Structural Design Calculations Issued for Permit

PDX Facility Improvements

Portland International Airport

PDX Fuel Company L.L.C.
BMcD No. 153929

BURNS McDONNELL

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Design Criteria

- Design Temperatures
- ACI 318-19 Barlap
- Seismic
- Wind
- Snow
- Ice

Design Temperatures

Average Temperatures		
	High	Low
January	46	37
February	51	37
March	56	40
April	62	43
May	69	48
June	74	53
July	82	57
August	82	57
September	76	53
October	64	46
November	52	41
December	46	36
	63.3	45.7

Tm =	55
Tw =	101
Tc =	21
Tm - Tc =	33
Tw - Tm =	46
Delta T =	**46**

PIP STC01015 Sunlight Exposed Steel Adder = 35

Total Temperature Delta for Pipe Rack = 81

High Temperatures	
2022	102
2021	114
2020	99
2019	98
2018	99
2017	104
2016	101
2015	104
2014	99
2013	98
2012	100
2011	97
2010	98
2009	105
2008	102
2007	103
2006	105
2005	97
2004	103
2003	101
2002	103
2001	99
2000	98
1999	93
1998	102
1997	95
1996	100
1995	99
1994	103
1993	97
1992	101
1991	100
Average =	100.59

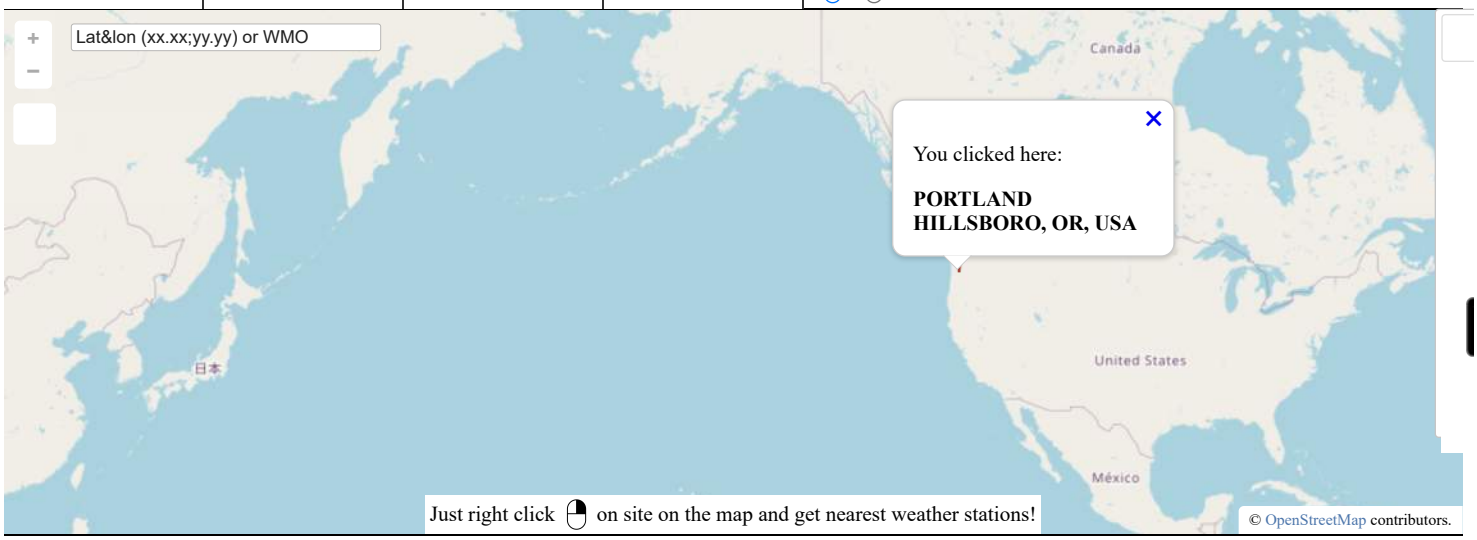
Low Temperatures	
2022	17
2021	21
2020	28
2019	23
2018	23
2017	18
2016	24
2015	26
2014	17
2013	14
2012	27
2011	18
2010	16
2009	15
2008	17
2007	20
2006	22
2005	25
2004	16
2003	27
2002	28
2001	26
2000	26
1999	28
1998	16
1997	25
1996	14
1995	16
1994	22
1993	18
1992	27
1991	20
Average =	21.25

Data Sources:
https://www.currentresults.com/Yearly-Weather/USA/OR/Portland/extreme-annual-portland-low-temperature.php
https://www.currentresults.com/Yearly-Weather/USA/OR/Portland/extreme-annual-portland-high-temperature.php
https://www.currentresults.com/Weather/Oregon/Places/portland-temperatures-by-month-average.php
Utilizing Technical Report No 65 - Temperature Discussion

ASHRAE CLIMATIC DESIGN CONDITIONS 2009/2013/2017/2021

2009 2013 2017 2021

MAP | STATIONS | STANDARTS | PSYCHROMETRIC CALCULATOR | SI IP | Show all station



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1 2 3

2021 ASHRAE Handbook - Foundamentals (SI)

PORTLAND HILLSBORO, OR, USA (WMO: 726986)

Lat:**45.541N** Long:**122.949W** Elev:**62** StdP: **100.58** Time zone:**-8.00 (NAP)** Period:**94-19** WBAN:**94261** Climate zone:**4C**

Annual Heating, Humidification, and Ventilation Design Conditions

Coldest Month	Heating DB		Humidification DP/MCDB and HR						Coldest month WS/MCDB				MCWS/PCWD to 99.6% DB		WSF
	99.6%	99%	99.6%			99%			0.4%		1%				
			DP	HR	MCDB	DP	HR	MCDB	WS	MCDB	WS	MCDB	MCWS	PCWD	
12	**-4.9**	**-3.0**	**-11.3**	**1.4**	**-1.1**	**-7.8**	**1.9**	**0.7**	**10.4**	**6.8**	**9.0**	**5.5**	**1.4**	**310**	**0.505**

Annual Cooling, Dehumidification, and Enthalpy Design Conditions

Hottest Month	Hottest Month DB Range	Cooling DB/MCWB						Evaporation WB/MCDB						MCWS/PCWD to 0.4% DB	
		0.4%		1%		2%		0.4%		1%		2%			
		DB	MCWB	DB	MCWB	DB	MCWB	WB	MCDB	WB	MCDB	WB	MCDB	MCWS	PCWD
7	**15.3**	**33.6**	**19.8**	**31.3**	**19.2**	**28.9**	**18.3**	**20.9**	**30.9**	**19.9**	**29.6**	**19.0**	**27.8**	**3.2**	**60**

Dehumidification DP/MCDB and HR									Enthalpy/MCDB						Extreme Max WB
0.4%			1%			2%			0.4%		1%		2%		
DP	HR	MCDB	DP	HR	MCDB	DP	HR	MCDB	Enth	MCDB	Enth	MCDB	Enth	MCDB	
17.3	**12.5**	**24.4**	**16.3**	**11.7**	**22.8**	**15.4**	**11.0**	**21.8**	**60.4**	**31.1**	**56.9**	**29.5**	**53.7**	**28.0**	**30.2**

Extreme Annual Design Conditions

Extreme Annual WS				Extreme Annual Temperature				n-Year Return Period Values of Extreme Temperature							
				Mean		Standard deviation		n=5 years		n=10 years		n=20 years		n=50 years	
1%	2.5%	5%		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
8.2	**7.3**	**6.1**	DB	**-8.4**	**37.4**	**2.9**	**2.0**	**-10.5**	**38.9**	**-12.2**	**40.1**	**-13.8**	**41.2**	**-15.9**	**42.7**
			WB	**-8.9**	**23.6**	**2.9**	**2.1**	**-11.0**	**25.0**	**-12.7**	**26.2**	**-14.3**	**27.4**	**-16.3**	**28.9**

Monthly Climatic Design Conditions

		Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperatures, Degree-Days and Degree-Hours	DBAvg	**11.5**	**4.8**	**5.8**	**8.0**	**10.2**	**13.7**	**16.3**	**19.7**	**19.7**	**16.7**	**11.5**	**7.2**	**4.4**
	DBStd	**6.27**	**3.45**	**3.07**	**2.85**	**3.08**	**3.37**	**3.23**	**3.09**	**2.85**	**3.13**	**2.96**	**3.45**	**3.49**
	HDD10.0	**692**	**163**	**119**	**77**	**33**	**6**	**0**	**0**	**0**	**1**	**19**	**97**	**177**
	HDD18.3	**2649**	**419**	**351**	**322**	**246**	**148**	**78**	**19**	**17**	**68**	**213**	**335**	**433**
	CDD10.0	**1245**	**2**	**2**	**13**	**38**	**121**	**189**	**300**	**299**	**201**	**64**	**12**	**2**
	CDD18.3	**161**	**0**	**0**	**0**	**1**	**5**	**17**	**61**	**59**	**18**	**1**	**0**	**0**
	CDH23.3	**2637**	**0**	**0**	**1**	**28**	**143**	**315**	**912**	**848**	**374**	**16**	**0**	**0**
	CDH26.7	**1066**	**0**	**0**	**0**	**6**	**39**	**121**	**399**	**365**	**134**	**2**	**0**	**0**
…nd	WSAvg	**2.2**	**2.1**	**2.3**	**2.4**	**2.4**	**2.2**	**2.2**	**2.3**	**2.1**	**1.9**	**1.8**	**2.0**	**2.2**

Contacts

Precipitation	PrecAvg	**1104**	**174**	**112**	**112**	**81**	**63**	**41**	**11**	**17**	**35**	**95**	**168**	**191**
	PrecMax	**1716**	**359**	**275**	**197**	**170**	**132**	**96**	**44**	**69**	**159**	**224**	**397**	**400**
	PrecMin	**824**	**66**	**6**	**38**	**30**	**0**	**6**	**0**	**0**	**0**	**16**	**57**	**57**
	PrecStd	**211**	**67**	**58**	**43**	**38**	**35**	**20**	**10**	**15**	**31**	**49**	**78**	**85**
Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	**14.1**	**16.2**	**21.3**	**27.1**	**30.3**	**34.2**	**37.1**	**36.2**	**33.4**	**25.7**	**17.5**	**14.2**
		MCWB	**12.3**	**10.6**	**12.9**	**16.8**	**18.3**	**20.1**	**21.1**	**21.1**	**18.8**	**15.6**	**13.8**	**12.4**
	2%	DB	**12.5**	**14.0**	**17.9**	**22.6**	**27.4**	**30.2**	**33.7**	**33.2**	**30.4**	**22.2**	**15.6**	**12.3**
		MCWB	**10.5**	**10.0**	**11.6**	**14.6**	**16.8**	**18.9**	**20.1**	**19.5**	**17.7**	**14.3**	**13.0**	**11.0**
	5%	DB	**11.1**	**12.4**	**15.3**	**19.1**	**24.1**	**27.1**	**31.1**	**30.9**	**27.7**	**19.5**	**13.9**	**10.9**
		MCWB	**9.4**	**9.1**	**10.2**	**12.5**	**15.6**	**17.7**	**19.6**	**19.2**	**17.3**	**13.2**	**11.6**	**9.7**
	10%	DB	**9.9**	**11.0**	**13.3**	**16.4**	**21.2**	**23.9**	**28.3**	**28.0**	**25.0**	**17.3**	**12.5**	**9.1**
		MCWB	**8.4**	**8.4**	**9.7**	**11.1**	**14.4**	**16.2**	**18.6**	**18.4**	**16.4**	**13.0**	**10.6**	**7.9**
Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	**13.0**	**13.2**	**14.1**	**17.8**	**19.6**	**21.6**	**22.8**	**22.6**	**20.6**	**18.0**	**15.3**	**12.8**
		MCDB	**14.2**	**14.3**	**19.2**	**25.4**	**28.9**	**31.5**	**33.5**	**32.0**	**30.1**	**22.5**	**16.6**	**13.7**
	2%	WB	**11.1**	**11.0**	**12.4**	**15.0**	**17.7**	**19.5**	**21.0**	**20.7**	**19.0**	**15.8**	**13.7**	**11.1**
		MCDB	**12.0**	**12.8**	**15.8**	**21.4**	**25.1**	**29.0**	**31.0**	**30.7**	**27.7**	**19.2**	**15.0**	**12.1**
	5%	WB	**9.8**	**9.8**	**11.3**	**13.1**	**16.3**	**17.9**	**20.0**	**19.7**	**17.9**	**14.6**	**12.3**	**9.7**
		MCDB	**10.7**	**11.7**	**14.3**	**17.9**	**22.9**	**25.8**	**29.9**	**29.0**	**25.6**	**17.8**	**13.4**	**10.6**
	10%	WB	**8.6**	**8.6**	**10.3**	**11.7**	**14.9**	**16.6**	**18.9**	**18.7**	**16.9**	**13.6**	**11.0**	**8.1**
		MCDB	**9.6**	**10.4**	**13.0**	**15.6**	**20.5**	**23.3**	**27.9**	**27.4**	**23.4**	**16.4**	**12.1**	**8.9**
Mean Daily Temperature Range		MDBR	**6.3**	**8.3**	**9.5**	**10.7**	**11.8**	**12.5**	**15.3**	**15.5**	**14.6**	**10.9**	**7.7**	**6.1**
	5% DB	MCDBR	**7.3**	**10.8**	**13.8**	**17.2**	**18.3**	**18.7**	**20.2**	**20.4**	**20.1**	**16.2**	**9.2**	**6.5**
		MCWBR	**5.3**	**7.0**	**8.0**	**9.5**	**9.4**	**9.1**	**8.6**	**8.8**	**9.3**	**9.1**	**6.2**	**5.3**
	5% WB	MCDBR	**6.1**	**8.1**	**11.3**	**15.0**	**16.0**	**17.1**	**18.5**	**18.4**	**17.4**	**11.7**	**7.0**	**6.0**
		MCWBR	**5.0**	**5.8**	**7.1**	**8.7**	**8.6**	**8.7**	**8.7**	**8.6**	**9.3**	**9.1**	**6.2**	**5.3**
Clear Sky Solar Irradiance	taub		**0.320**	**0.316**	**0.330**	**0.358**	**0.372**	**0.361**	**0.349**	**0.354**	**0.342**	**0.331**	**0.323**	**0.325**
	taud		**2.531**	**2.553**	**2.520**	**2.404**	**2.383**	**2.426**	**2.487**	**2.485**	**2.508**	**2.546**	**2.530**	**2.477**
	Ebn at noon		**794**	**874**	**906**	**902**	**896**	**904**	**912**	**895**	**880**	**841**	**781**	**739**
	Edn at noon		**66**	**77**	**90**	**110**	**117**	**112**	**104**	**101**	**91**	**76**	**65**	**63**
All-Sky Solar Radiation	RadAvg		**1.16**	**2.00**	**2.91**	**4.24**	**5.40**	**5.97**	**6.80**	**5.81**	**4.34**	**2.51**	**1.35**	**0.95**
	RadStd		**0.19**	**0.28**	**0.39**	**0.40**	**0.52**	**0.56**	**0.47**	**0.39**	**0.38**	**0.32**	**0.18**	**0.14**

Historical Trends

	DBAvg	Heating		Cooling			Degree-Days			
		99% DB	99% DP	1% DB	1% WB	1% DP	HDD10.0	HDD18.3	CDD10.0	CDD18.3
Station Only	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**-0.48**	**N/A**	**N/A**	**N/A**	**N/A**
Regional (0 neighbors)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**+23**

Contacts

ACI 318-19 Barlap

BURNS McDONNELL

Client PDX Fuel
Project 153929 Date 11/21/2023
Development and Splice Lengths of Rebars
4500 psi concrete, 60 ksi, uncoated rebars

Page ___ Of ___
Made By MCS
Checked By ___
Preliminary ___ Final X

Development and Splice Lengths of Deformed Single Rebars

Based on ACI 318-19, Chapter 18 & 25

Tension development length, ℓ_d = $\{ (3/40) [f_y/(\lambda\sqrt{f'_c})] (\psi_t\psi_e\psi_s\psi_g / [(c_b+K_{tr})/d_b]) \} d_b \geq 12"$ (EQ 25.4.2.4a)

Tension Development length at SMF joint (Seismic), ℓ_d = $2.5\,\ell_{de}$ (18.8.5.3)

Compression development length, ℓ_{dc} = Larger of $[f_y\psi_r/(50\lambda\sqrt{f'_c})]d_b$ and $0.0003f_y\psi_r d_b \geq 8"$ (25.4.9.1)

Compression lap splice length, = Larger of $0.0005f_y d_b$ and 12" if $f_y \leq 60{,}000$ psi (25.5.5.1)
Larger of $(0.0009f_y-24)d_b$ and 12" if 60,000 psi $< f_y \leq$ 80,000 psi
Larger of $(0.0009f_y-24)d_b$ and ℓ_d if $f_y >$ 80,000 psi

Tension dev. length of std hooks, ℓ_{dh} = $[f_y\psi_e\psi_r\psi_o\psi_c/(55\lambda\sqrt{f'c})]d_b^{1.5}$ but not less than 8 d_b or 6" (25.4.3.1)

Tension dev. length of std hooks at SMF joint (*Seismic*), ℓ_{dh} = $(f_y\, d_b/65\ \sqrt{f'_c})$ but not less than 8 d_b or 6" (EQ 18.8.5.1)

ψ_g =	1.00	Rebar grade modification factor <=== Rebar grade = Grade 60
f_y =	60,000	psi
f'_c =	4,500	psi (10,000 psi max)
$\psi_{c\ (Std\ Hook)}$ =	0.90	
ψ_e =	1.00	Uncoated or zinc-coated (galvanized) bars Ψe = 1.0
$\psi_{r(Compression)}$ =	1.00	Compression reinforcement not within (1), (2), (3), or (4)
$\psi_{r(Std\ Hook)}$ =	1.00	Hooked bars spaced ≥ 6db or enclosed by ties/stirrups with Aties ≥ 0.4Abars
λ =	1.00	Normal weight concrete
Ktr =	0.00	
Cover1 =	1.0	in. Smaller of the clear cover or half the clear distance between bars
Cover2 =	2.0	in. Smaller of side cover or cover beyond extension of hooked bars

ψ_t = Reinforcement location factor per Table 25.4.2.5 (1.3 for top bars, 1.0 for other bars)

ψ_e = Coating factor per Table 25.4.2.5 and 25.4.3.2 (1.0 for uncoated or zinc-coated bars, 1.2 for epoxy-coated or zinc and epoxy dual-coated bars, 1.5 for epoxy-coated or zinc and epoxy dual coated reinforcement with clear cover< 3db or clear spacing < 6db)

ψ_s = Reinforcement size factor Table 25.4.2.5 (0.8 for No.6 and smaller bars, 1.0 for larger bars)

ψ_g = Reinforcement grade factor Table 25.4.2.5 (1.0 for Grades 40 and 60, 1.15 for Grade 80, 1.3 for Grade 100)

$\psi_{r(Compression)}$ = Modification factors for bars in compression per Table 25.4.9.3 (0.75 for reinforcement enclosed within (1) a spiral, (2) a circular continuously wound tie with db ≥ 1/4 in. and pitch 4 in., (3) No. 4 bar or D20 wire ties in accordance with 25.7.2 spaced ≤ 4 in. on center, (4) hoops in accordance with 25.7.4 spaced ≤ 4 in. on center, 1.0 for others)

$\psi_{r(Std\ Hook)}$ = Confining reinforcement factor per Table 25.4.3.2 (1.0 when #11 or smaller bars are spaced s ≥ 6d or enclosed by ties or stirrups with $A_{th} \geq 0.4A_{hs}$, 1.6 for others)

ψ_o = Location factor per Table 25.4.3.2 (1.0 for #11 and smaller with side cover ≥ 2.5" if inside column or ≥ $6d_b$, 1.25 for others)

λ = Concrete weight factor per section Ch. 25 (1.0 for normal weight concrete and 0.75 for light weight concrete)

K_{tr} = Transverse reinforcement index per Equation 25.4.2.4b (may use 0 for design simplification)

60 ksi Rebar **4500 psi Concrete** **Normal Weight Concrete** **Uncoated Bars**		**Tension Development (ℓ_d) & Lap Splice Lengths**				**Compression Development (ℓ_{dc}) & Splice Lengths**		**Standard Hooks**
		OTHER BARS		TOP BARS				
Bar Size	Bar Diameter	Development Length & Class A Splice	Class B Splice	Development Length & Class A Splice	Class B Splice	Development Length	Splice Length	Tension Development Length (ℓ_{dh})
# 3	0.375	12	12	12	14	8	12	6
# 4	0.500	12	14	14	19	9	15	7
# 5	0.625	16	21	21	27	12	19	10
# 6	0.750	22	29	29	38	14	23	12
# 7	0.875	36	47	47	61	16	27	15
# 8	1.000	45	59	59	76	18	30	19
# 9	1.128	55	71	71	93	21	34	22
# 10	1.270	67	87	87	112	23	39	27
# 11	1.410	79	102	102	133	26	43	31

Notes: All dimensions are in inches.

Tension Lap Splice: Class A = $As_{,provided} / As_{,required} \geq 2$ and 50% max *As* spliced within the required lap length

Class B = Other splice condition not meeting Class A definition

Client	PDX Fuel	Page ___	Of ___
Project	153929	Date 11/22/2023	Made By AJK
	Development and Splice Lengths of Rebars		Checked By
	6000 psi concrete, 60 ksi, uncoated rebars		Preliminary ___ Final X

Development and Splice Lengths of Deformed Single Rebars

Based on ACI 318-19, Chapter 18 & 25

Tension development length, ℓ_d = { (3/40) [f_y /($\lambda\sqrt{f'_c}$)] ($\psi_t\psi_e\psi_s\psi_g$ / [(c_b+K_{tr})/d_b]) }d_b ≥ 12" (EQ 25.4.2.4a)

Tension Development length at SMF joint (Seismic), ℓ_d = 2.5 ℓ_{de} (18.8.5.3)

Compression development length, ℓ_{dc} = Larger of [$f_y\psi_r$/(50$\lambda\sqrt{f'_c}$)]d_b and 0.0003$f_y\psi_r d_b$ ≥ 8" (25.4.9.1)

Compression lap splice length, = Larger of 0.0005$f_y d_b$ and 12" if f_y ≤ 60,000 psi (25.5.5.1)
Larger of (0.0009f_y-24)d_b and 12" if 60,000 psi <f_y ≤ 80,000 psi
Larger of (0.0009f_y-24)d_b and ℓ_{dc} if f_y > 80,000 psi

Tension dev. length of std hooks, ℓ_{dh} = [$f_y\psi_e\psi_r\psi_o\psi_c$/(55$\lambda\sqrt{f'c}$)]$d_b^{1.5}$ but not less than 8 d_b or 6" (25.4.3.1)

Tension dev. length of std hooks at SMF joint (*Seismic*), ℓ_{dh} = ($f_y d_b$/65 $\sqrt{f'_c}$) but not less than 8 d_b or 6" (EQ 18.8.5.1)

ψ_g =	1.00	Rebar grade modification factor <=== Rebar grade = Grade 60
f_y =	60,000	psi
f'_c =	6,000	psi (10,000 psi max)
$\psi_{c\ (Std\ Hook)}$ =	1.00	
ψ_e =	1.00	Uncoated or zinc-coated (galvanized) bars Ψe = 1.0
$\psi_{r(Compression)}$ =	1.00	Compression reinforcement not within (1), (2), (3), or (4)
$\psi_{r(Std\ Hook)}$ =	1.00	Hooked bars spaced ≥ 6db or enclosed by ties/stirrups with Aties ≥ 0.4Abars
λ =	1.00	Normal weight concrete
Ktr =	0.00	
Cover1 =	1.0	in. Smaller of the clear cover or half the clear distance between bars
Cover2 =	2.0	in. Smaller of side cover or cover beyond extension of hooked bars

ψ_t = Reinforcement location factor per Table 25.4.2.5 (1.3 for top bars, 1.0 for other bars)

ψ_e = Coating factor per Table 25.4.2.5 and 25.4.3.2 (1.0 for uncoated or zinc-coated bars, 1.2 for epoxy-coated or zinc and epoxy dual-coated bars, 1.5 for epoxy-coated or zinc and epoxy dual coated reinforcement with clear cover< 3db or clear spacing < 6db)

ψ_s = Reinforcement size factor Table 25.4.2.5 (0.8 for No.6 and smaller bars, 1.0 for larger bars)

ψ_g = Reinforcement grade factor Table 25.4.2.5 (1.0 for Grades 40 and 60, 1.15 for Grade 80, 1.3 for Grade 100)

$\psi_{r(Compression)}$ = Modification factors for bars in compression per Table 25.4.9.3 (0.75 for reinforcement enclosed within (1) a spiral, (2) a circular continuously wound tie with db ≥ 1/4 in. and pitch 4 in., (3) No. 4 bar or D20 wire ties in accordance with 25.7.2 spaced ≤ 4 in. on center, (4) hoops in accordance with 25.7.4 spaced ≤ 4 in. on center, 1.0 for others)

$\psi_{r(Std\ Hook)}$ = Confining reinforcement factor per Table 25.4.3.2 (1.0 when #11 or smaller bars are spaced s ≥ 6d or enclosed by ties or stirrups with A_{th} ≥ 0.4A_{hs}, 1.6 for others)

ψ_o = Location factor per Table 25.4.3.2 (1.0 for #11 and smaller with side cover ≥ 2.5" if inside column or ≥ 6d_b, 1.25 for others)

λ = Concrete weight factor per section Ch. 25 (1.0 for normal weight concrete and 0.75 for light weight concrete)

K_{tr} = Transverse reinforcement index per Equation 25.4.2.4b (may use 0 for design simplification)

60 ksi Rebar 6000 psi Concrete Normal Weight Concrete Uncoated Bars		**Tension Development (ℓ_d) & Lap Splice Lengths**				**Compression Development (ℓ_{dc}) & Splice Lengths**		**Standard Hooks**
		OTHER BARS		TOP BARS				
Bar Size	Bar Diameter	Development Length & Class A Splice	Class B Splice	Development Length & Class A Splice	Class B Splice	Development Length	Splice Length	Tension Development Length (ℓ_{dh})
# 3	0.375	12	12	12	12	8	12	6
# 4	0.500	12	13	13	16	9	15	7
# 5	0.625	14	18	18	24	12	19	9
# 6	0.750	20	25	25	33	14	23	12
# 7	0.875	31	41	41	53	16	27	15
# 8	1.000	39	51	51	66	18	30	18
# 9	1.128	48	62	62	80	21	34	22
# 10	1.270	58	75	75	97	23	39	26
# 11	1.410	68	89	89	115	26	43	30

Notes: All dimensions are in inches.

Tension Lap Splice: Class A = $As_{,provided}$ / $As_{,required}$ ≥ 2 and 50% max *As* spliced within the required lap length

Class B = Other splice condition not meeting Class A definition

Seismic

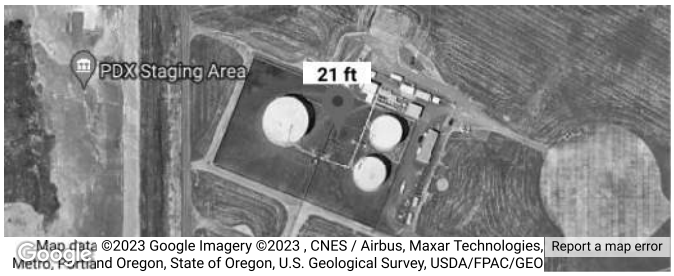
This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Hazards by Location

Search Information

Coordinates:	45.596892303752675, -122.61366896088869
Elevation:	21 ft
Timestamp:	2023-05-27T11:26:33.046Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	IV
Site Class:	E



Basic Parameters

Name	Value	Description
S_S	0.848	MCE_R ground motion (period=0.2s)
S_1	0.376	MCE_R ground motion (period=1.0s)
S_{MS}	1.102	Site-modified spectral acceleration value
S_{M1}	* null	Site-modified spectral acceleration value
S_{DS}	0.735	Numeric seismic design value at 0.2s SA
S_{D1}	* null	Numeric seismic design value at 1.0s SA

* See Section 11.4.8

0.59; site specific

0.74; site specific

(from the geotech report)

Additional Information

Name	Value	Description
SDC	* null	Seismic design category
F_a	1.3	Site amplification factor at 0.2s
F_v	* null	Site amplification factor at 1.0s
CR_S	0.884	Coefficient of risk (0.2s)
CR_1	0.864	Coefficient of risk (1.0s)
PGA	0.383	MCE_G peak ground acceleration
F_{PGA}	1.435	Site amplification factor at PGA
PGA_M	0.549	Site modified peak ground acceleration
T_L	16	Long-period transition period (s)
SsRT	0.848	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.959	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.376	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.435	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.544	Factored deterministic acceleration value (PGA)

* See Section 11.4.8

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

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Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

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SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(FOR NON-BUILDING STRUCTURES - NOT SIMILAR TO BUILDINGS)

Rev 03-2023 AHS

In accordance with ASCE 7-16

Location: PDX - Fuel Facility, Portland Oregon

Risk Category: (ASCE Table 1.5-1) (or IBC Table 1604.5): Category IV - Essential facilities (i.e. emergency, rescue, fire protection, emergency power, defense)

Site Classification: (ASCE Table 20.3-1): Class E - Soft soil profile

Site Seismicity:

S_s =	0.848	Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 =	0.376	One-Second Spectral Response Acceleration (at 1 second)

Importance Factor, I_p = 1.50 (ASCE 7 Table 1.5-2)

Site Coefficient: (ASCE 7 Table 11.4-1)

F_a =	1.04	(IBC Table 1613.2.3(1))	(ASCE 7 Table 11.4-1)
F_v =	2.95	(IBC Table 1613.2.3(2))	(ASCE 7 Table 11.4-2)

Max considered earthquake spectral response acceleration:

$S_{MS} = F_a S_s$ =	0.885	(ASCE 7 11.4-1)
$S_{M1} = F_v S_1$ =	1.109	(ASCE 7 11.4-2)

Design Spectral Response Acceleration:

$S_{DS} = 2/3\ S_{MS}$ =	0.590	(Site Specific)
$S_{D1} = 2/3\ S_{M1}$ =	0.739	(Site Specific)

Seismic Design Category based on S_{DS} =	D	(ASCE 7 Table 11.6-1)
Seismic Design Category based on S_{D1} =	D	(ASCE 7 Table 11.6-2)
Effective Seismic Design Category =	**D**	

North-South Direction

Component Coefficient: Steel ordinary concentrically braced frame

(ASCE Table 15.4-1)

R =	1.5	Response Modification Factor
Ωo =	1	System Overstrength Factor
Cd =	1.5	Deflection Amplification Factor

Seismic Response Coefficient, $C_s = S_{DS} I_e / R$ = 0.590 (ASCE Eq 12.8-2)

Minimum $C_s = 0.044 S_{DS} I$ or 0.030 = 0.039 (ASCE Eq 15.4-1)

or Minimum $C_s = 0.8\ S_1\ I / R$ = 0.301 (ASCE Eq 15.4-2)
(when $S_1 \geq 0.6g$)

Seismic Base Shear, $V = C_s\ W$
where C_s = 0.590
W = total dead load and applicable portions of other loads

East - West Direction

Component Coefficient: Steel ordinary moment frame

(ASCE Table 15.4-1)

R =	1	Response Modification Factor
Ωo =	1	System Overstrength Factor
Cd =	1	Deflection Amplification Factor

Seismic Response Coefficient, $C_s = S_{DS}\ I_e\ /R$ = 0.885 (ASCE Eq 12.8-2)

Minimum $C_s = 0.044 S_{DS} I$ or 0.030 = 0.039 (ASCE Eq 15.4-1)

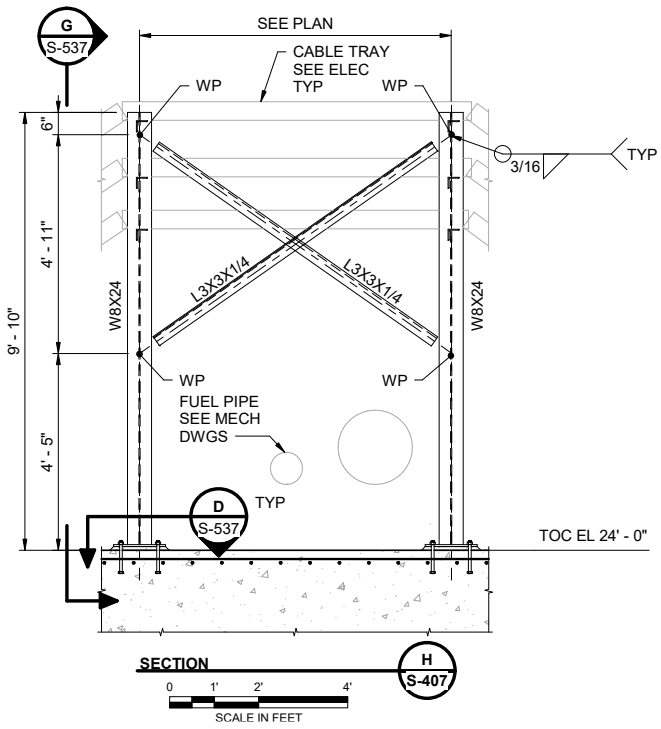
or Minimum $C_s = 0.8\ S_1\ I\ /\ R$ = 0.451 (ASCE Eq 15.4-2)
(when $S_1 \geq 0.6g$)

Seismic Base Shear, $V = C_s\ W$
where C_s = 0.885
W = total dead load and applicable portions of other loads

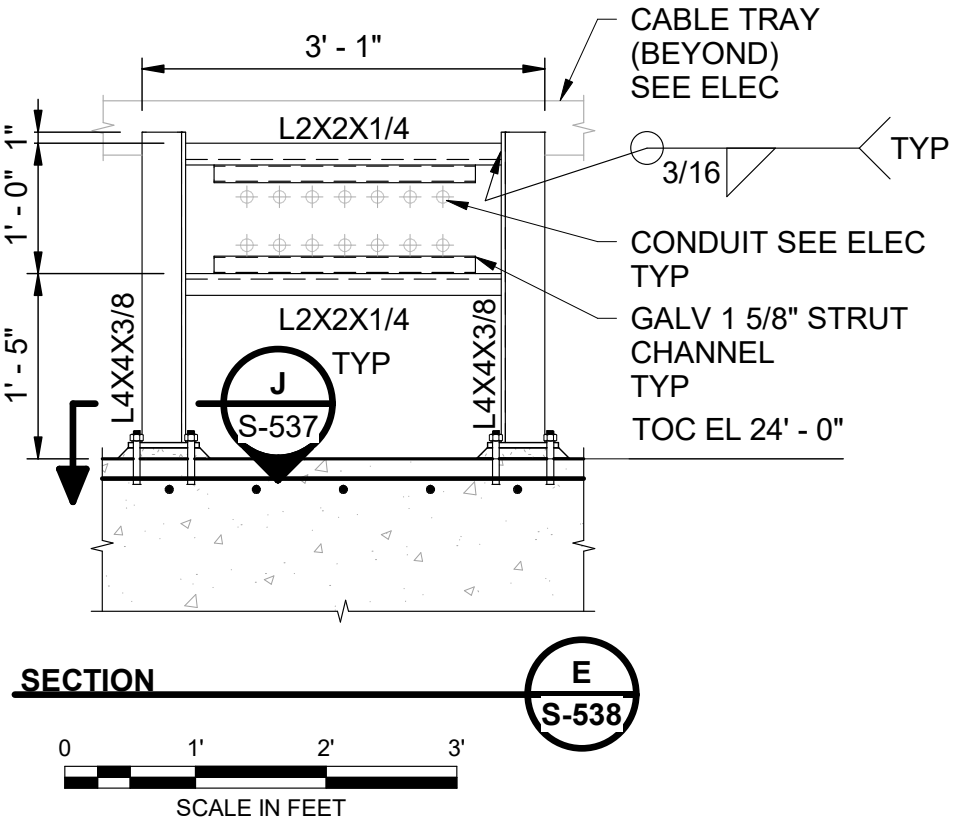
Vertical component of earthquake load concurrent with lateral component (ASCE 12.4.2.2)

$E_v = C_v\ W$
Coefficient C_v = + *or* - 0.2 S_{DS} ===> ***Coefficient*** C_v = **0.118**

Note: For Allowable Stress Design not using ASCE 7 or IBC load combinations, use 0.70E i.e multiply *Coefficients* by 0.70 (except for displacement calculation)
==> $C_{s.N\text{-}S}$ = 0.413
==> $C_{s.E\text{-}W}$ = 0.620
C_v = 0.083



Steel Ordinary Concentric Brace Frame



Steel Ordinary Moment Frame

SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(FOR NON-BUILDING STRUCTURES - NOT SIMILAR TO BUILDINGS)

Rev 03-2023 AHS

In accordance with ASCE 7-16

Location: PDX - Fuel Facility, Portland Oregon

Risk Category: (ASCE Table 1.5-1) (or IBC Table 1604.5): Category IV - Essential facilities (i.e. emergency, rescue, fire protection, emergency power, defense)

Site Classification: (ASCE Table 20.3-1): Class E - Soft soil profile

Site Seismicity:

S_s =	0.848	Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 =	0.376	One-Second Spectral Response Acceleration (at 1 second)

Importance Factor, I_p = 1.50 (ASCE 7 Table 1.5-2)

Site Coefficient: (ASCE 7 Table 11.4-1)

F_a =	1.04	(IBC Table 1613.2.3(1))	(ASCE 7 Table 11.4-1)
F_v =	2.95	(IBC Table 1613.2.3(2))	(ASCE 7 Table 11.4-2)

Max considered earthquake spectral response acceleration:

$S_{MS} = F_a S_s$ =	0.885	(ASCE 7 11.4-1)
$S_{M1} = F_v S_1$ =	1.109	(ASCE 7 11.4-2)

Design Spectral Response Acceleration:

$S_{DS} = 2/3\ S_{MS}$ =	0.590	(Site Specific)
$S_{D1} = 2/3\ S_{M1}$ =	0.739	(Site Specific)

Seismic Design Category based on S_{DS} =	D	(ASCE 7 Table 11.6-1)
Seismic Design Category based on S_{D1} =	D	(ASCE 7 Table 11.6-2)
Effective Seismic Design Category =	**D**	

North-South Direction

Component Coefficient: (ASCE Table 15.4-1): Steel ordinary moment frame

R =	1	Response Modification Factor
Ωo =	1	System Overstrength Factor
Cd =	1	Deflection Amplification Factor

Seismic Response Coefficient, $C_s = S_{DS} I_e / R$ = 0.885 (ASCE Eq 12.8-2)

Minimum $C_s = 0.044 S_{DS} I$ or 0.030 = 0.039 (ASCE Eq 15.4-1)

or Minimum $C_s = 0.8\ S_1\ I / R$ = 0.451 (ASCE Eq 15.4-2)
(when $S_1 \geq 0.6g$)

Seismic Base Shear, $V = C_s\ W$
where C_s = 0.885
W = total dead load and applicable portions of other loads

East - West Direction

Component Coefficient: (ASCE Table 15.4-1): Cantilevered column - conservatively using R = 1

R =	1	Response Modification Factor
Ωo =	1	System Overstrength Factor
Cd =	1	Deflection Amplification Factor

Seismic Response Coefficient, $C_s = S_{DS} I_e / R$ = 0.885 (ASCE Eq 12.8-2)

Minimum $C_s = 0.044 S_{DS} I$ or 0.030 = 0.039 (ASCE Eq 15.4-1)

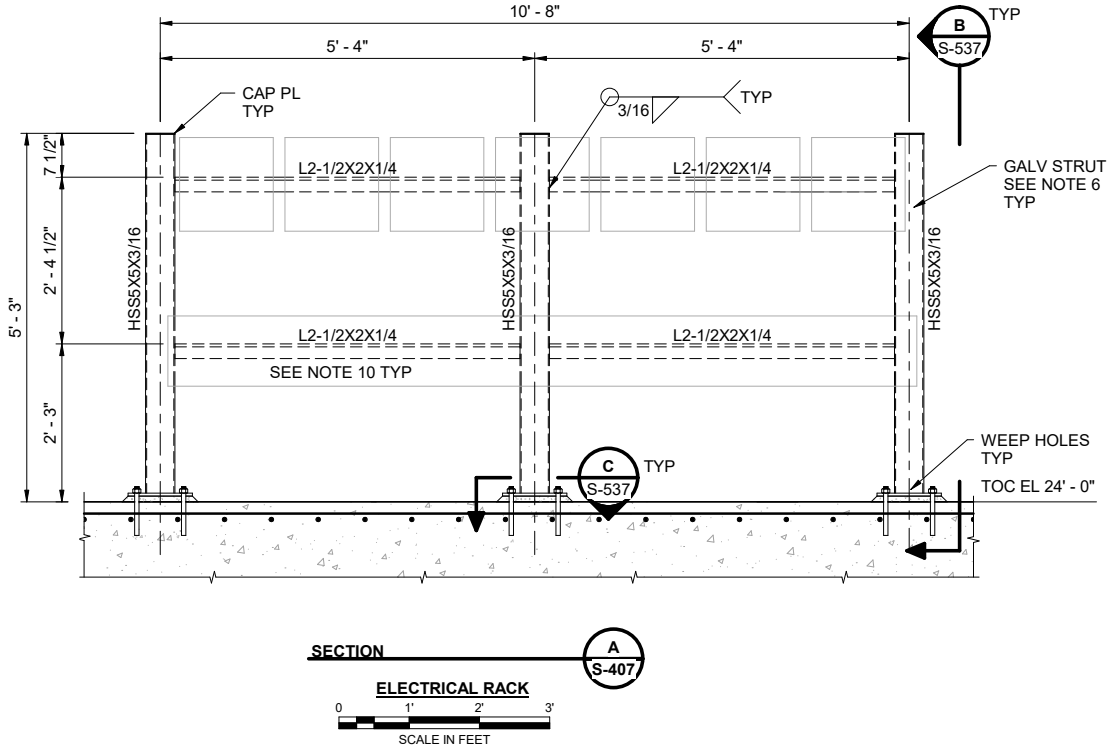
or Minimum $C_s = 0.8 S_1 I / R$ = 0.451 (ASCE Eq 15.4-2)
(when $S_1 \geq 0.6g$)

Seismic Base Shear, $V = C_s W$
where C_s = 0.885
W = total dead load and applicable portions of other loads

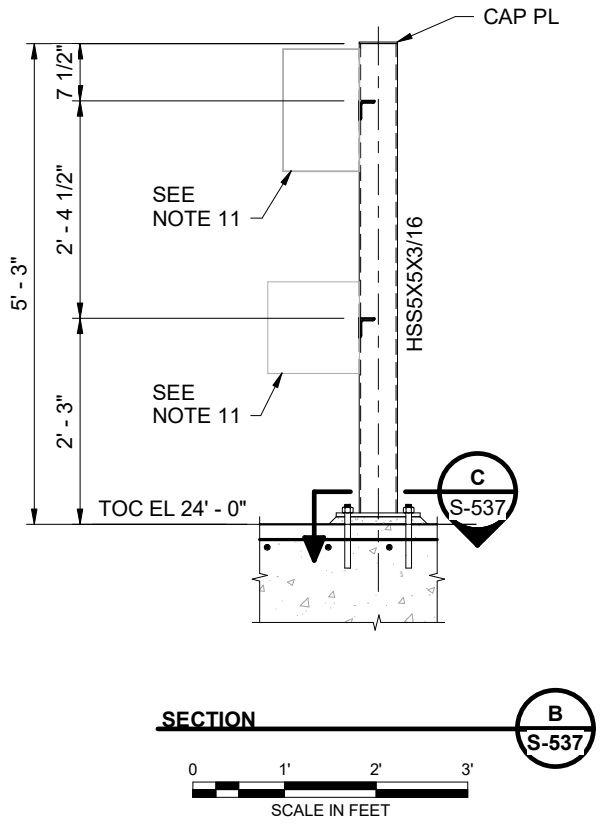
Vertical component of earthquake load concurrent with lateral component (ASCE 12.4.2.2)

$E_v = C_v W$
Coefficient C_v = + *or* - 0.2 S_{DS} ===> ***Coefficient*** C_v = **0.118**

Note: For Allowable Stress Design not using ASCE 7 or IBC load combinations, use 0.70E i.e multiply *Coefficients* by 0.70 (except for displacement calculation)
==> $C_{s.N-S}$ = 0.620
==> $C_{s.E-W}$ = 0.620
C_v = 0.083



Steel Ordinary Moment Frame



SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(FOR NON-STRUCTURAL COMPONENTS)
Rev 03-2023 AHS
In accordance with ASCE 7-16

Location: PDX - Fuel Facility, Portland Oregon

Risk Category: (ASCE Table 1.5-1) (or IBC Table 1604.5): Category IV - Essential facilities (i.e. emergency, rescue, fire protection, emergency power, defense)

Site Classification: (ASCE Table 20.3-1): Class E - Soft soil profile

Site Seismicity:
S_s = 0.848 Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 = 0.376 One-Second Spectral Response Acceleration (at 1 second)

Importance Factor, I_p = 1.50 (ASCE 7 Table 1.5-2)

Site Coefficient: (ASCE 7 Table 11.4-1)
F_a = 1.04 (IBC Table 1613.2.3(1)) (ASCE 7 Table 11.4-1)
F_v = 2.95 (IBC Table 1613.2.3(2)) (ASCE 7 Table 11.4-2)

Max considered earthquake spectral response acceleration:
$S_{MS} = F_a S_s$ = 0.885 (ASCE 7 11.4-1)
$S_{M1} = F_v S_1$ = 1.109 (ASCE 7 11.4-2)

Design Spectral Response Acceleration:
$S_{DS} = 2/3\ S_{MS}$ = 0.590 (ASCE 7 11.4-3)
$S_{D1} = 2/3\ S_{M1}$ = 0.739 (ASCE 7 11.4-4)

Seismic Design Category based on S_{DS} = D (ASCE 7 Table 11.6-1)
Seismic Design Category based on S_{D1} = D (ASCE 7 Table 11.6-2)
Effective Seismic Design Category = D

Component Coefficient: (ASCE Table 13.6-1): Piping conforming to ASME B31 with joints made by welding
a_p = 2.5 Component Amplification Factor
R_p = 12.0 Component Response Modification Factor

z = 8 Component height of attachment in structure (ft); z = 0 for items at or below base
h = 8 Average roof height of structure with respect to base (ft)
Use z/h = 1.00 <== Per ASCE 13.3.1, z/h need not exceed 1.0

Seismic Design Force Coefficient = $0.4\ a_p\ S_{DS}\ I_p\ (1 + 2\ z/h) / R_p$ = 0.221 (ASCE Eq 13.3 -1)

Coefficient need not be greater than $1.6\ S_{DS}\ I_p$ = 1.416 (ASCE Eq 13.3 -2)

Coefficient shall not be less than $0.3\ S_{DS}\ I_p$ = 0.266 (ASCE Eq 13.3 -3)

Supported on vibration isolators with clearance between equipment and support > 0.25"? No (ASCE Table 13.6-1)

Seismic Component Force, F_p = *Coefficient 1* x W_p
where *Coefficient 1* = 0.266
W_p = Component operating weight

Vertical component of earthquake load concurrent with lateral component (ASCE 13.3.1.2)

Coefficient 2 = + or - $0.2\ S_{DS}$ ===> ***Coefficient 2* = 0.118**

Note: For Allowable Stress Design not using ASCE 7 or IBC load combinations, use 0.70E i.e multiply *Coefficients* by 0.70 (except for displacement calculation)

SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(FOR NON-BUILDING STRUCTURES - NOT SIMILAR TO BUILDINGS)

Rev 03-2023 AHS

In accordance with ASCE 7-16

Location: PDX - Fuel Facility, Portland Oregon

Risk Category: (ASCE Table 1.5-1) — Category IV - Essential facilities (i.e. emergency, rescue, fire protection, emergency power, defense)

Site Classification: (ASCE Table 20.3-1) — Class E - Soft soil profile

Site Seismicity:

S_s =	0.848	Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 =	0.376	One-Second Spectral Response Acceleration (at 1 second)

Importance Factor, I_e = 1.50 (ASCE 7 Table 1.5-2)

Site Coefficient:

F_a =	1.20	(IBC Table 1613.2.3(1))	(ASCE 7 Table 11.4-1)
F_v =	2.22	(IBC Table 1613.2.3(2))	(ASCE 7 Table 11.4-2)

Max considered earthquake spectral response acceleration:

$S_{MS} = F_a S_s$ = 1.0176 (ASCE 7 11.4-1)

$S_{M1} = F_v S_1$ = 0.83472 (ASCE 7 11.4-2)

Design Spectral Response Acceleration:

S_{DS} =	0.590	(Site Specific)
S_{D1} =	0.739	(Site Specific)

Seismic Design Category based on S_{DS} = D (ASCE 7 Table 11.6-1)

Seismic Design Category based on S_{D1} = D (ASCE 7 Table 11.6-2)

Effective Seismic Design Category = D

Component Coefficient: Telecommunication Tower - Pole (Steel/Wood/Concrete)

(ASCE Table 15.4-2)

R =	1.5	Response Modification Factor
Ωo =	1.5	System Overstrength Factor
Cd =	1.5	Deflection Amplification Factor

Seismic Response Coefficient, $C_s = S_{DS} I_e / R$ = 0.590 (ASCE Eq 12.8-2)

Minimum $C_s = 0.044 S_{DS} I$ = 0.039 (ASCE Eq 15.4-1)

or 0.030

or Minimum $C_s = 0.8 S_1 I / R$ = 0.301 (ASCE Eq 15.4-2)

(when $S_1 \geq 0.6g$)

Seismic Base Shear, $V = C_s W$

where C_s = 0.590

W = total dead load and applicable portions of other loads

Note: For Allowable Stress Design not using ASCE 7 or IBC load combinations, use 0.70E i.e multiply *Coefficients* by 0.70 (except for displacement calculation)

==> C_s = 0.413

BURNS McDONNELL

Client PDX Fuel | Page ___ Of ___
Project 153929 Date 21 NOV 2023 | Made By MCS
SEISMIC LOADS FOR NON-BUILDING STRUCTURES | Checked By ___
Stairs and Platforms | Preliminary ___ Final X

SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(FOR NON-BUILDING STRUCTURES - NOT SIMILAR TO BUILDINGS)

Rev 03-2023 AHS

In accordance with ASCE 7-16

Location: PDX - Fuel Facility, Portland Oregon

Risk Category: (ASCE Table 1.5-1) (or IBC Table 1604.5): Category IV - Essential facilities (i.e. emergency, rescue, fire protection, emergency power, defense)

Site Classification: (ASCE Table 20.3-1): Class E - Soft soil profile

Site Seismicity:

S_s =	0.848	Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 =	0.376	One-Second Spectral Response Acceleration (at 1 second)

Importance Factor, I_e = 1.50 (ASCE 7 Table 1.5-2)

Site Coefficient:

F_a =	1.20	(IBC Table 1613.2.3(1))	(ASCE 7 Table 11.4-1)
F_v =	2.22	(IBC Table 1613.2.3(2))	(ASCE 7 Table 11.4-2)

Max considered earthquake spectral response acceleration:

$S_{MS} = F_a S_s$ =	1.018	(ASCE 7 11.4-1)
$S_{M1} = F_v S_1$ =	0.835	(ASCE 7 11.4-2)

Design Spectral Response Acceleration:

S_{DS} =	0.590	(Site Specific)
S_{D1} =	0.739	(Site Specific)

Seismic Design Category based on S_{DS} =	D	(ASCE 7 Table 11.6-1)
Seismic Design Category based on S_{D1} =	D	(ASCE 7 Table 11.6-2)
Effective Seismic Design Category =	**D**	

Component Coefficient: Steel ordinary concentrically braced frames (unlimited height)
(ASCE Table 15.4-1)

R =	1.5	Response Modification Factor
Ωo =	1	System Overstrength Factor
Cd =	1.5	Deflection Amplification Factor

Seismic Response Coefficient, $C_s = S_{DS} I_e / R$ = 0.590 (ASCE Eq 12.8-2)

Minimum $C_s = 0.044 S_{DS} I$ = 0.039 (ASCE Eq 15.4-1)
or 0.030

or Minimum $C_s = 0.8 S_1 I / R$ = 0.301 (ASCE Eq 15.4-2)
(when $S_1 \geq 0.6g$)

Seismic Base Shear, $V = C_s W$
where C_s = 0.590
W = total dead load and applicable portions of other loads

Note: For Allowable Stress Design not using ASCE 7 or IBC load combinations, use 0.70E i.e multiply *Coefficients* by 0.70 (except for displacement calculation)
==> C_s = 0.413

This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Hazards by Location

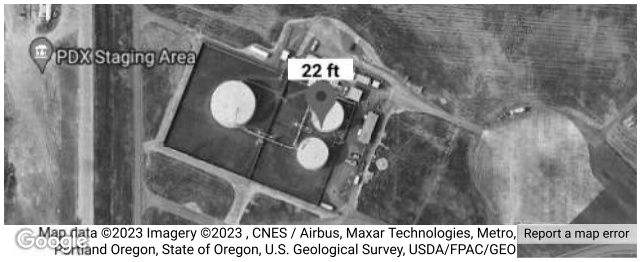
Search Information

Coordinates: 45.596832247808265, -122.6133470958069

Elevation: 22 ft

Timestamp: 2023-01-23T15:11:00.344Z

Hazard Type: Wind



ASCE 7-16

MRI 10-Year	66 mph
MRI 25-Year	72 mph
MRI 50-Year	77 mph
MRI 100-Year	82 mph
Risk Category I	91 mph
Risk Category II	97 mph
Risk Category III	103 mph
Risk Category IV	107 mph

ASCE 7-10

MRI 10-Year ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 25-Year ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 50-Year ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 100-Year ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category I ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category II ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category III-IV ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

ASCE 7-05

ASCE 7-05 Wind Speed ..... Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

Wind

WIND LOAD ON OPEN SIGNS AND SINGLE-PLANE OPEN FRAMES

In accordance with ASCE 7-16

Project Site: PDX Fuel Facility - Portland, Oregon

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ — q_z = Velocity Pressure, Sec. 26.10.2

Category IV (Essential, Critical Facilities) in All Regions

Open Signs and Single-Plane Open Frames (Determines K_d value)

V =	107 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	22.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.85	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ — p = Design wind pressure, Sec. 29.4

Exposure = C — C_f = Force coefficient per Figure 29.4-2

Flat-Sided Members

G =	0.85	G = Gust effect factor, Sec. 26.11
D =	2.00	<=== *Not Applicable*
ξ =	0.70	ξ = Ratio of solid area to gross area, 0.7 max.

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES p (psf)**
0 - 15	0.85	21.16	1.6	**28.8**
20	0.90	22.40	1.6	**30.5**
25	0.94	23.40	1.6	**31.8**
30	0.98	24.40	1.6	**33.2**
40	1.04	25.89	1.6	**35.2**
50	1.09	27.13	1.6	**36.9**
60	1.13	28.13	1.6	**38.3**
70	1.17	29.13	1.6	**39.6**
80	1.21	30.12	1.6	**41.0**
90	1.24	30.87	1.6	**42.0**
100	1.26	31.37	1.6	**42.7**
120	1.31	32.61	1.6	**44.3**
140	1.36	33.85	1.6	**46.0**
160	1.39	34.60	1.6	**47.1**
180	1.43	35.60	1.6	**48.4**
200	1.46	36.34	1.6	**49.4**

Notes:
1. Wind pressures may act towards and/or away from the structures (reversible).
2. Signs with openings comprising 30% or more of gross area are classified as open signs.
3. q_z: velocity pressure evaluated at height z above ground.
4. A_f is the solid area consistent with the calculated ξ projected normal to the wind direction.

WIND LOAD ON CHIMNEYS, TANKS, AND SIMILAR STRUCTURES

In accordance with ASCE 7-16

Project Site: PDX - Fuel Facility, Portland Oregon

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ — q_z = Velocity Pressure, Sec. 26.10.2

Category IV (Essential, Critical Facilities) in All Regions

Round/hexagonal chimneys and tanks (Determines *Directionality Factor*, K_d value)

V =	107 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	22.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.95	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ — p = Design wind pressure, Sec. 29.4.

Exposure = C

h =	32.5 ft	h = Structure height
D =	0.5 ft	D = Diameter or least horizontal dimension
h/D =	65	
G =	0.85	G = Gust effect factor, Sec. 26.11

Tank or chimney x-section: Round (D*sqrt[qz] < 2.5), All roughness

(Determines C_f values - Fig 29.4-1)

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES p (psf)**
0 - 15	0.85	23.65	1.2	**24.1**
20	0.90	25.04	1.2	**25.5**
25	0.94	26.15	1.2	**26.7**
30	0.98	27.27	1.2	**27.8**
40	1.04	28.93	1.2	**29.5**
50	1.09	30.33	1.2	**30.9**
60	1.13	31.44	1.2	**32.1**
70	1.17	32.55	1.2	**33.2**
80	1.21	33.66	1.2	**34.3**
90	1.24	34.50	1.2	**35.2**
100	1.26	35.06	1.2	**35.8**
120	1.31	36.45	1.2	**37.2**
140	1.36	37.84	1.2	**38.6**
160	1.39	38.67	1.2	**39.4**
180	1.43	39.79	1.2	**40.6**
200	1.46	40.62	1.2	**41.4**

Notes: 1. Wind pressures may act towards and/or away from the structures (reversible).
2. C_f: force coefficient per Figure 29.4-1.
3. q_z: velocity pressure evaluated at height z above ground.

WIND LOAD ON OPEN SIGNS AND SINGLE-PLANE OPEN FRAMES

In accordance with ASCE 7-16

Project Site: PDX Fuel Facility - Portland Oregon

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ — q_z = Velocity Pressure, Sec. 26.10.2

Category IV (Essential, Critical Facilities) in All Regions

Open Signs and Single-Plane Open Frames (Determines K_d value)

V =	107 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	22.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.85	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ — p = Design wind pressure, Sec. 29.4

Exposure = C — C_f = Force coefficient per Figure 29.4-2

Flat-Sided Members

G =	0.85	G = Gust effect factor, Sec. 26.11
D =	2.00	<=== *Not Applicable*
ξ =	0.15	ξ = Ratio of solid area to gross area, 0.7 max.

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES p (psf)**
0 - 15	0.85	21.16	1.8	**32.4**
20	0.90	22.40	1.8	**34.3**
25	0.94	23.40	1.8	**35.8**
30	0.98	24.40	1.8	**37.3**
40	1.04	25.89	1.8	**39.6**
50	1.09	27.13	1.8	**41.5**
60	1.13	28.13	1.8	**43.0**
70	1.17	29.13	1.8	**44.6**
80	1.21	30.12	1.8	**46.1**
90	1.24	30.87	1.8	**47.2**
100	1.26	31.37	1.8	**48.0**
120	1.31	32.61	1.8	**49.9**
140	1.36	33.85	1.8	**51.8**
160	1.39	34.60	1.8	**52.9**
180	1.43	35.60	1.8	**54.5**
200	1.46	36.34	1.8	**55.6**

Notes:
1. Wind pressures may act towards and/or away from the structures (reversible).
2. Signs with openings comprising 30% or more of gross area are classified as open signs.
3. q_z: velocity pressure evaluated at height z above ground.
4. A_f is the solid area consistent with the calculated ξ projected normal to the wind direction.

WIND LOAD ON OPEN SIGNS AND SINGLE-PLANE OPEN FRAMES

In accordance with ASCE 7-16

Project Site: PDX Fuel Facility - Portland Oregon

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ q_z = Velocity Pressure, Sec. 26.10.2

Category IV (Essential, Critical Facilities) in All Regions

Open Signs and Single-Plane Open Frames (Determines K_d value)

V =	30 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	22.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.85	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ p = Design wind pressure, Sec. 29.4

Exposure = C C_f = Force coefficient per Figure 29.4-2

Flat-Sided Members

G =	0.85	G = Gust effect factor, Sec. 26.11
D =	2.00	<=== *Not Applicable*
ξ =	0.15	ξ = Ratio of solid area to gross area, 0.7 max.

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES p (psf)**
0 - 15	0.85	1.66	1.8	**2.5**
20	0.90	1.76	1.8	**2.7**
25	0.94	1.84	1.8	**2.8**
30	0.98	1.92	1.8	**2.9**
40	1.04	2.04	1.8	**3.1**
50	1.09	2.13	1.8	**3.3**
60	1.13	2.21	1.8	**3.4**
70	1.17	2.29	1.8	**3.5**
80	1.21	2.37	1.8	**3.6**
90	1.24	2.43	1.8	**3.7**
100	1.26	2.47	1.8	**3.8**
120	1.31	2.56	1.8	**3.9**
140	1.36	2.66	1.8	**4.1**
160	1.39	2.72	1.8	**4.2**
180	1.43	2.80	1.8	**4.3**
200	1.46	2.86	1.8	**4.4**

Notes:
1. Wind pressures may act towards and/or away from the structures (reversible).
2. Signs with openings comprising 30% or more of gross area are classified as open signs.
3. q_z: velocity pressure evaluated at height z above ground.
4. A_f is the solid area consistent with the calculated ξ projected normal to the wind direction.

Client	PDX Fuel	Page	Of
Project	153929	Date 7 DEC 23	Made By AJK
	WIND LOAD ON TANKS		Checked By
	HORIZONTAL ROUND TANKS		Preliminary Final X

WIND LOAD ON CHIMNEYS, TANKS AND SIMILAR STRUCTURES

Rev 3-14

In accordance with ASCE 7-16

Project Site: PDX Airport

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ — q_z = Velocity Pressure, Sec. 26.10.2

Category IV (Essential, Critical Facilities) in All Regions

Round/hexagonal chimneys and tanks (Determines *Directionality Factor*, K_d value)

V =	107 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	22.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.95	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ — p = Design wind pressure, Sec. 29.4.

Exposure = C

h =	15.0 ft	h = Structure height
D =	9.0 ft	D = Diameter or least horizontal dimension
h/D =	1.667	
G =	0.85	G = Gust effect factor, Sec. 26.11

Tank or chimney x-section: Round (D/sqrt[qz] < 2.5), All roughness

(Determines C_f values)

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES** [4] **p (psf)**
0 - 15	0.85	23.65	0.711	**14.3**
20	0.90	25.04	0.711	**15.1**
25	0.94	26.15	0.711	**15.8**
30	0.98	27.27	0.711	**16.5**
40	1.04	28.93	0.711	**17.5**
50	1.09	30.33	0.711	**18.3**
60	1.13	31.44	0.711	**19.0**
70	1.17	32.55	0.711	**19.7**
80	1.21	33.66	0.711	**20.3**
90	1.24	34.50	0.711	**20.9**
100	1.26	35.06	0.711	**21.2**
120	1.31	36.45	0.711	**22.0**
140	1.36	37.84	0.711	**22.9**
160	1.39	38.67	0.711	**23.4**
180	1.43	39.79	0.711	**24.0**
200	1.46	40.62	0.711	**24.6**

Notes: 1. Wind pressures may act towards and/or away from the structures (reversible).
2. C_f: force coefficient per Figure 29.4-1.
3. q_z: velocity pressure evaluated at height z above ground.
4. Wind pressures are factored strength level per ASCE 7. Use 60% for ASD design.

WIND LOAD ON CHIMNEYS, TANKS AND SIMILAR STRUCTURES

Rev 3-14

In accordance with ASCE 7-16

Project Site: PDX Fuel Facility, Portland Oregon

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ — q_z = Velocity Pressure, Sec. 26.10.2

Category IV (Essential, Critical Facilities) in All Regions

Square chimneys and tanks (Determines *Directionality Factor*, K_d value)

V =	107 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	0.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.90	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ — p = Design wind pressure, Sec. 29.4.

Exposure = C

h =	0.4 ft	h = Structure height
D =	0.5 ft	D = Diameter or least horizontal dimension
h/D =	0.83333	
G =	0.85	G = Gust effect factor, Sec. 26.11

Tank or chimney x-section: Square (wind normal to face)
(Determines C_f values)

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES** [4] **p (psf)**
0 - 15	0.85	22.42	1.3	**24.8**
20	0.90	23.74	1.3	**26.2**
25	0.94	24.80	1.3	**27.4**
30	0.98	25.85	1.3	**28.6**
40	1.04	27.43	1.3	**30.3**
50	1.09	28.75	1.3	**31.8**
60	1.13	29.81	1.3	**32.9**
70	1.17	30.86	1.3	**34.1**
80	1.21	31.92	1.3	**35.3**
90	1.24	32.71	1.3	**36.1**
100	1.26	33.24	1.3	**36.7**
120	1.31	34.56	1.3	**38.2**
140	1.36	35.87	1.3	**39.6**
160	1.39	36.67	1.3	**40.5**
180	1.43	37.72	1.3	**41.7**
200	1.46	38.51	1.3	**42.6**

Notes:
1. Wind pressures may act towards and/or away from the structures (reversible).
2. C_f: force coefficient per Figure 29.4-1.
3. q_z: velocity pressure evaluated at height z above ground.
4. Wind pressures are factored strength level per ASCE 7. Use 60% for ASD design.
5. For pipe racks, may use tributary height = largest pipe diameter + 10% pipe rack width (per ASCE Wind Loads for Petrochemical Facilities and Other Industrial Facilities)

This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Hazards by Location

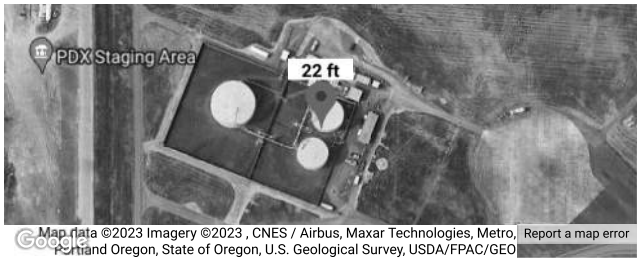
Search Information

Coordinates: 45.596832247808265, -122.6133470958069

Elevation: 22 ft

Timestamp: 2023-01-23T15:11:00.344Z

Hazard Type: Wind



ASCE 7-16

MRI 10-Year	66 mph
MRI 25-Year	72 mph
MRI 50-Year	77 mph
MRI 100-Year	82 mph
Risk Category I	91 mph
Risk Category II	97 mph
Risk Category III	103 mph
Risk Category IV	107 mph

ASCE 7-10

MRI 10-Year — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 25-Year — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 50-Year — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 100-Year — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category I — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category II — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category III-IV — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

ASCE 7-05

ASCE 7-05 Wind Speed — Special Region mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

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Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

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Snow

This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Hazards by Location

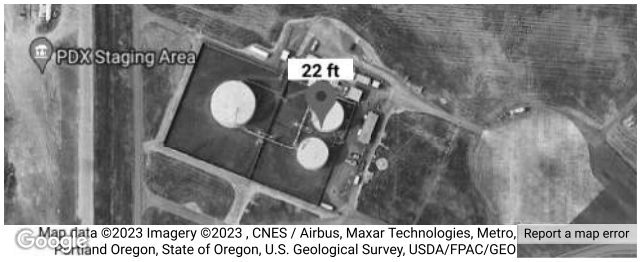
Search Information

Coordinates: 45.596832247808265, -122.6133470958069

Elevation: 22 ft

Timestamp: 2023-01-23T15:11:42.566Z

Hazard Type: Snow



ASCE 7-16

Ground Snow Load ..... 11 lb/sqft

The reported ground snow load applies at the query location of 22 feet up to a maximum elevation of 30 feet with a tolerance of 100 feet.

ASCE 7-10

Ground Snow Load ..... 10 lb/sqft

The reported ground snow load applies at the query location of 22 feet up to a maximum elevation of 600 feet.

ASCE 7-05

Ground Snow Load ..... 10 lb/sqft

The reported ground snow load applies at the query location of 22 feet up to a maximum elevation of 600 feet.

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

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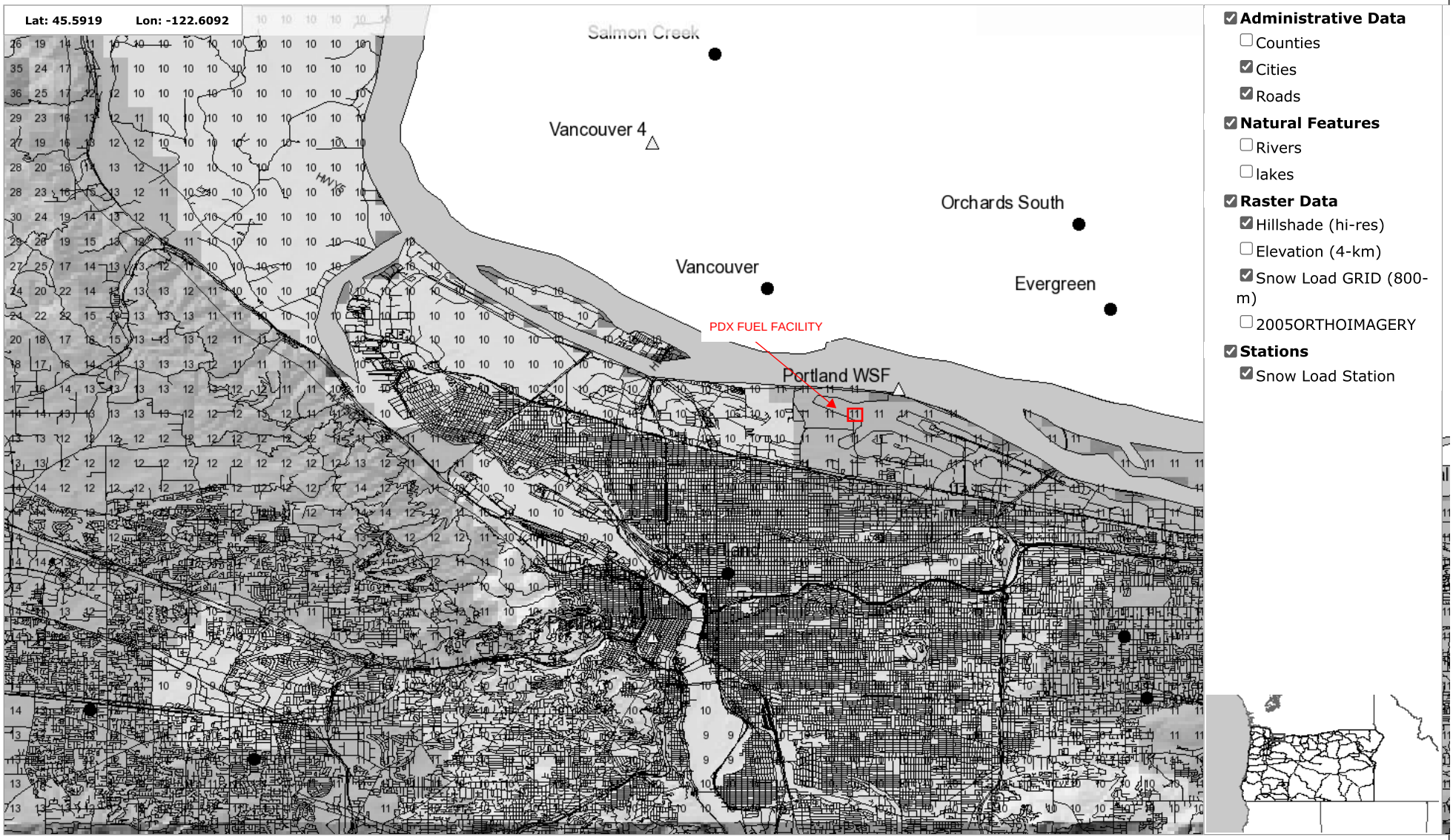
Oregon Snow Load Map

Usage Notes | Lat/Lon Lookup | Documentation



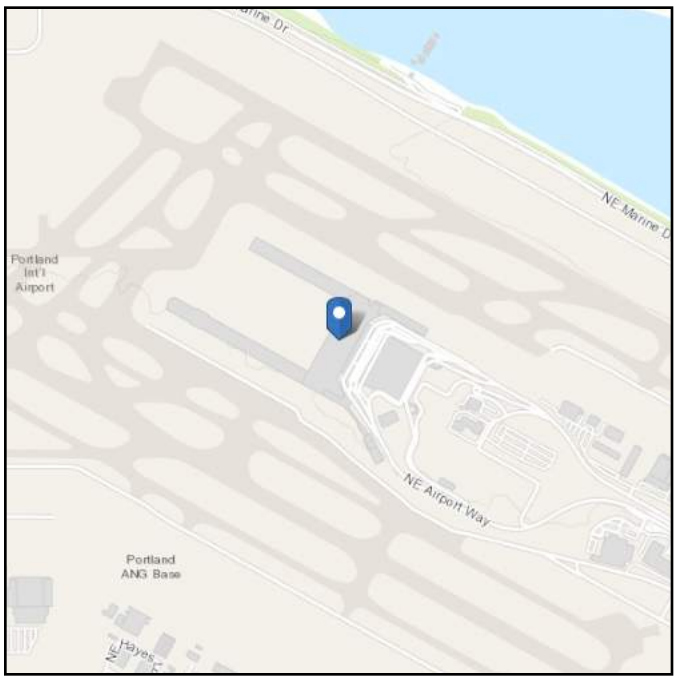
Ice

ASCE 7 Hazards Report

Address:
Portland International Airport - Portland
,

Standard: ASCE/SEI 7-16
Risk Category: IV
Soil Class: undefined

Latitude: 45.58919
Longitude: -122.59353
Elevation: 26.9832269297362 ft (NAVD 88)



Ice

Results:

Ice Thickness:	2.00 in.
Concurrent Temperature:	25 F
Gust Speed	30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Fri Sep 15 2023

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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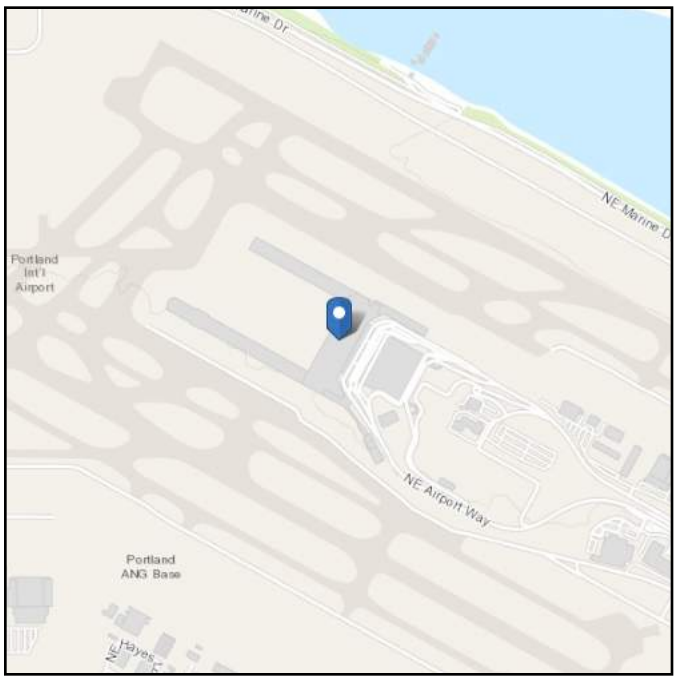
ASCE 7 Hazards Report

Address:
Portland International Airport - Portland
,

Standard: ASCE/SEI 7-16
Risk Category: IV
Soil Class: undefined

Latitude: 45.58919
Longitude: -122.59353
Elevation: 26.9832269297362 ft (NAVD 88)



Ice

Results:

Ice Thickness:	2.00 in.
Concurrent Temperature:	25 F
Gust Speed	30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Fri Sep 15 2023

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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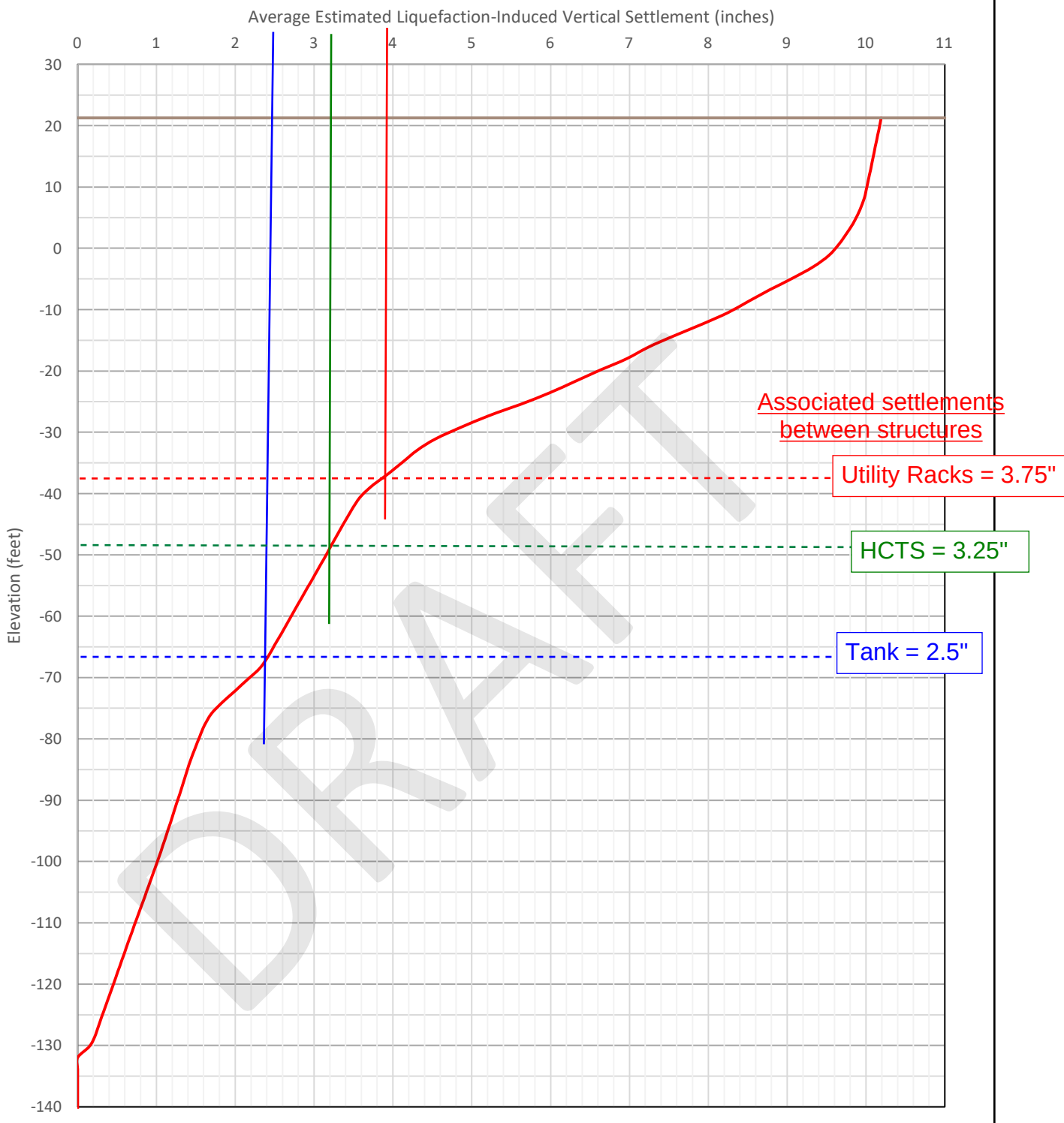
ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Pile Design



DRAFT

REFERENCE ONLY

HALEY ALDRICH

PDX FUEL TANK DESIGN
PORTLAND INTERNATIONAL AIRPORT
500 NE MARINE DRIVE
PORTLAND, OREGON 97218

ESTIMATED VERTICAL SEISMIC SETTLEMENT

SCALE: AS SHOWN
OCTOBER 2023

FIGURE 7

STR ID	*Relevant Profiles*	*Loading Condition*	*Soil Strength*	*ESU-3a Thickness (assumes 90% reduction)*	*ESU-3b Thickness (assumes 40% reduction)*	*Max. Lateral Soil Movement*
Tanks (L=131 ft, OD=18")	Middle	Static - Wind	Normal	6-ft (42-ft to 48 ft)	48-ft (48-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			15 inches
		Post Spread Gravity Loads	Normal			n/a
	Southern Edge	Static - Wind	Normal	N/A	54-ft (42-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			30 inches
		Post Spread Gravity Loads	Normal			n/a
HCTS (L=101 ft, OD=18")	Northern Edge	Static - Wind	Normal	22-ft (28-ft to 50-ft)	44-ft (50-ft to 94-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			7 inches
		Post Spread Gravity Loads	Normal			n/a
Pipe Racks (L=85-ft, OD=12")	Middle	Static - Wind	Normal	6-ft (42-ft to 48 ft)	48-ft (48-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			15 inches
		Post Spread Gravity Loads	Normal			n/a
	Southern Edge	Static - Wind	Normal	N/A	54-ft (42-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			30 inches
		Post Spread Gravity Loads	Normal			n/a

REFERENCE ONLY

Project: PDX Fuel Facility
Project Number: 153929

Date: 12/20/2023
By: AJK

Primary and Secondary Tank Pile Supported Mat Foundation

STATIC CONDITIONS

137 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
1700	**221**	-	40	-	10	-
1700	-	**64**	40	-	10	-

STATIC CONDITIONS

137 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
2500	**228**	-	120	-	10	-
2500	-	**64**	120	-	10	-

SEISMIC CONDITIONS

137 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
600	**247.7**	-	30	**16.8**	10	-
600	-	**175**	30	**16**	10	-

SEISMIC CONDITIONS

137 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
750	**247.5**	-	115	**19**	10	-
750	-	**175**	115	**16**	10	-

Notes:

1 Results shown are based on an envelope solution.

Tank = 131-ft Embed, 18-inch Dia., 0.5" Thick Steel Pipe Pile																			
Load Case	Applied Pile Loading (137 pile		FREE HEAD CONDITION									50% FIXED CONDITION							
	Shear	Comp.	Total Lateral Movement @ Pile Head[13]	Effective Deflection @ Pile Head[14]	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head	Deflection @ TOC	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head
	[k]	[k]	[in]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]
Static - Wind	23	160	0.5	-	0.3	131.0	8	23.0	0	23.7	23	0.3	0.2	106.1	0	23.0	0	na	na
Seismic W/ Liq.	23	250	0.5	-	0.3	132.6	8	23.0	0	24.2	23	0.3	0.2	106.0	0	23.0	0	na	na
Seismic w/ 15" Deflection (Middle)	23	250	16.7	1.6	1.2	497.1	48.3	123.2	87.7	2.8	23	15.2	0.2	512.0	48.0	123.2	87.7	336.2	23
Seismic w/ 30" Deflection (Southern Edge)	23	250	32.6	2.0	1.8	539.2	45	145.2	48.6	536.3	23	31.3	0.9	553.9	45.0	147.2	48.7	418.9	23

Notes:

1 Pile Group c-c Spacing = 8'10" to 17' (majority > 10' 3")
2 Fy steel = 45 ksi
3 Pile OD: 18-inch
4 Pile Wall thickness: 0.40-inch (post corrosion)
5 4,000 psi concrete-filled Section, Close Ended
6 0-ft reveal
7 Liquefaction= strength reduction in liquefiable layers via pmult =0.1 to 0.72 (see design notes for details)
8 Sacrifical allowance = 0.1" per Caltrans (100 yr lifespan)
9 Free Field Curvature Case Confims no rupture
10 All cases - pmult=0.75 upper 3-ft for construction disturbance
11 **Static NP= 80 ft bgs with 2.5" estimated Seismic Pile Tip Settlement**
12 **Results pending structural section strength check of 375 kips of liquefaction-induced drag load**

REFERENCE ONLY

Tank = 131-ft Embed, 18-inch Dia., 0.5" Thick Steel Pipe Pile																				
Load Case	Applied Pile Loading (137 pile		FREE HEAD CONDITION									50% FIXED CONDITION								
	Shear	Comp.	Total Lateral Movement @ Pile Head[13]	Effective Deflection @ Pile Head[14]	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head	Deflection @ TOC	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head
	[k]	[k]	[in]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]
Static - Wind	23	160	0.7	-	0.4	133.2	8	23.0	0	23.7	na	0.4	0.2	101.5	0	23.0	0	na	na
Seismic W/ Liq.	23	250	0.7	-	0.5	136.8	8	23.0	0	24.9	na	0.4	0.2	101.1	0	23.0	0	na	na
Seismic w/ 15" Deflection (Middle)	23	250	16.9	1.8	1.4	417.9	48.3	104.1	87.7	28.8	23	15.3	0.3	421.5	48.3	104.2	87.7	268.3	23
Seismic w/ 30" Deflection (Southern Edge)	23	250	32.9	2.3	2.0	420.9	45	128.7	48.3	402.7	23	31.1	0.6	426.0	45.0	129.9	48.3	418.9	23

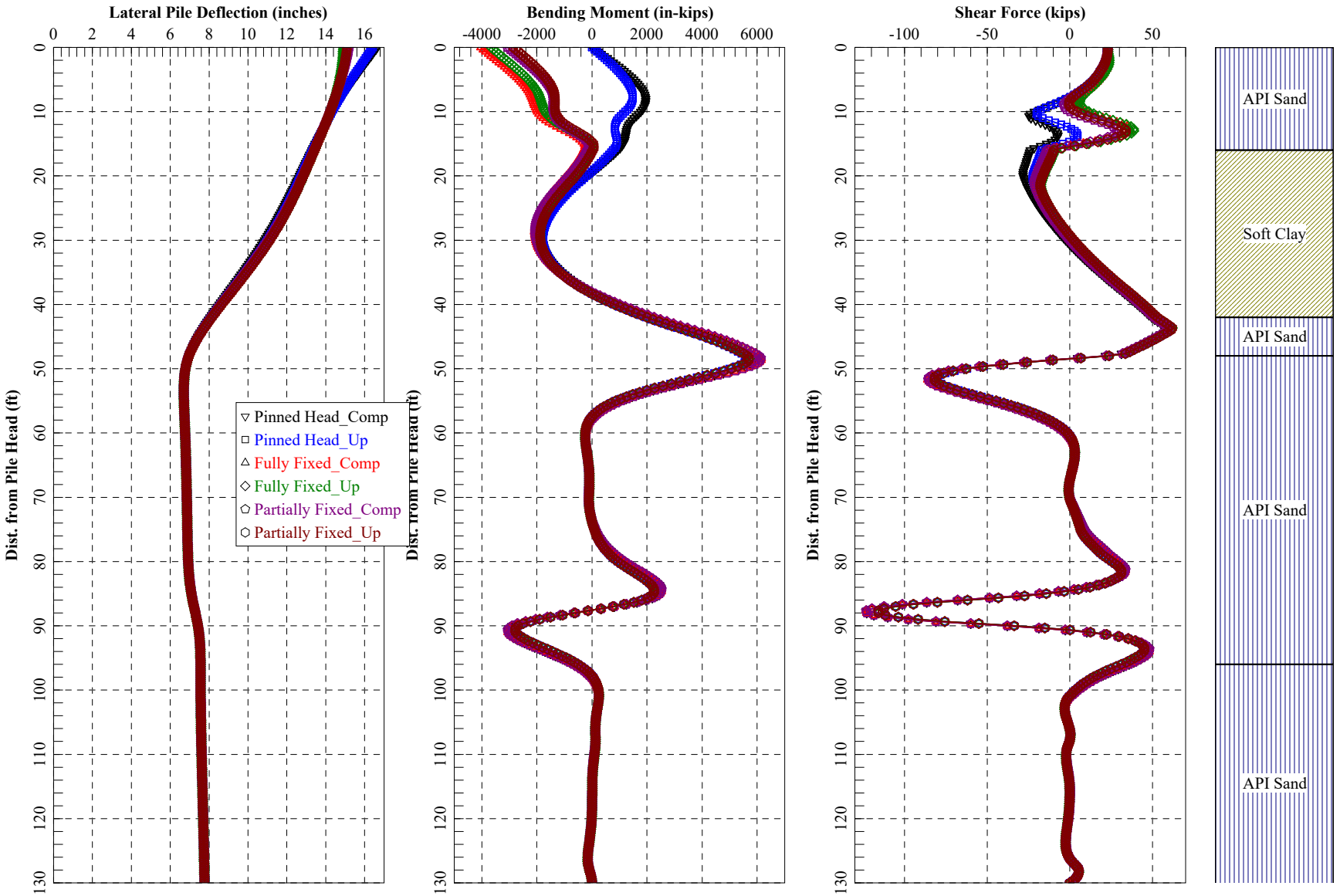
Notes:

1 Pile Group c-c Spacing = 8'10" to 17' (majority > 10' 3")
2 Fy steel = 45 ksi
3 Pile OD: 18-inch
4 Pile Wall thickness: 0.40-inch (post corrosion)
5 Hollow section
6 0-ft reveal
7 Liquefaction= strength reduction in liquefiable layers via pmult =0.1 to 0.72 (see design notes for details)
8 Sacrifical allowance = 0.1" per Caltrans (100 yr lifespan)
9 Free Field Curvature Case Confims no rupture
10 All cases - pmult=0.75 upper 3-ft for construction disturbance
11 **Static NP= 80 ft bgs with 2.5" estimated Seismic Pile Tip Settlement**
12 **Results pending structural section strength check of 375 kips of liquefaction-induced drag load**

13 Total Lateral Movement = Global Lateral Movement of Pile System with respect to the Static Condition **(Recommended for Performance Comparisons Across Site)**
14 Effective Deflection at Top of Column = "Total Lateral Movement" - Free Field Movement

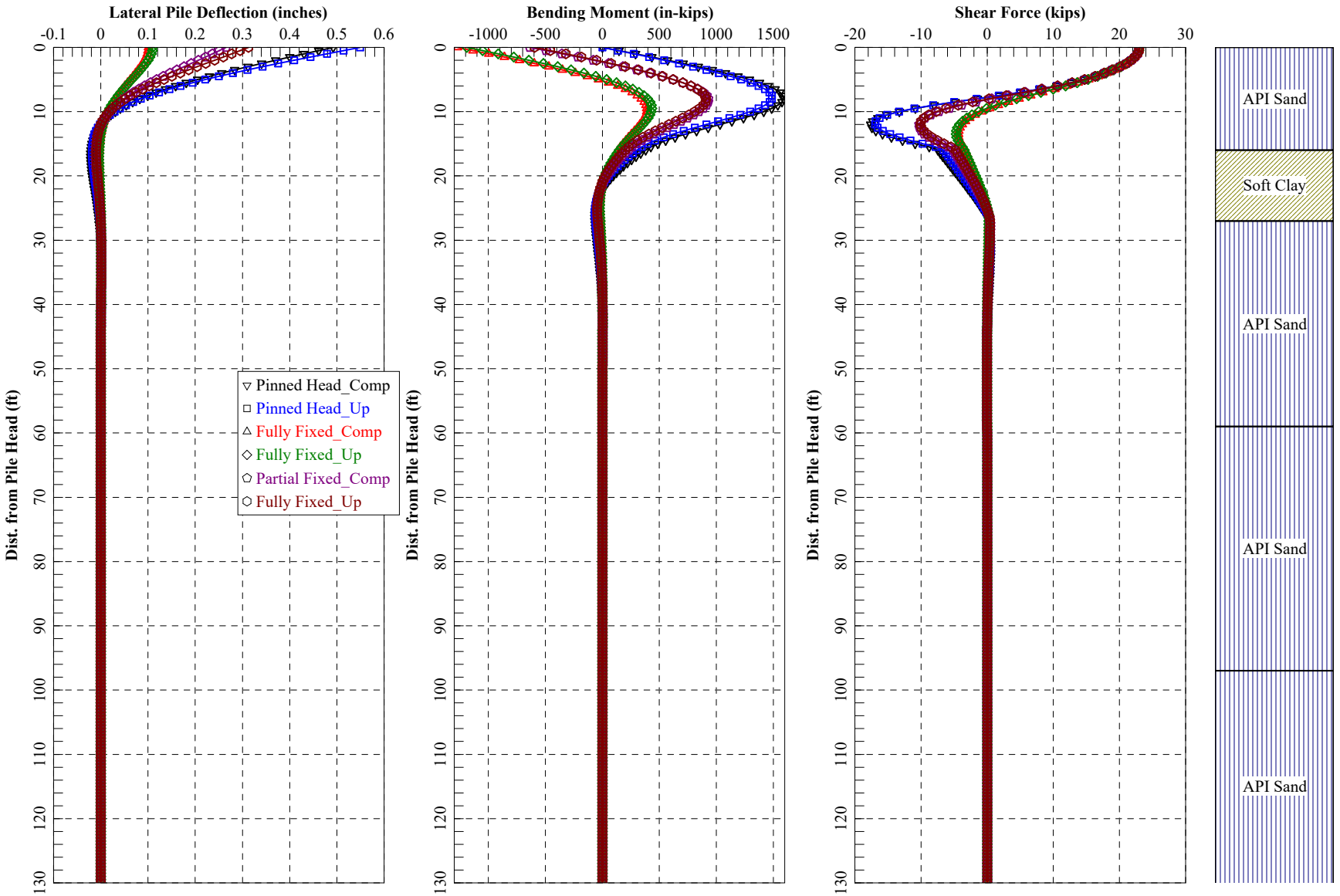
REFERENCE ONLY

REFERENCE ONLY



Tank - Middle Profile (15") Lat. Spread_Closed Ended

REFERENCE ONLY



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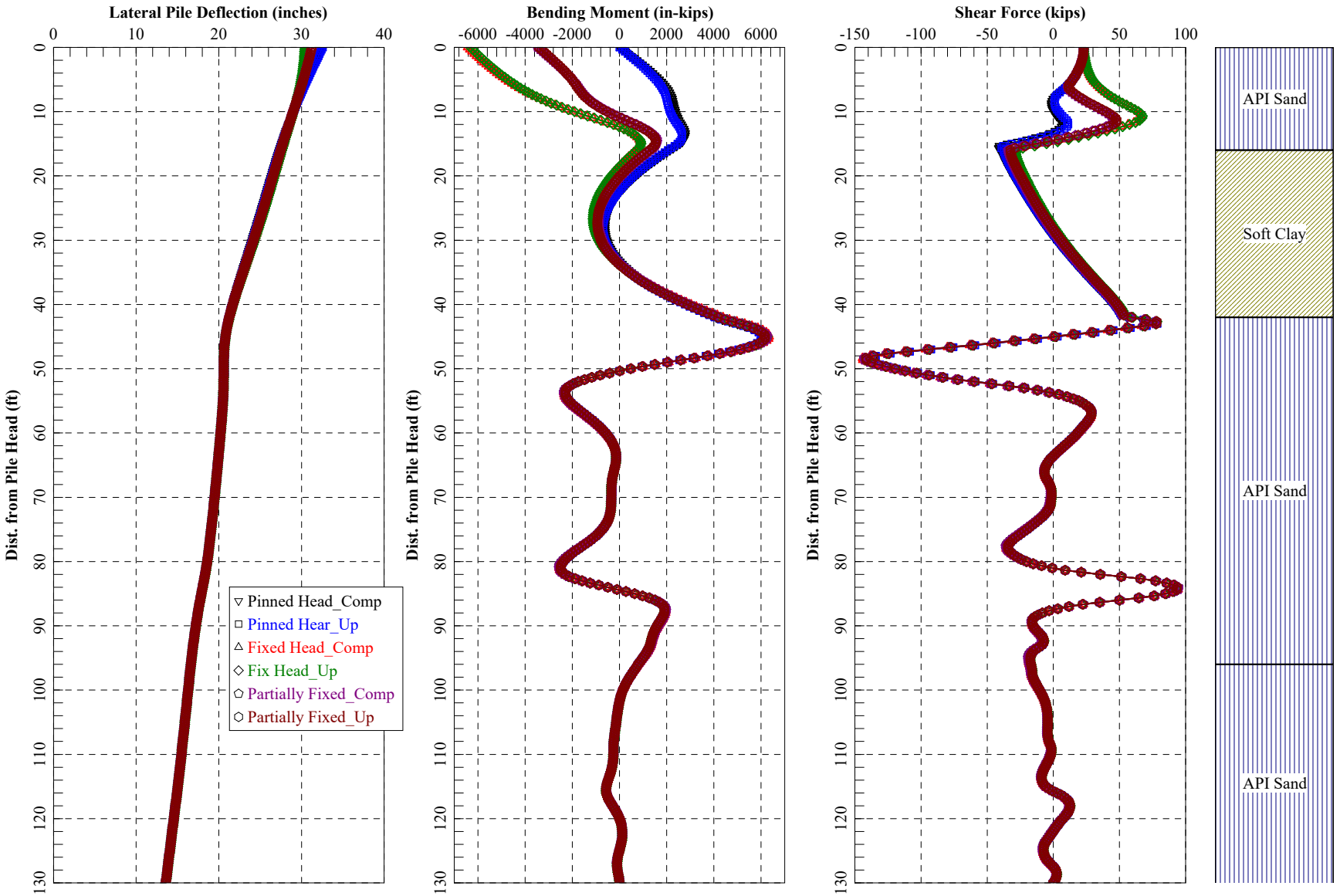


Tank - South (30 inch) Lat. Deflection_Closed Ended

Project: PDX Fuel Facility
Project Number: 153929

Date: 12/20/2023
By: AJK

HCTS / OFFLOAD PILE REACTIONS

STATIC CONDITIONS

20 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
1700	**131**	-	40	-	10	-
1700	-	**13**	40	-	10	-

STATIC CONDITIONS

20 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
2500	**135**	-	120	-	10	-
2500	-	**22.7**	120	-	10	-

SEISMIC CONDITIONS

20 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
600	**117**	-	30	**16.2**	10	-
600	-	**22.7**	30	**15.6**	10	-

SEISMIC CONDITIONS

20 Pile Arrangement

Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
750	**119**	-	115	**16.2**	10	-
750	-	**23**	115	**15.6**	10	-

Notes:

1 Results shown are based on an envelope solution.

2 12.2.5.2 - requires that the foundation and other elements contributing to the overturning resistance of cantilever column structures be designed with the overstrength factor

3 $\rho = 1.3$ $\Omega = 1.3$

HCTS = 101-ft Embed, 18-inch Dia., 0.5" Thick Steel Pipe Pile																			
Load Case	Applied Pile Loading (20 pile		FREE HEAD CONDITION									50% FIXED CONDITION							
	Shear	Comp.	**Total Lateral Movement @ TOC[13]**	Effective Deflection @ TOC[14]	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head	Deflection @ TOC	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head
	[k]	[k]	**[in]**	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]
Static - Wind	17	155	**0.3**	-	0.2	84.6	7.25	17.0	0	17.4	na	0.2	0.1	75.6	0	17.0	0	na	na
Seismic W/ Liq.	17	155	**0.3**	-	0.2	83.9	7	17.0	0	17.4	na	0.2	0.1	70.2	0	17.0	0	na	na
Seismic w/ 8" Deflection (North Edge)	17	155	**9.0**	**1.0**	0.8	264.9	33.3	55.3	40.3	17.1	17	7.9	0.1	266.1	33.7	55.2	40.3	163.1	17

Notes:

1 Pile Min. c-c Spacing = 13-ft (s/b = 8.67)
2 Fy steel = 45 ksi
3 Pile OD: 18-inch
4 Pile Wall thickness: 0.40-inch (post corrosion)
5 f'c = 4000 psi concrete filled section, closed ended
6 0-ft reveal
7 Liquefaction= strength reduction in liquefiable layers via pmult =0.1 to 0.72 (see design notes for details)
8 Sacrifical allowance = 0.1" per side per Caltrans (100 yr lifespan)
9 Free Field Curvature Case Confims no rupture
10 All cases - pmult=0.75 upper 3-ft for construction disturbance
11 **Static NP= 71 ft bgs with 3.25" estimated Seismic Pile Tip Settlement**
12 **Results pending structural section strength check of 230 kips of liquefaction-induced drag load**

13 Total Lateral Movement = Global Lateral Movement of Pile System with respect to the Static Condition **(Recommended for Performance Comparisons Across Site)**
14 Effective Deflection at Top of Column = "Total Lateral Movement" - Free Field Movement

REFERENCE ONLY

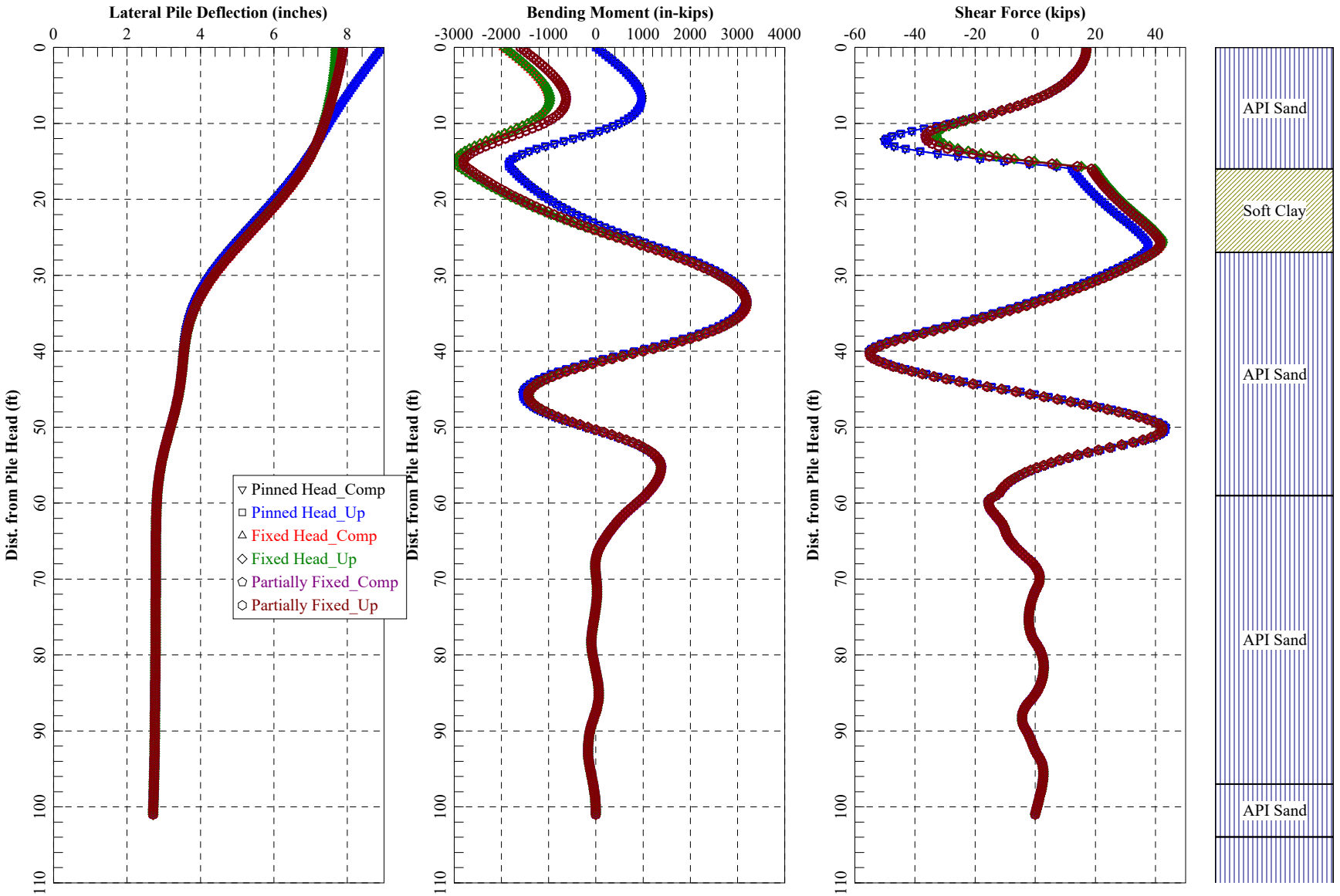
HCTS = 101-ft Embed, 18-inch Dia., 0.5" Thick Steel Pipe Pile																			
Load Case	Applied Pile Loading (20 pile		FREE HEAD CONDITION									50% FIXED CONDITION							
	Shear	Comp.	**Total Lateral Movement @ TOC[13]**	Effective Deflection @ TOC[14]	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head	Deflection @ TOC	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head
	[k]	[k]	**[in]**	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]
Static - Wind	17	155	**0.4**	-		81.3	7	17.0	0	17.6	na	0.2	0.1	70.4	0	17.0	0	na	na
Seismic W/ Liq.	17	155	**0.4**	-	0.3	84.4	7	17.0	0	17.6	na	0.2	0.1	70.0	0	17.0	0	na	na
Seismic w/ 8" Deflection (North Edge)	17	155	**9.1**	**1.1**	0.8	247.4	33.3	53.6	40	19.2	17	7.8	0.1	251.7	33.3	53.9	40.0	136.9	17

Notes:

1 Pile Min. c-c Spacing = 13-ft (s/b = 8.67)
2 Fy steel = 45 ksi
3 Pile OD: 18-inch
4 Pile Wall thickness: 0.40-inch (post corrosion)
5 0-ft reveal
6 Hollow Section
7 Liquefaction= strength reduction in liquefiable layers via pmult =0.1 to 0.72 (see design notes for details)
8 Sacrifical allowance = 0.1" per side per Caltrans (100 yr lifespan)
9 Free Field Curvature Case Confims no rupture
10 All cases - pmult=0.75 upper 3-ft for construction disturbance
11 **Static NP= 71 ft bgs with 3.25" estimated Seismic Pile Tip Settlement**
12 **Results pending structural section strength check of 230 kips of liquefaction-induced drag load**

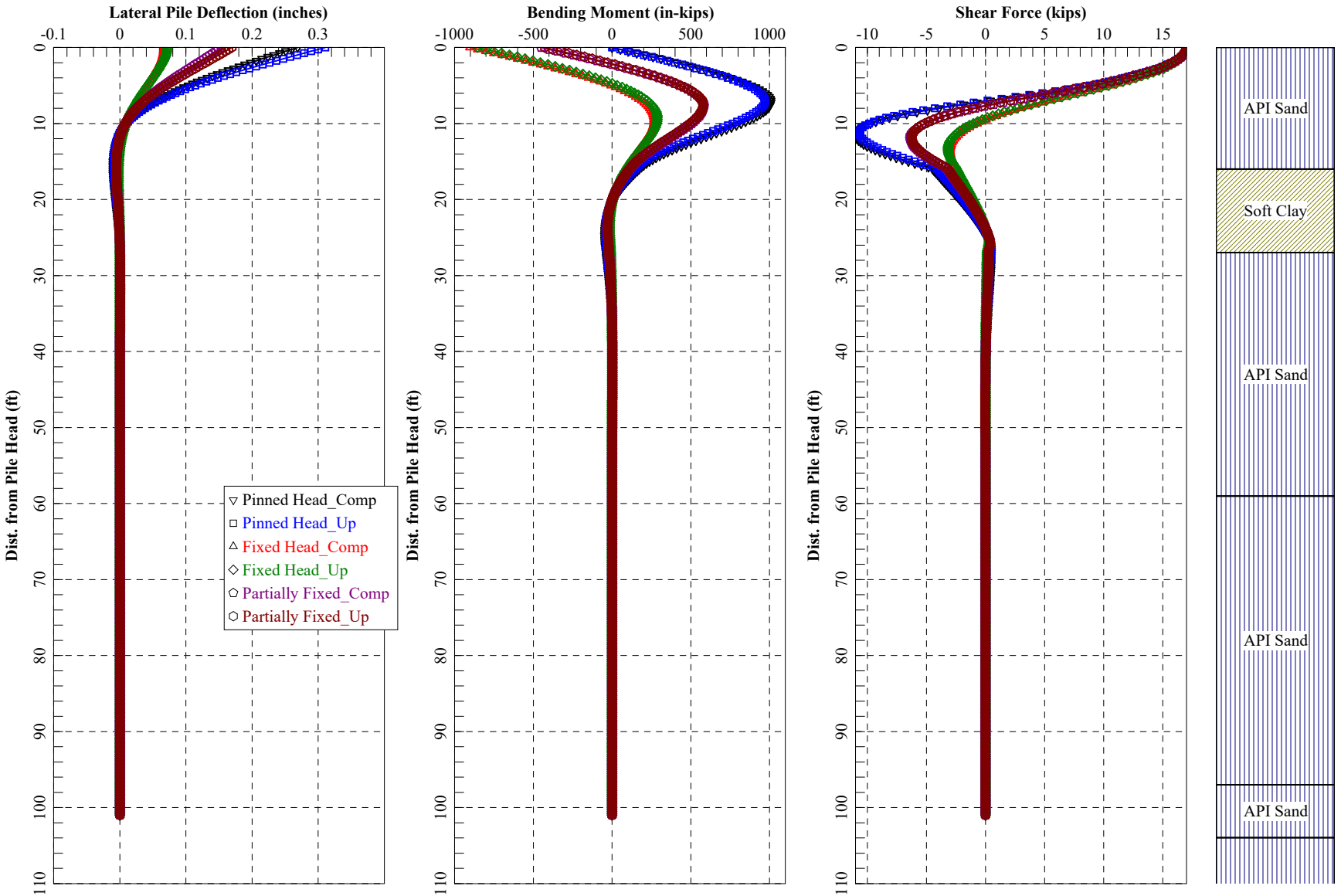
13 Total Lateral Movement = Global Lateral Movement of Pile System with respect to the Static Condition **(Recommended for Performance Comparisons Across Site)**
14 Effective Deflection at Top of Column = "Total Lateral Movement" - Free Field Movement

REFERENCE ONLY



HCTS - North (8-inch) Lat. Spread_Closed Ended

REFERENCE ONLY



HCTS - Seismic (pre Lat. Spread)_Closed Ended

REFERENCE ONLY

Project: PDX Fuel Facility
Project Number: 153929

Date: 12/20/2023
By: AJK

UTILITY RACK PILE REACTIONS

STATIC CONDITIONS						
Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
1700	61	-	40	3.4	10	-
1700	9	-	40	1.3	10	-

STATIC CONDITIONS						
Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
2500	62	-	120	4	10	-
2500	9	-	120	1.2	10	-

SEISMIC CONDITIONS						
Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
600	58	-	30	19	10	-
600	13	-	30	9	10	-

SEISMIC CONDITIONS						
Compression Spring Constant (k/in)	Max Compression (kips)	Min Compression (kips)	Lateral Spring Constant (k/in)	Lateral (kips)	Tension Spring Constant (k/in)	Tension (kips)
750	58	-	115	19	10	-
750	13	-	115	9	10	-

Notes:

1 Results shown are based on envelope solution.

Utility Racks = 75-ft Embed, 18-inch Dia., 0.5" Thick Steel Pipe Pile																			
Load Case	Applied Pile Loading (29 Pile Layout)		FREE HEAD CONDITION									50% FIXED CONDITION							
	Shear	Comp.	**Total Lateral Movement @ TOC[13]**	Effective Deflection @ TOC[14]	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head	Deflection @ TOC	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head
	[k]	[k]	**[in]**	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]
Static - Wind	23	71	**0.6**	-	0.3	130.4	8	23.0	0	23.3	na	0.3	0.2	104.7	0	23.0	0	na	na
Seismic W/ Liq.	23	71	**0.6**	-	0.3	130.3	8	23.0	0	23.3	na	0.3	0.2	104.6	0	23.0	0	na	na
Seismic w/ 15" Deflection (Middle)	23	71	**16.6**	1.6	1.1	460.6	48.5	77.0	51.6	21.5	23	15.2	0.2	471.9	48.5	79.7	51.8	313.7	23.0
Seismic w/ 30" Deflection (Southern Edge)	23	71	**32.5**	2.5	1.7	479.2	45	132.1	48.5	25.1	23	31.3	0.9	506.2	0.0	134.8	48.5	na	23.0

Notes:

1 Pile Min. c-c Spacing = 5.9-ft (s/b = 5.9), Pmult= 0.94 along pile length
2 Fy steel = 45 ksi
3 Pile OD: 18-inch
4 Pile Wall thickness: 0.4-inch (post corrosion)
5 f'c= 4000 psi concrete filled section, clesed ended
6 0-ft reveal
7 Liquefaction= strength reduction in liquefiable layers via pmult =0.1 to 0.72 (see design notes for details)
8 Sacrifical allowance = 0.1" per side per Caltrans (100 yr lifespan)
9 Free Field Curvature Case Confims no rupture
10 All cases - pmult=0.75 upper 3-ft for construction disturbance
11 **Static NP= 60 ft bgs with 3.75" estimated Seismic Pile Tip Settlement**
12 **Results pending structural section strength check of 160 kips of liquefaction-induced drag load**

13 Total Lateral Movement = Global Lateral Movement of Pile System with respect to the Static Condition **(Recommended for Performance Comparisons Across Site)**
14 Effective Deflection at Top of Column = "Total Lateral Movement" - Free Field Movement

REFERENCE ONLY

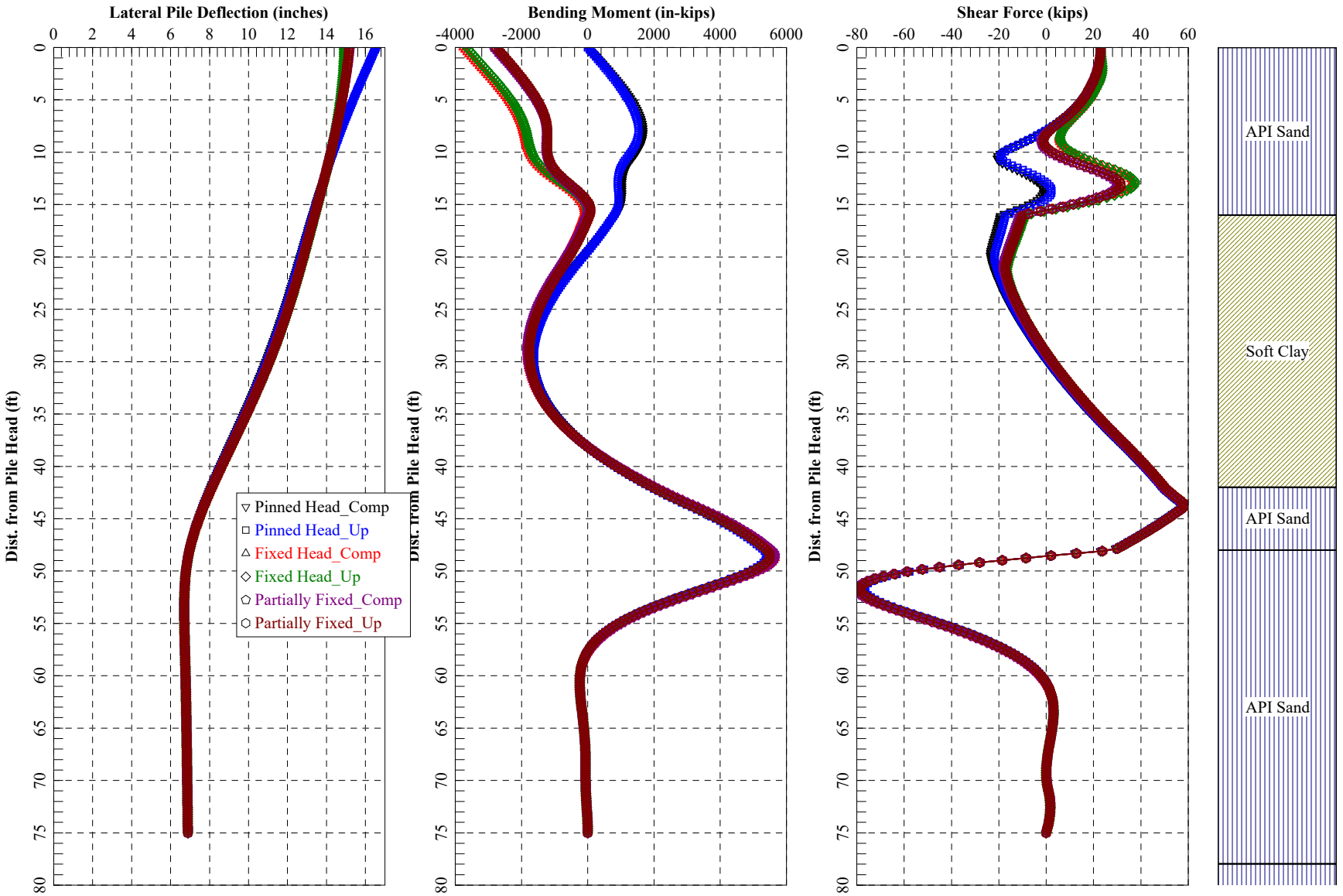
Utility Racks = 75-ft Embed, 18-inch Dia., 0.5" Thick Steel Pipe Pile																				
Load Case	Applied Pile Loading (29 Pile Layout)			FREE HEAD CONDITION									50% FIXED CONDITION							
	Shear	Comp.	Tension	**Total Lateral Movement @ TOC[13]**	Effective Deflection @ TOC[14]	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head	Deflection @ TOC	Rotation @ TOC	Maximum Moment		Maximum Shear		Moment at Pile Head	Shear at Pile Head
	[k]	[k]	[k]	**[in]**	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]	[in]	[deg]	[k-ft]	[@ ft]	[k]	[@ ft]	[k-ft]	[k]
Static - Wind	23	71	-	**0.7**	-	0.4	131.0	8	23.0	0	23.5	na	0.4	0.2	102.4	0	23.0	0	na	na
Seismic W/ Liq.	23	71	-	**0.7**	-	0.4	130.9	8	23.0	0	23.5	na	0.4	0.2	102.4	0	23.0	0	na	na
Seismic w/ 15" Deflection (Middle)	23	71	-	**16.7**	1.7	1.2	409.3	48.5	73.7	51.5	24.5	23	15.0	0.2	412.4	48.5	74.4	51.5	266.5	23.0
Seismic w/ 30" Deflection (Southern Edge)	23	71	-	**32.7**	2.7	1.9	427.7	45	124.3	48.25	25.2	23	31.18	0.7	434.8	45.0	125.9	48.3	na	23.0

Notes:

1 Pile Min. c-c Spacing = 5.9-ft (s/b = 5.9), Pmult= 0.94 along pile length
2 Fy steel = 45 ksi
3 Hollow Section
4 Pile OD: 18-inch
5 Pile Wall thickness: 0.4-inch (post corrosion)
6 0.5-ft embed into cap, Hollow Section
7 Liquefaction= strength reduction in liquefiable layers via pmult =0.1 to 0.72 (see design notes for details)
8 Sacrifical allowance = 0.1" per side per Caltrans (100 yr lifespan)
9 Free Field Curvature Case Confims no rupture
10 All cases - pmult=0.75 upper 3-ft for construction disturbance
11 **Static NP= 60 ft bgs with 3.75" estimated Seismic Pile Tip Settlement**
12 **Results pending structural section strength check of 160 kips of liquefaction-induced drag load**

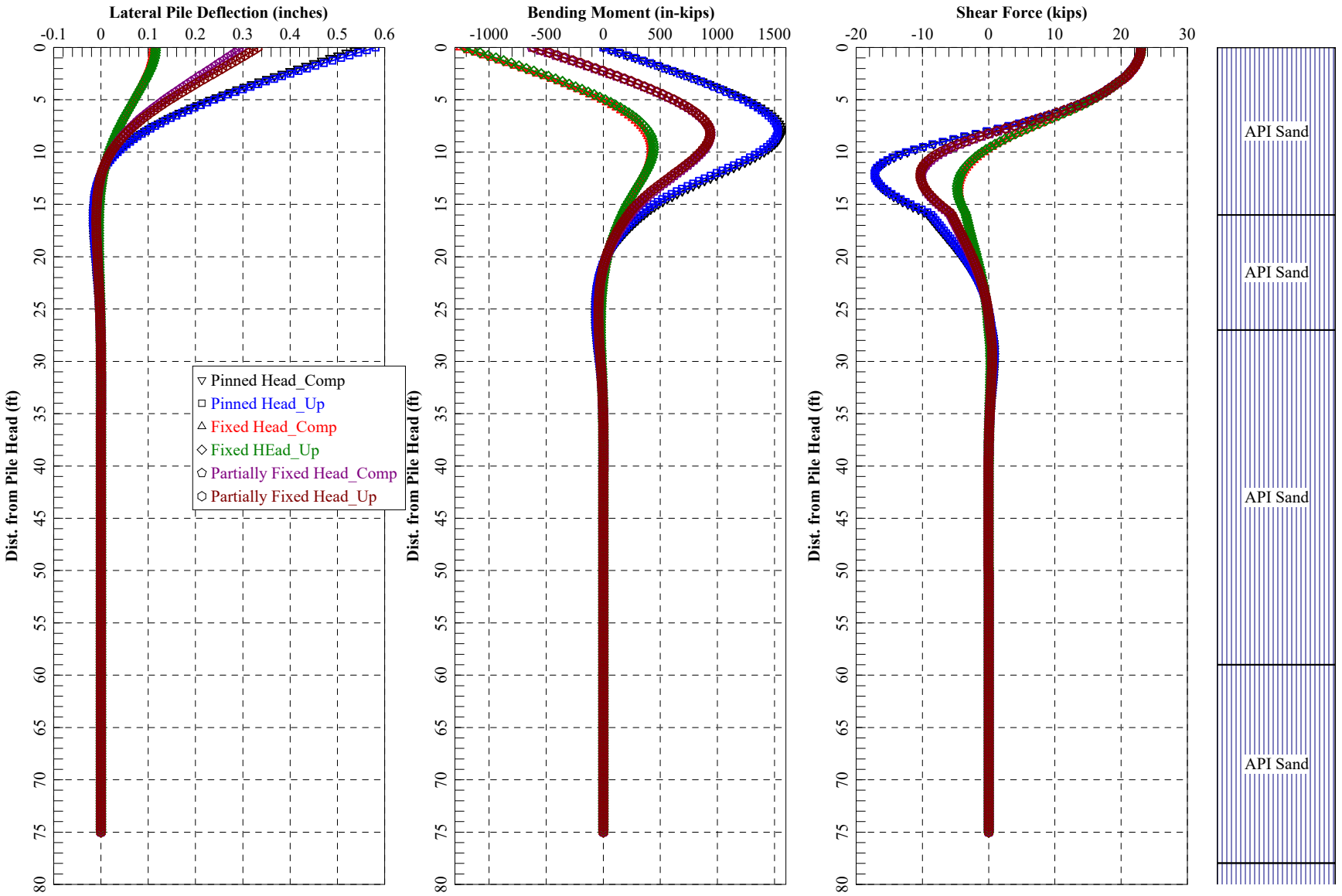
13 Total Lateral Movement = Global Lateral Movement of Pile System with respect to the Static Condition **(Recommended for Performance Comparisons Across Site)**
14 Effective Deflection at Top of Column = "Total Lateral Movement" - Free Field Movement

REFERENCE ONLY



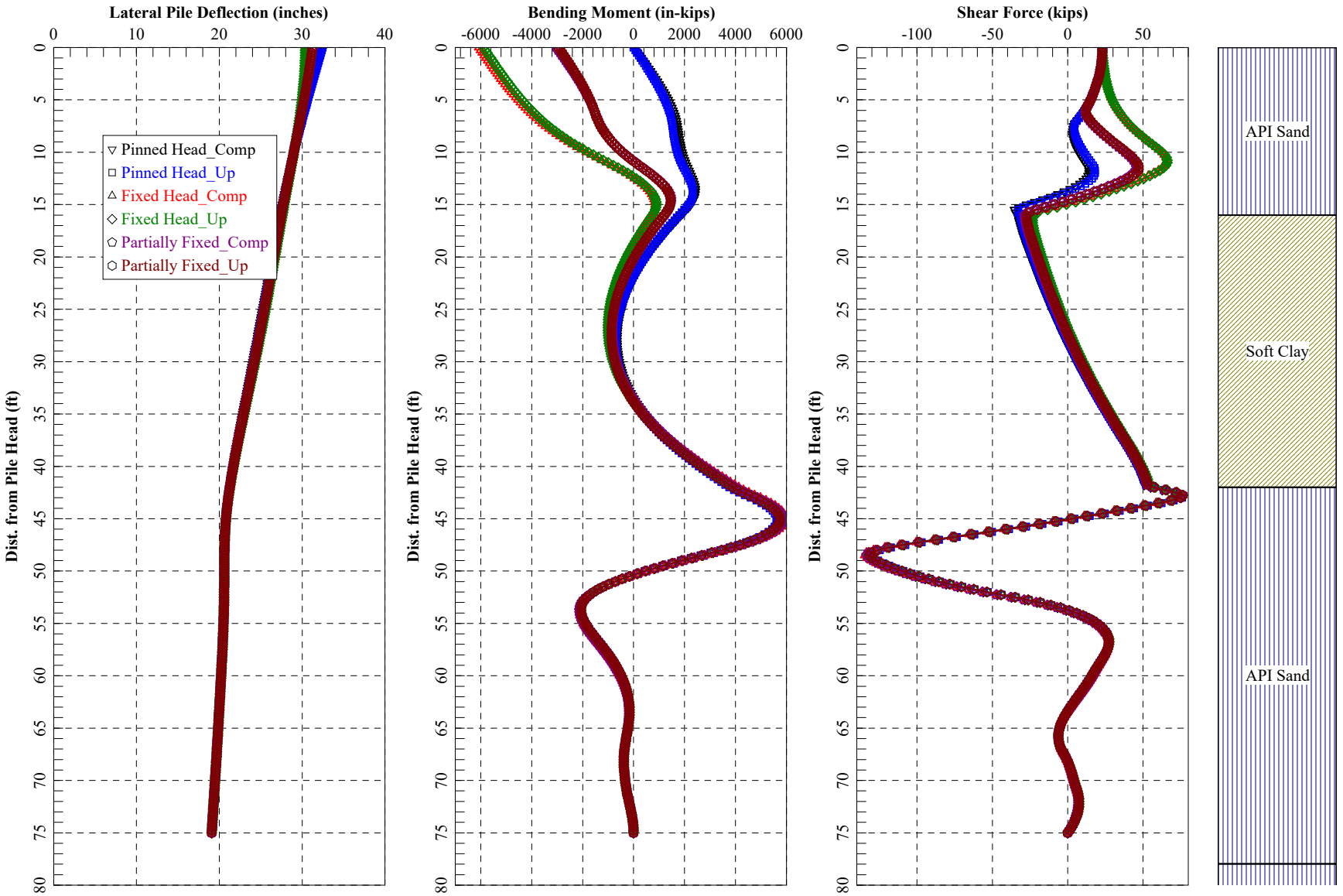
Utility Racks - Middle (15-inch) Lat. Spread_Closed Ended

REFERENCE ONLY



Utility Racks - Seismic (pre Lat. Spread)_Closed Ended

REFERENCE ONLY



Utility Racks - South (30-inch) Lat. Spread_Closed Ended

REFERENCE ONLY

Strain Compatibility Method of Composite Concrete Filled Round Tube

$\phi_b := 0.9$ $\phi_v := 0.9$ $\phi_c := 0.9$

$r := \frac{18\ in}{2}$

$t := .5 \cdot 0.8\ in = 0.4\ in$

$f'_c := 6000\ psi$

$f_y := 45\ ksi$

$M_u := 553.\ kip \cdot ft \cdot \phi_b = 497.7\ kip \cdot ft$

The M_{u1} moment is from the free field soil strain on the piles induced on the piles from the soil displacing during a seismic event and loading the pile. The ϕ_b factor was applied to the load to treat the load as an ASD design with a safety factor of 1.

$V_u := 147.2\ kip \cdot \phi_v = 132.48\ kip$

Shear loads are similar to moment loads

$P := \frac{250\ kip}{0.7} = 357.143\ kip$

(Worst case axial load for flexure check) positive is in compression

$P_u := 250\ kip \cdot 1.2 = 300\ kip$

(axial compression check) positive is in compression

$K := 1.2$

$L := 1\ ft$

$E_s := 29000\ ksi$ $E_c := 57000 \cdot \sqrt{\frac{f'_c}{psi}} \cdot psi = \left(4.415 \cdot 10^6\right)\ psi$

$r_i := r - t = 8.6\ in$

$r_m := r - \frac{t}{2}$

$D := 2 \cdot r$

$\frac{D}{t} = 45$

$0.22 \cdot \frac{E_s}{f_y} = 141.778$ $0.15 \cdot \frac{E_s}{f_y}$

For members subject primarily to flexural loading

$\text{if}\left(\frac{D}{t} \le 0.22 \cdot \frac{E_s}{f_y}, \text{“OK”}, \text{“NOT OK”}\right) = \text{“OK”}$

For members subject primarily to axial loading

$\text{if}\left(\frac{D}{t} \le 0.15 \cdot \frac{E_s}{f_y}, \text{“OK”}, \text{“NOT OK”}\right) = \text{“OK”}$

Axial Check

$A_c := \pi \cdot r_i^2 = 232.352\ in^2$ $A_s := 2 \cdot \pi \cdot r_m \cdot t = 22.117\ in^2$

$P_o := 0.95 \cdot f'_c \cdot A_c + f_y \cdot A_s = 2319.664\ kip$

$I_s := \frac{\pi}{4} \cdot \left(r^4 - r_i^4\right) = 856.805\ in^4$

$I_c := \frac{\pi}{4} \cdot \left(r_i^4\right) = \left(4.296 \cdot 10^3\right)\ in^4$

$C' := 0.15 + \frac{P}{P_o} + \frac{A_s}{A_s + A_c} = 0.391$

$EI_{eff} := E_s \cdot I_s + C' \cdot E_c \cdot I_c = \left(2.24 \cdot 10^5\right)\ ft \cdot kip \cdot ft$

$P_e := \frac{\pi \cdot EI_{eff}}{(K \cdot L)^2} = 488778.849\ kip$

$P_{cr1} := 0.877 \cdot P_e = 428659.051\ kip$

$P_{cr2} := 0.658^{\frac{P_o}{P_e}} \cdot P_o = 2315.061\ kip$

$P_n := min\left(P_e, P_{cr1}, P_{cr2}\right) = \left(2.315 \cdot 10^3\right)\ kip$

$\phi P_n := \phi_c \cdot P_n = 2083.555\ kip$

$Check_{Axial_Compression} = \text{“OK”}$

Flexure Check

Guess Values

$y := 1\ in$ $h := 1\ in$

$f'_c = 6\ ksi$

$P = 357.143\ kip$

$Acc := 1\ in^2$ $Cc := 1\ kip$

$r = 9\ in$

$Asc := 1\ in^2$ $Cs := 1\ kip$

$t = 0.4\ in$

$Ast := 1\ in^2$ $Ts := 1\ kip$

$h = r_i - y$

$$Acc = r_i^{\,2} \cdot \operatorname{acos}\left(\frac{r_i - h}{r_i}\right) - (r_i - h) \cdot \sqrt{2 \cdot r_i \cdot h - h^2}$$

$$Cc = .95 \cdot Acc \cdot f'_c$$

Constraints

$$Asc = t \cdot (r_m) \cdot 2 \cdot \operatorname{acos}\left(\frac{y}{r_m}\right)$$

$$Cs = Asc \cdot f_y$$

$$Ast = 2 \cdot \pi \cdot (r_m) \cdot t - Asc$$

$$Ts = Ast \cdot f_y$$

$$Cc + Cs - (P + Ts) = 0$$

Solver

$$sol := \mathbf{find}(y, h, Acc, Cc, Asc, Cs, Ast, \mathbf{Ts})$$

$$sol = \begin{bmatrix} 0.15\ ft \\ 0.567\ ft \\ 0.594\ ft^2 \\ (4.874 \cdot 10^5)\ lbf \\ 0.067\ ft^2 \\ (4.325 \cdot 10^5)\ lbf \\ 0.087\ ft^2 \\ (5.628 \cdot 10^5)\ lbf \end{bmatrix}$$

$y := sol_0 = 1.796\ in$ $\quad h := sol_1 = 6.804\ in$

$Cc := sol_3 = 487.388\ kip$ $\quad Acc := sol_2 = 85.507\ in^2$

$Cs := sol_5 = 432.506\ kip$ $\quad Asc := sol_4 = 9.611\ in^2$

$Ts := sol_7 = 562.751\ kip$ $\quad Ast := sol_6 = 12.506\ in^2$

$Cc + Cs - (P + Ts) = -1.047 \cdot 10^{-13}\ kip$ $\quad Asc + Ast = 22.117\ in^2$

$$\theta := \operatorname{asin}\left(\frac{y}{r_m}\right) = 0.206$$

$$c := r_i \cdot \cos(\theta) = 8.419\ in$$

$$P_{calc} := \left(\left(\frac{\pi}{2} - \theta\right) r_i^{\,2} - y \cdot c\right) \cdot 0.95\ f'_c - 4 \cdot \theta \cdot t \cdot r_m \cdot f_y = 359.1\ kip$$

$$M_n := \left(c \cdot \left(r_i{}^2 - y^2\right) - \frac{c^3}{3}\right) \cdot 0.95 \cdot f'_c + 4 \cdot c \cdot t \cdot \frac{r_m{}^2}{r_i} \cdot f_y = 643.239 \ \textit{kip} \cdot \textit{ft}$$

$$\phi M_n := \phi_b \cdot M_n = 6946.985 \ \textit{kip} \cdot \textit{in}$$

$Check_{Flexure} = \text{“OK”}$

Shear Check

$$V_s := 0.6 \cdot f_y \cdot 0.5 \cdot \pi \cdot t \cdot \left(2 \cdot r_m\right) = 298.577 \ \textit{kip}$$

$V_c := 0 \ \textit{kip}$ Assumed Vc is 0

$$V_n := \left(V_s + 0.5 \cdot V_c\right) = 298.577 \ \textit{kip}$$

ϕ_v

$$\phi V_n := \phi_v \cdot V_n = 268.719 \ \textit{kip}$$

$Check_{Shear} = \text{“OK”}$

Memorandum

BURNS McDONNELL

Date: December 4, 2023

Subject: PDX FUEL FACILITY IMPROVEMENTS – PH 2
4300 NE Marine Drive, Portland, Oregon
Geotechnical Design Process Summary
Burns & McDonnell Project No. 153929

To: Erik Martin (Sargent Engineers)
Derek Koistinen (JH Kelly)
Reid Unke (BMcD)
Adam Kral (BMcD)
Michael Butler (BMcD)

Per request of Sargent Engineers, this document outlines the geotechnical design methodology utilized by Burns & McDonnell for the Portland International Airport (PDX) Fuel Facilities Ph 2 Project pipe pile foundations for the Fuel Storage Tanks, Hazardous Cargo Transportation Security Structure, and above ground utility racks. This document is intended as a general reference for deep foundation design of the Operations Building by Sargent Engineers.

Assumptions and considerations outlined within this document are specific to the design of the Fuel Storage Tanks, Hazardous Cargo Transportation Security Structure, and above ground utility racks; they may not be applicable to other structures at this site. Sargent Engineers is responsible for final design of deep foundations for the Operations Building.

Proposed Development

Three (3) jet fuel storage tanks and supporting ancillary structures (including Hazardous Cargo Transportation Security [HCTS], truck offload facilities, operations building, utility racks, fire protection systems, and ancillary light poles) are proposed to be added to the existing Fueling Facility. Proposed new infrastructure will be integrated with existing systems on site. To our understanding, all existing systems at the site are founded on shallow foundations. Final grade elevation (NAVD88 EL +22-ft) is not expected to change.

Provided Information

Geotechnical Information

The following Geotechnical Reports were provided to BMcD and constitute the basis for the foundation design steps described herein:

1. Report on Enhanced Seismic Design Considerations, PDX Fuel Tank Project, Portland International Airport, Portland, Oregon; prepared by Haley & Aldrich, Inc. of Portland, OR; prepared for Bruns & McDonnell Engineering of Bloomington, MN; dated September 29, 2023.
2. Geotechnical Data Report on PDX Fuel Project Tank Design, Portland International Airport, Portland, Oregon; prepared by Haley & Aldrich, Inc. of Portland, OR; prepared for JH Kelly, LLC of Longview, WA; dated October 2023.
3. Report of Geotechnical Engineering Services, PDX Fuel Tank Design, Portland International Airport, Portland, Oregon; prepared by prepared by Haley & Aldrich, Inc. of Portland, OR; prepared for Bruns & McDonnell Engineering of Bloomington, MN; dated November 2023. (aka “H&A foundation design report referenced herein)

REFERENCE ONLY

Design profile from Table 5 of H&A foundation design report (used for axial and lateral analysis)

Parameter	Engineering Soil Unit (ESU)				
	ESU 1	ESU 2	ESU 3a	ESU 3b	ESU 3c
Elevation (ft)	22 to 6	6 to –5	–5 to –37	–37 to –75	–75+
Static p-y Curve Type	API Sand	API Sand	API Sand	API Sand	API Sand
Static p-y Modulus, k (pci)	102	34.6	85.7	96.6	96.6
Static Friction Angle (°)	32	30	35	36	36
Liquefied p-y Curve Type	API Sand	Soft Clay (Matlock)	API Sand	API Sand	API Sand
Liquefied p-y Modulus, k (pci)	102	n/a	85.7	96.6	96.6
Liquefied p-multiplier[1]	--	--	0.10	0.60	0.72
Liquefied Friction Angle (°)	32	n/a	35	36	36
Undrained Shear Strength at Top of Layer (psf)	n/a	520	n/a	n/a	n/a
Undrained Shear Strength at Bottom of Layer (psf)		655			
Liquefied Strain Factor, ε_{50}	n/a	0.05	n/a	n/a	n/a
Effective Unit Weight (psf)	112	42.6	52.6	57.6	57.6

Note:

1. *Lateral group p-multipliers should be combined with the liquefied p-multipliers as appropriate based on pile spacing.*

Structural Information/Criteria

The following deep foundation design criteria requirements and Pile section dimensions/properties for the tank structures were provided to the designer via email from the structural engineer, A. Kral:

- Pile Cap Assumed Fully Rigid
- Pile Head Fixity Considerations = Pinned Connection and 50% Fixity (partial restraint against rotation)
- Max Allowable Static Settlement = 1 inch
- Max Allowable Static Pile Head Lateral Deflection = 1 inch
- Max Allowable Static Pile Head Rotation = 0.5 deg.
- Steel Pipe Pile Properties
  - Pile OD = 18-inches
  - Pile Thickness = 0.5-inches
  - Effective Pile Thickness post corrosion = 0.4-inches (outside only, concrete filled)
  - F'y steel = 45 ksi
  - F'c concrete = 4.5 ksi
  - Pile Cap connection reinforcement information may be requested from the structural engineer (A. Kral)

REFERENCE ONLY

Deep Foundation Design Methodology

Axial Design

Static Compression - Static Uplift - Seismic Compression - Seismic Uplift

a. FHWA 2016 / APILE – API RP2A Method - (empirical effective stress analysis developed for steel pipe piles in offshore pile design)
    i. North Profile Control (thickest ESU-3a layer) in conjunction with provided design profile in Table 5 of H&A foundation design report
    ii. Effective OD = 17.9 inches
    iii. Assume liquefiable soils extend full upper 60-ft
b. APILE CPT-4 and CPT-5 (Static check only for comparison)

Down Drag:

a. Summary of Caltrans 2020
   Caltrans 2020 presents a method for evaluating Extreme Event loading conditions that address the effects of both liquefaction-induced down drag and post-seismic down drag. The methodology presents a settlement-based approach to determining minimum pile length to satisfy the axial bearing stability requirement. In liquefied soils, the pile should be designed to satisfy the following conditions:
    i. Inertial (Extreme Event-1 Compression) Loading Combination
    ii. Downdrag (Extreme Event-1 Downdrag) Loading Combination
   Details regarding the process can be referenced in the January 2020 Caltrans Geotechnical Manual.

b. Caltrans 2020 Key Assumptions
   Caltrans 2020 presents a simplified settlement-based analysis for the calculation of liquefaction-induced down drag acting on a deep foundation. The method is intended for bridge pier foundations (i.e. drilled shafts) and assumes the foundations are designed in accordance with Caltrans Seismic Design Criteria (SDC). Some key assumptions associated with the SDC that, in the designer's opinion, limit the applicability of implementing the method directly to the PDX Tank, HCST, and Utility Rack foundation design are outlined below.
    a. Liquefaction depth of occurrence limited to 70-ft.
        i. However, this project anticipates liquefaction occurring to depths up to 120-ft.
    b. Pile tip elevation should satisfy the seismic axial bearing stability criterion corresponding to Equation (1) and illustrated in Figure (1) of Caltans 2020.
        i. However, this project anticipates up to 4-inches of liquefaction-induced settlement occurring below the pile tip elevation.
    c. Design spectrum based on a 5% probability of exceedance in 50 years (975-year return period).
        i. However, this project utilizes seismic forces based on a design section based on a 2% probability of exceedance in 50-years (2475-year return period).
c. BMcD-modified approach using Caltrans 2020

REFERENCE ONLY

As a result of the limitations mentioned above, BMcD opted to implement the following modified Caltrans 2020 method that accounts for increased vertical settlements resulting for liquefaction occurring below 70-ft.

- Determine Sustained Dead Load acting on the pile
- Calculate pile nominal side and tip resistance with depth
- Determine Location of Neutral Plane – 2 scenarios
    - Scenario 1 – Load Resistance NP
        - Develop pile Load Resistance curve using Sustained DL + Figure 6 of the H&A foundation design report
        - Identify location of Neutral Plane from the intersections of the combined load resistance curve and the load shed curve in conjunction with Step 4 of Caltrans 2020
        - Calculate the amount of drag load acting on the pile (assumes no effective tip movement)
        - Calculate the ultimate geotechnical capacity below the Neutral Plane of the foundation to verify it meets or exceeds the load at the Neutral Plane
            - Geotechnical Capacity acceptable?
                - Yes, move to Scenario 2
                - No, modify pile geometry to achieve acceptable Geotechnical Capacity
    - Scenario 2 – Settlement-based NP
        - Determine amount of allowable settlement below pile tip
        - Use Figure 7 of the H&A foundation design report to find depth associated with allowable tip settlement (this is the settlement-based NP)
- Calculate the drag load with the deepest identified Neutral Plane between Scenario 1 and Scenario 2.
- Perform Structural Limit State checks with Max calculated drag load from Scenarios 1 & 2. Report magnitude of associated settlement expected below pile tip.

Lateral Design – LPILE v2022

- See Summary Table 1 below outlining lateral performance profiles and soil strength assumptions for Static, Seismic-pre Liq, Seismic Liq., Seismic Lateral Spread, and Post Seismic gravity cases.

REFERENCE ONLY

- Assumptions for all lateral cases utilizing Lpile v2022
  - Pile Group Spacing Effects considered using Ensoft's GROUP Technical Manual
  - Pile head connects to cap below finished grade (i.e. 0-ft reveal)
  - Construction disturbance considered in upper 3-ft of pile via pmult=0.75

- Additional Special Considerations
  - Seismic Lateral Spread
    - Lateral soil movements input into Lpile v2022 were generated from tabular lateral displacements received via emailed excel file from H&A and is available upon request.
    - Note, For the north profile, RSN 600181_MET-EW (see Figure 9 of H&A Enhanced Seismic design report) was omitted from calculated average to better illustrate expected pile performance. Based on phone conversations to-date, BMCD and H&A understand this particular ground motion to be an outlier due to an elevated CAV (see Table 9 Metadata from H&A Enchanced Seismic Design Report)
    - Per ASCE 7-16 12.139.3.4, pile sections for the Tanks, HCTS, and Utility racks were confirmed not to rupture or 'degrade'.

Please feel free to contact me with any further discussion,
SMB

REFERENCE ONLY

STR ID	Relevant Profiles	Loading Condition	Soil Strength	ESU-3a Thickness (assumes 90% reduction)	ESU-3b Thickness (assumes 40% reduction)	Max. Lateral Soil Movement
Tanks (L=131 ft, OD=18")	Middle	Static - Wind	Normal	6-ft (42-ft to 48 ft)	48-ft (48-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			15 inches
		Post Spread Gravity Loads	Normal			n/a
	Southern Edge	Static - Wind	Normal	N/A	54-ft (42-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			30 inches
		Post Spread Gravity Loads	Normal			n/a
HCTS (L=101 ft, OD=18")	Northern Edge	Static - Wind	Normal	22-ft (28-ft to 50-ft)	44-ft (50-ft to 94-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			7 inches
		Post Spread Gravity Loads	Normal			n/a
Pipe Racks (L=85-ft, OD=12")	Middle	Static - Wind	Normal	6-ft (42-ft to 48 ft)	48-ft (48-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			15 inches
		Post Spread Gravity Loads	Normal			n/a
	Southern Edge	Static - Wind	Normal	N/A	54-ft (42-ft to 96-ft)	n/a
		Seismic Pre Liquefaction	Normal			n/a
		Seismic with Liquefaction	0.1 to 0.72-factor			n/a
		Seismic with Lateral Spread	0.1 to 0.72-factor			30 inches
		Post Spread Gravity Loads	Normal			n/a

REFERENCE ONLY

References

1. ASCE/SEI, 2016. Minimum Design Loads for Buildings and Other Structures, ASCE 7-16, American Society of Civil Engineers (ASCE) - Structural Engineering Institute (SEI).
2. Caltrans, 2020. Liquefaction-Induced Downdrag, Caltrans Geotechnical Manual. January 2020. https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/geotechnical-services/202001-gm-downdrag-a11y.pdf.

REFERENCE ONLY

Above Ground Storage Tank

- Load Development
- Preliminary Pile Runs
- Finite Element Analysis
- Shear Checks
- Drainage

Load Development

Client	PDX Fuel			Page	Of
Project	153929	Date	6-Feb-23	Made By	AJK
	PRIMARY TANK - SEISMIC LOADS			Checked By	-
	55,000 BBL, 42,000 BBL USABLE - 110' DIA X 36' HIGH TANK			Preliminary	Final

SEISMIC ANALYSIS - SLOSHING

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic design based on ASCE 7-16
4. Sloshing height is calculated based on the normal fill height. Provide freeboard to prevent sloshing wave from spilling out the shell overflow vent or damaging floating pan and structural roof framing (unless the roof members are designed to resist sloshing forces)
5. Tanks located in regions where S1 ≤ 0.04 and Ss ≤ 0.15, or the peak ground acceleration for the ground motion defined by the regulatory requirements is less than or equal to 0.05g, need not be designed for seismic forces

Location: PDX Portland Oregon

Tank nominal diameter, D =	110	ft (inside of shell)
Tank shell height, h =	36	ft
Tank hydrotest height, H_{hydro} =	27.75	ft (above bottom at shell)
Safe or Normal fill (High) level, H =	27.75	ft (Must be below shell overflow slot)
Equivalent uniform shell thickness, t_u =	0.3125	in
Elastic Modulus of Tank Material, E =	29,000,000	psi
Roof truss/purlin and floating pan height =	1.000	ft
Height of overflow slot =	0.0	ft
Additional clearance between pan and truss =	0.000	ft

Seismic Use Group: (API 650 E.3)

Use Group III - Essential facilities (i.e. for post-eartquake recovery or public life and health)

Seismic Importance Factor, $I_{seismic}$ = 1.50 (API 650 Table E.5)

Site Classification: Class E - Soft soil profile (API 650 E.4.4)

Site Seismicity:

S_s =	0.848	Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 =	0.376	One-Second Spectral Response Acceleration (at 1 second)
S_0 =	0.339	Peak Ground or Zero-Second Spectral Response Acceleration = $0.4\ S_s$

(API 650 E.4.1)

Note: Tanks in regions where $S_1 < 0.04$ and $S_s < 0.15$ need not be designed for seismic forces. However, tanks in SUG III in this region shall comply with the freeboard requirements.

Site Coefficients: (API 650 E.4.4)

F_a =	1.04
F_v =	2.95

Maximum Considered Earthquake (MCE) spectral response acceleration:

$S_{MS} = F_a S_s$ =	0.885	(ASCE 7 Eq 11.4-1)
$S_{M1} = F_v S_1$ =	1.109	(ASCE 7 Eq 11.4-2)

Design Spectral Response Acceleration:

$S_{DS} = 2/3\ S_{MS}$ =	0.590	Provided from H&A report	(ASCE 7 Eq 11.4-3)
$S_{D1} = 2/3\ S_{M1}$ =	0.740	Provided from H&A report	(ASCE 7 Eq 11.4-4)

Seismic Design Category based on S_{DS} = D

Seismic Design Category based on S_{D1} = D

Effective Seismic Design Category = D

H/D = 0.252 ===> Coefficient C_i = 7.7 (API 650 Figure E-1) (see below)

Impulsive Natural Period, T_i :

$$T_i = \frac{1}{27.8}\frac{C_i H}{\sqrt{\frac{t_u}{D}}}\left[\frac{\sqrt{\rho}}{\sqrt{E}}\right] = 0.191 \text{ seconds}$$

(API E4.5.1-1b)

ρ = 0.0293 lbm/in^3

First Mode Sloshing Wave Period, T_C :

$T_C = K_s\ D^{0.5}$ = 7.096 seconds (API 650 Eq. E.4.5.2-b)

where $K_s = \frac{0.578}{\sqrt{\tanh\left(\frac{3.68H}{D}\right)}} =$ 0.677 (API 650 Eq. E.4.5.2-c)

Regional-dependent long-period transition period, T_L = 16 seconds (ASCE 7 Figure 22-14~17)

$T_s = S_{M1}/(S_{MS})$ = 1.253

Scaling Factor from MCE to Design Level Spectral Accelerations, Q = 0.667 (API E.2.1.6)

Coefficient to adjust the spectral accelerations for 5% - 0.5% damping, K = 1.500 (API E.2.1.6)

Mechanically Anchored Tanks ▼ Per mat fdn calcs ===> (Tank is NOT self-anchored)

Impulsive Response Modification Factor, R_{wi} = 4.00 (API 650 Table E-4)

Convective Response Modification Factor, R_{wc} = 2.00

Impulsive Spectral Acceleration Parameter, A_i :

$A_i = 2.5\,Q\,F_a\,S_0\,I/R_{wi}$ (API 650 Eq. E.4.6.1-1)

For Categories A through D, $A_i \geq$ 0.007 (API 650 Eq. E.4.6.1-2)

For Categories E and F only, $A_i \geq 0.5\,S_1\,(I/R_{wi})$ = 0.071 (API 650 Eq. E.4.6.1-3)

===> **A_i = 0.221**

Convective Spectral Acceleration Parameter, A_c : (sloshing action)

When $T_C \leq T_L$: $A_c = 2.5KQF_aS_0\left(\frac{T_S}{T_C}\right)\left(\frac{I}{R_{wc}}\right) \leq A_i$ (API 650 Eq. E.4.6.1-4)

When $T_C > T_L$: $A_c = 2.5KQF_aS_0\left(\frac{T_ST_L}{T_C^{\,2}}\right)\left(\frac{I}{R_{wc}}\right) \leq A_i$ (API 650 Eq. E.4.6.1-5)

===> **A_c = 0.117**

Sloshing height, $\delta_s = 0.42\,D\,A_f$ (API 650 Eq. E.7.2-1)

For SUG I and II:

When $T_C \leq 4$: $A_f = KS_{D1}I\left(\frac{1.0}{T_C}\right) =$ 0.235 (API 650 Eq. E.7.2-2)

When $T_C > 4$: $A_f = KS_{D1}I\left(\frac{4}{T_C^{\,2}}\right) =$ 0.132 (API 650 Eq. E.7.2-3)

For SUG III:

When $T_C \leq T_L$: $A_f = KS_{D1}\left(\frac{1.0}{T_C}\right) =$ 0.156 (API 650 Eq. E.7.2-4)

When $T_C > T_L$: $A_f = KS_{D1}\left(\frac{T_L}{T_C^{\,2}}\right) =$ 0.353 (API 650 Eq. E.7.2-5)

Controlling A_f = 0.156

Sloshing height, δ_s = 7.227 ft

API E.7.2: Purchaser shall specify whether freeboard is desired for SUG I tanks.
Freeboard is required for SUG II and SUG III tanks (see note below)

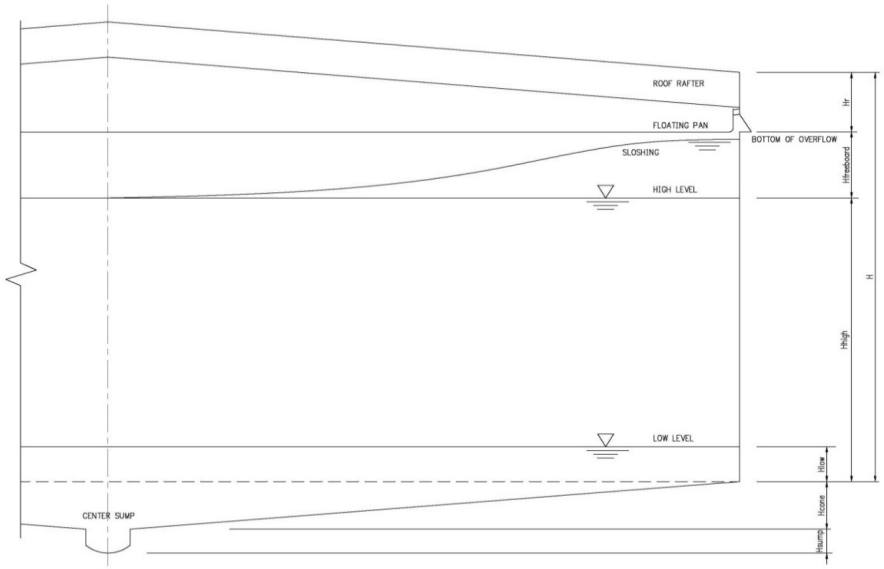
Minimum required freeboard (API 650 Table E-7):

Freeboard (ft) =	**d s =**	**7.227**	**Required**
Freeboard provided to bottom of overflow slot (ft) =		**7.250**	**<=== OK**

Note: When required, the freeboard need not be provided if one of the following is provided:
1. Secondary containment is provided to control the product spill.
2. The roof and tank shell are designed to contain the sloshing liquid.

ASCE 7-10 Section 15.7.6.1.2.c states: "If the sloshing is restricted because the freeboard is less than the computed sloshing height, then the roof and supporting structure shall be designed for an equivalent hydrostatic head equal to the computed sloshing height less the freeboard. In addition, the design of the tank shall use the confined portion of the convective (sloshing) mass as an additional impulsive mass."

(Note: Owner needs to be made aware that if insufficient freeboard is provided, the tank may need to be taken out of service during clean-up and/or repair depending on the severity of the spill/damage)



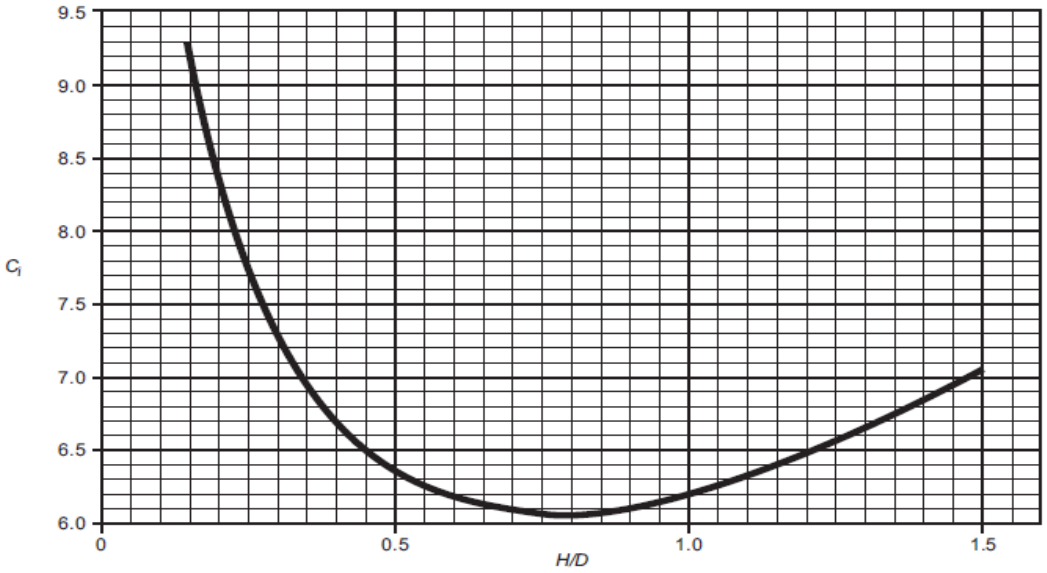


Figure E.1—Coefficient C_i

SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic design based on ASCE 7-16
4. For tanks supported on concrete mat or pile cap foundations.

Tank nominal diameter, D =	110	ft
Tank shell height, h =	36	ft
Normal fill level, H =	27.75	ft
D/H =	3.964	

Impulsive Liquid Weight, W_i and Center of Action Above Mat/Pile cap, X_{is} :

When D/H $\geq$ 1.333,

$$W_i = \frac{\tanh\left(0.866\,\frac{D}{H}\right)}{0.866\,\frac{D}{H}}Wp \qquad \text{(API E.6.1.1-1)}$$

$$X_{is} = 0.375\left[1.0 + 1.33\left(\frac{0.866\,\frac{D}{H}}{\tanh\left(0.866\,\frac{D}{H}\right)} - 1.0\right)\right]H \qquad \text{(API E.6.1.2.2-1)}$$

When D/H < 1.333,

$$W_i = [1.0 - 0.218\,(D/H)]\,W_p \qquad \text{(API E.6.1.1-2)}$$

$$X_{is} = [0.5 + 0.060\,(D/H)]H \qquad \text{(API E.6.1.2.2-2)}$$

===> **W_i = 0.291 W_p**
X_{is} = 1.592 H

Convective (sloshing) Liquid Weight, W_c and Center of Action Above Foundation, X_c :

$$W_c = 0.23\,(D/H)\tanh(3.67\,H/D) \qquad \text{(API E.6.1.1-3)}$$

$$X_{cs} = \left[1.0 - \frac{\cosh\left(\frac{3.67H}{D}\right) - 1.937}{\frac{3.67H}{D}\sinh\left(\frac{3.67H}{D}\right)}\right]H \qquad \text{(API E.6.1.2.2-3)}$$

===> **W_c = 0.687 W_p**
X_c = 1.484 H

Vertical Seismic Effects, Fv:

Fv = $\pm A_v\,W_{eff}$ where $A_v = 0.47\,S_{DS}$ (API E.6.1.3)

W_{eff} = Effective weight contributing to seismic response

$\pm A_v$ = 0.277

LOADS FOR TANK FOUNDATIONS

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic and wind design based on ASCE 7-16 and API 650
4. Seismic based on product at normal fill level.
5. For tanks supported on concrete mat foundations or pile caps.

V_{wind} =	107	mph. 3-second gust ultimate design wind speed	
Category IV (Essential, Critical Facilities) in All Regions			
t_{roof} =	0.2500	in. Average roof plate thickness	
t_{floor} =	0.2500	in. Average floor plate thickness	
t_{shell} =	0.3125	in. Average shell plate thickness	
$w_{roof\,frame}$ =	5.00	psf. Roof framing weight	
w_{pan} =	0.00	psf. Internal floating pan weight	
$SG_{product}$ =	0.82	Specific gravity of product/content	
Fy =	36,000	psi. Yield strength of tank plates	

Tank nominal diameter, D =	110	ft
Tank shell height, h =	36	ft
Normal fill level, H =	27.75	ft

$w_{wind,shell}$ = 10.00 psf. Avg wind pressure on tank shell = 18.6 psf x $(0.78 \times V_{wind}/120)^2$ per API 650 5.2.1

$w_{wind,roof}$ = 15.00 psf. Avg wind uplift on tank roof =31 psf x $(0.78 \times V_{wind}/120)^2$ per API 650 5.2.1

Lateral Forces:

Impulsive Spectral Acceleration Parameter, A_i = 0.221 (see previous spreadsheet)

Convective Spectral Acceleration Parameter, A_c = 0.117

Impulsive Liquid Weight, Wi = 0.291 W_p

Center of Impulsive Action Above Foundation, Xis = 1.5919 H = 44.176 ft

Convective(sloshing) Liquid Weight, W_c = 0.687 W_p

Center of Convective Action Above Foundation, X_{cs} = 1.484 H = 41.186 ft

Total shell weight, $W_s = \pi Dh(t_{shell}/12)$ 490 pcf = 158,749 lbs

Total roof weight, $W_r = (\pi D^2/4)[(t_{roof}/12)$ 490 pcf + $w_{roof\,frame}$] = 144,530 lbs

Total floating pan weight, $W_{pan} = (\pi D^2/4)\, w_{pan}$ = 0 lbs

Total floor weight, $W_f = (\pi D^2/4)(t_{floor}/12)$ 490 pcf = 97,013 lbs

Total product weight, $W_p = (\pi D^2/4)\, H\, SG_{product}$ 62.4 pcf = 13,493,875 lbs (content at Safe Height)

Impulsive Liquid Weight, W_i = 0.291 W_p = 3,922,682 lbs

Convective Liquid Weight, W_c = 0.687 W_p = 9,276,019 lbs

Impulsive Base Shear, $V_i = A_i (W_s + W_r + W_{pan} + W_f + W_i)$ = 956,428 lbs (tank full)

$V_i = A_i (W_s + W_r + W_{pan} + W_f)$ = 88,562 lbs (empty tank)

Convective Base Shear, $V_c = A_c\, Wc$ = 1,087,475 lbs

Horizontal Base Shear, $V = (V_i^2 + V_c^2)^{1/2}$ = 1,448,226 lbs

Vertical Seismic Forces:

$\pm A_v$ = 0.277

$P_{tank} = A_v (W_s + W_r + W_f)$ = 111,001 lbs (due to dead load of tank)

$P_{product} = A_v (W_p + W_{pan})$ = 3,741,852 lbs (due to product and floating pan)

Overturning Moment (total overturning moment acting across the entire tank base cross-section):

Full tank: $M_s = [(A_i (W_i X_{is} + W_s X_s + W_r X_r))^2 + (A_c (W_c X_{cs}))^2]^{1/2}$ = 59,370 ft-kips (API E.6.1.5-2)

Compare To Forces Due To Wind:

Horizontal Base Shear on Shell, $P_{WS} = w_{wind}\, D\, h$ = 39,600 lbs <=== DOES NOT GOVERN OVER SEISMIC

Overturning Moment at Base of Tank, $M_{WS} = w_{wind}\, D\, h^2/2$ = 713 ft-kips <=== DOES NOT GOVERN OVER SEISMIC

MAT FOUNDATION DESIGN

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic design based on ASCE 7-16 and API 650
4. Assume tank is centered on circular mat foundation.
5. Concrete designed in accordance with ACI 318-14 and ACI 350-06.

Roof Load:

w_{live} =	20.00	psf. Roof live load (20 psf min per API 650 5.2.1, 15 psf min if calculated per ASCE 7)
w_{snow} =	10.00	psf. Roof snow load (does not govern design unless larger than live load).
Roof Trib =	15.00	ft. Tributary width of roof supported by tank shell

Foundation:

E_{mat} =	1.50	ft. Mat extension past tank shell
T_{mat} =	3.25	ft. Ave thickness of mat
$Proj_{slab}$ =	1.00	ft. Projection of mat above grade
cover =	3.00	in. Concrete over top and bottom rebars

Soil:

Q_{rw} =	2000	psf. Allowable net bearing pressure for mat

1/3 increase in allowable soil bearing permitted for seismic or wind load case

k_o =	0.50	At-rest soil pressure coefficient
k_p =	3.00	Passive soil pressure coefficient
γ_{soil} =	110	pcf. Moist soil density
μ_{steel} =	0.40	Friction coefficient (steel - soil), 0.40 max per API 650 E.7.6
μ_{conc} =	0.30	Friction coefficient (concrete - soil)

Material:

f'c =	5,000	psi. Concrete strength
Fy =	60,000	psi. Reinforcing steel yield strength

Outside Diameter of Mat ,O*D* =	113	ft
Bearing Area Under Mat, $A_{mat} = \pi OD^2/4$ =	10,029	ft^2
Moment of Inertia of Mat, $I_{mat} = \pi OD^4/64$ =	8,003,569	ft^4
Section Modulus of Mat, $S_{mat} = \pi OD^3/32$ =	141,656	ft^3
Total Weight of Mat, $W_{mat} = A_{mat\,x}\ T_{mat}\ x\ 150\ pcf$ =	4,889	kips

Forces at base of tank:

Base shear due to wind, P_{WS} =	40	kips
Base shear due to seismic, $V_{seismic1}$ =	1,448	kips (tank full @ safe fill height)
$V_{seismic2}$ =	89	kips (tank empty)
Base moment due to wind, M_{WS} =	713	ft-kips
Base moment due to seismic $M_{seismic1}$ =	59,370	ft-kips (tank full @ safe fill height)
Base moment due to seismic $M_{seismic2}$ =	8,061	ft-kips (tank empty)

Forces at bottom of mat:

Base shear due to wind, P_{WS} =	40	kips
Base shear due to seismic, $V_{seismic1}$ =	1,448	kips (tank full)
$V_{seismic2}$ =	89	kips (tank empty)
Base moment due to wind, M_{WS} =	842	ft-kips
Base moment due to seismic $M_{seismic1}$ =	72,021	ft-kips (tank full)
Base moment due to seismic $M_{seismic2}$ =	16,293	ft-kips (tank empty)

Vertical Loads on Shell:

$w_s = h\ x\ t_{shell}\ x\ 490/12$ =	459	plf (weight of shell plates at base of shell)
$w_r = RoofTrib\ x\ t_{roof}\ x\ 490/12$ =	153	plf (weight of roof plates on shell)
$w_{sn} = w_{snow}\ RoofTrib$ =	150	plf (weight of snow on shell)
$w_{rs} = w_r + 0.10\ w_{sn}$ =	168	plf (roof plate weight + 10% snow load on shell)
$w_t = w_s + w_{rs}$ =	628	plf (weight of shell plate + roof load at base of shell)

Vertical Loads on Mat:

Total roof weight, W_r =	145	kips
$W_{live} = [\pi(D^2)/4]\ max(w_{live}\ or\ w_{snow})$ =	190	kips
Total shell weight, W_s =	159	kips
Total floating pan weight, W_{pan} =	0	kips
Total floor weight, W_f =	97	kips
Total product weight, W_p =	13,494	kips (tank full @ safe fill height)
$W_{hydro} = (\pi D^2/4)\ (62.4\ H_{hydro})$ =	16,456	kips (tank full with water @ hydrotest level)

Max Vert Load, $P_{max1} = W_{live} + Wr + Ws + W_{pan} + Wf + Wp$ =	14,084	kips (tank full @ safe fill height)
Vertical Component of Seismic, $\pm P_{seismic} = A_v\ W_{eff} = A_v\ P_{max1}$ =	3,853	kips (tank @ safe fill, excl W_{live})

Minimum Vertical Load, $P_{min1} = W_r + W_s + W_f + W_{pan} + W_p$ =	13,894	kips (tank full @ safe fill)
Vertical Component of Seismic, $\pm P_{seismic} = A_v\ W_{eff} = A_v\ P_{min1}$ =	3,853	kips (tank full @ safe fill)

Minimum Vertical Load, $P_{min2} = W_r + W_s + W_f + W_{pan} =$ 400 kips (tank empty)

Vertical Component of Seismic, $\pm P_{seismic} = A_v W_{eff} = A_v P_{min2} =$ 111 kips (tank empty)

Bearing Pressures Under Mat:

$Q_{hydrotest} = (P_{min2} + W_{mat} + W_{hydro})/A_{mat} =$ 2168 psf — Maximum gross bearing pressure during hydrotest
===> OK. LESS THAN Qallow OF 2248 PSF

$Q_{max1} = (P_{max1} + P_{seismic} + W_{mat})/A_{mat} + M_{seismic}/S_{mat} =$ 2784 psf — Maximum gross bearing pressure with seismic
===> OK. LESS THAN Qallow OF 2989 PSF

$Q_{max2} = (P_{max1} + W_{mat})/A_{mat} + M_{WS}/S_{mat} =$ 1898 psf — Maximum gross bearing pressure with wind
===> OK. LESS THAN Qallow OF 2989 PSF

$Qmax3 = (P_{max1} + W_{mat})/A_{mat} =$ 1892 psf — Maximum bearing pressure without wind or seismic
===> OK. LESS THAN Qallow OF 2248 PSF

$Q_{min} = (P_{min1} - P_{seismic} + W_{mat})/A_{mat} - M_{seismic}/S_{mat} =$ 980 psf — Minimum bearing pressure with seismic (tank full)

$Q_{min} = (P_{min2} - P_{seismic} + W_{mat})/A_{mat} - M_{seismic}/S_{mat} =$ 401 psf — Minimum bearing pressure with seismic (tank empty)

$Q_{min} = (P_{min} + R_{mat})/A_{mat} - M_{WS}/S_{mat} =$ 522 psf — Minimum bearing pressure with wind (tank empty)

ANCHORAGE RATIO (API E.6.2.1.1.1)
(for self-anchored tanks only)

$w_{int} =$ 0 plf — Uplift force due to internal pressure along shell

$t_a =$ 0.25 in. — Annulus plate thickness

$G_e = G(1 - 0.4A_v) =$ 0.729 — Effective specific gravity

$w_a = 7.9\, t_a\, (F_y\, H\, G_e)^{0.5} =$ 1685 plf — Uplift resistance in annulus region due to content

$1.28\, H\, D\, G_e =$ 2849 plf — Max limit for w_a <== Effective $w_a =$ 1685 plf

$w_t = (W_s/\pi D) + w_{rs} =$ 628 plf — Uplift resistance due to shell and roof contribution

$J = M_{rw} / [D^2 [w_t (1 - 0.4A_v) + w_a - 0.4w_{int}]] =$ **2.187** — **Anchorage Ratio**

(Tank is NOT self-anchored)

Anchorage Ratio, J	Criteria
J ≤ 0.785	No calculated uplift under the design seismic overturning moment. The tank is self-anchored.
0.785 < J ≤ 1.54	Tank is uplifting, but the tank is stable for the design load provided the shell compression requirement are satisfied. Tank is self-anchored.
J > 1.54	Tank is not stable and cannot be self-anchored for the design load. Modify annular ring if L < 0.035D is not controlling or add mechanical anchorage.

FACTOR OF SAFETY AGAINST SLIDING

Full Tank Weight, $P_{full} = W_r + W_s + W_{pan} + W_f + W_p =$ 13,894 kips (tank full, omit roof live load)

Empty Tank Weight, $P_{empty} = W_r + W_s + W_{pan} + W_f =$ 400 kips (tank empty, omit roof live load)

Tank Sliding (Assume only friction resistance between the tank bottom plate and the mat)
(Where SF is less than the minimum required, provide anchor bolts)

$FS_{slide} = \mu_{steel}\, P_{full}\, (1.0 - 0.4\, A_v)/V_{seismic} =$ 3.41 **OK** — API 650 E.7.6-1 seismic with tank full. (SF = 1.00 min)

$FS_{slide} = \mu_{steel}\, P_{full}/V_{seismic} =$ 3.84 **OK** — Due to seismic with tank full. (SF = 1.50 min)

$FS_{slide} = \mu_{steel}\, P_{empty}\, (1.0 - 0.4\, A_v)/V_{seismic} =$ 1.61 **OK** — API 650 E.7.6-1 seismic with tank empty (SF = 1.00 min)

$FS_{slide} = \mu_{steel}\, P_{empty}/V_{seismic} =$ 1.81 **OK** — Due to seismic with tank empty (SF = 1.50 min)

$FS_{slide} = \mu_{steel}\, P_{empty}/P_{WS} =$ 4.04 **OK** — Due to wind with tank empty (SF = 1.50 min)

===> **TANK IS STABLE AGAINST SLIDING WITHOUT ANCHOR BOLTS**

Tank and Mat Sliding (Assume passive soil resistance against mat and friction at the bottom of mat)

$FR =$ 0.5 Friction reduction factor when combined with full passive

$R_{passive} = 0.5\, k_p\, \gamma_{soil}\, (T_{slab} - Proj_{mat})\, (OD) =$ 42 kips (passive resistance)

$R_{slab} = \mu_{conc}\, W_{mat} =$ 1467 kips (friction resistance due to weight of slab)

$R_{full} = \mu_{conc}\ P_{full}$ = 4168 kips (friction resistance due to weight of full tank)

$R_{empty} = \mu_{conc}\ P_{empty}$ = 120 kips (friction resistance due to weight of empty tank)

$FS_{slide} = (R_{passive} + R_{mat} + R_{full})(1.0 - 0.4\ A_v)/V_{seismic}$ =	3.49	**OK**	API 650 E.7.6-1 seismic with tank full. (SF = 1.00 min)
$FS_{slide} = (R_{passive} + FR\ .\ R_{mat} + FR\ .R_{full})/V_{seismic}$ =	1.97	**OK**	Seismic with tank full. (SF = 1.50 min) - Passive & Friction
$FS_{slide} = (R_{mat} + R_{full})/V_{seismic}$ =	3.89	**OK**	Seismic with tank full. (SF = 1.50 min) - Friction only
$FS_{slide} = (R_{passive} + PR\ .\ R_{mat} + PR\ .\ R_{empty})/V_{seismic}$ =	9.43	**OK**	Seismic with tank empty (SF = 1.50 min) - Passive & Friction
$FS_{slide} = (R_{mat} + R_{empty})/V_{seismic}$ =	17.92	**OK**	Seismic with tank empty (SF = 1.50 min) - Friction only
$FS_{slide} = (R_{passive} + R_{mat} + R_{empty})/P_{WS}$ =	41.13	**OK**	Wind with tank empty (SF = 1.50 min) - Passive & Friction
$FS_{slide} = (R_{mat} + R_{empty})/P_{WS}$ =	40.07	**OK**	Wind with tank empty (SF = 1.50 min) - Friction only

FACTOR OF SAFETY AGAINST OVERTURNING

Tank Overturning (at base of tank)

$FS_{overturn} = P_{full}\ (0.9\ D/2)/M_{seismic}$ =	11.58	**OK**	Seismic with tank full. (SF = 2.0 min per EC6.2.3)
$FS_{overturn} = P_{empty}\ (0.9\ D/2)/M_{WS}$ =	27.80	**OK**	Wind with tank empty (SF = 2.0 min per EC6.2.3)

Tank and Mat Overturning (at base of mat)

Overturning moment due to wind, $M_{overturn1} = M_{WS} + P_{WS}\ T_{mat}$ = 842 ft-kips

Overturning moment due to seismic, $M_{overturn2} = M_{seismic} + V_{seismic}\ T_{mat}$ = 64076 ft-kips (tank full)

$FS_{overturn} = (P_{full} + W_{mat})\ (0.9\ D/2)/M_{overturn2}$ =	14.51	**OK**	Seismic with tank full. (SF = 1.50 min)
$FS_{overturn} = (P_{empty} + W_{mat})(0.9\ D/2)/M_{overturn1}$ =	311.14	**OK**	wind with tank empty (SF = 1.50 min)

MAT DESIGN

Design mat as slab supported on grade (non-structural)
Per ACI 350.7.12.2.1 - Minimum shrinkage and temperature steel is as follows:

Movement Joint Spacing	As ratio (Gr 60 rebar)
s < 30'	0.003
30' ≤ s < 40'	0.004
s ≥ 40'	0.005

For section thicker than 24", reinforcement on each face will be based on 12" thickness.
The reinforcement in the bottom of base slabs in contact with soil may be reduced to 50 % of that required in Table above

t_{eff} = 12 in
S_{joint} = 60 ft
As_{min} = 0.72 in^2/ft Top, 0.360 in^2/ft Bottom

Per ACI 318 8.6.1.1 - Total min steel in mat with deformed bars:

$As,min = 0.0018(60/fy)Ag\ or\ 0.0014Ag$ = 0.842 in^2
or 0.421 in^2 top and bottom

	Size	Spacing	As (in^2/ft)
Top bars	# 6	6	0.88
Bot bars	# 6	12	0.44

PROVIDE 113 FT DIAMETER X 3.25 FT THICK MAT FDN WITH # 6@6 IN EW TOP AND # 6 @ 12 IN EW BOTTOM

Note: API 650 E.7.1 requires shim and grout between tank and concrete foundation for mechanically anchored tanks

Client	PDX Fuel			Page	Of
Project	153929	Date	6-Feb-23	Made By	AJK
TANK ANCHOR BOLTS				Checked By	-
55,000 BBL, 42,000 BBL USABLE - 110' DIA X 36' HIGH TANK				Preliminary	Final

ANTICIPATED TANK ANCHOR BOLT

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Seismic design based on ASCE 7-16 and API 650
3. Anchor bolt size and spacing shown are preliminary, subjected to final design by tank mfr.
4. Anchor bolt sized based on steel strength only.
5. Excludes anchor embedment and concrete design in accordance with ACI 318-14.

$D1$ =	4.125	in (Distance from outside of tank shell to anchor bolt centerline)
ts =	0.25	in (Thickness of bottom shell course)
% Corrosion =	10.00%	% Corrosion of shell and roof plates and attachments acting on shell
CA =	0.0625	in. Corrosion allowance on anchor bolt diameter
N =	36	Total number of anchor bolts (equally spaced ≤ 10' oc)
$Dbolt$ =	1.5	in (Anchor bolt diameter, 1" min corroded shank diameter)
$Threads$ =	6	UNC coarse thread per inch
$Bolt\ Fy$ =	55	ksi (Yield strength of anchor bolts)

Tank nominal diameter, D =	110.000	ft (inside of shell)
$D_{bc} = D + 2(D1 + ts)$ =	110.729	ft (Bolt circle diameter)
$N_{min} = \pi D_{bc}/10$ =	35	Min # of bolts required
Bolt spacing = $\pi D_{bc}/N$ =	9.66	ft <== OK, less than 10' allowed
$Abolt$ =	1.294	in^2 (smaller of root area or gross corroded shank, API 5.12.4)
P_R =	15.00	psf (Wind uplift on roof)
P_{WR} =	2.88	in (Wind uplift on roof equivalent in inches of water)
M_{WS} =	712,800	ft-lb (Wind Overturning Moment at Base of Tank)
$Wshell = \pi D w_t$ =	216,848	lbs (Linear weight of shell plate and roof plate supported on shell)
W_2 = (1-% Corrosion) x $Wshell$ =	195,164	lbs (Total wt of corroded shell and roof plates acting on shell)
Overturning Moment, M_s =	59,369,642	ft-lb (seismic overturning moment acting at the base of the tank shell perimeter)

Anchor Bolt Load Due to Wind

Total Uplift, $U_{wind} = P_{WR} D_{bc}^2\ 4.08 + (4 M_{WS}/D_{bc}) - W_2$ = -46.842 kips (API Table 5.21b) **<== NO NET UPLIFT**

Anchor Bolt Load Due to Seismic

Total Uplift, $U_{seismic} = (4 M_s/D_{bc}) - W_2 (1-0.4A_v)$ = 1,971 kips (API Table 5.21b)

Max Tension per Anchor Bolt (API 5.12.2)

$tb = U/N$ =	54.75	kips (Tension per anchor bolt)
Bolt stress = $tb/Abolt$ =	42.33	ksi **<== OK**
Allowable bolt stress = $0.8\ Fy$ =	44.00	ksi (API table 5.21b)

When anchor bolts are required for seismic, attachment of anchor bolts to the tank or foundation shall be designed for an anchor design load (P_A) of the lesser of: (API 5.12.12)

$Abolt\ Fy$ =	71.14	kips/bolt
$3\ tb$ =	164.26	kips/bolt
==> P_A =	**71.14**	**kips/bolt**

PROVIDE A TOTAL OF 36 - 1.5 IN DIAMETER GRADE 55 ANCHOR BOLTS

(TO BE CONFIRMED BY TANK MANUFACTURER)

SEISMIC ANALYSIS - SLOSHING

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic design based on ASCE 7-16
4. Sloshing height is calculated based on the normal fill height. Provide freeboard to prevent sloshing wave from spilling out the shell overflow vent or damaging floating pan and structural roof framing (unless the roof members are designed to resist sloshing forces)
5. Tanks located in regions where S1 ≤ 0.04 and Ss ≤ 0.15, or the peak ground acceleration for the ground motion defined by the regulatory requirements is less than or equal to 0.05g, need not be designed for seismic forces

Location: PDX Portland Oregon

Tank nominal diameter, D =	142	ft (inside of shell)
Tank shell height, h =	24	ft
Tank hydrotest height, H_{hydro} =	16.66	ft (above bottom at shell)
Safe or Normal fill (High) level, H =	16.66	ft (Must be below shell overflow slot)
Equivalent uniform shell thickness, t_u =	0.3125	in
Elastic Modulus of Tank Material, E =	29,000,000	psi
Roof truss/purlin and floating pan height =	0.000	ft
Height of overflow slot =	0.0	ft
Additional clearance between pan and truss =	0.000	ft

Seismic Use Group: (API 650 E.3)

Use Group III - Essential facilities (i.e. for post-eartquake recovery or public life and health)

Seismic Importance Factor, $I_{seismic}$ = 1.50 (API 650 Table E.5)

Site Classification: Class E - Soft soil profile (API 650 E.4.4)

Site Seismicity:

S_s =	0.848	Short-Period Spectral Response Acceleration (at 0.2 second)
S_1 =	0.376	One-Second Spectral Response Acceleration (at 1 second)
S_0 =	0.339	Peak Ground or Zero-Second Spectral Response Acceleration = $0.4\ S_s$

(API 650 E.4.1)

Note: Tanks in regions where $S_1 < 0.04$ and $S_s < 0.15$ need not be designed for seismic forces. However, tanks in SUG III in this region shall comply with the freeboard requirements.

Site Coefficients: (API 650 E.4.4)

F_a = 1.04

F_v = 2.95

Maximum Considered Earthquake (MCE) spectral response acceleration:

$S_{MS} = F_a S_s$ = 0.885 (ASCE 7 Eq 11.4-1)

$S_{M1} = F_v S_1$ = 1.109 (ASCE 7 Eq 11.4-2)

Design Spectral Response Acceleration:

$S_{DS} = 2/3\ S_{MS}$ = 0.590 Provided from H&A report (ASCE 7 Eq 11.4-3)

$S_{D1} = 2/3\ S_{M1}$ = 0.740 Provided from H&A report (ASCE 7 Eq 11.4-4)

Seismic Design Category based on S_{DS} = D

Seismic Design Category based on S_{D1} = D

Effective Seismic Design Category = D

H/D = 0.117 ===> Coefficient C_i = 7.7 (API 650 Figure E-1) (see below)

Impulsive Natural Period, T_i :

$$T_i = \frac{1}{27.8}\frac{C_i H}{\sqrt{\frac{t_u}{D}}}\left[\frac{\sqrt{\rho}}{\sqrt{E}}\right] = 0.130 \text{ seconds}$$

(API E4.5.1-1b)

ρ = 0.0293 lbm/in^3

First Mode Sloshing Wave Period, T_C :

$T_C = K_s\ D^{0.5}$ = 10.799 seconds (API 650 Eq. E.4.5.2-b)

where $K_s = \dfrac{0.578}{\sqrt{\tanh\left(\dfrac{3.68H}{D}\right)}} =$ 0.906 (API 650 Eq. E.4.5.2-c)

Regional-dependent long-period transition period, T_L = 16 seconds (ASCE 7 Figure 22-14~17)

$T_s = S_{M1}/(S_{MS}) =$ 1.253

Scaling Factor from MCE to Design Level Spectral Accelerations, Q = 0.667 (API E.2.1.6)

Coefficient to adjust the spectral accelerations for 5% - 0.5% damping, K = 1.500 (API E.2.1.6)

Mechanically Anchored Tanks ▼ Per mat fdn calcs ===> (Tank is NOT self-anchored)

Impulsive Response Modification Factor, R_{wi} = 4.00 (API 650 Table E-4)

Convective Response Modification Factor, R_{wc} = 2.00

Impulsive Spectral Acceleration Parameter, A_i :

$A_i = 2.5\,Q\,F_a\,S_0\,I/R_{wi}$ (API 650 Eq. E.4.6.1-1)

For Categories A through D, $A_i \geq$ 0.007 (API 650 Eq. E.4.6.1-2)

For Categories E and F only, $A_i \geq 0.5\,S_1\,(I/R_{wi}) =$ 0.071 (API 650 Eq. E.4.6.1-3)

===> **A_i = 0.221**

Convective Spectral Acceleration Parameter, A_c : (sloshing action)

When $T_C \leq T_L$: $A_c = 2.5KQF_aS_0\left(\dfrac{T_s}{T_c}\right)\left(\dfrac{I}{R_{wc}}\right) \leq A_i$ (API 650 Eq. E.4.6.1-4)

When $T_C > T_L$: $A_c = 2.5KQF_aS_0\left(\dfrac{T_sT_L}{T_c^{\,2}}\right)\left(\dfrac{I}{R_{wc}}\right) \leq A_i$ (API 650 Eq. E.4.6.1-5)

===> **A_c = 0.077**

Sloshing height, $\delta_s = 0.42\,D\,A_f$ (API 650 Eq. E.7.2-1)

For SUG I and II:

When $T_C \leq 4$: $A_f = KS_{D1}I\left(\dfrac{1.0}{T_c}\right) =$ 0.154 (API 650 Eq. E.7.2-2)

When $T_C > 4$: $A_f = KS_{D1}I\left(\dfrac{4}{T_c^{\,2}}\right) =$ 0.057 (API 650 Eq. E.7.2-3)

For SUG III:

When $T_C \leq T_L$: $A_f = KS_{D1}\left(\dfrac{1.0}{T_c}\right) =$ 0.103 (API 650 Eq. E.7.2-4)

When $T_C > T_L$: $A_f = KS_{D1}\left(\dfrac{T_L}{T_C^{\,2}}\right) =$ 0.152 (API 650 Eq. E.7.2-5)

Controlling A_f = 0.103

Sloshing height, δ_s = 6.130 ft

API E.7.2: Purchaser shall specify whether freeboard is desired for SUG I tanks.
Freeboard is required for SUG II and SUG III tanks (see note below)

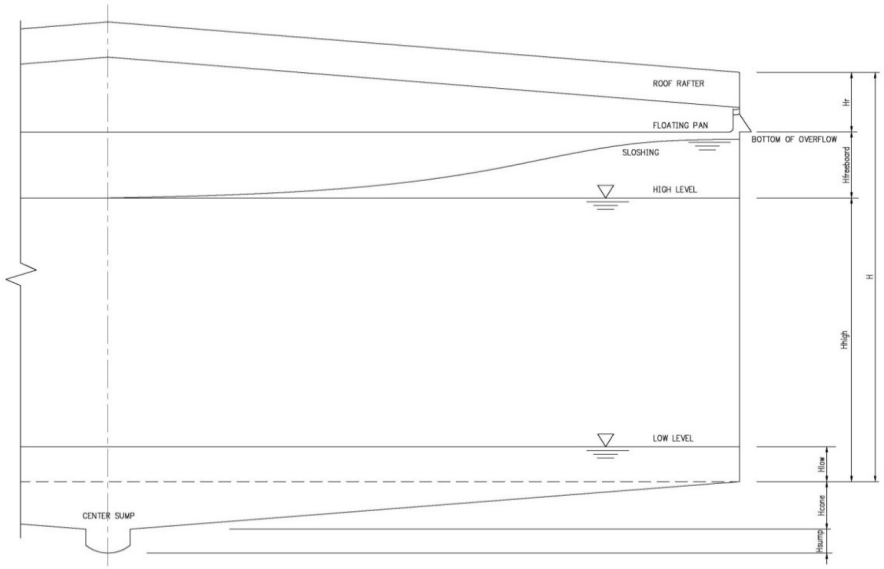
Minimum required freeboard (API 650 Table E-7):

Freeboard (ft) =	**d s =**	**6.130**	**Required**
Freeboard provided to bottom of overflow slot (ft) =		**7.340**	**<=== OK**

Note: When required, the freeboard need not be provided if one of the following is provided:
1. Secondary containment is provided to control the product spill.
2. The roof and tank shell are designed to contain the sloshing liquid.

ASCE 7-10 Section 15.7.6.1.2.c states: "If the sloshing is restricted because the freeboard is less than the computed sloshing height, then the roof and supporting structure shall be designed for an equivalent hydrostatic head equal to the computed sloshing height less the freeboard. In addition, the design of the tank shall use the confined portion of the convective (sloshing) mass as an additional impulsive mass."

(Note: Owner needs to be made aware that if insufficient freeboard is provided, the tank may need to be taken out of service during clean-up and/or repair depending on the severity of the spill/damage)



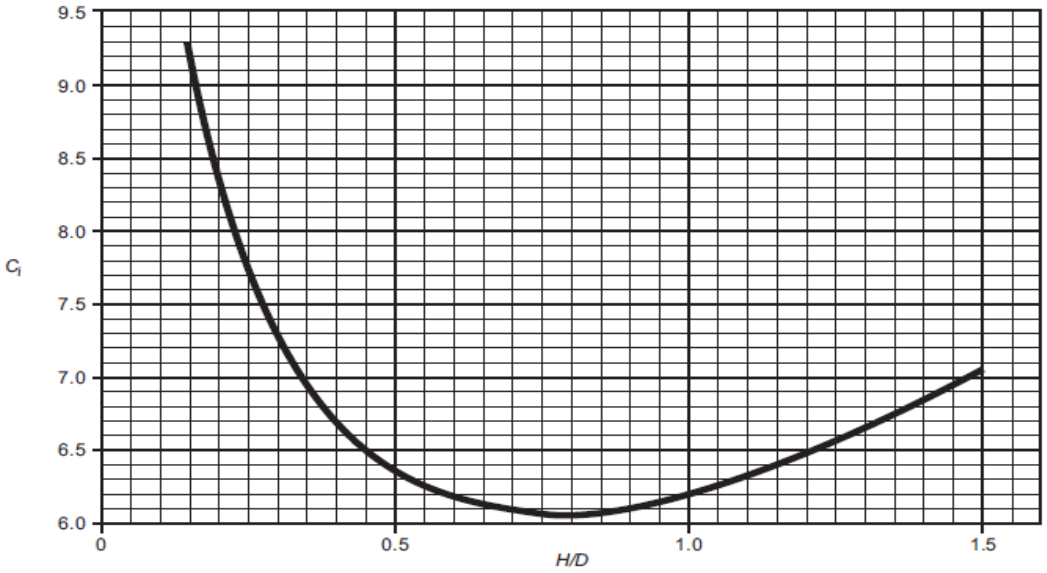


Figure E.1—Coefficient C_i

SEISMIC ANALYSIS - EQUIVALENT LATERAL FORCE

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic design based on ASCE 7-16
4. For tanks supported on concrete mat or pile cap foundations.

Tank nominal diameter, D =	142	ft
Tank shell height, h =	24	ft
Normal fill level, H =	16.66	ft
D/H =	8.523	

Impulsive Liquid Weight, W_i and Center of Action Above Mat/Pile cap, X_{is} :

When D/H $\geq$ 1.333,

$$W_i = \frac{\tanh\left(0.866\,\frac{D}{H}\right)}{0.866\,\frac{D}{H}}Wp \qquad \text{(API E.6.1.1-1)}$$

$$X_{is} = 0.375\left[1.0 + 1.33\left(\frac{0.866\,\frac{D}{H}}{\tanh\left(0.866\,\frac{D}{H}\right)} - 1.0\right)\right]H \qquad \text{(API E.6.1.2.2-1)}$$

When D/H < 1.333,

$$W_i = [1.0 - 0.218\,(D/H)]\,W_p \qquad \text{(API E.6.1.1-2)}$$

$$X_{is} = [0.5 + 0.060\,(D/H)]H \qquad \text{(API E.6.1.2.2-2)}$$

===> **W_i = 0.135 W_p**
X_{is} = 3.558 H

Convective (sloshing) Liquid Weight, W_c and Center of Action Above Foundation, X_c :

$$W_c = 0.23\,(D/H)\tanh(3.67\,H/D) \qquad \text{(API E.6.1.1-3)}$$

$$X_{cs} = \left[1.0 - \frac{\cosh\left(\frac{3.67H}{D}\right) - 1.937}{\frac{3.67H}{D}\sinh\left(\frac{3.67H}{D}\right)}\right]H \qquad \text{(API E.6.1.2.2-3)}$$

===> **W_c = 0.823 W_p**
X_c = 5.409 H

Vertical Seismic Effects, Fv:

Fv = $\pm A_v\,W_{eff}$ where $A_v = 0.47\,S_{DS}$ (API E.6.1.3)

W_{eff} = Effective weight contributing to seismic response

$\pm A_v$ = 0.277

LOADS FOR TANK FOUNDATIONS

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic and wind design based on ASCE 7-16 and API 650
4. Seismic based on product at normal fill level.
5. For tanks supported on concrete mat foundations or pile caps.

V_{wind} =	107	mph. 3-second gust ultimate design wind speed
Category IV (Essential, Critical Facilities) in All Regions		
t_{roof} =	0.2500	in. Average roof plate thickness
t_{floor} =	0.2500	in. Average floor plate thickness
t_{shell} =	0.3125	in. Average shell plate thickness
$w_{roof\,frame}$ =	5.00	psf. Roof framing weight
w_{pan} =	0.00	psf. Internal floating pan weight
$SG_{product}$ =	0.82	Specific gravity of product/content
Fy =	36,000	psi. Yield strength of tank plates

Tank nominal diameter, D =	142	ft
Tank shell height, h =	24	ft
Normal fill level, H =	16.66	ft

$w_{wind,shell}$ = 10.00 psf. Avg wind pressure on tank shell = 18.6 psf x $(0.78 \times V_{wind}/120)^2$ per API 650 5.2.1

$w_{wind,roof}$ = 15.00 psf. Avg wind uplift on tank roof =31 psf x $(0.78 \times V_{wind}/120)^2$ per API 650 5.2.1

Lateral Forces:

Impulsive Spectral Acceleration Parameter, A_i =	0.221			(see previous spreadsheet)
Convective Spectral Acceleration Parameter, A_c =	0.077			
Impulsive Liquid Weight, Wi =	0.135 W_p			
Center of Impulsive Action Above Foundation, Xis =	3.5577 H =		59.271	ft
Convective(sloshing) Liquid Weight, W_c =	0.823 W_p			
Center of Convective Action Above Foundation, X_{cs} =	5.409 H =		90.109	ft

Total shell weight, $W_s = \pi Dh(t_{shell}/12)$ 490 pcf =	136,620	lbs	
Total roof weight, $W_r = (\pi D^2/4)[(t_{roof}/12)$ 490 pcf + $w_{roof\,frame}$] =	240,851	lbs	
Total floating pan weight, $W_{pan} = (\pi D^2/4)\, w_{pan}$ =	0	lbs	
Total floor weight, $W_f = (\pi D^2/4)(t_{floor}/12)$ 490 pcf =	161,667	lbs	
Total product weight, $W_p = (\pi D^2/4)\, H\, SG_{product}$ 62.4 pcf =	13,500,194	lbs	(content at Safe Height)
Impulsive Liquid Weight, W_i = 0.135 W_p =	1,828,978	lbs	
Convective Liquid Weight, W_c = 0.823 W_p =	11,113,419	lbs	
Impulsive Base Shear, $V_i = A_i (W_s + W_r + W_{pan} + W_f + W_i)$ =	523,929	lbs	(tank full)
$V_i = A_i (W_s + W_r + W_{pan} + W_f)$ =	119,281	lbs	(empty tank)
Convective Base Shear, $V_c = A_c\, Wc$ =	856,109	lbs	
Horizontal Base Shear, $V = (V_i^2 + V_c^2)^{1/2}$ =	1,003,705	lbs	

Vertical Seismic Forces:

$\pm A_v$ =	0.277		
$P_{tank} = A_v (W_s + W_r + W_f)$ =	149,503	lbs	(due to dead load of tank)
$P_{product} = A_v (W_p + W_{pan})$ =	3,743,604	lbs	(due to product and floating pan)

Overturning Moment (total overturning moment acting across the entire tank base cross-section):

Full tank: $M_s = [(A_i (W_i X_{is} + W_s X_s + W_r X_r))^2 + (A_c (W_c X_{cs}))^2]^{1/2}$ = 80,894 ft-kips (API E.6.1.5-2)

Compare To Forces Due To Wind:

Horizantal Base Shear on Shell, $P_{WS} = w_{wind}\, D\, h$ =	34,080	lbs	<=== DOES NOT GOVERN OVER SEISMIC
Overturning Moment at Base of Tank, $M_{WS} = w_{wind}\, D\, h^2/2$ =	409	ft-kips	<=== DOES NOT GOVERN OVER SEISMIC

MAT FOUNDATION DESIGN

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Valid for Site Classification A through E (excludes Class F)
3. Seismic design based on ASCE 7-16 and API 650
4. Assume tank is centered on circular mat foundation.
5. Concrete designed in accordance with ACI 318-14 and ACI 350-06.

Roof Load:

w_{live} =	20.00	psf.	Roof live load (20 psf min per API 650 5.2.1, 15 psf min if calculated per ASCE 7)
w_{snow} =	10.00	psf.	Roof snow load (does not govern design unless larger than live load).
Roof Trib =	15.00	ft.	Tributary width of roof supported by tank shell

Foundation:

E_{mat} =	1.50	ft.	Mat extension past tank shell
T_{mat} =	3.25	ft.	Ave thickness of mat
$Proj_{slab}$ =	1.00	ft.	Projection of mat above grade
cover =	3.00	in.	Concrete over top and bottom rebars

Soil:

Q_{rw} =	2000	psf.	Allowable net bearing pressure for mat

1/3 increase in allowable soil bearing permitted for seismic or wind load case

k_o =	0.50		At-rest soil pressure coefficient
k_p =	3.00		Passive soil pressure coefficient
γ_{soil} =	110	pcf.	Moist soil density
μ_{steel} =	0.40		Friction coefficient (steel - soil), 0.40 max per API 650 E.7.6
μ_{conc} =	0.30		Friction coefficient (concrete - soil)

Material:

f'c =	5,000	psi.	Concrete strength
Fy =	60,000	psi.	Reinforcing steel yield strength

Outside Diameter of Mat ,OD =	145	ft
Bearing Area Under Mat, $A_{mat} = \pi OD^2/4$ =	16,513	ft^2
Moment of Inertia of Mat, $I_{mat} = \pi OD^4/64$ =	21,699,109	ft^4
Section Modulus of Mat, $S_{mat} = \pi OD^3/32$ =	299,298	ft^3
Total Weight of Mat, $W_{mat} = A_{mat\,x}\ T_{mat}\ x\ 150\ pcf$ =	8,050	kips

Forces at base of tank:

Base shear due to wind, P_{WS} =	34	kips
Base shear due to seismic, $V_{seismic1}$ =	1,004	kips (tank full @ safe fill height)
$V_{seismic2}$ =	119	kips (tank empty)
Base moment due to wind, M_{WS} =	409	ft-kips
Base moment due to seismic M $_{seismic1}$ =	80,894	ft-kips (tank full @ safe fill height)
Base moment due to seismic M $_{seismic2}$ =	7,420	ft-kips (tank empty)

Forces at bottom of mat:

Base shear due to wind, P_{WS} =	34	kips
Base shear due to seismic, $V_{seismic1}$ =	1,004	kips (tank full)
$V_{seismic2}$ =	119	kips (tank empty)
Base moment due to wind, M_{WS} =	520	ft-kips
Base moment due to seismic M $_{seismic1}$ =	97,237	ft-kips (tank full)
Base moment due to seismic M $_{seismic2}$ =	20,889	ft-kips (tank empty)

Vertical Loads on Shell:

$w_s = h\ x\ t_{shell}\ x\ 490/12$ =	306	plf (weight of shell plates at base of shell)
$w_r = RoofTrib\ x\ t_{roof}\ x\ 490/12$ =	153	plf (weight of roof plates on shell)
$w_{sn} = w_{snow}\ RoofTrib$ =	150	plf (weight of snow on shell)
$w_{rs} = w_r + 0.10\ w_{sn}$ =	168	plf (roof plate weight + 10% snow load on shell)
$w_t = w_s + w_{rs}$ =	474	plf (weight of shell plate + roof load at base of shell)

Vertical Loads on Mat:

Total roof weight, W_r =	241	kips
$W_{live} = [\pi(D^2)/4]\ max(w_{live}\ or\ w_{snow})$ =	317	kips
Total shell weight, W_s =	137	kips
Total floating pan weight, W_{pan} =	0	kips
Total floor weight, W_f =	162	kips
Total product weight, W_p =	13,500	kips (tank full @ safe fill height)
$W_{hydro} = (\pi D^2/4)\ (62.4\ H_{hydro})$ =	16,464	kips (tank full with water @ hydrotest level)

Max Vert Load, $P_{max1} = W_{live} + Wr + Ws + W_{pan} + Wf + Wp$ =	14,356	kips (tank full @ safe fill height)
Vertical Component of Seismic, $\pm P_{seismic} = A_v\ W_{eff} = A_v\ P_{max1}$ =	3,893	kips (tank @ safe fill, excl W_{live})

Minimum Vertical Load, $P_{min1} = W_r + W_s + W_f + W_{pan} + W_p$ =	14,039	kips (tank full @ safe fill)
Vertical Component of Seismic, $\pm P_{seismic} = A_v\ W_{eff} = A_v\ P_{min1}$ =	3,893	kips (tank full @ safe fill)

Minimum Vertical Load, $P_{min2} = W_r + W_s + W_f + W_{pan} =$ 539 kips (tank empty)

Vertical Component of Seismic, $\pm P_{seismic} = A_v W_{eff} = A_v P_{min2} =$ 150 kips (tank empty)

Bearing Pressures Under Mat:

$Q_{hydrotest} = (P_{min2} + W_{mat} + W_{hydro})/A_{mat} =$ 1517 psf — Maximum gross bearing pressure during hydrotest
===> OK. LESS THAN Qallow OF 2248 PSF

$Q_{max1} = (P_{max1} + P_{seismic} + W_{mat})/A_{mat} + M_{seismic}/S_{mat} =$ 1918 psf — Maximum gross bearing pressure with seismic
===> OK. LESS THAN Qallow OF 2989 PSF

$Q_{max2} = (P_{max1} + W_{mat})/A_{mat} + M_{WS}/S_{mat} =$ 1359 psf — Maximum gross bearing pressure with wind
===> OK. LESS THAN Qallow OF 2989 PSF

$Qmax3 = (P_{max1} + W_{mat})/A_{mat} =$ 1357 psf — Maximum bearing pressure without wind or seismic
===> OK. LESS THAN Qallow OF 2248 PSF

$Q_{min} = (P_{min1} - P_{seismic} + W_{mat})/A_{mat} - M_{seismic}/S_{mat} =$ 777 psf — Minimum bearing pressure with seismic (tank full)

$Q_{min} = (P_{min2} - P_{seismic} + W_{mat})/A_{mat} - M_{seismic}/S_{mat} =$ 441 psf — Minimum bearing pressure with seismic (tank empty)

$Q_{min} = (P_{min} + R_{mat})/A_{mat} - M_{WS}/S_{mat} =$ 519 psf — Minimum bearing pressure with wind (tank empty)

ANCHORAGE RATIO (API E.6.2.1.1.1)
(for self-anchored tanks only)

$w_{int} =$ 0 plf — Uplift force due to internal pressure along shell

$t_a =$ 0.25 in. — Annulus plate thickness

$G_e = G\,(1 - 0.4A_v) =$ 0.729 — Effective specific gravity

$w_a = 7.9\,t_a\,(F_y\,H\,G_e)^{0.5} =$ 1306 plf — Uplift resistance in annulus region due to content

$1.28\,H\,D\,G_e =$ 2208 plf — Max limit for w_a <== Effective $w_a =$ 1306 plf

$w_t = (W_s/\pi D) + w_{rs} =$ 474 plf — Uplift resistance due to shell and roof contribution

$J = M_{rw} / [D^2 [w_t\,(1 - 0.4A_v) + w_a - 0.4w_{int}]] =$ **2.322** — **Anchorage Ratio**

(Tank is NOT self-anchored)

Anchorage Ratio, J	Criteria
J ≤ 0.785	No calculated uplift under the design seismic overturning moment. The tank is self-anchored.
0.785 < J ≤ 1.54	Tank is uplifting, but the tank is stable for the design load provided the shell compression requirement are satisfied. Tank is self-anchored.
J > 1.54	Tank is not stable and cannot be self-anchored for the design load. Modify annular ring if L < 0.035D is not controlling or add mechanical anchorage.

FACTOR OF SAFETY AGAINST SLIDING

Full Tank Weight, $P_{full} = W_r + W_s + W_{pan} + W_f + W_p =$ 14,039 kips (tank full, omit roof live load)

Empty Tank Weight, $P_{empty} = W_r + W_s + W_{pan} + W_f =$ 539 kips (tank empty, omit roof live load)

Tank Sliding (Assume only friction resistance between the tank bottom plate and the mat)
(Where SF is less than the minimum required, provide anchor bolts)

$FS_{slide} = \mu_{steel}\,P_{full}\,(1.0 - 0.4\,A_v)/V_{seismic} =$ 4.97 **OK** — API 650 E.7.6-1 seismic with tank full. (SF = 1.00 min)

$FS_{slide} = \mu_{steel}\,P_{full}/V_{seismic} =$ 5.60 **OK** — Due to seismic with tank full. (SF = 1.50 min)

$FS_{slide} = \mu_{steel}\,P_{empty}\,(1.0 - 0.4\,A_v)/V_{seismic} =$ 1.61 **OK** — API 650 E.7.6-1 seismic with tank empty (SF = 1.00 min)

$FS_{slide} = \mu_{steel}\,P_{empty}/V_{seismic} =$ 1.81 **OK** — Due to seismic with tank empty (SF = 1.50 min)

$FS_{slide} = \mu_{steel}\,P_{empty}/P_{WS} =$ 6.33 **OK** — Due to wind with tank empty (SF = 1.50 min)

===> **TANK IS STABLE AGAINST SLIDING WITHOUT ANCHOR BOLTS**

Tank and Mat Sliding (Assume passive soil resistance against mat and friction at the bottom of mat)

$FR =$ 0.5 — Friction reduction factor when combined with full passive

$R_{passive} = 0.5\,k_p\,\gamma_{soil}\,(T_{slab} - Proj_{mat})\,(OD) =$ 54 kips (passive resistance)

$R_{slab} = \mu_{conc}\,W_{mat} =$ 2415 kips (friction resistance due to weight of slab)

$R_{full} = \mu_{conc}\ P_{full}$ = 4212 kips (friction resistance due to weight of full tank)

$R_{empty} = \mu_{conc}\ P_{empty}$ = 162 kips (friction resistance due to weight of empty tank)

$FS_{slide} = (R_{passive} + R_{mat} + R_{full})(1.0 - 0.4\ A_v)/V_{seismic}$ =	5.92	**OK**	API 650 E.7.6-1 seismic with tank full. (SF = 1.00 min)
$FS_{slide} = (R_{passive} + FR\ .\ R_{mat} + FR\ .R_{full})/V_{seismic}$ =	3.35	**OK**	Seismic with tank full. (SF = 1.50 min) - Passive & Friction
$FS_{slide} = (R_{mat} + R_{full})/V_{seismic}$ =	6.60	**OK**	Seismic with tank full. (SF = 1.50 min) - Friction only
$FS_{slide} = (R_{passive} + PR\ .\ R_{mat} + PR\ .\ R_{empty})/V_{seismic}$ =	11.25	**OK**	Seismic with tank empty (SF = 1.50 min) - Passive & Friction
$FS_{slide} = (R_{mat} + R_{empty})/V_{seismic}$ =	21.60	**OK**	Seismic with tank empty (SF = 1.50 min) - Friction only
$FS_{slide} = (R_{passive} + R_{mat} + R_{empty})/P_{WS}$ =	77.19	**OK**	Wind with tank empty (SF = 1.50 min) - Passive & Friction
$FS_{slide} = (R_{mat} + R_{empty})/P_{WS}$ =	75.61	**OK**	Wind with tank empty (SF = 1.50 min) - Friction only

FACTOR OF SAFETY AGAINST OVERTURNING

Tank Overturning (at base of tank)

$FS_{overturn} = P_{full}\ (0.9\ D/2)/M_{seismic}$ =	11.09	**OK**	Seismic with tank full. (SF = 2.0 min per EC6.2.3)
$FS_{overturn} = P_{empty}\ (0.9\ D/2)/M_{WS}$ =	84.24	**OK**	Wind with tank empty (SF = 2.0 min per EC6.2.3)

Tank and Mat Overturning (at base of mat)

Overturning moment due to wind, $M_{overturn1} = M_{WS} + P_{WS}\ T_{mat}$ = 520 ft-kips

Overturning moment due to seismic, $M_{overturn2} = M_{seismic} + V_{seismic}\ T_{mat}$ = 84156 ft-kips (tank full)

$FS_{overturn} = (P_{full} + W_{mat})\ (0.9\ D/2)/M_{overturn2}$ =	16.77	**OK**	Seismic with tank full. (SF = 1.50 min)
$FS_{overturn} = (P_{empty} + W_{mat})(0.9\ D/2)/M_{overturn1}$ =	1056.05	**OK**	wind with tank empty (SF = 1.50 min)

MAT DESIGN

Design mat as slab supported on grade (non-structural)

Per ACI 350.7.12.2.1 - Minimum shrinkage and temperature steel is as follows:

Movement Joint Spacing	As ratio (Gr 60 rebar)
s < 30'	0.003
30' ≤ s < 40'	0.004
s ≥ 40'	0.005

For section thicker than 24", reinforcement on each face will be based on 12" thickness.

The reinforcement in the bottom of base slabs in contact with soil may be reduced to 50 % of that required in Table above

t_{eff} = 12 in

S_{joint} = 60 ft

As_{min} = 0.72 in^2/ft Top, 0.360 in^2/ft Bottom

Per ACI 318 8.6.1.1 - Total min steel in mat with deformed bars:

$As,min = 0.0018(60/fy)Ag\ or\ 0.0014Ag$ = 0.842 in^2

or 0.421 in^2 top and bottom

	Size	Spacing	As (in^2/ft)
Top bars	# 6	6	0.88
Bot bars	# 6	12	0.44

PROVIDE 145 FT DIAMETER X 3.25 FT THICK MAT FDN WITH # 6@6 IN EW TOP AND # 6 @ 12 IN EW BOTTOM

Note: API 650 E.7.1 requires shim and grout between tank and concrete foundation for mechanically anchored tanks

Client	PDX Fuel			Page	Of
Project	153929	Date	29-Aug-23	Made By	AJK
TANK ANCHOR BOLTS				Checked By	-
SECONDARY CONTAINMENT AROUND PRIMARY TANK				Preliminary	Final

ANTICIPATED TANK ANCHOR BOLT

(Rev 11/21)

1. In accordance with API 650 13th Edition (Errata 1) Annex E
2. Seismic design based on ASCE 7-16 and API 650
3. Anchor bolt size and spacing shown are preliminary, subjected to final design by tank mfr.
4. Anchor bolt sized based on steel strength only.
5. Excludes anchor embedment and concrete design in accordance with ACI 318-14.

$D1$ =	4.125	in (Distance from outside of tank shell to anchor bolt centerline)
ts =	0.25	in (Thickness of bottom shell course)
% Corrosion =	10.00%	% Corrosion of shell and roof plates and attachments acting on shell
CA =	0.0625	in. Corrosion allowance on anchor bolt diameter
N =	46	Total number of anchor bolts (equally spaced ≤ 10' oc)
$Dbolt$ =	1.5	in (Anchor bolt diameter, 1" min corroded shank diameter)
$Threads$ =	6	UNC coarse thread per inch
$Bolt\ Fy$ =	55	ksi (Yield strength of anchor bolts)

Tank nominal diameter, D =	142.000	ft (inside of shell)
$D_{bc} = D + 2(D1 + ts)$ =	142.729	ft (Bolt circle diameter)
$N_{min} = \pi D_{bc}/10$ =	45	Min # of bolts required
Bolt spacing = $\pi D_{bc}/N$ =	9.75	ft <== OK, less than 10' allowed
$Abolt$ =	1.294	in^2 (smaller of root area or gross corroded shank, API 5.12.4)
P_R =	15.00	psf (Wind uplift on roof)
P_{WR} =	2.88	in (Wind uplift on roof equivalent in inches of water)
M_{WS} =	408,960	ft-lb (Wind Overturning Moment at Base of Tank)
$Wshell = \pi D w_t$ =	211,622	lbs (Linear weight of shell plate and roof plate supported on shell)
W_2 = (1-% Corrosion) x $Wshell$ =	190,459	lbs (Total wt of corroded shell and roof plates acting on shell)
$Overturning\ Moment, M_s$ =	80,894,039	ft-lb (seismic overturning moment acting at the base of the tank shell perimeter)

Anchor Bolt Load Due to Wind

Total Uplift, $U_{wind} = P_{WR} D_{bc}^2\ 4.08 + (4 M_{WS}/D_{bc}) - W_2$ = 39.523 kips (API Table 5.21b)

Anchor Bolt Load Due to Seismic

Total Uplift, $U_{seismic} = (4 M_s/D_{bc}) - W_2 (1-0.4A_v)$ = 2,098 kips (API Table 5.21b)

Max Tension per Anchor Bolt (API 5.12.2)

$tb = U/N$ =	45.60	kips (Tension per anchor bolt)
Bolt stress = $tb/Abolt$ =	35.26	ksi <== OK
Allowable bolt stress = $0.8\ Fy$ =	44.00	ksi (API table 5.21b)

When anchor bolts are required for seismic, attachment of anchor bolts to the tank or foundation shall be designed for an anchor design load (P_A) of the lesser of: (API 5.12.12)

$Abolt\ Fy$ =	71.14	kips/bolt
$3\ tb$ =	136.81	kips/bolt
==> P_A =	**71.14**	**kips/bolt**

PROVIDE A TOTAL OF 46 - 1.5 IN DIAMETER GRADE 55 ANCHOR BOLTS

(TO BE CONFIRMED BY TANK MANUFACTURER)

Primary Tank Calculations

Roof Live Load =	20	psf
Total Roof Live Load =	190.07	kips
Snow Load =	11	psf
Total Roof Live Load =	104.54	kips
Total Shell Weight =	159	kips
Total Roof Weight =	145	kips
Total Floor Weight =	97	kips
Area of Tank Bottom / Roof =	9503	ft^2
Half Circle Area =	4752	ft^2
Centroid of Half Circle (from outer edge) =	31.66	ft
Centroid of Half Circle (from center) =	23.34	ft
Circumference =	346	ft
Total Tank Weight =	400	kips
Tank Content Weight =	13,494	kips
Lateral Load due to Seismic - Tank Full =	1,448	kips
Ie =	1.5	Seismic Importance Factor
Base Shear of Pile Supported Mat Foundation =	0.266	ASCE 7-16 - 15.4.2
Tank Diameter =	110	ft
Foundation Extension Past Tank =	18	ft
Primary Pile Cap Diameter =	114	ft
Total Pile Cap Diameter =	146	ft
Pile Cap Thickness =	2.5	ft
Total Weight of Pile Cap =	6,278	kips
Lateral Load due to Seismic - Foundation =	1,667	kips
Total Lateral Base Shear =	**3,115**	kips
P = Total Vertical Demand =	**20,172**	kips

Preliminary Number of Piles =	137	Piles
Rigidly Distributed Static Load Per Pile =	147.24	kips
Rigidly Distributed Lateral Load Per Pile =	15.92	kips

Minimum Dead Load	6,678	kips
Minimum Dead Load per Pile =	48.75	kips

Moment from Seismic Load =	59,370	kip-ft
Additional Moment Due to Pile Cap =	1,810	kip-ft
Total Seismic Moment =	**61,180**	kip-ft

S = π*d3/32 =	130,671	ft^3
A = Area of Foundation =	9,503	ft^2
P/A + M/S =	2.59	ksf
P/A - M/S =	1.65	ksf
Couple to Produce Moment =	1310	kips
Half Perimeter of Tank =	173	ft
Line Load on Tension Side =	7.584	klf
Compressive Uniform Area Load =	**0.276**	**ksf**

Primary Tank Output

Percentage of DL	
Tank	2.88%
Content	97.12%

Lateral Loads

Area Loads (ksf)	DL	RLL	FL	SL	ELX	ELZ	ELY
Floor Weight =	**0.0102**	-	-	-	**0.276**	**0.276**	**0.003**
Fluid Load =	-	-	**1.420**	-			**0.394**
FDTN Weight =	-	-	-	-			**0.110**

Line Loads (klf)	DL	RLL	FL	SL	ELX	ELZ	ELY
Shell Weight =	**0.459**	-	-	-	**0.09**	**0.09**	**0.1274**
Floor Weight =	-	-	-	-	**7.584**	**7.584**	-
Roof Weight =	**0.209**	-	-	-			**0.0580**
Roof Live Load =	-	**0.275**	-	-	-	-	-
Snow Load =	-	-	-	**0.151**	-	-	-

Vertical Point Loads (kips)	DL	RLL	FL	SL	ELX	ELZ	ELY
Shell Weight =	-	-	-	-	-	-	-
Roof Weight =	**72.3**	-	-	-			**20.039**
Roof Live Load =	-	**95.0**	-	-	-	-	-
Snow Load =	-	-	-	**52.3**	-	-	-

Horizontal Point Loads (kips)	DL	RLL	FL	SL	ELX	ELZ	ELY
FDTN Weight =	-	-	-	-	**1,667**	**1,667**	-
Tank and Fluid =	-	-	-	-	**1,448**	**1,448**	-

RST Requirements at Head of Pile - ACI 318-18.13.6.2

Max Shear =	23	kips
Embedment of Pile =	6	inch
Moment Arm =	24	inch
Moment =	552	kip-in
Moment =	46	kip-ft
Couple Between Dowels =	13	inch
T/C =	42.46153846	kips
Minimum As =	0.943589744	in^2
Pile Diameter =	18	in
Wall Thickness =	0.5	in
Concrete Fill Area =	226.9800692	in^2
Minimum Steel Per IBC 1810.3.11.1 =	2.269800692	in^2
As Min =	2.269800692	in^2
Bar Area Required for 2 Bars =	1.134900346	in^2
Bar Area Required for 4 Bars =	0.567450173	in^2
Bar Area Required for 6 Bars =	0.378300115	in^2

Snow Load =	11.00	psf
Total Vertical Snow Load =	105	kips
S_{MS} =	0.885	(ASCE 7 Eq 11.4-1)
S_{M1} =	1.109	(ASCE 7 Eq 11.4-2)
S_{DS} =	0.590	(ASCE 7 Eq 11.4-3)
Ev = 0.2*S_{DS} =	0.118	(ASCE 7-16 eq 12.4-4a)
S_{D1} =	0.740	(ASCE 7 Eq 11.4-4)
S_s =	0.848	
C_v =	1.224	Table 11.9-1 (ASCE 7-16) - Interpolated based off Ss
Specific Gravity =	0.850	
ɣL = Unit weight of Stored Liquid =	53.04	pcf
Liquid Height = H_L	27.75	ft
Shell Thickness = t =	0.3125	in
Modulus of Elasticity = E =	4,176,000,000	psf
$T_v = 2\pi*(\gamma_L RH_L 2/gtE)^{0.5}$ =	0.159	(ASCE 7-16 eq C15.7-2)
S_{aMv} =	0.829	(ASCE 7-16 Eqs 11.9-4)
$S_{av} = 2/3*S_{aMv}$ =	0.553	(ASCE 7-16 11.9.3)
0.4*S_{av} =	0.221	(ASCE 7-16 Section 15.7.2c (3))

Av = 0.3*Sav =	0.166	(ASCE 7-16 Eqs 12.4-4b)
Av = 0.47SDS =	0.277	(API E.6.1.3)
Vertical Coefficient = Av =	0.277	max(0.3Sav,0.4Sav,0.47*Sds)

Vertical Seismic Forces:

Dead Load of Tank =	111	kips
Dead Load of Product =	3,742	kips
Dead Load of Foundation =	1,741	kips

D =	20,172	kips
Ev =	5,594	kips
Eh =	3,115	kips
OTM =	61,180	kip-ft

ASD Load Combinations	DL	Ev	Eh	OTM
1.0D + 0.7Ev + 0.7Eh =	20172	3916	2181	42826
1.0D + 0.525Ev + 0.525Eh + 0.75L + 0.75S =	20172	2937	1635	32119
0.6D-0.7Ev+0.7Eh =	12103	-3916	2181	42826

151 Pile Arrangement			
	Max Comp	Min Comp	Lateral
1.0D + 0.7Ev + 0.7Eh =	173.71	138.35	14.64
1.0D + 0.525Ev + 0.525Eh + 0.75L + 0.75S =	162.95	136.43	10.97
0.6D-0.7Ev+0.7Eh =	70.71	35.35	14.64

139 Pile Arrangement

Foundation Ties - ASCE 7-16 - 12.13.8.2			
10% * SDS * (DL + LL)	1190.2	kips	
Area of Steel Required =	26.45	in2	
#8	34	bars	0.79
#9	27	bars	1
#10	21	bars	1.27
#11	17	bars	1.56

	Max Comp	Min Comp	Lateral
1.0D + 0.7Ev + 0.7Eh =	188.04	149.33	15.9
1.0D + 0.525Ev + 0.525Eh + 0.75L + 0.75S =	177.25	147.97	11.92
0.6D-0.7Ev+0.7Eh =	77.13	38.09	15.9

121 Pile Arrangement			
	Max Comp	Min Comp	Lateral
1.0D + 0.7Ev + 0.7Eh =	216.87	172.57	18.26
1.0D + 0.525Ev + 0.525Eh + 0.75L + 0.75S =	203.41	170.19	13.69
0.6D-0.7Ev+0.7Eh =	88.33	44.03	18.26

Secondary Tank Calculations

Primary Tank Diameter =	110	ft
Tank Footprint =	9,503	ft2
Shell Height =	36	ft
Shell Volume =	342,119	cf
Shell Volume =	2,559,223	gallons
Shell Volume =	60,934	BBL
Interstitial Space =	16.0	ft
Outer Diameter =	142	ft
Total Footprint =	15,837	ft2
110% of Tank Volume =	376331	cf
Outer Shell Height Required =	24.00	ft
Extension Beyond Shell =	2	ft
Total Diameter =	146	ft
Assumed Outer Shell Thickness =	0.3125	in
Usable Volume =	42000	BBL
Perimeter of Tank =	446	ft
Usable Volume =	1,764,000	gallons
Usable Volume =	235813	cf
Height of Spill During Breach =	14.9	ft
Outer Shell Weight =	137	kips
Line Load from Shell =	**0.30625**	**klf**
Assumed Tank Floor Thickness =	0.25	in
Weight of Tank Floor =	161.7	kips
Total Area of Tank Bottom =	15836.8	ft^2
Half Circle Area =	7918.4	ft^2
Centroid of Half Circle (from outer edge) =	40.87	ft
Centroid of Half Circle (from center) =	30.13	ft
Circumference =	446	ft
Area Load on Tank Bottom	**0.01021**	**ksf**
Fluid Load on Bottom NL / FL =	0.85	ksf
Vertical Seismic NLY / ELY =	0.24	ksf
Lateral Load due to Seismic - Tank Full =	1,004	kips
Total Lateral Base Shear =	2,671	kips
Moment from Seismic Load =	80,894	kip-ft
Additional Moment Due to Pile Cap =	1,810	kip-ft
Total Seismic Moment =	**82,704**	kip-ft
S = Section Modulus of Mat Foundation = π*d3/32 =	130,671	ft^3
A = Area of Foundation =	9,503	ft^2
P/A + M/S =	2.59	ksf
P/A - M/S =	1.65	ksf
Couple to Produce Moment =	1012	kips
Half Perimeter of Tank =	223	ft
Line Load on Tension Side =	4.536	klf
Uniform Area Load =	**0.128**	**ksf**

RISA FDN

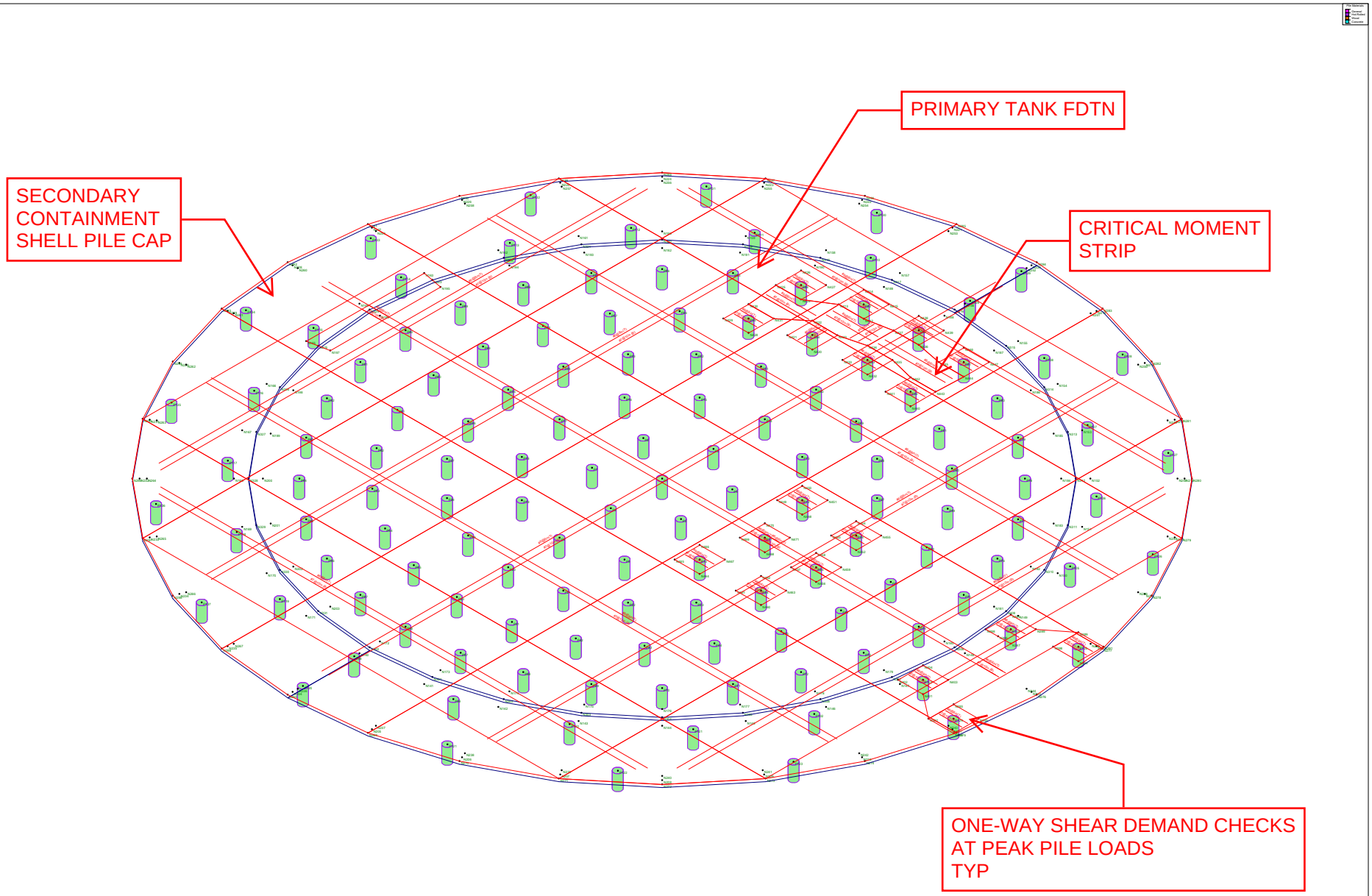
ELX NLX
ELY NLY
ELZ NLZ
FL NL

Area Loads (ksf)	DL	RLL	NL	SL	NLX	NLZ	NLY
Floor Weight =	**0.0102**	-	-	-	**0.128**	**0.128**	**0.003**
Fluid Load =	-	-	**0.852**	-			**0.236**
FDTN Weight =	-	-	-	-			**0.110**

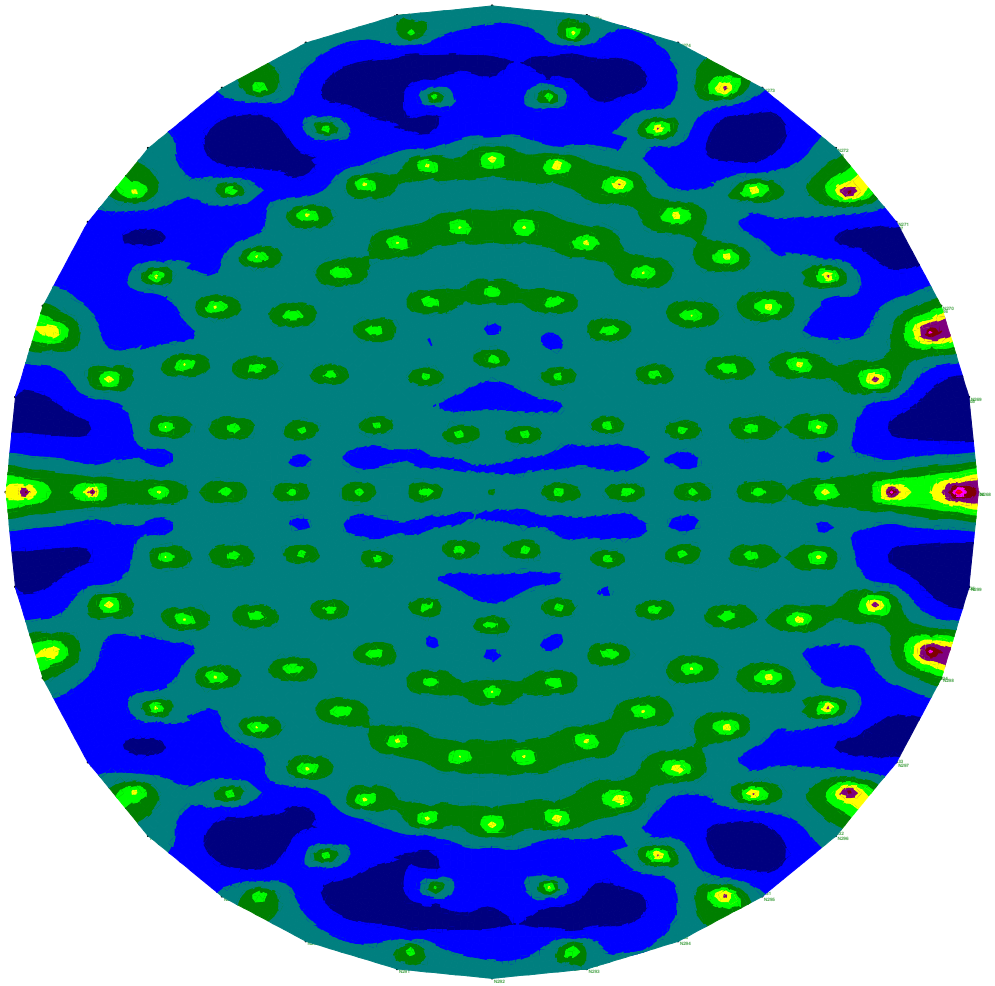
Line Loads (klf)	DL	RLL	NL	SL	NLX	NLZ	NLY
Shell Weight =	**0.306**	-	-	-	**0.07523**	**0.075227263**	0.0849
Floor Weight =					**4.536**	**4.536**	

Horizontal Point Loads (kips)	DL	RLL	NL	SL	NLX	NLZ	NLY
FDTN Weight =	-	-	-	-	**1,667**	**1,667**	-
Tank and Fluid =	-	-	-	-	**1,004**	**1,004**	-

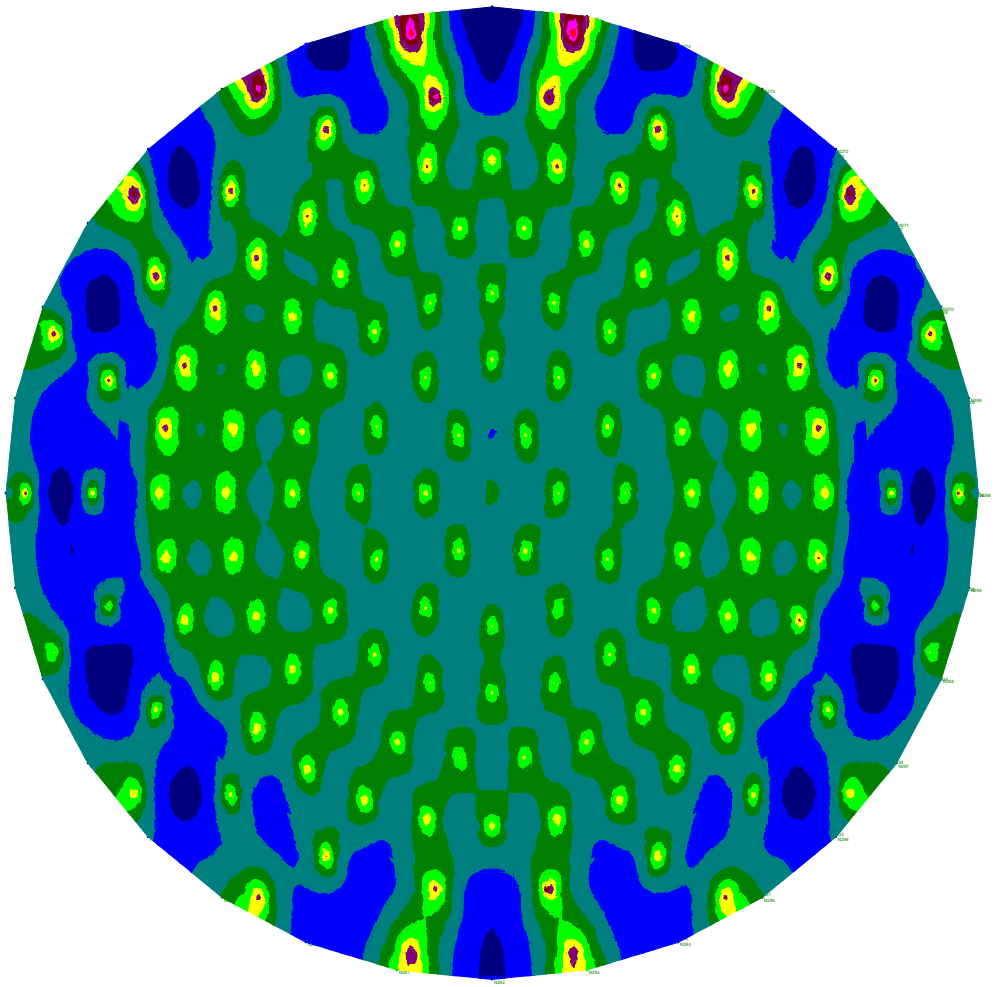
Finite Element Analysis



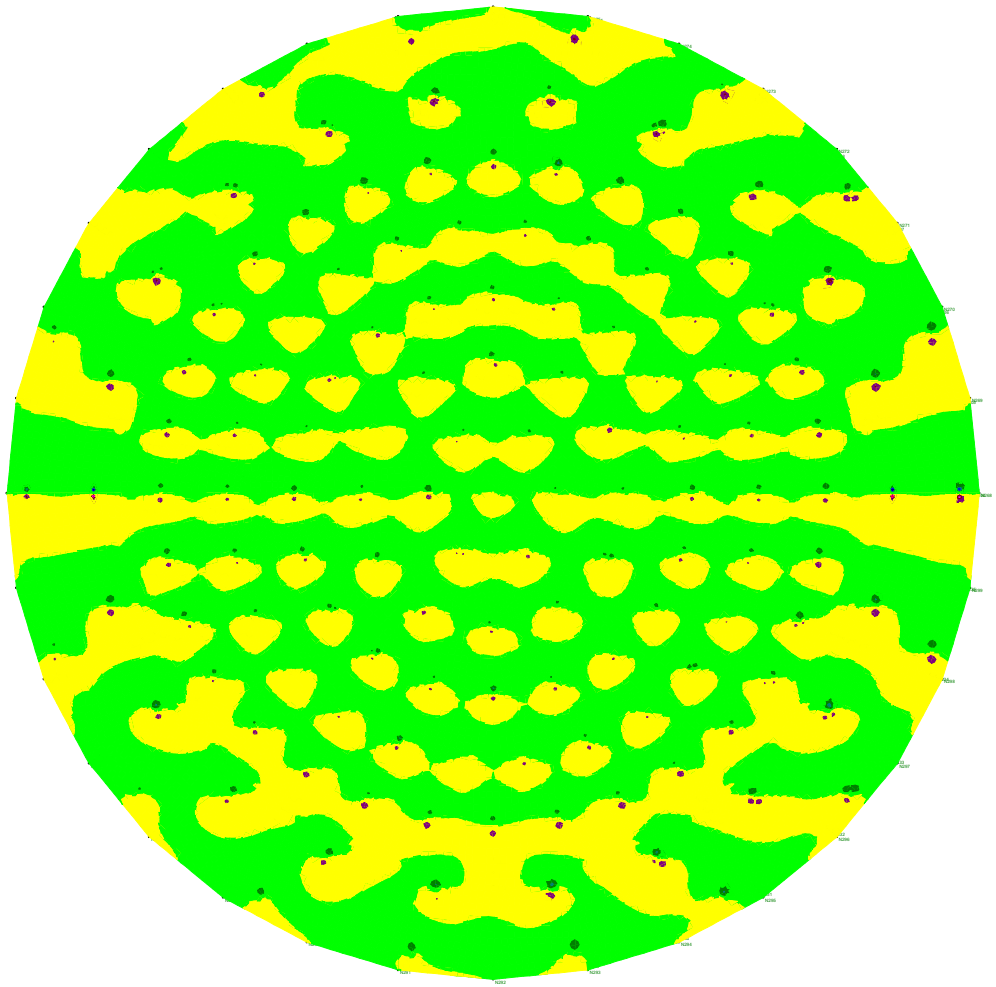
Burns & McDonnell	PDX Phase 2	SK - 1
A. Kral		Dec 8, 2023 at 7:54 AM
153929		137 Pile - Double Walled Tank.fnd



Burns & McDonnell	PDX Phase 2	SK - 3
A. Kral		Dec 8, 2023 at 8:23 AM
153929		137 Pile - Double Walled Tank.fnd



Burns & McDonnell	PDX Phase 2	SK - 5
A. Kral		Dec 8, 2023 at 8:25 AM
153929		137 Pile - Double Walled Tank.fnd



Burns & McDonnell	PDX Phase 2	SK - 4
A. Kral		Dec 8, 2023 at 8:24 AM
153929		137 Pile - Double Walled Tank.fnd

Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Comp UC	Pile Comp UC	Comp[k]	Comp LC	Soil Tens UC	Pile Tens UC	Tens[k]	Tens LC
P125	18" Pipe	0.712	16.381	23	NC	0.988	247.111	30	NC	0	0	NC
P124	18" Pipe	0.712	16.381	23	NC	0.988	247.063	30	NC	0	0	NC
P135	18" Pipe	0.695	15.995	24	NC	0.988	246.897	31	NC	0	0	NC
P123	18" Pipe	0.708	16.281	23	NC	0.988	246.887	31	NC	0	0	NC
P127	18" Pipe	0.7	16.102	23	NC	0.987	246.654	30	NC	0	0	NC
P121	18" Pipe	0.711	16.343	24	NC	0.987	246.649	30	NC	0	0	NC
P128	18" Pipe	0.692	15.916	28	NC	0.987	246.646	30	NC	0	0	NC
P122	18" Pipe	0.704	16.2	24	NC	0.987	246.628	30	NC	0	0	NC
P120	18" Pipe	0.713	16.391	24	NC	0.986	246.397	31	NC	0	0	NC
P126	18" Pipe	0.708	16.281	23	NC	0.985	246.334	30	NC	0	0	NC
P137	18" Pipe	0.711	16.343	24	NC	0.985	246.136	31	NC	0	0	NC
P136	18" Pipe	0.704	16.2	24	NC	0.982	245.472	31	NC	0	0	NC
P11	18" Pipe	0.714	16.411	27	NC	0.959	239.692	23	NC	0	0	NC
P9	18" Pipe	0.711	16.362	28	NC	0.958	239.401	24	NC	0	0	NC
P19	18" Pipe	0.711	16.361	28	NC	0.958	239.38	24	NC	0	0	NC
P8	18" Pipe	0.714	16.411	28	NC	0.957	239.344	24	NC	0	0	NC
P12	18" Pipe	0.711	16.362	27	NC	0.956	239.051	23	NC	0	0	NC
P2	18" Pipe	0.728	16.737	28	NC	0.956	239.01	24	NC	0	0	NC
P10	18" Pipe	0.711	16.362	27	NC	0.956	238.987	23	NC	0	0	NC
P4	18" Pipe	0.726	16.688	27	NC	0.954	238.402	23	NC	0	0	NC
P3	18" Pipe	0.726	16.688	27	NC	0.953	238.374	23	NC	0	0	NC
P13	18" Pipe	0.713	16.392	24	NC	0.95	237.506	23	NC	0	0	NC
P18	18" Pipe	0.713	16.392	23	NC	0.948	237.01	24	NC	0	0	NC
P107	18" Pipe	0.699	16.088	23	NC	0.944	236.044	30	NC	0	0	NC
P7	18" Pipe	0.726	16.702	23	NC	0.944	236.009	24	NC	0	0	NC
P100	18" Pipe	0.709	16.313	24	NC	0.944	235.963	30	NC	0	0	NC
P101	18" Pipe	0.706	16.246	23	NC	0.942	235.476	30	NC	0	0	NC
P106	18" Pipe	0.706	16.246	23	NC	0.942	235.414	30	NC	0	0	NC
P1	18" Pipe	0.814	18.712	27	NC	0.942	235.378	23	NC	0	0	NC
P117	18" Pipe	0.703	16.171	24	NC	0.94	235.1	31	NC	0	0	NC
P116	18" Pipe	0.696	16.002	24	NC	0.94	234.997	31	NC	0	0	NC
P102	18" Pipe	0.712	16.368	23	NC	0.94	234.9	31	NC	0	0	NC
P38	18" Pipe	0.703	16.166	28	NC	0.939	234.715	24	NC	0	0	NC
P22	18" Pipe	0.703	16.166	28	NC	0.939	234.713	24	NC	0	0	NC
P21	18" Pipe	0.705	16.216	28	NC	0.939	234.656	24	NC	0	0	NC
P134	18" Pipe	0.693	15.935	27	NC	0.939	234.643	31	NC	0	0	NC
P39	18" Pipe	0.705	16.216	28	NC	0.939	234.634	24	NC	0	0	NC
P26	18" Pipe	0.705	16.216	27	NC	0.939	234.632	23	NC	0	0	NC
P24	18" Pipe	0.705	16.216	27	NC	0.938	234.603	23	NC	0	0	NC
P23	18" Pipe	0.703	16.166	27	NC	0.938	234.596	23	NC	0	0	NC
P27	18" Pipe	0.703	16.165	27	NC	0.938	234.5	23	NC	0	0	NC
P25	18" Pipe	0.706	16.235	27	NC	0.938	234.398	23	NC	0	0	NC
P37	18" Pipe	0.705	16.207	23	NC	0.937	234.321	24	NC	0	0	NC
P28	18" Pipe	0.705	16.207	24	NC	0.937	234.308	23	NC	0	0	NC
P20	18" Pipe	0.706	16.235	28	NC	0.937	234.244	24	NC	0	0	NC
P105	18" Pipe	0.712	16.369	23	NC	0.937	234.222	30	NC	0	0	NC
P118	18" Pipe	0.709	16.314	24	NC	0.937	234.142	31	NC	0	0	NC
P108	18" Pipe	0.693	15.942	28	NC	0.934	233.526	30	NC	0	0	NC
P99	18" Pipe	0.713	16.41	24	NC	0.934	233.524	30	NC	0	0	NC
P103	18" Pipe	0.715	16.437	23	NC	0.933	233.227	30	NC	0	0	NC
P104	18" Pipe	0.715	16.436	23	NC	0.932	233.047	30	NC	0	0	NC
P119	18" Pipe	0.713	16.41	24	NC	0.932	232.902	31	NC	0	0	NC
P29	18" Pipe	0.707	16.265	24	NC	0.928	231.887	23	NC	0	0	NC
P98	18" Pipe	0.715	16.442	24	NC	0.927	231.824	31	NC	0	0	NC
P36	18" Pipe	0.707	16.265	23	NC	0.927	231.764	24	NC	0	0	NC
P5	18" Pipe	0.728	16.753	24	NC	0.926	231.441	23	NC	0	0	NC
P17	18" Pipe	0.715	16.445	23	NC	0.92	230.105	24	NC	0	0	NC
P14	18" Pipe	0.715	16.445	24	NC	0.919	229.859	23	NC	0	0	NC
P50	18" Pipe	0.699	16.088	24	NC	0.913	228.277	23	NC	0	0	NC
P44	18" Pipe	0.698	16.06	27	NC	0.913	228.229	24	NC	0	0	NC
P43	18" Pipe	0.697	16.036	28	NC	0.913	228.223	23	NC	0	0	NC
P62	18" Pipe	0.701	16.116	23	NC	0.913	228.205	24	NC	0	0	NC
P63	18" Pipe	0.698	16.057	23	NC	0.912	227.963	24	NC	0	0	NC
P64	18" Pipe	0.699	16.082	28	NC	0.912	227.906	24	NC	0	0	NC
P6	18" Pipe	0.726	16.703	23	NC	0.911	227.854	24	NC	0	0	NC
P49	18" Pipe	0.698	16.06	27	NC	0.911	227.847	23	NC	0	0	NC
P51	18" Pipe	0.702	16.142	24	NC	0.911	227.836	23	NC	0	0	NC
P42	18" Pipe	0.699	16.082	28	NC	0.911	227.826	23	NC	0	0	NC
P46	18" Pipe	0.701	16.123	27	NC	0.911	227.626	23	NC	0	0	NC
P47	18" Pipe	0.701	16.123	27	NC	0.911	227.626	23	NC	0	0	NC
P65	18" Pipe	0.701	16.114	28	NC	0.91	227.618	24	NC	0	0	NC
P48	18" Pipe	0.7	16.1	27	NC	0.91	227.594	23	NC	0	0	NC
P41	18" Pipe	0.701	16.114	28	NC	0.91	227.57	24	NC	0	0	NC
P45	18" Pipe	0.7	16.1	27	NC	0.91	227.541	23	NC	0	0	NC
P40	18" Pipe	0.701	16.126	28	NC	0.91	227.477	24	NC	0	0	NC
P61	18" Pipe	0.703	16.164	23	NC	0.906	226.49	24	NC	0	0	NC
P115	18" Pipe	0.694	15.953	27	NC	0.903	225.631	31	NC	0	0	NC

P35	18" Pipe	0.708	16.285	23	NC	0.896	223.971	24	NC	0	0	NC
P52	18" Pipe	0.704	16.181	24	NC	0.896	223.911	23	NC	0	0	NC
P30	18" Pipe	0.708	16.285	24	NC	0.896	223.875	23	NC	0	0	NC
P15	18" Pipe	0.713	16.392	24	NC	0.893	223.225	23	NC	0	0	NC
P16	18" Pipe	0.713	16.391	23	NC	0.891	222.715	24	NC	0	0	NC
P60	18" Pipe	0.704	16.191	23	NC	0.879	219.627	24	NC	0	0	NC
P34	18" Pipe	0.707	16.265	23	NC	0.867	216.792	24	NC	0	0	NC
P31	18" Pipe	0.707	16.264	24	NC	0.867	216.669	23	NC	0	0	NC
P109	18" Pipe	0.694	15.955	28	NC	0.862	215.487	30	NC	0	0	NC
P32	18" Pipe	0.705	16.207	24	NC	0.855	213.838	23	NC	0	0	NC
P33	18" Pipe	0.705	16.207	23	NC	0.855	213.737	24	NC	0	0	NC
P53	18" Pipe	0.704	16.195	24	NC	0.855	213.668	23	NC	0	0	NC
P129	18" Pipe	0.693	15.939	28	NC	0.836	209.046	30	NC	0	0	NC
P59	18" Pipe	0.704	16.192	23	NC	0.832	208.04	24	NC	0	0	NC
P114	18" Pipe	0.694	15.954	27	NC	0.823	205.703	31	NC	0	0	NC
P54	18" Pipe	0.704	16.181	24	NC	0.814	203.473	23	NC	0	0	NC
P71	18" Pipe	0.695	15.991	27	NC	0.807	201.651	24	NC	0	0	NC
P93	18" Pipe	0.698	16.063	23	NC	0.806	201.562	24	NC	0	0	NC
P69	18" Pipe	0.695	15.991	28	NC	0.805	201.323	23	NC	0	0	NC
P79	18" Pipe	0.698	16.062	24	NC	0.805	201.323	23	NC	0	0	NC
P94	18" Pipe	0.696	16.011	23	NC	0.804	201.103	24	NC	0	0	NC
P78	18" Pipe	0.696	16.011	24	NC	0.804	201.094	23	NC	0	0	NC
P70	18" Pipe	0.694	15.951	28	NC	0.804	201.091	24	NC	0	0	NC
P74	18" Pipe	0.698	16.058	27	NC	0.804	201.016	23	NC	0	0	NC
P77	18" Pipe	0.695	15.991	27	NC	0.804	200.907	23	NC	0	0	NC
P67	18" Pipe	0.698	16.05	28	NC	0.804	200.899	24	NC	0	0	NC
P97	18" Pipe	0.698	16.05	28	NC	0.804	200.887	24	NC	0	0	NC
P68	18" Pipe	0.697	16.026	28	NC	0.803	200.831	24	NC	0	0	NC
P66	18" Pipe	0.698	16.058	28	NC	0.803	200.69	24	NC	0	0	NC
P95	18" Pipe	0.695	15.991	28	NC	0.803	200.69	24	NC	0	0	NC
P96	18" Pipe	0.697	16.026	28	NC	0.803	200.682	24	NC	0	0	NC
P75	18" Pipe	0.698	16.05	27	NC	0.803	200.67	23	NC	0	0	NC
P76	18" Pipe	0.697	16.026	27	NC	0.803	200.627	23	NC	0	0	NC
P58	18" Pipe	0.703	16.164	23	NC	0.802	200.618	24	NC	0	0	NC
P72	18" Pipe	0.697	16.026	27	NC	0.802	200.617	23	NC	0	0	NC
P73	18" Pipe	0.698	16.049	27	NC	0.802	200.584	23	NC	0	0	NC
P80	18" Pipe	0.7	16.106	24	NC	0.802	200.582	23	NC	0	0	NC
P112	18" Pipe	0.69	15.876	27	NC	0.802	200.403	30	NC	0	0	NC
P92	18" Pipe	0.7	16.105	23	NC	0.802	200.376	24	NC	0	0	NC
P111	18" Pipe	0.691	15.903	28	NC	0.8	200.113	31	NC	0	0	NC
P113	18" Pipe	0.692	15.925	27	NC	0.799	199.691	30	NC	0	0	NC
P55	18" Pipe	0.702	16.142	24	NC	0.798	199.577	24	NC	0	0	NC
P110	18" Pipe	0.693	15.942	28	NC	0.798	199.389	30	NC	0	0	NC
P57	18" Pipe	0.701	16.116	23	NC	0.797	199.351	23	NC	0	0	NC
P56	18" Pipe	0.699	16.088	24	NC	0.797	199.202	24	NC	0	0	NC
P81	18" Pipe	0.701	16.134	24	NC	0.78	194.928	23	NC	0	0	NC
P133	18" Pipe	0.693	15.934	27	NC	0.78	194.896	29	NC	0	0	NC
P130	18" Pipe	0.692	15.916	28	NC	0.779	194.789	29	NC	0	0	NC
P91	18" Pipe	0.701	16.133	23	NC	0.779	194.639	24	NC	0	0	NC
P132	18" Pipe	0.691	15.886	27	NC	0.778	194.445	29	NC	0	0	NC
P131	18" Pipe	0.689	15.848	28	NC	0.777	194.25	29	NC	0	0	NC
P90	18" Pipe	0.702	16.144	23	NC	0.726	181.381	31	NC	0	0	NC
P82	18" Pipe	0.702	16.144	24	NC	0.725	181.149	30	NC	0	0	NC
P83	18" Pipe	0.701	16.134	24	NC	0.706	176.603	31	NC	0	0	NC
P84	18" Pipe	0.7	16.106	24	NC	0.705	176.286	31	NC	0	0	NC
P89	18" Pipe	0.701	16.133	23	NC	0.705	176.183	30	NC	0	0	NC
P88	18" Pipe	0.7	16.105	23	NC	0.704	176.042	30	NC	0	0	NC
P87	18" Pipe	0.698	16.062	23	NC	0.704	176.012	30	NC	0	0	NC
P85	18" Pipe	0.698	16.062	24	NC	0.703	175.678	31	NC	0	0	NC
P86	18" Pipe	0.696	16.011	24	NC	0.702	175.425	30	NC	0	0	NC

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	100
Mesh Size (in)	12
Max Iterations	10
Merge Tolerance (in)	0.12
Solver	Sparse Accelerated
Coefficient of Friction	0.5
No. of Shear Regions	4
Shear Region Spacing Increment (in)	4
Min 1 Bar Dia Spacing for Beams?	No
Optimize footings for OTM / Sliding?	Yes
Parme Beta Factor	0.65
Pile Safety Factor	3
Min % Steel for Pedestal	Auto
Concrete Stress Block	Rectangular
Concrete Rebar Set	ASTM A615
Include WWR	No
Concrete Code	ACI 318-19
HR Steel Pile Code	AISC 14th (360-10): ASD
Wood Pile Code	AWC NDS-18 / SDPWS-15 ASD
Mat Slab Design Option	Construction (Design per Integer No. of Bars)

Project Grid Lines

Label	Start Z [ft]	End Z [ft]	Start X [ft]	End X [ft]	Start Bubble	End Bubble
No Data to Print ...						

Project Grid Arcs

Label	Center Z [ft]	Center X [ft]	Radius [ft]	Start Angle [d...	Sweep Angle ...	Start Bubble	End Bubble
No Data to Print ...							

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density...	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc 6000NW	4463.15	1940.5	0.15	0.6	0.145	6	1	60	60
2	RIGID	1e+6		0.3	0	0	0	0	0	0

General Properties

	Label	Min Steel ...	Max Steel...	Material	Design Ru...	Equal Bar Spacing	Group Design	Concrete Bearing	Force Top Bar
1	Footing 1	0.002	0.007	Conc 600...	RST			Yes	

Footing Geometry

	Label	Max Length[...	Min Length[ft]	Max Width[ft]	Min Width[ft]	L/W Increm...	Max Thickn...	Min Thickne...	Thick Incre...	Force Sq...
1	Footing 1	10	2	10	2	0.5	24	12	1	

Pedestal Properties

	Label	Type	Shape	Height[in]	e/BL	ex[in]	ez[in]	BLx[ft]	BLz[ft]
1	Footing 1	Pedestal	CRECT12X12	24	Use ex,ez	0	0	0	0

Soil Properties

	Label	Overburden[ksf]	Passive[k]	Friction Coefficient	Gross/Net
1	Footing 1	0.1	0	0.3	Gross

Soil Definitions

	Label	Subgrade Modulus[k/ft^3]	Allowable Bearing[ksf]	Depth Properties	Default?
1	Default	0.0001	5	None	Yes

All Support Types

	Point Label	Support[k/in]	Footings/Piles/Pile Caps	Support Angle(deg)
1	P1	18" Pipe	18" Pipe	N/A
2	P2	18" Pipe	18" Pipe	N/A
3	P3	18" Pipe	18" Pipe	N/A
4	P4	18" Pipe	18" Pipe	N/A
5	P5	18" Pipe	18" Pipe	N/A
6	P6	18" Pipe	18" Pipe	N/A
7	P7	18" Pipe	18" Pipe	N/A
8	P8	18" Pipe	18" Pipe	N/A
9	P9	18" Pipe	18" Pipe	N/A
10	P10	18" Pipe	18" Pipe	N/A
11	P11	18" Pipe	18" Pipe	N/A
12	P12	18" Pipe	18" Pipe	N/A
13	P13	18" Pipe	18" Pipe	N/A
14	P14	18" Pipe	18" Pipe	N/A
15	P15	18" Pipe	18" Pipe	N/A
16	P16	18" Pipe	18" Pipe	N/A
17	P17	18" Pipe	18" Pipe	N/A
18	P18	18" Pipe	18" Pipe	N/A
19	P19	18" Pipe	18" Pipe	N/A
20	P20	18" Pipe	18" Pipe	N/A
21	P21	18" Pipe	18" Pipe	N/A
22	P22	18" Pipe	18" Pipe	N/A
23	P23	18" Pipe	18" Pipe	N/A
24	P24	18" Pipe	18" Pipe	N/A
25	P25	18" Pipe	18" Pipe	N/A
26	P26	18" Pipe	18" Pipe	N/A
27	P27	18" Pipe	18" Pipe	N/A
28	P28	18" Pipe	18" Pipe	N/A
29	P29	18" Pipe	18" Pipe	N/A
30	P30	18" Pipe	18" Pipe	N/A
31	P31	18" Pipe	18" Pipe	N/A
32	P32	18" Pipe	18" Pipe	N/A
33	P33	18" Pipe	18" Pipe	N/A
34	P34	18" Pipe	18" Pipe	N/A
35	P35	18" Pipe	18" Pipe	N/A
36	P36	18" Pipe	18" Pipe	N/A
37	P37	18" Pipe	18" Pipe	N/A
38	P38	18" Pipe	18" Pipe	N/A
39	P39	18" Pipe	18" Pipe	N/A
40	P40	18" Pipe	18" Pipe	N/A
41	P41	18" Pipe	18" Pipe	N/A
42	P42	18" Pipe	18" Pipe	N/A
43	P43	18" Pipe	18" Pipe	N/A
44	P44	18" Pipe	18" Pipe	N/A
45	P45	18" Pipe	18" Pipe	N/A
46	P46	18" Pipe	18" Pipe	N/A
47	P47	18" Pipe	18" Pipe	N/A
48	P48	18" Pipe	18" Pipe	N/A
49	P49	18" Pipe	18" Pipe	N/A
50	P50	18" Pipe	18" Pipe	N/A
51	P51	18" Pipe	18" Pipe	N/A
52	P52	18" Pipe	18" Pipe	N/A

All Support Types (Continued)

	Point Label	Support[k/in]	Footings/Piles/Pile Caps	Support Angle(deg)
53	P53	18" Pipe	18" Pipe	N/A
54	P54	18" Pipe	18" Pipe	N/A
55	P55	18" Pipe	18" Pipe	N/A
56	P56	18" Pipe	18" Pipe	N/A
57	P57	18" Pipe	18" Pipe	N/A
58	P58	18" Pipe	18" Pipe	N/A
59	P59	18" Pipe	18" Pipe	N/A
60	P60	18" Pipe	18" Pipe	N/A
61	P61	18" Pipe	18" Pipe	N/A
62	P62	18" Pipe	18" Pipe	N/A
63	P63	18" Pipe	18" Pipe	N/A
64	P64	18" Pipe	18" Pipe	N/A
65	P65	18" Pipe	18" Pipe	N/A
66	P66	18" Pipe	18" Pipe	N/A
67	P67	18" Pipe	18" Pipe	N/A
68	P68	18" Pipe	18" Pipe	N/A
69	P69	18" Pipe	18" Pipe	N/A
70	P70	18" Pipe	18" Pipe	N/A
71	P71	18" Pipe	18" Pipe	N/A
72	P72	18" Pipe	18" Pipe	N/A
73	P73	18" Pipe	18" Pipe	N/A
74	P74	18" Pipe	18" Pipe	N/A
75	P75	18" Pipe	18" Pipe	N/A
76	P76	18" Pipe	18" Pipe	N/A
77	P77	18" Pipe	18" Pipe	N/A
78	P78	18" Pipe	18" Pipe	N/A
79	P79	18" Pipe	18" Pipe	N/A
80	P80	18" Pipe	18" Pipe	N/A
81	P81	18" Pipe	18" Pipe	N/A
82	P82	18" Pipe	18" Pipe	N/A
83	P83	18" Pipe	18" Pipe	N/A
84	P84	18" Pipe	18" Pipe	N/A
85	P85	18" Pipe	18" Pipe	N/A
86	P86	18" Pipe	18" Pipe	N/A
87	P87	18" Pipe	18" Pipe	N/A
88	P88	18" Pipe	18" Pipe	N/A
89	P89	18" Pipe	18" Pipe	N/A
90	P90	18" Pipe	18" Pipe	N/A
91	P91	18" Pipe	18" Pipe	N/A
92	P92	18" Pipe	18" Pipe	N/A
93	P93	18" Pipe	18" Pipe	N/A
94	P94	18" Pipe	18" Pipe	N/A
95	P95	18" Pipe	18" Pipe	N/A
96	P96	18" Pipe	18" Pipe	N/A
97	P97	18" Pipe	18" Pipe	N/A
98	P98	18" Pipe	18" Pipe	N/A
99	P99	18" Pipe	18" Pipe	N/A
100	P100	18" Pipe	18" Pipe	N/A
101	P101	18" Pipe	18" Pipe	N/A
102	P102	18" Pipe	18" Pipe	N/A
103	P103	18" Pipe	18" Pipe	N/A
104	P104	18" Pipe	18" Pipe	N/A
105	P105	18" Pipe	18" Pipe	N/A
106	P106	18" Pipe	18" Pipe	N/A
107	P107	18" Pipe	18" Pipe	N/A
108	P108	18" Pipe	18" Pipe	N/A
109	P109	18" Pipe	18" Pipe	N/A

All Support Types (Continued)

	Point Label	Support[k/in]	Footings/Piles/Pile Caps	Support Angle(deg)
110	P110	18" Pipe	18" Pipe	N/A
111	P111	18" Pipe	18" Pipe	N/A
112	P112	18" Pipe	18" Pipe	N/A
113	P113	18" Pipe	18" Pipe	N/A
114	P114	18" Pipe	18" Pipe	N/A
115	P115	18" Pipe	18" Pipe	N/A
116	P116	18" Pipe	18" Pipe	N/A
117	P117	18" Pipe	18" Pipe	N/A
118	P118	18" Pipe	18" Pipe	N/A
119	P119	18" Pipe	18" Pipe	N/A
120	P120	18" Pipe	18" Pipe	N/A
121	P121	18" Pipe	18" Pipe	N/A
122	P122	18" Pipe	18" Pipe	N/A
123	P123	18" Pipe	18" Pipe	N/A
124	P124	18" Pipe	18" Pipe	N/A
125	P125	18" Pipe	18" Pipe	N/A
126	P126	18" Pipe	18" Pipe	N/A
127	P127	18" Pipe	18" Pipe	N/A
128	P128	18" Pipe	18" Pipe	N/A
129	P129	18" Pipe	18" Pipe	N/A
130	P130	18" Pipe	18" Pipe	N/A
131	P131	18" Pipe	18" Pipe	N/A
132	P132	18" Pipe	18" Pipe	N/A
133	P133	18" Pipe	18" Pipe	N/A
134	P134	18" Pipe	18" Pipe	N/A
135	P135	18" Pipe	18" Pipe	N/A
136	P136	18" Pipe	18" Pipe	N/A
137	P137	18" Pipe	18" Pipe	N/A
138	N396			N/A

Point Loads and Moments (Cat 1 : DL)

	Label	Direction	Magnitude[k,k-ft]
1	P1	Y	72.3

Point Loads and Moments (Cat 5 : SL)

	Label	Direction	Magnitude[k,k-ft]
1	P1	Y	52.3

Point Loads and Moments (Cat 6 : RLL)

	Label	Direction	Magnitude[k,k-ft]
1	P1	Y	95

Point Loads and Moments (Cat 16 : ELX)

	Label	Direction	Magnitude[k,k-ft]
1	P1	X	1667
2	P1	X	1448

Point Loads and Moments (Cat 17 : ELY)

	Label	Direction	Magnitude[k,k-ft]
1	P1	Y	20.039

Point Loads and Moments (Cat 18 : ELZ)

	Label	Direction	Magnitude[k,k-ft]
1	P1	Z	1667

Point Loads and Moments (Cat 18 : ELZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
2	P1	Z	1448

Point Loads and Moments (Cat 47 : NLX)

	Label	Direction	Magnitude[k,k-ft]
1	P1	X	1667
2	P1	X	1004

Point Loads and Moments (Cat 49 : NLZ)

	Label	Direction	Magnitude[k,k-ft]
1	P1	Z	1667
2	P1	Z	1004

Line Loads and Moments (Cat 1 : DL)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N172	N173	Y	0.668	0.668
2	N173	N174	Y	0.668	0.668
3	N174	N175	Y	0.668	0.668
4	N175	N176	Y	0.668	0.668
5	N176	N177	Y	0.668	0.668
6	N177	N178	Y	0.668	0.668
7	N178	N179	Y	0.668	0.668
8	N179	N180	Y	0.668	0.668
9	N180	N181	Y	0.668	0.668
10	N181	N182	Y	0.668	0.668
11	N182	N183	Y	0.668	0.668
12	N183	N184	Y	0.668	0.668
13	N184	N185	Y	0.668	0.668
14	N185	N186	Y	0.668	0.668
15	N186	N187	Y	0.668	0.668
16	N187	N188	Y	0.668	0.668
17	N188	N189	Y	0.668	0.668
18	N189	N190	Y	0.668	0.668
19	N190	N191	Y	0.668	0.668
20	N191	N192	Y	0.668	0.668
21	N192	N193	Y	0.668	0.668
22	N193	N194	Y	0.668	0.668
23	N194	N195	Y	0.668	0.668
24	N195	N196	Y	0.668	0.668
25	N196	N197	Y	0.668	0.668
26	N197	N198	Y	0.668	0.668
27	N198	N199	Y	0.668	0.668
28	N199	N200	Y	0.668	0.668
29	N200	N201	Y	0.668	0.668
30	N201	N202	Y	0.668	0.668
31	N202	N203	Y	0.668	0.668
32	N203	N172	Y	0.668	0.668
33	N236	N237	Y	0.306	0.306
34	N237	N238	Y	0.306	0.306
35	N238	N239	Y	0.306	0.306
36	N239	N240	Y	0.306	0.306
37	N240	N241	Y	0.306	0.306
38	N241	N242	Y	0.306	0.306
39	N242	N243	Y	0.306	0.306
40	N243	N244	Y	0.306	0.306
41	N244	N245	Y	0.306	0.306

Line Loads and Moments (Cat 1 : DL) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
42	N245	N246	Y	0.306	0.306
43	N246	N247	Y	0.306	0.306
44	N247	N248	Y	0.306	0.306
45	N248	N249	Y	0.306	0.306
46	N249	N250	Y	0.306	0.306
47	N250	N251	Y	0.306	0.306
48	N251	N252	Y	0.306	0.306
49	N252	N253	Y	0.306	0.306
50	N253	N254	Y	0.306	0.306
51	N254	N255	Y	0.306	0.306
52	N255	N256	Y	0.306	0.306
53	N256	N257	Y	0.306	0.306
54	N257	N258	Y	0.306	0.306
55	N258	N259	Y	0.306	0.306
56	N259	N260	Y	0.306	0.306
57	N260	N261	Y	0.306	0.306
58	N261	N262	Y	0.306	0.306
59	N262	N263	Y	0.306	0.306
60	N263	N264	Y	0.306	0.306
61	N264	N265	Y	0.306	0.306
62	N265	N266	Y	0.306	0.306
63	N266	N267	Y	0.306	0.306
64	N267	N236	Y	0.306	0.306

Line Loads and Moments (Cat 5 : SL)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N172	N173	Y	0.151	0.151
2	N173	N174	Y	0.151	0.151
3	N174	N175	Y	0.151	0.151
4	N175	N176	Y	0.151	0.151
5	N176	N177	Y	0.151	0.151
6	N177	N178	Y	0.151	0.151
7	N178	N179	Y	0.151	0.151
8	N179	N180	Y	0.151	0.151
9	N180	N181	Y	0.151	0.151
10	N181	N182	Y	0.151	0.151
11	N182	N183	Y	0.151	0.151
12	N183	N184	Y	0.151	0.151
13	N184	N185	Y	0.151	0.151
14	N185	N186	Y	0.151	0.151
15	N186	N187	Y	0.151	0.151
16	N187	N188	Y	0.151	0.151
17	N188	N189	Y	0.151	0.151
18	N189	N190	Y	0.151	0.151
19	N190	N191	Y	0.151	0.151
20	N191	N192	Y	0.151	0.151
21	N192	N193	Y	0.151	0.151
22	N193	N194	Y	0.151	0.151
23	N194	N195	Y	0.151	0.151
24	N195	N196	Y	0.151	0.151
25	N196	N197	Y	0.151	0.151
26	N197	N198	Y	0.151	0.151
27	N198	N199	Y	0.151	0.151
28	N199	N200	Y	0.151	0.151
29	N200	N201	Y	0.151	0.151
30	N201	N202	Y	0.151	0.151

Line Loads and Moments (Cat 5 : SL) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
31	N202	N203	Y	0.151	0.151
32	N203	N172	Y	0.151	0.151

Line Loads and Moments (Cat 6 : RLL)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N172	N173	Y	0.275	0.275
2	N173	N174	Y	0.275	0.275
3	N174	N175	Y	0.275	0.275
4	N175	N176	Y	0.275	0.275
5	N176	N177	Y	0.275	0.275
6	N177	N178	Y	0.275	0.275
7	N178	N179	Y	0.275	0.275
8	N179	N180	Y	0.275	0.275
9	N180	N181	Y	0.275	0.275
10	N181	N182	Y	0.275	0.275
11	N182	N183	Y	0.275	0.275
12	N183	N184	Y	0.275	0.275
13	N184	N185	Y	0.275	0.275
14	N185	N186	Y	0.275	0.275
15	N186	N187	Y	0.275	0.275
16	N187	N188	Y	0.275	0.275
17	N188	N189	Y	0.275	0.275
18	N189	N190	Y	0.275	0.275
19	N190	N191	Y	0.275	0.275
20	N191	N192	Y	0.275	0.275
21	N192	N193	Y	0.275	0.275
22	N193	N194	Y	0.275	0.275
23	N194	N195	Y	0.275	0.275
24	N195	N196	Y	0.275	0.275
25	N196	N197	Y	0.275	0.275
26	N197	N198	Y	0.275	0.275
27	N198	N199	Y	0.275	0.275
28	N199	N200	Y	0.275	0.275
29	N200	N201	Y	0.275	0.275
30	N201	N202	Y	0.275	0.275
31	N202	N203	Y	0.275	0.275
32	N203	N172	Y	0.275	0.275

Line Loads and Moments (Cat 16 : ELX)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N172	N173	X	0.09	0.09
2	N173	N174	X	0.09	0.09
3	N174	N175	X	0.09	0.09
4	N175	N176	X	0.09	0.09
5	N176	N177	X	0.09	0.09
6	N177	N178	X	0.09	0.09
7	N178	N179	X	0.09	0.09
8	N179	N180	X	0.09	0.09
9	N180	N181	X	0.09	0.09
10	N181	N182	X	0.09	0.09
11	N182	N183	X	0.09	0.09
12	N183	N184	X	0.09	0.09
13	N184	N185	X	0.09	0.09
14	N185	N186	X	0.09	0.09
15	N186	N187	X	0.09	0.09
16	N187	N188	X	0.09	0.09

Line Loads and Moments (Cat 16 : ELX) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
17	N188	N189	X	0.09	0.09
18	N189	N190	X	0.09	0.09
19	N190	N191	X	0.09	0.09
20	N191	N192	X	0.09	0.09
21	N192	N193	X	0.09	0.09
22	N193	N194	X	0.09	0.09
23	N194	N195	X	0.09	0.09
24	N195	N196	X	0.09	0.09
25	N196	N197	X	0.09	0.09
26	N197	N198	X	0.09	0.09
27	N198	N199	X	0.09	0.09
28	N199	N200	X	0.09	0.09
29	N200	N201	X	0.09	0.09
30	N201	N202	X	0.09	0.09
31	N202	N203	X	0.09	0.09
32	N203	N172	X	0.09	0.09
33	N188	N189	Y	-7.36	-7.36
34	N189	N190	Y	-7.36	-7.36
35	N190	N191	Y	-7.36	-7.36
36	N191	N192	Y	-7.36	-7.36
37	N192	N193	Y	-7.36	-7.36
38	N193	N194	Y	-7.36	-7.36
39	N194	N195	Y	-7.36	-7.36
40	N195	N196	Y	-7.36	-7.36
41	N196	N197	Y	-7.36	-7.36
42	N197	N198	Y	-7.36	-7.36
43	N198	N199	Y	-7.36	-7.36
44	N199	N200	Y	-7.36	-7.36
45	N200	N201	Y	-7.36	-7.36
46	N201	N202	Y	-7.36	-7.36
47	N202	N203	Y	-7.36	-7.36
48	N203	N172	Y	-7.36	-7.36

Line Loads and Moments (Cat 17 : ELY)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N172	N173	Y	0.185	0.185
2	N173	N174	Y	0.185	0.185
3	N174	N175	Y	0.185	0.185
4	N175	N176	Y	0.185	0.185
5	N176	N177	Y	0.185	0.185
6	N177	N178	Y	0.185	0.185
7	N178	N179	Y	0.185	0.185
8	N179	N180	Y	0.185	0.185
9	N180	N181	Y	0.185	0.185
10	N181	N182	Y	0.185	0.185
11	N182	N183	Y	0.185	0.185
12	N183	N184	Y	0.185	0.185
13	N184	N185	Y	0.185	0.185
14	N185	N186	Y	0.185	0.185
15	N186	N187	Y	0.185	0.185
16	N187	N188	Y	0.185	0.185
17	N188	N189	Y	0.185	0.185
18	N189	N190	Y	0.185	0.185
19	N190	N191	Y	0.185	0.185
20	N191	N192	Y	0.185	0.185
21	N192	N193	Y	0.185	0.185

Line Loads and Moments (Cat 17 : ELY) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
22	N193	N194	Y	0.185	0.185
23	N194	N195	Y	0.185	0.185
24	N195	N196	Y	0.185	0.185
25	N196	N197	Y	0.185	0.185
26	N197	N198	Y	0.185	0.185
27	N198	N199	Y	0.185	0.185
28	N199	N200	Y	0.185	0.185
29	N200	N201	Y	0.185	0.185
30	N201	N202	Y	0.185	0.185
31	N202	N203	Y	0.185	0.185
32	N203	N172	Y	0.185	0.185

Line Loads and Moments (Cat 18 : ELZ)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N172	N173	Z	0.09	0.09
2	N173	N174	Z	0.09	0.09
3	N174	N175	Z	0.09	0.09
4	N175	N176	Z	0.09	0.09
5	N176	N177	Z	0.09	0.09
6	N177	N178	Z	0.09	0.09
7	N178	N179	Z	0.09	0.09
8	N179	N180	Z	0.09	0.09
9	N180	N181	Z	0.09	0.09
10	N181	N182	Z	0.09	0.09
11	N182	N183	Z	0.09	0.09
12	N183	N184	Z	0.09	0.09
13	N184	N185	Z	0.09	0.09
14	N185	N186	Z	0.09	0.09
15	N186	N187	Z	0.09	0.09
16	N187	N188	Z	0.09	0.09
17	N188	N189	Z	0.09	0.09
18	N189	N190	Z	0.09	0.09
19	N190	N191	Z	0.09	0.09
20	N191	N192	Z	0.09	0.09
21	N192	N193	Z	0.09	0.09
22	N193	N194	Z	0.09	0.09
23	N194	N195	Z	0.09	0.09
24	N195	N196	Z	0.09	0.09
25	N196	N197	Z	0.09	0.09
26	N197	N198	Z	0.09	0.09
27	N198	N199	Z	0.09	0.09
28	N199	N200	Z	0.09	0.09
29	N200	N201	Z	0.09	0.09
30	N201	N202	Z	0.09	0.09
31	N202	N203	Z	0.09	0.09
32	N203	N172	Z	0.09	0.09
33	N180	N181	Y	-7.36	-7.36
34	N181	N182	Y	-7.36	-7.36
35	N182	N183	Y	-7.36	-7.36
36	N183	N184	Y	-7.36	-7.36
37	N184	N185	Y	-7.36	-7.36
38	N185	N186	Y	-7.36	-7.36
39	N186	N187	Y	-7.36	-7.36
40	N187	N188	Y	-7.36	-7.36
41	N188	N189	Y	-7.36	-7.36
42	N189	N190	Y	-7.36	-7.36

Line Loads and Moments (Cat 18 : ELZ) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
43	N190	N191	Y	-7.36	-7.36
44	N191	N192	Y	-7.36	-7.36
45	N192	N193	Y	-7.36	-7.36
46	N193	N194	Y	-7.36	-7.36
47	N194	N195	Y	-7.36	-7.36
48	N195	N196	Y	-7.36	-7.36

Line Loads and Moments (Cat 47 : NLX)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N246	N245	X	0.076	0.076
2	N245	N244	X	0.076	0.076
3	N244	N243	X	0.076	0.076
4	N243	N242	X	0.076	0.076
5	N242	N241	X	0.076	0.076
6	N241	N240	X	0.076	0.076
7	N240	N239	X	0.076	0.076
8	N239	N238	X	0.076	0.076
9	N238	N237	X	0.076	0.076
10	N237	N236	X	0.076	0.076
11	N236	N267	X	0.076	0.076
12	N267	N266	X	0.076	0.076
13	N266	N265	X	0.076	0.076
14	N265	N264	X	0.076	0.076
15	N264	N263	X	0.076	0.076
16	N263	N262	X	0.076	0.076
17	N262	N261	X	0.076	0.076
18	N261	N260	X	0.076	0.076
19	N260	N259	X	0.076	0.076
20	N259	N258	X	0.076	0.076
21	N258	N257	X	0.076	0.076
22	N257	N256	X	0.076	0.076
23	N256	N255	X	0.076	0.076
24	N255	N254	X	0.076	0.076
25	N254	N253	X	0.076	0.076
26	N253	N252	X	0.076	0.076
27	N252	N251	X	0.076	0.076
28	N251	N250	X	0.076	0.076
29	N250	N249	X	0.076	0.076
30	N249	N248	X	0.076	0.076
31	N248	N247	X	0.076	0.076
32	N247	N246	X	0.076	0.076
33	N252	N253	Y	-4.536	-4.536
34	N253	N254	Y	-4.536	-4.536
35	N254	N255	Y	-4.536	-4.536
36	N255	N256	Y	-4.536	-4.536
37	N256	N257	Y	-4.536	-4.536
38	N257	N258	Y	-4.536	-4.536
39	N258	N259	Y	-4.536	-4.536
40	N259	N260	Y	-4.536	-4.536
41	N260	N261	Y	-4.536	-4.536
42	N261	N262	Y	-4.536	-4.536
43	N262	N263	Y	-4.536	-4.536
44	N263	N264	Y	-4.536	-4.536
45	N264	N265	Y	-4.536	-4.536
46	N265	N266	Y	-4.536	-4.536
47	N266	N267	Y	-4.536	-4.536

Line Loads and Moments (Cat 47 : NLX) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
48	N267	N236	Y	-4.536	-4.536

Line Loads and Moments (Cat 48 : NLY)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N236	N237	Y	0.085	0.085
2	N237	N238	Y	0.085	0.085
3	N238	N239	Y	0.085	0.085
4	N239	N240	Y	0.085	0.085
5	N240	N241	Y	0.085	0.085
6	N241	N242	Y	0.085	0.085
7	N242	N243	Y	0.085	0.085
8	N243	N244	Y	0.085	0.085
9	N244	N245	Y	0.085	0.085
10	N245	N246	Y	0.085	0.085
11	N246	N247	Y	0.085	0.085
12	N247	N248	Y	0.085	0.085
13	N248	N249	Y	0.085	0.085
14	N249	N250	Y	0.085	0.085
15	N250	N251	Y	0.085	0.085
16	N251	N252	Y	0.085	0.085
17	N252	N253	Y	0.085	0.085
18	N253	N254	Y	0.085	0.085
19	N254	N255	Y	0.085	0.085
20	N255	N256	Y	0.085	0.085
21	N256	N257	Y	0.085	0.085
22	N257	N258	Y	0.085	0.085
23	N258	N259	Y	0.085	0.085
24	N259	N260	Y	0.085	0.085
25	N260	N261	Y	0.085	0.085
26	N261	N262	Y	0.085	0.085
27	N262	N263	Y	0.085	0.085
28	N263	N264	Y	0.085	0.085
29	N264	N265	Y	0.085	0.085
30	N265	N266	Y	0.085	0.085
31	N266	N267	Y	0.085	0.085
32	N267	N236	Y	0.085	0.085

Line Loads and Moments (Cat 49 : NLZ)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N246	N245	Z	0.076	0.076
2	N245	N244	Z	0.076	0.076
3	N244	N243	Z	0.076	0.076
4	N243	N242	Z	0.076	0.076
5	N242	N241	Z	0.076	0.076
6	N241	N240	Z	0.076	0.076
7	N240	N239	Z	0.076	0.076
8	N239	N238	Z	0.076	0.076
9	N238	N237	Z	0.076	0.076
10	N237	N236	Z	0.076	0.076
11	N236	N267	Z	0.076	0.076
12	N267	N266	Z	0.076	0.076
13	N266	N265	Z	0.076	0.076
14	N265	N264	Z	0.076	0.076
15	N264	N263	Z	0.076	0.076
16	N263	N262	Z	0.076	0.076
17	N262	N261	Z	0.076	0.076

Line Loads and Moments (Cat 49 : NLZ) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
18	N261	N260	Z	0.076	0.076
19	N260	N259	Z	0.076	0.076
20	N259	N258	Z	0.076	0.076
21	N258	N257	Z	0.076	0.076
22	N257	N256	Z	0.076	0.076
23	N256	N255	Z	0.076	0.076
24	N255	N254	Z	0.076	0.076
25	N254	N253	Z	0.076	0.076
26	N253	N252	Z	0.076	0.076
27	N252	N251	Z	0.076	0.076
28	N251	N250	Z	0.076	0.076
29	N250	N249	Z	0.076	0.076
30	N249	N248	Z	0.076	0.076
31	N248	N247	Z	0.076	0.076
32	N247	N246	Z	0.076	0.076
33	N260	N259	Y	-4.536	-4.536
34	N259	N258	Y	-4.536	-4.536
35	N258	N257	Y	-4.536	-4.536
36	N257	N256	Y	-4.536	-4.536
37	N256	N255	Y	-4.536	-4.536
38	N255	N254	Y	-4.536	-4.536
39	N254	N253	Y	-4.536	-4.536
40	N253	N252	Y	-4.536	-4.536
41	N252	N251	Y	-4.536	-4.536
42	N251	N250	Y	-4.536	-4.536
43	N250	N249	Y	-4.536	-4.536
44	N249	N248	Y	-4.536	-4.536
45	N248	N247	Y	-4.536	-4.536
46	N247	N246	Y	-4.536	-4.536
47	N246	N245	Y	-4.536	-4.536
48	N245	N244	Y	-4.536	-4.536

Area Loads (Cat 1 : DL)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL8	0.01	0.01

Area Loads (Cat 11 : FL)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL2	1.42	1.42

Area Loads (Cat 16 : ELX)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL4	0.268	0.268
2	AL19	-0.008	-0.008
3	AL20	0.008	0.008

Area Loads (Cat 17 : ELY)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL3	0.397	0.397
2	AL15	0.11	0.11

Area Loads (Cat 18 : ELZ)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL5	0.268	0.268

Area Loads (Cat 18 : ELZ) (Continued)

	Label	Base Mag[ksf]	Peak Mag[ksf]
2	AL17	0.008	0.008
3	AL18	-0.008	-0.008

Area Loads (Cat 46 : NL)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL9	0.852	0.852

Area Loads (Cat 47 : NLX)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL10	0.128	0.128

Area Loads (Cat 48 : NLY)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL14	0.239	0.239
2	AL16	0.11	0.11

Area Loads (Cat 49 : NLZ)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL12	0.121	0.121

Slabs

	Label	Thickness ...	Material	Local Axis ...	Analysis Offset [in]	Passive Pr...	Soil Overb...	Icr Factor
1	S1	30	Conc 6000NW	0	6	0	0	0.25
2	S2	30	Conc 6000NW	0	6	0	0	0.25
3	S3	30	Conc 6000NW	0	0	0	0	0.25

Load Combinations

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
1	ASCE Strengt...					DL	1.4									FL	1.4								
2	ASCE Strengt...					DL	1.2	LL	1.6	RLL	0.5					FL	1.2								
3	ASCE Strengt...					DL	1.2	LL	1.6	SL	0.5					FL	1.2								
4	ASCE Strengt...					DL	1.2	RLL	1.6	LL	0.5					FL	1.2								
5	ASCE Strengt...					DL	1.2	SL	1.6	LL	0.5					FL	1.2								
6	ASCE Strengt...	Yes				DL	1.2	ELX	1	LL	0.5	ELY	1	SL	0.2	FL	1.2								
7	ASCE Strengt...	Yes				DL	1.2	ELZ	1	LL	0.5	ELY	1	SL	0.2	FL	1.2								
8	ASCE Strengt...	Yes				DL	0.9	ELX	1	ELY	-1					FL	0.9								
9	ASCE Strengt...	Yes				DL	0.9	ELZ	1	ELY	-1					FL	0.9								
10	2nd Containm...	Yes			1.5	DL	1									NL	1								
11	2nd Containm...	Yes			1.5	DL	1.2	NLX	1	LL	0.5	NLY	1	SL	0.2	NL	1.2								
12	2nd Containm...	Yes			1.5	DL	1.2	NLZ	1	LL	0.5	NLY	1	SL	0.2	NL	1.2								
13	2nd Containm...	Yes			1.5	DL	0.9	NLX	1	NLY	-1					NL	0.9								
14	2nd Containm...	Yes			1.5	DL	0.9	NLZ	1	NLY	-1					NL	0.9								
15																									
16	ASCE 1				1.5	DL	1									FL	1								
17	ASCE 2				1.5	DL	1	LL	1							FL	1								
18	ASCE 3 (a)				1.5	DL	1	RLL	1							FL	1								
19	ASCE 3 (b)				1.5	DL	1	SL	1							FL	1								
20	ASCE 4 (a)				1.5	DL	1	LL	0.75	RLL	0.75					FL	1								
21	ASCE 4 (b)				1.5	DL	1	LL	0.75	SL	0.75					FL	1								
22	ASCE 4 (c)				1.5	DL	1	LL	0.75							FL	1								
23	ASCE 8 (a)	Yes	Yes		1.5	DL	1	ELX	0.7	ELY	0.7					FL	1								
24	ASCE 8 (b)	Yes	Yes		1.5	DL	1	ELZ	0.7	ELY	0.7					FL	1								
25	ASCE 9 (a)	Yes	Yes		1.5	DL	1	ELX	0.5...	LL	0.75	SL	0.75	ELY	0.5...	FL	1								
26	ASCE 9 (b)	Yes	Yes		1.5	DL	1	ELZ	0.5...	LL	0.75	SL	0.75	ELY	0.5...	FL	1								

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
27	ASCE 10 (a) (...	Yes	Yes			DL	0.6	ELX	0.7	ELY	-0.7					FL	0.6								
28	ASCE 10 (a) (...	Yes	Yes			DL	0.6	ELZ	0.7	ELY	-0.7					FL	0.6								
29	2nd Containm...	Yes	Yes		1.5	DL	1									NL	1								
30	2nd Containm...	Yes	Yes		1.5	DL	1	NLX	0.7	NLY	0.7					NL	1								
31	2nd Containm...	Yes	Yes		1.5	DL	1	NLZ	0.7	NLY	0.7					NL	1								
32	2nd Containm...	Yes	Yes		1.5	DL	1	NLX	0.5...	LL	0.75	SL	0.75	NLY	0.5...	NL	1								
33	2nd Containm...	Yes	Yes		1.5	DL	1	NLZ	0.5...	LL	0.75	SL	0.75	NLY	0.5...	NL	1								
34	2nd Containm...	Yes	Yes			DL	0.6	NLX	0.7	NLY	-0.7					NL	0.6								
35	2nd Containm...	Yes	Yes			DL	0.6	NLZ	0.7	NLY	-0.7					NL	0.6								

Design Cuts

Label	Design Rule
No Data to Print ...	

Design Strips

	Label	Rebar Angle from Pl...	No. of Design Cuts	Design Rule
1	DS1	0	10	RST
2	DS2	90	10	RST
3	DS3	90	10	RST
4	DS4	90	10	RST
5	DS5	90	10	RST
6	DS6	90	10	RST
7	DS7	90	10	RST
8	DS8	90	10	RST
9	DS9	90	10	RST
10	DS10	0	10	RST
11	DS11	90	10	RST
12	DS12	90	10	RST
13	DS13	90	10	RST
14	DS14	90	10	RST
15	DS15	90	10	RST
16	DS16	90	10	RST
17	DS17	90	10	RST
18	DS18	90	10	RST
19	DS19	90	50	RST
20	DS20	90	50	RST
21	DS21	90	50	RST
22	DS22	90	50	RST
23	DS23	90	3	RST
24	DS24	90	50	RST
25	M9	0	5	RST
26	M10	0	50	RST
27	M1	0	50	RST
28	M2	0	50	RST
29	M3	0	50	RST
30	M4	90	50	RST
31	M5	90	50	RST
32	M6	90	50	RST
33	M7	90	50	RST
34	M8	90	50	RST

Pedestals/Posts

Label	Type	Shape	Material	Design Rules	Angle(deg)	Height[in]	Pedestal Layout	Shear Layout
No Data to Print ...								

Stem Walls

Label	Start Point	End Point	Width[in]	Height[in]	Material Density[k/ft^3]
No Data to Print ...					

Load Categories

	Category	Point Loads	Line Loads	Area Loads
1	DL	1	64	1
2	SL	1	32	
3	RLL	1	32	
4	FL			1
5	ELX	2	48	3
6	ELY	1	32	2
7	ELZ	2	48	3
8	NL			1
9	NLX	2	48	1
10	NLY		32	2
11	NLZ	2	48	1

Design Cut Results

Label	UC Top	LC	UC Bot	LC	Shear UC	LC	Phi*Mnz ...	Phi*Mnz ...	Phi*Vny[k]	Top Flex ...	Bot/Mid F...
No Data to Print ...											

Strip Reinforcing

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
1	DS1	0.082	11	#6@8in	DS1-X1	0.302	6	#7@10in	DS1-X4	0.566	7	DS1-X10
2	DS2	0.08	11	#6@6in	DS2-X2	0.193	6	#7@10in	DS2-X6	0.235	6	DS2-X4
3	DS3	0.081	11	#6@6in	DS3-X3	0.159	7	#7@10in	DS3-X8	0.174	7	DS3-X10
4	DS4	0.063	11	#6@6in	DS4-X4	0.168	7	#7@10in	DS4-X8	0.162	11	DS4-X1
5	DS5	0.304	11	#6@8in	DS5-X6	0.174	6	#7@10in	DS5-X1	1.479	6	DS5-X5
6	DS6	0.355	11	#6@8in	DS6-X5	0.126	6	#7@10in	DS6-X10	1.332	6	DS6-X6
7	DS7	0.301	11	#6@8in	DS7-X6	0.114	7	#7@10in	DS7-X10	1.317	11	DS7-X5
8	DS8	0.3	11	#6@8in	DS8-X6	0.088	7	#7@10in	DS8-X10	1.217	12	DS8-X5
9	DS9	0.261	11	#6@8in	DS9-X6	0.104	7	#7@10in	DS9-X1	1.4	6	DS9-X5
10	DS10	0.314	11	#6@8in	DS10-X6	0.185	7	#7@10in	DS10-X1	1.319	6	DS10-X6
11	DS11	0.309	6	#6@8in	DS11-X5	0.102	6	#7@10in	DS11-X10	1.41	6	DS11-X6
12	DS12	0.292	6	#6@8in	DS12-X6	0.119	6	#7@10in	DS12-X1	1.632	6	DS12-X5
13	DS13	0.378	6	#6@8in	DS13-X6	0.058	7	#7@10in	DS13-X10	1.653	6	DS13-X6
14	DS14	0.391	6	#6@8in	DS14-X5	0.066	7	#7@10in	DS14-X10	1.646	6	DS14-X6
15	DS15	0.378	6	#6@8in	DS15-X6	0.039	9	#7@10in	DS15-X10	1.64	6	DS15-X6
16	DS16	0.357	6	#6@8in	DS16-X6	0.07	6	#7@10in	DS16-X10	1.613	6	DS16-X5
17	DS17	0.34	6	#6@8in	DS17-X5	0.056	6	#7@10in	DS17-X1	1.642	6	DS17-X5
18	DS18	0.342	7	#6@8in	DS18-X5	0.054	6	#7@10in	DS18-X1	1.714	6	DS18-X6
19	DS19	0.419	11	#6@8in	DS19-X26	0.213	12	#7@10in	DS19-X4	2.154	11	DS19-X25
20	DS20	0.405	11	#6@8in	DS20-X26	0.193	12	#7@10in	DS20-X1	2.338	11	DS20-X25
21	DS21	0.342	11	#6@8in	DS21-X25	0.287	12	#7@10in	DS21-X1	1.754	11	DS21-X26
22	DS22	0.328	11	#6@8in	DS22-X25	0.257	12	#7@10in	DS22-X50	1.848	11	DS22-X25
23	DS23	0.068	9	#6@8in	DS23-X1	0.355	12	#7@10in	DS23-X2	0.413	11	DS23-X1
24	DS24	0.225	8	#6@8in	DS24-X39	0.339	11	#7@10in	DS24-X25	0.379	12	DS24-X1
25	M9	0.054	12	#6@6in	M9-X4	0.155	7	#7@10in	M9-X2	0.338	7	M9-X4
26	M10	0.139	9	#6@8in	M10-X7	0.28	12	#7@10in	M10-X4	0.77	11	M10-X47
27	M1	0.35	11	#6@8in	M1-X46	0.352	11	#7@10in	M1-X6	1.291	11	M1-X46
28	M2	0.141	9	#6@8in	M2-X7	0.28	12	#7@10in	M2-X4	0.763	12	M2-X47
29	M3	0.342	12	#6@8in	M3-X46	0.349	12	#7@10in	M3-X43	1.285	12	M3-X46
30	M4	0.235	11	#6@6in	M4-X42	0.397	11	#7@10in	M4-X4	0.694	6	M4-X35
31	M5	0.171	6	#6@8in	M5-X21	0.3	11	#7@10in	M5-X7	0.807	6	M5-X28
32	M6	0.273	11	#6@8in	M6-X43	0.289	11	#7@10in	M6-X47	0.623	11	M6-X42
33	M7	0.172	6	#6@8in	M7-X21	0.302	11	#7@10in	M7-X7	0.819	7	M7-X28

Strip Reinforcing (Continued)

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
34	M8	0.286	11	#6@8in	M8-X43	0.288	11	#7@10in	M8-X47	0.633	11	M8-X42

Pedestals/Posts Design Values

Label	UC	Gov LC	Shear UC	Gov LC	Dir	Phi Used	Vertical Reinf	Shear Reinf
No Data to Print ...								

Pedestals/Posts Punching Shear Values

Label	UC	Gov LC	Location	Vuy[k]	Muz[k-ft]	Mux[k-ft]	Total Stress[...	Phi*Vny[ksi]
No Data to Print ...								

Pedestals/Posts Punching Shear Geometries

Label	Shape	Location	Effective De...	L1[in]	L2[in]	Polar Mome...	Polar Mome...	Gamma-x	Gamma-z
No Data to Print ...									

Pile Punching Shear Geometries

	Label	Pile	Shape	Location	Effective Depth[in]	L1[in]	L2[in]
1	P1	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
2	P2	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
3	P3	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
4	P4	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
5	P5	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
6	P6	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
7	P7	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
8	P8	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
9	P9	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
10	P10	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
11	P11	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
12	P12	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
13	P13	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
14	P14	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
15	P15	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
16	P16	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
17	P17	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
18	P18	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
19	P19	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
20	P20	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
21	P21	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
22	P22	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
23	P23	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
24	P24	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
25	P25	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
26	P26	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
27	P27	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
28	P28	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
29	P29	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
30	P30	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
31	P31	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
32	P32	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
33	P33	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
34	P34	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
35	P35	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
36	P36	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
37	P37	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
38	P38	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
39	P39	18" Pipe	Round	INTERIOR	21.625	35.762	35.762

Pile Punching Shear Geometries (Continued)

	Label	Pile	Shape	Location	Effective Depth[in]	L1[in]	L2[in]
40	P40	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
41	P41	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
42	P42	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
43	P43	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
44	P44	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
45	P45	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
46	P46	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
47	P47	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
48	P48	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
49	P49	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
50	P50	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
51	P51	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
52	P52	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
53	P53	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
54	P54	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
55	P55	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
56	P56	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
57	P57	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
58	P58	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
59	P59	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
60	P60	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
61	P61	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
62	P62	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
63	P63	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
64	P64	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
65	P65	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
66	P66	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
67	P67	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
68	P68	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
69	P69	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
70	P70	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
71	P71	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
72	P72	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
73	P73	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
74	P74	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
75	P75	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
76	P76	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
77	P77	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
78	P78	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
79	P79	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
80	P80	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
81	P81	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
82	P82	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
83	P83	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
84	P84	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
85	P85	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
86	P86	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
87	P87	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
88	P88	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
89	P89	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
90	P90	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
91	P91	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
92	P92	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
93	P93	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
94	P94	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
95	P95	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
96	P96	18" Pipe	Round	INTERIOR	21.625	35.762	35.762

Pile Punching Shear Geometries (Continued)

	Label	Pile	Shape	Location	Effective Depth[in]	L1[in]	L2[in]
97	P97	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
98	P98	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
99	P99	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
100	P100	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
101	P101	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
102	P102	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
103	P103	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
104	P104	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
105	P105	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
106	P106	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
107	P107	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
108	P108	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
109	P109	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
110	P110	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
111	P111	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
112	P112	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
113	P113	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
114	P114	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
115	P115	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
116	P116	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
117	P117	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
118	P118	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
119	P119	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
120	P120	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
121	P121	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
122	P122	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
123	P123	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
124	P124	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
125	P125	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
126	P126	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
127	P127	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
128	P128	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
129	P129	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
130	P130	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
131	P131	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
132	P132	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
133	P133	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
134	P134	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
135	P135	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
136	P136	18" Pipe	Round	INTERIOR	21.625	35.762	35.762
137	P137	18" Pipe	Round	INTERIOR	21.625	35.762	35.762

Pile Punching Shear Values

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
1	P1	18" Pipe	0.518	6	INTERIOR	296.067	571.658
2	P2	18" Pipe	0.525	7	INTERIOR	300.249	571.658
3	P3	18" Pipe	0.524	6	INTERIOR	299.304	571.658
4	P4	18" Pipe	0.524	6	INTERIOR	299.352	571.658
5	P5	18" Pipe	0.505	6	INTERIOR	288.592	571.658
6	P6	18" Pipe	0.495	7	INTERIOR	282.838	571.658
7	P7	18" Pipe	0.517	7	INTERIOR	295.676	571.658
8	P8	18" Pipe	0.524	7	INTERIOR	299.405	571.658
9	P9	18" Pipe	0.524	7	INTERIOR	299.759	571.658
10	P10	18" Pipe	0.523	6	INTERIOR	298.997	571.658
11	P11	18" Pipe	0.525	6	INTERIOR	300.095	571.658
12	P12	18" Pipe	0.523	6	INTERIOR	299.084	571.658

Pile Punching Shear Values (Continued)

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
13	P13	18" Pipe	0.52	6	INTERIOR	297.251	571.658
14	P14	18" Pipe	0.5	6	INTERIOR	285.626	571.658
15	P15	18" Pipe	0.482	6	INTERIOR	275.752	571.658
16	P16	18" Pipe	0.481	7	INTERIOR	274.89	571.658
17	P17	18" Pipe	0.501	7	INTERIOR	286.145	571.658
18	P18	18" Pipe	0.518	7	INTERIOR	296.367	571.658
19	P19	18" Pipe	0.524	7	INTERIOR	299.731	571.658
20	P20	18" Pipe	0.51	7	INTERIOR	291.76	571.658
21	P21	18" Pipe	0.512	7	INTERIOR	292.418	571.658
22	P22	18" Pipe	0.512	7	INTERIOR	292.539	571.658
23	P23	18" Pipe	0.511	6	INTERIOR	292.357	571.658
24	P24	18" Pipe	0.511	6	INTERIOR	292.34	571.658
25	P25	18" Pipe	0.511	6	INTERIOR	292	571.658
26	P26	18" Pipe	0.511	6	INTERIOR	292.375	571.658
27	P27	18" Pipe	0.511	6	INTERIOR	292.224	571.658
28	P28	18" Pipe	0.511	6	INTERIOR	292.298	571.658
29	P29	18" Pipe	0.506	6	INTERIOR	289.419	571.658
30	P30	18" Pipe	0.486	6	INTERIOR	277.772	571.658
31	P31	18" Pipe	0.468	6	INTERIOR	267.397	571.658
32	P32	18" Pipe	0.462	6	INTERIOR	263.896	571.658
33	P33	18" Pipe	0.461	7	INTERIOR	263.739	571.658
34	P34	18" Pipe	0.468	7	INTERIOR	267.564	571.658
35	P35	18" Pipe	0.486	7	INTERIOR	277.922	571.658
36	P36	18" Pipe	0.506	7	INTERIOR	289.232	571.658
37	P37	18" Pipe	0.511	7	INTERIOR	292.296	571.658
38	P38	18" Pipe	0.512	7	INTERIOR	292.54	571.658
39	P39	18" Pipe	0.511	7	INTERIOR	292.389	571.658
40	P40	18" Pipe	0.501	7	INTERIOR	286.142	571.658
41	P41	18" Pipe	0.501	7	INTERIOR	286.258	571.658
42	P42	18" Pipe	0.502	6	INTERIOR	287.246	571.658
43	P43	18" Pipe	0.503	6	INTERIOR	287.268	571.658
44	P44	18" Pipe	0.503	7	INTERIOR	287.472	571.658
45	P45	18" Pipe	0.501	6	INTERIOR	286.198	571.658
46	P46	18" Pipe	0.501	6	INTERIOR	286.361	571.658
47	P47	18" Pipe	0.501	6	INTERIOR	286.355	571.658
48	P48	18" Pipe	0.501	6	INTERIOR	286.276	571.658
49	P49	18" Pipe	0.501	6	INTERIOR	286.6	571.658
50	P50	18" Pipe	0.503	6	INTERIOR	287.344	571.658
51	P51	18" Pipe	0.502	6	INTERIOR	287.254	571.658
52	P52	18" Pipe	0.494	6	INTERIOR	282.375	571.658
53	P53	18" Pipe	0.468	6	INTERIOR	267.343	571.658
54	P54	18" Pipe	0.442	6	INTERIOR	252.389	571.658
55	P55	18" Pipe	0.434	7	INTERIOR	248.234	571.658
56	P56	18" Pipe	0.433	7	INTERIOR	247.699	571.658
57	P57	18" Pipe	0.434	6	INTERIOR	247.926	571.658
58	P58	18" Pipe	0.435	7	INTERIOR	248.65	571.658
59	P59	18" Pipe	0.453	7	INTERIOR	258.917	571.658
60	P60	18" Pipe	0.483	7	INTERIOR	276.252	571.658
61	P61	18" Pipe	0.5	7	INTERIOR	285.746	571.658
62	P62	18" Pipe	0.503	7	INTERIOR	287.441	571.658
63	P63	18" Pipe	0.502	7	INTERIOR	286.806	571.658
64	P64	18" Pipe	0.502	7	INTERIOR	286.699	571.658
65	P65	18" Pipe	0.501	7	INTERIOR	286.324	571.658
66	P66	18" Pipe	0.446	7	INTERIOR	254.849	571.658
67	P67	18" Pipe	0.446	7	INTERIOR	255.197	571.658
68	P68	18" Pipe	0.447	6	INTERIOR	255.34	571.658
69	P69	18" Pipe	0.447	6	INTERIOR	255.738	571.658

Pile Punching Shear Values (Continued)

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
70	P70	18" Pipe	0.447	7	INTERIOR	255.247	571.658
71	P71	18" Pipe	0.448	7	INTERIOR	256.273	571.658
72	P72	18" Pipe	0.446	7	INTERIOR	254.999	571.658
73	P73	18" Pipe	0.446	6	INTERIOR	254.701	571.658
74	P74	18" Pipe	0.447	6	INTERIOR	255.406	571.658
75	P75	18" Pipe	0.446	6	INTERIOR	254.828	571.658
76	P76	18" Pipe	0.446	6	INTERIOR	254.71	571.658
77	P77	18" Pipe	0.446	6	INTERIOR	255.072	571.658
78	P78	18" Pipe	0.447	6	INTERIOR	255.255	571.658
79	P79	18" Pipe	0.447	6	INTERIOR	255.737	571.658
80	P80	18" Pipe	0.447	6	INTERIOR	255.324	571.658
81	P81	18" Pipe	0.433	6	INTERIOR	247.576	571.658
82	P82	18" Pipe	0.394	11	INTERIOR	225.374	571.658
83	P83	18" Pipe	0.385	12	INTERIOR	220.006	571.658
84	P84	18" Pipe	0.384	12	INTERIOR	219.53	571.658
85	P85	18" Pipe	0.382	12	INTERIOR	218.613	571.658
86	P86	18" Pipe	0.382	11	INTERIOR	218.415	571.658
87	P87	18" Pipe	0.383	11	INTERIOR	219.181	571.658
88	P88	18" Pipe	0.383	11	INTERIOR	219.127	571.658
89	P89	18" Pipe	0.384	11	INTERIOR	219.358	571.658
90	P90	18" Pipe	0.395	12	INTERIOR	225.866	571.658
91	P91	18" Pipe	0.432	7	INTERIOR	247.092	571.658
92	P92	18" Pipe	0.446	7	INTERIOR	255.002	571.658
93	P93	18" Pipe	0.448	7	INTERIOR	256.146	571.658
94	P94	18" Pipe	0.447	7	INTERIOR	255.27	571.658
95	P95	18" Pipe	0.446	7	INTERIOR	254.704	571.658
96	P96	18" Pipe	0.446	7	INTERIOR	254.827	571.658
97	P97	18" Pipe	0.446	7	INTERIOR	255.179	571.658
98	P98	18" Pipe	0.515	12	INTERIOR	294.632	571.658
99	P99	18" Pipe	0.522	11	INTERIOR	298.267	571.658
100	P100	18" Pipe	0.526	11	INTERIOR	300.56	571.658
101	P101	18" Pipe	0.525	11	INTERIOR	300.127	571.658
102	P102	18" Pipe	0.524	12	INTERIOR	299.503	571.658
103	P103	18" Pipe	0.519	11	INTERIOR	296.689	571.658
104	P104	18" Pipe	0.519	11	INTERIOR	296.413	571.658
105	P105	18" Pipe	0.522	11	INTERIOR	298.341	571.658
106	P106	18" Pipe	0.525	11	INTERIOR	300.04	571.658
107	P107	18" Pipe	0.526	11	INTERIOR	300.67	571.658
108	P108	18" Pipe	0.522	11	INTERIOR	298.27	571.658
109	P109	18" Pipe	0.476	11	INTERIOR	272.159	571.658
110	P110	18" Pipe	0.437	12	INTERIOR	249.879	571.658
111	P111	18" Pipe	0.439	12	INTERIOR	251.128	571.658
112	P112	18" Pipe	0.44	11	INTERIOR	251.689	571.658
113	P113	18" Pipe	0.438	11	INTERIOR	250.46	571.658
114	P114	18" Pipe	0.451	12	INTERIOR	258.05	571.658
115	P115	18" Pipe	0.502	12	INTERIOR	286.761	571.658
116	P116	18" Pipe	0.524	12	INTERIOR	299.642	571.658
117	P117	18" Pipe	0.524	12	INTERIOR	299.415	571.658
118	P118	18" Pipe	0.522	12	INTERIOR	298.236	571.658
119	P119	18" Pipe	0.518	12	INTERIOR	296.308	571.658
120	P120	18" Pipe	0.534	12	INTERIOR	305.284	571.658
121	P121	18" Pipe	0.536	11	INTERIOR	306.359	571.658
122	P122	18" Pipe	0.533	11	INTERIOR	304.901	571.658
123	P123	18" Pipe	0.535	12	INTERIOR	305.64	571.658
124	P124	18" Pipe	0.536	11	INTERIOR	306.139	571.658
125	P125	18" Pipe	0.536	11	INTERIOR	306.214	571.658
126	P126	18" Pipe	0.533	11	INTERIOR	304.923	571.658

Pile Punching Shear Values (Continued)

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
127	P127	18" Pipe	0.533	11	INTERIOR	304.933	571.658
128	P128	18" Pipe	0.536	11	INTERIOR	306.356	571.658
129	P129	18" Pipe	0.438	11	INTERIOR	250.103	571.658
130	P130	18" Pipe	0.339	12	INTERIOR	193.809	571.658
131	P131	18" Pipe	0.338	12	INTERIOR	193.399	571.658
132	P132	18" Pipe	0.339	11	INTERIOR	193.581	571.658
133	P133	18" Pipe	0.367	12	INTERIOR	209.668	571.658
134	P134	18" Pipe	0.506	12	INTERIOR	289.344	571.658
135	P135	18" Pipe	0.535	12	INTERIOR	305.652	571.658
136	P136	18" Pipe	0.531	12	INTERIOR	303.476	571.658
137	P137	18" Pipe	0.533	12	INTERIOR	304.742	571.658

Pile Design Checks

	Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Co...	Pile Co...	Comp[k]	Comp LC	Soil Ten...	Pile Ten...	Tens[k]	Tens LC
1	P1	18" Pipe	0.814	18.712	27	NC	0.942	235.378	23	NC	0	0	NC
2	P2	18" Pipe	0.728	16.737	28	NC	0.956	239.01	24	NC	0	0	NC
3	P3	18" Pipe	0.726	16.688	27	NC	0.953	238.374	23	NC	0	0	NC
4	P4	18" Pipe	0.726	16.688	27	NC	0.954	238.402	23	NC	0	0	NC
5	P5	18" Pipe	0.728	16.753	24	NC	0.926	231.441	23	NC	0	0	NC
6	P6	18" Pipe	0.726	16.703	23	NC	0.911	227.854	24	NC	0	0	NC
7	P7	18" Pipe	0.726	16.702	23	NC	0.944	236.009	24	NC	0	0	NC
8	P8	18" Pipe	0.714	16.411	28	NC	0.957	239.344	24	NC	0	0	NC
9	P9	18" Pipe	0.711	16.362	28	NC	0.958	239.401	24	NC	0	0	NC
10	P10	18" Pipe	0.711	16.362	27	NC	0.956	238.987	23	NC	0	0	NC
11	P11	18" Pipe	0.714	16.411	27	NC	0.959	239.692	23	NC	0	0	NC
12	P12	18" Pipe	0.711	16.362	27	NC	0.956	239.051	23	NC	0	0	NC
13	P13	18" Pipe	0.713	16.392	24	NC	0.95	237.506	23	NC	0	0	NC
14	P14	18" Pipe	0.715	16.445	24	NC	0.919	229.859	23	NC	0	0	NC
15	P15	18" Pipe	0.713	16.392	24	NC	0.893	223.225	23	NC	0	0	NC
16	P16	18" Pipe	0.713	16.391	23	NC	0.891	222.715	24	NC	0	0	NC
17	P17	18" Pipe	0.715	16.445	23	NC	0.92	230.105	24	NC	0	0	NC
18	P18	18" Pipe	0.713	16.392	23	NC	0.948	237.01	24	NC	0	0	NC
19	P19	18" Pipe	0.711	16.361	28	NC	0.958	239.38	24	NC	0	0	NC
20	P20	18" Pipe	0.706	16.235	28	NC	0.937	234.244	24	NC	0	0	NC
21	P21	18" Pipe	0.705	16.216	28	NC	0.939	234.656	24	NC	0	0	NC
22	P22	18" Pipe	0.703	16.166	28	NC	0.939	234.713	24	NC	0	0	NC
23	P23	18" Pipe	0.703	16.166	27	NC	0.938	234.596	23	NC	0	0	NC
24	P24	18" Pipe	0.705	16.216	27	NC	0.938	234.603	23	NC	0	0	NC
25	P25	18" Pipe	0.706	16.235	27	NC	0.938	234.398	23	NC	0	0	NC
26	P26	18" Pipe	0.705	16.216	27	NC	0.939	234.632	23	NC	0	0	NC
27	P27	18" Pipe	0.703	16.165	27	NC	0.938	234.5	23	NC	0	0	NC
28	P28	18" Pipe	0.705	16.207	24	NC	0.937	234.308	23	NC	0	0	NC
29	P29	18" Pipe	0.707	16.265	24	NC	0.928	231.887	23	NC	0	0	NC
30	P30	18" Pipe	0.708	16.285	24	NC	0.896	223.875	23	NC	0	0	NC
31	P31	18" Pipe	0.707	16.264	24	NC	0.867	216.669	23	NC	0	0	NC
32	P32	18" Pipe	0.705	16.207	24	NC	0.855	213.838	23	NC	0	0	NC
33	P33	18" Pipe	0.705	16.207	23	NC	0.855	213.737	24	NC	0	0	NC
34	P34	18" Pipe	0.707	16.265	23	NC	0.867	216.792	24	NC	0	0	NC
35	P35	18" Pipe	0.708	16.285	23	NC	0.896	223.971	24	NC	0	0	NC
36	P36	18" Pipe	0.707	16.265	23	NC	0.927	231.764	24	NC	0	0	NC
37	P37	18" Pipe	0.705	16.207	23	NC	0.937	234.321	24	NC	0	0	NC
38	P38	18" Pipe	0.703	16.166	28	NC	0.939	234.715	24	NC	0	0	NC
39	P39	18" Pipe	0.705	16.216	28	NC	0.939	234.634	24	NC	0	0	NC
40	P40	18" Pipe	0.701	16.126	28	NC	0.91	227.477	24	NC	0	0	NC
41	P41	18" Pipe	0.701	16.114	28	NC	0.91	227.57	24	NC	0	0	NC
42	P42	18" Pipe	0.699	16.082	28	NC	0.911	227.826	23	NC	0	0	NC

Pile Design Checks (Continued)

	Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Co...	Pile Co...	Comp[k]	Comp LC	Soil Ten...	Pile Ten...	Tens[k]	Tens LC
43	P43	18" Pipe	0.697	16.036	28	NC	0.913	228.223	23	NC	0	0	NC
44	P44	18" Pipe	0.698	16.06	27	NC	0.913	228.229	24	NC	0	0	NC
45	P45	18" Pipe	0.7	16.1	27	NC	0.91	227.541	23	NC	0	0	NC
46	P46	18" Pipe	0.701	16.123	27	NC	0.911	227.626	23	NC	0	0	NC
47	P47	18" Pipe	0.701	16.123	27	NC	0.911	227.626	23	NC	0	0	NC
48	P48	18" Pipe	0.7	16.1	27	NC	0.91	227.594	23	NC	0	0	NC
49	P49	18" Pipe	0.698	16.06	27	NC	0.911	227.847	23	NC	0	0	NC
50	P50	18" Pipe	0.699	16.088	24	NC	0.913	228.277	23	NC	0	0	NC
51	P51	18" Pipe	0.702	16.142	24	NC	0.911	227.836	23	NC	0	0	NC
52	P52	18" Pipe	0.704	16.181	24	NC	0.896	223.911	23	NC	0	0	NC
53	P53	18" Pipe	0.704	16.195	24	NC	0.855	213.668	23	NC	0	0	NC
54	P54	18" Pipe	0.704	16.181	24	NC	0.814	203.473	23	NC	0	0	NC
55	P55	18" Pipe	0.702	16.142	24	NC	0.798	199.577	24	NC	0	0	NC
56	P56	18" Pipe	0.699	16.088	24	NC	0.797	199.202	24	NC	0	0	NC
57	P57	18" Pipe	0.701	16.116	23	NC	0.797	199.351	23	NC	0	0	NC
58	P58	18" Pipe	0.703	16.164	23	NC	0.802	200.618	24	NC	0	0	NC
59	P59	18" Pipe	0.704	16.192	23	NC	0.832	208.04	24	NC	0	0	NC
60	P60	18" Pipe	0.704	16.191	23	NC	0.879	219.627	24	NC	0	0	NC
61	P61	18" Pipe	0.703	16.164	23	NC	0.906	226.49	24	NC	0	0	NC
62	P62	18" Pipe	0.701	16.116	23	NC	0.913	228.205	24	NC	0	0	NC
63	P63	18" Pipe	0.698	16.057	23	NC	0.912	227.963	24	NC	0	0	NC
64	P64	18" Pipe	0.699	16.082	28	NC	0.912	227.906	24	NC	0	0	NC
65	P65	18" Pipe	0.701	16.114	28	NC	0.91	227.618	24	NC	0	0	NC
66	P66	18" Pipe	0.698	16.058	28	NC	0.803	200.69	24	NC	0	0	NC
67	P67	18" Pipe	0.698	16.05	28	NC	0.804	200.899	24	NC	0	0	NC
68	P68	18" Pipe	0.697	16.026	28	NC	0.803	200.831	24	NC	0	0	NC
69	P69	18" Pipe	0.695	15.991	28	NC	0.805	201.323	23	NC	0	0	NC
70	P70	18" Pipe	0.694	15.951	28	NC	0.804	201.091	24	NC	0	0	NC
71	P71	18" Pipe	0.695	15.991	27	NC	0.807	201.651	24	NC	0	0	NC
72	P72	18" Pipe	0.697	16.026	27	NC	0.802	200.617	23	NC	0	0	NC
73	P73	18" Pipe	0.698	16.049	27	NC	0.802	200.584	23	NC	0	0	NC
74	P74	18" Pipe	0.698	16.058	27	NC	0.804	201.016	23	NC	0	0	NC
75	P75	18" Pipe	0.698	16.05	27	NC	0.803	200.67	23	NC	0	0	NC
76	P76	18" Pipe	0.697	16.026	27	NC	0.803	200.627	23	NC	0	0	NC
77	P77	18" Pipe	0.695	15.991	27	NC	0.804	200.907	23	NC	0	0	NC
78	P78	18" Pipe	0.696	16.011	24	NC	0.804	201.094	23	NC	0	0	NC
79	P79	18" Pipe	0.698	16.062	24	NC	0.805	201.323	23	NC	0	0	NC
80	P80	18" Pipe	0.7	16.106	24	NC	0.802	200.582	23	NC	0	0	NC
81	P81	18" Pipe	0.701	16.134	24	NC	0.78	194.928	23	NC	0	0	NC
82	P82	18" Pipe	0.702	16.144	24	NC	0.725	181.149	30	NC	0	0	NC
83	P83	18" Pipe	0.701	16.134	24	NC	0.706	176.603	31	NC	0	0	NC
84	P84	18" Pipe	0.7	16.106	24	NC	0.705	176.286	31	NC	0	0	NC
85	P85	18" Pipe	0.698	16.062	24	NC	0.703	175.678	31	NC	0	0	NC
86	P86	18" Pipe	0.696	16.011	24	NC	0.702	175.425	30	NC	0	0	NC
87	P87	18" Pipe	0.698	16.062	23	NC	0.704	176.012	30	NC	0	0	NC
88	P88	18" Pipe	0.7	16.105	23	NC	0.704	176.042	30	NC	0	0	NC
89	P89	18" Pipe	0.701	16.133	23	NC	0.705	176.183	30	NC	0	0	NC
90	P90	18" Pipe	0.702	16.144	23	NC	0.726	181.381	31	NC	0	0	NC
91	P91	18" Pipe	0.701	16.133	23	NC	0.779	194.639	24	NC	0	0	NC
92	P92	18" Pipe	0.7	16.105	23	NC	0.802	200.376	24	NC	0	0	NC
93	P93	18" Pipe	0.698	16.063	23	NC	0.806	201.562	24	NC	0	0	NC
94	P94	18" Pipe	0.696	16.011	23	NC	0.804	201.103	24	NC	0	0	NC
95	P95	18" Pipe	0.695	15.991	28	NC	0.803	200.69	24	NC	0	0	NC
96	P96	18" Pipe	0.697	16.026	28	NC	0.803	200.682	24	NC	0	0	NC
97	P97	18" Pipe	0.698	16.05	28	NC	0.804	200.887	24	NC	0	0	NC
98	P98	18" Pipe	0.715	16.442	24	NC	0.927	231.824	31	NC	0	0	NC
99	P99	18" Pipe	0.713	16.41	24	NC	0.934	233.524	30	NC	0	0	NC

Pile Design Checks (Continued)

	Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Co...	Pile Co...	Comp[k]	Comp LC	Soil Ten...	Pile Ten...	Tens[k]	Tens LC
100	P100	18" Pipe	0.709	16.313	24	NC	0.944	235.963	30	NC	0	0	NC
101	P101	18" Pipe	0.706	16.246	23	NC	0.942	235.476	30	NC	0	0	NC
102	P102	18" Pipe	0.712	16.368	23	NC	0.94	234.9	31	NC	0	0	NC
103	P103	18" Pipe	0.715	16.437	23	NC	0.933	233.227	30	NC	0	0	NC
104	P104	18" Pipe	0.715	16.436	23	NC	0.932	233.047	30	NC	0	0	NC
105	P105	18" Pipe	0.712	16.369	23	NC	0.937	234.222	30	NC	0	0	NC
106	P106	18" Pipe	0.706	16.246	23	NC	0.942	235.414	30	NC	0	0	NC
107	P107	18" Pipe	0.699	16.088	23	NC	0.944	236.044	30	NC	0	0	NC
108	P108	18" Pipe	0.693	15.942	28	NC	0.934	233.526	30	NC	0	0	NC
109	P109	18" Pipe	0.694	15.955	28	NC	0.862	215.487	30	NC	0	0	NC
110	P110	18" Pipe	0.693	15.942	28	NC	0.798	199.389	30	NC	0	0	NC
111	P111	18" Pipe	0.691	15.903	28	NC	0.8	200.113	31	NC	0	0	NC
112	P112	18" Pipe	0.69	15.876	27	NC	0.802	200.403	30	NC	0	0	NC
113	P113	18" Pipe	0.692	15.925	27	NC	0.799	199.691	30	NC	0	0	NC
114	P114	18" Pipe	0.694	15.954	27	NC	0.823	205.703	31	NC	0	0	NC
115	P115	18" Pipe	0.694	15.953	27	NC	0.903	225.631	31	NC	0	0	NC
116	P116	18" Pipe	0.696	16.002	24	NC	0.94	234.997	31	NC	0	0	NC
117	P117	18" Pipe	0.703	16.171	24	NC	0.94	235.1	31	NC	0	0	NC
118	P118	18" Pipe	0.709	16.314	24	NC	0.937	234.142	31	NC	0	0	NC
119	P119	18" Pipe	0.713	16.41	24	NC	0.932	232.902	31	NC	0	0	NC
120	P120	18" Pipe	0.713	16.391	24	NC	0.986	246.397	31	NC	0	0	NC
121	P121	18" Pipe	0.711	16.343	24	NC	0.987	246.649	30	NC	0	0	NC
122	P122	18" Pipe	0.704	16.2	24	NC	0.987	246.628	30	NC	0	0	NC
123	P123	18" Pipe	0.708	16.281	23	NC	0.988	246.887	31	NC	0	0	NC
124	P124	18" Pipe	0.712	16.381	23	NC	0.988	247.063	30	NC	0	0	NC
125	P125	18" Pipe	0.712	16.381	23	NC	0.988	247.111	30	NC	0	0	NC
126	P126	18" Pipe	0.708	16.281	23	NC	0.985	246.334	30	NC	0	0	NC
127	P127	18" Pipe	0.7	16.102	23	NC	0.987	246.654	30	NC	0	0	NC
128	P128	18" Pipe	0.692	15.916	28	NC	0.987	246.646	30	NC	0	0	NC
129	P129	18" Pipe	0.693	15.939	28	NC	0.836	209.046	30	NC	0	0	NC
130	P130	18" Pipe	0.692	15.916	28	NC	0.779	194.789	29	NC	0	0	NC
131	P131	18" Pipe	0.689	15.848	28	NC	0.777	194.25	29	NC	0	0	NC
132	P132	18" Pipe	0.691	15.886	27	NC	0.778	194.445	29	NC	0	0	NC
133	P133	18" Pipe	0.693	15.934	27	NC	0.78	194.896	29	NC	0	0	NC
134	P134	18" Pipe	0.693	15.935	27	NC	0.939	234.643	31	NC	0	0	NC
135	P135	18" Pipe	0.695	15.995	24	NC	0.988	246.897	31	NC	0	0	NC
136	P136	18" Pipe	0.704	16.2	24	NC	0.982	245.472	31	NC	0	0	NC
137	P137	18" Pipe	0.711	16.343	24	NC	0.985	246.136	31	NC	0	0	NC

Concrete Pile Rebar

Label	Phi Used	Vertical Reinf	Shear Reinf
No Data to Print ...			

Envelope Slab Soil Pressures

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]	Point
1	S1	0	30	0	5	N276
2	S2	0	31	0	5	N16245
3	S3	0	23	0	5	N8180

Material Takeoff

	Material	Quantity	Volume[yds^3]	Weight[K]
1	Piles			
2	18" Pipe	137	N/A	N/A
3	Total Piles	137	N/A	N/A
4				

Material Takeoff (Continued)

	Material	Quantity	Volume[yds^3]	Weight[K]
5	Slabs			
6	Conc 6000NW	3	1540.2	6029.9
7				
8	Totals			
9	Conc 6000NW		1540.2	6029.9
10	Total Concrete		1540.2	6029.9

Shear Checks

PILE CAP SHEAR CHECK

BURNS McDONNELL

153929 - PDX Fuel Facility — Designer: A. Kral
Tank Pile Cap Capacity Checks — 12/4/2023

Pile Cap Checks Following ACI 318-19 and CRSI Pile Cap Design Guide

Column Row	TANK		
P = Allowable Pile Load =	250	kips	Column Reactions
Max Load From Risa File =	308	kips	
Vu =	308	kips	
hc = Pile Diameter =	18	in	
Area of Pile =	254.47	in^2	
Equalivent Square Pedestal =	15.95	in	ACI 318-19 - 22.6.4.1.2
Pile Embed =	6	in	
Edge Distance =	36	in	
Load at Column Pedestal =	0	kips	
Pile Cap Thickness =	30	in	
Top Reinforcement Cover =	2	in	
Top db = Bar Size =	6		
Top Bar Spacing =	8		
dbtop = Diameter of Bar =	0.750		
Asprovided =	0.663	in^2 / ft	
dtop = t-top cover - dbtop =	21.250	in	
Bottom Reinforcement Cover =	7.5	in	
dbot =	22.5	in	
S_{pile} E-W =	120	in	
S_{pile} N-S =	120	in	
c1 = baseplate E-W =	14	in	Baseplate Dimension
c2 = baseplate N-S =	14	in	Baseplate Dimension
Installation Tolerance Allowance =	3	in	
w_{e-w} =	116	in	
w_{n-s} =	116	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Design Strip Width E-W	237	in	
Design Strip Shear; VuE-W =	55	kips	
Design Strip Moment; MuE-W =	4056	k-in	
Design Strip Width N-S	555	in	
Design Strip Shear; VuN-S =	1124	kips	
Design Strip Moment; MuN-S =	53107	k-in	
ρ_{wbot} =	0.002		
w/d E-W =	5.156		
w/d N-S =	5.156		Mu/Vud & Vud/Mu Limits
Mu/VudE-W =	3277.576		1.000
Vud/MuE-W =	0.000		1.000
Mu/VudN-S =	2099.921		1.000
Vud/MuN-S =	0.000		1.000

bw =	55.50	in		4.63 ft
hc + dtop =	39.25	in		3.27 ft
bo = π(hc+dtop) =	123.3	in		10.28 ft
bo = 4*(d+c) =	148.8	in		12.40 ft
Critical Section Area = Ac =	3162	in^2		
Ag =	1665	in^2		
ACI 318-19 - 8.6.1.1				
0.0018Ag =	2.997	in^2 / ft		
ACI 318-19 - 8.6.1.2				
ϕ =	0.75		ACI 318-19 - Table 21.2.1	
λs = √(2/(1+(d/10))≤1	0.800		ACI 318-19 - 22.5.5.1.3	
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1	
vuv =	97.40	psi		
ϕ 2λsλ√f'c =	92.95	psi		
vuv > ϕ 2λsλ√f'c	Check Asmin 8.6.1.2			
bslab =	99	in	ACI 318-19 - Table 8.4.2.2.3	
As,min, corner =	7.97	in^2	corner	
As,min, edge =	5.31	in^2	edge	
As,min, interior =	3.99	in^2	interior	
As,min, corner =	0.97	in^2 / ft	corner	NG

CHECK N/A DUE TO PILE CAP ARRANGEMENT

As,min, edge =	0.64	in^2 / ft	edge	OK
As,min, interior =	0.48	in^2 / ft	interior	OK
Provide Shear Stirrups?	No			
λs = √(2/(1+(d/10))≤1	0.8			
# Bars Top =	9.0			
Top Bar Size =	6.0			
# Bars Top =	9.0			
Top Bar Size =	6.0			
As provided =	7.952	in^2		
Axial Load Along Member = Nu =	0	kips		
0.05*f'c =	300	psi		
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2	
ρ_w = As / (bw*d) =	0.0067			
dtop = t-top cover - dbtop =	21.250	in		
Nu/(6*Ag) =	0.000	psi		
$(\rho w)^{1/3}$ =	0.189			
One-Way Shear Calc				
Distance Away from CL of Pile =	29.23	in		
Value from RISA FDN Model =	53.00	kips		
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	182.7	kips	ACI 318-19 - 22.5.5.1 - Vc	
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	138.1	kips	ACI 318-19 - 22.5.5.1 - Vc	
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	110.5	kips	ACI 318-19 - 22.5.5.1 - Vc	
Max Vc = 5λ√f'cbwd =	456.8	kips		
Vc =	110.5	kips		
ϕVc =	82.8	kips		
	OK			
dagg = diameter of aggregate =	0.75	in		
Minimum Spacing =	1.0	in	ACI 318-19 - 25.2.1	
Vu =	308	kips		
4√fc'bwd =	365.4	kips		
Vs ≤ 4√fc'bwd ?	YES			
Vs > 4√fc'bwd ?	NO			
Maximum Spacing =	21.250	in		
Maximum Spacing =	N/A	in		
	STIRRUPS NOT REQD			
Stirrup Bar Size Provided =	4			
# of Legs per Stirrup =	2			
Cross Section =	0.196	in^2		
Av =	0.393	in^2		
s =	6.000	in		
Vs = (Avfytd)/s =	83.4	kips	ACI 318-19 - 22.5.8.5.3	
Vn = Vc + Vs =	193.9	kips		
ϕVn =	N/A	kips		
Two-Way Shear Calc - Without Stirrups				
λs = √(2/(1+(d/10))≤1	0.800			
vc = 4λsλ√fc' =	247.9	psi		
β =	1			
vc = (2+4/β)λsλ√f'c =	249.9	psi		
vc = (2+αsd/bo)λsλ√f'c =	356.0	psi		40 Interior
	267.5	psi		30 Edge
	179.0	psi		20 Corner
vc =	783.8	kips		
ϕvn = ϕvc =	587.859			
	OK			
Two-Way Shear Calc - Without Stirrups				
vc = 4λsλ√fc' =	247.871	psi		
vc =	783.812	kips		
ϕvn = ϕvc =	587.859	kips		
	OK			
Two-Way Shear Calc - With Stirrups	No			
bo = 4*(d+c) =	148.81	in		
2√f'cbo/f_{yt} =	0.384			
Av / s =	0.065			
Av / s > 2√f'cbo/f_{yt} =	NG			
λs = √(2/(1+(d/10))≤1	0.8			
vc = 2λsλ√fc' =	123.935	psi		
vc =	391.906	kips		
vuv =	97.401	psi		
ϕ6√f'c =	348.569	psi	ACI 318-19 - 22.6.6.3	
vs = Avfyt / bo*s =	26.390	kips		
Vn = Vc + Vs =	418.295	kips		
ϕVn =	N/A	kips		

Cut:	DS19-X1	Max Top bar Spac.:	8 in	Stress Block:	Rectangular
Material:	Conc 6000NW	Min Top bar Spac.:	3 in	Slab Design Option:	Construction
Start:	(42.41 , 123.58) ft	Max Bot bar Spac.:	12 in	Rebar Spacing Inc:	2 in
End:	(47.28 , 123.58) ft	Min Bot bar Spac.:	3 in	Design Rule:	RST

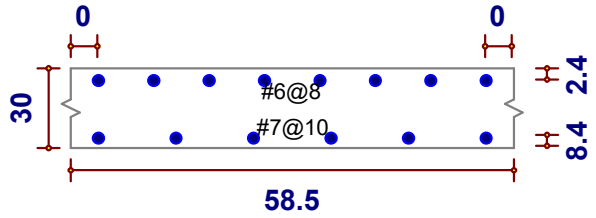
ACI 318-19 Code Check

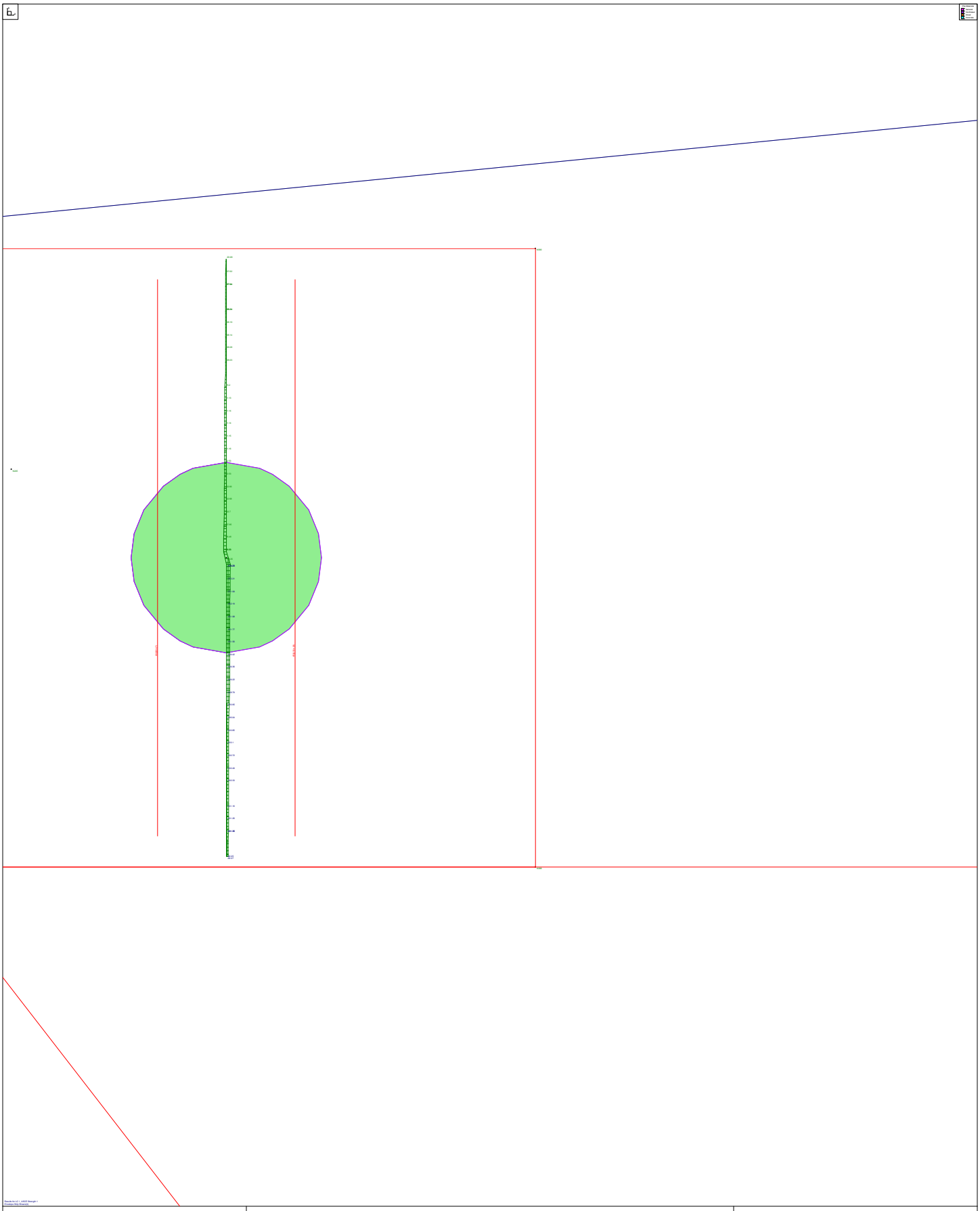
Top Bending Check	0.006	Bot Bending Check	0.194	1 Way Shear Check	0.989
Gov Mu Top	2.55 k-ft	Gov Mu Bot	-66.9 k-ft	Gov Vu	82.268 k
phi*Mn Top	433.705 k-ft	phi*Mn Bot	344.191 k-ft	phi*Vn	83.218 k
Governing LC	8	Governing LC	12	Governing LC	11

Tension Bar Fy	60 ksi	Concrete Weight	0.145 k/ft^3	Top Cover	2 in
Shear Bar Fy	60 ksi	λ	1	Bottom Cover	8 in
F'c	6 ksi	E_Concrete	4463.15 ksi	Side Cover	0 in
Flex. Rebar Set	ASTM A615				

Top As Reqd:		Bot As Reqd:			
Analysis	0.021 in^2	Analysis	0.692 in^2		
4/3	NA	4/3	NA	As Reqd(T/S)	3.15900
Min Flex	3.159 in^2	Min Flex	3.159 in^2	Rho Reqd(T/S)	0.00180
Top As Prvd	3.534 in^2 (8 #6)	Bot As Prvd	3.608 in^2 (6 #7)	Rho Prvd(Gross)	0.00407

Cross Section Detailing(All Bars Equally Spaced, Units: in)





Burns & McDonnell	PDX Phase 2	SK - 2
A. Kral		Dec 8, 2023 at 8:12 AM
153929		137 Pile - Double Walled Tank.fnd

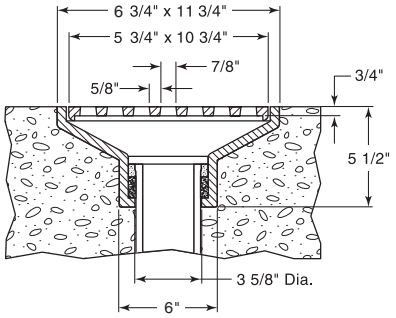
Drainage

■ Note: When specifying/ordering grates, refer to "Choosing the Proper Inlet Grate" on pages 125-126.
For a complete listing of FREE OPEN AREAS and WEIR PERIMETERS of all NEENAH grates, refer to pages 327-332.

R-4937-A
Floor Drain, Grate

Light Duty

CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-4937-A	B	0.2	2.7

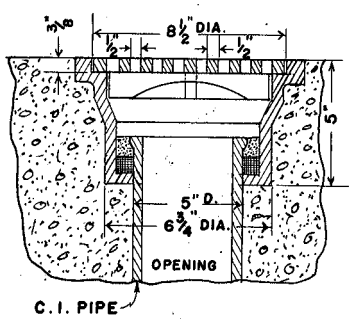


Outlet for 3" inside pipe caulk.

R-4937-B
Floor Drain, Grate

Light Duty

CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-4937-B	G	0.1	2.2

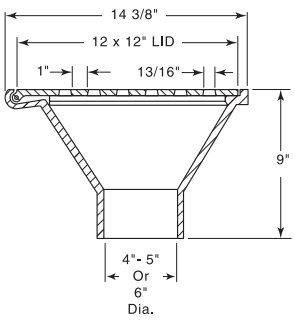


Outlet for 4" inside pipe caulk (Supplied by others).

R-4937-C Series
Floor Drain Frame, Hinged Strainer

Light Duty

CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-4937-C1	H	0.2	4.0
R-4937-C2	H	0.2	4.0
R-4937-C3	H	0.2	4.0

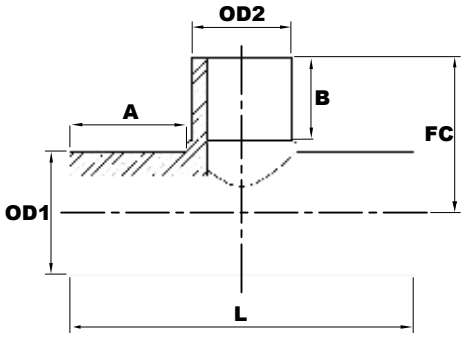


Catalog No.	Size
R-4937-C1	to fit 4" soil pipe
R-4937-C2	to fit 5" soil pipe
R-4937-C3	to fit 6" soil pipe

Supplied By:
TRENCHDRAIN SUPPLY
877-903-7246
www.trenchdrainsupply.com

BRANCH SADDLE REDUCING TEE - FABRICATED

Tee de Reducción fabricada con Silleta



Feedstock DR	32.5	26	21	17	13.5	11	9	7
Pressure Rating	63 psi	80 psi	100 psi	125 psi	160 psi	200 psi	250 psi	333 psi
EDR	32.5	26	21	17	13.5	11	9	7

Nominal Size (in)	OD1 (in)	OD2 (in)	A (in)	B (in)	FC (in)	L (in)
3 x 2	3.5	2.375	6.675	5.85	8.175	16
4 x 2	4.5	2.375	6.675	5.85	8.675	16
4 x 3	4.5	3.5	10	4.875	7.5	24
6 x 2	6.625	2.375	6.675	5.85	9.7375	16
6 x 3	6.625	3.5	10	4.875	8.8125	24
6 x 4	6.625	4.5	9.5	4.8	8.9875	24
8 x 2	8.625	2.375	6.675	5.85	10.7375	16
8 x 3	8.625	3.5	10	4.875	9.8125	24
8 x 4	8.625	4.5	9.5	4.8	10.2375	24
8 x 6	8.625	6.625	10.3125	6.625	11.4125	28
10 x 2	10.75	2.375	6.675	5.85	11.8	16
10 x 3	10.75	3.5	10	4.875	10.875	24
10 x 4	10.75	4.5	9.5	4.8	11.3	24
10 x 6	10.75	6.625	10.3125	6.625	13.125	28
10 x 8	10.75	8.625	10.375	6.575	13.575	30
12 x 2	12.75	2.375	6.675	5.85	12.8	16
12 x 3	12.75	3.5	10	4.875	11.875	24
12 x 4	12.75	4.5	9.5	4.8	12.3	24
12 x 6	12.75	6.625	10.3125	6.625	14.125	28
12 x 8	12.75	8.625	10.3750	6.575	14.575	30
12 x 10	12.75	10.75	9.25	6	12.875	30

1. Some size/DR combinations may have limited availability.
2. EDR (Equivalent Dimensional Ratio) – The EDR specified is the DR of the piping system for which the fabricated fitting is intended to be butt fused.
3. Reducing tees with branch outlets greater than 12-inch diameter may be available, please ask your ISCO salesperson.

Nominal Size (in)	OD1 (in)	OD2 (in)	A (in)	B (in)	FC (in)	L (in)
14 x 2	14	2.375	6.675	5.85	13.425	16
14 x 3	14	3.5	10	4.875	12.5	24
14 x 4	14	4.5	9.5	4.8	12.925	24
14 x 6	14	6.625	10.3125	6.625	14.75	28
14 x 8	14	8.625	10.375	6.575	15.2	30
14 x 10	14	10.75	9.25	6	13.5	30
16 x 2	16	2.375	6.675	5.85	14.425	16
16 x 3	16	3.5	10	4.875	13.5	24
16 x 4	16	4.5	9.5	4.8	13.925	24
16 x 6	16	6.625	10.3125	6.625	15.75	28
16 x 8	16	8.625	10.375	6.575	16.95	30
16 x 10	16	10.75	9.25	6	14.5	30
16 x 12	16	12.75	9.1	8	16.5	32
18 x 2	18	2.375	6.675	5.85	15.425	16
18 x 3	18	3.5	10	4.875	14.5	24
18 x 4	18	4.5	9.5	4.8	14.925	24
18 x 6	18	6.625	10.3125	6.625	16.75	28
18 x 8	18	8.625	10.375	6.575	17.95	30
18 x 10	18	10.75	9.25	6	15.5	30

1. Algunos Tamano / DR Combinaciones puede tener disponibilidad limitada.
2. EDR (Ratio Dimensional Equivalente) - El EDR especificado es el DR del sistema de tuberías para que el accesorio fabricado pueda ser fusionado a tope.
3. Es posible que haya disponibles camisetas reductoras con salidas de ramas de más de 12 pulgadas de diámetro. Consulte a su vendedor de ISCO.

Continued on next page

Company	Burns & McDonnell	Project No:	153929	Revision:	
Project :	PDX Fuel Facility	Eng. By:	AJK	Date:	12/18/23
Subject:	Primary and Secondary Storage Anchor Rod Reinforcement	Check By:	KAM	Chk Date:	

1.0 INTRODUCTION

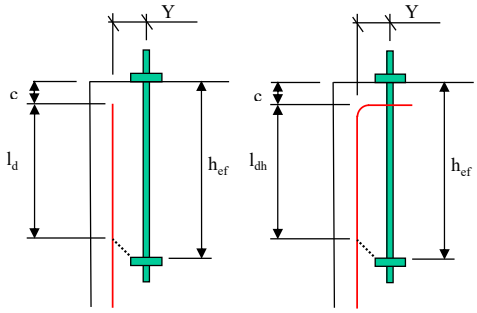
- This calculation is to check for development length on the rebar resisting tension from an anchor. Note that this version is different from the previously developed anchorage tension rebar check spreadsheets in more than just references to the ACI codes. The ACI 318-19 code has changed the formula for development lengths of standard hooks in tension due to recent research. See ACI 318-19 Commentary R25.4.3.
- For Seismic Design Categories C, D, E, or F, refer to ACI 318-19 Appendix D Section 17.10 for special ductility requirements. Also refer to ASCE Anchorage Design for Petrochemical Facilities, Section 3.11, the flow charts Figures 3.24T and 3.24S are particulary helpful for designing for Seismic Loading.
- Note that reduction in development length due to rebar provided being greater than that required is not permitted for structures in Seismic Design Category C, D, E, or F
- The distance between the anchor and the rebar, Y, is the farthest rebar that is to be considered effective in transferring the tension. In plan, it is the diagonal distance. (There could be cases where it is optimal to neglect the furthest rebar, solely relying on closer rebar).
- Appropriate input is required for each of the boxes below including all development length factors; no default value is permanently provided. See notes at each box.

2.0 CODES AND STANDARDS

ACI 318-19

3.0 ANCHORAGE TENSION REINFORCEMENT CHECK

Concrete f'_c =	6000	psi
Reinforcing Grade , f_y =	60000	psi
Anchor Diameter, d_a	1.50	in
Anchor Embedment Depth, h_{ef} =	18.00	in
Factored tension in the anchor, N_{ua}	105.6	Kips
Tension Rebar Size =	#5	
Number of rebars per bolt resisting tension, N =	8.0	



ϕ = 0.75

Area of rebar required, $A_{required} = N_{ua}/(\phi * F_y)$ = 105.6 / (0.75 * 60) = 2.347 Sq in (ACI 318-19, 17.5.2.1)

Area of steel provided, $A_{provided}$ = 8 * 0.31 = 2.480 Sq in > 2.347 Sq in, OK

Rebar Dia, d_b = 0.625 in

Use hooked bars at top of pedestal? Yes **90 Degree Hook (measured from inside of bar) = 9 in**

Hook Dev Length, ldh = Maximum of (a) (fy ψe ψr ψo ψc)/(55λ[f'c]^0.5)db^1.5; (b) 8db ; (c) 6 in. = 7.87 in. (ACI 314-19, 25.4.3.1)

λ =	1.00	(ACI 318-19, Table 25.4.2.5)
c_b =	2.00	(ACI 318-19 Section 2.2 Notation)
ψ_t =	1.30	(ACI 318 -19, Table 25.4.2.5)
ψ_e =	1.00	(ACI 318 -19, Table 25.4.2.5)
ψ_r =	1.00	(ACI 318 -19, Table 25.4.3.2)
ψ_o =	1.00	(ACI 318 -19, Table 25.4.3.2)
ψ_c =	0.87	(ACI 318 -19, Table 25.4.3.2)
K_{tr} =	0.00	(ACI 318 -19, 25.4.2.4b)
ψ_s =	0.80	(ACI 318 -19, Table 25.4.2.5)
ψ_g =	1.00	(ACI 318 -19, Table 25.4.2.5)

$\alpha = A_{required}/A_{provided}$ = 0.95

Consider reduction in development length? No **(See ACI 318-19, Section 25.4.10 for restrictions)**

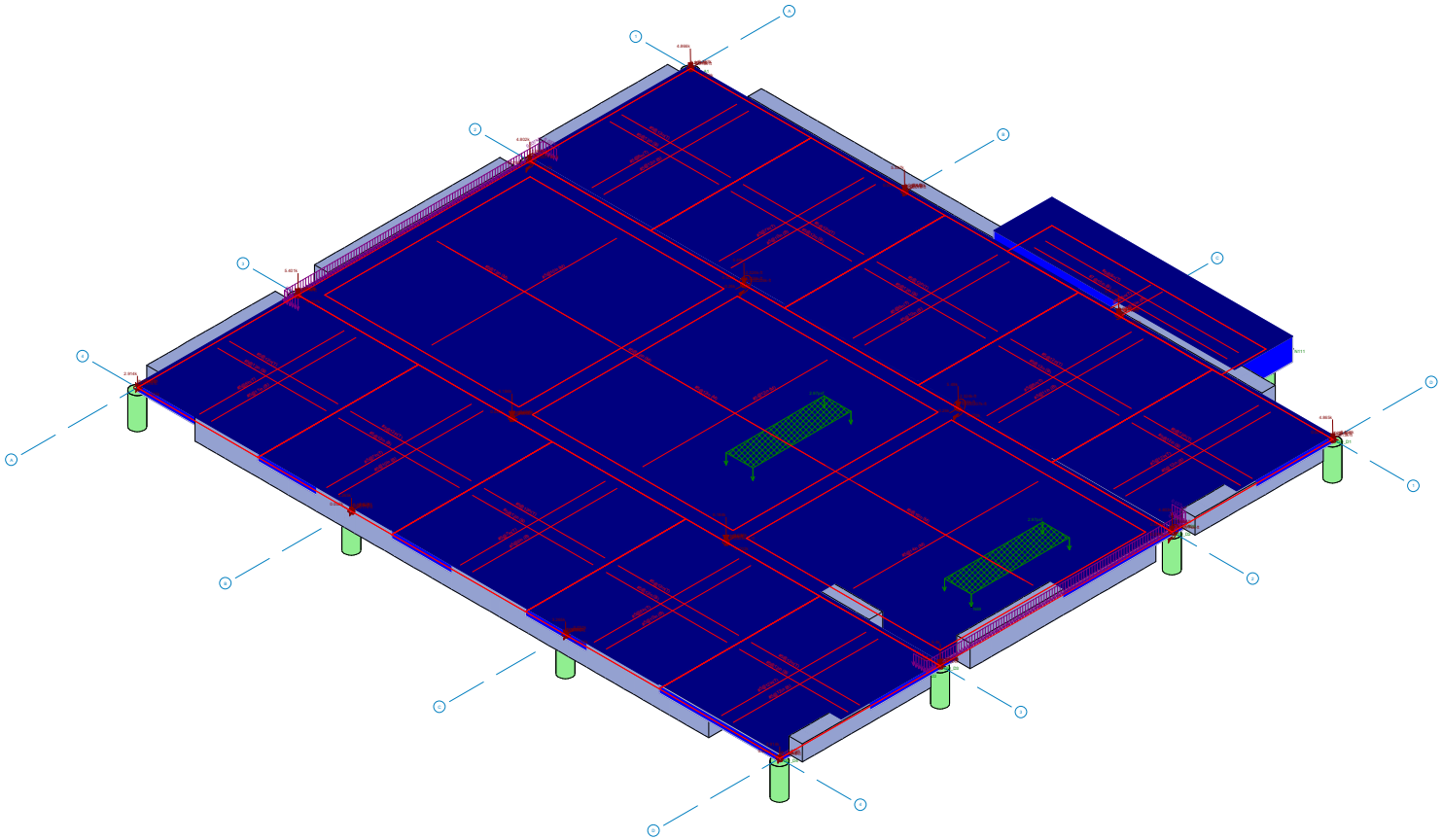
Reduced Hook Development length ldh = No reduction made 7.87 in.

Distance of Rebar to Anchors, Y = 9.00 in **O.K., Y < hef/2**

Rebar clear cover @ top, c = 2.00 in

l_d or l_{dh} available = h_{ef} - c -(Y/1.5) = 10.00 in > 7.87 in **OK**

Offload and HCTS Canopy



Loads: DL - Dead Load
Results for LC 1, ASCE Strength 1

BURNS & MCDONNELL	HCTS / OFFLOAD FOUNDATION	SK - 2
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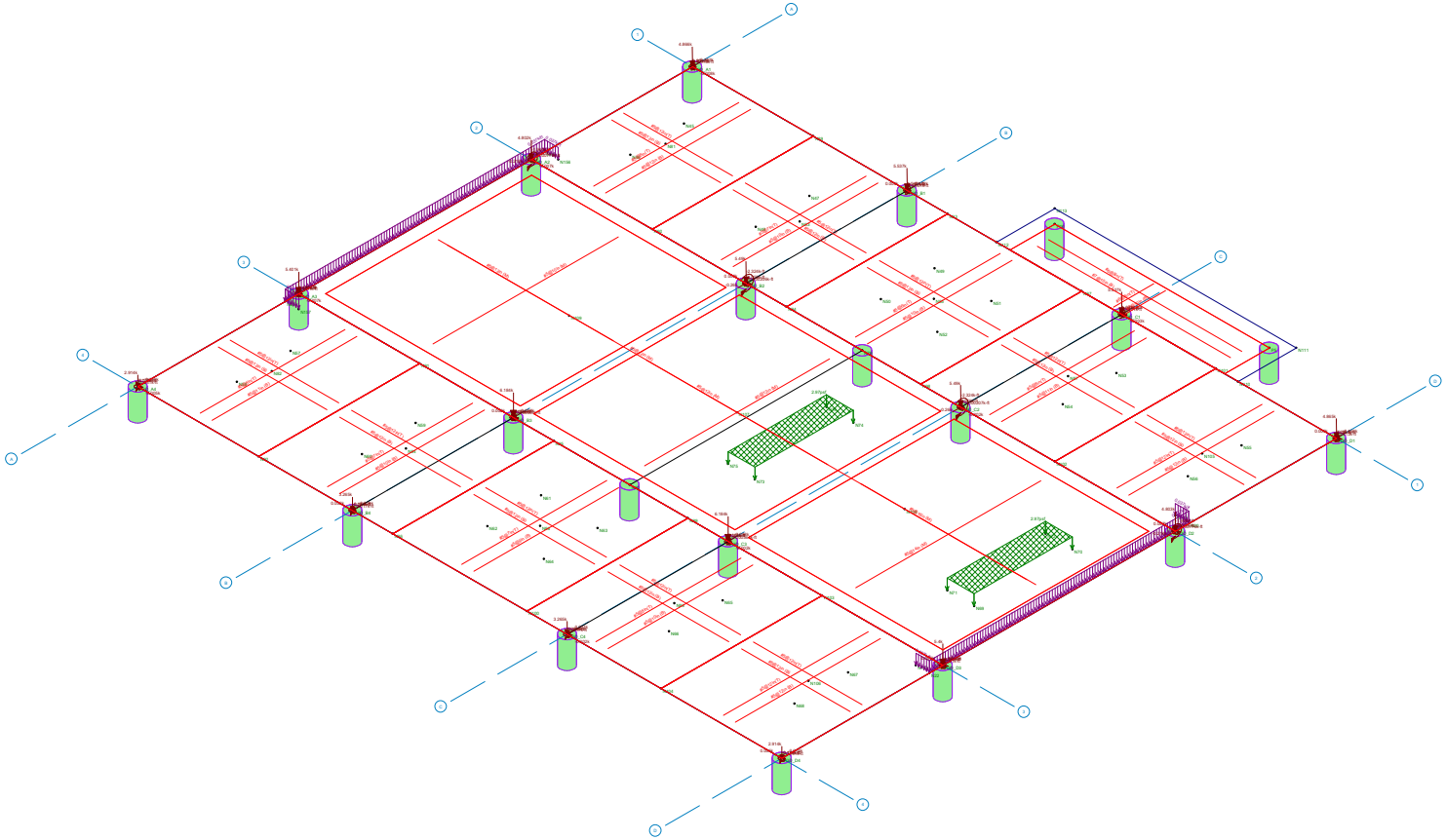
153929		Rev 1Updated Arrangement with Beams- Offloa...



Loads: DL - Dead Load
Results for LC 1, ASCE Strength 1

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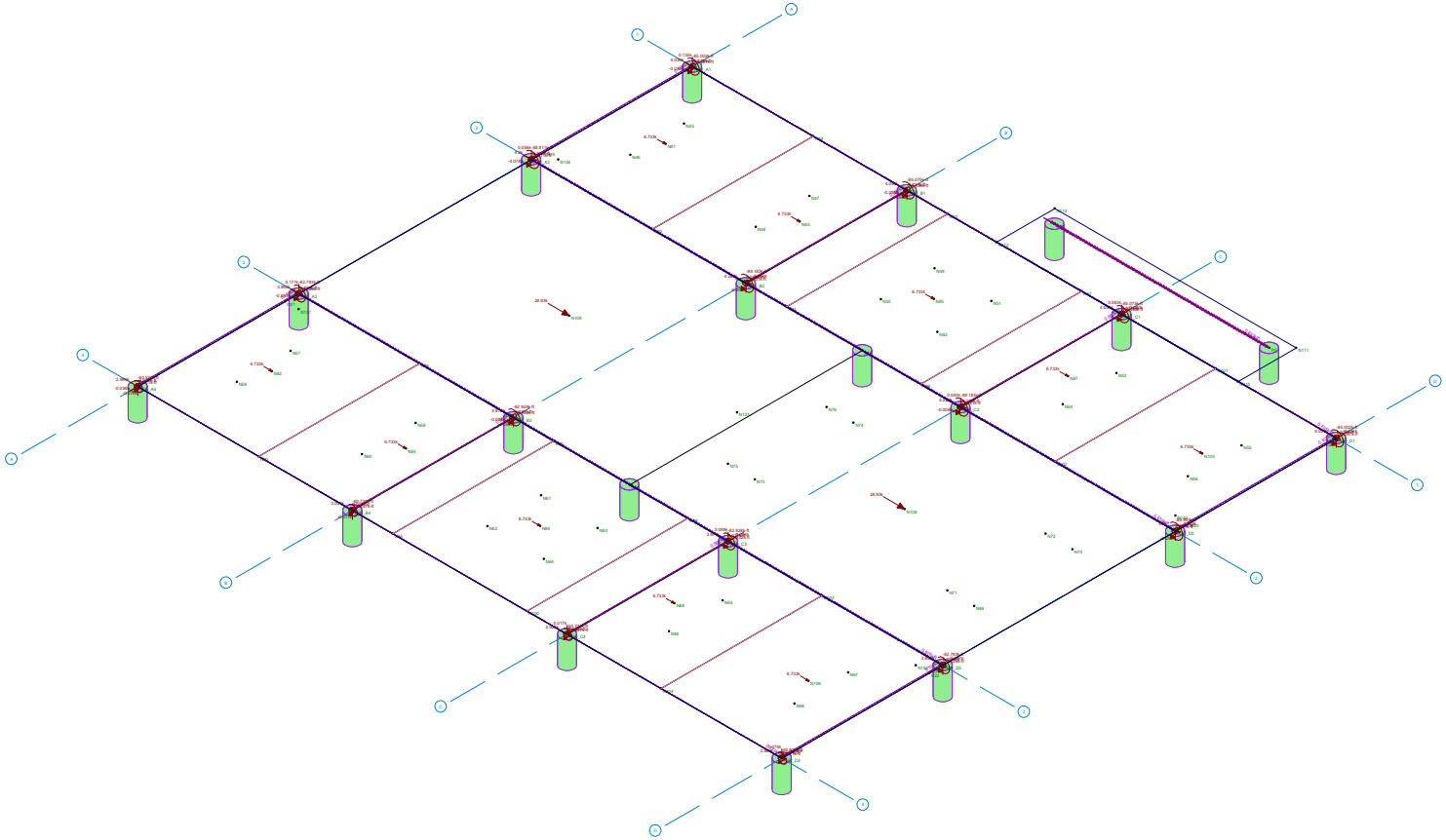

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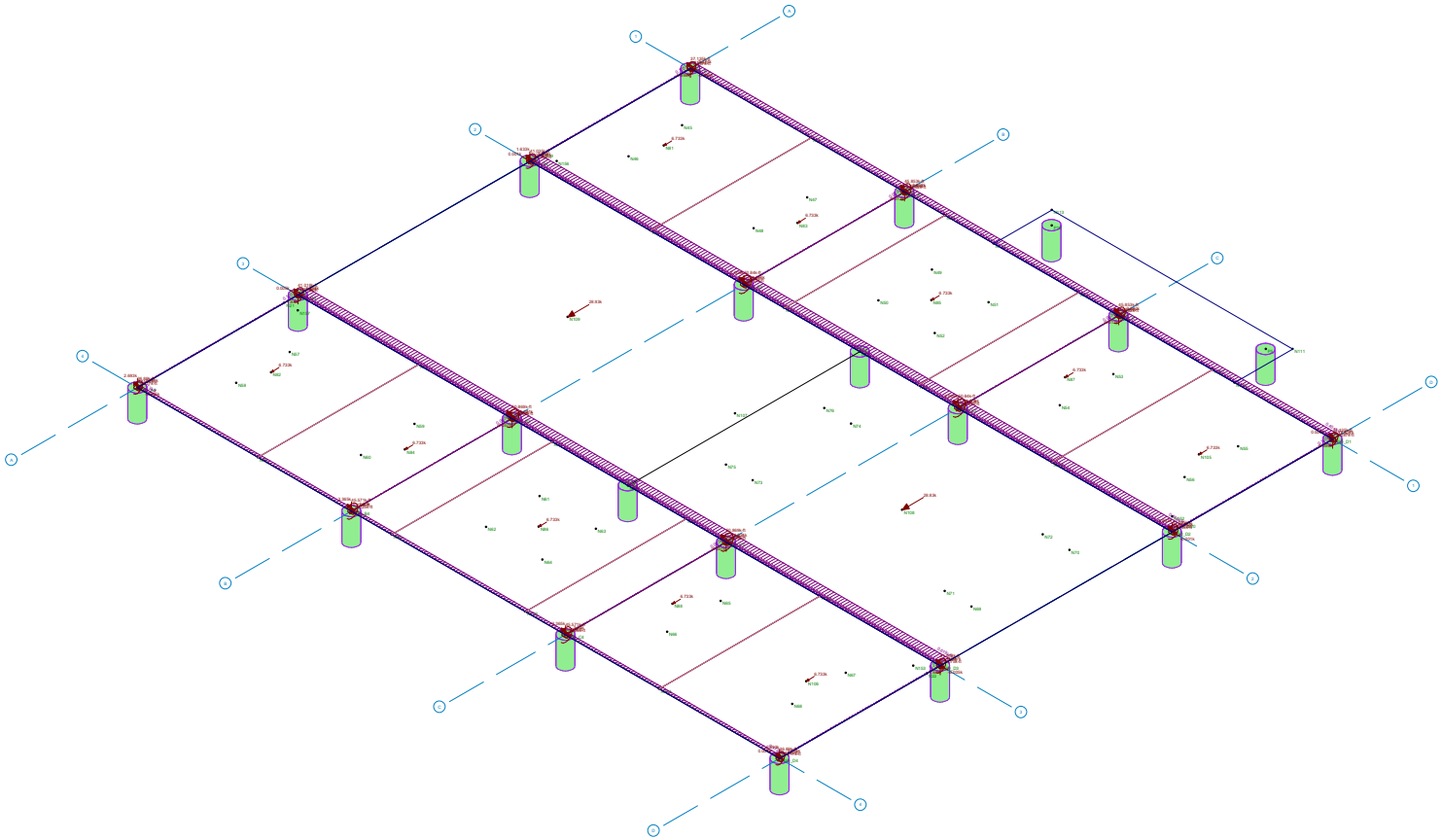

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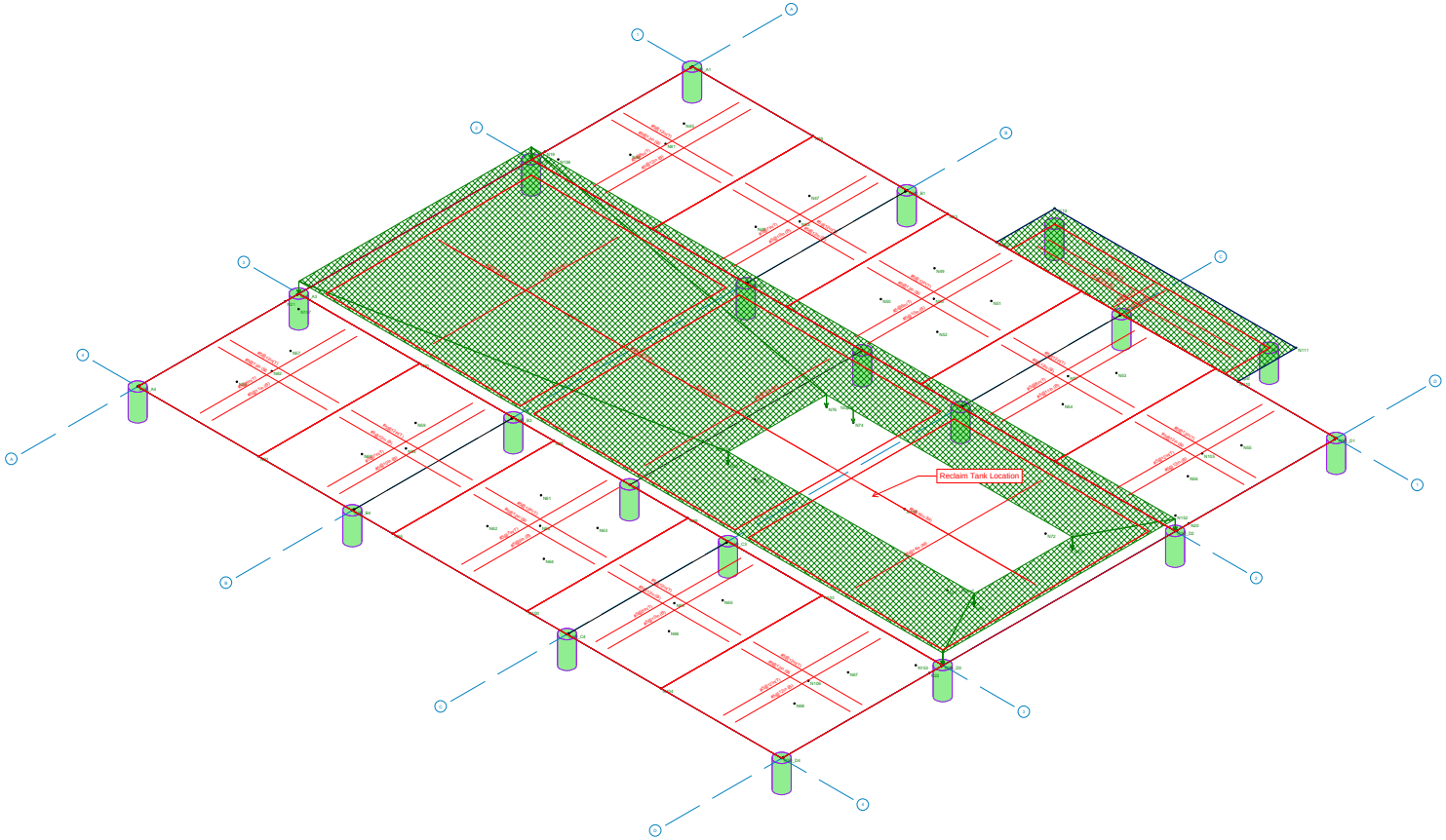

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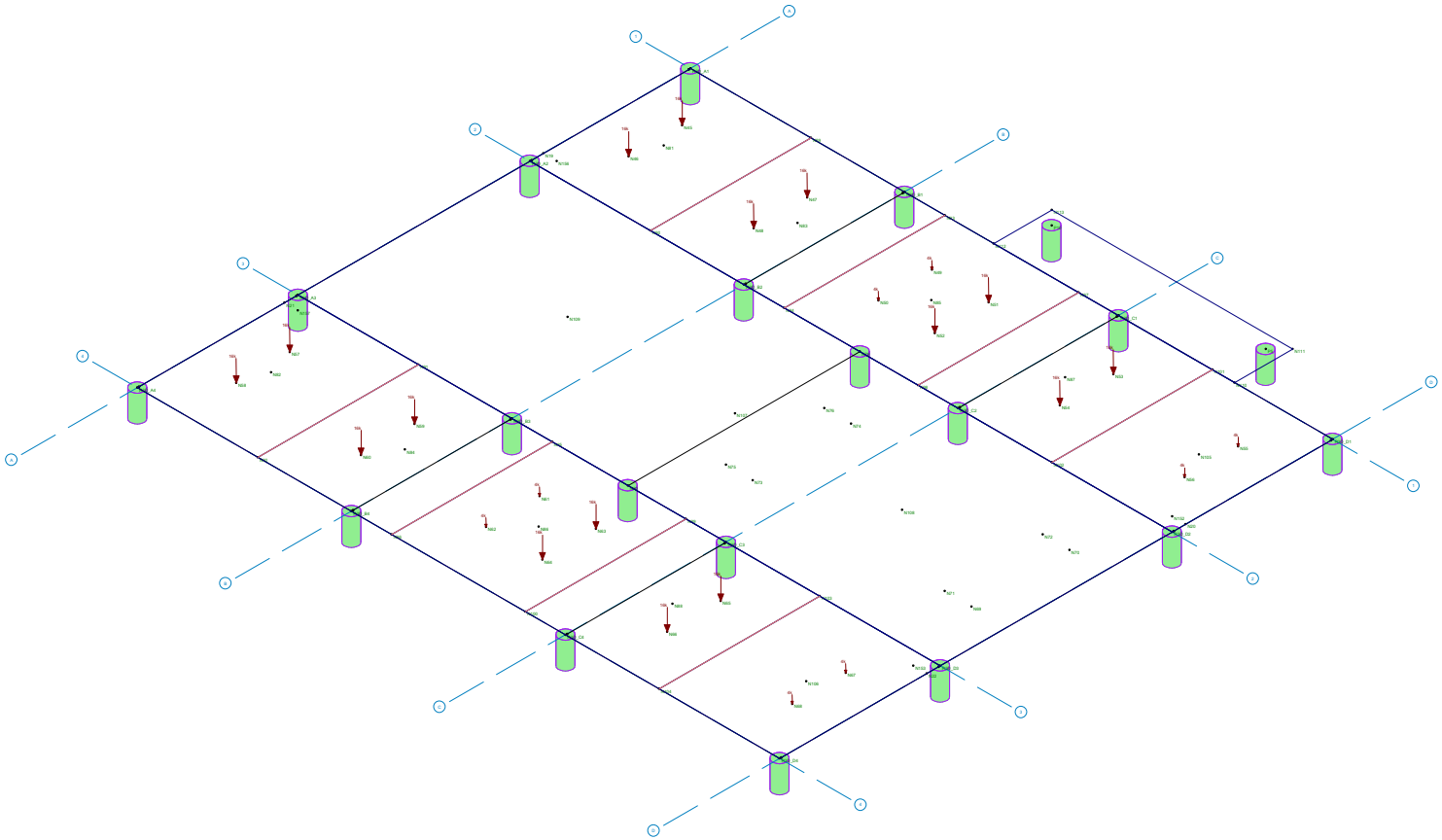

BURNS & MCDONNELL	HCTS / OFFLOAD FOUNDATION	SK - 8
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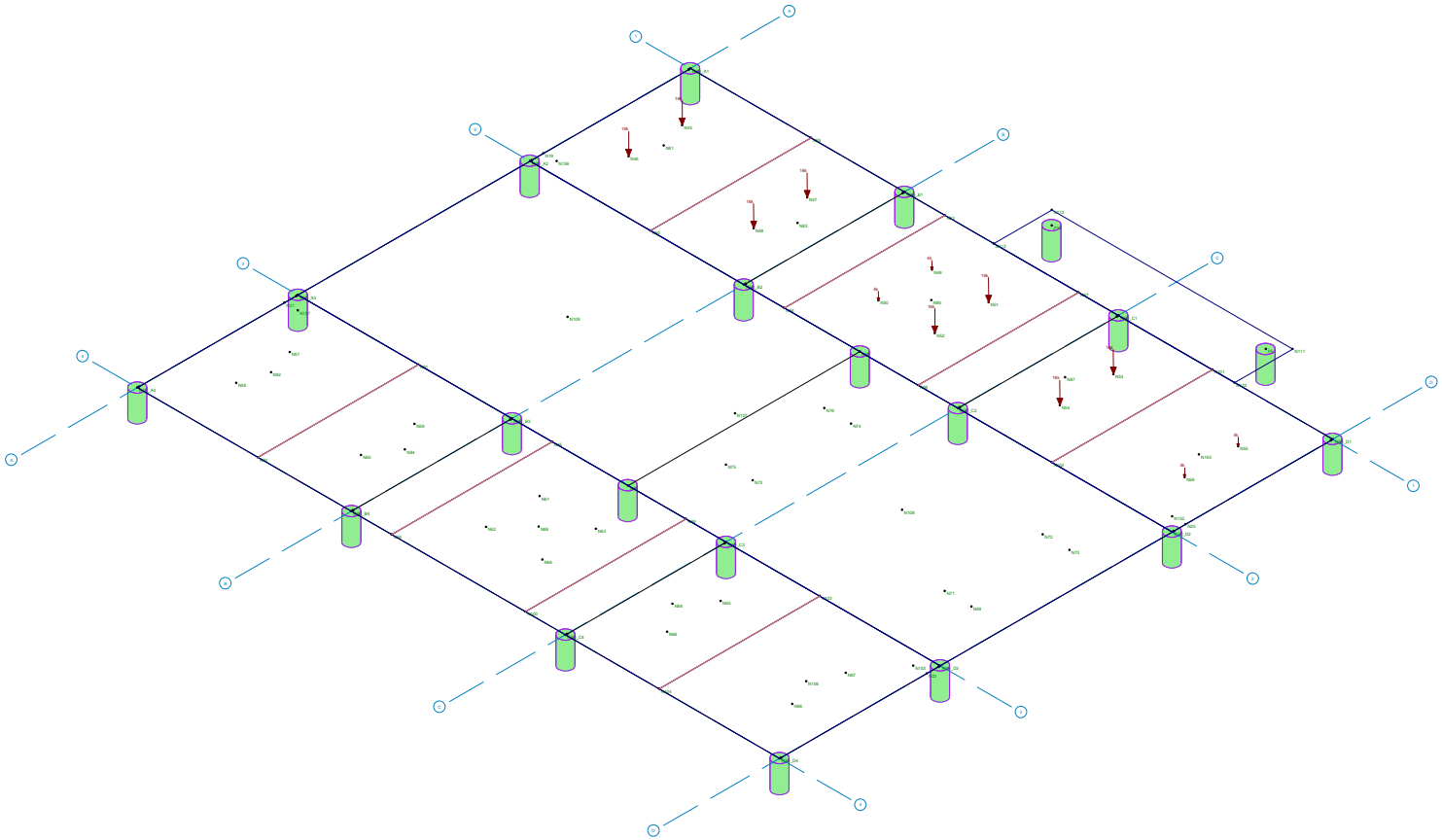

BURNS & MCDONNELL	HCTS / OFFLOAD FOUNDATION	SK - 9
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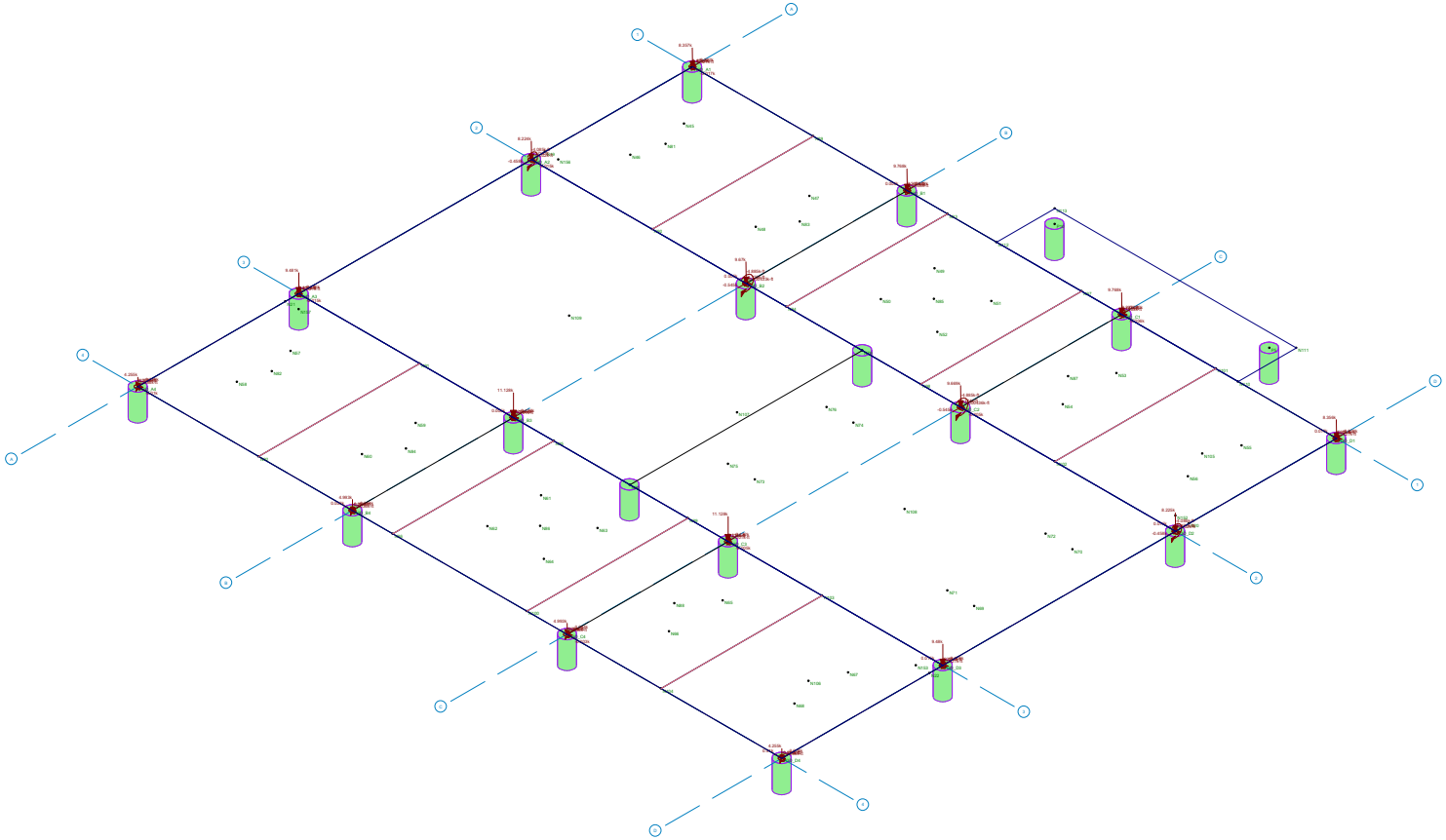

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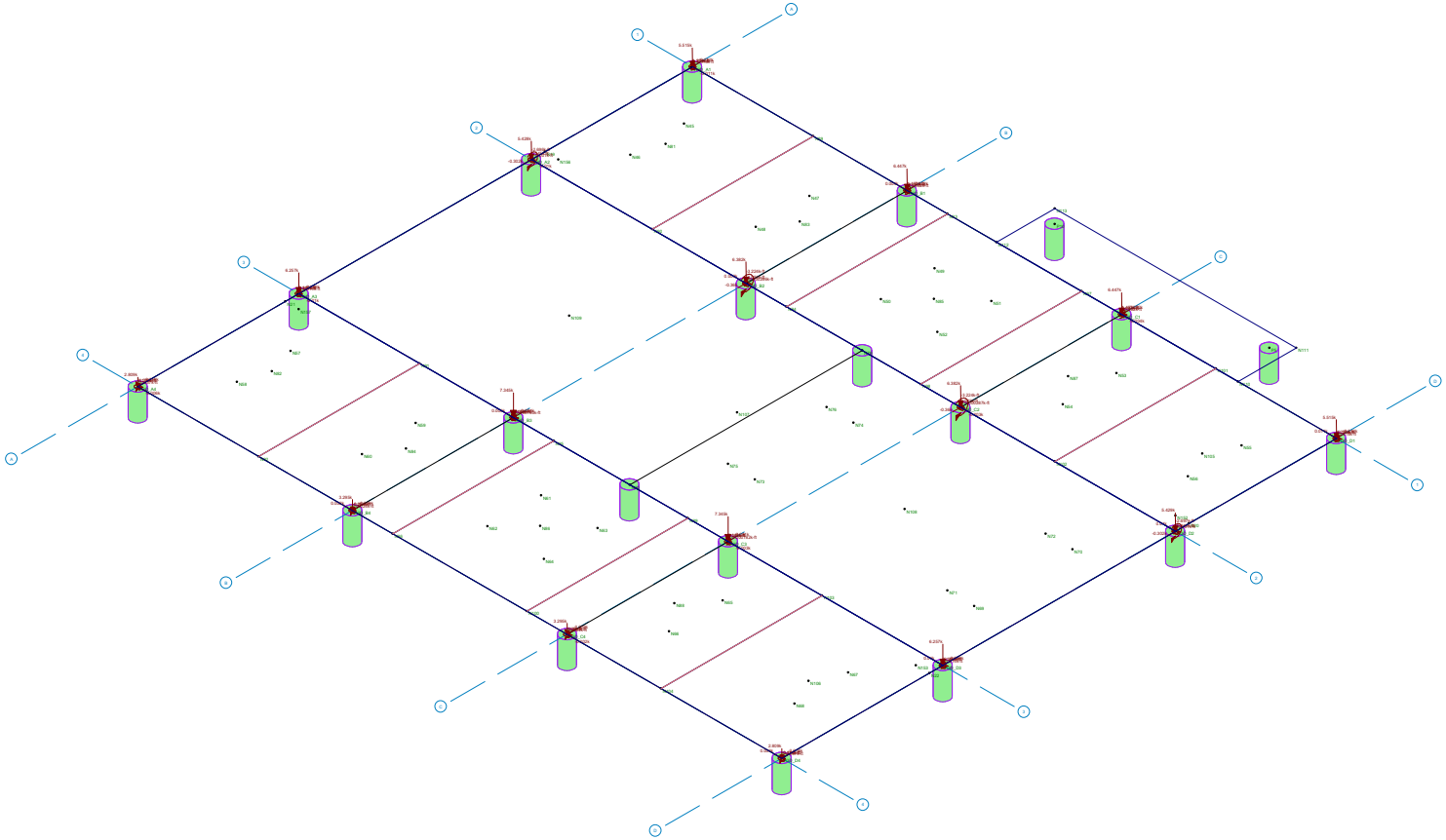


BURNS & MCDONNELL	HCTS / OFFLOAD FOUNDATION	SK - 4
A. Kral		Dec 19, 2023 at 4:31 PM
153929		Rev 1Updated Arrangement with Beams- Offloa...

Client	PDX Fuel Facility	Date	12/18/2023	Page	1
Project	153929	Made By	AJK	Checked	KAM
Notes	Island-Beam	Prelim		Final	X

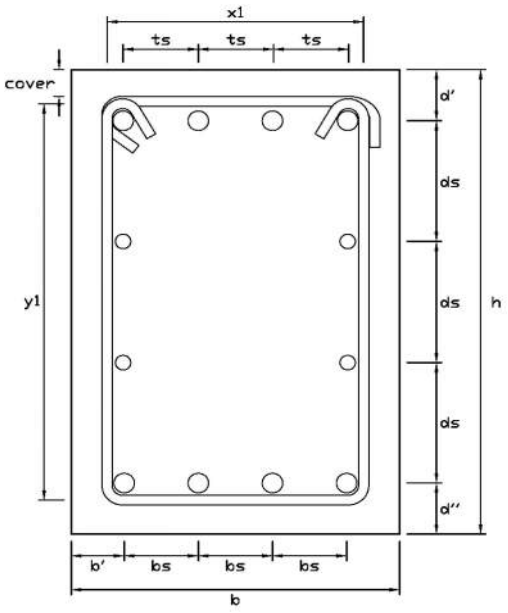
CONCRETE BEAM DESIGN FOR FLEXURE, SHEAR, AND TORSION

Beam Properties (Given)

h (in)	30
b (in)	18
cover (in)	3

Loads:

	LRFD	LC Fact, ϕ
V_u (k)	76	0.75
M_T (k-ft)	142	0.9
M_B (k-ft)	354	0.9
T_u (k-ft)	65	0.75



Bar Selection

Location	#of Bars	Size	Bar Dia.	A_{bar} (in²)	A_s (in²)
Top	3	8	1.000	0.79	2.37
Bottom	5	8	1.000	0.79	3.95
Side	4	4	0.500	0.20	0.80
	Bar Size	s (in)	Bar Dia.	A_b (in2)	A_s (in²/ft)
Shear	4	10.0	0.500	0.20	0.48

Concrete Properties

f'c (ksi)	6.0
β_1	0.75
w_c (kcf)	0.150
E_c (ksi)	4696

Steel Properties

f_y (ksi)	60
E_s (ksi)	29000
n	6.2

Flexure Analysis

Top Reinforcement	
a_{top} (in)	1.55
c_{top}(in)	2.07
$A_{s,min,T}$ (in²)	1.56
$A_{s,T}$ (in²)	2.37
Check $A_{s,T}$	**OK**
$M_{n,T}$ (k-ft)	298.9
$\phi M_{n,T}$ (k-ft)	269.0
M_T (k-ft)	142
Check $\phi M_{n,T}$	**OK**
$A_{s,req,T}$ (in²)	1.21
$A_{s,xtra,T}$ (in²)	1.16
Bottom Reinforcement	
a_{bot} (in)	2.58
c_{bot} (in)	3.44
$A_{s,min,B}$ (in²)	1.56
$A_{s,B}$ (in²)	3.95
Check $A_{s,B}$	**OK**
$M_{n,B}$ (k-ft)	488.0
$\phi M_{n,B}$ (k-ft)	439.2
M_T (k-ft)	354
Check $\phi M_{n,T}$	**OK**
$A_{s,req,B}$ (in²)	3.03
$A_{s,xtra,B}$ (in²)	0.92

Shear Analysis

Spacing Requirements	
V_c (k)	72.5
$2V_c$ (k)	145.0
$4V_c$ (k)	290.0
$V_{s,req}$ (k)	28.8
s_{max} (in)	13.0
s (in)	10.0
Check s	**OK**
Reinforcement	
$A_{v,min}$ (in²)	0.17
A_v (in²)	0.4
Check A_v	**OK**
$(A_v/s)_T$ (in)	0.040
Shear Strength	
V_s (k)	62.4
V_n (k)	134.9
ϕV_n (k)	101.2
V_u (k)	76
Check ϕV_n	OK
$V_u/\phi V_n$	0.75
$(A_v/s)_V$ (in)	0.030

Torsion Analysis

Treshold torsion	
T_{cr} (k-ft)	78.4
$1/4T_{cr}$ (k-ft)	19.6
Check Torsion	
Torsional Strength	
11-18L (psi)	468.8
11-18R (psi)	580.9
Section Sufficient Size	
Transverse Steel	
A_t (in²)	0.050
A_{t_min} (in²)	-0.063
Check A_{t_min}	**OK**
T_n (k-ft)	137.2
ϕT_n (k-ft)	102.9
Check ϕT_n	**OK**
Longitudinal Steel	
A_L (in²)	0.35
$A_{L,min}$ (in²)	2.96
$A_{L,ADD}$ (in²)	0.74
Check $A_{s,T}$	**OK**
Check $A_{s,B}$	**OK**
Check $A_{s,Side}$	**OK**
Longitudinal Spacing	s_{req} (in)
max(t_s,b_s)	5.00
	8.0
Check s	**OK**
Longitudinal Skin Spacing	s_{req} (in)
d_s (in)	7.33
	N/A
Check s	**OK**

$A_{s,pv}$ (in²)
1.16
0.92
0.80

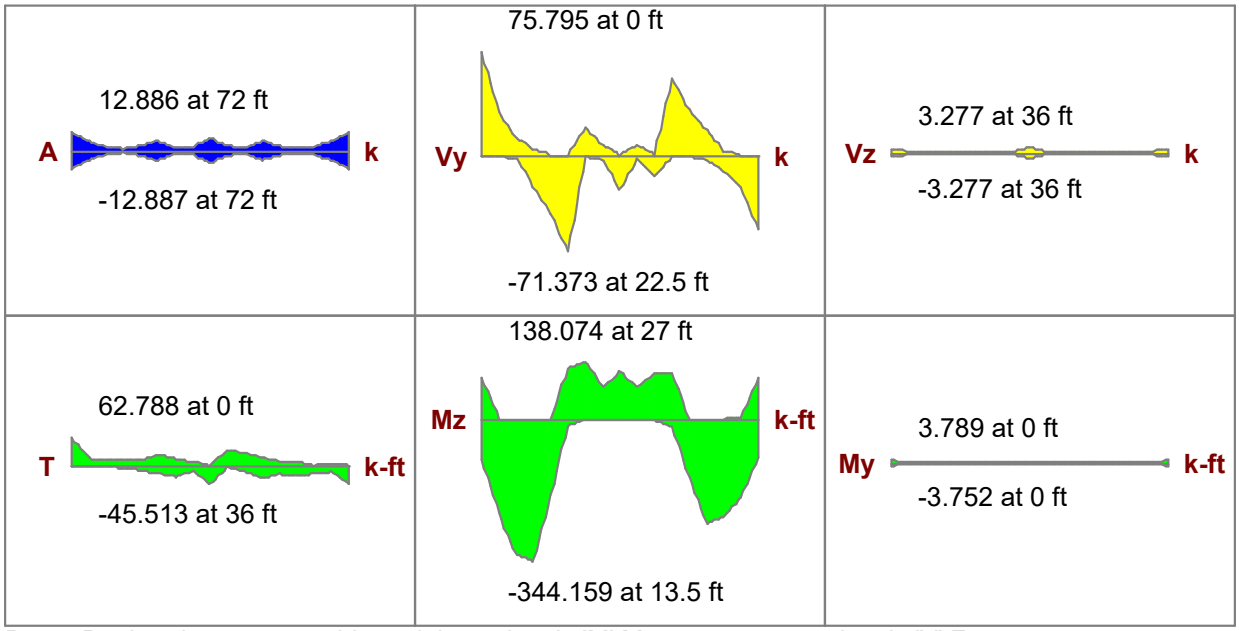
*Only required for the distance of h/2 on tension face

Beam Properties

d' (in)	4.0
d" (in)	4.0
d_t (in)	26.0
d_b (in)	26.0
b' (in)	4.0
b" (in)	4.0
d_s (in)	7.33
b_s (in)	2.50
t_s (in)	5.00
y_t (in)	15
x1 (in)	11.5
y1 (in)	23.5
A_{cp} (in²)	540.0
p_{cp} (in)	96.0
A_{oh} (in²)	270.3
A_o (in²)	229.7
p_h (in)	70

Beam: **ISLAND-BEAM1**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **72 ft**
Start: **R3D_A2**
End: **R3D_D2**

Code Check: **0.989 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.898 (LC 4)**	Bot Bending Check	**0.987 (LC 2)**	Shear Check	**0.989 (y) (LC 4)**
Location	**24 ft**	Location	**12.75 ft**	Location	**23.25 ft**
Gov Mu Top	**240.129 k-ft**	Gov Mu Bot	**-348.509 k-ft**	Gov Vu	**87.797 k**
phi*Mn Top	**267.511 k-ft**	phi*Mn Bot	**353.052 k-ft**	phi*Vn	**88.748 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 72**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A2**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #6
	Left	B	3 #6
	Mid	T	3 #8
	Mid	B	4 #8
	Right	T	3 #6
	Right	B	3 #6

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	170.255	0.0039	0.0264	0.0028	1.325	0.848
	-	B	170.255	0.0039	0.0264	0.0028	1.325	0.84
	24	T	297.234	0.0039	0.0264	0.005	2.356	2.108
	12.8	B	392.28	0.0039	0.0264	0.0067	3.142	3.099
	72	T	170.255	0.0039	0.0264	0.0028	1.325	0.861
	72	B	170.255	0.0039	0.0264	0.0028	1.325	0.816

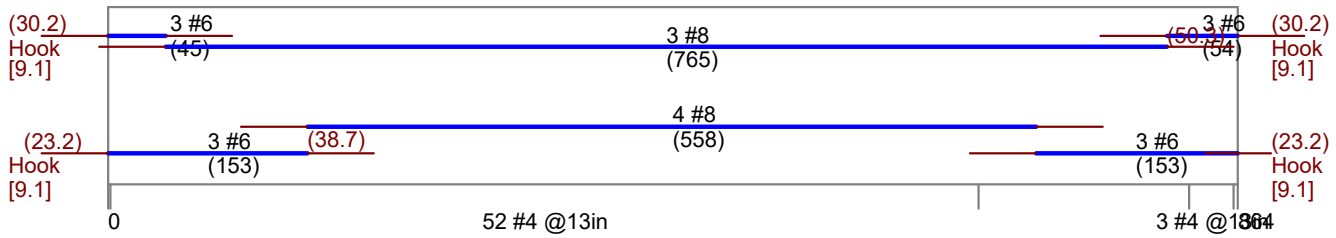
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 55.5	52 #4 @13in
	-	
	-	
	69 - 72	3 #4 @13in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 55.5	118.331	70.98	47.35	0.353	0.362
	-	0	0	0	0	0
	-	0	0	0	0	0
	69 - 72	118.331	70.98	47.35	0.022	0.362

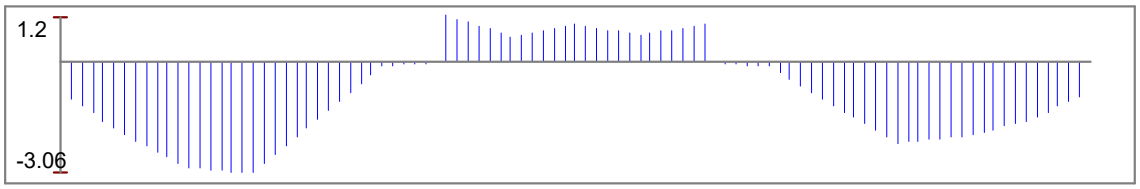
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



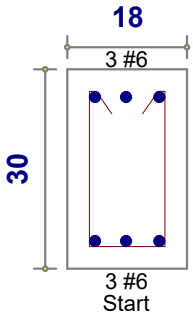
Tie Start Distance 2 in

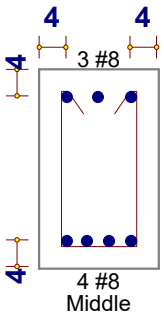
Span 1

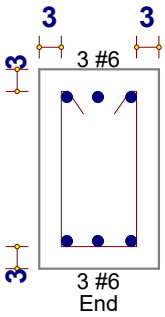
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)





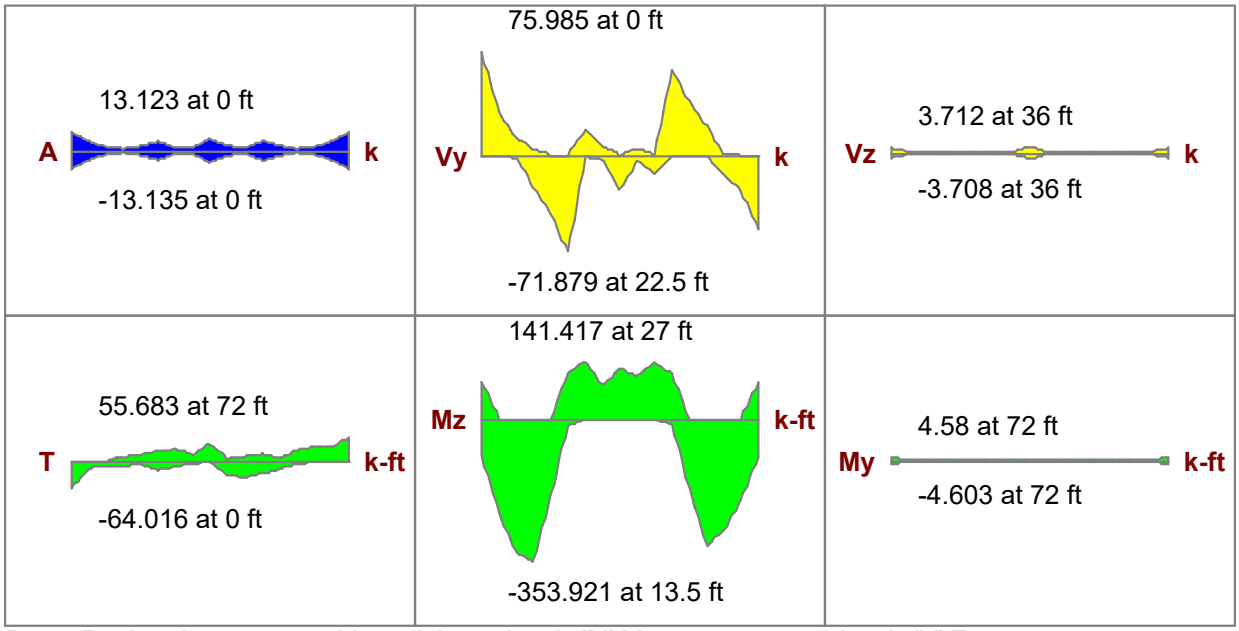


Span 1

Beam: **ISLAND-BEAM2**

Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **72 ft**
Start: **R3D_A3**
End: **R3D_D3**

Code Check: **1.014 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.896 (LC 4)**	Bot Bending Check	**1.014 (LC 2)**	Shear Check	**0.994 (y) (LC 4)**
Location	**24 ft**	Location	**12.75 ft**	Location	**23.25 ft**
Gov Mu Top	**239.599 k-ft**	Gov Mu Bot	**-357.919 k-ft**	Gov Vu	**88.199 k**
phi*Mn Top	**267.511 k-ft**	phi*Mn Bot	**353.052 k-ft**	phi*Vn	**88.722 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 72**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A3**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #6
	Left	B	3 #6
	Mid	T	3 #8
	Mid	B	4 #8
	Right	T	3 #6
	Right	B	3 #6

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	170.255	0.0039	0.0264	0.0028	1.325	0.787
	-	B	170.255	0.0039	0.0264	0.0028	1.325	0.783
	24	T	297.234	0.0039	0.0264	0.005	2.356	2.103
	12.8	B	392.28	0.0039	0.0264	0.0067	3.142	3.187
	72	T	170.255	0.0039	0.0264	0.0028	1.325	0.772
	72	B	170.255	0.0039	0.0264	0.0028	1.325	0.795

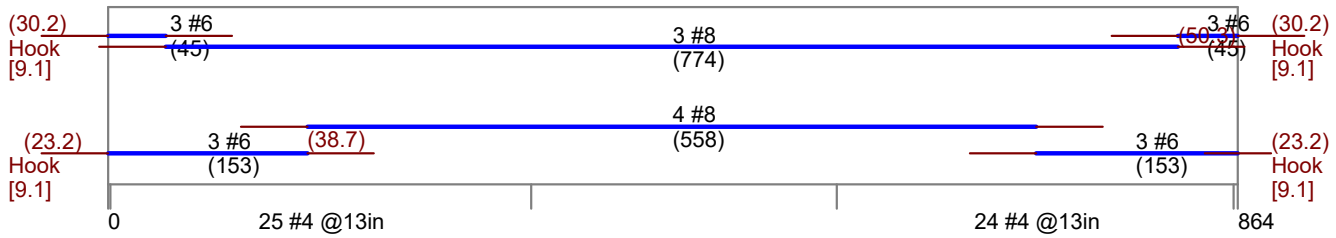
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 27	25 #4 @13in
	-	
	-	
	46.5 - 72	24 #4 @13in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 27	118.296	70.945	47.35	0.357	0.362
	-	0	0	0	0	0
	-	0	0	0	0	0
	46.5 - 72	118.296	70.945	47.35	0.246	0.362

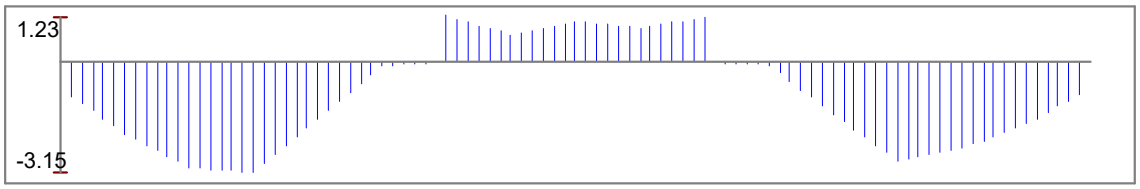
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



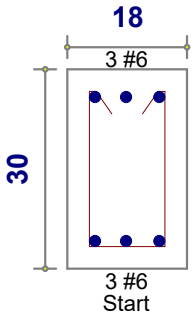
Tie Start Distance 2 in

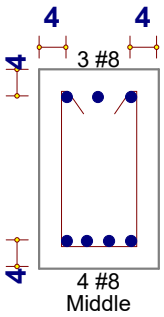
Span 1

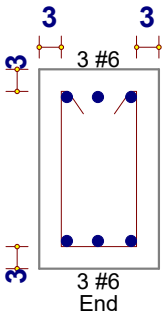
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)







Span 1

Client	PDX Fuel Facility	Date	12/18/2023	Page	1
Project	153929	Made By	AJK	Checked	KAM
Notes	Main-Beam	Prelim		Final	X

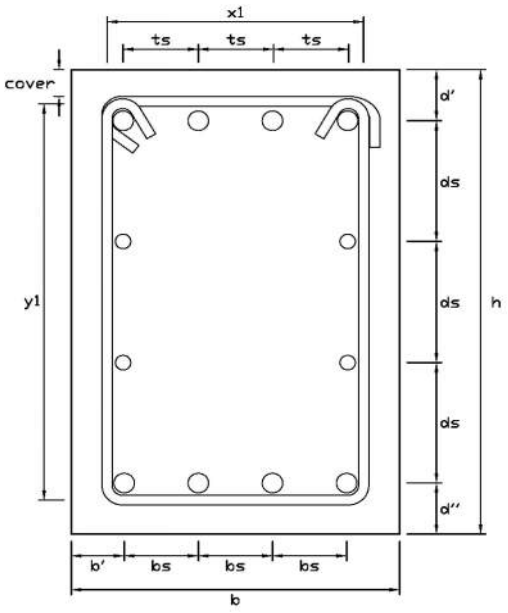
CONCRETE BEAM DESIGN FOR FLEXURE, SHEAR, AND TORSION

Beam Properties (Given)

h (in)	30
b (in)	18
cover (in)	3

Loads:

	LRFD	LC Fact, ϕ
V_u (k)	72	0.75
M_T (k-ft)	175	0.9
M_B (k-ft)	130	0.9
T_u (k-ft)	42	0.75



Bar Selection

Location	#of Bars	Size	Bar Dia.	A_{bar} (in^2)	A_s (in^2)
Top	3	8	1.000	0.79	2.37
Bottom	3	8	1.000	0.79	2.37
Side	4	4	0.500	0.20	0.80
	Bar Size	s (in)	Bar Dia.	A_b (in2)	A_s (in^2/ft)
Shear	4	12.0	0.500	0.20	0.40

Concrete Properties

f'c (ksi)	6.0
β_1	0.75
w_c (kcf)	0.150
E_c (ksi)	4696

Steel Properties

f_y (ksi)	60
E_s (ksi)	29000
n	6.2

Flexure Analysis

Top Reinforcement

a_{top} (in)	1.55
c_{top} (in)	2.07
$A_{s,min,T}$ (in^2)	1.56
$A_{s,T}$ (in^2)	2.37
Check $A_{s,T}$	OK
$M_{n,T}$ (k-ft)	298.9
$\phi M_{n,T}$ (k-ft)	269.0
M_T (k-ft)	175
Check $\phi M_{n,T}$	OK
$A_{s,req,T}$ (in^2)	1.50
$A_{s,xtra,T}$ (in^2)	0.87

Bottom Reinforcement

a_{bot} (in)	1.55
c_{bot} (in)	2.07
$A_{s,min,B}$ (in^2)	1.48
$A_{s,B}$ (in^2)	2.37
Check $A_{s,B}$	OK
$M_{n,B}$ (k-ft)	298.9
$\phi M_{n,B}$ (k-ft)	269.0
M_T (k-ft)	130
Check $\phi M_{n,T}$	OK
$A_{s,req,B}$ (in^2)	1.11
$A_{s,xtra,B}$ (in^2)	1.26

Shear Analysis

Spacing Requirements

V_c (k)	72.5
$2V_c$ (k)	145.0
$4V_c$ (k)	290.0
$V_{s,req}$ (k)	23.5
s_{max} (in)	13.0
s (in)	12.0
Check s	OK

Reinforcement

$A_{v,min}$ (in^2)	0.21
A_v (in^2)	0.4
Check A_v	OK
$(A_v/s)_T$ (in)	0.033

Shear Strength

V_s (k)	52.0
V_n (k)	124.5
ϕV_n (k)	93.4
V_u (k)	72
Check ϕV_n	OK
$V_u/\phi V_n$	0.77
$(A_v/s)_V$ (in)	0.026

Torsion Analysis

Treshold torsion

T_{cr} (k-ft)	78.4
$1/4T_{cr}$ (k-ft)	19.6
Check Torsion	

Torsional Strength

11-18L (psi)	323.1
11-18R (psi)	580.9
Section Sufficient Size	

Transverse Steel

A_t (in^2)	0.046
A_{t_min} (in^2)	-0.050
Check A_{t_min}	OK
T_n (k-ft)	105.2
ϕT_n (k-ft)	78.9
Check ϕT_n	OK

Longitudinal Steel

A_L (in^2)	0.27	
$A_{L,min}$ (in^2)	2.96	
$A_{L,ADD}$ (in^2)	0.74	$A_{s,pv}$ (in^2)
Check $A_{s,T}$	OK	0.87
Check $A_{s,B}$	OK	1.26
Check $A_{s,Side}$	OK	0.80

Longitudinal Spacing

		s_{req} (in)
max(t_s,b_s)	5.00	8.0
Check s	OK	

Longitudinal Skin Spacing

		s_{req} (in)
d_s (in)	7.33	N/A
Check s	OK	

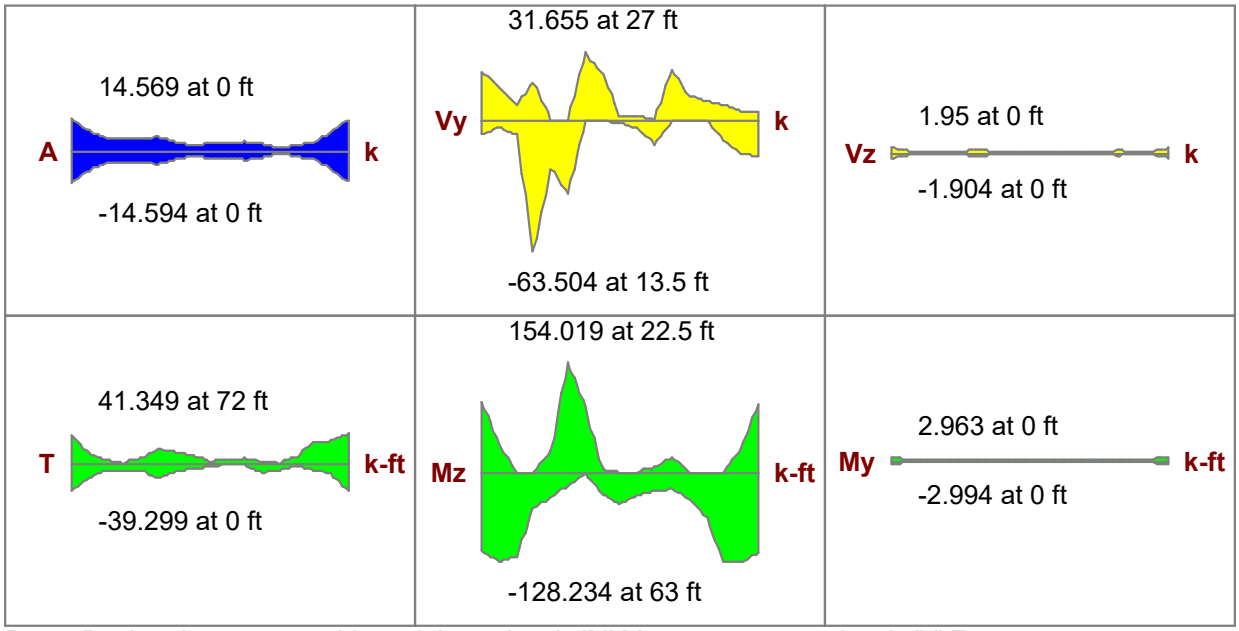
*Only required for the distance of h/2 on tension face

Beam Properties

d' (in)	4.0
d'' (in)	4.0
d_t (in)	26.0
d_b (in)	26.0
b' (in)	4.0
b'' (in)	4.0
d_s (in)	7.33
b_s (in)	5.00
t_s (in)	5.00
y_t (in)	15
x1 (in)	11.5
y1 (in)	23.5
A_{cp} (in^2)	540.0
p_{cp} (in)	96.0
A_{oh} (in^2)	270.3
A_o (in^2)	229.7
p_h (in)	70

Beam: **MAIN-BEAM1**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **72 ft**
Start: **R3D_A1**
End: **R3D_D1**

Code Check: **0.778 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.778 (LC 8)**	Bot Bending Check	**0.740 (LC 10)**	Shear Check	**0.717 (y) (LC 2)**
Location	**24 ft**	Location	**72 ft**	Location	**12.75 ft**
Gov Mu Top	**208.243 k-ft**	Gov Mu Bot	**-113.444 k-ft**	Gov Vu	**63.504 k**
phi*Mn Top	**267.511 k-ft**	phi*Mn Bot	**153.229 k-ft**	phi*Vn	**88.582 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 72**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A1**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #6
	Left	B	3 #6
	Mid	T	3 #8
	Mid	B	3 #7
	Right	T	3 #6
	Right	B	3 #6

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	170.255	0.0039	0.0264	0.0028	1.325	0.85
	-	B	170.255	0.0039	0.0264	0.0028	1.325	0.955
	24	T	297.234	0.0039	0.0264	0.005	2.356	1.822
	61.5	B	229.761	0.0039	0.0264	0.0038	1.804	1.189
	72	T	170.255	0.0039	0.0264	0.0028	1.325	0.834
	72	B	170.255	0.0039	0.0264	0.0028	1.325	0.982

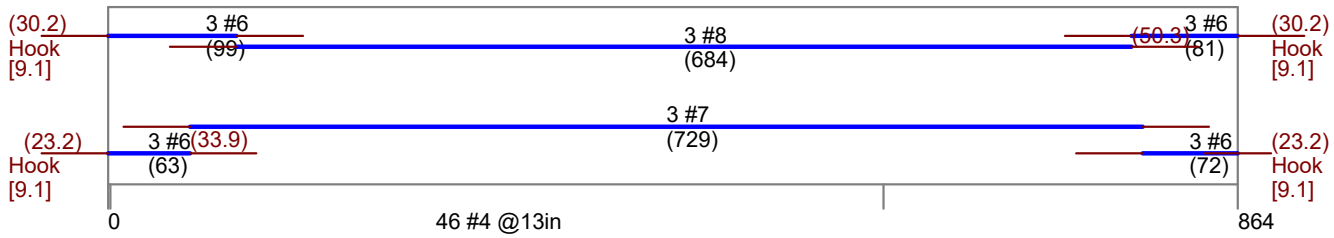
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 49.5	46 #4 @13in
	-	
	-	
	50.3 - 72	

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 49.5	118.109	70.759	47.35	0.107	0.362
	-	0	0	0	0	0
	-	0	0	0	0	0
	50.3 - 72	70.759	70.759	0	0	0

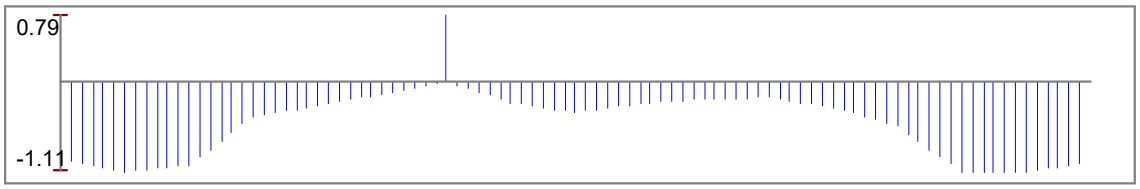
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



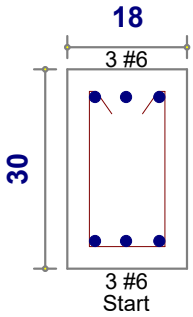
Tie Start Distance 2 in

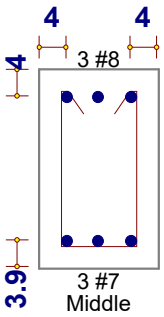
Span 1

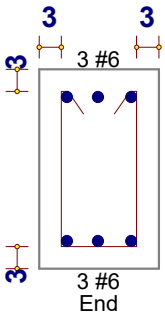
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



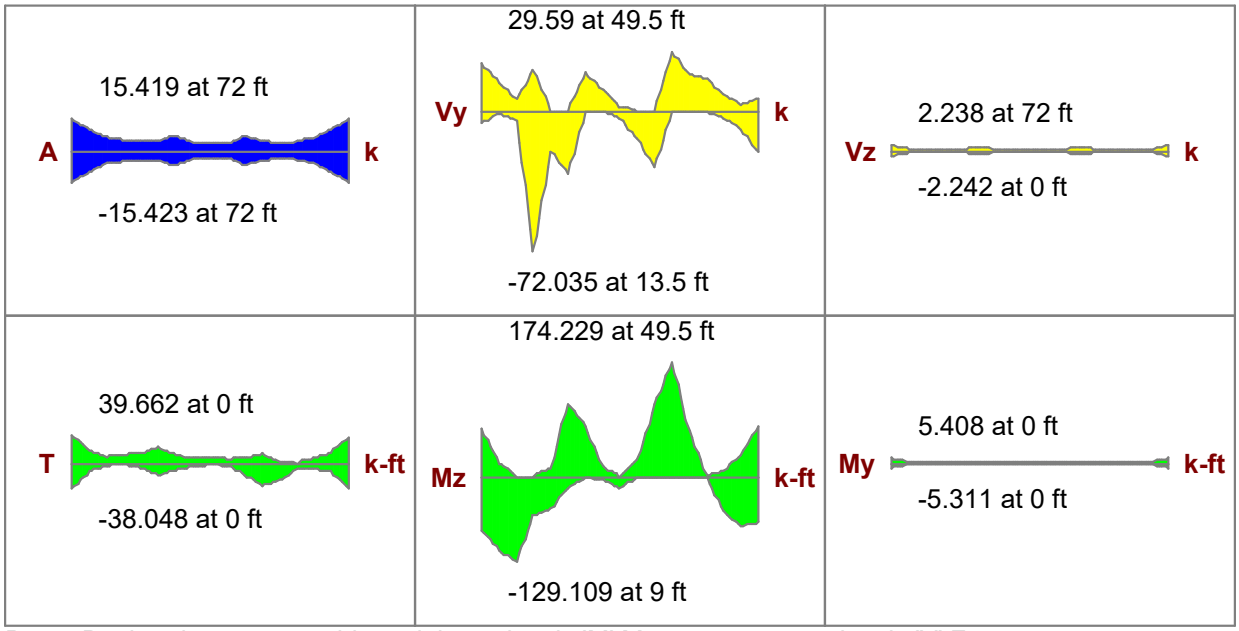




Span 1

Beam: **MAIN-BEAM2**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **72 ft**
Start: **R3D_A4**
End: **R3D_D4**

Code Check: **0.825 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.825 (LC 10)**	Bot Bending Check	**0.647 (LC 14)**	Shear Check	**0.814 (y) (LC 2)**
Location	**48 ft**	Location	**72 ft**	Location	**12.75 ft**
Gov Mu Top	**220.632 k-ft**	Gov Mu Bot	**-69.341 k-ft**	Gov Vu	**72.035 k**
phi*Mn Top	**267.511 k-ft**	phi*Mn Bot	**107.216 k-ft**	phi*Vn	**88.472 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 72**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A4**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #5
	Left	B	3 #6
	Mid	T	3 #8
	Mid	B	3 #7
	Right	T	3 #5
	Right	B	3 #5

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	119.129	0.0039	0.0264	0.002	0.92	0.613
	-	B	170.255	0.0039	0.0264	0.0028	1.325	0.698
	48	T	297.234	0.0039	0.0264	0.005	2.356	1.933
	9.8	B	229.761	0.0039	0.0264	0.0038	1.804	1.119
	72	T	119.129	0.0039	0.0264	0.002	0.92	0.655
	72	B	119.129	0.0039	0.0264	0.002	0.92	0.597

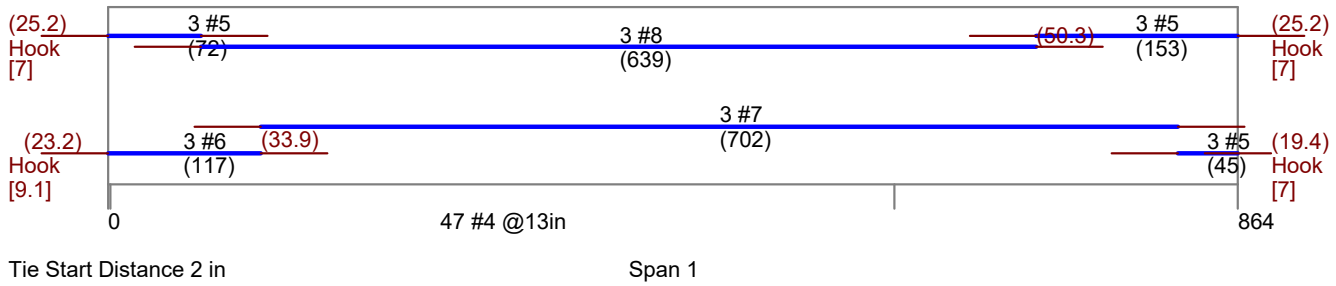
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 50.3	47 #4 @13in
	-	
	-	
	51 - 72	

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 50.3	117.963	70.612	47.35	0.195	0.362
	-	0	0	0	0	0
	-	0	0	0	0	0
	51 - 72	70.781	70.781	0	0	0

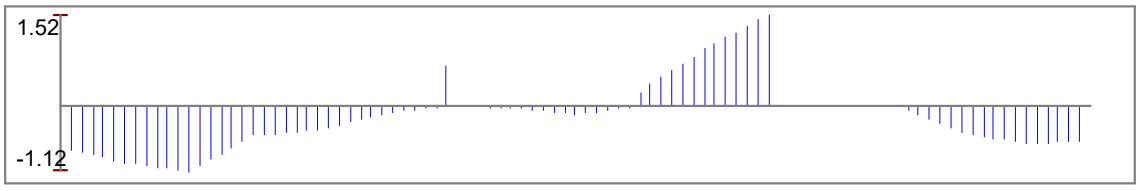
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



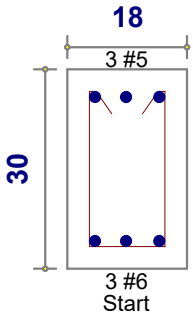
Tie Start Distance 2 in

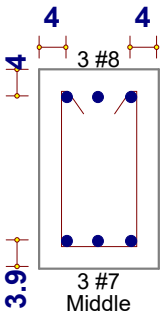
Span 1

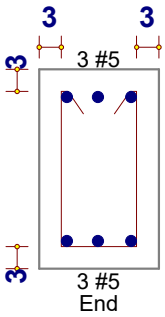
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)







Span 1

Client	PDX Fuel Facility	Date	12/18/2023	Page	1
Project	153929	Made By	AJK	Checked	KAM
Notes	Strut	Prelim		Final	X

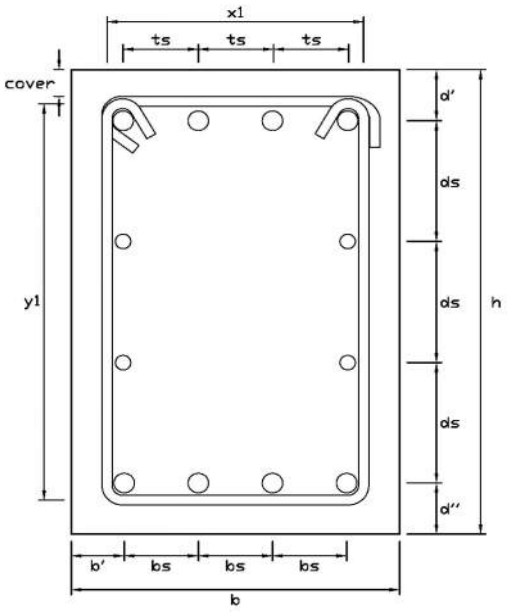
CONCRETE BEAM DESIGN FOR FLEXURE, SHEAR, AND TORSION

Beam Properties (Given)

h (in)	30
b (in)	18
cover (in)	3

Loads:

	LRFD	LC Fact, ϕ
V_u (k)	31	0.75
M_T (k-ft)	148	0.9
M_B (k-ft)	162	0.9
T_u (k-ft)	21	0.75



Bar Selection

Location	#of Bars	Size	Bar Dia.	A_{bar} (in²)	A_s (in²)
Top	3	8	1.000	0.79	2.37
Bottom	3	8	1.000	0.79	2.37
Side	4	4	0.500	0.20	0.80
	Bar Size	s (in)	Bar Dia.	A_b (in2)	A_s (in²/ft)
Shear	4	12.0	0.500	0.20	0.40

Concrete Properties

f'c (ksi)	6.0
β_1	0.75
w_c (kcf)	0.150
E_c (ksi)	4696

Steel Properties

f_y (ksi)	60
E_s (ksi)	29000
n	6.2

Flexure Analysis

Top Reinforcement

a_{top} (in)	1.55
c_{top}(in)	2.07
$A_{s,min,T}$ (in²)	1.56
$A_{s,T}$ (in²)	2.37
Check $A_{s,T}$	**OK**
$M_{n,T}$ (k-ft)	298.9
$\phi M_{n,T}$ (k-ft)	269.0
M_T (k-ft)	148
Check $\phi M_{n,T}$	**OK**
$A_{s,req,T}$ (in²)	1.27
$A_{s,xtra,T}$ (in²)	1.10

Bottom Reinforcement

a_{bot} (in)	1.55
c_{bot} (in)	2.07
$A_{s,min,B}$ (in²)	1.56
$A_{s,B}$ (in²)	2.37
Check $A_{s,B}$	**OK**
$M_{n,B}$ (k-ft)	298.9
$\phi M_{n,B}$ (k-ft)	269.0
M_T (k-ft)	162
Check $\phi M_{n,T}$	**OK**
$A_{s,req,B}$ (in²)	1.39
$A_{s,xtra,B}$ (in²)	0.98

Shear Analysis

Spacing Requirements

V_c (k)	72.5
$2V_c$ (k)	145.0
$4V_c$ (k)	290.0
$V_{s,req}$ (k)	0.0
s_{max} (in)	13.0
s (in)	12.0
Check s	**OK**

Reinforcement

$A_{v,min}$ (in²)	0.21
A_v (in²)	0.4
Check A_v	**OK**
$(A_v/s)_T$ (in)	0.033

Shear Strength

V_s (k)	52.0
V_n (k)	124.5
ϕV_n (k)	93.4
V_u (k)	31
Check ϕV_n	OK
$V_u/\phi V_n$	0.33
$(A_v/s)_V$ (in)	0.011

Torsion Analysis

Treshold torsion

T_{cr} (k-ft)	78.4
$1/4T_{cr}$ (k-ft)	19.6
Check Torsion	

Torsional Strength

11-18L (psi)	156.8
11-18R (psi)	580.9
Section Sufficient Size	

Transverse Steel

A_t (in²)	0.134
A_{t_min} (in²)	0.038
Check A_{t_min}	**OK**
T_n (k-ft)	306.9
ϕT_n (k-ft)	230.2
Check ϕT_n	**OK**

Longitudinal Steel

A_L (in²)	0.78	
$A_{L,min}$ (in²)	2.71	
$A_{L,ADD}$ (in²)	0.68	$A_{s,pv}$ (in²)
Check $A_{s,T}$	**OK**	1.10
Check $A_{s,B}$	**OK**	0.98
Check $A_{s,Side}$	**OK**	0.80

Longitudinal Spacing

		s_{req} (in)
max(t_s,b_s)	5.00	8.0
Check s	**OK**	

Longitudinal Skin Spacing

		s_{req} (in)
d_s (in)	7.33	N/A
Check s	**OK**	

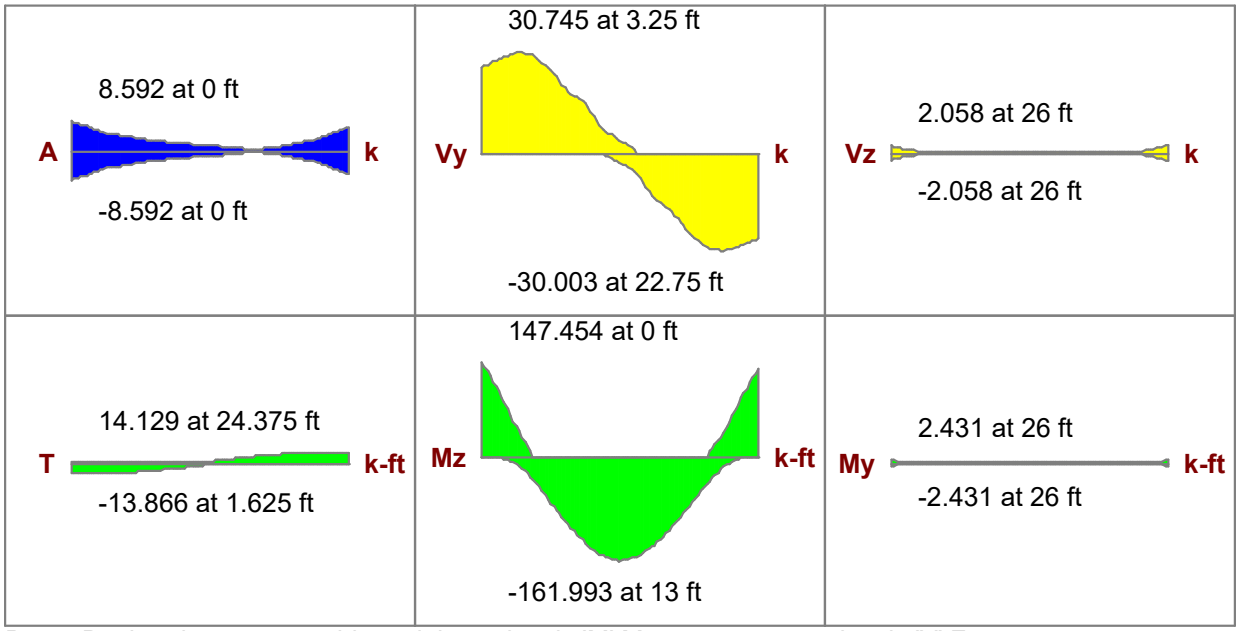
*Only required for the distance of h/2 on tension face

Beam Properties

d' (in)	4.0
d'' (in)	4.0
d_t (in)	26.0
d_b (in)	26.0
b' (in)	4.0
b'' (in)	4.0
d_s (in)	7.33
b_s (in)	5.00
t_s (in)	5.00
y_t (in)	15
x1 (in)	11.5
y1 (in)	23.5
A_{cp} (in²)	540.0
p_{cp} (in)	96.0
A_{oh} (in²)	270.3
A_o (in²)	229.7
p_h (in)	70

Beam: **STRUT-MID**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **26 ft**
Start: **N79**
End: **N80**

Code Check: **0.713 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.713 (LC 2)**	Bot Bending Check	**0.606 (LC 4)**	Shear Check	**0.497 (y) (LC 4)**
Location	**0 ft**	Location	**13 ft**	Location	**20.042 ft**
Gov Mu Top	**147.454 k-ft**	Gov Mu Bot	**-161.993 k-ft**	Gov Vu	**26.932 k**
phi*Mn Top	**206.785 k-ft**	phi*Mn Bot	**267.511 k-ft**	phi*Vn	**54.225 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 26**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**N79**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #7
	Left	B	-
	Mid	T	-
	Mid	B	3 #8
	Right	T	3 #7
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	229.761	0.0039	0.0264	0.0038	1.804	1.281
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	13	B	297.234	0.0039	0.0264	0.005	2.356	1.41
	26	T	229.761	0.0039	0.0264	0.0038	1.804	1.184
	26	B	0	0	0	0	0	0

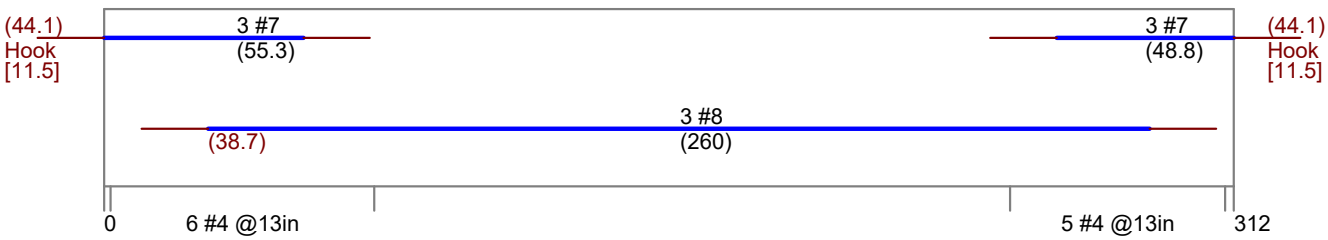
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 6.2	6 #4 @13in
	-	
	-	
	20.9 - 26	5 #4 @13in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 6.2	118.931	71.694	47.237	0	0.362
	-	0	0	0	0	0
	-	0	0	0	0	0
	20.9 - 26	118.931	71.694	47.237	0	0.362

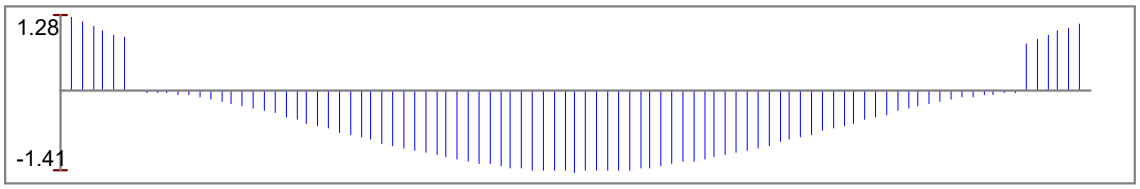
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



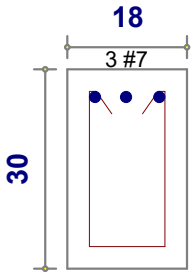
Tie Start Distance 2 in

Span 1

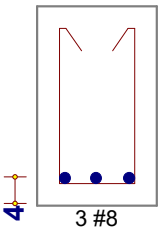
Graphical Plot of Required Area of Steel(Units: in^2)



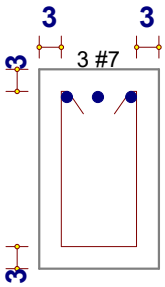
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Start



Middle

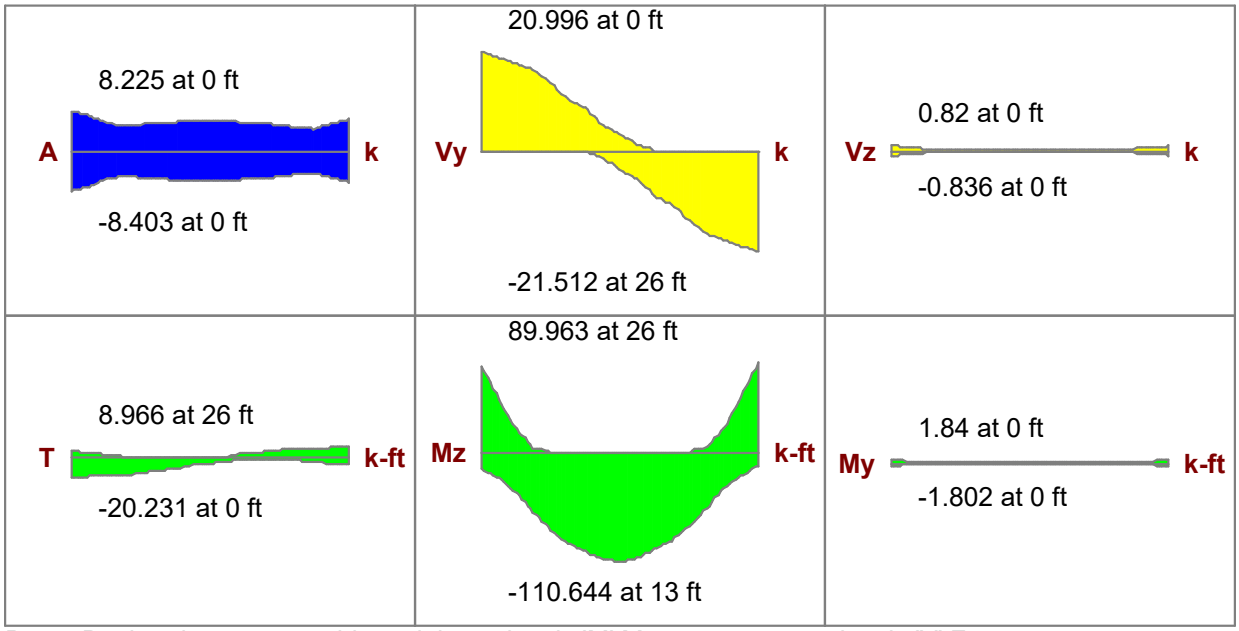


End

Span 1

Beam: **STRUT-NORTH**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **26 ft**
Start: **R3D_D2**
End: **R3D_D3**

Code Check: **0.722 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.587 (LC 9)**	Bot Bending Check	**0.722 (LC 4)**	Shear Check	**0.399 (y) (LC 9)**
Location	**26 ft**	Location	**13 ft**	Location	**25.188 ft**
Gov Mu Top	**89.963 k-ft**	Gov Mu Bot	**-110.644 k-ft**	Gov Vu	**21.512 k**
phi*Mn Top	**153.229 k-ft**	phi*Mn Bot	**153.229 k-ft**	phi*Vn	**53.926 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 26**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_D3**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #6
	Left	B	-
	Mid	T	-
	Mid	B	3 #6
	Right	T	3 #6
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	170.255	0.0039	0.0264	0.0028	1.325	0.748
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	13	B	170.255	0.0039	0.0264	0.0028	1.325	0.957
	26	T	170.255	0.0039	0.0264	0.0028	1.325	0.776
	26	B	0	0	0	0	0	0

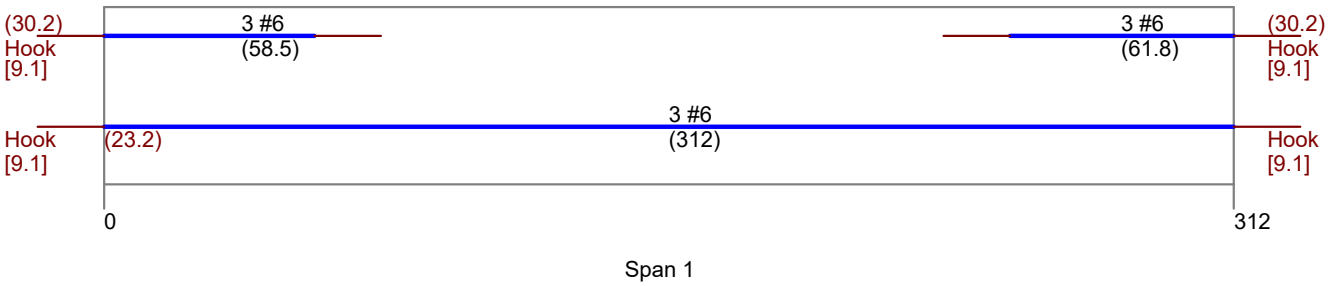
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 6.5	
	6.5 - 13	
	13 - 19.5	
	19.5 - 26	

Shear Span Results

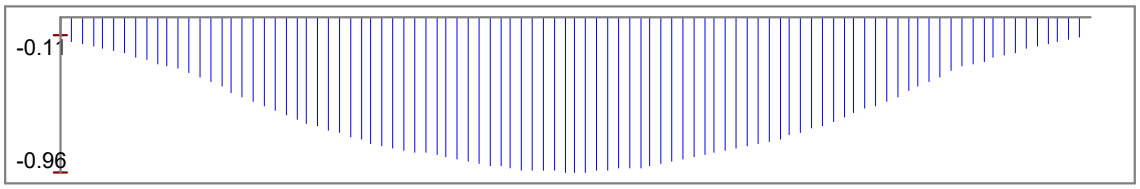
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 6.5	71.901	71.901	0	0	0
	6.5 - 13	71.901	71.901	0	0	0
	13 - 19.5	71.901	71.901	0	0	0
	19.5 - 26	71.901	71.901	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

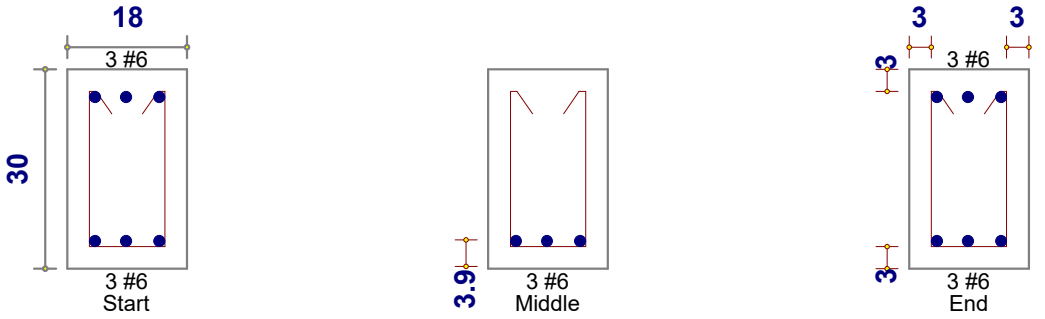


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



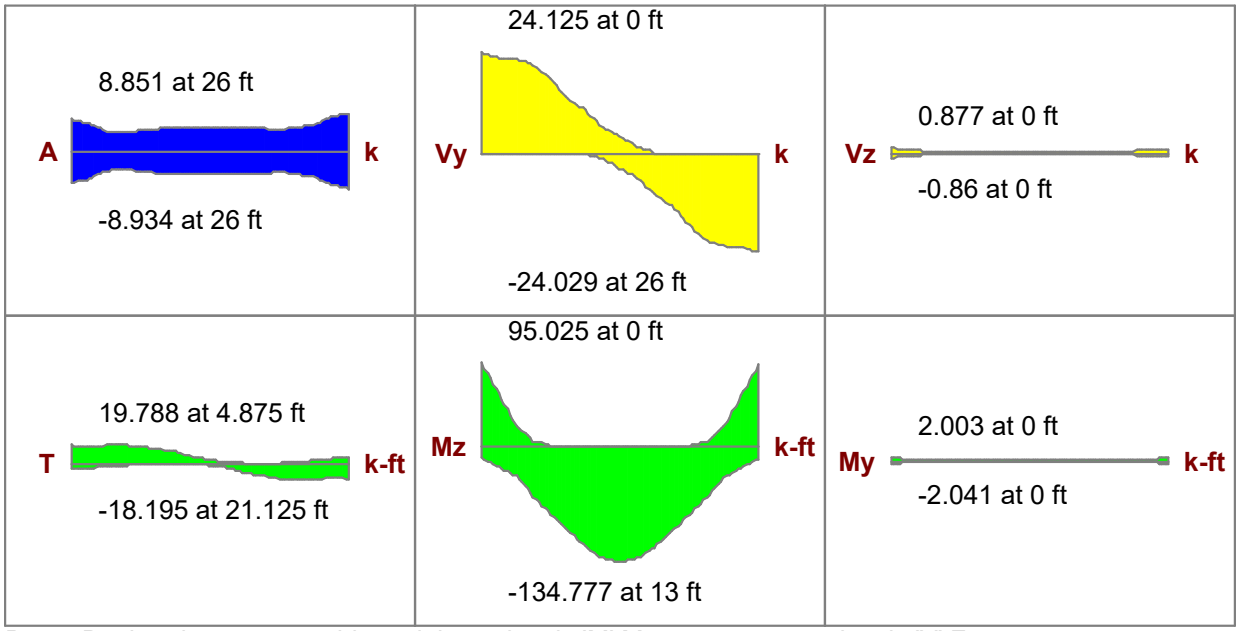
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **STRUT-SOUTH**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **26 ft**
Start: **R3D_A2**
End: **R3D_A3**

Code Check: **0.652 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.620 (LC 11)**	Bot Bending Check	**0.652 (LC 4)**	Shear Check	**0.450 (y) (LC 2)**
Location	**0 ft**	Location	**13 ft**	Location	**0 ft**
Gov Mu Top	**95.025 k-ft**	Gov Mu Bot	**-134.777 k-ft**	Gov Vu	**24.125 k**
phi*Mn Top	**153.229 k-ft**	phi*Mn Bot	**206.785 k-ft**	phi*Vn	**53.666 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 26**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A3**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #6
	Left	B	-
	Mid	T	-
	Mid	B	3 #7
	Right	T	3 #6
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	170.255	0.0039	0.0264	0.0028	1.325	0.821
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	13	B	229.761	0.0039	0.0264	0.0038	1.804	1.169
	26	T	170.255	0.0039	0.0264	0.0028	1.325	0.794
	26	B	0	0	0	0	0	0

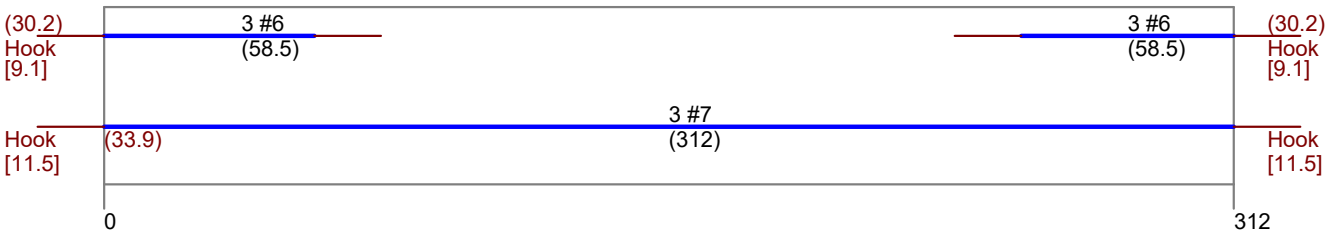
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 6.5	
	6.5 - 13	
	13 - 19.5	
	19.5 - 26	

Shear Span Results

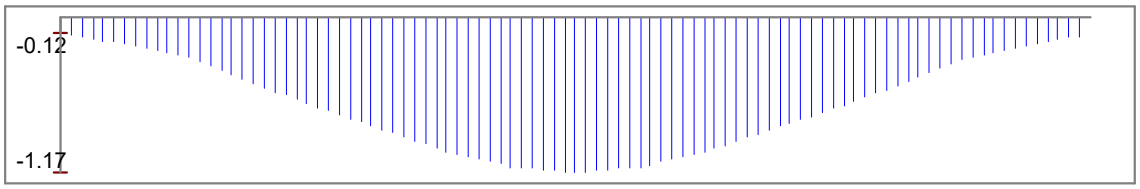
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 6.5	71.554	71.554	0	0	0
	6.5 - 13	71.383	71.383	0	0	0
	13 - 19.5	71.383	71.383	0	0	0
	19.5 - 26	71.554	71.554	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

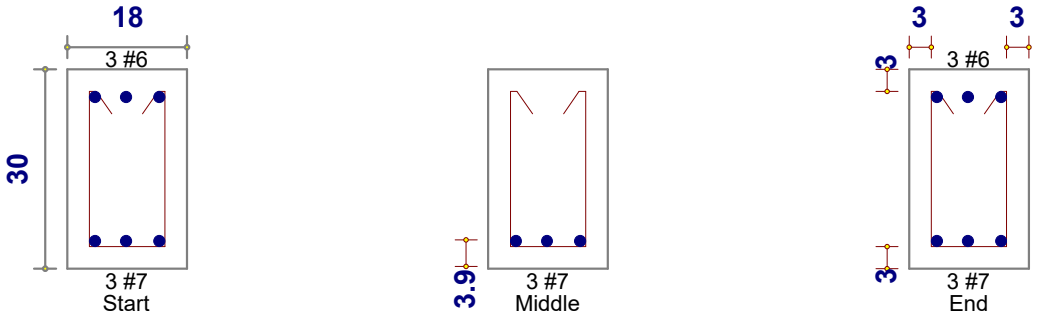


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

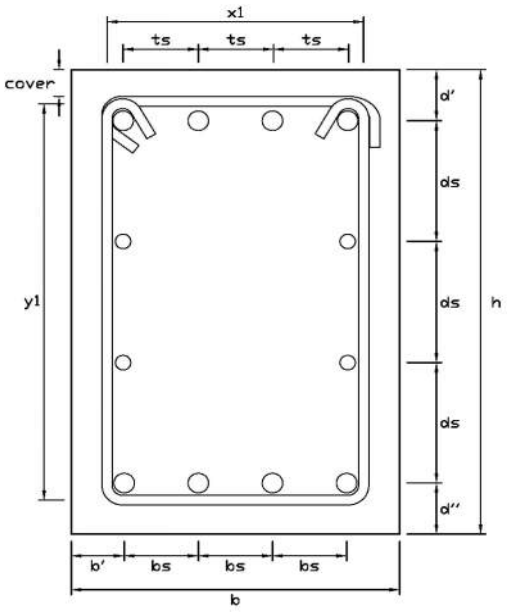
Client	PDX Fuel Facility	Date	12/18/2023	Page	1
Project	153929	Made By	AJK	Checked	KAM
Notes	Tie-Beam-1	Prelim		Final	X

CONCRETE BEAM DESIGN FOR FLEXURE, SHEAR, AND TORSION

Beam Properties (Given)

h (in)	30
b (in)	18
cover (in)	3

Loads:	LRFD	LC Fact, ϕ
V_u (k)	33	0.75
M_T (k-ft)	20	0.9
M_B (k-ft)	85	0.9
T_u (k-ft)	20	0.75



Bar Selection

Location	#of Bars	Size	Bar Dia.	A_{bar} (in²)	A_s (in²)
Top	3	5	0.625	0.31	0.93
Bottom	5	5	0.625	0.31	1.55
Side	2	5	0.625	0.31	0.62
	Bar Size	s (in)	Bar Dia.	A_b (in2)	A_s (in²/ft)
Shear	4	8.0	0.500	0.20	0.60

Concrete Properties

f'c (ksi)	6.0
β_1	0.75
w_c (kcf)	0.150
E_c (ksi)	4696

Steel Properties

f_y (ksi)	60
E_s (ksi)	29000
n	6.2

Flexure Analysis

Top Reinforcement

a_{top} (in)	0.61
c_{top}(in)	0.81
$A_{s,min,T}$ (in²)	0.23
$A_{s,T}$ (in²)	0.93
Check $A_{s,T}$	**OK**
$M_{n,T}$ (k-ft)	119.5
$\phi M_{n,T}$ (k-ft)	107.5
M_T (k-ft)	20
Check $\phi M_{n,T}$	**OK**
$A_{s,req,T}$ (in²)	0.17
$A_{s,xtra,T}$ (in²)	0.76

Bottom Reinforcement

a_{bot} (in)	1.01
c_{bot} (in)	1.35
$A_{s,min,B}$ (in²)	0.97
$A_{s,B}$ (in²)	1.55
Check $A_{s,B}$	**OK**
$M_{n,B}$ (k-ft)	197.6
$\phi M_{n,B}$ (k-ft)	177.8
M_T (k-ft)	85
Check $\phi M_{n,T}$	**OK**
$A_{s,req,B}$ (in²)	0.73
$A_{s,xtra,B}$ (in²)	0.82

Shear Analysis

Spacing Requirements

V_c (k)	72.5
$2V_c$ (k)	145.0
$4V_c$ (k)	290.0
$V_{s,req}$ (k)	0.0
s_{max} (in)	13.0
s (in)	8.0
Check s	**OK**

Reinforcement

$A_{v,min}$ (in²)	0.14
A_v (in²)	0.4
Check A_v	**OK**
$(A_v/s)_T$ (in)	0.050

Shear Strength

V_s (k)	78.0
V_n (k)	150.5
ϕV_n (k)	112.9
V_u (k)	33
Check ϕV_n	OK
$V_u/\phi V_n$	0.29
$(A_v/s)_V$ (in)	0.015

Torsion Analysis

Treshold torsion

T_{cr} (k-ft)	78.4
$1/4T_{cr}$ (k-ft)	19.6
Check Torsion	

Torsional Strength

11-18L (psi)	152.6
11-18R (psi)	580.9
Section Sufficient Size	

Transverse Steel

A_t (in²)	0.142
A_{t_min} (in²)	0.011
Check A_{t_min}	**OK**
T_n (k-ft)	487.7
ϕT_n (k-ft)	365.7
Check ϕT_n	**OK**

Longitudinal Steel

A_L (in²)	1.24	
$A_{L,min}$ (in²)	2.25	
$A_{L,ADD}$ (in²)	0.56	$A_{s,pv}$ (in²)
Check $A_{s,T}$	**OK**	0.76
Check $A_{s,B}$	**OK**	0.82
Check $A_{s,Side}$	**OK**	0.62

Longitudinal Spacing

		s_{req} (in)
max(t_s,b_s)	5.00	8.0
Check s	**OK**	

Longitudinal Skin Spacing

		s_{req} (in)
d_s (in)	11.00	N/A
Check s	**OK**	

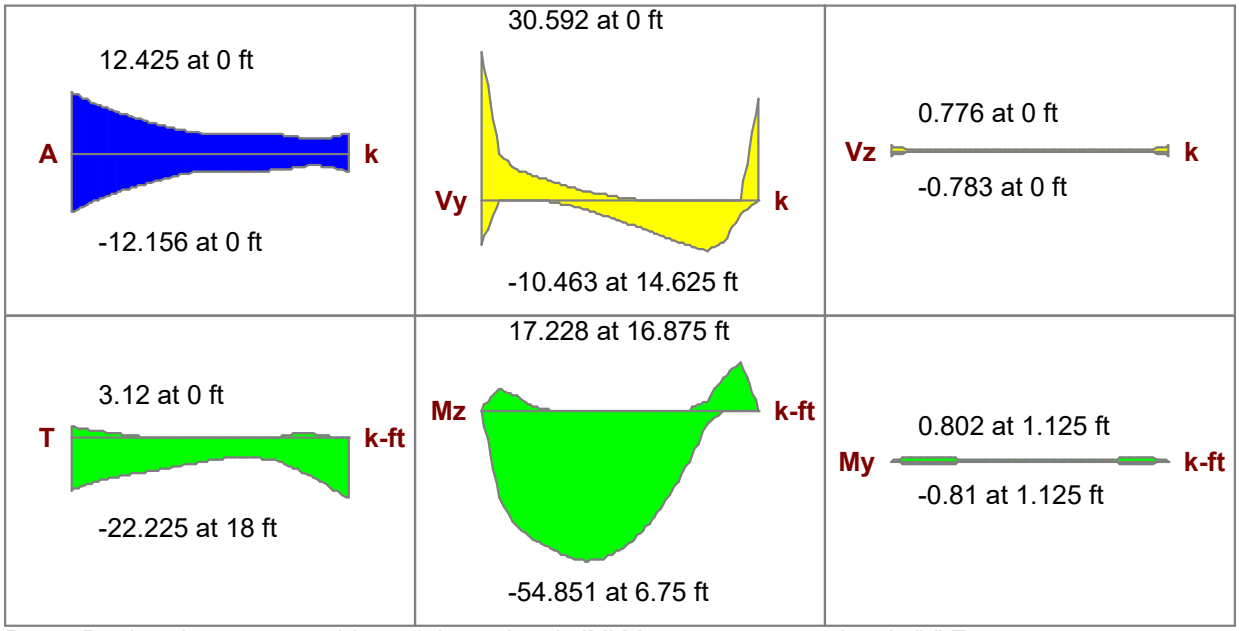
*Only required for the distance of h/2 on tension face

Beam Properties

d' (in)	4.0
d'' (in)	4.0
d_t (in)	26.0
d_b (in)	26.0
b' (in)	4.0
b'' (in)	4.0
d_s (in)	11.00
b_s (in)	2.50
t_s (in)	5.00
y_t (in)	15
x1 (in)	11.5
y1 (in)	23.5
A_{cp} (in²)	540.0
p_{cp} (in)	96.0
A_{oh} (in²)	270.3
A_o (in²)	229.7
p_h (in)	70

Beam: **TIE-BEAM-1A**
Shape: **CRECT21X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_D1**
End: **R3D_D2**

Code Check: **0.554 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.252 (LC 9)**	Bot Bending Check	**0.554 (LC 2)**	Shear Check	**0.413 (y) (LC 9)**
Location	**17.25 ft**	Location	**7.313 ft**	Location	**0 ft**
Gov Mu Top	**17.636 k-ft**	Gov Mu Bot	**-55.144 k-ft**	Gov Vu	**30.592 k**
phi*Mn Top	**69.941 k-ft**	phi*Mn Bot	**99.552 k-ft**	phi*Vn	**74.04 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**0**	**0**	**N20**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	17.3	T	77.712	0.0039	0.0264	0.003	0.92	0.232
	7.3	B	110.614	0.0039	0.0264	0.0043	1.325	0.731
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

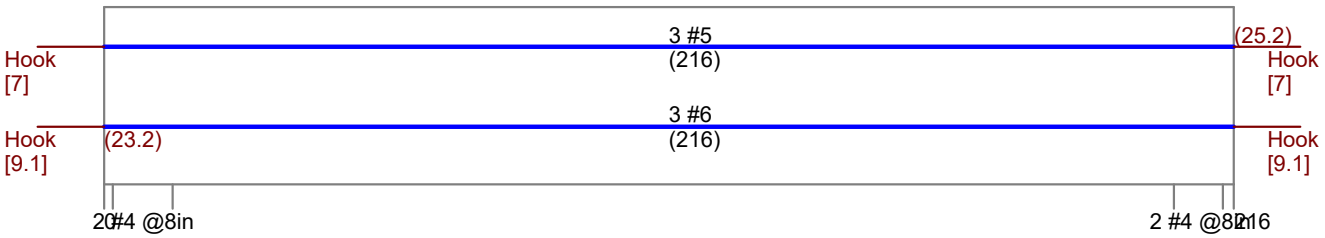
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 1.1	2 #4 @8in
	-	
	-	
	17.1 - 18	2 #4 @8in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 1.1	98.72	48.283	50.437	0	0.589
	-	0	0	0	0	0
	-	0	0	0	0	0
	17.1 - 18	98.72	48.283	50.437	0	0.589

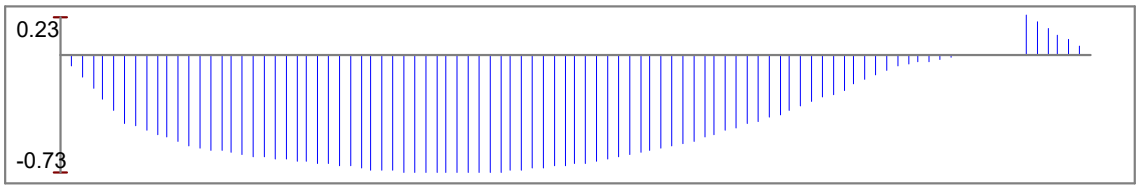
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



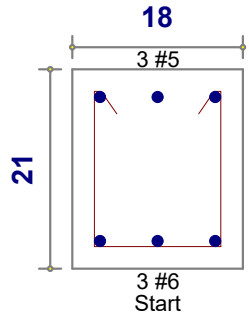
Tie Start Distance 2 in

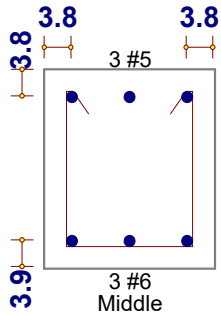
Span 1

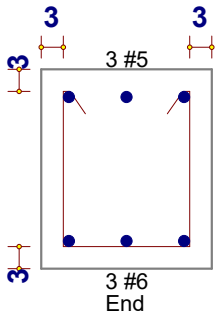
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



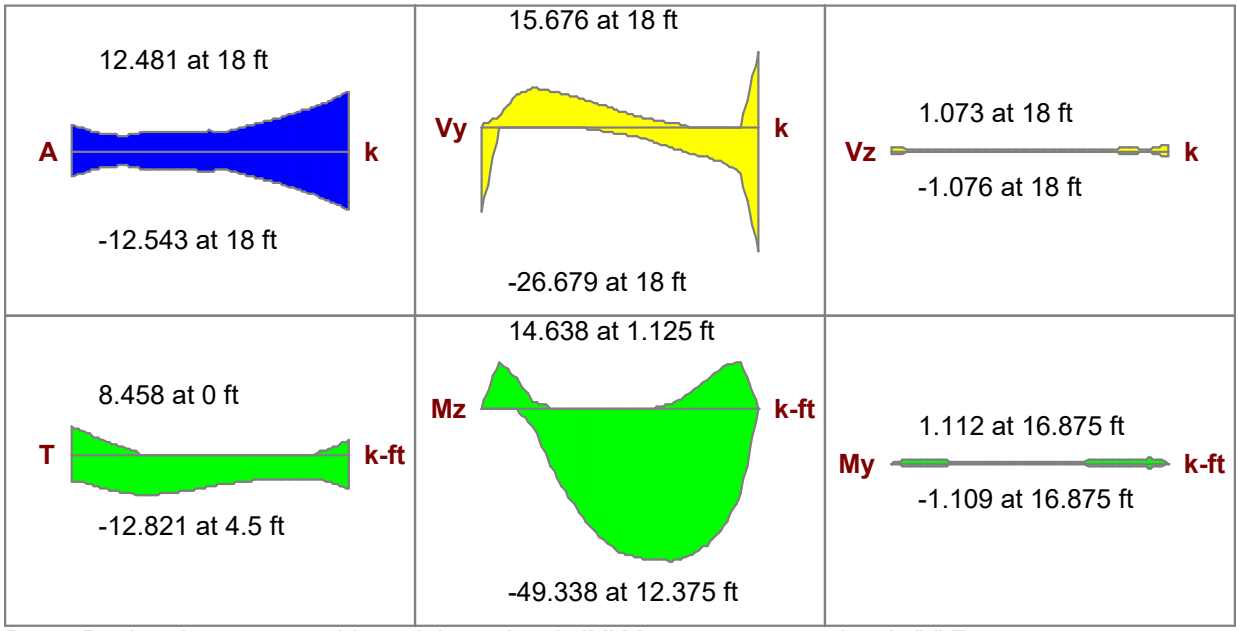




Span 1

Beam: **TIE-BEAM-1B**
Shape: **CRECT21X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_D3**
End: **R3D_D4**

Code Check: **0.712 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.213 (LC 11)**	Bot Bending Check	**0.712 (LC 11)**	Shear Check	**0.367 (y) (LC 11)**
Location	**0.75 ft**	Location	**11.813 ft**	Location	**17.063 ft**
Gov Mu Top	**14.891 k-ft**	Gov Mu Bot	**-49.787 k-ft**	Gov Vu	**26.679 k**
phi*Mn Top	**69.941 k-ft**	phi*Mn Bot	**69.941 k-ft**	phi*Vn	**72.629 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**0**	**0**	**N22**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #5
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	0.8	T	77.712	0.0039	0.0264	0.003	0.92	0.195
	11.8	B	77.712	0.0039	0.0264	0.003	0.92	0.659
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

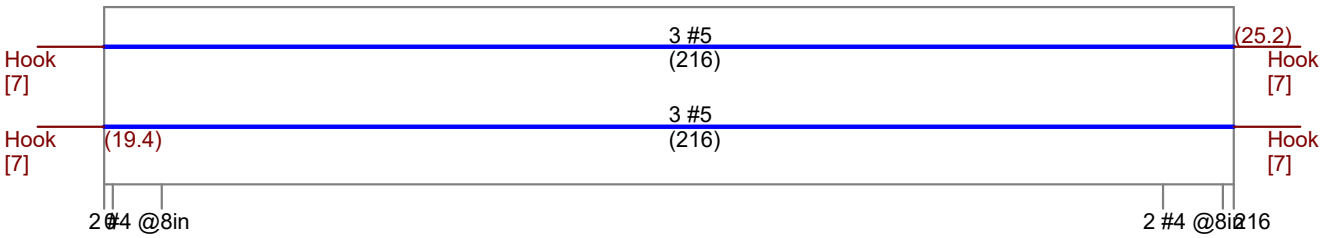
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 0.9	2 #4 @8in
	-	
	-	
	16.9 - 18	2 #4 @8in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 0.9	96.839	46.217	50.621	0	0.589
	-	0	0	0	0	0
	-	0	0	0	0	0
	16.9 - 18	96.839	46.217	50.621	0	0.589

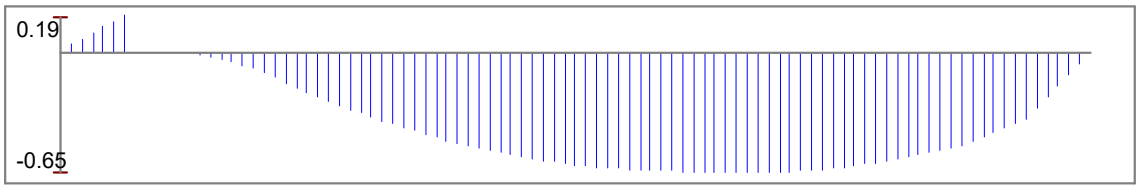
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



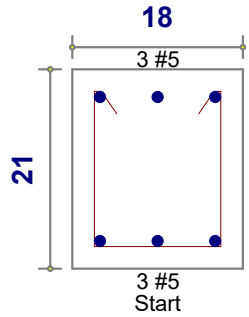
Tie Start Distance 2 in

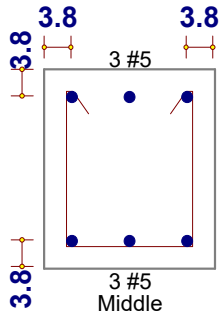
Span 1

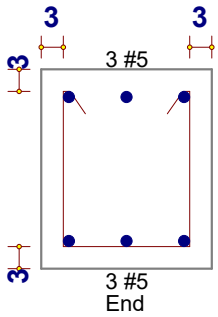
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)





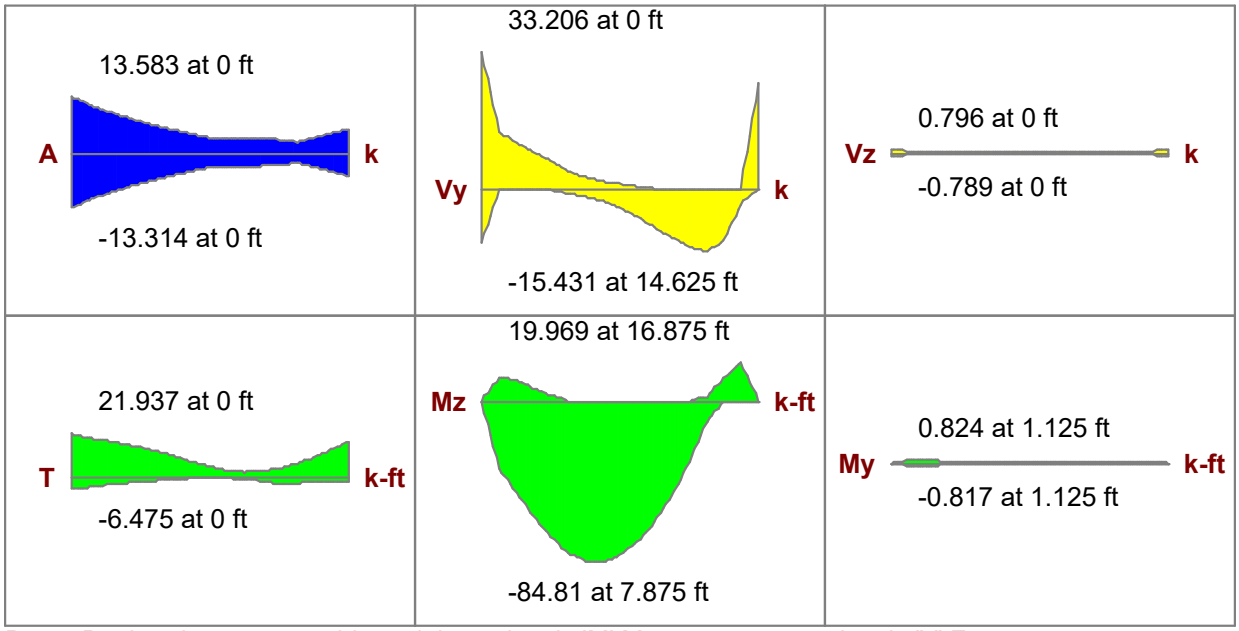


Span 1

Beam: **TIE-BEAM-1C**

Shape: **CRECT21X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_A1**
End: **R3D_A2**

Code Check: **0.860 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.304 (LC 4)**	Bot Bending Check	**0.860 (LC 2)**	Shear Check	**0.447 (y) (LC 9)**
Location	**17.25 ft**	Location	**7.313 ft**	Location	**0 ft**
Gov Mu Top	**21.293 k-ft**	Gov Mu Bot	**-85.615 k-ft**	Gov Vu	**33.206 k**
phi*Mn Top	**69.941 k-ft**	phi*Mn Bot	**99.552 k-ft**	phi*Vn	**74.216 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A2**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	17.3	T	77.712	0.0039	0.0264	0.003	0.92	0.28
	7.3	B	110.614	0.0039	0.0264	0.0043	1.325	1.144
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

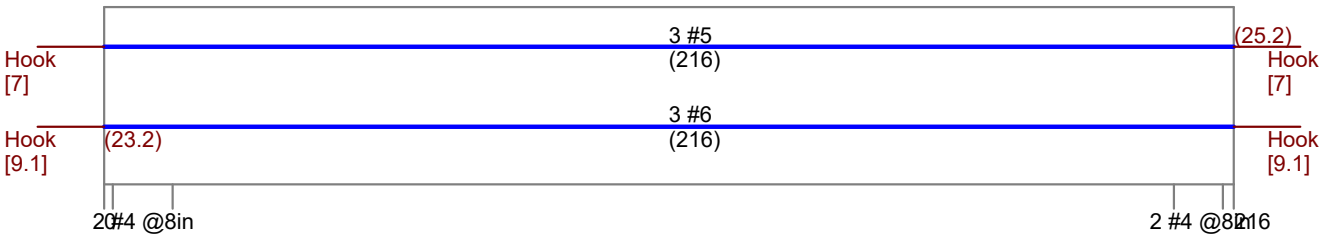
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 1.1	2 #4 @8in
	-	
	-	
	17.1 - 18	2 #4 @8in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 1.1	98.954	48.517	50.437	0	0.589
	-	0	0	0	0	0
	-	0	0	0	0	0
	17.1 - 18	98.954	48.517	50.437	0	0.589

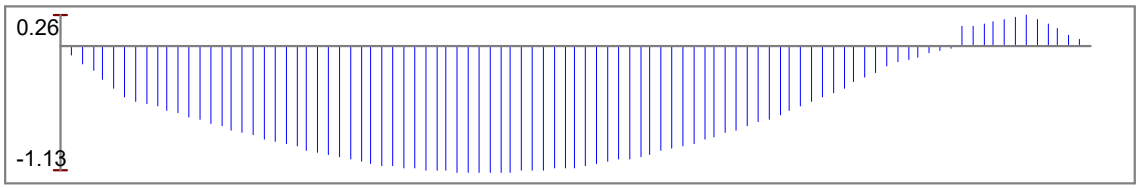
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



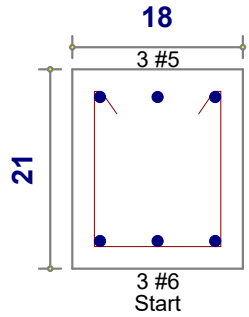
Tie Start Distance 2 in

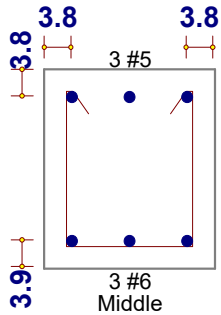
Span 1

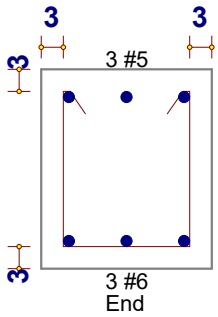
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



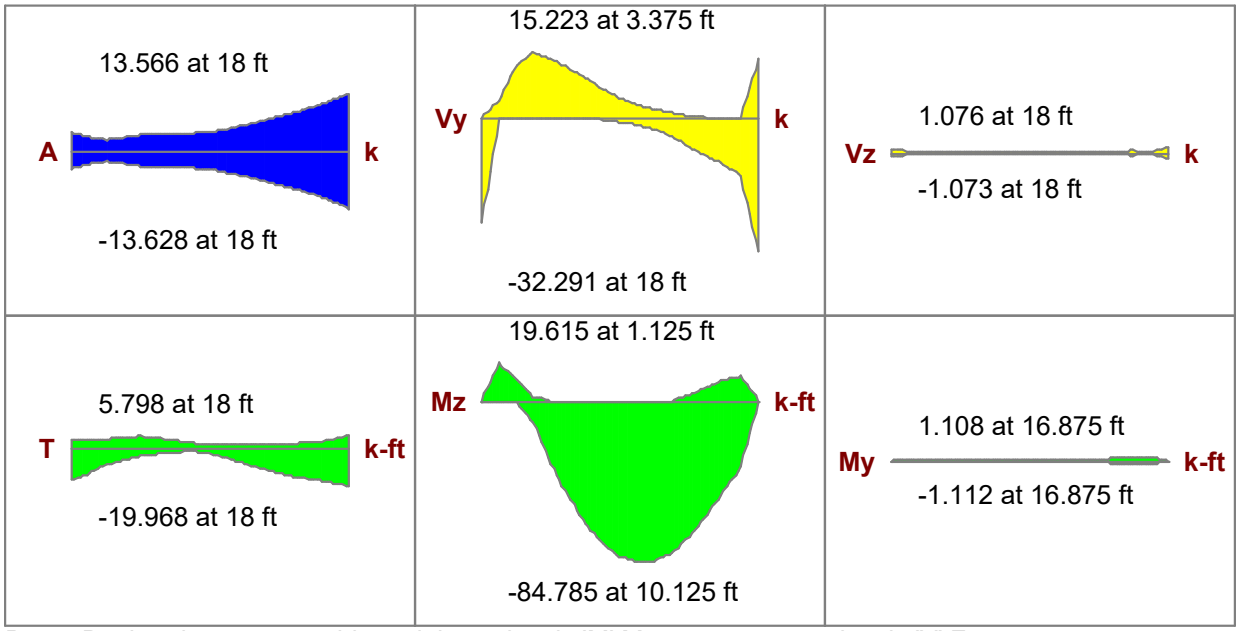




Span 1

Beam: **TIE-BEAM-1D**
Shape: **CRECT21X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_A3**
End: **R3D_A4**

Code Check: **0.858 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.299 (LC 4)**	Bot Bending Check	**0.858 (LC 2)**	Shear Check	**0.447 (y) (LC 11)**
Location	**0.75 ft**	Location	**10.688 ft**	Location	**17.063 ft**
Gov Mu Top	**20.919 k-ft**	Gov Mu Bot	**-85.464 k-ft**	Gov Vu	**32.291 k**
phi*Mn Top	**69.941 k-ft**	phi*Mn Bot	**99.552 k-ft**	phi*Vn	**72.254 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_A3**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	0.8	T	77.712	0.0039	0.0264	0.003	0.92	0.275
	10.7	B	110.614	0.0039	0.0264	0.0043	1.325	1.142
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

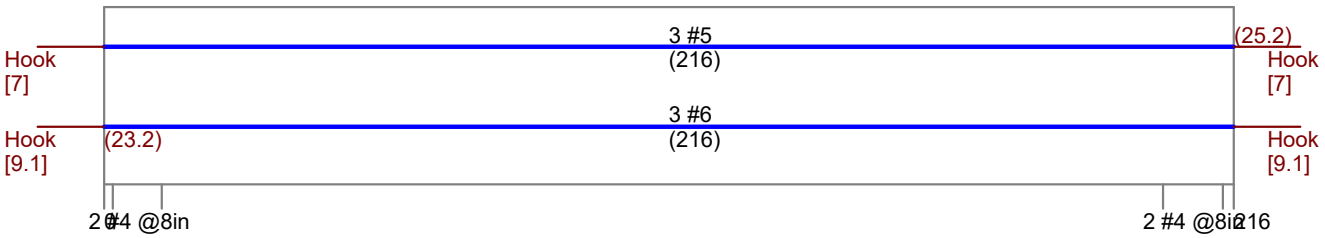
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 0.9	2 #4 @8in
	-	
	-	
	16.9 - 18	2 #4 @8in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 0.9	96.339	45.902	50.437	0	0.589
	-	0	0	0	0	0
	-	0	0	0	0	0
	16.9 - 18	96.339	45.902	50.437	0	0.589

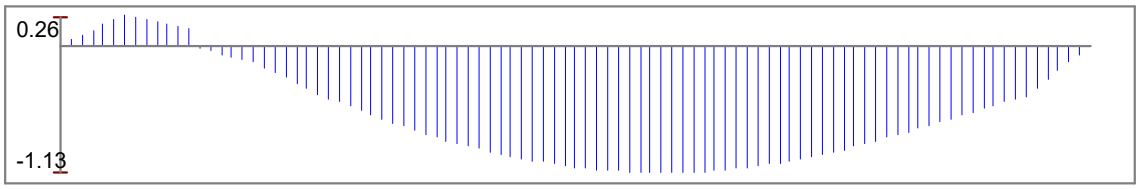
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



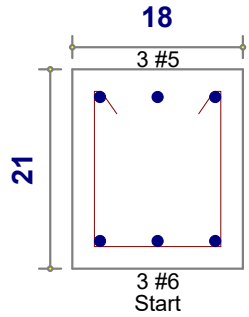
Tie Start Distance 2 in

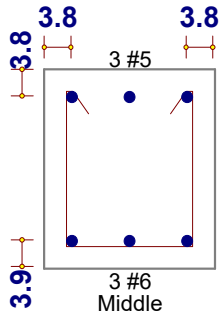
Span 1

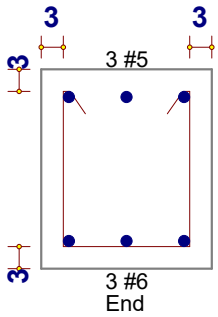
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)







Span 1

Client	PDX Fuel Facility	Date	12/18/2023	Page	1
Project	153929	Made By	AJK	Checked	KAM
Notes	Tie-Beam-2	Prelim		Final	X

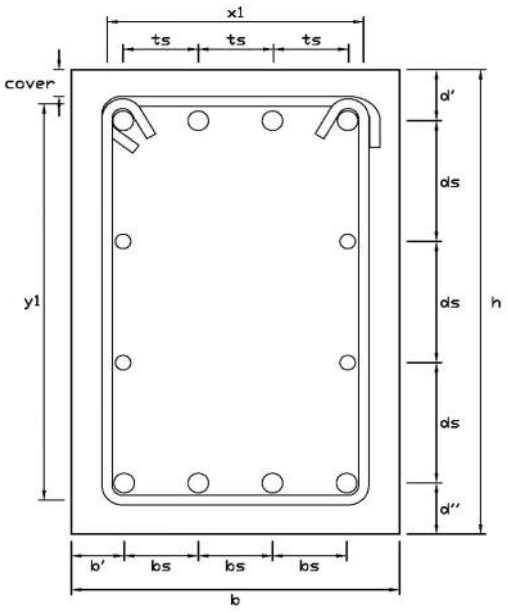
CONCRETE BEAM DESIGN FOR FLEXURE, SHEAR, AND TORSION

Beam Properties (Given)

h (in)	22
b (in)	18
cover (in)	3

Loads:

	LRFD	LC Fact, ϕ
V_u (k)	23	0.75
M_T (k-ft)	20	0.9
M_B (k-ft)	38	0.9
T_u (k-ft)	7	0.75



Bar Selection

Location	#of Bars	Size	Bar Dia.	A_{bar} (in²)	A_s (in²)
Top	3	5	0.625	0.31	0.93
Bottom	3	5	0.625	0.31	0.93
Side	0	5	0.625	0.31	0.00
	Bar Size	s (in)	Bar Dia.	A_b (in2)	A_s (in²/ft)
Shear	4	8.0	0.500	0.20	0.60

Concrete Properties

f'c (ksi)	6.0
β_1	0.75
w_c (kcf)	0.150
E_c (ksi)	4696

Steel Properties

f_y (ksi)	60
E_s (ksi)	29000
n	6.2

Flexure Analysis

Top Reinforcement

a_{top} (in)	0.61
c_{top}(in)	0.81
$A_{s,min,T}$ (in²)	0.33
$A_{s,T}$ (in²)	0.93
Check $A_{s,T}$	**OK**
$M_{n,T}$ (k-ft)	82.3
$\phi M_{n,T}$ (k-ft)	74.1
M_T (k-ft)	20
Check $\phi M_{n,T}$	**OK**
$A_{s,req,T}$ (in²)	0.25
$A_{s,xtra,T}$ (in²)	0.68

Bottom Reinforcement

a_{bot} (in)	0.61
c_{bot} (in)	0.81
$A_{s,min,B}$ (in²)	0.63
$A_{s,B}$ (in²)	0.93
Check $A_{s,B}$	**OK**
$M_{n,B}$ (k-ft)	82.3
$\phi M_{n,B}$ (k-ft)	74.1
M_T (k-ft)	38
Check $\phi M_{n,T}$	**OK**
$A_{s,req,B}$ (in²)	0.47
$A_{s,xtra,B}$ (in²)	0.46

Shear Analysis

Spacing Requirements

V_c (k)	50.2
$2V_c$ (k)	100.4
$4V_c$ (k)	200.8
$V_{s,req}$ (k)	0.0
s_{max} (in)	9.0
s (in)	8.0
Check s	**OK**

Reinforcement

$A_{v,min}$ (in²)	0.14
A_v (in²)	0.4
Check A_v	**OK**
$(A_v/s)_T$ (in)	0.050

Shear Strength

V_s (k)	54.0
V_n (k)	104.2
ϕV_n (k)	78.1
V_u (k)	23
Check ϕV_n	OK
$V_u/\phi V_n$	0.29
$(A_v/s)_V$ (in)	0.015

Torsion Analysis

Treshold torsion

T_{cr} (k-ft)	50.6
$1/4T_{cr}$ (k-ft)	12.7

Neglect Torsion

Torsional Strength

11-18L (psi)	110.0
11-18R (psi)	580.9

Section Sufficient Size

Transverse Steel

A_t (in²)	0.141
A_{t_min} (in²)	0.011
Check A_{t_min}	**OK**
T_n (k-ft)	320.8
ϕT_n (k-ft)	240.6
Check ϕT_n	**OK**

Longitudinal Steel

A_L (in²)	0.95	
$A_{L,min}$ (in²)	1.60	
$A_{L,ADD}$ (in²)	0.40	$A_{s,pv}$ (in²)
Check $A_{s,T}$	**OK**	0.68
Check $A_{s,B}$	**OK**	0.46
Check $A_{s,Side}$	**OK**	0.00

Longitudinal Spacing

max(t_s,b_s)	5.00
Check s	**OK**

s_{req} (in): 8.0

Longitudinal Skin Spacing

d_s (in)	14.00
Check s	**OK**

s_{req} (in): N/A

*Only required for the distance of h/2 on tension face

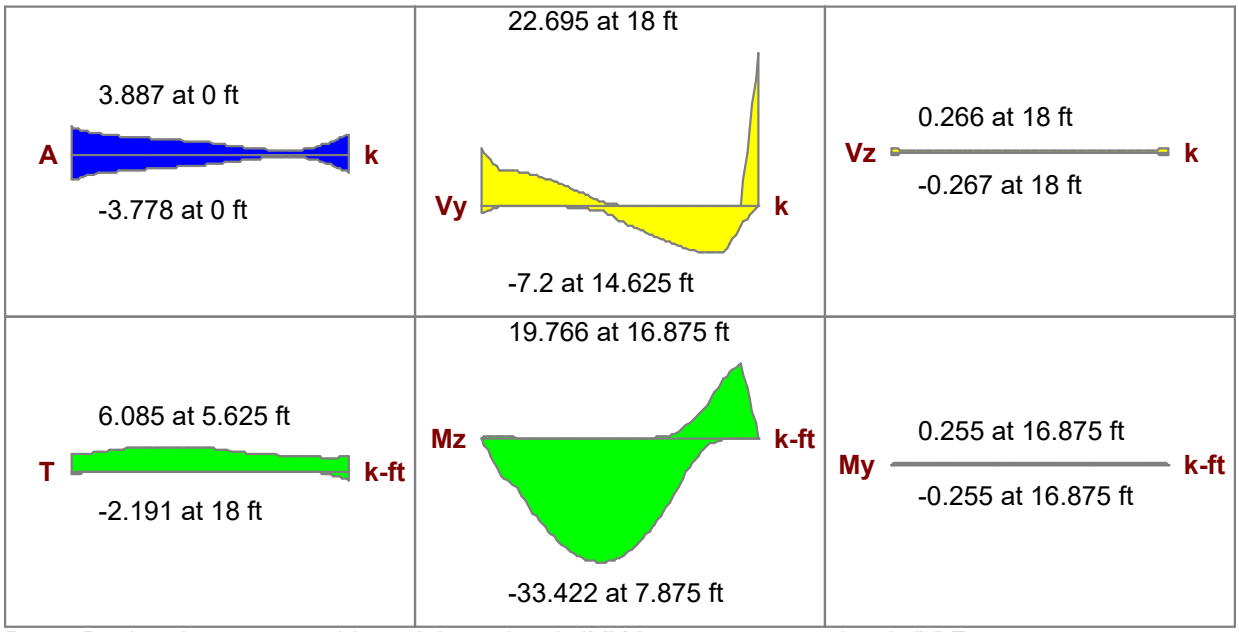
Beam Properties

d' (in)	4.0
d'' (in)	4.0
d_t (in)	18.0
d_b (in)	18.0
b' (in)	4.0
b'' (in)	4.0
d_s (in)	14.00
b_s (in)	5.00
t_s (in)	5.00
y_t (in)	11
x1 (in)	11.5
y1 (in)	15.5
A_{cp} (in²)	396.0
p_{cp} (in)	80.0
A_{oh} (in²)	178.3
A_o (in²)	151.5
p_h (in)	54

Beam: **TIE-BEAM-2A**

Shape: **CRECT13X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_C1**
End: **R3D_C2**

Code Check: **0.908 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.578 (LC 9)**	Bot Bending Check	**0.908 (LC 2)**	Shear Check	**0.425 (y) (LC 9)**
Location	**17.063 ft**	Location	**7.875 ft**	Location	**0 ft**
Gov Mu Top	**21.276 k-ft**	Gov Mu Bot	**-33.422 k-ft**	Gov Vu	**8.28 k**
phi*Mn Top	**36.807 k-ft**	phi*Mn Bot	**36.807 k-ft**	phi*Vn	**19.465 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_C1**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #5
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	17.1	T	40.896	0.0039	0.0264	0.0056	0.92	0.536
	7.9	B	40.896	0.0039	0.0264	0.0056	0.92	0.852
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

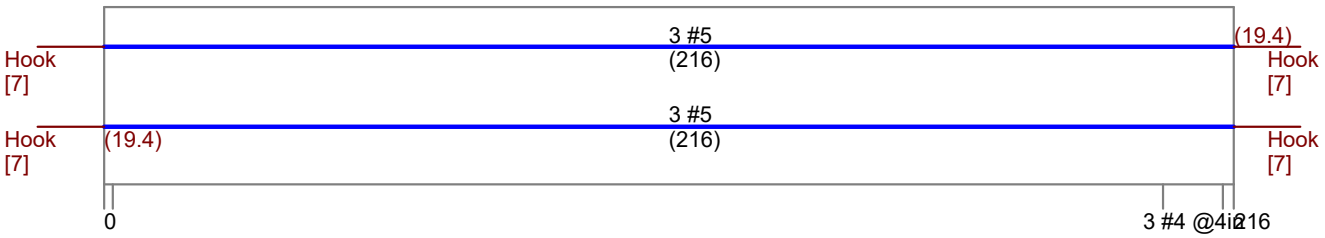
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 16.9	
	-	
	-	
	16.9 - 18	3 #4 @4in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 16.9	25.954	25.954	0	0	0
	-	0	0	0	0	0
	-	0	0	0	0	0
	16.9 - 18	80.073	25.954	54.119	0.094	1.178

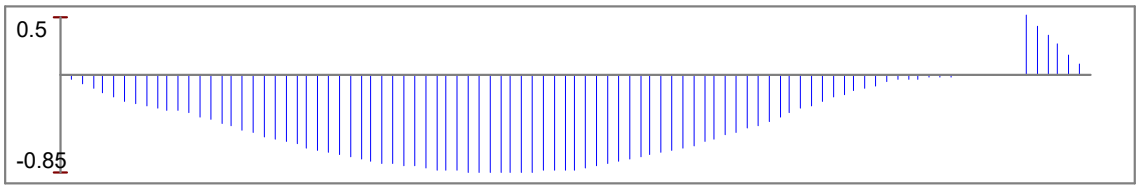
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



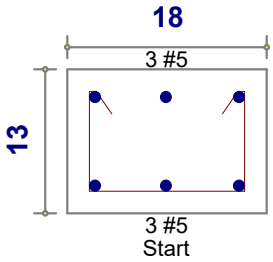
Tie Start Distance 2 in

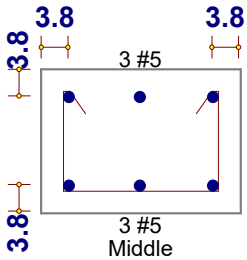
Span 1

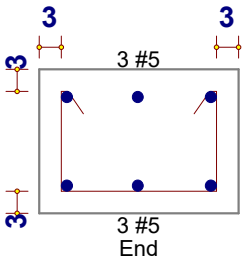
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



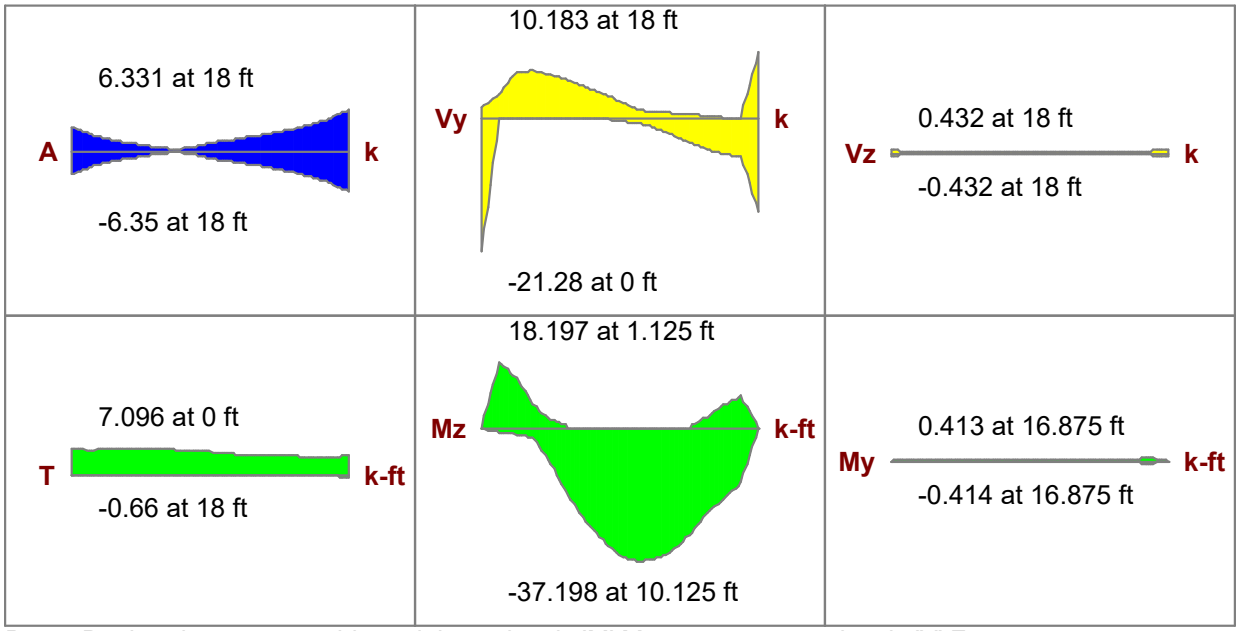




Span 1

Beam: **TIE-BEAM-2B**
Shape: **CRECT13X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_C3**
End: **R3D_C4**

Code Check: **0.718 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.542 (LC 11)**	Bot Bending Check	**0.718 (LC 2)**	Shear Check	**0.379 (y) (LC 4)**
Location	**0.938 ft**	Location	**10.125 ft**	Location	**3.938 ft**
Gov Mu Top	**19.95 k-ft**	Gov Mu Bot	**-37.198 k-ft**	Gov Vu	**7.28 k**
phi*Mn Top	**36.807 k-ft**	phi*Mn Bot	**51.839 k-ft**	phi*Vn	**19.189 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_C3**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	0.9	T	40.896	0.0039	0.0264	0.0056	0.92	0.502
	10.1	B	57.599	0.0039	0.0264	0.0081	1.325	0.951
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

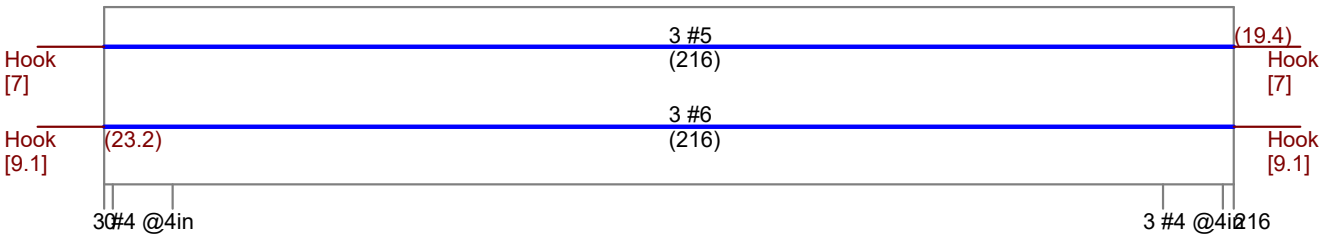
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 1.1	3 #4 @4in
	-	
	-	
	16.9 - 18	3 #4 @4in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 1.1	78.453	24.703	53.751	0.08	1.178
	-	0	0	0	0	0
	-	0	0	0	0	0
	16.9 - 18	78.453	24.703	53.751	0	1.178

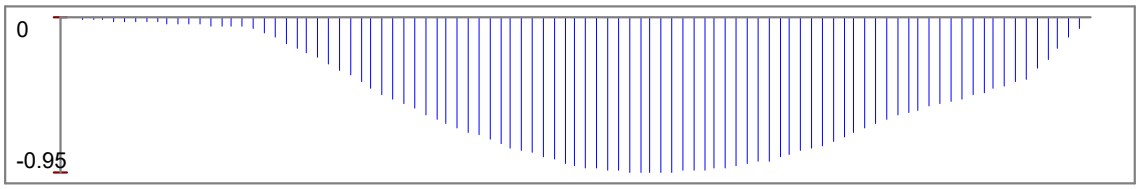
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



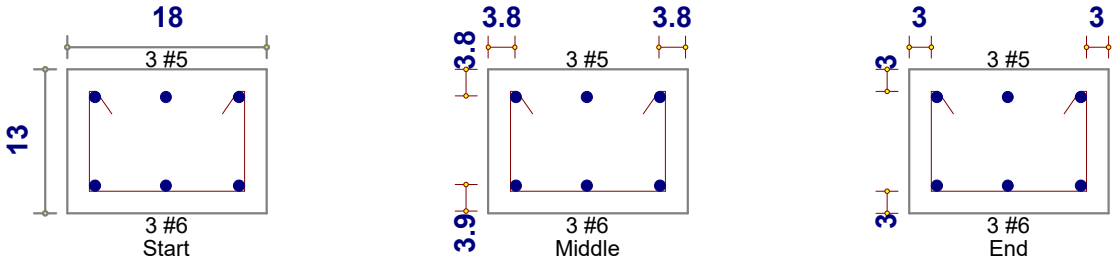
Tie Start Distance 2 in

Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)

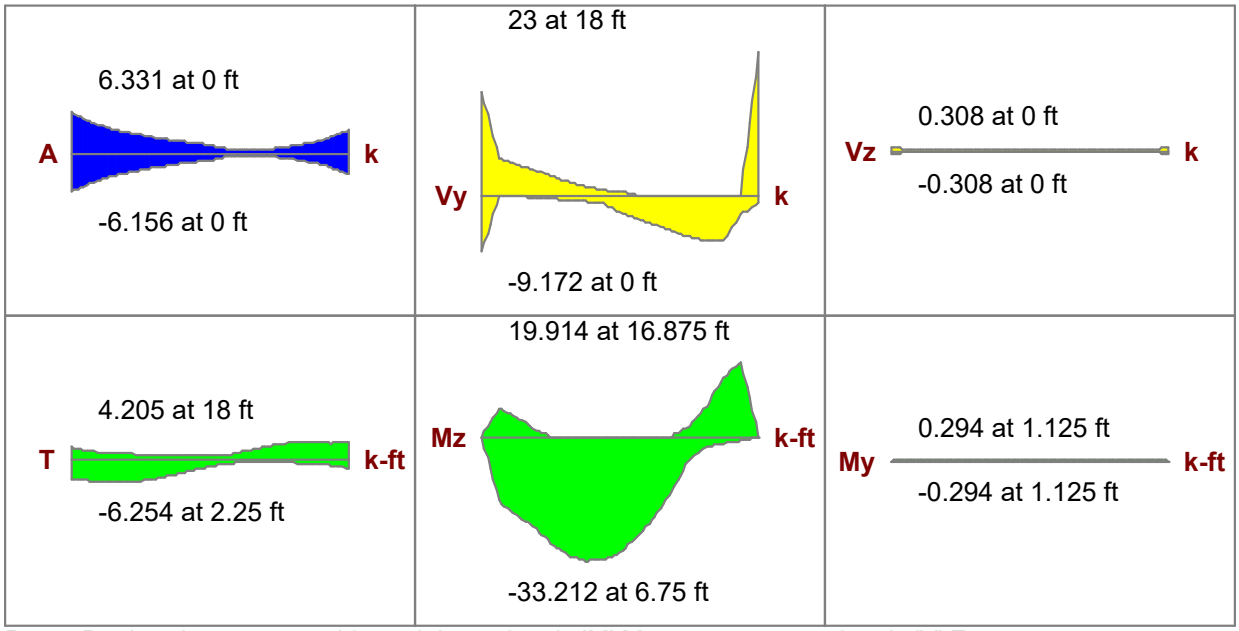


Span 1

Beam: **TIE-BEAM-2C**

Shape: **CRECT13X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_B1**
End: **R3D_B2**

Code Check: **0.906 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.586 (LC 9)**	Bot Bending Check	**0.906 (LC 2)**	Shear Check	**0.383 (y) (LC 9)**
Location	**17.063 ft**	Location	**6.938 ft**	Location	**17.063 ft**
Gov Mu Top	**21.562 k-ft**	Gov Mu Bot	**-33.345 k-ft**	Gov Vu	**23 k**
phi*Mn Top	**36.807 k-ft**	phi*Mn Bot	**36.807 k-ft**	phi*Vn	**60.119 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_B1**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #5
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	17.1	T	40.896	0.0039	0.0264	0.0056	0.92	0.543
	6.9	B	40.896	0.0039	0.0264	0.0056	0.92	0.85
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

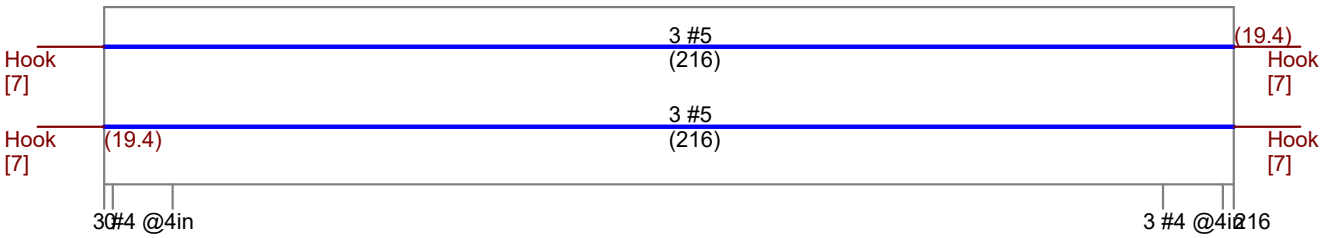
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 1.1	3 #4 @4in
	-	
	-	
	16.9 - 18	3 #4 @4in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 1.1	80.159	26.04	54.119	0	1.178
	-	0	0	0	0	0
	-	0	0	0	0	0
	16.9 - 18	80.159	26.04	54.119	0.101	1.178

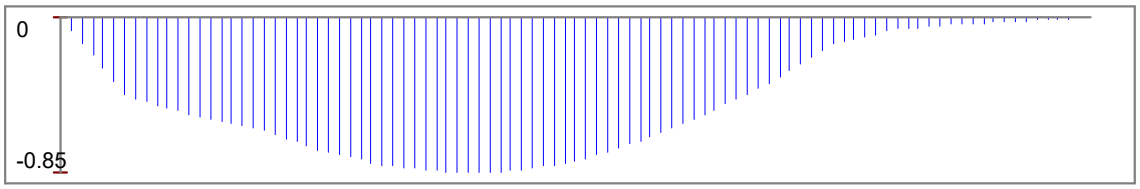
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



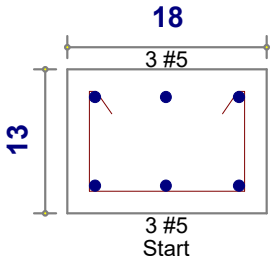
Tie Start Distance 2 in

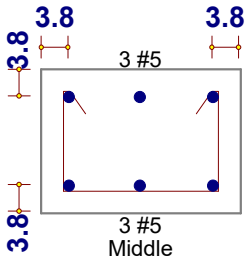
Span 1

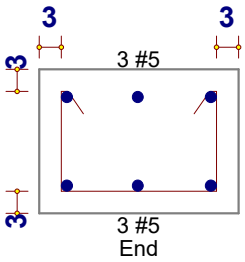
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



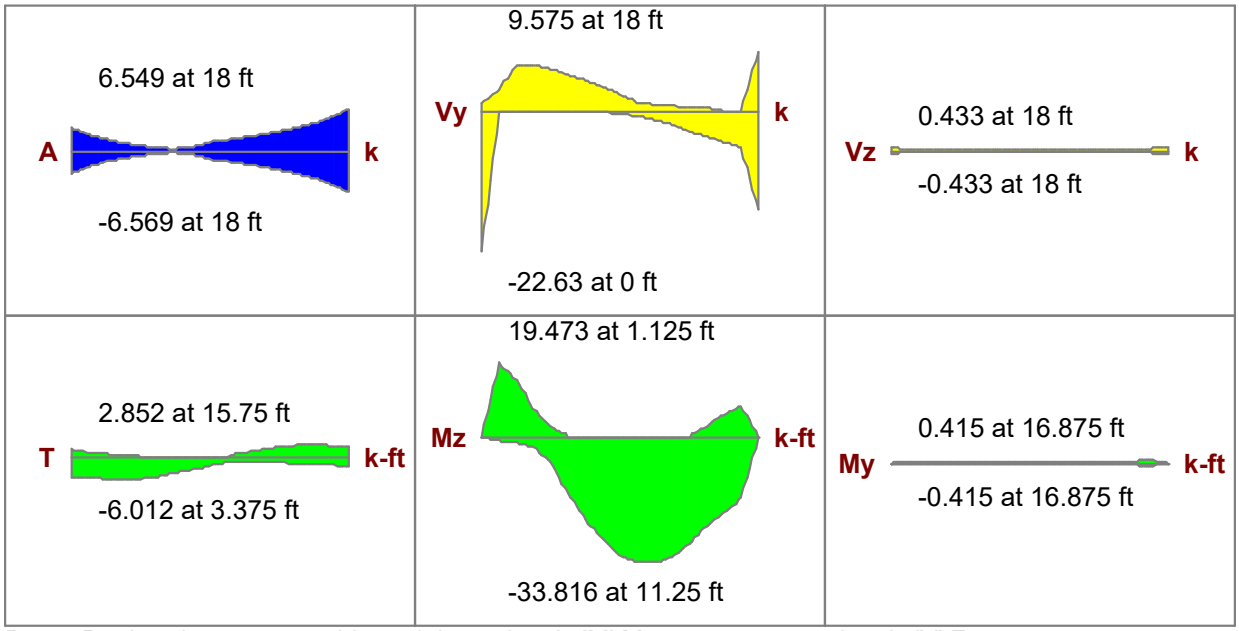




Span 1

Beam: **TIE-BEAM-2D**
Shape: **CRECT13X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **18 ft**
Start: **R3D_B3**
End: **R3D_B4**

Code Check: **0.923 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.576 (LC 11)**	Bot Bending Check	**0.923 (LC 2)**	Shear Check	**0.382 (y) (LC 11)**
Location	**0.938 ft**	Location	**11.063 ft**	Location	**0 ft**
Gov Mu Top	**21.216 k-ft**	Gov Mu Bot	**-33.964 k-ft**	Gov Vu	**22.63 k**
phi*Mn Top	**36.807 k-ft**	phi*Mn Bot	**36.807 k-ft**	phi*Vn	**59.224 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 18**	**0**	**0**

Soil Bearing

Span	Pressure (psf)	Allowable (psf)	Point	UC
1	**-0.99**	**-0.99**	**R3D_B3**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	3 #5
	Mid	B	3 #5
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	0.9	T	40.896	0.0039	0.0264	0.0056	0.92	0.534
	11.1	B	40.896	0.0039	0.0264	0.0056	0.92	0.866
	18	T	0	0	0	0	0	0
	18	B	0	0	0	0	0	0

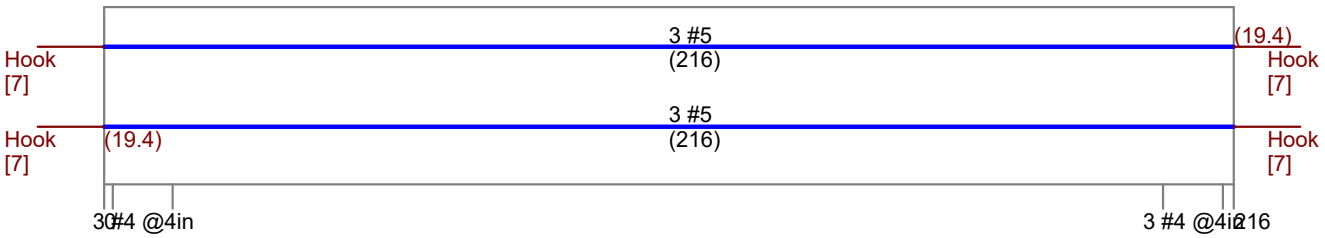
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 1.1	3 #4 @4in
	-	
	-	
	16.9 - 18	3 #4 @4in

Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 1.1	78.965	24.846	54.119	0.116	1.178
	-	0	0	0	0	0
	-	0	0	0	0	0
	16.9 - 18	78.965	24.846	54.119	0	1.178

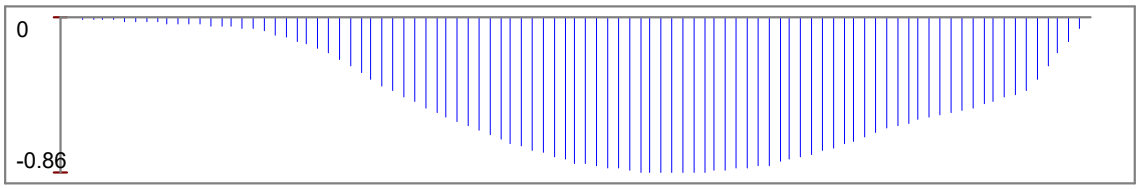
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



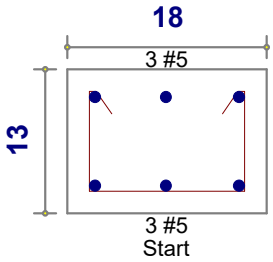
Tie Start Distance 2 in

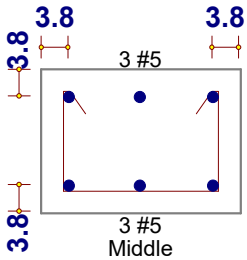
Span 1

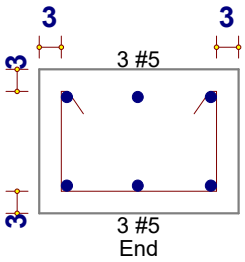
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)







Span 1

Company	Burns & McDonnell	Project No:	153929	Revision:	0
Project :	PDX Fuel	Eng. By:	AJK	Date:	12/19/23
Subject:	Canopy Anchorage Hairpins	Check By:	KAM	Chk Date:	

1.0 INTRODUCTION

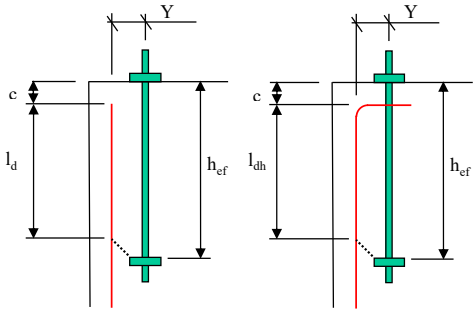
- This calculation is to check for development length on the rebar resisting tension from an anchor. Note that this version is different from the previously developed anchorage tension rebar check spreadsheets in more than just references to the ACI codes. The ACI 318-19 code has changed the formula for development lengths of standard hooks in tension due to recent research. See ACI 318-19 Commentary R25.4.3.
- For Seismic Design Categories C, D, E, or F, refer to ACI 318-19 Appendix D Section 17.10 for special ductility requirements. Also refer to ASCE Anchorage Design for Petrochemical Facilities, Section 3.11, the flow charts Figures 3.24T and 3.24S are particulary helpful for designing for Seismic Loading.
- Note that reduction in development length due to rebar provided being greater than that required is not permitted for structures in Seismic Design Category C, D, E, or F
- The distance between the anchor and the rebar, Y, is the farthest rebar that is to be considered effective in transferring the tension. In plan, it is the diagonal distance. (There could be cases where it is optimal to neglect the furthest rebar, solely relying on closer rebar).
- Appropriate input is required for each of the boxes below including all development length factors; no default value is permanently provided. See notes at each box.

2.0 CODES AND STANDARDS

ACI 318-19

3.0 ANCHORAGE TENSION REINFORCEMENT CHECK

Concrete f'_c =	6000	psi
Reinforcing Grade , f_y =	60000	psi
Anchor Diameter, d_a	1.50	in
Anchor Embedment Depth, h_{ef} =	18.00	in
Factored tension in the anchor, N_{ua}	45.0	Kips
Tension Rebar Size =	#5	
Number of rebars per bolt resisting tension, N =	4.0	



ϕ = 0.75

Area of rebar required, $A_{required} = N_{ua}/(\phi * F_y)$ = 45 / (0.75 * 60) = 1.000 Sq in (ACI 318-19, 17.5.2.1)

Area of steel provided, $A_{provided}$ = 4 * 0.31 = 1.240 Sq in > 1 Sq in, OK

Rebar Dia, d_b = 0.625 in

Use hooked bars at top of pedestal? Yes **90 Degree Hook (measured from inside of bar) = 9 in**

Hook Dev Length, ldh = Maximum of (a) (fy ψe ψr ψo ψc)/(55λ[f'c]^0.5)db^1.5; (b) 8db ; (c) 6 in. = 6.05 in. (ACI 314-19, 25.4.3.1)

λ =	1.00	(ACI 318-19, Table 25.4.2.5)
c_b =	2.00	(ACI 318-19 Section 2.2 Notation)
ψ_t =	1.00	(ACI 318 -19, Table 25.4.2.5)
ψ_e =	1.00	(ACI 318 -19, Table 25.4.2.5)
ψ_r =	1.00	(ACI 318 -19, Table 25.4.3.2)
ψ_o =	1.00	(ACI 318 -19, Table 25.4.3.2)
ψ_c =	0.87	(ACI 318 -19, Table 25.4.3.2)
K_{tr} =	0.00	(ACI 318 -19, 25.4.2.4b)
ψ_s =	0.80	(ACI 318 -19, Table 25.4.2.5)
ψ_g =	1.00	(ACI 318 -19, Table 25.4.2.5)

$\alpha = A_{required}/A_{provided}$ = 0.81

Consider reduction in development length? No **(See ACI 318-19, Section 25.4.10 for restrictions)**

Reduced Hook Development length ldh = No reduction made 6.05 in.

Distance of Rebar to Anchors, Y = 4.00 in **O.K., Y < hef/2**

Rebar clear cover @ top, c = 2.00 in

l_d or l_{dh} available = h_{ef} - c -(Y/1.5) = 13.33 in > 6.05 in **OK**

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	100
Mesh Size (in)	12
Max Iterations	10
Merge Tolerance (in)	0.12
Solver	Sparse Accelerated
Coefficient of Friction	0.4
No. of Shear Regions	4
Shear Region Spacing Increment (in)	4
Min 1 Bar Dia Spacing for Beams?	No
Optimize footings for OTM / Sliding?	Yes
Parme Beta Factor	0.65
Pile Safety Factor	3
Min % Steel for Pedestal	Auto
Concrete Stress Block	Rectangular
Concrete Rebar Set	ASTM A615
Include WWR	No
Concrete Code	ACI 318-19
HR Steel Pile Code	AISC 14th (360-10): ASD
Wood Pile Code	AWC NDS-15 / SDPWS-15 ASD
Mat Slab Design Option	Construction (Design per Integer No. of Bars)

Project Grid Lines

	Label	Start Z [ft]	End Z [ft]	Start X [ft]	End X [ft]	Start Bubble	End Bubble
1	1	0	0	-5	80	Yes	Yes
2	2	18	18	-5	80	Yes	Yes
3	3	44	44	-5	80	Yes	Yes
4	4	62	62	-5	80	Yes	Yes
5	A	-10	75	0	0	Yes	Yes
6	B	-10	75	24	24	Yes	Yes
7	C	-10	75	48	48	Yes	Yes
8	D	-10	75	72	72	Yes	Yes

Project Grid Arcs

Label	Center Z [ft]	Center X [ft]	Radius [ft]	Start Angle [d...	Sweep Angle ...	Start Bubble	End Bubble
No Data to Print ...							

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density...	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc3000NW	3156	1372	0.15	0.6	0.145	3	1	60	60
2	Conc3500NW	3409	1482	0.15	0.6	0.145	3.5	1	60	60
3	Conc4000NW	3644	1584	0.15	0.6	0.145	4	1	60	60
4	Conc3000LW	2085	907	0.15	0.6	0.11	3	0.75	60	60
5	Conc3500LW	2252	979	0.15	0.6	0.11	3.5	0.75	60	60
6	Conc4000LW	2408	1047	0.15	0.6	0.11	4	0.75	60	60
7	Conc5000NW	4074	1771.304	0.15	0.6	0.145	5	1	60	60
8	RIGID	1e+6	1584	0.3	0	0	0	1	60	60
9	Conc 6000NW	4463.15	1940.5	0.15	0.6	0.145	6	1	60	60

General Properties

	Label	Min Steel ...	Max Steel...	Material	Design Ru..	Equal Bar Spacing	Group Design	Concrete Bearing	Force Top Bar
1	TYPE1	0.002	0.007	Conc4000..	PILE CAP	Yes		Yes	
2	TYPE2	0.002	0.007	Conc4000..	PILE CAP	Yes		Yes	

Footing Geometry

	Label	Max Length[..	Min Length[ft]	Max Width[ft]	Min Width[ft]	L/W Increm...	Max Thickn...	Min Thickne...	Thick Incre...	Force Sq...
1	TYPE1	6.75	3	7	3	0.5	30	15	1	Yes
2	TYPE2	12	3	7	3	0.5	30	15	1	

Pedestal Properties

	Label	Type	Shape	Height[in]	e/BL	ex[in]	ez[in]	BLx[ft]	BLz[ft]
1	TYPE1	Pedestal	CRECT30X30	18	Use ex,ez	0	0	0	0
2	TYPE2	Pedestal	CRECT30X30	18	Use ex,ez	21	0	0	0

Soil Properties

	Label	Overburden[psf]	Passive[k]	Friction Coefficient	Gross/Net
1	TYPE1	0.06	0	0.35	Gross
2	TYPE2	0.06	0	0.35	Gross

Soil Definitions

	Label	Subgrade Modulus[k/ft^3]	Allowable Bearing[psf]	Depth Properties	Default?
1	No Support	0	0	None	Yes

All Support Types

	Point Label	Support[k/in]	Footings/Piles/Pile Caps	Support Angle(deg)
1	P5	18"	18"	N/A
2	P10	18"	18"	N/A
3	R3D_A3	18"	18"	N/A
4	R3D_A2	18"	18"	N/A
5	R3D_A1	18"	18"	N/A
6	R3D_A4	18"	18"	N/A
7	R3D_B3	18"	18"	N/A
8	R3D_B1	18"	18"	N/A
9	R3D_C1	18"	18"	N/A
10	R3D_C3	18"	18"	N/A
11	R3D_D3	18"	18"	N/A
12	R3D_D1	18"	18"	N/A
13	R3D_B2	18"	18"	N/A
14	R3D_C2	18"	18"	N/A
15	R3D_D2	18"	18"	N/A
16	R3D_B4	18"	18"	N/A
17	R3D_C4	18"	18"	N/A
18	R3D_D4	18"	18"	N/A
19	N79	18"	18"	N/A
20	N80	18"	18"	N/A

Point Loads and Moments (Cat 1 : DL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_A3	X	-0.007
2	R3D_A3	Y	5.401
3	R3D_A3	Z	0.05
4	R3D_A3	MX	0.104
5	R3D_A3	MY	-0.01
6	R3D_A3	MZ	0.191
7	R3D_A2	X	-0.007

Point Loads and Moments (Cat 1 : DL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
8	R3D_A2	Y	4.802
9	R3D_A2	Z	-0.218
10	R3D_A2	MX	-1.944
11	R3D_A2	MY	-0.000779
12	R3D_A2	MZ	0.177
13	R3D_A1	X	-0.008
14	R3D_A1	Y	4.866
15	R3D_A1	Z	0.153
16	R3D_A1	MX	0.89
17	R3D_A1	MY	-0.013
18	R3D_A1	MZ	0.201
19	R3D_B3	X	0.002
20	R3D_B3	Y	6.184
21	R3D_B3	Z	0.058
22	R3D_B3	MX	0.103
23	R3D_B3	MY	0.000566
24	R3D_B3	MZ	-0.064
25	R3D_B1	X	0.003
26	R3D_B1	Y	5.537
27	R3D_B1	Z	0.182
28	R3D_B1	MX	1.048
29	R3D_B1	MY	-0.001
30	R3D_B1	MZ	-0.067
31	R3D_C1	X	-0.003
32	R3D_C1	Y	5.537
33	R3D_C1	Z	0.182
34	R3D_C1	MX	1.048
35	R3D_C1	MY	0.001
36	R3D_C1	MZ	0.067
37	R3D_C3	X	-0.002
38	R3D_C3	Y	6.184
39	R3D_C3	Z	0.058
40	R3D_C3	MX	0.103
41	R3D_C3	MY	-0.000564
42	R3D_C3	MZ	0.064
43	R3D_D3	X	0.007
44	R3D_D3	Y	5.4
45	R3D_D3	Z	0.05
46	R3D_D3	MX	0.104
47	R3D_D3	MY	0.01
48	R3D_D3	MZ	-0.191
49	R3D_D1	X	0.008
50	R3D_D1	Y	4.865
51	R3D_D1	Z	0.153
52	R3D_D1	MX	0.89
53	R3D_D1	MY	0.013
54	R3D_D1	MZ	-0.201
55	R3D_B2	X	0.002
56	R3D_B2	Y	5.49
57	R3D_B2	Z	-0.26
58	R3D_B2	MX	-2.324
59	R3D_B2	MY	0.000206
60	R3D_B2	MZ	-0.059
61	R3D_C2	X	-0.002
62	R3D_C2	Y	5.49
63	R3D_C2	Z	-0.26
64	R3D_C2	MX	-2.324

Point Loads and Moments (Cat 1 : DL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
65	R3D_C2	MY	-0.000207
66	R3D_C2	MZ	0.059
67	R3D_D2	X	0.007
68	R3D_D2	Y	4.803
69	R3D_D2	Z	-0.218
70	R3D_D2	MX	-1.944
71	R3D_D2	MY	0.000776
72	R3D_D2	MZ	-0.177
73	R3D_A4	X	-0.005
74	R3D_A4	Y	2.914
75	R3D_A4	Z	0.013
76	R3D_A4	MX	-0.178
77	R3D_A4	MY	0.041
78	R3D_A4	MZ	0.127
79	R3D_B4	X	0.002
80	R3D_B4	Y	3.265
81	R3D_B4	Z	0.021
82	R3D_B4	MX	-0.181
83	R3D_B4	MY	-0.017
84	R3D_B4	MZ	-0.043
85	R3D_C4	X	-0.002
86	R3D_C4	Y	3.265
87	R3D_C4	Z	0.021
88	R3D_C4	MX	-0.181
89	R3D_C4	MY	0.017
90	R3D_C4	MZ	0.043
91	R3D_D4	X	0.005
92	R3D_D4	Y	2.914
93	R3D_D4	Z	0.013
94	R3D_D4	MX	-0.178
95	R3D_D4	MY	-0.041
96	R3D_D4	MZ	-0.127

Point Loads and Moments (Cat 5 : SL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_A3	X	-0.01
2	R3D_A3	Y	6.257
3	R3D_A3	Z	0.069
4	R3D_A3	MX	0.145
5	R3D_A3	MY	-0.014
6	R3D_A3	MZ	0.265
7	R3D_A2	X	-0.01
8	R3D_A2	Y	5.428
9	R3D_A2	Z	-0.302
10	R3D_A2	MX	-2.696
11	R3D_A2	MY	-0.001
12	R3D_A2	MZ	0.245
13	R3D_A1	X	-0.011
14	R3D_A1	Y	5.515
15	R3D_A1	Z	0.212
16	R3D_A1	MX	1.234
17	R3D_A1	MY	-0.018
18	R3D_A1	MZ	0.279
19	R3D_B3	X	0.003
20	R3D_B3	Y	7.345
21	R3D_B3	Z	0.081

Point Loads and Moments (Cat 5 : SL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
22	R3D_B3	MX	0.142
23	R3D_B3	MY	0.000785
24	R3D_B3	MZ	-0.088
25	R3D_B1	X	0.004
26	R3D_B1	Y	6.447
27	R3D_B1	Z	0.252
28	R3D_B1	MX	1.453
29	R3D_B1	MY	-0.002
30	R3D_B1	MZ	-0.093
31	R3D_C1	X	-0.004
32	R3D_C1	Y	6.447
33	R3D_C1	Z	0.252
34	R3D_C1	MX	1.453
35	R3D_C1	MY	0.002
36	R3D_C1	MZ	0.093
37	R3D_C3	X	-0.003
38	R3D_C3	Y	7.345
39	R3D_C3	Z	0.081
40	R3D_C3	MX	0.142
41	R3D_C3	MY	-0.000782
42	R3D_C3	MZ	0.088
43	R3D_D3	X	0.01
44	R3D_D3	Y	6.257
45	R3D_D3	Z	0.069
46	R3D_D3	MX	0.145
47	R3D_D3	MY	0.014
48	R3D_D3	MZ	-0.265
49	R3D_D1	X	0.011
50	R3D_D1	Y	5.515
51	R3D_D1	Z	0.212
52	R3D_D1	MX	1.234
53	R3D_D1	MY	0.018
54	R3D_D1	MZ	-0.279
55	R3D_B2	X	0.003
56	R3D_B2	Y	6.382
57	R3D_B2	Z	-0.36
58	R3D_B2	MX	-3.224
59	R3D_B2	MY	0.000286
60	R3D_B2	MZ	-0.081
61	R3D_C2	X	-0.003
62	R3D_C2	Y	6.382
63	R3D_C2	Z	-0.36
64	R3D_C2	MX	-3.224
65	R3D_C2	MY	-0.000287
66	R3D_C2	MZ	0.082
67	R3D_D2	X	0.01
68	R3D_D2	Y	5.429
69	R3D_D2	Z	-0.302
70	R3D_D2	MX	-2.697
71	R3D_D2	MY	0.001
72	R3D_D2	MZ	-0.245
73	R3D_A4	X	-0.006
74	R3D_A4	Y	2.809
75	R3D_A4	Z	0.018
76	R3D_A4	MX	-0.246
77	R3D_A4	MY	0.057
78	R3D_A4	MZ	0.176

Point Loads and Moments (Cat 5 : SL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
79	R3D_B4	X	0.002
80	R3D_B4	Y	3.295
81	R3D_B4	Z	0.029
82	R3D_B4	MX	-0.251
83	R3D_B4	MY	-0.024
84	R3D_B4	MZ	-0.06
85	R3D_C4	X	-0.002
86	R3D_C4	Y	3.295
87	R3D_C4	Z	0.029
88	R3D_C4	MX	-0.251
89	R3D_C4	MY	0.024
90	R3D_C4	MZ	0.06
91	R3D_D4	X	0.006
92	R3D_D4	Y	2.809
93	R3D_D4	Z	0.018
94	R3D_D4	MX	-0.246
95	R3D_D4	MY	-0.057
96	R3D_D4	MZ	-0.176

Point Loads and Moments (Cat 6 : RLL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_A3	X	-0.015
2	R3D_A3	Y	9.481
3	R3D_A3	Z	0.105
4	R3D_A3	MX	0.219
5	R3D_A3	MY	-0.021
6	R3D_A3	MZ	0.402
7	R3D_A2	X	-0.015
8	R3D_A2	Y	8.224
9	R3D_A2	Z	-0.458
10	R3D_A2	MX	-4.085
11	R3D_A2	MY	-0.002
12	R3D_A2	MZ	0.371
13	R3D_A1	X	-0.017
14	R3D_A1	Y	8.357
15	R3D_A1	Z	0.322
16	R3D_A1	MX	1.87
17	R3D_A1	MY	-0.027
18	R3D_A1	MZ	0.423
19	R3D_B3	X	0.005
20	R3D_B3	Y	11.128
21	R3D_B3	Z	0.122
22	R3D_B3	MX	0.216
23	R3D_B3	MY	0.001
24	R3D_B3	MZ	-0.134
25	R3D_B1	X	0.006
26	R3D_B1	Y	9.768
27	R3D_B1	Z	0.382
28	R3D_B1	MX	2.202
29	R3D_B1	MY	-0.003
30	R3D_B1	MZ	-0.141
31	R3D_C1	X	-0.006
32	R3D_C1	Y	9.768
33	R3D_C1	Z	0.383
34	R3D_C1	MX	2.202
35	R3D_C1	MY	0.003

Point Loads and Moments (Cat 6 : RLL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
36	R3D_C1	MZ	0.141
37	R3D_C3	X	-0.005
38	R3D_C3	Y	11.128
39	R3D_C3	Z	0.122
40	R3D_C3	MX	0.216
41	R3D_C3	MY	-0.001
42	R3D_C3	MZ	0.134
43	R3D_D3	X	0.015
44	R3D_D3	Y	9.48
45	R3D_D3	Z	0.105
46	R3D_D3	MX	0.22
47	R3D_D3	MY	0.021
48	R3D_D3	MZ	-0.402
49	R3D_D1	X	0.017
50	R3D_D1	Y	8.356
51	R3D_D1	Z	0.322
52	R3D_D1	MX	1.87
53	R3D_D1	MY	0.027
54	R3D_D1	MZ	-0.423
55	R3D_B2	X	0.005
56	R3D_B2	Y	9.67
57	R3D_B2	Z	-0.545
58	R3D_B2	MX	-4.885
59	R3D_B2	MY	0.000433
60	R3D_B2	MZ	-0.123
61	R3D_C2	X	-0.005
62	R3D_C2	Y	9.669
63	R3D_C2	Z	-0.545
64	R3D_C2	MX	-4.885
65	R3D_C2	MY	-0.000436
66	R3D_C2	MZ	0.124
67	R3D_D2	X	0.015
68	R3D_D2	Y	8.225
69	R3D_D2	Z	-0.458
70	R3D_D2	MX	-4.086
71	R3D_D2	MY	0.002
72	R3D_D2	MZ	-0.371
73	R3D_A4	X	-0.01
74	R3D_A4	Y	4.255
75	R3D_A4	Z	0.028
76	R3D_A4	MX	-0.373
77	R3D_A4	MY	0.086
78	R3D_A4	MZ	0.267
79	R3D_B4	X	0.003
80	R3D_B4	Y	4.993
81	R3D_B4	Z	0.044
82	R3D_B4	MX	-0.38
83	R3D_B4	MY	-0.036
84	R3D_B4	MZ	-0.091
85	R3D_C4	X	-0.003
86	R3D_C4	Y	4.993
87	R3D_C4	Z	0.044
88	R3D_C4	MX	-0.38
89	R3D_C4	MY	0.036
90	R3D_C4	MZ	0.091
91	R3D_D4	X	0.01
92	R3D_D4	Y	4.255

Point Loads and Moments (Cat 6 : RLL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
93	R3D_D4	Z	0.028
94	R3D_D4	MX	-0.373
95	R3D_D4	MY	-0.086
96	R3D_D4	MZ	-0.267

Point Loads and Moments (Cat 16 : ELX)

	Label	Direction	Magnitude[k,k-ft]
1	N81	X	6.733
2	N82	X	6.733
3	N106	X	6.733
4	N105	X	6.733
5	N83	X	6.733
6	N85	X	6.733
7	N87	X	6.733
8	N84	X	6.733
9	N86	X	6.733
10	N88	X	6.733
11	N109	X	28.93
12	N108	X	28.93
13	R3D_A3	X	3.955
14	R3D_A3	Y	0.171
15	R3D_A3	Z	-0.051
16	R3D_A3	MX	-0.659
17	R3D_A3	MY	-4.026
18	R3D_A3	MZ	-82.793
19	R3D_A2	X	4.2
20	R3D_A2	Y	0.059
21	R3D_A2	Z	-0.078
22	R3D_A2	MX	-0.866
23	R3D_A2	MY	2.911
24	R3D_A2	MZ	-88.911
25	R3D_A1	X	4.034
26	R3D_A1	Y	0.135
27	R3D_A1	Z	-0.034
28	R3D_A1	MX	-0.528
29	R3D_A1	MY	-2.287
30	R3D_A1	MZ	-85.002
31	R3D_B3	X	3.971
32	R3D_B3	Y	-0.099
33	R3D_B3	Z	-0.004
34	R3D_B3	MX	-0.027
35	R3D_B3	MY	-3.932
36	R3D_B3	MZ	-82.928
37	R3D_B1	X	4.048
38	R3D_B1	Y	-0.063
39	R3D_B1	Z	-0.003
40	R3D_B1	MX	-0.021
41	R3D_B1	MY	-2.436
42	R3D_B1	MZ	-85.075
43	R3D_C1	X	4.048
44	R3D_C1	Y	0.063
45	R3D_C1	Z	0.003
46	R3D_C1	MX	0.021
47	R3D_C1	MY	-2.436
48	R3D_C1	MZ	-85.075
49	R3D_C3	X	3.971

Point Loads and Moments (Cat 16 : ELX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
50	R3D_C3	Y	0.099
51	R3D_C3	Z	0.004
52	R3D_C3	MX	0.027
53	R3D_C3	MY	-3.932
54	R3D_C3	MZ	-82.928
55	R3D_D3	X	3.955
56	R3D_D3	Y	-0.171
57	R3D_D3	Z	0.051
58	R3D_D3	MX	0.659
59	R3D_D3	MY	-4.026
60	R3D_D3	MZ	-82.793
61	R3D_D1	X	4.034
62	R3D_D1	Y	-0.135
63	R3D_D1	Z	0.034
64	R3D_D1	MX	0.528
65	R3D_D1	MY	-2.287
66	R3D_D1	MZ	-85.002
67	R3D_B2	X	4.222
68	R3D_B2	Y	-0.093
69	R3D_B2	Z	0.006
70	R3D_B2	MX	0.049
71	R3D_B2	MY	2.781
72	R3D_B2	MZ	-89.183
73	R3D_C2	X	4.222
74	R3D_C2	Y	0.093
75	R3D_C2	Z	-0.006
76	R3D_C2	MX	-0.049
77	R3D_C2	MY	2.781
78	R3D_C2	MZ	-89.183
79	R3D_D2	X	4.2
80	R3D_D2	Y	-0.059
81	R3D_D2	Z	0.078
82	R3D_D2	MX	0.866
83	R3D_D2	MY	2.91
84	R3D_D2	MZ	-88.909
85	R3D_A4	X	2.989
86	R3D_A4	Y	-0.076
87	R3D_A4	Z	-0.056
88	R3D_A4	MX	-0.691
89	R3D_A4	MY	-4.11
90	R3D_A4	MZ	-60.533
91	R3D_B4	X	3.009
92	R3D_B4	Y	-0.017
93	R3D_B4	MX	0.008
94	R3D_B4	MY	-4.457
95	R3D_B4	MZ	-60.731
96	R3D_C4	X	3.009
97	R3D_C4	Y	0.017
98	R3D_C4	MX	-0.008
99	R3D_C4	MY	-4.457
100	R3D_C4	MZ	-60.731
101	R3D_D4	X	2.989
102	R3D_D4	Y	0.076
103	R3D_D4	Z	0.056
104	R3D_D4	MX	0.691
105	R3D_D4	MY	-4.11
106	R3D_D4	MZ	-60.533

Point Loads and Moments (Cat 18 : ELZ)

	Label	Direction	Magnitude[k,k-ft]
1	N105	Z	6.733
2	N106	Z	6.733
3	N81	Z	6.733
4	N82	Z	6.733
5	N83	Z	6.733
6	N85	Z	6.733
7	N87	Z	6.733
8	N84	Z	6.733
9	N86	Z	6.733
10	N88	Z	6.733
11	N108	Z	28.93
12	N109	Z	28.93
13	R3D_A3	X	0.005
14	R3D_A3	Y	-1.64
15	R3D_A3	Z	3.687
16	R3D_A3	MX	41.018
17	R3D_A3	MY	0.075
18	R3D_A3	MZ	-0.118
19	R3D_A2	X	0.001
20	R3D_A2	Y	1.633
21	R3D_A2	Z	3.688
22	R3D_A2	MX	41.035
23	R3D_A2	MY	-0.205
24	R3D_A2	MZ	-0.023
25	R3D_A1	X	-0.005
26	R3D_A1	Y	-2.696
27	R3D_A1	Z	3.177
28	R3D_A1	MX	37.135
29	R3D_A1	MY	0.087
30	R3D_A1	MZ	0.117
31	R3D_B3	Y	-2.051
32	R3D_B3	Z	4.521
33	R3D_B3	MX	50.869
34	R3D_B3	MY	-0.006
35	R3D_B3	MZ	0.019
36	R3D_B1	Y	-3.313
37	R3D_B1	Z	3.862
38	R3D_B1	MX	45.853
39	R3D_B1	MY	-0.002
40	R3D_B1	MZ	-0.009
41	R3D_C1	Y	-3.313
42	R3D_C1	Z	3.862
43	R3D_C1	MX	45.853
44	R3D_C1	MY	0.002
45	R3D_C1	MZ	0.009
46	R3D_C3	Y	-2.051
47	R3D_C3	Z	4.521
48	R3D_C3	MX	50.869
49	R3D_C3	MY	0.006
50	R3D_C3	MZ	-0.019
51	R3D_D3	X	-0.005
52	R3D_D3	Y	-1.64
53	R3D_D3	Z	3.687
54	R3D_D3	MX	41.018
55	R3D_D3	MY	-0.075
56	R3D_D3	MZ	0.119
57	R3D_D1	X	0.005

Point Loads and Moments (Cat 18 : ELZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
58	R3D_D1	Y	-2.696
59	R3D_D1	Z	3.177
60	R3D_D1	MX	37.135
61	R3D_D1	MY	-0.087
62	R3D_D1	MZ	-0.117
63	R3D_B2	Y	2.009
64	R3D_B2	Z	4.516
65	R3D_B2	MX	50.84
66	R3D_B2	MY	0.027
67	R3D_B2	MZ	0.003
68	R3D_C2	Y	2.009
69	R3D_C2	Z	4.516
70	R3D_C2	MX	50.84
71	R3D_C2	MY	-0.027
72	R3D_C2	MZ	-0.003
73	R3D_D2	X	-0.001
74	R3D_D2	Y	1.633
75	R3D_D2	Z	3.688
76	R3D_D2	MX	41.035
77	R3D_D2	MY	0.205
78	R3D_D2	MZ	0.023
79	R3D_A4	X	-0.005
80	R3D_A4	Y	2.693
81	R3D_A4	Z	3.148
82	R3D_A4	MX	36.89
83	R3D_A4	MY	0.217
84	R3D_A4	MZ	0.112
85	R3D_B4	Y	3.365
86	R3D_B4	Z	3.83
87	R3D_B4	MX	45.571
88	R3D_B4	MY	-0.025
89	R3D_B4	MZ	-0.018
90	R3D_C4	Y	3.365
91	R3D_C4	Z	3.83
92	R3D_C4	MX	45.571
93	R3D_C4	MY	0.025
94	R3D_C4	MZ	0.018
95	R3D_D4	X	0.005
96	R3D_D4	Y	2.693
97	R3D_D4	Z	3.148
98	R3D_D4	MX	36.89
99	R3D_D4	MY	-0.217
100	R3D_D4	MZ	-0.112

Point Loads and Moments (Cat 67 : OL1)

	Label	Direction	Magnitude[k,k-ft]
1	N55	Y	4
2	N56	Y	4
3	N67	Y	4
4	N68	Y	4
5	N49	Y	4
6	N50	Y	4
7	N61	Y	4
8	N62	Y	4
9	N51	Y	16
10	N52	Y	16

Point Loads and Moments (Cat 67 : OL1) (Continued)

	Label	Direction	Magnitude[k,k-ft]
11	N53	Y	16
12	N54	Y	16
13	N63	Y	16
14	N64	Y	16
15	N65	Y	16
16	N66	Y	16
17	N45	Y	16
18	N46	Y	16
19	N47	Y	16
20	N48	Y	16
21	N57	Y	16
22	N58	Y	16
23	N59	Y	16
24	N60	Y	16

Point Loads and Moments (Cat 68 : OL2)

	Label	Direction	Magnitude[k,k-ft]
1	N55	Y	4
2	N56	Y	4
3	N49	Y	4
4	N50	Y	4
5	N51	Y	16
6	N52	Y	16
7	N53	Y	16
8	N54	Y	16
9	N45	Y	16
10	N46	Y	16
11	N47	Y	16
12	N48	Y	16

Line Loads and Moments (Cat 1 : DL)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N19	N21	Y	0.037	0.037
2	N20	N22	Y	0.037	0.037
3	N20	N152	Y	0.037	0.037
4	N22	N153	Y	0.037	0.037
5	N19	N156	Y	0.037	0.037
6	N21	N157	Y	0.037	0.037

Line Loads and Moments (Cat 16 : ELX)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	R3D_D1	R3D_A1	X	0.401	0.401
2	R3D_D2	R3D_A2	X	0.619	0.619
3	R3D_D3	R3D_A3	X	0.619	0.619
4	R3D_D4	R3D_A4	X	0.173	0.173
5	P5	P10	X	0.893	0.893
6	R3D_C1	R3D_C2	X	0.065	0.065
7	R3D_B1	R3D_B2	X	0.065	0.065
8	R3D_B3	R3D_B4	X	0.065	0.065
9	R3D_C3	R3D_C4	X	0.065	0.065
10	R3D_D1	R3D_D2	X	0.105	0.105
11	R3D_D3	R3D_D4	X	0.105	0.105
12	R3D_A1	R3D_A2	X	0.105	0.105
13	R3D_A3	R3D_A4	X	0.105	0.105

Line Loads and Moments (Cat 18 : ELZ)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	R3D_D1	R3D_A1	Z	0.401	0.401
2	R3D_D2	R3D_A2	Z	0.619	0.619
3	R3D_D3	R3D_A3	Z	0.619	0.619
4	R3D_D4	R3D_A4	Z	0.173	0.173
5	R3D_C1	R3D_C2	Z	0.065	0.065
6	R3D_C3	R3D_C4	Z	0.065	0.065
7	R3D_B1	R3D_B2	Z	0.065	0.065
8	R3D_B3	R3D_B4	Z	0.065	0.065
9	R3D_A1	R3D_A2	Z	0.105	0.105
10	R3D_A3	R3D_A4	Z	0.105	0.105
11	R3D_D1	R3D_D2	Z	0.105	0.105
12	R3D_D3	R3D_D4	Z	0.105	0.105
13	R3D_D3	R3D_D4	Z	0.105	0.105

Area Loads (Cat 1 : DL)

	Label	Base Mag[psf]	Peak Mag[psf]
1	AL1	2.97	2.97
2	AL2	2.97	2.97

Area Loads (Cat 2 : LL)

	Label	Base Mag[psf]	Peak Mag[psf]
1	AL8	0.1	0.1
2	AL4	100	100
3	AL5	100	100
4	AL6	100	100
5	AL7	100	100

Slabs

	Label	Thickness ...	Material	Local Axis ...	Analysis Offset [in]	Passive Pr...	Soil Overb...	Icr Factor
1	S5	9	Conc 6000NW	0	0	0	0	0.25
2	S6	9	Conc 6000NW	0	0	0	0	0.25
3	S7	9	Conc 6000NW	0	0	0	0	0.25
4	S9	9	Conc 6000NW	0	0	0	0	0.25
5	S10	9	Conc 6000NW	0	0	0	0	0.25
6	S11	9	Conc 6000NW	0	0	0	0	0.25
7	S12	9	Conc 6000NW	0	0	0	0	0.25
8	S13	9	Conc 6000NW	0	0	0	0	0.25
9	S14	9	Conc 6000NW	0	0	0	0	0.25
10	S17	9	Conc 6000NW	0	0	0	0	0.25
11	S18	30	Conc 6000NW	0	0	0	0	0.25
12	S15	8	Conc 6000NW	0	0	0	0	0.25

Load Combinations

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
1	ASCE Strengt...	Yes				DL	1.4																				
2	ASCE Strengt...	Yes				DL	1.2	LL	1.6	LLS	1.6	HL	1.6	RLL	0.5									OL1	1.6		
3	ASCE Strengt...	Yes				DL	1.2	LL	1.6	LLS	1.6	HL	1.6	SL	0.5	SLN	0.5							OL1	1.6		
4	ASCE Strengt...	Yes				DL	1.2	LL	1.6	LLS	1.6	HL	1.6	RL	0.5									OL1	1.6		
5	ASCE Strengt...	Yes				DL	1.2	RLL	1.6	HL	1.6	LL	0.5	LLS	1									OL1	0.5		
6	ASCE Strengt...	Yes				DL	1.2	SL	1.6	SLN	1.6	HL	1.6	LL	0.5	LLS	1							OL1	0.5		
7	ASCE Strengt...	Yes				DL	1.2	RL	1.6	HL	1.6	LL	0.5	LLS	1									OL1	0.5		
8	ASCE Strengt...					DL	1.2	Sds*...	0.2	Rh...	1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7			OL1	0.5		
9	ASCE Strengt...					DL	1.2	Sds*...	0.2	Rh...	1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7			OL1	0.5		
10	ASCE Strengt...					DL	1.2	Sds*...	0.2	Rh...	-1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7			OL1	0.5		
11	ASCE Strengt...					DL	1.2	Sds*...	0.2	Rh...	-1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7			OL1	0.5		

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
12	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	1	HL	1.6												
13	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	1	HL	1.6												
14	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	-1	HL	1.6												
15	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	-1	HL	1.6												
16	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	1	HL	0.9												
17	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	1	HL	0.9												
18	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	-1	HL	0.9												
19	ASCE Strengt...					DL	0.9	Sds*...	-0.2	Rh...	-1	HL	0.9												
20	ASCE 1	Yes	Yes		1.5	DL	1																		
21	ASCE 2	Yes	Yes		1.5	DL	1	HL	1	LL	1	LLS	1							OL1	1				
22	ASCE 3 (a)	Yes	Yes		1.5	DL	1	HL	1	RLL	1														
23	ASCE 3 (b)	Yes	Yes		1.5	DL	1	HL	1	SL	1														
24	ASCE 3 (c)	Yes	Yes		1.5	DL	1	HL	1	RL	1														
25	ASCE 4 (a)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RLL	0.75					OL1	0.75				
26	ASCE 4 (b)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75			OL1	0.75				
27	ASCE 4 (c)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RL	0.75					OL1	0.75				
28	ASCE 8 (a)				1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7												
29	ASCE 8 (b)				1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7												
30	ASCE 8 (c)				1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7												
31	ASCE 8 (d)				1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7												
32	ASCE 9 (a)				1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	SL	0.75	OL2	0.75				
33	ASCE 9 (b)				1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	SL	0.75	OL2	0.75				
34	ASCE 9 (c)				1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	SL	0.75	OL2	0.75				
35	ASCE 9 (d)				1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	SL	0.75	OL2	0.75				
36	ASCE 10 (a) (...					DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7												
37	ASCE 10 (a) (...					DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7												
38	ASCE 10 (a) (c)					DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7												
39	ASCE 10 (a) (...					DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7												
40	ASCE 10 (b) (...					DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7												
41	ASCE 10 (b) (...					DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7												
42	ASCE 10 (b) (c)					DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7												
43	ASCE 10 (b) (...					DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7												

Design Cuts

Label	Design Rule
No Data to Print ...	

Design Strips

	Label	Rebar Angle from Pl...	No. of Design Cuts	Design Rule
1	DS1	90	50	8" Slab
2	DS2	90	50	8" Slab
3	DS3	90	50	8" Slab
4	DS10	90	50	SIDE Island
5	DS11	0	50	SIDE Island
6	DS18	0	50	8" Slab
7	DS19	0	50	8" Slab
8	DS20	0	50	8" Slab
9	DS9	0	50	SLAB
10	DS12	0	50	SLAB
11	DS13	0	50	SLAB
12	DS14	0	50	SLAB
13	DS15	0	50	SLAB
14	DS16	0	50	SLAB
15	DS17	0	50	SLAB
16	DS21	0	50	SLAB
17	DS22	0	50	SLAB

Design Strips (Continued)

	Label	Rebar Angle from Pl...	No. of Design Cuts	Design Rule
18	DS23	0	50	SLAB
19	DS24	90	50	SLAB
20	DS25	90	50	SLAB
21	DS26	90	50	SLAB
22	DS27	90	50	SLAB
23	DS28	90	50	SLAB
24	DS29	90	50	SLAB
25	DS30	90	50	SLAB
26	DS31	90	50	SLAB
27	DS32	90	50	SLAB
28	DS33	90	50	SLAB
29	DS34	90	50	8" Slab

Pedestals/Posts

Label	Type	Shape	Material	Design Rules	Angle(deg)	Height[in]	Pedestal Layout	Shear Layout
No Data to Print ...								

Stem Walls

Label	Start Point	End Point	Width[in]	Height[in]	Material Density[k/ft^3]
No Data to Print ...					

Load Categories

	Category	Point Loads	Line Loads	Area Loads
1	DL	96	6	2
2	LL			5
3	SL	96		
4	RLL	96		
5	ELX	106	13	
6	ELZ	100	13	
7	OL1	24		
8	OL2	12		

Design Cut Results

Label	UC Top	LC	UC Bot	LC	Shear UC	LC	Phi*Mnz ...	Phi*Mnz ...	Phi*Vny[k]	Top Flex ...	Bot/Mid F...
No Data to Print ...											

Strip Reinforcing

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
1	DS1	0.186	4			0.924	2	#5@18in	DS1-X31	0.216	2	DS1-X50
2	DS2	0.885	2			0	N/A	#5@14in	NA	0.262	2	DS2-X26
3	DS3	0.03	1			0.894	2	#5@12in	DS3-X21	0.262	2	DS3-X1
4	DS10	0.179	4	#6@8in	DS10-X26	0.182	2	#7@10in	DS10-X7	0.267	4	DS10-X29
5	DS11	0.051	4	#6@8in	DS11-X50	0.009	1	#7@10in	DS11-X23	0.043	1	DS11-X41
6	DS18	0.826	4			0.696	4	#5@8in	DS18-X26	0.51	4	DS18-X50
7	DS19	0.959	2			0.6	4	#5@12in	DS19-X25	0.533	4	DS19-X50
8	DS20	0.876	4			0.545	1	#5@12in	DS20-X25	0.446	4	DS20-X50
9	DS9	0.949	4	#5@8in	DS9-X50	0.932	2	#5@12in	DS9-X18	1.019	4	DS9-X50
10	DS12	0.928	4	#5@7in	DS12-X50	0.94	2	#5@11in	DS12-X18	0.885	4	DS12-X50
11	DS13	0.945	2	#5@7in	DS13-X50	0.926	2	#5@11in	DS13-X18	0.556	2	DS13-X50
12	DS14	0.945	4	#5@9in	DS14-X50	0.868	2	#5@12in	DS14-X18	0.837	4	DS14-X50
13	DS15	0.822	4	#5@12in	DS15-X50	0.521	2	#5@12in	DS15-X20	0.752	4	DS15-X50
14	DS16	0.932	4	#5@11in	DS16-X1	0.605	2	#5@12in	DS16-X33	0.745	4	DS16-X3
15	DS17	0.88	4	#5@7in	DS17-X1	0.913	2	#5@10in	DS17-X33	0.845	4	DS17-X3
16	DS21	0.872	2	#5@7in	DS21-X1	0.872	2	#5@9in	DS21-X33	0.537	2	DS21-X3

Strip Reinforcing (Continued)

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
17	DS22	0.949	4	#5@7in	DS22-X1	0.886	2	#5@10in	DS22-X33	0.905	4	DS22-X3
18	DS23	0.852	4	#5@7in	DS23-X1	0.946	2	#5@12in	DS23-X33	0.979	4	DS23-X3
19	DS24	0.059	2	#5@12in	DS24-X1	0.693	2	#5@12in	DS24-X19	0.413	2	DS24-X50
20	DS25	0.322	4	#5@12in	DS25-X35	0.393	2	#5@12in	DS25-X18	0.452	4	DS25-X4
21	DS26	0.136	4	#5@12in	DS26-X1	0.324	4	#5@12in	DS26-X37	0.284	4	DS26-X3
22	DS27	0.234	4	#5@12in	DS27-X16	0.434	2	#5@12in	DS27-X33	0.335	4	DS27-X32
23	DS28	0.008	2	#5@12in	DS28-X50	0.318	2	#5@12in	DS28-X31	0.18	2	DS28-X43
24	DS29	0.022	2	#5@12in	DS29-X50	0.281	2	#5@12in	DS29-X33	0.172	2	DS29-X43
25	DS30	0.343	4	#5@12in	DS30-X16	0.41	2	#5@12in	DS30-X33	0.368	4	DS30-X32
26	DS31	0.214	2	#5@12in	DS31-X50	0.343	4	#5@12in	DS31-X36	0.554	4	DS31-X50
27	DS32	0.293	4	#5@12in	DS32-X35	0.433	2	#5@12in	DS32-X18	0.559	2	DS32-X4
28	DS33	0.06	2	#5@12in	DS33-X1	0.7	2	#5@12in	DS33-X21	0.549	2	DS33-X50
29	DS34	0.795	2			0.965	2	#5@14in	DS34-X8	0.347	2	DS34-X1

Pedestals/Posts Design Values

Label	UC	Gov LC	Shear UC	Gov LC	Dir	Phi Used	Vertical Reinf	Shear Reinf
No Data to Print ...								

Pedestals/Posts Punching Shear Values

Label	UC	Gov LC	Location	Vuy[k]	Muz[k-ft]	Mux[k-ft]	Total Stress[...	Phi*Vny[ksi]
No Data to Print ...								

Pedestals/Posts Punching Shear Geometries

Label	Shape	Location	Effective De...	L1[in]	L2[in]	Polar Mome...	Polar Mome...	Gamma-x	Gamma-z
No Data to Print ...									

Pile Punching Shear Geometries

	Label	Pile	Shape	Location	Effective Depth[in]	L1[in]	L2[in]
1	P5	18"	Round	CORNER	22.125	36.131	36.131
2	P10	18"	Round	CORNER	22.125	36.131	36.131
3	R3D_A3	18"	Round	NC	0	0	0
4	R3D_A2	18"	Round	NC	0	0	0
5	R3D_A1	18"	Round	NC	0.688	0	0
6	R3D_A4	18"	Round	NC	0.688	0	0
7	R3D_B3	18"	Round	NC	0	0	0
8	R3D_B1	18"	Round	NC	0.688	0	0
9	R3D_C1	18"	Round	NC	0.688	0	0
10	R3D_C3	18"	Round	NC	0	0	0
11	R3D_D3	18"	Round	NC	0	0	0
12	R3D_D1	18"	Round	NC	0.688	0	0
13	R3D_B2	18"	Round	NC	0	0	0
14	R3D_C2	18"	Round	NC	0	0	0
15	R3D_D2	18"	Round	NC	0	0	0
16	R3D_B4	18"	Round	NC	0.688	0	0
17	R3D_C4	18"	Round	NC	0.688	0	0
18	R3D_D4	18"	Round	NC	0.688	0	0
19	N79	18"	Round	NC	0	0	0
20	N80	18"	Round	NC	0	0	0

Pile Punching Shear Values

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
1	P5	18"	0.118	1	CORNER	34.551	293.146
2	P10	18"	0.058	1	CORNER	17.044	293.146
3	R3D_A3	18"	NC	NC	NC	0	NC

Pile Punching Shear Values (Continued)

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
4	R3D_A2	18"	NC	NC	NC	0	NC
5	R3D_A1	18"	NC	NC	NC	0	NC
6	R3D_A4	18"	NC	NC	NC	0	NC
7	R3D_B3	18"	NC	NC	NC	0	NC
8	R3D_B1	18"	NC	NC	NC	0	NC
9	R3D_C1	18"	NC	NC	NC	0	NC
10	R3D_C3	18"	NC	NC	NC	0	NC
11	R3D_D3	18"	NC	NC	NC	0	NC
12	R3D_D1	18"	NC	NC	NC	0	NC
13	R3D_B2	18"	NC	NC	NC	0	NC
14	R3D_C2	18"	NC	NC	NC	0	NC
15	R3D_D2	18"	NC	NC	NC	0	NC
16	R3D_B4	18"	NC	NC	NC	0	NC
17	R3D_C4	18"	NC	NC	NC	0	NC
18	R3D_D4	18"	NC	NC	NC	0	NC
19	N79	18"	NC	NC	NC	0	NC
20	N80	18"	NC	NC	NC	0	NC

Pile Design Checks

	Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Co...	Pile Co...	Comp[k]	Comp LC	Soil Ten...	Pile Ten...	Tens[k]	Tens LC
1	P5	18"	0	0	22	NC	0.102	25.474	22	NC	0	0	NC
2	P10	18"	0	0	22	NC	0.052	13.053	22	NC	0	0	NC
3	R3D_A3	18"	0	0	22	NC	0.317	79.366	21	NC	0	0	NC
4	R3D_A2	18"	0	0.001	22	NC	0.314	78.45	21	NC	0	0	NC
5	R3D_A1	18"	0	0.001	22	NC	0.129	32.175	25	NC	0	0	NC
6	R3D_A4	18"	0	0	22	NC	0.115	28.843	25	NC	0	0	NC
7	R3D_B3	18"	0	0	22	NC	0.523	130.769	21	NC	0	0	NC
8	R3D_B1	18"	0	0	22	NC	0.298	74.587	21	NC	0	0	NC
9	R3D_C1	18"	0	0	22	NC	0.393	98.296	21	NC	0	0	NC
10	R3D_C3	18"	0	0	22	NC	0.464	115.968	21	NC	0	0	NC
11	R3D_D3	18"	0	0	22	NC	0.273	68.3	25	NC	0	0	NC
12	R3D_D1	18"	0	0.001	22	NC	0.109	27.359	25	NC	0	0	NC
13	R3D_B2	18"	0	0.001	22	NC	0.514	128.612	21	NC	0	0	NC
14	R3D_C2	18"	0	0.001	22	NC	0.425	106.352	21	NC	0	0	NC
15	R3D_D2	18"	0	0.001	22	NC	0.263	65.631	25	NC	0	0	NC
16	R3D_B4	18"	0	0	22	NC	0.223	55.843	21	NC	0	0	NC
17	R3D_C4	18"	0	0	22	NC	0.257	64.304	21	NC	0	0	NC
18	R3D_D4	18"	0	0	22	NC	0.084	21.031	25	NC	0	0	NC
19	N79	18"	0	0	22	NC	0.237	59.211	21	NC	0	0	NC
20	N80	18"	0	0	22	NC	0.221	55.147	21	NC	0	0	NC

Concrete Pile Rebar

Label	Phi Used	Vertical Reinf	Shear Reinf
No Data to Print ...			

Envelope Slab Soil Pressures

	Label	Max UC	Max LC	Soil Pressure[psf]	Allowable Bearing[psf]	Point
1	S5	0	20	0	0	N20
2	S6	0	20	0	0	N53
3	S7	0	20	0	0	N49
4	S9	0	20	0	0	N47
5	S10	NC	20	NC	NC	R3D_A2
6	S11	0	20	0	0	N22
7	S12	0	20	0	0	N65
8	S13	0	20	0	0	N61

Envelope Slab Soil Pressures (Continued)

	Label	Max UC	Max LC	Soil Pressure[psf]	Allowable Bearing[psf]	Point
9	S14	0	20	0	0	N59
10	S17	NC	20	NC	NC	R3D_A3
11	S18	NC	20	NC	NC	R3D_C1
12	S15	NC	20	NC	NC	R3D_A3

Material Takeoff

	Material	Quantity	Volume[yds^3]	Weight[K]
1	Piles			
2	18"	20	N/A	N/A
3	Total Piles	20	N/A	N/A
4				
5	Slabs			
6	Conc 6000NW	12	134.5	526.5
7				
8	Beams			
9	Conc 6000NW	15	62.2	243.4
10				
11	Totals			
12	Conc 6000NW		196.6	769.8
13	Total Concrete		196.6	769.8

Client	PDX Facility Improvements	Page ___	Of ___
Project	153929	Date 4 NOV 2023	Made By KAM
	WIND LOAD ON TANKS		Checked By
	HORIZONTAL ROUND TANKS		Preliminary ___ Final X

WIND LOAD ON CHIMNEYS, TANKS AND SIMILAR STRUCTURES

Rev 4-23

In accordance with ASCE 7-16

Project Site: PDX Portland Oregon

VELOCITY PRESSURES

$q_z = 0.00256\, K_z\, K_{zt}\, K_d\, K_e\, V^2$ — q_z = Velocity Pressure, Sec. 26.10.2

Category III (Hazardous, High Occupancy, etc.) in All Regions

Round/hexagonal chimneys and tanks (Determines *Directionality Factor*, K_d value)

V =	107 mph	V = Basic wind speed (3-sec gust), Fig. 26.5-1 & 2.
z_g =	15.00 ft	z_g = Site ground elevation above sea level
K_{zt} =	1.0	K_{zt} = Topographic factor, Sec. 26.8.2
K_z =	shown in the table below	K_z = Exposure coefficient, Table 26.10-1
K_d =	0.95	K_d = Directionality factor, Table 26.6-1
K_e =	1.00	K_e = Ground elevation factor, Table 26.9-1

DESIGN WIND PRESSURES

$p = q_z G C_f$ — p = Design wind pressure, Sec. 29.4.

Exposure = C

h =	12.0 ft	h = Structure height
D =	10.5 ft	D = Diameter or least horizontal dimension
h/D =	1.14286	
G =	0.85	G = Gust effect factor, Sec. 26.11

D x sqrt(qz) = 51.07 (based on 15 ft height)

Tank or chimney x-section: Round (D x sqrt[qz] > 2.5), Smooth surface

(Determines C_f values)

Mean Height Z (ft)	Exposure Coefficient K_z	Velocity Pressures q_z (psf)	Force Coefficient C_f	**DESIGN PRESSURES** [4] **p (psf)**
0 - 15	0.85	23.65	0.502	**10.1**
20	0.90	25.05	0.502	**10.7**
25	0.94	26.16	0.502	**11.2**
30	0.98	27.27	0.502	**11.6**
40	1.04	28.94	0.502	**12.4**
50	1.09	30.33	0.502	**13.0**
60	1.13	31.45	0.502	**13.4**
70	1.17	32.56	0.502	**13.9**
80	1.21	33.67	0.502	**14.4**
90	1.24	34.51	0.502	**14.7**
100	1.26	35.06	0.502	**15.0**
120	1.31	36.46	0.502	**15.6**
140	1.36	37.85	0.502	**16.2**
160	1.39	38.68	0.502	**16.5**
180	1.43	39.80	0.502	**17.0**
200	1.46	40.63	0.502	**17.4**

Notes:
1. Wind pressures may act towards and/or away from the structures (reversible).
2. C_f: force coefficient per Figure 29.4-1.
3. q_z: velocity pressure evaluated at height z above ground.
4. Wind pressures are factored strength level per ASCE 7. Use 60% for ASD design.
5. For pipe racks, may use tributary height = largest pipe diameter + 10% pipe rack width (per ASCE Wind Loads for Petrochemical Facilities and Other Industrial Facilities)

SEISMIC LOAD ANALYSIS PER IBC 2018 WHICH DEFERS TO ASCE 7-16

Chapter 11. SEISMIC DESIGN CRITERIA

Seismic mapped response spectral accelerations are taken from Structural Load Data Tool For UFC 3-301-01: https://www.wbdg.org/additional-resources/tools/ufcsldt

Spectral Response Acceleration Parameters

Mapped Acceleration Parameters: $S_s := 0.848$ $S_1 := 0.376$

Site Class per Geotechnical Report (if none, default to "D")

Site Class (11.4.3): $Site_Class := \text{“E”}$

Risk Category per Table 2-2 from UFC 3-301-01. This building is "not included in Risk Category V, but has DoD mission-essential command, control, primary functions that are not duplicated at geographically separate locations, as designated by the using agency."

Risk Category (1.5): $Risk_Category := \text{“IV”}$

Site Coefficients and Risk Targeted MCE_R Spectral Response Acceleration Parameters (11.4.4):

Table 11.4-1 Short-Period Site Coefficient, F_a

Site Class	Mapped Risk-Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameter at Short Period					
	$S_S \le 0.25$	$S_S = 0.5$	$S_S = 0.75$	$S_S = 1.0$	$S_S = 1.25$	$S_S \ge 1.5$
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8
F	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8

Note: Use straight-line interpolation for intermediate values of S_s.

Short-Period Site Coefficient (at 0.2-s period):

$F_a = \text{“See 11.4.8”}$

Short-Period Adjusted Spectral Response Acceleration Parameter:

$S_{MS} = F_a \cdot S_s$ *[Eq. 11.4-1]*

$S_{MS} = \text{“See 11.4.8”}$

Table 11.4-2 Long-Period Site Coefficient, F_v

Site Class	Mapped Risk-Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameter at 1-s Period					
	$S_1 \le 0.1$	$S_1 = 0.2$	$S_1 = 0.3$	$S_1 = 0.4$	$S_1 = 0.5$	$S_1 \ge 0.6$
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.8	0.8	0.8	0.8	0.8	0.8
C	1.5	1.5	1.5	1.5	1.5	1.4
D	2.4	2.2[a]	2.0[a]	1.9[a]	1.8[a]	1.7[a]
E	4.2	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8
F	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8	See Section 11.4.8

Note: Use straight-line interpolation for intermediate values of S_1.
[a]Also, see requirements for site-specific ground motions in Section 11.4.8.

Long-Period Site Coefficient (at 1.0-s period):

$F_v = \text{“See 11.4.8”}$

Long-Period Adjusted Spectral Response Acceleration Parameter:

$S_{M1} = F_v \cdot S_1$ *[Eq. 11.4-2]*

$S_{M1} = \text{“See 11.4.8”}$

Design Spectral Acceleration Parameters (11.4.5):

Short-Period Design Spectral Response Acceleration Parameter: $S_{DS} = \frac{2}{3} \cdot S_{MS}$ *[Eq. 11.4-3]*

Long-Period Design Spectral Response Acceleration Parameter: $S_{D1} = \frac{2}{3} \cdot S_{M1}$ *[Eq. 11.4-4]*

Seismic Design Category (11.6):

TABLE 11.6-1 Seismic Design Category Based on Short-Period Response Acceleration Parameter

	Risk Category	
Value of S_{DS}	I or II or III	IV
$S_{DS} < 0.167$	A	A
$0.167 \le S_{DS} < 0.33$	B	C
$0.33 \le S_{DS} < 0.50$	C	D
$0.50 \le S_{DS}$	D	D

TABLE 11.6-2 Seismic Design Category Based on 1-s Period Response Acceleration Parameter

	Risk Category	
Value of S_{D1}	I or II or III	IV
$S_{D1} < 0.067$	A	A
$0.067 \le S_{D1} < 0.133$	B	C
$0.133 \le S_{D1} < 0.20$	C	D
$0.20 \le S_{D1}$	D	D

Short-Period Design Spectral Response Acceleration Parameter: $S_{DS} =$ "See 11.4.8"

Long-Period Design Spectral Response Acceleration Parameter: $S_{D1} =$ "See 11.4.8"

Seismic Design Category: $SDC =$ "See 11.4.8"

If values result in "See Section 11.4.8", a ground motion hazard analysis is required, unless exceptions are met. Below calculations may not compute correctly if this is the case.

$Site_Specific_Ground_Motion_Analysis_Required? =$ "Yes – See 11.4.8"

Properties obtained from the Geotech Report:

Short-Period Design Spectral Response Acceleration Parameter: $S_{DS} := 0.59$

Long-Period Design Spectral Response Acceleration Parameter: $S_{D1} := 0.74$

CHAPTER 15.4 STRUCTURAL SYSTEM SELECTION

Structural Height: $h_n := 15\ ft$

Seismic Force-Resisting System (SFRS): Horizontal Tank

Response Modification Coefficient: $R := 3$

Over strength Factor: $\Omega_0 := 2$

Deflection Amplification Factor: $C_d := 2.5$

Importance Factor: $I_e := 1.5$

Table 15.4-2 Seismic Coefficients for Nonbuilding Structures Not Similar to Buildings

					Structural System and Structural Height, h_n, Limits (ft)[a,b]				
					Seismic Design Category				
Nonbuilding Structure Type	Detailing Requirements[c]	R	Ω_0	C_d	B	C	D	E	F
Elevated tanks, vessels, bins, or hoppers:									
On symmetrically braced legs (not similar to buildings)	Sec. 15.7.10	3	2[d]	2.5	NL	NL	160	100	100
On unbraced legs or asymmetrically braced legs (not similar to buildings)	Sec. 15.7.10	2	2[d]	2.5	NL	NL	100	60	60
Horizontal, saddle-supported welded steel vessels	Sec. 15.7.14	3	2[d]	2.5	NL	NL	NL	NL	NL

CHAPTER 12.8 EQUIVALENT LATERAL FORCE PROCEDURE

Importance Factor: $I_e = 1.5$

Mapped Long-Period Transition Period: (Fig. 22-12) $T_L := 12\ s$

Approximate Period Parameters: (Table 12.8-2) $C_t := 0.02$ $x := 0.75$

Approximate Fundamental Period: (Eq. 12.8-7) $T_a := C_t \cdot \left(\frac{h_n}{ft}\right)^x \cdot s = 0.152\ s$

Calculated Seismic Response Coefficient: (Eq. 12.8-2) $C_{s_Calc} := \frac{S_{DS}}{\left(\frac{R}{I_e}\right)} = 0.295$

Maximum Seismic Response Coefficient: (Eq. 12.8-3 and 12.8-4) $C_{s_Max} := \mathbf{if}\left(T_a \le T_L, \frac{S_{D1} \cdot s}{T_a \cdot \left(\frac{R}{I_e}\right)}, \frac{S_{D1} \cdot T_L \cdot s}{T_a{}^2 \cdot \left(\frac{R}{I_e}\right)}\right) = 2.427$

Minimum Seismic Response Coefficient: (Eq. 12.8-5 and 12.8-6)

$$C_{s_Min} := \mathbf{if}\left(S_1 \ge 0.6, \max\left(\frac{0.5 \cdot S_1}{\left(\frac{R}{I_e}\right)}, 0.044 \cdot S_{DS} \cdot I_e, 0.01\right), \max\left(0.044 \cdot S_{DS} \cdot I_e, 0.01\right)\right) = 0.039$$

Seismic Response Coefficient: $C_{s.12.8} := \max\left(C_{s_Min}, min\left(C_{s_Calc}, C_{s_Max}\right)\right)$

$$C_{s.12.8} = 0.295$$

15.7.14 Horizontal, Saddle-Supported Vessels for Liquid or Vapor Storage

15.7.14.1 General. Horizontal vessels supported on saddles (sometimes referred to as "blimps") shall be designed to meet the force and displacement requirements of Section 15.3 or 15.4.

15.7.14.2 Effective Mass. Changes to or variations in material density shall be considered. The design of the supports, saddles, anchorage, and foundation for seismic overturning shall assume that the material stored is a rigid mass acting at the volumetric center of gravity.

15.7.14.3 Vessel Design. Unless a more rigorous analysis is performed,

a. Horizontal vessels with a length-to-diameter ratio of 6 or more are permitted to be assumed to be a simply supported beam spanning between the saddles for determining the natural period of vibration and global bending moment.
b. For horizontal vessels with a length-to-diameter ratio of less than 6, the effects of "deep beam shear" shall be considered where determining the fundamental period and stress distribution.
c. Local bending and buckling of the vessel shell at the saddle supports caused by seismic load shall be considered. The stabilizing effects of internal pressure shall not be considered to increase the buckling resistance of the vessel shell.
d. If the vessel is a combination of liquid and gas storage, the vessel and supports shall be designed both with and without gas pressure acting (assume that piping has ruptured and pressure does not exist).

2. For nonbuilding systems that have an R value provided in Table 15.4-2, the minimum specified value in Eq. (12.8-5) shall be replaced by

$$C_s = 0.044 S_{DS} I_e \qquad (15.4\text{-}1)$$

The value of C_s shall not be taken as less than 0.03.

And for nonbuilding structures located where $S_1 \geq 0.6g$, the minimum specified value in Eq. (12.8-6) shall be replaced by

$$C_s = 0.8 S_1 / (R/I_e) \qquad (15.4\text{-}2)$$

$C_{s.12.8} = 0.295$

$C_{s.15.4} := \text{if}\left(S_1 \geq 0.6, \frac{0.8 \cdot S_1}{R \div I_e}, 0.044 \cdot S_{DS} \cdot I_e\right) = 0.039$

$C_{s.min15.4} := 0.03$

$Cs := \max\left(C_{s.15.4}, C_{s.min15.4}, C_{s.12.8}\right) = 0.3$

Overturning moment= 0.5 * 57,774 * 6.75ft = 195kip*ft

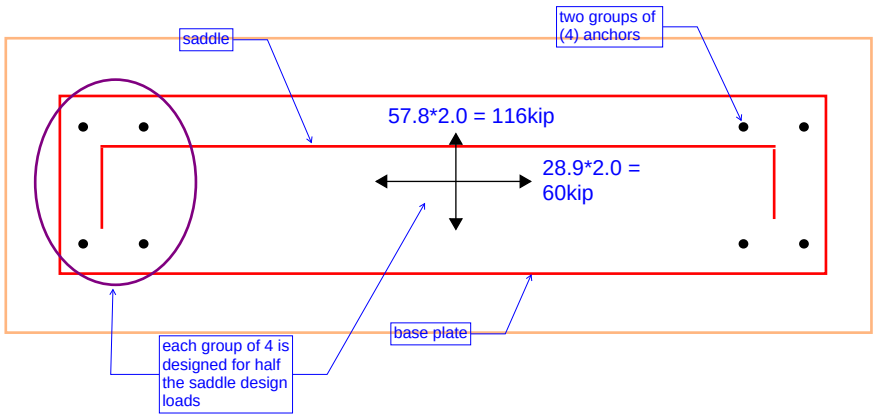
1/2 transverse load to each saddle

Resisting moment=
(0.9*(195,845/2))-(11,555/2)*(1/2*10ft)-8"=350kip*ft

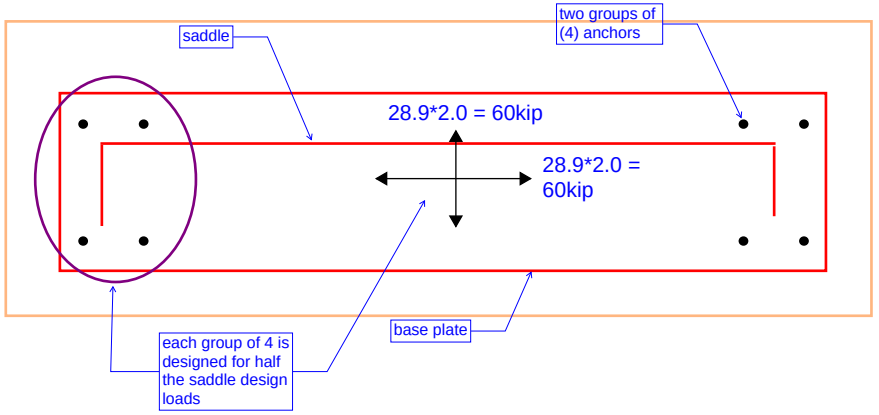
dead load of tank

seismic vertical effect (0.2*Sds*DL)

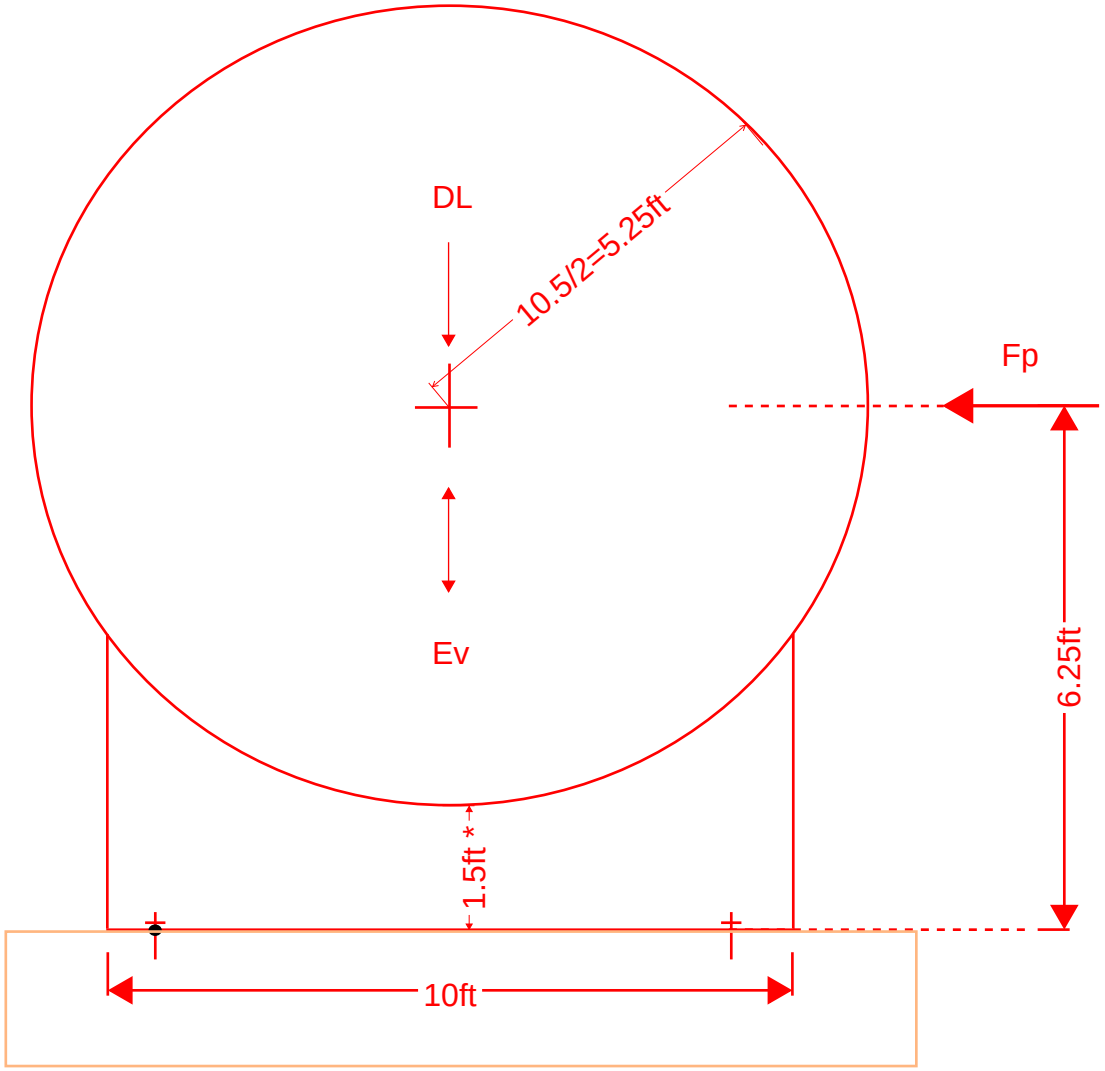
Resulting moment=195-350=> No overturning = No Net Anchor Uplift forces



NON-SLIDE END



SLIDE END

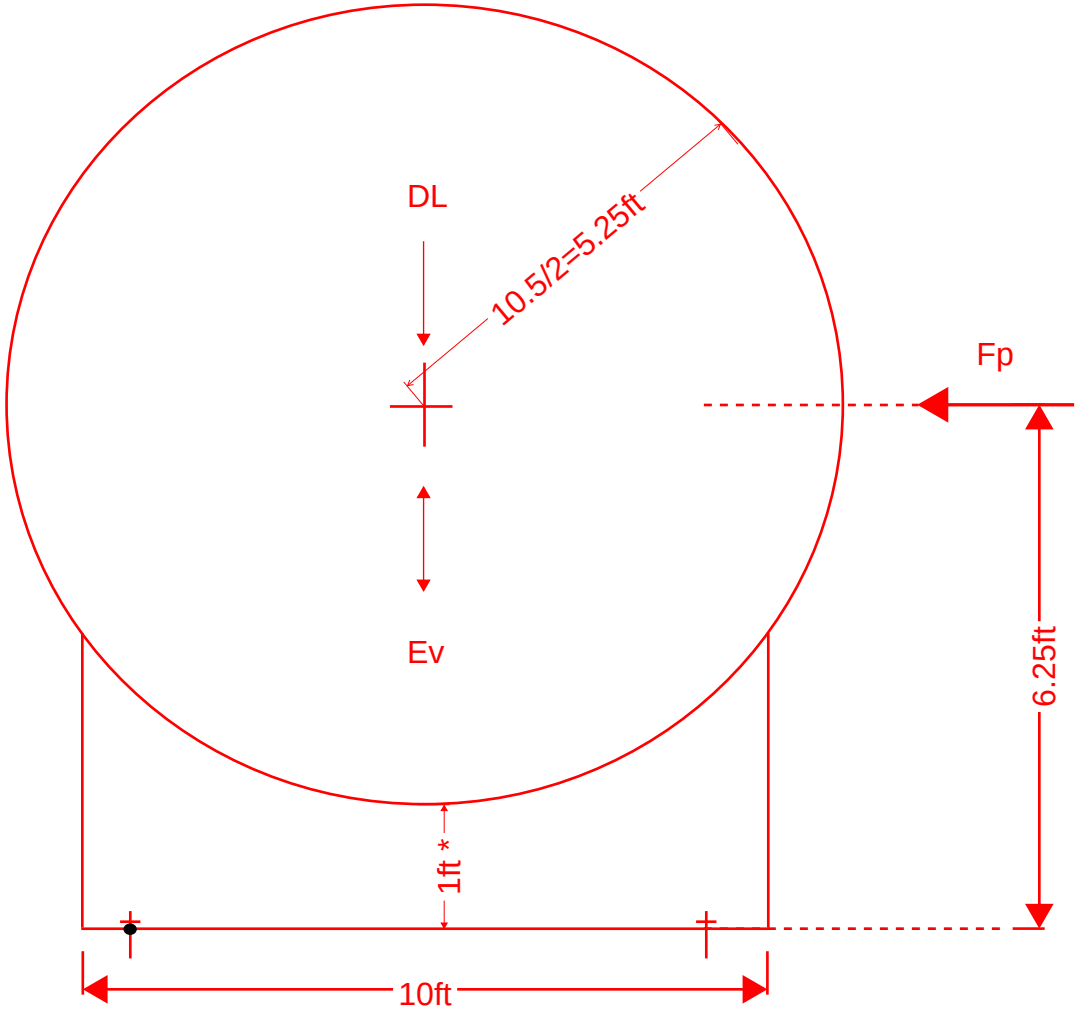


ANCHOR BOLT TENSION FOR FULL TANK

Overturning moment= 4.5 * 6.25ft = 28.125kip*ft

Resisting moment= (0.9*(15KIP))-(0.9)*(1/2*10ft)-8"=53kip*ft

Resulting moment=28-53=> No overturning = No Net Anchor Uplift forces



Note: Since this case also results in no net uplift in anchor bolts, and the seismic forces are less then a full case, this case does not control.

ANCHOR BOLT TENSION FOR EMPTY TANK

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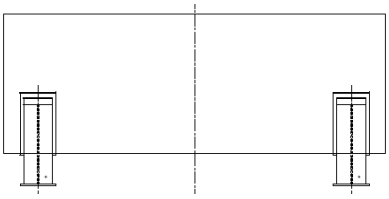
20,000 GAL DBL WALL TANK ON SADDLES - TANK FULL | Preliminary X Final ___

HORIZONTAL TANK WITH SADDLES ON FOOTINGS

Rev 4/22 AHS



1. Round tank supported on saddles
2. Two saddles supported on isolated pedestals/spread footings
3. Treat tank content loading as dead load
4. Treat temperature effects as live load.
5. Concrete design in accordance with ACI 318-14
6. Wind and seismic loads in accordance with ASCE 7-16
7. Run 2 separate analysis - tank full and tank empty (with $\gamma = 0$)
8. Design in accordance with UFC 3-301-01.

Horizontal tank size =	20,000	gallons
Tank diameter, D =	10.5	ft
Tank length, L =	31	ft
Tank weight (empty) =	29,000	lbs
t =	0.250	in (Average tank wall thickness)
Specific Gravity of content, γ =	1	(Use 1.0 if storing or testing with water)
ΔT =	30	deg-F (+ or - tank surface temperature range)
a =	6.50E-06	Coefficient of thermal expansion for steel
Platform LL =	100	psf
Platform width =	12	ft
Platform length =	32	ft
Coefficient of friction, μ =	0.30	Between steel saddle and concrete
Distance between saddles, L2 =	31.00	ft
Saddle length =	10.5	ft
Saddle height, hs =	1	ft (top of concrete support to bottom of tank)
Saddle anchorage =	End "A" non-slide, End "B" slide	

Tank content weight =	166,845	lbs
Total tank + content weight =	195,845	lbs
Max vertical load per saddle =	97,922	lbs

Wind pressure, p =	10.1	psf (factored per ASCE 7)
Lateral wind force, $W1 = pDL$ =	3288	lbs total
Longitudinal wind force, $W2 = \pi D^2.p/4$ =	875	lbs total

Seismic lateral load coefficient, Cs =	0.295	(per ASCE 7)
Seismic lateral load coefficient,+/- Cv =	0.059	(per ASCE 7)
Lateral or longitudinal force, $E = Cs.W$ =	57,774	lbs total
Vertical seismic force, +/- $Ev = Cv.W$ =	11,555	lbs total

Temperature effects - treat as longitudinal Live Load (LL):

$\Delta L = \alpha \Delta T L$ =	0.073	in (Change in length between saddles due to thermal cl
$A = \pi D t$ =	98.96	in^2 (tank cross-sectional area)
$P = \Delta L.A.E/L$ =	559,620	lbs (Force on both pedestals due to ΔL if both saddles
Max friction, μ (DL + LL) =	29,377	lbs (Force on both pedestals due to friction if one sadd
Min friction, μ DL =	4,350	lbs (Force on both pedestals due to friction if one sadd

Loads at bottom of saddles (END "A" - non-slide)

With lateral loads transverse to tank axis

	DL	LL	Wind	Seismic
Vertical (kips)	98	19	0.0	5.8
Lateral Vz (kips)	0	0	1.6	28.9
Moment Mx (ft-kips)	0	0	10.3	180.5

With lateral loads longitudinal to tank axis
Assume non-slide end resisting the total longitudinal load.

	DL	LL	Wind	Seismic
Vertical (kips)	98	19	0.2	17.4
Longitudinal Vx (kips)	0	29	0.9	57.8
Moment Mz (ft-kips)	0	0	0.0	0.0

57,774/2
(each end -slide & nonslide- takes half transverse loads)

design for 28.9*2 (Omega) = ~60kip for shear design

Each group of 2 anchor rods takes 1/2 * 60kip =30kip.

design for 57.8*2 (Omega) = ~120kip for shear design

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Loads at bottom of saddles (END "B" - Slide)

With lateral loads transverse to tank axis

	DL	LL	Wind	Seismic
Vertical (kips)	98	19	0.0	5.8
Lateral Vz (kips)	0	0	1.6	28.9
Moment Mx (ft-kips)	0	0	10.3	180.5

design for 28.9*2 (Omega) or 29.4 = ~60kip for shear design

With lateral loads longitudinal to tank axis
Assume longitudinal loads smaller of either applied load or static friction resistance.

	DL	LL	Wind	Seismic
Vertical (kips)	98	19	0.2	17.4
Longitudinal Vx (kips)	0	29	0.9	29.4
Moment Mz (ft-kips)	0	0	0.0	0.0

ANCHOR BOLTS

Use friction to resist seismic? No (Not recommended for seismic)
SF sliding using friction = 1.50
Anchor bolt spacing = 6.67 ft (between outer anchor bolts)
Anchor bolt gage = 6 in (between anchor bolts parallel with tank centerline)
Min edge distance = 15 in (anchor to edge of pedestal)
Distance btwn anchor bolt and edgeof base pl= 2 in

End A: Anchor configuration = 2 + 2 bolts
Non-Slide Total no. of anchor bolts = 4

Effective anchors resisting longitudinal shear =	4.00	===>	4	bolts x	1.0	groups
Effective anchors resisting transverse shear =	4.00	===>	4	bolts x	1.0	groups
Effective anchors resisting longitudinal uplift =	4.00	===>	4	bolts x	1.0	groups
Effective anchors resisting transverse uplift =	2.00	===>	2	bolts x	1.0	groups

Max load on anchor bolt group (kips) @ End "A" (service level)

	Transverse Direction			Longitudinal Direction		
	Net Uplift *	Applied Shear	Friction Resistance	Net Uplift *	Applied Shear	Friction Resistance
0.6D + 0.6W	0.0	1.0	1.4	0.0	0.5	2.9
0.6D + 0.7E	0.0	**20.2**	0.0	0.0	**40.4**	0.0
D + Temp	0.0	0.0	1.4	0.0	0.0	2.9
	ANCHOR BOLTS REQUIRED					

End B: Anchor configuration = 2 + 2 bolts
Slide Total no. of anchor bolts = 4

Effective anchors resisting longitudinal shear =	0.00	===>	0	bolts x	1.0	groups
Effective anchors resisting transverse shear =	4.00	===>	4	bolts x	1.0	groups
Effective anchors resisting longitudinal uplift =	4.00	===>	4	bolts x	1.0	groups
Effective anchors resisting transverse uplift =	2.00	===>	2	bolts x	1.0	groups

Max load on anchor bolt group (kips) @ End "B" (service level)

	Transverse Direction			Longitudinal Direction		
	Net Uplift *	Applied Shear	Friction Resistance	Net Uplift *	Applied Shear	Friction Resistance
0.6D + 0.6W	0.0	1.0	1.4	0.0	0.0	2.9
0.6D + 0.7E	0.0	**20.2**	0.0	0.0	0.0	0.0
D + Temp	0.0	0.0	1.4	0.0	0.0	2.9
	ANCHOR BOLTS REQUIRED					

Notes:
* Use 0.6D + 0.6W or 0.6D + 0.7E for net uplift calculations
1. Applied load considers empty tank for wind, full tank for seismic.
2. Friction resistance based on empty tank for wind, full tank minus vert seismic for seismic.
3. Friction can be used to resist sliding due to wind (not recommended for seismic).
4. With one sliding saddle, temperature load may be resisted by friction, without anchor bolts.

Applied Load on Each Anchor Bolt Group (k) - LRFD

Factored Load Combinations (Strength Design) per ASCE 7	END "A" Net Uplift *	Transv Shear *	Net Uplift	Longit Shear
6. 0.9D + 1.0T + 1.0W	0.0	1.6	0.0	0.9
7. 0.9D + 1.0T + 1.0E	0.0	28.9	0.0	57.8

Factored Load Combinations (Strength Design) per ASCE 7	END "B" Net Uplift *	Transv Shear *	Net Uplift *	Longit Shear *
6. 0.9D + 1.0T + 1.0W	0.0	1.6	0.0	0.0
7. 0.9D + 1.0T + 1.0E	0.0	28.9	0.0	0.0

* Uplift and lateral shear may not occur concurrently

For shear embedment, apply Ω overstrength factor of = 2.00

PROVIDE 3 GROUPS X (4) 1-1/4" DIAMETER SS TYPE VII ANCHOR BOLTS @ NON-SLIDE END
PROVIDE 2 GROUPS X (4) 1-1/4" DIAMETER SS TYPE VII ANCHOR BOLTS @ SLIDE END (SLOTTED HOLES)
ALLOW 0" MAX GROUT

ANCHOR TENSION EMBEDMENT

Per ASCE 7-16 15.7.5: … the load combinations with overstrength of Section 12.4.3 are not to be used to size the anchor bolts for tanks and horizontal and vertical vessels.

Per UFC 3-301-01 3-8.3: … For anchors in tension, where the special seismic provisions of ACI 318

ACI 318 17.2.3.4 Check: Anchor tension due to EQ > 20% total tension? No
==> ACI 318 Section 17.2.3.4.1 Applies

CA =	0.000	in. Corrosion allowance on anchor bolt diameter
Dbolt =	1.125	in. Anchor bolt diameter
Threads, n_t =	4	UNC coarse thread per inch (4 to 6 typ)
Bolt Fy =	36	ksi. Yield strength of anchor bolts

ACI 318 -17.4.1.2

$A_{se,N} = 0.25\ \pi\ (Dbolt - 0.9743/n_t)^2$ =	0.610	in^2, efective cross-sectional area of anchor bolt
f_{uta} =	68.4	ksi. Min *1.9fya* or 125,000 ksi
$N_{sa} = A_{se,N}\ f_{uta}$ =	41.74	k, Nominal steel strength of anchor in tension
$1.2\ N_{sa}$ =	50.08	k, Design nom steel strength per ACI 17.2.3.4.3(a)(i)

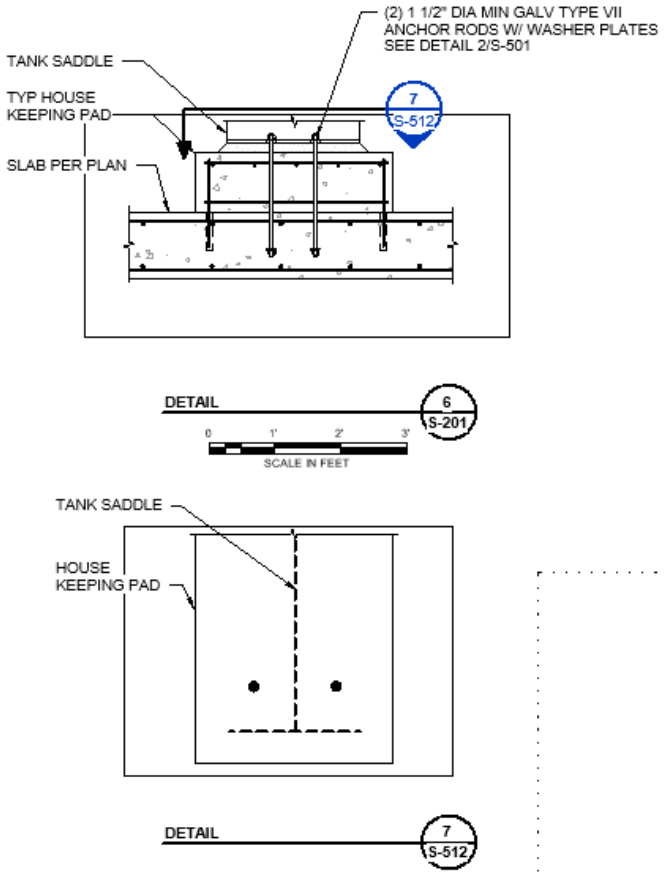
UFC 3-301-01 Replacement to ASCE 7 Section 15.7.5: ...

3-8.3 Section 15.7 - TANKS AND VESSELS.
15.7.5 - Anchorage [Replacement]
Tanks and vessels at grade are permitted to be designed without anchorage where they meet the requirements for unanchored tanks in reference documents. Tanks and vessels supported above grade on structural towers or building structures must be anchored to the supporting structure.
Anchorage must be in accordance with Chapter 17 of ACI 318. Post-installed anchors are permitted to be used in accordance with Section 15.4.9.3 of this UFC. For anchors in tension, where the special seismic provisions of ACI 318 Section 17.10.5.2 apply, the requirements of ACI 318 Section 17.10.5.3 (a) must be satisfied.

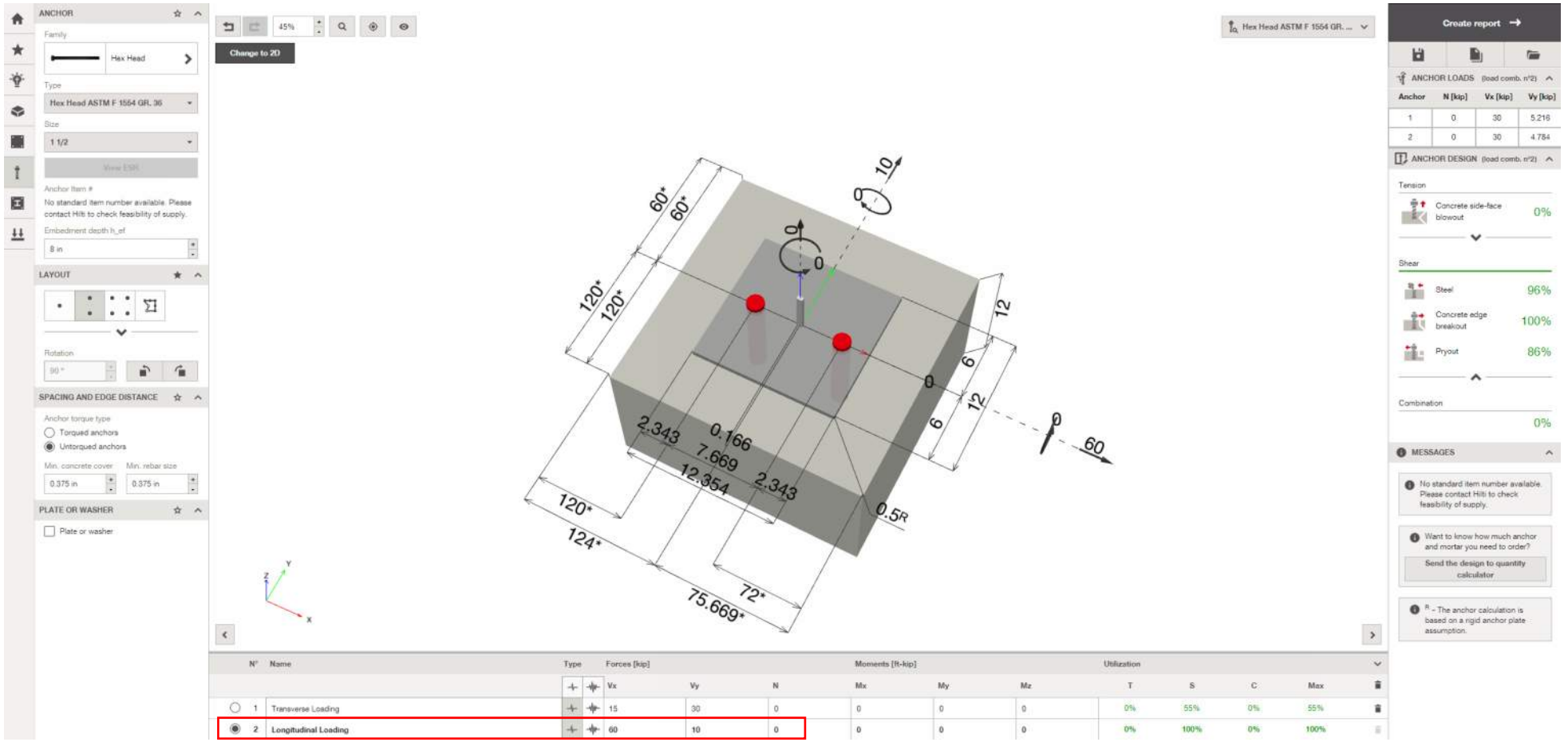
Anchors are not in tension, checks do not apply. Follow Chapter 17 of ACI and can use Omega for shear.

15.7.5 Anchorage. Tanks and vessels at grade are permitted to be designed without anchorage where they meet the requirements for self-anchored tanks in reference documents. Tanks and vessels supported above grade on structural towers or building structures shall be anchored to the supporting structure.

The following special detailing requirements shall apply to steel tank and vessel anchor bolts in Seismic Design Category C, D, E, and F. Anchorage shall be in accordance with Section 15.4.9, whereby the anchor embedment into the concrete shall be designed to develop the steel strength of the anchor in tension. The steel strength of the anchor in tension shall be determined in accordance with ACI 318, Eq. 17.4.1.2. The anchor shall have a minimum gauge length of eight diameters. Post-installed anchors are permitted to be used in accordance



HILTI PROFIS - CAST IN PLACE ANCHORS - SUMMARY OF DESIGN



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Fastening point:			

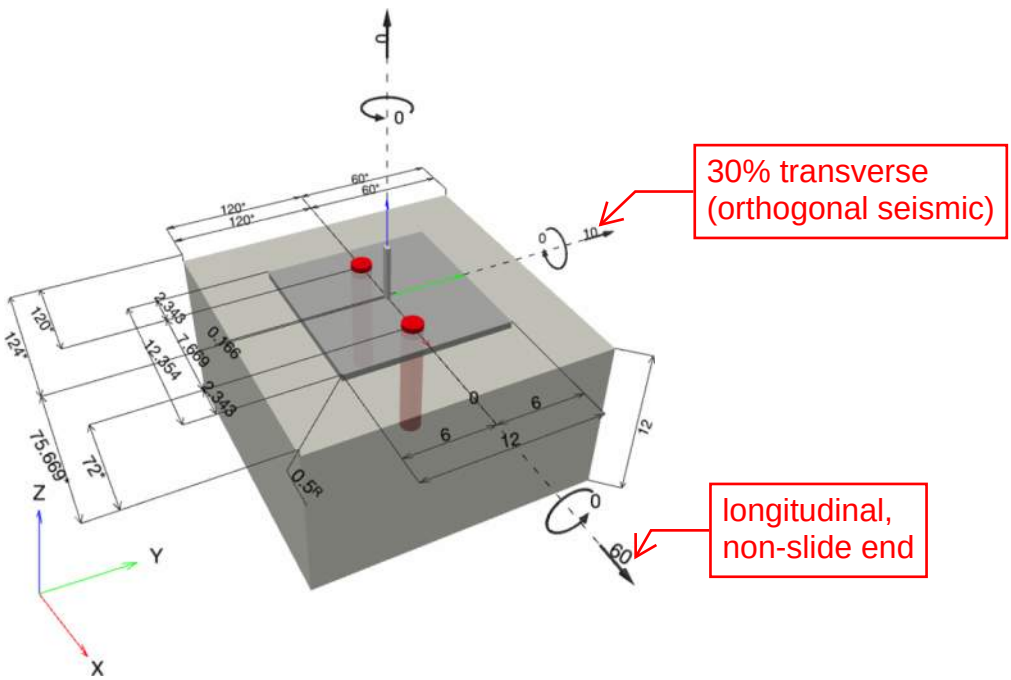
Specifier's comments:

1 Input data

Anchor type and diameter:	**Hex Head ASTM F 1554 GR. 36 1 1/2**
Item number:	not available
Effective embedment depth:	h_{ef} = 8.000 in.
Material:	ASTM F 1554
Evaluation Service Report:	Hilti Technical Data
Issued I Valid:	- | -
Proof:	Design Method ACI 318-14 / CIP
Stand-off installation:	e_b = 0.000 in. (no stand-off); t = 0.500 in.
Anchor plate[R]:	l_x x l_y x t = 12.354 in. x 12.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	Rectangular plates and bars (AISC), 1/2 - 5/16; (L x W x T) = 0.500 in. x 0.312 in.
Base material:	cracked concrete, 5000, f_c' = 5,000 psi; h = 12.000 in.
Reinforcement:	tension: condition B, shear: condition B; edge reinforcement: none or < No. 4 bar

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



Input data and results must be checked for conformity with the existing conditions and for plausibility!
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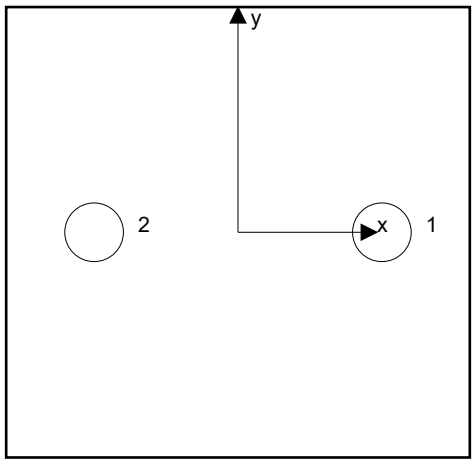
Omega= 2 accounted for in inputted design loads

1.1 Load combination and design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Transverse Loading	N = 0.000; V_x = 15.000; V_y = 30.000; M_x = 0.00000; M_y = 0.00000; M_z = 0.00000;	no	55
2	Longitudinal Loading	N = 0.000; V_x = 60.000; V_y = 10.000; M_x = 0.00000; M_y = 0.00000; M_z = 0.00000;	no	100

2 Load case/Resulting anchor forces

Controlling load case: 2 Longitudinal Loading



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	0.000	30.450	30.000	5.216
2	0.000	30.379	30.000	4.784

max. concrete compressive strain: - [‰]
max. concrete compressive stress: - [psi]
resulting tension force in (x/y)=(0.000/0.000): 0.000 [kip]
resulting compression force in (x/y)=(0.000/0.000): 0.000 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi N_n$	Status
Steel Strength*	N/A	N/A	N/A	N/A
Pullout Strength*	N/A	N/A	N/A	N/A
Concrete Breakout Failure**	N/A	N/A	N/A	N/A
Concrete Side-Face Blowout, direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	30.450	31.894	96	OK
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength*	30.450	35.469	86	OK
Concrete edge failure in direction x+**	60.828	61.152	100	OK

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

$V_{sa} = 0.6\ A_{se,V}\ f_{uta}$ ACI 318-14 Eq. (17.5.1.2b)
$\phi\ V_{steel} \geq V_{ua}$ ACI 318-14 Table 17.3.1.1

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
1.41	58,000

Calculations

V_{sa} [kip]
49.068

Results

V_{sa} [kip]	ϕ_{steel}	$\phi\ V_{sa}$ [kip]	V_{ua} [kip]
49.068	0.650	31.894	30.450

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.2 Pryout Strength

$V_{cp} = k_{cp} \left[\left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \right]$ ACI 318-14 Eq. (17.5.3.1a)

$\phi V_{cp} \geq V_{ua}$ ACI 318-14 Table 17.3.1.1

A_{Nc} see ACI 318-14, Section 17.4.2.1, Fig. R 17.4.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ ACI 318-14 Eq. (17.4.2.1c)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e'_N}{3 h_{ef}}} \right) \leq 1.0$ ACI 318-14 Eq. (17.4.2.4)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}} \right) \leq 1.0$ ACI 318-14 Eq. (17.4.2.5b)

$\psi_{cp,N} = MAX\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}} \right) \leq 1.0$ ACI 318-14 Eq. (17.4.2.7b)

$N_b = k_c \lambda_a \sqrt{f'_c} h_{ef}^{1.5}$ ACI 318-14 Eq. (17.4.2.2a)

Variables

k_{cp}	h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]
2	8.000	0.000	0.000	60.000

$\psi_{c,N}$	c_{ac} [in.]	k_c	λ_a	f'_c [psi]
1.000	∞	24	1.000	5,000

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
380.02	576.00	1.000	1.000	1.000	1.000	38.400

Results

V_{cp} [kip]	$\phi_{concrete}$	ϕV_{cp} [kip]	V_{ua} [kip]
50.670	0.700	35.469	30.450

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.3 Concrete edge failure in direction x+

$V_{cb} = \left(\frac{A_{Vc}}{A_{Vc0}}\right) \psi_{ed,V} \psi_{c,V} \psi_{h,V} \psi_{parallel,V} V_b$ ACI 318-14 Eq. (17.5.2.1a)

$\phi V_{cb} \geq V_{ua}$ ACI 318-14 Table 17.3.1.1

A_{Vc} see ACI 318-14, Section 17.5.2.1, Fig. R 17.5.2.1(b)

$A_{Vc0} = 4.5 c_{a1}^2$ ACI 318-14 Eq. (17.5.2.1c)

$\psi_{ed,V} = 0.7 + 0.3\left(\frac{c_{a2}}{1.5c_{a1}}\right) \leq 1.0$ ACI 318-14 Eq. (17.5.2.6b)

$\psi_{h,V} = \sqrt{\frac{1.5c_{a1}}{h_a}} \geq 1.0$ ACI 318-14 Eq. (17.5.2.8)

$V_b = 9 \lambda_a \sqrt{f_c'} c_{a1}^{1.5}$ ACI 318-14 Eq. (17.5.2.2b)

Variables

c_{a1} [in.]	c_{a2} [in.]	$\psi_{c,V}$	h_a [in.]	l_e [in.]
72.000	60.000	1.000	12.000	8.000

λ_a	d_a [in.]	f_c' [psi]	$\psi_{parallel,V}$
1.000	1.500	5,000	1.000

Calculations

A_{Vc} [in.^{2}]	A_{Vc0} [in.^{2}]	$\psi_{ed,V}$	$\psi_{h,V}$	V_b [kip]
2,016.00	23,328.00	0.867	3.000	388.800

Results

V_{cb} [kip]	$\phi_{concrete}$	ϕV_{cb} [kip]	V_{ua} [kip]
87.360	0.700	61.152	60.828

5 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/

Fastening meets the design criteria!

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Company:		Page:	6
Address:		Specifier:	
Phone I Fax:	|	E-Mail:	
Design:	Concrete - Oct 27, 2023	Date:	11/16/2023
Fastening point:			

6 Installation data

Profile: Rectangular plates and bars (AISC), 1/2 - 5/16; (L x W x T) = 0.500 in. x 0.312 in.

Hole diameter in the fixture: d_f = 1.562 in.

Plate thickness (input): 0.500 in.

Recommended plate thickness: not calculated

Anchor type and diameter: Hex Head ASTM F 1554 GR. 36 1 1/2

Item number: not available

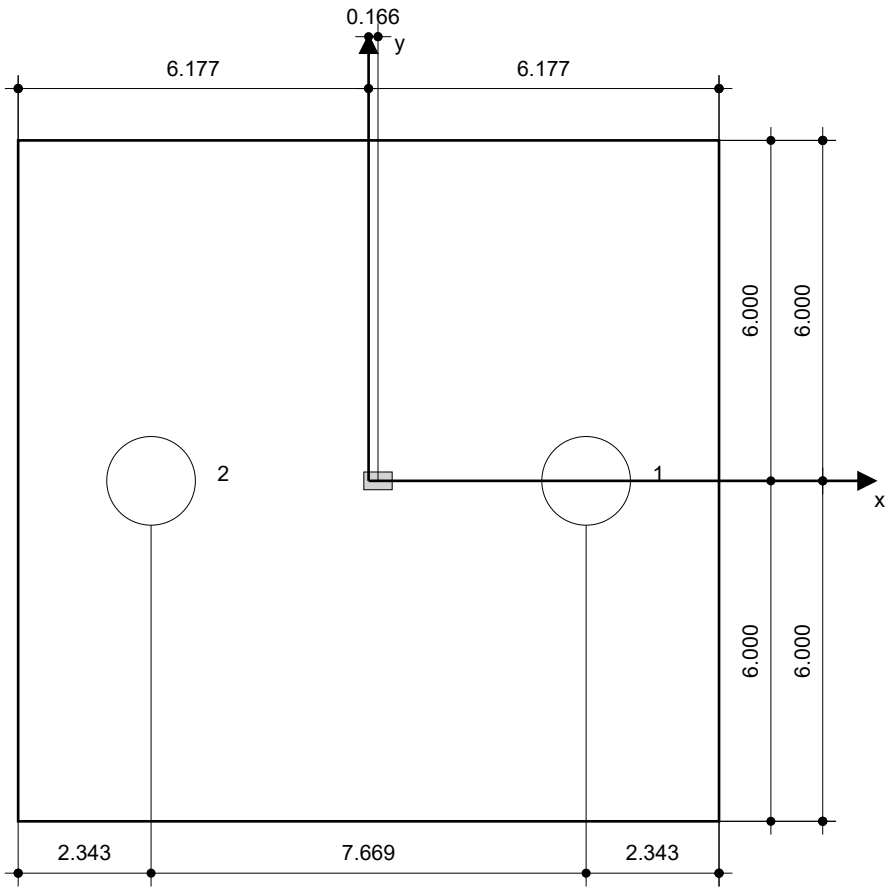
Maximum installation torque: -

Hole diameter in the base material: - in.

Hole depth in the base material: 8.000 in.

Minimum thickness of the base material: 9.500 in.

Hilti Hex Head headed stud anchor with 8 in embedment, 1 1/2, Steel galvanized, installation per instruction for use



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	3.834	0.000	127.669	72.000	120.000	60.000
2	-3.834	0.000	120.000	79.669	120.000	60.000

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Utility Corridor

- Truss Steel Analysis and Connections
- Expansion Loop Steel
- Fire Rack Support Steel
- Misc Connection Checks
- Pile Cap Finite Element Analysis
- 18 Inch Wide Concrete Beams
- 24 Inch Wide Concrete Beams
- 24 Inch Wide Concrete Ties
- 42 Inch Wide Concrete Ties
- 48 Inch Wide Concrete Ties
- Beams Between Mid and North Pile Cap
- Misc Section Checks

Truss Steel Analysis and Connections

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DETERMINE ICE LOADS FOR VARIOUS W-SHAPES

Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M273	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M313	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M314	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M336	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M337	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M340	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M342	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M343	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M346	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M347	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M349	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M350	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M351	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M352	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M353	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M354	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M355	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M356	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M357	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M358	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M359	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M360	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M361	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M362	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M363	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M364	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M365	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M366	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M367	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M368	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M369	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M370	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M371	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M372	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M373	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M374	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M375	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M376	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M377	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M378	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M379	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M380	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M381	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M382	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M383	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M384	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M385	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M386	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M387	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M388	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M389	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M390	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M392	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M394	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M396	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M397	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M398	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M399	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M400	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M401	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M402	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M403	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M404	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M405	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M406	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M409	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M410	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M411	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M412	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M413	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M414	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M415	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M416	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M95	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M96	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M530	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M531	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M532	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M533	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M534	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M535	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M536	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M537	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M538	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M539	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M540	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M541	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M542	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M543	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M544	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M545	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M546	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M547	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M548	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M549	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M550	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M551	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M552	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M553	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M554	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M555	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M556	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M557	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M558	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M559	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M560	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M561	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M562	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M563	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M564	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M565	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M566	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M567	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M568	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M569	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M570	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M571	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M572	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M573	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M574	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M575	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M576	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M577	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M578	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M579	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M580	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M581	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M582	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M583	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M584	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M585	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M586	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M587	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M588	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M589	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M590	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M591	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M592	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M593	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M594	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M595	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M596	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M597	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M598	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M599	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M600	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M601	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M602	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M618	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M619	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M620	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M621	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M622	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M623	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M624	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M625	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M626	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M627	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M628	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M629	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M630	W8X24	28.91667	0.99	4.54	7.93	6.5	10.25	210.98	0.082
M631	W8X24	28.91667	0.99	4.54	7.93	6.5	10.25	210.98	0.082
M632	W8X18	30.83333	0.99	4.57	8.14	5.25	9.69	204.61	0.080
M633	W8X18	30.83333	0.99	4.57	8.14	5.25	9.69	204.61	0.080
M634	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M635	L3X3X4	28.83333	0.99	4.54	3	3	4.24	125.20	0.049
M636	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M637	L3X3X4	28.83333	0.99	4.54	3	3	4.24	125.20	0.049
M638	L3X3X4	31	0.99	4.57	3	3	4.24	126.58	0.049
M639	L3X3X4	27.25	0.98	4.51	3	3	4.24	124.13	0.048
M640	W8X18	28.91667	0.99	4.54	8.14	5.25	9.69	202.88	0.079
M641	W8X18	28.91667	0.99	4.54	8.14	5.25	9.69	202.88	0.079
M642	W8X18	28.91667	0.99	4.54	8.14	5.25	9.69	202.88	0.079
M643	W8X18	28.91667	0.99	4.54	8.14	5.25	9.69	202.88	0.079
M644	L3X3X4	24.91646	0.97	4.47	3	3	4.24	122.46	0.048
M645	L3X3X4	28.91667	0.99	4.54	3	3	4.24	125.25	0.049

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M646	L3X3X4	24.91646	0.97	4.47	3	3	4.24	122.46	0.048
M647	L3X3X4	28.91667	0.99	4.54	3	3	4.24	125.25	0.049
M648	W8X18	33.83333	1.00	4.61	8.14	5.25	9.69	207.14	0.081
M649	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M650	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M651	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M652	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M653	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M654	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M655	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M656	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M657	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M658	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M659	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M660	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M407	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M408	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M417	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M418	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M419	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M420	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M421	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M422	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M423	L3X3X4	32.5	1.00	4.59	3	3	4.24	127.49	0.050
M424	L3X3X4	32.5	1.00	4.59	3	3	4.24	127.49	0.050
M425	L3X3X4	32.5	1.00	4.59	3	3	4.24	127.49	0.050
M426	L3X3X4	32.5	1.00	4.59	3	3	4.24	127.49	0.050
M427	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M428	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M429	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M430	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M431	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M432	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M433	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M434	W8X18	32.5	1.00	4.59	8.14	5.25	9.69	206.04	0.080
M439	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M440	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M441	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M442	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M443	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M444	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M445	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M446	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M447	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050

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M448	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M449	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M450	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M451	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M452	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M453	W8X24	24.625	0.97	4.47	7.93	6.5	10.25	206.60	0.080
M454	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M455	L3X3X4	32.58333	1.00	4.59	3	3	4.24	127.54	0.050
M456	L3X3X4	31.41667	1.00	4.58	3	3	4.24	126.84	0.049
M457	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M458	L3X3X4	33.83333	1.00	4.61	3	3	4.24	128.27	0.050
M463	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M464	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M465	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M466	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M467	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M472	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M486	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M487	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M488	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M489	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M490	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M491	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M492	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M493	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M494	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M495	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M496	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M499	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M500	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M501	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M502	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M503	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M504	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M505	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M391	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M393	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M395	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M459	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M461	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M462	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M470	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M474	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M475	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M476	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M477	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M478	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M479	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M480	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M481	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M482	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M483	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M484	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M519	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M520	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M521	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M522	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M523	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M524	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M525	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M526	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M527	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M528	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M529	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M603	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M604	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M605	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M606	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M607	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M608	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M609	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M610	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M611	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M612	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M613	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M614	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M615	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M616	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M617	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M661	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M662	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M663	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M664	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M665	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M666	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M667	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M668	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M669	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M670	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M671	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M672	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M673	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M674	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M675	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M676	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M677	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M678	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M679	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M680	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M681	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M682	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M683	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M684	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M685	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M686	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M687	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M688	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M689	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M690	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M691	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M692	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M693	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M694	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M695	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M696	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M697	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M701	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M702	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M703	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M704	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M705	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M706	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M460	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M471	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M473	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M507	W10X33	24.625	0.97	4.47	9.73	7.96	12.57	239.12	0.093
M508	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M509	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M510	LL4X4X4X6	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M511	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M512	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M513	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063

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DETERMINE ICE LOADS FOR VARIOUS W-SHAPES

Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M514	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M515	LL4X4X4X6	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M516	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M517	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M518	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M707	W6X15	28.91667	0.99	4.54	5.99	5.99	8.47	185.56	0.072
M708	L4X4X4	28.91667	0.99	4.54	4	4	5.66	145.42	0.057
M709	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M710	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M711	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M712	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M713	W6X15	30.31	0.99	4.56	5.99	5.99	8.47	186.74	0.073
M714	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M715	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M716	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M717	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M718	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M719	WT4X9	25.5	0.97	4.48	4.07	5.25	6.64	156.69	0.061
M720	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M721	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M722	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M723	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M724	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M725	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M726	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M727	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M728	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M729	L4X4X4	25.5	0.97	4.48	4	4	5.66	142.80	0.056
M730	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M731	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M732	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M733	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M734	WT3X7.5	25.5	0.97	4.48	3	5.99	6.70	157.48	0.061
M735	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M736	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M737	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M738	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M739	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M740	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M741	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M742	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M743	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M744	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057
M745	L4X4X4	30.31	0.99	4.56	4	4	5.66	146.41	0.057

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Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M746	L5X5X5	30.31	0.99	4.56	5	5	7.07	166.68	0.065
M747	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M748	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M749	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M750	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M751	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M752	L5X5X5	25.5	0.97	4.48	5	5	7.07	162.72	0.063
M753	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M754	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M755	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M756	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M757	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M758	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M759	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M760	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M761	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M762	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M763	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M764	L3X3X4	25.5	0.97	4.48	3	3	4.24	122.89	0.048
M765	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M766	W6X15	25.5	0.97	4.48	5.99	5.99	8.47	182.44	0.071
M768	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M769	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M771	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M773	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M774	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M775	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M776	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M777	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M778	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M779	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M780	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M781	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M782	L3X3X4	25.1667	0.97	4.48	3	3	4.24	122.64	0.048
M783	L3X3X4	25.1667	0.97	4.48	3	3	4.24	122.64	0.048
M784	L3X3X4	25.1667	0.97	4.48	3	3	4.24	122.64	0.048
M785	L3X3X4	25.1667	0.97	4.48	3	3	4.24	122.64	0.048
M485	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M497	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M498	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M786	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M787	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M788	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M698	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048

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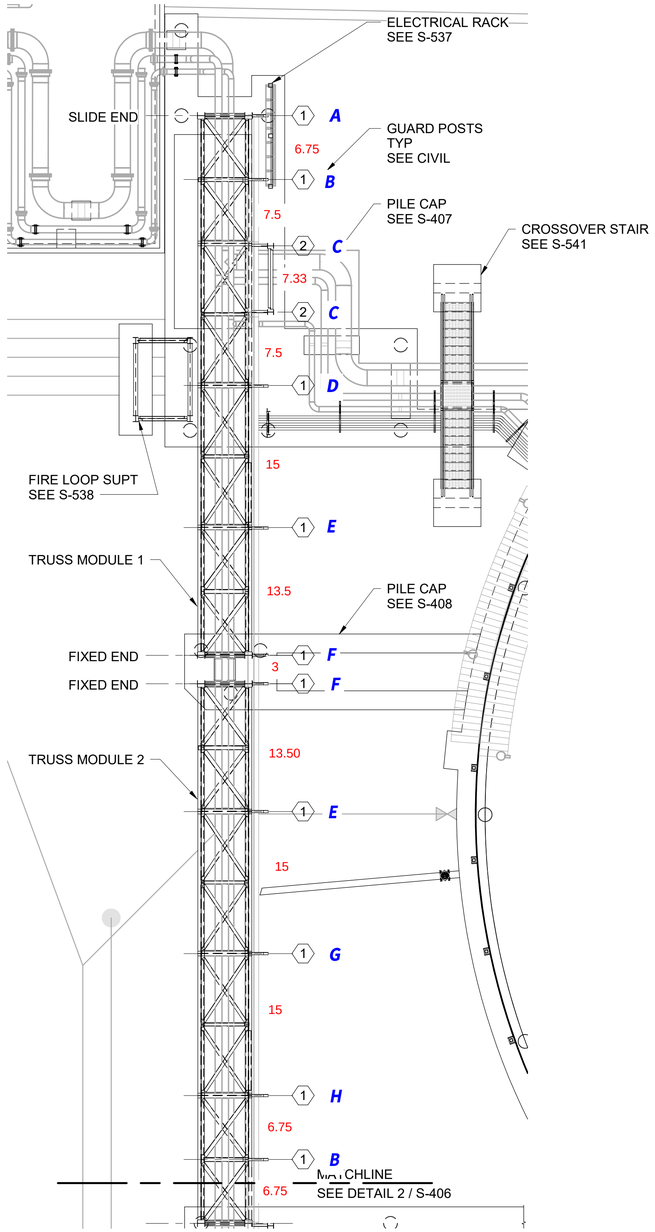
Ice Loads for Various Shapes				Preliminary	Final

DETERMINE ICE LOADS FOR VARIOUS W-SHAPES

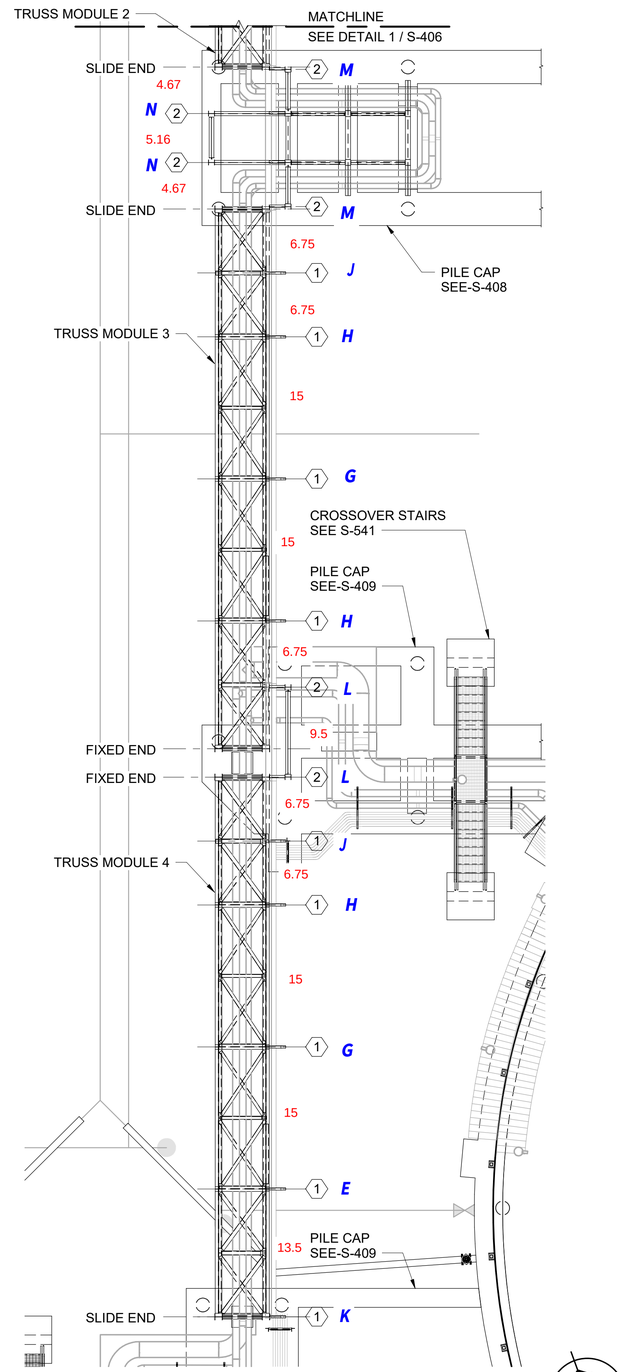
Member	Shape	z	f_z	t_d	d	b_f	D_c	A_i	w_{ice}
M699	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M700	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049
M468	L3X3X4	26.83333	0.98	4.51	3	3	4.24	123.84	0.048
M469	L3X3X4	28.08333	0.98	4.53	3	3	4.24	124.70	0.048
M506	L3X3X4	29.33333	0.99	4.55	3	3	4.24	125.52	0.049



DETAIL 1

0 4' 8' 16'

SCALE IN FEET



DETAIL 2

0 4' 8' 16'

SCALE IN FEET

NOTES:

1. SEE S-001 AND S-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ELEVATIONS SHOWN EQUAL DATUM ELEVATION SHOWN ON THE CIVIL DRAWINGS.
3. SEE CIVIL DRAWINGS FOR EXACT LOCATION AND ORIENTATION.
4. SEE S-500 DRAWING SERIES FOR TYPICAL DETAILS.
5. SEE MECHANICAL DRAWINGS FOR PIPE SUPPORT TYPES AND LOCATIONS. SEE S-550 SERIES FOR PIPE SUPPORT DETAILS.

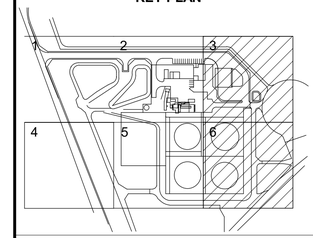
KEYED NOTES:

1 INDICATES LOCATION OF CABLE TRAY SUPPORT AT TRUSS MODULE, SEE S-534 FOR DETAILS.

2 INDICATES LOCATION OF CABLE TRAY SUPPORT BY SEPARATE STEEL STRUCTURE.

no.	date	by	ckd	description

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
Burns & McDonnell Engineering Co, Inc.

date	detailed
06/06/23	M. PATEL
designed	checked
A. KRAL	K. MICHAELIS

PDX FUEL COMPANY L.L.C

PORTLAND INTERNATIONAL AIRPORT
5000 NE MARINE DR.
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PDX FACILITY IMPROVEMENTS
UTILITY TRUSS PLAN

project	contract
153929	

drawing **S-406 — A** rev.

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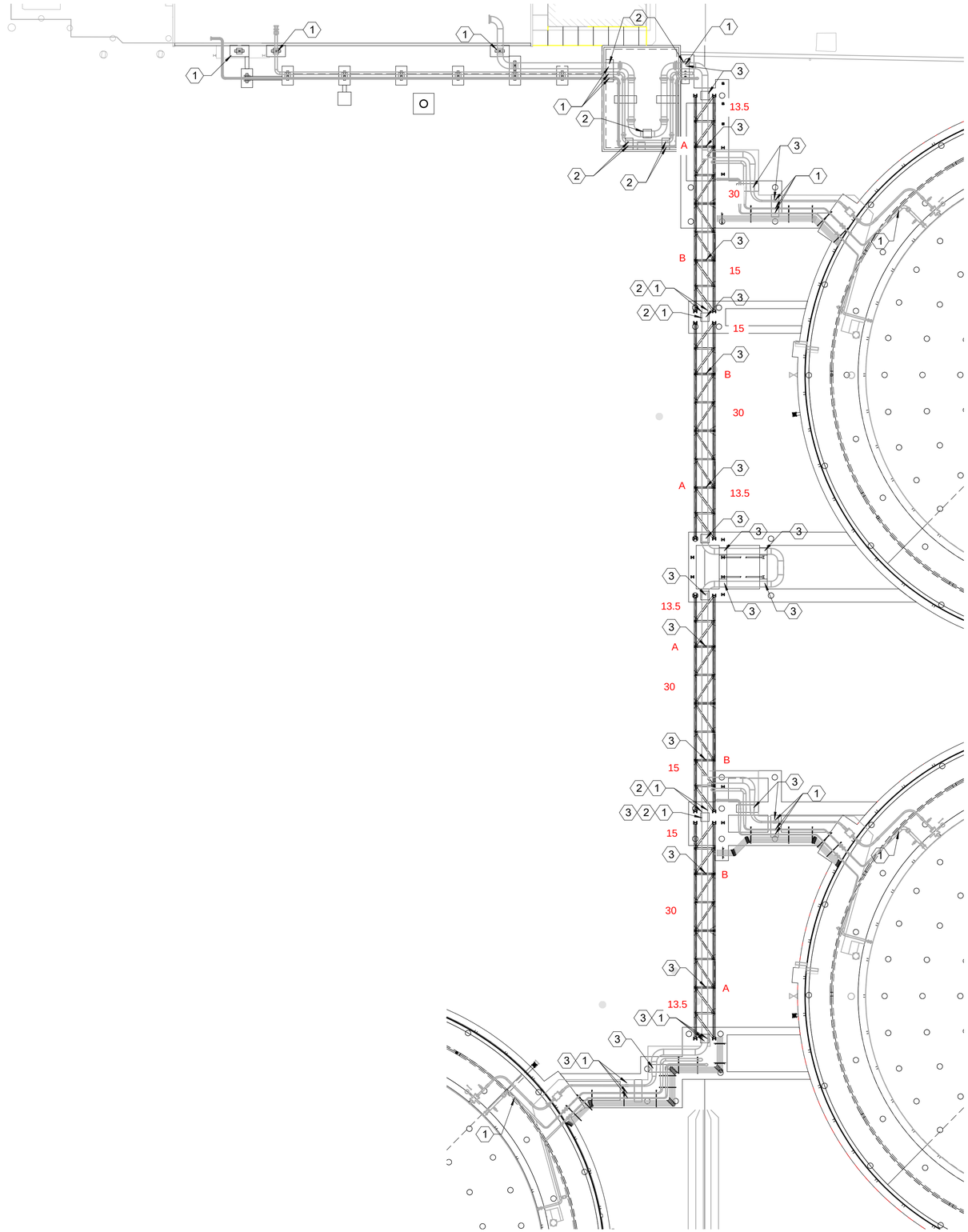


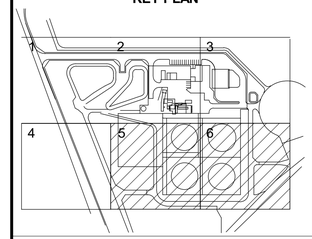
KEYED NOTES:

1. GUIDED SUPPORT
2. LINESTOP SUPPORT
3. V-STOP AT 20" SUPPORT

PLAN 1

no.	date	by	ckd	description

KEY PLAN



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date	detailed
12/13/23	A.KRAL
designed	checked
A.KRAL	A.KRAL

PDX FUEL COMPANY L.L.C

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PORTLAND, OREGON 97218

PDX FACILITY IMPROVEMENTS
GUIDE AND LINESTOP LOCATION PLAN

project	contract
153929	

drawing **EX-1** rev. —

file

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Location ID Tag	Utility Type	Span #1 (ft)	Span #2 (ft)	Depth of Tray (in)	Width of Tray (in)	Empty Weight (plf)	Weight Full (plf)	Tributary Length (ft)	Empty DL (kips) / Conduit	Empty Load @ RISA Nodes	Total DL (full) (kips)	Cable / Fluid Load	Cable / Fluid Load @ Nodes	$D_c = (d^2+b_i^2)^{0.5}$ = (in)	$A_i = \pi t_d(D_c+t_d)$ = (in^2)	$w_{ice} = A_i\gamma_{ice}$ = (klf)	Ice at Support (kips)	ICE Load @ Nodes	F (kips/ft)	WL @ Support (kips)	Wind Load @ Nodes	E-W Cs Seismic Factor	E-W Seismic Load	E-W Seismic Load @ Nodes	N-S Cs Seismic Factor	N-S Seismic Load		N-S Seismic Load @ Nodes	Cs Vertical Seismic Factor	Vertical Seismic Load @ Support (kips)	Vert Seismic Load @ Nodes
	1" RGS	10.00	10.00	1	1.315	1.61	2.193	10.0	0.016	0.105	0.022	0.006	0.038	1.32	22.97	0.0089	0.089	0.581	0.003	0.030	0.195	0.885	0.019	0.126	0.885	0.019		0.126	0.118	0.003	0.017
	2" RGS	10.00	10.00	2	2.375	3.5	4.088	10.0	0.035	0.263	0.041	0.006	0.044	2.38	30.04	0.0117	0.117	0.876	0.005	0.054	0.406	0.885	0.036	0.271	0.885	0.036		0.271	0.118	0.005	0.036
A	6" Cable Tray	6.75	0.00	5	6	3.42	11	3.4	0.012		0.037	0.026	0.026	7.81	66.33	0.0258	0.087		0.018	0.059		0.885	0.033		0.885	0.033	2.846		0.118	0.004	
A	12" Cable Tray	6.75	0.00	5	12	3.71	20	3.4	0.013		0.068	0.055	0.055	13.00	100.98	0.0393	0.133		0.018	0.059		0.885	0.060		0.885	0.060	4.771		0.118	0.008	
B	6" Cable Tray	6.75	7.50	5	6	3.42	11	7.1	0.024		0.078	0.054	0.054	7.81	66.33	0.0258	0.184		0.018	0.125		0.885	0.069		0.885	0.069	2.846		0.118	0.009	
B	12" Cable Tray	6.75	7.50	5	12	3.71	20	7.1	0.026		0.143	0.116	0.116	13.00	100.98	0.0393	0.280		0.018	0.125		0.885	0.126		0.885	0.126	4.771		0.118	0.017	
C	6" Cable Tray	7.50	7.50	5	6	3.42	11	7.5	0.026		0.083	0.057	0.057	7.81	66.33	0.0258	0.193		0.018	0.132		0.885	0.073		0.885	0.073			0.118	0.010	
C	12" Cable Tray	7.50	7.50	5	12	3.71	20	7.5	0.028		0.150	0.122	0.122	13.00	100.98	0.0393	0.295		0.018	0.132		0.885	0.133		0.885	0.133			0.118	0.018	
D	6" Cable Tray	7.50	15.00	5	6	3.42	11	11.3	0.038		0.124	0.085	0.085	7.81	66.33	0.0258	0.290		0.018	0.197		0.885	0.110		0.885	0.110			0.118	0.015	
D	12" Cable Tray	7.50	15.00	5	12	3.71	20	11.3	0.042		0.225	0.183	0.183	13.00	100.98	0.0393	0.442		0.018	0.197		0.885	0.199		0.885	0.199			0.118	0.027	
E	6" Cable Tray	15.00	13.50	5	6	3.42	11	14.3	0.049		0.157	0.108	0.108	7.81	66.33	0.0258	0.368		0.018	0.250		0.885	0.139		0.885	0.139			0.118	0.018	
E	12" Cable Tray	15.00	13.50	5	12	3.71	20	14.3	0.053		0.285	0.232	0.232	13.00	100.98	0.0393	0.560		0.018	0.250		0.885	0.252		0.885	0.252			0.118	0.034	
F	6" Cable Tray	13.50	3.00	5	6	3.42	11	8.3	0.028		0.091	0.063	0.063	7.81	66.33	0.0258	0.213		0.018	0.145		0.885	0.080		0.885	0.080			0.118	0.011	
F	12" Cable Tray	13.50	3.00	5	12	3.71	20	8.3	0.031		0.165	0.134	0.134	13.00	100.98	0.0393	0.324		0.018	0.145		0.885	0.146		0.885	0.146			0.118	0.019	
G	6" Cable Tray	15.00	15.00	5	6	3.42	11	15.0	0.051		0.165	0.114	0.114	7.81	66.33	0.0258	0.387		0.018	0.263		0.885	0.146		0.885	0.146			0.118	0.019	
G	12" Cable Tray	15.00	15.00	5	12	3.71	20	15.0	0.056		0.300	0.244	0.244	13.00	100.98	0.0393	0.589		0.018	0.263		0.885	0.266		0.885	0.266			0.118	0.035	
H	6" Cable Tray	15.00	6.75	5	6	3.42	11	10.9	0.037		0.120	0.082	0.082	7.81	66.33	0.0258	0.281		0.018	0.191		0.885	0.106		0.885	0.106			0.118	0.014	
H	12" Cable Tray	15.00	6.75	5	12	3.71	20	10.9	0.040		0.218	0.177	0.177	13.00	100.98	0.0393	0.427		0.018	0.191		0.885	0.192		0.885	0.192			0.118	0.026	
J	6" Cable Tray	6.75	6.75	5	6	3.42	11	6.8	0.023		0.074	0.051	0.051	7.81	66.33	0.0258	0.174		0.018	0.118		0.885	0.066		0.885	0.066			0.118	0.009	
J	12" Cable Tray	6.75	6.75	5	12	3.71	20	6.8	0.025		0.135	0.110	0.110	13.00	100.98	0.0393	0.265		0.018	0.118		0.885	0.119		0.885	0.119			0.118	0.016	
K	6" Cable Tray	13.50	0.00	5	6	3.42	11	6.8	0.023		0.074	0.051	0.051	7.81	66.33	0.0258	0.174		0.018	0.118		0.885	0.066		0.885	0.066			0.118	0.009	
K	12" Cable Tray	13.50	0.00	5	12	3.71	20	6.8	0.025		0.135	0.110	0.110	13.00	100.98	0.0393	0.265		0.018	0.118		0.885	0.119		0.885	0.119			0.118	0.016	
L	6" Cable Tray	6.75	9.50	5	6	3.42	11	8.1	0.028		0.089	0.062	0.062	7.81	66.33	0.0258	0.210		0.018	0.143		0.885	0.079		0.885	0.079			0.118	0.011	
L	12" Cable Tray	6.75	9.50	5	12	3.71	20	8.1	0.030		0.163	0.132	0.132	13.00	100.98	0.0393	0.319		0.018	0.143		0.885	0.144		0.885	0.144			0.118	0.019	
M	6" Cable Tray	6.75	4.67	5	6	3.42	11	5.7	0.020		0.063	0.043	0.043	7.81	66.33	0.0258	0.147		0.018	0.100		0.885	0.056		0.885	0.056			0.118	0.007	
M	12" Cable Tray	6.75	4.67	5	12	3.71	20	5.7	0.021		0.114	0.093	0.093	13.00	100.98	0.0393	0.224		0.018	0.100		0.885	0.101		0.885	0.101			0.118	0.013	
N	6" Cable Tray	4.67	4.67	5	6	3.42	11	4.7	0.016		0.051	0.035	0.035	7.81	66.33	0.0258	0.120		0.018	0.082		0.885	0.045		0.885	0.045			0.118	0.006	
N	12" Cable Tray	5.17	5.17	5	12	3.71	20	5.2	0.019		0.103	0.084	0.084	13.00	100.98	0.0393	0.203		0.018	0.091		0.885	0.092		0.885	0.092			0.118	0.012	

Location ID Tag	Utility Type	Span #1 (ft)	Span #2 (ft)	Pipe Diameter (in)	Outside Diameter (in)	Empty Weight (plf)	Weight Full (plf)	Tributary Length (ft)	Empty DL (kips) / Conduit	Empty Load @ RISA Nodes	Total DL (full) (kips)	Cable / Fluid Load	Cable / Fluid Load @ Nodes	$D_c = (d^2+b_i^2)^{0.5}$ = (in)	$A_i = \pi t_d(D_c+t_d)$ = (in^2)	$w_{ice} = A_i\gamma_{ice}$ = (klf)	Ice at Support (kips)	ICE Load @ Nodes	F (kips/ft)	WL @ Support (kips)	Wind Load @ Nodes	E-W Cs Seismic Factor	E-W Seismic Load	E-W Seismic Load @ Nodes	N-S Cs Seismic Factor	N-S Seismic Load		N-S Seismic Load @ Nodes	Cs Vertical Seismic Factor	Vertical Seismic Load @ Support (kips)	Vert Seismic Load @ Nodes
	6" Firewater	15.00	15.00	6	6.625	19.0	31.5	15.0	0.284	-	0.472	0.188	-	6.63	58.42	0.0227	0.341	-	0.015	0.227	-	0.885	0.418	-	0.885	0.418		-	0.118	0.06	
	6" Low Suction	15.00	15.00	6	6.625	19.0	31.5	15.0	0.284	-	0.472	0.188	-	6.63	58.42	0.0227	0.341	-	0.015	0.227	-	0.885	0.418	-	0.885	0.418		-	0.118	0.06	
	8" Fill	15.00	15.00	8	8.625	28.5	50.2	15.0	0.428	-	0.753	0.325	-	8.63	71.77	0.0279	0.419	-	0.020	0.295	-	0.885	0.666	-	0.885	0.666		-	0.118	0.09	
	8" Fill	15.00	13.50	8	8.625	28.5	50.2	14.3	0.406	-	0.715	0.309	-	8.63	71.77	0.0279	0.398	-	0.020	0.280	-	0.885	0.633	-	0.885	0.633		-	0.118	0.08	
	8" Fill	13.50	3.00	8	8.625	28.5	50.2	8.3	0.235		0.414	0.179		8.63	71.77	0.0279	0.230	-	0.020	0.162	-	0.885	0.367	-	0.885	0.367		-	0.118	0.05	
A	20" Suction	13.50	30.00	20	20	78.5	204.6	21.8	1.708	-	4.451	2.743	-	20.00	147.71	0.0574	1.249	-	0.046	0.992	-	0.885	3.939	-	0.885	3.939		-	0.118	0.53	
B	20" Suction	30.00	15.00	20	20	78.5	204.6	22.5	1.767	-	4.604	2.838	-	20.00	147.71	0.0574	1.292	-	0.046	1.027	-	0.885	4.075	-	0.885	4.075		-	0.118	0.54	
	6" Firewater	15.00	13.50	6	6.625	19.0	31.5	14.3	0.270	-	0.448	0.178	-	6.63	58.42	0.0227	0.324	-	0.015	0.215	-	0.885	0.397	-	0.885	0.397		-	0.118	0.05	
	6" Firewater	13.50	3.00	6	6.625	19.0	31.5	8.3	0.156	-	0.260	0.103	-	6.63	58.42	0.0227	0.187	-	0.015	0.125	-	0.885	0.230	-	0.885	0.230		-	0.118	0.03	
	6" Low Suction	15.00	13.50	6	6.625	19.0	31.5	14.3	0.270	-	0.448	0.178	-	6.63	58.42	0.0227	0.324	-	0.015	0.215	-	0.885	0.397	-	0.885	0.397		-	0.118	0.05	
	6" Low Suction	13.50	3.00	6	6.625	19.0	31.5	8.3	0.156	-	0.260	0.103	-	6.63	58.42	0.0227	0.187	-	0.015	0.125	-	0.885	0.230	-	0.885	0.230		-	0.118	0.03	

Rack Width =	5	ft
Conduit Spacing =	3	in
1" Conduits =	13	
2" Conduits =	15	
height, z =	6.5	ft
$f_z = (z/33)^{0.10}$ =	0.850	
t =	2.00	in
K_{zt} =	1.0	
I_i =	1.25	
$t_d = tI_if_z(K_{zt})^{0.35}$ =	2.13	
γ_{ice} =	56	lb/ft^3
Weight of Water =	62.4	plf
Weight of Jet Fuel =	53.04	plf
Wind Speed =	107	mph
q =	24.78	psf
G =	0.85	0
Cf =	1.3	
Kz =	0.85	0 0

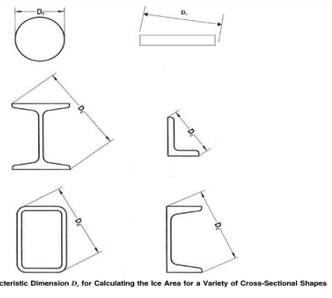
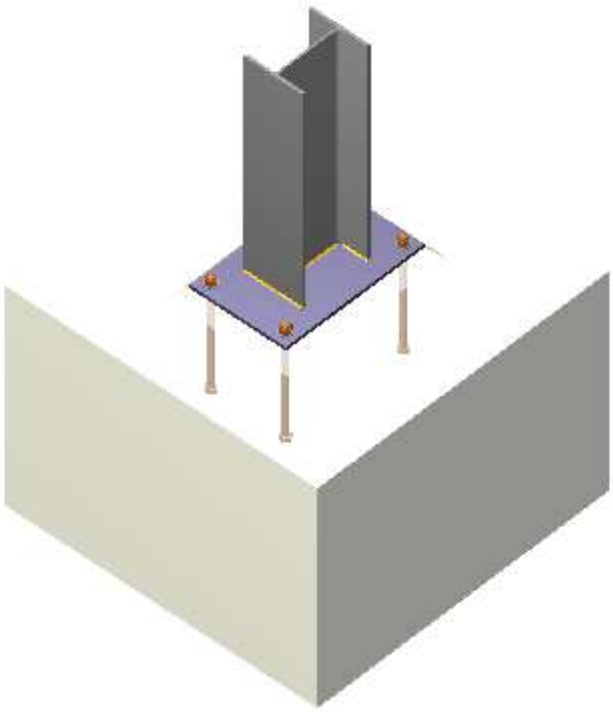
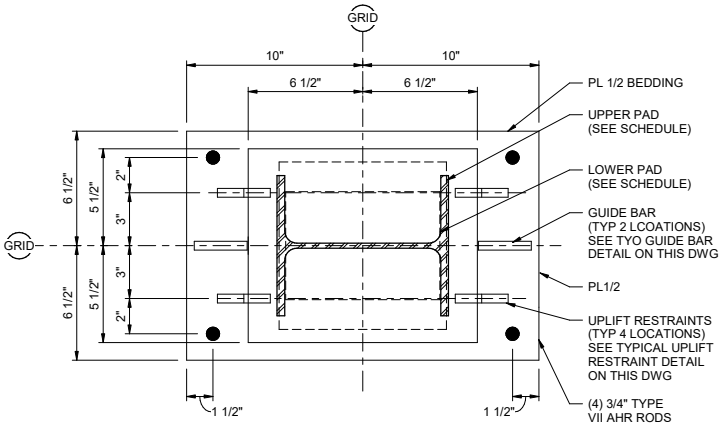


FIGURE 10.4-1 Characteristic Dimension D_c for Calculating the Ice Area for a Variety of Cross-Sectional Shapes

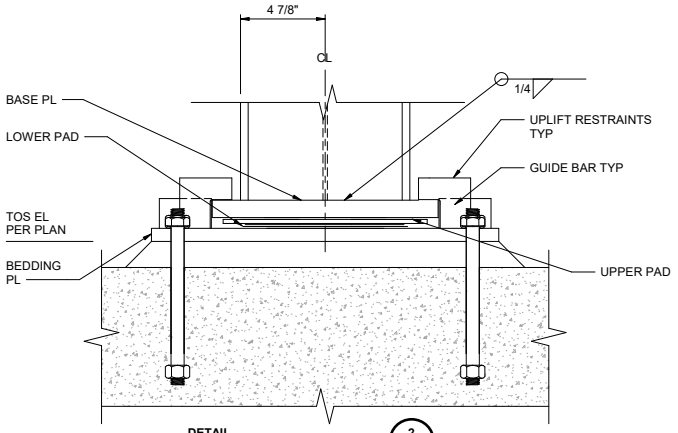




DETAIL 1

TYPICAL GUIDE SUPPORT

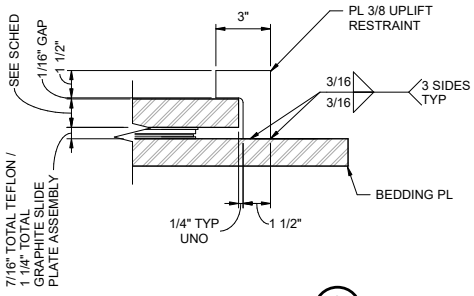
SCALE IN FEET



DETAIL 2

GUIDE SUPPORT - SECTION

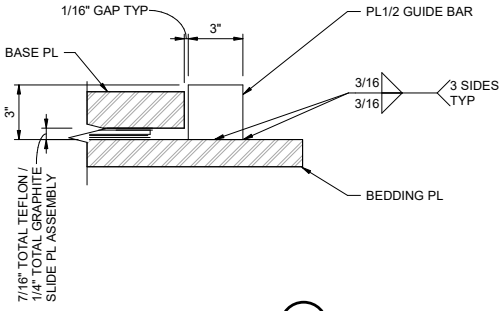
SCALE IN FEET



DETAIL 3

GUIDE SUPPORT - UPLIFT RESTRAINT DETAIL

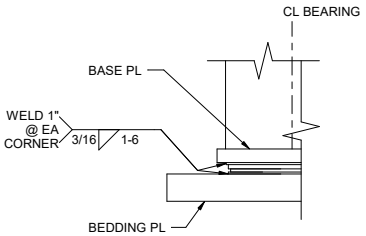
SCALE IN FEET



DETAIL 4

GUIDE SUPPORT - GUIDE BAR DETAIL

SCALE IN FEET



DETAIL 5

GUIDE SUPPORT - PLATE DETAIL

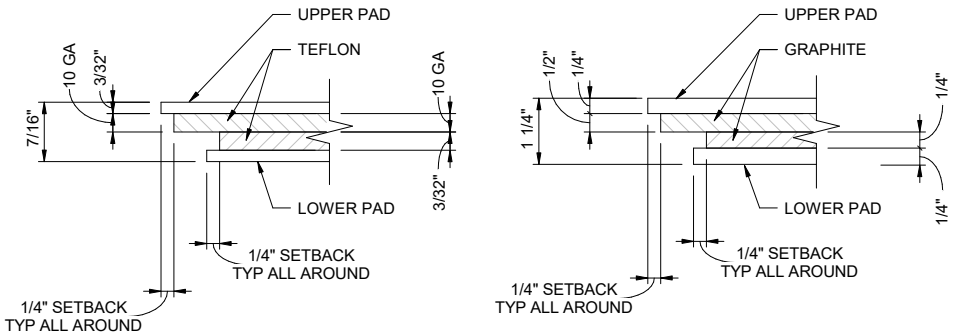
SCALE IN FEET

7 kips uplift
13 kips shear

LOADS INDICATED ABOVE ARE DISTRIBUTED OVER 4 LIFTOFF LUGS AND A GUIDE BAR WELDS FOR UPLIFT AND SHEAR ARE ACCEPTABLE BY ENGINEERING INSPECTION.

SHEAR - 1.392*3*(3+3) = 25 KIPS > 13 KIPS (OK)

UPLIFT - 1.392*3*8*1.5 = 50 KIPS >> 7 KIPS (OK)



TEFLON **GRAPHITE**

DETAIL 6

GUIDE SUPPORT - TEFLON AND GRAPHITE PAD DETAILS

SCALE IN FEET

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	S2	max	12.945	102	27.876	13	0	107	0	107	0	107	0	107
2		min	-12.673	70	-5.826	76	0	12	0	12	0	12	0	12
3	S1	max	6.995	72	23.194	72	0	107	0	107	0	107	0	107
4		min	-7.163	100	-6.971	74	0	12	0	12	0	12	0	12
5	S8	max	12.618	102	27.702	13	0	107	0	107	0	107	0	107
6		min	-12.404	70	-5.761	76	0	12	0	12	0	12	0	12
7	S7	max	6.827	72	22.733	72	0	107	0	107	0	107	0	107
8		min	-7.041	100	-6.76	74	0	12	0	12	0	12	0	12
9	S6	max	12.836	102	27.243	13	0	107	0	107	0	107	0	107
10		min	-12.609	70	-5.879	76	0	12	0	12	0	12	0	12
11	S5	max	6.946	72	23.154	72	0	107	0	107	0	107	0	107
12		min	-7.07	100	-6.872	74	0	12	0	12	0	12	0	12
13	S4	max	12.847	102	28.577	13	0	107	0	107	0	107	0	107
14		min	-12.564	70	-5.684	76	0	12	0	12	0	12	0	12
15	S3	max	6.864	72	22.81	72	0	107	0	107	0	107	0	107
16		min	-7.126	100	-6.939	74	0	12	0	12	0	12	0	12

Current Date: 12/13/2023 4:24 PM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\09 Utility Corridor\Truss Connections.rcnx

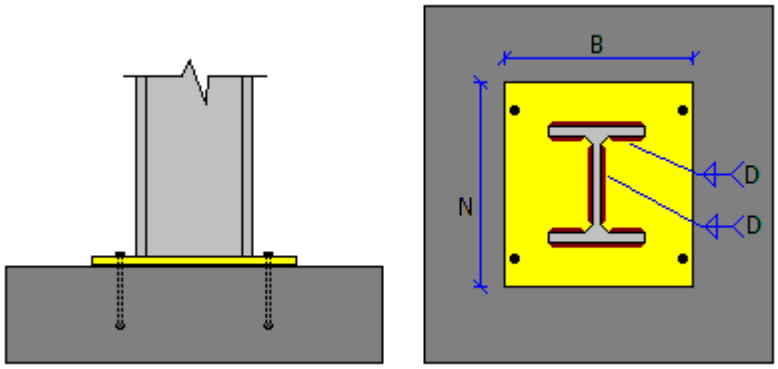
Steel Connections Data

Connection: 7 - Pinned BP

Family: Column - Base (CB)
Type: Base plate

General information

Connector



Members

Column

Column type	:	Prismatic member
Section	:	W 10X33
Material	:	A992 Gr50
Longitudinal offset	:	0 in

Base plate

Base plate

Plate shape	:	Rectangular
Connection type	:	Unstiffened
Position on the support	:	Center
N: Longitudinal dimension	:	20 in
B: Transversal dimension	:	13 in
Thickness	:	0.5 in
Material	:	A572 Gr50
Column weld	:	E70XX
Outer welds flanges only	:	No
D: Column weld size (1/16 in)	:	3
Override A2/A1 ratio	:	No
Include shear lug	:	No

Support

With pedestal	:	No

Longitudinal dimension	:	42 in
Transversal dimension	:	42 in
Thickness	:	30 in
Material	:	C 6-50
Include grouting	:	Yes
Grout thickness	:	1.5 in

Anchor

Anchor position	:	Longitudinal position
Rows number per side	:	1
Anchors per row	:	2
Longitudinal edge distance on the plate	:	1.5 in
Transverse edge distance on the plate	:	1.5 in
Anchor type	:	Headed
Head type	:	Hexagonal
Include lock nut	:	No
Anchor	:	3/4"
Effective embedment depth	:	12 in
Total length	:	14.99 in
Material	:	F1554 Gr36
Fy	:	36 kip/in2
Fu	:	58 kip/in2
Cracked concrete	:	No
Brittle steel	:	No
Anchors welded to base plate	:	Yes

Anchor reinforcement

Type of reinforcement	:	Primary
Tension reinforcement	:	No
Shear reinforcement	:	No

Current Date: 12/13/2023 4:23 PM
Units system: English
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Steel Connections
Results

Connection: 7 - Pinned BP

Family: Column - Base (CB)
Type: Base plate

Design code: AISC 360-16 LRFD, ACI 318-19

Demands

Description	Pu [kip]	Mu22 [kip*ft]	Mu33 [kip*ft]	Vu2 [kip]	Vu3 [kip]	Load type
DL	-30.00	0.00	0.00	12.00	0.00	Design

Design calculations

Design for major axis
Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	3	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	6.63	0.12	DL	**0.02**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	2.81	1.67	DL	**0.59**	DG1 Sec 3.1.2
Flexural yielding (tension interface)	[Kip*ft/ft]	2.81	0.00	DL	**0.00**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	0.00	DL	**0.00**	Sec. J2.4
Elastic method weld shear capacity	[Kip/ft]	50.12	9.16	DL	**0.18**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	0.00	DL	**0.00**	Sec. J2.4
Ratio	**0.59**					

Geometric Considerations

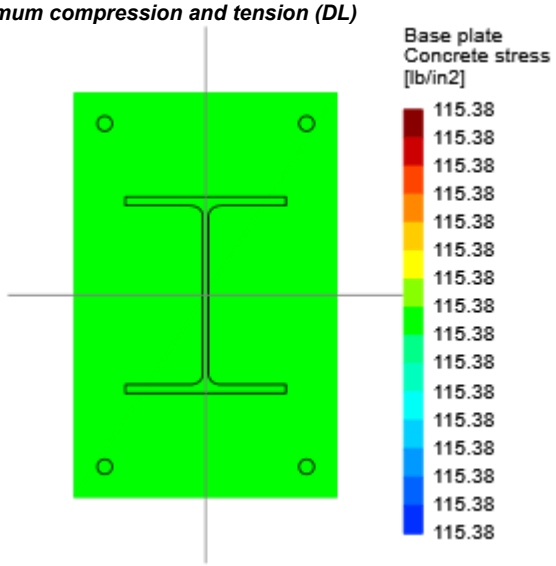
Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	10.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	12.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	29.51	✔	

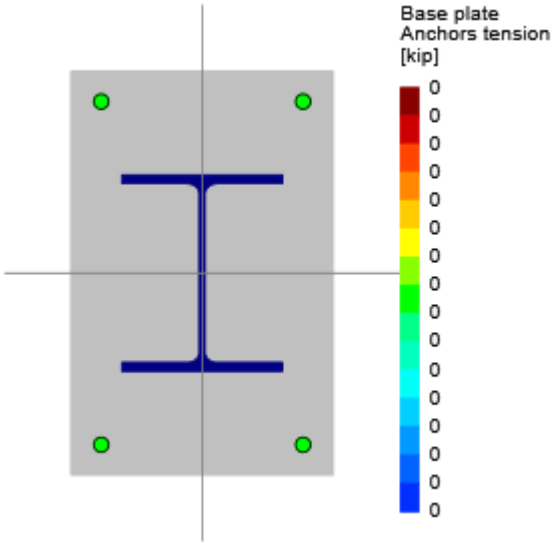
Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	0.00	DL	**0.00**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	49.57	0.00	DL	**0.00**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	30.77	0.00	DL	**0.00**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	3.00	DL	**0.50**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of group of anchors in shear	[Kip]	36.79	12.00	DL	**0.33**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	99.15	3.00	DL	**0.03**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	182.43	12.00	DL	**0.07**	Sec. 17.5.2
Ratio	**0.50**					
Global critical strength ratio	**0.59**					

Major axis

Maximum compression and tension (DL)





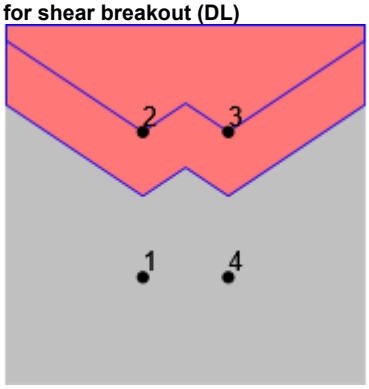
Maximum bearing pressure	115.38	[lb/in2]
Minimum bearing pressure	115.38	[lb/in2]
Maximum anchor tension	0.00	[kip]
Minimum anchor tension	0.00	[kip]
Neutral axis angle	0.00	[deg]
Neutral axis location	1.2E31	[in]
Bearing length	20.00	[in]

Anchors tensions

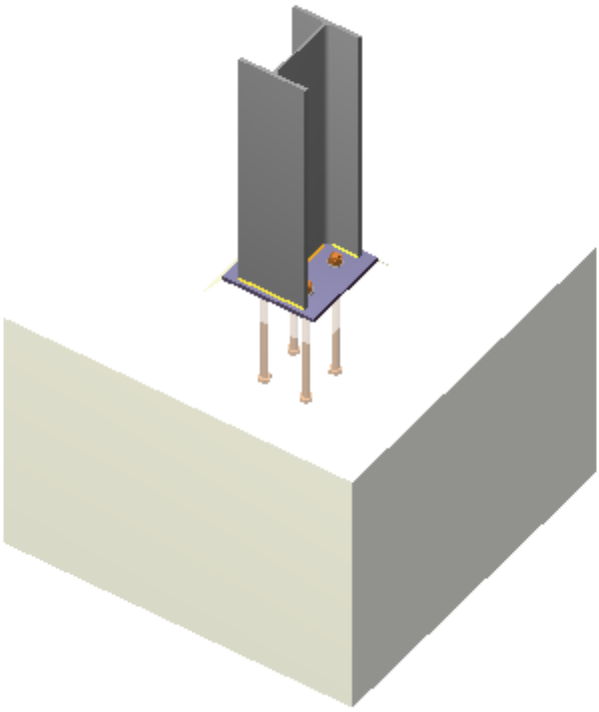
Anchor	Transverse [in]	Longitudinal [in]	Shear [kip]	Tension [kip]
1	-5.00	-8.50	3.00	0.00
2	-5.00	8.50	3.00	0.00
3	5.00	8.50	3.00	0.00
4	5.00	-8.50	3.00	0.00

Major axis

Results for shear breakout (DL)

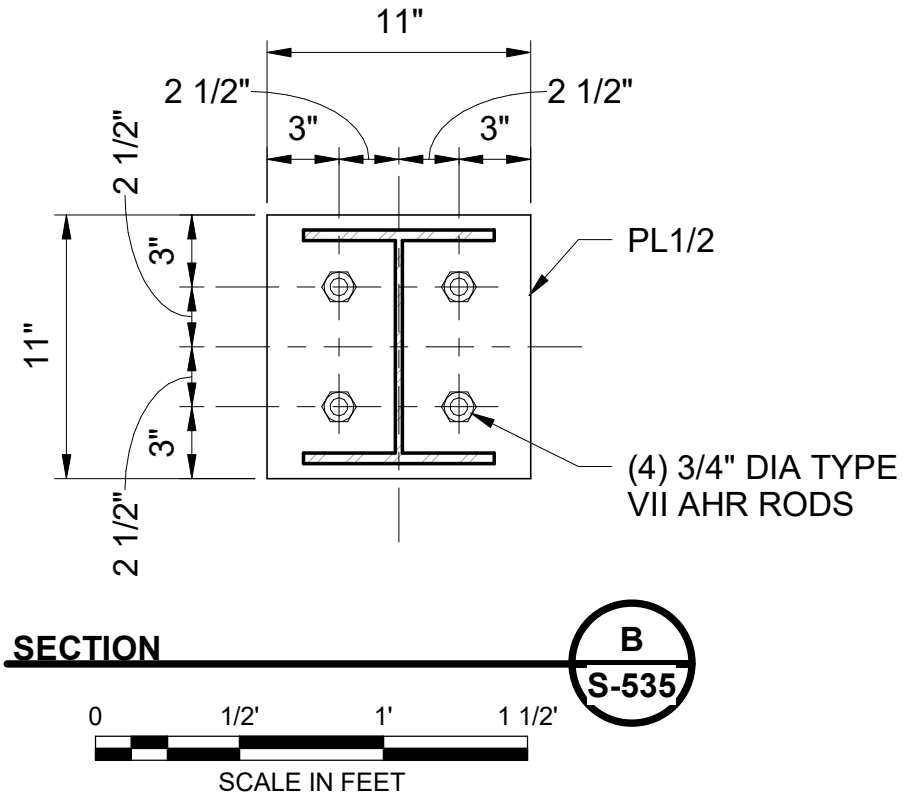


Group	Area [in2]	Shear [kip]	Anchors
1	1260.00	12.00	1, 2, 3, 4
2	787.50	6.00	2, 3



Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	F2	max	12.031	102	27.583	13	17.252	103	0	107	0	107	0	107
2		min	-11.801	70	-3.438	106	-16.326	75	0	12	0	12	0	12
3	F1	max	5.314	72	19.994	15	15.705	107	0	107	0	107	0	107
4		min	-5.633	100	-4.81	74	-16.645	71	0	12	0	12	0	12
5	F8	max	13.114	102	26.192	13	18.191	103	0	107	0	107	0	107
6		min	-12.896	70	-5.381	106	-18.162	71	0	12	0	12	0	12
7	F7	max	6.476	72	21.443	15	17.365	103	0	107	0	107	0	107
8		min	-6.709	100	-6.437	104	-17.394	71	0	12	0	12	0	12
9	F6	max	12.206	102	28.536	13	17.303	103	0	107	0	107	0	107
10		min	-11.921	74	-3.379	76	-16.398	75	0	12	0	12	0	12
11	F5	max	5.396	72	19.839	15	15.742	107	0	107	0	107	0	107
12		min	-5.777	100	-4.938	74	-16.649	71	0	12	0	12	0	12
13	F4	max	11.79	102	24.797	13	18.423	103	0	107	0	107	0	107
14		min	-11.699	70	-3.742	106	-18.629	71	0	12	0	12	0	12
15	F3	max	5.355	72	21.668	15	17.858	103	0	107	0	107	0	107
16		min	-5.484	100	-4.469	104	-17.652	71	0	12	0	12	0	12



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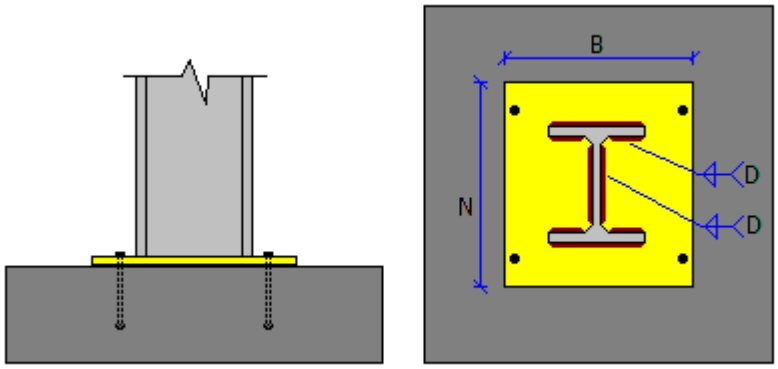
Steel Connections Data

Connection: 1 - Pinned BP

Family: Column - Base (CB)
Type: Base plate

General information

Connector



Members

Column

Column type	:	Prismatic member
Section	:	W 10X33
Material	:	A992 Gr50
Longitudinal offset	:	0 in

Base plate

Base plate

Plate shape	:	Rectangular
Connection type	:	Unstiffened
Position on the support	:	Center
N: Longitudinal dimension	:	11 in
B: Transversal dimension	:	11 in
Thickness	:	0.5 in
Material	:	A572 Gr50
Column weld	:	E70XX
Outer welds flanges only	:	No
D: Column weld size (1/16 in)	:	3
Override A2/A1 ratio	:	No
Include shear lug	:	No

Support

With pedestal	:	No

Longitudinal dimension	:	42 in
Transversal dimension	:	42 in
Thickness	:	30 in
Material	:	C 6-50
Include grouting	:	Yes
Grout thickness	:	1.5 in

Anchor

Anchor position	:	Longitudinal position
Rows number per side	:	1
Anchors per row	:	2
Longitudinal edge distance on the plate	:	3 in
Transverse edge distance on the plate	:	3 in
Anchor type	:	Headed
Head type	:	Hexagonal
Include lock nut	:	No
Anchor	:	3/4"
Effective embedment depth	:	12 in
Total length	:	14.99 in
Material	:	F1554 Gr36
Fy	:	36 kip/in2
Fu	:	58 kip/in2
Cracked concrete	:	No
Brittle steel	:	No
Anchors welded to base plate	:	Yes

Anchor reinforcement

Type of reinforcement	:	Primary
Tension reinforcement	:	No
Shear reinforcement	:	No

Current Date: 12/13/2023 4:18 PM
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Steel Connections Results

Connection: 1 - Pinned BP

Family: Column - Base (CB)
Type: Base plate

Design code: AISC 360-16 LRFD, ACI 318-19

Demands

Description	Pu [kip]	Mu22 [kip*ft]	Mu33 [kip*ft]	Vu2 [kip]	Vu3 [kip]	Load type
DL	-30.00	0.00	0.00	13.50	19.00	Design

Design calculations

Design for major axis
Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	2.62	0.25	--	✔	
Weld size	[1/16in]	3	3	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	6.63	0.25	DL	**0.04**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	2.81	0.66	DL	**0.24**	DG1 Sec 3.1.2
Flexural yielding (tension interface)	[Kip*ft/ft]	2.81	0.00	DL	**0.00**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	0.00	DL	**0.00**	Sec. J2.4
Elastic method weld shear capacity	[Kip/ft]	50.12	10.31	DL	**0.21**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	0.00	DL	**0.00**	Sec. J2.4
Ratio	**0.24**					

Geometric Considerations

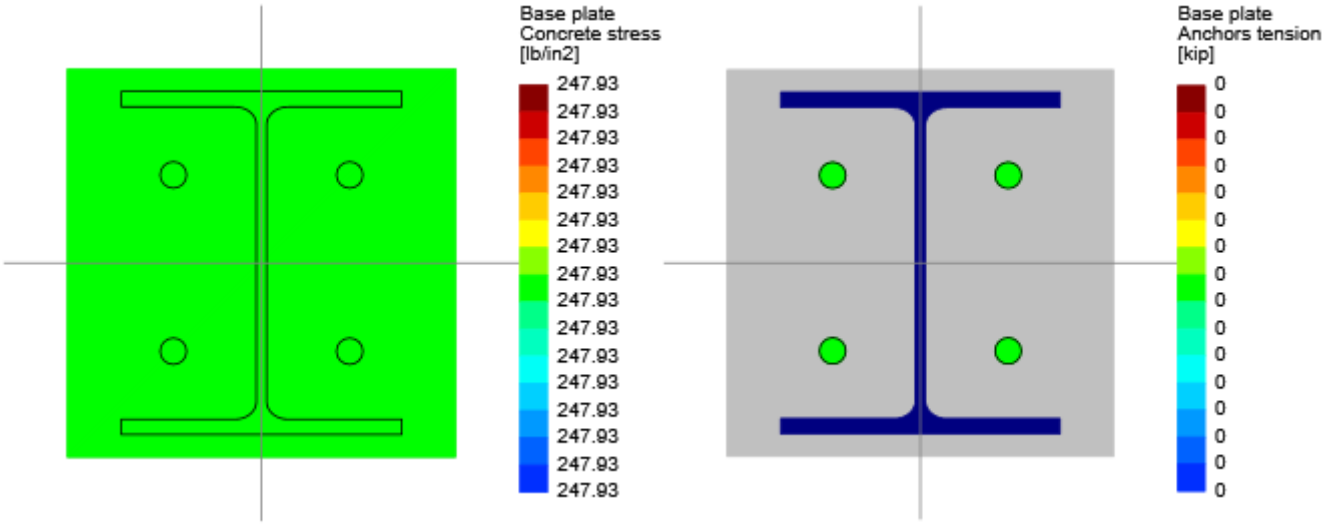
Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	5.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	18.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	29.51	✔	

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	0.00	DL	**0.00**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	68.21	0.00	DL	**0.00**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	30.77	0.00	DL	**0.00**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	3.38	DL	**0.56**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of group of anchors in shear	[Kip]	37.86	13.50	DL	**0.36**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	136.42	3.38	DL	**0.02**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	176.94	13.50	DL	**0.08**	Sec. 17.5.2
Ratio	**0.56**					
Global critical strength ratio	**0.56**					

Major axis

Maximum compression and tension (DL)



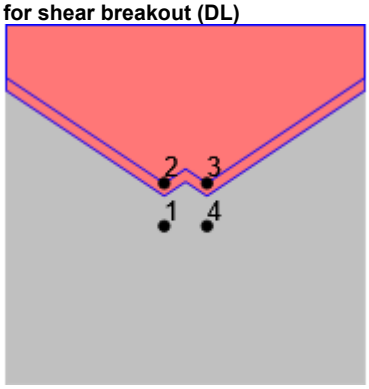
Maximum bearing pressure	247.93	[lb/in2]
Minimum bearing pressure	247.93	[lb/in2]
Maximum anchor tension	0.00	[kip]
Minimum anchor tension	0.00	[kip]
Neutral axis angle	0.00	[deg]
Neutral axis location	1.2E31	[in]
Bearing length	11.00	[in]

Anchors tensions

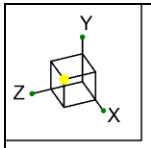
Anchor	Transverse [in]	Longitudinal [in]	Shear [kip]	Tension [kip]
1	-2.50	-2.50	3.38	0.00
2	-2.50	2.50	3.38	0.00
3	2.50	2.50	3.38	0.00
4	2.50	-2.50	3.38	0.00

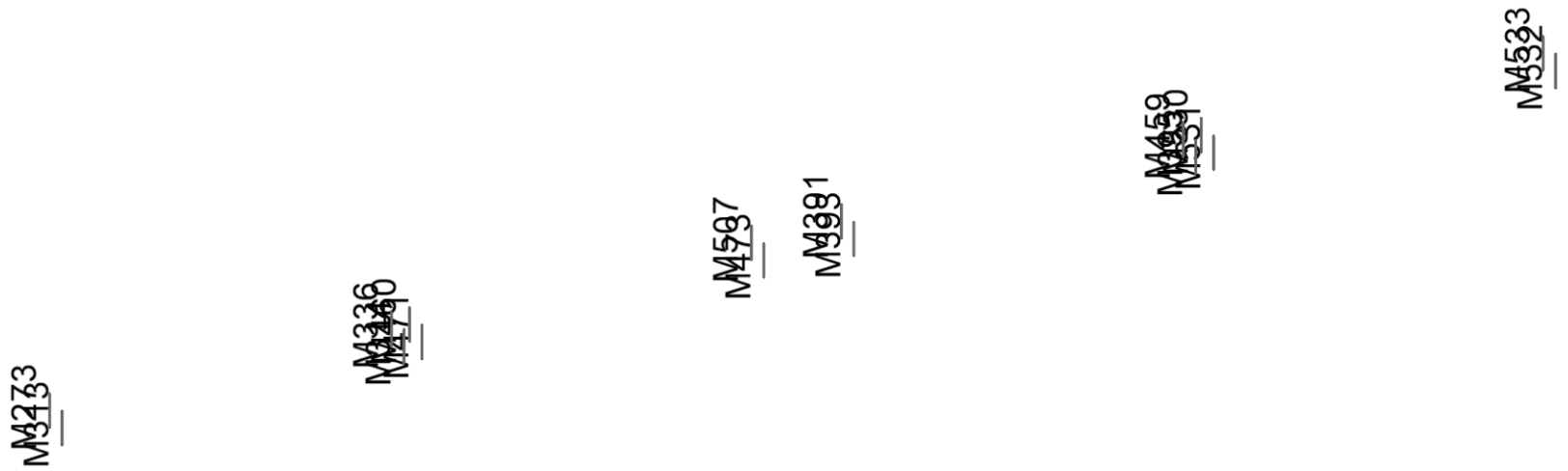
Major axis

Results for shear breakout (DL)



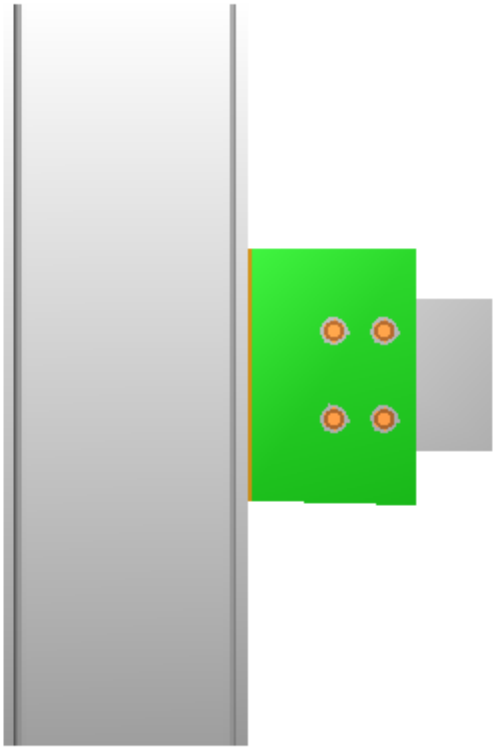
Group	Area [in2]	Shear [kip]	Anchors
1	1260.00	13.50	1, 2, 3, 4
2	1165.50	6.75	2, 3

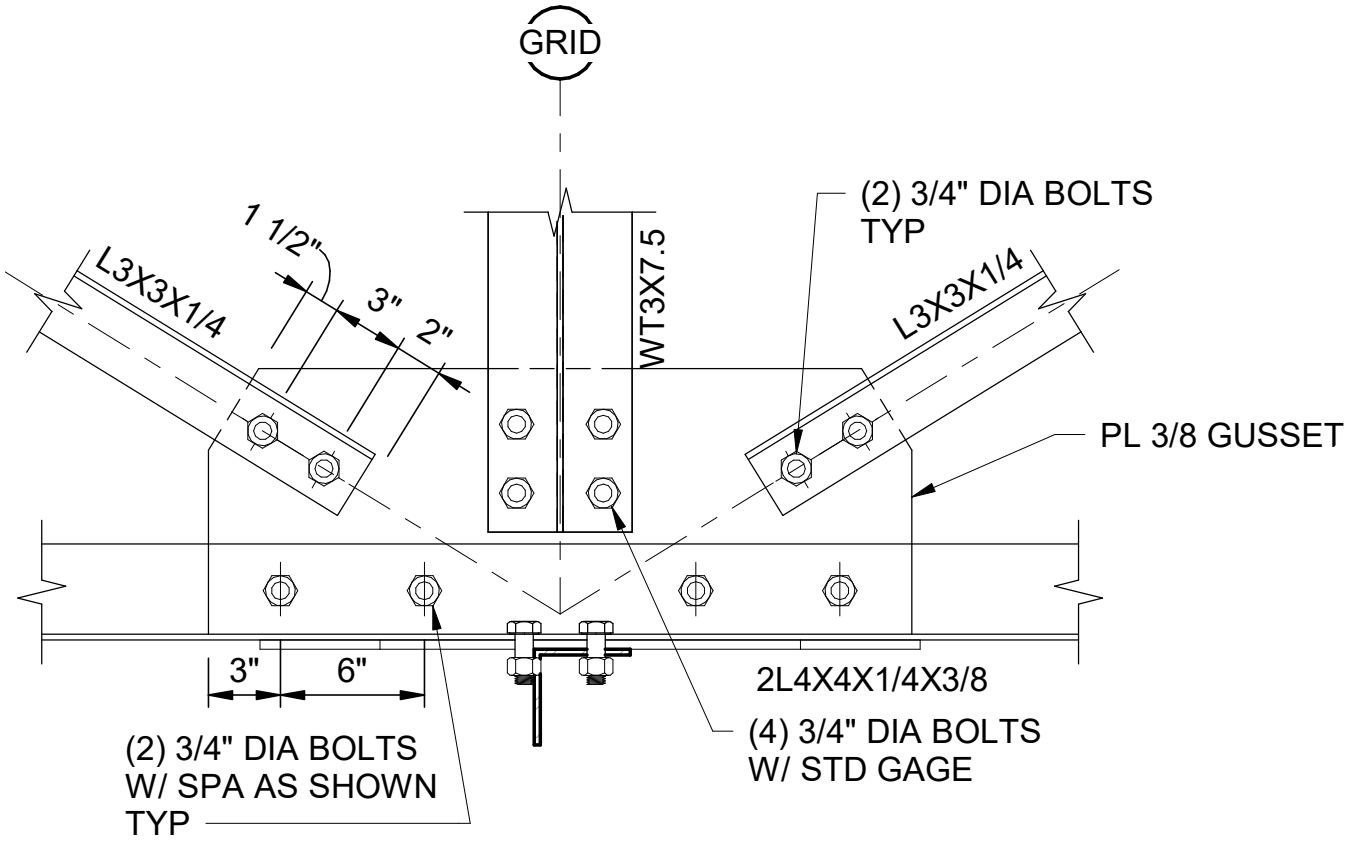




Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-3
	A. Kral		Dec 07, 2023 at 03:09 PM
	153929		Combined Pile Cap Model.r3d





DETAIL 4

0 1/2' 1' 1 1/2'

SCALE IN FEET

4 3/4" DIA Bolts Capacity = 42.4 kips

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M370	I	max	21.924	15	0.489	15	0.236	101	0.221	101	0.038	101	-0.133	66
2			min	3.311	68	-0.179	66	-0.242	103	-0.223	73	-0.04	103	-1.101	15
3		J	max	20.373	15	0.296	62	0.229	103	0.188	103	0.036	101	-0.117	66
4			min	3.192	68	-0.212	98	-0.222	101	-0.189	71	-0.038	103	-0.939	15
5	M723	I	max	21.62	15	0.482	15	0.235	101	0.221	101	0.038	101	-0.12	66
6			min	3.195	66	-0.179	66	-0.242	103	-0.222	73	-0.039	103	-1.086	15
7		J	max	20.069	15	0.298	62	0.228	103	0.188	103	0.036	101	-0.104	66
8			min	3.078	66	-0.214	98	-0.221	101	-0.189	71	-0.037	103	-0.924	15
9	M605	I	max	21.217	15	0.036	68	0.019	105	0.003	104	0	107	-0.151	67
10			min	3.242	67	-0.037	92	-0.019	73	-0.003	72	0	71	-0.986	15
11		J	max	20.903	15	0.036	66	0.019	107	0.003	104	0	107	-0.149	67
12			min	3.211	67	-0.037	94	-0.019	71	-0.003	72	0	71	-0.972	15
13	M529	I	max	21.052	15	0.479	15	0.249	71	0.231	71	0.041	71	-0.117	96
14			min	3.15	96	-0.185	66	-0.243	73	-0.23	103	-0.04	73	-1.059	15
15		J	max	19.464	15	0.31	92	0.229	73	0.196	73	0.039	71	-0.1	96
16			min	3.03	96	-0.221	68	-0.235	71	-0.196	101	-0.038	73	-0.892	15
17	M367	I	max	20.307	15	0.036	68	0.019	105	0.003	72	0	107	-0.142	96
18			min	3.064	96	-0.037	92	-0.019	73	-0.003	104	0	71	-0.944	15
19		J	max	19.992	15	0.036	66	0.019	107	0.003	72	0	107	-0.141	96
20			min	3.033	96	-0.037	94	-0.019	71	-0.003	104	0	71	-0.93	15
21	M720	I	max	20.064	15	0.036	68	0.019	71	0.003	72	0	73	-0.146	99
22			min	3.142	99	-0.037	92	-0.019	107	-0.003	104	0	105	-0.932	15
23		J	max	19.75	15	0.036	66	0.019	73	0.003	72	0	73	-0.145	99
24			min	3.111	99	-0.037	94	-0.019	105	-0.003	104	0	105	-0.919	15
25	M561	I	max	20.048	15	0.46	15	0.24	101	0.229	101	0.039	101	-0.115	66
26			min	3.112	66	-0.185	66	-0.247	103	-0.231	73	-0.04	103	-1.009	15
27		J	max	18.46	15	0.311	62	0.233	103	0.196	103	0.037	101	-0.099	66
28			min	2.991	66	-0.22	98	-0.227	101	-0.196	71	-0.038	103	-0.842	15
29	M558	I	max	19.726	15	0.036	68	0.019	71	0.003	72	0	73	-0.145	99
30			min	3.123	99	-0.037	92	-0.019	107	-0.003	104	0	105	-0.917	15
31		J	max	19.412	15	0.036	66	0.019	73	0.003	72	0	73	-0.144	99
32			min	3.092	99	-0.037	94	-0.019	105	-0.003	104	0	105	-0.903	15
33	M368	I	max	17.669	13	0.036	66	0.019	73	0.003	76	0	71	-0.133	98
34			min	2.857	98	-0.037	94	-0.019	105	-0.003	104	0	107	-0.821	13
35		J	max	17.355	13	0.036	68	0.019	71	0.003	76	0	71	-0.131	98
36			min	2.826	98	-0.037	92	-0.019	107	-0.003	104	0	107	-0.808	13
37	M603	I	max	17.668	13	0.036	66	0.019	73	0.003	76	0	71	-0.134	98
38			min	2.888	98	-0.037	94	-0.019	105	-0.003	104	0	107	-0.821	13
39		J	max	17.354	13	0.036	68	0.019	71	0.003	76	0	71	-0.133	98
40			min	2.858	98	-0.037	92	-0.019	107	-0.003	104	0	107	-0.807	13
41	M559	I	max	17.61	13	0.036	66	0.019	107	0.003	76	0	105	-0.141	99
42			min	3.036	99	-0.037	94	-0.019	71	-0.003	104	0	73	-0.818	13
43		J	max	17.296	13	0.036	68	0.019	105	0.003	76	0	105	-0.14	99
44			min	3.005	99	-0.037	92	-0.019	73	-0.003	104	0	73	-0.805	13
45	M721	I	max	17.606	13	0.036	66	0.019	107	0.003	76	0	105	-0.141	99
46			min	3.032	99	-0.037	94	-0.019	71	-0.003	104	0	73	-0.818	13
47		J	max	17.292	13	0.036	68	0.019	105	0.003	76	0	105	-0.14	99
48			min	3.001	99	-0.037	92	-0.019	73	-0.003	104	0	73	-0.805	13
49	M722	I	max	16.96	13	0.036	66	0.019	107	0.003	104	0	105	-0.13	68
50			min	2.807	68	-0.037	94	-0.019	71	-0.004	72	0	73	-0.788	13
51		J	max	16.646	13	0.036	68	0.019	105	0.003	104	0	105	-0.129	68
52			min	2.776	68	-0.037	92	-0.019	73	-0.004	72	0	73	-0.775	13
53	M560	I	max	16.935	13	0.036	66	0.019	107	0.003	104	0	105	-0.132	68
54			min	2.831	68	-0.037	94	-0.019	71	-0.003	72	0	73	-0.787	13
55		J	max	16.621	13	0.036	68	0.019	105	0.003	104	0	105	-0.13	68
56			min	2.8	68	-0.037	92	-0.019	73	-0.003	72	0	73	-0.773	13
57	M604	I	max	16.884	13	0.036	66	0.019	73	0.003	104	0	71	-0.138	67

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	2.959	67	-0.037	94	-0.019	105	-0.003	72	0	107	-0.785	13
59		J	max	16.57	13	0.036	68	0.019	71	0.003	104	0	71	-0.136	67
60			min	2.928	67	-0.037	92	-0.019	107	-0.003	72	0	107	-0.771	13
61	M369	I	max	16.882	13	0.036	66	0.019	73	0.003	104	0	71	-0.137	67
62			min	2.939	67	-0.037	94	-0.019	105	-0.003	72	0	107	-0.784	13
63		J	max	16.567	13	0.036	68	0.019	71	0.003	104	0	71	-0.135	67
64			min	2.908	67	-0.037	92	-0.019	107	-0.003	72	0	107	-0.771	13
65	M572	I	max	6.447	15	0.036	98	0.019	71	0	107	0	73	-0.013	75
66			min	0.283	75	-0.037	92	-0.019	107	-0.001	13	0	105	-0.299	15
67		J	max	6.132	15	0.036	66	0.019	73	0	107	0	73	-0.012	75
68			min	0.256	75	-0.037	64	-0.019	105	-0.001	13	0	105	-0.286	15
69	M616	I	max	6.4	15	0.036	68	0.019	105	0	74	0	107	-0.018	75
70			min	0.385	75	-0.037	92	-0.019	73	-0.001	13	0	71	-0.297	15
71		J	max	6.085	15	0.036	66	0.019	107	0	74	0	107	-0.017	75
72			min	0.358	75	-0.037	94	-0.019	71	-0.001	13	0	71	-0.283	15
73	M381	I	max	6.337	15	0.036	68	0.019	105	0	104	0	107	-0.019	75
74			min	0.402	75	-0.037	92	-0.019	73	-0.001	13	0	71	-0.294	15
75		J	max	6.023	15	0.036	66	0.019	107	0	104	0	107	-0.017	75
76			min	0.375	75	-0.037	94	-0.019	71	-0.001	13	0	71	-0.281	15
77	M734	I	max	6.17	15	0.036	98	0.019	71	0	107	0	73	-0.01	75
78			min	0.209	75	-0.037	92	-0.019	107	-0.001	13	0	105	-0.286	15
79		J	max	5.855	15	0.036	66	0.019	73	0	107	0	73	-0.009	75
80			min	0.182	75	-0.037	64	-0.019	105	-0.001	13	0	105	-0.273	15
81	M733	I	max	5.759	15	0.036	98	0.019	71	0.002	13	0	73	-0.009	107
82			min	0.187	107	-0.037	62	-0.019	107	0	104	0	105	-0.267	15
83		J	max	5.445	15	0.036	96	0.019	73	0.002	13	0	73	-0.008	107
84			min	0.16	107	-0.037	64	-0.019	105	0	104	0	105	-0.254	15
85	M380	I	max	5.598	15	0.036	68	0.019	105	0.002	13	0	107	-0.015	107
86			min	0.322	107	-0.037	92	-0.019	73	0	68	0	71	-0.26	15
87		J	max	5.284	15	0.036	66	0.019	107	0.002	13	0	107	-0.014	107
88			min	0.295	107	-0.037	94	-0.019	71	0	68	0	71	-0.246	15
89	M615	I	max	5.536	15	0.036	68	0.019	105	0.002	13	0	107	-0.014	107
90			min	0.296	107	-0.037	92	-0.019	73	0	68	0	71	-0.257	15
91		J	max	5.221	15	0.036	66	0.019	107	0.002	13	0	107	-0.013	107
92			min	0.269	107	-0.037	94	-0.019	71	0	68	0	71	-0.243	15
93	M378	I	max	5.271	13	0.036	66	0.019	73	0.001	13	0	71	-0.003	107
94			min	0.063	107	-0.037	94	-0.019	105	0	68	0	107	-0.245	13
95		J	max	4.957	13	0.036	68	0.019	71	0.001	13	0	71	-0.002	107
96			min	0.037	107	-0.037	92	-0.019	107	0	68	0	107	-0.231	13
97	M613	I	max	5.265	13	0.036	66	0.019	73	0.001	13	0	71	-0.004	107
98			min	0.077	107	-0.037	94	-0.019	105	0	68	0	107	-0.244	13
99		J	max	4.951	13	0.036	68	0.019	71	0.001	13	0	71	-0.002	107
100			min	0.05	107	-0.037	92	-0.019	107	0	68	0	107	-0.231	13
101	M731	I	max	5.09	14	0.036	66	0.019	107	0.001	13	0	105	0.004	107
102			min	-0.09	107	-0.037	94	-0.019	71	0	104	0	73	-0.236	14
103		J	max	4.775	14	0.036	68	0.019	105	0.001	13	0	105	0.005	107
104			min	-0.117	107	-0.037	92	-0.019	73	0	104	0	73	-0.223	14
105	M569	I	max	5.084	14	0.036	66	0.019	107	0.001	13	0	105	0.003	107
106			min	-0.065	107	-0.037	94	-0.019	71	0	104	0	73	-0.236	14
107		J	max	4.77	14	0.036	68	0.019	105	0.001	13	0	105	0.004	107
108			min	-0.092	107	-0.037	92	-0.019	73	0	104	0	73	-0.222	14
109	M571	I	max	4.909	15	0.036	98	0.019	71	0.001	13	0	73	-0.001	107
110			min	0.025	107	-0.037	62	-0.019	107	0	104	0	105	-0.228	15
111		J	max	4.594	15	0.036	96	0.019	73	0.001	13	0	73	0	107
112			min	-0.002	107	-0.037	64	-0.019	105	0	104	0	105	-0.214	15
113	M732	I	max	4.515	13	0.036	66	0.019	107	0	107	0	105	0.007	75
114			min	-0.14	75	-0.037	94	-0.019	71	-0.001	13	0	73	-0.209	13
115		J	max	4.201	13	0.036	68	0.019	105	0	107	0	105	0.008	75

4 3/4" DIA Bolts Capacity = 42.4 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
116			min	-0.167	75	-0.037	92	-0.019	73	-0.001	13	0	73	-0.196	13
117	M570	I	max	4.51	13	0.036	66	0.019	107	0	98	0	105	0.005	75
118			min	-0.113	75	-0.037	94	-0.019	71	-0.001	13	0	73	-0.209	13
119		J	max	4.195	13	0.036	68	0.019	105	0	98	0	105	0.006	75
120			min	-0.14	75	-0.037	92	-0.019	73	-0.001	13	0	73	-0.196	13
121	M614	I	max	4.341	16	0.036	66	0.019	73	0	74	0	71	0.002	75
122			min	-0.041	75	-0.037	94	-0.019	105	-0.001	13	0	107	-0.201	16
123		J	max	4.027	16	0.036	68	0.019	71	0	74	0	71	0.003	75
124			min	-0.068	75	-0.037	92	-0.019	107	-0.001	13	0	107	-0.188	16
125	M379	I	max	4.336	16	0.036	66	0.019	73	0	104	0	71	0.003	75
126			min	-0.058	75	-0.037	94	-0.019	105	-0.001	13	0	107	-0.201	16
127		J	max	4.022	16	0.036	68	0.019	71	0	104	0	71	0.004	75
128			min	-0.085	75	-0.037	92	-0.019	107	-0.001	13	0	107	-0.188	16

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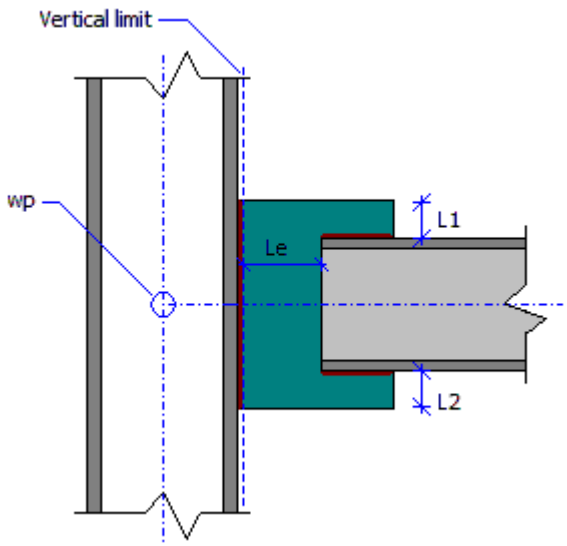
Steel Connections Data

Connection: 5 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

General information

Connector



Members

Existing members

Right beam	:	No
Left beam	:	No
Upper right brace	:	Yes
Upper left brace	:	No
Lower left brace	:	No
Lower right brace	:	No
Align beams to top edge	:	No

Column

General

Column section	:	W 10X33
Column material	:	A992 Gr50
Column orientation	:	Longitudinal
Is column end	:	No

Upper right brace

General

Section	:	WT 3X7.5

Material	:	A572 Gr50
Brace slope angle (degrees)	:	0
Brace rotation (degrees)	:	90°
Double brace	:	No

Additional geometric data

wpx: WP horizontal displacement	:	0 in
wpy: WP vertical displacement	:	0 in
Le: Minimum distance to other members	:	2 in
L1: Left distance	:	2 in
L2: Right distance	:	2.187 in

Interfaces

Upper right brace

Gusset

General

tp: Thickness	:	0.375 in
Material	:	A36
LV: Length on column	:	9.99 in

Gusset-to-Brace connection

General

Connection type	:	Bolted
Bolts	:	1/2" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)
nc: Bolt columns	:	2
nr: Rows of Bolts	:	2
s: Pitch - longitudinal center-to-center spacing	:	2 in
g: Gage - transverse center-to-center spacing	:	3.5 in
Leh: Longitudinal distance to edge	:	1.25 in

Gusset-to-Column connection

General

Connection type to column	:	Connection: Directly welded

Directly welded

Column weld	:	E70XX
D: Weld size to column (1/16 in)	:	3

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Units system: English
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Steel Connections
Results

Connection: 5 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

Design code: AISC 360-16 LRFD

Demands

Description	Right beam Pu [kip]	Right beam Vu [kip]	Right beam Mu33 [kip*ft]	Left beam Pu [kip]	Left beam Vu [kip]	Left beam Mu33 [kip*ft]	Column Pu [kip]	Column Vu [kip]	Load type
DL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Design

Description	Pu Brace1 [kip]	Pu Brace2 [kip]	Pu Brace3 [kip]	Pu Brace4 [kip]	Load type
DL	-24.00	0.00	0.00	0.00	Design

Design calculations

Interface between Gusset - Top right brace
Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
-24.00	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	1.25	0.75	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.25	0.75	--	✔	Tables J3.4, J3.5
Transverse center-to-center spacing (gage)	[in]	3.50	1.33	6.24	✔	Sec. J3.5
Longitudinal center-to-center spacing (pitch)	[in]	2.00	1.33	6.24	✔	Sec. J3.5

Gusset						
Transverse edge distance	[in]	3.25	0.75	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.25	0.75	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	31.75	24.00	DL	**0.76**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	59.89	24.00	DL	**0.40**	Eq. J3-6
Gusset						
Bolt bearing on gusset	[Kip]	77.08	24.00	DL	**0.31**	Eq. J3-6
Ratio	**0.76**					

Checks for gusset and brace

Demands

Pu [kip]	Description	Load type
-24.00	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Gusset						
Buckling on the Whitmore section	[Kip]	66.94	24.00	DL	**0.36**	Eq. E3-1
Ratio	**0.36**					

Interface Upper right gusset - column
Connection: Directly welded

Demands

	Beam			Column			
Description	**Ru** [kip]	**Pu** [kip]	**Mu** [kip*ft]	**Pu** [kip]	**Mu22** [kip*ft]	**Mu33** [kip*ft]	**Load type**
DL	0.00	-24.00	0.00	0.00	0.00	0.00	Design

Geometric Considerations

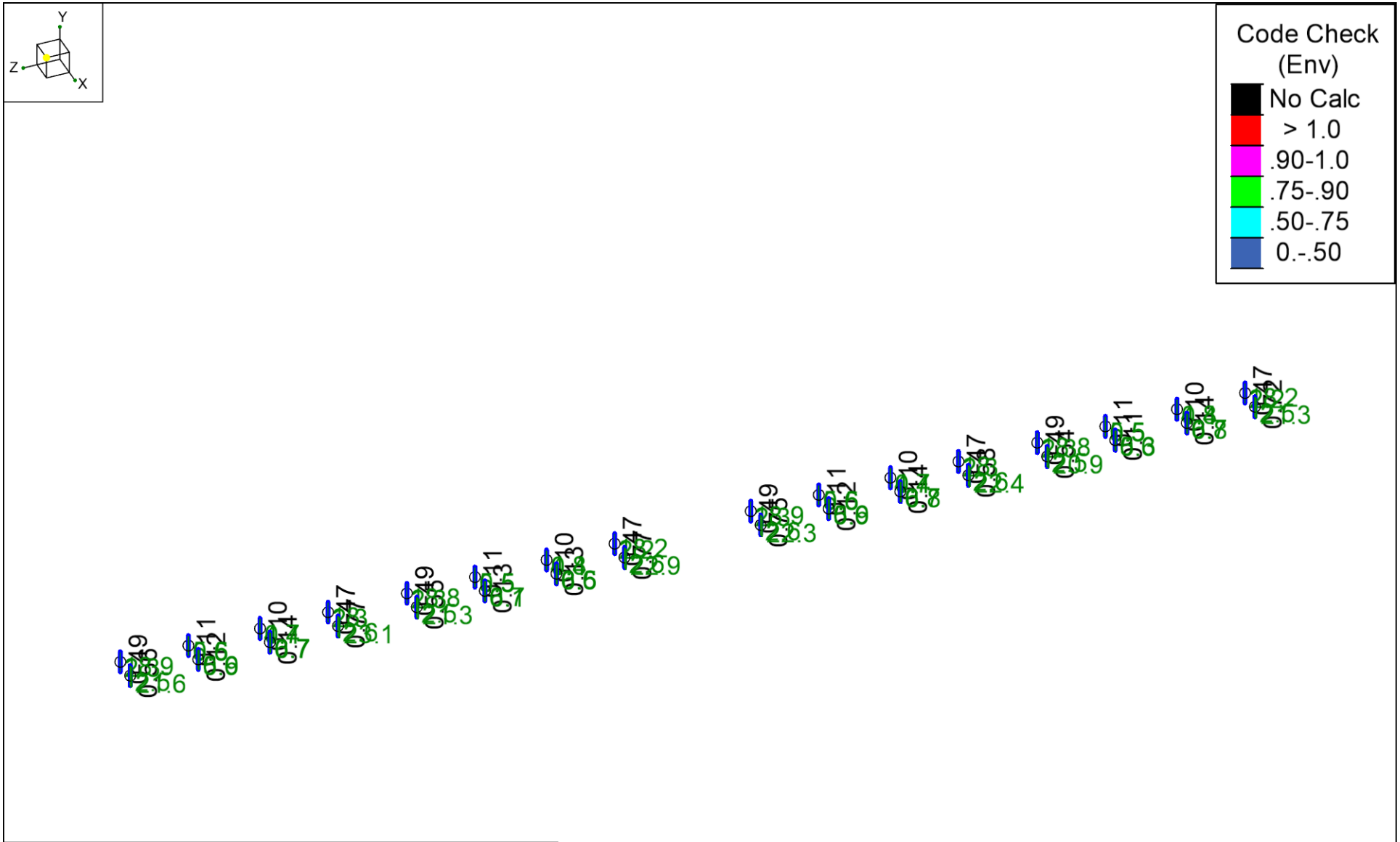
Dimensions	Unit	Value	Min.	Max.	Sta.	References
Gusset						
Weld size	[1/16in]	3	3	5	✔	Sec. J2.2b

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Gusset						
Beam yielding (normal stress)	[Kip]	121.38	24.00	DL	**0.20**	Eq. B-1, Appendix B, DG29
Shear yielding	[Kip]	80.92	0.00	DL	**0.00**	Eq. J4-3
Gusset edge tension stress	[Kip/in2]	32.40	6.41	DL	**0.20**	Eq. B-1, Appendix B, DG29
Gusset edge shear stress	[Kip/in2]	21.60	0.00	DL	**0.00**	J4-1
Weld capacity	[Kip]	125.17	30.00	DL	**0.24**	Tables 8-4 .. 8-11
Chord						
Web crippling	[Kip]	199.19	24.00	DL	**0.12**	Eq. B-1, Appendix B, DG29
Local web yielding	[Kip]	212.64	24.00	DL	**0.11**	Eq. B-1, Appendix B, DG29
Transverse section web yielding	[Kip]	84.65	24.00	DL	**0.28**	Eq. G2-1
Ratio	**0.28**					
Global critical strength ratio	**0.76**					

References

[9] AISC 2005, Design Examples Version 13.0, pp. IIC-26 - IIC-27



Member Code Checks Displayed (Enveloped)
Envelope Only Solution
Member Axial Forces (kips) (Enveloped)

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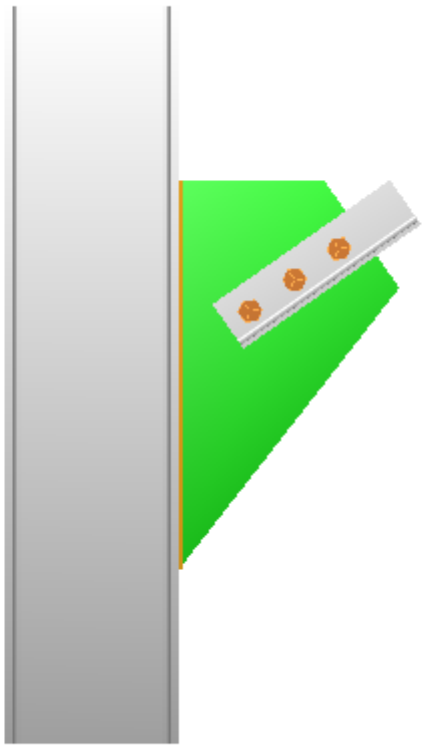
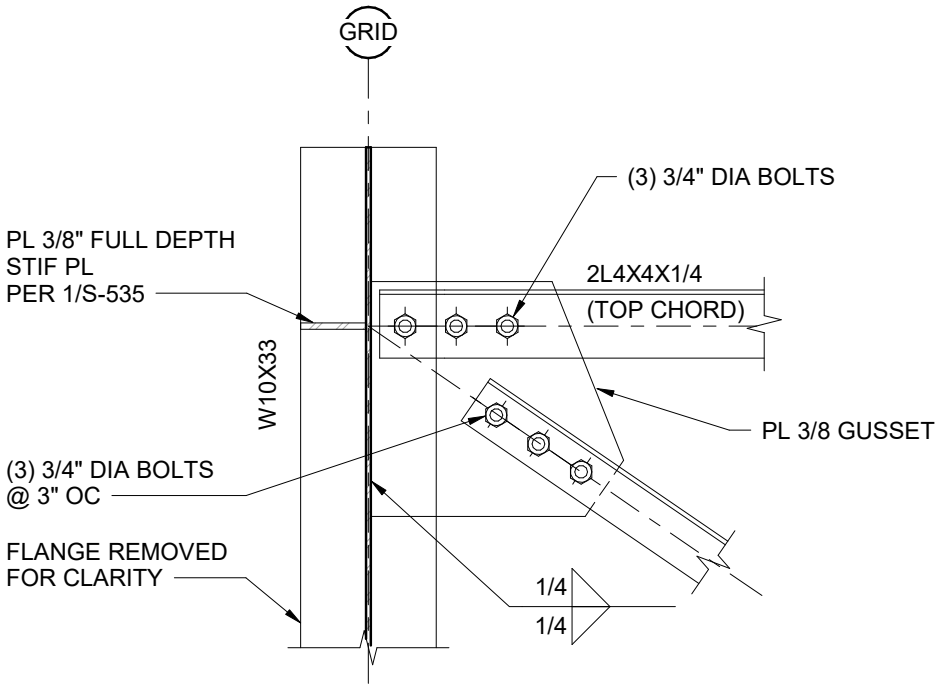
	153929		Combined Pile Cap Model.r3d



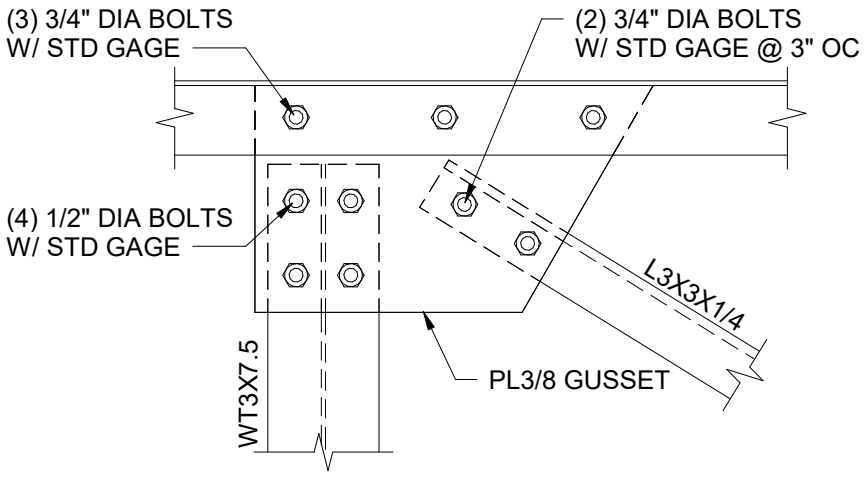


DETAIL 2

TOP CHORD TO COLUMN CONNECTION

0 1/2' 1' 1 1/2'

SCALE IN FEET



DETAIL 7

0 1/2' 1' 1 1/2'

SCALE IN FEET

2 bolt capacity = 35.80 kips
3 bolt capacity = 53.70 kips

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M405	I	max	-5.92	98	0	75	0.023	70	0.002	104	1.932	15	1.932	15
2			min	-39.207	15	-0.175	15	-0.022	106	-0.018	15	0.292	98	0.292	98
3		J	max	-5.941	98	0.175	13	0.023	72	0.002	104	1.943	15	1.943	15
4			min	-39.456	15	0	105	-0.022	104	-0.018	15	0.293	98	0.293	98
5	M755	I	max	-5.821	66	0	105	0.023	100	0.001	104	1.91	15	1.91	15
6			min	-38.76	15	-0.175	15	-0.022	76	-0.018	15	0.287	66	0.287	66
7		J	max	-5.841	66	0.175	13	0.023	102	0.001	104	1.921	15	1.921	15
8			min	-39.009	15	0	75	-0.022	74	-0.018	15	0.288	66	0.288	66
9	M678	I	max	-5.748	96	0.175	13	0.023	70	0.002	106	1.874	15	1.874	15
10			min	-38.043	15	0	107	-0.022	106	-0.016	13	0.283	96	0.283	96
11		J	max	-5.769	96	0	77	0.023	72	0.002	106	1.886	15	1.886	15
12			min	-38.292	15	-0.175	15	-0.022	104	-0.016	13	0.284	96	0.284	96
13	M680	I	max	-5.864	68	0	75	0.023	70	0.002	104	1.874	15	1.874	15
14			min	-38.042	15	-0.175	15	-0.022	106	-0.018	15	0.289	68	0.289	68
15		J	max	-5.884	68	0.175	13	0.023	72	0.002	104	1.886	15	1.886	15
16			min	-38.292	15	0	105	-0.022	104	-0.018	15	0.29	68	0.29	68
17	M403	I	max	-5.672	96	0.175	13	0.023	70	0.002	106	1.814	15	1.814	15
18			min	-36.812	15	0	107	-0.022	106	-0.016	13	0.279	96	0.279	96
19		J	max	-5.693	96	0	77	0.023	72	0.002	106	1.825	15	1.825	15
20			min	-37.061	15	-0.175	15	-0.022	104	-0.016	13	0.28	96	0.28	96
21	M753	I	max	-5.696	98	0.175	13	0.023	100	0.01	77	1.793	15	1.793	15
22			min	-36.402	15	0	77	-0.022	76	-0.016	13	0.281	98	0.281	98
23		J	max	-5.716	98	0	107	0.023	102	0.01	77	1.805	15	1.805	15
24			min	-36.652	15	-0.175	15	-0.022	74	-0.016	13	0.282	98	0.282	98
25	M593	I	max	-5.666	66	0	105	0.023	100	0.002	104	1.777	15	1.777	15
26			min	-36.071	15	-0.175	15	-0.022	76	-0.018	15	0.279	66	0.279	66
27		J	max	-5.687	66	0.175	13	0.023	102	0.002	104	1.789	15	1.789	15
28			min	-36.32	15	0	75	-0.022	74	-0.018	15	0.28	66	0.28	66
29	M591	I	max	-5.681	98	0.175	13	0.023	100	0.007	77	1.766	15	1.766	15
30			min	-35.847	15	0	77	-0.022	76	-0.016	13	0.28	98	0.28	98
31		J	max	-5.702	98	0	107	0.023	102	0.007	77	1.778	15	1.778	15
32			min	-36.096	15	-0.175	15	-0.022	74	-0.016	13	0.281	98	0.281	98
33	M684	I	max	-5.032	67	0	75	0.023	70	0.003	104	1.599	15	1.599	15
34			min	-32.449	15	-0.175	15	-0.022	106	-0.02	15	0.248	67	0.248	67
35		J	max	-5.053	67	0.175	13	0.023	72	0.003	104	1.611	15	1.611	15
36			min	-32.698	15	0	105	-0.022	104	-0.02	15	0.249	67	0.249	67
37	M404	I	max	-5.16	98	0	107	0.023	102	0.004	106	1.576	13	1.576	13
38			min	-31.985	13	-0.175	13	-0.022	74	-0.005	70	0.254	98	0.254	98
39		J	max	-5.18	98	0.175	15	0.023	100	0.004	106	1.588	13	1.588	13
40			min	-32.234	13	0	77	-0.022	76	-0.005	70	0.255	98	0.255	98
41	M679	I	max	-5.215	98	0	107	0.023	102	0.004	106	1.576	13	1.576	13
42			min	-31.981	13	-0.175	13	-0.022	74	-0.005	70	0.257	98	0.257	98
43		J	max	-5.236	98	0.175	15	0.023	100	0.004	106	1.587	13	1.587	13
44			min	-32.23	13	0	77	-0.022	76	-0.005	70	0.258	98	0.258	98
45	M754	I	max	-5.522	99	0	77	0.023	72	0.013	75	1.571	13	1.571	13
46			min	-31.891	13	-0.175	13	-0.022	104	-0.013	73	0.272	99	0.272	99
47		J	max	-5.543	99	0.175	15	0.023	70	0.013	75	1.583	13	1.583	13
48			min	-32.14	13	0	107	-0.022	106	-0.013	73	0.273	99	0.273	99
49	M592	I	max	-5.515	98	0	77	0.023	72	0.011	75	1.571	13	1.571	13
50			min	-31.886	13	-0.175	13	-0.022	104	-0.012	73	0.272	98	0.272	98
51		J	max	-5.536	98	0.175	15	0.023	70	0.011	75	1.583	13	1.583	13
52			min	-32.135	13	0	107	-0.022	106	-0.012	73	0.273	98	0.273	98
53	M411	I	max	-5.004	67	0	75	0.023	70	0.003	104	1.554	15	1.554	15
54			min	-31.537	15	-0.175	15	-0.022	106	-0.02	15	0.247	67	0.247	67
55		J	max	-5.025	67	0.175	13	0.023	72	0.003	104	1.566	15	1.566	15
56			min	-31.786	15	0	105	-0.022	104	-0.02	15	0.248	67	0.248	67
57	M409	I	max	-4.794	96	0.175	13	0.023	70	0.002	76	1.544	15	1.544	15

3 rows

2 rows

2 bolt capacity = 35.80 kips
3 bolt capacity = 53.70 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	-31.339	15	0	107	-0.022	106	-0.018	13	0.236	96	0.236	96
59		J	max	-4.815	96	0	77	0.023	72	0.002	76	1.556	15	1.556	15
60			min	-31.588	15	-0.175	15	-0.022	104	-0.018	13	0.237	96	0.237	96
61	M756	I	max	-5.105	68	0.175	15	0.023	72	0.005	70	1.53	13	1.53	13
62			min	-31.045	13	0	105	-0.022	104	-0.004	106	0.252	68	0.252	68
63		J	max	-5.126	68	0	75	0.023	70	0.005	70	1.541	13	1.541	13
64			min	-31.294	13	-0.175	13	-0.022	106	-0.004	106	0.253	68	0.253	68
65	M594	I	max	-5.151	68	0.175	15	0.023	72	0.005	70	1.528	13	1.528	13
66			min	-31.015	13	0	105	-0.022	104	-0.004	106	0.254	68	0.254	68
67		J	max	-5.172	68	0	75	0.023	70	0.005	70	1.54	13	1.54	13
68			min	-31.264	13	-0.175	13	-0.022	106	-0.004	106	0.255	68	0.255	68
69	M759	I	max	-4.766	66	0	105	0.023	100	0.003	104	1.528	15	1.528	15
70			min	-31.014	15	-0.175	15	-0.022	76	-0.02	15	0.235	66	0.235	66
71		J	max	-4.787	66	0.175	13	0.023	102	0.003	104	1.54	15	1.54	15
72			min	-31.264	15	0	75	-0.022	74	-0.02	15	0.236	66	0.236	66
73	M681	I	max	-5.432	68	0.175	15	0.023	102	0.005	70	1.528	13	1.528	13
74			min	-31.009	13	0	105	-0.022	74	-0.005	106	0.268	68	0.268	68
75		J	max	-5.453	68	0	75	0.023	100	0.005	70	1.54	13	1.54	13
76			min	-31.258	13	-0.175	13	-0.022	76	-0.005	106	0.269	68	0.269	68
77	M406	I	max	-5.403	67	0.175	15	0.023	102	0.005	70	1.528	13	1.528	13
78			min	-31.004	13	0	105	-0.022	74	-0.004	106	0.266	67	0.266	67
79		J	max	-5.424	67	0	75	0.023	100	0.005	70	1.539	13	1.539	13
80			min	-31.254	13	-0.175	13	-0.022	76	-0.004	106	0.267	67	0.267	67
81	M757	I	max	-4.902	99	0.175	13	0.023	100	0.003	76	1.525	15	1.525	15
82			min	-30.943	15	0	77	-0.022	76	-0.018	13	0.242	99	0.242	99
83		J	max	-4.923	99	0	107	0.023	102	0.003	76	1.536	15	1.536	15
84			min	-31.192	15	-0.175	15	-0.022	74	-0.018	13	0.242	99	0.242	99
85	M682	I	max	-4.72	96	0.175	13	0.023	70	0.002	76	1.499	15	1.499	15
86			min	-30.425	15	0	107	-0.022	106	-0.018	13	0.233	96	0.233	96
87		J	max	-4.74	96	0	77	0.023	72	0.002	76	1.511	15	1.511	15
88			min	-30.675	15	-0.175	15	-0.022	104	-0.018	13	0.233	96	0.233	96
89	M595	I	max	-4.869	99	0.175	13	0.023	100	0.003	76	1.495	15	1.495	15
90			min	-30.342	15	0	77	-0.022	76	-0.018	13	0.24	99	0.24	99
91		J	max	-4.889	99	0	107	0.023	102	0.003	76	1.507	15	1.507	15
92			min	-30.592	15	-0.175	15	-0.022	74	-0.018	13	0.241	99	0.241	99
93	M597	I	max	-4.626	66	0	105	0.023	100	0.003	104	1.397	15	1.397	15
94			min	-28.364	15	-0.175	15	-0.022	76	-0.02	15	0.228	66	0.228	66
95		J	max	-4.646	66	0.175	13	0.023	102	0.003	104	1.409	15	1.409	15
96			min	-28.613	15	0	75	-0.022	74	-0.02	15	0.229	66	0.229	66
97	M410	I	max	-4.611	98	0	107	0.023	102	0.003	68	1.311	13	1.311	13
98			min	-26.599	13	-0.175	13	-0.022	74	-0.014	13	0.227	98	0.227	98
99		J	max	-4.632	98	0.175	15	0.023	100	0.003	68	1.322	13	1.322	13
100			min	-26.848	13	0	77	-0.022	76	-0.014	13	0.228	98	0.228	98
101	M683	I	max	-4.669	98	0	107	0.023	102	0.003	68	1.31	13	1.31	13
102			min	-26.588	13	-0.175	13	-0.022	74	-0.014	13	0.23	98	0.23	98
103		J	max	-4.69	98	0.175	15	0.023	100	0.003	68	1.322	13	1.322	13
104			min	-26.837	13	0	77	-0.022	76	-0.014	13	0.231	98	0.231	98
105	M596	I	max	-4.682	96	0	77	0.023	72	0.003	68	1.306	14	1.306	14
106			min	-26.503	14	-0.175	13	-0.022	104	-0.014	13	0.231	96	0.231	96
107		J	max	-4.702	96	0.175	15	0.023	70	0.003	68	1.318	14	1.318	14
108			min	-26.753	14	0	107	-0.022	106	-0.014	13	0.232	96	0.232	96
109	M758	I	max	-4.65	96	0	77	0.023	72	0.003	68	1.305	14	1.305	14
110			min	-26.496	14	-0.175	13	-0.022	104	-0.014	13	0.229	96	0.229	96
111		J	max	-4.671	96	0.175	15	0.023	70	0.003	68	1.317	14	1.317	14
112			min	-26.745	14	0	107	-0.022	106	-0.014	13	0.23	96	0.23	96
113	M760	I	max	-4.547	68	0.175	15	0.023	72	0.003	96	1.265	13	1.265	13
114			min	-25.672	13	0	105	-0.022	104	-0.012	15	0.224	68	0.224	68
115		J	max	-4.568	68	0	75	0.023	70	0.003	96	1.277	13	1.277	13

2 bolt capacity = 35.80 kips
3 bolt capacity = 53.70 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
116			min	-25.922	13	-0.175	13	-0.022	106	-0.012	15	0.225	68	0.225	68
117	M598	I	max	-4.576	68	0.175	15	0.023	72	0.003	96	1.264	13	1.264	13
118			min	-25.651	13	0	105	-0.022	104	-0.012	15	0.225	68	0.225	68
119		J	max	-4.597	68	0	75	0.023	70	0.003	96	1.276	13	1.276	13
120			min	-25.9	13	-0.175	13	-0.022	106	-0.012	15	0.226	68	0.226	68
121	M685	I	max	-4.562	66	0.175	15	0.023	102	0.003	96	1.258	16	1.258	16
122			min	-25.531	16	0	105	-0.022	74	-0.012	15	0.225	66	0.225	66
123		J	max	-4.582	66	0	75	0.023	100	0.003	96	1.27	16	1.27	16
124			min	-25.78	16	-0.175	13	-0.022	76	-0.012	15	0.226	66	0.226	66
125	M412	I	max	-4.5	66	0.175	15	0.023	102	0.003	96	1.257	16	1.257	16
126			min	-25.52	16	0	105	-0.022	74	-0.012	15	0.222	66	0.222	66
127		J	max	-4.521	66	0	75	0.023	100	0.003	96	1.269	16	1.269	16
128			min	-25.77	16	-0.175	13	-0.022	76	-0.012	15	0.223	66	0.223	66
129	M675	I	max	-1.089	75	-0.001	75	0.024	100	0.007	74	0	102	0	104
130			min	-14.453	16	-0.195	13	-0.024	76	-0.014	15	0	74	0	15
131		J	max	-1.148	75	0.195	15	0.024	102	0.007	74	0	15	0	100
132			min	-14.703	16	0.001	105	-0.024	74	-0.014	15	0	104	0	76
133	M588	I	max	-0.905	75	-0.001	105	0.024	70	0.007	74	0	72	0	74
134			min	-14.43	15	-0.195	13	-0.024	106	-0.013	15	0	104	0	102
135		J	max	-0.964	75	0.195	15	0.024	72	0.007	74	0	15	0	70
136			min	-14.68	15	0.001	75	-0.024	104	-0.013	15	0	74	0	106
137	M400	I	max	-1.116	75	-0.001	75	0.024	100	0.007	74	0	102	0	104
138			min	-14.31	16	-0.195	13	-0.024	76	-0.014	15	0	74	0	15
139		J	max	-1.175	75	0.195	15	0.024	102	0.007	74	0	15	0	100
140			min	-14.56	16	0.001	105	-0.024	74	-0.014	15	0	104	0	76
141	M750	I	max	-0.784	75	-0.001	105	0.024	70	0.007	74	0	72	0	74
142			min	-13.981	15	-0.195	13	-0.024	106	-0.014	15	0	104	0	102
143		J	max	-0.843	75	0.195	15	0.024	72	0.007	74	0	15	0	70
144			min	-14.231	15	0.001	75	-0.024	104	-0.014	15	0	74	0	106
145	M747	I	max	-0.711	107	0.195	13	0.024	70	0.007	106	0.65	14	0.65	14
146			min	-13.198	14	0.001	77	-0.024	106	-0.01	13	0.035	107	0.035	107
147		J	max	-0.77	107	-0.001	107	0.024	72	0.007	106	0.662	14	0.662	14
148			min	-13.448	14	-0.195	15	-0.024	104	-0.01	13	0.038	107	0.038	107
149	M397	I	max	-0.988	107	0.195	13	0.024	100	0.007	106	0.637	15	0.637	15
150			min	-12.919	15	0.001	107	-0.024	76	-0.01	13	0.049	107	0.049	107
151		J	max	-1.047	107	-0.001	77	0.024	102	0.007	106	0.648	15	0.648	15
152			min	-13.169	15	-0.195	15	-0.024	74	-0.01	13	0.052	107	0.052	107
153	M672	I	max	-0.939	107	0.195	13	0.024	100	0.007	106	0.63	15	0.63	15
154			min	-12.776	15	0.001	107	-0.024	76	-0.01	13	0.046	107	0.046	107
155		J	max	-0.998	107	-0.001	77	0.024	102	0.007	106	0.641	15	0.641	15
156			min	-13.026	15	-0.195	15	-0.024	74	-0.01	13	0.049	107	0.049	107
157	M398	I	max	-0.481	107	-0.001	107	0.024	72	0.007	106	0.584	13	0.584	13
158			min	-11.847	13	-0.195	13	-0.024	104	-0.013	13	0.024	107	0.024	107
159		J	max	-0.539	107	0.195	15	0.024	70	0.007	106	0.596	13	0.596	13
160			min	-12.097	13	0.001	77	-0.024	106	-0.013	13	0.027	107	0.027	107
161	M673	I	max	-0.506	107	-0.001	107	0.024	72	0.007	76	0.583	13	0.583	13
162			min	-11.835	13	-0.195	13	-0.024	104	-0.013	13	0.025	107	0.025	107
163		J	max	-0.564	107	0.195	15	0.024	70	0.007	76	0.595	13	0.595	13
164			min	-12.085	13	0.001	77	-0.024	106	-0.013	13	0.028	107	0.028	107
165	M585	I	max	-0.414	107	0.195	13	0.024	70	0.007	106	0.575	14	0.575	14
166			min	-11.659	14	0.001	77	-0.024	106	-0.01	13	0.02	107	0.02	107
167		J	max	-0.473	107	-0.001	107	0.024	72	0.007	106	0.586	14	0.586	14
168			min	-11.909	14	-0.195	15	-0.024	104	-0.01	13	0.023	107	0.023	107
169	M748	I	max	-0.174	107	-0.001	77	0.024	102	0.007	76	0.569	14	0.569	14
170			min	-11.538	14	-0.195	13	-0.024	74	-0.013	13	0.009	107	0.009	107
171		J	max	-0.233	107	0.195	15	0.024	100	0.007	76	0.58	14	0.58	14
172			min	-11.788	14	0.001	107	-0.024	76	-0.013	13	0.011	107	0.011	107
173	M586	I	max	-0.222	107	-0.001	77	0.024	102	0.007	76	0.569	14	0.569	14

2 bolt capacity = 35.80 kips
3 bolt capacity = 53.70 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
174			min	-11.536	14	-0.195	13	-0.024	74	-0.013	13	0.011	107	0.011	107
175		J	max	-0.28	107	0.195	15	0.024	100	0.007	76	0.58	14	0.58	14
176			min	-11.786	14	0.001	107	-0.024	76	-0.013	13	0.014	107	0.014	107
177	M749	I	max	-0.109	75	0.195	15	0.024	102	0.007	104	0.53	13	0.53	13
178			min	-10.746	13	0.001	105	-0.024	74	-0.011	15	0.005	75	0.005	75
179		J	max	-0.168	75	-0.001	75	0.024	100	0.007	104	0.541	13	0.541	13
180			min	-10.996	13	-0.195	13	-0.024	76	-0.011	15	0.008	75	0.008	75
181	M587	I	max	-0.157	75	0.195	15	0.024	102	0.008	104	0.529	13	0.529	13
182			min	-10.736	13	0.001	105	-0.024	74	-0.011	15	0.008	75	0.008	75
183		J	max	-0.216	75	-0.001	75	0.024	100	0.008	104	0.541	13	0.541	13
184			min	-10.986	13	-0.195	13	-0.024	76	-0.011	15	0.011	75	0.011	75
185	M674	I	max	-0.265	75	0.195	15	0.024	72	0.008	74	0.514	16	0.514	16
186			min	-10.431	16	0.001	75	-0.024	104	-0.011	15	0.013	75	0.013	75
187		J	max	-0.324	75	-0.001	105	0.024	70	0.008	74	0.526	16	0.526	16
188			min	-10.681	16	-0.195	13	-0.024	106	-0.011	15	0.016	75	0.016	75
189	M399	I	max	-0.234	75	0.195	15	0.024	72	0.008	74	0.514	16	0.514	16
190			min	-10.42	16	0.001	75	-0.024	104	-0.011	15	0.012	75	0.012	75
191		J	max	-0.293	75	-0.001	105	0.024	70	0.008	74	0.525	16	0.525	16
192			min	-10.67	16	-0.195	13	-0.024	106	-0.011	15	0.014	75	0.014	75
193	M601	I	max	-0.075	75	-0.001	105	0.024	70	0.008	74	0.39	15	0.39	15
194			min	-7.908	15	-0.195	15	-0.024	106	-0.009	102	0.004	75	0.004	75
195		J	max	-0.134	75	0.195	13	0.024	72	0.008	74	0.402	15	0.402	15
196			min	-8.158	15	0.001	75	-0.024	104	-0.009	102	0.007	75	0.007	75
197	M688	I	max	-0.243	75	-0.001	75	0.024	100	0.008	104	0.382	16	0.382	16
198			min	-7.758	16	-0.195	15	-0.024	76	-0.008	72	0.012	75	0.012	75
199		J	max	-0.302	75	0.195	13	0.024	102	0.008	104	0.394	16	0.394	16
200			min	-8.008	16	0.001	105	-0.024	74	-0.008	72	0.015	75	0.015	75
201	M415	I	max	-0.277	75	-0.001	75	0.024	100	0.008	74	0.377	16	0.377	16
202			min	-7.657	16	-0.195	15	-0.024	76	-0.008	102	0.014	75	0.014	75
203		J	max	-0.336	75	0.195	13	0.024	102	0.008	74	0.389	16	0.389	16
204			min	-7.907	16	0.001	105	-0.024	74	-0.008	102	0.017	75	0.017	75
205	M763	I	max	0.07	75	-0.001	105	0.024	70	0.008	74	0.362	15	0.362	15
206			min	-7.343	15	-0.195	15	-0.024	106	-0.008	102	-0.003	75	-0.003	75
207		J	max	0.011	75	0.195	13	0.024	72	0.008	74	0.374	15	0.374	15
208			min	-7.593	15	0.001	75	-0.024	104	-0.008	102	-0.001	75	-0.001	75
209	M761	I	max	0.11	107	0.195	13	0.024	70	0.009	102	0.346	14	0.346	14
210			min	-7.029	14	0.001	77	-0.024	106	-0.007	74	-0.005	107	-0.005	107
211		J	max	0.051	107	-0.001	107	0.024	72	0.009	102	0.358	14	0.358	14
212			min	-7.279	14	-0.195	15	-0.024	104	-0.007	74	-0.003	107	-0.003	107
213	M413	I	max	-0.134	107	0.195	13	0.024	100	0.009	102	0.331	15	0.331	15
214			min	-6.709	15	0.001	107	-0.024	76	-0.007	74	0.007	107	0.007	107
215		J	max	-0.193	107	-0.001	77	0.024	102	0.009	102	0.343	15	0.343	15
216			min	-6.959	15	-0.195	15	-0.024	74	-0.007	74	0.009	107	0.009	107
217	M686	I	max	-0.093	107	0.195	13	0.024	100	0.009	102	0.326	15	0.326	15
218			min	-6.604	15	0.001	107	-0.024	76	-0.007	74	0.005	107	0.005	107
219		J	max	-0.152	107	-0.001	77	0.024	102	0.009	102	0.337	15	0.337	15
220			min	-6.854	15	-0.195	15	-0.024	74	-0.007	74	0.007	107	0.007	107
221	M414	I	max	0.321	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
222			min	-5.933	13	-0.195	13	-0.024	104	-0.008	104	-0.016	107	-0.016	107
223		J	max	0.262	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
224			min	-6.183	13	0.001	77	-0.024	106	-0.008	104	-0.013	107	-0.013	107
225	M687	I	max	0.296	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
226			min	-5.922	13	-0.195	13	-0.024	104	-0.008	104	-0.015	107	-0.015	107
227		J	max	0.237	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
228			min	-6.172	13	0.001	77	-0.024	106	-0.008	104	-0.012	107	-0.012	107
229	M762	I	max	0.605	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
230			min	-5.616	14	-0.195	13	-0.024	74	-0.008	74	-0.03	107	-0.03	107
231		J	max	0.546	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14

2 bolt capacity = 35.80 kips
3 bolt capacity = 53.70 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
232			min	-5.866	14	0.001	107	-0.024	76	-0.008	74	-0.027	107	-0.027	107
233	M600	I	max	0.557	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
234			min	-5.615	14	-0.195	13	-0.024	74	-0.008	74	-0.027	107	-0.027	107
235		J	max	0.498	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14
236			min	-5.865	14	0.001	107	-0.024	76	-0.008	74	-0.025	107	-0.025	107
237	M599	I	max	0.407	107	0.195	13	0.024	70	0.009	102	0.271	14	0.271	14
238			min	-5.498	14	0.001	77	-0.024	106	-0.007	74	-0.02	107	-0.02	107
239		J	max	0.349	107	-0.001	107	0.024	72	0.009	102	0.283	14	0.283	14
240			min	-5.748	14	-0.195	15	-0.024	104	-0.007	74	-0.017	107	-0.017	107
241	M764	I	max	0.673	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
242			min	-4.852	13	0.001	105	-0.024	74	-0.009	72	-0.033	75	-0.033	75
243		J	max	0.614	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
244			min	-5.102	13	-0.195	13	-0.024	76	-0.009	72	-0.03	75	-0.03	75
245	M602	I	max	0.623	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
246			min	-4.847	13	0.001	105	-0.024	74	-0.009	72	-0.031	75	-0.031	75
247		J	max	0.565	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
248			min	-5.097	13	-0.195	13	-0.024	76	-0.009	72	-0.028	75	-0.028	75
249	M689	I	max	0.492	75	0.195	15	0.024	72	0.008	104	0.224	16	0.224	16
250			min	-4.539	16	0.001	75	-0.024	104	-0.009	72	-0.024	75	-0.024	75
251		J	max	0.433	75	-0.001	105	0.024	70	0.008	104	0.236	16	0.236	16
252			min	-4.789	16	-0.195	13	-0.024	106	-0.009	72	-0.021	75	-0.021	75
253	M416	I	max	0.524	75	0.195	15	0.024	72	0.008	104	0.223	15	0.223	15
254			min	-4.53	15	0.001	75	-0.024	104	-0.009	72	-0.026	75	-0.026	75
255		J	max	0.465	75	-0.001	105	0.024	70	0.008	104	0.235	15	0.235	15
256			min	-4.78	15	-0.195	13	-0.024	106	-0.009	72	-0.023	75	-0.023	75
257	M447	I	max	0.638	45	0.266	16	0.03	104	0.003	73	0	107	0	107
258			min	-0.665	73	0.004	105	-0.03	42	-0.002	45	0	12	0	12
259		J	max	0.718	101	-0.004	45	0.03	106	0.003	73	0	107	0	107
260			min	-0.692	77	-0.266	13	-0.03	40	-0.002	45	0	12	0	12
261	M448	I	max	0.638	47	0.266	16	0.03	106	0.002	47	0	107	0	107
262			min	-0.665	41	0.004	77	-0.03	40	-0.003	41	0	12	0	12
263		J	max	0.718	73	-0.004	47	0.03	104	0.002	47	0	107	0	107
264			min	-0.692	75	-0.266	13	-0.03	42	-0.003	41	0	12	0	12

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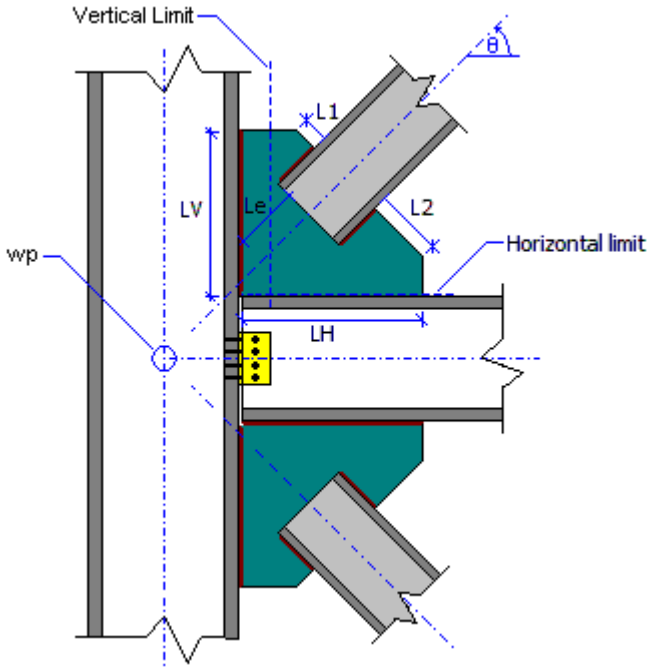
Steel Connections Data

Connection: 2 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

General information

Connector



Members

Existing members

Right beam	:	No
Left beam	:	No
Upper right brace	:	Yes
Upper left brace	:	No
Lower left brace	:	No
Lower right brace	:	No
Align beams to top edge	:	No

Column

General

Column section	:	W 10X33
Column material	:	A992 Gr50
Column orientation	:	Longitudinal

Is column end	:	No

Upper right brace

General

Section	:	L 3X3X1_4
Material	:	A572 Gr50
Brace slope angle (degrees)	:	35
Salient brace leg to the right	:	Yes
Brace long leg on gusset	:	Yes

Additional geometric data

wpx: WP horizontal displacement	:	0 in
wpy: WP vertical displacement	:	0 in
Le: Minimum distance to other members	:	2 in
L1: Left distance	:	2 in
L2: Right distance	:	2.187 in

Interfaces

Upper right brace

Gusset

General

tp: Thickness	:	0.375 in
Material	:	A36
LV: Length on column	:	21.426 in

Gusset-to-Brace connection

General

Connection type	:	Bolted
Bolts	:	3/4" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)
nc: Bolt columns	:	3
nr: Rows of Bolts	:	1
s: Pitch - longitudinal center-to-center spacing	:	3 in
Leh: Longitudinal distance to edge	:	1.5 in
Lev: Transverse distance to edge	:	1.5 in

Gusset-to-Column connection

General

Connection type to column	:	Connection: Directly welded

Directly welded

Column weld	:	E70XX
D: Weld size to column (1/16 in)	:	3

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Steel Connections
Results

Connection: 2 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

Design code: AISC 360-16 LRFD

Demands

Description	Right beam Pu [kip]	Right beam Vu [kip]	Right beam Mu33 [kip*ft]	Left beam Pu [kip]	Left beam Vu [kip]	Left beam Mu33 [kip*ft]	Column Pu [kip]	Column Vu [kip]	Load type
DL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Design

Description	Pu Brace1 [kip]	Pu Brace2 [kip]	Pu Brace3 [kip]	Pu Brace4 [kip]	Load type
DL	41.50	0.00	0.00	0.00	Design

Design calculations

Interface between Gusset - Top right brace
Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
41.50	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal center-to-center spacing (pitch)	[in]	3.00	2.00	6.00	✔	Sec. J3.5

Gusset						
Transverse edge distance	[in]	2.83	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	53.70	41.50	DL	**0.77**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	59.87	41.50	DL	**0.69**	Eq. J3-6
Block shear rupture at brace web	[Kip]	51.80	41.50	DL	**0.80**	Eq. J4-5
Gusset						
Bolt bearing on gusset	[Kip]	80.14	41.50	DL	**0.52**	Eq. J3-6
Ratio	**0.80**					

Checks for gusset and brace

Demands

Pu [kip]	Description	Load type
41.50	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Member						
Yielding strength due to axial load	[Kip]	64.80	41.50	DL	**0.64**	Eq. J4-1
Tension rupture	[Kip]	51.18	41.50	DL	**0.81**	Eq. J4-2
Gusset						
Tension yielding on the Whitmore section	[Kip]	84.18	41.50	DL	**0.49**	Eq. J4-1
Ratio	**0.81**					

Interface Upper right gusset - column

Connection: Directly welded

Demands

	Beam			Column			
Description	**Ru** [kip]	**Pu** [kip]	**Mu** [kip*ft]	**Pu** [kip]	**Mu22** [kip*ft]	**Mu33** [kip*ft]	**Load type**
DL	23.80	33.99	0.00	0.00	0.00	0.00	Design

Geometric Considerations

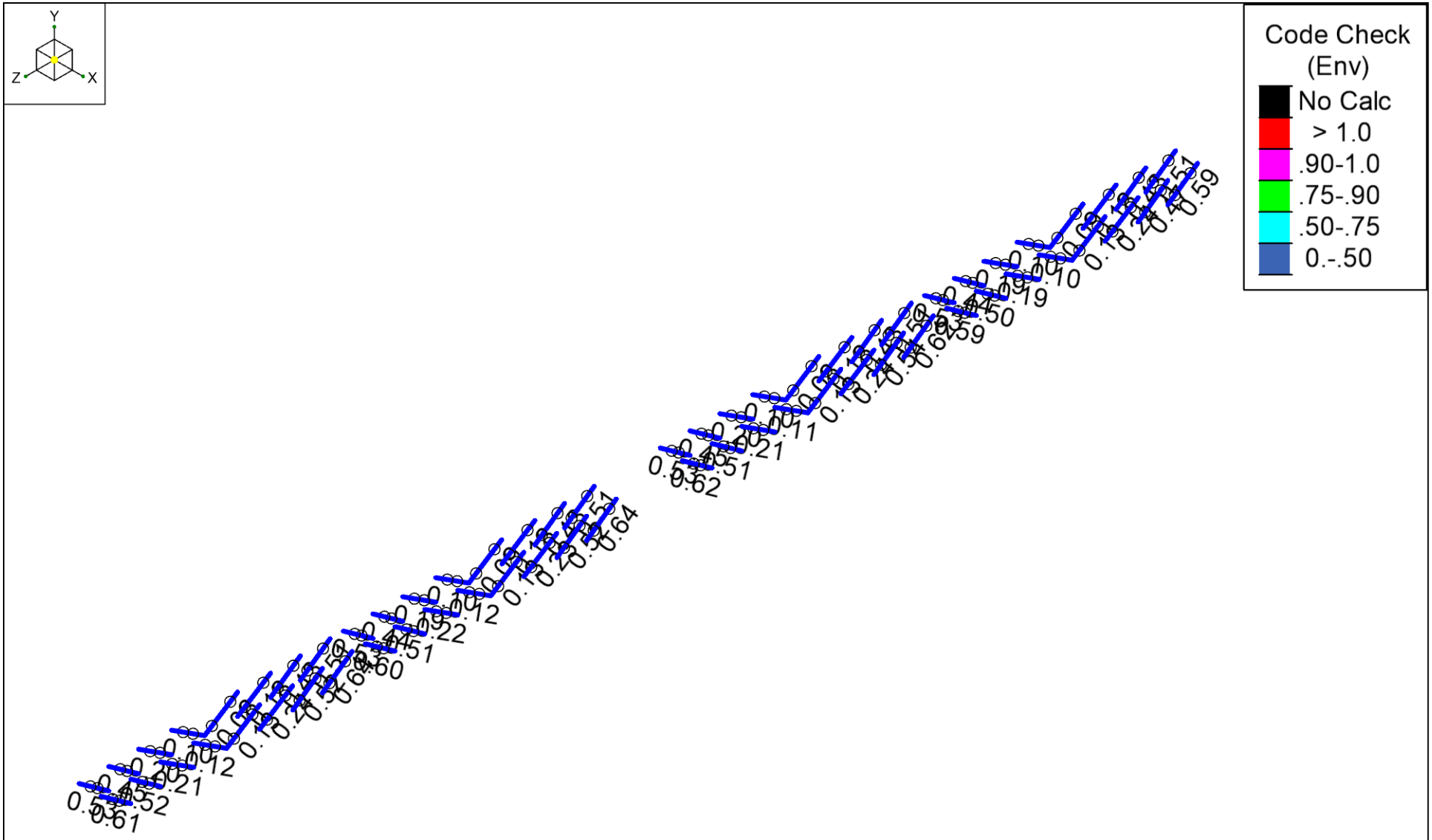
Dimensions	Unit	Value	Min.	Max.	Sta.	References
Gusset						
Weld size	[1/16in]	3	3	5	✔	Sec. J2.2b

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Gusset						
Beam yielding (normal stress)	[Kip]	260.32	33.99	DL	**0.13**	Eq. B-1, Appendix B, DG29
Shear yielding	[Kip]	173.55	23.80	DL	**0.14**	Eq. J4-3
Gusset edge tension stress	[Kip/in2]	32.40	4.23	DL	**0.13**	Eq. B-1, Appendix B, DG29
Gusset edge shear stress	[Kip/in2]	21.60	2.96	DL	**0.14**	J4-1
Weld capacity	[Kip]	245.30	51.88	DL	**0.21**	Tables 8-4 .. 8-11
Chord						
Web crippling	[Kip]	342.02	33.99	DL	**0.10**	Eq. B-1, Appendix B, DG29
Local web yielding	[Kip]	378.46	33.99	DL	**0.09**	Eq. B-1, Appendix B, DG29
Transverse section web yielding	[Kip]	84.65	33.99	DL	**0.40**	Eq. G2-1
Ratio	**0.40**					
Global critical strength ratio	**0.81**					

References

[9] AISC 2005, Design Examples Version 13.0, pp. IIC-26 - IIC-27



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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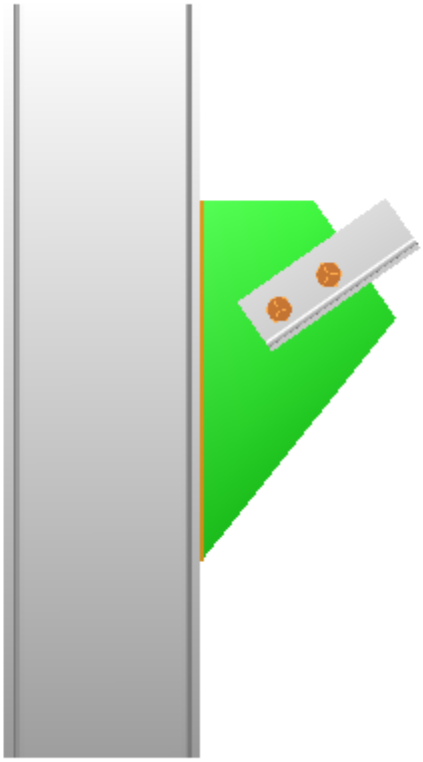
	A. Kral		Dec 07, 2023 at 02:10 PM
	153929		Combined Pile Cap Model.r3d



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Steel Connections Results

Connection: 4 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

Design code: AISC 360-16 LRFD

Demands

Description	Right beam Pu [kip]	Right beam Vu [kip]	Right beam Mu33 [kip*ft]	Left beam Pu [kip]	Left beam Vu [kip]	Left beam Mu33 [kip*ft]	Column Pu [kip]	Column Vu [kip]	Load type
DL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Design

Description	Pu Brace1 [kip]	Pu Brace2 [kip]	Pu Brace3 [kip]	Pu Brace4 [kip]	Load type
DL	35.80	0.00	0.00	0.00	Design

Design calculations

Interface between Gusset - Top right brace
Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
35.80	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal center-to-center spacing (pitch)	[in]	3.00	2.00	6.00	✔	Sec. J3.5

Gusset						
Transverse edge distance	[in]	2.81	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	35.80	35.80	DL	**1.00**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	37.93	35.80	DL	**0.94**	Eq. J3-6
Block shear rupture at brace web	[Kip]	36.26	35.80	DL	**0.99**	Eq. J4-5
Gusset						
Bolt bearing on gusset	[Kip]	50.77	35.80	DL	**0.71**	Eq. J3-6
Ratio	**1.00**					

Checks for gusset and brace

Demands

Pu [kip]	Description	Load type
35.80	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Member						
Yielding strength due to axial load	[Kip]	64.80	35.80	DL	**0.55**	Eq. J4-1
Tension rupture	[Kip]	42.82	35.80	DL	**0.84**	Eq. J4-2
Gusset						
Tension yielding on the Whitmore section	[Kip]	42.09	35.80	DL	**0.85**	Eq. J4-1
Ratio	**0.85**					

Interface Upper right gusset - column

Connection: Directly welded

Demands

	Beam			Column			
Description	**Ru** [kip]	**Pu** [kip]	**Mu** [kip*ft]	**Pu** [kip]	**Mu22** [kip*ft]	**Mu33** [kip*ft]	**Load type**
DL	20.53	29.33	0.00	0.00	0.00	0.00	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Gusset						
Weld size	[1/16in]	3	3	5	✔	Sec. J2.2b

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Gusset						
Beam yielding (normal stress)	[Kip]	218.51	29.33	DL	**0.13**	Eq. B-1, Appendix B, DG29
Shear yielding	[Kip]	145.67	20.53	DL	**0.14**	Eq. J4-3
Gusset edge tension stress	[Kip/in2]	32.40	4.35	DL	**0.13**	Eq. B-1, Appendix B, DG29
Gusset edge shear stress	[Kip/in2]	21.60	3.04	DL	**0.14**	J4-1
Weld capacity	[Kip]	205.90	44.75	DL	**0.22**	Tables 8-4 .. 8-11
Chord						
Web crippling	[Kip]	299.03	29.33	DL	**0.10**	Eq. B-1, Appendix B, DG29
Local web yielding	[Kip]	328.56	29.33	DL	**0.09**	Eq. B-1, Appendix B, DG29
Transverse section web yielding	[Kip]	84.65	29.33	DL	**0.35**	Eq. G2-1
Ratio	**0.35**					
Global critical strength ratio	**1.00**					

References

[9] AISC 2005, Design Examples Version 13.0, pp. IIC-26 - IIC-27

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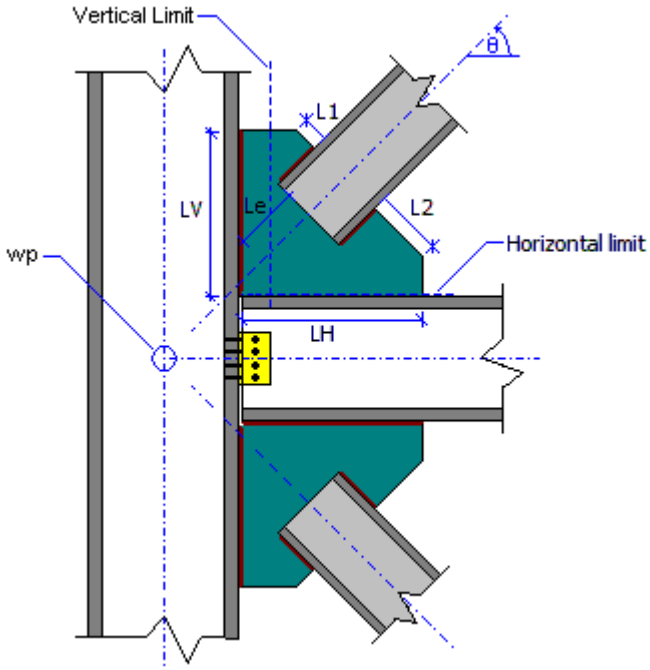
Steel Connections Data

Connection: 4 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

General information

Connector



Members

Existing members

Right beam	:	No
Left beam	:	No
Upper right brace	:	Yes
Upper left brace	:	No
Lower left brace	:	No
Lower right brace	:	No
Align beams to top edge	:	No

Column

General

Column section	:	W 10X33
Column material	:	A992 Gr50
Column orientation	:	Longitudinal

Is column end	:	No

Upper right brace

General

Section	:	L 3X3X1_4
Material	:	A572 Gr50
Brace slope angle (degrees)	:	35
Salient brace leg to the right	:	Yes
Brace long leg on gusset	:	Yes

Additional geometric data

wpx: WP horizontal displacement	:	0 in
wpy: WP vertical displacement	:	0 in
Le: Minimum distance to other members	:	2 in
L1: Left distance	:	2 in
L2: Right distance	:	2.187 in

Interfaces

Upper right brace

Gusset

General

tp: Thickness	:	0.375 in
Material	:	A36
LV: Length on column	:	17.984 in

Gusset-to-Brace connection

General

Connection type	:	Bolted
Bolts	:	3/4" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)
nc: Bolt columns	:	2
nr: Rows of Bolts	:	1
s: Pitch - longitudinal center-to-center spacing	:	3 in
Leh: Longitudinal distance to edge	:	1.5 in
Lev: Transverse distance to edge	:	1.5 in

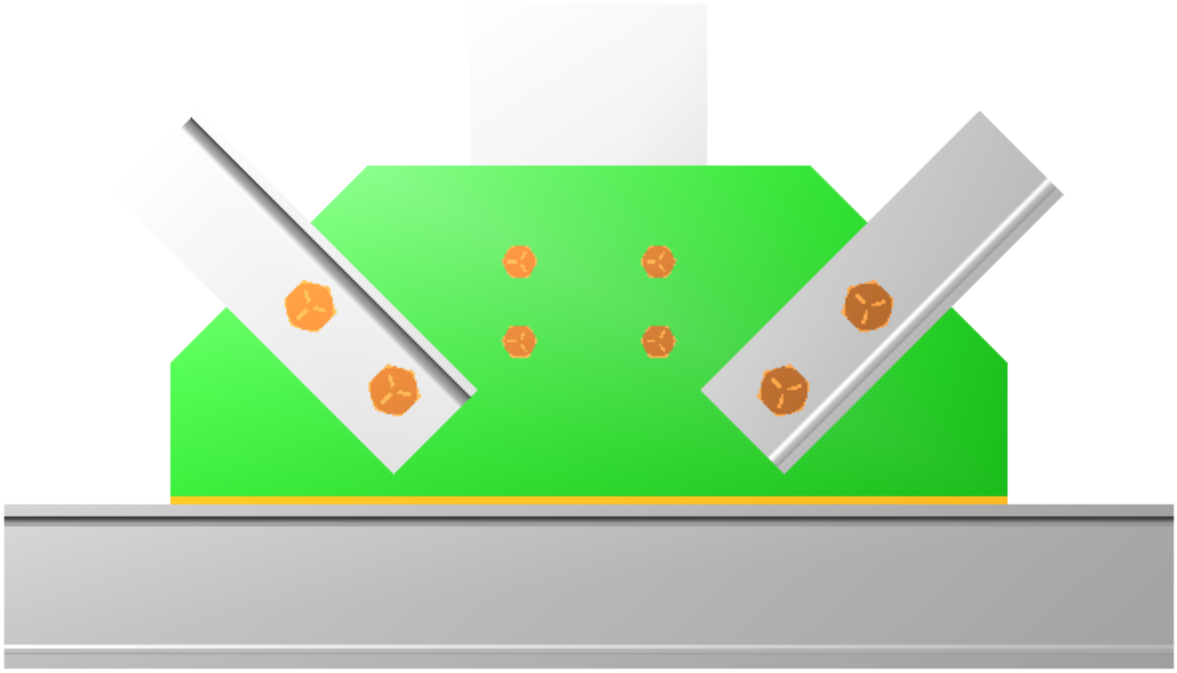
Gusset-to-Column connection

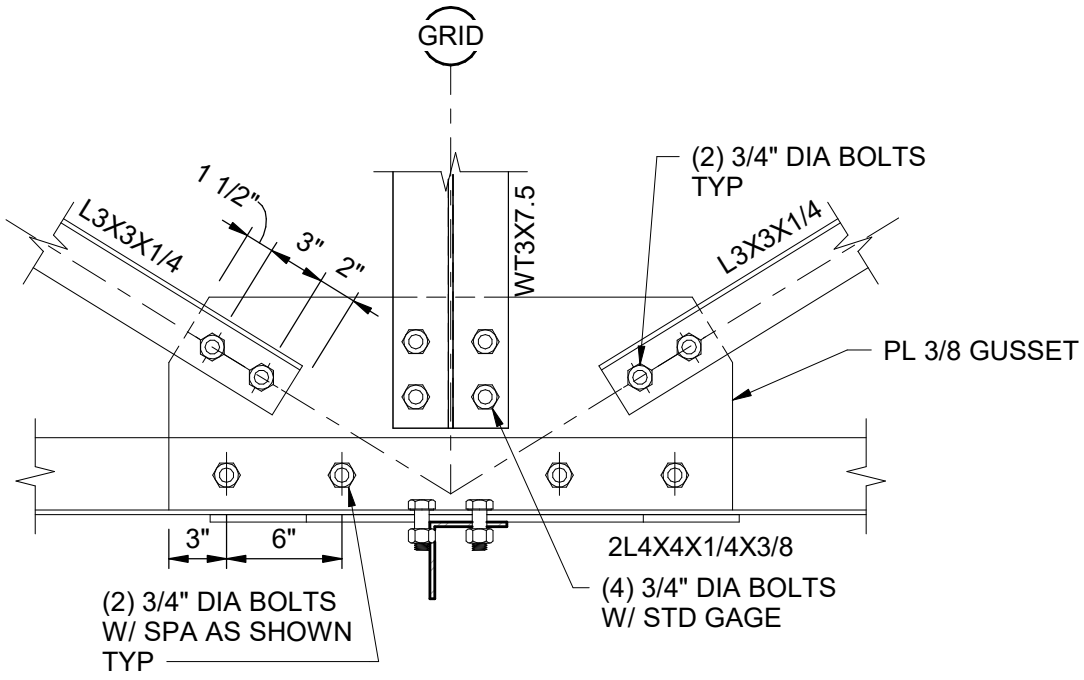
General

Connection type to column	:	Connection: Directly welded

Directly welded

Column weld	:	E70XX
D: Weld size to column (1/16 in)	:	3

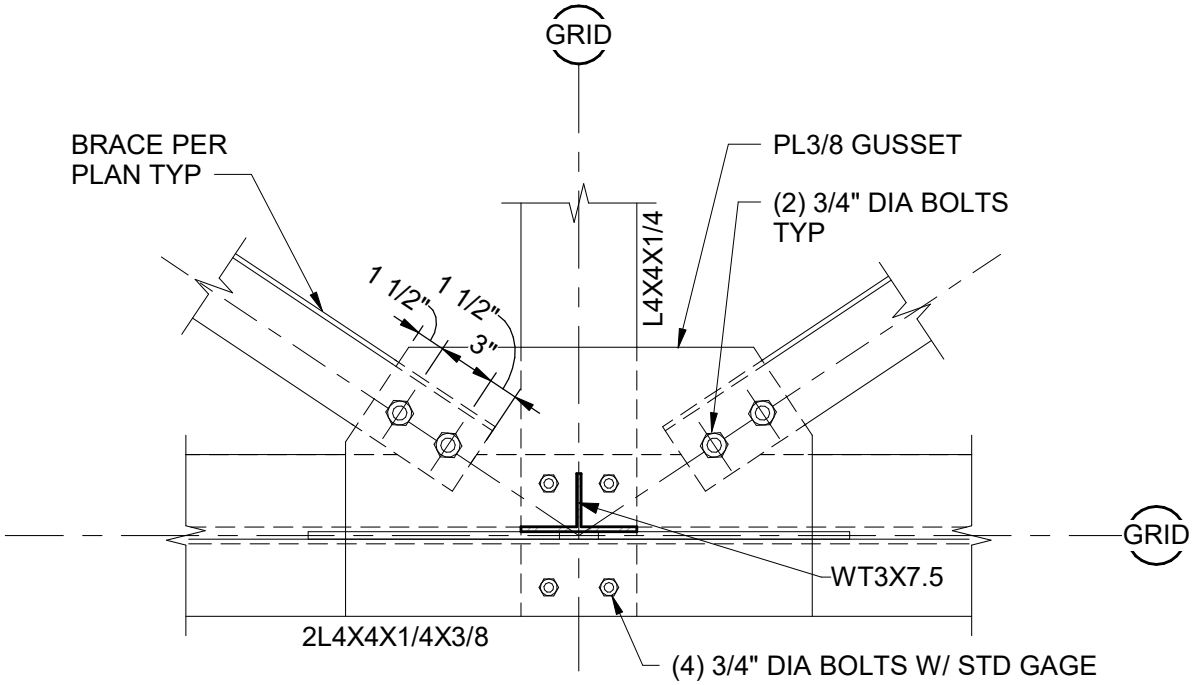




DETAIL 4

0 1/2' 1' 1 1/2'

SCALE IN FEET



DETAIL 5

0 1/2' 1' 1 1/2'

SCALE IN FEET

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M601	I	max	-0.075	75	-0.001	105	0.024	70	0.008	74	0.39	15	0.39	15
2			min	-7.908	15	-0.195	15	-0.024	106	-0.009	102	0.004	75	0.004	75
3		J	max	-0.134	75	0.195	13	0.024	72	0.008	74	0.402	15	0.402	15
4			min	-8.158	15	0.001	75	-0.024	104	-0.009	102	0.007	75	0.007	75
5	M688	I	max	-0.243	75	-0.001	75	0.024	100	0.008	104	0.382	16	0.382	16
6			min	-7.758	16	-0.195	15	-0.024	76	-0.008	72	0.012	75	0.012	75
7		J	max	-0.302	75	0.195	13	0.024	102	0.008	104	0.394	16	0.394	16
8			min	-8.008	16	0.001	105	-0.024	74	-0.008	72	0.015	75	0.015	75
9	M415	I	max	-0.277	75	-0.001	75	0.024	100	0.008	74	0.377	16	0.377	16
10			min	-7.657	16	-0.195	15	-0.024	76	-0.008	102	0.014	75	0.014	75
11		J	max	-0.336	75	0.195	13	0.024	102	0.008	74	0.389	16	0.389	16
12			min	-7.907	16	0.001	105	-0.024	74	-0.008	102	0.017	75	0.017	75
13	M763	I	max	0.07	75	-0.001	105	0.024	70	0.008	74	0.362	15	0.362	15
14			min	-7.343	15	-0.195	15	-0.024	106	-0.008	102	-0.003	75	-0.003	75
15		J	max	0.011	75	0.195	13	0.024	72	0.008	74	0.374	15	0.374	15
16			min	-7.593	15	0.001	75	-0.024	104	-0.008	102	-0.001	75	-0.001	75
17	M761	I	max	0.11	107	0.195	13	0.024	70	0.009	102	0.346	14	0.346	14
18			min	-7.029	14	0.001	77	-0.024	106	-0.007	74	-0.005	107	-0.005	107
19		J	max	0.051	107	-0.001	107	0.024	72	0.009	102	0.358	14	0.358	14
20			min	-7.279	14	-0.195	15	-0.024	104	-0.007	74	-0.003	107	-0.003	107
21	M413	I	max	-0.134	107	0.195	13	0.024	100	0.009	102	0.331	15	0.331	15
22			min	-6.709	15	0.001	107	-0.024	76	-0.007	74	0.007	107	0.007	107
23		J	max	-0.193	107	-0.001	77	0.024	102	0.009	102	0.343	15	0.343	15
24			min	-6.959	15	-0.195	15	-0.024	74	-0.007	74	0.009	107	0.009	107
25	M686	I	max	-0.093	107	0.195	13	0.024	100	0.009	102	0.326	15	0.326	15
26			min	-6.604	15	0.001	107	-0.024	76	-0.007	74	0.005	107	0.005	107
27		J	max	-0.152	107	-0.001	77	0.024	102	0.009	102	0.337	15	0.337	15
28			min	-6.854	15	-0.195	15	-0.024	74	-0.007	74	0.007	107	0.007	107
29	M414	I	max	0.321	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
30			min	-5.933	13	-0.195	13	-0.024	104	-0.008	104	-0.016	107	-0.016	107
31		J	max	0.262	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
32			min	-6.183	13	0.001	77	-0.024	106	-0.008	104	-0.013	107	-0.013	107
33	M687	I	max	0.296	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
34			min	-5.922	13	-0.195	13	-0.024	104	-0.008	104	-0.015	107	-0.015	107
35		J	max	0.237	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
36			min	-6.172	13	0.001	77	-0.024	106	-0.008	104	-0.012	107	-0.012	107
37	M762	I	max	0.605	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
38			min	-5.616	14	-0.195	13	-0.024	74	-0.008	74	-0.03	107	-0.03	107
39		J	max	0.546	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14
40			min	-5.866	14	0.001	107	-0.024	76	-0.008	74	-0.027	107	-0.027	107
41	M600	I	max	0.557	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
42			min	-5.615	14	-0.195	13	-0.024	74	-0.008	74	-0.027	107	-0.027	107
43		J	max	0.498	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14
44			min	-5.865	14	0.001	107	-0.024	76	-0.008	74	-0.025	107	-0.025	107
45	M599	I	max	0.407	107	0.195	13	0.024	70	0.009	102	0.271	14	0.271	14
46			min	-5.498	14	0.001	77	-0.024	106	-0.007	74	-0.02	107	-0.02	107
47		J	max	0.349	107	-0.001	107	0.024	72	0.009	102	0.283	14	0.283	14
48			min	-5.748	14	-0.195	15	-0.024	104	-0.007	74	-0.017	107	-0.017	107
49	M764	I	max	0.673	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
50			min	-4.852	13	0.001	105	-0.024	74	-0.009	72	-0.033	75	-0.033	75
51		J	max	0.614	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
52			min	-5.102	13	-0.195	13	-0.024	76	-0.009	72	-0.03	75	-0.03	75
53	M602	I	max	0.623	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
54			min	-4.847	13	0.001	105	-0.024	74	-0.009	72	-0.031	75	-0.031	75
55		J	max	0.565	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
56			min	-5.097	13	-0.195	13	-0.024	76	-0.009	72	-0.028	75	-0.028	75
57	M689	I	max	0.492	75	0.195	15	0.024	72	0.008	104	0.224	16	0.224	16

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	-4.539	16	0.001	75	-0.024	104	-0.009	72	-0.024	75	-0.024	75
59		J	max	0.433	75	-0.001	105	0.024	70	0.008	104	0.236	16	0.236	16
60			min	-4.789	16	-0.195	13	-0.024	106	-0.009	72	-0.021	75	-0.021	75
61	M416	I	max	0.524	75	0.195	15	0.024	72	0.008	104	0.223	15	0.223	15
62			min	-4.53	15	0.001	75	-0.024	104	-0.009	72	-0.026	75	-0.026	75
63		J	max	0.465	75	-0.001	105	0.024	70	0.008	104	0.235	15	0.235	15
64			min	-4.78	15	-0.195	13	-0.024	106	-0.009	72	-0.023	75	-0.023	75
65	M382	I	max	2.82	106	0.293	15	0.028	102	0.002	70	0.193	70	0.179	106
66			min	-3.03	70	0.023	107	-0.028	104	-0.003	19	-0.179	106	-0.193	70
67		J	max	2.858	106	-0.023	75	0.028	40	0.002	70	0.195	70	0.182	106
68			min	-3.067	70	-0.293	13	-0.028	76	-0.003	19	-0.182	106	-0.195	70
69	M739	I	max	3.002	102	0.293	15	0.028	70	0.006	19	0.181	74	0.191	102
70			min	-2.851	74	0.023	105	-0.028	72	-0.001	74	-0.191	102	-0.181	74
71		J	max	3.04	102	-0.023	77	0.028	42	0.006	19	0.184	74	0.193	102
72			min	-2.889	74	-0.293	13	-0.028	100	-0.001	74	-0.193	102	-0.184	74
73	M617	I	max	2.767	106	0.293	15	0.028	106	0.002	100	0.189	70	0.176	106
74			min	-2.967	70	0.023	107	-0.028	74	-0.003	19	-0.176	106	-0.189	70
75		J	max	2.805	106	-0.023	75	0.028	40	0.002	100	0.191	70	0.178	106
76			min	-3.005	70	-0.293	13	-0.028	72	-0.003	19	-0.178	106	-0.191	70
77	M577	I	max	2.794	102	0.293	15	0.028	70	0.006	15	0.156	74	0.178	102
78			min	-2.456	74	0.023	105	-0.028	76	-0.001	74	-0.178	102	-0.156	74
79		J	max	2.831	102	-0.023	77	0.028	46	0.006	15	0.159	74	0.18	102
80			min	-2.494	74	-0.293	13	-0.028	40	-0.001	74	-0.18	102	-0.159	74
81	M573	I	max	1.977	106	0.293	15	0.028	46	0.002	100	0.139	70	0.126	106
82			min	-2.179	70	0.023	77	-0.028	40	-0.003	19	-0.126	106	-0.139	70
83		J	max	2.015	106	-0.023	105	0.028	100	0.002	100	0.141	70	0.128	106
84			min	-2.217	70	-0.293	13	-0.028	72	-0.003	19	-0.128	106	-0.141	70
85	M386	I	max	2.139	72	0.293	15	0.028	44	0.006	19	0.118	104	0.136	72
86			min	-1.86	104	0.023	75	-0.028	46	-0.001	100	-0.136	72	-0.118	104
87		J	max	2.177	72	-0.023	107	0.028	72	0.006	19	0.121	104	0.139	72
88			min	-1.898	104	-0.293	13	-0.028	104	-0.001	100	-0.139	72	-0.121	104
89	M664	I	max	2.116	72	0.293	15	0.028	100	0.006	19	0.117	104	0.135	72
90			min	-1.844	104	0.023	75	-0.028	42	-0.001	70	-0.135	72	-0.117	104
91		J	max	2.154	72	-0.023	107	0.028	76	0.006	19	0.12	104	0.137	72
92			min	-1.881	104	-0.293	13	-0.028	40	-0.001	70	-0.137	72	-0.12	104
93	M343	I	max	1.406	104	0.027	72	-0.024	76	0.028	15	0.242	104	0.338	72
94			min	-1.965	72	-0.027	104	-0.289	13	0	74	-0.338	72	-0.242	104
95		J	max	1.443	104	0.029	70	0.289	15	0.028	15	0.248	104	0.345	72
96			min	-2.003	72	-0.029	102	0.024	104	0	74	-0.345	72	-0.248	104
97	M735	I	max	1.827	106	0.293	15	0.028	76	0.002	100	0.125	70	0.116	106
98			min	-1.963	70	0.023	77	-0.028	104	-0.003	19	-0.116	106	-0.125	70
99		J	max	1.865	106	-0.023	105	0.028	40	0.002	100	0.127	70	0.119	106
100			min	-2.001	70	-0.293	13	-0.028	42	-0.003	19	-0.119	106	-0.127	70
101	M474	I	max	1.4	104	0.027	72	-0.024	76	0.028	15	0.241	104	0.337	72
102			min	-1.958	72	-0.027	104	-0.289	13	0	74	-0.337	72	-0.241	104
103		J	max	1.438	104	0.029	70	0.289	15	0.028	15	0.247	104	0.343	72
104			min	-1.996	72	-0.029	102	0.024	104	0	74	-0.343	72	-0.247	104
105	M727	I	max	1.459	74	0.029	70	-0.024	76	0.007	13	0.251	74	0.295	102
106			min	-1.715	102	-0.029	106	-0.289	13	-0.001	76	-0.295	102	-0.251	74
107		J	max	1.497	74	0.027	72	0.289	15	0.007	13	0.258	74	0.302	102
108			min	-1.753	102	-0.027	104	0.024	104	-0.001	76	-0.302	102	-0.258	74
109	M565	I	max	1.366	74	0.029	70	-0.024	76	0.007	13	0.235	74	0.253	106
110			min	-1.472	106	-0.029	106	-0.289	13	-0.001	76	-0.253	106	-0.235	74
111		J	max	1.404	74	0.027	72	0.289	15	0.007	13	0.242	74	0.26	106
112			min	-1.51	106	-0.027	104	0.024	104	-0.001	76	-0.26	106	-0.242	74
113	M537	I	max	0.256	96	0.027	106	-0.024	76	0.028	15	0.044	96	0.256	15
114			min	-1.488	15	-0.027	70	-0.289	13	0	74	-0.256	15	-0.044	96
115		J	max	0.256	96	0.029	104	0.289	15	0.028	15	0.044	96	0.256	15

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
116			min	-1.488	15	-0.029	72	0.024	104	0	74	-0.256	15	-0.044	96
117	M511	I	max	0.195	96	0.027	106	-0.024	76	0.028	15	0.034	96	0.245	15
118			min	-1.425	15	-0.027	70	-0.289	13	0	74	-0.245	15	-0.034	96
119		J	max	0.195	96	0.029	104	0.289	15	0.028	15	0.034	96	0.245	15
120			min	-1.425	15	-0.029	72	0.024	104	0	74	-0.245	15	-0.034	96
121	M374	I	max	0.359	66	0.029	104	-0.024	76	0.007	13	0.062	66	0.104	94
122			min	-0.605	94	-0.029	72	-0.289	13	-0.001	106	-0.104	94	-0.062	66
123		J	max	0.359	66	0.027	106	0.289	15	0.007	13	0.062	66	0.104	94
124			min	-0.605	94	-0.027	70	0.024	104	-0.001	106	-0.104	94	-0.062	66
125	M609	I	max	0.319	66	0.029	104	-0.024	76	0.007	13	0.055	66	0.097	94
126			min	-0.562	94	-0.029	72	-0.289	13	-0.001	106	-0.097	94	-0.055	66
127		J	max	0.319	66	0.027	106	0.289	15	0.007	13	0.055	66	0.097	94
128			min	-0.562	94	-0.027	70	0.024	104	-0.001	106	-0.097	94	-0.055	66

Current Date: 12/7/2023 3:40 PM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\09 Utility Corridor\Truss Connections.rcnx

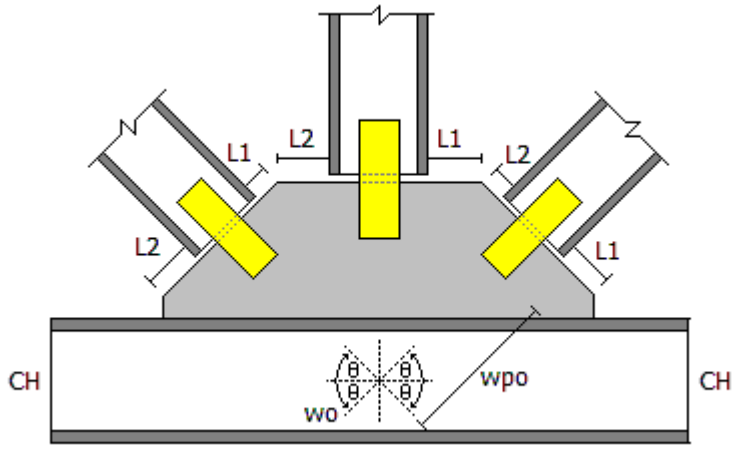
Steel Connections Data

Connection: 6 - TGB_AISC

Family: Chord - Branches (CHB)
Type: Gusset

General information

Connector



Members

Existing members

Upper right branch	:	Yes
Upper branch	:	Yes
Upper left branch	:	Yes
Lower left branch	:	No
Lower branch	:	No
Lower right branch	:	No

Chord

General

Section	:	W 4X13
Material	:	A992 Gr50
Rotated	:	No

Upper right branch

General

Section	:	L 3X3X1_4
Material	:	A572 Gr50
Slope angle (degrees)	:	45
Salient branch leg to the right	:	Yes
Branch long leg on gusset	:	Yes

Additional geometric data

Le: Minimum distance to chord	:	0.75 in
L1: Outside distance	:	2 in
Le2: Inward distance	:	2 in

Upper branch

General

Section	:	WT 3X7.5
Material	:	A572 Gr50
Rotation (degrees)	:	90°
Double brace	:	No

Additional geometric data

Le: Minimum distance to chord	:	2.403 in

Upper left branch

General

Section	:	L 3X3X1_4
Material	:	A572 Gr50
Slope angle (degrees)	:	45
Salient branch leg to the right	:	Yes
Branch long leg on gusset	:	Yes

Additional geometric data

Le: Minimum distance to chord	:	0.75 in
L1: Outside distance	:	2 in
Le2: Inward distance	:	2 in

Interfaces

Upper gusset

Gusset

tg: Thickness	:	0.375 in
Material	:	A572 Gr50
wpY: Offset to working point	:	0 in

Gusset-to-chord connection

Welding electrode	:	E70XX
D: Weld size to member (1/16 in)	:	3

Upper right branch

Gusset-to-Branch connection

General

Connection type	:	Bolted
Bolts	:	3/4" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)
np: Number of rows of bolts longitudinally	:	2
nc: Number of lines of bolts transversely	:	1
sp: Longitudinal bolt spacing	:	3 in
ae1: Longitudinal distance to edge	:	1.5 in
ae3: Transverse distance to edge	:	1.5 in
t: Thickness	:	0.375 in

Upper branch

Gusset-to-Branch connection

General

Connection type	:	Bolted
Bolts	:	1/2" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)
np: Number of rows of bolts longitudinally	:	2
nc: Number of lines of bolts transversely	:	2
sp: Longitudinal bolt spacing	:	2 in
sg: Transversal bolt spacing	:	3.5 in
ae1: Longitudinal distance to edge	:	1.5 in
t: Thickness	:	0.375 in

Upper left branch

Gusset-to-Branch connection

General

Connection type	:	Bolted
Bolts	:	3/4" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)

np: Number of rows of bolts longitudinally : 2
nc: Number of lines of bolts transversely : 1
sp: Longitudinal bolt spacing : 3 in
ae1: Longitudinal distance to edge : 1.5 in
ae3: Transverse distance to edge : 1.5 in
t: Thickness : 0.375 in

Lower left branch

Gusset-to-Branch connection

General

t: Thickness : 0.375 in

Lower branch

Gusset-to-Branch connection

General

t: Thickness : 0.375 in

Lower right branch

Gusset-to-Branch connection

General

t: Thickness : 0.375 in

Current Date: 12/7/2023 3:40 PM
Units system: English
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Steel Connections Results

Connection: 6 - TGB_AISC

Family: Chord - Branches (CHB)
Type: Gusset

Design code: AISC 360-16 LRFD

Demands

Description	Chord Pu [kip]	Chord Vu [kip]	Chord Mu33 [kip*ft]	Axial1 Branch1 [kip]	Axial2 Branch2 [kip]	Axial3 Branch3 [kip]	Axial4 Branch4 [kip]	Axial5 Branch5 [kip]	Axial6 Branch6 [kip]	Load type
DL	0.00	0.00	0.00	10.00	10.00	10.00	0.00	0.00	0.00	Design

Design calculations

Interface between Gusset - Top right branch
Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
10.00	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal center-to-center spacing (pitch)	[in]	3.00	2.00	6.00	✔	Sec. J3.5
Gusset						
Transverse edge distance	[in]	5.00	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	35.80	10.00	DL	**0.28**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	37.93	10.00	DL	**0.26**	Eq. J3-6
Block shear rupture at branch web	[Kip]	36.26	10.00	DL	**0.28**	Eq. J4-5
Gusset						
Bolt bearing on gusset	[Kip]	56.90	10.00	DL	**0.18**	Eq. J3-6
Ratio	**0.28**					

Checks for gusset and branch

Demands

Pu [kip]	Description	Load type
10.00	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Member						
Yielding strength due to axial load	[Kip]	64.80	10.00	DL	**0.15**	Eq. J4-1
Tension rupture	[Kip]	42.82	10.00	DL	**0.23**	Eq. J4-2
Gusset						
Tension yielding on the Whitmore section	[Kip]	58.46	10.00	DL	**0.17**	Eq. J4-1
Ratio	**0.23**					

Interface between Gusset - Top branch

Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
10.00	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	1.25	0.75	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	0.75	--	✔	Tables J3.4, J3.5
Transverse center-to-center spacing (gage)	[in]	3.50	1.33	6.24	✔	Sec. J3.5
Longitudinal center-to-center spacing (pitch)	[in]	2.00	1.33	6.24	✔	Sec. J3.5

Gusset						
Transverse edge distance	[in]	6.28	0.75	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	0.75	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	31.75	10.00	DL	**0.31**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	60.84	10.00	DL	**0.16**	Eq. J3-6
Block shear rupture at branch web	[Kip]	62.61	10.00	DL	**0.16**	Eq. J4-5
Gusset						
Bolt bearing on gusset	[Kip]	87.75	10.00	DL	**0.11**	Eq. J3-6
Block shear on gusset	[Kip]	108.77	10.00	DL	**0.09**	Eq. J4-5
Ratio	**0.31**					

Checks for gusset and branch

Demands

Pu [kip]	Description	Load type
10.00	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Member						
Yielding strength due to axial load	[Kip]	99.45	10.00	DL	**0.10**	Eq. J4-1
Tension rupture	[Kip]	67.38	10.00	DL	**0.15**	Eq. J4-2
Gusset						
Tension yielding on the Whitmore section	[Kip]	98.03	10.00	DL	**0.10**	Eq. J4-1
Ratio	**0.15**					

Interface between Gusset - Top left branch

Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
10.00	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal center-to-center spacing (pitch)	[in]	3.00	2.00	6.00	✔	Sec. J3.5
Gusset						
Transverse edge distance	[in]	5.00	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	35.80	10.00	DL	**0.28**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	37.93	10.00	DL	**0.26**	Eq. J3-6
Block shear rupture at branch web	[Kip]	36.26	10.00	DL	**0.28**	Eq. J4-5
Gusset						
Bolt bearing on gusset	[Kip]	56.90	10.00	DL	**0.18**	Eq. J3-6
Ratio	**0.28**					

Checks for gusset and branch

Demands

Pu [kip]	Description	Load type
10.00	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Member						
Yielding strength due to axial load	[Kip]	64.80	10.00	DL	**0.15**	Eq. J4-1
Tension rupture	[Kip]	42.82	10.00	DL	**0.23**	Eq. J4-2
Gusset						
Tension yielding on the Whitmore section	[Kip]	58.46	10.00	DL	**0.17**	Eq. J4-1
Ratio	**0.23**					

Interface between Chord - Top gusset

Connection: Directly welded

Demands

Description	Beam			Column			Load type
	Ru [kip]	Pu [kip]	Mu [kip*ft]	Pu [kip]	Mu22 [kip*ft]	Mu33 [kip*ft]	
DL	0.00	24.14	0.00	0.00	0.00	0.00	Design

Geometric Considerations

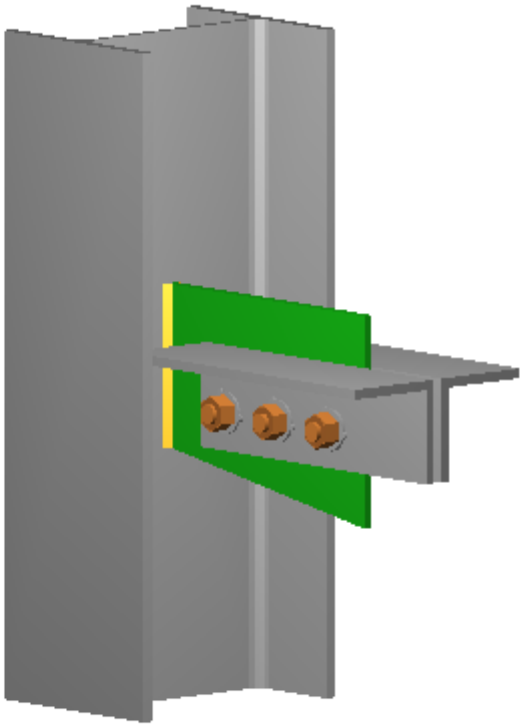
Dimensions	Unit	Value	Min.	Max.	Sta.	References
Gusset						
Weld size	[1/16in]	3	3	5	✔	Sec. J2.2b

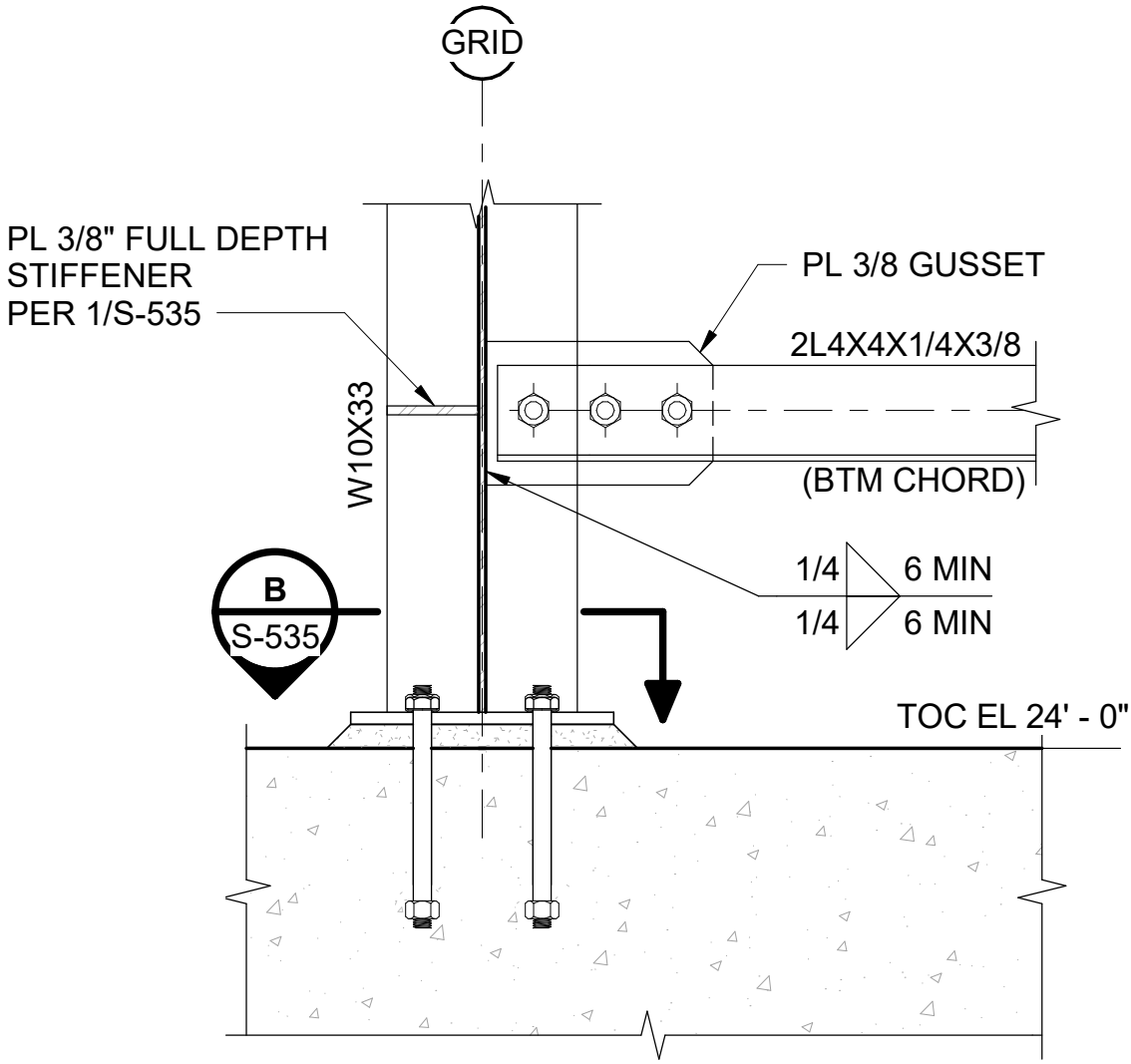
Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Gusset						
Beam yielding (normal stress)	[Kip]	356.94	24.14	DL	**0.07**	Eq. B-1, Appendix B, DG29
Shear yielding	[Kip]	237.96	0.00	DL	**0.00**	Eq. J4-3
Gusset edge tension stress	[Kip/in2]	45.00	3.04	DL	**0.07**	Eq. B-1, Appendix B, DG29
Gusset edge shear stress	[Kip/in2]	30.00	0.00	DL	**0.00**	J4-1
Weld capacity	[Kip]	265.01	30.18	DL	**0.11**	Tables 8-4 .. 8-11
Chord						
Web crippling	[Kip]	764.12	24.14	DL	**0.03**	Eq. B-1, Appendix B, DG29
Local web yielding	[Kip]	337.78	24.14	DL	**0.07**	Eq. B-1, Appendix B, DG29
Transverse section web yielding	[Kip]	34.94	24.14	DL	**0.69**	Eq. G2-1
Ratio		**0.69**				
Global critical strength ratio		**0.69**				

References

[9] AISC 2005, Design Examples Version 13.0, pp. IIC-26 - IIC-27





DETAIL **3**

BTM CHORD TO COLUMN CONNECTION

0 1/2' 1' 1 1/2'

SCALE IN FEET

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M514	I	max	31.751	15	-0.038	66	0.047	74	0.005	68	0	107	-0.431	66
2			min	4.787	66	-0.43	15	-0.065	102	-0.015	13	0	12	-2.858	15
3		J	max	29.62	15	0.404	15	0.068	102	0.007	92	0	107	-0.254	75
4			min	2.821	75	0.035	66	-0.045	74	-0.007	68	0	12	-2.666	15
5	M349	I	max	31.726	15	-0.037	96	0.048	74	0.005	68	0	107	-0.404	99
6			min	4.488	99	-0.433	15	-0.067	102	-0.015	13	0	12	-2.855	15
7		J	max	29.933	15	0.412	15	0.067	102	0.007	92	0	107	-0.416	66
8			min	4.62	66	0.036	96	-0.044	74	-0.007	68	0	12	-2.694	15
9	M477	I	max	30.796	15	-0.037	96	0.046	74	0.005	68	0	107	-0.381	107
10			min	4.234	107	-0.436	15	-0.066	102	-0.015	13	0	12	-2.772	15
11		J	max	30.926	15	0.409	15	0.068	102	0.006	92	0	107	-0.423	96
12			min	4.705	96	0.036	96	-0.047	74	-0.007	68	0	12	-2.783	15
13	M540	I	max	29.573	15	-0.038	66	0.048	74	0.005	68	0	107	-0.42	66
14			min	4.661	66	-0.38	15	-0.064	102	-0.015	13	0	12	-2.662	15
15		J	max	29.24	15	0.398	15	0.068	102	0.007	92	0	107	-0.254	75
16			min	2.818	75	0.035	66	-0.045	74	-0.007	68	0	12	-2.632	15
17	M350	I	max	28.031	13	0.051	106	0.062	74	0.01	98	0	107	0.166	106
18			min	-1.848	106	-0.383	70	-0.074	102	-0.01	62	0	12	-2.523	13
19		J	max	27.334	13	0.365	70	0.072	72	0.008	66	0	107	0.038	106
20			min	-0.423	106	-0.038	106	-0.055	104	-0.021	15	0	12	-2.46	13
21	M478	I	max	27.817	13	0.049	106	0.06	74	0.01	98	0	107	0.158	106
22			min	-1.754	106	-0.381	70	-0.073	102	-0.01	62	0	12	-2.504	13
23		J	max	27.553	13	0.367	70	0.073	72	0.008	66	0	107	0.045	106
24			min	-0.502	106	-0.039	98	-0.058	104	-0.021	15	0	12	-2.48	13
25	M515	I	max	27.464	13	0.038	68	0.06	74	0.01	98	0	107	0.042	76
26			min	-0.472	76	-0.364	100	-0.071	102	-0.01	62	0	12	-2.472	13
27		J	max	27.263	13	0.378	100	0.074	72	0.008	66	0	107	0.158	76
28			min	-1.758	76	-0.051	76	-0.058	104	-0.021	15	0	12	-2.454	13
29	M541	I	max	26.947	13	0.032	76	0.06	74	0.01	98	0	107	0.022	76
30			min	-0.247	76	-0.352	100	-0.069	102	-0.01	62	0	12	-2.425	13
31		J	max	27.101	13	0.375	100	0.074	72	0.008	66	0	107	0.146	76
32			min	-1.626	76	-0.049	76	-0.058	104	-0.021	15	0	12	-2.439	13
33	M509	I	max	10.5	102	0.213	70	0.135	102	0.001	104	0	107	0.885	74
34			min	-9.828	74	-0.204	106	-0.106	74	-0.071	15	0	12	-0.945	102
35		J	max	21.383	71	0.333	75	0.099	70	0.003	76	0	107	1.861	107
36			min	-20.683	107	-0.345	103	-0.088	106	-0.064	13	0	12	-1.924	71
37	M535	I	max	9.965	102	0.205	70	0.133	102	0.001	104	0	107	0.861	74
38			min	-9.568	74	-0.197	106	-0.105	74	-0.071	15	0	12	-0.897	102
39		J	max	20.709	71	0.324	75	0.099	70	0.002	76	0	107	1.828	103
40			min	-20.309	103	-0.339	103	-0.087	106	-0.064	13	0	12	-1.864	71
41	M340	I	max	20.514	103	0.312	71	0.127	102	0.001	104	0	107	1.682	75
42			min	-18.688	75	-0.316	103	-0.098	74	-0.071	15	0	12	-1.846	103
43		J	max	10.276	102	0.204	106	0.106	70	0.003	76	0	107	0.887	74
44			min	-9.857	74	-0.214	70	-0.097	106	-0.064	13	0	12	-0.925	102
45	M462	I	max	20.33	103	0.314	71	0.119	102	0.001	104	0	107	1.676	75
46			min	-18.617	75	-0.312	103	-0.094	74	-0.072	15	0	12	-1.83	103
47		J	max	10.415	102	0.205	106	0.109	70	0.002	76	0	107	0.891	74
48			min	-9.904	74	-0.211	70	-0.105	106	-0.065	13	0	12	-0.937	102
49	M510	I	max	0.257	75	0.056	72	0.052	64	0.016	70	0	107	0.027	103
50			min	-0.301	103	-0.075	17	-0.049	96	-0.012	106	0	12	-0.023	75
51		J	max	19.981	71	0.317	75	0.023	96	0.015	106	0	107	1.825	103
52			min	-20.277	103	-0.333	103	-0.099	15	-0.016	70	0	12	-1.798	71
53	M536	I	max	0.25	75	0.054	72	0.054	64	0.015	70	0	107	0.026	103
54			min	-0.293	103	-0.077	17	-0.051	96	-0.012	106	0	12	-0.023	75
55		J	max	19.742	71	0.312	75	0.024	96	0.014	106	0	107	1.778	103
56			min	-19.759	103	-0.325	103	-0.098	15	-0.016	70	0	12	-1.777	71
57	M470	I	max	18.36	107	0.326	71	0.041	64	0.017	70	0	107	1.753	71

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	-19.475	71	-0.292	107	-0.039	96	-0.013	106	0	12	-1.652	107
59		J	max	0.257	107	0.09	17	0.032	96	0.013	106	0	107	0.027	71
60			min	-0.301	71	-0.054	72	-0.106	15	-0.015	70	0	12	-0.023	107
61	M342	I	max	18.3	107	0.326	71	0.048	64	0.016	70	0	107	1.751	71
62			min	-19.454	71	-0.291	107	-0.043	96	-0.013	106	0	12	-1.647	107
63		J	max	0.241	107	0.091	17	0.028	96	0.014	106	0	107	0.026	71
64			min	-0.287	71	-0.053	72	-0.099	15	-0.015	70	0	12	-0.022	107

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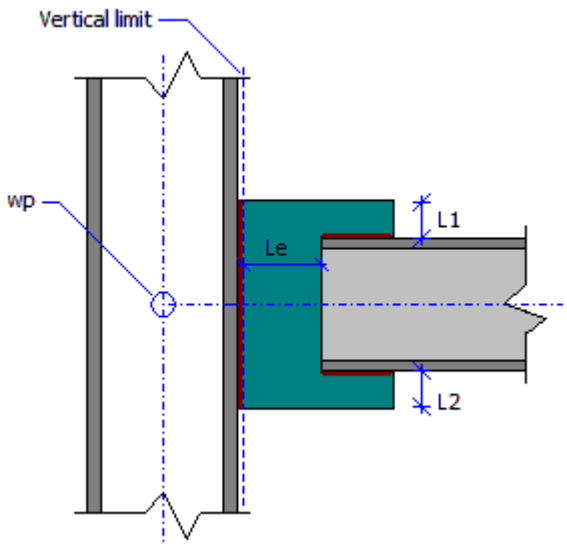
Steel Connections
Data

Connection: 3 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

General information

Connector



Members

Existing members

Right beam	:	No
Left beam	:	No
Upper right brace	:	Yes
Upper left brace	:	No
Lower left brace	:	No
Lower right brace	:	No
Align beams to top edge	:	No

Column

General

Column section	:	W 10X33
Column material	:	A992 Gr50
Column orientation	:	Transversal
Is column end	:	No

Upper right brace

General

Section	:	T2L 4X4X3_8

Material	:	A572 Gr50
Brace slope angle (degrees)	:	0
Salient brace leg to the right	:	Yes
Brace long leg on gusset	:	Yes

Additional geometric data

wpx: WP horizontal displacement	:	0 in
wpy: WP vertical displacement	:	0 in
Le: Minimum distance to other members	:	2 in
L1: Left distance	:	2 in
L2: Right distance	:	2.187 in

Interfaces

Upper right brace

Gusset

General

tp: Thickness	:	0.375 in
Material	:	A572 Gr50
LV: Length on column	:	6.277 in

Gusset-to-Brace connection

General

Connection type	:	Bolted
Bolts	:	3/4" A325 N
Hole type	:	Standard (STD)
Hole type on gusset	:	Standard (STD)
nc: Bolt columns	:	3
nr: Rows of Bolts	:	1
s: Pitch - longitudinal center-to-center spacing	:	3 in
Leh: Longitudinal distance to edge	:	1.5 in
Lev: Transverse distance to edge	:	1.5 in

Gusset-to-Column connection

General

Connection type to column	:	Connection: Directly welded

Directly welded

Column weld	:	E70XX
D: Weld size to column (1/16 in)	:	4

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Steel Connections
Results

Connection: 3 - CBB_DW

Family: Column - Beams - Braces (CBB)
Type: Gusset

Design code: AISC 360-16 LRFD

Demands

Description	Right beam Pu [kip]	Right beam Vu [kip]	Right beam Mu33 [kip*ft]	Left beam Pu [kip]	Left beam Vu [kip]	Left beam Mu33 [kip*ft]	Column Pu [kip]	Column Vu [kip]	Load type
DL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Design

Description	Pu Brace1 [kip]	Pu Brace2 [kip]	Pu Brace3 [kip]	Pu Brace4 [kip]	Load type
DL	35.00	0.00	0.00	0.00	Design

Design calculations

Interface between Gusset - Top right brace
Connection: Directly bolted

Demands

Pu [kip]	Description	Load type
35.00	DL	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Directly bolted						
Transverse edge distance	[in]	2.00	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5
Longitudinal center-to-center spacing (pitch)	[in]	3.00	2.00	9.00	✔	Sec. J3.5

Gusset						
Transverse edge distance	[in]	3.43	1.00	--	✔	Tables J3.4, J3.5
Longitudinal edge distance	[in]	1.50	1.00	--	✔	Tables J3.4, J3.5

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Directly bolted						
Bolts shear	[Kip]	107.41	35.00	DL	**0.33**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	179.61	35.00	DL	**0.19**	Eq. J3-6
Block shear rupture at brace web	[Kip]	173.67	35.00	DL	**0.20**	Eq. J4-5
Gusset						
Bolt bearing on gusset	[Kip]	89.81	35.00	DL	**0.39**	Eq. J3-6
Ratio	**0.39**					

Checks for gusset and brace

Demands

Pu [kip]	Description	Load type
35.00	DL	Design

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Member						
Yielding strength due to axial load	[Kip]	257.40	35.00	DL	**0.14**	Eq. J4-1
Tension rupture	[Kip]	200.02	35.00	DL	**0.17**	Eq. J4-2
Gusset						
Tension yielding on the Whitmore section	[Kip]	99.18	35.00	DL	**0.35**	Eq. J4-1
Ratio	**0.35**					

Interface Upper right gusset - column

Connection: Directly welded

Demands

	Beam			Column			
Description	**Ru** [kip]	**Pu** [kip]	**Mu** [kip*ft]	**Pu** [kip]	**Mu22** [kip*ft]	**Mu33** [kip*ft]	**Load type**
DL	0.00	35.00	0.00	0.00	0.00	0.00	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Gusset						
Weld size	[1/16in]	4	3	4	✔	Sec. J2.2b

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Gusset						
Beam yielding (normal stress)	[Kip]	105.92	35.00	DL	**0.33**	Eq. B-1, Appendix B, DG29
Shear yielding	[Kip]	70.61	0.00	DL	**0.00**	Eq. J4-3
Gusset edge tension stress	[Kip/in2]	45.00	14.87	DL	**0.33**	Eq. B-1, Appendix B, DG29
Gusset edge shear stress	[Kip/in2]	30.00	0.00	DL	**0.00**	J4-1
Weld capacity	[Kip]	104.85	43.75	DL	**0.42**	Tables 8-4 .. 8-11
Chord						
Web plate strength due out-of-plane transverse load	[Kip]	15.71	35.00	DL	**2.23**	p.9-16
Ratio	**2.23**					
Global critical strength ratio	**2.23**					

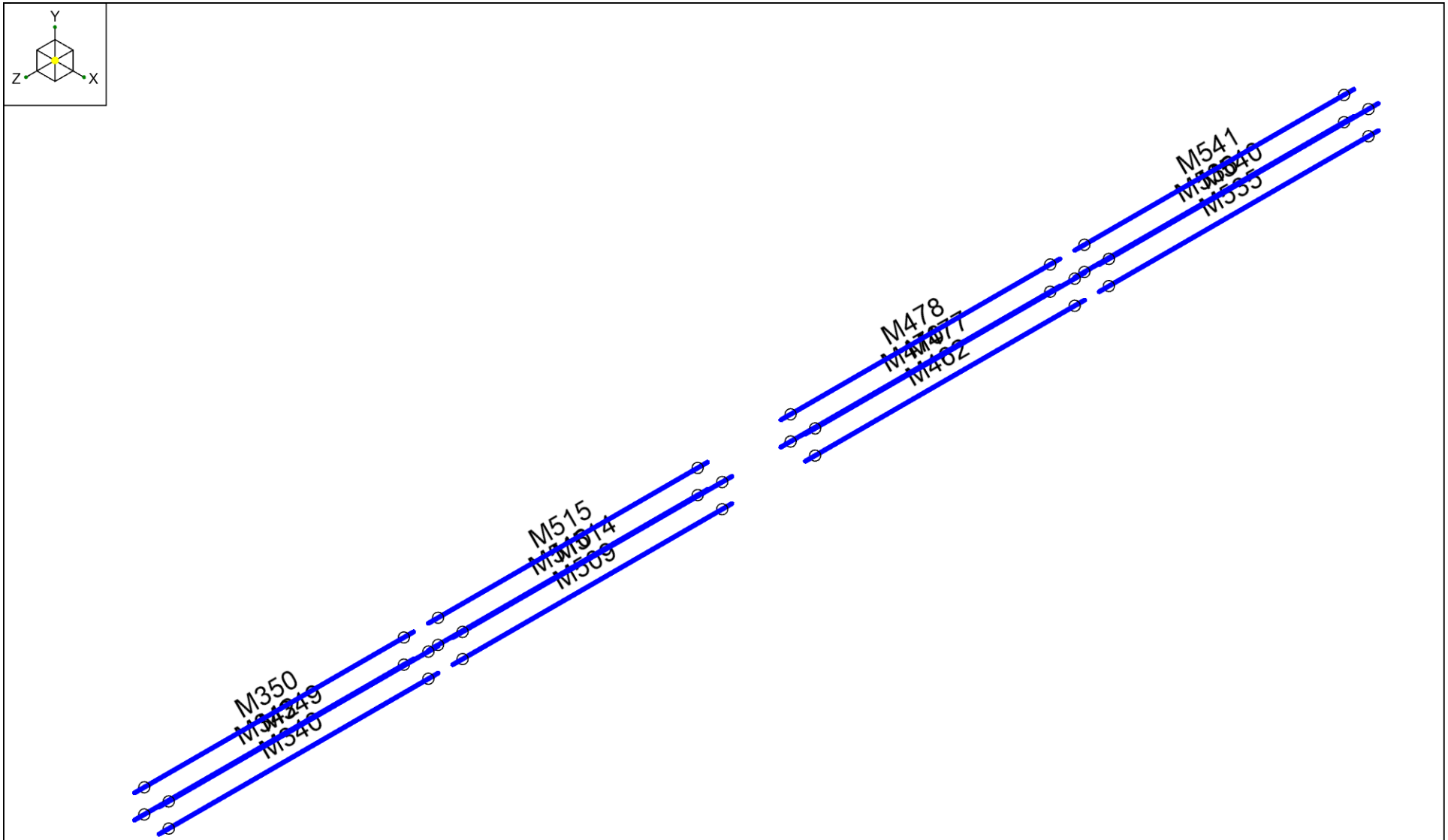
References

[9] AISC 2005, Design Examples Version 13.0, pp. IIC-26 - IIC-27

UTILIZING FULL DEPTH STIFFENER, REFER TO 1/S-535 & 3/S-535

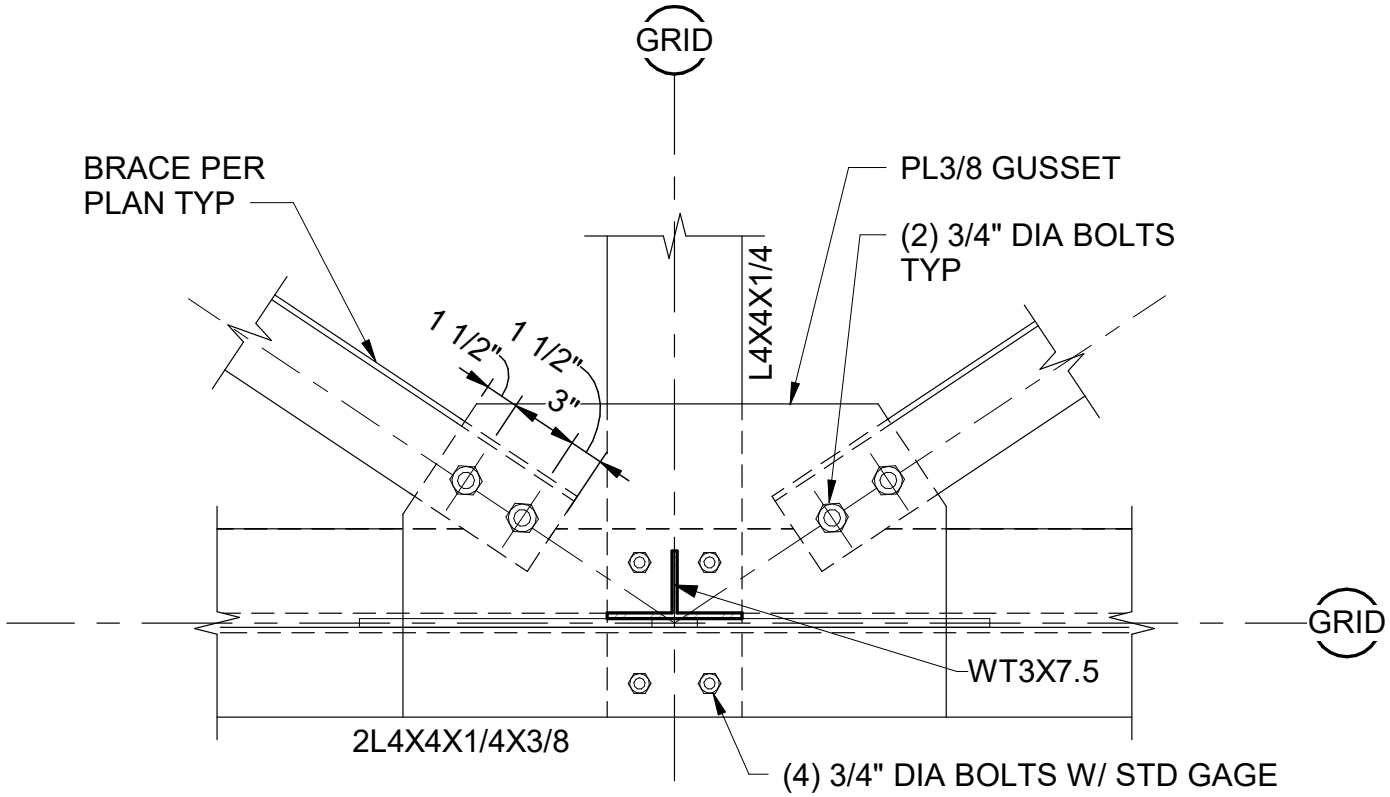
Length of weld per side of flange = d/2 - k1 = 9.73/2 - 0.935 = 3.93 in

Strength of Weld = 1.392 * 4 * (3.93*4) = 87.5 kips > 35 kips (OK)



Envelope Only Solution

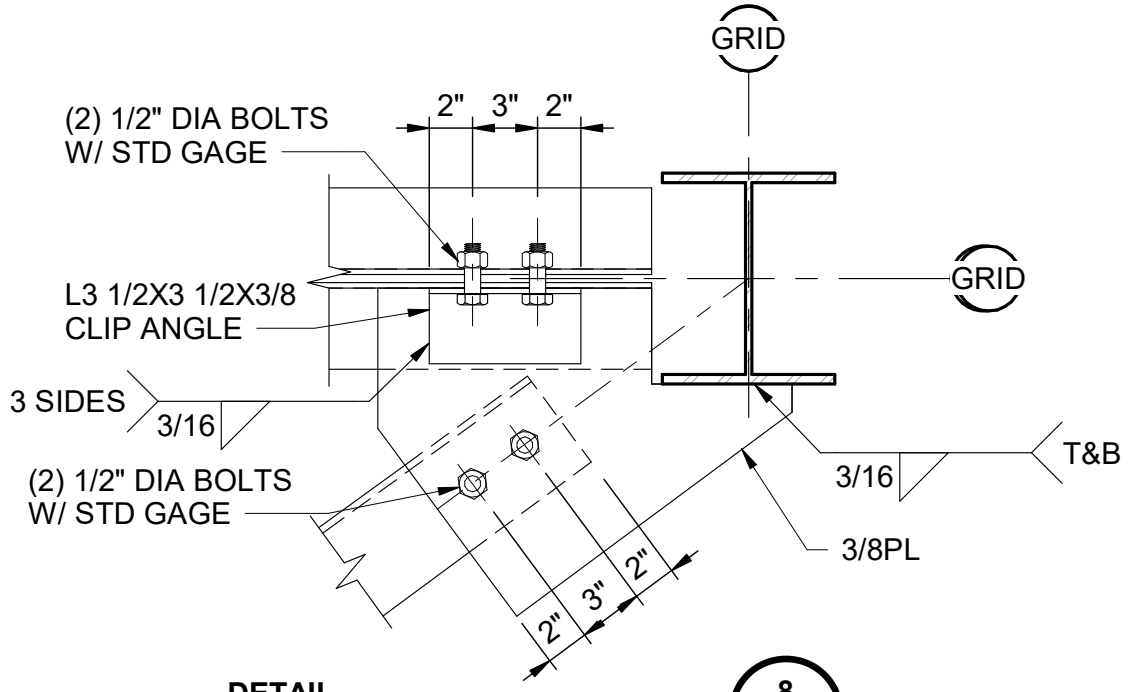
RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-4
	A. Kral		Dec 07, 2023 at 03:49 PM
	153929		Combined Pile Cap Model.r3d



DETAIL 5

0 1/2' 1' 1 1/2'

SCALE IN FEET



DETAIL 8 S-533

0 1/2' 1' 1 1/2'

SCALE IN FEET

2 bolt capacity = 35.80 kips

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M402	I	max	13.838	104	0.038	70	-0.035	77	0.014	70	2.976	104	3.165	102
2			min	-14.714	102	-0.038	102	-0.318	13	-0.009	106	-3.165	102	-2.976	104
3		J	max	13.778	104	0.043	72	0.318	15	0.014	70	2.963	104	3.152	102
4			min	-14.654	102	-0.043	100	0.035	105	-0.009	106	-3.152	102	-2.963	104
5	M677	I	max	13.76	74	0.038	70	-0.035	77	0.015	70	2.96	74	3.129	102
6			min	-14.548	102	-0.038	102	-0.318	13	-0.009	106	-3.129	102	-2.96	74
7		J	max	13.7	74	0.043	72	0.318	15	0.015	70	2.947	74	3.116	102
8			min	-14.488	102	-0.043	100	0.035	105	-0.009	106	-3.116	102	-2.947	74
9	M751	I	max	13.768	74	0.043	76	-0.035	107	0.011	106	2.961	74	3.044	102
10			min	-14.153	102	-0.043	100	-0.318	15	-0.015	70	-3.044	102	-2.961	74
11		J	max	13.708	74	0.038	70	0.318	13	0.011	106	2.948	74	3.031	102
12			min	-14.093	102	-0.038	102	0.035	75	-0.015	70	-3.031	102	-2.948	74
13	M589	I	max	13.772	74	0.043	76	-0.035	107	0.01	106	2.962	74	3.04	102
14			min	-14.136	102	-0.043	100	-0.318	15	-0.014	70	-3.04	102	-2.962	74
15		J	max	13.712	74	0.038	70	0.318	13	0.01	106	2.949	74	3.027	102
16			min	-14.075	102	-0.038	102	0.035	75	-0.014	70	-3.027	102	-2.949	74
17	M752	I	max	12.185	74	0.038	104	-0.035	75	0.013	70	2.621	74	2.831	102
18			min	-13.163	102	-0.038	72	-0.318	13	-0.008	106	-2.831	102	-2.621	74
19		J	max	12.125	74	0.043	106	0.318	15	0.013	70	2.608	74	2.818	102
20			min	-13.103	102	-0.043	70	0.035	107	-0.008	106	-2.818	102	-2.608	74
21	M476	I	max	12.347	104	0.038	72	-0.035	77	0.017	15	2.656	104	2.8	72
22			min	-13.02	72	-0.038	100	-0.318	13	-0.005	74	-2.8	72	-2.656	104
23		J	max	12.407	104	0.043	70	0.318	15	0.017	15	2.668	104	2.813	72
24			min	-13.08	72	-0.043	102	0.035	105	-0.005	74	-2.813	72	-2.668	104
25	M676	I	max	12.267	74	0.043	72	-0.035	104	0.009	106	2.638	74	2.803	102
26			min	-13.03	102	-0.043	104	-0.318	15	-0.013	70	-2.803	102	-2.638	74
27		J	max	12.207	74	0.038	70	0.318	13	0.009	106	2.625	74	2.79	102
28			min	-12.97	102	-0.038	106	0.035	76	-0.013	70	-2.79	102	-2.625	74
29	M347	I	max	12.268	104	0.038	72	-0.035	77	0.017	15	2.638	104	2.763	72
30			min	-12.845	72	-0.038	100	-0.318	13	-0.004	74	-2.763	72	-2.638	104
31		J	max	12.328	104	0.043	70	0.318	15	0.017	15	2.651	104	2.776	72
32			min	-12.905	72	-0.043	102	0.035	105	-0.004	74	-2.776	72	-2.651	104
33	M401	I	max	12.207	74	0.043	72	-0.035	104	0.009	106	2.625	74	2.765	102
34			min	-12.854	102	-0.043	104	-0.318	15	-0.013	70	-2.765	102	-2.625	74
35		J	max	12.147	74	0.038	70	0.318	13	0.009	106	2.613	74	2.752	102
36			min	-12.794	102	-0.038	106	0.035	76	-0.013	70	-2.752	102	-2.613	74
37	M730	I	max	12.205	104	0.043	70	-0.035	107	0.006	74	2.625	104	2.727	76
38			min	-12.679	76	-0.043	102	-0.318	13	-0.006	106	-2.727	76	-2.625	104
39		J	max	12.265	104	0.038	72	0.318	15	0.006	74	2.638	104	2.74	76
40			min	-12.739	76	-0.038	104	0.035	75	-0.006	106	-2.74	76	-2.638	104
41	M568	I	max	12.206	104	0.043	70	-0.035	107	0.006	74	2.625	104	2.718	76
42			min	-12.638	76	-0.043	102	-0.318	13	-0.006	102	-2.718	76	-2.625	104
43		J	max	12.266	104	0.038	72	0.318	15	0.006	74	2.638	104	2.731	76
44			min	-12.698	76	-0.038	104	0.035	75	-0.006	102	-2.731	76	-2.638	104
45	M590	I	max	11.866	74	0.038	104	-0.035	75	0.013	70	2.552	74	2.687	102
46			min	-12.493	102	-0.038	72	-0.318	13	-0.007	106	-2.687	102	-2.552	74
47		J	max	11.806	74	0.043	106	0.318	15	0.013	70	2.539	74	2.674	102
48			min	-12.433	102	-0.043	70	0.035	107	-0.007	106	-2.674	102	-2.539	74
49	M377	I	max	10.671	74	0.043	104	-0.035	105	0.006	74	2.295	74	2.433	102
50			min	-11.31	102	-0.043	72	-0.318	13	-0.006	106	-2.433	102	-2.295	74
51		J	max	10.732	74	0.038	106	0.318	15	0.006	74	2.308	74	2.445	102
52			min	-11.37	102	-0.038	70	0.035	77	-0.006	106	-2.446	102	-2.308	74
53	M513	I	max	10.608	104	0.038	72	-0.035	75	0.017	15	2.282	104	2.429	72
54			min	-11.294	72	-0.038	104	-0.318	13	-0.004	74	-2.429	72	-2.281	104
55		J	max	10.668	104	0.043	70	0.318	15	0.017	15	2.294	104	2.442	72
56			min	-11.355	72	-0.043	106	0.035	107	-0.004	74	-2.442	72	-2.294	104
57	M612	I	max	10.589	104	0.043	104	-0.035	105	0.005	70	2.277	104	2.39	72

2 bolt capacity = 35.80 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	-11.111	72	-0.043	72	-0.318	13	-0.005	106	-2.39	72	-2.277	104
59		J	max	10.649	104	0.038	106	0.318	15	0.005	70	2.29	104	2.403	72
60			min	-11.171	72	-0.038	70	0.035	77	-0.005	106	-2.403	72	-2.29	104
61	M539	I	max	10.308	104	0.038	72	-0.035	75	0.016	13	2.217	104	2.294	76
62			min	-10.665	76	-0.038	104	-0.318	13	-0.004	74	-2.294	76	-2.217	104
63		J	max	10.368	104	0.043	70	0.318	15	0.016	13	2.23	104	2.307	76
64			min	-10.725	76	-0.043	106	0.035	107	-0.004	74	-2.307	76	-2.23	104
65	M385	I	max	8.688	106	0.327	13	0.041	46	0.003	68	0.795	70	0.691	106
66			min	-9.99	70	0.034	107	-0.041	70	-0.016	13	-0.691	106	-0.795	70
67		J	max	8.748	106	-0.034	75	0.041	104	0.003	68	0.799	70	0.696	106
68			min	-10.05	70	-0.327	15	-0.041	72	-0.016	13	-0.696	106	-0.799	70
69	M663	I	max	8.544	76	0.327	13	0.041	106	0.003	68	0.773	100	0.68	76
70			min	-9.714	100	0.034	107	-0.041	74	-0.016	13	-0.68	76	-0.773	100
71		J	max	8.604	76	-0.034	75	0.041	44	0.003	68	0.778	100	0.684	76
72			min	-9.774	100	-0.327	15	-0.041	46	-0.016	13	-0.684	76	-0.778	100
73	M742	I	max	8.643	76	0.327	13	0.041	100	0.006	92	0.746	100	0.688	76
74			min	-9.373	100	0.034	105	-0.041	46	-0.005	68	-0.688	76	-0.746	100
75		J	max	8.703	76	-0.034	77	0.041	42	0.006	92	0.75	100	0.692	76
76			min	-9.433	100	-0.327	15	-0.041	74	-0.005	68	-0.692	76	-0.75	100
77	M580	I	max	8.5	76	0.327	13	0.041	40	0.006	92	0.73	100	0.676	76
78			min	-9.17	100	0.034	105	-0.041	76	-0.005	68	-0.676	76	-0.73	100
79		J	max	8.56	76	-0.034	77	0.041	72	0.006	92	0.734	100	0.681	76
80			min	-9.231	100	-0.327	15	-0.041	74	-0.005	68	-0.681	76	-0.734	100
81	M738	I	max	7.767	76	0.327	13	0.041	46	0.003	68	0.716	100	0.618	76
82			min	-8.999	100	0.034	77	-0.041	100	-0.016	13	-0.618	76	-0.716	100
83		J	max	7.827	76	-0.034	105	0.041	70	0.003	68	0.721	100	0.623	76
84			min	-9.059	100	-0.327	15	-0.041	106	-0.016	13	-0.623	76	-0.721	100
85	M667	I	max	7.971	76	0.327	13	0.041	100	0.006	92	0.708	100	0.634	76
86			min	-8.895	100	0.034	75	-0.041	102	-0.005	68	-0.634	76	-0.708	100
87		J	max	8.031	76	-0.034	107	0.041	106	0.006	92	0.712	100	0.639	76
88			min	-8.955	100	-0.327	15	-0.041	74	-0.005	68	-0.639	76	-0.712	100
89	M662	I	max	7.722	106	0.327	13	0.041	76	0	94	0.699	70	0.614	106
90			min	-8.788	70	0.034	107	-0.041	44	-0.012	13	-0.614	106	-0.699	70
91		J	max	7.782	106	-0.034	75	0.041	70	0	94	0.704	70	0.619	106
92			min	-8.848	70	-0.327	15	-0.041	106	-0.012	13	-0.619	106	-0.704	70
93	M389	I	max	7.881	76	0.327	13	0.041	100	0.006	92	0.69	100	0.627	76
94			min	-8.671	100	0.034	75	-0.041	46	-0.005	68	-0.627	76	-0.69	100
95		J	max	7.941	76	-0.034	107	0.041	72	0.006	92	0.695	100	0.632	76
96			min	-8.731	100	-0.327	15	-0.041	74	-0.005	68	-0.632	76	-0.695	100
97	M384	I	max	7.685	106	0.327	13	0.041	76	0	98	0.688	70	0.611	106
98			min	-8.645	70	0.034	107	-0.041	44	-0.012	13	-0.611	106	-0.688	70
99		J	max	7.746	106	-0.034	75	0.041	100	0	98	0.692	70	0.616	106
100			min	-8.705	70	-0.327	15	-0.041	42	-0.012	13	-0.616	106	-0.692	70
101	M576	I	max	7.607	76	0.327	13	0.041	106	0.003	68	0.676	100	0.605	76
102			min	-8.494	100	0.034	77	-0.041	40	-0.016	13	-0.605	76	-0.676	100
103		J	max	7.667	76	-0.034	105	0.041	70	0.003	68	0.68	100	0.61	76
104			min	-8.554	100	-0.327	15	-0.041	72	-0.016	13	-0.61	76	-0.68	100
105	M741	I	max	7.826	106	0.327	13	0.041	74	0.013	13	0.672	70	0.623	106
106			min	-8.445	70	0.034	105	-0.041	76	0	98	-0.623	106	-0.672	70
107		J	max	7.886	106	-0.034	77	0.041	106	0.013	13	0.677	70	0.627	106
108			min	-8.505	70	-0.327	15	-0.041	70	0	98	-0.627	106	-0.677	70
109	M579	I	max	7.676	106	0.327	13	0.041	104	0.013	13	0.655	70	0.611	106
110			min	-8.228	70	0.034	105	-0.041	102	0	98	-0.611	106	-0.655	70
111		J	max	7.737	106	-0.034	77	0.041	106	0.013	13	0.659	70	0.615	106
112			min	-8.288	70	-0.327	15	-0.041	100	0	98	-0.615	106	-0.659	70
113	M372	I	max	8.162	72	0.03	71	-0.021	46	0.002	106	1.756	72	1.658	104
114			min	-7.707	104	-0.03	107	-0.189	13	-0.004	100	-1.658	104	-1.756	72
115		J	max	8.222	72	0.03	73	0.189	15	0.002	106	1.768	72	1.671	104

2 bolt capacity = 35.80 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
116			min	-7.767	104	-0.03	105	0.021	105	-0.004	100	-1.671	104	-1.768	72
117	M607	I	max	8.014	72	0.03	71	-0.021	44	0.003	76	1.724	72	1.643	104
118			min	-7.637	104	-0.03	107	-0.189	15	-0.004	100	-1.643	104	-1.724	72
119		J	max	8.074	72	0.03	73	0.189	16	0.003	76	1.737	72	1.656	104
120			min	-7.697	104	-0.03	105	0.021	74	-0.004	100	-1.656	104	-1.737	72
121	M724	I	max	7.859	72	0.03	71	-0.021	106	0.004	70	1.69	72	1.622	104
122			min	-7.539	104	-0.03	107	-0.189	15	-0.003	76	-1.622	104	-1.69	72
123		J	max	7.919	72	0.03	73	0.189	16	0.004	70	1.703	72	1.634	104
124			min	-7.6	104	-0.03	105	0.021	44	-0.003	76	-1.634	104	-1.703	72
125	M562	I	max	7.842	72	0.03	71	-0.021	44	0.004	70	1.687	72	1.622	104
126			min	-7.543	104	-0.03	107	-0.189	15	-0.003	76	-1.622	104	-1.687	72
127		J	max	7.902	72	0.03	73	0.189	13	0.004	70	1.699	72	1.635	104
128			min	-7.603	104	-0.03	105	0.021	47	-0.003	76	-1.635	104	-1.699	72
129	M388	I	max	7.027	76	0.327	13	0.041	100	0.013	13	0.612	100	0.559	76
130			min	-7.697	100	0.034	75	-0.041	106	0	98	-0.559	76	-0.612	100
131		J	max	7.087	76	-0.034	107	0.041	102	0.013	13	0.617	100	0.564	76
132			min	-7.757	100	-0.327	15	-0.041	74	0	98	-0.564	76	-0.617	100
133	M737	I	max	6.74	106	0.327	13	0.041	72	0	98	0.606	70	0.536	106
134			min	-7.621	70	0.034	77	-0.041	104	-0.012	13	-0.536	106	-0.606	70
135		J	max	6.8	106	-0.034	105	0.041	100	0	98	0.611	70	0.541	106
136			min	-7.681	70	-0.327	15	-0.041	102	-0.012	13	-0.541	106	-0.611	70
137	M666	I	max	6.936	106	0.327	13	0.041	40	0.013	13	0.597	70	0.552	106
138			min	-7.499	70	0.034	75	-0.041	76	0	98	-0.552	106	-0.597	70
139		J	max	6.996	106	-0.034	107	0.041	42	0.013	13	0.601	70	0.556	106
140			min	-7.56	70	-0.327	15	-0.041	100	0	98	-0.557	106	-0.601	70
141	M725	I	max	7.27	72	0.03	71	-0.021	105	0.001	76	1.564	72	1.444	104
142			min	-6.712	104	-0.03	107	-0.189	16	-0.003	15	-1.444	104	-1.564	72
143		J	max	7.33	72	0.03	73	0.189	13	0.001	76	1.577	72	1.457	104
144			min	-6.772	104	-0.03	101	0.021	44	-0.003	15	-1.457	104	-1.577	72
145	M606	I	max	7.225	72	0.03	71	-0.021	76	0.003	15	1.554	72	1.441	104
146			min	-6.699	104	-0.03	107	-0.189	14	-0.001	106	-1.441	104	-1.554	72
147		J	max	7.285	72	0.03	73	0.189	15	0.003	15	1.567	72	1.454	104
148			min	-6.759	104	-0.03	105	0.021	107	-0.001	106	-1.454	104	-1.567	72
149	M575	I	max	6.582	106	0.327	13	0.041	72	0	98	0.567	70	0.524	106
150			min	-7.129	70	0.034	77	-0.041	104	-0.012	13	-0.524	106	-0.567	70
151		J	max	6.642	106	-0.034	105	0.041	40	0	98	0.572	70	0.528	106
152			min	-7.189	70	-0.327	15	-0.041	42	-0.012	13	-0.528	106	-0.572	70
153	M371	I	max	7.072	102	0.03	71	-0.021	75	0.003	15	1.521	102	1.425	104
154			min	-6.623	104	-0.03	107	-0.189	14	-0.001	76	-1.425	104	-1.521	102
155		J	max	7.132	102	0.03	73	0.189	15	0.003	15	1.534	102	1.437	104
156			min	-6.683	104	-0.03	105	0.021	107	-0.001	76	-1.437	104	-1.534	102
157	M563	I	max	6.89	72	0.03	71	-0.021	106	0.001	76	1.482	72	1.405	104
158			min	-6.532	104	-0.03	103	-0.189	16	-0.002	15	-1.405	104	-1.482	72
159		J	max	6.95	72	0.03	73	0.189	15	0.001	76	1.495	72	1.418	104
160			min	-6.592	104	-0.03	101	0.021	44	-0.002	15	-1.418	104	-1.495	72
161	M671	I	max	5.534	70	0.194	15	0.03	71	0.002	96	0.388	106	0.44	70
162			min	-4.878	106	0.019	76	-0.03	73	-0.003	15	-0.44	70	-0.388	106
163		J	max	5.474	70	-0.019	104	0.03	43	0.002	96	0.383	106	0.435	70
164			min	-4.818	106	-0.194	13	-0.03	105	-0.003	15	-0.435	70	-0.383	106
165	M396	I	max	5.442	70	0.194	15	0.03	41	0.002	66	0.386	106	0.433	70
166			min	-4.853	106	0.019	76	-0.03	103	-0.003	15	-0.433	70	-0.386	106
167		J	max	5.382	70	-0.019	104	0.03	43	0.002	66	0.381	106	0.428	70
168			min	-4.793	106	-0.194	13	-0.03	101	-0.003	15	-0.428	70	-0.381	106
169	M743	I	max	5.333	70	0.194	15	0.03	71	0.003	94	0.393	106	0.424	70
170			min	-4.941	106	0.019	76	-0.03	103	-0.002	96	-0.424	70	-0.393	106
171		J	max	5.273	70	-0.019	104	0.03	73	0.003	94	0.388	106	0.419	70
172			min	-4.881	106	-0.194	13	-0.03	41	-0.002	96	-0.419	70	-0.388	106
173	M581	I	max	5.209	70	0.194	15	0.03	71	0.002	94	0.386	106	0.414	70

2 bolt capacity = 35.80 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
174			min	-4.853	106	0.019	76	-0.03	107	-0.002	96	-0.414	70	-0.386	106
175		J	max	5.149	70	-0.019	104	0.03	73	0.002	94	0.381	106	0.41	70
176			min	-4.793	106	-0.194	13	-0.03	45	-0.002	96	-0.41	70	-0.381	106
177	M390	I	max	4.898	100	0.194	15	0.03	101	0.003	94	0.356	76	0.39	100
178			min	-4.469	76	0.019	76	-0.03	73	-0.002	66	-0.39	100	-0.356	76
179		J	max	4.838	100	-0.019	104	0.03	103	0.003	94	0.351	76	0.385	100
180			min	-4.409	76	-0.194	13	-0.03	75	-0.002	66	-0.385	100	-0.351	76
181	M746	I	max	4.845	70	0.194	15	0.03	105	0.002	96	0.342	106	0.385	70
182			min	-4.295	106	0.019	76	-0.03	47	-0.003	15	-0.385	70	-0.342	106
183		J	max	4.785	70	-0.019	104	0.03	77	0.002	96	0.337	106	0.381	70
184			min	-4.235	106	-0.194	13	-0.03	101	-0.003	15	-0.381	70	-0.337	106
185	M668	I	max	4.777	70	0.194	15	0.03	71	0.003	64	0.351	106	0.38	70
186			min	-4.412	106	0.019	76	-0.03	103	-0.002	96	-0.38	70	-0.351	106
187		J	max	4.717	70	-0.019	104	0.03	107	0.003	64	0.346	106	0.375	70
188			min	-4.352	106	-0.194	13	-0.03	101	-0.002	96	-0.375	70	-0.346	106
189	M584	I	max	4.545	70	0.194	15	0.03	71	0.002	96	0.334	106	0.362	70
190			min	-4.2	106	0.019	76	-0.03	103	-0.002	94	-0.362	70	-0.334	106
191		J	max	4.485	70	-0.019	104	0.03	73	0.002	96	0.329	106	0.357	70
192			min	-4.14	106	-0.194	13	-0.03	41	-0.002	94	-0.357	70	-0.329	106
193	M383	I	max	3.636	106	0.293	15	0.028	46	0	68	0.273	70	0.231	106
194			min	-4.292	70	0.023	107	-0.028	40	-0.007	13	-0.231	106	-0.273	70
195		J	max	3.674	106	-0.023	75	0.028	44	0	68	0.276	70	0.234	106
196			min	-4.33	70	-0.293	13	-0.028	72	-0.007	13	-0.234	106	-0.276	70
197	M661	I	max	3.586	106	0.293	15	0.028	72	0	68	0.27	70	0.228	106
198			min	-4.236	70	0.023	107	-0.028	70	-0.007	13	-0.228	106	-0.27	70
199		J	max	3.624	106	-0.023	75	0.028	100	0	68	0.272	70	0.231	106
200			min	-4.273	70	-0.293	13	-0.028	42	-0.007	13	-0.231	106	-0.272	70
201	M740	I	max	3.785	76	0.293	15	0.028	104	0.011	13	0.26	70	0.241	76
202			min	-4.085	70	0.023	105	-0.028	42	0	68	-0.241	76	-0.26	70
203		J	max	3.823	76	-0.023	77	0.028	102	0.011	13	0.262	70	0.243	76
204			min	-4.123	70	-0.293	13	-0.028	70	0	68	-0.243	76	-0.262	70
205	M578	I	max	3.536	76	0.293	15	0.028	74	0.011	13	0.231	100	0.225	76
206			min	-3.635	100	0.023	105	-0.028	106	0	77	-0.225	76	-0.231	100
207		J	max	3.574	76	-0.023	77	0.028	46	0.011	13	0.234	100	0.227	76
208			min	-3.673	100	-0.293	13	-0.028	70	0	77	-0.227	76	-0.234	100
209	M574	I	max	2.791	106	0.293	15	0.028	76	0	68	0.217	100	0.178	106
210			min	-3.414	100	0.023	77	-0.028	70	-0.007	13	-0.178	106	-0.217	100
211		J	max	2.829	106	-0.023	105	0.028	40	0	68	0.22	100	0.18	106
212			min	-3.452	100	-0.293	13	-0.028	106	-0.007	13	-0.18	106	-0.22	100
213	M736	I	max	2.651	106	0.293	15	0.028	72	0	68	0.206	100	0.169	106
214			min	-3.231	100	0.023	77	-0.028	44	-0.007	13	-0.169	106	-0.206	100
215		J	max	2.689	106	-0.023	105	0.028	100	0	68	0.208	100	0.171	106
216			min	-3.268	100	-0.293	13	-0.028	102	-0.007	13	-0.171	106	-0.208	100
217	M475	I	max	2.805	104	0.027	72	-0.024	76	0.016	13	0.483	104	0.545	72
218			min	-3.166	72	-0.027	104	-0.289	13	-0.002	76	-0.545	72	-0.483	104
219		J	max	2.843	104	0.029	70	0.289	15	0.016	13	0.489	104	0.551	72
220			min	-3.204	72	-0.029	106	0.024	104	-0.002	76	-0.551	72	-0.489	104
221	M346	I	max	2.806	104	0.027	72	-0.024	76	0.017	13	0.483	104	0.543	72
222			min	-3.158	72	-0.027	104	-0.289	13	-0.002	76	-0.543	72	-0.483	104
223		J	max	2.844	104	0.029	70	0.289	15	0.017	13	0.489	104	0.55	72
224			min	-3.196	72	-0.029	106	0.024	104	-0.002	76	-0.55	72	-0.489	104
225	M387	I	max	2.877	76	0.293	15	0.028	44	0.011	13	0.198	100	0.183	76
226			min	-3.114	100	0.023	75	-0.028	42	0	98	-0.183	76	-0.198	100
227		J	max	2.915	76	-0.023	107	0.028	76	0.011	13	0.201	100	0.186	76
228			min	-3.151	100	-0.293	13	-0.028	70	0	98	-0.186	76	-0.201	100
229	M665	I	max	2.856	76	0.293	15	0.028	70	0.011	13	0.197	70	0.182	76
230			min	-3.09	70	0.023	75	-0.028	102	0	68	-0.182	76	-0.197	70
231		J	max	2.894	76	-0.023	107	0.028	106	0.011	13	0.199	70	0.184	76

2 bolt capacity = 35.80 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
232			min	-3.127	70	-0.293	13	-0.028	100	0	68	-0.184	76	-0.199	70
233	M382	I	max	2.82	106	0.293	15	0.028	102	0.002	70	0.193	70	0.179	106
234			min	-3.03	70	0.023	107	-0.028	104	-0.003	19	-0.179	106	-0.193	70
235		J	max	2.858	106	-0.023	75	0.028	40	0.002	70	0.195	70	0.182	106
236			min	-3.067	70	-0.293	13	-0.028	76	-0.003	19	-0.182	106	-0.195	70
237	M739	I	max	3.002	102	0.293	15	0.028	70	0.006	19	0.181	74	0.191	102
238			min	-2.851	74	0.023	105	-0.028	72	-0.001	74	-0.191	102	-0.181	74
239		J	max	3.04	102	-0.023	77	0.028	42	0.006	19	0.184	74	0.193	102
240			min	-2.889	74	-0.293	13	-0.028	100	-0.001	74	-0.193	102	-0.184	74
241	M729	I	max	2.852	74	0.029	70	-0.024	76	0.004	72	0.491	74	0.514	106
242			min	-2.988	106	-0.029	106	-0.289	13	-0.003	104	-0.514	106	-0.491	74
243		J	max	2.889	74	0.027	72	0.289	15	0.004	72	0.497	74	0.521	106
244			min	-3.025	106	-0.027	104	0.024	104	-0.003	104	-0.521	106	-0.497	74
245	M617	I	max	2.767	106	0.293	15	0.028	106	0.002	100	0.189	70	0.176	106
246			min	-2.967	70	0.023	107	-0.028	74	-0.003	19	-0.176	106	-0.189	70
247		J	max	2.805	106	-0.023	75	0.028	40	0.002	100	0.191	70	0.178	106
248			min	-3.005	70	-0.293	13	-0.028	72	-0.003	19	-0.178	106	-0.191	70
249	M577	I	max	2.794	102	0.293	15	0.028	70	0.006	15	0.156	74	0.178	102
250			min	-2.456	74	0.023	105	-0.028	76	-0.001	74	-0.178	102	-0.156	74
251		J	max	2.831	102	-0.023	77	0.028	46	0.006	15	0.159	74	0.18	102
252			min	-2.494	74	-0.293	13	-0.028	40	-0.001	74	-0.18	102	-0.159	74
253	M567	I	max	2.755	74	0.029	70	-0.024	76	0.004	72	0.474	74	0.478	106
254			min	-2.778	106	-0.029	106	-0.289	13	-0.003	104	-0.478	106	-0.474	74
255		J	max	2.793	74	0.027	72	0.289	15	0.004	72	0.48	74	0.484	106
256			min	-2.815	106	-0.027	104	0.024	104	-0.003	104	-0.484	106	-0.48	74
257	M573	I	max	1.977	106	0.293	15	0.028	46	0.002	100	0.139	70	0.126	106
258			min	-2.179	70	0.023	77	-0.028	40	-0.003	19	-0.126	106	-0.139	70
259		J	max	2.015	106	-0.023	105	0.028	100	0.002	100	0.141	70	0.128	106
260			min	-2.217	70	-0.293	13	-0.028	72	-0.003	19	-0.128	106	-0.141	70
261	M386	I	max	2.139	72	0.293	15	0.028	44	0.006	19	0.118	104	0.136	72
262			min	-1.86	104	0.023	75	-0.028	46	-0.001	100	-0.136	72	-0.118	104
263		J	max	2.177	72	-0.023	107	0.028	72	0.006	19	0.121	104	0.139	72
264			min	-1.898	104	-0.293	13	-0.028	104	-0.001	100	-0.139	72	-0.121	104
265	M664	I	max	2.116	72	0.293	15	0.028	100	0.006	19	0.117	104	0.135	72
266			min	-1.844	104	0.023	75	-0.028	42	-0.001	70	-0.135	72	-0.117	104
267		J	max	2.154	72	-0.023	107	0.028	76	0.006	19	0.12	104	0.137	72
268			min	-1.881	104	-0.293	13	-0.028	40	-0.001	70	-0.137	72	-0.12	104
269	M394	I	max	2.056	70	0.163	15	0.019	101	0.001	100	0.115	106	0.131	70
270			min	-1.806	106	0.012	106	-0.019	103	-0.001	72	-0.131	70	-0.115	106
271		J	max	2.019	70	-0.012	74	0.019	73	0.001	100	0.113	106	0.128	70
272			min	-1.768	106	-0.163	13	-0.019	71	-0.001	72	-0.128	70	-0.113	106
273	M670	I	max	2.023	70	0.163	15	0.019	75	0.001	100	0.113	106	0.129	70
274			min	-1.777	106	0.012	106	-0.019	103	-0.001	72	-0.129	70	-0.113	106
275		J	max	1.985	70	-0.012	74	0.019	73	0.001	100	0.111	106	0.126	70
276			min	-1.739	106	-0.163	13	-0.019	71	-0.001	72	-0.126	70	-0.111	106
277	M343	I	max	1.406	104	0.027	72	-0.024	76	0.028	15	0.242	104	0.338	72
278			min	-1.965	72	-0.027	104	-0.289	13	0	74	-0.338	72	-0.242	104
279		J	max	1.443	104	0.029	70	0.289	15	0.028	15	0.248	104	0.345	72
280			min	-2.003	72	-0.029	102	0.024	104	0	74	-0.345	72	-0.248	104
281	M735	I	max	1.827	106	0.293	15	0.028	76	0.002	100	0.125	70	0.116	106
282			min	-1.963	70	0.023	77	-0.028	104	-0.003	19	-0.116	106	-0.125	70
283		J	max	1.865	106	-0.023	105	0.028	40	0.002	100	0.127	70	0.119	106
284			min	-2.001	70	-0.293	13	-0.028	42	-0.003	19	-0.119	106	-0.127	70
285	M474	I	max	1.4	104	0.027	72	-0.024	76	0.028	15	0.241	104	0.337	72
286			min	-1.958	72	-0.027	104	-0.289	13	0	74	-0.337	72	-0.241	104
287		J	max	1.438	104	0.029	70	0.289	15	0.028	15	0.247	104	0.343	72
288			min	-1.996	72	-0.029	102	0.024	104	0	74	-0.343	72	-0.247	104
289	M744	I	max	1.945	70	0.163	15	0.019	71	0.001	102	0.12	106	0.124	70

2 bolt capacity = 35.80 kips

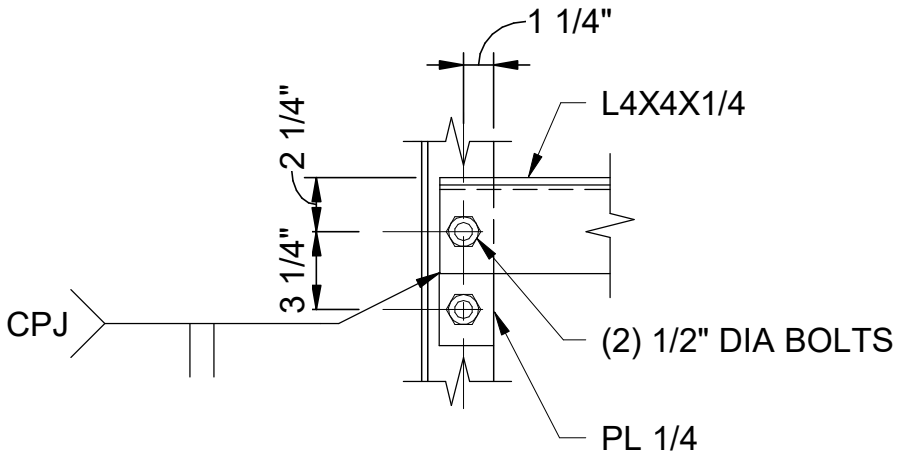
Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
290			min	-1.893	106	0.012	106	-0.019	77	-0.001	104	-0.124	70	-0.12	106
291		J	max	1.907	70	-0.012	74	0.019	103	0.001	102	0.118	106	0.121	70
292			min	-1.855	106	-0.163	13	-0.019	41	-0.001	104	-0.121	70	-0.118	106
293	M512	I	max	1.432	74	0.027	106	-0.024	76	0.017	13	0.246	74	0.325	72
294			min	-1.89	72	-0.027	70	-0.289	13	-0.002	76	-0.325	72	-0.246	74
295		J	max	1.47	74	0.029	104	0.289	15	0.017	13	0.253	74	0.332	72
296			min	-1.927	72	-0.029	72	0.024	104	-0.002	76	-0.332	72	-0.253	74
297	M538	I	max	1.413	74	0.027	106	-0.024	76	0.017	13	0.243	74	0.321	72
298			min	-1.867	72	-0.027	70	-0.289	13	-0.002	76	-0.321	72	-0.243	74
299		J	max	1.451	74	0.029	104	0.289	15	0.017	13	0.25	74	0.328	72
300			min	-1.905	72	-0.029	72	0.024	104	-0.002	76	-0.328	72	-0.25	74
301	M582	I	max	1.702	74	0.163	15	0.019	41	0.001	102	0.113	102	0.108	74
302			min	-1.777	102	0.012	106	-0.019	103	-0.001	100	-0.108	74	-0.113	102
303		J	max	1.664	74	-0.012	74	0.019	43	0.001	102	0.111	102	0.106	74
304			min	-1.739	102	-0.163	13	-0.019	101	-0.001	100	-0.106	74	-0.111	102
305	M376	I	max	1.525	74	0.029	104	-0.024	106	0.004	72	0.262	74	0.299	102
306			min	-1.736	102	-0.029	72	-0.289	13	-0.004	104	-0.299	102	-0.262	74
307		J	max	1.562	74	0.027	106	0.289	15	0.004	72	0.269	74	0.305	102
308			min	-1.774	102	-0.027	70	0.024	74	-0.004	104	-0.305	102	-0.269	74
309	M727	I	max	1.459	74	0.029	70	-0.024	76	0.007	13	0.251	74	0.295	102
310			min	-1.715	102	-0.029	106	-0.289	13	-0.001	76	-0.295	102	-0.251	74
311		J	max	1.497	74	0.027	72	0.289	15	0.007	13	0.258	74	0.302	102
312			min	-1.753	102	-0.027	104	0.024	104	-0.001	76	-0.302	102	-0.258	74
313	M611	I	max	1.476	104	0.029	104	-0.024	76	0.004	72	0.254	104	0.288	102
314			min	-1.674	102	-0.029	72	-0.289	13	-0.004	104	-0.288	102	-0.254	104
315		J	max	1.514	104	0.027	106	0.289	15	0.004	72	0.26	104	0.294	102
316			min	-1.712	102	-0.027	70	0.024	104	-0.004	104	-0.295	102	-0.26	104
317	M583	I	max	1.578	70	0.163	15	0.019	45	0.001	100	0.085	106	0.1	70
318			min	-1.341	106	0.012	106	-0.019	43	-0.001	102	-0.1	70	-0.085	106
319		J	max	1.54	70	-0.012	74	0.019	73	0.001	100	0.083	106	0.098	70
320			min	-1.303	106	-0.163	13	-0.019	71	-0.001	102	-0.098	70	-0.083	106
321	M565	I	max	1.366	74	0.029	70	-0.024	76	0.007	13	0.235	74	0.253	106
322			min	-1.472	106	-0.029	106	-0.289	13	-0.001	76	-0.253	106	-0.235	74
323		J	max	1.404	74	0.027	72	0.289	15	0.007	13	0.242	74	0.26	106
324			min	-1.51	106	-0.027	104	0.024	104	-0.001	76	-0.26	106	-0.242	74
325	M537	I	max	0.256	96	0.027	106	-0.024	76	0.028	15	0.044	96	0.256	15
326			min	-1.488	15	-0.027	70	-0.289	13	0	74	-0.256	15	-0.044	96
327		J	max	0.256	96	0.029	104	0.289	15	0.028	15	0.044	96	0.256	15
328			min	-1.488	15	-0.029	72	0.024	104	0	74	-0.256	15	-0.044	96
329	M745	I	max	1.467	70	0.163	15	0.019	101	0.001	100	0.08	106	0.093	70
330			min	-1.26	106	0.012	106	-0.019	73	-0.001	72	-0.093	70	-0.08	106
331		J	max	1.429	70	-0.012	74	0.019	103	0.001	100	0.078	106	0.091	70
332			min	-1.222	106	-0.163	13	-0.019	75	-0.001	72	-0.091	70	-0.078	106
333	M608	I	max	1.435	72	0.019	103	-0.013	105	0	96	0.247	72	0.19	104
334			min	-1.107	104	-0.019	71	-0.16	13	0	64	-0.19	104	-0.247	72
335		J	max	1.398	72	0.019	101	0.16	16	0	96	0.24	72	0.184	104
336			min	-1.069	104	-0.019	73	0.013	44	0	64	-0.184	104	-0.24	72
337	M373	I	max	1.434	72	0.019	103	-0.013	105	0	96	0.247	72	0.191	104
338			min	-1.108	104	-0.019	71	-0.16	16	0	64	-0.191	104	-0.247	72
339		J	max	1.397	72	0.019	101	0.16	14	0	96	0.24	72	0.184	104
340			min	-1.07	104	-0.019	73	0.013	107	0	64	-0.184	104	-0.24	72
341	M511	I	max	0.195	96	0.027	106	-0.024	76	0.028	15	0.034	96	0.245	15
342			min	-1.425	15	-0.027	70	-0.289	13	0	74	-0.245	15	-0.034	96
343		J	max	0.195	96	0.029	104	0.289	15	0.028	15	0.034	96	0.245	15
344			min	-1.425	15	-0.029	72	0.024	104	0	74	-0.245	15	-0.034	96
345	M392	I	max	1.404	100	0.163	15	0.019	71	0.001	102	0.09	72	0.089	100
346			min	-1.413	72	0.012	76	-0.019	103	-0.001	74	-0.089	100	-0.09	72
347		J	max	1.366	100	-0.012	104	0.019	73	0.001	102	0.088	72	0.087	100

2 bolt capacity = 35.80 kips

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
348			min	-1.375	72	-0.163	13	-0.019	101	-0.001	74	-0.087	100	-0.088	72
349	M669	I	max	1.392	70	0.163	15	0.019	45	0.001	102	0.089	72	0.089	70
350			min	-1.4	72	0.012	106	-0.019	103	-0.001	104	-0.089	70	-0.089	72
351		J	max	1.354	70	-0.012	74	0.019	107	0.001	102	0.087	72	0.086	70
352			min	-1.362	72	-0.163	13	-0.019	71	-0.001	104	-0.086	70	-0.087	72
353	M728	I	max	1.307	102	0.019	103	-0.013	104	0.001	15	0.225	102	0.194	74
354			min	-1.127	74	-0.019	75	-0.16	14	0	96	-0.194	74	-0.225	102
355		J	max	1.269	102	0.019	101	0.16	16	0.001	15	0.218	102	0.187	74
356			min	-1.089	74	-0.019	73	0.013	77	0	96	-0.187	74	-0.218	102
357	M566	I	max	1.185	106	0.019	103	-0.013	44	0	64	0.204	106	0.185	74
358			min	-1.075	74	-0.019	75	-0.16	16	0	96	-0.185	74	-0.204	106
359		J	max	1.147	106	0.019	101	0.16	14	0	64	0.197	106	0.179	74
360			min	-1.038	74	-0.019	73	0.013	107	0	96	-0.179	74	-0.197	106
361	M461	I	max	0.881	72	0.019	105	-0.013	106	0	76	0.152	72	0.07	104
362			min	-0.405	104	-0.019	73	-0.16	13	0	13	-0.07	104	-0.152	72
363		J	max	0.919	72	0.019	107	0.16	16	0	76	0.158	72	0.076	104
364			min	-0.443	104	-0.019	71	0.013	104	0	13	-0.076	104	-0.158	72
365	M337	I	max	0.881	72	0.019	105	-0.013	105	0	106	0.152	72	0.07	104
366			min	-0.405	104	-0.019	73	-0.16	14	0	70	-0.07	104	-0.152	72
367		J	max	0.918	72	0.019	107	0.16	13	0	106	0.158	72	0.076	104
368			min	-0.443	104	-0.019	71	0.013	44	0	70	-0.076	104	-0.158	72
369	M508	I	max	0.878	72	0.019	75	-0.013	76	0	74	0.151	72	0.069	104
370			min	-0.4	104	-0.019	103	-0.16	14	0	102	-0.069	104	-0.151	72
371		J	max	0.916	72	0.019	77	0.16	15	0	74	0.158	72	0.075	104
372			min	-0.438	104	-0.019	101	0.013	104	0	102	-0.075	104	-0.158	72
373	M534	I	max	0.771	72	0.019	75	-0.013	106	0	74	0.133	72	0.064	104
374			min	-0.37	104	-0.019	43	-0.16	16	0	15	-0.064	104	-0.133	72
375		J	max	0.809	72	0.019	77	0.16	14	0	74	0.139	72	0.07	104
376			min	-0.408	104	-0.019	101	0.013	104	0	15	-0.07	104	-0.139	72
377	M564	I	max	0.772	15	0.019	103	-0.013	46	0.001	100	0.133	15	0.06	104
378			min	-0.347	104	-0.019	75	-0.16	13	-0.001	72	-0.06	104	-0.133	15
379		J	max	0.772	15	0.019	101	0.16	15	0.001	100	0.133	15	0.053	104
380			min	-0.309	104	-0.019	77	0.013	47	-0.001	72	-0.053	104	-0.133	15
381	M726	I	max	0.757	15	0.019	103	-0.013	76	0.001	100	0.13	15	0.06	104
382			min	-0.347	104	-0.019	75	-0.16	16	-0.001	72	-0.06	104	-0.13	15
383		J	max	0.757	15	0.019	101	0.16	13	0.001	100	0.13	15	0.053	104
384			min	-0.309	104	-0.019	73	0.013	44	-0.001	72	-0.053	104	-0.13	15
385	M375	I	max	0.653	102	0.019	103	-0.013	76	0.001	102	0.112	102	0.068	74
386			min	-0.394	74	-0.019	71	-0.16	14	-0.001	74	-0.068	74	-0.112	102
387		J	max	0.615	102	0.019	101	0.16	13	0.001	102	0.106	102	0.061	74
388			min	-0.356	74	-0.019	73	0.013	46	-0.001	74	-0.061	74	-0.106	102
389	M610	I	max	0.622	102	0.019	103	-0.013	104	0.001	72	0.107	102	0.064	104
390			min	-0.371	104	-0.019	71	-0.16	15	-0.001	104	-0.064	104	-0.107	102
391		J	max	0.584	102	0.019	101	0.16	16	0.001	72	0.101	102	0.057	104
392			min	-0.333	104	-0.019	73	0.013	105	-0.001	104	-0.057	104	-0.101	102
393	M374	I	max	0.359	66	0.029	104	-0.024	76	0.007	13	0.062	66	0.104	94
394			min	-0.605	94	-0.029	72	-0.289	13	-0.001	106	-0.104	94	-0.062	66
395		J	max	0.359	66	0.027	106	0.289	15	0.007	13	0.062	66	0.104	94
396			min	-0.605	94	-0.027	70	0.024	104	-0.001	106	-0.104	94	-0.062	66
397	M609	I	max	0.319	66	0.029	104	-0.024	76	0.007	13	0.055	66	0.097	94
398			min	-0.562	94	-0.029	72	-0.289	13	-0.001	106	-0.097	94	-0.055	66
399		J	max	0.319	66	0.027	106	0.289	15	0.007	13	0.055	66	0.097	94
400			min	-0.562	94	-0.027	70	0.024	104	-0.001	106	-0.097	94	-0.055	66



DETAIL **6**

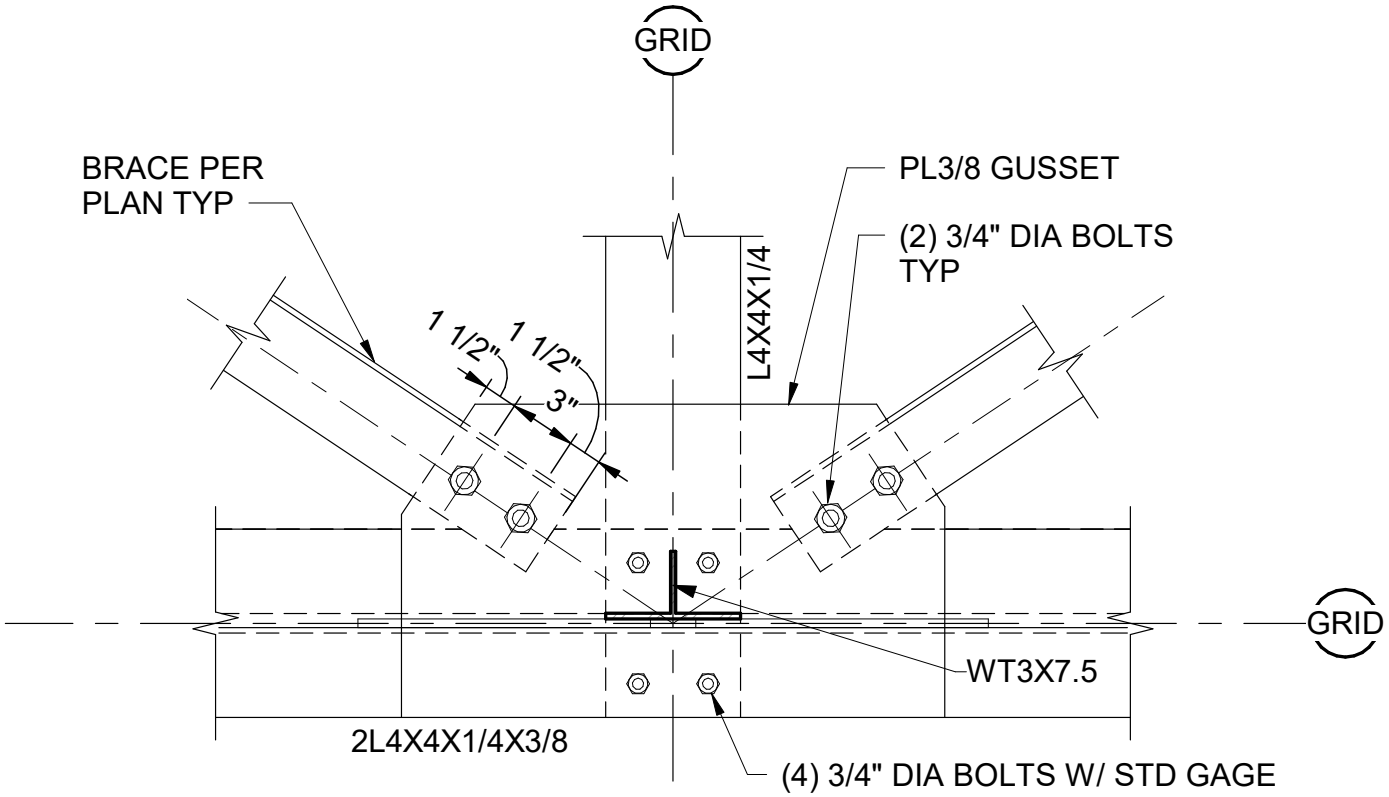
0 1/2' 1' 1 1/2'

SCALE IN FEET

2 bolt connection is acceptable by inspection

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M351	I	max	0.393	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
2			min	-0.536	72	-0.729	103	-1.214	15	-0.062	103	-0.253	103	-0.265	71
3		J	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
4			min	-1.14	70	-0.831	71	0.352	67	-0.076	71	-0.287	103	-0.299	71
5	M479	I	max	0.393	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
6			min	-0.535	72	-0.729	103	-1.214	15	-0.062	103	-0.253	103	-0.265	71
7		J	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
8			min	-1.14	70	-0.831	71	0.352	67	-0.076	71	-0.287	103	-0.299	71
9	M542	I	max	0.474	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
10			min	-0.607	72	-0.729	103	-1.214	15	-0.061	103	-0.254	103	-0.265	71
11		J	max	0.926	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
12			min	-1.058	70	-0.831	71	0.352	67	-0.076	71	-0.288	103	-0.299	71
13	M516	I	max	0.394	104	0.736	71	-0.317	67	0.062	71	0.046	75	0.055	107
14			min	-0.536	72	-0.729	103	-1.214	15	-0.062	103	-0.254	103	-0.265	71
15		J	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
16			min	-1.14	70	-0.83	71	0.352	96	-0.075	71	-0.288	103	-0.299	71
17	M708	I	max	0.697	13	0.715	71	-0.302	67	0.06	71	0.028	75	0.048	107
18			min	-0.419	76	-0.702	103	-1.182	15	-0.059	103	-0.255	103	-0.279	71
19		J	max	1.073	102	0.791	103	1.29	15	0.072	103	0.034	75	0.053	107
20			min	-0.812	74	-0.804	71	0.335	66	-0.073	71	-0.288	103	-0.312	71
21	M483	I	max	0.69	13	0.714	71	-0.302	67	0.06	71	0.029	75	0.047	107
22			min	-0.415	76	-0.703	103	-1.182	15	-0.059	103	-0.256	103	-0.278	71
23		J	max	1.078	102	0.792	103	1.289	15	0.072	103	0.035	75	0.052	107
24			min	-0.812	74	-0.804	71	0.335	66	-0.073	71	-0.289	103	-0.311	71
25	M355	I	max	0.68	15	0.714	71	-0.302	67	0.06	71	0.029	75	0.047	107
26			min	-0.35	76	-0.702	103	-1.182	15	-0.059	103	-0.256	103	-0.278	71
27		J	max	1.141	102	0.792	103	1.289	15	0.072	103	0.035	75	0.053	107
28			min	-0.885	74	-0.803	71	0.335	96	-0.073	71	-0.289	103	-0.31	71
29	M546	I	max	0.64	15	0.714	71	-0.302	67	0.06	71	0.029	75	0.048	107
30			min	-0.363	76	-0.701	103	-1.182	15	-0.059	103	-0.254	103	-0.277	71
31		J	max	1.121	102	0.79	103	1.289	15	0.072	103	0.035	75	0.054	107
32			min	-0.897	74	-0.803	71	0.335	96	-0.073	71	-0.287	103	-0.31	71
33	M543	I	max	1.247	100	0.703	71	-0.302	98	0.061	71	0.043	75	0.044	107
34			min	-1.231	76	-0.702	103	-1.176	13	-0.06	103	-0.256	103	-0.256	71
35		J	max	0.156	102	0.791	103	1.283	13	0.071	103	0.048	75	0.049	107
36			min	-0.145	74	-0.792	71	0.335	67	-0.07	71	-0.288	103	-0.289	71
37	M352	I	max	1.194	100	0.703	71	-0.302	67	0.062	71	0.043	75	0.044	107
38			min	-1.194	72	-0.702	103	-1.176	13	-0.061	103	-0.255	103	-0.256	71
39		J	max	0.192	106	0.791	103	1.283	16	0.07	103	0.049	75	0.049	107
40			min	-0.196	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
41	M480	I	max	1.177	100	0.702	71	-0.302	67	0.062	71	0.043	75	0.044	107
42			min	-1.181	72	-0.702	103	-1.176	13	-0.062	103	-0.255	103	-0.256	71
43		J	max	0.208	106	0.791	103	1.283	15	0.069	103	0.049	75	0.049	107
44			min	-0.213	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
45	M517	I	max	1.189	100	0.702	71	-0.302	67	0.062	71	0.043	75	0.044	107
46			min	-1.183	72	-0.702	103	-1.176	13	-0.061	103	-0.255	103	-0.256	71
47		J	max	0.206	106	0.791	103	1.283	16	0.07	103	0.049	75	0.049	107
48			min	-0.201	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71



DETAIL **5**

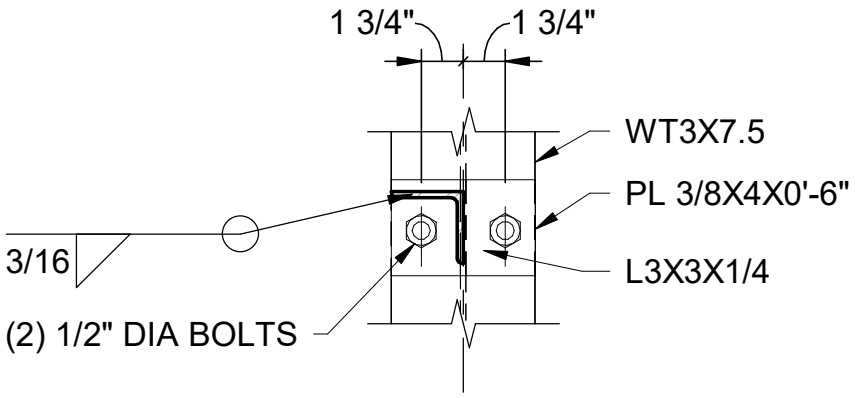
0 1/2' 1' 1 1/2'

SCALE IN FEET

(4) 3/4" DIA BOLTS ARE OK BY INSPECTION

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M690	I	max	2.631	102	3.635	15	3.001	71	0.738	71	0	107	0.534	104
2			min	-2.138	104	0.83	99	-3	103	-0.738	103	0	12	-0.657	102
3		J	max	8.016	102	-0.83	99	3	103	0.738	103	0	107	1.877	104
4			min	-7.522	104	-3.635	15	-3.001	71	-0.739	71	0	12	-2.001	102
5	M95	I	max	2.509	72	3.635	15	3	71	0.738	71	0	107	0.522	104
6			min	-2.09	104	0.83	99	-3	103	-0.738	103	0	12	-0.626	72
7		J	max	7.893	72	-0.83	99	3	103	0.738	103	0	107	1.866	104
8			min	-7.475	104	-3.635	15	-3	71	-0.738	71	0	12	-1.97	72
9	M619	I	max	2.097	76	3.633	15	2.999	71	0.738	71	0	107	0.478	74
10			min	-1.915	74	0.83	97	-3	103	-0.738	103	0	12	-0.523	76
11		J	max	7.481	76	-0.83	97	3	103	0.738	103	0	107	1.822	74
12			min	-7.299	74	-3.633	15	-2.999	71	-0.737	71	0	12	-1.867	76
13	M766	I	max	2.128	76	3.633	15	2.999	71	0.738	71	0	107	0.484	74
14			min	-1.939	74	0.83	97	-3	103	-0.738	103	0	12	-0.531	76
15		J	max	7.512	76	-0.83	97	3	103	0.738	103	0	107	1.828	74
16			min	-7.323	74	-3.633	15	-2.999	71	-0.737	71	0	12	-1.875	76
17	M765	I	max	1.779	72	3.521	15	2.912	71	0.716	71	0	107	0.312	74
18			min	-1.25	74	0.803	99	-2.912	103	-0.716	103	0	12	-0.444	72
19		J	max	6.986	72	-0.803	99	2.912	103	0.716	103	0	107	1.612	74
20			min	-6.458	74	-3.521	15	-2.912	71	-0.716	71	0	12	-1.744	72
21	M96	I	max	1.507	102	3.52	15	2.911	71	0.716	71	0	107	0.291	74
22			min	-1.166	74	0.803	67	-2.912	103	-0.716	103	0	12	-0.376	102
23		J	max	6.714	102	-0.803	67	2.912	103	0.716	103	0	107	1.591	74
24			min	-6.374	74	-3.52	15	-2.911	71	-0.715	71	0	12	-1.676	102
25	M691	I	max	1.373	102	3.519	15	2.911	71	0.716	71	0	107	0.277	104
26			min	-1.11	104	0.803	97	-2.912	103	-0.716	103	0	12	-0.343	102
27		J	max	6.58	102	-0.803	97	2.912	103	0.716	103	0	107	1.577	104
28			min	-6.318	104	-3.519	15	-2.911	71	-0.715	71	0	12	-1.642	102
29	M618	I	max	1.375	72	3.52	15	2.827	71	0.695	71	0	107	0.268	74
30			min	-1.075	74	0.803	99	-2.827	103	-0.695	103	0	12	-0.343	72
31		J	max	6.583	72	-0.803	99	2.827	103	0.695	103	0	107	1.568	74
32			min	-6.283	74	-3.52	15	-2.827	71	-0.695	71	0	12	-1.643	72



SECTION **A**

0 3" 6" 9"

SCALE IN FEET

(2) 1/2" DIA BOLTS ARE ACCEPTABLE BY INSPECTION

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M771	I	max	0.359	102	0.359	73	-0.059	66	0	107	0.928	14	0.928	16
2			min	-0.359	74	-0.359	101	-1.068	15	0	12	-0.101	47	-0.101	105
3		J	max	0	107	0	70	0	107	0	107	0	107	0	107
4			min	0	12	0	72	0	72	0	12	0	12	0	12
5	M463	I	max	0.359	102	0.359	103	-0.059	66	0	107	0.928	14	0.928	16
6			min	-0.359	40	-0.359	45	-1.068	15	0	12	-0.101	47	-0.101	45
7		J	max	0	107	0	70	0	107	0	107	0	107	0	107
8			min	0	12	0	72	0	72	0	12	0	12	0	12
9	M696	I	max	0.359	72	0.359	73	-0.059	66	0	107	0.928	14	0.928	16
10			min	-0.359	100	-0.359	45	-1.068	15	0	12	-0.101	77	-0.101	45
11		J	max	0	107	0	70	0	107	0	107	0	107	0	107
12			min	0	12	0	72	0	72	0	12	0	12	0	12
13	M465	I	max	0.341	46	0.341	47	-0.056	66	0	107	0.883	14	0.883	16
14			min	-0.341	40	-0.341	75	-1.017	15	0	12	-0.096	47	-0.096	45
15		J	max	0	107	0	70	0	107	0	107	0	107	0	107
16			min	0	12	0	12	0	72	0	12	0	12	0	12
17	M493	I	max	0.341	76	0.341	77	-0.056	66	0	107	0.883	14	0.883	16
18			min	-0.341	40	-0.341	71	-1.017	15	0	12	-0.096	107	-0.096	45
19		J	max	0	107	0	70	0	70	0	107	0	107	0	107
20			min	0	12	0	12	0	72	0	12	0	12	0	12
21	M693	I	max	0.341	102	0.341	77	-0.056	66	0	107	0.883	14	0.883	16
22			min	-0.341	100	-0.341	45	-1.017	15	0	12	-0.096	77	-0.096	45
23		J	max	0	107	0	107	0	70	0	107	0	107	0	107
24			min	0	12	0	72	0	72	0	12	0	12	0	12
25	M488	I	max	0.272	106	0.272	47	-0.047	66	0	107	0.716	14	0.716	16
26			min	-0.272	70	-0.272	71	-0.828	15	0	12	-0.076	47	-0.076	105
27		J	max	0	107	0	70	0	107	0	107	0	107	0	107
28			min	0	12	0	72	0	72	0	12	0	12	0	12
29	M467	I	max	0.26	76	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
30			min	-0.26	104	-0.26	71	-0.796	15	0	12	-0.073	107	-0.073	45
31		J	max	0	107	0	107	0	70	0	107	0	107	0	107
32			min	0	12	0	72	0	72	0	12	0	12	0	12
33	M776	I	max	0.26	46	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
34			min	-0.26	40	-0.26	75	-0.796	15	0	12	-0.073	107	-0.073	45
35		J	max	0	107	0	70	0	107	0	107	0	107	0	107
36			min	0	12	0	12	0	72	0	12	0	12	0	12
37	M701	I	max	0.26	106	0.26	47	-0.045	66	0	107	0.688	14	0.688	16
38			min	-0.26	74	-0.26	71	-0.796	15	0	12	-0.073	47	-0.073	75
39		J	max	0	107	0	70	0	107	0	107	0	107	0	107
40			min	0	12	0	12	0	72	0	12	0	12	0	12
41	M768	I	max	0.26	102	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
42			min	-0.26	44	-0.26	75	-0.796	15	0	12	-0.073	107	-0.073	45
43		J	max	0	107	0	107	0	107	0	107	0	107	0	107
44			min	0	12	0	72	0	72	0	12	0	12	0	12
45	M490	I	max	0.204	76	0.204	103	-0.037	66	0	107	0.551	14	0.551	16
46			min	-0.204	70	-0.204	45	-0.641	15	0	12	-0.057	107	-0.057	45
47		J	max	0	107	0	100	0	70	0	107	0	107	0	107
48			min	0	12	0	102	0	12	0	12	0	12	0	12
49	M692	I	max	0.204	102	0.204	103	-0.037	66	0	107	0.551	14	0.551	16
50			min	-0.204	100	-0.204	101	-0.641	15	0	12	-0.057	47	-0.057	75
51		J	max	0	107	0	100	0	70	0	107	0	107	0	107
52			min	0	12	0	102	0	12	0	12	0	12	0	12
53	M694	I	max	0.251	34	0.198	107	-0.053	66	0	107	0.459	14	0.459	16
54			min	-0.251	96	-0.198	45	-0.667	15	0	12	-0.044	107	-0.044	45
55		J	max	0	107	0	70	0	107	0	107	0	107	0	107
56			min	0	12	0	72	0	72	0	12	0	12	0	12
57	M704	I	max	0.251	94	0.198	73	-0.053	66	0	107	0.46	14	0.46	16

Envelope Member End Reactions (Continued)

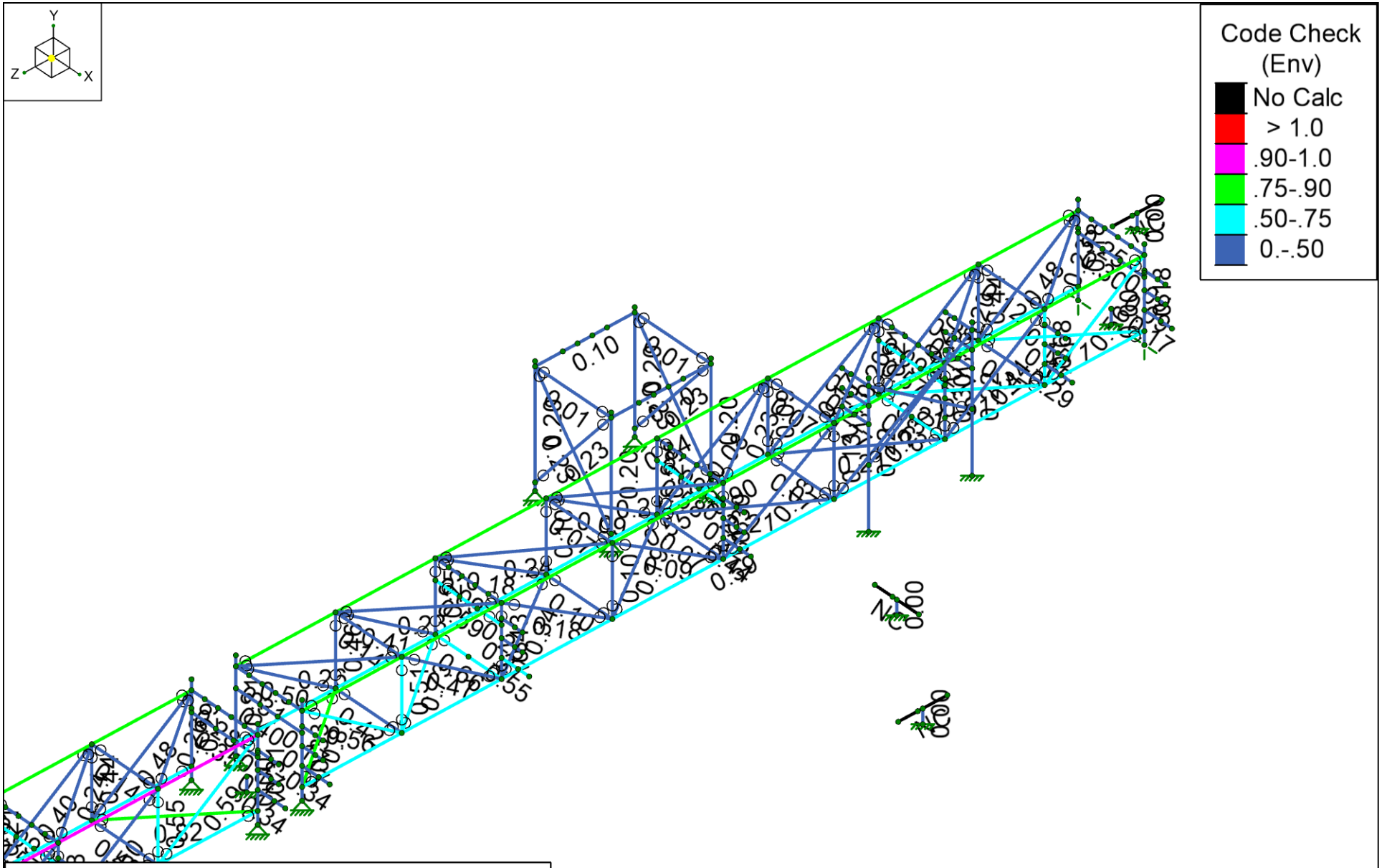
	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	-0.251	66	-0.198	105	-0.669	15	0	12	-0.044	47	-0.044	75
59		J	max	0	107	0	70	0	107	0	107	0	107	0	107
60			min	0	12	0	72	0	72	0	12	0	12	0	12
61	M769	I	max	0.251	38	0.198	73	-0.053	66	0	107	0.459	14	0.459	16
62			min	-0.251	32	-0.198	71	-0.667	15	0	12	-0.044	107	-0.044	75
63		J	max	0	107	0	70	0	107	0	107	0	107	0	107
64			min	0	12	0	72	0	72	0	12	0	12	0	12
65	M779	I	max	0.251	68	0.198	77	-0.053	66	0	107	0.46	14	0.46	16
66			min	-0.251	66	-0.198	71	-0.669	15	0	12	-0.044	107	-0.044	105
67		J	max	0	107	0	70	0	107	0	107	0	107	0	107
68			min	0	12	0	72	0	72	0	12	0	12	0	12
69	M504	I	max	0.251	98	0.198	73	-0.053	66	0	107	0.46	14	0.46	16
70			min	-0.251	96	-0.198	105	-0.669	15	0	12	-0.044	47	-0.044	105
71		J	max	0	107	0	70	0	107	0	107	0	107	0	107
72			min	0	12	0	72	0	72	0	12	0	12	0	12
73	M503	I	max	0.251	38	0.198	43	-0.053	66	0	107	0.459	14	0.459	16
74			min	-0.251	96	-0.198	105	-0.667	15	0	12	-0.044	47	-0.044	105
75		J	max	0	107	0	70	0	107	0	107	0	107	0	107
76			min	0	12	0	72	0	72	0	12	0	12	0	12
77	M705	I	max	0.241	64	0.19	43	-0.051	66	0	107	0.444	14	0.444	16
78			min	-0.241	96	-0.19	75	-0.646	15	0	12	-0.043	107	-0.043	75
79		J	max	0	107	0	107	0	107	0	107	0	107	0	107
80			min	0	12	0	72	0	72	0	12	0	12	0	12
81	M706	I	max	0.241	68	0.19	73	-0.051	66	0	107	0.445	14	0.445	16
82			min	-0.241	62	-0.19	41	-0.647	15	0	12	-0.043	107	-0.043	45
83		J	max	0	107	0	107	0	107	0	107	0	107	0	107
84			min	0	12	0	72	0	72	0	12	0	12	0	12
85	M466	I	max	0.241	94	0.19	77	-0.051	66	0	107	0.445	14	0.445	16
86			min	-0.241	66	-0.19	101	-0.647	15	0	12	-0.043	77	-0.043	105
87		J	max	0	107	0	70	0	107	0	107	0	107	0	107
88			min	0	12	0	12	0	72	0	12	0	12	0	12
89	M495	I	max	0.241	68	0.19	103	-0.051	66	0	107	0.445	14	0.445	16
90			min	-0.241	66	-0.19	71	-0.647	15	0	12	-0.043	47	-0.043	75
91		J	max	0	107	0	70	0	107	0	107	0	107	0	107
92			min	0	12	0	12	0	72	0	12	0	12	0	12
93	M494	I	max	0.241	68	0.19	107	-0.051	66	0	107	0.444	14	0.444	16
94			min	-0.241	96	-0.19	105	-0.646	15	0	12	-0.043	47	-0.043	75
95		J	max	0	107	0	70	0	107	0	107	0	107	0	107
96			min	0	12	0	12	0	72	0	12	0	12	0	12
97	M502	I	max	0.241	38	0.19	73	-0.051	66	0	107	0.444	14	0.444	16
98			min	-0.241	32	-0.19	45	-0.646	15	0	12	-0.043	107	-0.043	105
99		J	max	0	107	0	70	0	107	0	107	0	107	0	107
100			min	0	12	0	12	0	72	0	12	0	12	0	12
101	M485	I	max	0.173	102	0.173	103	-0.032	98	0	107	0.475	14	0.475	16
102			min	-0.173	104	-0.173	45	-0.556	13	0	12	-0.048	107	-0.048	45
103		J	max	0	107	0	107	0	107	0	107	0	107	0	107
104			min	0	12	0	42	0	76	0	12	0	12	0	12
105	M786	I	max	0.173	106	0.173	107	-0.032	98	0	107	0.475	14	0.475	16
106			min	-0.173	74	-0.173	45	-0.556	13	0	12	-0.048	77	-0.048	75
107		J	max	0	107	0	70	0	107	0	107	0	107	0	107
108			min	0	12	0	12	0	76	0	12	0	12	0	12
109	M468	I	max	0.167	76	0.167	103	-0.032	98	0	107	0.461	14	0.461	16
110			min	-0.167	44	-0.167	41	-0.539	13	0	12	-0.047	77	-0.047	45
111		J	max	0	107	0	107	0	107	0	107	0	107	0	107
112			min	0	12	0	102	0	76	0	12	0	12	0	12
113	M698	I	max	0.167	106	0.167	43	-0.032	98	0	107	0.461	14	0.461	16
114			min	-0.167	104	-0.167	71	-0.539	13	0	12	-0.047	107	-0.047	105
115		J	max	0	107	0	107	0	107	0	107	0	107	0	107

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
116			min	0	12	0	42	0	76	0	12	0	12	0	12
117	M464	I	max	0.167	102	0.167	77	-0.032	66	0	107	0.461	14	0.461	16
118			min	-0.167	74	-0.167	101	-0.539	15	0	12	-0.047	77	-0.047	45
119		J	max	0	107	0	100	0	70	0	107	0	107	0	107
120			min	0	12	0	12	0	12	0	12	0	12	0	12
121	M496	I	max	0.187	34	0.15	77	-0.041	66	0	107	0.355	14	0.355	16
122			min	-0.187	36	-0.15	41	-0.52	15	0	12	-0.033	107	-0.033	45
123		J	max	0	107	0	70	0	107	0	107	0	107	0	107
124			min	0	12	0	72	0	72	0	12	0	12	0	12
125	M486	I	max	0.187	94	0.15	107	-0.041	66	0	107	0.354	14	0.354	16
126			min	-0.187	92	-0.15	75	-0.518	15	0	12	-0.033	107	-0.033	75
127		J	max	0	107	0	70	0	107	0	107	0	107	0	107
128			min	0	12	0	72	0	72	0	12	0	12	0	12
129	M780	I	max	0.182	38	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
130			min	-0.182	62	-0.146	41	-0.507	15	0	12	-0.033	47	-0.033	45
131		J	max	0	107	0	107	0	107	0	107	0	107	0	107
132			min	0	12	0	72	0	72	0	12	0	12	0	12
133	M505	I	max	0.182	64	0.146	73	-0.04	66	0	107	0.348	14	0.348	16
134			min	-0.182	32	-0.146	105	-0.509	15	0	12	-0.033	107	-0.033	45
135		J	max	0	107	0	107	0	107	0	107	0	107	0	107
136			min	0	12	0	72	0	72	0	12	0	12	0	12
137	M702	I	max	0.182	94	0.146	47	-0.04	66	0	107	0.347	14	0.347	16
138			min	-0.182	36	-0.146	75	-0.507	15	0	12	-0.033	77	-0.033	105
139		J	max	0	107	0	70	0	107	0	107	0	107	0	107
140			min	0	12	0	12	0	72	0	12	0	12	0	12
141	M777	I	max	0.182	68	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
142			min	-0.182	96	-0.146	71	-0.507	15	0	12	-0.033	107	-0.033	75
143		J	max	0	107	0	70	0	107	0	107	0	107	0	107
144			min	0	12	0	12	0	72	0	12	0	12	0	12
145	M781	I	max	0.182	38	0.146	107	-0.04	69	0	107	0.348	14	0.348	16
146			min	-0.182	36	-0.146	71	-0.509	15	0	12	-0.033	107	-0.033	45
147		J	max	0	107	0	107	0	107	0	107	0	107	0	107
148			min	0	12	0	72	0	72	0	12	0	12	0	12
149	M703	I	max	0.182	68	0.146	77	-0.04	66	0	107	0.348	14	0.348	16
150			min	-0.182	92	-0.146	101	-0.509	15	0	12	-0.033	77	-0.033	105
151		J	max	0	107	0	70	0	107	0	107	0	107	0	107
152			min	0	12	0	12	0	72	0	12	0	12	0	12
153	M778	I	max	0.182	68	0.146	103	-0.04	66	0	107	0.348	14	0.348	16
154			min	-0.182	96	-0.146	105	-0.509	15	0	12	-0.033	47	-0.033	105
155		J	max	0	107	0	70	0	107	0	107	0	107	0	107
156			min	0	12	0	12	0	72	0	12	0	12	0	12
157	M499	I	max	0.182	98	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
158			min	-0.182	66	-0.146	101	-0.507	15	0	12	-0.033	107	-0.033	45
159		J	max	0	107	0	107	0	107	0	107	0	107	0	107
160			min	0	12	0	72	0	72	0	12	0	12	0	12
161	M492	I	max	0.138	38	0.113	107	-0.032	66	0	107	0.275	14	0.275	16
162			min	-0.138	96	-0.113	75	-0.406	15	0	12	-0.025	47	-0.025	75
163		J	max	0	107	0	100	0	70	0	107	0	107	0	107
164			min	0	12	0	12	0	12	0	12	0	12	0	12
165	M491	I	max	0.138	94	0.113	77	-0.032	66	0	107	0.274	14	0.274	16
166			min	-0.138	62	-0.113	41	-0.405	15	0	12	-0.025	77	-0.025	75
167		J	max	0	107	0	100	0	70	0	107	0	107	0	107
168			min	0	12	0	12	0	12	0	12	0	12	0	12
169	M695	I	max	0.138	68	0.113	103	-0.032	66	0	107	0.275	14	0.275	16
170			min	-0.138	92	-0.113	45	-0.406	15	0	12	-0.025	107	-0.025	75
171		J	max	0	107	0	107	0	70	0	107	0	107	0	107
172			min	0	12	0	102	0	12	0	12	0	12	0	12
173	M697	I	max	0.138	34	0.113	43	-0.032	66	0	107	0.274	14	0.274	16

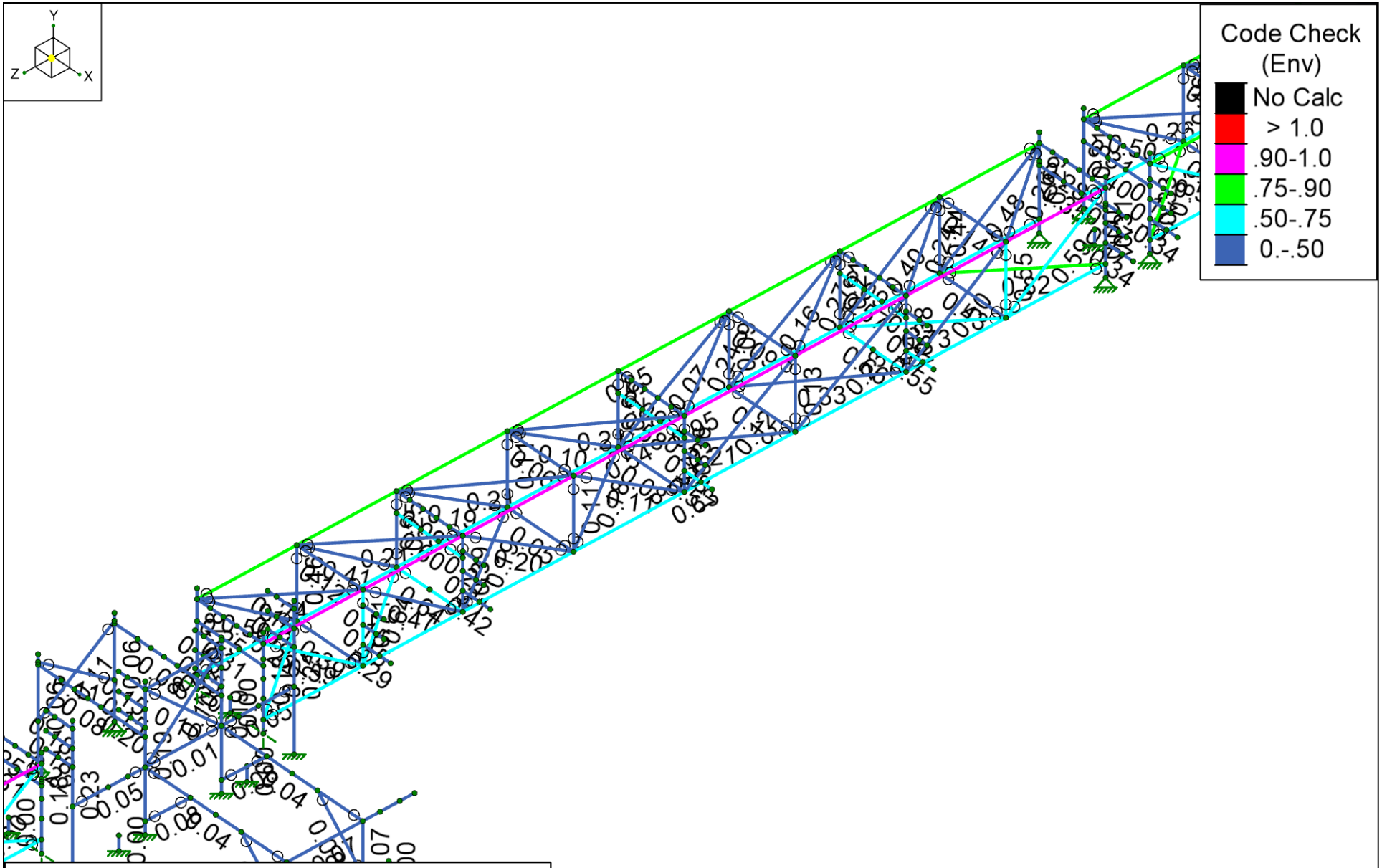
Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
174			min	-0.138	32	-0.113	45	-0.405	15	0	12	-0.025	47	-0.025	45
175		J	max	0	107	0	107	0	70	0	107	0	107	0	107
176			min	0	12	0	102	0	12	0	12	0	12	0	12
177	M787	I	max	0.118	38	0.098	47	-0.029	66	0	107	0.241	14	0.241	16
178			min	-0.118	96	-0.098	105	-0.359	15	0	12	-0.022	47	-0.022	105
179		J	max	0	107	0	106	0	107	0	107	0	107	0	107
180			min	0	12	0	12	0	72	0	12	0	12	0	12
181	M497	I	max	0.118	38	0.098	107	-0.029	66	0	107	0.242	14	0.242	16
182			min	-0.118	62	-0.098	71	-0.36	15	0	12	-0.022	47	-0.022	75
183		J	max	0	107	0	107	0	107	0	107	0	107	0	107
184			min	0	12	0	102	0	72	0	12	0	12	0	12
185	M788	I	max	0.118	34	0.098	47	-0.029	66	0	107	0.242	14	0.242	16
186			min	-0.118	66	-0.098	105	-0.36	15	0	12	-0.022	77	-0.022	45
187		J	max	0	107	0	70	0	107	0	107	0	107	0	107
188			min	0	12	0	12	0	72	0	12	0	12	0	12
189	M498	I	max	0.118	38	0.098	47	-0.029	66	0	107	0.241	14	0.241	16
190			min	-0.118	62	-0.098	41	-0.359	15	0	12	-0.022	107	-0.022	75
191		J	max	0	107	0	107	0	107	0	107	0	107	0	107
192			min	0	12	0	102	0	72	0	12	0	12	0	12
193	M501	I	max	0.113	94	0.094	73	-0.028	66	0	107	0.235	14	0.235	16
194			min	-0.113	36	-0.094	101	-0.349	15	0	12	-0.021	77	-0.021	105
195		J	max	0	107	0	100	0	70	0	107	0	107	0	107
196			min	0	12	0	12	0	12	0	12	0	12	0	12
197	M506	I	max	0.113	98	0.094	73	-0.028	66	0	107	0.235	14	0.235	16
198			min	-0.113	32	-0.094	41	-0.349	15	0	12	-0.021	107	-0.021	45
199		J	max	0	107	0	107	0	70	0	107	0	107	0	107
200			min	0	12	0	102	0	72	0	12	0	12	0	12
201	M500	I	max	0.113	38	0.094	77	-0.028	66	0	107	0.234	14	0.234	16
202			min	-0.113	62	-0.094	105	-0.348	15	0	12	-0.021	77	-0.021	105
203		J	max	0	107	0	100	0	70	0	107	0	107	0	107
204			min	0	12	0	12	0	12	0	12	0	12	0	12
205	M700	I	max	0.113	68	0.094	43	-0.028	66	0	107	0.235	14	0.235	16
206			min	-0.113	66	-0.094	71	-0.349	15	0	12	-0.021	107	-0.021	45
207		J	max	0	107	0	107	0	107	0	107	0	107	0	107
208			min	0	12	0	102	0	72	0	12	0	12	0	12
209	M699	I	max	0.113	94	0.094	43	-0.028	66	0	107	0.234	14	0.234	16
210			min	-0.113	36	-0.094	105	-0.348	15	0	12	-0.021	107	-0.021	105
211		J	max	0	107	0	107	0	107	0	107	0	107	0	107
212			min	0	12	0	102	0	72	0	12	0	12	0	12
213	M469	I	max	0.113	38	0.094	43	-0.028	66	0	107	0.234	14	0.234	16
214			min	-0.113	96	-0.094	41	-0.348	15	0	12	-0.021	107	-0.021	45
215		J	max	0	107	0	107	0	107	0	107	0	107	0	107
216			min	0	12	0	102	0	72	0	12	0	12	0	12
217	M472	I	max	0.092	76	0.092	47	-0.021	66	0	107	0.28	14	0.28	16
218			min	-0.092	70	-0.092	101	-0.334	15	0	12	-0.026	107	-0.026	105
219		J	max	0	107	0	107	0	70	0	107	0	107	0	107
220			min	0	12	0	102	0	12	0	12	0	12	0	12
221	M487	I	max	0.059	94	0.053	103	-0.018	66	0	107	0.147	14	0.147	16
222			min	-0.059	32	-0.053	71	-0.225	15	0	12	-0.012	107	-0.012	75
223		J	max	0	107	0	107	0	70	0	107	0	107	0	107
224			min	0	12	0	102	0	12	0	12	0	12	0	12
225	M489	I	max	0.059	64	0.053	103	-0.018	66	0	107	0.146	14	0.146	16
226			min	-0.059	62	-0.053	71	-0.224	15	0	12	-0.012	107	-0.012	75
227		J	max	0	107	0	107	0	70	0	107	0	107	0	107
228			min	0	12	0	102	0	12	0	12	0	12	0	12



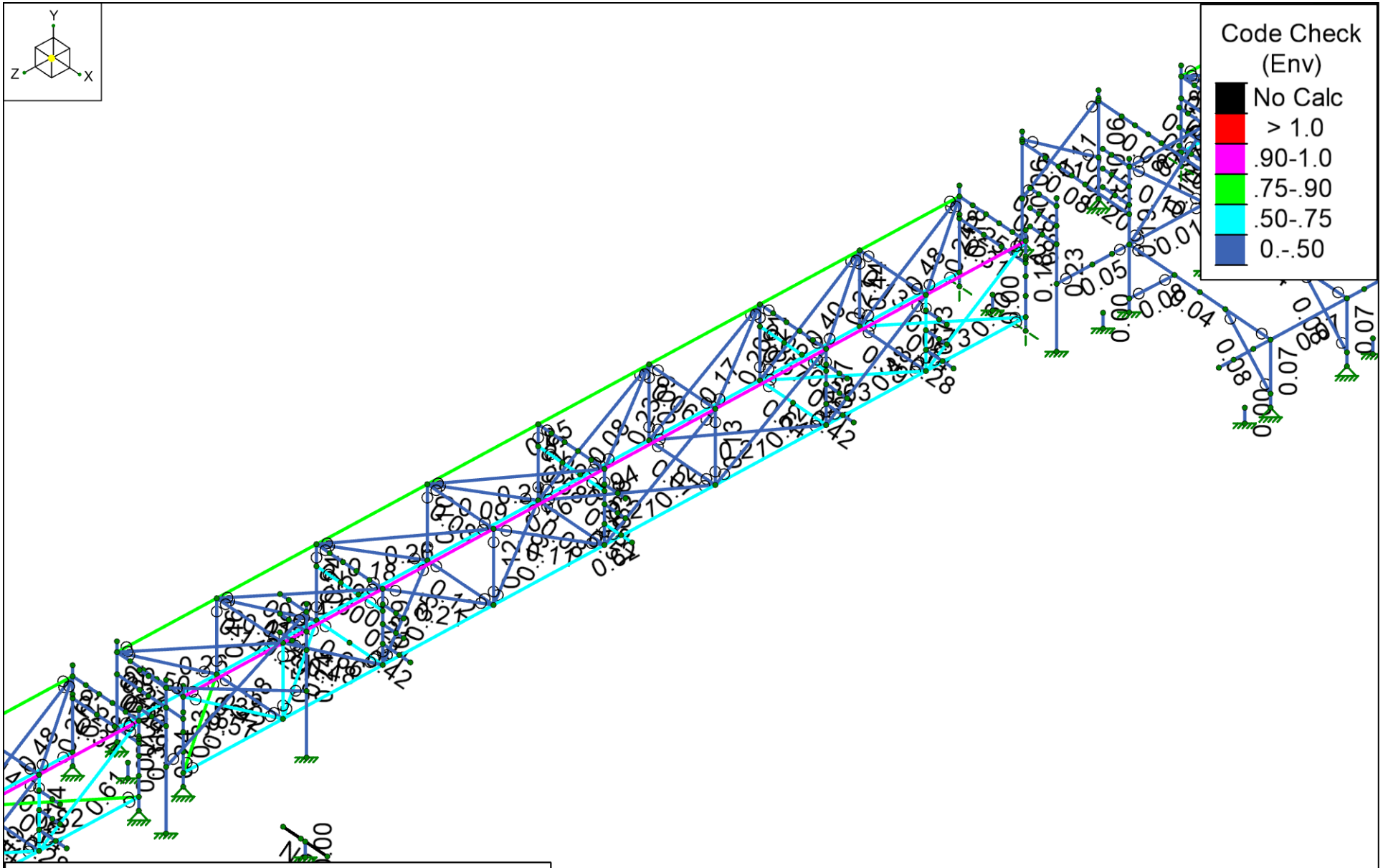
Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-10
	A. Kral		Dec 14, 2023 at 08:11 AM
	153929		Combined Pile Cap Model.r3d

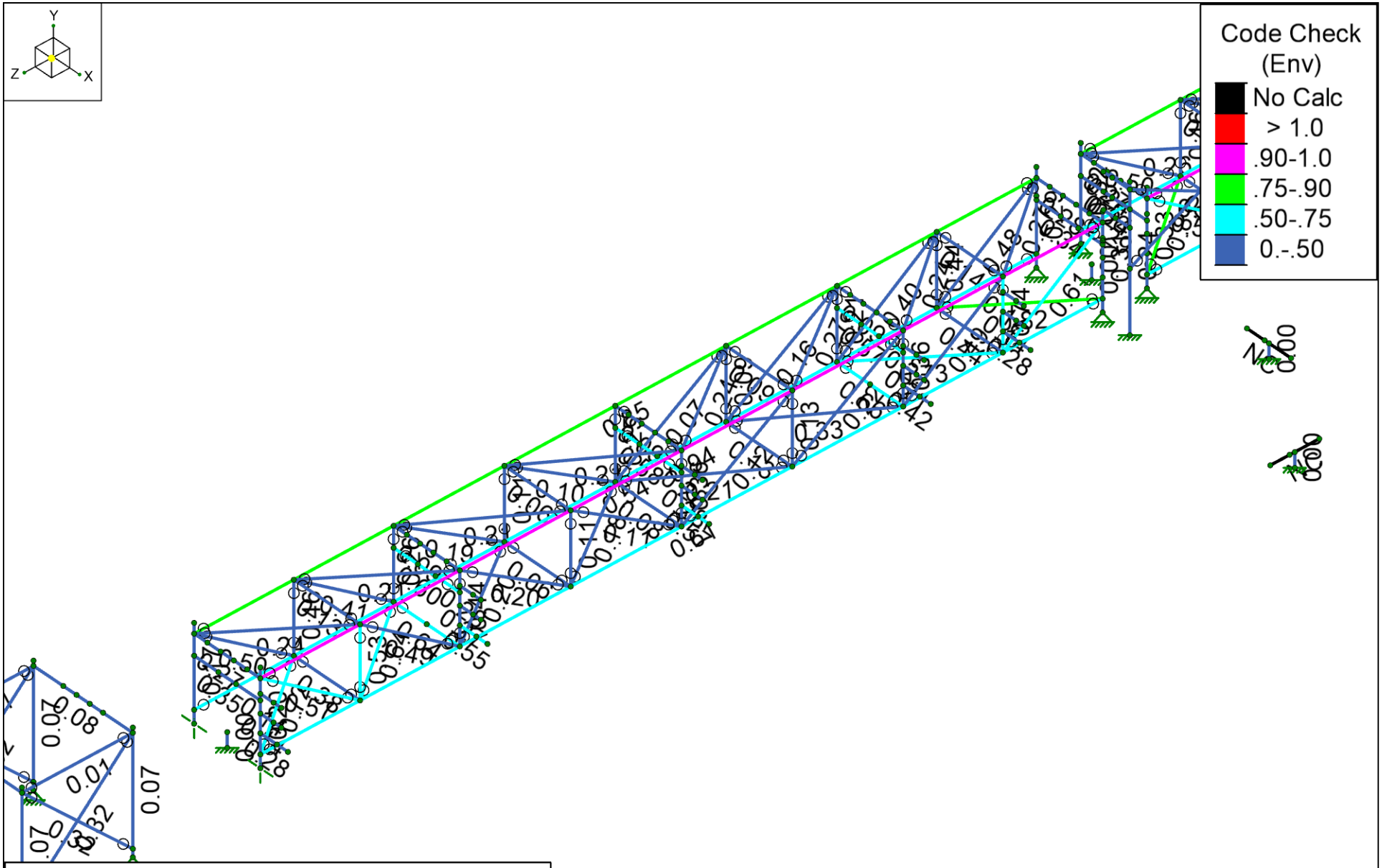


Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-11
	A. Kral		Dec 14, 2023 at 08:11 AM
	153929		Combined Pile Cap Model.r3d



RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-12
	A. Kral		Dec 14, 2023 at 08:12 AM
	153929		Combined Pile Cap Model.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-13
	A. Kral		Dec 14, 2023 at 08:12 AM
	153929		Combined Pile Cap Model.r3d

Model Settings

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Nodal

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI S100-12: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-15 / SDPWS-15 ASD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	ACI 530-13: ASD
Aluminum	AA ADM1-15: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16

Model Settings (Continued)

Risk Category	IV
Drift Cat	Other
Base Elevation (ft)	0
Include the weight of the structure in base shear calcs	Yes
S_1 (g)	0.376
SD_1 (g)	0.739
SD_S (g)	0.59
T_L (sec)	16
T Z (sec)	
T X (sec)	
C_tZ	0.02
C_tX	0.02
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	1
R X	1
Ω_0Z	1
Ω_0X	1
C_dZ	1
C_dX	1
ρ Z	1.3
ρ X	1.3

Project Grid Lines

No Data to Print...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	A500 Gr.C Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in^{2}]	Iyy [in^{4}]	Izz [in^{4}]	J [in^{4}]
1	Bent Columns	W10X33	Column	Wide Flange	A992	Typical	9.71	36.6	171	0.583
2	Top Chord	LL4X4X4X6	Beam	Double Angle (No Gap)	A572 Gr.50	Typical	3.86	14.1	6	0.088
3	Bottom Chord	LL4X4X4X6	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical	3.86	14.1	6	0.088
4	Post	WT3X7.5	Column	W Tee	A992	Typical	2.21	4.66	1.41	0.05
5	Heavy Post	WT4X9	Column	Channel	A992	Lateral Tie	2.63	3.98	3.41	0.086
6	VB	L3X3X4	VBrace	Single Angle	A572 Gr.50	Typical	1.44	1.23	1.23	0.031
7	Heavy VB	L3X3X4	VBrace	Single Angle	A572 Gr.50	Lateral Tie	1.44	1.23	1.23	0.031
8	Fire Beam	W6X15	Beam	Wide Flange	A992	Typical	4.43	9.32	29.1	0.101
9	20" Suction	W6X15	Beam	Wide Flange	A992	Typical	4.43	9.32	29.1	0.101
10	Fueling	L4X4X4	Beam	Single Angle	A572 Gr.50	Typical	1.93	3	3	0.044
11	MC End	W6X15	Beam	Wide Flange	A992	Lateral Tie	4.43	9.32	29.1	0.101
12	Bottom HB	L4X4X4	HBrace	Single Angle	A572 Gr.50	Typical	1.93	3	3	0.044
13	Top HB	L4X4X4	HBrace	Single Angle	A572 Gr.50	Lateral Tie	1.93	3	3	0.044
14	Top HB Heavy	L5X5X5	HBrace	Single Angle	A572 Gr.50	Lateral Tie	3.07	7.44	7.44	0.108
15	Thermal Bracing	L5X5X5	HBrace	Single Angle	A572 Gr.50	Lateral Tie	3.07	7.44	7.44	0.108
16	CT Support	L3X3X4	Beam	Single Angle	A572 Gr.50	Lateral Tie	1.44	1.23	1.23	0.031
17	Top MC	W6X15	Beam	Wide Flange	A992	Lateral Tie	4.43	9.32	29.1	0.101
18	W8x24	W8X24	Column	Wide Flange	A992	Lateral Tie	7.08	18.3	82.7	0.346
19	W8x18	W8X18	Beam	Wide Flange	A992	Lateral Tie	5.26	7.97	61.9	0.172
20	W8x10	W8X10	Beam	Wide Flange	A992	Lateral Tie	2.96	2.09	30.8	0.043

Design Size and Code Check Parameters

	Label	Max Depth [in]	Max Axial/Bending Chk	Max Shear Chk
1	Typical		1	1
2	Lateral Tie	6.5	1	1
3	#9 Pile Cap		1	1
4	#8 Pile Cap		1	1
5	#7 Pile Cap		1	1

Concrete Rebar Parameters

	Label	Optimize Rebar ?	Min Flex Bar	Max Flex Bar	Shear Bar	Legs per Stirrup	Top (Column) Cover [in]	Bottom Cover [in]	Side Cover [in]	Top/Bottom Bars	Add'l Side Bars	Shear Bar Spacing [in]
1	Typical	Optimize	#6	#9	#4	2	3	3	3	2	1	12
2	Lateral Tie	Optimize	#9	#9	#4	2	3	3	3	2	1	12
3	#9 Pile Cap	Optimize	#5	#10	#4	2	2	8	1.5	2	1	12
4	#8 Pile Cap	Optimize	#5	#10	#4	2	2	8	1.5	2	1	12
5	#7 Pile Cap	Optimize	#5	#10	#4	2	2	8	1.5	2	1	12

Deflection Design

	Label	LC	Ratio	LC	Ratio	LC	Ratio
1	Typical	None	N/A	None	N/A	None	N/A
2	Lateral Tie	None	N/A	None	N/A	None	N/A
3	#9 Pile Cap	1	240	2	360	3	240
4	#8 Pile Cap	1	240	2	360	3	240
5	#7 Pile Cap	1	240	2	360	3	240

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	S8	5	24.125	1.5	
2	S7	0	24.125	1.5	
3	S6	5	24.125	118.5	
4	S5	0	24.125	118.5	
5	S4	5	24.125	133.5	
6	S3	0	24.125	133.5	
7	S2	5	24.125	250.5	
8	S1	0	24.125	250.5	
9	O19	21	25	29.18	
10	N1157	-2.583333	24	-4.81	
11	N1156	-2.583333	25	-4.81	
12	N1155	21	24	194.84	
13	N1154	21	24	30.84	
14	N1153	13.365	24	25.75	
15	N1152	13.375	24	189.75	
16	N1151	21	25	194.84	
17	N1150	21	25	30.84	
18	N1149	13.365	25	25.75	
19	N1148	13.375	25	189.75	
20	N1147	-9.195	24	258.37	
21	N1146	-9.195	25	258.37	
22	N1145	-15.083333	24	264.435	
23	N1144	15.03	25	25.75	
24	N1143	7.333333	28.416666	118.500001	
25	N1142	-15.083333	25	264.435	
26	N1141	6	32.083333	128.583333	
27	N1140	6.25	30.91667	128.583333	
28	N1139	6	33.33333	128.583333	
29	N1138	6	32.083333	123.416667	
30	N1137	6.25	30.91667	123.416667	
31	N1136	6	33.33333	123.416667	
32	N1135	5	28.83333	200.25	
33	N1134	5	27.583333	200.25	
34	N1133	5	26.33333	200.25	
35	N1132	6.58333	27.583333	200.25	
36	N1131	7.08333	26.33333	200.25	
37	N1130	6	28.83333	200.25	
38	N1129	6	32.083333	133.5	
39	N1128	6.25	30.91667	133.5	
40	N1127	6	33.33333	133.5	
41	N1126	5	28.83333	111.75	
42	N1125	5	27.583333	111.75	
43	N1124	5	26.33333	111.75	
44	N1123	6	27.583333	111.75	
45	N1122	6.58333	27.583333	111.75	
46	N1121	6.58333	28.83333	111.75	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
47	N1120	6	28.83333	111.75	
48	N1119	7.08333	26.33333	111.75	
49	N1118	6.25	26.33333	111.75	
50	N1117	5	27.583333	8.25	
51	N1116	5	28.83333	8.25	
52	N1115	5	26.33333	8.25	
53	N1114	6	27.583333	8.25	
54	N1113	6.58333	27.583333	8.25	
55	N1112	6	28.83333	8.25	
56	N1111	6	33.33333	22.25	
57	N1110	6	32.083333	22.25	
58	N1109	6.25	30.91667	22.25	
59	N1108	-6.416667	32	30.625	
60	N1107	-6.416667	32	29.625	
61	N1106	-6.416667	32	28.625	
62	N1105	-6.416667	32	27.625	
63	N1104	-0.666667	32	30.625	
64	N1103	-0.666667	32	29.625	
65	N1102	-0.666667	32	28.625	
66	N1101	-0.666667	32	27.625	
67	N1100	1	32	267.75	
68	N1099	2	32	267.75	
69	N1098	3	32	267.75	
70	N1097	4	32	267.75	
71	N1096	1	32	260.25	
72	N1095	2	32	260.25	
73	N1094	3	32	260.25	
74	N1093	4	32	260.25	
75	N1092	1	30.333334	123.416667	
76	N1091	2	30.333334	123.416667	
77	N1090	3	30.333334	123.416667	
78	N1089	4	30.333334	123.416667	
79	N1088	1	30.333334	128.583333	
80	N1087	2	30.333334	128.583333	
81	N1086	3	30.333334	128.583333	
82	N1085	4	30.333334	128.583333	
83	N1084	18	28.416666	122.249997	
84	N1083	7.333333	28.416666	122.249997	
85	N1082	18	28.416666	120.916667	
86	N1081	7.333333	28.416666	120.916667	
87	N1080	18	28.416666	129.750003	
88	N1079	7.333333	28.416666	129.750003	
89	N1078	18	28.416666	131.083333	
90	N1077	7.333333	28.416666	131.083333	
91	N1076	5	28.83333	133.5	
92	N1075	5	28.83333	140.25	
93	N1074	5	27.583333	140.25	
94	N1073	5	27.583333	133.5	
95	N1072	6	28.83333	147	
96	N1071	6.58333	28.83333	147	
97	N1070	5	28.83333	147	
98	N1069	5	26.33333	140.25	
99	N1068	6	27.583333	147	
100	N1067	6.58333	27.583333	147	
101	N1066	6.25	26.33333	147	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
102	N1065	7.08333	26.33333	147	
103	N1064	6	28.83333	162	
104	N1063	6.58333	28.83333	162	
105	N1062	6	27.583333	162	
106	N1061	6.58333	27.583333	162	
107	N1060	5	27.583333	162	
108	N1059	5	26.33333	162	
109	N1058	5	28.83333	177	
110	N1057	6	27.583333	177	
111	N1056	6	28.83333	140.25	
112	N1055	5	28.83333	190.5	
113	N1054	2.5	24	250.5	
114	N1053	5	27.583333	147	
115	N1052	5	28.83333	162	
116	N1051	5	26.33333	177	
117	N1050	5	26.33333	190.5	
118	N1049	6	32.083333	184.25	
119	N1048	6.58333	27.583333	177	
120	N1047	6.58333	28.83333	140.25	
121	N1046	6.58333	28.83333	177	
122	N1045	6	28.83333	177	
123	N1044	7.333333	24	121.69	
124	N1043	6.25	26.33333	162	
125	N1042	6	27.583333	140.25	
126	N1041	2.5	24	192	
127	N1040	6.25	30.91667	184.25	
128	N1039	7.08333	26.33333	177	
129	N1038	5	26.33333	147	
130	N1037	5	27.583333	177	
131	N1036	6.25	26.33333	177	
132	N1035	5	27.583333	190.5	
133	N1034	7.08333	26.33333	162	
134	N1033	5	26.33333	133.5	
135	N1032	6	33.33333	184.25	
136	N1031	0	30.5	190.5	
137	N1030	5	30.5	190.5	
138	N1029	0	30.5	133.5	
139	N1028	5	30.5	133.5	
140	N1027	2.5	25	177	
141	N1026	2.5	25	147	
142	N1025	18	24	121.66	
143	N1024	2.5	24	133.5	
144	N1023	18	24	130.33	
145	N1022	2.5	24	118.5	
146	N1021	0	28.666667	133.5	
147	N1020	5	28.666667	133.5	
148	N1019	1.833334	28.416667	177	
149	N1018	1.833334	28.416667	190.5	
150	N1017	1.833334	28.416667	147	
151	N1016	1.833334	28.416667	133.5	
152	N1015	1.833334	28.416667	162	
153	N1014	3.16667	28.416667	177	
154	N1013	3.16667	28.416667	190.5	
155	N1012	3.16667	28.416667	147	
156	N1011	3.16667	28.416667	133.5	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
157	N1010	3.16667	28.416667	162	
158	N1009	1	29.81	177	
159	N1008	2	29.81	177	
160	N1007	3	29.81	177	
161	N1006	4	29.81	177	
162	N1005	1	29.81	133.5	
163	N1004	2	29.81	133.5	
164	N1003	3	29.81	133.5	
165	N1002	4	29.81	133.5	
166	N1001	1	29.81	190.5	
167	N1000	2	29.81	190.5	
168	N999	3	29.81	190.5	
169	N998	4	29.81	190.5	
170	N997	1	29.81	162	
171	N996	2	29.81	162	
172	N995	3	29.81	162	
173	N994	4	29.81	162	
174	N993	1	29.81	147	
175	N992	2	29.81	147	
176	N991	3	29.81	147	
177	N990	4	29.81	147	
178	N989	5	29.81	154.5	
179	N988	5	28.83333	61.5	
180	N987	6	27.583333	61.5	
181	N986	6.58333	27.583333	61.5	
182	N985	5	27.583333	61.5	
183	N984	6	28.83333	75	
184	N983	6.58333	28.83333	75	
185	N982	5	28.83333	75	
186	N981	6	28.83333	61.5	
187	N980	6	27.583333	75	
188	N979	6.58333	27.583333	75	
189	N978	6.25	26.33333	75	
190	N977	7.08333	26.33333	75	
191	N976	6	28.83333	90	
192	N975	6.58333	28.83333	90	
193	N974	6	27.583333	90	
194	N973	6.58333	27.583333	90	
195	N972	5	27.583333	90	
196	N971	5	26.33333	90	
197	N970	5	28.83333	105	
198	N969	6	27.583333	105	
199	N968	6.25	26.33333	61.5	
200	N967	5	28.83333	118.5	
201	N966	6.58333	27.583333	140.25	
202	N965	5	27.583333	75	
203	N964	5	28.83333	90	
204	N963	5	26.33333	105	
205	N962	5	26.33333	118.5	
206	N961	6	32.083333	118.5	
207	N960	6.58333	27.583333	105	
208	N959	7.08333	26.33333	61.5	
209	N958	6.58333	28.83333	105	
210	N957	6	28.83333	105	
211	N956	6.25	26.33333	140.25	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
212	N955	6.25	26.33333	90	
213	N954	6.58333	28.83333	61.5	
214	N953	7.08333	26.33333	140.25	
215	N952	6.25	30.91667	118.5	
216	N951	7.08333	26.33333	105	
217	N950	5	26.33333	75	
218	N949	5	27.583333	105	
219	N948	6.25	26.33333	105	
220	N947	5	27.583333	118.5	
221	N946	7.08333	26.33333	90	
222	N945	5	29.81	169.5	
223	N944	0	29.81	154.5	
224	N943	0	29.81	169.5	
225	N942	0	25	169.5	
226	N941	5	25	169.5	
227	N940	0	29.81	183.75	
228	N939	5	29.81	183.75	
229	N938	0	29.81	140.25	
230	N937	5	29.81	140.25	
231	N936	0	25	183.75	
232	N935	5	25	183.75	
233	N934	0	29.81	177	
234	N933	5	29.81	177	
235	N932	0	29.81	147	
236	N931	5	29.81	147	
237	N930	0	29.81	162	
238	N929	5	29.81	162	
239	N928	0	28.416667	177	
240	N927	5	28.416667	177	
241	N926	0	28.416667	133.5	
242	N925	5	28.416667	133.5	
243	N924	0	28.416667	190.5	
244	N923	6	33.33333	193.75	
245	N922	6.58333	28.83333	200.25	
246	N921	5	27.583333	193.5	
247	N920	5	28.83333	207	
248	N919	6.58333	27.583333	207	
249	N918	5	27.583333	207	
250	N917	5	28.416667	190.5	
251	N916	7.08333	26.33333	207	
252	N915	5	26.33333	193.5	
253	N914	6.58333	28.83333	222	
254	N913	6.58333	27.583333	222	
255	N912	5	27.583333	222	
256	N911	6.25	26.33333	222	
257	N910	5	26.33333	222	
258	N909	6.58333	28.83333	237	
259	N908	6.58333	27.583333	237	
260	N907	5	27.583333	237	
261	N906	6.25	26.33333	237	
262	N905	5	26.33333	237	
263	N904	0	28.416667	147	
264	N903	6.58333	28.83333	250.5	
265	N902	5	28.83333	250.5	
266	N901	6	27.583333	250.5	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
267	N900	6.58333	27.583333	250.5	
268	N899	6.25	26.33333	250.5	
269	N898	7.08333	26.33333	250.5	
270	N897	7.08333	26.33333	237	
271	N896	5	28.416667	147	
272	N895	0	28.416667	162	
273	N894	5	28.83333	237	
274	N893	5	28.83333	1.5	
275	N892	6	27.583333	1.5	
276	N891	6.58333	27.583333	1.5	
277	N890	5	27.583333	1.5	
278	N889	6	33.33333	15.25	
279	N888	6.25	26.33333	8.25	
280	N887	5	28.83333	15	
281	N886	6	28.83333	1.5	
282	N885	6	32.083333	15.25	
283	N884	7.08333	26.33333	8.25	
284	N883	6.25	30.91667	15.25	
285	N882	6.58333	28.83333	8.25	
286	N881	6	28.83333	30	
287	N880	6.58333	28.83333	30	
288	N879	6	27.583333	30	
289	N878	6.58333	27.583333	30	
290	N877	5	27.583333	30	
291	N876	5	26.33333	30	
292	N875	5	28.83333	45	
293	N874	6	27.583333	45	
294	N873	6.25	26.33333	1.5	
295	N872	5	28.83333	58.5	
296	N871	6.58333	27.583333	58.5	
297	N870	5	27.583333	15	
298	N869	5	28.83333	30	
299	N868	5	26.33333	45	
300	N867	5	26.33333	58.5	
301	N866	5	26.33333	61.5	
302	N865	6	27.583333	58.5	
303	N864	6	33.33333	118.5	
304	N863	0	30.5	118.5	
305	N862	5	30.5	118.5	
306	N861	0	30.5	61.5	
307	N860	5	30.5	61.5	
308	N859	2.5	25	105	
309	N858	2.5	25	75	
310	N857	2.5	24	60	
311	N855	2.5	24	1.5	
312	N854	7.333333	24	130.36	
313	N853	0	28.666667	61.5	
314	N852	5	28.666667	61.5	
315	N851	1.833334	28.416667	105	
316	N850	1.833334	28.416667	118.5	
317	N849	1.833334	28.416667	75	
318	N848	1.833334	28.416667	61.5	
319	N847	1.833334	28.416667	90	
320	N846	3.16667	28.416667	105	
321	N845	3.16667	28.416667	118.5	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
322	N844	3.16667	28.416667	75	
323	N843	3.16667	28.416667	61.5	
324	N842	3.16667	28.416667	90	
325	N841	1	29.81	105	
326	N840	2	29.81	105	
327	N839	3	29.81	105	
328	N838	4	29.81	105	
329	N837	1	29.81	61.5	
330	N836	2	29.81	61.5	
331	N835	3	29.81	61.5	
332	N834	5	28.416667	162	
333	N833	4	29.81	61.5	
334	N832	0	25	140.25	
335	N831	1	29.81	118.5	
336	N830	5	25	140.25	
337	N829	0	25	154.5	
338	N828	5	25	154.5	
339	N827	6.58333	27.583333	45	
340	N826	2	29.81	118.5	
341	N825	7.08333	26.33333	1.5	
342	N824	0	25	177	
343	N823	6.58333	28.83333	45	
344	N822	5	25	177	
345	N821	6	28.83333	45	
346	N820	6.58333	28.83333	58.5	
347	N819	0	25	147	
348	N818	5	25	147	
349	N817	3	29.81	118.5	
350	N816	4	29.81	118.5	
351	N815	6.25	26.33333	30	
352	N814	0	25	162	
353	N813	1	29.81	90	
354	N812	5	25	162	
355	N811	2	29.81	90	
356	N810	6.58333	28.83333	1.5	
357	N809	0	25	190.5	
358	N808	7.08333	26.33333	58.5	
359	N807	5	28.83333	193.5	
360	N806	6	32.083333	193.75	
361	N805	6.25	30.91667	193.75	
362	N804	6	28.83333	207	
363	N803	6.25	26.33333	58.5	
364	N802	6.58333	28.83333	207	
365	N801	6.25	26.33333	207	
366	N800	5	25	190.5	
367	N799	5	26.33333	207	
368	N798	0	25	133.5	
369	N797	6	28.83333	222	
370	N796	3	29.81	90	
371	N795	5	28.83333	222	
372	N794	5	25	133.5	
373	N793	6	27.583333	222	
374	N792	7.08333	26.33333	222	
375	N791	6	28.83333	237	
376	N790	7.08333	26.33333	45	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
377	N789	6	27.583333	237	
378	N788	6	28.83333	250.5	
379	N787	5	26.33333	15	
380	N786	6.25	26.33333	200.25	
381	N785	4	29.81	90	
382	N784	5	27.583333	250.5	
383	N783	5	26.33333	250.5	
384	N782	1	29.81	75	
385	N781	0	29.81	190.5	
386	N780	6	27.583333	200.25	
387	N779	5	29.81	190.5	
388	N778	6	27.583333	207	
389	N777	5	27.583333	45	
390	N776	0	29.81	133.5	
391	N775	6.25	26.33333	45	
392	N774	5	27.583333	58.5	
393	N773	2	29.81	75	
394	N772	3	29.81	75	
395	N771	4	29.81	75	
396	N770	7.08333	26.33333	30	
397	N769	5	26.33333	1.5	
398	N768	5	29.81	133.5	
399	N767	6	28.83333	58.5	
400	N766	5	29.81	82.5	
401	N765	5.333333	30.91667	22.25	
402	N764	7.333333	30.91667	22.25	
403	N763	5.333333	32.08333	22.25	
404	N762	7.333333	32.08333	22.25	
405	N761	5.333333	33.33333	22.25	
406	N760	7.333333	28.33333	22.25	
407	N759	7.333333	33.33333	22.25	
408	N758	7.333333	33.83333	22.25	
409	N757	7.333333	24.125	22.25	
410	N756	5.333333	30.91667	15.25	
411	N755	7.333333	30.91667	15.25	
412	N754	5.333333	32.08333	15.25	
413	N753	7.333333	32.08333	15.25	
414	N752	5.333333	33.33333	15.25	
415	N751	7.333333	28.33333	15.25	
416	N750	7.333333	33.33333	15.25	
417	N749	7.333333	33.83333	15.25	
418	N748	7.333333	24.125	15.25	
419	N747	5.333333	30.91667	193.749999	
420	N746	7.333333	30.91667	193.749999	
421	N745	5.333333	32.08333	193.749999	
422	N744	7.333333	32.08333	193.749999	
423	N743	5.333333	33.33333	193.749999	
424	N742	7.333333	28.33333	193.749999	
425	N741	7.333333	33.33333	193.749999	
426	N740	7.333333	33.83333	193.749999	
427	N739	7.333333	24.125	193.749999	
428	N738	5.333333	30.91667	184.249999	
429	N737	7.333333	30.91667	184.249999	
430	N736	5.333333	32.08333	184.249999	
431	N735	7.333333	32.08333	184.249999	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
432	N734	5.333333	33.33333	184.249999	
433	N733	7.333333	28.33333	184.249999	
434	N732	7.333333	33.33333	184.249999	
435	N731	7.333333	33.83333	184.249999	
436	N730	-6.416667	24.6667	32.5	
437	N729	-6.416667	24.6667	25.75	
438	N728	-0.666667	24.6667	32.5	
439	N727	-0.666667	24.6667	25.75	
440	N726	-6.416667	32	32.5	
441	N725	-6.416667	32	25.75	
442	N724	-0.666667	32	32.5	
443	N723	-0.666667	32	25.75	
444	N722	-6.416667	32.33333	32.5	
445	N721	-6.416667	32.33333	25.75	
446	N720	-0.666667	32.33333	32.5	
447	N719	-0.666667	32.33333	25.75	
448	N718	-6.416667	24.125	32.5	
449	N717	-6.416667	24.125	25.75	
450	N716	-0.666667	24.125	32.5	
451	N715	7.333333	24.125	184.249999	
452	N714	-0.666667	24.125	25.75	
453	N713	-1.25	24.6667	267.75	
454	N712	-1.25	24.6667	260.25	
455	N711	6.25	24.6667	267.75	
456	N710	6.25	24.6667	260.25	
457	N709	-1.25	32	267.75	
458	N708	-1.25	32	260.25	
459	N707	6.25	32	267.75	
460	N706	6.25	32	260.25	
461	N705	-1.25	32.33333	267.75	
462	N704	-1.25	32.33333	260.25	
463	N703	6.25	32.33333	267.75	
464	N702	6.25	32.33333	260.25	
465	N701	-1.25	24.125	267.75	
466	N700	-1.25	24.125	260.25	
467	N699	6.25	24.125	267.75	
468	N698	6.25	24.125	260.25	
469	N697	5.333333	30.91667	133.499999	
470	N696	7.333333	30.91667	133.499999	
471	N695	5.333333	30.91667	118.500001	
472	N694	7.333333	30.91667	118.500001	
473	N693	5.333333	30.91667	123.416667	
474	N692	7.333333	30.91667	123.416667	
475	N691	5.333333	30.91667	128.583333	
476	N690	7.333333	30.91667	128.583333	
477	N689	5.333333	32.08333	133.499999	
478	N688	7.333333	32.08333	133.499999	
479	N687	5.333333	32.08333	118.500001	
480	N686	7.333333	32.08333	118.500001	
481	N685	5.333333	32.08333	123.416667	
482	N684	7.333333	32.08333	123.416667	
483	N683	5.333333	32.08333	128.583333	
484	N682	7.333333	32.08333	128.583333	
485	N681	5.333333	33.33333	133.499999	
486	N680	5.333333	33.33333	118.500001	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
487	N679	5.333333	33.33333	128.583333	
488	N678	5.333333	33.33333	123.416667	
489	N677	7.333333	25	128.583333	
490	N676	7.333333	25	123.416667	
491	N675	18	25	128.583333	
492	N674	18	25	123.416667	
493	N671	7.333333	28.416666	128.583333	
494	N670	7.333333	28.416666	123.416667	
495	N669	-0.75	26.75	128.583333	
496	N668	-0.75	26.75	123.416667	
497	N667	-0.75	30.5	128.583333	
498	N666	-0.75	30.5	123.416667	
499	N665	7.333333	28.416666	133.499999	
500	N661	7.333333	33.33333	133.499999	
501	N660	7.333333	33.33333	118.500001	
502	N659	7.333333	33.33333	128.583333	
503	N658	7.333333	33.33333	123.416667	
504	N657	-0.75	30.333334	128.583333	
505	N656	-0.75	30.333334	123.416667	
506	N655	7.333333	30.333333	128.583333	
507	N654	7.333333	30.333333	123.416667	
508	N653	18	28.416666	119.916667	
509	N651	18	28.416666	132.083333	
510	N649	-0.75	31	128.583333	
511	N648	-0.75	31	123.416667	
512	N647	18	28.416666	128.583333	
513	N646	18	28.416666	123.416667	
514	N645	12.66666	28.416666	128.583333	
515	N644	12.66666	28.416666	123.416667	
516	N643	7.333333	33.83333	133.499999	
517	N642	7.333333	33.83333	118.500001	
518	N641	7.333333	33.83333	128.583333	
519	N640	7.333333	33.83333	123.416667	
520	N639	7.333333	24.125	133.499999	
521	N638	7.333333	24.125	118.500001	
522	N637	18	24.125	128.583333	
523	N636	18	24.125	123.416667	
524	N633	7.333333	24.125	128.583333	
525	N632	7.333333	24.125	123.416667	
526	N631	-0.75	24.125	128.583333	
527	N630	-0.75	24.125	123.416667	
528	N629	-150	43	400	
529	N628	-150	38	400	
530	N627	-150	23	400	
531	N626	0	30.5	58.5	
532	N625	5	30.5	58.5	
533	N624	0	30.5	1.5	
534	N623	5	30.5	1.5	
535	N622	2.5	25	45	
536	N621	2.5	25	15	
537	N616	5	29.81	97.5	
538	N615	0	29.81	82.5	
539	N614	0	29.81	97.5	
540	N613	0	25	97.5	
541	N612	5	25	97.5	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
542	N611	0	29.81	111.75	
543	N610	5	29.81	111.75	
544	N609	0	29.81	68.25	
545	N608	5	29.81	68.25	
546	N607	0	25	111.75	
547	N606	5	25	111.75	
548	N605	0	29.81	105	
549	N604	5	29.81	105	
550	N603	0	29.81	75	
551	N602	5	29.81	75	
552	N601	0	29.81	90	
553	N600	5	29.81	90	
554	N599	0	28.416667	105	
555	N598	5	28.416667	105	
556	N597	0	28.416667	61.5	
557	N596	5	28.416667	61.5	
558	N595	0	28.416667	118.5	
559	N594	5	28.416667	118.5	
560	N593	0	28.416667	75	
561	N592	5	28.416667	75	
562	N591	0	28.416667	90	
563	N590	5	28.416667	90	
564	N589	0	25	68.25	
565	N588	5	25	68.25	
566	N587	0	25	82.5	
567	N586	5	25	82.5	
568	N585	0	25	105	
569	N584	5	25	105	
570	N583	0	25	75	
571	N582	5	25	75	
572	N581	0	25	90	
573	N580	5	25	90	
574	N579	0	25	118.5	
575	N578	5	25	118.5	
576	N577	0	25	61.5	
577	N576	5	25	61.5	
578	N575	0	29.81	118.5	
579	N574	5	29.81	118.5	
580	N573	0	29.81	61.5	
581	N572	5	29.81	61.5	
582	N571	0	28.666667	1.5	
583	N570	5	28.666667	1.5	
584	N569	1.833334	28.416667	45	
585	N568	1.833334	28.416667	58.5	
586	N567	1.833334	28.416667	15	
587	N566	1.833334	28.416667	1.5	
588	N565	1.833334	28.416667	30	
589	N564	3.16667	28.416667	45	
590	N563	3.16667	28.416667	58.5	
591	N562	3.16667	28.416667	15	
592	N561	3.16667	28.416667	1.5	
593	N560	3.16667	28.416667	30	
594	N559	1	29.81	45	
595	N558	2	29.81	45	
596	N557	3	29.81	45	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
597	N556	4	29.81	45	
598	N555	1	29.81	1.5	
599	N554	2	29.81	1.5	
600	N553	3	29.81	1.5	
601	N552	4	29.81	1.5	
602	N551	1	29.81	58.5	
603	N550	2	29.81	58.5	
604	N549	3	29.81	58.5	
605	N548	4	29.81	58.5	
606	N547	1	29.81	30	
607	N546	2	29.81	30	
608	N545	3	29.81	30	
609	N544	4	29.81	30	
610	N543	1	29.81	15	
611	N542	2	29.81	15	
612	N541	3	29.81	15	
613	N540	4	29.81	15	
614	N539	5	29.81	22.5	
615	N538	5	29.81	37.5	
616	N537	0	29.81	22.5	
617	N536	0	29.81	37.5	
618	N535	0	25	37.5	
619	N534	5	25	37.5	
620	N533	0	29.81	51.75	
621	N532	5	29.81	51.75	
622	N531	0	29.81	8.25	
623	N530	5	29.81	8.25	
624	N529	0	25	51.75	
625	N528	5	25	51.75	
626	N527	0	29.81	45	
627	N526	5	29.81	45	
628	N525	0	29.81	15	
629	N524	5	29.81	15	
630	N523	0	29.81	30	
631	N522	5	29.81	30	
632	N521	0	28.416667	45	
633	N520	5	28.416667	45	
634	N519	0	28.416667	1.5	
635	N518	5	28.416667	1.5	
636	N517	0	28.416667	58.5	
637	N516	5	28.416667	58.5	
638	N515	0	28.416667	15	
639	N514	5	28.416667	15	
640	N513	0	28.416667	30	
641	N512	5	28.416667	30	
642	N511	0	25	8.25	
643	N510	5	25	8.25	
644	N509	0	25	22.5	
645	N508	5	25	22.5	
646	N507	0	25	45	
647	N506	5	25	45	
648	N505	0	25	15	
649	N504	5	25	15	
650	N503	0	25	30	
651	N502	5	25	30	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
652	N501	0	25	58.5	
653	N500	5	25	58.5	
654	N499	0	25	1.5	
655	N498	5	25	1.5	
656	N497	0	29.81	58.5	
657	N496	5	29.81	58.5	
658	N495	0	29.81	1.5	
659	N494	5	29.81	1.5	
660	N492	150	43	-50	
661	N491	150	43	400	
662	N488	150	38	-50	
663	N487	150	23	-50	
664	N486	150	38	400	
665	N485	0	28.666667	193.5	
666	N484	5	28.666667	193.5	
667	N483	150	23	400	
668	N465	1.833334	28.416667	237	
669	N464	1.833334	28.416667	250.5	
670	N463	1.833334	28.416667	207	
671	N462	1.833334	28.416667	193.5	
672	N461	1.833334	28.416667	222	
673	N460	3.16667	28.416667	237	
674	N459	3.16667	28.416667	250.5	
675	N458	3.16667	28.416667	207	
676	N457	3.16667	28.416667	193.5	
677	N456	3.16667	28.416667	222	
678	N455	1	29.81	237	
679	N454	2	29.81	237	
680	N453	3	29.81	237	
681	N452	4	29.81	237	
682	N451	1	29.81	193.5	
683	N450	2	29.81	193.5	
684	N449	3	29.81	193.5	
685	N448	4	29.81	193.5	
686	N447	1	29.81	250.5	
687	N446	2	29.81	250.5	
688	N445	3	29.81	250.5	
689	N444	4	29.81	250.5	
690	N443	1	29.81	222	
691	N442	2	29.81	222	
692	N441	3	29.81	222	
693	N440	4	29.81	222	
694	N439	1	29.81	207	
695	N438	2	29.81	207	
696	N437	3	29.81	207	
697	N436	4	29.81	207	
698	N435	5	29.81	214.5	
699	N434	5	29.81	229.5	
700	N433	0	29.81	214.5	
701	N432	0	29.81	229.5	
702	N431	0	25	229.5	
703	N430	5	25	229.5	
704	N429	0	29.81	243.75	
705	N428	5	29.81	243.75	
706	N427	0	29.81	200.25	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
707	N426	5	29.81	200.25	
708	N425	0	25	243.75	
709	N424	5	25	243.75	
710	N417	0	29.81	237	
711	N416	5	29.81	237	
712	N411	0	29.81	207	
713	N410	5	29.81	207	
714	N409	0	29.81	222	
715	N408	5	29.81	222	
716	N407	0	28.416667	237	
717	N406	5	28.416667	237	
718	N405	0	28.416667	193.5	
719	N404	5	28.416667	193.5	
720	N403	0	28.416667	250.5	
721	N402	5	28.416667	250.5	
722	N401	0	28.416667	207	
723	N400	5	28.416667	207	
724	N399	0	28.416667	222	
725	N398	5	28.416667	222	
726	N397	0	25	200.25	
727	N396	5	25	200.25	
728	N395	0	25	214.5	
729	N394	5	25	214.5	
730	N393	0	25	237	
731	N392	5	25	237	
732	N391	0	25	207	
733	N390	5	25	207	
734	N389	0	25	222	
735	N388	5	25	222	
736	N383	0	29.81	250.5	
737	N382	5	29.81	250.5	
738	N381	0	29.81	193.5	
739	N380	5	29.81	193.5	
740	N144	2.5	25	237	
741	N143	2.5	25	207	
742	N142	0	30.5	250.5	
743	N141	5	30.5	250.5	
744	N140	0	30.5	193.5	
745	N139	5	30.5	193.5	
746	H20	13.04	25	25.75	
747	F8	5	24.125	58.5	
748	F7	0	24.125	58.5	
749	F6	5	24.125	61.5	
750	F5	0	24.125	61.5	
751	F4	5	24.125	190.5	
752	F3	0	24.125	190.5	
753	F2	5	24.125	193.5	
754	F1	0	24.125	193.5	
755	E08	21	25	196.5	
756	E06	11.71	25	189.75	
757	D102	-7.54	25	258.37	
758	D77	-15.083333	25	266.1	
759	D	5	25	193.5	
760	C113	-8.85	25	258.37	
761	C90	-2.583333	25	-4.48	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
762	C	0	25	193.5	
763	B	5	25	250.5	
764	A83	18	25	130.33	
765	A82	7.333333	25	130.36	
766	A81	18	25	121.66	
767	A80	2.5	25	133.5	
768	A78	-10.85	25	258.37	
769	A63	2.5	25	250.5	
770	A59	2.5	25	192	
771	A53	7.333333	25	121.69	
772	A52	2.5	25	118.5	
773	A49	2.5	25	60	
774	A46	-2.583333	25	-6.48	
775	A	0	25	250.5	
776	521	15.04	25	189.75	
777	470	21	25	193.18	
778	406	21	25	195.19	
779	403	13.04	25	189.75	
780	400	11.7	25	25.75	
781	389	21	25	32.5	
782	348	21	25	31.18	
783	212	-2.583333	25	-3.14	
784	113	-15.083333	25	264.78	
785	42	2.5	25	1.5	
786	21	-15.083333	25	262.77	
787	N856	14.583334	28.416666	128.583333	
788	N1158	14.583334	28.416666	123.416667	
789	N1159	10.749993	28.416666	128.583333	
790	N1160	10.749993	28.416666	123.416667	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	F2	Reaction	Reaction	Reaction			
2	F1	Reaction	Reaction	Reaction			
3	S2	Reaction	Reaction				
4	S1	Reaction	Reaction				
5	S8	Reaction	Reaction				
6	S7	Reaction	Reaction				
7	F8	Reaction	Reaction	Reaction			
8	F7	Reaction	Reaction	Reaction			
9	N630	Reaction	Reaction	Reaction			
10	N631	Reaction	Reaction	Reaction			
11	N632	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
12	N633	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
13	N636	Reaction	Reaction	Reaction			
14	N637	Reaction	Reaction	Reaction			
15	N638	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
16	N639	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
17	N698	Reaction	Reaction	Reaction			
18	N699	Reaction	Reaction	Reaction			
19	N700	Reaction	Reaction	Reaction			
20	N701	Reaction	Reaction	Reaction			
21	N714	Reaction	Reaction	Reaction			
22	N716	Reaction	Reaction	Reaction			
23	N717	Reaction	Reaction	Reaction			

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
24	N718	Reaction	Reaction	Reaction			
25	N715	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
26	N739	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
27	N748	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
28	N757	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
29	F6	Reaction	Reaction	Reaction			
30	F5	Reaction	Reaction	Reaction			
31	S6	Reaction	Reaction				
32	S5	Reaction	Reaction				
33	S4	Reaction	Reaction				
34	S3	Reaction	Reaction				
35	F4	Reaction	Reaction	Reaction			
36	F3	Reaction	Reaction	Reaction			
37	N855	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
38	N857	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
39	N1022	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
40	N1024	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
41	N1041	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
42	N1054	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
43	N1025	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
44	N854	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
45	N1023	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
46	N1044	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
47	N1147	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
48	N1145	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
49	N1152	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
50	N1155	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
51	N1154	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
52	N1153	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
53	N1157	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Drift Definitions

No Data to Print...

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M273	S1	N142		Bent Columns	Column	Wide Flange	A992	Typical
2	M313	S2	N141	180	Bent Columns	Column	Wide Flange	A992	Typical
3	M314	F2	N139	180	Bent Columns	Column	Wide Flange	A992	Typical
4	M336	F1	N140		Bent Columns	Column	Wide Flange	A992	Typical
5	M337	N388	N389	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
6	M340	D	B	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
7	M342	C	A	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
8	M343	N389	N394	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
9	M346	N395	N390	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
10	M347	N391	N396	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
11	M349	N380	N382		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
12	M350	N381	N383		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
13	M351	N398	N399	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
14	M352	N400	N401	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
15	M353	N402	N403		MC End	Beam	Wide Flange	A992	Lateral Tie
16	M354	N404	N405		MC End	Beam	Wide Flange	A992	Lateral Tie
17	M355	N406	N407	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
18	M356	N408	N409		Fire Beam	Beam	Wide Flange	A992	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
19	M357	N410	N411		Fire Beam	Beam	Wide Flange	A992	Typical
20	M358	N382	N383		Top MC	Beam	Wide Flange	A992	Lateral Tie
21	M359	N380	N381		Top MC	Beam	Wide Flange	A992	Lateral Tie
22	M360	N416	N417		Fire Beam	Beam	Wide Flange	A992	Typical
23	M361	N392	N416	180	Heavy Post	Column	Channel	A992	Lateral Tie
24	M362	N393	N417		Heavy Post	Column	Channel	A992	Lateral Tie
25	M363	N389	N409		Heavy Post	Column	Channel	A992	Lateral Tie
26	M364	N391	N411	90	Heavy Post	Column	Channel	A992	Lateral Tie
27	M365	N388	N408	180	Heavy Post	Column	Channel	A992	Lateral Tie
28	M366	N390	N410	180	Heavy Post	Column	Channel	A992	Lateral Tie
29	M367	N424	N428	180	Post	Column	W_Tee	A992	Typical
30	M368	N425	N429		Post	Column	W_Tee	A992	Typical
31	M369	N397	N427		Post	Column	W_Tee	A992	Typical
32	M370	N396	N426	180	Post	Column	W_Tee	A992	Typical
33	M371	N424	N425	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
34	M372	N396	N397	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
35	M373	N395	N394	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
36	M374	N389	N430	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
37	M375	N431	N430	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
38	M376	N431	N392	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
39	M377	N393	N424	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
40	M378	N431	N432		Post	Column	W_Tee	A992	Typical
41	M379	N395	N433		Post	Column	W_Tee	A992	Typical
42	M380	N430	N434	180	Post	Column	W_Tee	A992	Typical
43	M381	N394	N435	180	Post	Column	W_Tee	A992	Typical
44	M382	N408	N433		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
45	M383	N435	N411		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
46	M384	N410	N427		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
47	M385	N426	N381		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
48	M386	N408	N432		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
49	M387	N434	N417		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
50	M388	N416	N429		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
51	M389	N428	N383		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
52	M390	N428	N429		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
53	M392	N434	N432		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
54	M394	N435	N433		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
55	M396	N426	N427		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
56	M397	N430	N416		VB	VBrace	Single Angle	A572 Gr.50	Typical
57	M398	N431	N417	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
58	M399	N395	N411		VB	VBrace	Single Angle	A572 Gr.50	Typical
59	M400	N394	N410	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
60	M401	B	N425	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
61	M402	D	N397	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
62	M403	N424	N382		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
63	M404	N425	N383	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
64	M405	N396	N380	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
65	M406	N397	N381		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
66	M409	N392	N428		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
67	M410	N393	N429	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
68	M411	N390	N426	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
69	M412	N391	N427		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
70	M413	N388	N434		VB	VBrace	Single Angle	A572 Gr.50	Typical
71	M414	N389	N432	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
72	M415	N388	N435	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
73	M416	N389	N433		VB	VBrace	Single Angle	A572 Gr.50	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
74	M95	N390	N391		20" Suction	Beam	Wide Flange	A992	Typical
75	M96	N392	N393		20" Suction	Beam	Wide Flange	A992	Typical
76	M530	F7	N626		Bent Columns	Column	Wide Flange	A992	Typical
77	M531	F8	N625	180	Bent Columns	Column	Wide Flange	A992	Typical
78	M532	S8	N623	180	Bent Columns	Column	Wide Flange	A992	Typical
79	M533	S7	N624		Bent Columns	Column	Wide Flange	A992	Typical
80	M534	N502	N503	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
81	M535	N498	N500	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
82	M536	N499	N501	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
83	M537	N503	N508	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
84	M538	N509	N504	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
85	M539	N505	N510	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
86	M540	N494	N496		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
87	M541	N495	N497		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
88	M542	N512	N513	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
89	M543	N514	N515	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
90	M544	N516	N517		MC End	Beam	Wide Flange	A992	Lateral Tie
91	M545	N518	N519		MC End	Beam	Wide Flange	A992	Lateral Tie
92	M546	N520	N521	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
93	M547	N522	N523		Fire Beam	Beam	Wide Flange	A992	Typical
94	M548	N524	N525		Fire Beam	Beam	Wide Flange	A992	Typical
95	M549	N496	N497		Top MC	Beam	Wide Flange	A992	Lateral Tie
96	M550	N494	N495		Top MC	Beam	Wide Flange	A992	Lateral Tie
97	M551	N526	N527		Fire Beam	Beam	Wide Flange	A992	Typical
98	M552	N506	N526	180	Heavy Post	Column	Channel	A992	Lateral Tie
99	M553	N507	N527		Heavy Post	Column	Channel	A992	Lateral Tie
100	M554	N503	N523		Heavy Post	Column	Channel	A992	Lateral Tie
101	M555	N505	N525	90	Heavy Post	Column	Channel	A992	Lateral Tie
102	M556	N502	N522	180	Heavy Post	Column	Channel	A992	Lateral Tie
103	M557	N504	N524	180	Heavy Post	Column	Channel	A992	Lateral Tie
104	M558	N528	N532	180	Post	Column	W_Tee	A992	Typical
105	M559	N529	N533		Post	Column	W_Tee	A992	Typical
106	M560	N511	N531		Post	Column	W_Tee	A992	Typical
107	M561	N510	N530	180	Post	Column	W_Tee	A992	Typical
108	M562	N528	N529	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
109	M563	N510	N511	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
110	M564	N509	N508	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
111	M565	N503	N534	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
112	M566	N535	N534	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
113	M567	N535	N506	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
114	M568	N507	N528	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
115	M569	N535	N536		Post	Column	W_Tee	A992	Typical
116	M570	N509	N537		Post	Column	W_Tee	A992	Typical
117	M571	N534	N538	180	Post	Column	W_Tee	A992	Typical
118	M572	N508	N539	180	Post	Column	W_Tee	A992	Typical
119	M573	N522	N537		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
120	M574	N539	N525		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
121	M575	N524	N531		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
122	M576	N530	N495		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
123	M577	N522	N536		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
124	M578	N538	N527		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
125	M579	N526	N533		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
126	M580	N532	N497		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
127	M581	N532	N533		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
128	M582	N538	N536		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
129	M583	N539	N537		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
130	M584	N530	N531		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
131	M585	N534	N526		VB	VBrace	Single Angle	A572 Gr.50	Typical
132	M586	N535	N527	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
133	M587	N509	N525		VB	VBrace	Single Angle	A572 Gr.50	Typical
134	M588	N508	N524	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
135	M589	N500	N529	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
136	M590	N498	N511	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
137	M591	N528	N496		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
138	M592	N529	N497	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
139	M593	N510	N494	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
140	M594	N511	N495		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
141	M595	N506	N532		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
142	M596	N507	N533	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
143	M597	N504	N530	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
144	M598	N505	N531		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
145	M599	N502	N538		VB	VBrace	Single Angle	A572 Gr.50	Typical
146	M600	N503	N536	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
147	M601	N502	N539	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
148	M602	N503	N537		VB	VBrace	Single Angle	A572 Gr.50	Typical
149	M618	N504	N505		20" Suction	Beam	Wide Flange	A992	Typical
150	M619	N506	N507		20" Suction	Beam	Wide Flange	A992	Typical
151	M620	N631	N649		W8x24	Column	Wide Flange	A992	Lateral Tie
152	M621	N630	N648		W8x24	Column	Wide Flange	A992	Lateral Tie
153	M622	N639	N643		W8x24	Column	Wide Flange	A992	Lateral Tie
154	M623	N633	N641		W8x24	Column	Wide Flange	A992	Lateral Tie
155	M624	N632	N640		W8x24	Column	Wide Flange	A992	Lateral Tie
156	M625	N638	N642		W8x24	Column	Wide Flange	A992	Lateral Tie
157	M628	N637	N647	90	W8X24	Column	Wide Flange	A992	Lateral Tie
158	M629	N636	N646	90	W8X24	Column	Wide Flange	A992	Lateral Tie
159	M631	N651	N653		W8X24	Beam	Wide Flange	A992	Lateral Tie
160	M632	N657	N655		W8x18	Beam	Wide Flange	A992	Lateral Tie
161	M633	N656	N654		W8x18	Beam	Wide Flange	A992	Lateral Tie
162	M638	N667	N668		VB	VBrace	Single Angle	A572 Gr.50	Typical
163	M639	N669	N666		VB	VBrace	Single Angle	A572 Gr.50	Typical
164	M640	N671	N647		W8x18	Beam	Wide Flange	A992	Lateral Tie
165	M642	N670	N646		W8x18	Beam	Wide Flange	A992	Lateral Tie
166	M644	N677	N1159		VB	VBrace	Single Angle	A572 Gr.50	Typical
167	M645	N856	N675		VB	VBrace	Single Angle	A572 Gr.50	Typical
168	M646	N676	N1160		VB	VBrace	Single Angle	A572 Gr.50	Typical
169	M647	N1158	N674		VB	VBrace	Single Angle	A572 Gr.50	Typical
170	M648	N659	N658		W8x18	Beam	Wide Flange	A992	Lateral Tie
171	M649	N661	N681		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
172	M650	N659	N679		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
173	M651	N658	N678		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
174	M652	N660	N680		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
175	M653	N682	N683		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
176	M654	N684	N685		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
177	M655	N686	N687		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
178	M656	N688	N689		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
179	M657	N690	N691		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
180	M658	N692	N693		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
181	M659	N694	N695		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
182	M660	N696	N697		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
183	M407	N701	N705		W8x24	Column	Wide Flange	A992	Lateral Tie

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
184	M408	N699	N703		W8x24	Column	Wide Flange	A992	Lateral Tie
185	M417	N698	N702		W8x24	Column	Wide Flange	A992	Lateral Tie
186	M418	N700	N704		W8x24	Column	Wide Flange	A992	Lateral Tie
187	M419	N709	N708		W8x18	Beam	Wide Flange	A992	Lateral Tie
188	M420	N708	N706		W8x18	Beam	Wide Flange	A992	Lateral Tie
189	M421	N706	N707		W8x18	Beam	Wide Flange	A992	Lateral Tie
190	M422	N707	N709		W8x18	Beam	Wide Flange	A992	Lateral Tie
191	M423	N709	N712		VB	VBrace	Single Angle	A572 Gr.50	Typical
192	M424	N708	N713		VB	VBrace	Single Angle	A572 Gr.50	Typical
193	M425	N707	N710		VB	VBrace	Single Angle	A572 Gr.50	Typical
194	M426	N706	N711		VB	VBrace	Single Angle	A572 Gr.50	Typical
195	M427	N718	N722		W8x24	Column	Wide Flange	A992	Lateral Tie
196	M428	N716	N720		W8x24	Column	Wide Flange	A992	Lateral Tie
197	M429	N714	N719		W8x24	Column	Wide Flange	A992	Lateral Tie
198	M430	N717	N721		W8x24	Column	Wide Flange	A992	Lateral Tie
199	M431	N726	N725		W8x18	Beam	Wide Flange	A992	Lateral Tie
200	M432	N725	N723		W8x18	Beam	Wide Flange	A992	Lateral Tie
201	M433	N723	N724		W8x18	Beam	Wide Flange	A992	Lateral Tie
202	M434	N724	N726		W8x18	Beam	Wide Flange	A992	Lateral Tie
203	M439	N715	N731		W8x24	Column	Wide Flange	A992	Lateral Tie
204	M440	N732	N734		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
205	M441	N735	N736		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
206	M442	N737	N738		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
207	M443	N739	N740		W8x24	Column	Wide Flange	A992	Lateral Tie
208	M444	N741	N743		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
209	M445	N744	N745		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
210	M446	N746	N747		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
211	M447	N732	N742		VB	VBrace	Single Angle	A572 Gr.50	Typical
212	M448	N741	N733		VB	VBrace	Single Angle	A572 Gr.50	Typical
213	M449	N748	N749		W8x24	Column	Wide Flange	A992	Lateral Tie
214	M450	N750	N752		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
215	M451	N753	N754		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
216	M452	N755	N756		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
217	M453	N757	N758		W8x24	Column	Wide Flange	A992	Lateral Tie
218	M454	N759	N761		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
219	M455	N762	N763		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
220	M456	N764	N765		CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
221	M457	N750	N760		VB	VBrace	Single Angle	A572 Gr.50	Typical
222	M458	N759	N751		VB	VBrace	Single Angle	A572 Gr.50	Typical
223	M463	N910	N792	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
224	M464	N783	N898	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
225	M465	N905	N897	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
226	M466	N894	N909	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
227	M467	N799	N916	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
228	M472	N769	N825	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
229	M486	N877	N878	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
230	M487	N893	N810	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
231	M488	N876	N770	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
232	M489	N890	N891	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
233	M490	N867	N808	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
234	M491	N774	N871	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
235	M492	N872	N820	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
236	M493	N868	N790	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
237	M494	N777	N827	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
238	M495	N875	N823	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
239	M496	N869	N880	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
240	M499	N918	N919	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
241	M500	N784	N900	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
242	M501	N902	N903	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
243	M502	N907	N908	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
244	M503	N912	N913	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
245	M504	N795	N914	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
246	M505	N920	N802	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
247	M391	S5	N863		Bent Columns	Column	Wide Flange	A992	Typical
248	M393	S6	N862	180	Bent Columns	Column	Wide Flange	A992	Typical
249	M395	F6	N860	180	Bent Columns	Column	Wide Flange	A992	Typical
250	M459	F5	N861		Bent Columns	Column	Wide Flange	A992	Typical
251	M461	N580	N581	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
252	M462	N576	N578	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
253	M470	N577	N579	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
254	M474	N581	N586	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
255	M475	N587	N582	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
256	M476	N583	N588	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
257	M477	N572	N574		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
258	M478	N573	N575		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
259	M479	N590	N591	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
260	M480	N592	N593	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
261	M481	N594	N595		MC End	Beam	Wide Flange	A992	Lateral Tie
262	M482	N596	N597		MC End	Beam	Wide Flange	A992	Lateral Tie
263	M483	N598	N599	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
264	M484	N600	N601		Fire Beam	Beam	Wide Flange	A992	Typical
265	M519	N602	N603		Fire Beam	Beam	Wide Flange	A992	Typical
266	M520	N574	N575		Top MC	Beam	Wide Flange	A992	Lateral Tie
267	M521	N572	N573		Top MC	Beam	Wide Flange	A992	Lateral Tie
268	M522	N604	N605		Fire Beam	Beam	Wide Flange	A992	Typical
269	M523	N584	N604	180	Heavy Post	Column	Channel	A992	Lateral Tie
270	M524	N585	N605		Heavy Post	Column	Channel	A992	Lateral Tie
271	M525	N581	N601		Heavy Post	Column	Channel	A992	Lateral Tie
272	M526	N583	N603	90	Heavy Post	Column	Channel	A992	Lateral Tie
273	M527	N580	N600	180	Heavy Post	Column	Channel	A992	Lateral Tie
274	M528	N582	N602	180	Heavy Post	Column	Channel	A992	Lateral Tie
275	M529	N606	N610	180	Post	Column	W_Tee	A992	Typical
276	M603	N607	N611		Post	Column	W_Tee	A992	Typical
277	M604	N589	N609		Post	Column	W_Tee	A992	Typical
278	M605	N588	N608	180	Post	Column	W_Tee	A992	Typical
279	M606	N606	N607	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
280	M607	N588	N589	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
281	M608	N587	N586	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
282	M609	N581	N612	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
283	M610	N613	N612	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
284	M611	N613	N584	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
285	M612	N585	N606	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
286	M613	N613	N614		Post	Column	W_Tee	A992	Typical
287	M614	N587	N615		Post	Column	W_Tee	A992	Typical
288	M615	N612	N616	180	Post	Column	W_Tee	A992	Typical
289	M616	N586	N766	180	Post	Column	W_Tee	A992	Typical
290	M617	N600	N615		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
291	M661	N766	N603		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
292	M662	N602	N609		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
293	M663	N608	N573		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
294	M664	N600	N614		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
295	M665	N616	N605		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
296	M666	N604	N611		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
297	M667	N610	N575		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
298	M668	N610	N611		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
299	M669	N616	N614		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
300	M670	N766	N615		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
301	M671	N608	N609		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
302	M672	N612	N604		VB	VBrace	Single Angle	A572 Gr.50	Typical
303	M673	N613	N605	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
304	M674	N587	N603		VB	VBrace	Single Angle	A572 Gr.50	Typical
305	M675	N586	N602	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
306	M676	N578	N607	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
307	M677	N576	N589	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
308	M678	N606	N574		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
309	M679	N607	N575	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
310	M680	N588	N572	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
311	M681	N589	N573		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
312	M682	N584	N610		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
313	M683	N585	N611	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
314	M684	N582	N608	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
315	M685	N583	N609		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
316	M686	N580	N616		VB	VBrace	Single Angle	A572 Gr.50	Typical
317	M687	N581	N614	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
318	M688	N580	N766	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
319	M689	N581	N615		VB	VBrace	Single Angle	A572 Gr.50	Typical
320	M690	N582	N583		20" Suction	Beam	Wide Flange	A992	Typical
321	M691	N584	N585		20" Suction	Beam	Wide Flange	A992	Typical
322	M692	N866	N959	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
323	M693	N950	N977	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
324	M694	N972	N973	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
325	M695	N988	N954	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
326	M696	N971	N946	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
327	M697	N985	N986	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
328	M701	N963	N951	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
329	M702	N949	N960	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
330	M703	N970	N958	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
331	M704	N964	N975	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
332	M705	N965	N979	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
333	M706	N982	N983	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
334	M460	F3	N1031		Bent Columns	Column	Wide Flange	A992	Typical
335	M471	F4	N1030	180	Bent Columns	Column	Wide Flange	A992	Typical
336	M473	S4	N1028	180	Bent Columns	Column	Wide Flange	A992	Typical
337	M507	S3	N1029		Bent Columns	Column	Wide Flange	A992	Typical
338	M508	N812	N814	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
339	M509	N794	N800	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
340	M510	N798	N809	180	Bottom Chord	Beam	Double Angle (3/8 Gap)	A572 Gr.50	Typical
341	M511	N814	N828	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
342	M512	N829	N818	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
343	M513	N819	N830	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
344	M514	N768	N779		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
345	M515	N776	N781		Top Chord	Beam	Double Angle (No Gap)	A572 Gr.50	Typical
346	M516	N834	N895	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
347	M517	N896	N904	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
348	M518	N917	N924		MC End	Beam	Wide Flange	A992	Lateral Tie

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
349	M707	N925	N926		MC End	Beam	Wide Flange	A992	Lateral Tie
350	M708	N927	N928	90	Fueling	Beam	Single Angle	A572 Gr.50	Typical
351	M709	N929	N930		Fire Beam	Beam	Wide Flange	A992	Typical
352	M710	N931	N932		Fire Beam	Beam	Wide Flange	A992	Typical
353	M711	N779	N781		Top MC	Beam	Wide Flange	A992	Lateral Tie
354	M712	N768	N776		Top MC	Beam	Wide Flange	A992	Lateral Tie
355	M713	N933	N934		Fire Beam	Beam	Wide Flange	A992	Typical
356	M714	N822	N933	180	Heavy Post	Column	Channel	A992	Lateral Tie
357	M715	N824	N934		Heavy Post	Column	Channel	A992	Lateral Tie
358	M716	N814	N930		Heavy Post	Column	Channel	A992	Lateral Tie
359	M717	N819	N932	90	Heavy Post	Column	Channel	A992	Lateral Tie
360	M718	N812	N929	180	Heavy Post	Column	Channel	A992	Lateral Tie
361	M719	N818	N931	180	Heavy Post	Column	Channel	A992	Lateral Tie
362	M720	N935	N939	180	Post	Column	W_Tee	A992	Typical
363	M721	N936	N940		Post	Column	W_Tee	A992	Typical
364	M722	N832	N938		Post	Column	W_Tee	A992	Typical
365	M723	N830	N937	180	Post	Column	W_Tee	A992	Typical
366	M724	N935	N936	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
367	M725	N830	N832	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
368	M726	N829	N828	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
369	M727	N814	N941	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
370	M728	N942	N941	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
371	M729	N942	N822	90	Bottom HB	HBrace	Single Angle	A572 Gr.50	Typical
372	M730	N824	N935	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
373	M731	N942	N943		Post	Column	W_Tee	A992	Typical
374	M732	N829	N944		Post	Column	W_Tee	A992	Typical
375	M733	N941	N945	180	Post	Column	W_Tee	A992	Typical
376	M734	N828	N989	180	Post	Column	W_Tee	A992	Typical
377	M735	N929	N944		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
378	M736	N989	N932		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
379	M737	N931	N938		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
380	M738	N937	N776		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
381	M739	N929	N943		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
382	M740	N945	N934		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
383	M741	N933	N940		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
384	M742	N939	N781		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
385	M743	N939	N940		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
386	M744	N945	N943		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
387	M745	N989	N944		Top HB	HBrace	Single Angle	A572 Gr.50	Lateral Tie
388	M746	N937	N938		Top HB Heavy	HBrace	Single Angle	A572 Gr.50	Lateral Tie
389	M747	N941	N933		VB	VBrace	Single Angle	A572 Gr.50	Typical
390	M748	N942	N934	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
391	M749	N829	N932		VB	VBrace	Single Angle	A572 Gr.50	Typical
392	M750	N828	N931	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
393	M751	N800	N936	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
394	M752	N794	N832	90	Thermal Bracing	HBrace	Single Angle	A572 Gr.50	Lateral Tie
395	M753	N935	N779		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
396	M754	N936	N781	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
397	M755	N830	N768	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
398	M756	N832	N776		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
399	M757	N822	N939		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
400	M758	N824	N940	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
401	M759	N818	N937	180	Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
402	M760	N819	N938		Heavy VB	VBrace	Single Angle	A572 Gr.50	Lateral Tie
403	M761	N812	N945		VB	VBrace	Single Angle	A572 Gr.50	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
404	M762	N814	N943	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
405	M763	N812	N989	180	VB	VBrace	Single Angle	A572 Gr.50	Typical
406	M764	N814	N944		VB	VBrace	Single Angle	A572 Gr.50	Typical
407	M765	N818	N819		20" Suction	Beam	Wide Flange	A992	Typical
408	M766	N822	N824		20" Suction	Beam	Wide Flange	A992	Typical
409	M768	N1038	N1065	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
410	M769	N1060	N1061	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
411	M771	N1059	N1034	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
412	M776	N1051	N1039	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
413	M777	N1037	N1048	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
414	M778	N1058	N1046	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
415	M779	N1052	N1063	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
416	M780	N1053	N1067	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
417	M781	N1070	N1071	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
418	M782	N730	N724		VB	VBrace	Single Angle	A572 Gr.50	Typical
419	M783	N728	N726		VB	VBrace	Single Angle	A572 Gr.50	Typical
420	M784	N729	N723		VB	VBrace	Single Angle	A572 Gr.50	Typical
421	M785	N727	N725		VB	VBrace	Single Angle	A572 Gr.50	Typical
422	M485	N1115	N884	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
423	M497	N1116	N882	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
424	M498	N1117	N1113	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
425	M786	N1124	N1119	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
426	M787	N1125	N1122	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
427	M788	N1126	N1121	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
428	M698	N1069	N953	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
429	M699	N1074	N966	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
430	M700	N1075	N1047	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
431	M468	N1133	N1131	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
432	M469	N1134	N1132	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
433	M506	N1135	N922	90	CT Support	Beam	Single Angle	A572 Gr.50	Lateral Tie
434	M767	N855	42		LINESTOPS	Column	Rectangular	Conc 6000NW	Typical
435	M770	N857	A49		LINESTOPS	Column	Rectangular	Conc 6000NW	Typical
436	M772	N1022	A52		LINESTOPS	Column	Rectangular	Conc 6000NW	Typical
437	M773	N1024	A80		LINESTOPS	Column	Rectangular	Conc 6000NW	Typical
438	M774	N1041	A59		LINESTOPS	Column	Rectangular	Conc 6000NW	Typical
439	M775	N1054	A63		LINESTOPS	Column	Rectangular	Conc 6000NW	Typical
440	M636	N665	N671		W8x18	Beam	Wide Flange	A992	Lateral Tie
441	M637	N670	N1143		W8x18	Beam	Wide Flange	A992	Lateral Tie
442	M789	N671	N670		W8x10	Beam	Wide Flange	A992	Lateral Tie
443	M626	N854	A82		PEDESTAL	Column	Rectangular	Conc 6000NW	Typical
444	M627	N1023	A83		PEDESTAL	Column	Rectangular	Conc 6000NW	Typical
445	M630	N1044	A53		PEDESTAL	Column	Rectangular	Conc 6000NW	Typical
446	M641	N1025	A81		PEDESTAL	Column	Rectangular	Conc 6000NW	Typical
447	M643	400	N1144		RIGID	None	None	RIGID_1	Typical
448	M790	O19	389		RIGID	None	None	RIGID_1	Typical
449	M791	E06	521		RIGID	None	None	RIGID_1	Typical
450	M792	E08	470		RIGID	None	None	RIGID_1	Typical
451	M793	D102	A78		RIGID	None	None	RIGID_1	Typical
452	M794	21	D77		RIGID	None	None	RIGID_1	Typical
453	M795	N1145	N1142	90	PS-10	Column	Rectangular	Conc 6000NW	Typical
454	M796	N1147	N1146		PS-10	Column	Rectangular	Conc 6000NW	Typical
455	M797	N1153	N1149		PS-10	Column	Rectangular	Conc 6000NW	Typical
456	M798	N1154	N1150	90	PS-10	Column	Rectangular	Conc 6000NW	Typical
457	M799	N1155	N1151	90	PS-10	Column	Rectangular	Conc 6000NW	Typical
458	M800	N1152	N1148		PS-10	Column	Rectangular	Conc 6000NW	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
459	M801	212	A46		RIGID	None	None	RIGID_1	Typical
460	M802	N1157	N1156	90	PS-10	Column	Rectangular	Conc 6000NW	Typical
461	M803	N659	N670		VB	VBrace	Single Angle	A572 Gr.50	Typical
462	M804	N671	N658		VB	VBrace	Single Angle	A572 Gr.50	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
1	M273						Yes	** NA **		None
2	M313						Yes	** NA **		None
3	M314						Yes	** NA **		None
4	M336						Yes	** NA **		None
5	M337	BenPIN	BenPIN				Yes	** NA **	-y	None
6	M340	BenPIN	BenPIN				Yes	Default	-y	None
7	M342	BenPIN	BenPIN				Yes	Default	-y	None
8	M343	BenPIN	BenPIN				Yes	** NA **	-y	None
9	M346	BenPIN	BenPIN				Yes	** NA **	-y	None
10	M347	BenPIN	BenPIN				Yes	** NA **	-y	None
11	M349	BenPIN	BenPIN				Yes	Default	-y	None
12	M350	BenPIN	BenPIN				Yes	Default	-y	None
13	M351	BenPIN	BenPIN	3	3		Yes	Default	+z	None
14	M352	BenPIN	BenPIN	3	3		Yes	Default	+z	None
15	M353			M313	M273		Yes	Default	-y	None
16	M354			M314	M336		Yes	Default	-y	None
17	M355	BenPIN	BenPIN	3	3		Yes	Default	+z	None
18	M356	BenPIN	BenPIN				Yes	Default	+y	None
19	M357	BenPIN	BenPIN				Yes	Default	+y	None
20	M358			M313	M273		Yes	Default	+y	None
21	M359			M314	M336		Yes	Default	+y	None
22	M360	BenPIN	BenPIN				Yes	Default	+y	None
23	M361	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
24	M362	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
25	M363	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
26	M364	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
27	M365	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
28	M366	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
29	M367	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
30	M368	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
31	M369	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
32	M370	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
33	M371	BenPIN	BenPIN				Yes	** NA **	-y	None
34	M372	BenPIN	BenPIN				Yes	** NA **	-y	None
35	M373	BenPIN	BenPIN				Yes	** NA **	-y	None
36	M374	BenPIN	BenPIN				Yes	** NA **	-y	None
37	M375	BenPIN	BenPIN				Yes	** NA **	-y	None
38	M376	BenPIN	BenPIN				Yes	** NA **	-y	None
39	M377	BenPIN	BenPIN				Yes	** NA **	-y	None
40	M378	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
41	M379	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
42	M380	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
43	M381	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
44	M382	BenPIN	BenPIN				Yes	** NA **	+y	None
45	M383	BenPIN	BenPIN				Yes	** NA **	+y	None
46	M384	BenPIN	BenPIN				Yes	** NA **	+y	None
47	M385	BenPIN	BenPIN				Yes	** NA **	+y	None
48	M386	BenPIN	BenPIN				Yes	** NA **	+y	None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
49	M387	BenPIN	BenPIN				Yes	** NA **	+y	None
50	M388	BenPIN	BenPIN				Yes	** NA **	+y	None
51	M389	BenPIN	BenPIN				Yes	** NA **	+y	None
52	M390	BenPIN	BenPIN				Yes	** NA **	+y	None
53	M392	BenPIN	BenPIN				Yes	** NA **	+y	None
54	M394	BenPIN	BenPIN				Yes	** NA **	+y	None
55	M396	BenPIN	BenPIN				Yes	** NA **	+y	None
56	M397	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
57	M398	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
58	M399	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
59	M400	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **		None
60	M401	BenPIN	BenPIN				Yes	** NA **	-y	None
61	M402	BenPIN	BenPIN				Yes	** NA **	-y	None
62	M403	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
63	M404	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
64	M405	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
65	M406	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
66	M409	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
67	M410	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
68	M411	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
69	M412	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
70	M413	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
71	M414	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
72	M415	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
73	M416	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
74	M95	BenPIN	BenPIN				Yes	Default	-y	None
75	M96	BenPIN	BenPIN				Yes	Default	-y	None
76	M530						Yes	** NA **		None
77	M531						Yes	** NA **		None
78	M532						Yes	** NA **		None
79	M533						Yes	** NA **		None
80	M534	BenPIN	BenPIN				Yes	** NA **	-y	None
81	M535	BenPIN	BenPIN				Yes	Default	-y	None
82	M536	BenPIN	BenPIN				Yes	Default	-y	None
83	M537	BenPIN	BenPIN				Yes	** NA **	-y	None
84	M538	BenPIN	BenPIN				Yes	** NA **	-y	None
85	M539	BenPIN	BenPIN				Yes	** NA **	-y	None
86	M540	BenPIN	BenPIN				Yes	Default	-y	None
87	M541	BenPIN	BenPIN				Yes	Default	-y	None
88	M542	BenPIN	BenPIN	3	3		Yes	Default	+z	None
89	M543	BenPIN	BenPIN	3	3		Yes	Default	+z	None
90	M544			M313	M273		Yes	Default	-y	None
91	M545			M314	M336		Yes	Default	-y	None
92	M546	BenPIN	BenPIN	3	3		Yes	Default	+z	None
93	M547	BenPIN	BenPIN				Yes	Default	+y	None
94	M548	BenPIN	BenPIN				Yes	Default	+y	None
95	M549			M313	M273		Yes	Default	+y	None
96	M550			M314	M336		Yes	Default	+y	None
97	M551	BenPIN	BenPIN				Yes	Default	+y	None
98	M552	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
99	M553	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
100	M554	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
101	M555	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
102	M556	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
103	M557	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
104	M558	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
105	M559	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
106	M560	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
107	M561	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
108	M562	BenPIN	BenPIN				Yes	** NA **	-y	None
109	M563	BenPIN	BenPIN				Yes	** NA **	-y	None
110	M564	BenPIN	BenPIN				Yes	** NA **	-y	None
111	M565	BenPIN	BenPIN				Yes	** NA **	-y	None
112	M566	BenPIN	BenPIN				Yes	** NA **	-y	None
113	M567	BenPIN	BenPIN				Yes	** NA **	-y	None
114	M568	BenPIN	BenPIN				Yes	** NA **	-y	None
115	M569	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
116	M570	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
117	M571	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
118	M572	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
119	M573	BenPIN	BenPIN				Yes	** NA **	+y	None
120	M574	BenPIN	BenPIN				Yes	** NA **	+y	None
121	M575	BenPIN	BenPIN				Yes	** NA **	+y	None
122	M576	BenPIN	BenPIN				Yes	** NA **	+y	None
123	M577	BenPIN	BenPIN				Yes	** NA **	+y	None
124	M578	BenPIN	BenPIN				Yes	** NA **	+y	None
125	M579	BenPIN	BenPIN				Yes	** NA **	+y	None
126	M580	BenPIN	BenPIN				Yes	** NA **	+y	None
127	M581	BenPIN	BenPIN				Yes	** NA **	+y	None
128	M582	BenPIN	BenPIN				Yes	** NA **	+y	None
129	M583	BenPIN	BenPIN				Yes	** NA **	+y	None
130	M584	BenPIN	BenPIN				Yes	** NA **	+y	None
131	M585	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
132	M586	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
133	M587	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
134	M588	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **		None
135	M589	BenPIN	BenPIN				Yes	** NA **	-y	None
136	M590	BenPIN	BenPIN				Yes	** NA **	-y	None
137	M591	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
138	M592	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
139	M593	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
140	M594	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
141	M595	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
142	M596	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
143	M597	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
144	M598	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
145	M599	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
146	M600	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
147	M601	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
148	M602	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
149	M618	BenPIN	BenPIN				Yes	Default	-y	None
150	M619	BenPIN	BenPIN				Yes	Default	-y	None
151	M620						Yes	** NA **		None
152	M621						Yes	** NA **		None
153	M622						Yes	** NA **		None
154	M623						Yes	** NA **		None
155	M624						Yes	** NA **		None
156	M625						Yes	** NA **		None
157	M628						Yes	** NA **		None
158	M629						Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
159	M631						Yes	Default		None
160	M632						Yes	Default		None
161	M633						Yes	Default		None
162	M638	BenPIN	BenPIN				Yes	** NA **		None
163	M639	BenPIN	BenPIN				Yes	** NA **		None
164	M640	BenPIN	BenPIN				Yes	Default		None
165	M642	BenPIN	BenPIN				Yes	Default		None
166	M644	BenPIN	BenPIN				Yes	** NA **		None
167	M645	BenPIN	BenPIN				Yes	** NA **		None
168	M646	BenPIN	BenPIN				Yes	** NA **		None
169	M647	BenPIN	BenPIN				Yes	** NA **		None
170	M648	BenPIN	BenPIN				Yes	Default		None
171	M649						Yes	Default		None
172	M650						Yes	Default		None
173	M651						Yes	Default		None
174	M652						Yes	Default		None
175	M653						Yes	Default		None
176	M654						Yes	Default		None
177	M655						Yes	Default		None
178	M656						Yes	Default		None
179	M657						Yes	Default		None
180	M658						Yes	Default		None
181	M659						Yes	Default		None
182	M660						Yes	Default		None
183	M407						Yes	** NA **		None
184	M408						Yes	** NA **		None
185	M417						Yes	** NA **		None
186	M418						Yes	** NA **		None
187	M419	BenPIN	BenPIN				Yes	Default		None
188	M420						Yes	Default		None
189	M421	BenPIN	BenPIN				Yes	Default		None
190	M422						Yes	Default		None
191	M423	BenPIN	BenPIN				Yes	** NA **		None
192	M424	BenPIN	BenPIN				Yes	** NA **		None
193	M425	BenPIN	BenPIN				Yes	** NA **		None
194	M426	BenPIN	BenPIN				Yes	** NA **		None
195	M427						Yes	** NA **		None
196	M428						Yes	** NA **		None
197	M429						Yes	** NA **		None
198	M430						Yes	** NA **		None
199	M431						Yes	Default		None
200	M432	BenPIN	BenPIN				Yes	Default		None
201	M433						Yes	Default		None
202	M434	BenPIN	BenPIN				Yes	Default		None
203	M439						Yes	** NA **		None
204	M440						Yes	Default		None
205	M441						Yes	Default		None
206	M442						Yes	Default		None
207	M443						Yes	** NA **		None
208	M444						Yes	Default		None
209	M445						Yes	Default		None
210	M446						Yes	Default		None
211	M447	BenPIN	BenPIN				Yes	** NA **		None
212	M448	BenPIN	BenPIN				Yes	** NA **		None
213	M449						Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
214	M450						Yes	Default		None
215	M451						Yes	Default		None
216	M452						Yes	Default		None
217	M453						Yes	** NA **		None
218	M454						Yes	Default		None
219	M455						Yes	Default		None
220	M456						Yes	Default		None
221	M457	BenPIN	BenPIN				Yes	** NA **		None
222	M458	BenPIN	BenPIN				Yes	** NA **		None
223	M463						Yes	Default		None
224	M464						Yes	Default		None
225	M465						Yes	Default		None
226	M466						Yes	Default		None
227	M467						Yes	Default		None
228	M472						Yes	Default		None
229	M486						Yes	Default		None
230	M487						Yes	Default		None
231	M488						Yes	Default		None
232	M489						Yes	Default		None
233	M490						Yes	Default		None
234	M491						Yes	Default		None
235	M492						Yes	Default		None
236	M493						Yes	Default		None
237	M494						Yes	Default		None
238	M495						Yes	Default		None
239	M496						Yes	Default		None
240	M499						Yes	Default		None
241	M500						Yes	Default		None
242	M501						Yes	Default		None
243	M502						Yes	Default		None
244	M503						Yes	Default		None
245	M504						Yes	Default		None
246	M505						Yes	Default		None
247	M391						Yes	** NA **		None
248	M393						Yes	** NA **		None
249	M395						Yes	** NA **		None
250	M459						Yes	** NA **		None
251	M461	BenPIN	BenPIN				Yes	** NA **	-y	None
252	M462	BenPIN	BenPIN				Yes	Default	-y	None
253	M470	BenPIN	BenPIN				Yes	Default	-y	None
254	M474	BenPIN	BenPIN				Yes	** NA **	-y	None
255	M475	BenPIN	BenPIN				Yes	** NA **	-y	None
256	M476	BenPIN	BenPIN				Yes	** NA **	-y	None
257	M477	BenPIN	BenPIN				Yes	Default	-y	None
258	M478	BenPIN	BenPIN				Yes	Default	-y	None
259	M479	BenPIN	BenPIN	3	3		Yes	Default	+z	None
260	M480	BenPIN	BenPIN	3	3		Yes	Default	+z	None
261	M481			M313	M273		Yes	Default	-y	None
262	M482			M314	M336		Yes	Default	-y	None
263	M483	BenPIN	BenPIN	3	3		Yes	Default	+z	None
264	M484	BenPIN	BenPIN				Yes	Default	+y	None
265	M519	BenPIN	BenPIN				Yes	Default	+y	None
266	M520			M313	M273		Yes	Default	+y	None
267	M521			M314	M336		Yes	Default	+y	None
268	M522	BenPIN	BenPIN				Yes	Default	+y	None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
269	M523	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
270	M524	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
271	M525	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
272	M526	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
273	M527	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
274	M528	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
275	M529	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
276	M603	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
277	M604	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
278	M605	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
279	M606	BenPIN	BenPIN				Yes	** NA **	-y	None
280	M607	BenPIN	BenPIN				Yes	** NA **	-y	None
281	M608	BenPIN	BenPIN				Yes	** NA **	-y	None
282	M609	BenPIN	BenPIN				Yes	** NA **	-y	None
283	M610	BenPIN	BenPIN				Yes	** NA **	-y	None
284	M611	BenPIN	BenPIN				Yes	** NA **	-y	None
285	M612	BenPIN	BenPIN				Yes	** NA **	-y	None
286	M613	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
287	M614	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
288	M615	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
289	M616	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
290	M617	BenPIN	BenPIN				Yes	** NA **	+y	None
291	M661	BenPIN	BenPIN				Yes	** NA **	+y	None
292	M662	BenPIN	BenPIN				Yes	** NA **	+y	None
293	M663	BenPIN	BenPIN				Yes	** NA **	+y	None
294	M664	BenPIN	BenPIN				Yes	** NA **	+y	None
295	M665	BenPIN	BenPIN				Yes	** NA **	+y	None
296	M666	BenPIN	BenPIN				Yes	** NA **	+y	None
297	M667	BenPIN	BenPIN				Yes	** NA **	+y	None
298	M668	BenPIN	BenPIN				Yes	** NA **	+y	None
299	M669	BenPIN	BenPIN				Yes	** NA **	+y	None
300	M670	BenPIN	BenPIN				Yes	** NA **	+y	None
301	M671	BenPIN	BenPIN				Yes	** NA **	+y	None
302	M672	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
303	M673	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
304	M674	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
305	M675	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **		None
306	M676	BenPIN	BenPIN				Yes	** NA **	-y	None
307	M677	BenPIN	BenPIN				Yes	** NA **	-y	None
308	M678	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
309	M679	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
310	M680	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
311	M681	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
312	M682	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
313	M683	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
314	M684	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
315	M685	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
316	M686	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
317	M687	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
318	M688	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
319	M689	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
320	M690	BenPIN	BenPIN				Yes	Default	-y	None
321	M691	BenPIN	BenPIN				Yes	Default	-y	None
322	M692						Yes	Default		None
323	M693						Yes	Default		None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
324	M694						Yes	Default		None
325	M695						Yes	Default		None
326	M696						Yes	Default		None
327	M697						Yes	Default		None
328	M701						Yes	Default		None
329	M702						Yes	Default		None
330	M703						Yes	Default		None
331	M704						Yes	Default		None
332	M705						Yes	Default		None
333	M706						Yes	Default		None
334	M460						Yes	** NA **		None
335	M471						Yes	** NA **		None
336	M473						Yes	** NA **		None
337	M507						Yes	** NA **		None
338	M508	BenPIN	BenPIN				Yes	** NA **	-y	None
339	M509	BenPIN	BenPIN				Yes	Default	-y	None
340	M510	BenPIN	BenPIN				Yes	Default	-y	None
341	M511	BenPIN	BenPIN				Yes	** NA **	-y	None
342	M512	BenPIN	BenPIN				Yes	** NA **	-y	None
343	M513	BenPIN	BenPIN				Yes	** NA **	-y	None
344	M514	BenPIN	BenPIN				Yes	Default	-y	None
345	M515	BenPIN	BenPIN				Yes	Default	-y	None
346	M516	BenPIN	BenPIN	3	3		Yes	Default	+z	None
347	M517	BenPIN	BenPIN	3	3		Yes	Default	+z	None
348	M518			M313	M273		Yes	Default	-y	None
349	M707			M314	M336		Yes	Default	-y	None
350	M708	BenPIN	BenPIN	3	3		Yes	Default	+z	None
351	M709	BenPIN	BenPIN				Yes	Default	+y	None
352	M710	BenPIN	BenPIN				Yes	Default	+y	None
353	M711			M313	M273		Yes	Default	+y	None
354	M712			M314	M336		Yes	Default	+y	None
355	M713	BenPIN	BenPIN				Yes	Default	+y	None
356	M714	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
357	M715	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
358	M716	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
359	M717	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
360	M718	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
361	M719	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
362	M720	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
363	M721	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
364	M722	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
365	M723	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
366	M724	BenPIN	BenPIN				Yes	** NA **	-y	None
367	M725	BenPIN	BenPIN				Yes	** NA **	-y	None
368	M726	BenPIN	BenPIN				Yes	** NA **	-y	None
369	M727	BenPIN	BenPIN				Yes	** NA **	-y	None
370	M728	BenPIN	BenPIN				Yes	** NA **	-y	None
371	M729	BenPIN	BenPIN				Yes	** NA **	-y	None
372	M730	BenPIN	BenPIN				Yes	** NA **	-y	None
373	M731	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
374	M732	BenPIN	BenPIN	M342	M350		Yes	** NA **	-y	None
375	M733	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
376	M734	BenPIN	BenPIN	M340	M349		Yes	** NA **	-y	None
377	M735	BenPIN	BenPIN				Yes	** NA **	+y	None
378	M736	BenPIN	BenPIN				Yes	** NA **	+y	None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
379	M737	BenPIN	BenPIN				Yes	** NA **	+y	None
380	M738	BenPIN	BenPIN				Yes	** NA **	+y	None
381	M739	BenPIN	BenPIN				Yes	** NA **	+y	None
382	M740	BenPIN	BenPIN				Yes	** NA **	+y	None
383	M741	BenPIN	BenPIN				Yes	** NA **	+y	None
384	M742	BenPIN	BenPIN				Yes	** NA **	+y	None
385	M743	BenPIN	BenPIN				Yes	** NA **	+y	None
386	M744	BenPIN	BenPIN				Yes	** NA **	+y	None
387	M745	BenPIN	BenPIN				Yes	** NA **	+y	None
388	M746	BenPIN	BenPIN				Yes	** NA **	+y	None
389	M747	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
390	M748	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
391	M749	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
392	M750	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **		None
393	M751	BenPIN	BenPIN				Yes	** NA **	-y	None
394	M752	BenPIN	BenPIN				Yes	** NA **	-y	None
395	M753	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
396	M754	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
397	M755	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
398	M756	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
399	M757	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
400	M758	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
401	M759	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
402	M760	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
403	M761	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
404	M762	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
405	M763	BenPIN	BenPIN	M340	M349	Euler Buckling	Yes	** NA **	+z	None
406	M764	BenPIN	BenPIN	M342	M350	Euler Buckling	Yes	** NA **	+z	None
407	M765	BenPIN	BenPIN				Yes	Default	-y	None
408	M766	BenPIN	BenPIN				Yes	Default	-y	None
409	M768						Yes	Default		None
410	M769						Yes	Default		None
411	M771						Yes	Default		None
412	M776						Yes	Default		None
413	M777						Yes	Default		None
414	M778						Yes	Default		None
415	M779						Yes	Default		None
416	M780						Yes	Default		None
417	M781						Yes	Default		None
418	M782	BenPIN	BenPIN				Yes	** NA **		None
419	M783	BenPIN	BenPIN				Yes	** NA **		None
420	M784	BenPIN	BenPIN				Yes	** NA **		None
421	M785	BenPIN	BenPIN				Yes	** NA **		None
422	M485						Yes	Default		None
423	M497						Yes	Default		None
424	M498						Yes	Default		None
425	M786						Yes	Default		None
426	M787						Yes	Default		None
427	M788						Yes	Default		None
428	M698						Yes	Default		None
429	M699						Yes	Default		None
430	M700						Yes	Default		None
431	M468						Yes	Default		None
432	M469						Yes	Default		None
433	M506						Yes	Default		None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
434	M767						Yes	** NA **		None
435	M770						Yes	** NA **		None
436	M772						Yes	** NA **		None
437	M773						Yes	** NA **		None
438	M774						Yes	** NA **		None
439	M775						Yes	** NA **		None
440	M636	BenPIN	BenPIN				Yes	Default		None
441	M637	BenPIN	BenPIN				Yes	Default		None
442	M789	BenPIN	BenPIN				Yes	Default		None
443	M626						Yes	** NA **		None
444	M627						Yes	** NA **		None
445	M630						Yes	** NA **		None
446	M641						Yes	** NA **		None
447	M643						Yes	** NA **		None
448	M790						Yes	** NA **		None
449	M791						Yes	** NA **		None
450	M792						Yes	** NA **		None
451	M793						Yes	** NA **		None
452	M794						Yes	** NA **		None
453	M795						Yes	** NA **		None
454	M796						Yes	** NA **		None
455	M797						Yes	** NA **		None
456	M798						Yes	** NA **		None
457	M799						Yes	** NA **		None
458	M800						Yes	** NA **		None
459	M801						Yes	** NA **		None
460	M802						Yes	** NA **		None
461	M803	BenPIN	BenPIN				Yes	** NA **		None
462	M804	BenPIN	BenPIN				Yes	** NA **		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
1	M273	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
2	M313	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
3	M314	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
4	M336	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
5	M337	Bottom HB	5			Lbyy			N/A	N/A	Lateral
6	M340	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
7	M342	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
8	M343	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
9	M346	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
10	M347	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
11	M349	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
12	M350	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
13	M351	Fueling	5			Lbyy			N/A	N/A	Lateral
14	M352	Fueling	5			Lbyy			N/A	N/A	Lateral
15	M353	MC End	5			Lbyy			N/A	N/A	Lateral
16	M354	MC End	5			Lbyy			N/A	N/A	Lateral
17	M355	Fueling	5			Lbyy			N/A	N/A	Lateral
18	M356	Fire Beam	5			Lbyy			N/A	N/A	Lateral
19	M357	Fire Beam	5			Lbyy			N/A	N/A	Lateral
20	M358	Top MC	5			Lbyy			N/A	N/A	Lateral
21	M359	Top MC	5			Lbyy			N/A	N/A	Lateral
22	M360	Fire Beam	5			Lbyy			N/A	N/A	Lateral
23	M361	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
24	M362	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
25	M363	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
26	M364	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
27	M365	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
28	M366	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
29	M367	Post	4.81			Lbyy			N/A	N/A	Lateral
30	M368	Post	4.81			Lbyy			N/A	N/A	Lateral
31	M369	Post	4.81			Lbyy			N/A	N/A	Lateral
32	M370	Post	4.81			Lbyy			N/A	N/A	Lateral
33	M371	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
34	M372	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
35	M373	Bottom HB	5			Lbyy			N/A	N/A	Lateral
36	M374	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
37	M375	Bottom HB	5			Lbyy			N/A	N/A	Lateral
38	M376	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
39	M377	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
40	M378	Post	4.81			Lbyy			N/A	N/A	Lateral
41	M379	Post	4.81			Lbyy			N/A	N/A	Lateral
42	M380	Post	4.81			Lbyy			N/A	N/A	Lateral
43	M381	Post	4.81			Lbyy			N/A	N/A	Lateral
44	M382	Top HB	9.014			Lbyy			N/A	N/A	Lateral
45	M383	Top HB	9.014			Lbyy			N/A	N/A	Lateral
46	M384	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
47	M385	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
48	M386	Top HB	9.014			Lbyy			N/A	N/A	Lateral
49	M387	Top HB	9.014			Lbyy			N/A	N/A	Lateral
50	M388	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
51	M389	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
52	M390	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
53	M392	Top HB	5			Lbyy			N/A	N/A	Lateral
54	M394	Top HB	5			Lbyy			N/A	N/A	Lateral
55	M396	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
56	M397	VB	8.91			Lbyy			N/A	N/A	Lateral
57	M398	VB	8.91			Lbyy			N/A	N/A	Lateral
58	M399	VB	8.91			Lbyy			N/A	N/A	Lateral
59	M400	VB	8.91			Lbyy			N/A	N/A	Lateral
60	M401	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
61	M402	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
62	M403	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
63	M404	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
64	M405	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
65	M406	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
66	M409	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
67	M410	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
68	M411	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
69	M412	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
70	M413	VB	8.91			Lbyy			N/A	N/A	Lateral
71	M414	VB	8.91			Lbyy			N/A	N/A	Lateral
72	M415	VB	8.91			Lbyy			N/A	N/A	Lateral
73	M416	VB	8.91			Lbyy			N/A	N/A	Lateral
74	M95	20" Suction	5			Lbyy			N/A	N/A	Lateral
75	M96	20" Suction	5			Lbyy			N/A	N/A	Lateral
76	M530	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
77	M531	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
78	M532	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
79	M533	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
80	M534	Bottom HB	5			Lbyy			N/A	N/A	Lateral
81	M535	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
82	M536	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
83	M537	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
84	M538	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
85	M539	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
86	M540	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
87	M541	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
88	M542	Fueling	5			Lbyy			N/A	N/A	Lateral
89	M543	Fueling	5			Lbyy			N/A	N/A	Lateral
90	M544	MC End	5			Lbyy			N/A	N/A	Lateral
91	M545	MC End	5			Lbyy			N/A	N/A	Lateral
92	M546	Fueling	5			Lbyy			N/A	N/A	Lateral
93	M547	Fire Beam	5			Lbyy			N/A	N/A	Lateral
94	M548	Fire Beam	5			Lbyy			N/A	N/A	Lateral
95	M549	Top MC	5			Lbyy			N/A	N/A	Lateral
96	M550	Top MC	5			Lbyy			N/A	N/A	Lateral
97	M551	Fire Beam	5			Lbyy			N/A	N/A	Lateral
98	M552	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
99	M553	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
100	M554	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
101	M555	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
102	M556	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
103	M557	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
104	M558	Post	4.81			Lbyy			N/A	N/A	Lateral
105	M559	Post	4.81			Lbyy			N/A	N/A	Lateral
106	M560	Post	4.81			Lbyy			N/A	N/A	Lateral
107	M561	Post	4.81			Lbyy			N/A	N/A	Lateral
108	M562	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
109	M563	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
110	M564	Bottom HB	5			Lbyy			N/A	N/A	Lateral
111	M565	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
112	M566	Bottom HB	5			Lbyy			N/A	N/A	Lateral
113	M567	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
114	M568	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
115	M569	Post	4.81			Lbyy			N/A	N/A	Lateral
116	M570	Post	4.81			Lbyy			N/A	N/A	Lateral
117	M571	Post	4.81			Lbyy			N/A	N/A	Lateral
118	M572	Post	4.81			Lbyy			N/A	N/A	Lateral
119	M573	Top HB	9.014			Lbyy			N/A	N/A	Lateral
120	M574	Top HB	9.014			Lbyy			N/A	N/A	Lateral
121	M575	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
122	M576	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
123	M577	Top HB	9.014			Lbyy			N/A	N/A	Lateral
124	M578	Top HB	9.014			Lbyy			N/A	N/A	Lateral
125	M579	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
126	M580	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
127	M581	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
128	M582	Top HB	5			Lbyy			N/A	N/A	Lateral
129	M583	Top HB	5			Lbyy			N/A	N/A	Lateral
130	M584	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
131	M585	VB	8.91			Lbyy			N/A	N/A	Lateral
132	M586	VB	8.91			Lbyy			N/A	N/A	Lateral
133	M587	VB	8.91			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
134	M588	VB	8.91			Lbyy			N/A	N/A	Lateral
135	M589	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
136	M590	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
137	M591	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
138	M592	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
139	M593	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
140	M594	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
141	M595	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
142	M596	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
143	M597	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
144	M598	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
145	M599	VB	8.91			Lbyy			N/A	N/A	Lateral
146	M600	VB	8.91			Lbyy			N/A	N/A	Lateral
147	M601	VB	8.91			Lbyy			N/A	N/A	Lateral
148	M602	VB	8.91			Lbyy			N/A	N/A	Lateral
149	M618	20" Suction	5			Lbyy			N/A	N/A	Lateral
150	M619	20" Suction	5			Lbyy			N/A	N/A	Lateral
151	M620	W8x24	6.875			Lbyy			N/A	N/A	Lateral
152	M621	W8x24	6.875			Lbyy			N/A	N/A	Lateral
153	M622	W8x24	9.708			Lbyy			N/A	N/A	Lateral
154	M623	W8x24	9.708			Lbyy			N/A	N/A	Lateral
155	M624	W8x24	9.708			Lbyy			N/A	N/A	Lateral
156	M625	W8x24	9.708			Lbyy			N/A	N/A	Lateral
157	M628	W8X24	4.292			Lbyy			N/A	N/A	Lateral
158	M629	W8X24	4.292			Lbyy			N/A	N/A	Lateral
159	M631	W8X24	12.167			Lbyy			N/A	N/A	Lateral
160	M632	W8x18	8.083			Lbyy			N/A	N/A	Lateral
161	M633	W8x18	8.083			Lbyy			N/A	N/A	Lateral
162	M638	VB	6.384			Lbyy			N/A	N/A	Lateral
163	M639	VB	6.384			Lbyy			N/A	N/A	Lateral
164	M640	W8x18	10.667			Lbyy			N/A	N/A	Lateral
165	M642	W8x18	10.667			Lbyy			N/A	N/A	Lateral
166	M644	VB	4.832			Lbyy			N/A	N/A	Lateral
167	M645	VB	4.832			Lbyy			N/A	N/A	Lateral
168	M646	VB	4.832			Lbyy			N/A	N/A	Lateral
169	M647	VB	4.832			Lbyy			N/A	N/A	Lateral
170	M648	W8x18	5.167			Lbyy			N/A	N/A	Lateral
171	M649	CT Support	2			Lbyy			N/A	N/A	Lateral
172	M650	CT Support	2			Lbyy			N/A	N/A	Lateral
173	M651	CT Support	2			Lbyy			N/A	N/A	Lateral
174	M652	CT Support	2			Lbyy			N/A	N/A	Lateral
175	M653	CT Support	2			Lbyy			N/A	N/A	Lateral
176	M654	CT Support	2			Lbyy			N/A	N/A	Lateral
177	M655	CT Support	2			Lbyy			N/A	N/A	Lateral
178	M656	CT Support	2			Lbyy			N/A	N/A	Lateral
179	M657	CT Support	2			Lbyy			N/A	N/A	Lateral
180	M658	CT Support	2			Lbyy			N/A	N/A	Lateral
181	M659	CT Support	2			Lbyy			N/A	N/A	Lateral
182	M660	CT Support	2			Lbyy			N/A	N/A	Lateral
183	M407	W8x24	8.208			Lbyy			N/A	N/A	Lateral
184	M408	W8x24	8.208			Lbyy			N/A	N/A	Lateral
185	M417	W8x24	8.208			Lbyy			N/A	N/A	Lateral
186	M418	W8x24	8.208			Lbyy			N/A	N/A	Lateral
187	M419	W8x18	7.5			Lbyy			N/A	N/A	Lateral
188	M420	W8x18	7.5			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
189	M421	W8x18	7.5			Lbyy			N/A	N/A	Lateral
190	M422	W8x18	7.5			Lbyy			N/A	N/A	Lateral
191	M423	VB	10.489			Lbyy			N/A	N/A	Lateral
192	M424	VB	10.489			Lbyy			N/A	N/A	Lateral
193	M425	VB	10.489			Lbyy			N/A	N/A	Lateral
194	M426	VB	10.489			Lbyy			N/A	N/A	Lateral
195	M427	W8x24	8.208			Lbyy			N/A	N/A	Lateral
196	M428	W8x24	8.208			Lbyy			N/A	N/A	Lateral
197	M429	W8x24	8.208			Lbyy			N/A	N/A	Lateral
198	M430	W8x24	8.208			Lbyy			N/A	N/A	Lateral
199	M431	W8x18	6.75			Lbyy			N/A	N/A	Lateral
200	M432	W8x18	5.75			Lbyy			N/A	N/A	Lateral
201	M433	W8x18	6.75			Lbyy			N/A	N/A	Lateral
202	M434	W8x18	5.75			Lbyy			N/A	N/A	Lateral
203	M439	W8x24	9.708			Lbyy			N/A	N/A	Lateral
204	M440	CT Support	2			Lbyy			N/A	N/A	Lateral
205	M441	CT Support	2			Lbyy			N/A	N/A	Lateral
206	M442	CT Support	2			Lbyy			N/A	N/A	Lateral
207	M443	W8x24	9.708			Lbyy			N/A	N/A	Lateral
208	M444	CT Support	2			Lbyy			N/A	N/A	Lateral
209	M445	CT Support	2			Lbyy			N/A	N/A	Lateral
210	M446	CT Support	2			Lbyy			N/A	N/A	Lateral
211	M447	VB	10.735			Lbyy			N/A	N/A	Lateral
212	M448	VB	10.735			Lbyy			N/A	N/A	Lateral
213	M449	W8x24	9.708			Lbyy			N/A	N/A	Lateral
214	M450	CT Support	2			Lbyy			N/A	N/A	Lateral
215	M451	CT Support	2			Lbyy			N/A	N/A	Lateral
216	M452	CT Support	2			Lbyy			N/A	N/A	Lateral
217	M453	W8x24	9.708			Lbyy			N/A	N/A	Lateral
218	M454	CT Support	2			Lbyy			N/A	N/A	Lateral
219	M455	CT Support	2			Lbyy			N/A	N/A	Lateral
220	M456	CT Support	2			Lbyy			N/A	N/A	Lateral
221	M457	VB	8.602			Lbyy			N/A	N/A	Lateral
222	M458	VB	8.602			Lbyy			N/A	N/A	Lateral
223	M463	CT Support	2.083			Lbyy			N/A	N/A	Lateral
224	M464	CT Support	2.083			Lbyy			N/A	N/A	Lateral
225	M465	CT Support	2.083			Lbyy			N/A	N/A	Lateral
226	M466	CT Support	1.583			Lbyy			N/A	N/A	Lateral
227	M467	CT Support	2.083			Lbyy			N/A	N/A	Lateral
228	M472	CT Support	2.083			Lbyy			N/A	N/A	Lateral
229	M486	CT Support	1.583			Lbyy			N/A	N/A	Lateral
230	M487	CT Support	1.583			Lbyy			N/A	N/A	Lateral
231	M488	CT Support	2.083			Lbyy			N/A	N/A	Lateral
232	M489	CT Support	1.583			Lbyy			N/A	N/A	Lateral
233	M490	CT Support	2.083			Lbyy			N/A	N/A	Lateral
234	M491	CT Support	1.583			Lbyy			N/A	N/A	Lateral
235	M492	CT Support	1.583			Lbyy			N/A	N/A	Lateral
236	M493	CT Support	2.083			Lbyy			N/A	N/A	Lateral
237	M494	CT Support	1.583			Lbyy			N/A	N/A	Lateral
238	M495	CT Support	1.583			Lbyy			N/A	N/A	Lateral
239	M496	CT Support	1.583			Lbyy			N/A	N/A	Lateral
240	M499	CT Support	1.583			Lbyy			N/A	N/A	Lateral
241	M500	CT Support	1.583			Lbyy			N/A	N/A	Lateral
242	M501	CT Support	1.583			Lbyy			N/A	N/A	Lateral
243	M502	CT Support	1.583			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
244	M503	CT Support	1.583			Lbyy			N/A	N/A	Lateral
245	M504	CT Support	1.583			Lbyy			N/A	N/A	Lateral
246	M505	CT Support	1.583			Lbyy			N/A	N/A	Lateral
247	M391	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
248	M393	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
249	M395	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
250	M459	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
251	M461	Bottom HB	5			Lbyy			N/A	N/A	Lateral
252	M462	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
253	M470	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
254	M474	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
255	M475	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
256	M476	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
257	M477	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
258	M478	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
259	M479	Fueling	5			Lbyy			N/A	N/A	Lateral
260	M480	Fueling	5			Lbyy			N/A	N/A	Lateral
261	M481	MC End	5			Lbyy			N/A	N/A	Lateral
262	M482	MC End	5			Lbyy			N/A	N/A	Lateral
263	M483	Fueling	5			Lbyy			N/A	N/A	Lateral
264	M484	Fire Beam	5			Lbyy			N/A	N/A	Lateral
265	M519	Fire Beam	5			Lbyy			N/A	N/A	Lateral
266	M520	Top MC	5			Lbyy			N/A	N/A	Lateral
267	M521	Top MC	5			Lbyy			N/A	N/A	Lateral
268	M522	Fire Beam	5			Lbyy			N/A	N/A	Lateral
269	M523	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
270	M524	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
271	M525	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
272	M526	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
273	M527	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
274	M528	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
275	M529	Post	4.81			Lbyy			N/A	N/A	Lateral
276	M603	Post	4.81			Lbyy			N/A	N/A	Lateral
277	M604	Post	4.81			Lbyy			N/A	N/A	Lateral
278	M605	Post	4.81			Lbyy			N/A	N/A	Lateral
279	M606	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
280	M607	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
281	M608	Bottom HB	5			Lbyy			N/A	N/A	Lateral
282	M609	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
283	M610	Bottom HB	5			Lbyy			N/A	N/A	Lateral
284	M611	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
285	M612	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
286	M613	Post	4.81			Lbyy			N/A	N/A	Lateral
287	M614	Post	4.81			Lbyy			N/A	N/A	Lateral
288	M615	Post	4.81			Lbyy			N/A	N/A	Lateral
289	M616	Post	4.81			Lbyy			N/A	N/A	Lateral
290	M617	Top HB	9.014			Lbyy			N/A	N/A	Lateral
291	M661	Top HB	9.014			Lbyy			N/A	N/A	Lateral
292	M662	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
293	M663	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
294	M664	Top HB	9.014			Lbyy			N/A	N/A	Lateral
295	M665	Top HB	9.014			Lbyy			N/A	N/A	Lateral
296	M666	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
297	M667	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
298	M668	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
299	M669	Top HB	5			Lbyy			N/A	N/A	Lateral
300	M670	Top HB	5			Lbyy			N/A	N/A	Lateral
301	M671	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
302	M672	VB	8.91			Lbyy			N/A	N/A	Lateral
303	M673	VB	8.91			Lbyy			N/A	N/A	Lateral
304	M674	VB	8.91			Lbyy			N/A	N/A	Lateral
305	M675	VB	8.91			Lbyy			N/A	N/A	Lateral
306	M676	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
307	M677	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
308	M678	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
309	M679	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
310	M680	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
311	M681	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
312	M682	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
313	M683	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
314	M684	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
315	M685	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
316	M686	VB	8.91			Lbyy			N/A	N/A	Lateral
317	M687	VB	8.91			Lbyy			N/A	N/A	Lateral
318	M688	VB	8.91			Lbyy			N/A	N/A	Lateral
319	M689	VB	8.91			Lbyy			N/A	N/A	Lateral
320	M690	20" Suction	5			Lbyy			N/A	N/A	Lateral
321	M691	20" Suction	5			Lbyy			N/A	N/A	Lateral
322	M692	CT Support	2.083			Lbyy			N/A	N/A	Lateral
323	M693	CT Support	2.083			Lbyy			N/A	N/A	Lateral
324	M694	CT Support	1.583			Lbyy			N/A	N/A	Lateral
325	M695	CT Support	1.583			Lbyy			N/A	N/A	Lateral
326	M696	CT Support	2.083			Lbyy			N/A	N/A	Lateral
327	M697	CT Support	1.583			Lbyy			N/A	N/A	Lateral
328	M701	CT Support	2.083			Lbyy			N/A	N/A	Lateral
329	M702	CT Support	1.583			Lbyy			N/A	N/A	Lateral
330	M703	CT Support	1.583			Lbyy			N/A	N/A	Lateral
331	M704	CT Support	1.583			Lbyy			N/A	N/A	Lateral
332	M705	CT Support	1.583			Lbyy			N/A	N/A	Lateral
333	M706	CT Support	1.583			Lbyy			N/A	N/A	Lateral
334	M460	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
335	M471	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
336	M473	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
337	M507	Bent Columns	6.375		5.167	Lbyy	2.1	2.1	N/A	N/A	Lateral
338	M508	Bottom HB	5			Lbyy			N/A	N/A	Lateral
339	M509	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
340	M510	Bottom Chord	57	7.5	7.5				N/A	N/A	Lateral
341	M511	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
342	M512	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
343	M513	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
344	M514	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
345	M515	Top Chord	57	7.5	7.5				N/A	N/A	Lateral
346	M516	Fueling	5			Lbyy			N/A	N/A	Lateral
347	M517	Fueling	5			Lbyy			N/A	N/A	Lateral
348	M518	MC End	5			Lbyy			N/A	N/A	Lateral
349	M707	MC End	5			Lbyy			N/A	N/A	Lateral
350	M708	Fueling	5			Lbyy			N/A	N/A	Lateral
351	M709	Fire Beam	5			Lbyy			N/A	N/A	Lateral
352	M710	Fire Beam	5			Lbyy			N/A	N/A	Lateral
353	M711	Top MC	5			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
354	M712	Top MC	5			Lbyy			N/A	N/A	Lateral
355	M713	Fire Beam	5			Lbyy			N/A	N/A	Lateral
356	M714	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
357	M715	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
358	M716	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
359	M717	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
360	M718	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
361	M719	Heavy Post	4.81			Lbyy			N/A	N/A	Lateral
362	M720	Post	4.81			Lbyy			N/A	N/A	Lateral
363	M721	Post	4.81			Lbyy			N/A	N/A	Lateral
364	M722	Post	4.81			Lbyy			N/A	N/A	Lateral
365	M723	Post	4.81			Lbyy			N/A	N/A	Lateral
366	M724	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
367	M725	Thermal Bracing	5			Lbyy			N/A	N/A	Lateral
368	M726	Bottom HB	5			Lbyy			N/A	N/A	Lateral
369	M727	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
370	M728	Bottom HB	5			Lbyy			N/A	N/A	Lateral
371	M729	Bottom HB	9.014			Lbyy			N/A	N/A	Lateral
372	M730	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
373	M731	Post	4.81			Lbyy			N/A	N/A	Lateral
374	M732	Post	4.81			Lbyy			N/A	N/A	Lateral
375	M733	Post	4.81			Lbyy			N/A	N/A	Lateral
376	M734	Post	4.81			Lbyy			N/A	N/A	Lateral
377	M735	Top HB	9.014			Lbyy			N/A	N/A	Lateral
378	M736	Top HB	9.014			Lbyy			N/A	N/A	Lateral
379	M737	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
380	M738	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
381	M739	Top HB	9.014			Lbyy			N/A	N/A	Lateral
382	M740	Top HB	9.014			Lbyy			N/A	N/A	Lateral
383	M741	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
384	M742	Top HB Heavy	8.4			Lbyy			N/A	N/A	Lateral
385	M743	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
386	M744	Top HB	5			Lbyy			N/A	N/A	Lateral
387	M745	Top HB	5			Lbyy			N/A	N/A	Lateral
388	M746	Top HB Heavy	5			Lbyy			N/A	N/A	Lateral
389	M747	VB	8.91			Lbyy			N/A	N/A	Lateral
390	M748	VB	8.91			Lbyy			N/A	N/A	Lateral
391	M749	VB	8.91			Lbyy			N/A	N/A	Lateral
392	M750	VB	8.91			Lbyy			N/A	N/A	Lateral
393	M751	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
394	M752	Thermal Bracing	8.4			Lbyy			N/A	N/A	Lateral
395	M753	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
396	M754	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
397	M755	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
398	M756	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
399	M757	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
400	M758	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
401	M759	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
402	M760	Heavy VB	8.288			Lbyy			N/A	N/A	Lateral
403	M761	VB	8.91			Lbyy			N/A	N/A	Lateral
404	M762	VB	8.91			Lbyy			N/A	N/A	Lateral
405	M763	VB	8.91			Lbyy			N/A	N/A	Lateral
406	M764	VB	8.91			Lbyy			N/A	N/A	Lateral
407	M765	20" Suction	5			Lbyy			N/A	N/A	Lateral
408	M766	20" Suction	5			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
409	M768	CT Support	2.083			Lbyy			N/A	N/A	Lateral
410	M769	CT Support	1.583			Lbyy			N/A	N/A	Lateral
411	M771	CT Support	2.083			Lbyy			N/A	N/A	Lateral
412	M776	CT Support	2.083			Lbyy			N/A	N/A	Lateral
413	M777	CT Support	1.583			Lbyy			N/A	N/A	Lateral
414	M778	CT Support	1.583			Lbyy			N/A	N/A	Lateral
415	M779	CT Support	1.583			Lbyy			N/A	N/A	Lateral
416	M780	CT Support	1.583			Lbyy			N/A	N/A	Lateral
417	M781	CT Support	1.583			Lbyy			N/A	N/A	Lateral
418	M782	VB	9.319			Lbyy			N/A	N/A	Lateral
419	M783	VB	9.319			Lbyy			N/A	N/A	Lateral
420	M784	VB	9.319			Lbyy			N/A	N/A	Lateral
421	M785	VB	9.319			Lbyy			N/A	N/A	Lateral
422	M485	CT Support	2.083			Lbyy			N/A	N/A	Lateral
423	M497	CT Support	1.583			Lbyy			N/A	N/A	Lateral
424	M498	CT Support	1.583			Lbyy			N/A	N/A	Lateral
425	M786	CT Support	2.083			Lbyy			N/A	N/A	Lateral
426	M787	CT Support	1.583			Lbyy			N/A	N/A	Lateral
427	M788	CT Support	1.583			Lbyy			N/A	N/A	Lateral
428	M698	CT Support	2.083			Lbyy			N/A	N/A	Lateral
429	M699	CT Support	1.583			Lbyy			N/A	N/A	Lateral
430	M700	CT Support	1.583			Lbyy			N/A	N/A	Lateral
431	M468	CT Support	2.083			Lbyy			N/A	N/A	Lateral
432	M469	CT Support	1.583			Lbyy			N/A	N/A	Lateral
433	M506	CT Support	1.583			Lbyy			N/A	N/A	Lateral
434	M636	W8x18	4.917			Lbyy			N/A	N/A	Lateral
435	M637	W8x18	4.917			Lbyy			N/A	N/A	Lateral
436	M789	W8x10	5.167			Lbyy			N/A	N/A	Lateral
437	M803	VB	7.132			Lbyy			N/A	N/A	Lateral
438	M804	VB	7.132			Lbyy			N/A	N/A	Lateral

Member Detailing Data

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
1	M273	10	0	0	0	10	0	0	0
2	M313	10	0	0	0	10	0	0	0
3	M314	10	0	0	0	10	0	0	0
4	M336	10	0	0	0	10	0	0	0
5	M337	10	0	0	0	10	0	0	0
6	M340	10	0	0	0	10	0	0	0
7	M342	10	0	0	0	10	0	0	0
8	M343	10	0	0	0	10	0	0	0
9	M346	10	0	0	0	10	0	0	0
10	M347	10	0	0	0	10	0	0	0
11	M349	10	0	0	0	10	0	0	0
12	M350	10	0	0	0	10	0	0	0
13	M351	10	0	0	0	10	0	0	0
14	M352	10	0	0	0	10	0	0	0
15	M353	10	0	0	0	10	0	0	0
16	M354	10	0	0	0	10	0	0	0
17	M355	10	0	0	0	10	0	0	0
18	M356	10	0	0	0	10	0	0	0
19	M357	10	0	0	0	10	0	0	0
20	M358	10	0	0	0	10	0	0	0
21	M359	10	0	0	0	10	0	0	0
22	M360	10	0	0	0	10	0	0	0
23	M361	10	0	0	0	10	0	0	0
24	M362	10	0	0	0	10	0	0	0
25	M363	10	0	0	0	10	0	0	0
26	M364	10	0	0	0	10	0	0	0
27	M365	10	0	0	0	10	0	0	0
28	M366	10	0	0	0	10	0	0	0
29	M367	10	0	0	0	10	0	0	0
30	M368	10	0	0	0	10	0	0	0
31	M369	10	0	0	0	10	0	0	0
32	M370	10	0	0	0	10	0	0	0
33	M371	10	0	0	0	10	0	0	0
34	M372	10	0	0	0	10	0	0	0
35	M373	10	0	0	0	10	0	0	0
36	M374	10	0	0	0	10	0	0	0
37	M375	10	0	0	0	10	0	0	0
38	M376	10	0	0	0	10	0	0	0
39	M377	10	0	0	0	10	0	0	0
40	M378	10	0	0	0	10	0	0	0
41	M379	10	0	0	0	10	0	0	0
42	M380	10	0	0	0	10	0	0	0
43	M381	10	0	0	0	10	0	0	0
44	M382	10	0	0	0	10	0	0	0
45	M383	10	0	0	0	10	0	0	0
46	M384	10	0	0	0	10	0	0	0
47	M385	10	0	0	0	10	0	0	0
48	M386	10	0	0	0	10	0	0	0
49	M387	10	0	0	0	10	0	0	0
50	M388	10	0	0	0	10	0	0	0
51	M389	10	0	0	0	10	0	0	0
52	M390	10	0	0	0	10	0	0	0
53	M392	10	0	0	0	10	0	0	0
54	M394	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
55	M396	10	0	0	0	10	0	0	0
56	M397	10	0	0	0	10	0	0	0
57	M398	10	0	0	0	10	0	0	0
58	M399	10	0	0	0	10	0	0	0
59	M400	10	0	0	0	10	0	0	0
60	M401	10	0	0	0	10	0	0	0
61	M402	10	0	0	0	10	0	0	0
62	M403	10	0	0	0	10	0	0	0
63	M404	10	0	0	0	10	0	0	0
64	M405	10	0	0	0	10	0	0	0
65	M406	10	0	0	0	10	0	0	0
66	M409	10	0	0	0	10	0	0	0
67	M410	10	0	0	0	10	0	0	0
68	M411	10	0	0	0	10	0	0	0
69	M412	10	0	0	0	10	0	0	0
70	M413	10	0	0	0	10	0	0	0
71	M414	10	0	0	0	10	0	0	0
72	M415	10	0	0	0	10	0	0	0
73	M416	10	0	0	0	10	0	0	0
74	M95	10	0	0	0	10	0	0	0
75	M96	10	0	0	0	10	0	0	0
76	M530	10	0	0	0	10	0	0	0
77	M531	10	0	0	0	10	0	0	0
78	M532	10	0	0	0	10	0	0	0
79	M533	10	0	0	0	10	0	0	0
80	M534	10	0	0	0	10	0	0	0
81	M535	10	0	0	0	10	0	0	0
82	M536	10	0	0	0	10	0	0	0
83	M537	10	0	0	0	10	0	0	0
84	M538	10	0	0	0	10	0	0	0
85	M539	10	0	0	0	10	0	0	0
86	M540	10	0	0	0	10	0	0	0
87	M541	10	0	0	0	10	0	0	0
88	M542	10	0	0	0	10	0	0	0
89	M543	10	0	0	0	10	0	0	0
90	M544	10	0	0	0	10	0	0	0
91	M545	10	0	0	0	10	0	0	0
92	M546	10	0	0	0	10	0	0	0
93	M547	10	0	0	0	10	0	0	0
94	M548	10	0	0	0	10	0	0	0
95	M549	10	0	0	0	10	0	0	0
96	M550	10	0	0	0	10	0	0	0
97	M551	10	0	0	0	10	0	0	0
98	M552	10	0	0	0	10	0	0	0
99	M553	10	0	0	0	10	0	0	0
100	M554	10	0	0	0	10	0	0	0
101	M555	10	0	0	0	10	0	0	0
102	M556	10	0	0	0	10	0	0	0
103	M557	10	0	0	0	10	0	0	0
104	M558	10	0	0	0	10	0	0	0
105	M559	10	0	0	0	10	0	0	0
106	M560	10	0	0	0	10	0	0	0
107	M561	10	0	0	0	10	0	0	0
108	M562	10	0	0	0	10	0	0	0
109	M563	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
110	M564	10	0	0	0	10	0	0	0
111	M565	10	0	0	0	10	0	0	0
112	M566	10	0	0	0	10	0	0	0
113	M567	10	0	0	0	10	0	0	0
114	M568	10	0	0	0	10	0	0	0
115	M569	10	0	0	0	10	0	0	0
116	M570	10	0	0	0	10	0	0	0
117	M571	10	0	0	0	10	0	0	0
118	M572	10	0	0	0	10	0	0	0
119	M573	10	0	0	0	10	0	0	0
120	M574	10	0	0	0	10	0	0	0
121	M575	10	0	0	0	10	0	0	0
122	M576	10	0	0	0	10	0	0	0
123	M577	10	0	0	0	10	0	0	0
124	M578	10	0	0	0	10	0	0	0
125	M579	10	0	0	0	10	0	0	0
126	M580	10	0	0	0	10	0	0	0
127	M581	10	0	0	0	10	0	0	0
128	M582	10	0	0	0	10	0	0	0
129	M583	10	0	0	0	10	0	0	0
130	M584	10	0	0	0	10	0	0	0
131	M585	10	0	0	0	10	0	0	0
132	M586	10	0	0	0	10	0	0	0
133	M587	10	0	0	0	10	0	0	0
134	M588	10	0	0	0	10	0	0	0
135	M589	10	0	0	0	10	0	0	0
136	M590	10	0	0	0	10	0	0	0
137	M591	10	0	0	0	10	0	0	0
138	M592	10	0	0	0	10	0	0	0
139	M593	10	0	0	0	10	0	0	0
140	M594	10	0	0	0	10	0	0	0
141	M595	10	0	0	0	10	0	0	0
142	M596	10	0	0	0	10	0	0	0
143	M597	10	0	0	0	10	0	0	0
144	M598	10	0	0	0	10	0	0	0
145	M599	10	0	0	0	10	0	0	0
146	M600	10	0	0	0	10	0	0	0
147	M601	10	0	0	0	10	0	0	0
148	M602	10	0	0	0	10	0	0	0
149	M618	10	0	0	0	10	0	0	0
150	M619	10	0	0	0	10	0	0	0
151	M620	10	0	0	0	10	0	0	0
152	M621	10	0	0	0	10	0	0	0
153	M622	10	0	0	0	10	0	0	0
154	M623	10	0	0	0	10	0	0	0
155	M624	10	0	0	0	10	0	0	0
156	M625	10	0	0	0	10	0	0	0
157	M628	10	0	0	0	10	0	0	0
158	M629	10	0	0	0	10	0	0	0
159	M631	10	0	0	0	10	0	0	0
160	M632	10	0	0	0	10	0	0	0
161	M633	10	0	0	0	10	0	0	0
162	M638	10	0	0	0	10	0	0	0
163	M639	10	0	0	0	10	0	0	0
164	M640	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
165	M642	10	0	0	0	10	0	0	0
166	M644	10	0	0	0	10	0	0	0
167	M645	10	0	0	0	10	0	0	0
168	M646	10	0	0	0	10	0	0	0
169	M647	10	0	0	0	10	0	0	0
170	M648	10	0	0	0	10	0	0	0
171	M649	10	0	0	0	10	0	0	0
172	M650	10	0	0	0	10	0	0	0
173	M651	10	0	0	0	10	0	0	0
174	M652	10	0	0	0	10	0	0	0
175	M653	10	0	0	0	10	0	0	0
176	M654	10	0	0	0	10	0	0	0
177	M655	10	0	0	0	10	0	0	0
178	M656	10	0	0	0	10	0	0	0
179	M657	10	0	0	0	10	0	0	0
180	M658	10	0	0	0	10	0	0	0
181	M659	10	0	0	0	10	0	0	0
182	M660	10	0	0	0	10	0	0	0
183	M407	10	0	0	0	10	0	0	0
184	M408	10	0	0	0	10	0	0	0
185	M417	10	0	0	0	10	0	0	0
186	M418	10	0	0	0	10	0	0	0
187	M419	10	0	0	0	10	0	0	0
188	M420	10	0	0	0	10	0	0	0
189	M421	10	0	0	0	10	0	0	0
190	M422	10	0	0	0	10	0	0	0
191	M423	10	0	0	0	10	0	0	0
192	M424	10	0	0	0	10	0	0	0
193	M425	10	0	0	0	10	0	0	0
194	M426	10	0	0	0	10	0	0	0
195	M427	10	0	0	0	10	0	0	0
196	M428	10	0	0	0	10	0	0	0
197	M429	10	0	0	0	10	0	0	0
198	M430	10	0	0	0	10	0	0	0
199	M431	10	0	0	0	10	0	0	0
200	M432	10	0	0	0	10	0	0	0
201	M433	10	0	0	0	10	0	0	0
202	M434	10	0	0	0	10	0	0	0
203	M439	10	0	0	0	10	0	0	0
204	M440	10	0	0	0	10	0	0	0
205	M441	10	0	0	0	10	0	0	0
206	M442	10	0	0	0	10	0	0	0
207	M443	10	0	0	0	10	0	0	0
208	M444	10	0	0	0	10	0	0	0
209	M445	10	0	0	0	10	0	0	0
210	M446	10	0	0	0	10	0	0	0
211	M447	10	0	0	0	10	0	0	0
212	M448	10	0	0	0	10	0	0	0
213	M449	10	0	0	0	10	0	0	0
214	M450	10	0	0	0	10	0	0	0
215	M451	10	0	0	0	10	0	0	0
216	M452	10	0	0	0	10	0	0	0
217	M453	10	0	0	0	10	0	0	0
218	M454	10	0	0	0	10	0	0	0
219	M455	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
220	M456	10	0	0	0	10	0	0	0
221	M457	10	0	0	0	10	0	0	0
222	M458	10	0	0	0	10	0	0	0
223	M463	10	0	0	0	10	0	0	0
224	M464	10	0	0	0	10	0	0	0
225	M465	10	0	0	0	10	0	0	0
226	M466	10	0	0	0	10	0	0	0
227	M467	10	0	0	0	10	0	0	0
228	M472	10	0	0	0	10	0	0	0
229	M486	10	0	0	0	10	0	0	0
230	M487	10	0	0	0	10	0	0	0
231	M488	10	0	0	0	10	0	0	0
232	M489	10	0	0	0	10	0	0	0
233	M490	10	0	0	0	10	0	0	0
234	M491	10	0	0	0	10	0	0	0
235	M492	10	0	0	0	10	0	0	0
236	M493	10	0	0	0	10	0	0	0
237	M494	10	0	0	0	10	0	0	0
238	M495	10	0	0	0	10	0	0	0
239	M496	10	0	0	0	10	0	0	0
240	M499	10	0	0	0	10	0	0	0
241	M500	10	0	0	0	10	0	0	0
242	M501	10	0	0	0	10	0	0	0
243	M502	10	0	0	0	10	0	0	0
244	M503	10	0	0	0	10	0	0	0
245	M504	10	0	0	0	10	0	0	0
246	M505	10	0	0	0	10	0	0	0
247	M391	10	0	0	0	10	0	0	0
248	M393	10	0	0	0	10	0	0	0
249	M395	10	0	0	0	10	0	0	0
250	M459	10	0	0	0	10	0	0	0
251	M461	10	0	0	0	10	0	0	0
252	M462	10	0	0	0	10	0	0	0
253	M470	10	0	0	0	10	0	0	0
254	M474	10	0	0	0	10	0	0	0
255	M475	10	0	0	0	10	0	0	0
256	M476	10	0	0	0	10	0	0	0
257	M477	10	0	0	0	10	0	0	0
258	M478	10	0	0	0	10	0	0	0
259	M479	10	0	0	0	10	0	0	0
260	M480	10	0	0	0	10	0	0	0
261	M481	10	0	0	0	10	0	0	0
262	M482	10	0	0	0	10	0	0	0
263	M483	10	0	0	0	10	0	0	0
264	M484	10	0	0	0	10	0	0	0
265	M519	10	0	0	0	10	0	0	0
266	M520	10	0	0	0	10	0	0	0
267	M521	10	0	0	0	10	0	0	0
268	M522	10	0	0	0	10	0	0	0
269	M523	10	0	0	0	10	0	0	0
270	M524	10	0	0	0	10	0	0	0
271	M525	10	0	0	0	10	0	0	0
272	M526	10	0	0	0	10	0	0	0
273	M527	10	0	0	0	10	0	0	0
274	M528	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
275	M529	10	0	0	0	10	0	0	0
276	M603	10	0	0	0	10	0	0	0
277	M604	10	0	0	0	10	0	0	0
278	M605	10	0	0	0	10	0	0	0
279	M606	10	0	0	0	10	0	0	0
280	M607	10	0	0	0	10	0	0	0
281	M608	10	0	0	0	10	0	0	0
282	M609	10	0	0	0	10	0	0	0
283	M610	10	0	0	0	10	0	0	0
284	M611	10	0	0	0	10	0	0	0
285	M612	10	0	0	0	10	0	0	0
286	M613	10	0	0	0	10	0	0	0
287	M614	10	0	0	0	10	0	0	0
288	M615	10	0	0	0	10	0	0	0
289	M616	10	0	0	0	10	0	0	0
290	M617	10	0	0	0	10	0	0	0
291	M661	10	0	0	0	10	0	0	0
292	M662	10	0	0	0	10	0	0	0
293	M663	10	0	0	0	10	0	0	0
294	M664	10	0	0	0	10	0	0	0
295	M665	10	0	0	0	10	0	0	0
296	M666	10	0	0	0	10	0	0	0
297	M667	10	0	0	0	10	0	0	0
298	M668	10	0	0	0	10	0	0	0
299	M669	10	0	0	0	10	0	0	0
300	M670	10	0	0	0	10	0	0	0
301	M671	10	0	0	0	10	0	0	0
302	M672	10	0	0	0	10	0	0	0
303	M673	10	0	0	0	10	0	0	0
304	M674	10	0	0	0	10	0	0	0
305	M675	10	0	0	0	10	0	0	0
306	M676	10	0	0	0	10	0	0	0
307	M677	10	0	0	0	10	0	0	0
308	M678	10	0	0	0	10	0	0	0
309	M679	10	0	0	0	10	0	0	0
310	M680	10	0	0	0	10	0	0	0
311	M681	10	0	0	0	10	0	0	0
312	M682	10	0	0	0	10	0	0	0
313	M683	10	0	0	0	10	0	0	0
314	M684	10	0	0	0	10	0	0	0
315	M685	10	0	0	0	10	0	0	0
316	M686	10	0	0	0	10	0	0	0
317	M687	10	0	0	0	10	0	0	0
318	M688	10	0	0	0	10	0	0	0
319	M689	10	0	0	0	10	0	0	0
320	M690	10	0	0	0	10	0	0	0
321	M691	10	0	0	0	10	0	0	0
322	M692	10	0	0	0	10	0	0	0
323	M693	10	0	0	0	10	0	0	0
324	M694	10	0	0	0	10	0	0	0
325	M695	10	0	0	0	10	0	0	0
326	M696	10	0	0	0	10	0	0	0
327	M697	10	0	0	0	10	0	0	0
328	M701	10	0	0	0	10	0	0	0
329	M702	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
330	M703	10	0	0	0	10	0	0	0
331	M704	10	0	0	0	10	0	0	0
332	M705	10	0	0	0	10	0	0	0
333	M706	10	0	0	0	10	0	0	0
334	M460	10	0	0	0	10	0	0	0
335	M471	10	0	0	0	10	0	0	0
336	M473	10	0	0	0	10	0	0	0
337	M507	10	0	0	0	10	0	0	0
338	M508	10	0	0	0	10	0	0	0
339	M509	10	0	0	0	10	0	0	0
340	M510	10	0	0	0	10	0	0	0
341	M511	10	0	0	0	10	0	0	0
342	M512	10	0	0	0	10	0	0	0
343	M513	10	0	0	0	10	0	0	0
344	M514	10	0	0	0	10	0	0	0
345	M515	10	0	0	0	10	0	0	0
346	M516	10	0	0	0	10	0	0	0
347	M517	10	0	0	0	10	0	0	0
348	M518	10	0	0	0	10	0	0	0
349	M707	10	0	0	0	10	0	0	0
350	M708	10	0	0	0	10	0	0	0
351	M709	10	0	0	0	10	0	0	0
352	M710	10	0	0	0	10	0	0	0
353	M711	10	0	0	0	10	0	0	0
354	M712	10	0	0	0	10	0	0	0
355	M713	10	0	0	0	10	0	0	0
356	M714	10	0	0	0	10	0	0	0
357	M715	10	0	0	0	10	0	0	0
358	M716	10	0	0	0	10	0	0	0
359	M717	10	0	0	0	10	0	0	0
360	M718	10	0	0	0	10	0	0	0
361	M719	10	0	0	0	10	0	0	0
362	M720	10	0	0	0	10	0	0	0
363	M721	10	0	0	0	10	0	0	0
364	M722	10	0	0	0	10	0	0	0
365	M723	10	0	0	0	10	0	0	0
366	M724	10	0	0	0	10	0	0	0
367	M725	10	0	0	0	10	0	0	0
368	M726	10	0	0	0	10	0	0	0
369	M727	10	0	0	0	10	0	0	0
370	M728	10	0	0	0	10	0	0	0
371	M729	10	0	0	0	10	0	0	0
372	M730	10	0	0	0	10	0	0	0
373	M731	10	0	0	0	10	0	0	0
374	M732	10	0	0	0	10	0	0	0
375	M733	10	0	0	0	10	0	0	0
376	M734	10	0	0	0	10	0	0	0
377	M735	10	0	0	0	10	0	0	0
378	M736	10	0	0	0	10	0	0	0
379	M737	10	0	0	0	10	0	0	0
380	M738	10	0	0	0	10	0	0	0
381	M739	10	0	0	0	10	0	0	0
382	M740	10	0	0	0	10	0	0	0
383	M741	10	0	0	0	10	0	0	0
384	M742	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
385	M743	10	0	0	0	10	0	0	0
386	M744	10	0	0	0	10	0	0	0
387	M745	10	0	0	0	10	0	0	0
388	M746	10	0	0	0	10	0	0	0
389	M747	10	0	0	0	10	0	0	0
390	M748	10	0	0	0	10	0	0	0
391	M749	10	0	0	0	10	0	0	0
392	M750	10	0	0	0	10	0	0	0
393	M751	10	0	0	0	10	0	0	0
394	M752	10	0	0	0	10	0	0	0
395	M753	10	0	0	0	10	0	0	0
396	M754	10	0	0	0	10	0	0	0
397	M755	10	0	0	0	10	0	0	0
398	M756	10	0	0	0	10	0	0	0
399	M757	10	0	0	0	10	0	0	0
400	M758	10	0	0	0	10	0	0	0
401	M759	10	0	0	0	10	0	0	0
402	M760	10	0	0	0	10	0	0	0
403	M761	10	0	0	0	10	0	0	0
404	M762	10	0	0	0	10	0	0	0
405	M763	10	0	0	0	10	0	0	0
406	M764	10	0	0	0	10	0	0	0
407	M765	10	0	0	0	10	0	0	0
408	M766	10	0	0	0	10	0	0	0
409	M768	10	0	0	0	10	0	0	0
410	M769	10	0	0	0	10	0	0	0
411	M771	10	0	0	0	10	0	0	0
412	M776	10	0	0	0	10	0	0	0
413	M777	10	0	0	0	10	0	0	0
414	M778	10	0	0	0	10	0	0	0
415	M779	10	0	0	0	10	0	0	0
416	M780	10	0	0	0	10	0	0	0
417	M781	10	0	0	0	10	0	0	0
418	M782	10	0	0	0	10	0	0	0
419	M783	10	0	0	0	10	0	0	0
420	M784	10	0	0	0	10	0	0	0
421	M785	10	0	0	0	10	0	0	0
422	M485	10	0	0	0	10	0	0	0
423	M497	10	0	0	0	10	0	0	0
424	M498	10	0	0	0	10	0	0	0
425	M786	10	0	0	0	10	0	0	0
426	M787	10	0	0	0	10	0	0	0
427	M788	10	0	0	0	10	0	0	0
428	M698	10	0	0	0	10	0	0	0
429	M699	10	0	0	0	10	0	0	0
430	M700	10	0	0	0	10	0	0	0
431	M468	10	0	0	0	10	0	0	0
432	M469	10	0	0	0	10	0	0	0
433	M506	10	0	0	0	10	0	0	0
434	M767	10	0	0	0	10	0	0	0
435	M770	10	0	0	0	10	0	0	0
436	M772	10	0	0	0	10	0	0	0
437	M773	10	0	0	0	10	0	0	0
438	M774	10	0	0	0	10	0	0	0
439	M775	10	0	0	0	10	0	0	0

Member Detailing Data (Continued)

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
440	M636	10	0	0	0	10	0	0	0
441	M637	10	0	0	0	10	0	0	0
442	M789	10	0	0	0	10	0	0	0
443	M626	10	0	0	0	10	0	0	0
444	M627	10	0	0	0	10	0	0	0
445	M630	10	0	0	0	10	0	0	0
446	M641	10	0	0	0	10	0	0	0
447	M643	1	0	-1	-1	1	0	-1	-1
448	M790	1	0	-1	-1	1	0	-1	-1
449	M791	1	0	-1	-1	1	0	-1	-1
450	M792	1	0	-1	-1	1	0	-1	-1
451	M793	1	0	-1	-1	1	0	-1	-1
452	M794	1	0	-1	-1	1	0	-1	-1
453	M795	10	0	0	0	10	0	0	0
454	M796	10	0	0	0	10	0	0	0
455	M797	10	0	0	0	10	0	0	0
456	M798	10	0	0	0	10	0	0	0
457	M799	10	0	0	0	10	0	0	0
458	M800	10	0	0	0	10	0	0	0
459	M801	1	0	-1	-1	1	0	-1	-1
460	M802	10	0	0	0	10	0	0	0
461	M803	10	0	0	0	10	0	0	0
462	M804	10	0	0	0	10	0	0	0

Member Point Loads

No Data to Print...

Member Distributed Loads (BLC 7 : Ice on Structure)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M273	Y	-0.093	-0.093	0	%100
2	M313	Y	-0.093	-0.093	0	%100
3	M314	Y	-0.093	-0.093	0	%100
4	M336	Y	-0.093	-0.093	0	%100
5	M337	Y	-0.056	-0.056	0	%100
6	M340	Y	-0.056	-0.056	0	%100
7	M342	Y	-0.056	-0.056	0	%100
8	M343	Y	-0.056	-0.056	0	%100
9	M346	Y	-0.056	-0.056	0	%100
10	M347	Y	-0.063	-0.063	0	%100
11	M349	Y	-0.057	-0.057	0	%100
12	M350	Y	-0.057	-0.057	0	%100
13	M351	Y	-0.057	-0.057	0	%100
14	M352	Y	-0.057	-0.057	0	%100
15	M353	Y	-0.072	-0.072	0	%100
16	M354	Y	-0.072	-0.072	0	%100
17	M355	Y	-0.057	-0.057	0	%100
18	M356	Y	-0.073	-0.073	0	%100
19	M357	Y	-0.073	-0.073	0	%100
20	M358	Y	-0.073	-0.073	0	%100
21	M359	Y	-0.073	-0.073	0	%100
22	M360	Y	-0.073	-0.073	0	%100
23	M361	Y	-0.061	-0.061	0	%100
24	M362	Y	-0.061	-0.061	0	%100
25	M363	Y	-0.061	-0.061	0	%100
26	M364	Y	-0.061	-0.061	0	%100
27	M365	Y	-0.061	-0.061	0	%100
28	M366	Y	-0.061	-0.061	0	%100
29	M367	Y	-0.061	-0.061	0	%100
30	M368	Y	-0.061	-0.061	0	%100
31	M369	Y	-0.061	-0.061	0	%100
32	M370	Y	-0.061	-0.061	0	%100
33	M371	Y	-0.063	-0.063	0	%100
34	M372	Y	-0.063	-0.063	0	%100
35	M373	Y	-0.056	-0.056	0	%100
36	M374	Y	-0.056	-0.056	0	%100
37	M375	Y	-0.056	-0.056	0	%100
38	M376	Y	-0.056	-0.056	0	%100
39	M377	Y	-0.063	-0.063	0	%100
40	M378	Y	-0.061	-0.061	0	%100
41	M379	Y	-0.061	-0.061	0	%100
42	M380	Y	-0.061	-0.061	0	%100
43	M381	Y	-0.061	-0.061	0	%100
44	M382	Y	-0.057	-0.057	0	%100
45	M383	Y	-0.057	-0.057	0	%100
46	M384	Y	-0.065	-0.065	0	%100
47	M385	Y	-0.065	-0.065	0	%100
48	M386	Y	-0.057	-0.057	0	%100
49	M387	Y	-0.057	-0.057	0	%100
50	M388	Y	-0.065	-0.065	0	%100
51	M389	Y	-0.065	-0.065	0	%100
52	M390	Y	-0.065	-0.065	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
53	M392	Y	-0.057	-0.057	0	%100
54	M394	Y	-0.057	-0.057	0	%100
55	M396	Y	-0.065	-0.065	0	%100
56	M397	Y	-0.048	-0.048	0	%100
57	M398	Y	-0.048	-0.048	0	%100
58	M399	Y	-0.048	-0.048	0	%100
59	M400	Y	-0.048	-0.048	0	%100
60	M401	Y	-0.063	-0.063	0	%100
61	M402	Y	-0.063	-0.063	0	%100
62	M403	Y	-0.048	-0.048	0	%100
63	M404	Y	-0.048	-0.048	0	%100
64	M405	Y	-0.048	-0.048	0	%100
65	M406	Y	-0.048	-0.048	0	%100
66	M409	Y	-0.048	-0.048	0	%100
67	M410	Y	-0.048	-0.048	0	%100
68	M411	Y	-0.048	-0.048	0	%100
69	M412	Y	-0.048	-0.048	0	%100
70	M413	Y	-0.048	-0.048	0	%100
71	M414	Y	-0.048	-0.048	0	%100
72	M415	Y	-0.048	-0.048	0	%100
73	M416	Y	-0.048	-0.048	0	%100
74	M95	Y	-0.071	-0.071	0	%100
75	M96	Y	-0.071	-0.071	0	%100
76	M530	Y	-0.093	-0.093	0	%100
77	M531	Y	-0.093	-0.093	0	%100
78	M532	Y	-0.093	-0.093	0	%100
79	M533	Y	-0.093	-0.093	0	%100
80	M534	Y	-0.056	-0.056	0	%100
81	M535	Y	-0.056	-0.056	0	%100
82	M536	Y	-0.056	-0.056	0	%100
83	M537	Y	-0.056	-0.056	0	%100
84	M538	Y	-0.056	-0.056	0	%100
85	M539	Y	-0.063	-0.063	0	%100
86	M540	Y	-0.057	-0.057	0	%100
87	M541	Y	-0.057	-0.057	0	%100
88	M542	Y	-0.057	-0.057	0	%100
89	M543	Y	-0.057	-0.057	0	%100
90	M544	Y	-0.072	-0.072	0	%100
91	M545	Y	-0.072	-0.072	0	%100
92	M546	Y	-0.057	-0.057	0	%100
93	M547	Y	-0.073	-0.073	0	%100
94	M548	Y	-0.073	-0.073	0	%100
95	M549	Y	-0.073	-0.073	0	%100
96	M550	Y	-0.073	-0.073	0	%100
97	M551	Y	-0.073	-0.073	0	%100
98	M552	Y	-0.061	-0.061	0	%100
99	M553	Y	-0.061	-0.061	0	%100
100	M554	Y	-0.061	-0.061	0	%100
101	M555	Y	-0.061	-0.061	0	%100
102	M556	Y	-0.061	-0.061	0	%100
103	M557	Y	-0.061	-0.061	0	%100
104	M558	Y	-0.061	-0.061	0	%100
105	M559	Y	-0.061	-0.061	0	%100
106	M560	Y	-0.061	-0.061	0	%100
107	M561	Y	-0.061	-0.061	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
108	M562	Y	-0.063	-0.063	0	%100
109	M563	Y	-0.063	-0.063	0	%100
110	M564	Y	-0.056	-0.056	0	%100
111	M565	Y	-0.056	-0.056	0	%100
112	M566	Y	-0.056	-0.056	0	%100
113	M567	Y	-0.056	-0.056	0	%100
114	M568	Y	-0.063	-0.063	0	%100
115	M569	Y	-0.061	-0.061	0	%100
116	M570	Y	-0.061	-0.061	0	%100
117	M571	Y	-0.061	-0.061	0	%100
118	M572	Y	-0.061	-0.061	0	%100
119	M573	Y	-0.057	-0.057	0	%100
120	M574	Y	-0.057	-0.057	0	%100
121	M575	Y	-0.065	-0.065	0	%100
122	M576	Y	-0.065	-0.065	0	%100
123	M577	Y	-0.057	-0.057	0	%100
124	M578	Y	-0.057	-0.057	0	%100
125	M579	Y	-0.065	-0.065	0	%100
126	M580	Y	-0.065	-0.065	0	%100
127	M581	Y	-0.065	-0.065	0	%100
128	M582	Y	-0.057	-0.057	0	%100
129	M583	Y	-0.057	-0.057	0	%100
130	M584	Y	-0.065	-0.065	0	%100
131	M585	Y	-0.048	-0.048	0	%100
132	M586	Y	-0.048	-0.048	0	%100
133	M587	Y	-0.048	-0.048	0	%100
134	M588	Y	-0.048	-0.048	0	%100
135	M589	Y	-0.063	-0.063	0	%100
136	M590	Y	-0.063	-0.063	0	%100
137	M591	Y	-0.048	-0.048	0	%100
138	M592	Y	-0.048	-0.048	0	%100
139	M593	Y	-0.048	-0.048	0	%100
140	M594	Y	-0.048	-0.048	0	%100
141	M595	Y	-0.048	-0.048	0	%100
142	M596	Y	-0.048	-0.048	0	%100
143	M597	Y	-0.048	-0.048	0	%100
144	M598	Y	-0.048	-0.048	0	%100
145	M599	Y	-0.048	-0.048	0	%100
146	M600	Y	-0.048	-0.048	0	%100
147	M601	Y	-0.048	-0.048	0	%100
148	M602	Y	-0.048	-0.048	0	%100
149	M618	Y	-0.071	-0.071	0	%100
150	M619	Y	-0.071	-0.071	0	%100
151	M620	Y	-0.08	-0.08	0	%100
152	M621	Y	-0.08	-0.08	0	%100
153	M622	Y	-0.08	-0.08	0	%100
154	M623	Y	-0.08	-0.08	0	%100
155	M624	Y	-0.08	-0.08	0	%100
156	M625	Y	-0.08	-0.08	0	%100
157	M628	Y	-0.08	-0.08	0	%100
158	M629	Y	-0.08	-0.08	0	%100
159	M631	Y	-0.082	-0.082	0	%100
160	M632	Y	-0.08	-0.08	0	%100
161	M633	Y	-0.08	-0.08	0	%100
162	M638	Y	-0.049	-0.049	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
163	M639	Y	-0.048	-0.048	0	%100
164	M640	Y	-0.079	-0.079	0	%100
165	M642	Y	-0.079	-0.079	0	%100
166	M644	Y	-0.048	-0.048	0	%100
167	M645	Y	-0.049	-0.049	0	%100
168	M646	Y	-0.048	-0.048	0	%100
169	M647	Y	-0.049	-0.049	0	%100
170	M648	Y	-0.081	-0.081	0	%100
171	M649	Y	-0.05	-0.05	0	%100
172	M650	Y	-0.05	-0.05	0	%100
173	M651	Y	-0.05	-0.05	0	%100
174	M652	Y	-0.05	-0.05	0	%100
175	M653	Y	-0.05	-0.05	0	%100
176	M654	Y	-0.05	-0.05	0	%100
177	M655	Y	-0.05	-0.05	0	%100
178	M656	Y	-0.05	-0.05	0	%100
179	M657	Y	-0.049	-0.049	0	%100
180	M658	Y	-0.049	-0.049	0	%100
181	M659	Y	-0.049	-0.049	0	%100
182	M660	Y	-0.049	-0.049	0	%100
183	M407	Y	-0.08	-0.08	0	%100
184	M408	Y	-0.08	-0.08	0	%100
185	M417	Y	-0.08	-0.08	0	%100
186	M418	Y	-0.08	-0.08	0	%100
187	M419	Y	-0.08	-0.08	0	%100
188	M420	Y	-0.08	-0.08	0	%100
189	M421	Y	-0.08	-0.08	0	%100
190	M422	Y	-0.08	-0.08	0	%100
191	M423	Y	-0.05	-0.05	0	%100
192	M424	Y	-0.05	-0.05	0	%100
193	M425	Y	-0.05	-0.05	0	%100
194	M426	Y	-0.05	-0.05	0	%100
195	M427	Y	-0.08	-0.08	0	%100
196	M428	Y	-0.08	-0.08	0	%100
197	M429	Y	-0.08	-0.08	0	%100
198	M430	Y	-0.08	-0.08	0	%100
199	M431	Y	-0.08	-0.08	0	%100
200	M432	Y	-0.08	-0.08	0	%100
201	M433	Y	-0.08	-0.08	0	%100
202	M434	Y	-0.08	-0.08	0	%100
203	M439	Y	-0.08	-0.08	0	%100
204	M440	Y	-0.05	-0.05	0	%100
205	M441	Y	-0.05	-0.05	0	%100
206	M442	Y	-0.049	-0.049	0	%100
207	M443	Y	-0.08	-0.08	0	%100
208	M444	Y	-0.05	-0.05	0	%100
209	M445	Y	-0.05	-0.05	0	%100
210	M446	Y	-0.049	-0.049	0	%100
211	M447	Y	-0.05	-0.05	0	%100
212	M448	Y	-0.05	-0.05	0	%100
213	M449	Y	-0.08	-0.08	0	%100
214	M450	Y	-0.05	-0.05	0	%100
215	M451	Y	-0.05	-0.05	0	%100
216	M452	Y	-0.049	-0.049	0	%100
217	M453	Y	-0.08	-0.08	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
218	M454	Y	-0.05	-0.05	0	%100
219	M455	Y	-0.05	-0.05	0	%100
220	M456	Y	-0.049	-0.049	0	%100
221	M457	Y	-0.05	-0.05	0	%100
222	M458	Y	-0.05	-0.05	0	%100
223	M463	Y	-0.048	-0.048	0	%100
224	M464	Y	-0.048	-0.048	0	%100
225	M465	Y	-0.048	-0.048	0	%100
226	M466	Y	-0.049	-0.049	0	%100
227	M467	Y	-0.048	-0.048	0	%100
228	M472	Y	-0.048	-0.048	0	%100
229	M486	Y	-0.048	-0.048	0	%100
230	M487	Y	-0.049	-0.049	0	%100
231	M488	Y	-0.048	-0.048	0	%100
232	M489	Y	-0.048	-0.048	0	%100
233	M490	Y	-0.048	-0.048	0	%100
234	M491	Y	-0.048	-0.048	0	%100
235	M492	Y	-0.049	-0.049	0	%100
236	M493	Y	-0.048	-0.048	0	%100
237	M494	Y	-0.048	-0.048	0	%100
238	M495	Y	-0.049	-0.049	0	%100
239	M496	Y	-0.049	-0.049	0	%100
240	M499	Y	-0.048	-0.048	0	%100
241	M500	Y	-0.048	-0.048	0	%100
242	M501	Y	-0.049	-0.049	0	%100
243	M502	Y	-0.048	-0.048	0	%100
244	M503	Y	-0.048	-0.048	0	%100
245	M504	Y	-0.049	-0.049	0	%100
246	M505	Y	-0.049	-0.049	0	%100
247	M391	Y	-0.093	-0.093	0	%100
248	M393	Y	-0.093	-0.093	0	%100
249	M395	Y	-0.093	-0.093	0	%100
250	M459	Y	-0.093	-0.093	0	%100
251	M461	Y	-0.056	-0.056	0	%100
252	M462	Y	-0.056	-0.056	0	%100
253	M470	Y	-0.056	-0.056	0	%100
254	M474	Y	-0.056	-0.056	0	%100
255	M475	Y	-0.056	-0.056	0	%100
256	M476	Y	-0.063	-0.063	0	%100
257	M477	Y	-0.057	-0.057	0	%100
258	M478	Y	-0.057	-0.057	0	%100
259	M479	Y	-0.057	-0.057	0	%100
260	M480	Y	-0.057	-0.057	0	%100
261	M481	Y	-0.072	-0.072	0	%100
262	M482	Y	-0.072	-0.072	0	%100
263	M483	Y	-0.057	-0.057	0	%100
264	M484	Y	-0.073	-0.073	0	%100
265	M519	Y	-0.073	-0.073	0	%100
266	M520	Y	-0.073	-0.073	0	%100
267	M521	Y	-0.073	-0.073	0	%100
268	M522	Y	-0.073	-0.073	0	%100
269	M523	Y	-0.061	-0.061	0	%100
270	M524	Y	-0.061	-0.061	0	%100
271	M525	Y	-0.061	-0.061	0	%100
272	M526	Y	-0.061	-0.061	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
273	M527	Y	-0.061	-0.061	0	%100
274	M528	Y	-0.061	-0.061	0	%100
275	M529	Y	-0.061	-0.061	0	%100
276	M603	Y	-0.061	-0.061	0	%100
277	M604	Y	-0.061	-0.061	0	%100
278	M605	Y	-0.061	-0.061	0	%100
279	M606	Y	-0.063	-0.063	0	%100
280	M607	Y	-0.063	-0.063	0	%100
281	M608	Y	-0.056	-0.056	0	%100
282	M609	Y	-0.056	-0.056	0	%100
283	M610	Y	-0.056	-0.056	0	%100
284	M611	Y	-0.056	-0.056	0	%100
285	M612	Y	-0.063	-0.063	0	%100
286	M613	Y	-0.061	-0.061	0	%100
287	M614	Y	-0.061	-0.061	0	%100
288	M615	Y	-0.061	-0.061	0	%100
289	M616	Y	-0.061	-0.061	0	%100
290	M617	Y	-0.057	-0.057	0	%100
291	M661	Y	-0.057	-0.057	0	%100
292	M662	Y	-0.065	-0.065	0	%100
293	M663	Y	-0.065	-0.065	0	%100
294	M664	Y	-0.057	-0.057	0	%100
295	M665	Y	-0.057	-0.057	0	%100
296	M666	Y	-0.065	-0.065	0	%100
297	M667	Y	-0.065	-0.065	0	%100
298	M668	Y	-0.065	-0.065	0	%100
299	M669	Y	-0.057	-0.057	0	%100
300	M670	Y	-0.057	-0.057	0	%100
301	M671	Y	-0.065	-0.065	0	%100
302	M672	Y	-0.048	-0.048	0	%100
303	M673	Y	-0.048	-0.048	0	%100
304	M674	Y	-0.048	-0.048	0	%100
305	M675	Y	-0.048	-0.048	0	%100
306	M676	Y	-0.063	-0.063	0	%100
307	M677	Y	-0.063	-0.063	0	%100
308	M678	Y	-0.048	-0.048	0	%100
309	M679	Y	-0.048	-0.048	0	%100
310	M680	Y	-0.048	-0.048	0	%100
311	M681	Y	-0.048	-0.048	0	%100
312	M682	Y	-0.048	-0.048	0	%100
313	M683	Y	-0.048	-0.048	0	%100
314	M684	Y	-0.048	-0.048	0	%100
315	M685	Y	-0.048	-0.048	0	%100
316	M686	Y	-0.048	-0.048	0	%100
317	M687	Y	-0.048	-0.048	0	%100
318	M688	Y	-0.048	-0.048	0	%100
319	M689	Y	-0.048	-0.048	0	%100
320	M690	Y	-0.071	-0.071	0	%100
321	M691	Y	-0.071	-0.071	0	%100
322	M692	Y	-0.048	-0.048	0	%100
323	M693	Y	-0.048	-0.048	0	%100
324	M694	Y	-0.048	-0.048	0	%100
325	M695	Y	-0.049	-0.049	0	%100
326	M696	Y	-0.048	-0.048	0	%100
327	M697	Y	-0.048	-0.048	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
328	M701	Y	-0.048	-0.048	0	%100
329	M702	Y	-0.048	-0.048	0	%100
330	M703	Y	-0.049	-0.049	0	%100
331	M704	Y	-0.049	-0.049	0	%100
332	M705	Y	-0.048	-0.048	0	%100
333	M706	Y	-0.049	-0.049	0	%100
334	M460	Y	-0.093	-0.093	0	%100
335	M471	Y	-0.093	-0.093	0	%100
336	M473	Y	-0.093	-0.093	0	%100
337	M507	Y	-0.093	-0.093	0	%100
338	M508	Y	-0.056	-0.056	0	%100
339	M509	Y	-0.056	-0.056	0	%100
340	M510	Y	-0.056	-0.056	0	%100
341	M511	Y	-0.056	-0.056	0	%100
342	M512	Y	-0.056	-0.056	0	%100
343	M513	Y	-0.063	-0.063	0	%100
344	M514	Y	-0.057	-0.057	0	%100
345	M515	Y	-0.057	-0.057	0	%100
346	M516	Y	-0.057	-0.057	0	%100
347	M517	Y	-0.057	-0.057	0	%100
348	M518	Y	-0.072	-0.072	0	%100
349	M707	Y	-0.072	-0.072	0	%100
350	M708	Y	-0.057	-0.057	0	%100
351	M709	Y	-0.073	-0.073	0	%100
352	M710	Y	-0.073	-0.073	0	%100
353	M711	Y	-0.073	-0.073	0	%100
354	M712	Y	-0.073	-0.073	0	%100
355	M713	Y	-0.073	-0.073	0	%100
356	M714	Y	-0.061	-0.061	0	%100
357	M715	Y	-0.061	-0.061	0	%100
358	M716	Y	-0.061	-0.061	0	%100
359	M717	Y	-0.061	-0.061	0	%100
360	M718	Y	-0.061	-0.061	0	%100
361	M719	Y	-0.061	-0.061	0	%100
362	M720	Y	-0.061	-0.061	0	%100
363	M721	Y	-0.061	-0.061	0	%100
364	M722	Y	-0.061	-0.061	0	%100
365	M723	Y	-0.061	-0.061	0	%100
366	M724	Y	-0.063	-0.063	0	%100
367	M725	Y	-0.063	-0.063	0	%100
368	M726	Y	-0.056	-0.056	0	%100
369	M727	Y	-0.056	-0.056	0	%100
370	M728	Y	-0.056	-0.056	0	%100
371	M729	Y	-0.056	-0.056	0	%100
372	M730	Y	-0.063	-0.063	0	%100
373	M731	Y	-0.061	-0.061	0	%100
374	M732	Y	-0.061	-0.061	0	%100
375	M733	Y	-0.061	-0.061	0	%100
376	M734	Y	-0.061	-0.061	0	%100
377	M735	Y	-0.057	-0.057	0	%100
378	M736	Y	-0.057	-0.057	0	%100
379	M737	Y	-0.065	-0.065	0	%100
380	M738	Y	-0.065	-0.065	0	%100
381	M739	Y	-0.057	-0.057	0	%100
382	M740	Y	-0.057	-0.057	0	%100

Member Distributed Loads (BLC 7 : Ice on Structure) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
383	M741	Y	-0.065	-0.065	0	%100
384	M742	Y	-0.065	-0.065	0	%100
385	M743	Y	-0.065	-0.065	0	%100
386	M744	Y	-0.057	-0.057	0	%100
387	M745	Y	-0.057	-0.057	0	%100
388	M746	Y	-0.065	-0.065	0	%100
389	M747	Y	-0.048	-0.048	0	%100
390	M748	Y	-0.048	-0.048	0	%100
391	M749	Y	-0.048	-0.048	0	%100
392	M750	Y	-0.048	-0.048	0	%100
393	M751	Y	-0.063	-0.063	0	%100
394	M752	Y	-0.063	-0.063	0	%100
395	M753	Y	-0.048	-0.048	0	%100
396	M754	Y	-0.048	-0.048	0	%100
397	M755	Y	-0.048	-0.048	0	%100
398	M756	Y	-0.048	-0.048	0	%100
399	M757	Y	-0.048	-0.048	0	%100
400	M758	Y	-0.048	-0.048	0	%100
401	M759	Y	-0.048	-0.048	0	%100
402	M760	Y	-0.048	-0.048	0	%100
403	M761	Y	-0.048	-0.048	0	%100
404	M762	Y	-0.048	-0.048	0	%100
405	M763	Y	-0.048	-0.048	0	%100
406	M764	Y	-0.048	-0.048	0	%100
407	M765	Y	-0.071	-0.071	0	%100
408	M766	Y	-0.071	-0.071	0	%100
409	M768	Y	-0.048	-0.048	0	%100
410	M769	Y	-0.048	-0.048	0	%100
411	M771	Y	-0.048	-0.048	0	%100
412	M776	Y	-0.048	-0.048	0	%100
413	M777	Y	-0.048	-0.048	0	%100
414	M778	Y	-0.049	-0.049	0	%100
415	M779	Y	-0.049	-0.049	0	%100
416	M780	Y	-0.048	-0.048	0	%100
417	M781	Y	-0.049	-0.049	0	%100
418	M782	Y	-0.048	-0.048	0	%100
419	M783	Y	-0.048	-0.048	0	%100
420	M784	Y	-0.048	-0.048	0	%100
421	M785	Y	-0.048	-0.048	0	%100
422	M485	Y	-0.048	-0.048	0	%100
423	M497	Y	-0.049	-0.049	0	%100
424	M498	Y	-0.048	-0.048	0	%100
425	M786	Y	-0.048	-0.048	0	%100
426	M787	Y	-0.048	-0.048	0	%100
427	M788	Y	-0.049	-0.049	0	%100
428	M698	Y	-0.048	-0.048	0	%100
429	M699	Y	-0.048	-0.048	0	%100
430	M700	Y	-0.049	-0.049	0	%100
431	M468	Y	-0.048	-0.048	0	%100
432	M469	Y	-0.048	-0.048	0	%100
433	M506	Y	-0.049	-0.049	0	%100
434	M636	Y	-0.081	-0.081	0	%100
435	M789	Y	-0.081	-0.081	0	%100
436	M637	Y	-0.081	-0.081	0	%100

Member Distributed Loads (BLC 12 : Temperature)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M367	T	81	81	0	%100
2	M388	T	81	81	0	%100
3	M377	T	81	81	0	%100
4	M416	T	81	81	0	%100
5	M385	T	81	81	0	%100
6	M411	T	81	81	0	%100
7	M366	T	81	81	0	%100
8	M415	T	81	81	0	%100
9	M401	T	81	81	0	%100
10	M365	T	81	81	0	%100
11	M398	T	81	81	0	%100
12	M413	T	81	81	0	%100
13	M362	T	81	81	0	%100
14	M378	T	81	81	0	%100
15	M371	T	81	81	0	%100
16	M372	T	81	81	0	%100
17	M361	T	81	81	0	%100
18	M358	T	81	81	0	%100
19	M357	T	81	81	0	%100
20	M368	T	81	81	0	%100
21	M374	T	81	81	0	%100
22	M355	T	81	81	0	%100
23	M383	T	81	81	0	%100
24	M400	T	81	81	0	%100
25	M410	T	81	81	0	%100
26	M402	T	81	81	0	%100
27	M352	T	81	81	0	%100
28	M397	T	81	81	0	%100
29	M396	T	81	81	0	%100
30	M364	T	81	81	0	%100
31	M382	T	81	81	0	%100
32	M412	T	81	81	0	%100
33	M351	T	81	81	0	%100
34	M353	T	81	81	0	%100
35	M359	T	81	81	0	%100
36	M349	T	81	81	0	%100
37	M363	T	81	81	0	%100
38	M347	T	81	81	0	%100
39	M384	T	81	81	0	%100
40	M343	T	81	81	0	%100
41	M404	T	81	81	0	%100
42	M381	T	81	81	0	%100
43	M379	T	81	81	0	%100
44	M403	T	81	81	0	%100
45	M389	T	81	81	0	%100
46	M350	T	81	81	0	%100
47	M346	T	81	81	0	%100
48	M414	T	81	81	0	%100
49	M373	T	81	81	0	%100
50	M340	T	81	81	0	%100
51	M394	T	81	81	0	%100
52	M392	T	81	81	0	%100
53	M405	T	81	81	0	%100
54	M337	T	81	81	0	%100
55	M380	T	81	81	0	%100

Member Distributed Loads (BLC 12 : Temperature) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
56	M369	T	81	81	0	%100
57	M336	T	81	81	0	%100
58	M354	T	81	81	0	%100
59	M356	T	81	81	0	%100
60	M386	T	81	81	0	%100
61	M399	T	81	81	0	%100
62	M342	T	81	81	0	%100
63	M375	T	81	81	0	%100
64	M313	T	81	81	0	%100
65	M409	T	81	81	0	%100
66	M273	T	81	81	0	%100
67	M360	T	81	81	0	%100
68	M370	T	81	81	0	%100
69	M406	T	81	81	0	%100
70	M387	T	81	81	0	%100
71	M314	T	81	81	0	%100
72	M376	T	81	81	0	%100
73	M390	T	81	81	0	%100
74	M95	T	81	81	0	%100
75	M96	T	81	81	0	%100
76	M530	T	81	81	0	%100
77	M531	T	81	81	0	%100
78	M532	T	81	81	0	%100
79	M533	T	81	81	0	%100
80	M534	T	81	81	0	%100
81	M535	T	81	81	0	%100
82	M536	T	81	81	0	%100
83	M537	T	81	81	0	%100
84	M538	T	81	81	0	%100
85	M539	T	81	81	0	%100
86	M540	T	81	81	0	%100
87	M541	T	81	81	0	%100
88	M542	T	81	81	0	%100
89	M543	T	81	81	0	%100
90	M544	T	81	81	0	%100
91	M545	T	81	81	0	%100
92	M546	T	81	81	0	%100
93	M547	T	81	81	0	%100
94	M548	T	81	81	0	%100
95	M549	T	81	81	0	%100
96	M550	T	81	81	0	%100
97	M551	T	81	81	0	%100
98	M552	T	81	81	0	%100
99	M553	T	81	81	0	%100
100	M554	T	81	81	0	%100
101	M555	T	81	81	0	%100
102	M556	T	81	81	0	%100
103	M557	T	81	81	0	%100
104	M558	T	81	81	0	%100
105	M559	T	81	81	0	%100
106	M560	T	81	81	0	%100
107	M561	T	81	81	0	%100
108	M562	T	81	81	0	%100
109	M563	T	81	81	0	%100
110	M564	T	81	81	0	%100

Member Distributed Loads (BLC 12 : Temperature) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
111	M565	T	81	81	0	%100
112	M566	T	81	81	0	%100
113	M567	T	81	81	0	%100
114	M568	T	81	81	0	%100
115	M569	T	81	81	0	%100
116	M570	T	81	81	0	%100
117	M571	T	81	81	0	%100
118	M572	T	81	81	0	%100
119	M573	T	81	81	0	%100
120	M574	T	81	81	0	%100
121	M575	T	81	81	0	%100
122	M576	T	81	81	0	%100
123	M577	T	81	81	0	%100
124	M578	T	81	81	0	%100
125	M579	T	81	81	0	%100
126	M580	T	81	81	0	%100
127	M581	T	81	81	0	%100
128	M582	T	81	81	0	%100
129	M583	T	81	81	0	%100
130	M584	T	81	81	0	%100
131	M585	T	81	81	0	%100
132	M586	T	81	81	0	%100
133	M587	T	81	81	0	%100
134	M588	T	81	81	0	%100
135	M589	T	81	81	0	%100
136	M590	T	81	81	0	%100
137	M591	T	81	81	0	%100
138	M592	T	81	81	0	%100
139	M593	T	81	81	0	%100
140	M594	T	81	81	0	%100
141	M595	T	81	81	0	%100
142	M596	T	81	81	0	%100
143	M597	T	81	81	0	%100
144	M598	T	81	81	0	%100
145	M599	T	81	81	0	%100
146	M600	T	81	81	0	%100
147	M601	T	81	81	0	%100
148	M602	T	81	81	0	%100
149	M618	T	81	81	0	%100
150	M619	T	81	81	0	%100
151	M463	T	81	81	0	%100
152	M464	T	81	81	0	%100
153	M465	T	81	81	0	%100
154	M466	T	81	81	0	%100
155	M467	T	81	81	0	%100
156	M472	T	81	81	0	%100
157	M486	T	81	81	0	%100
158	M487	T	81	81	0	%100
159	M488	T	81	81	0	%100
160	M489	T	81	81	0	%100
161	M490	T	81	81	0	%100
162	M491	T	81	81	0	%100
163	M492	T	81	81	0	%100
164	M493	T	81	81	0	%100
165	M494	T	81	81	0	%100

Member Distributed Loads (BLC 12 : Temperature) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
166	M495	T	81	81	0	%100
167	M496	T	81	81	0	%100
168	M499	T	81	81	0	%100
169	M500	T	81	81	0	%100
170	M501	T	81	81	0	%100
171	M502	T	81	81	0	%100
172	M503	T	81	81	0	%100
173	M504	T	81	81	0	%100
174	M505	T	81	81	0	%100
175	M391	T	81	81	0	%100
176	M393	T	81	81	0	%100
177	M395	T	81	81	0	%100
178	M459	T	81	81	0	%100
179	M461	T	81	81	0	%100
180	M462	T	81	81	0	%100
181	M470	T	81	81	0	%100
182	M474	T	81	81	0	%100
183	M475	T	81	81	0	%100
184	M476	T	81	81	0	%100
185	M477	T	81	81	0	%100
186	M478	T	81	81	0	%100
187	M479	T	81	81	0	%100
188	M480	T	81	81	0	%100
189	M481	T	81	81	0	%100
190	M482	T	81	81	0	%100
191	M483	T	81	81	0	%100
192	M484	T	81	81	0	%100
193	M519	T	81	81	0	%100
194	M520	T	81	81	0	%100
195	M521	T	81	81	0	%100
196	M522	T	81	81	0	%100
197	M523	T	81	81	0	%100
198	M524	T	81	81	0	%100
199	M525	T	81	81	0	%100
200	M526	T	81	81	0	%100
201	M527	T	81	81	0	%100
202	M528	T	81	81	0	%100
203	M529	T	81	81	0	%100
204	M603	T	81	81	0	%100
205	M604	T	81	81	0	%100
206	M605	T	81	81	0	%100
207	M606	T	81	81	0	%100
208	M607	T	81	81	0	%100
209	M608	T	81	81	0	%100
210	M609	T	81	81	0	%100
211	M610	T	81	81	0	%100
212	M611	T	81	81	0	%100
213	M612	T	81	81	0	%100
214	M613	T	81	81	0	%100
215	M614	T	81	81	0	%100
216	M615	T	81	81	0	%100
217	M616	T	81	81	0	%100
218	M617	T	81	81	0	%100
219	M661	T	81	81	0	%100
220	M662	T	81	81	0	%100

Member Distributed Loads (BLC 12 : Temperature) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
221	M663	T	81	81	0	%100
222	M664	T	81	81	0	%100
223	M665	T	81	81	0	%100
224	M666	T	81	81	0	%100
225	M667	T	81	81	0	%100
226	M668	T	81	81	0	%100
227	M669	T	81	81	0	%100
228	M670	T	81	81	0	%100
229	M671	T	81	81	0	%100
230	M672	T	81	81	0	%100
231	M673	T	81	81	0	%100
232	M674	T	81	81	0	%100
233	M675	T	81	81	0	%100
234	M676	T	81	81	0	%100
235	M677	T	81	81	0	%100
236	M678	T	81	81	0	%100
237	M679	T	81	81	0	%100
238	M680	T	81	81	0	%100
239	M681	T	81	81	0	%100
240	M682	T	81	81	0	%100
241	M683	T	81	81	0	%100
242	M684	T	81	81	0	%100
243	M685	T	81	81	0	%100
244	M686	T	81	81	0	%100
245	M687	T	81	81	0	%100
246	M688	T	81	81	0	%100
247	M689	T	81	81	0	%100
248	M690	T	81	81	0	%100
249	M691	T	81	81	0	%100
250	M692	T	81	81	0	%100
251	M693	T	81	81	0	%100
252	M694	T	81	81	0	%100
253	M695	T	81	81	0	%100
254	M696	T	81	81	0	%100
255	M697	T	81	81	0	%100
256	M701	T	81	81	0	%100
257	M702	T	81	81	0	%100
258	M703	T	81	81	0	%100
259	M704	T	81	81	0	%100
260	M705	T	81	81	0	%100
261	M706	T	81	81	0	%100
262	M460	T	81	81	0	%100
263	M471	T	81	81	0	%100
264	M473	T	81	81	0	%100
265	M507	T	81	81	0	%100
266	M508	T	81	81	0	%100
267	M509	T	81	81	0	%100
268	M510	T	81	81	0	%100
269	M511	T	81	81	0	%100
270	M512	T	81	81	0	%100
271	M513	T	81	81	0	%100
272	M514	T	81	81	0	%100
273	M515	T	81	81	0	%100
274	M516	T	81	81	0	%100
275	M517	T	81	81	0	%100

Member Distributed Loads (BLC 12 : Temperature) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
276	M518	T	81	81	0	%100
277	M707	T	81	81	0	%100
278	M708	T	81	81	0	%100
279	M709	T	81	81	0	%100
280	M710	T	81	81	0	%100
281	M711	T	81	81	0	%100
282	M712	T	81	81	0	%100
283	M713	T	81	81	0	%100
284	M714	T	81	81	0	%100
285	M715	T	81	81	0	%100
286	M716	T	81	81	0	%100
287	M717	T	81	81	0	%100
288	M718	T	81	81	0	%100
289	M719	T	81	81	0	%100
290	M720	T	81	81	0	%100
291	M721	T	81	81	0	%100
292	M722	T	81	81	0	%100
293	M723	T	81	81	0	%100
294	M724	T	81	81	0	%100
295	M725	T	81	81	0	%100
296	M726	T	81	81	0	%100
297	M727	T	81	81	0	%100
298	M728	T	81	81	0	%100
299	M729	T	81	81	0	%100
300	M730	T	81	81	0	%100
301	M731	T	81	81	0	%100
302	M732	T	81	81	0	%100
303	M733	T	81	81	0	%100
304	M734	T	81	81	0	%100
305	M735	T	81	81	0	%100
306	M736	T	81	81	0	%100
307	M737	T	81	81	0	%100
308	M738	T	81	81	0	%100
309	M739	T	81	81	0	%100
310	M740	T	81	81	0	%100
311	M741	T	81	81	0	%100
312	M742	T	81	81	0	%100
313	M743	T	81	81	0	%100
314	M744	T	81	81	0	%100
315	M745	T	81	81	0	%100
316	M746	T	81	81	0	%100
317	M747	T	81	81	0	%100
318	M748	T	81	81	0	%100
319	M749	T	81	81	0	%100
320	M750	T	81	81	0	%100
321	M751	T	81	81	0	%100
322	M752	T	81	81	0	%100
323	M753	T	81	81	0	%100
324	M754	T	81	81	0	%100
325	M755	T	81	81	0	%100
326	M756	T	81	81	0	%100
327	M757	T	81	81	0	%100
328	M758	T	81	81	0	%100
329	M759	T	81	81	0	%100
330	M760	T	81	81	0	%100

Member Distributed Loads (BLC 12 : Temperature) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
331	M761	T	81	81	0	%100
332	M762	T	81	81	0	%100
333	M763	T	81	81	0	%100
334	M764	T	81	81	0	%100
335	M765	T	81	81	0	%100
336	M766	T	81	81	0	%100
337	M768	T	81	81	0	%100
338	M769	T	81	81	0	%100
339	M771	T	81	81	0	%100
340	M776	T	81	81	0	%100
341	M777	T	81	81	0	%100
342	M778	T	81	81	0	%100
343	M779	T	81	81	0	%100
344	M780	T	81	81	0	%100
345	M781	T	81	81	0	%100
346	M485	T	81	81	0	%100
347	M497	T	81	81	0	%100
348	M498	T	81	81	0	%100
349	M786	T	81	81	0	%100
350	M787	T	81	81	0	%100
351	M788	T	81	81	0	%100
352	M698	T	81	81	0	%100
353	M699	T	81	81	0	%100
354	M700	T	81	81	0	%100
355	M468	T	81	81	0	%100
356	M469	T	81	81	0	%100
357	M506	T	81	81	0	%100

Member Distributed Loads (BLC 8 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M774	X	0.073	0.073	0	1
2	M775	X	0.073	0.073	0	1
3	M636	X	0.022	0.022	0	4.917
4	M637	X	0.022	0.022	0	4.917
5	M789	X	0.021	0.021	0	5.167
6	M626	X	0.065	0.065	0	1
7	M627	X	0.065	0.065	0	1
8	M630	X	0.065	0.065	0	1
9	M641	X	0.065	0.065	0	1
10	M790	X	0	0	0	3.32
11	M792	X	0	0	0	3.32
12	M794	X	0	0	0	3.33
13	M795	X	0.189	0.189	0	1
14	M796	X	0.065	0.065	0	1
15	M797	X	0.065	0.065	0	1
16	M798	X	0.189	0.189	0	1
17	M799	X	0.189	0.189	0	1
18	M800	X	0.065	0.065	0	1
19	M801	X	0	0	0	3.34
20	M802	X	0.189	0.189	0	1
21	M273	X	0.021	0.021	0	6.375
22	M313	X	0.021	0.021	0	6.375
23	M314	X	0.021	0.021	0	6.375
24	M336	X	0.021	0.021	0	6.375
25	M340	X	0.011	0.011	0	57

Member Distributed Loads (BLC 8 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
26	M342	X	0.011	0.011	0	57
27	M349	X	0.011	0.011	0	57
28	M350	X	0.011	0.011	0	57
29	M361	X	0.014	0.014	0.167	4.643
30	M362	X	0.014	0.014	0.167	4.643
31	M363	X	0.014	0.014	0.167	4.643
32	M364	X	0.011	0.011	0.167	4.643
33	M365	X	0.014	0.014	0.167	4.643
34	M366	X	0.014	0.014	0.167	4.643
35	M367	X	0.016	0.016	0.167	4.643
36	M368	X	0.016	0.016	0.167	4.643
37	M369	X	0.016	0.016	0.167	4.643
38	M370	X	0.016	0.016	0.167	4.643
39	M378	X	0.016	0.016	0.167	4.643
40	M379	X	0.016	0.016	0.167	4.643
41	M380	X	0.016	0.016	0.167	4.643
42	M381	X	0.016	0.016	0.167	4.643
43	M530	X	0.021	0.021	0	6.375
44	M531	X	0.021	0.021	0	6.375
45	M532	X	0.021	0.021	0	6.375
46	M533	X	0.021	0.021	0	6.375
47	M535	X	0.011	0.011	0	57
48	M536	X	0.011	0.011	0	57
49	M540	X	0.011	0.011	0	57
50	M541	X	0.011	0.011	0	57
51	M552	X	0.014	0.014	0.167	4.643
52	M553	X	0.014	0.014	0.167	4.643
53	M554	X	0.014	0.014	0.167	4.643
54	M555	X	0.011	0.011	0.167	4.643
55	M556	X	0.014	0.014	0.167	4.643
56	M557	X	0.014	0.014	0.167	4.643
57	M558	X	0.016	0.016	0.167	4.643
58	M559	X	0.016	0.016	0.167	4.643
59	M560	X	0.016	0.016	0.167	4.643
60	M561	X	0.016	0.016	0.167	4.643
61	M569	X	0.016	0.016	0.167	4.643
62	M570	X	0.016	0.016	0.167	4.643
63	M571	X	0.016	0.016	0.167	4.643
64	M572	X	0.016	0.016	0.167	4.643
65	M620	X	0.018	0.018	0	6.875
66	M621	X	0.018	0.018	0	6.875
67	M622	X	0.018	0.018	0	9.708
68	M623	X	0.018	0.018	0	9.708
69	M624	X	0.018	0.018	0	9.708
70	M625	X	0.018	0.018	0	9.708
71	M628	X	0.021	0.021	0	4.292
72	M629	X	0.021	0.021	0	4.292
73	M631	X	0.021	0.021	0	12.167
74	M648	X	0.022	0.022	0	5.167
75	M407	X	0.018	0.018	0	8.208
76	M408	X	0.018	0.018	0	8.208
77	M417	X	0.018	0.018	0	8.208
78	M418	X	0.018	0.018	0	8.208
79	M419	X	0.022	0.022	0	7.5
80	M421	X	0.022	0.022	0	7.5

Member Distributed Loads (BLC 8 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
81	M427	X	0.018	0.018	0	8.208
82	M428	X	0.018	0.018	0	8.208
83	M429	X	0.018	0.018	0	8.208
84	M430	X	0.018	0.018	0	8.208
85	M431	X	0.022	0.022	0	6.75
86	M433	X	0.022	0.022	0	6.75
87	M439	X	0.018	0.018	0	9.708
88	M443	X	0.018	0.018	0	9.708
89	M449	X	0.018	0.018	0	9.708
90	M453	X	0.018	0.018	0	9.708
91	M391	X	0.021	0.021	0	6.375
92	M393	X	0.021	0.021	0	6.375
93	M395	X	0.021	0.021	0	6.375
94	M459	X	0.021	0.021	0	6.375
95	M462	X	0.011	0.011	0	57
96	M470	X	0.011	0.011	0	57
97	M477	X	0.011	0.011	0	57
98	M478	X	0.011	0.011	0	57
99	M523	X	0.014	0.014	0.167	4.643
100	M524	X	0.014	0.014	0.167	4.643
101	M525	X	0.014	0.014	0.167	4.643
102	M526	X	0.011	0.011	0.167	4.643
103	M527	X	0.014	0.014	0.167	4.643
104	M528	X	0.014	0.014	0.167	4.643
105	M529	X	0.016	0.016	0.167	4.643
106	M603	X	0.016	0.016	0.167	4.643
107	M604	X	0.016	0.016	0.167	4.643
108	M605	X	0.016	0.016	0.167	4.643
109	M613	X	0.016	0.016	0.167	4.643
110	M614	X	0.016	0.016	0.167	4.643
111	M615	X	0.016	0.016	0.167	4.643
112	M616	X	0.016	0.016	0.167	4.643
113	M460	X	0.021	0.021	0	6.375
114	M471	X	0.021	0.021	0	6.375
115	M473	X	0.021	0.021	0	6.375
116	M507	X	0.021	0.021	0	6.375
117	M509	X	0.011	0.011	0	57
118	M510	X	0.011	0.011	0	57
119	M514	X	0.011	0.011	0	57
120	M515	X	0.011	0.011	0	57
121	M714	X	0.014	0.014	0.167	4.643
122	M715	X	0.014	0.014	0.167	4.643
123	M716	X	0.014	0.014	0.167	4.643
124	M717	X	0.011	0.011	0.167	4.643
125	M718	X	0.014	0.014	0.167	4.643
126	M719	X	0.014	0.014	0.167	4.643
127	M720	X	0.016	0.016	0.167	4.643
128	M721	X	0.016	0.016	0.167	4.643
129	M722	X	0.016	0.016	0.167	4.643
130	M723	X	0.016	0.016	0.167	4.643
131	M731	X	0.016	0.016	0.167	4.643
132	M732	X	0.016	0.016	0.167	4.643
133	M733	X	0.016	0.016	0.167	4.643
134	M734	X	0.016	0.016	0.167	4.643
135	M767	X	0.073	0.073	0	1

Member Distributed Loads (BLC 8 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
136	M770	X	0.073	0.073	0	1
137	M772	X	0.073	0.073	0	1
138	M773	X	0.073	0.073	0	1

Member Distributed Loads (BLC 13 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M517	Z	0.011	0.011	0.25	4.75
2	M518	Z	0.016	0.016	0.405	4.595
3	M707	Z	0.016	0.016	0.405	4.595
4	M708	Z	0.011	0.011	0.25	4.75
5	M709	Z	0.016	0.016	0	5
6	M710	Z	0.016	0.016	0	5
7	M711	Z	0.016	0.016	0.405	4.595
8	M712	Z	0.016	0.016	0.405	4.595
9	M713	Z	0.016	0.016	0	5
10	M714	Z	0.011	0.011	0.167	4.643
11	M715	Z	0.011	0.011	0.167	4.643
12	M716	Z	0.011	0.011	0.167	4.643
13	M717	Z	0.014	0.014	0.167	4.643
14	M718	Z	0.011	0.011	0.167	4.643
15	M719	Z	0.011	0.011	0.167	4.643
16	M720	Z	0.008	0.008	0.167	4.643
17	M721	Z	0.008	0.008	0.167	4.643
18	M722	Z	0.008	0.008	0.167	4.643
19	M723	Z	0.008	0.008	0.167	4.643
20	M731	Z	0.008	0.008	0.167	4.643
21	M732	Z	0.008	0.008	0.167	4.643
22	M733	Z	0.008	0.008	0.167	4.643
23	M734	Z	0.008	0.008	0.167	4.643
24	M765	Z	0.016	0.016	0	5
25	M766	Z	0.016	0.016	0	5
26	M768	Z	0.008	0.008	0	2.083
27	M769	Z	0.008	0.008	0	1.583
28	M771	Z	0.008	0.008	0	2.083
29	M776	Z	0.008	0.008	0	2.083
30	M777	Z	0.008	0.008	0	1.583
31	M778	Z	0.008	0.008	0	1.583
32	M779	Z	0.008	0.008	0	1.583
33	M780	Z	0.008	0.008	0	1.583
34	M781	Z	0.008	0.008	0	1.583
35	M485	Z	0.008	0.008	0	2.083
36	M497	Z	0.008	0.008	0	1.583
37	M498	Z	0.008	0.008	0	1.583
38	M786	Z	0.008	0.008	0	2.083
39	M787	Z	0.008	0.008	0	1.583
40	M788	Z	0.008	0.008	0	1.583
41	M698	Z	0.008	0.008	0	2.083
42	M699	Z	0.008	0.008	0	1.583
43	M700	Z	0.008	0.008	0	1.583
44	M468	Z	0.008	0.008	0	2.083
45	M469	Z	0.008	0.008	0	1.583
46	M506	Z	0.008	0.008	0	1.583
47	M767	Z	0.072	0.072	0	1
48	M770	Z	0.072	0.072	0	1
49	M772	Z	0.072	0.072	0	1

Member Distributed Loads (BLC 13 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
50	M773	Z	0.072	0.072	0	1
51	M774	Z	0.072	0.072	0	1
52	M775	Z	0.072	0.072	0	1
53	M626	Z	0.064	0.064	0	1
54	M627	Z	0.064	0.064	0	1
55	M630	Z	0.064	0.064	0	1
56	M641	Z	0.064	0.064	0	1
57	M643	Z	0	0	0	3.33
58	M791	Z	0	0	0	3.33
59	M793	Z	0	0	0	3.31
60	M795	Z	0.064	0.064	0	1
61	M796	Z	0.187	0.187	0	1
62	M797	Z	0.187	0.187	0	1
63	M798	Z	0.064	0.064	0	1
64	M799	Z	0.064	0.064	0	1
65	M800	Z	0.187	0.187	0	1
66	M802	Z	0.064	0.064	0	1
67	M273	Z	0.026	0.026	0	6.375
68	M313	Z	0.026	0.026	0	6.375
69	M314	Z	0.026	0.026	0	6.375
70	M336	Z	0.026	0.026	0	6.375
71	M351	Z	0.011	0.011	0.25	4.75
72	M352	Z	0.011	0.011	0.25	4.75
73	M353	Z	0.016	0.016	0.405	4.595
74	M354	Z	0.016	0.016	0.405	4.595
75	M355	Z	0.011	0.011	0.25	4.75
76	M356	Z	0.016	0.016	0	5
77	M357	Z	0.016	0.016	0	5
78	M358	Z	0.016	0.016	0.405	4.595
79	M359	Z	0.016	0.016	0.405	4.595
80	M360	Z	0.016	0.016	0	5
81	M361	Z	0.011	0.011	0.167	4.643
82	M362	Z	0.011	0.011	0.167	4.643
83	M363	Z	0.011	0.011	0.167	4.643
84	M364	Z	0.014	0.014	0.167	4.643
85	M365	Z	0.011	0.011	0.167	4.643
86	M366	Z	0.011	0.011	0.167	4.643
87	M367	Z	0.008	0.008	0.167	4.643
88	M368	Z	0.008	0.008	0.167	4.643
89	M369	Z	0.008	0.008	0.167	4.643
90	M370	Z	0.008	0.008	0.167	4.643
91	M378	Z	0.008	0.008	0.167	4.643
92	M379	Z	0.008	0.008	0.167	4.643
93	M380	Z	0.008	0.008	0.167	4.643
94	M381	Z	0.008	0.008	0.167	4.643
95	M95	Z	0.016	0.016	0	5
96	M96	Z	0.016	0.016	0	5
97	M530	Z	0.026	0.026	0	6.375
98	M531	Z	0.026	0.026	0	6.375
99	M532	Z	0.026	0.026	0	6.375
100	M533	Z	0.026	0.026	0	6.375
101	M542	Z	0.011	0.011	0.25	4.75
102	M543	Z	0.011	0.011	0.25	4.75
103	M544	Z	0.016	0.016	0.405	4.595
104	M545	Z	0.016	0.016	0.405	4.595

Member Distributed Loads (BLC 13 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
105	M546	Z	0.011	0.011	0.25	4.75
106	M547	Z	0.016	0.016	0	5
107	M548	Z	0.016	0.016	0	5
108	M549	Z	0.016	0.016	0.405	4.595
109	M550	Z	0.016	0.016	0.405	4.595
110	M551	Z	0.016	0.016	0	5
111	M552	Z	0.011	0.011	0.167	4.643
112	M553	Z	0.011	0.011	0.167	4.643
113	M554	Z	0.011	0.011	0.167	4.643
114	M555	Z	0.014	0.014	0.167	4.643
115	M556	Z	0.011	0.011	0.167	4.643
116	M557	Z	0.011	0.011	0.167	4.643
117	M558	Z	0.008	0.008	0.167	4.643
118	M559	Z	0.008	0.008	0.167	4.643
119	M560	Z	0.008	0.008	0.167	4.643
120	M561	Z	0.008	0.008	0.167	4.643
121	M569	Z	0.008	0.008	0.167	4.643
122	M570	Z	0.008	0.008	0.167	4.643
123	M571	Z	0.008	0.008	0.167	4.643
124	M572	Z	0.008	0.008	0.167	4.643
125	M618	Z	0.016	0.016	0	5
126	M619	Z	0.016	0.016	0	5
127	M620	Z	0.021	0.021	0	6.875
128	M621	Z	0.021	0.021	0	6.875
129	M622	Z	0.021	0.021	0	9.708
130	M623	Z	0.021	0.021	0	9.708
131	M624	Z	0.021	0.021	0	9.708
132	M625	Z	0.021	0.021	0	9.708
133	M628	Z	0.017	0.017	0	4.292
134	M629	Z	0.017	0.017	0	4.292
135	M632	Z	0.022	0.022	0	8.083
136	M633	Z	0.022	0.022	0	8.083
137	M640	Z	0.022	0.022	0	10.667
138	M642	Z	0.022	0.022	0	10.667
139	M649	Z	0.008	0.008	0	2
140	M650	Z	0.008	0.008	0	2
141	M651	Z	0.008	0.008	0	2
142	M652	Z	0.008	0.008	0	2
143	M653	Z	0.008	0.008	0	2
144	M654	Z	0.008	0.008	0	2
145	M655	Z	0.008	0.008	0	2
146	M656	Z	0.008	0.008	0	2
147	M657	Z	0.008	0.008	0	2
148	M658	Z	0.008	0.008	0	2
149	M659	Z	0.008	0.008	0	2
150	M660	Z	0.008	0.008	0	2
151	M407	Z	0.021	0.021	0	8.208
152	M408	Z	0.021	0.021	0	8.208
153	M417	Z	0.021	0.021	0	8.208
154	M418	Z	0.021	0.021	0	8.208
155	M420	Z	0.022	0.022	0	7.5
156	M422	Z	0.022	0.022	0	7.5
157	M427	Z	0.021	0.021	0	8.208
158	M428	Z	0.021	0.021	0	8.208
159	M429	Z	0.021	0.021	0	8.208

Member Distributed Loads (BLC 13 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
160	M430	Z	0.021	0.021	0	8.208
161	M432	Z	0.022	0.022	0	5.75
162	M434	Z	0.022	0.022	0	5.75
163	M439	Z	0.021	0.021	0	9.708
164	M440	Z	0.008	0.008	0	2
165	M441	Z	0.008	0.008	0	2
166	M442	Z	0.008	0.008	0	2
167	M443	Z	0.021	0.021	0	9.708
168	M444	Z	0.008	0.008	0	2
169	M445	Z	0.008	0.008	0	2
170	M446	Z	0.008	0.008	0	2
171	M449	Z	0.021	0.021	0	9.708
172	M450	Z	0.008	0.008	0	2
173	M451	Z	0.008	0.008	0	2
174	M452	Z	0.008	0.008	0	2
175	M453	Z	0.021	0.021	0	9.708
176	M454	Z	0.008	0.008	0	2
177	M455	Z	0.008	0.008	0	2
178	M456	Z	0.008	0.008	0	2
179	M463	Z	0.008	0.008	0	2.083
180	M464	Z	0.008	0.008	0	2.083
181	M465	Z	0.008	0.008	0	2.083
182	M466	Z	0.008	0.008	0	1.583
183	M467	Z	0.008	0.008	0	2.083
184	M472	Z	0.008	0.008	0	2.083
185	M486	Z	0.008	0.008	0	1.583
186	M487	Z	0.008	0.008	0	1.583
187	M488	Z	0.008	0.008	0	2.083
188	M489	Z	0.008	0.008	0	1.583
189	M490	Z	0.008	0.008	0	2.083
190	M491	Z	0.008	0.008	0	1.583
191	M492	Z	0.008	0.008	0	1.583
192	M493	Z	0.008	0.008	0	2.083
193	M494	Z	0.008	0.008	0	1.583
194	M495	Z	0.008	0.008	0	1.583
195	M496	Z	0.008	0.008	0	1.583
196	M499	Z	0.008	0.008	0	1.583
197	M500	Z	0.008	0.008	0	1.583
198	M501	Z	0.008	0.008	0	1.583
199	M502	Z	0.008	0.008	0	1.583
200	M503	Z	0.008	0.008	0	1.583
201	M504	Z	0.008	0.008	0	1.583
202	M505	Z	0.008	0.008	0	1.583
203	M391	Z	0.026	0.026	0	6.375
204	M393	Z	0.026	0.026	0	6.375
205	M395	Z	0.026	0.026	0	6.375
206	M459	Z	0.026	0.026	0	6.375
207	M479	Z	0.011	0.011	0.25	4.75
208	M480	Z	0.011	0.011	0.25	4.75
209	M481	Z	0.016	0.016	0.405	4.595
210	M482	Z	0.016	0.016	0.405	4.595
211	M483	Z	0.011	0.011	0.25	4.75
212	M484	Z	0.016	0.016	0	5
213	M519	Z	0.016	0.016	0	5
214	M520	Z	0.016	0.016	0.405	4.595

Member Distributed Loads (BLC 13 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
215	M521	Z	0.016	0.016	0.405	4.595
216	M522	Z	0.016	0.016	0	5
217	M523	Z	0.011	0.011	0.167	4.643
218	M524	Z	0.011	0.011	0.167	4.643
219	M525	Z	0.011	0.011	0.167	4.643
220	M526	Z	0.014	0.014	0.167	4.643
221	M527	Z	0.011	0.011	0.167	4.643
222	M528	Z	0.011	0.011	0.167	4.643
223	M529	Z	0.008	0.008	0.167	4.643
224	M603	Z	0.008	0.008	0.167	4.643
225	M604	Z	0.008	0.008	0.167	4.643
226	M605	Z	0.008	0.008	0.167	4.643
227	M613	Z	0.008	0.008	0.167	4.643
228	M614	Z	0.008	0.008	0.167	4.643
229	M615	Z	0.008	0.008	0.167	4.643
230	M616	Z	0.008	0.008	0.167	4.643
231	M690	Z	0.016	0.016	0	5
232	M691	Z	0.016	0.016	0	5
233	M692	Z	0.008	0.008	0	2.083
234	M693	Z	0.008	0.008	0	2.083
235	M694	Z	0.008	0.008	0	1.583
236	M695	Z	0.008	0.008	0	1.583
237	M696	Z	0.008	0.008	0	2.083
238	M697	Z	0.008	0.008	0	1.583
239	M701	Z	0.008	0.008	0	2.083
240	M702	Z	0.008	0.008	0	1.583
241	M703	Z	0.008	0.008	0	1.583
242	M704	Z	0.008	0.008	0	1.583
243	M705	Z	0.008	0.008	0	1.583
244	M706	Z	0.008	0.008	0	1.583
245	M460	Z	0.026	0.026	0	6.375
246	M471	Z	0.026	0.026	0	6.375
247	M473	Z	0.026	0.026	0	6.375
248	M507	Z	0.026	0.026	0	6.375
249	M516	Z	0.011	0.011	0.25	4.75

Member Area Loads (BLC 3 : Wind X)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N488	N487	N483	N486	X	Open Structure	0.032
2	N492	N488	N486	N491	X	Open Structure	0.034

Member Area Loads (BLC 4 : Wind Z)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N628	N627	N483	N486	Z	Open Structure	0.032
2	N629	N628	N486	N491	Z	Open Structure	0.034

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Distributed	Area(Member)
1	Self Weight	DL		-1.02				
2	PIPING DL OFF TRUSS	DL				27		
3	Wind X	WLX				81		2
4	Wind Z	WLZ				16		2

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Distributed	Area(Member)
5	Seismic X	ELX	0.885			84		
6	Seismic Z	ELZ			0.885	87		
7	Ice on Structure	OL1					436	
8	BLC 3 Transient Area Loads	None					138	
9	6"Cable Tray	DL				54		
10	6" Cables	FL				54		
11	6" CT Ice	OL1				54		
12	Temperature	TL				118	357	
13	BLC 4 Transient Area Loads	None					249	
14	12"Cable Tray	DL				27		
15	12" Cables	FL				27		
16	12" CT Ice	OL1				27		
19	6" Fluid Load	FL				24		
20	8" Fluid Load	FL				24		
21	20" Fluid Load	FL				8		
22	Fire Piping Fluid	FL				104		
24	6" Self Weight	DL				24		
25	8" Self Weight	DL				24		
26	20" Self Weight	DL				8		
27	6" Fire Pipe Self Weight	DL				104		
29	6" Pipe w/ Ice	OL1				24		
30	8" Pipe w/ Ice	OL1				24		
31	20" Pipe w/ Ice	OL1				8		
32	6" Fire Pipe w/ Ice	OL1				104		
34	Wind 6" Pipe	WLX				24		
35	Wind 8" Pipe	WLX				24		
36	Wind 20" Pipe	WLX				8		
37	Wind 6" FW Pipe	WLX				104		
39	Seismic X 6" Pipe	ELX				24		
40	Seismic X 8" Pipe	ELX				24		
41	Seismic X 20" Pipe	ELX				9		
42	Seismic X 6" FW Pipe (Empty)	ELX				104		
44	Seismic Z 6" Pipe	ELZ				24		
45	Seismic Z 8" Pipe	ELZ				24		
46	Seismic Z 20" Pipe	ELZ				9		
47	Seismic Z 6" FW Pipe (Empty)	ELZ				104		

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DL		Y	DL	1																
2	Fluid Load		Y	FL	1																
3	Wind X		Y	WLX	1																
4	Wind Z		Y	WLZ	1																
5	ELX		Y	ELX	1																
6	ELZ		Y	ELZ	1																
7	Ice Load		Y	OL1	1																
8	Servicability Wind Speed Drift Check		Y	DL	1	LL	0.5	WLX	0.71												
9	Servicability Wind Speed Drift Check		Y	DL	1	LL	0.5	WLZ	0.71												
10																					
11	Atmospheric Ice Load Combinations																				
12	1.2D + 1.6L + 0.2Di + 0.5S	Yes	Y	DL	1.2	LL	1.6	OL1	0.2	SL	0.5			FL	1.2						
13	1.2D + Di + WiX + 0.5S	Yes	Y	DL	1.2	OL1	1	WLX	0.077	SL	0.5			FL	1.2						
14	1.2D + Di + WiZ + 0.5S	Yes	Y	DL	1.2	OL1	1	WLZ	0.077	SL	0.5			FL	1.2						
15	1.2D + Di + WiX + 0.5S	Yes	Y	DL	1.2	OL1	1	WLX	-0.077	SL	0.5			FL	1.2						
16	1.2D + Di + Wi + 0.5S	Yes	Y	DL	1.2	OL1	1	WLZ	-0.077	SL	0.5			FL	1.2						

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
17	0.9D + Di + WiX	Yes	Y	DL	0.9	OL1	1	WLX	0.077					FL	0.9				
18	0.9D + Di + WiZ	Yes	Y	DL	0.9	OL1	1	WLZ	0.077					FL	0.9				
19	0.9D + Di - WiX	Yes	Y	DL	0.9	OL1	1	WLX	-0.077					FL	0.9				
20	0.9D + Di - WiZ	Yes	Y	DL	0.9	OL1	1	WLZ	-0.077					FL	0.9				
21																			
22																			
23	Deflection 1		Y	DL	1									FL	1				
24	Deflection 2		Y	LL	1									FL	1				
25	Deflection 3		Y	DL	1	LL	1							FL	1				
26	ASCE Strength 1	Yes	Y	DL	1.4									FL	1.4				
27	ASCE Strength 2 (a)	Yes	Y	DL	1.2	LL	1.6	LLS	1.6					FL	1.2				
28	ASCE Strength 3 (b) (a)	Yes	Y	DL	1.2	WLX	0.5							FL	1.2				
29	ASCE Strength 3 (b) (b)	Yes	Y	DL	1.2	WLZ	0.5							FL	1.2				
30	ASCE Strength 3 (b) (c)	Yes	Y	DL	1.2	WLX	-0.5							FL	1.2				
31	ASCE Strength 3 (b) (d)	Yes	Y	DL	1.2	WLZ	-0.5							FL	1.2				
32	ASCE Strength 4 (a) (a)	Yes	Y	DL	1.2	WLX	1	LL	0.5	LLS	1			FL	1.2				
33	ASCE Strength 4 (a) (b)	Yes	Y	DL	1.2	WLZ	1	LL	0.5	LLS	1			FL	1.2				
34	ASCE Strength 4 (a) (c)	Yes	Y	DL	1.2	WLX	-1	LL	0.5	LLS	1			FL	1.2				
35	ASCE Strength 4 (a) (d)	Yes	Y	DL	1.2	WLZ	-1	LL	0.5	LLS	1			FL	1.2				
36	ASCE Strength 5 (a)	Yes	Y	DL	0.9	WLX	1												
37	ASCE Strength 5 (b)	Yes	Y	DL	0.9	WLZ	1												
38	ASCE Strength 5 (c)	Yes	Y	DL	0.9	WLX	-1												
39	ASCE Strength 5 (d)	Yes	Y	DL	0.9	WLZ	-1												
40	ASCE Strength 6 (a)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
41	ASCE Strength 6 (b)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
42	ASCE Strength 6 (c)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
43	ASCE Strength 6 (d)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
44	ASCE Strength 7 (a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	1					FL	0.9	FL	-0.118		
45	ASCE Strength 7 (b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	1					FL	0.9	FL	-0.118		
46	ASCE Strength 7 (c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	-1					FL	0.9	FL	-0.118		
47	ASCE Strength 7 (d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	-1					FL	0.9	FL	-0.118		
48	ASCE Strength 6 (os-a)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
49	ASCE Strength 6 (os-b)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
50	ASCE Strength 6 (os-c)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
51	ASCE Strength 6 (os-d)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118		
52	ASCE Strength 7 (os-a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1					FL	0.9	FL	-0.118		
53	ASCE Strength 7 (os-b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1					FL	0.9	FL	-0.118		
54	ASCE Strength 7 (os-c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1					FL	0.9	FL	-0.118		
55	ASCE Strength 7 (os-d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1					FL	0.9	FL	-0.118		
56	ASCE Strength 1	Yes	Y	DL	1.4									FL	1.4			TL	1.2
57	ASCE Strength 2 (a)	Yes	Y	DL	1.2	LL	1.6	LLS	1.6					FL	1.2			TL	1.2
58	ASCE Strength 3 (b) (a)	Yes	Y	DL	1.2	WLX	0.5							FL	1.2			TL	1
59	ASCE Strength 3 (b) (b)	Yes	Y	DL	1.2	WLZ	0.5							FL	1.2			TL	1
60	ASCE Strength 3 (b) (c)	Yes	Y	DL	1.2	WLX	-0.5							FL	1.2			TL	1
61	ASCE Strength 3 (b) (d)	Yes	Y	DL	1.2	WLZ	-0.5							FL	1.2			TL	1
62	ASCE Strength 4 (a) (a)	Yes	Y	DL	1.2	WLX	1	LL	0.5	LLS	1			FL	1.2			TL	1
63	ASCE Strength 4 (a) (b)	Yes	Y	DL	1.2	WLZ	1	LL	0.5	LLS	1			FL	1.2			TL	1
64	ASCE Strength 4 (a) (c)	Yes	Y	DL	1.2	WLX	-1	LL	0.5	LLS	1			FL	1.2			TL	1
65	ASCE Strength 4 (a) (d)	Yes	Y	DL	1.2	WLZ	-1	LL	0.5	LLS	1			FL	1.2			TL	1
66	ASCE Strength 5 (a)	Yes	Y	DL	0.9	WLX	1											TL	0.9
67	ASCE Strength 5 (b)	Yes	Y	DL	0.9	WLZ	1											TL	0.9
68	ASCE Strength 5 (c)	Yes	Y	DL	0.9	WLX	-1											TL	0.9
69	ASCE Strength 5 (d)	Yes	Y	DL	0.9	WLZ	-1											TL	0.9
70	ASCE Strength 6 (a)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
71	ASCE Strength 6 (b)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
72	ASCE Strength 6 (c)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
73	ASCE Strength 6 (d)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
74	ASCE Strength 7 (a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	1					FL	0.9	FL	-0.118	TL	0.9
75	ASCE Strength 7 (b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	1					FL	0.9	FL	-0.118	TL	0.9
76	ASCE Strength 7 (c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	-1					FL	0.9	FL	-0.118	TL	0.9
77	ASCE Strength 7 (d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	-1					FL	0.9	FL	-0.118	TL	0.9
78	ASCE Strength 6 (os-a)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
79	ASCE Strength 6 (os-b)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
80	ASCE Strength 6 (os-c)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
81	ASCE Strength 6 (os-d)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	1
82	ASCE Strength 7 (os-a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1					FL	0.9	FL	-0.118	TL	0.9
83	ASCE Strength 7 (os-b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1					FL	0.9	FL	-0.118	TL	0.9
84	ASCE Strength 7 (os-c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1					FL	0.9	FL	-0.118	TL	0.9
85	ASCE Strength 7 (os-d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1					FL	0.9	FL	-0.118	TL	0.9
86	ASCE Strength 1	Yes	Y	DL	1.4									FL	1.4			TL	-1.2
87	ASCE Strength 2 (a)	Yes	Y	DL	1.2	LL	1.6	LLS	1.6					FL	1.2			TL	-1.2
88	ASCE Strength 3 (b) (a)	Yes	Y	DL	1.2	WLX	0.5							FL	1.2			TL	-1
89	ASCE Strength 3 (b) (b)	Yes	Y	DL	1.2	WLZ	0.5							FL	1.2			TL	-1
90	ASCE Strength 3 (b) (c)	Yes	Y	DL	1.2	WLX	-0.5							FL	1.2			TL	-1
91	ASCE Strength 3 (b) (d)	Yes	Y	DL	1.2	WLZ	-0.5							FL	1.2			TL	-1
92	ASCE Strength 4 (a) (a)	Yes	Y	DL	1.2	WLX	1	LL	0.5	LLS	1			FL	1.2			TL	-1
93	ASCE Strength 4 (a) (b)	Yes	Y	DL	1.2	WLZ	1	LL	0.5	LLS	1			FL	1.2			TL	-1
94	ASCE Strength 4 (a) (c)	Yes	Y	DL	1.2	WLX	-1	LL	0.5	LLS	1			FL	1.2			TL	-1
95	ASCE Strength 4 (a) (d)	Yes	Y	DL	1.2	WLZ	-1	LL	0.5	LLS	1			FL	1.2			TL	-1
96	ASCE Strength 5 (a)	Yes	Y	DL	0.9	WLX	1											TL	-0.9
97	ASCE Strength 5 (b)	Yes	Y	DL	0.9	WLZ	1											TL	-0.9
98	ASCE Strength 5 (c)	Yes	Y	DL	0.9	WLX	-1											TL	-0.9
99	ASCE Strength 5 (d)	Yes	Y	DL	0.9	WLZ	-1											TL	-0.9
100	ASCE Strength 6 (a)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
101	ASCE Strength 6 (b)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
102	ASCE Strength 6 (c)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
103	ASCE Strength 6 (d)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
104	ASCE Strength 7 (a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	1					FL	0.9	FL	-0.118	TL	-0.9
105	ASCE Strength 7 (b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	1					FL	0.9	FL	-0.118	TL	-0.9
106	ASCE Strength 7 (c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	-1					FL	0.9	FL	-0.118	TL	-0.9
107	ASCE Strength 7 (d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	-1					FL	0.9	FL	-0.118	TL	-0.9
108	ASCE Strength 6 (os-a)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
109	ASCE Strength 6 (os-b)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
110	ASCE Strength 6 (os-c)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
111	ASCE Strength 6 (os-d)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118	TL	-1
112	ASCE Strength 7 (os-a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1					FL	0.9	FL	-0.118	TL	-0.9
113	ASCE Strength 7 (os-b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1					FL	0.9	FL	-0.118	TL	-0.9
114	ASCE Strength 7 (os-c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1					FL	0.9	FL	-0.118	TL	-0.9
115	ASCE Strength 7 (os-d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1					FL	0.9	FL	-0.118	TL	-0.9

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	DL		Yes	Yes		Yes	Yes	Yes	Yes	Yes
2	Fluid Load		Yes	Yes		Yes	Yes	Yes	Yes	Yes
3	Wind X		Yes	Yes		Yes	Yes	Yes	Yes	Yes
4	Wind Z		Yes	Yes		Yes	Yes	Yes	Yes	Yes
5	ELX		Yes	Yes		Yes	Yes	Yes	Yes	Yes
6	ELZ		Yes	Yes		Yes	Yes	Yes	Yes	Yes
7	Ice Load		Yes	Yes		Yes	Yes	Yes	Yes	Yes
8	Servicability Wind Speed Drift Check		Yes	Yes		Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
9	Servicability Wind Speed Drift Check		Yes	Yes		Yes	Yes	Yes	Yes	Yes
10			Yes	Yes		Yes	Yes	Yes	Yes	Yes
11	Atmospheric Ice Load Combinations		Yes	Yes		Yes	Yes	Yes	Yes	Yes
12	1.2D + 1.6L + 0.2Di + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	1.2D + Di + WiX + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	1.2D + Di + WiZ + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	1.2D + Di + WiX + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	1.2D + Di + Wi + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	0.9D + Di + WiX		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	0.9D + Di + WiZ		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	0.9D + Di - WiX		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	0.9D + Di - WiZ		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Deflection 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	Deflection 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	Deflection 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	ASCE Strength 1		Yes	Yes		Yes	Yes	Yes	Yes	Yes
27	ASCE Strength 2 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
28	ASCE Strength 3 (b) (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
29	ASCE Strength 3 (b) (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
30	ASCE Strength 3 (b) (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
31	ASCE Strength 3 (b) (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
32	ASCE Strength 4 (a) (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
33	ASCE Strength 4 (a) (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
34	ASCE Strength 4 (a) (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
35	ASCE Strength 4 (a) (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
36	ASCE Strength 5 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
37	ASCE Strength 5 (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
38	ASCE Strength 5 (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
39	ASCE Strength 5 (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
40	ASCE Strength 6 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
41	ASCE Strength 6 (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
42	ASCE Strength 6 (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
43	ASCE Strength 6 (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
44	ASCE Strength 7 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
45	ASCE Strength 7 (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
46	ASCE Strength 7 (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
47	ASCE Strength 7 (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
48	ASCE Strength 6 (os-a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
49	ASCE Strength 6 (os-b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
50	ASCE Strength 6 (os-c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
51	ASCE Strength 6 (os-d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
52	ASCE Strength 7 (os-a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
53	ASCE Strength 7 (os-b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
54	ASCE Strength 7 (os-c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
55	ASCE Strength 7 (os-d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
56	ASCE Strength 1		Yes	Yes		Yes	Yes	Yes	Yes	Yes
57	ASCE Strength 2 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	ASCE Strength 3 (b) (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
59	ASCE Strength 3 (b) (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
60	ASCE Strength 3 (b) (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	ASCE Strength 3 (b) (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62	ASCE Strength 4 (a) (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	ASCE Strength 4 (a) (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
64	ASCE Strength 4 (a) (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
65	ASCE Strength 4 (a) (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	ASCE Strength 5 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67	ASCE Strength 5 (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
68	ASCE Strength 5 (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	ASCE Strength 5 (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	ASCE Strength 6 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	ASCE Strength 6 (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	ASCE Strength 6 (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73	ASCE Strength 6 (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	ASCE Strength 7 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	ASCE Strength 7 (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
76	ASCE Strength 7 (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
77	ASCE Strength 7 (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
78	ASCE Strength 6 (os-a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
79	ASCE Strength 6 (os-b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
80	ASCE Strength 6 (os-c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
81	ASCE Strength 6 (os-d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
82	ASCE Strength 7 (os-a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
83	ASCE Strength 7 (os-b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
84	ASCE Strength 7 (os-c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
85	ASCE Strength 7 (os-d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
86	ASCE Strength 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
87	ASCE Strength 2 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
88	ASCE Strength 3 (b) (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
89	ASCE Strength 3 (b) (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
90	ASCE Strength 3 (b) (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
91	ASCE Strength 3 (b) (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
92	ASCE Strength 4 (a) (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
93	ASCE Strength 4 (a) (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
94	ASCE Strength 4 (a) (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
95	ASCE Strength 4 (a) (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
96	ASCE Strength 5 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
97	ASCE Strength 5 (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
98	ASCE Strength 5 (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
99	ASCE Strength 5 (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
100	ASCE Strength 6 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
101	ASCE Strength 6 (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
102	ASCE Strength 6 (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
103	ASCE Strength 6 (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
104	ASCE Strength 7 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
105	ASCE Strength 7 (b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
106	ASCE Strength 7 (c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
107	ASCE Strength 7 (d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
108	ASCE Strength 6 (os-a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
109	ASCE Strength 6 (os-b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
110	ASCE Strength 6 (os-c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
111	ASCE Strength 6 (os-d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
112	ASCE Strength 7 (os-a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
113	ASCE Strength 7 (os-b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
114	ASCE Strength 7 (os-c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
115	ASCE Strength 7 (os-d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Spectra Scaling Factor

Seismic Code:	ASCE 7-16				
C_tZ:	0.02	T Z (sec):	Not Entered	R Z:	1
C_tX:	0.02	T X (sec):	Not Entered	R X:	1
C_tExp. Z:	0.75	C_tExp. X:	0.75	Seismic Weight LC:	0
Risk Category:	IV	T_L(sec):	16		
SD_1(g):	0.739	SD_s(g):	0.59	S_1(g):	0.376

T Z Used (sec):	0	T Z Method A:	0	T Z Upper Limit:	0
T X Used (sec):	0	T X Method A:	0	T X Upper Limit:	0
Importance Fac.:	0	Design Cat:			
V Z (k):	-1	Gov. Eqn.:			
V X (k):	-1	Gov. Eqn.:			

Weight (k):	0

Static Base Shear Z (k):	-1	Unscaled Base Shear Z (k):	-1	Multiplier Z:	1
Static Base Shear X (k):	-1	Unscaled Base Shear X (k):	-1	Multiplier X:	1

Scaling Factor Z:	1	Scaling Factor X:	1		

Dynamic Data

Number Of Modes	0
Load Combination Number	DL
Acceleration of Gravity	32.2 (ft/sec^2)
Convergence Tolerance	0.0001

Node Reactions

No Data to Print...

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	F2	max	12.031	102	27.583	13	17.252	103	0	107	0	107	0	107
1		min	-11.801	70	-3.438	106	-16.326	75	0	12	0	12	0	12
2	F1	max	5.314	72	19.994	15	15.705	107	0	107	0	107	0	107
3		min	-5.633	100	-4.81	74	-16.645	71	0	12	0	12	0	12
4	S2	max	11.608	102	26.491	13	0	107	0	107	0	107	0	107
5		min	-11.385	70	-2.973	106	0	12	0	12	0	12	0	12
6	S1	max	4.6	72	21.471	15	0	107	0	107	0	107	0	107
7		min	-4.694	100	-4.06	74	0	12	0	12	0	12	0	12
8	S8	max	10.695	102	26.269	13	0	107	0	107	0	107	0	107
9		min	-10.548	70	-2.188	76	0	12	0	12	0	12	0	12
10	S7	max	4.999	72	20.27	15	0	107	0	107	0	107	0	107
11		min	-5.152	100	-3.146	74	0	12	0	12	0	12	0	12
12	F8	max	13.114	102	26.192	13	18.191	103	0	107	0	107	0	107
13		min	-12.896	70	-5.381	106	-18.162	71	0	12	0	12	0	12
14	F7	max	6.476	72	21.443	15	17.365	103	0	107	0	107	0	107
15		min	-6.709	100	-6.437	104	-17.394	71	0	12	0	12	0	12
16	N630	max	0.501	102	2.775	16	0.672	77	0	107	0	107	0	107
17		min	-0.234	74	-0.731	75	-0.674	75	0	12	0	12	0	12
18	N631	max	0.501	102	2.775	14	0.674	77	0	107	0	107	0	107
19		min	-0.234	74	-0.731	77	-0.672	75	0	12	0	12	0	12
20	N632	max	1.94	106	5.576	16	2.004	73	5.545	103	0.02	107	3.683	70
21		min	-2.083	70	-0.702	75	-2.012	71	-5.548	101	-0.02	75	-3.401	106
22	N633	max	1.94	106	5.576	14	2.012	73	5.548	103	0.02	77	3.683	70
23		min	-2.083	70	-0.702	77	-2.004	71	-5.545	101	-0.02	105	-3.401	106
24	N636	max	1.185	106	3.306	16	1.134	99	0	107	0	107	0	107
25		min	-1.315	70	-1.316	97	-1.448	93	0	12	0	12	0	12
26	N637	max	1.185	106	3.306	14	1.448	95	0	107	0	107	0	107
27		min	-1.315	70	-1.316	99	-1.134	97	0	12	0	12	0	12
28	N638	max	0.91	102	2.887	14	0.514	107	3.457	103	0.372	103	4.885	74
29		min	-0.91	70	0.459	99	-0.514	105	-3.456	101	-0.372	105	-5.573	102
30	N639	max	0.91	102	2.887	16	0.514	107	3.456	103	0.372	103	4.885	74
31		min	-0.91	70	0.459	97	-0.514	105	-3.457	101	-0.372	45	-5.573	102
32	N698	max	0.663	106	3.223	13	0.755	103	0	107	0	107	0	107
33		min	-0.804	40	-0.564	46	-0.69	75	0	12	0	12	0	12
34	N699	max	0.663	106	3.223	13	0.69	107	0	107	0	107	0	107
35		min	-0.804	40	-0.564	46	-0.755	41	0	12	0	12	0	12
36	N700	max	0.804	102	3.223	15	0.755	103	0	107	0	107	0	107
37		min	-0.663	44	-0.564	44	-0.69	75	0	12	0	12	0	12
38	N701	max	0.804	102	3.223	15	0.69	107	0	107	0	107	0	107
39		min	-0.663	44	-0.564	44	-0.755	41	0	12	0	12	0	12
40	N714	max	0.834	106	3.757	13	0.926	103	0	107	0	107	0	107
41		min	-0.959	40	-1.148	46	-0.856	75	0	12	0	12	0	12
42	N716	max	0.834	106	3.757	13	0.856	107	0	107	0	107	0	107
43		min	-0.959	40	-1.148	46	-0.926	41	0	12	0	12	0	12
44	N717	max	0.959	102	3.757	15	0.926	103	0	107	0	107	0	107
45		min	-0.834	44	-1.148	44	-0.856	75	0	12	0	12	0	12
46	N718	max	0.959	102	3.757	15	0.856	107	0	107	0	107	0	107
47		min	-0.834	74	-1.148	74	-0.926	41	0	12	0	12	0	12
48	N715	max	0.757	106	3.161	16	0.757	103	2.042	73	0.512	107	4.681	104
49		min	-0.757	44	-0.11	45	-0.757	75	-2.04	41	-0.512	41	-5.618	42
50	N739	max	0.757	102	3.161	14	0.757	107	2.04	73	0.512	103	4.681	44
51		min	-0.757	40	-0.11	47	-0.757	41	-2.042	41	-0.512	45	-5.618	72

Envelope Node Reactions (Continued)

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
52	N748	max	0.718	106	2.969	16	0.717	103	1.931	73	0.479	107	4.411	104
53		min	-0.718	44	-0.309	45	-0.718	105	-1.928	41	-0.479	41	-5.287	42
54	N757	max	0.718	42	2.969	14	0.718	107	1.928	73	0.479	103	4.411	44
55		min	-0.718	40	-0.309	47	-0.717	41	-1.931	41	-0.479	45	-5.287	72
56	F6	max	12.206	102	28.536	13	17.303	103	0	107	0	107	0	107
57		min	-11.921	74	-3.379	76	-16.398	75	0	12	0	12	0	12
58	F5	max	5.396	72	19.839	15	15.742	107	0	107	0	107	0	107
59		min	-5.777	100	-4.938	74	-16.649	71	0	12	0	12	0	12
60	S6	max	10.926	102	25.852	13	0	107	0	107	0	107	0	107
61		min	-10.763	70	-2.194	106	0	12	0	12	0	12	0	12
62	S5	max	5.098	72	21.574	15	0	107	0	107	0	107	0	107
63		min	-5.164	100	-3.172	104	0	12	0	12	0	12	0	12
64	S4	max	10.93	102	27.149	13	0	107	0	107	0	107	0	107
65		min	-10.715	70	-2.033	76	0	12	0	12	0	12	0	12
66	S3	max	5.019	72	20.134	15	0	107	0	107	0	107	0	107
67		min	-5.219	100	-3.247	74	0	12	0	12	0	12	0	12
68	F4	max	11.79	102	24.797	13	18.423	103	0	107	0	107	0	107
69		min	-11.699	70	-3.742	106	-18.629	71	0	12	0	12	0	12
70	F3	max	5.355	72	21.668	15	17.858	103	0	107	0	107	0	107
71		min	-5.484	100	-4.469	104	-17.652	71	0	12	0	12	0	12
72	N855	max	0.845	106	4.268	86	0.845	107	0.422	103	0	107	0.422	100
73		min	-0.845	40	2.384	44	-0.845	41	-0.422	41	0	12	-0.422	42
74	N857	max	6.875	102	3.112	86	8.537	103	8.115	103	0	107	6.453	100
75		min	-6.875	40	1.738	44	-8.537	71	-8.115	71	0	12	-6.453	42
76	N1022	max	0.845	106	2.391	86	0.845	107	0.422	103	0	107	0.422	100
77		min	-0.845	40	1.335	44	-0.845	41	-0.422	41	0	12	-0.422	42
78	N1024	max	0.845	106	2.391	86	0.845	107	0.422	103	0	107	0.422	100
79		min	-0.845	40	1.335	44	-0.845	41	-0.422	41	0	12	-0.422	42
80	N1041	max	3.835	106	1.048	86	12.964	103	12.542	103	0	107	3.412	100
81		min	-3.835	40	0.586	44	-12.964	71	-12.542	71	0	12	-3.412	42
82	N1054	max	8.552	87	2.164	86	0.845	107	0.422	103	0	107	8.552	56
83		min	-8.552	57	1.209	44	-0.845	45	-0.422	41	0	12	-8.552	86
84	N1025	max	0.667	106	4.328	86	0.667	107	0.334	103	0	107	0.334	100
85		min	-0.667	40	2.418	44	-0.667	41	-0.334	41	0	12	-0.334	42
86	N854	max	0.667	106	2.981	86	0.667	107	0.334	103	0	107	0.334	100
87		min	-0.667	40	1.665	44	-0.667	41	-0.334	41	0	12	-0.334	42
88	N1023	max	0.667	106	4.328	86	0.667	107	0.334	103	0	107	0.334	100
89		min	-0.667	40	2.418	44	-0.667	41	-0.334	41	0	12	-0.334	42
90	N1044	max	0.667	106	3.274	86	0.667	107	0.334	103	0	107	0.334	100
91		min	-0.667	40	1.829	44	-0.667	41	-0.334	41	0	12	-0.334	42
92	N1147	max	1.946	106	3.565	86	1.946	107	0.973	103	0	101	1.889	100
93		min	-1.946	40	1.991	46	-1.946	45	-0.973	41	0	43	-0.43	46
94	N1145	max	1.946	106	18.273	86	3.867	103	19.095	86	0	70	0.973	100
95		min	-1.946	44	10.207	75	-3.867	71	6.676	75	0	72	-0.973	42
96	N1152	max	1.946	106	2.937	86	1.946	107	0.973	103	0	107	0.682	104
97		min	-1.946	40	1.64	44	-1.946	41	-0.973	41	0	12	-1.463	42
98	N1155	max	1.946	106	22.545	86	1.946	107	21.082	86	0	100	0.973	100
99		min	-1.946	40	12.593	45	-1.946	41	10.803	45	0	42	-0.973	42
100	N1154	max	1.946	106	22.487	86	6.85	107	25.519	103	0	102	0.973	100
101		min	-1.946	40	12.561	77	-6.85	41	5.777	45	0	40	-0.973	42
102	N1153	max	1.946	102	3.006	86	1.946	103	0.973	103	0	107	0.653	104
103		min	-1.946	44	1.679	44	-1.946	41	-0.973	41	0	45	-1.512	42
104	N1157	max	10.563	106	12.919	100	19.514	103	15.817	103	14.389	70	9.59	70
105		min	-10.563	44	0.047	76	-19.514	71	-7.367	75	-14.389	72	-9.59	42
106	Totals:	max	191.433	102	536.265	15	221.268	103						

Envelope Node Reactions (Continued)

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
107		min	-191.434	70	147.812	66	-221.268	71						

Node Reactions - Overstrength or Capacity Limit

No Data to Print...

Envelope Node Reactions - Overstrength or Capacity Limit

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	F2	max	9.387	110*	18.806	78*	13.581	111*	0	115*	0	115*	0	115*
1		min	-9.221	78*	-1.126	114*	-12.65	83*	0	48*	0	48*	0	48*
2	F1	max	4.219	80*	16.605	110*	12.196	115*	0	115*	0	115*	0	115*
3		min	-4.476	108*	-2.507	82*	-13.141	79*	0	48*	0	48*	0	48*
4	S2	max	9.209	110*	18.598	78*	0	115*	0	115*	0	115*	0	115*
5		min	-9.018	78*	-0.984	114*	0	48*	0	48*	0	48*	0	48*
6	S1	max	3.55	80*	16.635	110*	0	115*	0	115*	0	115*	0	115*
7		min	-3.621	108*	-2.066	82*	0	48*	0	48*	0	48*	0	48*
8	S8	max	8.37	110*	17.1	108*	0	115*	0	115*	0	115*	0	115*
9		min	-8.248	78*	-0.24	84*	0	48*	0	48*	0	48*	0	48*
10	S7	max	3.98	80*	15.46	110*	0	115*	0	115*	0	115*	0	115*
11		min	-4.107	108*	-1.205	82*	0	48*	0	48*	0	48*	0	48*
12	F8	max	10.218	110*	20.001	78*	14.176	111*	0	115*	0	115*	0	115*
13		min	-10.07	78*	-2.656	114*	-14.155	79*	0	48*	0	48*	0	48*
14	F7	max	5.131	80*	18.23	80*	13.534	111*	0	115*	0	115*	0	115*
15		min	-5.29	108*	-3.711	112*	-13.555	79*	0	48*	0	48*	0	48*
16	N630	max	0.424	110*	2.198	111*	0.517	85*	0	115*	0	115*	0	115*
17		min	-0.158	82*	-0.409	83*	-0.518	83*	0	48*	0	48*	0	48*
18	N631	max	0.424	110*	2.198	109*	0.518	85*	0	115*	0	115*	0	115*
19		min	-0.158	82*	-0.409	85*	-0.517	83*	0	48*	0	48*	0	48*
20	N632	max	1.489	114*	3.581	111*	1.542	81*	4.266	111*	0.016	115*	2.889	78*
21		min	-1.632	78*	-0.257	83*	-1.547	79*	-4.267	109*	-0.016	83*	-2.607	114*
22	N633	max	1.489	114*	3.581	109*	1.547	81*	4.267	111*	0.016	85*	2.889	78*
23		min	-1.632	78*	-0.257	85*	-1.542	79*	-4.266	109*	-0.016	113*	-2.607	114*
24	N636	max	0.904	114*	2.84	81*	0.783	115*	0	115*	0	115*	0	115*
25		min	-1.035	78*	-0.641	113*	-1.155	109*	0	48*	0	48*	0	48*
26	N637	max	0.904	114*	2.84	79*	1.155	111*	0	115*	0	115*	0	115*
27		min	-1.035	78*	-0.641	115*	-0.783	113*	0	48*	0	48*	0	48*
28	N638	max	0.703	110*	1.035	109*	0.396	115*	2.66	111*	0.286	111*	3.711	82*
29		min	-0.703	78*	0.614	115*	-0.395	113*	-2.658	109*	-0.286	113*	-4.399	110*
30	N639	max	0.703	110*	1.035	111*	0.395	115*	2.658	111*	0.286	51*	3.711	82*
31		min	-0.703	78*	0.614	113*	-0.396	113*	-2.66	109*	-0.286	113*	-4.399	110*
32	N698	max	0.497	114*	2.037	108*	0.59	111*	0	115*	0	115*	0	115*
33		min	-0.64	78*	-0.283	54*	-0.525	113*	0	48*	0	48*	0	48*
34	N699	max	0.497	114*	2.037	108*	0.525	115*	0	115*	0	115*	0	115*
35		min	-0.64	78*	-0.283	54*	-0.59	49*	0	48*	0	48*	0	48*
36	N700	max	0.64	110*	2.037	80*	0.59	111*	0	115*	0	115*	0	115*
37		min	-0.497	52*	-0.283	52*	-0.525	113*	0	48*	0	48*	0	48*
38	N701	max	0.64	110*	2.037	80*	0.525	115*	0	115*	0	115*	0	115*
39		min	-0.497	52*	-0.283	52*	-0.59	49*	0	48*	0	48*	0	48*
40	N714	max	0.631	114*	3.088	108*	0.727	111*	0	115*	0	115*	0	115*
41		min	-0.756	78*	-0.676	54*	-0.649	113*	0	48*	0	48*	0	48*
42	N716	max	0.631	114*	3.088	108*	0.649	115*	0	115*	0	115*	0	115*
43		min	-0.756	78*	-0.676	54*	-0.727	49*	0	48*	0	48*	0	48*
44	N717	max	0.756	110*	3.088	80*	0.727	111*	0	115*	0	115*	0	115*
45		min	-0.631	52*	-0.676	52*	-0.649	113*	0	48*	0	48*	0	48*
46	N718	max	0.756	110*	3.088	80*	0.649	115*	0	115*	0	115*	0	115*

Envelope Node Reactions - Overstrength or Capacity Limit (Continued)

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
47		min	-0.631	52*	-0.676	52*	-0.727	49*	0	48*	0	48*	0	48*
48	N715	max	0.582	114*	1.359	111*	0.582	111*	1.571	111*	0.394	115*	3.52	82*
49		min	-0.582	82*	0.036	113*	-0.582	113*	-1.569	49*	-0.394	49*	-4.457	50*
50	N739	max	0.582	110*	1.359	109*	0.582	115*	1.569	111*	0.394	111*	3.52	112*
51		min	-0.582	78*	0.036	85*	-0.582	49*	-1.571	49*	-0.394	53*	-4.457	110*
52	N748	max	0.552	114*	1.447	111*	0.552	111*	1.485	111*	0.368	55*	3.318	82*
53		min	-0.552	82*	-0.124	53*	-0.552	113*	-1.483	49*	-0.368	49*	-4.194	50*
54	N757	max	0.552	80*	1.447	109*	0.552	115*	1.483	111*	0.368	111*	3.318	112*
55		min	-0.552	78*	-0.124	55*	-0.552	49*	-1.485	49*	-0.368	53*	-4.194	110*
56	F6	max	9.53	110*	19.256	108*	13.631	111*	0	115*	0	115*	0	115*
57		min	-9.301	78*	-1.036	84*	-12.722	83*	0	48*	0	48*	0	48*
58	F5	max	4.277	80*	16.605	110*	12.214	115*	0	115*	0	115*	0	115*
59		min	-4.596	108*	-2.605	82*	-13.125	79*	0	48*	0	48*	0	48*
60	S6	max	8.549	110*	17.389	78*	0	115*	0	115*	0	115*	0	115*
61		min	-8.414	78*	-0.223	114*	0	48*	0	48*	0	48*	0	48*
62	S5	max	4.067	80*	15.756	80*	0	115*	0	115*	0	115*	0	115*
63		min	-4.106	108*	-1.199	112*	0	48*	0	48*	0	48*	0	48*
64	S4	max	8.558	110*	17.516	108*	0	115*	0	115*	0	115*	0	115*
65		min	-8.369	78*	-0.072	84*	0	48*	0	48*	0	48*	0	48*
66	S3	max	3.99	80*	15.445	110*	0	115*	0	115*	0	115*	0	115*
67		min	-4.164	108*	-1.292	82*	0	48*	0	48*	0	48*	0	48*
68	F4	max	9.191	110*	18.05	78*	14.361	111*	0	115*	0	115*	0	115*
69		min	-9.158	78*	-1.462	114*	-14.576	79*	0	48*	0	48*	0	48*
70	F3	max	4.275	80*	16.835	80*	13.973	111*	0	115*	0	115*	0	115*
71		min	-4.341	108*	-2.187	112*	-13.758	79*	0	48*	0	48*	0	48*
72	N855	max	0.65	114*	4.018	111*	0.65	115*	0.325	111*	0	115*	0.325	108*
73		min	-0.65	52*	2.384	52*	-0.65	53*	-0.325	49*	0	48*	-0.325	50*
74	N857	max	5.289	114*	2.93	111*	6.75	111*	6.425	111*	0	115*	4.964	108*
75		min	-5.289	52*	1.738	52*	-6.75	79*	-6.425	79*	0	48*	-4.964	50*
76	N1022	max	0.65	114*	2.251	111*	0.65	115*	0.325	111*	0	115*	0.325	108*
77		min	-0.65	48*	1.335	52*	-0.65	49*	-0.325	49*	0	48*	-0.325	50*
78	N1024	max	0.65	114*	2.251	111*	0.65	115*	0.325	111*	0	115*	0.325	108*
79		min	-0.65	48*	1.335	52*	-0.65	49*	-0.325	49*	0	48*	-0.325	50*
80	N1041	max	2.95	114*	0.987	111*	10.11	111*	9.785	111*	0	115*	2.625	108*
81		min	-2.95	48*	0.586	52*	-10.11	79*	-9.785	79*	0	48*	-2.625	50*
82	N1054	max	7.777	110*	2.037	111*	0.65	111*	0.325	111*	0	115*	7.452	78*
83		min	-7.777	78*	1.209	52*	-0.65	49*	-0.325	49*	0	48*	-7.452	110*
84	N1025	max	0.513	114*	4.075	111*	0.513	115*	0.257	111*	0	115*	0.257	108*
85		min	-0.513	52*	2.418	52*	-0.513	53*	-0.257	49*	0	48*	-0.257	50*
86	N854	max	0.513	110*	2.807	111*	0.513	111*	0.257	111*	0	115*	0.257	108*
87		min	-0.513	48*	1.665	52*	-0.513	49*	-0.257	49*	0	48*	-0.257	50*
88	N1023	max	0.513	114*	4.075	111*	0.513	115*	0.257	111*	0	115*	0.257	108*
89		min	-0.513	52*	2.418	52*	-0.513	53*	-0.257	49*	0	48*	-0.257	50*
90	N1044	max	0.513	114*	3.082	111*	0.513	115*	0.257	111*	0	115*	0.257	108*
91		min	-0.513	48*	1.829	52*	-0.513	49*	-0.257	49*	0	48*	-0.257	50*
92	N1147	max	1.497	114*	3.356	108*	1.497	115*	0.749	111*	0	109*	1.664	108*
93		min	-1.497	48*	1.991	54*	-1.497	49*	-0.749	49*	0	51*	-0.205	54*
94	N1145	max	1.497	114*	17.203	111*	3.418	111*	18.476	111*	0	78*	0.749	108*
95		min	-1.497	52*	10.207	83*	-3.418	79*	6.901	83*	0	80*	-0.749	50*
96	N1152	max	1.497	114*	2.765	111*	1.497	115*	0.749	111*	0	115*	0.458	112*
97		min	-1.497	48*	1.64	52*	-1.497	49*	-0.749	49*	0	48*	-1.239	50*
98	N1155	max	1.497	114*	21.224	111*	1.497	115*	20.596	111*	0	108*	0.749	108*
99		min	-1.497	52*	12.593	53*	-1.497	49*	11.027	53*	0	50*	-0.749	50*
100	N1154	max	1.497	114*	21.17	109*	5.269	115*	24.163	111*	0	110*	0.749	108*
101		min	-1.497	52*	12.561	55*	-5.269	49*	7.134	113*	0	48*	-0.749	50*

Envelope Node Reactions - Overstrength or Capacity Limit (Continued)

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
102	N1153	max	1.497	110*	2.83	110*	1.497	115*	0.749	111*	0	111*	0.429	112*
103		min	-1.497	52*	1.679	52*	-1.497	49*	-0.749	49*	0	49*	-1.288	50*
104	N1157	max	8.125	110*	11.816	108*	15.165	111*	13.535	111*	11.069	78*	7.377	108*
105		min	-8.125	52*	1.15	84*	-15.165	79*	-5.086	83*	-11.069	80*	-7.377	50*
106	Totals:	max	149.197	110*	292.866	109*	172.704	111*						
107		min	-149.197	78*	167.904	84*	-172.704	79*						

Node Displacements

No Data to Print...

Envelope Node Displacements

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
0	S8	max	0	70	0	76	0.365	105	6.768e-3	15	1.278e-2	71	4.348e-3	102
1		min	0	102	0	13	-0.699	73	1.062e-3	66	-1.129e-2	103	-4.61e-3	70
2	S7	max	0	100	0	74	0.364	105	6.008e-3	13	1.675e-2	107	4.133e-3	72
3		min	0	72	0	15	-0.687	73	6.733e-4	68	-1.853e-2	71	-4.379e-3	100
4	S6	max	0	70	0	106	0.702	71	-1.03e-3	96	1.952e-2	71	4.443e-3	102
5		min	0	102	0	13	-0.364	107	-6.585e-3	15	-1.759e-2	107	-4.661e-3	70
6	S5	max	0	100	0	104	0.693	71	-6.875e-4	98	1.823e-2	103	4.226e-3	72
7		min	0	72	0	15	-0.358	107	-6.389e-3	13	-1.996e-2	71	-4.425e-3	100
8	S4	max	0	70	0	76	0.364	105	7.076e-3	15	1.932e-2	71	4.375e-3	102
9		min	0	102	0	13	-0.705	73	1.091e-3	66	-1.779e-2	103	-4.685e-3	70
10	S3	max	0	100	0	74	0.363	105	6.098e-3	13	1.814e-2	107	4.153e-3	72
11		min	0	72	0	15	-0.69	73	6.618e-4	68	-2.014e-2	71	-4.456e-3	100
12	S2	max	0	70	0	106	0.7	71	-1.02e-3	96	7.688e-3	71	4.918e-3	102
13		min	0	102	0	13	-0.362	107	-6.555e-3	15	-5.973e-3	107	-5.17e-3	70
14	S1	max	0	100	0	74	0.693	71	-6.945e-4	98	1.575e-2	103	4.093e-3	102
15		min	0	72	0	15	-0.358	107	-6.381e-3	13	-1.713e-2	71	-4.333e-3	70
16	O19	max	0	100	0	105	0	105	-5.982e-7	105	0	100	1.854e-7	102
17		min	0	42	0	43	0	43	-1.509e-6	43	0	42	-1.854e-7	40
18	N1157	max	0	104	0	76	0	71	0	75	0	72	0	102
19		min	0	42	0	100	0	103	0	103	0	70	0	70
20	N1156	max	0	70	0	76	0	75	3.47e-7	76	4.222e-6	72	2.648e-6	102
21		min	0	42	0	100	0	103	-9.125e-7	100	-4.222e-6	70	-2.648e-6	70
22	N1155	max	0	104	0	105	0	101	0	105	0	102	0	102
23		min	0	42	0	26	0	47	0	26	0	40	0	40
24	N1154	max	0	104	0	107	0	101	0	105	0	100	0	102
25		min	0	42	0	26	0	47	0	43	0	42	0	40
26	N1153	max	0	104	0	104	0	101	0	101	0	105	0	102
27		min	0	42	0	26	0	43	0	43	0	47	0	44
28	N1152	max	0	100	0	107	0	105	0	101	0	107	0	102
29		min	0	46	0	26	0	43	0	43	0	12	0	44
30	N1151	max	0	100	0	105	0	105	-7.694e-7	105	0	102	1.854e-7	102
31		min	0	42	0	26	0	43	-1.416e-6	26	0	40	-1.854e-7	40
32	N1150	max	0	100	0	107	0	105	-5.965e-7	105	0	100	1.854e-7	102
33		min	0	42	0	26	0	43	-1.506e-6	43	0	42	-1.854e-7	40
34	N1149	max	0	104	0	104	0	101	1.854e-7	101	0	105	5.803e-8	102
35		min	0	42	0	26	0	43	-1.854e-7	43	0	47	0	44
36	N1148	max	0	104	0	107	0	101	1.854e-7	101	0	107	5.474e-8	102
37		min	0	42	0	26	0	43	-1.854e-7	43	0	12	0	44
38	N1147	max	0	100	0	106	0	105	0	101	0	103	0	106
39		min	0	46	0	26	0	47	0	43	0	41	0	40
40	N1146	max	0	100	0	106	0	101	1.854e-7	101	0	103	-1.47e-8	106
41		min	0	46	0	26	0	43	-1.854e-7	43	0	41	-8.33e-8	40

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
42	N1145	max	0	104	0	75	0	71	0	75	0	72	0	102
43		min	0	46	0	86	0	103	0	86	0	70	0	40
44	N1144	max	0	104	0	106	0	101	1.854e-7	101	0	105	5.803e-8	102
45		min	0	42	0	40	0	43	-1.854e-7	43	0	43	0	44
46	N1143	max	0.032	74	0	99	0.104	101	3.545e-3	101	2.048e-2	105	1.193e-3	102
47		min	-0.038	102	-0.001	14	-0.104	103	-3.546e-3	103	-2.048e-2	103	-9.726e-4	74
48	N1142	max	0	100	0	75	0	75	-5.503e-7	75	0	72	1.854e-7	102
49		min	0	42	0	86	0	103	-1.206e-6	86	0	70	-1.854e-7	40
50	N1141	max	0.036	74	0.002	66	0.238	101	6.953e-4	103	7.454e-3	101	2.33e-3	15
51		min	-0.045	102	-0.03	15	-0.233	107	-6.968e-4	101	-6.937e-3	107	-1.394e-4	66
52	N1140	max	0.031	74	0.002	66	0.19	101	1.108e-4	103	4.987e-3	101	2.448e-3	15
53		min	-0.036	102	-0.025	15	-0.184	107	-1.112e-4	101	-4.331e-3	107	-1.389e-4	66
54	N1139	max	0.042	74	0.003	66	0.248	101	9.176e-4	103	8.881e-3	101	2.364e-3	15
55		min	-0.056	102	-0.031	15	-0.243	107	-9.196e-4	101	-8.365e-3	77	-1.459e-4	66
56	N1138	max	0.036	74	0.002	66	0.238	101	6.968e-4	103	7.454e-3	101	2.33e-3	15
57		min	-0.045	102	-0.03	15	-0.233	107	-6.953e-4	101	-6.937e-3	107	-1.394e-4	66
58	N1137	max	0.031	74	0.002	66	0.19	101	1.112e-4	103	4.986e-3	101	2.448e-3	15
59		min	-0.036	102	-0.025	15	-0.184	107	-1.108e-4	101	-4.331e-3	107	-1.389e-4	66
60	N1136	max	0.042	74	0.003	66	0.248	101	9.196e-4	103	8.882e-3	71	2.364e-3	15
61		min	-0.056	102	-0.031	15	-0.243	107	-9.176e-4	101	-8.365e-3	107	-1.459e-4	66
62	N1135	max	0.467	74	-0.125	66	0.391	71	6.39e-3	15	3.938e-2	73	1.754e-3	104
63		min	-0.515	102	-1.034	15	-0.145	107	8.231e-4	96	-3.897e-2	101	-9.681e-3	15
64	N1134	max	0.487	74	-0.132	66	0.365	71	6.404e-3	15	6.824e-2	73	1.757e-3	104
65		min	-0.587	102	-1.025	15	-0.184	107	8.232e-4	96	-6.811e-2	101	-3.598e-3	13
66	N1133	max	0.504	74	-0.138	66	0.315	71	6.421e-3	15	6.611e-2	73	3.988e-3	94
67		min	-0.601	102	-1.015	15	-0.197	107	7.411e-4	107	-6.626e-2	101	-2.328e-3	66
68	N1132	max	0.496	74	-0.152	68	1.667	71	6.404e-3	15	6.835e-2	73	1.508e-3	104
69		min	-0.597	102	-1.11	14	-1.478	107	8.232e-4	96	-6.872e-2	101	-4.912e-3	13
70	N1131	max	0.516	74	-0.096	68	2.005	71	6.421e-3	15	6.654e-2	77	3.07e-3	98
71		min	-0.615	102	-1.011	13	-1.857	107	7.411e-4	107	-6.799e-2	101	-3.106e-3	62
72	N1130	max	0.473	74	-0.138	66	0.862	71	6.39e-3	15	3.949e-2	73	1.506e-3	104
73		min	-0.521	102	-1.161	15	-0.616	107	8.231e-4	96	-3.958e-2	101	-1.099e-2	15
74	N1129	max	0.08	74	0.014	66	0.868	101	4.463e-3	101	3.667e-2	41	2.984e-3	15
75		min	-0.1	102	-0.038	15	-0.861	107	-4.462e-3	103	-3.604e-2	107	-8.011e-4	66
76	N1128	max	0.065	74	0.011	66	0.656	101	4.35e-3	101	3.352e-2	41	2.929e-3	15
77		min	-0.079	102	-0.03	15	-0.649	107	-4.349e-3	103	-3.28e-2	107	-8.23e-4	66
78	N1127	max	0.097	74	0.014	66	0.964	101	4.494e-3	101	3.843e-2	71	3.023e-3	15
79		min	-0.122	102	-0.039	15	-0.957	107	-4.493e-3	103	-3.78e-2	107	-8.049e-4	66
80	N1126	max	0.459	74	-0.123	66	0.566	71	-2.674e-4	107	4.055e-2	103	2.58e-3	104
81		min	-0.508	102	-1.012	15	-0.481	103	-5.991e-3	14	-4.103e-2	71	-9.187e-3	15
82	N1125	max	0.491	74	-0.13	66	0.639	71	-7.067e-4	107	7.085e-2	103	2.274e-3	104
83		min	-0.59	102	-1.002	15	-0.475	103	-6.001e-3	15	-7.113e-2	71	-3.977e-3	72
84	N1124	max	0.515	74	-0.136	66	0.686	71	-8.66e-4	96	6.891e-2	103	3.817e-3	94
85		min	-0.61	102	-0.993	15	-0.457	107	-6.016e-3	15	-6.901e-2	71	-2.195e-3	66
86	N1123	max	0.497	74	-0.144	69	1.498	71	-7.067e-4	107	7.096e-2	103	2.018e-3	104
87		min	-0.596	102	-1.053	15	-1.327	103	-6.001e-3	15	-7.177e-2	71	-4.802e-3	13
88	N1122	max	0.5	74	-0.148	68	2	71	-7.067e-4	107	7.096e-2	103	2.017e-3	104
89		min	-0.6	102	-1.086	14	-1.823	103	-6.001e-3	15	-7.177e-2	71	-4.816e-3	13
90	N1121	max	0.469	74	-0.137	66	1.355	71	-2.674e-4	107	4.072e-2	107	2.322e-3	104
91		min	-0.518	102	-1.207	15	-1.253	103	-5.991e-3	14	-4.167e-2	71	-1.055e-2	15
92	N1120	max	0.465	74	-0.132	66	1.064	71	-2.674e-4	107	4.072e-2	107	2.323e-3	104
93		min	-0.514	102	-1.133	15	-0.968	103	-5.991e-3	14	-4.166e-2	71	-1.053e-2	15
94	N1119	max	0.527	74	-0.09	68	2.447	71	-8.66e-4	96	6.932e-2	107	2.903e-3	98
95		min	-0.623	102	-0.999	13	-2.187	107	-6.016e-3	15	-7.08e-2	71	-3.04e-3	62
96	N1118	max	0.522	74	-0.114	68	1.739	71	-8.66e-4	96	6.932e-2	107	2.907e-3	98

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
97		min	-0.618	102	-0.989	13	-1.494	107	-6.016e-3	15	-7.079e-2	71	-3.036e-3	62
98	N1117	max	0.491	74	-0.126	66	0.477	101	6.181e-3	15	7.112e-2	73	2.41e-3	104
99		min	-0.576	102	-0.966	15	-0.636	73	6.848e-4	75	-7.088e-2	101	-3.919e-3	72
100	N1116	max	0.457	74	-0.119	66	0.482	101	6.172e-3	16	4.103e-2	73	2.767e-3	104
101		min	-0.497	102	-0.975	15	-0.563	73	2.484e-4	75	-4.056e-2	101	-8.302e-3	15
102	N1115	max	0.516	74	-0.133	66	0.458	105	6.197e-3	15	6.897e-2	73	3.866e-3	94
103		min	-0.596	102	-0.957	15	-0.683	73	9.044e-4	66	-6.897e-2	101	-2.244e-3	66
104	N1114	max	0.497	74	-0.141	67	1.332	101	6.181e-3	15	7.123e-2	73	2.151e-3	104
105		min	-0.582	102	-1.011	15	-1.49	73	6.848e-4	75	-7.151e-2	101	-4.355e-3	72
106	N1113	max	0.5	74	-0.142	68	1.833	101	6.181e-3	15	7.123e-2	73	2.15e-3	104
107		min	-0.586	102	-1.041	13	-1.989	73	6.848e-4	75	-7.152e-2	101	-4.357e-3	72
108	N1112	max	0.463	74	-0.128	66	0.974	101	6.172e-3	16	4.115e-2	73	2.508e-3	104
109		min	-0.503	102	-1.086	15	-1.056	73	2.484e-4	75	-4.12e-2	101	-9.649e-3	15
110	N1111	max	0.096	44	0.015	36	0.819	101	3.819e-4	103	4.917e-2	101	3.717e-3	15
111		min	-0.128	72	-0.047	15	-0.81	77	-3.811e-4	75	-4.837e-2	47	-8.549e-4	36
112	N1110	max	0.079	44	0.015	36	0.789	101	2.763e-4	103	4.696e-2	101	3.668e-3	15
113		min	-0.104	72	-0.047	15	-0.78	77	-2.754e-4	75	-4.617e-2	47	-8.5e-4	36
114	N1109	max	0.063	44	0.012	36	0.599	101	1.998e-5	103	4.303e-2	101	3.656e-3	15
115		min	-0.081	72	-0.038	15	-0.591	77	-1.896e-5	75	-4.21e-2	47	-8.756e-4	36
116	N1108	max	0.051	44	-0.002	75	0.594	101	-1.06e-4	69	1.345e-3	102	1.912e-5	38
117		min	-0.051	72	-0.018	16	-0.594	73	-4.954e-4	14	-1.345e-3	40	-2.48e-5	32
118	N1107	max	0.062	74	-0.005	36	0.594	101	1.324e-4	107	4.816e-4	102	1.912e-5	38
119		min	-0.062	72	-0.023	15	-0.594	73	-3.047e-4	41	-4.817e-4	40	-2.48e-5	32
120	N1106	max	0.062	74	-0.005	36	0.594	101	3.047e-4	73	4.817e-4	100	1.912e-5	38
121		min	-0.062	72	-0.023	15	-0.594	73	-1.324e-4	75	-4.816e-4	72	-2.48e-5	32
122	N1105	max	0.051	74	-0.002	107	0.594	101	4.954e-4	16	1.345e-3	100	1.912e-5	38
123		min	-0.051	72	-0.018	14	-0.594	73	1.06e-4	37	-1.345e-3	72	-2.48e-5	32
124	N1104	max	0.051	100	-0.002	75	0.594	101	-1.06e-4	69	1.345e-3	42	2.48e-5	94
125		min	-0.051	46	-0.018	16	-0.594	73	-4.954e-4	14	-1.345e-3	40	-1.912e-5	36
126	N1103	max	0.062	100	-0.005	38	0.594	101	1.324e-4	107	4.817e-4	42	2.48e-5	94
127		min	-0.062	46	-0.023	13	-0.594	73	-3.047e-4	41	-4.816e-4	40	-1.912e-5	36
128	N1102	max	0.062	100	-0.005	38	0.594	101	3.047e-4	73	4.816e-4	100	2.48e-5	94
129		min	-0.062	46	-0.023	13	-0.594	73	-1.324e-4	75	-4.817e-4	42	-1.912e-5	36
130	N1101	max	0.051	100	-0.002	107	0.594	101	4.954e-4	16	1.345e-3	100	2.48e-5	94
131		min	-0.051	46	-0.018	14	-0.594	73	1.06e-4	37	-1.345e-3	42	-1.912e-5	36
132	N1100	max	0.154	100	0	106	0.047	101	2.482e-4	107	9.844e-4	103	-7.559e-6	96
133		min	-0.154	42	-0.012	13	-0.047	43	-2.649e-4	41	-9.843e-4	41	-2.606e-4	15
134	N1099	max	0.154	100	-0.002	98	0.055	101	2.482e-4	107	3.485e-4	103	1.603e-4	44
135		min	-0.154	42	-0.014	13	-0.055	43	-2.649e-4	41	-3.485e-4	41	-2.449e-4	42
136	N1098	max	0.154	100	-0.002	96	0.055	101	2.482e-4	107	3.485e-4	101	2.449e-4	100
137		min	-0.154	42	-0.014	15	-0.055	43	-2.649e-4	41	-3.485e-4	43	-1.603e-4	46
138	N1097	max	0.154	100	0	44	0.047	101	2.482e-4	107	9.843e-4	101	2.606e-4	13
139		min	-0.154	42	-0.012	15	-0.047	43	-2.649e-4	41	-9.844e-4	43	7.559e-6	68
140	N1096	max	0.154	100	0	106	0.047	101	2.649e-4	73	9.843e-4	103	-7.559e-6	96
141		min	-0.154	42	-0.012	13	-0.047	43	-2.482e-4	75	-9.844e-4	41	-2.606e-4	15
142	N1095	max	0.154	100	-0.002	98	0.055	101	2.649e-4	73	3.485e-4	103	1.603e-4	44
143		min	-0.154	42	-0.014	13	-0.055	43	-2.482e-4	75	-3.485e-4	41	-2.449e-4	42
144	N1094	max	0.154	100	-0.002	96	0.055	101	2.649e-4	73	3.485e-4	101	2.449e-4	100
145		min	-0.154	42	-0.014	15	-0.055	43	-2.482e-4	75	-3.485e-4	43	-1.603e-4	46
146	N1093	max	0.154	100	0	44	0.047	101	2.649e-4	73	9.844e-4	101	2.606e-4	13
147		min	-0.154	42	-0.012	15	-0.047	43	-2.482e-4	75	-9.843e-4	43	7.559e-6	68
148	N1092	max	0.028	74	-0.002	96	0.109	101	1.735e-4	77	2.608e-3	103	-3.001e-5	96
149		min	-0.032	102	-0.01	15	-0.11	103	-1.739e-4	101	-2.61e-3	101	-3.809e-4	15
150	N1091	max	0.028	74	-0.002	96	0.137	101	9.886e-5	77	1.919e-3	103	2.71e-5	74
151		min	-0.032	102	-0.015	15	-0.137	103	-9.92e-5	101	-1.921e-3	101	-2.611e-4	15

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
152	N1090	max	0.028	74	-0.001	96	0.155	101	2.417e-5	77	1.086e-3	103	8.865e-5	74
153		min	-0.032	102	-0.017	15	-0.155	103	-2.446e-5	101	-1.088e-3	101	-1.293e-4	102
154	N1089	max	0.028	74	0	66	0.163	101	5.047e-5	75	5.421e-4	95	1.405e-4	13
155		min	-0.032	102	-0.017	15	-0.163	103	-5.086e-5	103	-5.439e-4	93	-9.668e-6	106
156	N1088	max	0.028	74	-0.002	96	0.11	101	1.739e-4	103	2.61e-3	103	-3.001e-5	96
157		min	-0.032	102	-0.01	15	-0.109	103	-1.735e-4	75	-2.608e-3	101	-3.809e-4	15
158	N1087	max	0.028	74	-0.002	96	0.137	101	9.92e-5	103	1.921e-3	103	2.71e-5	74
159		min	-0.032	102	-0.015	15	-0.137	103	-9.886e-5	75	-1.919e-3	101	-2.611e-4	15
160	N1086	max	0.028	74	-0.001	96	0.155	101	2.446e-5	103	1.088e-3	103	8.865e-5	74
161		min	-0.032	102	-0.017	15	-0.155	103	-2.417e-5	75	-1.086e-3	101	-1.293e-4	102
162	N1085	max	0.028	74	0	66	0.163	101	5.086e-5	101	5.439e-4	95	1.405e-4	13
163		min	-0.032	102	-0.017	15	-0.163	103	-5.047e-5	77	-5.421e-4	93	-9.668e-6	106
164	N1084	max	0.039	70	0.005	67	0.055	63	3.62e-4	67	1.693e-3	102	8.488e-5	13
165		min	-0.039	102	-0.01	95	-0.055	65	-6.533e-4	65	-1.693e-3	70	4.489e-6	68
166	N1083	max	0.033	74	-0.001	97	0.104	101	-3.112e-5	69	9.977e-4	102	6.905e-4	102
167		min	-0.034	102	-0.005	16	-0.104	103	-1.406e-4	14	-8.941e-4	74	-5.702e-4	74
168	N1082	max	0.067	70	0.011	67	0.055	63	3.494e-4	67	1.806e-3	102	8.488e-5	13
169		min	-0.067	102	-0.021	95	-0.055	65	-6.784e-4	65	-1.806e-3	70	4.489e-6	68
170	N1081	max	0.041	74	-0.001	97	0.104	101	2.91e-5	16	3.141e-4	64	8.692e-4	102
171		min	-0.044	102	-0.006	16	-0.104	103	3.087e-7	105	-2.404e-4	96	-7.133e-4	74
172	N1080	max	0.039	70	0.005	69	0.055	63	6.533e-4	63	1.693e-3	70	8.488e-5	13
173		min	-0.039	102	-0.01	93	-0.055	65	-3.62e-4	69	-1.693e-3	102	4.489e-6	68
174	N1079	max	0.033	74	-0.001	99	0.104	101	1.406e-4	16	8.941e-4	74	6.905e-4	102
175		min	-0.034	102	-0.005	14	-0.104	103	3.112e-5	67	-9.977e-4	102	-5.702e-4	74
176	N1078	max	0.067	70	0.011	69	0.055	63	6.784e-4	63	1.806e-3	70	8.488e-5	13
177		min	-0.067	102	-0.021	93	-0.055	65	-3.494e-4	69	-1.806e-3	102	4.489e-6	68
178	N1077	max	0.041	74	-0.001	99	0.104	101	-3.087e-7	107	2.404e-4	96	8.692e-4	102
179		min	-0.044	102	-0.006	14	-0.104	103	-2.91e-5	14	-3.141e-4	64	-7.133e-4	74
180	N1076	max	0.223	70	0.033	57	0.472	101	6.963e-3	15	1.917e-2	71	2.315e-3	106
181		min	-0.206	102	-0.039	86	-0.527	73	1.059e-3	67	-1.768e-2	103	-2.496e-3	70
182	N1075	max	0.46	74	-0.123	66	0.482	101	6.451e-3	16	3.946e-2	73	2.763e-3	104
183		min	-0.507	102	-1.034	15	-0.561	73	3.258e-4	75	-3.904e-2	101	-9.203e-3	15
184	N1074	max	0.495	74	-0.13	66	0.474	101	6.461e-3	15	6.842e-2	73	2.531e-3	104
185		min	-0.591	102	-1.024	15	-0.635	73	7.496e-4	75	-6.825e-2	101	-4.174e-3	72
186	N1073	max	0.179	70	0.024	57	0.433	101	6.985e-3	15	1.932e-2	71	2.974e-3	102
187		min	-0.166	102	-0.028	86	-0.575	73	1.08e-3	66	-1.779e-2	103	-3.218e-3	70
188	N1072	max	0.743	70	-0.233	66	1.005	101	4.951e-3	16	4.208e-2	103	8.655e-3	104
189		min	-0.694	106	-1.945	15	-1.122	73	-1.389e-3	75	-4.199e-2	71	-1.25e-2	72
190	N1071	max	0.747	70	-0.232	66	1.294	101	4.951e-3	16	4.209e-2	103	8.654e-3	104
191		min	-0.697	106	-1.992	15	-1.411	73	-1.389e-3	75	-4.199e-2	71	-1.251e-2	72
192	N1070	max	0.737	70	-0.234	66	0.513	101	4.951e-3	16	4.191e-2	103	9.046e-3	104
193		min	-0.688	106	-1.87	15	-0.627	73	-1.389e-3	75	-4.103e-2	71	-1.185e-2	72
194	N1069	max	0.523	74	-0.136	66	0.455	105	6.478e-3	15	6.639e-2	73	3.858e-3	94
195		min	-0.614	102	-1.014	15	-0.683	73	9.253e-4	66	-6.648e-2	101	-2.112e-3	66
196	N1068	max	0.836	70	-0.258	66	1.36	105	4.968e-3	15	6.996e-2	103	5.743e-3	104
197		min	-0.83	102	-1.92	15	-1.535	73	5.09e-4	105	-6.998e-2	71	-8.685e-3	72
198	N1067	max	0.84	70	-0.268	66	1.842	105	4.968e-3	15	6.996e-2	103	5.742e-3	104
199		min	-0.834	102	-1.956	15	-2.019	73	5.09e-4	105	-6.998e-2	71	-8.687e-3	72
200	N1066	max	0.901	74	-0.283	67	1.498	105	4.993e-3	15	6.599e-2	107	2.793e-3	104
201		min	-0.917	102	-1.931	15	-1.712	73	2.628e-4	107	-6.744e-2	71	-6.658e-3	72
202	N1065	max	0.905	74	-0.272	68	2.163	105	4.993e-3	15	6.599e-2	107	2.79e-3	104
203		min	-0.922	102	-1.997	13	-2.366	73	2.628e-4	107	-6.744e-2	71	-6.663e-3	72
204	N1064	max	0.993	70	-0.302	66	1.091	105	2.893e-3	103	5.531e-2	107	8.058e-3	104
205		min	-0.81	106	-2.647	15	-1.251	73	-2.793e-3	71	-5.626e-2	71	-1.287e-2	72
206	N1063	max	0.996	70	-0.308	66	1.478	105	2.893e-3	103	5.531e-2	107	8.057e-3	104

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
207		min	-0.813	106	-2.713	15	-1.632	73	-2.793e-3	71	-5.626e-2	71	-1.287e-2	72
208	N1062	max	1.08	70	-0.32	66	1.603	105	7.141e-4	73	9.337e-2	107	6.259e-3	104
209		min	-0.957	106	-2.641	15	-1.766	73	-6.14e-4	101	-9.433e-2	71	-1.06e-2	72
210	N1061	max	1.083	70	-0.332	66	2.256	105	7.141e-4	73	9.338e-2	107	6.258e-3	104
211		min	-0.96	106	-2.704	15	-2.413	73	-6.14e-4	101	-9.433e-2	71	-1.06e-2	72
212	N1060	max	1.073	70	-0.299	66	0.488	105	7.141e-4	73	9.31e-2	103	6.788e-3	104
213		min	-0.951	106	-2.542	15	-0.656	73	-6.14e-4	101	-9.303e-2	71	-9.705e-3	72
214	N1059	max	1.135	70	-0.307	66	0.479	105	1.435e-3	71	8.839e-2	103	5.063e-3	104
215		min	-1.066	106	-2.54	15	-0.648	73	-1.349e-3	107	-8.826e-2	71	-7.572e-3	72
216	N1058	max	0.708	70	-0.225	66	0.294	105	5.066e-4	107	4.09e-2	103	6.77e-3	104
217		min	-0.654	106	-1.807	15	-0.508	73	-4.532e-3	14	-4.179e-2	71	-9.202e-3	72
218	N1057	max	0.782	70	-0.252	66	1.175	105	-5.26e-4	66	6.901e-2	103	4.704e-3	104
219		min	-0.768	106	-1.864	15	-1.332	73	-4.556e-3	15	-7.051e-2	71	-7.817e-3	72
220	N1056	max	0.465	74	-0.132	66	0.955	101	6.451e-3	16	3.958e-2	73	2.514e-3	104
221		min	-0.514	102	-1.155	15	-1.036	73	3.258e-4	75	-3.965e-2	101	-1.051e-2	15
222	N1055	max	0.234	70	0.033	57	0.09	75	-7.919e-4	106	8.227e-2	71	2.531e-3	102
223		min	-0.225	102	-0.038	86	-0.368	15	-6.468e-3	15	-7.644e-2	77	-2.622e-3	70
224	N1054	max	0	57	0	107	0	105	0	101	0	107	0	86
225		min	0	87	0	26	0	47	0	43	0	12	0	56
226	N1053	max	0.829	70	-0.242	66	0.535	105	4.968e-3	15	6.979e-2	103	6.133e-3	104
227		min	-0.824	106	-1.866	15	-0.706	73	5.09e-4	105	-6.902e-2	71	-8.029e-3	72
228	N1052	max	0.986	70	-0.292	66	0.432	105	2.893e-3	103	5.497e-2	103	8.589e-3	104
229		min	-0.804	106	-2.543	15	-0.598	73	-2.793e-3	71	-5.496e-2	71	-1.197e-2	72
230	N1051	max	0.829	74	-0.24	66	0.346	105	7.37e-4	75	6.45e-2	103	3.692e-3	104
231		min	-0.843	102	-1.8	15	-0.467	73	-4.58e-3	15	-6.503e-2	71	-5.183e-3	72
232	N1050	max	0.13	70	0.016	57	0.111	75	1.549e-3	75	8.344e-2	71	3.995e-3	102
233		min	-0.125	102	-0.018	86	-0.228	103	-6.514e-3	15	-7.752e-2	77	-4.163e-3	70
234	N1049	max	0.084	104	0.015	36	0.844	101	2.924e-4	107	5.029e-2	101	3.876e-3	15
235		min	-0.11	42	-0.049	15	-0.835	77	-2.93e-4	41	-4.942e-2	77	-9.02e-4	36
236	N1048	max	0.785	70	-0.264	66	1.66	105	-5.26e-4	66	6.901e-2	103	4.703e-3	104
237		min	-0.771	106	-1.903	15	-1.81	73	-4.556e-3	15	-7.051e-2	71	-7.819e-3	72
238	N1047	max	0.469	74	-0.137	66	1.233	101	6.451e-3	16	3.958e-2	73	2.513e-3	104
239		min	-0.517	102	-1.229	15	-1.313	73	3.258e-4	75	-3.965e-2	101	-1.052e-2	15
240	N1046	max	0.718	70	-0.241	66	1.081	105	5.066e-4	107	4.118e-2	107	6.38e-3	104
241		min	-0.663	106	-1.911	15	-1.275	73	-4.532e-3	14	-4.275e-2	71	-9.859e-3	72
242	N1045	max	0.714	70	-0.235	66	0.79	105	5.066e-4	107	4.118e-2	107	6.381e-3	104
243		min	-0.659	106	-1.87	15	-0.992	73	-4.532e-3	14	-4.274e-2	71	-9.857e-3	72
244	N1044	max	0	104	0	107	0	105	0	101	0	107	0	102
245		min	0	42	0	26	0	43	0	43	0	12	0	40
246	N1043	max	1.143	70	-0.349	66	1.827	105	1.435e-3	71	8.95e-2	107	3.559e-3	104
247		min	-1.073	106	-2.695	15	-1.976	73	-1.349e-3	107	-9.197e-2	71	-1.285e-2	13
248	N1042	max	0.5	74	-0.144	67	1.298	101	6.461e-3	15	6.854e-2	73	2.282e-3	104
249		min	-0.598	102	-1.072	15	-1.457	73	7.496e-4	75	-6.886e-2	101	-4.593e-3	72
250	N1041	max	0	104	0	107	0	71	0	71	0	107	0	102
251		min	0	42	0	26	0	103	0	103	0	12	0	40
252	N1040	max	0.067	104	0.013	36	0.641	101	2.116e-5	107	4.605e-2	101	3.869e-3	15
253		min	-0.086	42	-0.04	15	-0.632	77	-2.193e-5	41	-4.505e-2	47	-9.301e-4	36
254	N1039	max	0.841	74	-0.277	68	2	105	7.37e-4	75	6.525e-2	107	2.606e-3	104
255		min	-0.856	102	-1.971	13	-2.081	73	-4.58e-3	15	-6.772e-2	71	-8.065e-3	13
256	N1038	max	0.893	74	-0.25	66	0.512	105	4.993e-3	15	6.538e-2	103	3.881e-3	104
257		min	-0.909	102	-1.861	15	-0.732	73	2.628e-4	107	-6.475e-2	71	-4.851e-3	76
258	N1037	max	0.775	70	-0.232	66	0.347	105	-5.26e-4	66	6.883e-2	103	5.091e-3	104
259		min	-0.762	106	-1.804	15	-0.514	73	-4.556e-3	15	-6.955e-2	71	-7.164e-3	72
260	N1036	max	0.836	74	-0.275	67	1.334	105	7.37e-4	75	6.525e-2	107	2.609e-3	104
261		min	-0.851	102	-1.892	15	-1.435	73	-4.58e-3	15	-6.771e-2	71	-8.024e-3	13

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
262	N1035	max	0.188	70	0.024	57	0.115	75	-7.864e-4	75	8.344e-2	71	3.247e-3	102
263		min	-0.181	102	-0.028	86	-0.299	103	-6.485e-3	15	-7.752e-2	77	-3.377e-3	70
264	N1034	max	1.149	70	-0.378	66	2.736	105	1.435e-3	71	8.951e-2	107	3.556e-3	104
265		min	-1.078	106	-2.82	15	-2.862	73	-1.349e-3	107	-9.198e-2	71	-1.289e-2	13
266	N1033	max	0.123	70	0.016	57	0.405	105	7.018e-3	15	1.932e-2	71	3.665e-3	102
267		min	-0.114	102	-0.018	86	-0.622	73	1.086e-3	66	-1.779e-2	103	-3.961e-3	70
268	N1032	max	0.102	104	0.015	36	0.876	101	4.04e-4	107	5.266e-2	101	3.928e-3	15
269		min	-0.137	42	-0.05	15	-0.867	77	-4.046e-4	41	-5.18e-2	77	-9.072e-4	36
270	N1031	max	0.284	100	0.046	57	0.038	75	-4.896e-4	107	7.636e-2	77	2.225e-3	76
271		min	-0.273	72	-0.051	86	-0.483	13	-6.28e-3	13	-8.211e-2	71	-2.372e-3	100
272	N1030	max	0.283	70	0.046	57	0.035	75	-5.364e-4	107	7.951e-2	71	2.217e-3	102
273		min	-0.271	102	-0.052	86	-0.497	15	-6.466e-3	14	-7.39e-2	77	-2.277e-3	70
274	N1029	max	0.271	100	0.046	57	0.51	101	6.06e-3	13	1.774e-2	107	2.038e-3	76
275		min	-0.25	76	-0.051	86	-0.47	73	6.498e-4	68	-1.96e-2	71	-2.258e-3	100
276	N1028	max	0.269	70	0.045	57	0.523	101	6.957e-3	15	1.881e-2	71	2.025e-3	106
277		min	-0.249	106	-0.052	86	-0.461	73	1.054e-3	67	-1.745e-2	103	-2.166e-3	70
278	N1027	max	0.891	104	-0.27	68	0.843	75	2.319e-1	71	8.203e-4	106	1.465e-3	96
279		min	-0.91	76	-1.755	13	-0.907	103	-2.4e-1	103	-8.423e-4	74	-3.275e-3	15
280	N1026	max	0.951	104	-0.275	68	0.952	105	2.318e-1	71	1.505e-3	100	1.222e-3	66
281		min	-0.964	76	-1.781	13	-1.203	73	-2.24e-1	103	-1.389e-3	76	-4.422e-3	15
282	N1025	max	0	104	0	107	0	105	0	101	0	107	0	102
283		min	0	42	0	26	0	43	0	43	0	12	0	40
284	N1024	max	0	104	0	107	0	105	0	101	0	107	0	102
285		min	0	42	0	26	0	43	0	43	0	12	0	40
286	N1023	max	0	104	0	107	0	105	0	101	0	107	0	102
287		min	0	42	0	26	0	43	0	43	0	12	0	40
288	N1022	max	0	104	0	107	0	105	0	101	0	107	0	102
289		min	0	42	0	26	0	43	0	43	0	12	0	40
290	N1021	max	0.217	100	0.033	57	0.459	101	6.059e-3	13	1.807e-2	107	2.424e-3	76
291		min	-0.202	72	-0.037	86	-0.536	73	6.517e-4	68	-2.004e-2	71	-2.659e-3	100
292	N1020	max	0.217	70	0.032	57	0.467	101	6.965e-3	15	1.923e-2	71	2.36e-3	106
293		min	-0.201	102	-0.037	86	-0.533	73	1.062e-3	67	-1.773e-2	103	-2.544e-3	70
294	N1019	max	0.74	100	-0.276	68	1.151	75	2.879e-2	75	3.033e-3	15	4.207e-4	66
295		min	-0.683	76	-1.903	13	-1.457	103	-3.167e-2	103	9.598e-5	96	-8.064e-3	15
296	N1018	max	0.203	100	0.034	72	2.82	75	1.432e-2	75	4.9e-3	71	5.503e-4	74
297		min	-0.195	72	-0.043	100	-2.832	73	-1.742e-2	73	-4.676e-3	103	-6.001e-4	102
298	N1017	max	0.778	100	-0.278	68	1.196	105	3.339e-2	71	5.505e-3	103	1.193e-4	66
299		min	-0.728	76	-1.914	13	-1.467	73	-2.946e-2	107	-2.832e-3	75	-9.065e-3	15
300	N1016	max	0.192	100	0.033	72	0.868	101	6.365e-3	13	1.809e-3	74	5.219e-4	70
301		min	-0.178	76	-0.043	100	-1.021	73	-5.068e-4	77	-1.915e-3	102	-5.593e-4	102
302	N1015	max	1.025	100	-0.371	68	1.274	105	3.063e-2	71	2.917e-3	73	1.839e-3	66
303		min	-0.848	76	-2.577	13	-1.551	73	-3.029e-2	103	7.051e-5	105	-9.718e-3	15
304	N1014	max	0.728	70	-0.297	67	1.103	75	2.548e-2	75	4.509e-3	75	4.289e-3	103
305		min	-0.682	106	-1.948	16	-1.408	103	-2.836e-2	103	-7.613e-3	103	-5.691e-4	68
306	N1013	max	0.203	70	0.033	70	2.709	75	1.213e-2	75	8.153e-3	71	6.511e-4	100
307		min	-0.195	102	-0.041	102	-2.736	73	-1.555e-2	73	-7.508e-3	107	-5.558e-4	76
308	N1012	max	0.768	70	-0.304	67	1.21	105	2.892e-2	71	7.522e-4	75	3.842e-3	103
309		min	-0.729	106	-1.977	16	-1.474	73	-2.52e-2	107	-4.272e-3	103	-6.868e-4	75
310	N1011	max	0.192	70	0.033	70	0.855	101	6.645e-3	13	1.848e-3	74	6.271e-4	100
311		min	-0.179	106	-0.04	102	-1.005	73	-1.296e-4	77	-1.954e-3	102	-5.165e-4	76
312	N1010	max	1.013	70	-0.406	67	1.245	105	2.698e-2	71	4.066e-3	75	5.256e-3	92
313		min	-0.845	106	-2.645	15	-1.52	73	-2.662e-2	103	-7.363e-3	103	-2.05e-3	68
314	N1009	max	0.632	100	-0.203	68	0.188	105	1.267e-2	77	1.172e-3	102	1.567e-3	96
315		min	-0.549	76	-1.671	13	-0.435	73	-1.792e-2	101	-1.04e-3	70	-4.111e-3	15
316	N1008	max	0.626	100	-0.228	68	0.216	105	2.015e-2	77	1.172e-3	102	1.572e-3	96

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
317		min	-0.542	76	-1.714	13	-0.464	73	-2.548e-2	101	-1.041e-3	70	-3.612e-3	15
318	N1007	max	0.63	70	-0.247	67	0.216	105	2.013e-2	77	1.171e-3	102	1.586e-3	96
319		min	-0.544	106	-1.75	16	-0.465	73	-2.553e-2	101	-1.041e-3	70	-3.018e-3	15
320	N1006	max	0.636	70	-0.239	66	0.188	105	1.259e-2	77	1.171e-3	102	1.567e-3	96
321		min	-0.548	106	-1.782	15	-0.438	73	-1.809e-2	101	-1.042e-3	70	-2.517e-3	15
322	N1005	max	0.252	100	0.043	72	0.657	101	6.189e-3	13	1.533e-3	104	2.883e-4	76
323		min	-0.234	76	-0.051	100	-0.66	73	5.23e-4	105	-1.83e-3	72	-4.397e-4	100
324	N1004	max	0.248	100	0.039	57	0.664	101	6.396e-3	13	1.524e-3	104	4.918e-4	74
325		min	-0.23	76	-0.049	86	-0.664	73	-1.729e-5	105	-1.819e-3	72	-5.297e-4	102
326	N1003	max	0.248	70	0.039	57	0.666	101	6.604e-3	13	1.525e-3	74	5.566e-4	100
327		min	-0.229	106	-0.049	86	-0.663	73	5.626e-6	105	-1.828e-3	102	-4.698e-4	76
328	N1002	max	0.252	70	0.043	70	0.662	101	6.817e-3	16	1.536e-3	74	4.091e-4	102
329		min	-0.232	106	-0.051	102	-0.655	73	5.917e-4	105	-1.837e-3	102	-3.248e-4	74
330	N1001	max	0.265	100	0.043	72	0.61	75	3.342e-4	107	1.589e-3	102	3.252e-4	76
331		min	-0.255	72	-0.052	100	-0.873	103	-6.306e-3	13	-1.386e-3	70	-4.622e-4	100
332	N1000	max	0.261	100	0.039	57	0.62	75	8.886e-4	107	1.566e-3	72	5.176e-4	74
333		min	-0.251	72	-0.049	86	-0.884	103	-6.348e-3	13	-1.354e-3	70	-5.654e-4	102
334	N999	max	0.261	70	0.039	57	0.617	75	8.763e-4	107	1.595e-3	72	5.783e-4	100
335		min	-0.25	102	-0.049	86	-0.883	103	-6.39e-3	13	-1.376e-3	100	-5.036e-4	76
336	N998	max	0.265	70	0.044	70	0.6	75	2.975e-4	107	1.79e-3	71	4.5e-4	102
337		min	-0.253	102	-0.051	102	-0.869	103	-6.435e-3	14	-1.523e-3	107	-3.514e-4	74
338	N997	max	0.893	100	-0.278	68	0.306	105	1.579e-2	73	7.342e-4	107	2.906e-3	96
339		min	-0.667	76	-2.332	13	-0.47	73	-1.575e-2	105	-7.612e-4	71	-5.786e-3	15
340	N996	max	0.887	100	-0.321	68	0.336	105	2.373e-2	73	2.905e-4	107	2.982e-3	96
341		min	-0.66	76	-2.392	13	-0.5	73	-2.367e-2	105	-3.176e-4	71	-5.285e-3	15
342	N995	max	0.891	70	-0.354	67	0.336	105	2.374e-2	73	2.223e-4	105	3.068e-3	96
343		min	-0.662	106	-2.445	15	-0.501	73	-2.366e-2	105	-2.492e-4	73	-4.685e-3	15
344	N994	max	0.898	70	-0.324	66	0.307	105	1.584e-2	73	6.659e-4	105	3.12e-3	96
345		min	-0.667	106	-2.497	15	-0.471	73	-1.574e-2	105	-6.929e-4	73	-4.256e-3	94
346	N993	max	0.629	100	-0.209	68	0.429	101	1.872e-2	103	1.215e-3	104	1.298e-3	96
347		min	-0.544	76	-1.677	13	-0.5	73	-1.351e-2	75	-1.384e-3	102	-5.196e-3	15
348	N992	max	0.623	100	-0.235	68	0.459	101	2.623e-2	103	1.215e-3	104	1.32e-3	96
349		min	-0.537	76	-1.734	13	-0.527	73	-2.098e-2	75	-1.383e-3	102	-4.753e-3	15
350	N991	max	0.628	70	-0.254	67	0.461	101	2.623e-2	103	1.216e-3	104	1.352e-3	96
351		min	-0.54	106	-1.784	16	-0.527	73	-2.094e-2	75	-1.383e-3	102	-4.215e-3	15
352	N990	max	0.634	70	-0.245	66	0.434	101	1.872e-2	103	1.217e-3	104	1.35e-3	96
353		min	-0.544	106	-1.831	15	-0.498	73	-1.34e-2	75	-1.382e-3	102	-3.77e-3	15
354	N989	max	0.8	70	-0.273	66	0.308	105	3.937e-3	15	1.663e-3	100	2.144e-2	62
355		min	-0.643	106	-2.319	15	-0.427	73	1.802e-4	66	-7.426e-4	76	-1.587e-2	98
356	N988	max	0.246	70	0.033	57	0.38	15	7.042e-3	15	6.51e-3	71	2.542e-3	106
357		min	-0.227	106	-0.039	86	-0.063	107	8.465e-4	76	-5.265e-3	103	-2.767e-3	70
358	N987	max	0.204	70	0.053	76	0.292	15	6.936e-3	15	5.044e-3	75	2.966e-3	106
359		min	-0.188	106	-0.069	100	-0.038	107	1.008e-3	107	-4.324e-3	103	-4.061e-3	70
360	N986	max	0.208	70	0.072	76	0.305	15	6.936e-3	15	5.042e-3	75	2.965e-3	106
361		min	-0.192	102	-0.095	100	-0.011	74	1.008e-3	107	-4.323e-3	103	-4.063e-3	70
362	N985	max	0.198	70	0.024	57	0.276	71	6.936e-3	15	5.748e-3	71	3.262e-3	106
363		min	-0.183	106	-0.028	86	-0.089	107	1.008e-3	107	-4.46e-3	103	-3.562e-3	70
364	N984	max	0.751	70	-0.241	66	1.187	71	4.921e-3	15	5.346e-2	103	7.621e-3	104
365		min	-0.699	106	-1.956	15	-0.963	107	-9.671e-4	75	-5.362e-2	71	-1.199e-2	72
366	N983	max	0.754	70	-0.241	66	1.562	71	4.921e-3	15	5.346e-2	103	7.62e-3	104
367		min	-0.703	106	-2.011	15	-1.336	107	-9.671e-4	75	-5.362e-2	71	-1.199e-2	72
368	N982	max	0.744	70	-0.241	66	0.548	71	4.921e-3	15	5.323e-2	103	8.132e-3	104
369		min	-0.694	106	-1.87	15	-0.325	107	-9.671e-4	75	-5.236e-2	71	-1.113e-2	72
370	N981	max	0.253	70	0.054	76	0.398	15	7.042e-3	15	5.81e-3	75	2.246e-3	106
371		min	-0.232	106	-0.071	100	-0.003	107	8.465e-4	76	-5.129e-3	103	-3.266e-3	70

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
372	N980	max	0.829	70	-0.269	66	1.642	71	4.95e-3	15	8.975e-2	103	4.588e-3	104
373		min	-0.827	102	-1.932	15	-1.465	107	5.762e-4	96	-9.003e-2	71	-8.097e-3	72
374	N979	max	0.833	70	-0.281	66	2.272	71	4.95e-3	15	8.975e-2	103	4.587e-3	104
375		min	-0.83	102	-1.976	15	-2.092	107	5.762e-4	96	-9.004e-2	71	-8.098e-3	72
376	N978	max	0.877	74	-0.29	69	1.813	71	4.979e-3	15	8.54e-2	107	2.224e-3	98
377		min	-0.903	102	-1.954	14	-1.668	107	-6.137e-4	107	-8.748e-2	71	-8.692e-3	13
378	N977	max	0.882	74	-0.272	68	2.688	71	4.979e-3	15	8.54e-2	107	2.221e-3	98
379		min	-0.908	102	-2.041	13	-2.522	107	-6.137e-4	107	-8.748e-2	71	-8.733e-3	13
380	N976	max	1.003	70	-0.311	66	1.282	71	2.909e-3	103	5.53e-2	107	7.868e-3	104
381		min	-0.819	106	-2.664	15	-1.101	107	-2.817e-3	71	-5.625e-2	71	-1.279e-2	72
382	N975	max	1.007	70	-0.317	66	1.676	71	2.909e-3	103	5.53e-2	107	7.867e-3	104
383		min	-0.823	106	-2.734	15	-1.488	107	-2.817e-3	71	-5.626e-2	71	-1.279e-2	72
384	N974	max	1.088	70	-0.329	66	1.797	71	7.29e-4	73	9.336e-2	107	6.068e-3	104
385		min	-0.968	106	-2.657	15	-1.616	107	-6.352e-4	101	-9.431e-2	71	-1.052e-2	72
386	N973	max	1.091	70	-0.342	66	2.457	71	7.29e-4	73	9.337e-2	107	6.067e-3	104
387		min	-0.971	106	-2.724	15	-2.269	107	-6.352e-4	101	-9.432e-2	71	-1.052e-2	72
388	N972	max	1.081	70	-0.308	66	0.67	71	7.29e-4	73	9.309e-2	103	6.597e-3	104
389		min	-0.962	106	-2.551	15	-0.497	107	-6.352e-4	101	-9.301e-2	71	-9.628e-3	72
390	N971	max	1.141	70	-0.316	66	0.659	71	1.413e-3	71	8.839e-2	103	4.872e-3	104
391		min	-1.078	106	-2.549	15	-0.487	107	-1.331e-3	107	-8.824e-2	71	-7.494e-3	72
392	N970	max	0.721	70	-0.235	66	0.642	71	1.428e-3	107	4.1e-2	103	7.68e-3	104
393		min	-0.666	106	-1.828	15	-0.522	103	-4.71e-3	71	-4.185e-2	71	-1.015e-2	72
394	N969	max	0.808	70	-0.26	66	1.565	71	-4.703e-4	77	6.917e-2	107	5.494e-3	104
395		min	-0.796	106	-1.891	15	-1.373	107	-4.555e-3	15	-7.063e-2	71	-8.654e-3	72
396	N968	max	0.144	70	0.058	76	0.208	15	6.74e-3	15	3.074e-3	75	3.179e-3	106
397		min	-0.133	102	-0.09	100	-0.045	107	-1.012e-3	107	-3.78e-3	102	-5.813e-3	70
398	N967	max	0.221	70	0.033	57	0.53	71	-1.01e-3	99	1.937e-2	71	2.357e-3	102
399		min	-0.21	102	-0.038	86	-0.469	103	-6.533e-3	15	-1.748e-2	107	-2.478e-3	70
400	N966	max	0.504	74	-0.147	68	1.78	101	6.461e-3	15	6.854e-2	73	2.281e-3	104
401		min	-0.601	102	-1.102	16	-1.936	73	7.496e-4	75	-6.887e-2	101	-4.595e-3	72
402	N965	max	0.823	70	-0.249	66	0.566	71	4.95e-3	15	8.952e-2	103	5.097e-3	104
403		min	-0.82	102	-1.865	15	-0.392	107	5.762e-4	96	-8.878e-2	71	-7.239e-3	72
404	N964	max	0.997	70	-0.3	66	0.612	71	2.909e-3	103	5.496e-2	103	8.398e-3	104
405		min	-0.814	106	-2.553	15	-0.439	107	-2.817e-3	71	-5.495e-2	71	-1.19e-2	72
406	N963	max	0.867	74	-0.25	66	0.744	71	-1.969e-4	75	6.472e-2	103	4.363e-3	104
407		min	-0.884	102	-1.821	15	-0.52	107	-4.579e-3	15	-6.522e-2	71	-5.907e-3	72
408	N962	max	0.122	70	0.016	57	0.623	71	-1.027e-3	96	1.952e-2	71	3.73e-3	102
409		min	-0.116	102	-0.018	86	-0.403	107	-6.556e-3	15	-1.759e-2	107	-3.937e-3	70
410	N961	max	0.08	74	0.014	66	0.868	101	4.462e-3	101	3.667e-2	101	2.984e-3	15
411		min	-0.1	102	-0.038	15	-0.861	107	-4.463e-3	103	-3.604e-2	107	-8.011e-4	66
412	N960	max	0.811	70	-0.27	66	2.059	71	-4.703e-4	77	6.917e-2	107	5.493e-3	104
413		min	-0.799	106	-1.933	15	-1.857	107	-4.555e-3	15	-7.063e-2	71	-8.656e-3	72
414	N959	max	0.15	70	0.085	76	0.24	15	6.74e-3	15	3.068e-3	75	3.176e-3	106
415		min	-0.139	102	-0.143	100	-0.046	74	-1.012e-3	107	-3.783e-3	102	-5.818e-3	70
416	N958	max	0.731	70	-0.246	66	1.451	71	1.428e-3	107	4.129e-2	107	7.29e-3	104
417		min	-0.675	106	-1.94	15	-1.304	103	-4.71e-3	71	-4.281e-2	71	-1.08e-2	72
418	N957	max	0.728	70	-0.242	66	1.152	71	1.428e-3	107	4.129e-2	107	7.291e-3	104
419		min	-0.672	106	-1.896	15	-1.016	103	-4.71e-3	71	-4.281e-2	71	-1.08e-2	72
420	N956	max	0.53	74	-0.115	68	1.463	105	6.478e-3	15	6.682e-2	107	2.918e-3	98
421		min	-0.622	102	-1.002	13	-1.682	73	9.253e-4	66	-6.819e-2	101	-2.881e-3	62
422	N955	max	1.149	70	-0.358	66	2.02	71	1.413e-3	71	8.949e-2	107	3.368e-3	104
423		min	-1.086	106	-2.714	15	-1.823	107	-1.331e-3	107	-9.195e-2	71	-1.345e-2	13
424	N954	max	0.256	70	0.069	76	0.41	15	7.042e-3	15	5.807e-3	75	2.245e-3	106
425		min	-0.236	106	-0.092	100	0.017	66	8.465e-4	76	-5.129e-3	103	-3.268e-3	70
426	N953	max	0.535	74	-0.09	68	2.14	105	6.478e-3	15	6.682e-2	107	2.915e-3	98

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
427		min	-0.627	102	-1.005	13	-2.349	73	9.253e-4	66	-6.82e-2	101	-2.885e-3	62
428	N952	max	0.065	74	0.011	66	0.656	101	4.349e-3	101	3.352e-2	41	2.929e-3	15
429		min	-0.079	102	-0.03	15	-0.65	107	-4.35e-3	103	-3.28e-2	107	-8.23e-4	66
430	N951	max	0.879	74	-0.291	68	2.429	71	-1.969e-4	75	6.549e-2	107	3.276e-3	104
431		min	-0.897	102	-2.003	13	-2.153	107	-4.579e-3	15	-6.791e-2	71	-8.506e-3	13
432	N950	max	0.87	74	-0.257	66	0.518	71	4.979e-3	15	8.454e-2	103	2.67e-3	104
433		min	-0.895	102	-1.86	15	-0.392	107	-6.137e-4	107	-8.396e-2	71	-3.92e-3	72
434	N949	max	0.801	70	-0.243	66	0.721	71	-4.703e-4	77	6.899e-2	103	5.882e-3	104
435		min	-0.79	106	-1.825	15	-0.544	107	-4.555e-3	15	-6.967e-2	71	-8.e-3	72
436	N948	max	0.875	74	-0.285	66	1.75	71	-1.969e-4	75	6.548e-2	107	3.279e-3	104
437		min	-0.892	102	-1.92	15	-1.498	107	-4.579e-3	15	-6.79e-2	71	-8.465e-3	13
438	N947	max	0.178	70	0.024	57	0.577	71	-1.024e-3	96	1.952e-2	71	3.03e-3	102
439		min	-0.169	102	-0.028	86	-0.431	103	-6.542e-3	15	-1.759e-2	107	-3.196e-3	70
440	N946	max	1.154	70	-0.388	66	2.94	71	1.413e-3	71	8.95e-2	107	3.365e-3	104
441		min	-1.09	106	-2.844	15	-2.718	107	-1.331e-3	107	-9.196e-2	71	-1.349e-2	13
442	N945	max	0.8	70	-0.274	66	0.19	105	-2.811e-4	66	7.234e-4	76	1.996e-2	62
443		min	-0.644	106	-2.327	15	-0.399	73	-4.47e-3	15	-1.721e-3	13	-1.697e-2	98
444	N944	max	0.8	100	-0.226	68	0.304	105	3.855e-3	13	1.652e-3	100	1.897e-2	66
445		min	-0.643	76	-2.081	13	-0.427	73	1.638e-4	68	-7.593e-4	76	-2.408e-2	15
446	N943	max	0.801	100	-0.222	68	0.189	105	-2.241e-4	68	7.205e-4	76	1.789e-2	66
447		min	-0.646	76	-2.085	13	-0.396	73	-3.815e-3	13	-1.717e-3	13	-3.371e-2	15
448	N942	max	1.103	104	-0.247	68	0.2	105	-3.955e-4	68	1.327e-3	76	1.668e-2	76
449		min	-1.097	76	-2.078	13	-0.316	73	-4.185e-3	13	-1.594e-3	100	-8.481e-2	13
450	N941	max	1.092	74	-0.298	66	0.203	105	-4.502e-4	66	1.376e-3	76	2.184e-2	76
451		min	-1.085	76	-2.318	15	-0.321	73	-4.881e-3	15	-1.705e-3	100	-4.257e-2	13
452	N940	max	0.462	100	-0.08	68	0.085	105	-1.347e-3	68	2.012e-3	76	6.884e-3	66
453		min	-0.423	76	-0.893	13	-0.401	13	-1.088e-2	13	-2.382e-3	100	-2.114e-2	15
454	N939	max	0.457	70	-0.111	66	0.084	105	-1.419e-3	66	1.952e-3	106	5.27e-3	92
455		min	-0.418	106	-0.991	15	-0.412	15	-1.215e-2	15	-2.42e-3	70	-5.849e-3	68
456	N938	max	0.454	100	-0.086	68	0.436	101	1.082e-2	13	2.472e-3	100	9.066e-3	66
457		min	-0.41	76	-0.889	13	-0.465	73	1.359e-3	68	-2.092e-3	106	-8.622e-3	98
458	N937	max	0.45	70	-0.119	66	0.446	101	1.248e-2	15	2.52e-3	70	1.495e-2	13
459		min	-0.406	106	-1.039	15	-0.46	73	1.42e-3	66	-2.054e-3	106	-3.996e-3	68
460	N936	max	0.469	104	-0.101	68	0.113	105	-2.07e-3	68	5.631e-3	76	1.834e-2	106
461		min	-0.488	72	-0.866	13	-0.161	73	-1.209e-2	13	-5.665e-3	104	-2.027e-2	70
462	N935	max	0.507	74	-0.132	66	0.116	105	-2.144e-3	68	5.524e-3	76	6.771e-3	76
463		min	-0.523	102	-0.96	15	-0.163	73	-1.361e-2	15	-5.413e-3	104	-6.436e-2	13
464	N934	max	0.639	100	-0.175	68	0.134	105	-8.772e-4	68	1.435e-3	76	1.223e-2	66
465		min	-0.556	76	-1.624	13	-0.379	73	-7.939e-3	13	-2.09e-3	100	-3.288e-2	15
466	N933	max	0.641	70	-0.22	66	0.133	105	-8.447e-4	66	1.453e-3	76	1.057e-2	66
467		min	-0.553	106	-1.809	15	-0.384	73	-8.758e-3	15	-2.156e-3	100	-1.125e-2	94
468	N932	max	0.636	100	-0.182	68	0.373	101	7.934e-3	13	2.108e-3	100	1.476e-2	66
469		min	-0.55	76	-1.617	13	-0.445	73	8.738e-4	68	-1.499e-3	76	-1.61e-2	94
470	N931	max	0.64	70	-0.229	66	0.381	101	8.409e-3	15	2.189e-3	100	1.722e-2	13
471		min	-0.549	106	-1.873	15	-0.443	73	8.006e-4	66	-1.524e-3	76	-9.102e-3	98
472	N930	max	0.899	100	-0.234	68	0.247	105	9.423e-5	71	6.815e-5	107	1.73e-2	66
473		min	-0.673	76	-2.267	13	-0.412	73	-7.831e-5	107	-9.071e-5	71	-4.682e-2	15
474	N929	max	0.904	70	-0.287	66	0.25	105	1.349e-4	71	2.675e-4	107	1.782e-2	66
475		min	-0.672	106	-2.544	15	-0.414	73	-2.119e-5	106	-2.907e-4	71	-2.257e-2	94
476	N928	max	0.754	100	-0.182	68	0.354	105	2.636e-3	107	8.022e-3	71	6.393e-3	104
477		min	-0.688	76	-1.621	13	-0.545	73	-6.094e-3	71	-8.294e-3	103	-7.105e-3	76
478	N927	max	0.733	70	-0.227	66	0.316	105	-8.396e-5	107	5.227e-2	103	6.272e-3	104
479		min	-0.693	106	-1.806	15	-0.514	73	-4.539e-3	15	-5.309e-2	71	-8.551e-3	72
480	N926	max	0.209	100	0.031	57	0.452	101	6.059e-3	13	1.814e-2	107	2.494e-3	76
481		min	-0.194	72	-0.035	86	-0.544	73	6.529e-4	68	-2.014e-2	71	-2.736e-3	100

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
482	N925	max	0.209	70	0.03	57	0.46	101	6.969e-3	15	1.932e-2	71	2.424e-3	106
483		min	-0.194	102	-0.035	86	-0.543	73	1.066e-3	67	-1.779e-2	103	-2.613e-3	70
484	N924	max	0.22	100	0.031	57	0.101	75	-7.155e-4	98	8.018e-2	77	2.718e-3	76
485		min	-0.212	72	-0.035	86	-0.326	13	-6.287e-3	13	-8.627e-2	71	-2.873e-3	100
486	N923	max	0.102	44	0.015	36	0.876	101	4.046e-4	103	5.266e-2	101	3.928e-3	15
487		min	-0.137	72	-0.05	15	-0.867	77	-4.04e-4	75	-5.18e-2	47	-9.072e-4	36
488	N922	max	0.476	74	-0.146	66	1.138	71	6.39e-3	15	3.949e-2	73	1.505e-3	104
489		min	-0.525	102	-1.238	15	-0.89	107	8.231e-4	96	-3.958e-2	101	-1.1e-2	15
490	N921	max	0.194	70	0.024	57	0.275	15	6.961e-3	15	1.937e-2	71	3.231e-3	106
491		min	-0.18	106	-0.028	86	-0.085	107	1.013e-3	107	-1.78e-2	103	-3.493e-3	70
492	N920	max	0.742	70	-0.24	66	0.521	71	4.908e-3	16	4.175e-2	103	8.e-3	104
493		min	-0.693	106	-1.875	15	-0.298	107	-5.48e-4	75	-4.091e-2	71	-1.1e-2	72
494	N919	max	0.828	70	-0.281	66	1.849	71	4.933e-3	15	6.974e-2	103	4.8e-3	104
495		min	-0.827	102	-1.97	15	-1.672	107	5.835e-4	96	-6.98e-2	71	-7.935e-3	72
496	N918	max	0.818	70	-0.247	66	0.527	71	4.933e-3	15	6.956e-2	103	5.19e-3	104
497		min	-0.817	102	-1.87	15	-0.353	107	5.835e-4	96	-6.884e-2	71	-7.278e-3	72
498	N917	max	0.22	70	0.03	57	0.101	75	-9.222e-4	106	8.344e-2	71	2.651e-3	102
499		min	-0.211	102	-0.035	86	-0.336	15	-6.472e-3	15	-7.752e-2	77	-2.743e-3	70
500	N916	max	0.878	74	-0.28	68	2.144	71	4.958e-3	15	6.569e-2	107	2.111e-3	98
501		min	-0.905	102	-2.014	13	-1.99	107	-5.867e-4	107	-6.72e-2	71	-7.191e-3	13
502	N915	max	0.133	70	0.016	57	0.205	71	6.76e-3	15	1.937e-2	71	3.978e-3	106
503		min	-0.124	106	-0.018	86	-0.087	107	-9.293e-4	107	-1.78e-2	103	-4.297e-3	70
504	N914	max	1.016	70	-0.32	66	1.674	71	2.91e-3	103	5.528e-2	107	8.029e-3	104
505		min	-0.831	106	-2.733	15	-1.486	107	-2.825e-3	71	-5.622e-2	71	-1.297e-2	72
506	N913	max	1.098	70	-0.344	66	2.455	71	7.195e-4	73	9.335e-2	107	6.229e-3	104
507		min	-0.977	106	-2.724	15	-2.267	107	-6.333e-4	101	-9.429e-2	71	-1.07e-2	72
508	N912	max	1.088	70	-0.307	66	0.669	71	7.195e-4	73	9.307e-2	103	6.76e-3	104
509		min	-0.968	106	-2.551	15	-0.495	107	-6.333e-4	101	-9.299e-2	71	-9.811e-3	72
510	N911	max	1.153	70	-0.36	66	2.019	71	1.405e-3	71	8.948e-2	107	3.53e-3	104
511		min	-1.089	106	-2.713	15	-1.822	107	-1.329e-3	107	-9.194e-2	71	-1.345e-2	13
512	N910	max	1.145	70	-0.315	66	0.658	71	1.405e-3	71	8.837e-2	103	5.034e-3	104
513		min	-1.082	106	-2.549	15	-0.485	107	-1.329e-3	107	-8.823e-2	71	-7.677e-3	72
514	N909	max	0.75	70	-0.249	66	1.698	71	1.858e-3	107	5.277e-2	107	7.523e-3	104
515		min	-0.692	106	-1.943	15	-1.546	103	-5.172e-3	71	-5.452e-2	71	-1.14e-2	72
516	N908	max	0.827	70	-0.276	66	2.479	71	-2.544e-4	77	8.914e-2	107	5.611e-3	104
517		min	-0.813	106	-1.936	15	-2.273	107	-4.568e-3	15	-9.083e-2	71	-9.183e-3	72
518	N907	max	0.817	70	-0.243	66	0.758	71	-2.544e-4	77	8.889e-2	103	6.12e-3	104
519		min	-0.804	106	-1.818	15	-0.58	107	-4.568e-3	15	-8.958e-2	71	-8.325e-3	72
520	N906	max	0.884	74	-0.29	69	2.088	71	-1.782e-4	75	8.515e-2	107	2.972e-3	104
521		min	-0.902	102	-1.929	15	-1.829	107	-4.596e-3	15	-8.816e-2	71	-9.987e-3	13
522	N905	max	0.877	74	-0.251	66	0.783	71	-1.782e-4	75	8.414e-2	103	4.393e-3	104
523		min	-0.894	102	-1.814	15	-0.557	107	-4.596e-3	15	-8.464e-2	71	-6.081e-3	72
524	N904	max	0.793	100	-0.189	68	0.368	105	5.639e-3	13	4.627e-3	70	7.413e-3	104
525		min	-0.734	76	-1.613	13	-0.525	73	5.125e-5	75	-4.093e-3	106	-8.469e-3	72
526	N903	max	0.256	70	0.062	76	0.477	70	-9.97e-4	99	8.35e-3	71	2.325e-3	106
527		min	-0.243	102	-0.081	100	-0.41	102	-6.499e-3	15	-7.143e-3	103	-3.164e-3	70
528	N902	max	0.246	70	0.033	57	0.53	71	-9.97e-4	99	8.965e-3	71	2.601e-3	102
529		min	-0.233	102	-0.038	86	-0.468	103	-6.499e-3	15	-7.287e-3	107	-2.747e-3	70
530	N901	max	0.204	70	0.047	76	0.52	70	-1.014e-3	96	7.752e-3	71	3.072e-3	106
531		min	-0.194	102	-0.06	100	-0.372	102	-6.509e-3	15	-6.504e-3	103	-3.973e-3	70
532	N900	max	0.208	70	0.063	76	0.527	70	-1.014e-3	96	7.749e-3	71	3.071e-3	106
533		min	-0.197	102	-0.081	100	-0.376	102	-6.509e-3	15	-6.503e-3	103	-3.974e-3	70
534	N899	max	0.144	70	0.05	76	0.577	70	-1.018e-3	96	6.077e-3	75	3.401e-3	106
535		min	-0.137	102	-0.075	100	-0.35	106	-6.524e-3	15	-5.622e-3	103	-5.548e-3	70
536	N898	max	0.149	70	0.076	106	0.59	70	-1.018e-3	96	6.071e-3	75	3.398e-3	106

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
537		min	-0.142	102	-0.122	70	-0.354	106	-6.524e-3	15	-5.621e-3	103	-5.553e-3	70
538	N897	max	0.889	74	-0.292	68	2.97	71	-1.782e-4	75	8.515e-2	107	2.969e-3	104
539		min	-0.908	102	-2.028	13	-2.681	107	-4.596e-3	15	-8.816e-2	71	-1.003e-2	13
540	N896	max	0.773	70	-0.237	66	0.523	101	4.955e-3	16	5.325e-2	103	8.145e-3	104
541		min	-0.74	106	-1.869	15	-0.658	73	-7.978e-4	75	-5.242e-2	71	-1.061e-2	72
542	N895	max	1.04	100	-0.241	68	0.457	105	4.622e-3	103	7.992e-3	71	8.191e-3	104
543		min	-0.853	76	-2.266	13	-0.623	73	-4.634e-3	71	-7.962e-3	103	-9.908e-3	72
544	N894	max	0.74	70	-0.236	66	0.666	71	1.858e-3	107	5.24e-2	103	8.033e-3	104
545		min	-0.682	106	-1.821	15	-0.546	103	-5.172e-3	71	-5.326e-2	71	-1.054e-2	72
546	N893	max	0.219	70	0.033	57	0.47	101	6.661e-3	15	1.341e-2	71	2.298e-3	102
547		min	-0.205	102	-0.038	86	-0.528	73	1.035e-3	67	-1.197e-2	103	-2.447e-3	70
548	N892	max	0.182	70	0.051	72	0.389	102	6.682e-3	15	1.281e-2	71	2.813e-3	106
549		min	-0.172	102	-0.061	100	-0.527	70	1.051e-3	66	-1.16e-2	103	-3.392e-3	70
550	N891	max	0.186	70	0.068	76	0.41	102	6.682e-3	15	1.281e-2	71	2.812e-3	106
551		min	-0.175	102	-0.083	100	-0.545	70	1.051e-3	66	-1.16e-2	103	-3.394e-3	70
552	N890	max	0.176	70	0.024	57	0.433	101	6.682e-3	15	1.315e-2	71	2.958e-3	102
553		min	-0.165	102	-0.028	86	-0.575	73	1.051e-3	66	-1.166e-2	103	-3.16e-3	70
554	N889	max	0.096	104	0.015	36	0.819	101	3.811e-4	107	4.917e-2	101	3.717e-3	15
555		min	-0.128	42	-0.047	15	-0.81	77	-3.819e-4	41	-4.837e-2	47	-8.549e-4	36
556	N888	max	0.524	74	-0.11	68	1.505	105	6.197e-3	15	6.941e-2	77	3.011e-3	98
557		min	-0.604	102	-0.952	13	-1.721	73	9.044e-4	66	-7.075e-2	101	-3.106e-3	62
558	N887	max	0.717	70	-0.229	66	0.429	101	4.786e-3	15	5.016e-3	103	7.901e-3	104
559		min	-0.667	106	-1.76	15	-0.541	73	-3.56e-5	75	-4.21e-3	75	-1.056e-2	72
560	N886	max	0.225	70	0.053	72	0.424	102	6.661e-3	15	1.307e-2	71	2.158e-3	106
561		min	-0.211	102	-0.064	100	-0.478	70	1.035e-3	67	-1.191e-2	103	-2.679e-3	70
562	N885	max	0.079	104	0.015	36	0.789	101	2.754e-4	107	4.697e-2	101	3.668e-3	15
563		min	-0.104	42	-0.047	15	-0.78	77	-2.763e-4	41	-4.616e-2	77	-8.501e-4	36
564	N884	max	0.528	74	-0.085	68	2.207	105	6.197e-3	15	6.941e-2	77	3.008e-3	98
565		min	-0.609	102	-0.962	13	-2.414	73	9.044e-4	66	-7.076e-2	101	-3.11e-3	62
566	N883	max	0.063	104	0.012	36	0.599	101	1.896e-5	107	4.304e-2	101	3.656e-3	15
567		min	-0.081	42	-0.038	15	-0.591	77	-1.998e-5	41	-4.21e-2	47	-8.756e-4	36
568	N882	max	0.466	74	-0.133	66	1.262	101	6.172e-3	16	4.115e-2	73	2.507e-3	104
569		min	-0.507	102	-1.153	15	-1.344	73	2.484e-4	75	-4.12e-2	101	-9.664e-3	15
570	N881	max	0.997	70	-0.302	66	0.914	105	2.443e-3	103	4.29e-2	107	7.538e-3	104
571		min	-0.81	106	-2.53	15	-1.073	73	-2.307e-3	71	-4.362e-2	71	-1.193e-2	72
572	N880	max	1	70	-0.311	66	1.213	105	2.443e-3	103	4.291e-2	107	7.537e-3	104
573		min	-0.814	106	-2.592	15	-1.368	73	-2.307e-3	71	-4.363e-2	71	-1.193e-2	72
574	N879	max	1.075	70	-0.319	66	1.303	105	4.883e-4	73	7.182e-2	107	5.86e-3	104
575		min	-0.947	106	-2.523	15	-1.465	73	-3.545e-4	105	-7.254e-2	71	-9.726e-3	72
576	N878	max	1.079	70	-0.332	66	1.804	105	4.883e-4	73	7.182e-2	107	5.859e-3	104
577		min	-0.95	106	-2.581	15	-1.962	73	-3.545e-4	105	-7.255e-2	71	-9.727e-3	72
578	N877	max	1.069	70	-0.296	66	0.448	105	4.883e-4	73	7.163e-2	103	6.259e-3	104
579		min	-0.941	106	-2.431	15	-0.613	73	-3.545e-4	105	-7.156e-2	71	-9.053e-3	72
580	N876	max	1.125	70	-0.304	66	0.437	105	1.428e-3	71	6.749e-2	103	4.757e-3	104
581		min	-1.048	106	-2.43	15	-0.605	73	-1.311e-3	107	-6.737e-2	71	-7.078e-3	72
582	N875	max	0.741	70	-0.224	66	0.32	105	9.829e-4	107	5.227e-2	103	6.381e-3	104
583		min	-0.68	106	-1.764	15	-0.529	73	-4.359e-3	14	-5.319e-2	71	-8.925e-3	72
584	N874	max	0.808	70	-0.252	66	1.453	105	-5.299e-4	66	8.894e-2	107	4.064e-3	104
585		min	-0.789	106	-1.83	15	-1.606	73	-4.384e-3	15	-9.069e-2	71	-7.683e-3	72
586	N873	max	0.129	70	0.057	76	0.374	106	6.713e-3	15	1.189e-2	75	3.257e-3	106
587		min	-0.122	102	-0.074	100	-0.582	70	1.056e-3	66	-1.112e-2	103	-4.537e-3	70
588	N872	max	0.281	70	0.033	57	0.088	75	-7.499e-4	106	5.811e-2	71	2.993e-3	102
589		min	-0.268	102	-0.038	86	-0.36	15	-6.257e-3	14	-5.598e-2	73	-3.136e-3	70
590	N871	max	0.236	70	0.084	76	0.826	77	-7.901e-4	75	5.743e-2	71	3.569e-3	106
591		min	-0.226	102	-0.104	100	-1.026	71	-6.296e-3	15	-5.587e-2	73	-4.565e-3	70

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
592	N870	max	0.798	70	-0.236	66	0.414	105	4.798e-3	15	5.581e-3	103	5.737e-3	104
593		min	-0.789	106	-1.755	15	-0.579	73	6.616e-4	96	-4.895e-3	71	-7.291e-3	72
594	N869	max	0.99	70	-0.289	66	0.404	105	2.443e-3	103	4.267e-2	103	7.938e-3	104
595		min	-0.804	106	-2.433	15	-0.568	73	-2.307e-3	71	-4.264e-2	71	-1.125e-2	72
596	N868	max	0.845	74	-0.239	66	0.385	105	7.729e-4	75	8.385e-2	103	2.938e-3	104
597		min	-0.857	102	-1.758	15	-0.504	73	-4.41e-3	15	-8.443e-2	71	-4.718e-3	72
598	N867	max	0.155	70	0.016	57	0.109	75	1.519e-3	75	5.734e-2	71	4.769e-3	102
599		min	-0.148	102	-0.018	86	-0.225	103	-6.365e-3	15	-5.517e-2	73	-5.015e-3	70
600	N866	max	0.136	70	0.016	57	0.209	71	6.74e-3	15	4.918e-3	71	4.024e-3	106
601		min	-0.126	106	-0.018	86	-0.09	107	-1.012e-3	107	-3.63e-3	103	-4.39e-3	70
602	N865	max	0.232	70	0.061	76	0.436	77	-7.901e-4	75	5.743e-2	71	3.57e-3	106
603		min	-0.222	102	-0.075	100	-0.624	71	-6.296e-3	15	-5.587e-2	73	-4.563e-3	70
604	N864	max	0.097	74	0.014	66	0.964	101	4.493e-3	101	3.843e-2	101	3.023e-3	15
605		min	-0.122	102	-0.039	15	-0.957	107	-4.494e-3	103	-3.78e-2	47	-8.049e-4	66
606	N863	max	0.269	100	0.046	57	0.472	71	-6.732e-4	98	1.785e-2	103	2.067e-3	76
607		min	-0.255	72	-0.051	86	-0.509	103	-6.333e-3	13	-1.942e-2	71	-2.242e-3	100
608	N862	max	0.267	70	0.045	57	0.466	71	-1.005e-3	99	1.902e-2	71	2.064e-3	102
609		min	-0.253	102	-0.052	86	-0.517	103	-6.531e-3	15	-1.724e-2	107	-2.151e-3	70
610	N861	max	0.299	100	0.046	57	0.486	13	6.e-3	13	1.473e-2	107	2.248e-3	76
611		min	-0.275	76	-0.051	86	-0.018	107	7.28e-4	68	-1.633e-2	71	-2.501e-3	100
612	N860	max	0.298	70	0.045	57	0.521	15	7.069e-3	16	6.718e-3	71	2.225e-3	106
613		min	-0.274	106	-0.052	86	-0.013	107	7.249e-4	76	-5.573e-3	103	-2.402e-3	70
614	N859	max	0.936	104	-0.28	68	1.377	71	2.239e-1	71	1.383e-3	106	1.367e-3	96
615		min	-0.956	76	-1.768	13	-1.104	107	-2.32e-1	103	-1.411e-3	74	-3.486e-3	15
616	N858	max	0.905	104	-0.284	68	1.065	71	2.399e-1	71	9.178e-4	100	1.388e-3	66
617		min	-0.922	76	-1.792	13	-0.984	103	-2.319e-1	103	-8.266e-4	76	-4.082e-3	15
618	N857	max	0	100	0	107	0	71	0	71	0	107	0	102
619		min	0	42	0	26	0	103	0	103	0	12	0	40
620	N855	max	0	104	0	107	0	105	0	101	0	107	0	102
621		min	0	42	0	26	0	43	0	43	0	12	0	40
622	N854	max	0	104	0	107	0	105	0	101	0	107	0	102
623		min	0	42	0	26	0	43	0	43	0	12	0	40
624	N853	max	0.24	100	0.033	57	0.354	13	6.046e-3	13	1.503e-2	107	2.671e-3	76
625		min	-0.221	76	-0.037	86	-0.065	107	7.064e-4	68	-1.672e-2	71	-2.942e-3	100
626	N852	max	0.241	70	0.032	57	0.366	15	7.033e-3	15	6.523e-3	71	2.591e-3	106
627		min	-0.221	106	-0.037	86	-0.067	107	8.92e-4	76	-5.261e-3	103	-2.82e-3	70
628	N851	max	0.756	100	-0.288	68	1.615	71	2.787e-2	75	3.22e-3	72	3.302e-4	66
629		min	-0.698	76	-1.916	13	-1.62	103	-3.078e-2	103	-1.323e-4	104	-8.268e-3	15
630	N850	max	0.191	100	0.033	72	1.096	71	9.206e-4	75	1.899e-3	72	5.203e-4	74
631		min	-0.181	72	-0.043	100	-0.929	103	-6.399e-3	13	-1.776e-3	104	-5.684e-4	102
632	N849	max	0.779	100	-0.285	68	1.318	71	3.411e-2	71	6.013e-3	103	2.902e-4	66
633		min	-0.728	76	-1.926	13	-1.258	103	-3.017e-2	107	-3.349e-3	75	-8.737e-3	15
634	N848	max	0.214	100	0.034	72	0.765	71	6.39e-3	13	1.936e-3	74	5.775e-4	70
635		min	-0.197	76	-0.044	100	-0.475	107	-7.173e-4	107	-2.021e-3	102	-6.031e-4	102
636	N847	max	1.03	100	-0.384	68	1.585	71	3.062e-2	71	2.91e-3	73	1.929e-3	66
637		min	-0.852	76	-2.592	13	-1.552	103	-3.027e-2	103	6.644e-5	105	-9.577e-3	15
638	N846	max	0.746	70	-0.312	69	1.567	71	2.455e-2	75	4.488e-3	75	4.253e-3	103
639		min	-0.699	106	-1.964	15	-1.571	103	-2.747e-2	103	-7.63e-3	103	-6.976e-4	75
640	N845	max	0.191	70	0.033	70	1.077	71	5.091e-4	75	1.944e-3	72	6.235e-4	100
641		min	-0.181	102	-0.041	102	-0.913	103	-6.455e-3	13	-1.811e-3	104	-5.235e-4	76
642	N844	max	0.771	70	-0.315	69	1.341	71	2.952e-2	71	2.359e-4	75	3.978e-3	103
643		min	-0.732	106	-1.983	14	-1.27	103	-2.58e-2	107	-3.8e-3	15	-7.886e-4	75
644	N843	max	0.214	70	0.034	70	0.734	71	6.684e-3	13	2.129e-3	75	6.829e-4	100
645		min	-0.197	106	-0.041	102	-0.444	107	-2.881e-4	107	-2.073e-3	103	-5.663e-4	76
646	N842	max	1.022	70	-0.419	66	1.546	71	2.697e-2	71	4.063e-3	75	5.283e-3	92

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
647		min	-0.855	106	-2.658	15	-1.509	103	-2.66e-2	103	-7.366e-3	103	-2.094e-3	68
648	N841	max	0.633	100	-0.216	68	0.502	71	1.335e-2	107	1.343e-3	102	1.465e-3	96
649		min	-0.547	76	-1.683	13	-0.426	103	-1.86e-2	71	-1.226e-3	70	-4.321e-3	15
650	N840	max	0.627	100	-0.24	68	0.53	71	2.084e-2	77	1.343e-3	102	1.479e-3	96
651		min	-0.54	76	-1.728	13	-0.456	103	-2.615e-2	71	-1.226e-3	70	-3.817e-3	15
652	N839	max	0.632	70	-0.258	69	0.529	71	2.082e-2	107	1.342e-3	102	1.502e-3	96
653		min	-0.543	106	-1.766	14	-0.457	103	-2.621e-2	71	-1.227e-3	70	-3.218e-3	15
654	N838	max	0.639	70	-0.248	66	0.501	71	1.33e-2	107	1.341e-3	102	1.492e-3	96
655		min	-0.547	106	-1.801	15	-0.429	103	-1.876e-2	71	-1.227e-3	70	-2.713e-3	15
656	N837	max	0.279	100	0.043	72	0.482	71	6.155e-3	13	1.367e-3	104	3.283e-4	76
657		min	-0.257	76	-0.053	100	-0.178	107	3.064e-4	75	-1.679e-3	72	-4.861e-4	100
658	N836	max	0.275	100	0.039	57	0.48	71	6.406e-3	13	1.356e-3	104	5.388e-4	70
659		min	-0.254	76	-0.049	86	-0.172	107	-2.546e-4	75	-1.667e-3	72	-5.679e-4	102
660	N835	max	0.276	70	0.039	57	0.472	71	6.657e-3	13	1.362e-3	74	6.049e-4	100
661		min	-0.253	106	-0.049	86	-0.162	107	-2.553e-4	75	-1.671e-3	102	-5.116e-4	76
662	N834	max	1.018	70	-0.294	66	0.456	105	2.209e-3	103	6.983e-2	103	8.071e-3	104
663		min	-0.857	106	-2.543	15	-0.622	73	-2.109e-3	71	-6.98e-2	71	-1.124e-2	72
664	N833	max	0.279	70	0.044	70	0.46	71	6.91e-3	16	1.373e-3	74	4.441e-4	102
665		min	-0.256	106	-0.051	102	-0.146	107	3.042e-4	75	-1.682e-3	102	-3.685e-4	74
666	N832	max	0.519	104	-0.107	68	0.339	105	1.234e-2	13	5.978e-3	104	1.555e-2	106
667		min	-0.535	72	-0.862	13	-0.619	73	1.953e-3	68	-6.105e-3	76	-1.93e-2	70
668	N831	max	0.25	100	0.043	72	0.675	71	-5.243e-4	107	1.774e-3	102	2.934e-4	76
669		min	-0.238	72	-0.051	100	-0.666	103	-6.36e-3	13	-1.548e-3	70	-4.367e-4	100
670	N830	max	0.552	74	-0.142	66	0.341	105	1.437e-2	15	5.739e-3	104	7.064e-2	15
671		min	-0.568	106	-1.005	15	-0.631	73	2.149e-3	66	-6.029e-3	72	-4.581e-3	104
672	N829	max	1.143	104	-0.251	68	0.272	105	4.14e-3	13	1.396e-3	100	3.709e-2	15
673		min	-1.133	76	-2.074	13	-0.484	73	3.444e-4	68	-9.151e-4	76	-2.126e-2	104
674	N828	max	1.123	74	-0.298	66	0.274	105	4.144e-3	15	1.485e-3	100	7.224e-2	15
675		min	-1.113	106	-2.309	15	-0.493	73	3.146e-4	66	-9.468e-4	76	-2.028e-2	104
676	N827	max	0.812	70	-0.264	66	2.079	105	-5.299e-4	66	8.894e-2	107	4.063e-3	104
677		min	-0.792	106	-1.875	15	-2.223	73	-4.384e-3	15	-9.07e-2	71	-7.684e-3	72
678	N826	max	0.246	100	0.039	57	0.679	71	3.51e-5	107	1.763e-3	102	4.913e-4	74
679		min	-0.233	72	-0.049	86	-0.673	103	-6.402e-3	13	-1.538e-3	74	-5.381e-4	102
680	N825	max	0.134	70	0.085	76	0.403	106	6.713e-3	15	1.188e-2	75	3.254e-3	106
681		min	-0.127	102	-0.114	100	-0.612	71	1.056e-3	66	-1.112e-2	103	-4.542e-3	70
682	N824	max	0.904	104	-0.2	68	0.159	105	-1.356e-3	68	3.82e-3	106	4.079e-4	68
683		min	-0.915	76	-1.612	13	-0.231	73	-8.756e-3	13	-4.115e-3	70	-7.447e-2	13
684	N823	max	0.751	70	-0.238	66	1.328	105	9.829e-4	107	5.265e-2	107	5.872e-3	104
685		min	-0.689	106	-1.881	15	-1.513	73	-4.359e-3	14	-5.444e-2	71	-9.784e-3	72
686	N822	max	0.878	74	-0.246	66	0.163	105	-1.324e-3	66	3.529e-3	76	6.957e-3	76
687		min	-0.901	76	-1.795	15	-0.234	73	-9.731e-3	15	-3.597e-3	104	-7.652e-2	13
688	N821	max	0.747	70	-0.233	66	0.955	105	9.829e-4	107	5.265e-2	107	5.873e-3	104
689		min	-0.686	106	-1.834	15	-1.151	73	-4.359e-3	14	-5.444e-2	71	-9.782e-3	72
690	N820	max	0.291	70	0.078	76	0.802	77	-7.499e-4	106	5.737e-2	71	2.696e-3	106
691		min	-0.278	102	-0.1	100	-1.067	71	-6.257e-3	14	-5.584e-2	73	-3.636e-3	70
692	N819	max	0.964	104	-0.206	68	0.306	105	8.551e-3	13	3.904e-3	74	4.547e-2	15
693		min	-0.969	76	-1.603	13	-0.563	73	1.252e-3	68	-3.832e-3	106	-2.783e-3	96
694	N818	max	0.939	74	-0.256	66	0.309	105	9.198e-3	15	3.555e-3	104	9.372e-2	15
695		min	-0.957	106	-1.856	15	-0.573	73	1.174e-3	66	-3.394e-3	76	-5.553e-3	74
696	N817	max	0.246	70	0.039	57	0.678	71	3.121e-5	107	1.77e-3	72	5.536e-4	100
697		min	-0.233	102	-0.049	86	-0.674	103	-6.444e-3	13	-1.541e-3	104	-4.758e-4	76
698	N816	max	0.25	70	0.043	70	0.67	71	-5.36e-4	107	1.78e-3	72	4.173e-4	102
699		min	-0.236	102	-0.051	102	-0.669	103	-6.491e-3	14	-1.551e-3	104	-3.237e-4	74
700	N815	max	1.133	70	-0.345	66	1.465	105	1.428e-3	71	6.831e-2	107	3.618e-3	104
701		min	-1.055	106	-2.566	15	-1.617	73	-1.311e-3	107	-7.018e-2	71	-1.111e-2	13

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
702	N814	max	1.213	104	-0.26	68	0.238	105	4.569e-4	103	6.722e-4	15	1.712e-2	76
703		min	-1.178	76	-2.262	13	-0.402	73	-4.44e-4	75	-1.732e-4	74	-2.266e-2	13
704	N813	max	0.902	100	-0.291	68	0.471	71	1.577e-2	73	7.295e-4	107	2.993e-3	96
705		min	-0.672	76	-2.348	13	-0.301	107	-1.575e-2	105	-7.685e-4	71	-5.646e-3	15
706	N812	max	1.193	74	-0.314	66	0.241	105	6.088e-4	103	6.454e-4	15	2.66e-2	15
707		min	-1.16	76	-2.536	15	-0.409	73	-4.646e-4	75	-2.845e-4	75	-1.707e-2	104
708	N811	max	0.896	70	-0.334	68	0.502	71	2.371e-2	73	2.858e-4	107	3.069e-3	96
709		min	-0.666	76	-2.406	13	-0.331	107	-2.367e-2	105	-3.249e-4	71	-5.144e-3	15
710	N810	max	0.229	70	0.067	72	0.445	102	6.661e-3	15	1.307e-2	71	2.157e-3	106
711		min	-0.215	102	-0.082	100	-0.496	70	1.035e-3	67	-1.191e-2	103	-2.681e-3	70
712	N809	max	0.051	100	0.006	57	0.06	75	4.719e-3	75	8.018e-2	77	4.445e-3	72
713		min	-0.049	72	-0.007	86	-0.106	103	-9.075e-3	103	-8.627e-2	71	-4.605e-3	100
714	N808	max	0.168	70	0.104	76	1.181	77	1.519e-3	75	5.532e-2	75	3.917e-3	106
715		min	-0.162	102	-0.158	100	-1.311	71	-6.365e-3	15	-5.478e-2	73	-6.44e-3	70
716	N807	max	0.242	70	0.033	57	0.381	15	7.071e-3	15	1.922e-2	71	2.522e-3	106
717		min	-0.224	106	-0.039	86	-0.059	107	8.444e-4	76	-1.77e-2	103	-2.717e-3	70
718	N806	max	0.084	44	0.015	36	0.844	101	2.93e-4	103	5.028e-2	101	3.876e-3	15
719		min	-0.11	72	-0.049	15	-0.835	77	-2.924e-4	75	-4.943e-2	77	-9.02e-4	36
720	N805	max	0.067	44	0.013	36	0.641	101	2.193e-5	103	4.605e-2	101	3.869e-3	15
721		min	-0.086	72	-0.04	15	-0.632	77	-2.116e-5	75	-4.505e-2	77	-9.301e-4	36
722	N804	max	0.749	70	-0.243	66	1.019	71	4.908e-3	16	4.193e-2	103	7.61e-3	104
723		min	-0.699	106	-1.956	15	-0.798	107	-5.48e-4	75	-4.186e-2	71	-1.165e-2	72
724	N803	max	0.163	70	0.069	76	0.636	77	1.519e-3	75	5.532e-2	75	3.92e-3	106
725		min	-0.156	102	-0.099	100	-0.758	71	-6.365e-3	15	-5.478e-2	73	-6.435e-3	70
726	N802	max	0.752	70	-0.245	66	1.312	71	4.908e-3	16	4.193e-2	103	7.609e-3	104
727		min	-0.702	106	-2.007	15	-1.09	107	-5.48e-4	75	-4.187e-2	71	-1.166e-2	72
728	N801	max	0.873	74	-0.29	69	1.472	71	4.958e-3	15	6.569e-2	107	2.114e-3	98
729		min	-0.899	102	-1.943	14	-1.333	107	-5.867e-4	107	-6.719e-2	71	-7.15e-3	13
730	N800	max	0.056	70	0.006	57	0.062	75	4.817e-3	75	8.344e-2	71	4.597e-3	102
731		min	-0.054	102	-0.007	86	-0.108	103	-9.246e-3	103	-7.752e-2	77	-4.78e-3	70
732	N799	max	0.866	74	-0.255	66	0.477	71	4.958e-3	15	6.508e-2	103	3.045e-3	104
733		min	-0.891	102	-1.866	15	-0.352	107	-5.867e-4	107	-6.451e-2	71	-4.176e-3	72
734	N798	max	0.048	100	0.006	57	0.378	105	6.09e-3	13	1.814e-2	107	4.082e-3	72
735		min	-0.045	72	-0.007	86	-0.661	73	6.614e-4	68	-2.014e-2	71	-4.383e-3	100
736	N797	max	1.012	70	-0.312	66	1.28	71	2.91e-3	103	5.528e-2	107	8.03e-3	104
737		min	-0.828	106	-2.663	15	-1.099	107	-2.825e-3	71	-5.622e-2	71	-1.297e-2	72
738	N796	max	0.903	70	-0.365	69	0.502	71	2.373e-2	73	2.181e-4	105	3.155e-3	96
739		min	-0.67	106	-2.458	15	-0.331	107	-2.366e-2	105	-2.572e-4	73	-4.697e-3	64
740	N795	max	1.006	70	-0.3	66	0.611	71	2.91e-3	103	5.493e-2	103	8.561e-3	104
741		min	-0.822	106	-2.552	15	-0.437	107	-2.825e-3	71	-5.492e-2	71	-1.208e-2	72
742	N794	max	0.053	70	0.006	57	0.381	105	7.064e-3	15	1.932e-2	71	4.223e-3	102
743		min	-0.049	102	-0.007	86	-0.672	73	1.091e-3	66	-1.779e-2	103	-4.535e-3	70
744	N793	max	1.094	70	-0.33	66	1.795	71	7.195e-4	73	9.335e-2	107	6.23e-3	104
745		min	-0.974	106	-2.657	15	-1.614	107	-6.333e-4	101	-9.429e-2	71	-1.07e-2	72
746	N792	max	1.158	70	-0.392	66	2.938	71	1.405e-3	71	8.948e-2	107	3.527e-3	104
747		min	-1.094	106	-2.844	15	-2.717	107	-1.329e-3	107	-9.194e-2	71	-1.349e-2	13
748	N791	max	0.747	70	-0.244	66	1.316	71	1.858e-3	107	5.277e-2	107	7.524e-3	104
749		min	-0.688	106	-1.895	15	-1.177	103	-5.172e-3	71	-5.452e-2	71	-1.14e-2	72
750	N790	max	0.857	74	-0.272	68	2.54	101	7.729e-4	75	8.488e-2	107	1.517e-3	104
751		min	-0.87	102	-1.968	13	-2.605	73	-4.41e-3	15	-8.796e-2	71	-9.91e-3	13
752	N789	max	0.824	70	-0.264	66	1.844	71	-2.544e-4	77	8.914e-2	107	5.612e-3	104
753		min	-0.81	106	-1.889	15	-1.649	107	-4.568e-3	15	-9.083e-2	71	-9.182e-3	72
754	N788	max	0.252	70	0.049	72	0.471	70	-9.97e-4	99	8.353e-3	71	2.326e-3	106
755		min	-0.239	102	-0.063	100	-0.407	102	-6.499e-3	15	-7.144e-3	103	-3.162e-3	70
756	N787	max	0.862	74	-0.243	66	0.389	105	4.807e-3	15	3.349e-3	100	4.416e-3	104

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
757		min	-0.87	106	-1.751	15	-0.601	73	2.976e-4	107	-3.042e-3	76	-4.944e-3	76
758	N786	max	0.512	74	-0.121	68	1.325	71	6.421e-3	15	6.653e-2	77	3.073e-3	98
759		min	-0.609	102	-1.005	13	-1.192	107	7.411e-4	107	-6.798e-2	101	-3.102e-3	62
760	N785	max	0.91	70	-0.334	66	0.473	71	1.583e-2	73	6.616e-4	105	3.207e-3	96
761		min	-0.675	106	-2.508	15	-0.302	107	-1.574e-2	105	-7.009e-4	73	-4.365e-3	64
762	N784	max	0.198	70	0.024	57	0.578	71	-1.014e-3	96	8.365e-3	71	3.359e-3	102
763		min	-0.187	102	-0.028	86	-0.432	103	-6.509e-3	15	-6.649e-3	107	-3.558e-3	70
764	N783	max	0.136	70	0.015	57	0.623	71	-1.018e-3	96	7.688e-3	71	4.142e-3	102
765		min	-0.129	102	-0.018	86	-0.403	107	-6.524e-3	15	-5.973e-3	107	-4.388e-3	70
766	N782	max	0.645	100	-0.216	68	0.434	71	1.797e-2	103	1.052e-3	104	1.479e-3	96
767		min	-0.557	76	-1.693	13	-0.182	107	-1.273e-2	75	-1.246e-3	72	-4.861e-3	15
768	N781	max	0.265	100	0.041	57	0.06	75	-4.892e-4	107	7.636e-2	77	2.225e-3	76
769		min	-0.255	72	-0.046	86	-0.431	13	-6.28e-3	13	-8.211e-2	71	-2.372e-3	100
770	N780	max	0.493	74	-0.148	69	1.187	71	6.404e-3	15	6.835e-2	73	1.509e-3	104
771		min	-0.594	102	-1.076	15	-1.001	107	8.232e-4	96	-6.872e-2	101	-4.898e-3	13
772	N779	max	0.264	70	0.04	57	0.058	75	-5.36e-4	107	7.951e-2	71	2.217e-3	102
773		min	-0.253	102	-0.046	86	-0.444	15	-6.466e-3	14	-7.39e-2	77	-2.277e-3	70
774	N778	max	0.824	70	-0.268	66	1.361	71	4.933e-3	15	6.974e-2	103	4.801e-3	104
775		min	-0.824	102	-1.931	15	-1.186	107	5.835e-4	96	-6.98e-2	71	-7.933e-3	72
776	N777	max	0.802	70	-0.231	66	0.384	105	-5.299e-4	66	8.867e-2	103	4.571e-3	104
777		min	-0.783	106	-1.761	15	-0.549	73	-4.384e-3	15	-8.944e-2	71	-6.827e-3	72
778	N776	max	0.252	100	0.041	57	0.491	101	6.06e-3	13	1.774e-2	107	2.037e-3	76
779		min	-0.233	76	-0.046	86	-0.495	73	6.498e-4	68	-1.96e-2	71	-2.258e-3	100
780	N775	max	0.852	74	-0.274	67	1.671	105	7.729e-4	75	8.487e-2	107	1.52e-3	104
781		min	-0.865	102	-1.87	15	-1.764	73	-4.41e-3	15	-8.795e-2	71	-9.869e-3	13
782	N774	max	0.226	70	0.024	57	0.113	75	-7.901e-4	75	5.817e-2	71	3.87e-3	102
783		min	-0.216	102	-0.028	86	-0.294	103	-6.296e-3	15	-5.6e-2	73	-4.066e-3	70
784	N773	max	0.639	100	-0.242	68	0.464	71	2.548e-2	103	1.052e-3	104	1.492e-3	96
785		min	-0.55	76	-1.745	13	-0.21	107	-2.019e-2	75	-1.245e-3	72	-4.424e-3	15
786	N772	max	0.645	70	-0.261	69	0.466	71	2.549e-2	103	1.053e-3	104	1.514e-3	96
787		min	-0.554	106	-1.791	14	-0.21	107	-2.014e-2	75	-1.245e-3	72	-3.891e-3	15
788	N771	max	0.651	70	-0.254	66	0.439	71	1.799e-2	103	1.053e-3	104	1.502e-3	96
789		min	-0.558	106	-1.833	15	-0.181	107	-1.259e-2	75	-1.244e-3	72	-3.452e-3	15
790	N770	max	1.139	70	-0.374	66	2.157	105	1.428e-3	71	6.831e-2	107	3.615e-3	104
791		min	-1.06	106	-2.673	15	-2.293	73	-1.311e-3	107	-7.019e-2	71	-1.115e-2	13
792	N769	max	0.121	70	0.016	57	0.405	105	6.713e-3	15	1.278e-2	71	3.646e-3	102
793		min	-0.114	102	-0.018	86	-0.62	73	1.056e-3	66	-1.129e-2	103	-3.897e-3	70
794	N768	max	0.251	70	0.04	57	0.502	101	6.957e-3	15	1.881e-2	71	2.024e-3	106
795		min	-0.232	106	-0.047	86	-0.488	73	1.053e-3	67	-1.745e-2	103	-2.166e-3	70
796	N767	max	0.287	70	0.06	72	0.412	77	-7.499e-4	106	5.737e-2	71	2.697e-3	106
797		min	-0.274	102	-0.075	100	-0.665	71	-6.257e-3	14	-5.584e-2	73	-3.634e-3	70
798	N766	max	0.814	70	-0.281	66	0.401	71	3.996e-3	15	1.634e-3	70	2.137e-2	62
799		min	-0.653	106	-2.321	15	-0.184	107	2.105e-4	66	-7.093e-4	106	-1.583e-2	98
800	N765	max	0.063	44	0.021	36	1.073	101	1.998e-5	103	4.304e-2	101	3.711e-3	15
801		min	-0.081	72	-0.078	15	-1.054	77	-1.896e-5	75	-4.21e-2	77	-8.711e-4	36
802	N764	max	0.063	44	0	47	0.046	101	1.998e-5	103	4.159e-2	105	1.567e-3	102
803		min	-0.081	72	-0.001	14	-0.046	77	-1.896e-5	75	-4.159e-2	43	-1.12e-3	44
804	N763	max	0.079	44	0.021	36	1.165	101	2.763e-4	103	4.697e-2	101	3.69e-3	15
805		min	-0.104	72	-0.076	15	-1.15	77	-2.754e-4	75	-4.617e-2	47	-8.483e-4	36
806	N762	max	0.079	44	0	47	0.044	101	2.763e-4	103	4.573e-2	105	1.628e-3	102
807		min	-0.104	72	-0.001	14	-0.044	77	-2.754e-4	75	-4.574e-2	43	-1.137e-3	44
808	N761	max	0.096	44	0.021	36	1.212	101	3.819e-4	103	4.917e-2	101	3.738e-3	15
809		min	-0.128	72	-0.077	15	-1.197	77	-3.811e-4	75	-4.837e-2	47	-8.532e-4	36
810	N760	max	0.029	44	0	47	0.035	101	7.148e-4	101	2.581e-2	45	1.218e-3	102
811		min	-0.036	72	-0.001	14	-0.035	73	-7.129e-4	77	-2.582e-2	43	-9.419e-4	44

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
812	N759	max	0.096	44	0	47	0.038	101	3.819e-4	103	4.793e-2	105	1.652e-3	102
813		min	-0.128	72	-0.001	14	-0.038	77	-3.811e-4	75	-4.794e-2	43	-1.138e-3	44
814	N758	max	0.103	44	0	47	0.036	101	3.817e-4	103	4.793e-2	105	1.653e-3	102
815		min	-0.138	72	-0.001	14	-0.036	77	-3.809e-4	75	-4.794e-2	43	-1.138e-3	44
816	N757	max	0	100	0	47	0	101	0	101	0	105	0	102
817		min	0	42	0	14	0	77	0	73	0	43	0	44
818	N756	max	0.063	104	0.021	36	1.073	101	1.896e-5	107	4.305e-2	101	3.711e-3	15
819		min	-0.081	42	-0.078	15	-1.054	77	-1.998e-5	41	-4.21e-2	47	-8.711e-4	36
820	N755	max	0.063	104	0	45	0.046	75	1.896e-5	107	4.159e-2	101	1.567e-3	42
821		min	-0.081	42	-0.001	16	-0.046	73	-1.998e-5	41	-4.159e-2	47	-1.12e-3	104
822	N754	max	0.079	104	0.021	36	1.165	101	2.754e-4	107	4.697e-2	101	3.69e-3	15
823		min	-0.104	42	-0.076	15	-1.15	77	-2.763e-4	41	-4.617e-2	47	-8.483e-4	36
824	N753	max	0.079	104	0	45	0.044	75	2.754e-4	107	4.574e-2	101	1.628e-3	42
825		min	-0.104	42	-0.001	16	-0.044	73	-2.763e-4	41	-4.573e-2	47	-1.137e-3	104
826	N752	max	0.096	104	0.021	36	1.212	101	3.811e-4	107	4.918e-2	101	3.738e-3	15
827		min	-0.128	42	-0.077	15	-1.197	77	-3.819e-4	41	-4.837e-2	77	-8.532e-4	36
828	N751	max	0.029	104	0	45	0.035	101	7.129e-4	75	2.582e-2	101	1.218e-3	42
829		min	-0.036	42	-0.001	16	-0.035	73	-7.148e-4	73	-2.581e-2	47	-9.419e-4	104
830	N750	max	0.096	104	0	45	0.038	75	3.811e-4	107	4.794e-2	101	1.652e-3	42
831		min	-0.128	42	-0.001	16	-0.038	73	-3.819e-4	41	-4.793e-2	47	-1.138e-3	104
832	N749	max	0.103	104	0	45	0.036	75	3.809e-4	107	4.794e-2	101	1.653e-3	42
833		min	-0.138	42	-0.001	16	-0.036	73	-3.817e-4	41	-4.793e-2	47	-1.138e-3	104
834	N748	max	0	44	0	45	0	105	0	101	0	101	0	42
835		min	0	46	0	16	0	43	0	73	0	47	0	104
836	N747	max	0.067	44	0.023	36	1.148	101	2.193e-5	103	4.606e-2	101	3.925e-3	15
837		min	-0.086	72	-0.083	15	-1.128	77	-2.116e-5	75	-4.506e-2	77	-9.256e-4	36
838	N746	max	0.067	44	0	47	0.049	101	2.193e-5	103	4.451e-2	45	1.668e-3	42
839		min	-0.086	72	-0.001	14	-0.049	77	-2.116e-5	75	-4.451e-2	43	-1.191e-3	44
840	N745	max	0.084	44	0.023	36	1.246	101	2.93e-4	103	5.028e-2	101	3.898e-3	15
841		min	-0.11	72	-0.08	15	-1.23	77	-2.924e-4	75	-4.943e-2	47	-9.002e-4	36
842	N744	max	0.084	44	0	47	0.046	101	2.93e-4	103	4.896e-2	45	1.734e-3	42
843		min	-0.11	72	-0.001	14	-0.046	77	-2.924e-4	75	-4.896e-2	43	-1.21e-3	44
844	N743	max	0.102	44	0.023	36	1.298	101	4.046e-4	103	5.266e-2	101	3.949e-3	15
845		min	-0.137	72	-0.082	15	-1.282	77	-4.04e-4	75	-5.18e-2	77	-9.055e-4	36
846	N742	max	0.031	44	0	47	0.037	101	7.562e-4	101	2.76e-2	45	1.297e-3	102
847		min	-0.038	72	-0.001	14	-0.037	73	-7.546e-4	77	-2.761e-2	43	-1.001e-3	44
848	N741	max	0.102	44	0	47	0.041	101	4.046e-4	103	5.134e-2	105	1.761e-3	102
849		min	-0.137	72	-0.002	14	-0.041	77	-4.04e-4	75	-5.134e-2	43	-1.21e-3	44
850	N740	max	0.109	44	0	47	0.038	101	4.044e-4	103	5.134e-2	105	1.761e-3	102
851		min	-0.147	72	-0.002	14	-0.038	77	-4.039e-4	75	-5.134e-2	43	-1.21e-3	44
852	N739	max	0	100	0	47	0	101	0	101	0	45	0	102
853		min	0	42	0	14	0	77	0	73	0	43	0	44
854	N738	max	0.067	104	0.023	36	1.148	101	2.116e-5	107	4.606e-2	101	3.925e-3	15
855		min	-0.086	42	-0.083	15	-1.128	77	-2.193e-5	41	-4.505e-2	77	-9.256e-4	36
856	N737	max	0.067	104	0	45	0.049	75	2.116e-5	107	4.451e-2	101	1.668e-3	42
857		min	-0.086	42	-0.001	16	-0.049	73	-2.193e-5	41	-4.451e-2	77	-1.191e-3	104
858	N736	max	0.084	104	0.023	36	1.246	101	2.924e-4	107	5.029e-2	101	3.898e-3	15
859		min	-0.11	42	-0.08	15	-1.23	77	-2.93e-4	41	-4.943e-2	77	-9.002e-4	36
860	N735	max	0.084	104	0	45	0.046	75	2.924e-4	107	4.896e-2	101	1.734e-3	42
861		min	-0.11	42	-0.001	16	-0.046	73	-2.93e-4	41	-4.896e-2	77	-1.21e-3	104
862	N734	max	0.102	104	0.023	36	1.298	101	4.04e-4	107	5.266e-2	101	3.949e-3	15
863		min	-0.137	42	-0.082	15	-1.282	77	-4.046e-4	41	-5.18e-2	77	-9.055e-4	36
864	N733	max	0.031	104	0	45	0.037	101	7.546e-4	75	2.761e-2	101	1.297e-3	42
865		min	-0.038	42	-0.001	16	-0.037	73	-7.562e-4	73	-2.76e-2	77	-1.001e-3	104
866	N732	max	0.102	104	0	45	0.041	75	4.04e-4	107	5.134e-2	101	1.761e-3	42

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
867		min	-0.137	42	-0.002	16	-0.041	73	-4.046e-4	41	-5.134e-2	77	-1.21e-3	104
868	N731	max	0.109	104	0	45	0.038	75	4.039e-4	107	5.134e-2	101	1.761e-3	42
869		min	-0.147	42	-0.002	16	-0.038	73	-4.044e-4	41	-5.134e-2	77	-1.21e-3	104
870	N730	max	0.002	74	0	74	0.061	101	9.277e-3	101	2.065e-3	106	2.222e-4	42
871		min	-0.002	42	0	15	-0.058	77	-8.917e-3	77	-2.075e-3	40	-2.101e-4	74
872	N729	max	0.002	74	0	74	0.058	75	8.917e-3	75	2.075e-3	100	2.222e-4	42
873		min	-0.002	42	0	15	-0.061	73	-9.277e-3	73	-2.065e-3	46	-2.101e-4	44
874	N728	max	0.002	100	0	106	0.061	101	9.277e-3	101	2.075e-3	42	2.101e-4	106
875		min	-0.002	46	0	13	-0.058	77	-8.917e-3	77	-2.065e-3	104	-2.222e-4	40
876	N727	max	0.002	100	0	106	0.058	75	8.917e-3	75	2.065e-3	104	2.101e-4	106
877		min	-0.002	46	0	13	-0.061	73	-9.277e-3	73	-2.075e-3	42	-2.222e-4	40
878	N726	max	0.01	74	0.001	107	0.594	101	5.423e-4	75	2.068e-3	102	1.912e-5	38
879		min	-0.01	42	-0.002	41	-0.594	73	-1.191e-3	73	-2.069e-3	40	-2.48e-5	32
880	N725	max	0.01	74	0.001	75	0.594	101	1.191e-3	101	2.069e-3	100	1.912e-5	38
881		min	-0.01	42	-0.002	73	-0.594	73	-5.423e-4	77	-2.068e-3	72	-2.48e-5	32
882	N724	max	0.01	100	0.001	107	0.594	101	5.423e-4	75	2.069e-3	42	2.48e-5	94
883		min	-0.01	46	-0.002	41	-0.594	73	-1.191e-3	73	-2.068e-3	40	-1.912e-5	36
884	N723	max	0.01	100	0.001	75	0.594	101	1.191e-3	101	2.068e-3	100	2.48e-5	94
885		min	-0.01	46	-0.002	73	-0.594	73	-5.423e-4	77	-2.069e-3	42	-1.912e-5	36
886	N722	max	0.01	74	0.001	107	0.596	101	5.423e-4	75	2.068e-3	102	1.913e-5	38
887		min	-0.01	42	-0.002	41	-0.599	73	-1.191e-3	73	-2.069e-3	40	-2.481e-5	32
888	N721	max	0.01	74	0.001	75	0.599	101	1.191e-3	101	2.069e-3	100	1.913e-5	38
889		min	-0.01	42	-0.002	73	-0.596	73	-5.423e-4	77	-2.068e-3	72	-2.481e-5	32
890	N720	max	0.01	100	0.001	107	0.596	101	5.423e-4	75	2.069e-3	42	2.481e-5	94
891		min	-0.01	46	-0.002	41	-0.599	73	-1.191e-3	73	-2.068e-3	40	-1.913e-5	36
892	N719	max	0.01	100	0.001	75	0.599	101	1.191e-3	101	2.068e-3	100	2.481e-5	94
893		min	-0.01	46	-0.002	73	-0.596	73	-5.423e-4	77	-2.069e-3	42	-1.913e-5	36
894	N718	max	0	74	0	74	0	101	9.324e-3	101	2.065e-3	106	2.327e-4	42
895		min	0	72	0	15	0	77	-8.959e-3	77	-2.075e-3	40	-2.193e-4	74
896	N717	max	0	74	0	74	0	75	8.959e-3	75	2.075e-3	100	2.327e-4	42
897		min	0	72	0	15	0	43	-9.324e-3	73	-2.065e-3	46	-2.193e-4	44
898	N716	max	0	100	0	106	0	101	9.324e-3	101	2.075e-3	42	2.193e-4	106
899		min	0	46	0	13	0	77	-8.959e-3	77	-2.065e-3	104	-2.327e-4	40
900	N715	max	0	44	0	45	0	105	0	101	0	101	0	42
901		min	0	46	0	16	0	43	0	73	0	77	0	104
902	N714	max	0	100	0	106	0	75	8.959e-3	75	2.065e-3	104	2.193e-4	106
903		min	0	46	0	13	0	43	-9.324e-3	73	-2.075e-3	42	-2.327e-4	40
904	N713	max	0.014	44	0	44	0.004	101	5.463e-4	101	1.647e-3	103	2.147e-3	42
905		min	-0.014	42	0	15	-0.004	77	-5.185e-4	77	-1.643e-3	45	-2.041e-3	44
906	N712	max	0.014	44	0	44	0.004	105	5.185e-4	105	1.643e-3	47	2.147e-3	42
907		min	-0.014	42	0	15	-0.004	73	-5.463e-4	73	-1.647e-3	41	-2.041e-3	44
908	N711	max	0.014	100	0	106	0.004	101	5.463e-4	101	1.643e-3	45	2.041e-3	106
909		min	-0.014	46	0	13	-0.004	77	-5.185e-4	77	-1.647e-3	43	-2.147e-3	40
910	N710	max	0.014	100	0	106	0.004	105	5.185e-4	105	1.647e-3	101	2.041e-3	106
911		min	-0.014	46	0	13	-0.004	73	-5.463e-4	73	-1.643e-3	47	-2.147e-3	40
912	N709	max	0.154	100	0	44	0.009	101	2.482e-4	107	1.645e-3	103	5.635e-4	106
913		min	-0.154	42	-0.001	15	-0.009	77	-2.649e-4	41	-1.644e-3	41	-7.987e-4	40
914	N708	max	0.154	100	0	44	0.009	105	2.649e-4	73	1.644e-3	103	5.635e-4	106
915		min	-0.154	42	-0.001	15	-0.009	43	-2.482e-4	75	-1.645e-3	41	-7.987e-4	40
916	N707	max	0.154	100	0	106	0.009	101	2.482e-4	107	1.644e-3	101	7.987e-4	42
917		min	-0.154	42	-0.001	13	-0.009	77	-2.649e-4	41	-1.645e-3	43	-5.635e-4	44
918	N706	max	0.154	100	0	106	0.009	75	2.649e-4	73	1.645e-3	101	7.987e-4	42
919		min	-0.154	42	-0.001	13	-0.009	73	-2.482e-4	75	-1.644e-3	43	-5.635e-4	44
920	N705	max	0.157	100	0	44	0.008	105	2.481e-4	107	1.645e-3	103	5.635e-4	106
921		min	-0.156	46	-0.001	15	-0.008	43	-2.649e-4	41	-1.644e-3	41	-7.987e-4	40

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
922	N704	max	0.157	100	0	44	0.008	101	2.649e-4	73	1.644e-3	103	5.635e-4	106
923		min	-0.156	46	-0.001	15	-0.008	77	-2.481e-4	75	-1.645e-3	41	-7.987e-4	40
924	N703	max	0.156	44	0	106	0.008	105	2.481e-4	107	1.644e-3	101	7.987e-4	42
925		min	-0.157	42	-0.001	13	-0.008	73	-2.649e-4	41	-1.645e-3	43	-5.635e-4	44
926	N702	max	0.156	44	0	106	0.008	101	2.649e-4	73	1.645e-3	101	7.987e-4	42
927		min	-0.157	42	-0.001	13	-0.008	77	-2.481e-4	75	-1.644e-3	43	-5.635e-4	44
928	N701	max	0	44	0	44	0	101	5.837e-4	101	1.647e-3	103	2.156e-3	42
929		min	0	72	0	15	0	77	-5.526e-4	77	-1.643e-3	45	-2.049e-3	44
930	N700	max	0	44	0	44	0	105	5.526e-4	105	1.643e-3	47	2.156e-3	42
931		min	0	72	0	15	0	43	-5.837e-4	73	-1.647e-3	41	-2.049e-3	44
932	N699	max	0	100	0	106	0	101	5.837e-4	101	1.643e-3	45	2.049e-3	106
933		min	0	46	0	13	0	77	-5.526e-4	77	-1.647e-3	43	-2.156e-3	40
934	N698	max	0	100	0	106	0	105	5.526e-4	105	1.647e-3	101	2.049e-3	106
935		min	0	46	0	13	0	43	-5.837e-4	73	-1.643e-3	47	-2.156e-3	40
936	N697	max	0.065	74	0.02	66	1.025	101	4.35e-3	101	3.353e-2	41	2.985e-3	15
937		min	-0.079	102	-0.063	15	-1.01	107	-4.349e-3	103	-3.28e-2	107	-8.185e-4	66
938	N696	max	0.065	74	0	97	0.225	101	4.35e-3	101	3.241e-2	105	1.45e-3	102
939		min	-0.079	102	-0.001	16	-0.225	103	-4.349e-3	103	-3.241e-2	103	-1.102e-3	74
940	N695	max	0.065	74	0.02	66	1.025	101	4.349e-3	101	3.353e-2	101	2.985e-3	15
941		min	-0.079	102	-0.063	15	-1.01	107	-4.35e-3	103	-3.28e-2	107	-8.185e-4	66
942	N694	max	0.065	74	0	99	0.225	101	4.349e-3	101	3.241e-2	105	1.45e-3	102
943		min	-0.079	102	-0.001	14	-0.225	103	-4.35e-3	103	-3.241e-2	103	-1.102e-3	74
944	N693	max	0.031	74	0.003	66	0.245	101	1.112e-4	103	4.995e-3	101	2.504e-3	15
945		min	-0.036	102	-0.053	15	-0.232	107	-1.108e-4	101	-4.335e-3	107	-1.343e-4	66
946	N692	max	0.031	74	0	105	0.129	101	1.112e-4	103	3.977e-3	105	6.341e-4	102
947		min	-0.036	102	-0.002	16	-0.129	103	-1.108e-4	101	-3.977e-3	107	-3.457e-4	74
948	N691	max	0.031	74	0.003	66	0.245	101	1.108e-4	103	4.996e-3	101	2.504e-3	15
949		min	-0.036	102	-0.053	15	-0.232	107	-1.112e-4	101	-4.334e-3	107	-1.343e-4	66
950	N690	max	0.031	74	0	107	0.129	101	1.108e-4	103	3.977e-3	105	6.341e-4	102
951		min	-0.036	102	-0.002	14	-0.129	103	-1.112e-4	101	-3.977e-3	107	-3.457e-4	74
952	N689	max	0.08	74	0.02	66	1.162	101	4.463e-3	101	3.667e-2	41	3.006e-3	15
953		min	-0.1	102	-0.062	15	-1.15	107	-4.462e-3	103	-3.604e-2	107	-7.993e-4	66
954	N688	max	0.08	74	0	97	0.287	101	4.463e-3	101	3.57e-2	105	1.497e-3	102
955		min	-0.1	102	-0.001	16	-0.287	103	-4.462e-3	103	-3.57e-2	103	-1.114e-3	74
956	N687	max	0.08	74	0.02	66	1.162	101	4.462e-3	101	3.667e-2	101	3.006e-3	15
957		min	-0.1	102	-0.062	15	-1.15	107	-4.463e-3	103	-3.604e-2	107	-7.993e-4	66
958	N686	max	0.08	74	0	99	0.287	101	4.462e-3	101	3.57e-2	105	1.497e-3	102
959		min	-0.1	102	-0.001	14	-0.287	103	-4.463e-3	103	-3.57e-2	103	-1.114e-3	74
960	N685	max	0.036	74	0.004	66	0.298	101	6.968e-4	103	7.457e-3	101	2.352e-3	15
961		min	-0.045	102	-0.049	15	-0.288	107	-6.953e-4	101	-6.939e-3	107	-1.377e-4	66
962	N684	max	0.036	74	0	105	0.123	101	6.968e-4	103	6.658e-3	105	6.857e-4	102
963		min	-0.045	102	-0.002	16	-0.123	103	-6.953e-4	101	-6.658e-3	107	-3.684e-4	74
964	N683	max	0.036	74	0.004	66	0.298	101	6.953e-4	103	7.458e-3	101	2.352e-3	15
965		min	-0.045	102	-0.049	15	-0.288	107	-6.968e-4	101	-6.939e-3	107	-1.377e-4	66
966	N682	max	0.036	74	0	107	0.123	101	6.953e-4	103	6.658e-3	105	6.857e-4	102
967		min	-0.045	102	-0.002	14	-0.123	103	-6.968e-4	101	-6.658e-3	107	-3.684e-4	74
968	N681	max	0.097	74	0.02	66	1.271	101	4.494e-3	101	3.844e-2	41	3.045e-3	15
969		min	-0.122	102	-0.063	15	-1.259	107	-4.493e-3	103	-3.78e-2	107	-8.031e-4	66
970	N680	max	0.097	74	0.02	66	1.271	101	4.493e-3	101	3.844e-2	101	3.045e-3	15
971		min	-0.122	102	-0.063	15	-1.259	107	-4.494e-3	103	-3.78e-2	107	-8.031e-4	66
972	N679	max	0.042	74	0.004	66	0.319	101	9.176e-4	103	8.885e-3	101	2.386e-3	15
973		min	-0.056	102	-0.05	15	-0.309	107	-9.196e-4	101	-8.366e-3	77	-1.441e-4	66
974	N678	max	0.042	74	0.004	66	0.319	101	9.196e-4	103	8.885e-3	71	2.386e-3	15
975		min	-0.056	102	-0.05	15	-0.309	107	-9.176e-4	101	-8.366e-3	107	-1.441e-4	66
976	N677	max	0.002	70	0	77	0.008	101	1.386e-3	101	2.285e-4	105	1.678e-4	106

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
977		min	-0.002	106	0	14	-0.008	103	-1.386e-3	103	-2.285e-4	77	-1.822e-4	70
978	N676	max	0.002	70	0	75	0.008	101	1.386e-3	101	2.285e-4	75	1.678e-4	106
979		min	-0.002	106	0	16	-0.008	103	-1.386e-3	103	-2.285e-4	107	-1.822e-4	70
980	N675	max	0.009	70	0	99	0.014	67	1.242e-3	67	1.288e-3	70	6.363e-4	106
981		min	-0.008	106	0	71	-0.015	65	-1.288e-3	65	-1.289e-3	102	-6.756e-4	70
982	N674	max	0.009	70	0	97	0.015	63	1.288e-3	63	1.289e-3	102	6.363e-4	106
983		min	-0.008	106	0	73	-0.014	69	-1.242e-3	69	-1.288e-3	70	-6.756e-4	70
984	N671	max	0.017	70	0	107	0.104	101	1.942e-3	101	1.123e-3	105	5.342e-4	102
985		min	-0.017	106	-0.002	14	-0.104	103	-1.94e-3	103	-1.123e-3	107	-4.45e-4	74
986	N670	max	0.017	70	0	105	0.104	101	1.94e-3	101	1.123e-3	105	5.342e-4	102
987		min	-0.017	106	-0.002	16	-0.104	103	-1.942e-3	103	-1.123e-3	107	-4.45e-4	74
988	N669	max	0.014	74	0	77	0.043	101	8.41e-4	101	3.13e-3	103	4.981e-4	102
989		min	-0.019	102	-0.001	14	-0.043	73	-8.376e-4	77	-3.126e-3	101	-4.103e-4	74
990	N668	max	0.014	74	0	75	0.043	71	8.376e-4	75	3.126e-3	103	4.981e-4	102
991		min	-0.019	102	-0.001	16	-0.043	103	-8.41e-4	103	-3.13e-3	101	-4.103e-4	74
992	N667	max	0.029	74	0	77	0.047	101	3.089e-4	103	3.129e-3	103	4.65e-5	106
993		min	-0.032	102	-0.001	14	-0.046	77	-3.084e-4	75	-3.127e-3	101	-2.766e-4	70
994	N666	max	0.029	74	0	75	0.046	75	3.084e-4	77	3.127e-3	103	4.65e-5	106
995		min	-0.032	102	-0.001	16	-0.047	103	-3.089e-4	101	-3.129e-3	101	-2.766e-4	70
996	N665	max	0.032	74	0	97	0.104	101	3.546e-3	101	2.048e-2	105	1.193e-3	102
997		min	-0.038	102	-0.001	16	-0.104	103	-3.545e-3	103	-2.048e-2	103	-9.726e-4	74
998	N661	max	0.097	74	0	97	0.354	101	4.494e-3	101	3.746e-2	105	1.516e-3	102
999		min	-0.122	102	-0.001	16	-0.354	103	-4.493e-3	103	-3.746e-2	103	-1.114e-3	74
1000	N660	max	0.097	74	0	99	0.354	101	4.493e-3	101	3.746e-2	105	1.516e-3	102
1001		min	-0.122	102	-0.001	14	-0.354	103	-4.494e-3	103	-3.746e-2	103	-1.114e-3	74
1002	N659	max	0.042	74	0	107	0.11	101	9.176e-4	103	8.086e-3	105	7.057e-4	102
1003		min	-0.056	102	-0.002	14	-0.11	103	-9.196e-4	101	-8.086e-3	77	-3.729e-4	74
1004	N658	max	0.042	74	0	105	0.11	101	9.196e-4	103	8.086e-3	75	7.057e-4	102
1005		min	-0.056	102	-0.002	16	-0.11	103	-9.176e-4	101	-8.086e-3	107	-3.729e-4	74
1006	N657	max	0.028	74	0	77	0.047	101	3.047e-4	103	3.129e-3	103	4.642e-5	106
1007		min	-0.032	102	-0.001	15	-0.047	77	-3.042e-4	75	-3.127e-3	101	-2.766e-4	70
1008	N656	max	0.028	74	0	75	0.047	75	3.042e-4	77	3.127e-3	103	4.642e-5	106
1009		min	-0.032	102	-0.001	15	-0.047	103	-3.047e-4	101	-3.129e-3	101	-2.766e-4	70
1010	N655	max	0.028	74	0	107	0.129	101	2.997e-4	101	1.598e-3	105	5.886e-4	102
1011		min	-0.031	102	-0.002	14	-0.129	103	-2.994e-4	103	-1.597e-3	107	-3.258e-4	74
1012	N654	max	0.028	74	0	105	0.129	101	2.994e-4	101	1.597e-3	105	5.886e-4	102
1013		min	-0.031	102	-0.002	16	-0.129	103	-2.997e-4	103	-1.598e-3	107	-3.258e-4	74
1014	N653	max	0.089	70	0.015	67	0.055	63	3.491e-4	67	1.807e-3	102	8.488e-5	13
1015		min	-0.089	102	-0.029	95	-0.055	65	-6.787e-4	65	-1.807e-3	70	4.489e-6	68
1016	N651	max	0.089	70	0.015	69	0.055	63	6.787e-4	63	1.807e-3	70	8.488e-5	13
1017		min	-0.089	102	-0.029	93	-0.055	65	-3.491e-4	69	-1.807e-3	102	4.489e-6	68
1018	N649	max	0.03	74	0	77	0.045	101	3.087e-4	103	3.129e-3	103	4.655e-5	106
1019		min	-0.031	102	-0.001	14	-0.045	77	-3.082e-4	75	-3.127e-3	101	-2.767e-4	70
1020	N648	max	0.03	74	0	75	0.045	75	3.082e-4	77	3.127e-3	103	4.655e-5	106
1021		min	-0.031	102	-0.001	16	-0.045	103	-3.087e-4	101	-3.129e-3	101	-2.767e-4	70
1022	N647	max	0.017	70	0	69	0.055	63	5.647e-4	63	1.292e-3	70	8.488e-5	13
1023		min	-0.017	106	-0.001	93	-0.055	65	-4.047e-4	69	-1.292e-3	102	4.489e-6	68
1024	N646	max	0.017	70	0	67	0.055	63	4.047e-4	67	1.292e-3	102	8.488e-5	13
1025		min	-0.017	106	-0.001	95	-0.055	65	-5.647e-4	65	-1.292e-3	70	4.489e-6	68
1026	N645	max	0.017	70	0.003	106	0.116	101	1.285e-3	101	4.018e-4	101	2.763e-4	70
1027		min	-0.016	106	-0.004	70	-0.116	103	-1.195e-3	77	-4.022e-4	103	-2.756e-4	102
1028	N644	max	0.017	70	0.003	106	0.116	101	1.195e-3	75	4.022e-4	101	2.763e-4	70
1029		min	-0.016	106	-0.004	70	-0.116	103	-1.285e-3	103	-4.018e-4	103	-2.756e-4	102
1030	N643	max	0.104	74	0	97	0.381	101	4.494e-3	101	3.746e-2	105	1.516e-3	102
1031		min	-0.131	102	-0.001	16	-0.381	103	-4.493e-3	103	-3.746e-2	103	-1.114e-3	74

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1032	N642	max	0.104	74	0	99	0.381	101	4.493e-3	101	3.746e-2	105	1.516e-3	102
1033		min	-0.131	102	-0.001	14	-0.381	103	-4.494e-3	103	-3.746e-2	103	-1.114e-3	74
1034	N641	max	0.044	74	0	107	0.105	101	9.174e-4	103	8.086e-3	105	7.057e-4	102
1035		min	-0.06	102	-0.002	14	-0.105	103	-9.194e-4	101	-8.086e-3	77	-3.729e-4	74
1036	N640	max	0.044	74	0	105	0.105	101	9.194e-4	103	8.086e-3	75	7.057e-4	102
1037		min	-0.06	102	-0.002	16	-0.105	103	-9.174e-4	101	-8.086e-3	107	-3.729e-4	74
1038	N639	max	0	70	0	97	0	105	0	101	0	105	0	102
1039		min	0	102	0	16	0	107	0	103	0	103	0	74
1040	N638	max	0	70	0	99	0	105	0	101	0	105	0	102
1041		min	0	102	0	14	0	107	0	103	0	103	0	74
1042	N637	max	0	70	0	99	0	97	1.275e-3	67	1.288e-3	70	7.891e-4	106
1043		min	0	106	0	14	0	95	-1.329e-3	65	-1.289e-3	102	-8.455e-4	70
1044	N636	max	0	70	0	97	0	93	1.329e-3	63	1.289e-3	102	7.891e-4	106
1045		min	0	106	0	16	0	99	-1.275e-3	69	-1.288e-3	70	-8.455e-4	70
1046	N633	max	0	70	0	77	0	71	0	101	0	105	0	106
1047		min	0	106	0	14	0	73	0	103	0	77	0	70
1048	N632	max	0	70	0	75	0	71	0	101	0	75	0	106
1049		min	0	106	0	16	0	73	0	103	0	107	0	70
1050	N631	max	0	74	0	77	0	75	1.602e-3	101	3.13e-3	103	6.215e-4	102
1051		min	0	102	0	14	0	77	-1.597e-3	103	-3.126e-3	101	-4.646e-4	74
1052	N630	max	0	74	0	75	0	75	1.597e-3	101	3.126e-3	103	6.215e-4	102
1053		min	0	102	0	16	0	77	-1.602e-3	103	-3.13e-3	101	-4.646e-4	74
1054	N629	max	0	107	0	107	0	107	0	107	0	107	0	107
1055		min	0	12	0	12	0	12	0	12	0	12	0	12
1056	N628	max	0	107	0	107	0	107	0	107	0	107	0	107
1057		min	0	12	0	12	0	12	0	12	0	12	0	12
1058	N627	max	0	107	0	107	0	107	0	107	0	107	0	107
1059		min	0	12	0	12	0	12	0	12	0	12	0	12
1060	N626	max	0.341	100	0.046	57	0.035	75	-5.302e-4	107	6.825e-2	73	2.633e-3	76
1061		min	-0.325	72	-0.051	86	-0.476	13	-6.238e-3	13	-7.02e-2	71	-2.812e-3	100
1062	N625	max	0.339	70	0.045	57	0.034	75	-5.033e-4	107	5.638e-2	71	2.613e-3	102
1063		min	-0.323	102	-0.052	86	-0.485	15	-6.251e-3	14	-5.434e-2	73	-2.715e-3	70
1064	N624	max	0.266	100	0.046	57	0.51	101	5.969e-3	13	1.638e-2	103	2.021e-3	76
1065		min	-0.249	72	-0.051	86	-0.469	73	6.611e-4	68	-1.802e-2	71	-2.212e-3	100
1066	N623	max	0.264	70	0.046	57	0.518	101	6.655e-3	15	1.331e-2	71	2.012e-3	102
1067		min	-0.247	102	-0.052	86	-0.464	73	1.028e-3	67	-1.198e-2	103	-2.12e-3	70
1068	N622	max	0.893	104	-0.27	68	0.84	75	2.319e-1	71	7.854e-4	106	1.435e-3	96
1069		min	-0.912	76	-1.728	13	-0.904	103	-2.399e-1	103	-7.832e-4	74	-2.74e-3	15
1070	N621	max	0.932	104	-0.272	68	0.973	105	2.25e-1	71	1.498e-3	104	1.287e-3	66
1071		min	-0.935	76	-1.719	13	-1.223	73	-2.174e-1	103	-1.41e-3	76	-2.817e-3	15
1072	N616	max	0.808	70	-0.284	66	0.429	71	-2.478e-4	66	7.668e-4	106	1.991e-2	62
1073		min	-0.649	106	-2.342	15	-0.303	107	-4.39e-3	15	-1.731e-3	13	-1.694e-2	98
1074	N615	max	0.813	100	-0.235	68	0.395	71	3.832e-3	13	1.619e-3	70	1.883e-2	66
1075		min	-0.653	76	-2.102	13	-0.184	107	2.063e-4	68	-7.227e-4	106	-2.419e-2	15
1076	N614	max	0.806	100	-0.237	68	0.428	71	-2.011e-4	68	7.657e-4	106	1.787e-2	66
1077		min	-0.648	76	-2.1	13	-0.3	107	-3.879e-3	13	-1.727e-3	13	-3.377e-2	15
1078	N613	max	1.134	104	-0.261	68	0.486	71	-3.503e-4	68	1.069e-3	106	1.59e-2	76
1079		min	-1.129	76	-2.092	13	-0.267	107	-4.262e-3	13	-1.328e-3	70	-8.483e-2	13
1080	N612	max	1.119	74	-0.309	66	0.491	71	-3.923e-4	66	1.112e-3	106	2.238e-2	76
1081		min	-1.118	106	-2.333	15	-0.273	107	-4.821e-3	15	-1.427e-3	70	-4.27e-2	13
1082	N611	max	0.455	100	-0.09	68	0.466	71	-1.388e-3	98	2.111e-3	106	6.812e-3	66
1083		min	-0.413	76	-0.898	13	-0.434	103	-1.091e-2	13	-2.485e-3	70	-2.129e-2	15
1084	N610	max	0.452	70	-0.119	66	0.464	71	-1.404e-3	96	2.056e-3	106	5.212e-3	92
1085		min	-0.409	106	-1.017	15	-0.441	103	-1.214e-2	15	-2.53e-3	70	-5.845e-3	68
1086	N609	max	0.475	100	-0.087	68	0.405	13	1.095e-2	13	2.414e-3	70	8.961e-3	66

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1087		min	-0.43	76	-0.901	13	-0.077	107	1.391e-3	68	-2.036e-3	106	-8.522e-3	98
1088	N608	max	0.471	70	-0.122	66	0.429	15	1.267e-2	15	2.461e-3	70	1.494e-2	13
1089		min	-0.425	106	-1.023	15	-0.076	107	1.498e-3	96	-1.995e-3	106	-3.98e-3	68
1090	N607	max	0.506	104	-0.111	68	0.622	71	-1.97e-3	68	5.959e-3	76	1.687e-2	106
1091		min	-0.526	72	-0.871	13	-0.335	107	-1.219e-2	13	-5.985e-3	104	-1.91e-2	70
1092	N606	max	0.539	74	-0.142	66	0.629	71	-2.112e-3	66	5.866e-3	106	5.695e-3	76
1093		min	-0.561	102	-0.983	15	-0.339	107	-1.39e-2	15	-5.745e-3	104	-6.508e-2	13
1094	N605	max	0.64	100	-0.189	68	0.447	71	-9.03e-4	98	1.512e-3	106	1.217e-2	66
1095		min	-0.553	76	-1.632	13	-0.371	103	-8.007e-3	13	-2.162e-3	70	-3.295e-2	15
1096	N604	max	0.644	70	-0.231	66	0.446	71	-8.645e-4	96	1.527e-3	76	1.054e-2	66
1097		min	-0.552	106	-1.83	15	-0.376	103	-8.662e-3	15	-2.226e-3	100	-1.122e-2	94
1098	N603	max	0.652	100	-0.187	68	0.378	71	7.98e-3	13	2.067e-3	70	1.46e-2	66
1099		min	-0.564	76	-1.636	13	-0.127	107	9.229e-4	68	-1.45e-3	106	-1.601e-2	94
1100	N602	max	0.657	70	-0.236	66	0.386	71	8.535e-3	15	2.142e-3	100	1.703e-2	13
1101		min	-0.563	106	-1.872	15	-0.127	107	8.103e-4	66	-1.469e-3	76	-8.976e-3	98
1102	N601	max	0.908	100	-0.245	68	0.413	71	8.709e-5	75	5.968e-5	107	1.718e-2	66
1103		min	-0.679	76	-2.285	13	-0.243	107	-1.017e-4	103	-8.343e-5	71	-4.699e-2	15
1104	N600	max	0.916	70	-0.296	66	0.416	71	1.634e-4	15	2.59e-4	107	1.773e-2	66
1105		min	-0.68	106	-2.553	15	-0.244	107	-2.365e-5	107	-2.812e-4	71	-2.253e-2	94
1106	N599	max	0.77	100	-0.196	68	0.74	71	3.55e-3	107	7.847e-3	71	7.303e-3	104
1107		min	-0.703	76	-1.629	13	-0.589	103	-6.982e-3	71	-8.181e-3	103	-8.065e-3	76
1108	N598	max	0.751	70	-0.238	66	0.673	71	8.366e-4	107	5.239e-2	103	7.143e-3	104
1109		min	-0.711	106	-1.827	15	-0.534	103	-4.542e-3	14	-5.318e-2	71	-9.46e-3	72
1110	N597	max	0.231	100	0.031	57	0.335	13	6.07e-3	13	1.509e-2	107	2.748e-3	76
1111		min	-0.213	76	-0.035	86	-0.07	107	6.96e-4	68	-1.681e-2	71	-3.026e-3	100
1112	N596	max	0.232	70	0.03	57	0.345	15	7.016e-3	15	6.543e-3	71	2.661e-3	106
1113		min	-0.213	106	-0.035	86	-0.073	107	9.739e-4	76	-5.255e-3	103	-2.895e-3	70
1114	N595	max	0.208	100	0.031	57	0.547	71	-6.77e-4	98	1.823e-2	103	2.529e-3	76
1115		min	-0.198	72	-0.035	86	-0.45	103	-6.337e-3	13	-1.996e-2	71	-2.717e-3	100
1116	N594	max	0.208	70	0.03	57	0.546	71	-1.016e-3	99	1.952e-2	71	2.471e-3	102
1117		min	-0.197	102	-0.035	86	-0.456	103	-6.536e-3	15	-1.759e-2	107	-2.594e-3	70
1118	N593	max	0.794	100	-0.194	68	0.358	71	5.72e-3	13	4.694e-3	70	6.373e-3	104
1119		min	-0.734	76	-1.633	13	-0.179	107	6.946e-4	68	-4.148e-3	106	-7.605e-3	72
1120	N592	max	0.776	70	-0.243	66	0.56	71	4.93e-3	15	6.738e-2	103	7.211e-3	104
1121		min	-0.742	106	-1.868	15	-0.353	107	-3.16e-4	75	-6.656e-2	71	-9.869e-3	72
1122	N591	max	1.045	100	-0.253	68	0.663	71	4.635e-3	103	8.012e-3	71	8.e-3	104
1123		min	-0.857	76	-2.284	13	-0.487	107	-4.653e-3	71	-7.961e-3	103	-9.831e-3	72
1124	N590	max	1.028	70	-0.303	66	0.637	71	2.224e-3	103	6.982e-2	103	7.88e-3	104
1125		min	-0.867	106	-2.552	15	-0.464	107	-2.132e-3	71	-6.979e-2	71	-1.117e-2	72
1126	N589	max	0.482	104	-0.108	68	0.16	71	1.23e-2	13	5.644e-3	104	1.718e-2	106
1127		min	-0.501	72	-0.875	13	-0.109	107	2.084e-3	68	-5.804e-3	72	-2.074e-2	70
1128	N588	max	0.524	74	-0.143	66	0.161	71	1.441e-2	15	5.402e-3	74	7.09e-2	15
1129		min	-0.545	102	-0.99	15	-0.114	107	2.214e-3	68	-5.775e-3	102	-5.404e-3	104
1130	N587	max	1.109	104	-0.26	68	0.317	71	4.093e-3	13	1.647e-3	70	3.689e-2	15
1131		min	-1.102	76	-2.095	13	-0.195	107	4.035e-4	68	-1.163e-3	106	-2.215e-2	104
1132	N586	max	1.104	74	-0.305	66	0.319	71	4.181e-3	15	1.755e-3	70	7.22e-2	15
1133		min	-1.103	106	-2.311	15	-0.202	107	3.589e-4	66	-1.208e-3	106	-1.982e-2	104
1134	N585	max	0.95	104	-0.214	68	0.566	71	-1.299e-3	98	3.816e-3	106	1.467e-4	68
1135		min	-0.962	76	-1.62	13	-0.302	107	-8.813e-3	13	-4.096e-3	70	-7.467e-2	13
1136	N584	max	0.926	74	-0.256	66	0.572	71	-1.241e-3	96	3.478e-3	106	5.503e-3	106
1137		min	-0.954	106	-1.816	15	-0.307	107	-9.56e-3	15	-3.554e-3	74	-7.612e-2	13
1138	N583	max	0.918	104	-0.21	68	0.232	71	8.64e-3	13	3.943e-3	74	4.514e-2	15
1139		min	-0.927	76	-1.623	13	-0.155	107	1.331e-3	68	-3.92e-3	106	-2.95e-3	96
1140	N582	max	0.897	74	-0.263	66	0.232	71	9.445e-3	15	3.581e-3	104	9.287e-2	15
1141		min	-0.924	106	-1.854	15	-0.161	107	1.238e-3	66	-3.459e-3	106	-7.357e-3	74

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1142	N581	max	1.21	104	-0.272	68	0.404	71	3.783e-4	107	7.113e-4	13	1.723e-2	76
1143		min	-1.178	76	-2.28	13	-0.233	107	-4.293e-4	71	-9.082e-5	76	-2.274e-2	13
1144	N580	max	1.197	74	-0.322	66	0.407	71	5.785e-4	103	6.697e-4	13	2.657e-2	15
1145		min	-1.172	106	-2.546	15	-0.24	107	-3.889e-4	75	-2.606e-4	75	-1.723e-2	104
1146	N579	max	0.048	100	0.006	57	0.664	71	-6.871e-4	98	1.823e-2	103	4.154e-3	72
1147		min	-0.046	72	-0.007	86	-0.374	107	-6.381e-3	13	-1.996e-2	71	-4.354e-3	100
1148	N578	max	0.052	70	0.006	57	0.671	71	-1.029e-3	96	1.952e-2	71	4.291e-3	102
1149		min	-0.05	102	-0.007	86	-0.379	107	-6.575e-3	15	-1.759e-2	107	-4.51e-3	70
1150	N577	max	0.054	100	0.006	57	0.096	71	8.228e-3	71	1.509e-2	107	4.475e-3	76
1151		min	-0.05	76	-0.007	86	-0.048	107	-3.68e-3	107	-1.681e-2	71	-4.845e-3	100
1152	N576	max	0.058	70	0.006	57	0.098	71	8.426e-3	71	4.918e-3	71	4.646e-3	106
1153		min	-0.054	106	-0.007	86	-0.052	107	-3.981e-3	107	-3.63e-3	103	-5.026e-3	70
1154	N575	max	0.25	100	0.041	57	0.497	71	-6.732e-4	98	1.785e-2	103	2.067e-3	76
1155		min	-0.237	72	-0.046	86	-0.489	103	-6.333e-3	13	-1.942e-2	71	-2.242e-3	100
1156	N574	max	0.249	70	0.04	57	0.492	71	-1.005e-3	99	1.902e-2	71	2.064e-3	102
1157		min	-0.236	102	-0.046	86	-0.497	103	-6.531e-3	15	-1.724e-2	107	-2.151e-3	70
1158	N573	max	0.279	100	0.041	57	0.436	13	6.e-3	13	1.473e-2	107	2.248e-3	76
1159		min	-0.257	76	-0.046	86	-0.036	107	7.28e-4	68	-1.633e-2	71	-2.5e-3	100
1160	N572	max	0.278	70	0.04	57	0.463	15	7.069e-3	16	6.718e-3	71	2.225e-3	106
1161		min	-0.255	106	-0.047	86	-0.034	107	7.249e-4	76	-5.573e-3	103	-2.402e-3	70
1162	N571	max	0.214	100	0.033	57	0.459	101	5.968e-3	13	1.668e-2	107	2.404e-3	76
1163		min	-0.201	72	-0.037	86	-0.534	73	6.631e-4	68	-1.844e-2	71	-2.606e-3	100
1164	N570	max	0.214	70	0.032	57	0.465	101	6.663e-3	15	1.345e-2	71	2.344e-3	102
1165		min	-0.2	102	-0.037	86	-0.534	73	1.038e-3	67	-1.199e-2	103	-2.494e-3	70
1166	N569	max	0.771	100	-0.278	68	1.159	75	2.864e-2	75	2.998e-3	15	4.183e-4	66
1167		min	-0.707	76	-1.88	13	-1.461	103	-3.144e-2	103	1.169e-4	96	-7.508e-3	15
1168	N568	max	0.246	100	0.036	72	2.447	75	1.333e-2	75	1.182e-2	71	6.317e-4	74
1169		min	-0.235	76	-0.045	100	-2.588	73	-1.72e-2	73	-1.161e-2	77	-6.739e-4	102
1170	N567	max	0.753	100	-0.276	68	1.161	105	3.381e-2	71	3.841e-3	103	1.513e-4	66
1171		min	-0.702	76	-1.865	13	-1.429	73	-2.993e-2	107	-1.205e-3	75	-7.445e-3	15
1172	N566	max	0.189	100	0.033	72	0.833	101	6.201e-3	13	1.833e-3	70	5.126e-4	74
1173		min	-0.177	76	-0.042	100	-0.98	73	-5.174e-4	77	-1.886e-3	102	-5.542e-4	102
1174	N565	max	1.026	100	-0.37	68	1.262	105	3.079e-2	71	2.912e-3	16	1.796e-3	66
1175		min	-0.844	76	-2.526	13	-1.537	73	-3.044e-2	103	6.125e-4	105	-8.163e-3	15
1176	N564	max	0.759	70	-0.296	67	1.119	75	2.522e-2	75	3.993e-3	75	4.453e-3	103
1177		min	-0.706	106	-1.916	16	-1.42	103	-2.801e-2	103	-7.114e-3	103	-4.602e-4	68
1178	N563	max	0.246	70	0.035	70	2.222	75	9.187e-3	75	1.454e-2	71	7.476e-4	100
1179		min	-0.235	106	-0.043	102	-2.368	73	-1.314e-2	73	-1.425e-2	77	-6.467e-4	76
1180	N562	max	0.744	70	-0.3	67	1.149	105	2.969e-2	71	2.38e-3	75	4.41e-3	103
1181		min	-0.703	106	-1.902	16	-1.41	73	-2.604e-2	107	-5.939e-3	103	-5.152e-4	68
1182	N561	max	0.189	70	0.033	70	0.813	101	6.415e-3	13	1.876e-3	70	6.162e-4	100
1183		min	-0.177	106	-0.04	102	-0.958	73	-1.417e-4	77	-1.925e-3	102	-5.106e-4	76
1184	N560	max	1.014	70	-0.402	67	1.225	105	2.727e-2	71	4.609e-3	75	5.612e-3	92
1185		min	-0.842	106	-2.569	15	-1.497	73	-2.688e-2	103	-7.903e-3	103	-1.824e-3	68
1186	N559	max	0.669	100	-0.205	68	0.189	105	1.27e-2	77	1.048e-3	102	1.54e-3	96
1187		min	-0.579	76	-1.654	13	-0.431	73	-1.787e-2	101	-9.693e-4	70	-3.572e-3	15
1188	N558	max	0.662	100	-0.229	68	0.217	105	2.02e-2	77	1.047e-3	102	1.551e-3	96
1189		min	-0.572	76	-1.691	13	-0.461	73	-2.54e-2	101	-9.697e-4	70	-3.066e-3	15
1190	N557	max	0.667	70	-0.246	67	0.217	105	2.018e-2	77	1.047e-3	102	1.572e-3	96
1191		min	-0.574	106	-1.72	16	-0.461	73	-2.543e-2	101	-9.702e-4	70	-2.464e-3	15
1192	N556	max	0.673	70	-0.238	66	0.189	105	1.266e-2	77	1.046e-3	102	1.559e-3	96
1193		min	-0.578	106	-1.745	15	-0.434	73	-1.796e-2	101	-9.706e-4	70	-1.956e-3	15
1194	N555	max	0.247	100	0.043	72	0.641	101	6.066e-3	13	1.585e-3	100	2.875e-4	76
1195		min	-0.232	72	-0.051	100	-0.644	73	4.992e-4	105	-1.776e-3	72	-4.322e-4	100
1196	N554	max	0.243	100	0.039	57	0.643	101	6.224e-3	13	1.574e-3	100	4.831e-4	74

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1197		min	-0.228	76	-0.049	86	-0.645	73	-6.015e-5	105	-1.765e-3	72	-5.236e-4	102
1198	N553	max	0.243	70	0.039	57	0.639	101	6.382e-3	13	1.578e-3	70	5.476e-4	100
1199		min	-0.228	106	-0.049	86	-0.639	73	-5.653e-5	105	-1.773e-3	102	-4.637e-4	76
1200	N552	max	0.247	70	0.043	70	0.631	101	6.546e-3	16	1.589e-3	70	4.09e-4	102
1201		min	-0.231	102	-0.05	102	-0.628	73	5.1e-4	105	-1.783e-3	102	-3.17e-4	74
1202	N551	max	0.318	100	0.045	72	0.521	75	2.797e-4	107	1.445e-3	102	3.936e-4	76
1203		min	-0.304	72	-0.054	100	-0.788	73	-6.239e-3	13	-1.292e-3	70	-5.372e-4	100
1204	N550	max	0.315	100	0.039	57	0.517	75	8.453e-4	107	1.433e-3	102	6.181e-4	74
1205		min	-0.301	76	-0.049	86	-0.787	73	-6.24e-3	13	-1.28e-3	70	-6.6e-4	102
1206	N549	max	0.315	70	0.039	57	0.503	75	8.452e-4	107	1.696e-3	71	6.812e-4	100
1207		min	-0.3	106	-0.049	86	-0.773	73	-6.242e-3	13	-1.566e-3	107	-6.004e-4	76
1208	N548	max	0.318	70	0.046	70	0.476	75	2.798e-4	107	2.444e-3	71	5.147e-4	102
1209		min	-0.303	106	-0.053	102	-0.748	73	-6.246e-3	14	-2.283e-3	77	-4.225e-4	74
1210	N547	max	0.904	100	-0.28	68	0.305	105	1.58e-2	73	7.304e-4	107	2.868e-3	96
1211		min	-0.674	76	-2.296	13	-0.468	73	-1.575e-2	105	-7.573e-4	71	-4.618e-3	94
1212	N546	max	0.898	100	-0.321	68	0.336	105	2.375e-2	73	2.867e-4	107	2.947e-3	96
1213		min	-0.668	76	-2.337	13	-0.498	73	-2.366e-2	105	-3.137e-4	71	-4.311e-3	94
1214	N545	max	0.903	70	-0.35	67	0.336	105	2.378e-2	73	2.258e-4	105	3.036e-3	96
1215		min	-0.671	106	-2.372	16	-0.498	73	-2.365e-2	105	-2.526e-4	73	-3.938e-3	94
1216	N544	max	0.91	70	-0.321	66	0.307	105	1.588e-2	73	6.693e-4	105	3.091e-3	96
1217		min	-0.675	106	-2.405	15	-0.468	73	-1.573e-2	105	-6.963e-4	73	-3.607e-3	94
1218	N543	max	0.626	100	-0.21	68	0.429	101	1.867e-2	103	1.267e-3	100	1.335e-3	96
1219		min	-0.539	76	-1.644	13	-0.498	73	-1.352e-2	75	-1.379e-3	102	-3.576e-3	15
1220	N542	max	0.62	100	-0.233	68	0.458	101	2.617e-2	103	1.267e-3	100	1.356e-3	96
1221		min	-0.533	76	-1.681	13	-0.526	73	-2.101e-2	75	-1.379e-3	102	-3.135e-3	15
1222	N541	max	0.625	70	-0.25	67	0.459	101	2.616e-2	103	1.268e-3	100	1.387e-3	96
1223		min	-0.536	106	-1.712	16	-0.526	73	-2.099e-2	75	-1.378e-3	102	-2.6e-3	15
1224	N540	max	0.631	70	-0.241	66	0.432	101	1.865e-2	103	1.268e-3	100	1.384e-3	96
1225		min	-0.54	106	-1.74	15	-0.497	73	-1.345e-2	75	-1.377e-3	102	-2.158e-3	15
1226	N539	max	0.803	70	-0.269	66	0.307	105	4.011e-3	15	1.743e-3	100	2.13e-2	62
1227		min	-0.643	106	-2.201	15	-0.425	73	1.907e-4	66	-8.138e-4	76	-1.575e-2	98
1228	N538	max	0.825	70	-0.272	66	0.191	105	-2.771e-4	66	6.016e-4	76	1.98e-2	62
1229		min	-0.662	106	-2.247	15	-0.395	73	-3.962e-3	15	-1.669e-3	13	-1.685e-2	98
1230	N537	max	0.803	100	-0.23	68	0.304	105	3.841e-3	13	1.731e-3	100	1.889e-2	66
1231		min	-0.643	76	-2.063	13	-0.425	73	1.777e-4	68	-8.297e-4	76	-2.397e-2	15
1232	N536	max	0.825	100	-0.226	68	0.189	105	-2.53e-4	68	5.986e-4	76	1.788e-2	66
1233		min	-0.664	76	-2.07	13	-0.393	73	-3.75e-3	13	-1.669e-3	13	-3.37e-2	15
1234	N535	max	1.095	104	-0.251	68	0.2	105	-3.945e-4	68	1.166e-3	76	1.699e-2	76
1235		min	-1.087	76	-2.062	13	-0.314	73	-4.135e-3	13	-1.488e-3	100	-8.484e-2	13
1236	N534	max	1.085	74	-0.296	66	0.203	105	-4.139e-4	66	1.209e-3	76	2.225e-2	76
1237		min	-1.073	76	-2.239	15	-0.321	73	-4.393e-3	15	-1.6e-3	100	-4.256e-2	13
1238	N533	max	0.506	100	-0.082	68	0.085	105	-1.36e-3	68	1.891e-3	106	6.853e-3	66
1239		min	-0.462	76	-0.887	13	-0.395	13	-1.082e-2	13	-2.288e-3	100	-2.124e-2	15
1240	N532	max	0.502	70	-0.111	66	0.085	105	-1.416e-3	66	1.833e-3	106	5.29e-3	92
1241		min	-0.457	106	-0.969	15	-0.401	15	-1.19e-2	15	-2.329e-3	70	-5.858e-3	68
1242	N531	max	0.45	100	-0.087	68	0.436	101	1.07e-2	13	2.477e-3	70	9.085e-3	66
1243		min	-0.406	76	-0.881	13	-0.463	73	1.39e-3	68	-2.071e-3	106	-8.644e-3	98
1244	N530	max	0.447	70	-0.115	66	0.442	101	1.165e-2	15	2.524e-3	70	1.488e-2	13
1245		min	-0.403	106	-0.98	15	-0.461	73	1.409e-3	66	-2.032e-3	106	-3.908e-3	68
1246	N529	max	0.476	104	-0.103	68	0.113	105	-2.076e-3	68	5.591e-3	76	1.908e-2	106
1247		min	-0.495	72	-0.86	13	-0.16	73	-1.204e-2	13	-5.618e-3	104	-2.096e-2	70
1248	N528	max	0.514	74	-0.132	66	0.116	105	-2.121e-3	68	5.482e-3	76	7.301e-3	76
1249		min	-0.53	102	-0.939	15	-0.163	73	-1.331e-2	15	-5.365e-3	104	-6.441e-2	13
1250	N527	max	0.675	100	-0.178	68	0.134	105	-9.02e-4	68	1.309e-3	106	1.205e-2	66
1251		min	-0.585	76	-1.613	13	-0.376	73	-7.862e-3	13	-1.972e-3	100	-3.311e-2	15

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1252	N526	max	0.679	70	-0.219	66	0.135	105	-8.243e-4	66	1.327e-3	76	1.041e-2	66
1253		min	-0.582	106	-1.765	15	-0.38	73	-8.34e-3	15	-2.041e-3	100	-1.112e-2	94
1254	N525	max	0.633	100	-0.184	68	0.373	101	7.884e-3	13	2.147e-3	100	1.498e-2	66
1255		min	-0.546	76	-1.603	13	-0.444	73	8.8e-4	68	-1.523e-3	76	-1.618e-2	94
1256	N524	max	0.637	70	-0.225	66	0.379	101	8.121e-3	15	2.221e-3	100	1.754e-2	13
1257		min	-0.545	106	-1.762	15	-0.442	73	8.327e-4	66	-1.545e-3	76	-9.226e-3	98
1258	N523	max	0.91	100	-0.239	68	0.247	105	9.813e-5	71	1.138e-4	104	1.743e-2	66
1259		min	-0.681	76	-2.249	13	-0.41	73	-7.888e-5	107	-1.189e-4	72	-4.622e-2	15
1260	N522	max	0.916	70	-0.284	66	0.25	105	2.586e-4	15	2.19e-4	107	1.786e-2	66
1261		min	-0.68	106	-2.434	15	-0.411	73	1.662e-5	107	-2.222e-4	71	-2.244e-2	94
1262	N521	max	0.785	100	-0.185	68	0.354	105	2.673e-3	107	7.989e-3	71	5.945e-3	104
1263		min	-0.712	76	-1.61	13	-0.543	73	-6.091e-3	71	-8.29e-3	103	-6.72e-3	76
1264	N520	max	0.764	70	-0.226	66	0.346	105	3.353e-4	107	6.646e-2	103	5.859e-3	104
1265		min	-0.718	106	-1.763	15	-0.541	73	-4.366e-3	15	-6.733e-2	71	-8.251e-3	72
1266	N519	max	0.205	100	0.031	57	0.452	101	5.968e-3	13	1.675e-2	107	2.475e-3	76
1267		min	-0.193	72	-0.035	86	-0.543	73	6.643e-4	68	-1.853e-2	71	-2.682e-3	100
1268	N518	max	0.206	70	0.03	57	0.458	101	6.666e-3	15	1.351e-2	71	2.41e-3	102
1269		min	-0.193	102	-0.035	86	-0.544	73	1.044e-3	67	-1.202e-2	103	-2.562e-3	70
1270	N517	max	0.264	100	0.031	57	0.097	75	-7.331e-4	98	7.175e-2	73	3.226e-3	76
1271		min	-0.253	72	-0.035	86	-0.32	13	-6.235e-3	13	-7.383e-2	71	-3.418e-3	100
1272	N516	max	0.264	70	0.03	57	0.099	75	-8.732e-4	106	5.896e-2	71	3.142e-3	102
1273		min	-0.252	102	-0.035	86	-0.329	15	-6.267e-3	15	-5.68e-2	73	-3.288e-3	70
1274	N515	max	0.768	100	-0.191	68	0.368	105	5.581e-3	13	4.048e-3	70	6.807e-3	104
1275		min	-0.708	76	-1.599	13	-0.523	73	5.021e-5	75	-3.595e-3	106	-7.752e-3	72
1276	N514	max	0.748	70	-0.232	66	0.425	101	4.79e-3	15	7.253e-3	103	7.184e-3	104
1277		min	-0.714	106	-1.758	15	-0.557	73	3.652e-4	75	-6.484e-3	71	-9.518e-3	72
1278	N513	max	1.04	100	-0.246	68	0.457	105	4.626e-3	103	7.999e-3	71	7.61e-3	104
1279		min	-0.849	76	-2.248	13	-0.621	73	-4.631e-3	71	-7.964e-3	103	-9.291e-3	72
1280	N512	max	1.019	70	-0.291	66	0.424	105	1.822e-3	103	5.447e-2	103	7.44e-3	104
1281		min	-0.854	106	-2.432	15	-0.588	73	-1.686e-3	71	-5.443e-2	71	-1.055e-2	72
1282	N511	max	0.51	104	-0.108	68	0.339	105	1.221e-2	13	5.855e-3	104	1.531e-2	106
1283		min	-0.52	72	-0.855	13	-0.616	73	1.945e-3	68	-5.916e-3	76	-1.911e-2	70
1284	N510	max	0.541	74	-0.138	66	0.342	105	1.35e-2	15	5.617e-3	104	7.08e-2	15
1285		min	-0.552	106	-0.948	15	-0.626	73	2.079e-3	66	-5.827e-3	76	-4.724e-3	104
1286	N509	max	1.123	104	-0.255	68	0.272	105	4.119e-3	13	1.406e-3	100	3.696e-2	15
1287		min	-1.105	76	-2.057	13	-0.482	73	3.604e-4	68	-9.561e-4	76	-2.129e-2	104
1288	N508	max	1.104	74	-0.294	66	0.274	105	4.222e-3	15	1.494e-3	100	7.179e-2	15
1289		min	-1.086	106	-2.191	15	-0.49	73	3.475e-4	66	-9.813e-4	76	-2.044e-2	104
1290	N507	max	0.906	104	-0.204	68	0.159	105	-1.365e-3	98	3.73e-3	106	2.585e-4	76
1291		min	-0.918	76	-1.6	13	-0.229	73	-8.693e-3	13	-4.042e-3	70	-7.476e-2	13
1292	N506	max	0.881	74	-0.245	66	0.162	105	-1.301e-3	66	3.429e-3	76	6.936e-3	106
1293		min	-0.904	106	-1.752	15	-0.234	73	-9.407e-3	15	-3.512e-3	104	-7.712e-2	13
1294	N505	max	0.945	104	-0.208	68	0.307	105	8.46e-3	13	3.839e-3	74	4.65e-2	15
1295		min	-0.941	76	-1.589	13	-0.56	73	1.254e-3	68	-3.748e-3	106	-3.169e-3	96
1296	N504	max	0.92	74	-0.25	66	0.309	105	8.646e-3	15	3.499e-3	104	9.443e-2	15
1297		min	-0.928	106	-1.746	15	-0.569	73	1.174e-3	66	-3.326e-3	76	-6.111e-3	74
1298	N503	max	1.196	100	-0.265	68	0.238	105	4.59e-4	103	6.184e-4	13	1.769e-2	76
1299		min	-1.155	76	-2.244	13	-0.4	73	-4.26e-4	75	-9.612e-5	74	-2.25e-2	13
1300	N502	max	1.176	74	-0.31	66	0.24	105	7.112e-4	103	6.071e-4	13	2.697e-2	72
1301		min	-1.136	76	-2.427	15	-0.408	73	-3.733e-4	75	-2.25e-4	75	-1.767e-2	104
1302	N501	max	0.061	100	0.006	57	0.058	75	4.586e-3	75	7.175e-2	73	5.312e-3	72
1303		min	-0.059	72	-0.007	86	-0.103	103	-8.847e-3	103	-7.383e-2	71	-5.539e-3	100
1304	N500	max	0.066	70	0.006	57	0.06	75	4.735e-3	75	5.734e-2	71	5.47e-3	102
1305		min	-0.064	102	-0.007	86	-0.106	103	-9.109e-3	103	-5.517e-2	73	-5.723e-3	70
1306	N499	max	0.048	100	0.006	57	0.379	105	6.001e-3	13	1.675e-2	107	4.062e-3	72

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1307		min	-0.045	72	-0.007	86	-0.658	73	6.729e-4	68	-1.853e-2	71	-4.308e-3	100
1308	N498	max	0.052	70	0.006	57	0.381	105	6.757e-3	15	1.278e-2	71	4.199e-3	102
1309		min	-0.049	102	-0.007	86	-0.668	73	1.061e-3	66	-1.129e-2	103	-4.462e-3	70
1310	N497	max	0.317	100	0.041	57	0.057	75	-5.298e-4	107	6.825e-2	73	2.633e-3	76
1311		min	-0.303	72	-0.046	86	-0.424	13	-6.238e-3	13	-7.02e-2	71	-2.812e-3	100
1312	N496	max	0.316	70	0.04	57	0.057	75	-5.029e-4	107	5.638e-2	71	2.613e-3	102
1313		min	-0.301	102	-0.046	86	-0.433	15	-6.251e-3	14	-5.434e-2	73	-2.715e-3	70
1314	N495	max	0.247	100	0.041	57	0.491	101	5.969e-3	13	1.638e-2	103	2.021e-3	76
1315		min	-0.232	72	-0.046	86	-0.493	73	6.611e-4	68	-1.802e-2	71	-2.212e-3	100
1316	N494	max	0.246	70	0.04	57	0.498	101	6.655e-3	15	1.331e-2	71	2.011e-3	102
1317		min	-0.231	102	-0.046	86	-0.49	73	1.028e-3	67	-1.198e-2	103	-2.12e-3	70
1318	N492	max	0	107	0	107	0	107	0	107	0	107	0	107
1319		min	0	12	0	12	0	12	0	12	0	12	0	12
1320	N491	max	0	107	0	107	0	107	0	107	0	107	0	107
1321		min	0	12	0	12	0	12	0	12	0	12	0	12
1322	N488	max	0	107	0	107	0	107	0	107	0	107	0	107
1323		min	0	12	0	12	0	12	0	12	0	12	0	12
1324	N487	max	0	107	0	107	0	107	0	107	0	107	0	107
1325		min	0	12	0	12	0	12	0	12	0	12	0	12
1326	N486	max	0	107	0	107	0	107	0	107	0	107	0	107
1327		min	0	12	0	12	0	12	0	12	0	12	0	12
1328	N485	max	0.235	100	0.033	57	0.354	13	6.052e-3	13	1.803e-2	107	2.633e-3	76
1329		min	-0.218	76	-0.037	86	-0.065	107	7.07e-4	68	-2.002e-2	71	-2.88e-3	100
1330	N484	max	0.236	70	0.032	57	0.367	15	7.062e-3	15	1.928e-2	71	2.57e-3	106
1331		min	-0.219	106	-0.037	86	-0.064	107	8.897e-4	76	-1.774e-2	103	-2.769e-3	70
1332	N483	max	0	107	0	107	0	107	0	107	0	107	0	107
1333		min	0	12	0	12	0	12	0	12	0	12	0	12
1334	N465	max	0.762	70	-0.288	68	1.626	71	2.772e-2	75	3.251e-3	72	3.398e-4	66
1335		min	-0.703	106	-1.913	13	-1.63	103	-3.063e-2	103	-1.567e-4	104	-8.159e-3	15
1336	N464	max	0.206	70	0.033	72	1.024	71	8.616e-4	75	1.903e-3	72	5.603e-4	70
1337		min	-0.194	102	-0.042	100	-0.869	103	-6.382e-3	13	-1.792e-3	104	-6.047e-4	102
1338	N463	max	0.766	70	-0.286	68	1.307	71	3.425e-2	71	5.461e-3	103	3.199e-4	66
1339		min	-0.718	106	-1.928	13	-1.246	103	-3.031e-2	107	-2.817e-3	75	-8.814e-3	15
1340	N462	max	0.209	100	0.034	72	0.851	71	6.404e-3	13	1.973e-3	74	5.655e-4	70
1341		min	-0.194	76	-0.043	100	-0.549	107	-7.299e-4	77	-2.065e-3	102	-5.986e-4	102
1342	N461	max	1.029	70	-0.384	68	1.585	71	3.062e-2	71	2.938e-3	73	1.951e-3	66
1343		min	-0.851	106	-2.592	13	-1.552	103	-3.027e-2	103	4.357e-5	105	-9.567e-3	15
1344	N460	max	0.764	70	-0.312	69	1.585	71	2.429e-2	75	4.005e-3	75	4.243e-3	103
1345		min	-0.715	106	-1.959	15	-1.589	103	-2.721e-2	103	-7.137e-3	103	-6.638e-4	75
1346	N459	max	0.214	70	0.034	70	0.995	71	4.679e-4	75	1.998e-3	71	6.372e-4	70
1347		min	-0.202	102	-0.041	102	-0.84	103	-6.43e-3	13	-1.994e-3	107	-5.324e-4	106
1348	N458	max	0.768	70	-0.315	69	1.321	71	2.977e-2	71	7.677e-4	75	3.939e-3	103
1349		min	-0.729	106	-1.987	14	-1.249	103	-2.604e-2	107	-4.316e-3	103	-8.091e-4	68
1350	N457	max	0.209	70	0.033	70	0.833	71	6.705e-3	13	2.014e-3	70	6.701e-4	100
1351		min	-0.195	106	-0.041	102	-0.531	107	-3.503e-4	77	-2.103e-3	102	-5.577e-4	76
1352	N456	max	1.031	70	-0.419	66	1.545	71	2.697e-2	71	4.091e-3	75	5.285e-3	92
1353		min	-0.863	106	-2.658	15	-1.508	103	-2.66e-2	103	-7.394e-3	103	-2.089e-3	68
1354	N455	max	0.64	70	-0.215	68	0.502	71	1.335e-2	107	1.367e-3	72	1.461e-3	96
1355		min	-0.552	106	-1.681	13	-0.426	103	-1.86e-2	71	-1.243e-3	100	-4.212e-3	15
1356	N454	max	0.646	70	-0.239	68	0.529	71	2.083e-2	107	1.367e-3	72	1.472e-3	96
1357		min	-0.557	106	-1.725	13	-0.455	103	-2.616e-2	71	-1.243e-3	100	-3.709e-3	15
1358	N453	max	0.653	70	-0.258	69	0.529	71	2.08e-2	107	1.366e-3	72	1.493e-3	96
1359		min	-0.561	106	-1.762	14	-0.456	103	-2.622e-2	101	-1.244e-3	100	-3.11e-3	15
1360	N452	max	0.659	70	-0.249	66	0.5	71	1.327e-2	77	1.366e-3	72	1.479e-3	96
1361		min	-0.565	106	-1.795	15	-0.428	103	-1.877e-2	101	-1.244e-3	100	-2.605e-3	15

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1362	N451	max	0.273	100	0.043	72	0.515	71	6.164e-3	13	1.38e-3	74	3.222e-4	76
1363		min	-0.253	76	-0.052	100	-0.209	107	3.209e-4	45	-1.703e-3	102	-4.758e-4	100
1364	N450	max	0.269	100	0.039	57	0.523	71	6.421e-3	13	1.388e-3	74	5.307e-4	74
1365		min	-0.25	76	-0.049	86	-0.214	107	-2.175e-4	45	-1.711e-3	102	-5.648e-4	102
1366	N449	max	0.27	70	0.039	57	0.524	71	6.678e-3	13	1.398e-3	74	5.927e-4	100
1367		min	-0.25	106	-0.049	86	-0.213	107	-1.942e-4	45	-1.72e-3	102	-5.043e-4	76
1368	N448	max	0.273	70	0.044	70	0.519	71	6.937e-3	16	1.409e-3	74	4.442e-4	102
1369		min	-0.253	106	-0.051	102	-0.205	107	3.896e-4	75	-1.73e-3	102	-3.641e-4	74
1370	N447	max	0.259	70	0.042	72	0.648	71	-5.264e-4	107	1.76e-3	72	2.982e-4	106
1371		min	-0.244	102	-0.051	100	-0.639	103	-6.348e-3	13	-1.543e-3	100	-4.448e-4	70
1372	N446	max	0.268	70	0.038	57	0.644	71	5.109e-5	107	1.77e-3	72	5.415e-4	70
1373		min	-0.253	102	-0.049	86	-0.637	103	-6.383e-3	13	-1.552e-3	100	-5.874e-4	102
1374	N445	max	0.275	70	0.04	57	0.635	71	6.568e-5	107	1.78e-3	72	5.976e-4	70
1375		min	-0.259	102	-0.049	86	-0.63	103	-6.419e-3	13	-1.562e-3	100	-5.121e-4	106
1376	N444	max	0.278	70	0.044	70	0.62	71	-4.825e-4	107	1.791e-3	72	4.514e-4	102
1377		min	-0.262	102	-0.052	102	-0.618	103	-6.461e-3	14	-1.573e-3	100	-3.567e-4	74
1378	N443	max	0.901	70	-0.29	68	0.471	71	1.577e-2	73	7.578e-4	77	3.003e-3	66
1379		min	-0.671	106	-2.348	13	-0.301	107	-1.575e-2	105	-7.949e-4	101	-5.636e-3	15
1380	N442	max	0.908	70	-0.334	68	0.501	71	2.371e-2	73	3.141e-4	77	3.077e-3	66
1381		min	-0.676	106	-2.406	13	-0.33	107	-2.367e-2	75	-3.514e-4	101	-5.134e-3	15
1382	N441	max	0.915	70	-0.365	69	0.502	71	2.372e-2	103	2.484e-4	75	3.162e-3	66
1383		min	-0.681	106	-2.457	15	-0.33	107	-2.366e-2	75	-2.857e-4	103	-4.702e-3	94
1384	N440	max	0.922	70	-0.334	66	0.472	71	1.582e-2	103	6.92e-4	75	3.211e-3	66
1385		min	-0.685	106	-2.508	15	-0.3	107	-1.574e-2	75	-7.294e-4	103	-4.367e-3	94
1386	N439	max	0.636	100	-0.216	68	0.434	71	1.797e-2	103	1.088e-3	74	1.506e-3	66
1387		min	-0.55	76	-1.694	13	-0.181	107	-1.273e-2	75	-1.278e-3	102	-4.938e-3	15
1388	N438	max	0.641	70	-0.243	68	0.464	71	2.548e-2	103	1.088e-3	74	1.517e-3	66
1389		min	-0.553	106	-1.747	13	-0.209	107	-2.02e-2	75	-1.277e-3	102	-4.501e-3	15
1390	N437	max	0.648	70	-0.262	69	0.465	71	2.548e-2	103	1.089e-3	74	1.537e-3	66
1391		min	-0.557	106	-1.794	14	-0.209	107	-2.016e-2	75	-1.276e-3	102	-3.968e-3	15
1392	N436	max	0.654	70	-0.253	66	0.438	71	1.798e-2	103	1.089e-3	74	1.524e-3	66
1393		min	-0.562	106	-1.838	15	-0.18	107	-1.261e-2	75	-1.276e-3	102	-3.528e-3	15
1394	N435	max	0.821	70	-0.28	66	0.399	71	3.976e-3	15	1.684e-3	70	2.128e-2	62
1395		min	-0.66	106	-2.324	15	-0.182	107	2.103e-4	66	-7.508e-4	106	-1.574e-2	98
1396	N434	max	0.824	70	-0.284	66	0.428	71	-2.438e-4	66	7.836e-4	76	1.988e-2	92
1397		min	-0.663	106	-2.338	15	-0.301	107	-4.415e-3	15	-1.744e-3	100	-1.691e-2	68
1398	N433	max	0.802	100	-0.235	68	0.396	71	3.825e-3	13	1.669e-3	70	1.873e-2	66
1399		min	-0.643	76	-2.102	13	-0.184	107	2.06e-4	68	-7.637e-4	106	-2.418e-2	15
1400	N432	max	0.796	70	-0.236	68	0.429	71	-2.025e-4	68	7.835e-4	76	1.778e-2	96
1401		min	-0.638	106	-2.1	13	-0.3	107	-3.885e-3	13	-1.727e-3	100	-3.377e-2	15
1402	N431	max	1.131	104	-0.261	68	0.487	71	-3.479e-4	68	1.063e-3	106	1.591e-2	106
1403		min	-1.126	76	-2.092	13	-0.267	107	-4.263e-3	13	-1.322e-3	70	-8.481e-2	13
1404	N430	max	1.12	74	-0.309	66	0.49	71	-3.768e-4	66	1.106e-3	106	2.234e-2	106
1405		min	-1.12	106	-2.33	15	-0.272	107	-4.814e-3	15	-1.421e-3	70	-4.271e-2	13
1406	N429	max	0.451	70	-0.09	68	0.467	71	-1.367e-3	98	2.127e-3	76	6.857e-3	96
1407		min	-0.409	106	-0.897	13	-0.434	103	-1.093e-2	13	-2.498e-3	100	-2.12e-2	15
1408	N428	max	0.474	70	-0.12	66	0.463	71	-1.435e-3	96	2.02e-3	106	5.587e-3	92
1409		min	-0.43	102	-0.998	15	-0.439	103	-1.227e-2	15	-2.486e-3	70	-6.158e-3	68
1410	N427	max	0.469	100	-0.087	68	0.406	13	1.093e-2	13	2.46e-3	70	8.861e-3	66
1411		min	-0.424	76	-0.902	13	-0.078	107	1.404e-3	98	-2.073e-3	106	-8.434e-3	98
1412	N426	max	0.471	70	-0.121	66	0.429	15	1.254e-2	15	2.507e-3	70	1.485e-2	13
1413		min	-0.426	106	-1.04	15	-0.074	107	1.467e-3	66	-2.032e-3	106	-3.891e-3	68
1414	N425	max	0.5	104	-0.111	68	0.622	71	-1.957e-3	68	5.96e-3	76	1.769e-2	106
1415		min	-0.517	72	-0.87	13	-0.334	107	-1.217e-2	13	-5.983e-3	104	-1.968e-2	70
1416	N424	max	0.54	74	-0.141	66	0.628	71	-2.124e-3	66	5.862e-3	76	6.278e-3	106

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1417		min	-0.559	102	-0.967	15	-0.338	107	-1.373e-2	15	-5.744e-3	104	-6.46e-2	13
1418	N417	max	0.634	70	-0.189	68	0.448	71	-9.028e-4	98	1.534e-3	76	1.203e-2	96
1419		min	-0.547	106	-1.632	13	-0.371	103	-8.005e-3	13	-2.188e-3	100	-3.305e-2	15
1420	N416	max	0.665	70	-0.231	66	0.445	71	-8.439e-4	66	1.554e-3	76	1.038e-2	96
1421		min	-0.57	106	-1.823	15	-0.374	103	-8.762e-3	15	-2.259e-3	100	-1.11e-2	64
1422	N411	max	0.643	100	-0.187	68	0.379	71	7.982e-3	13	2.104e-3	70	1.466e-2	66
1423		min	-0.556	76	-1.637	13	-0.127	107	9.185e-4	68	-1.484e-3	106	-1.602e-2	94
1424	N410	max	0.66	70	-0.235	66	0.384	71	8.437e-3	15	2.174e-3	70	1.718e-2	13
1425		min	-0.566	106	-1.877	15	-0.125	107	8.281e-4	66	-1.498e-3	106	-8.995e-3	98
1426	N409	max	0.895	100	-0.245	68	0.413	71	8.675e-5	75	9.084e-5	77	1.711e-2	96
1427		min	-0.667	76	-2.285	13	-0.243	107	-1.021e-4	103	-1.135e-4	101	-4.698e-2	15
1428	N408	max	0.928	70	-0.295	66	0.415	71	1.399e-4	101	2.911e-4	77	1.767e-2	96
1429		min	-0.69	106	-2.553	15	-0.243	107	-3.319e-5	77	-3.124e-4	101	-2.245e-2	64
1430	N407	max	0.76	100	-0.196	68	0.741	71	3.55e-3	107	7.874e-3	71	7.593e-3	104
1431		min	-0.693	76	-1.629	13	-0.589	103	-6.984e-3	71	-8.194e-3	103	-8.348e-3	76
1432	N406	max	0.769	70	-0.238	66	0.703	71	1.208e-3	107	6.662e-2	103	7.476e-3	104
1433		min	-0.727	106	-1.82	15	-0.563	103	-4.552e-3	14	-6.742e-2	71	-9.83e-3	72
1434	N405	max	0.226	100	0.031	57	0.336	13	6.076e-3	13	1.81e-2	107	2.709e-3	76
1435		min	-0.21	76	-0.035	86	-0.07	107	6.969e-4	68	-2.012e-2	71	-2.961e-3	100
1436	N404	max	0.227	70	0.03	57	0.346	15	7.044e-3	15	1.937e-2	71	2.639e-3	106
1437		min	-0.211	106	-0.035	86	-0.07	107	9.713e-4	76	-1.78e-2	103	-2.841e-3	70
1438	N403	max	0.205	70	0.031	57	0.547	71	-6.836e-4	98	1.575e-2	103	2.589e-3	106
1439		min	-0.193	102	-0.035	86	-0.449	103	-6.33e-3	13	-1.713e-2	71	-2.802e-3	70
1440	N402	max	0.231	70	0.03	57	0.546	71	-1.005e-3	99	9.018e-3	71	2.73e-3	102
1441		min	-0.219	102	-0.035	86	-0.456	103	-6.501e-3	15	-7.302e-3	107	-2.879e-3	70
1442	N401	max	0.781	100	-0.194	68	0.358	71	5.719e-3	13	4.538e-3	70	6.405e-3	104
1443		min	-0.724	76	-1.633	13	-0.179	107	6.956e-4	68	-4.012e-3	106	-7.652e-3	72
1444	N400	max	0.772	70	-0.242	66	0.528	71	4.916e-3	15	5.307e-2	103	7.134e-3	104
1445		min	-0.74	106	-1.873	15	-0.321	107	4.457e-5	75	-5.228e-2	71	-9.798e-3	72
1446	N399	max	1.034	100	-0.253	68	0.663	71	4.631e-3	103	8.04e-3	71	8.162e-3	104
1447		min	-0.848	76	-2.284	13	-0.487	107	-4.65e-3	71	-7.985e-3	103	-1.001e-2	72
1448	N398	max	1.036	70	-0.302	66	0.636	71	2.225e-3	103	6.979e-2	103	8.043e-3	104
1449		min	-0.874	106	-2.552	15	-0.462	107	-2.14e-3	71	-6.976e-2	71	-1.135e-2	72
1450	N397	max	0.483	104	-0.108	68	0.161	71	1.232e-2	13	5.643e-3	104	1.671e-2	106
1451		min	-0.505	72	-0.875	13	-0.108	107	2.096e-3	68	-5.801e-3	76	-2.053e-2	70
1452	N396	max	0.526	74	-0.144	66	0.159	71	1.456e-2	15	5.412e-3	74	7.041e-2	15
1453		min	-0.55	102	-1.005	15	-0.113	107	2.254e-3	68	-5.785e-3	102	-5.161e-3	74
1454	N395	max	1.107	104	-0.26	68	0.318	71	4.092e-3	13	1.649e-3	70	3.687e-2	15
1455		min	-1.1	76	-2.096	13	-0.195	107	4.045e-4	68	-1.165e-3	106	-2.201e-2	104
1456	N394	max	1.104	74	-0.304	66	0.318	71	4.192e-3	15	1.756e-3	70	7.223e-2	15
1457		min	-1.104	106	-2.314	15	-0.2	107	3.723e-4	66	-1.21e-3	106	-1.985e-2	74
1458	N393	max	0.945	104	-0.214	68	0.566	71	-1.306e-3	98	3.835e-3	106	-1.736e-4	68
1459		min	-0.958	76	-1.619	13	-0.302	107	-8.834e-3	13	-4.092e-3	70	-7.479e-2	13
1460	N392	max	0.927	74	-0.257	66	0.571	71	-1.265e-3	96	3.514e-3	76	5.371e-3	106
1461		min	-0.955	106	-1.809	15	-0.306	107	-9.782e-3	15	-3.578e-3	104	-7.657e-2	13
1462	N391	max	0.917	104	-0.21	68	0.232	71	8.62e-3	13	3.932e-3	74	4.528e-2	15
1463		min	-0.926	76	-1.623	13	-0.155	107	1.32e-3	68	-3.894e-3	106	-2.916e-3	96
1464	N390	max	0.898	74	-0.261	66	0.231	71	9.23e-3	15	3.563e-3	74	9.336e-2	15
1465		min	-0.925	106	-1.86	15	-0.16	107	1.214e-3	66	-3.422e-3	106	-7.541e-3	74
1466	N389	max	1.208	104	-0.272	68	0.404	71	3.768e-4	107	7.181e-4	13	1.708e-2	76
1467		min	-1.175	76	-2.28	13	-0.233	107	-4.316e-4	71	-8.208e-5	76	-2.274e-2	13
1468	N388	max	1.198	74	-0.322	66	0.406	71	5.551e-4	103	6.746e-4	13	2.658e-2	15
1469		min	-1.173	106	-2.545	15	-0.238	107	-3.881e-4	75	-2.609e-4	105	-1.717e-2	74
1470	N383	max	0.251	70	0.041	57	0.497	71	-6.798e-4	98	1.539e-2	103	2.183e-3	106
1471		min	-0.236	102	-0.046	86	-0.489	103	-6.326e-3	13	-1.665e-2	71	-2.387e-3	70

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1472	N382	max	0.277	70	0.04	57	0.492	71	-9.898e-4	99	9.08e-3	71	2.272e-3	102
1473		min	-0.262	102	-0.046	86	-0.496	103	-6.496e-3	15	-7.488e-3	107	-2.378e-3	70
1474	N381	max	0.273	100	0.041	57	0.437	13	6.005e-3	13	1.771e-2	107	2.217e-3	76
1475		min	-0.253	76	-0.046	86	-0.036	107	7.281e-4	68	-1.958e-2	71	-2.448e-3	100
1476	N380	max	0.272	70	0.04	57	0.464	15	7.099e-3	16	1.886e-2	71	2.208e-3	106
1477		min	-0.252	106	-0.047	86	-0.031	107	7.232e-4	76	-1.747e-2	103	-2.362e-3	70
1478	N144	max	0.932	104	-0.279	68	1.377	71	2.239e-1	71	1.385e-3	76	1.35e-3	96
1479		min	-0.952	76	-1.765	13	-1.104	107	-2.32e-1	103	-1.421e-3	104	-3.372e-3	15
1480	N143	max	0.904	104	-0.285	68	1.065	71	2.398e-1	71	9.273e-4	70	1.43e-3	66
1481		min	-0.921	76	-1.795	13	-0.983	103	-2.32e-1	103	-8.457e-4	106	-4.164e-3	15
1482	N142	max	0.271	70	0.046	57	0.472	71	-6.798e-4	98	1.539e-2	103	2.183e-3	106
1483		min	-0.254	102	-0.051	86	-0.508	103	-6.326e-3	13	-1.665e-2	71	-2.387e-3	70
1484	N141	max	0.297	70	0.045	57	0.465	71	-9.9e-4	99	9.08e-3	71	2.272e-3	102
1485		min	-0.281	102	-0.051	86	-0.515	103	-6.496e-3	15	-7.488e-3	107	-2.378e-3	70
1486	N140	max	0.293	100	0.046	57	0.487	13	6.005e-3	13	1.771e-2	107	2.217e-3	76
1487		min	-0.271	76	-0.051	86	-0.018	107	7.281e-4	68	-1.958e-2	71	-2.448e-3	100
1488	N139	max	0.292	70	0.045	57	0.523	15	7.099e-3	16	1.886e-2	71	2.208e-3	106
1489		min	-0.271	106	-0.052	86	-0.011	107	7.232e-4	76	-1.747e-2	103	-2.362e-3	70
1490	H20	max	0	104	0	104	0	101	1.854e-7	101	0	105	5.805e-8	102
1491		min	0	42	0	26	0	43	-1.854e-7	43	0	43	0	44
1492	F8	max	0	70	0	106	0	71	5.911e-3	75	5.734e-2	71	5.652e-3	102
1493		min	0	102	0	13	0	103	-1.03e-2	103	-5.517e-2	73	-5.904e-3	70
1494	F7	max	0	100	0	104	0	71	5.712e-3	75	7.175e-2	73	5.404e-3	72
1495		min	0	72	0	15	0	103	-9.978e-3	103	-7.383e-2	71	-5.632e-3	100
1496	F6	max	0	74	0	76	0	75	9.488e-3	71	4.918e-3	71	4.815e-3	106
1497		min	0	102	0	13	0	103	-5.087e-3	107	-3.63e-3	103	-5.193e-3	70
1498	F5	max	0	100	0	74	0	71	9.313e-3	71	1.509e-2	107	4.55e-3	76
1499		min	0	72	0	15	0	107	-4.703e-3	107	-1.681e-2	71	-4.925e-3	100
1500	F4	max	0	70	0	106	0	71	6.019e-3	75	8.344e-2	71	4.76e-3	102
1501		min	0	102	0	13	0	103	-1.045e-2	103	-7.752e-2	77	-4.944e-3	70
1502	F3	max	0	100	0	104	0	71	5.864e-3	75	8.018e-2	77	4.521e-3	72
1503		min	0	72	0	15	0	103	-1.024e-2	103	-8.627e-2	71	-4.681e-3	100
1504	F2	max	0	70	0	106	0	75	9.355e-3	71	1.937e-2	71	4.751e-3	106
1505		min	0	102	0	13	0	103	-4.955e-3	107	-1.78e-2	103	-5.089e-3	70
1506	F1	max	0	100	0	74	0	71	9.331e-3	71	1.81e-2	107	4.478e-3	76
1507		min	0	72	0	15	0	107	-4.705e-3	107	-2.012e-2	71	-4.812e-3	100
1508	E08	max	0	100	0	107	0	105	-7.692e-7	105	0	102	1.854e-7	102
1509		min	0	42	0	41	0	43	-1.416e-6	26	0	40	-1.854e-7	40
1510	E06	max	0	104	0	104	0	101	1.854e-7	101	0	107	5.479e-8	102
1511		min	0	42	0	42	0	43	-1.854e-7	43	0	12	0	44
1512	D102	max	0	100	0	106	0	101	1.854e-7	101	0	103	-1.475e-8	106
1513		min	0	46	0	40	0	43	-1.854e-7	43	0	41	-8.339e-8	40
1514	D77	max	0	100	0	107	0	75	-5.501e-7	75	0	72	1.854e-7	102
1515		min	0	42	0	56	0	103	-1.205e-6	86	0	70	-1.854e-7	40
1516	D	max	0.057	70	0.006	57	0.097	71	8.298e-3	71	1.937e-2	71	4.585e-3	106
1517		min	-0.054	106	-0.007	86	-0.05	107	-3.852e-3	107	-1.78e-2	103	-4.924e-3	70
1518	C113	max	0	100	0	106	0	101	1.854e-7	101	0	103	-1.472e-8	106
1519		min	0	46	0	26	0	43	-1.854e-7	43	0	41	-8.334e-8	40
1520	C90	max	0	100	0	107	0	75	3.471e-7	76	4.222e-6	72	2.648e-6	102
1521		min	0	102	0	71	0	103	-9.124e-7	100	-4.222e-6	70	-2.648e-6	70
1522	C	max	0.052	100	0.006	57	0.096	71	8.247e-3	71	1.81e-2	107	4.404e-3	76
1523		min	-0.049	76	-0.007	86	-0.048	107	-3.684e-3	107	-2.012e-2	71	-4.734e-3	100
1524	B	max	0.058	70	0.006	57	0.67	71	-1.02e-3	96	7.688e-3	71	4.757e-3	102
1525		min	-0.055	102	-0.007	86	-0.378	107	-6.544e-3	15	-5.973e-3	107	-5.01e-3	70
1526	A83	max	0	100	0	107	0	101	1.854e-7	101	0	107	1.854e-7	102

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1527		min	0	42	0	26	0	43	-1.854e-7	43	0	12	-1.854e-7	40
1528	A82	max	0	100	0	107	0	101	1.854e-7	101	0	107	1.854e-7	102
1529		min	0	42	0	26	0	43	-1.854e-7	43	0	12	-1.854e-7	40
1530	A81	max	0	100	0	107	0	101	1.854e-7	101	0	107	1.854e-7	102
1531		min	0	42	0	26	0	43	-1.854e-7	43	0	12	-1.854e-7	40
1532	A80	max	0	100	0	107	0	101	1.465e-7	101	0	107	1.465e-7	102
1533		min	0	42	0	26	0	43	-1.465e-7	43	0	12	-1.465e-7	40
1534	A78	max	0	100	0	104	0	101	1.854e-7	101	0	103	-1.47e-8	106
1535		min	0	46	0	42	0	43	-1.854e-7	43	0	41	-8.33e-8	40
1536	A63	max	0	56	0	107	0	101	1.465e-7	101	0	107	4.45e-6	86
1537		min	0	86	0	26	0	43	-1.465e-7	43	0	12	-4.45e-6	56
1538	A59	max	0	100	0	107	0	71	6.453e-6	71	0	107	1.702e-6	102
1539		min	0	42	0	26	0	103	-6.453e-6	103	0	12	-1.702e-6	40
1540	A53	max	0	100	0	107	0	101	1.854e-7	101	0	107	1.854e-7	102
1541		min	0	42	0	26	0	43	-1.854e-7	43	0	12	-1.854e-7	40
1542	A52	max	0	100	0	107	0	101	1.465e-7	101	0	107	1.465e-7	102
1543		min	0	42	0	26	0	43	-1.465e-7	43	0	12	-1.465e-7	40
1544	A49	max	0	100	0	107	0	71	4.15e-6	71	0	107	3.285e-6	102
1545		min	0	42	0	26	0	103	-4.15e-6	103	0	12	-3.285e-6	40
1546	A46	max	0	70	0	76	0	75	3.475e-7	76	4.224e-6	72	2.648e-6	102
1547		min	0	72	0	100	0	103	-9.143e-7	100	-4.224e-6	70	-2.648e-6	70
1548	A	max	0.047	70	0.006	57	0.664	71	-6.941e-4	98	1.575e-2	103	4.03e-3	102
1549		min	-0.044	102	-0.007	86	-0.374	107	-6.373e-3	13	-1.713e-2	71	-4.269e-3	70
1550	521	max	0	104	0	106	0	101	1.854e-7	101	0	107	5.474e-8	102
1551		min	0	42	0	40	0	43	-1.854e-7	43	0	12	0	44
1552	470	max	0	100	0	105	0	105	-7.711e-7	105	0	102	1.854e-7	102
1553		min	0	42	0	26	0	43	-1.419e-6	26	0	40	-1.854e-7	40
1554	406	max	0	100	0	107	0	105	-7.693e-7	105	0	102	1.854e-7	102
1555		min	0	42	0	26	0	43	-1.416e-6	26	0	40	-1.854e-7	40
1556	403	max	0	104	0	104	0	101	1.854e-7	101	0	107	5.476e-8	102
1557		min	0	42	0	26	0	43	-1.854e-7	43	0	12	0	44
1558	400	max	0	104	0	104	0	101	1.854e-7	101	0	101	5.808e-8	102
1559		min	0	42	0	42	0	43	-1.854e-7	43	0	43	0	44
1560	389	max	0	100	0	107	0	105	-5.963e-7	105	0	100	1.854e-7	102
1561		min	0	42	0	41	0	43	-1.506e-6	43	0	42	-1.854e-7	40
1562	348	max	0	100	0	107	0	105	-5.964e-7	105	0	100	1.854e-7	102
1563		min	0	42	0	26	0	43	-1.506e-6	43	0	42	-1.854e-7	40
1564	212	max	0	76	0	107	0	75	3.471e-7	76	4.222e-6	72	2.648e-6	102
1565		min	0	74	0	71	0	103	-9.123e-7	100	-4.222e-6	70	-2.648e-6	70
1566	113	max	0	100	0	107	0	75	-5.502e-7	75	0	72	1.854e-7	102
1567		min	0	42	0	56	0	103	-1.205e-6	86	0	70	-1.854e-7	40
1568	42	max	0	100	0	107	0	101	1.465e-7	101	0	107	1.465e-7	102
1569		min	0	42	0	26	0	43	-1.465e-7	43	0	12	-1.465e-7	40
1570	21	max	0	70	0	75	0	75	-5.516e-7	75	0	72	1.854e-7	102
1571		min	0	42	0	86	0	103	-1.208e-6	86	0	70	-1.854e-7	40
1572	N856	max	0.017	70	0.003	74	0.101	101	1.045e-3	101	8.908e-4	101	1.391e-4	70
1573		min	-0.016	106	-0.004	102	-0.101	103	-9.225e-4	77	-8.909e-4	103	-1.344e-4	106
1574	N1158	max	0.017	70	0.003	74	0.101	101	9.225e-4	75	8.909e-4	101	1.391e-4	70
1575		min	-0.016	106	-0.004	102	-0.101	103	-1.045e-3	103	-8.908e-4	103	-1.344e-4	106
1576	N1159	max	0.017	70	0.009	106	0.12	101	1.525e-3	101	3.754e-4	99	5.56e-5	74
1577		min	-0.016	106	-0.01	70	-0.119	103	-1.467e-3	77	-3.757e-4	97	-5.62e-5	102
1578	N1160	max	0.017	70	0.009	106	0.119	101	1.467e-3	75	3.757e-4	99	5.56e-5	74
1579		min	-0.016	106	-0.01	70	-0.12	103	-1.525e-3	103	-3.754e-4	97	-5.62e-5	102

X-Direction Story Drift - Service

No Data to Print...

Envelope X-Direction Story Drift - Service

No Data to Print...

X-Direction Story Drift - Strength

No Data to Print...

Envelope X-Direction Story Drift - Strength

No Data to Print...

Z-Direction Story Drift - Service

No Data to Print...

Envelope Z-Direction Story Drift - Service

No Data to Print...

Z-Direction Story Drift - Strength

No Data to Print...

Envelope Z-Direction Story Drift - Strength

No Data to Print...

Member Section Forces

No Data to Print...

Envelope Member Section Forces

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
0	M273	1	max	21.471	15	4.699	100	0.135	15	0	107	0	107	0	107
1			min	-4.06	74	-4.666	72	-0.007	74	0	12	0	12	0	12
2		2	max	21.17	15	4.634	100	0.188	107	0	107	0.149	103	7.356	72
3			min	-4.142	74	-4.538	72	-0.201	71	0	12	-0.128	75	-7.451	100
4		3	max	20.957	15	4.573	100	0.127	107	0	107	0.397	103	14.54	72
5			min	-4.184	74	-4.477	72	-0.14	71	0	12	-0.392	75	-14.788	100
6		4	max	20.028	15	3.95	70	0.371	71	0.101	77	0.338	103	7.982	72
7			min	1.025	66	-4.548	102	-0.371	103	-0.133	71	-0.342	71	-8.225	100
8		5	max	0	107	0	70	0	13	0	107	0	107	0	107
9			min	0	12	0	102	0	98	0	12	0	12	0	12
10	M313	1	max	26.491	13	11.615	102	0.003	106	0	107	0	107	0	107
11			min	-2.973	106	-11.499	70	-0.173	13	0	12	0	12	0	12
12		2	max	25.883	13	3.792	102	0.387	71	0	107	0.264	75	13.066	70
13			min	-3.257	106	-4.153	70	-0.388	103	0	12	-0.286	103	-12.91	102
14		3	max	25.131	13	3.563	102	0.159	71	0.206	73	0.663	75	19.693	70
15			min	-3.412	106	-3.91	70	-0.16	107	-0.206	105	-0.692	103	-18.504	102
16		4	max	22.839	13	3.499	76	0.574	103	0.08	103	0.487	75	9.502	70
17			min	1.037	98	-4.485	100	-0.555	75	-0.107	101	-0.507	103	-8.81	102
18		5	max	0	107	0	102	0	106	0	107	0	107	0	107
19			min	0	12	0	70	0	15	0	12	0	12	0	12
20	M314	1	max	27.583	13	12.036	102	16.374	75	0	107	0	107	0	107
21			min	-3.438	106	-11.916	70	-17.296	103	0	12	0	12	0	12
22		2	max	26.965	13	3.058	106	2.927	103	0	107	12.334	75	13.138	70
23			min	-3.631	106	-3.738	70	-2.775	75	0	12	-13.011	103	-12.733	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
24		3	max	26.752	13	3	106	3.015	103	0	107	7.849	75	19.033	70
25			min	-3.673	106	-3.662	70	-2.85	75	0	12	-8.27	103	-17.528	106
26		4	max	24.743	13	3.722	76	3.527	103	0.14	71	3.026	75	8.947	70
27			min	1.303	98	-4.882	100	-3.35	75	-0.106	77	-3.179	103	-8.233	102
28		5	max	0	107	0	102	0	16	0	107	0	107	0	107
29			min	0	12	0	70	0	76	0	12	0	12	0	12
30	M336	1	max	19.994	15	5.627	100	15.734	107	0	107	0	107	0	107
31			min	-4.81	74	-5.401	72	-16.716	71	0	12	0	12	0	12
32		2	max	19.723	15	5.501	100	2.831	71	0	107	11.856	107	8.57	72
33			min	-4.761	74	-5.338	72	-2.652	107	0	12	-12.587	71	-8.888	100
34		3	max	19.511	15	5.44	100	2.892	71	0	107	7.581	107	17.03	72
35			min	-4.803	74	-5.278	72	-2.713	107	0	12	-8.026	71	-17.607	100
36		4	max	18.992	15	4.376	70	3.459	71	0.117	77	2.955	107	9.331	72
37			min	0.529	74	-4.802	102	-3.27	107	-0.148	71	-3.116	71	-9.736	100
38		5	max	0	107	0	100	0	68	0	107	0	107	0	107
39			min	0	12	0	72	0	13	0	12	0	12	0	12
40	M337	1	max	0.881	72	0.019	105	-0.013	105	0	106	0.152	72	0.07	104
41			min	-0.405	104	-0.019	73	-0.16	14	0	70	-0.07	104	-0.152	72
42		2	max	0.89	72	0.009	105	-0.007	105	0	106	0.139	72	0.063	104
43			min	-0.415	104	-0.009	73	-0.08	14	0	70	-0.08	104	-0.216	15
44		3	max	0.9	72	0.002	106	0	102	0	106	0.135	72	0.061	104
45			min	-0.424	104	-0.002	74	0	100	0	70	-0.085	104	-0.252	15
46		4	max	0.909	72	0.009	107	0.08	13	0	106	0.142	72	0.066	104
47			min	-0.434	104	-0.009	71	0.007	44	0	70	-0.083	104	-0.216	15
48		5	max	0.918	72	0.019	107	0.16	13	0	106	0.158	72	0.076	104
49			min	-0.443	104	-0.019	71	0.013	44	0	70	-0.076	104	-0.158	72
50	M340	1	max	20.514	103	0.312	71	0.127	102	0.001	104	0	107	1.682	75
51			min	-18.688	75	-0.316	103	-0.098	74	-0.071	15	0	12	-1.846	103
52		2	max	2.147	106	0.142	103	0.036	104	0.019	13	0.995	102	1.506	16
53			min	-52.369	13	0.011	68	-0.066	102	-0.009	76	-0.791	104	0.234	68
54		3	max	2.891	106	0.056	70	0.027	68	0.061	13	0.376	106	0.485	15
55			min	-64.58	13	-0.232	13	-0.064	71	0.006	107	-0.634	70	-0.04	66
56		4	max	5.425	106	-0.009	98	0.101	72	0.031	15	1.154	72	1.407	14
57			min	-53.908	13	-0.13	71	-0.062	104	-0.008	104	-0.961	104	0.209	98
58		5	max	10.276	102	0.204	106	0.106	70	0.003	76	0	107	0.887	74
59			min	-9.857	74	-0.214	70	-0.097	106	-0.064	13	0	12	-0.925	102
60	M342	1	max	18.3	107	0.326	71	0.048	64	0.016	70	0	107	1.751	71
61			min	-19.454	71	-0.291	107	-0.043	96	-0.013	106	0	12	-1.647	107
62		2	max	-0.122	104	0.135	102	0.135	70	0.019	70	1.35	102	1.112	15
63			min	-51.513	15	-0.02	74	-0.131	106	-0.015	106	-1.221	74	0.121	74
64		3	max	3.427	104	0.087	72	0.047	71	0.056	13	0.425	106	0.447	100
65			min	-61.102	15	-0.29	15	-0.051	64	0.005	107	-0.771	70	-0.117	76
66		4	max	4.627	104	0.008	96	0.125	106	0.015	106	1.317	106	1.234	15
67			min	-50.246	15	-0.132	72	-0.145	70	-0.018	70	-1.377	70	0.126	104
68		5	max	0.241	107	0.091	17	0.028	96	0.014	106	0	107	0.026	71
69			min	-0.287	71	-0.053	72	-0.099	15	-0.015	70	0	12	-0.022	107
70	M343	1	max	1.406	104	0.027	72	-0.024	76	0.028	15	0.242	104	0.338	72
71			min	-1.965	72	-0.027	104	-0.289	13	0	74	-0.338	72	-0.242	104
72		2	max	1.415	104	0.013	72	-0.012	76	0.028	15	0.181	104	0.258	72
73			min	-1.975	72	-0.013	104	-0.144	13	0	74	-0.568	15	-0.238	104
74		3	max	1.424	104	0.002	73	0	99	0.028	15	0.162	104	0.239	76
75			min	-1.984	72	-0.002	105	0	100	0	74	-0.683	15	-0.258	17
76		4	max	1.434	104	0.015	70	0.144	15	0.028	15	0.185	104	0.262	72
77			min	-1.994	72	-0.015	102	0.012	104	0	74	-0.568	15	-0.241	104
78		5	max	1.443	104	0.029	70	0.289	15	0.028	15	0.248	104	0.345	72

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
79			min	-2.003	72	-0.029	102	0.024	104	0	74	-0.345	72	-0.248	104
80	M346	1	max	2.806	104	0.027	72	-0.024	76	0.017	13	0.483	104	0.543	72
81			min	-3.158	72	-0.027	104	-0.289	13	-0.002	76	-0.543	72	-0.483	104
82		2	max	2.815	104	0.013	72	-0.012	76	0.017	13	0.422	104	0.479	76
83			min	-3.168	72	-0.013	104	-0.144	13	-0.002	76	-0.559	72	-0.479	104
84		3	max	2.825	104	0.002	73	0	99	0.017	13	0.403	104	0.46	76
85			min	-3.177	72	-0.002	105	0	100	-0.002	76	-0.64	15	-0.479	104
86		4	max	2.834	104	0.015	70	0.144	15	0.017	13	0.426	104	0.482	76
87			min	-3.186	72	-0.015	106	0.012	104	-0.002	76	-0.562	72	-0.482	104
88		5	max	2.844	104	0.029	70	0.289	15	0.017	13	0.489	104	0.55	72
89			min	-3.196	72	-0.029	106	0.024	104	-0.002	76	-0.55	72	-0.489	104
90	M347	1	max	12.268	104	0.038	72	-0.035	77	0.017	15	2.638	104	2.763	72
91			min	-12.845	72	-0.038	100	-0.318	13	-0.004	74	-2.763	72	-2.638	104
92		2	max	12.283	104	0.018	72	-0.017	77	0.017	15	2.558	104	2.676	76
93			min	-12.86	72	-0.018	100	-0.159	13	-0.004	74	-2.786	72	-2.636	104
94		3	max	12.298	104	0.003	73	0	99	0.017	15	2.533	104	2.652	76
95			min	-12.875	72	-0.003	101	0	101	-0.004	74	-2.796	72	-2.637	104
96		4	max	12.313	104	0.022	70	0.159	15	0.017	15	2.564	104	2.683	76
97			min	-12.89	72	-0.022	102	0.017	105	-0.004	74	-2.793	72	-2.642	104
98		5	max	12.328	104	0.043	70	0.318	15	0.017	15	2.651	104	2.776	72
99			min	-12.905	72	-0.043	102	0.035	105	-0.004	74	-2.776	72	-2.651	104
100	M349	1	max	31.726	15	-0.037	96	0.048	74	0.005	68	0	107	-0.404	99
101			min	4.488	99	-0.433	15	-0.067	102	-0.015	13	0	12	-2.855	15
102		2	max	66.778	15	0.032	66	0.028	74	0.006	68	0.193	104	-0.066	96
103			min	1.555	96	-0.111	102	-0.044	102	-0.007	92	-0.231	72	-1.174	15
104		3	max	72.296	15	0.227	13	0.1	71	0.024	15	1.173	13	0.019	66
105			min	0.698	96	-0.034	71	-0.178	15	-0.007	103	-0.161	106	-0.527	15
106		4	max	65.485	15	0.098	102	0.046	102	0.009	100	0.193	104	-0.021	96
107			min	1.37	96	-0.058	17	-0.028	74	-0.005	68	-0.226	72	-0.929	15
108		5	max	29.933	15	0.412	15	0.067	102	0.007	92	0	107	-0.416	66
109			min	4.62	66	0.036	96	-0.044	74	-0.007	68	0	12	-2.694	15
110	M350	1	max	28.031	13	0.051	106	0.062	74	0.01	98	0	107	0.166	106
111			min	-1.848	106	-0.383	70	-0.074	102	-0.01	62	0	12	-2.523	13
112		2	max	61.048	13	0.08	19	0.044	70	0.013	15	0.125	104	-0.082	98
113			min	-2.004	106	-0.057	100	-0.044	102	-0.004	104	-0.217	72	-0.824	13
114		3	max	65.686	13	0.251	15	0.181	14	0.021	15	1.175	13	0.029	68
115			min	-2.679	106	-0.249	14	-0.18	15	-0.006	73	-0.167	106	-0.324	100
116		4	max	60.782	13	0.063	70	0.04	72	0.006	74	0.147	74	-0.077	98
117			min	-1.577	106	-0.078	19	-0.04	100	-0.006	106	-0.241	102	-0.827	13
118		5	max	27.334	13	0.365	70	0.072	72	0.008	66	0	107	0.038	106
119			min	-0.423	106	-0.038	106	-0.055	104	-0.021	15	0	12	-2.46	13
120	M351	1	max	0.393	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
121			min	-0.536	72	-0.729	103	-1.214	15	-0.062	103	-0.253	103	-0.265	71
122		2	max	0.385	104	0.728	71	-0.31	67	0.062	71	0.259	75	0.264	107
123			min	-0.527	72	-0.72	103	-1.141	15	-0.062	103	-1.444	103	-1.463	71
124		3	max	0.289	98	0.129	71	-0.047	96	0.009	71	0.369	75	0.371	107
125			min	-0.397	62	-0.129	103	-0.152	15	-0.009	103	-2.051	103	-2.074	71
126		4	max	0.992	106	0.814	103	1.252	15	0.075	103	0.293	75	0.297	107
127			min	-1.132	70	-0.822	71	0.345	67	-0.076	71	-1.631	103	-1.651	71
128		5	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
129			min	-1.14	70	-0.831	71	0.352	67	-0.076	71	-0.287	103	-0.299	71
130	M352	1	max	1.194	100	0.703	71	-0.302	67	0.062	71	0.043	75	0.044	107
131			min	-1.194	72	-0.702	103	-1.176	13	-0.061	103	-0.255	103	-0.256	71
132		2	max	1.186	100	0.694	71	-0.295	67	0.062	71	0.239	75	0.24	107
133			min	-1.186	72	-0.693	103	-1.103	13	-0.061	103	-1.408	103	-1.409	71

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
134		3	max	0.658	100	0.123	71	-0.044	96	0.011	71	0.34	75	0.34	107
135			min	-0.665	72	-0.122	103	-0.147	15	-0.011	103	-1.996	103	-1.997	71
136		4	max	0.184	106	0.783	103	1.21	16	0.07	103	0.27	75	0.27	107
137			min	-0.187	74	-0.783	71	0.328	67	-0.069	71	-1.588	103	-1.589	71
138		5	max	0.192	106	0.791	103	1.283	16	0.07	103	0.049	75	0.049	107
139			min	-0.196	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
140	M353	1	max	2.429	57	6.42	70	0.506	71	0.108	71	0.142	77	12.748	70
141			min	-3.122	100	-5.31	106	-0.442	77	-0.089	47	-0.146	75	-11.316	106
142		2	max	2.429	57	6.399	70	0.488	71	0.108	71	0.375	71	6.035	70
143			min	-3.14	100	-5.323	106	-0.423	77	-0.089	47	-0.314	107	-5.83	102
144		3	max	2.394	72	6.037	70	0.108	75	0.018	71	0.635	71	-0.001	68
145			min	-3.132	100	-5.555	102	-0.117	103	-0.018	107	-0.555	107	-0.464	100
146		4	max	2.128	76	5.485	74	0.391	107	0.104	103	0.533	71	5.449	106
147			min	-2.824	100	-6.125	102	-0.45	71	-0.116	71	-0.481	107	-6.057	70
148		5	max	2.146	76	5.473	74	0.409	107	0.104	103	0.064	101	11.836	102
149			min	-2.842	100	-6.146	102	-0.468	71	-0.116	71	-0.063	103	-11.773	70
150	M354	1	max	1.879	72	6.282	70	0.467	71	0.103	75	0.06	101	12.57	70
151			min	-2.519	100	-5.132	106	-0.4	77	-0.094	73	-0.061	103	-11.05	106
152		2	max	1.897	72	6.26	70	0.449	71	0.103	75	0.524	71	6.003	70
153			min	-2.537	100	-5.145	106	-0.382	77	-0.094	73	-0.461	77	-5.669	106
154		3	max	2.212	72	5.898	70	0.071	71	0.015	75	0.744	71	0.04	68
155			min	-2.855	100	-5.359	106	-0.066	107	-0.021	103	-0.648	77	-0.519	100
156		4	max	2.708	72	5.386	74	0.431	77	0.1	77	0.597	71	5.642	76
157			min	-3.347	100	-5.853	102	-0.505	71	-0.124	71	-0.526	107	-6.326	100
158		5	max	2.726	72	5.374	74	0.449	77	0.1	77	0.072	101	11.659	72
159			min	-3.365	100	-5.874	102	-0.523	71	-0.124	71	-0.069	103	-11.869	100
160	M355	1	max	0.68	15	0.714	71	-0.302	67	0.06	71	0.029	75	0.047	107
161			min	-0.35	76	-0.702	103	-1.182	15	-0.059	103	-0.256	103	-0.278	71
162		2	max	0.68	15	0.706	71	-0.295	67	0.06	71	0.233	75	0.241	107
163			min	-0.341	76	-0.694	103	-1.109	15	-0.059	103	-1.409	103	-1.441	71
164		3	max	0.671	15	0.123	71	-0.044	96	0.009	71	0.337	75	0.341	107
165			min	-0.186	66	-0.123	103	-0.148	15	-0.009	107	-1.997	103	-2.033	71
166		4	max	1.133	102	0.783	103	1.216	15	0.072	103	0.264	75	0.272	107
167			min	-0.876	74	-0.795	71	0.328	96	-0.073	71	-1.589	103	-1.621	71
168		5	max	1.141	102	0.792	103	1.289	15	0.072	103	0.035	75	0.053	107
169			min	-0.885	74	-0.803	71	0.335	96	-0.073	71	-0.289	103	-0.31	71
170	M356	1	max	1.92	70	1.879	15	0.54	75	0.124	77	0	107	0.479	70
171			min	-1.933	102	0.423	97	-0.54	77	-0.124	101	0	12	-0.482	102
172		2	max	1.649	70	0.94	15	0.27	75	0.062	77	0.599	75	-0.181	66
173			min	-1.662	102	0.212	97	-0.27	77	-0.062	101	-0.599	77	-2.131	15
174		3	max	1.379	70	0.004	74	0	104	0	76	0.799	75	-0.395	66
175			min	-1.392	102	-0.004	76	0	71	0	16	-0.799	77	-2.817	15
176		4	max	1.109	70	-0.212	97	0.27	77	0.062	75	0.599	75	-0.294	66
177			min	-1.122	102	-0.94	15	-0.27	75	-0.062	103	-0.599	77	-2.122	15
178		5	max	0.839	70	-0.423	97	0.54	77	0.124	75	0	107	0.209	70
179			min	-0.852	102	-1.88	15	-0.54	75	-0.124	103	0	12	-0.213	102
180	M357	1	max	3.756	70	1.82	13	0.514	71	0.118	77	0	107	0.938	70
181			min	-3.375	106	0.404	98	-0.514	73	-0.118	71	0	12	-0.842	106
182		2	max	3.499	70	0.91	13	0.257	71	0.059	77	0.57	71	0.125	74
183			min	-3.117	106	0.202	99	-0.257	73	-0.059	71	-0.57	73	-1.971	102
184		3	max	3.241	70	0.004	74	0	102	0.001	66	0.761	71	-0.095	66
185			min	-2.86	106	-0.004	76	0	70	-0.002	102	-0.76	73	-2.503	15
186		4	max	2.984	70	-0.202	98	0.257	73	0.058	75	0.57	71	-0.002	66
187			min	-2.602	106	-0.91	13	-0.257	71	-0.059	73	-0.57	73	-1.843	102
188		5	max	2.726	70	-0.404	99	0.514	73	0.117	75	0	107	0.68	70

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
189			min	-2.345	106	-1.82	15	-0.514	71	-0.118	73	0	12	-0.585	106
190	M358	1	max	4.324	100	5.109	70	0.362	101	0.072	103	0.09	71	9.88	70
191			min	-3.34	76	-3.809	106	-0.364	103	-0.068	101	-0.066	107	-8.671	106
192		2	max	4.17	100	4.798	70	0.192	101	0.034	103	0.377	71	4.638	70
193			min	-3.184	76	-3.993	106	-0.191	103	-0.032	105	-0.368	103	-4.663	102
194		3	max	4.015	100	4.484	70	0.036	101	0.008	64	0.498	71	-0.066	66
195			min	-3.029	76	-4.208	102	-0.036	103	-0.006	96	-0.49	103	-0.573	15
196		4	max	3.86	100	4.17	70	0.12	73	0.038	71	0.451	71	4.259	106
197			min	-2.874	76	-4.522	102	-0.119	75	-0.035	107	-0.444	103	-4.822	70
198		5	max	3.704	100	3.968	74	0.298	103	0.076	101	0.239	71	9.176	102
199			min	-2.719	76	-4.837	102	-0.295	101	-0.074	103	-0.214	107	-9.036	70
200	M359	1	max	4.708	100	5.068	70	0.338	101	0.069	107	0.258	71	9.801	70
201			min	-3.572	76	-3.732	106	-0.339	103	-0.077	101	-0.229	107	-8.512	106
202		2	max	4.554	100	4.757	70	0.157	105	0.031	107	0.51	71	4.602	70
203			min	-3.416	76	-3.916	106	-0.158	103	-0.037	101	-0.5	103	-4.514	102
204		3	max	4.399	100	4.444	70	0.002	76	0.014	76	0.596	71	-0.061	66
205			min	-3.261	76	-4.102	106	-0.003	100	-0.02	100	-0.588	103	-0.564	15
206		4	max	4.243	100	4.141	74	0.153	107	0.033	105	0.514	71	4.245	76
207			min	-3.106	76	-4.378	102	-0.154	101	-0.04	103	-0.506	103	-4.85	100
208		5	max	4.087	100	3.952	74	0.334	103	0.072	105	0.266	71	8.934	72
209			min	-2.951	76	-4.693	102	-0.335	101	-0.08	103	-0.239	103	-8.996	100
210	M360	1	max	3.494	100	1.819	13	0.514	105	0.118	103	0	107	0.872	100
211			min	-3.575	72	0.403	68	-0.514	107	-0.117	75	0	12	-0.892	72
212		2	max	3.237	100	0.909	13	0.257	105	0.059	103	0.57	105	0.111	96
213			min	-3.318	72	0.202	68	-0.257	107	-0.058	75	-0.57	107	-2.147	15
214		3	max	2.979	100	0.004	104	0	100	0.002	102	0.76	105	-0.095	96
215			min	-3.06	72	-0.004	106	0	72	-0.002	66	-0.76	107	-2.81	15
216		4	max	2.722	100	-0.202	68	0.257	107	0.059	101	0.57	105	-0.002	96
217			min	-2.802	72	-0.909	13	-0.257	105	-0.059	77	-0.57	107	-2.138	15
218		5	max	2.464	100	-0.404	68	0.514	107	0.118	101	0	107	0.615	100
219			min	-2.545	72	-1.819	13	-0.514	105	-0.117	77	0	12	-0.635	72
220	M361	1	max	13.795	15	0.684	72	0.66	71	0.478	71	0.109	71	-0.069	96
221			min	1.838	96	-0.441	104	-0.645	103	-0.475	103	-0.106	103	-1.021	15
222		2	max	13.714	15	0.672	72	0.649	71	0.478	71	0.842	71	0.383	104
223			min	1.829	96	-0.429	104	-0.633	103	-0.475	103	-0.821	103	-1.435	15
224		3	max	12.617	15	0.327	15	0.233	75	0.026	71	1.127	71	0.794	104
225			min	1.765	96	-0.087	96	-0.233	103	-0.025	107	-1.107	103	-1.126	72
226		4	max	10.721	15	0.988	13	0.681	103	0.226	103	1.114	71	0.801	104
227			min	1.403	96	-0.309	76	-0.682	71	-0.225	71	-1.097	103	-0.961	72
228		5	max	9.993	15	1.011	13	0.911	103	0.43	103	0.154	71	0.035	104
229			min	1.294	107	-0.513	76	-0.928	71	-0.43	71	-0.151	103	-0.537	15
230	M362	1	max	11.15	13	0.283	74	0.269	103	0.017	103	0.042	103	-0.086	98
231			min	1.553	107	-0.355	102	-0.28	71	-0.017	71	-0.044	71	-0.746	13
232		2	max	11.069	13	0.271	74	0.257	103	0.017	103	0.336	103	0.281	106
233			min	1.545	107	-0.344	102	-0.268	71	-0.017	71	-0.351	71	-0.662	70
234		3	max	10.989	13	0.26	74	0.246	103	0.017	103	0.618	103	0.637	106
235			min	1.537	107	-0.332	102	-0.257	71	-0.017	71	-0.644	71	-0.941	70
236		4	max	9.636	13	0.822	102	0.64	71	0.045	71	0.796	103	0.898	106
237			min	1.024	107	-0.648	74	-0.613	103	-0.042	103	-0.831	71	-1.056	70
238		5	max	9.555	13	0.833	102	0.652	71	0.045	71	0.103	103	0.026	106
239			min	1.016	107	-0.66	74	-0.625	103	-0.042	103	-0.108	71	-0.595	13
240	M363	1	max	4.287	13	0.355	70	0.273	103	0.017	103	0.043	103	-0.032	98
241			min	0.89	98	-0.313	106	-0.273	71	-0.016	71	-0.043	71	-0.303	13
242		2	max	4.207	13	0.344	70	0.262	103	0.017	103	0.342	103	0.304	106
243			min	0.881	98	-0.302	106	-0.262	71	-0.016	71	-0.342	71	-0.603	70

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
244		3	max	4.126	13	0.332	70	0.25	103	0.017	103	0.628	103	0.635	106
245			min	0.871	98	-0.29	106	-0.25	71	-0.016	71	-0.629	71	-0.981	70
246		4	max	2.728	13	0.72	106	0.625	71	0.044	71	0.81	103	0.881	106
247			min	0.512	99	-0.828	70	-0.624	103	-0.043	103	-0.811	71	-1.161	70
248		5	max	2.648	13	0.731	106	0.636	71	0.044	71	0.105	103	0.069	106
249			min	0.503	99	-0.839	70	-0.636	103	-0.043	103	-0.105	71	-0.229	70
250	M364	1	max	10.202	16	0.257	103	0.082	102	0.001	98	0.011	102	-0.059	75
251			min	1.422	75	-0.256	71	-0.084	70	-0.002	62	-0.011	70	-0.709	16
252		2	max	10.121	16	0.246	103	0.071	102	0.001	98	0.097	102	0.217	75
253			min	1.414	75	-0.245	71	-0.073	70	-0.002	62	-0.099	70	-0.714	16
254		3	max	10.041	16	0.234	103	0.059	102	0.001	98	0.17	102	0.481	75
255			min	1.406	75	-0.233	71	-0.061	70	-0.002	62	-0.174	70	-0.933	103
256		4	max	8.686	16	0.577	71	0.16	70	0.013	74	0.207	102	0.68	75
257			min	0.896	75	-0.586	103	-0.156	102	-0.014	102	-0.213	70	-1.041	103
258		5	max	8.605	16	0.589	71	0.172	70	0.013	74	0.027	102	0.034	75
259			min	0.888	75	-0.598	103	-0.167	102	-0.014	102	-0.028	70	-0.602	16
260	M365	1	max	7.149	15	0.773	72	0.657	71	0.499	71	0.109	71	-0.02	96
261			min	1.067	99	-0.41	104	-0.657	103	-0.499	103	-0.108	103	-0.593	15
262		2	max	7.069	15	0.762	72	0.646	71	0.499	71	0.838	71	0.397	104
263			min	1.058	99	-0.398	104	-0.645	103	-0.499	103	-0.837	103	-1.241	15
264		3	max	5.92	15	0.554	15	0.242	75	0.025	71	1.134	71	0.772	104
265			min	0.989	99	-0.047	96	-0.242	107	-0.025	107	-1.133	103	-1.112	72
266		4	max	3.967	15	0.631	100	0.708	103	0.236	103	1.125	71	0.741	104
267			min	0.61	99	-0.411	76	-0.708	71	-0.236	71	-1.124	103	-0.997	72
268		5	max	3.218	15	0.841	100	0.931	103	0.447	103	0.155	71	0.077	104
269			min	0.548	99	-0.62	76	-0.931	71	-0.446	71	-0.154	103	-0.189	72
270	M366	1	max	14.065	15	0.817	72	0.55	71	0.366	71	0.091	71	-0.083	66
271			min	1.985	67	-0.573	104	-0.565	103	-0.368	103	-0.093	103	-1.053	15
272		2	max	13.985	15	0.806	72	0.539	71	0.366	71	0.7	71	0.502	104
273			min	1.976	67	-0.561	104	-0.553	103	-0.368	103	-0.718	103	-1.561	15
274		3	max	13.108	15	0.521	72	0.227	71	0.023	75	0.975	71	1.072	104
275			min	1.922	67	-0.285	104	-0.227	103	-0.024	103	-0.994	103	-1.597	72
276		4	max	11.353	15	1.13	100	0.643	103	0.18	103	1.003	71	1.25	104
277			min	1.469	75	-0.899	76	-0.642	71	-0.181	71	-1.018	103	-1.666	72
278		5	max	10.764	15	1.291	100	0.843	103	0.337	103	0.137	71	0.035	104
279			min	1.361	75	-1.059	76	-0.827	71	-0.337	71	-0.14	103	-0.688	15
280	M367	1	max	20.307	15	0.036	68	0.019	105	0.003	72	0	107	-0.142	96
281			min	3.064	96	-0.037	92	-0.019	73	-0.003	104	0	71	-0.944	15
282		2	max	20.228	15	0.018	68	0.01	105	0.003	72	0.016	105	-0.112	96
283			min	3.056	96	-0.018	92	-0.01	73	-0.003	104	-0.016	73	-0.943	15
284		3	max	20.15	15	0	74	0	107	0.003	72	0.022	105	-0.101	96
285			min	3.048	96	-0.003	15	0	71	-0.003	104	-0.022	73	-0.94	15
286		4	max	20.071	15	0.018	66	0.01	107	0.003	72	0.016	105	-0.111	96
287			min	3.041	96	-0.018	94	-0.01	71	-0.003	104	-0.016	73	-0.936	15
288		5	max	19.992	15	0.036	66	0.019	107	0.003	72	0	107	-0.141	96
289			min	3.033	96	-0.037	94	-0.019	71	-0.003	104	0	71	-0.93	15
290	M368	1	max	17.669	13	0.036	66	0.019	73	0.003	76	0	71	-0.133	98
291			min	2.857	98	-0.037	94	-0.019	105	-0.003	104	0	107	-0.821	13
292		2	max	17.591	13	0.018	66	0.01	73	0.003	76	0.016	73	-0.102	98
293			min	2.849	98	-0.018	94	-0.01	105	-0.003	104	-0.016	105	-0.82	13
294		3	max	17.512	13	0	76	0	71	0.003	76	0.022	73	-0.092	98
295			min	2.841	98	-0.003	13	0	107	-0.003	104	-0.022	105	-0.817	13
296		4	max	17.434	13	0.018	68	0.01	71	0.003	76	0.016	73	-0.101	98
297			min	2.834	98	-0.018	92	-0.01	107	-0.003	104	-0.016	105	-0.813	13
298		5	max	17.355	13	0.036	68	0.019	71	0.003	76	0	71	-0.131	98

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
299			min	2.826	98	-0.037	92	-0.019	107	-0.003	104	0	107	-0.808	13
300	M369	1	max	16.882	13	0.036	66	0.019	73	0.003	104	0	71	-0.137	67
301			min	2.939	67	-0.037	94	-0.019	105	-0.003	72	0	107	-0.784	13
302		2	max	16.803	13	0.018	66	0.01	73	0.003	104	0.016	73	-0.11	68
303			min	2.931	67	-0.018	94	-0.01	105	-0.003	72	-0.016	105	-0.783	13
304		3	max	16.725	13	0	76	0	71	0.003	104	0.022	73	-0.099	68
305			min	2.923	67	-0.003	13	0	107	-0.003	72	-0.022	105	-0.781	13
306		4	max	16.646	13	0.018	68	0.01	71	0.003	104	0.016	73	-0.109	68
307			min	2.916	67	-0.018	92	-0.01	107	-0.003	72	-0.016	105	-0.777	13
308		5	max	16.567	13	0.036	68	0.019	71	0.003	104	0	71	-0.135	67
309			min	2.908	67	-0.037	92	-0.019	107	-0.003	72	0	107	-0.771	13
310	M370	1	max	21.924	15	0.489	15	0.236	101	0.221	101	0.038	101	-0.133	66
311			min	3.311	68	-0.179	66	-0.242	103	-0.223	73	-0.04	103	-1.101	15
312		2	max	21.845	15	0.487	15	0.226	101	0.221	101	0.297	101	0.057	66
313			min	3.304	68	-0.161	66	-0.233	103	-0.223	73	-0.305	103	-1.647	15
314		3	max	21.227	15	0.311	15	0.015	75	0.006	105	0.327	101	0.141	66
315			min	3.261	68	-0.027	66	-0.014	77	-0.007	73	-0.335	103	-1.329	15
316		4	max	20.801	15	0.183	13	0.096	103	0.09	107	0.243	101	0.079	66
317			min	3.225	68	-0.074	98	-0.095	101	-0.091	71	-0.25	103	-1.194	15
318		5	max	20.373	15	0.296	62	0.229	103	0.188	103	0.036	101	-0.117	66
319			min	3.192	68	-0.212	98	-0.222	101	-0.189	71	-0.038	103	-0.939	15
320	M371	1	max	7.072	102	0.03	71	-0.021	75	0.003	15	1.521	102	1.425	104
321			min	-6.623	104	-0.03	107	-0.189	14	-0.001	76	-1.425	104	-1.521	102
322		2	max	7.087	102	0.015	71	-0.01	75	0.003	15	1.501	102	1.414	104
323			min	-6.638	104	-0.015	107	-0.095	14	-0.001	76	-1.442	104	-1.548	102
324		3	max	7.102	102	0.004	72	0	76	0.003	15	1.496	102	1.413	104
325			min	-6.653	104	-0.004	104	0	42	-0.001	76	-1.449	104	-1.559	102
326		4	max	7.117	102	0.015	73	0.095	15	0.003	15	1.507	102	1.42	104
327			min	-6.668	104	-0.015	105	0.01	107	-0.001	76	-1.448	104	-1.554	102
328		5	max	7.132	102	0.03	73	0.189	15	0.003	15	1.534	102	1.437	104
329			min	-6.683	104	-0.03	105	0.021	107	-0.001	76	-1.437	104	-1.534	102
330	M372	1	max	8.162	72	0.03	71	-0.021	46	0.002	106	1.756	72	1.658	104
331			min	-7.707	104	-0.03	107	-0.189	13	-0.004	100	-1.658	104	-1.756	72
332		2	max	8.177	72	0.015	71	-0.01	46	0.002	106	1.736	72	1.647	104
333			min	-7.722	104	-0.015	107	-0.095	13	-0.004	100	-1.675	104	-1.782	72
334		3	max	8.192	72	0.004	72	0	46	0.002	106	1.731	72	1.646	104
335			min	-7.737	104	-0.004	104	0	40	-0.004	100	-1.682	104	-1.793	72
336		4	max	8.207	72	0.015	73	0.095	15	0.002	106	1.742	72	1.654	104
337			min	-7.752	104	-0.015	105	0.01	105	-0.004	100	-1.681	104	-1.789	72
338		5	max	8.222	72	0.03	73	0.189	15	0.002	106	1.768	72	1.671	104
339			min	-7.767	104	-0.03	105	0.021	105	-0.004	100	-1.671	104	-1.768	72
340	M373	1	max	1.434	72	0.019	103	-0.013	105	0	96	0.247	72	0.191	104
341			min	-1.108	104	-0.019	71	-0.16	16	0	64	-0.191	104	-0.247	72
342		2	max	1.425	72	0.009	103	-0.007	105	0	96	0.231	72	0.18	104
343			min	-1.098	104	-0.009	71	-0.08	16	0	64	-0.198	104	-0.26	72
344		3	max	1.415	72	0.002	104	0	40	0	96	0.224	72	0.176	104
345			min	-1.089	104	-0.002	76	0	102	0	64	-0.199	104	-0.263	72
346		4	max	1.406	72	0.009	101	0.08	14	0	96	0.227	72	0.177	104
347			min	-1.08	104	-0.009	73	0.007	107	0	64	-0.194	104	-0.257	72
348		5	max	1.397	72	0.019	101	0.16	14	0	96	0.24	72	0.184	104
349			min	-1.07	104	-0.019	73	0.013	107	0	64	-0.184	104	-0.24	72
350	M374	1	max	0.359	66	0.029	104	-0.024	76	0.007	13	0.062	66	0.104	94
351			min	-0.605	94	-0.029	72	-0.289	13	-0.001	106	-0.104	94	-0.062	66
352		2	max	0.359	66	0.015	104	-0.012	76	0.007	13	0.029	66	0.073	106
353			min	-0.605	94	-0.015	72	-0.144	13	-0.001	106	-0.375	15	-0.324	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
354		3	max	0.359	66	0.002	105	0	76	0.007	13	0.027	74	0.076	106
355			min	-0.605	94	-0.002	73	0	100	-0.001	106	-0.49	15	-0.439	13
356		4	max	0.359	66	0.013	106	0.144	15	0.007	13	0.029	66	0.076	106
357			min	-0.605	94	-0.013	70	0.012	104	-0.001	106	-0.375	15	-0.324	13
358		5	max	0.359	66	0.027	106	0.289	15	0.007	13	0.062	66	0.104	94
359			min	-0.605	94	-0.027	70	0.024	104	-0.001	106	-0.104	94	-0.062	66
360	M375	1	max	0.653	102	0.019	103	-0.013	76	0.001	102	0.112	102	0.068	74
361			min	-0.394	74	-0.019	71	-0.16	14	-0.001	74	-0.068	74	-0.112	102
362		2	max	0.643	102	0.009	103	-0.007	76	0.001	102	0.096	102	0.057	74
363			min	-0.384	74	-0.009	71	-0.08	14	-0.001	74	-0.089	17	-0.135	15
364		3	max	0.634	102	0.002	104	0	40	0.001	102	0.091	106	0.053	74
365			min	-0.375	74	-0.002	76	0	72	-0.001	74	-0.123	17	-0.17	15
366		4	max	0.625	102	0.009	101	0.08	13	0.001	102	0.093	102	0.054	74
367			min	-0.366	74	-0.009	73	0.007	46	-0.001	74	-0.089	17	-0.135	15
368		5	max	0.615	102	0.019	101	0.16	13	0.001	102	0.106	102	0.061	74
369			min	-0.356	74	-0.019	73	0.013	46	-0.001	74	-0.061	74	-0.106	102
370	M376	1	max	1.525	74	0.029	104	-0.024	106	0.004	72	0.262	74	0.299	102
371			min	-1.736	102	-0.029	72	-0.289	13	-0.004	104	-0.299	102	-0.262	74
372		2	max	1.534	74	0.015	104	-0.012	106	0.004	72	0.27	74	0.304	106
373			min	-1.745	102	-0.015	72	-0.144	13	-0.004	104	-0.392	15	-0.326	74
374		3	max	1.544	74	0.002	105	0	106	0.004	72	0.273	74	0.307	106
375			min	-1.755	102	-0.002	73	0	70	-0.004	104	-0.507	15	-0.436	13
376		4	max	1.553	74	0.013	106	0.144	15	0.004	72	0.273	74	0.307	106
377			min	-1.764	102	-0.013	70	0.012	74	-0.004	104	-0.392	15	-0.329	74
378		5	max	1.562	74	0.027	106	0.289	15	0.004	72	0.269	74	0.305	102
379			min	-1.774	102	-0.027	70	0.024	74	-0.004	104	-0.305	102	-0.269	74
380	M377	1	max	10.671	74	0.043	104	-0.035	105	0.006	74	2.295	74	2.433	102
381			min	-11.31	102	-0.043	72	-0.318	13	-0.006	106	-2.433	102	-2.295	74
382		2	max	10.686	74	0.022	104	-0.017	105	0.006	74	2.305	74	2.428	106
383			min	-11.325	102	-0.022	72	-0.159	13	-0.006	106	-2.547	102	-2.383	74
384		3	max	10.702	74	0.003	105	0	101	0.006	74	2.31	74	2.434	106
385			min	-11.34	102	-0.003	73	0	12	-0.006	106	-2.587	102	-2.414	74
386		4	max	10.717	74	0.018	106	0.159	15	0.006	74	2.311	74	2.435	106
387			min	-11.355	102	-0.018	70	0.017	77	-0.006	106	-2.553	102	-2.389	74
388		5	max	10.732	74	0.038	106	0.318	15	0.006	74	2.308	74	2.445	102
389			min	-11.37	102	-0.038	70	0.035	77	-0.006	106	-2.446	102	-2.308	74
390	M378	1	max	5.271	13	0.036	66	0.019	73	0.001	13	0	71	-0.003	107
391			min	0.063	107	-0.037	94	-0.019	105	0	68	0	107	-0.245	13
392		2	max	5.192	13	0.018	66	0.01	73	0.001	13	0.016	73	0.003	98
393			min	0.057	107	-0.018	94	-0.01	105	0	68	-0.016	105	-0.244	13
394		3	max	5.114	13	0	76	0	71	0.001	13	0.022	73	0.014	98
395			min	0.05	107	-0.003	13	0	107	0	68	-0.022	105	-0.241	13
396		4	max	5.035	13	0.018	68	0.01	71	0.001	13	0.016	73	0.004	98
397			min	0.043	107	-0.018	92	-0.01	107	0	68	-0.016	105	-0.237	13
398		5	max	4.957	13	0.036	68	0.019	71	0.001	13	0	71	-0.002	107
399			min	0.037	107	-0.037	92	-0.019	107	0	68	0	107	-0.231	13
400	M379	1	max	4.336	16	0.036	66	0.019	73	0	104	0	71	0.003	75
401			min	-0.058	75	-0.037	94	-0.019	105	-0.001	13	0	107	-0.201	16
402		2	max	4.258	16	0.018	66	0.01	73	0	104	0.016	73	0.003	75
403			min	-0.065	75	-0.018	94	-0.01	105	-0.001	13	-0.016	105	-0.2	13
404		3	max	4.179	16	0	76	0	71	0	104	0.022	73	0.007	68
405			min	-0.071	75	-0.003	13	0	107	-0.001	13	-0.022	105	-0.197	13
406		4	max	4.101	16	0.018	68	0.01	71	0	104	0.016	73	0.004	75
407			min	-0.078	75	-0.018	92	-0.01	107	-0.001	13	-0.016	105	-0.193	13
408		5	max	4.022	16	0.036	68	0.019	71	0	104	0	71	0.004	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
409			min	-0.085	75	-0.037	92	-0.019	107	-0.001	13	0	107	-0.188	16
410	M380	1	max	5.598	15	0.036	68	0.019	105	0.002	13	0	107	-0.015	107
411			min	0.322	107	-0.037	92	-0.019	73	0	68	0	71	-0.26	15
412		2	max	5.52	15	0.018	68	0.01	105	0.002	13	0.016	105	0.003	96
413			min	0.315	107	-0.018	92	-0.01	73	0	68	-0.016	73	-0.259	15
414		3	max	5.441	15	0	74	0	107	0.002	13	0.022	105	0.013	96
415			min	0.308	107	-0.003	15	0	71	0	68	-0.022	73	-0.256	15
416		4	max	5.362	15	0.018	66	0.01	107	0.002	13	0.016	105	0.004	96
417			min	0.301	107	-0.018	94	-0.01	71	0	68	-0.016	73	-0.252	15
418		5	max	5.284	15	0.036	66	0.019	107	0.002	13	0	107	-0.014	107
419			min	0.295	107	-0.037	94	-0.019	71	0	68	0	71	-0.246	15
420	M381	1	max	6.337	15	0.036	68	0.019	105	0	104	0	107	-0.019	75
421			min	0.402	75	-0.037	92	-0.019	73	-0.001	13	0	71	-0.294	15
422		2	max	6.259	15	0.018	68	0.01	105	0	104	0.016	105	-0.011	66
423			min	0.395	75	-0.018	92	-0.01	73	-0.001	13	-0.016	73	-0.293	15
424		3	max	6.18	15	0	74	0	107	0	104	0.022	105	-0.001	66
425			min	0.388	75	-0.003	15	0	71	-0.001	13	-0.022	73	-0.29	15
426		4	max	6.101	15	0.018	66	0.01	107	0	104	0.016	105	-0.01	66
427			min	0.382	75	-0.018	94	-0.01	71	-0.001	13	-0.016	73	-0.286	15
428		5	max	6.023	15	0.036	66	0.019	107	0	104	0	107	-0.017	75
429			min	0.375	75	-0.037	94	-0.019	71	-0.001	13	0	71	-0.281	15
430	M382	1	max	2.82	106	0.293	15	0.028	102	0.002	70	0.193	70	0.179	106
431			min	-3.03	70	0.023	107	-0.028	104	-0.003	19	-0.179	106	-0.193	70
432		2	max	2.83	106	0.147	15	0.014	102	0.002	70	0.417	13	0.186	106
433			min	-3.039	70	0.011	107	-0.014	104	-0.003	19	-0.118	106	-0.417	13
434		3	max	2.839	106	0.001	71	0	40	0.002	70	0.533	13	0.188	106
435			min	-3.049	70	-0.001	107	0	104	-0.003	19	-0.098	106	-0.533	13
436		4	max	2.849	106	-0.011	75	0.014	40	0.002	70	0.417	13	0.187	106
437			min	-3.058	70	-0.147	13	-0.014	76	-0.003	19	-0.119	106	-0.417	13
438		5	max	2.858	106	-0.023	75	0.028	40	0.002	70	0.195	70	0.182	106
439			min	-3.067	70	-0.293	13	-0.028	76	-0.003	19	-0.182	106	-0.195	70
440	M383	1	max	3.636	106	0.293	15	0.028	46	0	68	0.273	70	0.231	106
441			min	-4.292	70	0.023	107	-0.028	40	-0.007	13	-0.231	106	-0.273	70
442		2	max	3.646	106	0.147	15	0.014	46	0	68	0.464	13	0.238	106
443			min	-4.301	70	0.011	107	-0.014	40	-0.007	13	-0.17	106	-0.464	13
444		3	max	3.655	106	0.001	71	0	46	0	68	0.581	13	0.24	106
445			min	-4.311	70	-0.001	107	0	75	-0.007	13	-0.15	106	-0.581	13
446		4	max	3.664	106	-0.011	75	0.014	44	0	68	0.464	13	0.239	106
447			min	-4.32	70	-0.147	13	-0.014	72	-0.007	13	-0.171	106	-0.464	13
448		5	max	3.674	106	-0.023	75	0.028	44	0	68	0.276	70	0.234	106
449			min	-4.33	70	-0.293	13	-0.028	72	-0.007	13	-0.234	106	-0.276	70
450	M384	1	max	7.685	106	0.327	13	0.041	76	0	98	0.688	70	0.611	106
451			min	-8.645	70	0.034	107	-0.041	44	-0.012	13	-0.611	106	-0.688	70
452		2	max	7.7	106	0.163	13	0.02	76	0	98	0.709	70	0.619	106
453			min	-8.66	70	0.016	107	-0.02	44	-0.012	13	-0.528	106	-0.8	70
454		3	max	7.715	106	0.001	71	0	76	0	98	0.717	70	0.622	106
455			min	-8.675	70	-0.001	107	0	44	-0.012	13	-0.502	106	-0.838	70
456		4	max	7.731	106	-0.016	75	0.02	100	0	98	0.712	70	0.621	106
457			min	-8.69	70	-0.163	15	-0.02	42	-0.012	13	-0.531	106	-0.802	70
458		5	max	7.746	106	-0.034	75	0.041	100	0	98	0.692	70	0.616	106
459			min	-8.705	70	-0.327	15	-0.041	42	-0.012	13	-0.616	106	-0.692	70
460	M385	1	max	8.688	106	0.327	13	0.041	46	0.003	68	0.795	70	0.691	106
461			min	-9.99	70	0.034	107	-0.041	70	-0.016	13	-0.691	106	-0.795	70
462		2	max	8.703	106	0.163	13	0.02	46	0.003	68	0.816	70	0.699	106
463			min	-10.005	70	0.016	107	-0.02	70	-0.016	13	-0.608	106	-0.907	70

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
464		3	max	8.718	106	0.001	75	0	75	0.003	68	0.824	70	0.702	106
465			min	-10.02	70	-0.001	103	0	71	-0.016	13	-0.581	106	-0.945	70
466		4	max	8.733	106	-0.016	75	0.02	104	0.003	68	0.819	70	0.701	106
467			min	-10.035	70	-0.163	15	-0.02	72	-0.016	13	-0.611	106	-0.909	70
468		5	max	8.748	106	-0.034	75	0.041	104	0.003	68	0.799	70	0.696	106
469			min	-10.05	70	-0.327	15	-0.041	72	-0.016	13	-0.696	106	-0.799	70
470	M386	1	max	2.139	72	0.293	15	0.028	44	0.006	19	0.118	104	0.136	72
471			min	-1.86	104	0.023	75	-0.028	46	-0.001	100	-0.136	72	-0.118	104
472		2	max	2.148	72	0.147	15	0.014	44	0.006	19	0.325	13	0.072	68
473			min	-1.869	104	0.011	75	-0.014	46	-0.001	100	-0.137	76	-0.325	13
474		3	max	2.158	72	0.001	107	0	44	0.006	19	0.442	13	0.062	68
475			min	-1.879	104	-0.001	71	0	46	-0.001	100	-0.14	76	-0.442	13
476		4	max	2.167	72	-0.011	107	0.014	72	0.006	19	0.325	13	0.072	68
477			min	-1.888	104	-0.147	13	-0.014	104	-0.001	100	-0.138	76	-0.325	13
478		5	max	2.177	72	-0.023	107	0.028	72	0.006	19	0.121	104	0.139	72
479			min	-1.898	104	-0.293	13	-0.028	104	-0.001	100	-0.139	72	-0.121	104
480	M387	1	max	2.877	76	0.293	15	0.028	44	0.011	13	0.198	100	0.183	76
481			min	-3.114	100	0.023	75	-0.028	42	0	98	-0.183	76	-0.198	100
482		2	max	2.887	76	0.147	15	0.014	44	0.011	13	0.372	13	0.122	76
483			min	-3.123	100	0.011	75	-0.014	42	0	98	-0.189	76	-0.372	13
484		3	max	2.896	76	0.001	107	0	44	0.011	13	0.488	13	0.102	76
485			min	-3.132	100	-0.001	71	0	42	0	98	-0.192	76	-0.488	13
486		4	max	2.906	76	-0.011	107	0.014	76	0.011	13	0.372	13	0.123	76
487			min	-3.142	100	-0.147	13	-0.014	70	0	98	-0.191	76	-0.372	13
488		5	max	2.915	76	-0.023	107	0.028	76	0.011	13	0.201	100	0.186	76
489			min	-3.151	100	-0.293	13	-0.028	70	0	98	-0.186	76	-0.201	100
490	M388	1	max	7.027	76	0.327	13	0.041	100	0.013	13	0.612	100	0.559	76
491			min	-7.697	100	0.034	75	-0.041	106	0	98	-0.559	76	-0.612	100
492		2	max	7.042	76	0.163	13	0.02	100	0.013	13	0.724	100	0.476	76
493			min	-7.712	100	0.016	75	-0.02	106	0	98	-0.566	76	-0.634	100
494		3	max	7.057	76	0.001	107	0	100	0.013	13	0.763	100	0.449	76
495			min	-7.727	100	-0.001	71	0	74	0	98	-0.57	76	-0.642	100
496		4	max	7.072	76	-0.016	107	0.02	102	0.013	13	0.727	100	0.478	76
497			min	-7.742	100	-0.163	15	-0.02	74	0	98	-0.569	76	-0.636	100
498		5	max	7.087	76	-0.034	107	0.041	102	0.013	13	0.617	100	0.564	76
499			min	-7.757	100	-0.327	15	-0.041	74	0	98	-0.564	76	-0.617	100
500	M389	1	max	7.881	76	0.327	13	0.041	100	0.006	92	0.69	100	0.627	76
501			min	-8.671	100	0.034	75	-0.041	46	-0.005	68	-0.627	76	-0.69	100
502		2	max	7.896	76	0.163	13	0.02	100	0.006	92	0.802	100	0.544	76
503			min	-8.686	100	0.016	75	-0.02	46	-0.005	68	-0.634	76	-0.711	100
504		3	max	7.911	76	0.001	107	0	100	0.006	92	0.84	100	0.517	76
505			min	-8.701	100	-0.001	71	0	46	-0.005	68	-0.638	76	-0.72	100
506		4	max	7.926	76	-0.016	107	0.02	72	0.006	92	0.804	100	0.546	76
507			min	-8.716	100	-0.163	15	-0.02	74	-0.005	68	-0.637	76	-0.714	100
508		5	max	7.941	76	-0.034	107	0.041	72	0.006	92	0.695	100	0.632	76
509			min	-8.731	100	-0.327	15	-0.041	74	-0.005	68	-0.632	76	-0.695	100
510	M390	1	max	4.898	100	0.194	15	0.03	101	0.003	94	0.356	76	0.39	100
511			min	-4.469	76	0.019	76	-0.03	73	-0.002	66	-0.39	100	-0.356	76
512		2	max	4.883	100	0.097	15	0.015	101	0.003	94	0.374	72	0.365	100
513			min	-4.454	76	0.009	76	-0.015	73	-0.002	66	-0.365	100	-0.374	72
514		3	max	4.868	100	0.001	104	0	106	0.003	94	0.38	72	0.357	104
515			min	-4.439	76	-0.001	72	0	104	-0.002	66	-0.357	104	-0.38	72
516		4	max	4.853	100	-0.009	104	0.015	103	0.003	94	0.371	72	0.363	100
517			min	-4.424	76	-0.097	13	-0.015	75	-0.002	66	-0.363	100	-0.371	72
518		5	max	4.838	100	-0.019	104	0.03	103	0.003	94	0.351	76	0.385	100

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
519			min	-4.409	76	-0.194	13	-0.03	75	-0.002	66	-0.385	100	-0.351	76
520	M392	1	max	1.404	100	0.163	15	0.019	71	0.001	102	0.09	72	0.089	100
521			min	-1.413	72	0.012	76	-0.019	103	-0.001	74	-0.089	100	-0.09	72
522		2	max	1.394	100	0.081	15	0.009	71	0.001	102	0.12	15	0.078	104
523			min	-1.404	72	0.006	76	-0.009	103	-0.001	74	-0.078	104	-0.12	15
524		3	max	1.385	100	0.001	104	0	70	0.001	102	0.156	15	0.075	104
525			min	-1.394	72	-0.001	72	0	104	-0.001	74	-0.075	104	-0.156	15
526		4	max	1.375	100	-0.006	104	0.009	73	0.001	102	0.12	15	0.077	104
527			min	-1.385	72	-0.081	13	-0.009	101	-0.001	74	-0.077	104	-0.12	15
528		5	max	1.366	100	-0.012	104	0.019	73	0.001	102	0.088	72	0.087	100
529			min	-1.375	72	-0.163	13	-0.019	101	-0.001	74	-0.087	100	-0.088	72
530	M394	1	max	2.056	70	0.163	15	0.019	101	0.001	100	0.115	106	0.131	70
531			min	-1.806	106	0.012	106	-0.019	103	-0.001	72	-0.131	70	-0.115	106
532		2	max	2.047	70	0.081	15	0.009	101	0.001	100	0.126	102	0.117	74
533			min	-1.797	106	0.006	106	-0.009	103	-0.001	72	-0.117	74	-0.126	102
534		3	max	2.037	70	0.001	74	0	46	0.001	100	0.13	102	0.113	74
535			min	-1.787	106	-0.001	102	0	44	-0.001	72	-0.113	74	-0.13	102
536		4	max	2.028	70	-0.006	74	0.009	73	0.001	100	0.125	102	0.116	74
537			min	-1.778	106	-0.081	13	-0.009	71	-0.001	72	-0.116	74	-0.125	102
538		5	max	2.019	70	-0.012	74	0.019	73	0.001	100	0.113	106	0.128	70
539			min	-1.768	106	-0.163	13	-0.019	71	-0.001	72	-0.128	70	-0.113	106
540	M396	1	max	5.442	70	0.194	15	0.03	41	0.002	66	0.386	106	0.433	70
541			min	-4.853	106	0.019	76	-0.03	103	-0.003	15	-0.433	70	-0.386	106
542		2	max	5.427	70	0.097	15	0.015	41	0.002	66	0.4	102	0.408	70
543			min	-4.838	106	0.009	76	-0.015	103	-0.003	15	-0.408	70	-0.4	102
544		3	max	5.412	70	0.001	104	0	100	0.002	66	0.406	102	0.4	70
545			min	-4.823	106	-0.001	72	0	74	-0.003	15	-0.4	70	-0.406	102
546		4	max	5.397	70	-0.009	104	0.015	43	0.002	66	0.397	102	0.406	70
547			min	-4.808	106	-0.097	13	-0.015	101	-0.003	15	-0.406	70	-0.397	102
548		5	max	5.382	70	-0.019	104	0.03	43	0.002	66	0.381	106	0.428	70
549			min	-4.793	106	-0.194	13	-0.03	101	-0.003	15	-0.428	70	-0.381	106
550	M397	1	max	-0.988	107	0.195	13	0.024	100	0.007	106	0.637	15	0.637	15
551			min	-12.919	15	0.001	107	-0.024	76	-0.01	13	0.049	107	0.049	107
552		2	max	-1.003	107	0.097	13	0.012	100	0.007	106	0.861	15	0.418	15
553			min	-12.981	15	0.001	107	-0.012	76	-0.01	13	0.051	107	0.048	107
554		3	max	-1.017	107	0	13	0.002	13	0.007	106	0.938	15	0.347	15
555			min	-13.044	15	0	106	0	75	-0.01	13	0.052	107	0.049	107
556		4	max	-1.032	107	-0.001	77	0.012	102	0.007	106	0.867	15	0.424	15
557			min	-13.106	15	-0.097	15	-0.012	74	-0.01	13	0.052	107	0.05	107
558		5	max	-1.047	107	-0.001	77	0.024	102	0.007	106	0.648	15	0.648	15
559			min	-13.169	15	-0.195	15	-0.024	74	-0.01	13	0.052	107	0.052	107
560	M398	1	max	-0.481	107	-0.001	107	0.024	72	0.007	106	0.584	13	0.584	13
561			min	-11.847	13	-0.195	13	-0.024	104	-0.013	13	0.024	107	0.024	107
562		2	max	-0.495	107	-0.001	107	0.012	72	0.007	106	0.365	13	0.808	13
563			min	-11.909	13	-0.097	13	-0.012	104	-0.013	13	0.023	107	0.026	107
564		3	max	-0.51	107	0	106	0.002	15	0.007	106	0.294	13	0.885	13
565			min	-11.972	13	0	13	0	105	-0.013	13	0.024	107	0.027	107
566		4	max	-0.525	107	0.097	15	0.012	70	0.007	106	0.371	13	0.814	13
567			min	-12.034	13	0.001	77	-0.012	106	-0.013	13	0.025	107	0.027	107
568		5	max	-0.539	107	0.195	15	0.024	70	0.007	106	0.596	13	0.596	13
569			min	-12.097	13	0.001	77	-0.024	106	-0.013	13	0.027	107	0.027	107
570	M399	1	max	-0.234	75	0.195	15	0.024	72	0.008	74	0.514	16	0.514	16
571			min	-10.42	16	0.001	75	-0.024	104	-0.011	15	0.012	75	0.012	75
572		2	max	-0.249	75	0.097	15	0.012	72	0.008	74	0.738	16	0.295	16
573			min	-10.482	16	0.001	75	-0.012	104	-0.011	15	0.013	75	0.011	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
574		3	max	-0.264	75	0	15	0.002	15	0.008	74	0.815	16	0.224	16
575			min	-10.545	16	0	74	0	107	-0.011	15	0.015	75	0.003	74
576		4	max	-0.278	75	-0.001	105	0.012	70	0.008	74	0.744	16	0.301	16
577			min	-10.607	16	-0.097	13	-0.012	106	-0.011	15	0.015	75	0.012	75
578		5	max	-0.293	75	-0.001	105	0.024	70	0.008	74	0.525	16	0.525	16
579			min	-10.67	16	-0.195	13	-0.024	106	-0.011	15	0.014	75	0.014	75
580	M400	1	max	-1.116	75	-0.001	75	0.024	100	0.007	74	0	102	0	104
581			min	-14.31	16	-0.195	13	-0.024	76	-0.014	15	0	74	0	15
582		2	max	-1.131	75	-0.001	75	0.012	100	0.007	74	0.011	104	0.222	13
583			min	-14.372	16	-0.097	13	-0.012	76	-0.014	15	-0.222	13	-0.011	76
584		3	max	-1.145	75	0	72	0	15	0.007	74	0.015	104	0.296	13
585			min	-14.435	16	0	104	0	69	-0.014	15	-0.296	13	-0.015	76
586		4	max	-1.16	75	0.097	15	0.012	102	0.007	74	0.011	74	0.222	13
587			min	-14.497	16	0.001	105	-0.012	74	-0.014	15	-0.222	13	-0.011	76
588		5	max	-1.175	75	0.195	15	0.024	102	0.007	74	0	15	0	100
589			min	-14.56	16	0.001	105	-0.024	74	-0.014	15	0	104	0	76
590	M401	1	max	12.207	74	0.043	72	-0.035	104	0.009	106	2.625	74	2.765	102
591			min	-12.854	102	-0.043	104	-0.318	15	-0.013	70	-2.765	102	-2.625	74
592		2	max	12.192	74	0.022	72	-0.017	104	0.009	106	2.538	74	2.659	106
593			min	-12.839	102	-0.022	104	-0.159	15	-0.013	70	-2.782	102	-2.616	74
594		3	max	12.177	74	0.003	73	0	100	0.009	106	2.507	74	2.628	106
595			min	-12.824	102	-0.003	105	0	12	-0.013	70	-2.786	102	-2.611	74
596		4	max	12.162	74	0.018	70	0.159	13	0.009	106	2.532	74	2.653	106
597			min	-12.809	102	-0.018	106	0.017	76	-0.013	70	-2.775	102	-2.61	74
598		5	max	12.147	74	0.038	70	0.318	13	0.009	106	2.613	74	2.752	102
599			min	-12.794	102	-0.038	106	0.035	76	-0.013	70	-2.752	102	-2.613	74
600	M402	1	max	13.838	104	0.038	70	-0.035	77	0.014	70	2.976	104	3.165	102
601			min	-14.714	102	-0.038	102	-0.318	13	-0.009	106	-3.165	102	-2.976	104
602		2	max	13.823	104	0.018	70	-0.017	77	0.014	70	2.979	104	3.143	106
603			min	-14.699	102	-0.018	102	-0.159	13	-0.009	106	-3.272	102	-3.057	104
604		3	max	13.808	104	0.003	71	0	99	0.014	70	2.978	104	3.142	106
605			min	-14.684	102	-0.003	103	0	101	-0.009	106	-3.306	102	-3.082	104
606		4	max	13.793	104	0.022	72	0.159	15	0.014	70	2.973	104	3.136	106
607			min	-14.669	102	-0.022	100	0.017	105	-0.009	106	-3.266	102	-3.051	104
608		5	max	13.778	104	0.043	72	0.318	15	0.014	70	2.963	104	3.152	102
609			min	-14.654	102	-0.043	100	0.035	105	-0.009	106	-3.152	102	-2.963	104
610	M403	1	max	-5.672	96	0.175	13	0.023	70	0.002	106	1.814	15	1.814	15
611			min	-36.812	15	0	107	-0.022	106	-0.016	13	0.279	96	0.279	96
612		2	max	-5.678	96	0.087	13	0.011	70	0.002	106	2.001	15	1.632	15
613			min	-36.874	15	0	107	-0.011	106	-0.016	13	0.295	96	0.264	96
614		3	max	-5.683	96	0	70	0.002	15	0.002	106	2.066	15	1.574	15
615			min	-36.937	15	0	106	0	105	-0.016	13	0.3	96	0.259	96
616		4	max	-5.688	96	0	77	0.011	72	0.002	106	2.007	15	1.638	15
617			min	-36.999	15	-0.087	15	-0.011	104	-0.016	13	0.296	96	0.265	96
618		5	max	-5.693	96	0	77	0.023	72	0.002	106	1.825	15	1.825	15
619			min	-37.061	15	-0.175	15	-0.022	104	-0.016	13	0.28	96	0.28	96
620	M404	1	max	-5.16	98	0	107	0.023	102	0.004	106	1.576	13	1.576	13
621			min	-31.985	13	-0.175	13	-0.022	74	-0.005	70	0.254	98	0.254	98
622		2	max	-5.165	98	0	107	0.011	102	0.004	106	1.394	13	1.763	13
623			min	-32.047	13	-0.087	13	-0.011	74	-0.005	70	0.239	98	0.27	98
624		3	max	-5.17	98	0	106	0.002	13	0.004	106	1.336	13	1.828	13
625			min	-32.109	13	0	70	0	75	-0.005	70	0.234	98	0.275	98
626		4	max	-5.175	98	0.087	15	0.011	100	0.004	106	1.4	13	1.769	13
627			min	-32.172	13	0	77	-0.011	76	-0.005	70	0.24	98	0.27	98
628		5	max	-5.18	98	0.175	15	0.023	100	0.004	106	1.588	13	1.588	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
629			min	-32.234	13	0	77	-0.022	76	-0.005	70	0.255	98	0.255	98
630	M405	1	max	-5.92	98	0	75	0.023	70	0.002	104	1.932	15	1.932	15
631			min	-39.207	15	-0.175	15	-0.022	106	-0.018	15	0.292	98	0.292	98
632		2	max	-5.925	98	0	75	0.011	70	0.002	104	1.75	15	2.119	15
633			min	-39.269	15	-0.087	15	-0.011	106	-0.018	15	0.277	98	0.307	98
634		3	max	-5.93	98	0	74	0.002	15	0.002	104	1.692	15	2.184	15
635			min	-39.332	15	0	102	0	107	-0.018	15	0.272	98	0.313	98
636		4	max	-5.935	98	0.087	13	0.011	72	0.002	104	1.756	15	2.125	15
637			min	-39.394	15	0	105	-0.011	104	-0.018	15	0.277	98	0.308	98
638		5	max	-5.941	98	0.175	13	0.023	72	0.002	104	1.943	15	1.943	15
639			min	-39.456	15	0	105	-0.022	104	-0.018	15	0.293	98	0.293	98
640	M406	1	max	-5.403	67	0.175	15	0.023	102	0.005	70	1.528	13	1.528	13
641			min	-31.004	13	0	105	-0.022	74	-0.004	106	0.266	67	0.266	67
642		2	max	-5.408	67	0.087	15	0.011	102	0.005	70	1.715	13	1.346	13
643			min	-31.067	13	0	105	-0.011	74	-0.004	106	0.282	67	0.251	67
644		3	max	-5.413	67	0	72	0.002	13	0.005	70	1.779	13	1.287	13
645			min	-31.129	13	0	104	0	77	-0.004	106	0.287	67	0.246	67
646		4	max	-5.418	67	0	75	0.011	100	0.005	70	1.721	13	1.352	13
647			min	-31.191	13	-0.087	13	-0.011	76	-0.004	106	0.282	67	0.252	67
648		5	max	-5.424	67	0	75	0.023	100	0.005	70	1.539	13	1.539	13
649			min	-31.254	13	-0.175	13	-0.022	76	-0.004	106	0.267	67	0.267	67
650	M409	1	max	-4.794	96	0.175	13	0.023	70	0.002	76	1.544	15	1.544	15
651			min	-31.339	15	0	107	-0.022	106	-0.018	13	0.236	96	0.236	96
652		2	max	-4.799	96	0.087	13	0.011	70	0.002	76	1.731	15	1.363	15
653			min	-31.401	15	0	107	-0.011	106	-0.018	13	0.252	96	0.221	96
654		3	max	-4.805	96	0	70	0.002	15	0.002	76	1.796	15	1.304	15
655			min	-31.464	15	0	106	0	105	-0.018	13	0.257	96	0.216	96
656		4	max	-4.81	96	0	77	0.011	72	0.002	76	1.737	15	1.368	15
657			min	-31.526	15	-0.087	15	-0.011	104	-0.018	13	0.252	96	0.222	96
658		5	max	-4.815	96	0	77	0.023	72	0.002	76	1.556	15	1.556	15
659			min	-31.588	15	-0.175	15	-0.022	104	-0.018	13	0.237	96	0.237	96
660	M410	1	max	-4.611	98	0	107	0.023	102	0.003	68	1.311	13	1.311	13
661			min	-26.599	13	-0.175	13	-0.022	74	-0.014	13	0.227	98	0.227	98
662		2	max	-4.616	98	0	107	0.011	102	0.003	68	1.129	13	1.498	13
663			min	-26.661	13	-0.087	13	-0.011	74	-0.014	13	0.212	98	0.243	98
664		3	max	-4.621	98	0	106	0.002	13	0.003	68	1.07	13	1.562	13
665			min	-26.723	13	0	70	0	75	-0.014	13	0.207	98	0.248	98
666		4	max	-4.627	98	0.087	15	0.011	100	0.003	68	1.135	13	1.504	13
667			min	-26.786	13	0	77	-0.011	76	-0.014	13	0.213	98	0.243	98
668		5	max	-4.632	98	0.175	15	0.023	100	0.003	68	1.322	13	1.322	13
669			min	-26.848	13	0	77	-0.022	76	-0.014	13	0.228	98	0.228	98
670	M411	1	max	-5.004	67	0	75	0.023	70	0.003	104	1.554	15	1.554	15
671			min	-31.537	15	-0.175	15	-0.022	106	-0.02	15	0.247	67	0.247	67
672		2	max	-5.01	67	0	75	0.011	70	0.003	104	1.372	15	1.741	15
673			min	-31.599	15	-0.087	15	-0.011	106	-0.02	15	0.231	67	0.262	67
674		3	max	-5.015	67	0	74	0.002	15	0.003	104	1.314	15	1.806	15
675			min	-31.662	15	0	102	0	107	-0.02	15	0.227	67	0.268	67
676		4	max	-5.02	67	0.087	13	0.011	72	0.003	104	1.378	15	1.747	15
677			min	-31.724	15	0	105	-0.011	104	-0.02	15	0.232	67	0.263	67
678		5	max	-5.025	67	0.175	13	0.023	72	0.003	104	1.566	15	1.566	15
679			min	-31.786	15	0	105	-0.022	104	-0.02	15	0.248	67	0.248	67
680	M412	1	max	-4.5	66	0.175	15	0.023	102	0.003	96	1.257	16	1.257	16
681			min	-25.52	16	0	105	-0.022	74	-0.012	15	0.222	66	0.222	66
682		2	max	-4.505	66	0.087	15	0.011	102	0.003	96	1.445	16	1.076	16
683			min	-25.583	16	0	105	-0.011	74	-0.012	15	0.237	66	0.207	66

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
684		3	max	-4.511	66	0	72	0.002	13	0.003	96	1.509	16	1.017	16
685			min	-25.645	16	0	104	0	77	-0.012	15	0.243	66	0.202	66
686		4	max	-4.516	66	0	75	0.011	100	0.003	96	1.451	16	1.082	16
687			min	-25.707	16	-0.087	13	-0.011	76	-0.012	15	0.238	66	0.207	66
688		5	max	-4.521	66	0	75	0.023	100	0.003	96	1.269	16	1.269	16
689			min	-25.77	16	-0.175	13	-0.022	76	-0.012	15	0.223	66	0.223	66
690	M413	1	max	-0.134	107	0.195	13	0.024	100	0.009	102	0.331	15	0.331	15
691			min	-6.709	15	0.001	107	-0.024	76	-0.007	74	0.007	107	0.007	107
692		2	max	-0.149	107	0.097	13	0.012	100	0.009	102	0.555	15	0.168	71
693			min	-6.772	15	0.001	107	-0.012	76	-0.007	74	0.009	107	0.006	107
694		3	max	-0.164	107	0	13	0.002	13	0.009	102	0.632	15	0.154	71
695			min	-6.834	15	0	106	0	75	-0.007	74	0.01	107	0.006	107
696		4	max	-0.178	107	-0.001	77	0.012	102	0.009	102	0.561	15	0.167	71
697			min	-6.897	15	-0.097	15	-0.012	74	-0.007	74	0.01	107	0.008	107
698		5	max	-0.193	107	-0.001	77	0.024	102	0.009	102	0.343	15	0.343	15
699			min	-6.959	15	-0.195	15	-0.024	74	-0.007	74	0.009	107	0.009	107
700	M414	1	max	0.321	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
701			min	-5.933	13	-0.195	13	-0.024	104	-0.008	104	-0.016	107	-0.016	107
702		2	max	0.306	107	-0.001	107	0.012	72	0.009	72	0.159	71	0.517	13
703			min	-5.995	13	-0.097	13	-0.012	104	-0.008	104	-0.016	107	-0.014	107
704		3	max	0.291	107	0	106	0.002	15	0.009	72	0.145	71	0.594	13
705			min	-6.058	13	0	13	0	105	-0.008	104	-0.017	19	-0.013	107
706		4	max	0.277	107	0.097	15	0.012	70	0.009	72	0.159	71	0.523	13
707			min	-6.12	13	0.001	77	-0.012	106	-0.008	104	-0.015	107	-0.012	107
708		5	max	0.262	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
709			min	-6.183	13	0.001	77	-0.024	106	-0.008	104	-0.013	107	-0.013	107
710	M415	1	max	-0.277	75	-0.001	75	0.024	100	0.008	74	0.377	16	0.377	16
711			min	-7.657	16	-0.195	15	-0.024	76	-0.008	102	0.014	75	0.014	75
712		2	max	-0.292	75	-0.001	75	0.012	100	0.008	74	0.179	70	0.602	16
713			min	-7.72	16	-0.097	15	-0.012	76	-0.008	102	0.006	76	0.016	75
714		3	max	-0.307	75	0	74	0.002	13	0.008	74	0.179	70	0.679	16
715			min	-7.782	16	0	102	0	77	-0.008	102	-0.008	76	0.017	75
716		4	max	-0.321	75	0.097	13	0.012	102	0.008	74	0.179	70	0.608	16
717			min	-7.845	16	0.001	105	-0.012	74	-0.008	102	0.007	76	0.017	75
718		5	max	-0.336	75	0.195	13	0.024	102	0.008	74	0.389	16	0.389	16
719			min	-7.907	16	0.001	105	-0.024	74	-0.008	102	0.017	75	0.017	75
720	M416	1	max	0.524	75	0.195	15	0.024	72	0.008	104	0.223	15	0.223	15
721			min	-4.53	15	0.001	75	-0.024	104	-0.009	72	-0.026	75	-0.026	75
722		2	max	0.509	75	0.097	15	0.012	72	0.008	104	0.448	15	0.142	102
723			min	-4.593	15	0.001	75	-0.012	104	-0.009	72	-0.024	75	-0.027	74
724		3	max	0.494	75	0	102	0.002	15	0.008	104	0.525	15	0.142	102
725			min	-4.655	15	0	74	0	107	-0.009	72	-0.023	75	-0.082	17
726		4	max	0.479	75	-0.001	105	0.012	70	0.008	104	0.454	15	0.143	102
727			min	-4.718	15	-0.097	13	-0.012	106	-0.009	72	-0.022	75	-0.027	74
728		5	max	0.465	75	-0.001	105	0.024	70	0.008	104	0.235	15	0.235	15
729			min	-4.78	15	-0.195	13	-0.024	106	-0.009	72	-0.023	75	-0.023	75
730	M95	1	max	2.509	72	3.635	15	3	71	0.738	71	0	107	0.522	104
731			min	-2.09	104	0.83	99	-3	103	-0.738	103	0	12	-0.626	72
732		2	max	2.531	72	3.523	15	2.979	71	0.738	71	3.737	71	-0.741	96
733			min	-2.112	104	0.812	99	-2.978	103	-0.738	103	-3.736	103	-4.723	15
734		3	max	7.85	72	3.411	15	2.957	71	0.077	62	7.447	71	-1.746	96
735			min	-7.431	104	-3.035	41	-2.957	103	-0.738	71	-7.446	103	-9.65	72
736		4	max	7.872	72	-0.812	99	2.978	103	0.738	103	3.737	71	-0.415	104
737			min	-7.453	104	-3.523	15	-2.979	71	-0.738	71	-3.736	103	-5.826	72
738		5	max	7.893	72	-0.83	99	3	103	0.738	103	0	107	1.866	104

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
739			min	-7.475	104	-3.635	15	-3	71	-0.738	71	0	12	-1.97	72
740	M96	1	max	1.507	102	3.52	15	2.911	71	0.716	71	0	107	0.291	74
741			min	-1.166	74	0.803	67	-2.912	103	-0.716	103	0	12	-0.376	102
742		2	max	1.529	102	3.408	15	2.889	71	0.716	71	3.625	71	-0.755	66
743			min	-1.188	74	0.786	67	-2.89	103	-0.716	103	-3.626	103	-4.435	15
744		3	max	6.671	102	3.296	15	2.868	71	0.716	71	7.223	71	-1.727	66
745			min	-6.33	74	-2.931	100	-2.868	103	-0.077	92	-7.225	103	-9.09	102
746		4	max	6.693	102	-0.786	67	2.89	103	0.716	103	3.625	71	-0.507	66
747			min	-6.352	74	-3.408	15	-2.889	71	-0.715	71	-3.626	103	-5.399	102
748		5	max	6.714	102	-0.803	67	2.912	103	0.716	103	0	107	1.591	74
749			min	-6.374	74	-3.52	15	-2.911	71	-0.715	71	0	12	-1.676	102
750	M530	1	max	21.443	15	6.693	100	17.444	103	0	107	0	107	0	107
751			min	-6.437	104	-6.593	72	-17.44	71	0	12	0	12	0	12
752		2	max	21.138	15	6.601	100	2.409	71	0	107	13.525	103	10.47	72
753			min	-6.405	104	-6.527	72	-2.412	103	0	12	-13.524	71	-10.608	100
754		3	max	20.925	15	6.541	100	2.47	71	0	107	9.631	103	20.824	72
755			min	-6.447	104	-6.466	72	-2.473	103	0	12	-9.635	71	-21.081	100
756		4	max	19.998	15	4.12	70	4.943	71	0.959	77	4.474	103	11.384	72
757			min	-0.046	104	-4.747	102	-4.942	103	-0.991	71	-4.48	71	-11.61	100
758		5	max	0	107	0	100	0	13	0	107	0	107	0	107
759			min	0	12	0	72	0	107	0	12	0	12	0	12
760	M531	1	max	26.192	13	13.109	102	18.217	71	0	107	0	107	0	107
761			min	-5.381	106	-13.039	70	-18.293	103	0	12	0	12	0	12
762		2	max	25.589	13	4.484	102	2.461	103	0	107	14.178	71	14.875	70
763			min	-5.561	106	-4.794	70	-2.451	71	0	12	-14.22	103	-14.715	102
764		3	max	24.735	13	4.219	102	2.755	103	0.253	73	9.993	71	22.535	70
765			min	-5.742	106	-4.509	70	-2.747	71	-0.253	71	-10.021	103	-21.325	102
766		4	max	22.324	13	3.71	76	4.944	103	0.672	71	4.438	71	10.897	70
767			min	0.35	106	-4.649	100	-4.932	71	-0.641	77	-4.45	103	-10.166	102
768		5	max	0	107	0	102	0	107	0	107	0	107	0	107
769			min	0	12	0	70	0	14	0	12	0	12	0	12
770	M532	1	max	26.269	13	10.705	102	0.177	13	0	107	0	107	0	107
771			min	-2.188	76	-10.642	70	-0.002	76	0	12	0	12	0	12
772		2	max	25.653	13	3.064	102	0.297	75	0	107	0.242	71	11.86	70
773			min	-2.457	76	-3.513	70	-0.307	103	0	12	-0.193	107	-11.586	102
774		3	max	25.106	13	2.909	102	0.143	75	0.113	77	0.572	71	17.436	70
775			min	-2.562	76	-3.346	70	-0.153	103	-0.113	101	-0.534	107	-16.2	102
776		4	max	22.824	13	3.427	76	0.47	107	0.039	71	0.431	71	8.32	70
777			min	1.518	68	-4.47	100	-0.485	71	-0.026	101	-0.414	107	-7.666	102
778		5	max	0	107	0	102	0	15	0	107	0	107	0	107
779			min	0	12	0	70	0	76	0	12	0	12	0	12
780	M533	1	max	20.27	15	5.154	100	0.005	74	0	107	0	107	0	107
781			min	-3.146	74	-5.074	72	-0.12	15	0	12	0	12	0	12
782		2	max	19.983	15	5.049	100	0.205	103	0	107	0.13	107	8.004	72
783			min	-3.226	74	-4.948	72	-0.195	75	0	12	-0.151	71	-8.151	100
784		3	max	19.771	15	4.988	100	0.144	103	0	107	0.4	107	15.842	72
785			min	-3.268	74	-4.888	72	-0.135	75	0	12	-0.412	71	-16.149	100
786		4	max	19.111	15	3.918	70	0.389	71	0.108	77	0.346	103	8.688	72
787			min	1.321	66	-4.495	102	-0.378	107	-0.14	71	-0.348	71	-8.965	100
788		5	max	0	107	0	100	0	68	0	107	0	107	0	107
789			min	0	12	0	72	0	13	0	12	0	12	0	12
790	M534	1	max	0.771	72	0.019	75	-0.013	106	0	74	0.133	72	0.064	104
791			min	-0.37	104	-0.019	43	-0.16	16	0	15	-0.064	104	-0.133	72
792		2	max	0.78	72	0.009	75	-0.007	106	0	74	0.12	72	0.057	104
793			min	-0.38	104	-0.009	43	-0.08	16	0	15	-0.074	104	-0.196	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
794		3	max	0.79	72	0.002	76	0	72	0	74	0.116	72	0.055	104
795			min	-0.389	104	-0.002	74	0	104	0	15	-0.079	104	-0.231	15
796		4	max	0.799	72	0.009	77	0.08	14	0	74	0.123	72	0.06	104
797			min	-0.399	104	-0.009	101	0.007	104	0	15	-0.077	104	-0.196	15
798		5	max	0.809	72	0.019	77	0.16	14	0	74	0.139	72	0.07	104
799			min	-0.408	104	-0.019	101	0.013	104	0	15	-0.07	104	-0.139	72
800	M535	1	max	9.965	102	0.205	70	0.133	102	0.001	104	0	107	0.861	74
801			min	-9.568	74	-0.197	106	-0.105	74	-0.071	15	0	12	-0.897	102
802		2	max	5.612	76	0.14	103	0.058	104	0.021	13	1.057	72	1.322	16
803			min	-50.415	13	0.014	75	-0.076	72	-0.01	76	-0.917	104	0.208	75
804		3	max	3.137	76	0.239	13	0.062	103	0.061	13	0.338	76	0.489	15
805			min	-63.676	13	-0.062	70	-0.051	102	0.004	75	-0.613	100	-0.028	66
806		4	max	2.084	76	-0.007	98	0.081	72	0.031	15	1.038	72	1.398	14
807			min	-53.678	13	-0.119	71	-0.037	104	-0.006	104	-0.812	104	0.214	98
808		5	max	20.709	71	0.324	75	0.099	70	0.002	76	0	107	1.828	103
809			min	-20.309	103	-0.339	103	-0.087	106	-0.064	13	0	12	-1.864	71
810	M536	1	max	0.25	75	0.054	72	0.054	64	0.015	70	0	107	0.026	103
811			min	-0.293	103	-0.077	17	-0.051	96	-0.012	106	0	12	-0.023	75
812		2	max	4.355	74	0.118	102	0.131	70	0.019	70	1.328	102	1.077	15
813			min	-48.341	15	-0.01	17	-0.119	106	-0.014	106	-1.254	74	0.135	74
814		3	max	3.277	74	0.273	15	0.031	102	0.056	13	0.386	76	0.425	100
815			min	-58.77	15	-0.084	72	-0.093	15	0.006	75	-0.744	100	-0.111	76
816		4	max	0.467	75	0.019	104	0.125	106	0.016	106	1.258	106	1.221	15
817			min	-48.951	15	-0.143	72	-0.146	70	-0.018	70	-1.317	70	0.116	104
818		5	max	19.742	71	0.312	75	0.024	96	0.014	106	0	107	1.778	103
819			min	-19.759	103	-0.325	103	-0.098	15	-0.016	70	0	12	-1.777	71
820	M537	1	max	0.256	96	0.027	106	-0.024	76	0.028	15	0.044	96	0.256	15
821			min	-1.488	15	-0.027	70	-0.289	13	0	74	-0.256	15	-0.044	96
822		2	max	0.256	96	0.013	106	-0.012	76	0.028	15	0.012	96	0.096	64
823			min	-1.488	15	-0.013	70	-0.144	13	0	74	-0.601	15	-0.109	17
824		3	max	0.256	96	0.002	107	0	99	0.028	15	0.001	96	0.081	64
825			min	-1.488	15	-0.002	71	0	100	0	74	-0.716	15	-0.22	17
826		4	max	0.256	96	0.015	104	0.144	15	0.028	15	0.012	96	0.096	64
827			min	-1.488	15	-0.015	72	0.012	104	0	74	-0.601	15	-0.109	17
828		5	max	0.256	96	0.029	104	0.289	15	0.028	15	0.044	96	0.256	15
829			min	-1.488	15	-0.029	72	0.024	104	0	74	-0.256	15	-0.044	96
830	M538	1	max	1.413	74	0.027	106	-0.024	76	0.017	13	0.243	74	0.321	72
831			min	-1.867	72	-0.027	70	-0.289	13	-0.002	76	-0.321	72	-0.243	74
832		2	max	1.423	74	0.013	106	-0.012	76	0.017	13	0.183	74	0.248	76
833			min	-1.877	72	-0.013	70	-0.144	13	-0.002	76	-0.549	15	-0.239	74
834		3	max	1.432	74	0.002	107	0	99	0.017	13	0.164	74	0.229	76
835			min	-1.886	72	-0.002	71	0	100	-0.002	76	-0.663	15	-0.279	13
836		4	max	1.441	74	0.015	104	0.144	15	0.017	13	0.186	74	0.251	76
837			min	-1.896	72	-0.015	72	0.012	104	-0.002	76	-0.549	15	-0.242	74
838		5	max	1.451	74	0.029	104	0.289	15	0.017	13	0.25	74	0.328	72
839			min	-1.905	72	-0.029	72	0.024	104	-0.002	76	-0.328	72	-0.25	74
840	M539	1	max	10.308	104	0.038	72	-0.035	75	0.016	13	2.217	104	2.294	76
841			min	-10.665	76	-0.038	104	-0.318	13	-0.004	74	-2.294	76	-2.217	104
842		2	max	10.323	104	0.018	72	-0.017	75	0.016	13	2.136	104	2.213	76
843			min	-10.68	76	-0.018	104	-0.159	13	-0.004	74	-2.316	72	-2.214	104
844		3	max	10.338	104	0.003	73	0	99	0.016	13	2.111	104	2.188	76
845			min	-10.695	76	-0.003	105	0	103	-0.004	74	-2.326	72	-2.215	104
846		4	max	10.353	104	0.022	70	0.159	15	0.016	13	2.142	104	2.219	76
847			min	-10.71	76	-0.022	106	0.017	107	-0.004	74	-2.323	72	-2.22	104
848		5	max	10.368	104	0.043	70	0.318	15	0.016	13	2.23	104	2.307	76

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
849			min	-10.725	76	-0.043	106	0.035	107	-0.004	74	-2.307	76	-2.23	104
850	M540	1	max	29.573	15	-0.038	66	0.048	74	0.005	68	0	107	-0.42	66
851			min	4.661	66	-0.38	15	-0.064	102	-0.015	13	0	12	-2.662	15
852		2	max	63.296	15	0.033	66	0.03	74	0.006	68	0.178	104	-0.066	66
853			min	2.033	66	-0.119	102	-0.044	102	-0.007	92	-0.221	72	-1.098	15
854		3	max	69.121	15	0.229	13	0.086	101	0.024	15	1.137	13	0.006	66
855			min	0.782	74	-0.028	71	-0.17	15	-0.007	103	-0.153	76	-0.482	15
856		4	max	63.138	15	0.085	72	0.046	102	0.009	100	0.186	104	-0.027	66
857			min	1.605	66	-0.068	17	-0.029	74	-0.005	68	-0.211	72	-0.896	15
858		5	max	29.24	15	0.398	15	0.068	102	0.007	92	0	107	-0.254	75
859			min	2.818	75	0.035	66	-0.045	74	-0.007	68	0	12	-2.632	15
860	M541	1	max	26.947	13	0.032	76	0.06	74	0.01	98	0	107	0.022	76
861			min	-0.247	76	-0.352	100	-0.069	102	-0.01	62	0	12	-2.425	13
862		2	max	59.583	13	0.079	19	0.044	70	0.013	15	0.12	74	-0.079	68
863			min	-1.105	76	-0.062	100	-0.042	102	-0.004	104	-0.213	102	-0.815	13
864		3	max	64.435	13	0.057	72	0.176	15	0.02	15	1.143	13	0.024	68
865			min	-2.211	76	-0.249	15	-0.077	102	-0.007	103	-0.159	76	-0.317	100
866		4	max	59.938	13	0.055	70	0.042	72	0.006	74	0.135	74	-0.084	68
867			min	-1.641	76	-0.081	19	-0.042	100	-0.006	106	-0.219	102	-0.813	13
868		5	max	27.101	13	0.375	100	0.074	72	0.008	66	0	107	0.146	76
869			min	-1.626	76	-0.049	76	-0.058	104	-0.021	15	0	12	-2.439	13
870	M542	1	max	0.474	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
871			min	-0.607	72	-0.729	103	-1.214	15	-0.061	103	-0.254	103	-0.265	71
872		2	max	0.465	104	0.728	71	-0.31	67	0.062	71	0.259	75	0.263	107
873			min	-0.598	72	-0.721	103	-1.141	15	-0.061	103	-1.445	103	-1.463	71
874		3	max	0.205	98	0.129	71	-0.047	96	0.009	71	0.369	75	0.371	107
875			min	-0.309	62	-0.129	103	-0.152	15	-0.009	103	-2.053	103	-2.074	71
876		4	max	0.918	106	0.815	103	1.252	15	0.075	103	0.293	75	0.297	107
877			min	-1.049	70	-0.822	71	0.345	67	-0.076	71	-1.632	103	-1.651	71
878		5	max	0.926	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
879			min	-1.058	70	-0.831	71	0.352	67	-0.076	71	-0.288	103	-0.299	71
880	M543	1	max	1.247	100	0.703	71	-0.302	98	0.061	71	0.043	75	0.044	107
881			min	-1.231	76	-0.702	103	-1.176	13	-0.06	103	-0.256	103	-0.256	71
882		2	max	1.238	100	0.694	71	-0.295	98	0.061	71	0.239	75	0.24	107
883			min	-1.222	76	-0.694	103	-1.103	13	-0.06	103	-1.409	103	-1.41	71
884		3	max	0.71	100	0.123	71	-0.044	96	0.01	71	0.34	75	0.34	107
885			min	-0.701	72	-0.123	103	-0.147	15	-0.01	107	-1.996	103	-1.998	71
886		4	max	0.148	102	0.783	103	1.21	13	0.071	103	0.27	75	0.27	107
887			min	-0.136	74	-0.783	71	0.328	67	-0.07	71	-1.589	103	-1.59	71
888		5	max	0.156	102	0.791	103	1.283	13	0.071	103	0.048	75	0.049	107
889			min	-0.145	74	-0.792	71	0.335	67	-0.07	71	-0.288	103	-0.289	71
890	M544	1	max	1.836	70	7.324	70	2.004	71	0.471	71	0.334	77	14.503	70
891			min	-2.625	102	-6.293	76	-1.939	77	-0.453	77	-0.339	75	-13.211	106
892		2	max	1.818	70	7.303	70	1.986	71	0.471	71	1.751	71	6.844	70
893			min	-2.607	102	-6.306	76	-1.921	77	-0.453	77	-1.688	73	-6.642	102
894		3	max	2.058	72	6.941	70	0.836	71	0.189	71	3.067	71	0.084	76
895			min	-2.842	100	-6.525	76	-0.825	77	-0.185	77	-2.972	77	-0.557	100
896		4	max	3.904	72	6.461	74	2.436	77	0.624	77	2.667	71	6.589	76
897			min	-4.685	100	-7.042	72	-2.51	71	-0.641	71	-2.592	77	-7.144	100
898		5	max	3.922	72	6.448	74	2.454	77	0.624	77	0.062	101	13.911	72
899			min	-4.703	100	-7.063	72	-2.528	71	-0.641	71	-0.061	103	-13.805	100
900	M545	1	max	1.786	57	5.704	40	0.487	71	0.104	71	0.055	77	11.371	70
901			min	-2.492	100	-4.646	76	-0.422	77	-0.092	73	-0.062	71	-10.038	106
902		2	max	1.792	72	5.682	40	0.469	71	0.104	71	0.439	71	5.409	70
903			min	-2.51	100	-4.659	76	-0.403	77	-0.092	73	-0.38	107	-5.194	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
904		3	max	2.106	72	5.319	70	0.096	71	0.017	75	0.684	71	0.036	68
905			min	-2.828	100	-4.877	76	-0.09	107	-0.019	103	-0.595	107	-0.507	100
906		4	max	2.602	72	4.826	104	0.406	107	0.1	107	0.564	71	5.146	76
907			min	-3.321	100	-5.398	72	-0.476	71	-0.122	71	-0.499	107	-5.737	100
908		5	max	2.62	72	4.813	104	0.424	107	0.1	107	0.068	101	10.748	72
909			min	-3.339	100	-5.419	72	-0.495	71	-0.122	71	-0.066	103	-10.703	100
910	M546	1	max	0.64	15	0.714	71	-0.302	67	0.06	71	0.029	75	0.048	107
911			min	-0.363	76	-0.701	103	-1.182	15	-0.059	103	-0.254	103	-0.277	71
912		2	max	0.64	15	0.705	71	-0.295	67	0.06	71	0.233	75	0.242	107
913			min	-0.354	76	-0.693	103	-1.108	15	-0.059	103	-1.406	103	-1.44	71
914		3	max	0.631	15	0.123	71	-0.044	96	0.009	71	0.337	75	0.341	107
915			min	-0.19	66	-0.122	103	-0.148	15	-0.009	103	-1.993	103	-2.033	71
916		4	max	1.113	102	0.782	103	1.216	15	0.072	103	0.264	75	0.272	107
917			min	-0.888	74	-0.795	71	0.328	96	-0.073	71	-1.586	103	-1.621	71
918		5	max	1.121	102	0.79	103	1.289	15	0.072	103	0.035	75	0.054	107
919			min	-0.897	74	-0.803	71	0.335	96	-0.073	71	-0.287	103	-0.31	71
920	M547	1	max	1.863	70	1.879	15	0.54	75	0.124	77	0	107	0.465	70
921			min	-1.881	102	0.423	97	-0.54	77	-0.124	71	0	12	-0.47	102
922		2	max	1.593	70	0.94	15	0.27	75	0.062	77	0.599	75	-0.195	66
923			min	-1.611	102	0.212	97	-0.27	77	-0.062	101	-0.599	77	-2.13	15
924		3	max	1.323	70	0.004	74	0	72	0	66	0.799	75	-0.409	66
925			min	-1.341	102	-0.004	76	0	104	0	15	-0.799	77	-2.816	15
926		4	max	1.053	70	-0.212	97	0.27	77	0.062	75	0.599	75	-0.308	66
927			min	-1.071	102	-0.94	13	-0.27	75	-0.062	103	-0.599	77	-2.122	15
928		5	max	0.783	70	-0.423	97	0.54	77	0.124	75	0	107	0.195	70
929			min	-0.8	102	-1.879	15	-0.54	75	-0.124	73	0	12	-0.2	102
930	M548	1	max	3.227	70	1.82	13	0.514	71	0.118	107	0	107	0.805	70
931			min	-2.872	106	0.404	98	-0.514	73	-0.118	71	0	12	-0.717	106
932		2	max	2.97	70	0.91	13	0.257	71	0.059	107	0.57	71	0.065	66
933			min	-2.615	106	0.202	99	-0.257	73	-0.059	71	-0.57	73	-1.852	15
934		3	max	2.712	70	0.004	74	0	72	0.001	100	0.76	71	-0.141	66
935			min	-2.357	106	-0.004	76	0	100	-0.002	102	-0.76	73	-2.516	15
936		4	max	2.455	70	-0.202	98	0.257	73	0.059	105	0.57	71	-0.048	66
937			min	-2.1	106	-0.91	13	-0.257	71	-0.059	73	-0.57	73	-1.843	15
938		5	max	2.197	70	-0.404	99	0.514	73	0.117	105	0	107	0.548	70
939			min	-1.842	106	-1.82	13	-0.514	71	-0.117	73	0	12	-0.46	106
940	M549	1	max	4.482	100	5.74	70	0.424	101	0.082	103	0.807	71	11.202	70
941			min	-3.566	76	-4.501	76	-0.429	103	-0.079	101	-0.778	73	-10.101	106
942		2	max	4.328	100	5.429	70	0.22	101	0.035	103	1.113	71	5.299	70
943			min	-3.41	76	-4.681	76	-0.22	103	-0.033	105	-1.085	73	-5.33	102
944		3	max	4.172	100	5.116	70	0.064	101	0.017	74	1.263	71	-0.068	66
945			min	-3.255	76	-4.865	76	-0.064	103	-0.016	76	-1.234	73	-0.574	15
946		4	max	4.017	100	4.837	74	0.092	103	0.036	71	1.245	71	5.065	76
947			min	-3.1	76	-5.165	72	-0.092	105	-0.034	107	-1.215	73	-5.579	100
948		5	max	3.861	100	4.647	74	0.312	103	0.084	101	1.073	71	10.621	72
949			min	-2.945	76	-5.485	72	-0.307	101	-0.084	103	-1.04	77	-10.447	100
950	M550	1	max	4.302	100	4.622	70	0.351	101	0.069	103	0.165	71	8.86	70
951			min	-3.272	76	-3.36	76	-0.352	103	-0.074	101	-0.139	107	-7.721	106
952		2	max	4.148	100	4.31	70	0.176	101	0.031	107	0.436	71	4.128	70
953			min	-3.116	76	-3.542	76	-0.176	103	-0.035	101	-0.427	103	-4.142	102
954		3	max	3.993	100	3.997	100	0.021	101	0.005	96	0.541	71	-0.065	66
955			min	-2.961	76	-3.727	76	-0.021	103	-0.011	15	-0.533	103	-0.568	15
956		4	max	3.838	100	3.708	74	0.134	77	0.034	45	0.478	71	3.873	76
957			min	-2.806	76	-4.027	72	-0.135	101	-0.038	103	-0.471	103	-4.409	100
958		5	max	3.682	100	3.519	74	0.314	103	0.072	101	0.25	71	8.238	72

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
959			min	-2.652	76	-4.346	72	-0.313	101	-0.078	103	-0.225	103	-8.109	100
960	M551	1	max	3.848	74	1.819	13	0.514	75	0.118	73	0	107	0.96	74
961			min	-3.974	102	0.403	98	-0.514	77	-0.117	75	0	12	-0.992	102
962		2	max	3.59	74	0.909	13	0.257	75	0.059	73	0.57	75	0.176	74
963			min	-3.716	102	0.202	98	-0.257	77	-0.059	75	-0.57	77	-2.162	15
964		3	max	3.333	74	0.004	74	0	70	0.002	94	0.76	75	-0.088	66
965			min	-3.459	102	-0.004	76	0	106	-0.001	96	-0.76	77	-2.825	15
966		4	max	3.075	74	-0.202	98	0.257	77	0.059	71	0.57	75	0.048	74
967			min	-3.201	102	-0.909	13	-0.257	75	-0.059	77	-0.57	77	-2.153	15
968		5	max	2.818	74	-0.404	98	0.514	77	0.118	71	0	107	0.703	74
969			min	-2.943	102	-1.819	13	-0.514	75	-0.117	77	0	12	-0.735	102
970	M552	1	max	13.112	15	0.686	72	0.66	71	0.478	71	0.109	71	-0.078	96
971			min	1.88	99	-0.439	104	-0.64	103	-0.475	103	-0.106	103	-0.975	15
972		2	max	13.031	15	0.675	72	0.648	71	0.478	71	0.841	71	0.344	104
973			min	1.871	99	-0.427	104	-0.629	103	-0.475	103	-0.816	103	-1.4	15
974		3	max	11.934	15	0.339	15	0.233	75	0.027	71	1.127	71	0.751	104
975			min	1.706	107	-0.086	96	-0.233	103	-0.026	107	-1.102	103	-1.069	72
976		4	max	10.038	15	0.96	13	0.68	103	0.226	103	1.114	71	0.756	104
977			min	1.121	107	-0.317	76	-0.683	71	-0.225	71	-1.092	103	-0.909	72
978		5	max	9.311	15	0.983	13	0.906	103	0.429	103	0.154	71	-0.003	104
979			min	0.983	107	-0.52	76	-0.928	71	-0.429	71	-0.15	103	-0.494	15
980	M553	1	max	10.976	14	0.285	74	0.268	103	0.016	103	0.042	103	-0.1	98
981			min	1.41	107	-0.35	102	-0.28	71	-0.016	71	-0.044	71	-0.736	13
982		2	max	10.895	14	0.274	74	0.256	103	0.016	103	0.335	103	0.229	106
983			min	1.402	107	-0.338	102	-0.269	71	-0.016	71	-0.351	71	-0.612	70
984		3	max	10.815	14	0.262	74	0.245	103	0.016	103	0.615	103	0.581	106
985			min	1.394	107	-0.327	102	-0.257	71	-0.016	71	-0.645	71	-0.896	70
986		4	max	9.462	14	0.809	102	0.642	71	0.045	71	0.793	103	0.84	106
987			min	0.881	107	-0.654	74	-0.611	103	-0.043	103	-0.832	71	-1.014	70
988		5	max	9.381	14	0.82	102	0.653	71	0.045	71	0.103	103	-0.023	106
989			min	0.873	107	-0.666	74	-0.622	103	-0.043	103	-0.108	71	-0.588	13
990	M554	1	max	4.276	13	0.332	70	0.273	103	0.017	103	0.043	103	-0.036	98
991			min	0.889	98	-0.292	106	-0.273	71	-0.016	71	-0.043	71	-0.301	13
992		2	max	4.196	13	0.32	70	0.262	103	0.017	103	0.342	103	0.277	106
993			min	0.88	98	-0.28	106	-0.262	71	-0.016	71	-0.342	71	-0.572	70
994		3	max	4.115	13	0.308	70	0.25	103	0.017	103	0.629	103	0.584	106
995			min	0.871	98	-0.269	106	-0.25	71	-0.016	71	-0.628	71	-0.923	70
996		4	max	2.717	13	0.667	106	0.624	71	0.044	71	0.81	103	0.814	106
997			min	0.513	97	-0.769	70	-0.624	103	-0.043	103	-0.81	71	-1.085	70
998		5	max	2.637	13	0.679	106	0.636	71	0.044	71	0.105	103	0.061	106
999			min	0.504	97	-0.78	70	-0.636	103	-0.043	103	-0.105	71	-0.218	70
1000	M555	1	max	10.363	13	0.257	103	0.07	102	0.001	98	0.009	102	-0.057	75
1001			min	1.379	75	-0.256	71	-0.069	70	-0.001	62	-0.009	70	-0.721	13
1002		2	max	10.282	13	0.246	103	0.059	102	0.001	98	0.081	102	0.22	75
1003			min	1.371	75	-0.244	71	-0.057	70	-0.001	62	-0.079	70	-0.725	16
1004		3	max	10.202	13	0.234	103	0.047	102	0.001	98	0.141	102	0.483	75
1005			min	1.363	75	-0.233	71	-0.046	70	-0.001	62	-0.137	70	-0.943	103
1006		4	max	8.847	13	0.577	71	0.122	70	0.011	74	0.17	102	0.682	75
1007			min	0.853	75	-0.587	103	-0.126	102	-0.011	102	-0.165	70	-1.051	103
1008		5	max	8.767	13	0.589	71	0.134	70	0.011	74	0.022	102	0.037	75
1009			min	0.845	75	-0.598	103	-0.138	102	-0.011	102	-0.021	70	-0.613	13
1010	M556	1	max	6.59	15	0.65	72	0.557	71	0.381	71	0.092	71	-0.027	96
1011			min	1.032	96	-0.368	104	-0.557	103	-0.381	103	-0.092	103	-0.533	15
1012		2	max	6.51	15	0.639	72	0.545	71	0.381	71	0.709	71	0.351	104
1013			min	1.023	96	-0.356	104	-0.546	103	-0.381	103	-0.709	103	-1.034	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1014		3	max	5.601	15	0.429	15	0.235	71	0.022	71	0.993	71	0.693	104
1015			min	0.968	97	-0.071	104	-0.235	103	-0.022	107	-0.993	103	-1.026	72
1016		4	max	3.797	15	0.601	100	0.666	103	0.188	103	1.022	71	0.714	104
1017			min	0.601	97	-0.453	76	-0.666	71	-0.187	71	-1.022	103	-0.967	72
1018		5	max	3.197	15	0.763	100	0.84	103	0.347	103	0.139	71	0.067	104
1019			min	0.549	96	-0.614	76	-0.84	71	-0.346	71	-0.139	103	-0.19	72
1020	M557	1	max	12.3	15	0.395	72	0.243	71	0.014	71	0.04	71	-0.089	74
1021			min	1.731	75	-0.389	100	-0.252	103	-0.015	103	-0.041	103	-0.859	15
1022		2	max	12.22	15	0.384	72	0.232	71	0.014	71	0.306	71	0.334	104
1023			min	1.723	75	-0.377	100	-0.241	103	-0.015	103	-0.317	103	-0.886	15
1024		3	max	12.139	15	0.361	72	0.205	71	0.013	71	0.543	71	0.743	104
1025			min	1.715	75	-0.363	100	-0.206	103	-0.014	103	-0.555	103	-1.26	72
1026		4	max	10.891	15	0.896	100	0.513	103	0.036	103	0.685	71	1.035	104
1027			min	1.259	75	-0.898	72	-0.514	71	-0.036	71	-0.696	103	-1.461	72
1028		5	max	10.81	15	0.911	100	0.554	103	0.038	103	0.09	71	0.03	74
1029			min	1.251	75	-0.916	72	-0.543	71	-0.038	71	-0.092	103	-0.755	15
1030	M558	1	max	19.726	15	0.036	68	0.019	71	0.003	72	0	73	-0.145	99
1031			min	3.123	99	-0.037	92	-0.019	107	-0.003	104	0	105	-0.917	15
1032		2	max	19.647	15	0.018	68	0.01	71	0.003	72	0.016	71	-0.119	96
1033			min	3.115	99	-0.018	92	-0.01	107	-0.003	104	-0.016	107	-0.916	15
1034		3	max	19.569	15	0	74	0	73	0.003	72	0.022	71	-0.109	96
1035			min	3.108	99	-0.003	15	0	105	-0.003	104	-0.022	107	-0.913	15
1036		4	max	19.49	15	0.018	66	0.01	73	0.003	72	0.016	71	-0.119	96
1037			min	3.1	99	-0.018	94	-0.01	105	-0.003	104	-0.016	107	-0.909	15
1038		5	max	19.412	15	0.036	66	0.019	73	0.003	72	0	73	-0.144	99
1039			min	3.092	99	-0.037	94	-0.019	105	-0.003	104	0	105	-0.903	15
1040	M559	1	max	17.61	13	0.036	66	0.019	107	0.003	76	0	105	-0.141	99
1041			min	3.036	99	-0.037	94	-0.019	71	-0.003	104	0	73	-0.818	13
1042		2	max	17.532	13	0.018	66	0.01	107	0.003	76	0.016	107	-0.113	98
1043			min	3.028	99	-0.018	94	-0.01	71	-0.003	104	-0.016	71	-0.817	13
1044		3	max	17.453	13	0	76	0	105	0.003	76	0.022	107	-0.103	98
1045			min	3.02	99	-0.003	13	0	73	-0.003	104	-0.022	71	-0.815	13
1046		4	max	17.374	13	0.018	68	0.01	105	0.003	76	0.016	107	-0.113	98
1047			min	3.013	99	-0.018	92	-0.01	73	-0.003	104	-0.016	71	-0.811	13
1048		5	max	17.296	13	0.036	68	0.019	105	0.003	76	0	105	-0.14	99
1049			min	3.005	99	-0.037	92	-0.019	73	-0.003	104	0	73	-0.805	13
1050	M560	1	max	16.935	13	0.036	66	0.019	107	0.003	104	0	105	-0.132	68
1051			min	2.831	68	-0.037	94	-0.019	71	-0.003	72	0	73	-0.787	13
1052		2	max	16.856	13	0.018	66	0.01	107	0.003	104	0.016	107	-0.101	68
1053			min	2.823	68	-0.018	94	-0.01	71	-0.003	72	-0.016	71	-0.786	13
1054		3	max	16.778	13	0	76	0	105	0.003	104	0.022	107	-0.09	68
1055			min	2.815	68	-0.003	13	0	73	-0.003	72	-0.022	71	-0.783	13
1056		4	max	16.699	13	0.018	68	0.01	105	0.003	104	0.016	107	-0.1	68
1057			min	2.808	68	-0.018	92	-0.01	73	-0.003	72	-0.016	71	-0.779	13
1058		5	max	16.621	13	0.036	68	0.019	105	0.003	104	0	105	-0.13	68
1059			min	2.8	68	-0.037	92	-0.019	73	-0.003	72	0	73	-0.773	13
1060	M561	1	max	20.048	15	0.46	15	0.24	101	0.229	101	0.039	101	-0.115	66
1061			min	3.112	66	-0.185	66	-0.247	103	-0.231	73	-0.04	103	-1.009	15
1062		2	max	19.97	15	0.458	15	0.231	101	0.229	101	0.303	101	0.082	66
1063			min	3.104	66	-0.167	66	-0.237	103	-0.231	73	-0.312	103	-1.522	15
1064		3	max	19.335	15	0.311	15	0.016	75	0.006	105	0.334	101	0.169	66
1065			min	3.067	66	-0.028	66	-0.015	77	-0.007	73	-0.342	103	-1.181	15
1066		4	max	18.898	15	0.211	13	0.099	103	0.094	107	0.248	101	0.105	66
1067			min	3.03	66	-0.077	98	-0.097	101	-0.095	71	-0.255	103	-1.061	15
1068		5	max	18.46	15	0.311	62	0.233	103	0.196	103	0.037	101	-0.099	66

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1069			min	2.991	66	-0.22	98	-0.227	101	-0.196	71	-0.038	103	-0.842	15
1070	M562	1	max	7.842	72	0.03	71	-0.021	44	0.004	70	1.687	72	1.622	104
1071			min	-7.543	104	-0.03	107	-0.189	15	-0.003	76	-1.622	104	-1.687	72
1072		2	max	7.857	72	0.015	71	-0.01	44	0.004	70	1.672	76	1.612	104
1073			min	-7.558	104	-0.015	107	-0.095	15	-0.003	76	-1.639	104	-1.713	72
1074		3	max	7.872	72	0.004	72	0	44	0.004	70	1.671	76	1.61	104
1075			min	-7.573	104	-0.004	104	0	102	-0.003	76	-1.647	104	-1.724	72
1076		4	max	7.887	72	0.015	73	0.095	13	0.004	70	1.679	76	1.618	104
1077			min	-7.588	104	-0.015	105	0.01	47	-0.003	76	-1.646	104	-1.72	72
1078		5	max	7.902	72	0.03	73	0.189	13	0.004	70	1.699	72	1.635	104
1079			min	-7.603	104	-0.03	105	0.021	47	-0.003	76	-1.635	104	-1.699	72
1080	M563	1	max	6.89	72	0.03	71	-0.021	106	0.001	76	1.482	72	1.405	104
1081			min	-6.532	104	-0.03	103	-0.189	16	-0.002	15	-1.405	104	-1.482	72
1082		2	max	6.905	72	0.015	71	-0.01	106	0.001	76	1.463	76	1.394	104
1083			min	-6.547	104	-0.015	103	-0.095	16	-0.002	15	-1.422	104	-1.508	72
1084		3	max	6.92	72	0.004	76	0	40	0.001	76	1.461	76	1.393	104
1085			min	-6.562	104	-0.004	104	0	72	-0.002	15	-1.43	104	-1.519	72
1086		4	max	6.935	72	0.015	73	0.095	15	0.001	76	1.469	76	1.401	104
1087			min	-6.577	104	-0.015	101	0.01	44	-0.002	15	-1.428	104	-1.515	72
1088		5	max	6.95	72	0.03	73	0.189	15	0.001	76	1.495	72	1.418	104
1089			min	-6.592	104	-0.03	101	0.021	44	-0.002	15	-1.418	104	-1.495	72
1090	M564	1	max	0.772	15	0.019	103	-0.013	46	0.001	100	0.133	15	0.06	104
1091			min	-0.347	104	-0.019	75	-0.16	13	-0.001	72	-0.06	104	-0.133	15
1092		2	max	0.772	15	0.009	103	-0.007	46	0.001	100	0.113	72	0.049	104
1093			min	-0.338	104	-0.009	75	-0.08	13	-0.001	72	-0.067	104	-0.239	15
1094		3	max	0.772	15	0.002	104	0	70	0.001	100	0.107	72	0.045	104
1095			min	-0.328	104	-0.002	76	0	42	-0.001	72	-0.068	104	-0.274	15
1096		4	max	0.772	15	0.009	101	0.08	15	0.001	100	0.11	72	0.046	104
1097			min	-0.319	104	-0.009	77	0.007	47	-0.001	72	-0.064	104	-0.239	15
1098		5	max	0.772	15	0.019	101	0.16	15	0.001	100	0.133	15	0.053	104
1099			min	-0.309	104	-0.019	77	0.013	47	-0.001	72	-0.053	104	-0.133	15
1100	M565	1	max	1.366	74	0.029	70	-0.024	76	0.007	13	0.235	74	0.253	106
1101			min	-1.472	106	-0.029	106	-0.289	13	-0.001	76	-0.253	106	-0.235	74
1102		2	max	1.375	74	0.015	70	-0.012	76	0.007	13	0.242	74	0.261	106
1103			min	-1.482	106	-0.015	106	-0.144	13	-0.001	76	-0.336	102	-0.395	13
1104		3	max	1.385	74	0.002	71	0	76	0.007	13	0.246	74	0.264	106
1105			min	-1.491	106	-0.002	107	0	100	-0.001	76	-0.423	15	-0.51	13
1106		4	max	1.394	74	0.013	72	0.144	15	0.007	13	0.246	74	0.264	106
1107			min	-1.501	106	-0.013	104	0.012	104	-0.001	76	-0.339	102	-0.395	13
1108		5	max	1.404	74	0.027	72	0.289	15	0.007	13	0.242	74	0.26	106
1109			min	-1.51	106	-0.027	104	0.024	104	-0.001	76	-0.26	106	-0.242	74
1110	M566	1	max	1.185	106	0.019	103	-0.013	44	0	64	0.204	106	0.185	74
1111			min	-1.075	74	-0.019	75	-0.16	16	0	96	-0.185	74	-0.204	106
1112		2	max	1.176	106	0.009	103	-0.007	44	0	64	0.194	106	0.175	74
1113			min	-1.066	74	-0.009	75	-0.08	16	0	96	-0.192	74	-0.215	102
1114		3	max	1.166	106	0.002	104	0	44	0	64	0.189	106	0.17	74
1115			min	-1.056	74	-0.002	76	0	70	0	96	-0.193	74	-0.218	102
1116		4	max	1.157	106	0.009	101	0.08	14	0	64	0.19	106	0.171	74
1117			min	-1.047	74	-0.009	73	0.007	107	0	96	-0.189	74	-0.212	102
1118		5	max	1.147	106	0.019	101	0.16	14	0	64	0.197	106	0.179	74
1119			min	-1.038	74	-0.019	73	0.013	107	0	96	-0.179	74	-0.197	106
1120	M567	1	max	2.755	74	0.029	70	-0.024	76	0.004	72	0.474	74	0.478	106
1121			min	-2.778	106	-0.029	106	-0.289	13	-0.003	104	-0.478	106	-0.474	74
1122		2	max	2.764	74	0.015	70	-0.012	76	0.004	72	0.481	74	0.485	106
1123			min	-2.787	106	-0.015	106	-0.144	13	-0.003	104	-0.548	102	-0.538	70

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1124		3	max	2.774	74	0.002	71	0	76	0.004	72	0.485	74	0.489	106
1125			min	-2.796	106	-0.002	107	0	100	-0.003	104	-0.576	102	-0.567	70
1126		4	max	2.783	74	0.013	72	0.144	15	0.004	72	0.485	74	0.488	106
1127			min	-2.806	106	-0.013	104	0.012	104	-0.003	104	-0.551	102	-0.541	70
1128		5	max	2.793	74	0.027	72	0.289	15	0.004	72	0.48	74	0.484	106
1129			min	-2.815	106	-0.027	104	0.024	104	-0.003	104	-0.484	106	-0.48	74
1130	M568	1	max	12.206	104	0.043	70	-0.035	107	0.006	74	2.625	104	2.718	76
1131			min	-12.638	76	-0.043	102	-0.318	13	-0.006	102	-2.718	76	-2.625	104
1132		2	max	12.221	104	0.022	70	-0.017	107	0.006	74	2.635	104	2.728	76
1133			min	-12.653	76	-0.022	102	-0.159	13	-0.006	102	-2.828	72	-2.713	104
1134		3	max	12.236	104	0.003	71	0	103	0.006	74	2.64	104	2.733	76
1135			min	-12.668	76	-0.003	107	0	12	-0.006	102	-2.868	72	-2.744	104
1136		4	max	12.251	104	0.018	72	0.159	15	0.006	74	2.641	104	2.734	76
1137			min	-12.683	76	-0.018	104	0.017	75	-0.006	102	-2.835	72	-2.719	104
1138		5	max	12.266	104	0.038	72	0.318	15	0.006	74	2.638	104	2.731	76
1139			min	-12.698	76	-0.038	104	0.035	75	-0.006	102	-2.731	76	-2.638	104
1140	M569	1	max	5.084	14	0.036	66	0.019	107	0.001	13	0	105	0.003	107
1141			min	-0.065	107	-0.037	94	-0.019	71	0	104	0	73	-0.236	14
1142		2	max	5.005	14	0.018	66	0.01	107	0.001	13	0.016	107	0.003	107
1143			min	-0.072	107	-0.018	94	-0.01	71	0	104	-0.016	71	-0.235	13
1144		3	max	4.927	14	0	76	0	105	0.001	13	0.022	107	0.004	98
1145			min	-0.079	107	-0.003	13	0	73	0	104	-0.022	71	-0.232	13
1146		4	max	4.848	14	0.018	68	0.01	105	0.001	13	0.016	107	0.004	107
1147			min	-0.085	107	-0.018	92	-0.01	73	0	104	-0.016	71	-0.228	13
1148		5	max	4.77	14	0.036	68	0.019	105	0.001	13	0	105	0.004	107
1149			min	-0.092	107	-0.037	92	-0.019	73	0	104	0	73	-0.222	14
1150	M570	1	max	4.51	13	0.036	66	0.019	107	0	98	0	105	0.005	75
1151			min	-0.113	75	-0.037	94	-0.019	71	-0.001	13	0	73	-0.209	13
1152		2	max	4.431	13	0.018	66	0.01	107	0	98	0.016	107	0.006	75
1153			min	-0.119	75	-0.018	94	-0.01	71	-0.001	13	-0.016	71	-0.208	13
1154		3	max	4.352	13	0	76	0	105	0	98	0.022	107	0.015	68
1155			min	-0.126	75	-0.003	13	0	73	-0.001	13	-0.022	71	-0.206	13
1156		4	max	4.274	13	0.018	68	0.01	105	0	98	0.016	107	0.006	75
1157			min	-0.133	75	-0.018	92	-0.01	73	-0.001	13	-0.016	71	-0.201	13
1158		5	max	4.195	13	0.036	68	0.019	105	0	98	0	105	0.006	75
1159			min	-0.14	75	-0.037	92	-0.019	73	-0.001	13	0	73	-0.196	13
1160	M571	1	max	4.909	15	0.036	98	0.019	71	0.001	13	0	73	-0.001	107
1161			min	0.025	107	-0.037	62	-0.019	107	0	104	0	105	-0.228	15
1162		2	max	4.83	15	0.018	98	0.01	71	0.001	13	0.016	71	-0.001	107
1163			min	0.019	107	-0.018	62	-0.01	107	0	104	-0.016	107	-0.227	15
1164		3	max	4.752	15	0	74	0	73	0.001	13	0.022	71	0.007	96
1165			min	0.012	107	-0.003	15	0	105	0	104	-0.022	107	-0.224	15
1166		4	max	4.673	15	0.018	96	0.01	73	0.001	13	0.016	71	0	107
1167			min	0.005	107	-0.018	64	-0.01	105	0	104	-0.016	107	-0.22	15
1168		5	max	4.594	15	0.036	96	0.019	73	0.001	13	0	73	0	107
1169			min	-0.002	107	-0.037	64	-0.019	105	0	104	0	105	-0.214	15
1170	M572	1	max	6.447	15	0.036	98	0.019	71	0	107	0	73	-0.013	75
1171			min	0.283	75	-0.037	92	-0.019	107	-0.001	13	0	105	-0.299	15
1172		2	max	6.368	15	0.018	98	0.01	71	0	107	0.016	71	-0.002	66
1173			min	0.276	75	-0.018	92	-0.01	107	-0.001	13	-0.016	107	-0.298	15
1174		3	max	6.29	15	0	74	0	73	0	107	0.022	71	0.009	66
1175			min	0.269	75	-0.003	15	0	105	-0.001	13	-0.022	107	-0.296	15
1176		4	max	6.211	15	0.018	66	0.01	73	0	107	0.016	71	-0.001	66
1177			min	0.263	75	-0.018	64	-0.01	105	-0.001	13	-0.016	107	-0.291	15
1178		5	max	6.132	15	0.036	66	0.019	73	0	107	0	73	-0.012	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1179			min	0.256	75	-0.037	64	-0.019	105	-0.001	13	0	105	-0.286	15
1180	M573	1	max	1.977	106	0.293	15	0.028	46	0.002	100	0.139	70	0.126	106
1181			min	-2.179	70	0.023	77	-0.028	40	-0.003	19	-0.126	106	-0.139	70
1182		2	max	1.987	106	0.147	15	0.014	46	0.002	100	0.411	13	0.132	106
1183			min	-2.189	70	0.011	77	-0.014	40	-0.003	19	-0.066	98	-0.411	13
1184		3	max	1.996	106	0.001	105	0	46	0.002	100	0.528	13	0.135	106
1185			min	-2.198	70	-0.001	73	0	40	-0.003	19	-0.056	98	-0.528	13
1186		4	max	2.005	106	-0.011	105	0.014	100	0.002	100	0.411	13	0.133	106
1187			min	-2.208	70	-0.147	13	-0.014	72	-0.003	19	-0.066	98	-0.411	13
1188		5	max	2.015	106	-0.023	105	0.028	100	0.002	100	0.141	70	0.128	106
1189			min	-2.217	70	-0.293	13	-0.028	72	-0.003	19	-0.128	106	-0.141	70
1190	M574	1	max	2.791	106	0.293	15	0.028	76	0	68	0.217	100	0.178	106
1191			min	-3.414	100	0.023	77	-0.028	70	-0.007	13	-0.178	106	-0.217	100
1192		2	max	2.8	106	0.147	15	0.014	76	0	68	0.456	13	0.184	106
1193			min	-3.424	100	0.011	77	-0.014	70	-0.007	13	-0.116	106	-0.456	13
1194		3	max	2.81	106	0.001	105	0	76	0	68	0.572	13	0.186	106
1195			min	-3.433	100	-0.001	73	0	70	-0.007	13	-0.096	106	-0.572	13
1196		4	max	2.819	106	-0.011	105	0.014	40	0	68	0.456	13	0.185	106
1197			min	-3.442	100	-0.147	13	-0.014	106	-0.007	13	-0.117	106	-0.456	13
1198		5	max	2.829	106	-0.023	105	0.028	40	0	68	0.22	100	0.18	106
1199			min	-3.452	100	-0.293	13	-0.028	106	-0.007	13	-0.18	106	-0.22	100
1200	M575	1	max	6.582	106	0.327	13	0.041	72	0	98	0.567	70	0.524	106
1201			min	-7.129	70	0.034	77	-0.041	104	-0.012	13	-0.524	106	-0.567	70
1202		2	max	6.597	106	0.163	13	0.02	72	0	98	0.589	70	0.531	106
1203			min	-7.144	70	0.016	77	-0.02	104	-0.012	13	-0.441	106	-0.679	70
1204		3	max	6.612	106	0.001	105	0	72	0	98	0.621	13	0.534	106
1205			min	-7.159	70	-0.001	73	0	104	-0.012	13	-0.414	106	-0.717	70
1206		4	max	6.627	106	-0.016	105	0.02	40	0	98	0.591	70	0.533	106
1207			min	-7.174	70	-0.163	15	-0.02	42	-0.012	13	-0.443	106	-0.682	70
1208		5	max	6.642	106	-0.034	105	0.041	40	0	98	0.572	70	0.528	106
1209			min	-7.189	70	-0.327	15	-0.041	42	-0.012	13	-0.528	106	-0.572	70
1210	M576	1	max	7.607	76	0.327	13	0.041	106	0.003	68	0.676	100	0.605	76
1211			min	-8.494	100	0.034	77	-0.041	40	-0.016	13	-0.605	76	-0.676	100
1212		2	max	7.622	76	0.163	13	0.02	106	0.003	68	0.697	100	0.613	76
1213			min	-8.509	100	0.016	77	-0.02	40	-0.016	13	-0.522	76	-0.788	100
1214		3	max	7.637	76	0.001	105	0	106	0.003	68	0.705	100	0.616	76
1215			min	-8.524	100	-0.001	73	0	105	-0.016	13	-0.495	76	-0.826	100
1216		4	max	7.652	76	-0.016	105	0.02	70	0.003	68	0.7	100	0.615	76
1217			min	-8.539	100	-0.163	15	-0.02	72	-0.016	13	-0.525	76	-0.79	100
1218		5	max	7.667	76	-0.034	105	0.041	70	0.003	68	0.68	100	0.61	76
1219			min	-8.554	100	-0.327	15	-0.041	72	-0.016	13	-0.61	76	-0.68	100
1220	M577	1	max	2.794	102	0.293	15	0.028	70	0.006	15	0.156	74	0.178	102
1221			min	-2.456	74	0.023	105	-0.028	76	-0.001	74	-0.178	102	-0.156	74
1222		2	max	2.803	102	0.147	15	0.014	70	0.006	15	0.315	13	0.112	76
1223			min	-2.466	74	0.011	105	-0.014	76	-0.001	74	-0.179	76	-0.315	13
1224		3	max	2.813	102	0.001	73	0	70	0.006	15	0.432	13	0.091	76
1225			min	-2.475	74	-0.001	101	0	40	-0.001	74	-0.182	76	-0.432	13
1226		4	max	2.822	102	-0.011	77	0.014	46	0.006	15	0.315	13	0.113	76
1227			min	-2.485	74	-0.147	13	-0.014	40	-0.001	74	-0.181	76	-0.315	13
1228		5	max	2.831	102	-0.023	77	0.028	46	0.006	15	0.159	74	0.18	102
1229			min	-2.494	74	-0.293	13	-0.028	40	-0.001	74	-0.18	102	-0.159	74
1230	M578	1	max	3.536	76	0.293	15	0.028	74	0.011	13	0.231	100	0.225	76
1231			min	-3.635	100	0.023	105	-0.028	106	0	77	-0.225	76	-0.231	100
1232		2	max	3.546	76	0.147	15	0.014	74	0.011	13	0.361	13	0.164	76
1233			min	-3.644	100	0.011	105	-0.014	106	0	77	-0.231	76	-0.361	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1234		3	max	3.555	76	0.001	73	0	74	0.011	13	0.478	13	0.143	76
1235			min	-3.654	100	-0.001	105	0	106	0	77	-0.234	76	-0.478	13
1236		4	max	3.565	76	-0.011	77	0.014	46	0.011	13	0.361	13	0.165	76
1237			min	-3.663	100	-0.147	13	-0.014	70	0	77	-0.233	76	-0.361	13
1238		5	max	3.574	76	-0.023	77	0.028	46	0.011	13	0.234	100	0.227	76
1239			min	-3.673	100	-0.293	13	-0.028	70	0	77	-0.227	76	-0.234	100
1240	M579	1	max	7.676	106	0.327	13	0.041	104	0.013	13	0.655	70	0.611	106
1241			min	-8.228	70	0.034	105	-0.041	102	0	98	-0.611	106	-0.655	70
1242		2	max	7.691	106	0.163	13	0.02	104	0.013	13	0.767	70	0.528	106
1243			min	-8.243	70	0.016	105	-0.02	102	0	98	-0.618	106	-0.676	70
1244		3	max	7.707	106	0.001	73	0	104	0.013	13	0.805	70	0.501	106
1245			min	-8.258	70	-0.001	105	0	102	0	98	-0.621	106	-0.684	70
1246		4	max	7.722	106	-0.016	77	0.02	106	0.013	13	0.769	70	0.53	106
1247			min	-8.273	70	-0.163	15	-0.02	100	0	98	-0.62	106	-0.679	70
1248		5	max	7.737	106	-0.034	77	0.041	106	0.013	13	0.659	70	0.615	106
1249			min	-8.288	70	-0.327	15	-0.041	100	0	98	-0.615	106	-0.659	70
1250	M580	1	max	8.5	76	0.327	13	0.041	40	0.006	92	0.73	100	0.676	76
1251			min	-9.17	100	0.034	105	-0.041	76	-0.005	68	-0.676	76	-0.73	100
1252		2	max	8.515	76	0.163	13	0.02	40	0.006	92	0.842	100	0.593	76
1253			min	-9.186	100	0.016	105	-0.02	76	-0.005	68	-0.684	76	-0.751	100
1254		3	max	8.53	76	0.001	73	0	40	0.006	92	0.88	100	0.566	76
1255			min	-9.201	100	-0.001	105	0	74	-0.005	68	-0.687	76	-0.759	100
1256		4	max	8.545	76	-0.016	77	0.02	72	0.006	92	0.844	100	0.596	76
1257			min	-9.216	100	-0.163	15	-0.02	74	-0.005	68	-0.686	76	-0.754	100
1258		5	max	8.56	76	-0.034	77	0.041	72	0.006	92	0.734	100	0.681	76
1259			min	-9.231	100	-0.327	15	-0.041	74	-0.005	68	-0.681	76	-0.734	100
1260	M581	1	max	5.209	70	0.194	15	0.03	71	0.002	94	0.386	106	0.414	70
1261			min	-4.853	106	0.019	76	-0.03	107	-0.002	96	-0.414	70	-0.386	106
1262		2	max	5.194	70	0.097	15	0.015	71	0.002	94	0.404	102	0.39	70
1263			min	-4.838	106	0.009	76	-0.015	107	-0.002	96	-0.39	70	-0.404	102
1264		3	max	5.179	70	0.001	104	0	76	0.002	94	0.411	102	0.384	74
1265			min	-4.823	106	-0.001	72	0	74	-0.002	96	-0.384	74	-0.411	102
1266		4	max	5.164	70	-0.009	104	0.015	73	0.002	94	0.402	102	0.387	70
1267			min	-4.808	106	-0.097	13	-0.015	45	-0.002	96	-0.387	70	-0.402	102
1268		5	max	5.149	70	-0.019	104	0.03	73	0.002	94	0.381	106	0.41	70
1269			min	-4.793	106	-0.194	13	-0.03	45	-0.002	96	-0.41	70	-0.381	106
1270	M582	1	max	1.702	74	0.163	15	0.019	41	0.001	102	0.113	102	0.108	74
1271			min	-1.777	102	0.012	106	-0.019	103	-0.001	100	-0.108	74	-0.113	102
1272		2	max	1.692	74	0.081	15	0.009	41	0.001	102	0.127	102	0.099	74
1273			min	-1.767	102	0.006	106	-0.009	103	-0.001	100	-0.099	74	-0.127	102
1274		3	max	1.683	74	0.001	74	0	72	0.001	102	0.161	15	0.096	74
1275			min	-1.758	102	-0.001	102	0	100	-0.001	100	-0.096	74	-0.161	15
1276		4	max	1.673	74	-0.006	74	0.009	43	0.001	102	0.126	102	0.098	74
1277			min	-1.749	102	-0.081	13	-0.009	101	-0.001	100	-0.098	74	-0.126	102
1278		5	max	1.664	74	-0.012	74	0.019	43	0.001	102	0.111	102	0.106	74
1279			min	-1.739	102	-0.163	13	-0.019	101	-0.001	100	-0.106	74	-0.111	102
1280	M583	1	max	1.578	70	0.163	15	0.019	45	0.001	100	0.085	106	0.1	70
1281			min	-1.341	106	0.012	106	-0.019	43	-0.001	102	-0.1	70	-0.085	106
1282		2	max	1.569	70	0.081	15	0.009	45	0.001	100	0.097	102	0.086	74
1283			min	-1.331	106	0.006	106	-0.009	43	-0.001	102	-0.086	74	-0.097	102
1284		3	max	1.559	70	0.001	74	0	76	0.001	100	0.108	15	0.082	74
1285			min	-1.322	106	-0.001	102	0	70	-0.001	102	-0.082	74	-0.108	15
1286		4	max	1.55	70	-0.006	74	0.009	73	0.001	100	0.096	102	0.085	74
1287			min	-1.312	106	-0.081	13	-0.009	71	-0.001	102	-0.085	74	-0.096	102
1288		5	max	1.54	70	-0.012	74	0.019	73	0.001	100	0.083	106	0.098	70

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1289			min	-1.303	106	-0.163	13	-0.019	71	-0.001	102	-0.098	70	-0.083	106
1290	M584	1	max	4.545	70	0.194	15	0.03	71	0.002	96	0.334	106	0.362	70
1291			min	-4.2	106	0.019	76	-0.03	103	-0.002	94	-0.362	70	-0.334	106
1292		2	max	4.53	70	0.097	15	0.015	71	0.002	96	0.354	102	0.337	70
1293			min	-4.185	106	0.009	76	-0.015	103	-0.002	94	-0.337	70	-0.354	102
1294		3	max	4.515	70	0.001	104	0	72	0.002	96	0.36	102	0.33	74
1295			min	-4.17	106	-0.001	72	0	40	-0.002	94	-0.33	74	-0.36	102
1296		4	max	4.5	70	-0.009	104	0.015	73	0.002	96	0.351	102	0.335	70
1297			min	-4.155	106	-0.097	13	-0.015	41	-0.002	94	-0.335	70	-0.351	102
1298		5	max	4.485	70	-0.019	104	0.03	73	0.002	96	0.329	106	0.357	70
1299			min	-4.14	106	-0.194	13	-0.03	41	-0.002	94	-0.357	70	-0.329	106
1300	M585	1	max	-0.414	107	0.195	13	0.024	70	0.007	106	0.575	14	0.575	14
1301			min	-11.659	14	0.001	77	-0.024	106	-0.01	13	0.02	107	0.02	107
1302		2	max	-0.429	107	0.097	13	0.012	70	0.007	106	0.799	14	0.356	14
1303			min	-11.721	14	0.001	77	-0.012	106	-0.01	13	0.022	107	0.02	107
1304		3	max	-0.444	107	0	13	0.002	13	0.007	106	0.876	14	0.285	14
1305			min	-11.784	14	0	76	0	105	-0.01	13	0.023	107	0.02	107
1306		4	max	-0.458	107	-0.001	107	0.012	72	0.007	106	0.805	14	0.362	14
1307			min	-11.846	14	-0.097	15	-0.012	104	-0.01	13	0.024	107	0.021	107
1308		5	max	-0.473	107	-0.001	107	0.024	72	0.007	106	0.586	14	0.586	14
1309			min	-11.909	14	-0.195	15	-0.024	104	-0.01	13	0.023	107	0.023	107
1310	M586	1	max	-0.222	107	-0.001	77	0.024	102	0.007	76	0.569	14	0.569	14
1311			min	-11.536	14	-0.195	13	-0.024	74	-0.013	13	0.011	107	0.011	107
1312		2	max	-0.236	107	-0.001	77	0.012	102	0.007	76	0.35	14	0.793	14
1313			min	-11.598	14	-0.097	13	-0.012	74	-0.013	13	0.01	107	0.013	107
1314		3	max	-0.251	107	0	76	0.002	15	0.007	76	0.279	14	0.87	14
1315			min	-11.661	14	0	100	0	75	-0.013	13	0.011	107	0.014	107
1316		4	max	-0.266	107	0.097	15	0.012	100	0.007	76	0.356	14	0.799	14
1317			min	-11.723	14	0.001	107	-0.012	76	-0.013	13	0.012	107	0.014	107
1318		5	max	-0.28	107	0.195	15	0.024	100	0.007	76	0.58	14	0.58	14
1319			min	-11.786	14	0.001	107	-0.024	76	-0.013	13	0.014	107	0.014	107
1320	M587	1	max	-0.157	75	0.195	15	0.024	102	0.008	104	0.529	13	0.529	13
1321			min	-10.736	13	0.001	105	-0.024	74	-0.011	15	0.008	75	0.008	75
1322		2	max	-0.172	75	0.097	15	0.012	102	0.008	104	0.754	13	0.31	13
1323			min	-10.799	13	0.001	105	-0.012	74	-0.011	15	0.01	75	0.007	75
1324		3	max	-0.187	75	0	15	0.002	15	0.008	104	0.831	13	0.24	13
1325			min	-10.861	13	0	104	0	77	-0.011	15	0.011	75	0.008	75
1326		4	max	-0.201	75	-0.001	75	0.012	100	0.008	104	0.76	13	0.316	13
1327			min	-10.924	13	-0.097	13	-0.012	76	-0.011	15	0.011	75	0.009	75
1328		5	max	-0.216	75	-0.001	75	0.024	100	0.008	104	0.541	13	0.541	13
1329			min	-10.986	13	-0.195	13	-0.024	76	-0.011	15	0.011	75	0.011	75
1330	M588	1	max	-0.905	75	-0.001	105	0.024	70	0.007	74	0	72	0	74
1331			min	-14.43	15	-0.195	13	-0.024	106	-0.013	15	0	104	0	102
1332		2	max	-0.92	75	-0.001	105	0.012	70	0.007	74	0.011	104	0.222	13
1333			min	-14.492	15	-0.097	13	-0.012	106	-0.013	15	-0.222	13	-0.011	106
1334		3	max	-0.935	75	0	106	0	15	0.007	74	0.015	104	0.296	13
1335			min	-14.555	15	0	70	0	97	-0.013	15	-0.296	13	-0.015	106
1336		4	max	-0.95	75	0.097	15	0.012	72	0.007	74	0.011	104	0.222	13
1337			min	-14.617	15	0.001	75	-0.012	104	-0.013	15	-0.222	13	-0.011	106
1338		5	max	-0.964	75	0.195	15	0.024	72	0.007	74	0	15	0	70
1339			min	-14.68	15	0.001	75	-0.024	104	-0.013	15	0	74	0	106
1340	M589	1	max	13.772	74	0.043	76	-0.035	107	0.01	106	2.962	74	3.04	102
1341			min	-14.136	102	-0.043	100	-0.318	15	-0.014	70	-3.04	102	-2.962	74
1342		2	max	13.757	74	0.022	76	-0.017	107	0.01	106	2.875	74	2.952	106
1343			min	-14.12	102	-0.022	100	-0.159	15	-0.014	70	-3.058	102	-2.953	74

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1344		3	max	13.742	74	0.003	77	0	103	0.01	106	2.843	74	2.921	106
1345			min	-14.105	102	-0.003	101	0	12	-0.014	70	-3.061	102	-2.947	74
1346		4	max	13.727	74	0.018	70	0.159	13	0.01	106	2.868	74	2.945	106
1347			min	-14.09	102	-0.018	102	0.017	75	-0.014	70	-3.051	102	-2.946	74
1348		5	max	13.712	74	0.038	70	0.318	13	0.01	106	2.949	74	3.027	102
1349			min	-14.075	102	-0.038	102	0.035	75	-0.014	70	-3.027	102	-2.949	74
1350	M590	1	max	11.866	74	0.038	104	-0.035	75	0.013	70	2.552	74	2.687	102
1351			min	-12.493	102	-0.038	72	-0.318	13	-0.007	106	-2.687	102	-2.552	74
1352		2	max	11.851	74	0.018	104	-0.017	75	0.013	70	2.555	74	2.672	106
1353			min	-12.478	102	-0.018	72	-0.159	13	-0.007	106	-2.795	102	-2.633	74
1354		3	max	11.836	74	0.003	105	0	99	0.013	70	2.554	74	2.671	106
1355			min	-12.463	102	-0.003	73	0	103	-0.007	106	-2.828	102	-2.658	74
1356		4	max	11.821	74	0.022	106	0.159	15	0.013	70	2.549	74	2.666	106
1357			min	-12.448	102	-0.022	70	0.017	107	-0.007	106	-2.788	102	-2.627	74
1358		5	max	11.806	74	0.043	106	0.318	15	0.013	70	2.539	74	2.674	102
1359			min	-12.433	102	-0.043	70	0.035	107	-0.007	106	-2.674	102	-2.539	74
1360	M591	1	max	-5.681	98	0.175	13	0.023	100	0.007	77	1.766	15	1.766	15
1361			min	-35.847	15	0	77	-0.022	76	-0.016	13	0.28	98	0.28	98
1362		2	max	-5.686	98	0.087	13	0.011	100	0.007	77	1.954	15	1.585	15
1363			min	-35.909	15	0	77	-0.011	76	-0.016	13	0.295	98	0.265	98
1364		3	max	-5.691	98	0	100	0.002	15	0.007	77	2.018	15	1.526	15
1365			min	-35.972	15	0	76	0	75	-0.016	13	0.301	98	0.26	98
1366		4	max	-5.697	98	0	107	0.011	102	0.007	77	1.959	15	1.591	15
1367			min	-36.034	15	-0.087	15	-0.011	74	-0.016	13	0.296	98	0.265	98
1368		5	max	-5.702	98	0	107	0.023	102	0.007	77	1.778	15	1.778	15
1369			min	-36.096	15	-0.175	15	-0.022	74	-0.016	13	0.281	98	0.281	98
1370	M592	1	max	-5.515	98	0	77	0.023	72	0.011	75	1.571	13	1.571	13
1371			min	-31.886	13	-0.175	13	-0.022	104	-0.012	73	0.272	98	0.272	98
1372		2	max	-5.52	98	0	77	0.011	72	0.011	75	1.389	13	1.758	13
1373			min	-31.948	13	-0.087	13	-0.011	104	-0.012	73	0.257	98	0.287	98
1374		3	max	-5.525	98	0	72	0.002	13	0.011	75	1.331	13	1.823	13
1375			min	-32.011	13	0	100	0	105	-0.012	73	0.252	98	0.293	98
1376		4	max	-5.53	98	0.087	15	0.011	70	0.011	75	1.395	13	1.764	13
1377			min	-32.073	13	0	107	-0.011	106	-0.012	73	0.257	98	0.288	98
1378		5	max	-5.536	98	0.175	15	0.023	70	0.011	75	1.583	13	1.583	13
1379			min	-32.135	13	0	107	-0.022	106	-0.012	73	0.273	98	0.273	98
1380	M593	1	max	-5.666	66	0	105	0.023	100	0.002	104	1.777	15	1.777	15
1381			min	-36.071	15	-0.175	15	-0.022	76	-0.018	15	0.279	66	0.279	66
1382		2	max	-5.672	66	0	105	0.011	100	0.002	104	1.596	15	1.965	15
1383			min	-36.133	15	-0.087	15	-0.011	76	-0.018	15	0.264	66	0.295	66
1384		3	max	-5.677	66	0	104	0.002	15	0.002	104	1.537	15	2.029	15
1385			min	-36.195	15	0	72	0	77	-0.018	15	0.259	66	0.3	66
1386		4	max	-5.682	66	0.087	13	0.011	102	0.002	104	1.602	15	1.97	15
1387			min	-36.258	15	0	75	-0.011	74	-0.018	15	0.265	66	0.295	66
1388		5	max	-5.687	66	0.175	13	0.023	102	0.002	104	1.789	15	1.789	15
1389			min	-36.32	15	0	75	-0.022	74	-0.018	15	0.28	66	0.28	66
1390	M594	1	max	-5.151	68	0.175	15	0.023	72	0.005	70	1.528	13	1.528	13
1391			min	-31.015	13	0	105	-0.022	104	-0.004	106	0.254	68	0.254	68
1392		2	max	-5.157	68	0.087	15	0.011	72	0.005	70	1.716	13	1.347	13
1393			min	-31.077	13	0	105	-0.011	104	-0.004	106	0.269	68	0.239	68
1394		3	max	-5.162	68	0	72	0.002	13	0.005	70	1.78	13	1.288	13
1395			min	-31.14	13	0	104	0	107	-0.004	106	0.275	68	0.234	68
1396		4	max	-5.167	68	0	75	0.011	70	0.005	70	1.721	13	1.352	13
1397			min	-31.202	13	-0.087	13	-0.011	106	-0.004	106	0.27	68	0.239	68
1398		5	max	-5.172	68	0	75	0.023	70	0.005	70	1.54	13	1.54	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1399			min	-31.264	13	-0.175	13	-0.022	106	-0.004	106	0.255	68	0.255	68
1400	M595	1	max	-4.869	99	0.175	13	0.023	100	0.003	76	1.495	15	1.495	15
1401			min	-30.342	15	0	77	-0.022	76	-0.018	13	0.24	99	0.24	99
1402		2	max	-4.874	99	0.087	13	0.011	100	0.003	76	1.682	15	1.313	15
1403			min	-30.405	15	0	77	-0.011	76	-0.018	13	0.255	99	0.225	99
1404		3	max	-4.879	99	0	100	0.002	15	0.003	76	1.747	15	1.255	15
1405			min	-30.467	15	0	76	0	75	-0.018	13	0.261	99	0.22	99
1406		4	max	-4.884	99	0	107	0.011	102	0.003	76	1.688	15	1.319	15
1407			min	-30.529	15	-0.087	15	-0.011	74	-0.018	13	0.256	99	0.225	99
1408		5	max	-4.889	99	0	107	0.023	102	0.003	76	1.507	15	1.507	15
1409			min	-30.592	15	-0.175	15	-0.022	74	-0.018	13	0.241	99	0.241	99
1410	M596	1	max	-4.682	96	0	77	0.023	72	0.003	68	1.306	14	1.306	14
1411			min	-26.503	14	-0.175	13	-0.022	104	-0.014	13	0.231	96	0.231	96
1412		2	max	-4.687	96	0	77	0.011	72	0.003	68	1.124	14	1.493	14
1413			min	-26.566	14	-0.087	13	-0.011	104	-0.014	13	0.216	96	0.246	96
1414		3	max	-4.692	96	0	76	0.002	13	0.003	68	1.066	14	1.558	14
1415			min	-26.628	14	0	100	0	105	-0.014	13	0.211	96	0.252	96
1416		4	max	-4.697	96	0.087	15	0.011	70	0.003	68	1.13	14	1.499	14
1417			min	-26.69	14	0	107	-0.011	106	-0.014	13	0.216	96	0.247	96
1418		5	max	-4.702	96	0.175	15	0.023	70	0.003	68	1.318	14	1.318	14
1419			min	-26.753	14	0	107	-0.022	106	-0.014	13	0.232	96	0.232	96
1420	M597	1	max	-4.626	66	0	105	0.023	100	0.003	104	1.397	15	1.397	15
1421			min	-28.364	15	-0.175	15	-0.022	76	-0.02	15	0.228	66	0.228	66
1422		2	max	-4.631	66	0	105	0.011	100	0.003	104	1.216	15	1.585	15
1423			min	-28.426	15	-0.087	15	-0.011	76	-0.02	15	0.213	66	0.244	66
1424		3	max	-4.636	66	0	104	0.002	15	0.003	104	1.157	15	1.649	15
1425			min	-28.488	15	0	72	0	77	-0.02	15	0.208	66	0.249	66
1426		4	max	-4.641	66	0.087	13	0.011	102	0.003	104	1.222	15	1.591	15
1427			min	-28.551	15	0	75	-0.011	74	-0.02	15	0.213	66	0.244	66
1428		5	max	-4.646	66	0.175	13	0.023	102	0.003	104	1.409	15	1.409	15
1429			min	-28.613	15	0	75	-0.022	74	-0.02	15	0.229	66	0.229	66
1430	M598	1	max	-4.576	68	0.175	15	0.023	72	0.003	96	1.264	13	1.264	13
1431			min	-25.651	13	0	105	-0.022	104	-0.012	15	0.225	68	0.225	68
1432		2	max	-4.581	68	0.087	15	0.011	72	0.003	96	1.451	13	1.082	13
1433			min	-25.713	13	0	105	-0.011	104	-0.012	15	0.241	68	0.21	68
1434		3	max	-4.587	68	0	72	0.002	13	0.003	96	1.516	13	1.024	13
1435			min	-25.775	13	0	104	0	107	-0.012	15	0.246	68	0.205	68
1436		4	max	-4.592	68	0	75	0.011	70	0.003	96	1.457	13	1.088	13
1437			min	-25.838	13	-0.087	13	-0.011	106	-0.012	15	0.242	68	0.211	68
1438		5	max	-4.597	68	0	75	0.023	70	0.003	96	1.276	13	1.276	13
1439			min	-25.9	13	-0.175	13	-0.022	106	-0.012	15	0.226	68	0.226	68
1440	M599	1	max	0.407	107	0.195	13	0.024	70	0.009	102	0.271	14	0.271	14
1441			min	-5.498	14	0.001	77	-0.024	106	-0.007	74	-0.02	107	-0.02	107
1442		2	max	0.393	107	0.097	13	0.012	70	0.009	102	0.496	14	0.157	71
1443			min	-5.561	14	0.001	77	-0.012	106	-0.007	74	-0.018	107	-0.021	107
1444		3	max	0.378	107	0	13	0.002	13	0.009	102	0.573	14	0.148	70
1445			min	-5.623	14	0	76	0	105	-0.007	74	-0.017	107	-0.037	20
1446		4	max	0.363	107	-0.001	107	0.012	72	0.009	102	0.502	14	0.156	71
1447			min	-5.686	14	-0.097	15	-0.012	104	-0.007	74	-0.017	107	-0.019	107
1448		5	max	0.349	107	-0.001	107	0.024	72	0.009	102	0.283	14	0.283	14
1449			min	-5.748	14	-0.195	15	-0.024	104	-0.007	74	-0.017	107	-0.017	107
1450	M600	1	max	0.557	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
1451			min	-5.615	14	-0.195	13	-0.024	74	-0.008	74	-0.027	107	-0.027	107
1452		2	max	0.542	107	-0.001	77	0.012	102	0.009	102	0.16	71	0.501	14
1453			min	-5.677	14	-0.097	13	-0.012	74	-0.008	74	-0.028	107	-0.025	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1454		3	max	0.527	107	0	76	0.002	15	0.009	102	0.147	72	0.578	14
1455			min	-5.74	14	0	100	0	75	-0.008	74	-0.031	20	-0.024	107
1456		4	max	0.513	107	0.097	15	0.012	100	0.009	102	0.16	71	0.507	14
1457			min	-5.802	14	0.001	107	-0.012	76	-0.008	74	-0.026	107	-0.024	107
1458		5	max	0.498	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14
1459			min	-5.865	14	0.001	107	-0.024	76	-0.008	74	-0.025	107	-0.025	107
1460	M601	1	max	-0.075	75	-0.001	105	0.024	70	0.008	74	0.39	15	0.39	15
1461			min	-7.908	15	-0.195	15	-0.024	106	-0.009	102	0.004	75	0.004	75
1462		2	max	-0.09	75	-0.001	105	0.012	70	0.008	74	0.191	103	0.614	15
1463			min	-7.97	15	-0.097	15	-0.012	106	-0.009	102	0.003	75	0.006	75
1464		3	max	-0.104	75	0	104	0.002	13	0.008	74	0.177	103	0.691	15
1465			min	-8.033	15	0	15	0	107	-0.009	102	0.004	75	0.007	75
1466		4	max	-0.119	75	0.097	13	0.012	72	0.008	74	0.191	103	0.62	15
1467			min	-8.095	15	0.001	75	-0.012	104	-0.009	102	0.005	75	0.007	75
1468		5	max	-0.134	75	0.195	13	0.024	72	0.008	74	0.402	15	0.402	15
1469			min	-8.158	15	0.001	75	-0.024	104	-0.009	102	0.007	75	0.007	75
1470	M602	1	max	0.623	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
1471			min	-4.847	13	0.001	105	-0.024	74	-0.009	72	-0.031	75	-0.031	75
1472		2	max	0.609	75	0.097	15	0.012	102	0.008	104	0.464	13	0.157	103
1473			min	-4.909	13	0.001	105	-0.012	74	-0.009	72	-0.029	75	-0.031	75
1474		3	max	0.594	75	0	15	0.002	15	0.008	104	0.54	13	0.143	103
1475			min	-4.972	13	0	104	0	77	-0.009	72	-0.028	75	-0.068	19
1476		4	max	0.579	75	-0.001	75	0.012	100	0.008	104	0.47	13	0.157	103
1477			min	-5.034	13	-0.097	13	-0.012	76	-0.009	72	-0.027	75	-0.03	75
1478		5	max	0.565	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
1479			min	-5.097	13	-0.195	13	-0.024	76	-0.009	72	-0.028	75	-0.028	75
1480	M618	1	max	1.375	72	3.52	15	2.827	71	0.695	71	0	107	0.268	74
1481			min	-1.075	74	0.803	99	-2.827	103	-0.695	103	0	12	-0.343	72
1482		2	max	1.397	72	3.408	15	2.805	71	0.695	71	3.52	71	-0.816	96
1483			min	-1.097	74	0.786	99	-2.805	103	-0.695	103	-3.52	103	-4.504	15
1484		3	max	6.539	72	3.297	15	2.784	71	0.695	103	7.013	71	-1.788	96
1485			min	-6.239	74	-3.116	86	-2.338	73	-0.695	71	-7.013	103	-9.054	72
1486		4	max	6.561	72	-0.786	99	2.805	103	0.695	103	3.52	71	-0.569	96
1487			min	-6.261	74	-3.408	15	-2.805	71	-0.695	71	-3.52	103	-5.364	72
1488		5	max	6.583	72	-0.803	99	2.827	103	0.695	103	0	107	1.568	74
1489			min	-6.283	74	-3.52	15	-2.827	71	-0.695	71	0	12	-1.643	72
1490	M619	1	max	2.097	76	3.633	15	2.999	71	0.738	71	0	107	0.478	74
1491			min	-1.915	74	0.83	97	-3	103	-0.738	103	0	12	-0.523	76
1492		2	max	2.119	76	3.521	15	2.977	71	0.738	71	3.735	71	-0.76	66
1493			min	-1.937	74	0.812	97	-2.978	103	-0.738	103	-3.736	103	-4.52	15
1494		3	max	7.438	76	3.41	15	2.957	103	0.738	103	7.443	71	-1.765	66
1495			min	-7.256	74	-3.035	103	-0.368	86	-0.077	92	-7.446	103	-9.533	72
1496		4	max	7.46	76	-0.812	97	2.978	103	0.738	103	3.735	71	-0.459	74
1497			min	-7.278	74	-3.521	15	-2.977	71	-0.737	71	-3.736	103	-5.712	72
1498		5	max	7.481	76	-0.83	97	3	103	0.738	103	0	107	1.822	74
1499			min	-7.299	74	-3.633	15	-2.999	71	-0.737	71	0	12	-1.867	76
1500	M620	1	max	2.775	14	0.234	74	0.674	103	0	107	0	107	0	107
1501			min	-0.731	77	-0.502	102	-0.675	101	0	12	0	12	0	12
1502		2	max	2.587	14	0.186	74	0.626	103	0	107	1.117	103	0.821	102
1503			min	-0.764	77	-0.454	102	-0.628	101	0	12	-1.12	101	-0.361	74
1504		3	max	2.217	15	0.121	74	0.4	101	0	102	1.358	103	1.545	102
1505			min	-0.113	77	-0.388	102	-0.399	103	0	74	-1.361	101	-0.626	74
1506		4	max	2.029	15	0.073	74	0.447	101	0	102	0.632	103	2.171	102
1507			min	-0.146	77	-0.34	102	-0.446	103	0	74	-0.633	101	-0.793	74
1508		5	max	0	107	0	13	0	71	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1509			min	0	12	0	106	0	103	0	12	0	12	0	12
1510	M621	1	max	2.775	16	0.234	74	0.675	103	0	107	0	107	0	107
1511			min	-0.731	75	-0.502	102	-0.674	101	0	12	0	12	0	12
1512		2	max	2.587	16	0.186	74	0.628	103	0	107	1.12	103	0.821	102
1513			min	-0.764	75	-0.454	102	-0.626	101	0	12	-1.117	101	-0.361	74
1514		3	max	2.214	15	0.121	74	0.399	101	0	74	1.361	103	1.545	102
1515			min	-0.113	75	-0.388	102	-0.4	103	0	102	-1.358	101	-0.626	74
1516		4	max	2.026	15	0.073	74	0.446	101	0	74	0.633	103	2.171	102
1517			min	-0.146	75	-0.34	102	-0.447	103	0	102	-0.632	101	-0.793	74
1518		5	max	0	107	0	13	0	101	0	107	0	107	0	107
1519			min	0	12	0	106	0	73	0	12	0	12	0	12
1520	M622	1	max	2.887	16	0.911	70	0.515	103	0.372	103	3.457	101	4.885	74
1521			min	0.459	97	-0.911	102	-0.516	101	-0.372	105	-3.456	103	-5.573	102
1522		2	max	2.621	16	0.843	70	0.448	103	0.372	103	2.288	101	2.76	74
1523			min	0.405	97	-0.843	102	-0.448	101	-0.372	105	-2.287	103	-3.444	102
1524		3	max	1.677	16	0.447	70	0.449	103	0.372	103	1.243	101	1.035	66
1525			min	0.189	37	-0.447	102	-0.449	101	-0.372	105	-1.243	103	-1.666	102
1526		4	max	0.944	16	0.239	62	0.239	103	0.22	103	0.305	101	0.242	66
1527			min	0.108	67	-0.24	94	-0.239	101	-0.22	71	-0.305	103	-0.854	15
1528		5	max	0	107	0	70	0	103	0	107	0	107	0	107
1529			min	0	12	0	15	0	101	0	12	0	12	0	12
1530	M623	1	max	5.576	14	2.083	70	2.012	73	0.02	77	5.545	101	3.683	70
1531			min	-0.702	77	-1.941	106	-2.007	71	-0.02	105	-5.548	103	-3.401	106
1532		2	max	4.642	14	0.534	70	1.932	103	0.02	107	0.768	101	1.097	74
1533			min	-0.821	107	-0.208	106	-1.932	101	-0.02	105	-0.766	103	-1.447	102
1534		3	max	2.774	14	1.258	100	0.269	101	0.019	107	2.638	103	0.02	96
1535			min	-0.357	107	-0.991	76	-0.271	103	-0.019	71	-2.639	101	-1.566	15
1536		4	max	1.259	101	0.282	70	0.734	101	0.179	73	1.547	103	0.31	66
1537			min	-0.79	77	-0.282	102	-0.733	103	-0.179	105	-1.55	101	-0.735	15
1538		5	max	0	107	0	70	0	101	0	107	0	107	0	107
1539			min	0	12	0	15	0	103	0	12	0	12	0	12
1540	M624	1	max	5.576	16	2.083	70	2.007	73	0.02	107	5.548	101	3.683	70
1541			min	-0.702	75	-1.941	106	-2.012	71	-0.02	75	-5.545	103	-3.401	106
1542		2	max	4.642	16	0.534	70	1.932	103	0.02	107	0.766	101	1.097	74
1543			min	-0.821	105	-0.208	106	-1.932	101	-0.02	105	-0.768	103	-1.447	102
1544		3	max	2.774	16	1.258	100	0.271	101	0.019	73	2.639	103	0.02	96
1545			min	-0.357	105	-0.991	76	-0.269	103	-0.019	105	-2.638	101	-1.566	15
1546		4	max	1.259	103	0.282	70	0.733	101	0.179	107	1.55	103	0.31	66
1547			min	-0.79	75	-0.282	102	-0.734	103	-0.179	71	-1.547	101	-0.735	15
1548		5	max	0	107	0	70	0	101	0	107	0	107	0	107
1549			min	0	12	0	15	0	103	0	12	0	12	0	12
1550	M625	1	max	2.887	14	0.911	70	0.516	103	0.372	103	3.456	101	4.885	74
1551			min	0.459	99	-0.911	102	-0.515	101	-0.372	105	-3.457	103	-5.573	102
1552		2	max	2.621	14	0.843	70	0.448	103	0.372	103	2.287	101	2.76	74
1553			min	0.405	99	-0.843	102	-0.448	101	-0.372	105	-2.288	103	-3.444	102
1554		3	max	1.677	16	0.447	70	0.449	103	0.372	103	1.243	101	1.035	66
1555			min	0.189	67	-0.447	102	-0.449	101	-0.372	75	-1.243	103	-1.666	102
1556		4	max	0.944	15	0.239	62	0.239	103	0.22	103	0.305	101	0.242	66
1557			min	0.108	67	-0.24	94	-0.239	101	-0.22	45	-0.305	103	-0.854	15
1558		5	max	0	107	0	70	0	103	0	107	0	107	0	107
1559			min	0	12	0	15	0	101	0	12	0	12	0	12
1560	M628	1	max	3.306	14	1.447	65	1.185	106	0	107	0	107	0	107
1561			min	-1.316	99	-1.137	67	-1.317	70	0	12	0	12	0	12
1562		2	max	3.108	93	1.428	65	0.292	70	0	106	0.975	106	1.21	67
1563			min	-1.406	69	-1.118	67	-0.258	106	0	70	-1.085	70	-1.542	95

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1564		3	max	3.076	93	1.41	65	0.322	70	0	106	0.682	106	2.399	67
1565			min	-1.43	69	-1.099	67	-0.288	106	0	70	-0.755	70	-3.065	65
1566		4	max	3.044	93	1.391	65	0.352	70	0	106	0.357	106	3.569	67
1567			min	-1.453	69	-1.081	67	-0.318	106	0	70	-0.393	70	-4.567	65
1568		5	max	3.013	93	1.373	65	0.382	70	0	106	0	63	4.718	67
1569			min	-1.477	69	-1.062	67	-0.348	106	0	70	0	65	-6.05	65
1570	M629	1	max	3.306	16	1.137	69	1.185	106	0	107	0	107	0	107
1571			min	-1.316	97	-1.447	63	-1.317	70	0	12	0	12	0	12
1572		2	max	3.108	95	1.118	69	0.292	70	0	70	0.975	106	1.542	93
1573			min	-1.406	67	-1.428	63	-0.258	106	0	106	-1.085	70	-1.21	69
1574		3	max	3.076	95	1.099	69	0.322	70	0	70	0.682	106	3.065	63
1575			min	-1.43	67	-1.41	63	-0.288	106	0	106	-0.755	70	-2.399	69
1576		4	max	3.044	95	1.081	69	0.352	70	0	70	0.357	106	4.567	63
1577			min	-1.453	67	-1.391	63	-0.318	106	0	106	-0.393	70	-3.569	69
1578		5	max	3.013	95	1.062	69	0.382	70	0	70	0	65	6.05	63
1579			min	-1.477	67	-1.373	63	-0.348	106	0	106	0	63	-4.718	69
1580	M631	1	max	0	107	0	71	0	73	0	107	0	107	0	107
1581			min	0	12	0	12	0	103	0	12	0	12	0	12
1582		2	max	1.044	99	-0.419	67	0.897	70	0	107	1.123	70	2.047	16
1583			min	-1.044	63	-1.564	16	-0.897	102	0	12	-1.123	102	0.538	67
1584		3	max	-0.098	98	1.991	63	0	95	0	65	1.444	70	0.844	15
1585			min	-0.363	16	-1.991	65	0	93	0	63	-1.444	102	0.237	69
1586		4	max	1.044	93	1.564	14	0.897	102	0	107	1.123	70	2.047	14
1587			min	-1.044	69	0.419	69	-0.897	70	0	12	-1.123	102	0.538	69
1588		5	max	0	107	0	106	0	101	0	107	0	107	0	107
1589			min	0	12	0	73	0	71	0	12	0	12	0	12
1590	M632	1	max	0.327	15	1.666	15	0.447	103	0.004	103	0	102	2.523	102
1591			min	-0.023	66	0.035	66	-0.447	101	-0.004	75	0	74	-0.864	74
1592		2	max	0.324	13	1.006	15	0.269	103	0.004	103	0.824	103	0.226	106
1593			min	0.023	68	-0.149	74	-0.269	101	-0.004	75	-0.824	101	-1.126	70
1594		3	max	0.559	100	0.385	106	0.046	101	0.004	103	1.109	103	-0.151	96
1595			min	-0.293	76	-0.574	70	-0.046	103	-0.004	75	-1.109	101	-2.078	15
1596		4	max	0.738	100	0.183	106	0.224	101	0.004	103	0.795	103	1.029	74
1597			min	-0.471	76	-0.915	70	-0.224	103	-0.004	75	-0.795	101	-1.705	102
1598		5	max	0.78	100	0.154	106	0.266	101	0.004	103	0.299	73	2.755	70
1599			min	-0.513	76	-1.019	13	-0.266	103	-0.004	75	-0.299	105	-1.872	106
1600	M633	1	max	0.327	15	1.666	15	0.447	103	0.004	77	0	74	2.523	102
1601			min	-0.023	66	0.035	66	-0.447	101	-0.004	101	0	102	-0.864	74
1602		2	max	0.324	13	1.006	15	0.269	103	0.004	77	0.824	103	0.226	106
1603			min	0.023	68	-0.149	74	-0.269	101	-0.004	101	-0.824	101	-1.126	70
1604		3	max	0.559	100	0.385	106	0.046	101	0.004	77	1.109	103	-0.151	96
1605			min	-0.293	76	-0.574	70	-0.046	103	-0.004	101	-1.109	101	-2.078	15
1606		4	max	0.738	100	0.183	106	0.224	101	0.004	77	0.795	103	1.029	74
1607			min	-0.471	76	-0.915	70	-0.224	103	-0.004	101	-0.795	101	-1.705	102
1608		5	max	0.78	100	0.154	106	0.266	101	0.004	77	0.299	107	2.755	70
1609			min	-0.513	76	-1.019	13	-0.266	103	-0.004	101	-0.299	71	-1.872	106
1610	M638	1	max	1.162	107	0.142	14	0.018	106	0	102	0	107	0	107
1611			min	-1.184	101	0	107	-0.018	44	0	74	0	12	0	12
1612		2	max	1.173	107	0.071	14	0.009	106	0	102	0.12	14	0.007	46
1613			min	-1.185	101	0	107	-0.009	74	0	74	-0.007	104	-0.12	14
1614		3	max	1.185	103	0	107	0	107	0	102	0.16	14	0.009	46
1615			min	-1.186	101	0	12	0	12	0	74	-0.009	104	-0.16	14
1616		4	max	1.198	103	0	47	0.009	70	0	102	0.12	14	0.007	46
1617			min	-1.189	105	-0.071	15	-0.009	102	0	74	-0.007	104	-0.12	14
1618		5	max	1.211	103	0	47	0.018	104	0	102	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1619			min	-1.193	105	-0.142	15	-0.018	42	0	74	0	12	0	12
1620	M639	1	max	1.211	101	0.139	16	0.018	76	0	74	0	107	0	107
1621			min	-1.193	107	0	45	-0.018	44	0	102	0	12	0	12
1622		2	max	1.198	101	0.07	16	0.009	46	0	74	0.118	16	0.007	46
1623			min	-1.189	107	0	45	-0.009	70	0	102	-0.007	74	-0.118	16
1624		3	max	1.185	101	0	107	0	107	0	74	0.157	16	0.009	46
1625			min	-1.186	103	0	12	0	12	0	102	-0.009	74	-0.157	16
1626		4	max	1.173	105	0	105	0.009	100	0	74	0.118	16	0.007	46
1627			min	-1.185	103	-0.07	14	-0.009	72	0	102	-0.007	74	-0.118	16
1628		5	max	1.162	105	0	105	0.018	104	0	74	0	107	0	107
1629			min	-1.184	103	-0.139	14	-0.018	42	0	102	0	12	0	12
1630	M640	1	max	1.436	74	0.641	70	0.124	103	0.002	75	0	107	0	107
1631			min	-1.494	102	-0.589	106	-0.124	101	-0.002	103	0	12	0	12
1632		2	max	1.491	74	0.589	74	0.069	103	0.002	75	0.257	103	1.624	102
1633			min	-1.549	102	-0.641	102	-0.069	101	-0.002	103	-0.257	101	-1.624	70
1634		3	max	0.382	13	0.981	102	0	101	0.002	75	0.34	103	0.195	106
1635			min	-0.136	68	-0.972	74	0	103	-0.002	103	-0.34	101	-0.232	70
1636		4	max	1.381	106	0.513	70	0.069	101	0.002	105	0.257	103	1.286	74
1637			min	-1.418	70	-0.47	106	-0.069	103	-0.002	73	-0.257	101	-1.312	102
1638		5	max	1.326	106	0.463	74	0.124	101	0.002	105	0	107	0	107
1639			min	-1.363	70	-0.524	102	-0.124	103	-0.002	73	0	12	0	12
1640	M642	1	max	1.436	74	0.641	70	0.124	103	0.002	101	0	107	0	107
1641			min	-1.494	102	-0.589	106	-0.124	101	-0.002	77	0	12	0	12
1642		2	max	1.491	74	0.589	74	0.069	103	0.002	101	0.257	103	1.624	102
1643			min	-1.549	102	-0.641	102	-0.069	101	-0.002	77	-0.257	101	-1.624	70
1644		3	max	0.382	13	0.981	102	0	101	0.002	101	0.34	103	0.195	106
1645			min	-0.136	68	-0.972	74	0	103	-0.002	77	-0.34	101	-0.232	70
1646		4	max	1.381	106	0.513	70	0.069	101	0.002	71	0.257	103	1.286	74
1647			min	-1.418	70	-0.47	106	-0.069	103	-0.002	107	-0.257	101	-1.312	102
1648		5	max	1.326	106	0.463	74	0.124	101	0.002	71	0	107	0	107
1649			min	-1.363	70	-0.524	102	-0.124	103	-0.002	107	0	12	0	12
1650	M644	1	max	2.428	102	0.092	15	0.014	47	0	67	0	107	0	107
1651			min	-2.143	74	-0.003	46	-0.014	45	0	95	0	12	0	12
1652		2	max	2.418	102	0.046	15	0.007	47	0	67	0.059	15	0.004	47
1653			min	-2.141	74	-0.001	46	-0.007	45	0	95	-0.004	45	-0.059	14
1654		3	max	2.407	102	0	107	0	107	0	67	0.079	15	0.006	47
1655			min	-2.14	74	0	12	0	12	0	95	-0.006	45	-0.079	14
1656		4	max	2.397	102	0.001	106	0.007	105	0	67	0.059	15	0.004	47
1657			min	-2.138	74	-0.046	16	-0.007	107	0	95	-0.004	45	-0.059	14
1658		5	max	2.386	102	0.003	106	0.014	71	0	67	0	107	0	107
1659			min	-2.137	74	-0.092	16	-0.014	107	0	95	0	12	0	12
1660	M645	1	max	2.192	70	0.094	16	0.014	107	0	70	0	107	0	107
1661			min	-1.977	106	-0.003	44	-0.014	45	0	106	0	12	0	12
1662		2	max	2.202	70	0.047	16	0.007	107	0	70	0.06	16	0.004	47
1663			min	-1.978	106	-0.001	44	-0.007	45	0	106	-0.004	45	-0.06	13
1664		3	max	2.213	70	0	107	0	107	0	70	0.08	16	0.006	47
1665			min	-1.98	106	0	12	0	12	0	106	-0.006	45	-0.08	13
1666		4	max	2.223	70	0.001	104	0.007	71	0	70	0.06	16	0.004	47
1667			min	-1.981	106	-0.047	13	-0.007	47	0	106	-0.004	45	-0.06	13
1668		5	max	2.233	70	0.003	104	0.014	71	0	70	0	107	0	107
1669			min	-1.983	106	-0.094	13	-0.014	43	0	106	0	12	0	12
1670	M646	1	max	2.428	102	0.092	16	0.014	73	0	93	0	107	0	107
1671			min	-2.143	74	-0.003	46	-0.014	105	0	69	0	12	0	12
1672		2	max	2.418	102	0.046	16	0.007	73	0	93	0.059	16	0.004	77
1673			min	-2.141	74	-0.001	46	-0.007	105	0	69	-0.004	105	-0.059	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1674		3	max	2.407	102	0	107	0	107	0	93	0.079	16	0.006	77
1675			min	-2.14	74	0	12	0	12	0	69	-0.006	105	-0.079	13
1676		4	max	2.397	102	0.001	106	0.007	45	0	93	0.059	16	0.004	77
1677			min	-2.138	74	-0.046	14	-0.007	47	0	69	-0.004	105	-0.059	13
1678		5	max	2.386	102	0.003	106	0.014	71	0	93	0	107	0	107
1679			min	-2.137	74	-0.092	14	-0.014	47	0	69	0	12	0	12
1680	M647	1	max	2.192	70	0.094	16	0.014	73	0	106	0	107	0	107
1681			min	-1.977	106	-0.003	44	-0.014	45	0	70	0	12	0	12
1682		2	max	2.202	70	0.047	16	0.007	73	0	106	0.06	16	0.004	107
1683			min	-1.978	106	-0.001	44	-0.007	45	0	70	-0.004	75	-0.06	13
1684		3	max	2.213	70	0	107	0	107	0	106	0.08	16	0.006	107
1685			min	-1.98	106	0	12	0	12	0	70	-0.006	75	-0.08	13
1686		4	max	2.223	70	0.001	104	0.007	101	0	106	0.06	16	0.004	107
1687			min	-1.981	106	-0.047	13	-0.007	47	0	70	-0.004	75	-0.06	13
1688		5	max	2.233	70	0.003	104	0.014	101	0	106	0	107	0	107
1689			min	-1.983	106	-0.094	13	-0.014	43	0	70	0	12	0	12
1690	M648	1	max	0.033	105	0.266	16	0.057	98	0	105	0	107	0	107
1691			min	-0.101	13	0.037	45	-0.057	32	0	107	0	12	0	12
1692		2	max	0.007	105	0.133	16	0.028	98	0	105	0.055	98	-0.036	105
1693			min	-0.101	13	0.018	45	-0.028	32	0	107	-0.055	32	-0.258	13
1694		3	max	-0.008	98	0	107	0	107	0	105	0.073	98	-0.048	105
1695			min	-0.101	13	0	12	0	12	0	107	-0.073	32	-0.343	13
1696		4	max	0.007	107	-0.018	107	0.028	96	0	105	0.055	98	-0.036	105
1697			min	-0.101	13	-0.133	13	-0.028	34	0	107	-0.055	32	-0.258	13
1698		5	max	0.033	107	-0.037	107	0.057	96	0	105	0	107	0	107
1699			min	-0.101	13	-0.266	13	-0.057	34	0	107	0	12	0	12
1700	M649	1	max	0.098	66	0.339	13	0.085	41	0	107	0.025	107	0.294	16
1701			min	-0.098	34	0.027	98	-0.085	43	0	12	-0.294	14	-0.025	75
1702		2	max	0.098	66	0.311	13	0.082	41	0	107	0.015	107	0.179	16
1703			min	-0.098	34	0.025	98	-0.082	43	0	12	-0.179	14	-0.015	75
1704		3	max	0.098	66	0.283	13	0.08	41	0	107	0.006	107	0.074	16
1705			min	-0.098	34	0.022	98	-0.08	43	0	12	-0.074	14	-0.006	75
1706		4	max	0.003	100	0.028	15	0.004	97	0	107	0	99	0.005	16
1707			min	-0.003	106	0.002	106	-0.004	35	0	12	-0.005	14	0	67
1708		5	max	0	107	0	107	0	100	0	107	0	107	0	107
1709			min	0	12	0	102	0	72	0	12	0	12	0	12
1710	M650	1	max	0.079	96	0.293	13	0.07	75	0	107	0.02	107	0.251	16
1711			min	-0.079	64	0.023	98	-0.07	103	0	12	-0.251	14	-0.02	75
1712		2	max	0.079	96	0.265	13	0.068	75	0	107	0.013	107	0.152	16
1713			min	-0.079	64	0.021	98	-0.068	103	0	12	-0.152	14	-0.013	105
1714		3	max	0.079	96	0.237	13	0.065	75	0	107	0.005	77	0.063	16
1715			min	-0.079	64	0.019	98	-0.065	103	0	12	-0.063	14	-0.005	105
1716		4	max	0.003	100	0.028	15	0.004	37	0	107	0	39	0.005	16
1717			min	-0.003	72	0.002	106	-0.004	99	0	12	-0.005	14	0	67
1718		5	max	0	107	0	100	0	100	0	107	0	107	0	107
1719			min	0	12	0	102	0	102	0	12	0	12	0	12
1720	M651	1	max	0.079	92	0.293	13	0.07	105	0	107	0.02	77	0.251	16
1721			min	-0.079	34	0.023	98	-0.07	73	0	12	-0.251	14	-0.02	45
1722		2	max	0.079	92	0.265	13	0.068	105	0	107	0.013	77	0.152	16
1723			min	-0.079	34	0.021	98	-0.068	73	0	12	-0.152	14	-0.013	75
1724		3	max	0.079	92	0.237	13	0.065	105	0	107	0.005	77	0.063	16
1725			min	-0.079	34	0.019	98	-0.065	73	0	12	-0.063	14	-0.005	75
1726		4	max	0.003	74	0.028	14	0.004	33	0	107	0	39	0.005	16
1727			min	-0.003	42	0.002	106	-0.004	65	0	12	-0.005	14	0	97
1728		5	max	0	107	0	100	0	70	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1729			min	0	12	0	102	0	72	0	12	0	12	0	12
1730	M652	1	max	0.098	92	0.339	13	0.085	71	0	107	0.025	47	0.294	16
1731			min	-0.098	34	0.027	98	-0.085	73	0	12	-0.294	14	-0.025	75
1732		2	max	0.098	92	0.311	13	0.082	71	0	107	0.015	47	0.179	16
1733			min	-0.098	34	0.025	98	-0.082	73	0	12	-0.179	14	-0.015	45
1734		3	max	0.098	92	0.283	13	0.08	71	0	107	0.006	107	0.074	16
1735			min	-0.098	34	0.022	98	-0.08	73	0	12	-0.074	14	-0.006	45
1736		4	max	0.003	44	0.028	16	0.004	67	0	107	0	99	0.005	16
1737			min	-0.003	42	0.002	106	-0.004	95	0	12	-0.005	14	0	97
1738		5	max	0	107	0	107	0	100	0	107	0	107	0	107
1739			min	0	12	0	102	0	72	0	12	0	12	0	12
1740	M653	1	max	0.079	92	0.293	13	0.07	75	0	107	0.02	77	0.251	16
1741			min	-0.079	34	0.023	98	-0.07	43	0	12	-0.251	14	-0.02	75
1742		2	max	0.079	92	0.265	13	0.068	75	0	107	0.013	77	0.152	16
1743			min	-0.079	34	0.021	98	-0.068	43	0	12	-0.152	14	-0.013	105
1744		3	max	0.079	92	0.237	13	0.065	75	0	107	0.005	77	0.063	16
1745			min	-0.079	34	0.019	98	-0.065	43	0	12	-0.063	14	-0.005	105
1746		4	max	0.003	104	0.028	16	0.004	97	0	107	0	39	0.005	16
1747			min	-0.003	42	0.002	106	-0.004	69	0	12	-0.005	14	0	67
1748		5	max	0	107	0	100	0	100	0	107	0	107	0	107
1749			min	0	12	0	102	0	102	0	12	0	12	0	12
1750	M654	1	max	0.079	66	0.293	13	0.07	75	0	107	0.02	77	0.251	16
1751			min	-0.079	64	0.023	98	-0.07	107	0	12	-0.251	14	-0.02	75
1752		2	max	0.079	66	0.265	13	0.068	75	0	107	0.013	77	0.152	16
1753			min	-0.079	64	0.021	98	-0.068	107	0	12	-0.152	14	-0.013	45
1754		3	max	0.079	66	0.237	13	0.065	75	0	107	0.005	77	0.063	16
1755			min	-0.079	64	0.019	98	-0.065	107	0	12	-0.063	14	-0.005	45
1756		4	max	0.003	100	0.028	16	0.004	37	0	107	0	69	0.005	16
1757			min	-0.003	42	0.002	106	-0.004	35	0	12	-0.005	14	0	97
1758		5	max	0	107	0	100	0	70	0	107	0	107	0	107
1759			min	0	12	0	102	0	72	0	12	0	12	0	12
1760	M655	1	max	0.098	92	0.339	13	0.085	105	0	107	0.025	47	0.294	16
1761			min	-0.098	38	0.027	98	-0.085	47	0	12	-0.294	14	-0.025	105
1762		2	max	0.098	92	0.311	13	0.082	105	0	107	0.015	47	0.179	16
1763			min	-0.098	38	0.025	98	-0.082	47	0	12	-0.179	14	-0.015	105
1764		3	max	0.098	92	0.283	13	0.08	105	0	107	0.006	77	0.074	16
1765			min	-0.098	38	0.022	98	-0.08	47	0	12	-0.074	14	-0.006	75
1766		4	max	0.003	104	0.028	16	0.004	67	0	107	0	99	0.005	16
1767			min	-0.003	72	0.002	106	-0.004	95	0	12	-0.005	14	0	37
1768		5	max	0	107	0	107	0	100	0	107	0	107	0	107
1769			min	0	12	0	102	0	72	0	12	0	12	0	12
1770	M656	1	max	0.098	66	0.339	13	0.085	71	0	107	0.025	77	0.294	16
1771			min	-0.098	34	0.027	98	-0.085	43	0	12	-0.294	14	-0.025	105
1772		2	max	0.098	66	0.311	13	0.082	71	0	107	0.015	77	0.179	16
1773			min	-0.098	34	0.025	98	-0.082	43	0	12	-0.179	14	-0.015	105
1774		3	max	0.098	66	0.283	13	0.08	71	0	107	0.006	77	0.074	16
1775			min	-0.098	34	0.022	98	-0.08	43	0	12	-0.074	14	-0.006	75
1776		4	max	0.003	104	0.028	13	0.004	37	0	107	0	99	0.005	16
1777			min	-0.003	42	0.002	106	-0.004	65	0	12	-0.005	14	0	67
1778		5	max	0	107	0	107	0	100	0	107	0	107	0	107
1779			min	0	12	0	102	0	72	0	12	0	12	0	12
1780	M657	1	max	0.129	104	0.433	13	0.129	71	0	107	0.031	47	0.326	16
1781			min	-0.129	42	0.026	98	-0.129	103	0	12	-0.326	14	-0.031	105
1782		2	max	0.126	104	0.406	13	0.126	71	0	107	0.017	47	0.177	16
1783			min	-0.126	42	0.024	98	-0.126	103	0	12	-0.177	14	-0.017	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1784		3	max	0.124	104	0.378	13	0.124	71	0	107	0.003	47	0.039	16
1785			min	-0.124	42	0.022	98	-0.124	103	0	12	-0.039	14	-0.003	75
1786		4	max	0.003	44	0.027	13	0.004	67	0	107	0	39	0.005	16
1787			min	-0.003	46	0.002	106	-0.004	35	0	12	-0.005	14	0	67
1788		5	max	0	107	0	100	0	100	0	107	0	107	0	107
1789			min	0	12	0	102	0	102	0	12	0	12	0	12
1790	M658	1	max	0.129	104	0.433	13	0.129	71	0	107	0.031	77	0.326	16
1791			min	-0.129	42	0.026	98	-0.129	77	0	12	-0.326	14	-0.031	105
1792		2	max	0.126	104	0.406	13	0.126	71	0	107	0.017	47	0.177	16
1793			min	-0.126	42	0.024	98	-0.126	77	0	12	-0.177	14	-0.017	105
1794		3	max	0.124	104	0.378	13	0.124	71	0	107	0.003	107	0.039	16
1795			min	-0.124	42	0.022	98	-0.124	77	0	12	-0.039	14	-0.003	105
1796		4	max	0.003	100	0.027	13	0.004	37	0	107	0	69	0.005	16
1797			min	-0.003	42	0.002	106	-0.004	95	0	12	-0.005	14	0	97
1798		5	max	0	107	0	100	0	100	0	107	0	107	0	107
1799			min	0	12	0	102	0	72	0	12	0	12	0	12
1800	M659	1	max	0.142	104	0.468	13	0.142	105	0	107	0.034	107	0.353	16
1801			min	-0.142	102	0.028	98	-0.142	43	0	12	-0.353	14	-0.034	105
1802		2	max	0.139	104	0.44	13	0.139	105	0	107	0.019	107	0.192	16
1803			min	-0.139	102	0.026	98	-0.139	43	0	12	-0.192	14	-0.019	105
1804		3	max	0.136	104	0.413	13	0.136	105	0	107	0.003	77	0.041	16
1805			min	-0.136	102	0.023	98	-0.136	43	0	12	-0.041	14	-0.003	45
1806		4	max	0.003	104	0.027	15	0.004	33	0	107	0	69	0.005	16
1807			min	-0.003	42	0.002	106	-0.004	39	0	12	-0.005	14	0	37
1808		5	max	0	107	0	107	0	100	0	107	0	107	0	107
1809			min	0	12	0	102	0	72	0	12	0	12	0	12
1810	M660	1	max	0.142	104	0.468	13	0.142	71	0	107	0.034	47	0.353	16
1811			min	-0.142	72	0.028	98	-0.142	43	0	12	-0.353	14	-0.034	75
1812		2	max	0.139	104	0.44	13	0.139	71	0	107	0.019	107	0.192	16
1813			min	-0.139	72	0.026	98	-0.139	43	0	12	-0.192	14	-0.019	75
1814		3	max	0.136	104	0.413	13	0.136	71	0	107	0.003	107	0.041	16
1815			min	-0.136	72	0.023	98	-0.136	43	0	12	-0.041	14	-0.003	45
1816		4	max	0.003	104	0.027	15	0.004	37	0	107	0	39	0.005	16
1817			min	-0.003	42	0.002	106	-0.004	69	0	12	-0.005	14	0	37
1818		5	max	0	107	0	107	0	100	0	107	0	107	0	107
1819			min	0	12	0	102	0	72	0	12	0	12	0	12
1820	M407	1	max	3.223	15	0.661	74	0.69	107	0	107	0	107	0	107
1821			min	-0.564	44	-0.81	42	-0.756	41	0	12	0	12	0	12
1822		2	max	2.591	15	0.575	44	0.03	95	0	42	0.415	107	1.556	42
1823			min	-0.593	44	-0.721	42	-0.026	37	0	44	-0.443	41	-1.254	44
1824		3	max	2.367	15	0.518	44	0.053	101	0	42	0.375	107	2.978	42
1825			min	-0.632	44	-0.665	42	-0.048	77	0	44	-0.394	41	-2.376	44
1826		4	max	2.142	15	0.461	44	0.109	101	0	42	0.219	107	4.283	42
1827			min	-0.672	44	-0.608	42	-0.105	77	0	44	-0.228	41	-3.381	44
1828		5	max	0	107	0	13	0	101	0	107	0	107	0	107
1829			min	0	12	0	72	0	43	0	12	0	12	0	12
1830	M408	1	max	3.223	13	0.81	100	0.69	107	0	107	0	107	0	107
1831			min	-0.564	46	-0.661	46	-0.756	41	0	12	0	12	0	12
1832		2	max	2.591	13	0.721	100	0.03	95	0	106	0.415	107	1.254	106
1833			min	-0.593	46	-0.575	46	-0.026	37	0	40	-0.443	41	-1.556	40
1834		3	max	2.367	13	0.665	100	0.053	101	0	106	0.375	107	2.376	106
1835			min	-0.632	46	-0.518	46	-0.048	77	0	40	-0.394	41	-2.978	40
1836		4	max	2.142	13	0.608	100	0.109	101	0	106	0.219	107	3.381	106
1837			min	-0.672	46	-0.461	46	-0.105	77	0	40	-0.228	41	-4.283	40
1838		5	max	0	107	0	100	0	101	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1839			min	0	12	0	15	0	43	0	12	0	12	0	12
1840	M417	1	max	3.223	13	0.81	100	0.756	103	0	107	0	107	0	107
1841			min	-0.564	46	-0.661	46	-0.69	75	0	12	0	12	0	12
1842		2	max	2.591	13	0.721	100	0.026	99	0	100	0.443	73	1.254	106
1843			min	-0.593	46	-0.575	46	-0.03	33	0	46	-0.415	75	-1.556	40
1844		3	max	2.367	13	0.665	100	0.048	105	0	100	0.394	73	2.376	106
1845			min	-0.632	46	-0.518	46	-0.053	43	0	46	-0.375	75	-2.978	40
1846		4	max	2.142	13	0.608	100	0.105	105	0	100	0.228	73	3.381	106
1847			min	-0.672	46	-0.461	46	-0.109	43	0	46	-0.219	75	-4.283	40
1848		5	max	0	107	0	100	0	101	0	107	0	107	0	107
1849			min	0	12	0	15	0	43	0	12	0	12	0	12
1850	M418	1	max	3.223	15	0.661	44	0.756	73	0	107	0	107	0	107
1851			min	-0.564	44	-0.81	42	-0.69	75	0	12	0	12	0	12
1852		2	max	2.591	15	0.575	44	0.026	99	0	44	0.443	73	1.556	42
1853			min	-0.593	44	-0.721	42	-0.03	33	0	42	-0.415	75	-1.254	44
1854		3	max	2.367	15	0.518	44	0.048	105	0	44	0.394	73	2.978	42
1855			min	-0.632	44	-0.665	42	-0.053	43	0	42	-0.375	75	-2.376	44
1856		4	max	2.142	15	0.461	44	0.105	105	0	44	0.228	73	4.283	42
1857			min	-0.672	44	-0.608	42	-0.109	43	0	42	-0.219	75	-3.381	44
1858		5	max	0	107	0	13	0	101	0	107	0	107	0	107
1859			min	0	12	0	42	0	43	0	12	0	12	0	12
1860	M419	1	max	0.05	105	0.382	16	0.082	98	0	101	0	107	0	107
1861			min	-0.124	15	0.054	44	-0.082	32	0	43	0	12	0	12
1862		2	max	0.034	44	0.191	16	0.041	98	0	101	0.116	98	-0.075	107
1863			min	-0.124	15	0.027	44	-0.041	32	0	43	-0.116	32	-0.537	13
1864		3	max	0.034	44	0	107	0	107	0	101	0.155	98	-0.1	107
1865			min	-0.124	15	0	12	0	12	0	43	-0.155	32	-0.717	13
1866		4	max	0.034	44	-0.027	107	0.041	96	0	101	0.116	98	-0.075	107
1867			min	-0.124	15	-0.191	13	-0.041	34	0	43	-0.116	32	-0.537	13
1868		5	max	0.05	107	-0.054	107	0.082	96	0	101	0	107	0	107
1869			min	-0.124	15	-0.382	13	-0.082	34	0	43	0	12	0	12
1870	M420	1	max	0.441	102	1.893	42	0.35	103	0	42	0	44	5.288	42
1871			min	-0.299	44	-0.816	44	-0.35	41	0	40	0	42	-4.135	44
1872		2	max	0.402	102	1.848	42	0.312	103	0	42	0.621	103	1.983	106
1873			min	-0.26	44	-0.843	44	-0.312	41	0	40	-0.621	41	-2.787	40
1874		3	max	0.167	14	1.218	42	0	42	0	42	0.896	103	-0.417	97
1875			min	0.035	66	-1.218	40	0	40	0	40	-0.896	41	-1.897	16
1876		4	max	0.402	100	0.843	106	0.312	101	0	42	0.621	103	1.983	44
1877			min	-0.26	46	-1.848	40	-0.312	43	0	40	-0.621	41	-2.787	42
1878		5	max	0.441	100	0.816	106	0.35	101	0	42	0	106	5.288	100
1879			min	-0.299	46	-1.893	40	-0.35	43	0	40	0	40	-4.135	46
1880	M421	1	max	0.05	107	0.382	16	0.082	96	0	103	0	107	0	107
1881			min	-0.124	13	0.054	44	-0.082	34	0	41	0	12	0	12
1882		2	max	0.034	106	0.191	16	0.041	96	0	103	0.116	96	-0.075	107
1883			min	-0.124	13	0.027	44	-0.041	34	0	41	-0.116	34	-0.537	13
1884		3	max	0.034	106	0	107	0	107	0	103	0.155	96	-0.1	107
1885			min	-0.124	13	0	12	0	12	0	41	-0.155	34	-0.717	13
1886		4	max	0.034	106	-0.027	107	0.041	98	0	103	0.116	96	-0.075	107
1887			min	-0.124	13	-0.191	13	-0.041	32	0	41	-0.116	34	-0.537	13
1888		5	max	0.05	75	-0.054	107	0.082	98	0	103	0	107	0	107
1889			min	-0.124	13	-0.382	13	-0.082	32	0	41	0	12	0	12
1890	M422	1	max	0.441	100	1.893	100	0.35	101	0	100	0	106	5.288	100
1891			min	-0.299	46	-0.816	46	-0.35	43	0	42	0	40	-4.135	46
1892		2	max	0.402	100	1.848	100	0.312	101	0	100	0.621	101	1.983	44
1893			min	-0.26	46	-0.843	46	-0.312	43	0	42	-0.621	43	-2.787	42

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1894		3	max	0.167	16	1.218	100	0	100	0	100	0.896	101	-0.417	69
1895			min	0.035	66	-1.218	42	0	42	0	42	-0.896	43	-1.897	14
1896		4	max	0.402	102	0.843	44	0.312	103	0	100	0.621	101	1.983	106
1897			min	-0.26	44	-1.848	42	-0.312	41	0	42	-0.621	43	-2.787	40
1898		5	max	0.441	102	0.816	44	0.35	103	0	100	0	44	5.288	42
1899			min	-0.299	44	-1.893	42	-0.35	41	0	42	0	42	-4.135	44
1900	M423	1	max	0.883	103	0.21	14	0.03	42	0	42	0	107	0	107
1901			min	-0.825	75	-0.006	77	-0.03	40	0	44	0	12	0	12
1902		2	max	0.906	103	0.105	16	0.015	42	0	42	0.292	14	0.021	106
1903			min	-0.828	75	-0.003	77	-0.015	40	0	44	-0.021	74	-0.292	13
1904		3	max	0.929	103	0	107	0	107	0	42	0.389	14	0.028	106
1905			min	-0.832	75	0	12	0	12	0	44	-0.028	74	-0.389	13
1906		4	max	0.951	103	0.003	47	0.015	74	0	42	0.292	14	0.021	106
1907			min	-0.835	75	-0.105	15	-0.015	46	0	44	-0.021	74	-0.292	13
1908		5	max	0.974	103	0.006	47	0.03	104	0	42	0	107	0	107
1909			min	-0.838	75	-0.21	15	-0.03	46	0	44	0	12	0	12
1910	M424	1	max	0.883	101	0.21	16	0.03	104	0	44	0	107	0	107
1911			min	-0.825	77	-0.006	75	-0.03	42	0	42	0	12	0	12
1912		2	max	0.906	101	0.105	14	0.015	104	0	44	0.292	16	0.021	104
1913			min	-0.828	77	-0.003	75	-0.015	42	0	42	-0.021	46	-0.292	13
1914		3	max	0.929	101	0	107	0	107	0	44	0.389	16	0.028	104
1915			min	-0.832	77	0	12	0	12	0	42	-0.028	46	-0.389	13
1916		4	max	0.951	101	0.003	45	0.015	106	0	44	0.292	16	0.021	104
1917			min	-0.835	77	-0.105	15	-0.015	44	0	42	-0.021	46	-0.292	13
1918		5	max	0.974	101	0.006	45	0.03	106	0	44	0	107	0	107
1919			min	-0.838	77	-0.21	15	-0.03	40	0	42	0	12	0	12
1920	M425	1	max	0.883	103	0.21	16	0.03	106	0	106	0	107	0	107
1921			min	-0.825	75	-0.006	77	-0.03	40	0	40	0	12	0	12
1922		2	max	0.906	103	0.105	15	0.015	106	0	106	0.292	16	0.021	106
1923			min	-0.828	75	-0.003	77	-0.015	40	0	40	-0.021	74	-0.292	13
1924		3	max	0.929	103	0	107	0	107	0	106	0.389	16	0.028	106
1925			min	-0.832	75	0	12	0	12	0	40	-0.028	74	-0.389	13
1926		4	max	0.951	103	0.003	47	0.015	104	0	106	0.292	16	0.021	106
1927			min	-0.835	75	-0.105	16	-0.015	46	0	40	-0.021	74	-0.292	13
1928		5	max	0.974	103	0.006	47	0.03	104	0	106	0	107	0	107
1929			min	-0.838	75	-0.21	16	-0.03	42	0	40	0	12	0	12
1930	M426	1	max	0.883	101	0.21	15	0.03	104	0	100	0	107	0	107
1931			min	-0.825	77	-0.006	105	-0.03	42	0	46	0	12	0	12
1932		2	max	0.906	101	0.105	16	0.015	104	0	100	0.292	15	0.021	44
1933			min	-0.828	77	-0.003	105	-0.015	42	0	46	-0.021	46	-0.292	15
1934		3	max	0.929	101	0	107	0	107	0	100	0.389	15	0.028	44
1935			min	-0.832	77	0	12	0	12	0	46	-0.028	46	-0.389	15
1936		4	max	0.951	101	0.003	45	0.015	106	0	100	0.292	15	0.021	44
1937			min	-0.835	77	-0.105	13	-0.015	44	0	46	-0.021	46	-0.292	15
1938		5	max	0.974	101	0.006	45	0.03	106	0	100	0	107	0	107
1939			min	-0.838	77	-0.21	13	-0.03	40	0	46	0	12	0	12
1940	M427	1	max	3.757	15	0.834	74	0.849	47	0	107	0	107	0	107
1941			min	-1.148	74	-0.96	42	-0.956	41	0	12	0	12	0	12
1942		2	max	2.984	15	0.017	94	0.767	107	0.001	107	1.646	107	0.531	42
1943			min	-0.836	77	-0.009	66	-0.861	41	-0.001	41	-1.846	41	-0.477	44
1944		3	max	2.862	101	0.068	42	0.711	107	0.001	107	3.162	107	0.451	42
1945			min	-0.875	77	-0.058	44	-0.804	41	-0.001	41	-3.555	41	-0.416	44
1946		4	max	2.796	101	0.125	42	0.654	107	0.001	107	4.562	107	0.253	42
1947			min	-0.915	77	-0.115	44	-0.748	41	-0.001	41	-5.147	41	-0.237	44
1948		5	max	0	107	0	13	0	16	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1949			min	0	12	0	34	0	41	0	12	0	12	0	12
1950	M428	1	max	3.757	13	0.96	100	0.849	47	0	107	0	107	0	107
1951			min	-1.148	46	-0.834	46	-0.956	41	0	12	0	12	0	12
1952		2	max	2.984	13	0.009	98	0.767	107	0.001	101	1.646	107	0.477	106
1953			min	-0.836	77	-0.017	32	-0.861	41	-0.001	77	-1.846	41	-0.531	40
1954		3	max	2.862	101	0.058	106	0.711	107	0.001	101	3.162	107	0.416	106
1955			min	-0.875	77	-0.068	40	-0.804	41	-0.001	77	-3.555	41	-0.451	40
1956		4	max	2.796	101	0.115	106	0.654	107	0.001	101	4.562	107	0.237	106
1957			min	-0.915	77	-0.125	40	-0.748	41	-0.001	77	-5.147	41	-0.253	40
1958		5	max	0	107	0	62	0	16	0	107	0	107	0	107
1959			min	0	12	0	15	0	41	0	12	0	12	0	12
1960	M429	1	max	3.757	13	0.96	100	0.956	73	0	107	0	107	0	107
1961			min	-1.148	46	-0.834	46	-0.849	45	0	12	0	12	0	12
1962		2	max	2.984	13	0.009	98	0.861	73	0.001	75	1.846	73	0.477	106
1963			min	-0.836	75	-0.017	32	-0.767	75	-0.001	73	-1.646	75	-0.531	40
1964		3	max	2.862	73	0.058	106	0.804	73	0.001	75	3.555	73	0.416	106
1965			min	-0.875	75	-0.068	40	-0.711	75	-0.001	73	-3.162	75	-0.451	40
1966		4	max	2.796	73	0.115	106	0.748	73	0.001	75	5.147	73	0.237	106
1967			min	-0.915	75	-0.125	40	-0.654	75	-0.001	73	-4.562	75	-0.253	40
1968		5	max	0	107	0	92	0	73	0	107	0	107	0	107
1969			min	0	12	0	15	0	14	0	12	0	12	0	12
1970	M430	1	max	3.757	15	0.834	74	0.956	73	0	107	0	107	0	107
1971			min	-1.148	44	-0.96	42	-0.849	45	0	12	0	12	0	12
1972		2	max	2.984	15	0.017	94	0.861	73	0.001	73	1.846	73	0.531	42
1973			min	-0.836	75	-0.009	66	-0.767	75	-0.001	75	-1.646	75	-0.477	44
1974		3	max	2.862	73	0.068	42	0.804	73	0.001	73	3.555	73	0.451	42
1975			min	-0.875	75	-0.058	44	-0.711	75	-0.001	75	-3.162	75	-0.416	44
1976		4	max	2.796	73	0.125	42	0.748	73	0.001	73	5.147	73	0.253	42
1977			min	-0.915	75	-0.115	44	-0.654	75	-0.001	75	-4.562	75	-0.237	44
1978		5	max	0	107	0	13	0	73	0	107	0	107	0	107
1979			min	0	12	0	34	0	14	0	12	0	12	0	12
1980	M431	1	max	0.586	101	2.878	101	0.541	102	0	101	0.002	107	6.394	101
1981			min	-0.517	77	-1.09	77	-0.541	40	0	73	-0.002	41	-5.647	77
1982		2	max	0.552	101	2.837	101	0.507	102	0	101	0.884	102	2.127	75
1983			min	-0.482	77	-1.114	77	-0.507	40	0	73	-0.884	40	-4.37	73
1984		3	max	0.097	13	1.76	101	0.001	101	0	101	1.238	102	-0.8	36
1985			min	0.021	69	-1.76	73	-0.001	73	0	73	-1.238	40	-3.595	15
1986		4	max	0.552	103	1.114	75	0.507	100	0	101	0.884	102	2.127	107
1987			min	-0.482	75	-2.837	73	-0.507	72	0	73	-0.884	40	-4.37	41
1988		5	max	0.586	103	1.09	75	0.541	100	0	101	0.002	75	6.394	73
1989			min	-0.517	75	-2.878	73	-0.541	72	0	73	-0.002	73	-5.647	75
1990	M432	1	max	0.064	75	0.293	16	0.062	99	0	42	0	107	0	107
1991			min	-0.209	73	0.041	44	-0.062	33	0	40	0	12	0	12
1992		2	max	0.064	75	0.146	16	0.031	99	0	42	0.067	99	-0.044	107
1993			min	-0.209	73	0.021	44	-0.031	33	0	40	-0.067	33	-0.316	13
1994		3	max	0.064	75	0	107	0	107	0	42	0.09	99	-0.059	107
1995			min	-0.209	73	0	12	0	12	0	40	-0.09	33	-0.421	13
1996		4	max	0.064	75	-0.021	107	0.031	97	0	42	0.067	99	-0.044	107
1997			min	-0.209	73	-0.146	13	-0.031	35	0	40	-0.067	33	-0.316	13
1998		5	max	0.064	75	-0.041	107	0.062	97	0	42	0	107	0	107
1999			min	-0.209	73	-0.293	13	-0.062	35	0	40	0	12	0	12
2000	M433	1	max	0.586	103	2.878	73	0.541	100	0	73	0.002	75	6.394	73
2001			min	-0.517	75	-1.09	75	-0.541	42	0	41	-0.002	73	-5.647	75
2002		2	max	0.552	103	2.837	73	0.507	100	0	73	0.884	100	2.127	107
2003			min	-0.482	75	-1.114	75	-0.507	42	0	41	-0.884	42	-4.37	41

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2004		3	max	0.097	15	1.76	73	0.001	73	0	73	1.238	100	-0.8	38
2005			min	0.021	69	-1.76	41	-0.001	41	0	41	-1.238	42	-3.595	13
2006		4	max	0.552	101	1.114	107	0.507	42	0	73	0.884	100	2.127	75
2007			min	-0.482	77	-2.837	41	-0.507	40	0	41	-0.884	42	-4.37	73
2008		5	max	0.586	101	1.09	107	0.541	42	0	73	0.002	107	6.394	101
2009			min	-0.517	77	-2.878	41	-0.541	40	0	41	-0.002	41	-5.647	77
2010	M434	1	max	0.064	107	0.293	16	0.062	97	0	100	0	107	0	107
2011			min	-0.209	41	0.041	46	-0.062	35	0	42	0	12	0	12
2012		2	max	0.064	107	0.146	16	0.031	97	0	100	0.067	97	-0.044	106
2013			min	-0.209	41	0.021	46	-0.031	35	0	42	-0.067	35	-0.316	13
2014		3	max	0.064	107	0	107	0	107	0	100	0.09	97	-0.059	106
2015			min	-0.209	41	0	12	0	12	0	42	-0.09	35	-0.421	13
2016		4	max	0.064	107	-0.021	104	0.031	99	0	100	0.067	97	-0.044	106
2017			min	-0.209	41	-0.146	13	-0.031	33	0	42	-0.067	35	-0.316	13
2018		5	max	0.064	107	-0.041	104	0.062	99	0	100	0	107	0	107
2019			min	-0.209	41	-0.293	13	-0.062	33	0	42	0	12	0	12
2020	M439	1	max	3.161	16	0.757	100	0.758	73	0.512	107	2.04	101	4.681	104
2021			min	-0.11	45	-0.757	72	-0.757	41	-0.512	41	-2.042	73	-5.618	42
2022		2	max	2.895	16	0.69	100	0.691	73	0.512	107	0.284	75	2.925	104
2023			min	-0.156	45	-0.69	72	-0.69	41	-0.512	41	-0.285	73	-3.861	42
2024		3	max	2.323	16	0.593	100	0.005	101	0.511	107	0.904	73	1.375	36
2025			min	0.091	45	-0.593	72	-0.005	77	-0.511	41	-0.903	41	-2.287	42
2026		4	max	1.434	16	0.328	100	0.27	101	0.298	107	0.713	73	0.326	36
2027			min	-0.09	45	-0.328	72	-0.27	73	-0.298	41	-0.712	41	-1.108	15
2028		5	max	0	107	0	100	0	101	0	107	0	107	0	107
2029			min	0	12	0	15	0	43	0	12	0	12	0	12
2030	M440	1	max	0.138	36	0.431	13	0.115	105	0	107	0.034	47	0.381	16
2031			min	-0.138	38	0.034	38	-0.115	43	0	12	-0.381	14	-0.034	45
2032		2	max	0.138	36	0.403	13	0.112	105	0	107	0.021	47	0.233	16
2033			min	-0.138	38	0.032	38	-0.112	43	0	12	-0.233	14	-0.021	45
2034		3	max	0.138	36	0.375	13	0.109	105	0	107	0.008	107	0.095	16
2035			min	-0.138	38	0.03	38	-0.109	43	0	12	-0.095	14	-0.008	45
2036		4	max	0.003	100	0.028	14	0.004	33	0	107	0	69	0.005	16
2037			min	-0.003	46	0.002	46	-0.004	39	0	12	-0.005	14	0	37
2038		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2039			min	0	12	0	72	0	72	0	12	0	12	0	12
2040	M441	1	max	0.138	96	0.431	13	0.115	45	0	107	0.034	107	0.381	16
2041			min	-0.138	38	0.034	38	-0.115	73	0	12	-0.381	14	-0.034	105
2042		2	max	0.138	96	0.403	13	0.112	45	0	107	0.021	107	0.233	16
2043			min	-0.138	38	0.032	38	-0.112	73	0	12	-0.233	14	-0.021	105
2044		3	max	0.138	96	0.375	13	0.109	45	0	107	0.008	107	0.095	16
2045			min	-0.138	38	0.03	38	-0.109	73	0	12	-0.095	14	-0.008	75
2046		4	max	0.003	100	0.028	13	0.004	97	0	107	0	69	0.005	16
2047			min	-0.003	72	0.002	46	-0.004	69	0	12	-0.005	14	0	37
2048		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2049			min	0	12	0	72	0	72	0	12	0	12	0	12
2050	M442	1	max	0.197	104	0.622	13	0.197	75	0	107	0.048	47	0.471	16
2051			min	-0.197	42	0.036	38	-0.197	77	0	12	-0.471	14	-0.048	75
2052		2	max	0.195	104	0.595	13	0.195	75	0	107	0.026	47	0.256	16
2053			min	-0.195	42	0.034	38	-0.195	77	0	12	-0.256	14	-0.026	105
2054		3	max	0.192	104	0.567	13	0.192	75	0	107	0.004	47	0.05	16
2055			min	-0.192	42	0.031	38	-0.192	77	0	12	-0.05	14	-0.004	45
2056		4	max	0.003	100	0.027	16	0.004	93	0	107	0	69	0.005	16
2057			min	-0.003	46	0.002	46	-0.004	65	0	12	-0.005	14	0	37
2058		5	max	0	107	0	107	0	100	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2059			min	0	12	0	72	0	72	0	12	0	12	0	12
2060	M443	1	max	3.161	14	0.757	100	0.757	103	0.512	103	2.042	101	4.681	44
2061			min	-0.11	47	-0.757	42	-0.758	41	-0.512	45	-2.04	73	-5.618	72
2062		2	max	2.895	14	0.69	100	0.69	103	0.512	103	0.285	101	2.925	44
2063			min	-0.156	47	-0.69	42	-0.691	41	-0.512	45	-0.284	77	-3.861	72
2064		3	max	2.323	14	0.593	100	0.005	105	0.511	103	0.903	73	1.375	36
2065			min	0.091	47	-0.593	42	-0.005	43	-0.511	45	-0.904	41	-2.287	42
2066		4	max	1.434	14	0.328	100	0.27	101	0.298	103	0.712	73	0.326	36
2067			min	-0.09	47	-0.328	42	-0.27	73	-0.298	45	-0.713	41	-1.108	15
2068		5	max	0	107	0	100	0	101	0	107	0	107	0	107
2069			min	0	12	0	15	0	43	0	12	0	12	0	12
2070	M444	1	max	0.138	92	0.431	13	0.115	45	0	107	0.034	47	0.381	16
2071			min	-0.138	68	0.034	38	-0.115	73	0	12	-0.381	14	-0.034	105
2072		2	max	0.138	92	0.403	13	0.112	45	0	107	0.021	47	0.233	16
2073			min	-0.138	68	0.032	38	-0.112	73	0	12	-0.233	14	-0.021	75
2074		3	max	0.138	92	0.375	13	0.109	45	0	107	0.008	47	0.095	16
2075			min	-0.138	68	0.03	38	-0.109	73	0	12	-0.095	14	-0.008	75
2076		4	max	0.003	104	0.028	13	0.004	33	0	107	0	69	0.005	16
2077			min	-0.003	42	0.002	46	-0.004	95	0	12	-0.005	14	0	37
2078		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2079			min	0	12	0	72	0	72	0	12	0	12	0	12
2080	M445	1	max	0.138	96	0.431	13	0.115	45	0	107	0.034	47	0.381	16
2081			min	-0.138	34	0.034	38	-0.115	77	0	12	-0.381	14	-0.034	45
2082		2	max	0.138	96	0.403	13	0.112	45	0	107	0.021	47	0.233	16
2083			min	-0.138	34	0.032	38	-0.112	77	0	12	-0.233	14	-0.021	45
2084		3	max	0.138	96	0.375	13	0.109	45	0	107	0.008	47	0.095	16
2085			min	-0.138	34	0.03	38	-0.109	77	0	12	-0.095	14	-0.008	45
2086		4	max	0.003	104	0.028	15	0.004	97	0	107	0	69	0.005	16
2087			min	-0.003	42	0.002	46	-0.004	35	0	12	-0.005	14	0	37
2088		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2089			min	0	12	0	72	0	72	0	12	0	12	0	12
2090	M446	1	max	0.197	104	0.622	13	0.197	45	0	107	0.048	47	0.471	16
2091			min	-0.197	72	0.036	38	-0.197	73	0	12	-0.471	14	-0.048	105
2092		2	max	0.195	104	0.595	13	0.195	45	0	107	0.026	47	0.256	16
2093			min	-0.195	72	0.034	38	-0.195	73	0	12	-0.256	14	-0.026	105
2094		3	max	0.192	104	0.567	13	0.192	45	0	107	0.004	107	0.05	16
2095			min	-0.192	72	0.031	38	-0.192	73	0	12	-0.05	14	-0.004	105
2096		4	max	0.003	104	0.027	14	0.004	97	0	107	0	69	0.005	16
2097			min	-0.003	42	0.002	46	-0.004	69	0	12	-0.005	14	0	37
2098		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2099			min	0	12	0	72	0	72	0	12	0	12	0	12
2100	M447	1	max	0.638	45	0.266	14	0.03	104	0.003	103	0	107	0	107
2101			min	-0.665	73	0.004	75	-0.03	42	-0.002	45	0	12	0	12
2102		2	max	0.657	45	0.133	16	0.015	104	0.003	103	0.379	16	0.017	104
2103			min	-0.67	73	0.002	75	-0.015	42	-0.002	45	-0.017	46	-0.379	14
2104		3	max	0.675	101	0	107	0	107	0.003	103	0.505	16	0.022	104
2105			min	-0.675	73	0	12	0	12	-0.002	45	-0.022	46	-0.505	14
2106		4	max	0.697	101	-0.002	45	0.015	106	0.003	103	0.379	16	0.017	104
2107			min	-0.684	77	-0.133	13	-0.015	40	-0.002	45	-0.017	46	-0.379	14
2108		5	max	0.718	101	-0.004	45	0.03	106	0.003	103	0	107	0	107
2109			min	-0.692	77	-0.266	13	-0.03	40	-0.002	45	0	12	0	12
2110	M448	1	max	0.638	47	0.266	16	0.03	106	0.002	47	0	107	0	107
2111			min	-0.665	41	0.004	47	-0.03	40	-0.003	41	0	12	0	12
2112		2	max	0.657	47	0.133	16	0.015	106	0.002	47	0.379	16	0.017	106
2113			min	-0.67	41	0.002	47	-0.015	40	-0.003	41	-0.017	44	-0.379	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2114		3	max	0.675	103	0	107	0	107	0.002	47	0.505	16	0.022	106
2115			min	-0.675	41	0	12	0	12	-0.003	41	-0.022	44	-0.505	13
2116		4	max	0.697	103	-0.002	107	0.015	104	0.002	47	0.379	16	0.017	106
2117			min	-0.684	75	-0.133	13	-0.015	42	-0.003	41	-0.017	44	-0.379	13
2118		5	max	0.718	103	-0.004	107	0.03	104	0.002	47	0	107	0	107
2119			min	-0.692	75	-0.266	13	-0.03	42	-0.003	41	0	12	0	12
2120	M449	1	max	2.969	16	0.718	100	0.719	73	0.479	47	1.928	101	4.411	104
2121			min	-0.309	45	-0.718	72	-0.718	41	-0.479	41	-1.931	73	-5.287	42
2122		2	max	2.703	16	0.651	100	0.651	73	0.479	47	0.268	75	2.75	104
2123			min	-0.356	45	-0.651	72	-0.65	41	-0.479	41	-0.269	73	-3.626	42
2124		3	max	2.188	16	0.559	100	0.002	101	0.477	107	0.852	73	1.293	36
2125			min	-0.019	45	-0.56	72	-0.002	47	-0.477	41	-0.851	41	-2.143	42
2126		4	max	1.334	16	0.307	100	0.255	101	0.277	107	0.674	73	0.305	36
2127			min	-0.191	45	-0.307	72	-0.255	73	-0.277	41	-0.673	41	-1.049	15
2128		5	max	0	107	0	100	0	101	0	107	0	107	0	107
2129			min	0	12	0	15	0	43	0	12	0	12	0	12
2130	M450	1	max	0.128	96	0.41	13	0.108	101	0	107	0.032	107	0.361	16
2131			min	-0.128	38	0.032	38	-0.108	43	0	12	-0.361	14	-0.032	45
2132		2	max	0.128	96	0.382	13	0.105	101	0	107	0.02	107	0.22	16
2133			min	-0.128	38	0.03	38	-0.105	43	0	12	-0.22	14	-0.02	45
2134		3	max	0.128	96	0.354	13	0.102	101	0	107	0.008	107	0.09	16
2135			min	-0.128	38	0.028	38	-0.102	43	0	12	-0.09	14	-0.008	75
2136		4	max	0.003	104	0.028	13	0.004	93	0	107	0	69	0.005	16
2137			min	-0.003	42	0.002	46	-0.004	69	0	12	-0.005	14	0	37
2138		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2139			min	0	12	0	72	0	72	0	12	0	12	0	12
2140	M451	1	max	0.128	96	0.41	13	0.108	45	0	107	0.032	107	0.361	16
2141			min	-0.128	34	0.032	38	-0.108	47	0	12	-0.361	14	-0.032	45
2142		2	max	0.128	96	0.382	13	0.105	45	0	107	0.02	107	0.22	16
2143			min	-0.128	34	0.03	38	-0.105	47	0	12	-0.22	14	-0.02	45
2144		3	max	0.128	96	0.354	13	0.102	45	0	107	0.008	107	0.09	16
2145			min	-0.128	34	0.028	38	-0.102	47	0	12	-0.09	14	-0.008	45
2146		4	max	0.003	104	0.028	13	0.004	33	0	107	0	69	0.005	16
2147			min	-0.003	42	0.002	46	-0.004	35	0	12	-0.005	14	0	37
2148		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2149			min	0	12	0	72	0	72	0	12	0	12	0	12
2150	M452	1	max	0.185	104	0.588	13	0.185	101	0	107	0.045	107	0.445	16
2151			min	-0.185	46	0.034	38	-0.185	73	0	12	-0.445	14	-0.045	45
2152		2	max	0.182	104	0.56	13	0.182	101	0	107	0.024	107	0.241	16
2153			min	-0.182	46	0.032	38	-0.182	73	0	12	-0.241	14	-0.024	75
2154		3	max	0.179	104	0.533	13	0.179	101	0	107	0.004	107	0.048	16
2155			min	-0.179	46	0.03	38	-0.179	73	0	12	-0.048	14	-0.004	75
2156		4	max	0.003	100	0.027	15	0.004	97	0	107	0	99	0.005	16
2157			min	-0.003	42	0.002	46	-0.004	65	0	12	-0.005	14	0	37
2158		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2159			min	0	12	0	72	0	72	0	12	0	12	0	12
2160	M453	1	max	2.969	14	0.718	100	0.718	73	0.479	103	1.931	101	4.411	44
2161			min	-0.309	47	-0.718	42	-0.719	41	-0.479	45	-1.928	73	-5.287	72
2162		2	max	2.703	14	0.651	100	0.65	73	0.479	103	0.269	101	2.75	44
2163			min	-0.356	47	-0.651	42	-0.651	41	-0.479	45	-0.268	77	-3.626	72
2164		3	max	2.188	14	0.559	100	0.002	45	0.477	103	0.851	73	1.293	96
2165			min	-0.019	47	-0.56	42	-0.002	73	-0.477	75	-0.852	41	-2.143	42
2166		4	max	1.334	14	0.307	100	0.255	101	0.277	103	0.673	73	0.305	96
2167			min	-0.191	47	-0.307	42	-0.255	43	-0.277	45	-0.674	41	-1.049	15
2168		5	max	0	107	0	100	0	101	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2169			min	0	12	0	15	0	43	0	12	0	12	0	12
2170	M454	1	max	0.128	96	0.41	13	0.108	105	0	107	0.032	107	0.361	16
2171			min	-0.128	34	0.032	38	-0.108	77	0	12	-0.361	14	-0.032	75
2172		2	max	0.128	96	0.382	13	0.105	105	0	107	0.02	47	0.22	16
2173			min	-0.128	34	0.03	38	-0.105	77	0	12	-0.22	14	-0.02	75
2174		3	max	0.128	96	0.354	13	0.102	105	0	107	0.008	47	0.09	16
2175			min	-0.128	34	0.028	38	-0.102	77	0	12	-0.09	14	-0.008	75
2176		4	max	0.003	104	0.028	14	0.004	93	0	107	0	99	0.005	16
2177			min	-0.003	46	0.002	46	-0.004	35	0	12	-0.005	14	0	37
2178		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2179			min	0	12	0	72	0	72	0	12	0	12	0	12
2180	M455	1	max	0.128	92	0.41	13	0.108	45	0	107	0.032	47	0.361	16
2181			min	-0.128	34	0.032	38	-0.108	43	0	12	-0.361	14	-0.032	45
2182		2	max	0.128	92	0.382	13	0.105	45	0	107	0.02	47	0.22	16
2183			min	-0.128	34	0.03	38	-0.105	43	0	12	-0.22	14	-0.02	75
2184		3	max	0.128	92	0.354	13	0.102	45	0	107	0.008	47	0.09	16
2185			min	-0.128	34	0.028	38	-0.102	43	0	12	-0.09	14	-0.008	75
2186		4	max	0.003	104	0.028	14	0.004	33	0	107	0	99	0.005	16
2187			min	-0.003	46	0.002	46	-0.004	39	0	12	-0.005	14	0	37
2188		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2189			min	0	12	0	72	0	72	0	12	0	12	0	12
2190	M456	1	max	0.185	74	0.588	13	0.185	45	0	107	0.045	107	0.445	16
2191			min	-0.185	46	0.034	38	-0.185	77	0	12	-0.445	14	-0.045	45
2192		2	max	0.182	74	0.56	13	0.182	45	0	107	0.024	107	0.241	16
2193			min	-0.182	46	0.032	38	-0.182	77	0	12	-0.241	14	-0.024	75
2194		3	max	0.179	74	0.533	13	0.179	45	0	107	0.004	47	0.048	16
2195			min	-0.179	46	0.03	38	-0.179	77	0	12	-0.048	14	-0.004	75
2196		4	max	0.003	104	0.027	16	0.004	93	0	107	0	99	0.005	16
2197			min	-0.003	42	0.002	46	-0.004	95	0	12	-0.005	14	0	37
2198		5	max	0	107	0	107	0	100	0	107	0	107	0	107
2199			min	0	12	0	72	0	72	0	12	0	12	0	12
2200	M457	1	max	0.66	45	0.196	15	0.024	104	0.004	73	0	107	0	107
2201			min	-0.687	43	0	75	-0.024	46	-0.004	45	0	12	0	12
2202		2	max	0.675	45	0.098	15	0.012	104	0.004	73	0.224	15	0.012	44
2203			min	-0.688	43	0	75	-0.012	46	-0.004	45	-0.012	46	-0.224	15
2204		3	max	0.69	101	0	107	0	107	0.004	73	0.298	15	0.016	44
2205			min	-0.69	43	0	12	0	12	-0.004	45	-0.016	46	-0.298	15
2206		4	max	0.708	101	0	45	0.012	102	0.004	73	0.224	15	0.012	44
2207			min	-0.695	77	-0.098	16	-0.012	40	-0.004	45	-0.012	46	-0.224	15
2208		5	max	0.726	101	0	45	0.024	102	0.004	73	0	107	0	107
2209			min	-0.7	77	-0.196	16	-0.024	44	-0.004	45	0	12	0	12
2210	M458	1	max	0.66	47	0.196	16	0.024	106	0.004	47	0	107	0	107
2211			min	-0.687	41	0	77	-0.024	44	-0.004	41	0	12	0	12
2212		2	max	0.675	47	0.098	16	0.012	106	0.004	47	0.224	16	0.012	106
2213			min	-0.688	41	0	77	-0.012	44	-0.004	41	-0.012	44	-0.224	16
2214		3	max	0.69	73	0	107	0	107	0.004	47	0.298	16	0.016	106
2215			min	-0.69	41	0	12	0	12	-0.004	41	-0.016	44	-0.298	16
2216		4	max	0.708	73	0	47	0.012	100	0.004	47	0.224	16	0.012	106
2217			min	-0.695	75	-0.098	13	-0.012	42	-0.004	41	-0.012	44	-0.224	16
2218		5	max	0.726	73	0	47	0.024	100	0.004	47	0	107	0	107
2219			min	-0.7	75	-0.196	13	-0.024	46	-0.004	41	0	12	0	12
2220	M463	1	max	0.359	102	0.359	103	-0.059	66	0	107	0.928	14	0.928	16
2221			min	-0.359	40	-0.359	45	-1.068	15	0	12	-0.101	47	-0.101	45
2222		2	max	0.356	102	0.356	103	-0.057	66	0	107	0.54	14	0.54	16
2223			min	-0.356	40	-0.356	45	-1.04	15	0	12	-0.059	47	-0.059	45

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2224		3	max	0.353	102	0.353	103	-0.054	66	0	107	0.162	14	0.162	16
2225			min	-0.353	40	-0.353	45	-1.012	15	0	12	-0.017	107	-0.017	75
2226		4	max	0.003	76	0.004	65	-0.002	107	0	107	0.005	14	0.005	16
2227			min	-0.003	100	-0.004	33	-0.028	13	0	12	0	99	0	97
2228		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2229			min	0	12	0	72	0	72	0	12	0	12	0	12
2230	M464	1	max	0.167	102	0.167	77	-0.032	66	0	107	0.461	14	0.461	16
2231			min	-0.167	74	-0.167	101	-0.539	15	0	12	-0.047	77	-0.047	45
2232		2	max	0.164	102	0.164	77	-0.029	66	0	107	0.267	14	0.267	16
2233			min	-0.164	74	-0.164	101	-0.511	15	0	12	-0.027	77	-0.027	75
2234		3	max	0.161	102	0.161	77	-0.027	66	0	107	0.084	14	0.084	16
2235			min	-0.161	74	-0.161	101	-0.483	15	0	12	-0.008	77	-0.008	75
2236		4	max	0.003	106	0.004	99	-0.002	74	0	107	0.005	14	0.005	16
2237			min	-0.003	70	-0.004	63	-0.028	16	0	12	0	69	0	97
2238		5	max	0	107	0	100	0	70	0	107	0	107	0	107
2239			min	0	12	0	12	0	12	0	12	0	12	0	12
2240	M465	1	max	0.341	46	0.341	47	-0.056	66	0	107	0.883	14	0.883	16
2241			min	-0.341	40	-0.341	75	-1.017	15	0	12	-0.096	47	-0.096	45
2242		2	max	0.338	46	0.338	47	-0.054	66	0	107	0.514	14	0.514	16
2243			min	-0.338	40	-0.338	75	-0.989	15	0	12	-0.056	47	-0.056	105
2244		3	max	0.335	46	0.335	47	-0.052	66	0	107	0.154	14	0.154	16
2245			min	-0.335	40	-0.335	75	-0.961	15	0	12	-0.016	47	-0.016	105
2246		4	max	0.003	42	0.004	99	-0.002	45	0	107	0.005	14	0.005	16
2247			min	-0.003	40	-0.004	93	-0.028	13	0	12	0	69	0	97
2248		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2249			min	0	12	0	12	0	72	0	12	0	12	0	12
2250	M466	1	max	0.241	94	0.19	77	-0.051	66	0	107	0.445	14	0.445	16
2251			min	-0.241	66	-0.19	101	-0.647	15	0	12	-0.043	77	-0.043	105
2252		2	max	0.241	94	0.188	77	-0.049	66	0	107	0.267	14	0.267	16
2253			min	-0.241	66	-0.188	101	-0.625	15	0	12	-0.026	77	-0.026	105
2254		3	max	0.241	94	0.186	77	-0.047	66	0	107	0.095	14	0.095	16
2255			min	-0.241	66	-0.186	101	-0.604	15	0	12	-0.009	77	-0.009	45
2256		4	max	0.002	46	0.003	65	-0.002	47	0	107	0.003	14	0.003	16
2257			min	-0.002	40	-0.003	33	-0.022	13	0	12	0	69	0	67
2258		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2259			min	0	12	0	12	0	72	0	12	0	12	0	12
2260	M467	1	max	0.26	76	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
2261			min	-0.26	104	-0.26	71	-0.796	15	0	12	-0.073	107	-0.073	45
2262		2	max	0.257	76	0.257	43	-0.042	66	0	107	0.399	14	0.399	16
2263			min	-0.257	104	-0.257	71	-0.768	15	0	12	-0.043	107	-0.043	45
2264		3	max	0.254	76	0.254	43	-0.04	66	0	107	0.122	14	0.122	16
2265			min	-0.254	104	-0.254	71	-0.739	15	0	12	-0.012	77	-0.012	45
2266		4	max	0.003	106	0.004	35	-0.002	47	0	107	0.005	14	0.005	16
2267			min	-0.003	74	-0.004	97	-0.028	13	0	12	0	39	0	97
2268		5	max	0	107	0	107	0	70	0	107	0	107	0	107
2269			min	0	12	0	72	0	72	0	12	0	12	0	12
2270	M472	1	max	0.092	76	0.092	47	-0.021	66	0	107	0.28	14	0.28	16
2271			min	-0.092	70	-0.092	101	-0.334	15	0	12	-0.026	107	-0.026	105
2272		2	max	0.089	76	0.089	47	-0.019	66	0	107	0.161	14	0.161	16
2273			min	-0.089	70	-0.089	101	-0.306	15	0	12	-0.015	107	-0.015	105
2274		3	max	0.087	76	0.087	47	-0.016	66	0	107	0.054	14	0.054	16
2275			min	-0.087	70	-0.087	101	-0.278	15	0	12	-0.004	107	-0.004	45
2276		4	max	0.003	102	0.004	65	-0.002	74	0	107	0.005	14	0.005	16
2277			min	-0.003	70	-0.004	97	-0.028	14	0	12	0	39	0	67
2278		5	max	0	107	0	107	0	70	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2279			min	0	12	0	102	0	12	0	12	0	12	0	12
2280	M486	1	max	0.187	94	0.15	107	-0.041	66	0	107	0.354	14	0.354	16
2281			min	-0.187	92	-0.15	75	-0.518	15	0	12	-0.033	107	-0.033	75
2282		2	max	0.187	94	0.147	107	-0.039	66	0	107	0.212	14	0.212	16
2283			min	-0.187	92	-0.147	75	-0.497	15	0	12	-0.02	47	-0.02	75
2284		3	max	0.187	94	0.145	107	-0.037	66	0	107	0.076	14	0.076	16
2285			min	-0.187	92	-0.145	75	-0.475	15	0	12	-0.007	47	-0.007	75
2286		4	max	0.002	46	0.003	95	-0.002	45	0	107	0.003	14	0.003	16
2287			min	-0.002	74	-0.003	33	-0.021	13	0	12	0	39	0	97
2288		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2289			min	0	12	0	72	0	72	0	12	0	12	0	12
2290	M487	1	max	0.059	94	0.053	103	-0.018	66	0	107	0.147	14	0.147	16
2291			min	-0.059	32	-0.053	71	-0.225	15	0	12	-0.012	107	-0.012	75
2292		2	max	0.059	94	0.051	103	-0.016	66	0	107	0.087	14	0.087	16
2293			min	-0.059	32	-0.051	71	-0.204	15	0	12	-0.007	107	-0.007	75
2294		3	max	0.059	94	0.049	103	-0.014	66	0	107	0.033	14	0.033	16
2295			min	-0.059	32	-0.049	71	-0.182	15	0	12	-0.002	47	-0.002	75
2296		4	max	0.002	102	0.003	99	-0.002	74	0	107	0.003	14	0.003	16
2297			min	-0.002	70	-0.003	67	-0.022	14	0	12	0	69	0	97
2298		5	max	0	107	0	107	0	70	0	107	0	107	0	107
2299			min	0	12	0	102	0	12	0	12	0	12	0	12
2300	M488	1	max	0.272	106	0.272	47	-0.047	66	0	107	0.716	14	0.716	16
2301			min	-0.272	70	-0.272	71	-0.828	15	0	12	-0.076	47	-0.076	105
2302		2	max	0.269	106	0.269	47	-0.044	66	0	107	0.416	14	0.416	16
2303			min	-0.269	70	-0.269	71	-0.8	15	0	12	-0.045	77	-0.045	75
2304		3	max	0.266	106	0.266	47	-0.042	66	0	107	0.126	14	0.126	16
2305			min	-0.266	70	-0.266	71	-0.772	15	0	12	-0.013	77	-0.013	75
2306		4	max	0.003	102	0.004	65	-0.002	77	0	107	0.005	14	0.005	16
2307			min	-0.003	70	-0.004	97	-0.028	14	0	12	0	69	0	67
2308		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2309			min	0	12	0	72	0	72	0	12	0	12	0	12
2310	M489	1	max	0.059	64	0.053	103	-0.018	66	0	107	0.146	14	0.146	16
2311			min	-0.059	62	-0.053	71	-0.224	15	0	12	-0.012	107	-0.012	75
2312		2	max	0.059	64	0.051	103	-0.016	66	0	107	0.086	14	0.086	16
2313			min	-0.059	62	-0.051	71	-0.202	15	0	12	-0.007	107	-0.007	75
2314		3	max	0.059	64	0.049	103	-0.014	66	0	107	0.032	14	0.032	16
2315			min	-0.059	62	-0.049	71	-0.181	15	0	12	-0.002	107	-0.002	75
2316		4	max	0.002	102	0.003	95	-0.002	74	0	107	0.003	14	0.003	16
2317			min	-0.002	70	-0.003	97	-0.021	13	0	12	0	69	0	37
2318		5	max	0	107	0	107	0	70	0	107	0	107	0	107
2319			min	0	12	0	102	0	12	0	12	0	12	0	12
2320	M490	1	max	0.204	76	0.204	103	-0.037	66	0	107	0.551	14	0.551	16
2321			min	-0.204	70	-0.204	45	-0.641	15	0	12	-0.057	107	-0.057	45
2322		2	max	0.201	76	0.201	103	-0.035	66	0	107	0.32	14	0.32	16
2323			min	-0.201	70	-0.201	45	-0.613	15	0	12	-0.033	107	-0.033	75
2324		3	max	0.198	76	0.198	103	-0.032	66	0	107	0.099	14	0.099	16
2325			min	-0.198	70	-0.198	45	-0.585	15	0	12	-0.01	107	-0.01	75
2326		4	max	0.003	102	0.004	65	-0.002	74	0	107	0.005	14	0.005	16
2327			min	-0.003	104	-0.004	37	-0.028	13	0	12	0	69	0	67
2328		5	max	0	107	0	100	0	70	0	107	0	107	0	107
2329			min	0	12	0	102	0	12	0	12	0	12	0	12
2330	M491	1	max	0.138	94	0.113	77	-0.032	66	0	107	0.274	14	0.274	16
2331			min	-0.138	62	-0.113	41	-0.405	15	0	12	-0.025	77	-0.025	75
2332		2	max	0.138	94	0.11	77	-0.03	66	0	107	0.164	14	0.164	16
2333			min	-0.138	62	-0.11	41	-0.383	15	0	12	-0.015	107	-0.015	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2334		3	max	0.138	94	0.108	77	-0.028	66	0	107	0.059	14	0.059	16
2335			min	-0.138	62	-0.108	41	-0.362	15	0	12	-0.005	107	-0.005	75
2336		4	max	0.002	46	0.003	35	-0.002	74	0	107	0.003	14	0.003	16
2337			min	-0.002	74	-0.003	93	-0.021	14	0	12	0	69	0	37
2338		5	max	0	107	0	100	0	70	0	107	0	107	0	107
2339			min	0	12	0	12	0	12	0	12	0	12	0	12
2340	M492	1	max	0.138	38	0.113	107	-0.032	66	0	107	0.275	14	0.275	16
2341			min	-0.138	96	-0.113	75	-0.406	15	0	12	-0.025	47	-0.025	75
2342		2	max	0.138	38	0.11	107	-0.03	66	0	107	0.164	14	0.164	16
2343			min	-0.138	96	-0.11	75	-0.384	15	0	12	-0.015	47	-0.015	75
2344		3	max	0.138	38	0.108	107	-0.029	66	0	107	0.059	14	0.059	16
2345			min	-0.138	96	-0.108	75	-0.363	15	0	12	-0.005	47	-0.005	75
2346		4	max	0.002	102	0.003	65	-0.002	74	0	107	0.003	14	0.003	16
2347			min	-0.002	70	-0.003	67	-0.022	13	0	12	0	99	0	97
2348		5	max	0	107	0	100	0	70	0	107	0	107	0	107
2349			min	0	12	0	12	0	12	0	12	0	12	0	12
2350	M493	1	max	0.341	76	0.341	77	-0.056	66	0	107	0.883	14	0.883	16
2351			min	-0.341	40	-0.341	71	-1.017	15	0	12	-0.096	107	-0.096	45
2352		2	max	0.338	76	0.338	77	-0.054	66	0	107	0.514	14	0.514	16
2353			min	-0.338	40	-0.338	71	-0.989	15	0	12	-0.056	107	-0.056	75
2354		3	max	0.335	76	0.335	77	-0.052	66	0	107	0.154	14	0.154	16
2355			min	-0.335	40	-0.335	71	-0.961	15	0	12	-0.016	107	-0.016	75
2356		4	max	0.003	106	0.004	69	-0.002	47	0	107	0.005	14	0.005	16
2357			min	-0.003	74	-0.004	97	-0.028	16	0	12	0	39	0	37
2358		5	max	0	107	0	70	0	70	0	107	0	107	0	107
2359			min	0	12	0	12	0	72	0	12	0	12	0	12
2360	M494	1	max	0.241	68	0.19	107	-0.051	66	0	107	0.444	14	0.444	16
2361			min	-0.241	96	-0.19	105	-0.646	15	0	12	-0.043	47	-0.043	75
2362		2	max	0.241	68	0.188	107	-0.049	66	0	107	0.266	14	0.266	16
2363			min	-0.241	96	-0.188	105	-0.624	15	0	12	-0.026	47	-0.026	45
2364		3	max	0.241	68	0.186	107	-0.047	66	0	107	0.095	14	0.095	16
2365			min	-0.241	96	-0.186	105	-0.603	15	0	12	-0.009	47	-0.009	45
2366		4	max	0.002	46	0.003	35	-0.002	107	0	107	0.003	14	0.003	16
2367			min	-0.002	40	-0.003	37	-0.021	13	0	12	0	39	0	67
2368		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2369			min	0	12	0	12	0	72	0	12	0	12	0	12
2370	M495	1	max	0.241	68	0.19	103	-0.051	66	0	107	0.445	14	0.445	16
2371			min	-0.241	66	-0.19	71	-0.647	15	0	12	-0.043	47	-0.043	75
2372		2	max	0.241	68	0.188	103	-0.049	66	0	107	0.267	14	0.267	16
2373			min	-0.241	66	-0.188	71	-0.625	15	0	12	-0.026	107	-0.026	45
2374		3	max	0.241	68	0.186	103	-0.047	66	0	107	0.095	14	0.095	16
2375			min	-0.241	66	-0.186	71	-0.604	15	0	12	-0.009	107	-0.009	45
2376		4	max	0.002	46	0.003	95	-0.002	47	0	107	0.003	14	0.003	16
2377			min	-0.002	40	-0.003	33	-0.022	13	0	12	0	69	0	97
2378		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2379			min	0	12	0	12	0	72	0	12	0	12	0	12
2380	M496	1	max	0.187	34	0.15	77	-0.041	66	0	107	0.355	14	0.355	16
2381			min	-0.187	36	-0.15	41	-0.52	15	0	12	-0.033	107	-0.033	45
2382		2	max	0.187	34	0.147	77	-0.039	66	0	107	0.212	14	0.212	16
2383			min	-0.187	36	-0.147	41	-0.498	15	0	12	-0.02	107	-0.02	45
2384		3	max	0.187	34	0.145	77	-0.038	66	0	107	0.076	14	0.076	16
2385			min	-0.187	36	-0.145	41	-0.476	15	0	12	-0.007	107	-0.007	45
2386		4	max	0.002	42	0.003	35	-0.002	105	0	107	0.003	14	0.003	16
2387			min	-0.002	40	-0.003	93	-0.022	14	0	12	0	99	0	37
2388		5	max	0	107	0	70	0	107	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2389			min	0	12	0	72	0	72	0	12	0	12	0	12
2390	M499	1	max	0.182	98	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
2391			min	-0.182	66	-0.146	101	-0.507	15	0	12	-0.033	107	-0.033	45
2392		2	max	0.182	98	0.144	103	-0.038	66	0	107	0.207	14	0.207	16
2393			min	-0.182	66	-0.144	101	-0.486	15	0	12	-0.02	107	-0.02	105
2394		3	max	0.182	98	0.141	103	-0.037	66	0	107	0.074	14	0.074	16
2395			min	-0.182	66	-0.141	101	-0.465	15	0	12	-0.007	107	-0.007	105
2396		4	max	0.002	42	0.003	99	-0.002	45	0	107	0.003	14	0.003	16
2397			min	-0.002	40	-0.003	93	-0.021	13	0	12	0	99	0	37
2398		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2399			min	0	12	0	72	0	72	0	12	0	12	0	12
2400	M500	1	max	0.113	38	0.094	77	-0.028	66	0	107	0.234	14	0.234	16
2401			min	-0.113	62	-0.094	105	-0.348	15	0	12	-0.021	77	-0.021	105
2402		2	max	0.113	38	0.092	77	-0.026	66	0	107	0.139	14	0.139	16
2403			min	-0.113	62	-0.092	105	-0.326	15	0	12	-0.013	77	-0.013	105
2404		3	max	0.113	38	0.09	77	-0.024	66	0	107	0.051	14	0.051	16
2405			min	-0.113	62	-0.09	105	-0.305	15	0	12	-0.004	107	-0.004	45
2406		4	max	0.002	46	0.003	99	-0.002	74	0	107	0.003	14	0.003	16
2407			min	-0.002	70	-0.003	33	-0.021	14	0	12	0	39	0	67
2408		5	max	0	107	0	100	0	70	0	107	0	107	0	107
2409			min	0	12	0	12	0	12	0	12	0	12	0	12
2410	M501	1	max	0.113	94	0.094	73	-0.028	66	0	107	0.235	14	0.235	16
2411			min	-0.113	36	-0.094	101	-0.349	15	0	12	-0.021	77	-0.021	105
2412		2	max	0.113	94	0.092	73	-0.026	66	0	107	0.14	14	0.14	16
2413			min	-0.113	36	-0.092	101	-0.328	15	0	12	-0.013	77	-0.013	105
2414		3	max	0.113	94	0.09	73	-0.024	66	0	107	0.051	14	0.051	16
2415			min	-0.113	36	-0.09	101	-0.306	15	0	12	-0.004	77	-0.004	75
2416		4	max	0.002	106	0.003	69	-0.002	74	0	107	0.003	14	0.003	16
2417			min	-0.002	70	-0.003	97	-0.022	13	0	12	0	69	0	37
2418		5	max	0	107	0	100	0	70	0	107	0	107	0	107
2419			min	0	12	0	12	0	12	0	12	0	12	0	12
2420	M502	1	max	0.241	38	0.19	73	-0.051	66	0	107	0.444	14	0.444	16
2421			min	-0.241	32	-0.19	45	-0.646	15	0	12	-0.043	107	-0.043	105
2422		2	max	0.241	38	0.188	73	-0.049	66	0	107	0.266	14	0.266	16
2423			min	-0.241	32	-0.188	45	-0.624	15	0	12	-0.026	107	-0.026	105
2424		3	max	0.241	38	0.186	73	-0.047	66	0	107	0.095	14	0.095	16
2425			min	-0.241	32	-0.186	45	-0.603	15	0	12	-0.009	107	-0.009	105
2426		4	max	0.002	46	0.003	69	-0.002	75	0	107	0.003	14	0.003	16
2427			min	-0.002	44	-0.003	63	-0.021	15	0	12	0	99	0	37
2428		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2429			min	0	12	0	12	0	72	0	12	0	12	0	12
2430	M503	1	max	0.251	38	0.198	43	-0.053	66	0	107	0.459	14	0.459	16
2431			min	-0.251	96	-0.198	105	-0.667	15	0	12	-0.044	47	-0.044	105
2432		2	max	0.251	38	0.195	43	-0.051	66	0	107	0.276	14	0.276	16
2433			min	-0.251	96	-0.195	105	-0.646	15	0	12	-0.027	107	-0.027	105
2434		3	max	0.251	38	0.193	43	-0.049	66	0	107	0.098	14	0.098	16
2435			min	-0.251	96	-0.193	105	-0.624	15	0	12	-0.009	107	-0.009	75
2436		4	max	0.002	102	0.003	69	-0.002	77	0	107	0.003	14	0.003	16
2437			min	-0.002	100	-0.003	37	-0.021	16	0	12	0	39	0	67
2438		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2439			min	0	12	0	72	0	72	0	12	0	12	0	12
2440	M504	1	max	0.251	98	0.198	73	-0.053	66	0	107	0.46	14	0.46	16
2441			min	-0.251	96	-0.198	105	-0.669	15	0	12	-0.044	47	-0.044	105
2442		2	max	0.251	98	0.195	73	-0.051	66	0	107	0.276	14	0.276	16
2443			min	-0.251	96	-0.195	105	-0.647	15	0	12	-0.027	47	-0.027	105

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2444		3	max	0.251	98	0.193	73	-0.049	66	0	107	0.098	14	0.098	16
2445			min	-0.251	96	-0.193	105	-0.625	15	0	12	-0.009	47	-0.009	75
2446		4	max	0.002	46	0.003	95	-0.002	75	0	107	0.003	14	0.003	16
2447			min	-0.002	74	-0.003	93	-0.022	13	0	12	0	69	0	97
2448		5	max	0	107	0	70	0	107	0	107	0	107	0	107
2449			min	0	12	0	72	0	72	0	12	0	12	0	12
2450	M505	1	max	0.182	64	0.146	73	-0.04	66	0	107	0.348	14	0.348	16
2451			min	-0.182	32	-0.146	105	-0.509	15	0	12	-0.033	107	-0.033	45
2452		2	max	0.182	64	0.144	73	-0.039	66	0	107	0.208	14	0.208	16
2453			min	-0.182	32	-0.144	105	-0.487	15	0	12	-0.02	107	-0.02	45
2454		3	max	0.182	64	0.141	73	-0.037	66	0	107	0.074	14	0.074	16
2455			min	-0.182	32	-0.141	105	-0.465	15	0	12	-0.007	77	-0.007	75
2456		4	max	0.002	42	0.003	35	-0.002	75	0	107	0.003	14	0.003	16
2457			min	-0.002	70	-0.003	33	-0.022	15	0	12	0	69	0	97
2458		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2459			min	0	12	0	72	0	72	0	12	0	12	0	12
2460	M391	1	max	21.574	15	5.166	100	0.136	15	0	107	0	107	0	107
2461			min	-3.172	104	-5.176	72	-0.006	104	0	12	0	12	0	12
2462		2	max	21.275	15	5.098	100	0.203	107	0	107	0.158	103	8.162	72
2463			min	-3.256	104	-5.038	72	-0.211	71	0	12	-0.134	75	-8.193	100
2464		3	max	21.062	15	5.037	100	0.142	107	0	107	0.431	103	16.143	72
2465			min	-3.298	104	-4.978	72	-0.151	71	0	12	-0.416	75	-16.269	100
2466		4	max	20.072	15	4.023	70	0.396	75	0.117	77	0.361	103	8.843	72
2467			min	1.321	96	-4.629	102	-0.407	103	-0.148	71	-0.355	75	-9.032	100
2468		5	max	0	107	0	100	0	13	0	107	0	107	0	107
2469			min	0	12	0	72	0	98	0	12	0	12	0	12
2470	M393	1	max	25.852	13	10.936	102	0.002	76	0	107	0	107	0	107
2471			min	-2.194	106	-10.86	70	-0.169	13	0	12	0	12	0	12
2472		2	max	25.239	13	2.998	102	0.193	71	0	107	0.125	75	12.036	70
2473			min	-2.478	106	-3.498	70	-0.189	107	0	12	-0.144	103	-11.746	102
2474		3	max	25.026	13	2.937	102	0.132	71	0	107	0.378	75	17.55	70
2475			min	-2.52	106	-3.425	70	-0.128	107	0	12	-0.396	103	-16.475	102
2476		4	max	23.501	13	3.524	76	0.365	103	0.137	71	0.318	75	8.306	70
2477			min	1.432	98	-4.599	100	-0.358	75	-0.107	77	-0.328	103	-7.828	102
2478		5	max	0	107	0	102	0	106	0	107	0	107	0	107
2479			min	0	12	0	70	0	15	0	12	0	12	0	12
2480	M395	1	max	28.536	13	12.213	102	16.449	75	0	107	0	107	0	107
2481			min	-3.379	76	-12.033	70	-17.349	103	0	12	0	12	0	12
2482		2	max	27.923	13	3.324	102	2.697	103	0	107	12.561	75	13.336	70
2483			min	-3.547	76	-3.872	70	-2.548	75	0	12	-13.223	103	-13.093	102
2484		3	max	27.07	13	3.057	102	2.991	103	0.253	103	8.236	75	19.53	70
2485			min	-3.728	76	-3.59	70	-2.829	75	-0.253	71	-8.648	103	-17.89	106
2486		4	max	24.144	13	3.714	76	3.783	103	0.12	103	3.251	71	9.278	70
2487			min	1.211	68	-4.777	100	-3.61	71	-0.141	101	-3.399	103	-8.289	102
2488		5	max	0	107	0	102	0	16	0	107	0	107	0	107
2489			min	0	12	0	70	0	76	0	12	0	12	0	12
2490	M459	1	max	19.839	15	5.771	100	15.771	107	0	107	0	107	0	107
2491			min	-4.938	74	-5.484	72	-16.719	71	0	12	0	12	0	12
2492		2	max	19.566	15	5.647	100	2.848	71	0	107	11.872	107	8.707	72
2493			min	-4.891	74	-5.428	72	-2.675	107	0	12	-12.578	71	-9.118	100
2494		3	max	19.354	15	5.586	100	2.909	71	0	107	7.56	107	17.311	72
2495			min	-4.933	74	-5.368	72	-2.736	107	0	12	-7.99	71	-18.069	100
2496		4	max	18.925	15	4.328	70	3.421	71	0.099	77	2.937	107	9.493	72
2497			min	0.495	74	-4.728	102	-3.238	107	-0.13	71	-3.093	71	-9.977	100
2498		5	max	0	107	0	100	0	68	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2499			min	0	12	0	72	0	13	0	12	0	12	0	12
2500	M461	1	max	0.881	72	0.019	105	-0.013	106	0	76	0.152	72	0.07	104
2501			min	-0.405	104	-0.019	73	-0.16	13	0	13	-0.07	104	-0.152	72
2502		2	max	0.89	72	0.009	105	-0.007	106	0	76	0.139	72	0.063	104
2503			min	-0.415	104	-0.009	73	-0.08	13	0	13	-0.08	104	-0.216	15
2504		3	max	0.9	72	0.002	106	0	102	0	76	0.135	72	0.061	104
2505			min	-0.424	104	-0.002	74	0	70	0	13	-0.085	104	-0.252	15
2506		4	max	0.909	72	0.009	107	0.08	16	0	76	0.142	72	0.066	104
2507			min	-0.434	104	-0.009	71	0.007	104	0	13	-0.083	104	-0.216	15
2508		5	max	0.919	72	0.019	107	0.16	16	0	76	0.158	72	0.076	104
2509			min	-0.443	104	-0.019	71	0.013	104	0	13	-0.076	104	-0.158	72
2510	M462	1	max	20.33	103	0.314	71	0.119	102	0.001	104	0	107	1.676	75
2511			min	-18.617	75	-0.312	103	-0.094	74	-0.072	15	0	12	-1.83	103
2512		2	max	2.276	106	0.149	103	0.038	104	0.019	13	1.021	72	1.579	13
2513			min	-52.229	13	0.011	68	-0.07	72	-0.009	76	-0.802	104	0.232	68
2514		3	max	2.886	106	0.054	70	0.028	68	0.061	13	0.377	106	0.494	15
2515			min	-64.712	13	-0.232	13	-0.063	71	0.006	107	-0.635	70	-0.036	66
2516		4	max	5.398	106	-0.009	99	0.096	72	0.03	15	1.125	72	1.336	14
2517			min	-54.142	13	-0.123	71	-0.061	104	-0.008	104	-0.951	104	0.207	99
2518		5	max	10.415	102	0.205	106	0.109	70	0.002	76	0	107	0.891	74
2519			min	-9.904	74	-0.211	70	-0.105	106	-0.065	13	0	12	-0.937	102
2520	M470	1	max	18.36	107	0.326	71	0.041	64	0.017	70	0	107	1.753	71
2521			min	-19.475	71	-0.292	107	-0.039	96	-0.013	106	0	12	-1.652	107
2522		2	max	-0.135	104	0.137	102	0.136	70	0.019	70	1.369	102	1.12	15
2523			min	-51.44	15	-0.021	74	-0.133	102	-0.015	106	-1.227	74	0.118	74
2524		3	max	3.433	104	0.087	72	0.048	71	0.056	13	0.426	106	0.448	100
2525			min	-61.065	15	-0.29	15	-0.051	64	0.005	107	-0.772	70	-0.118	76
2526		4	max	4.643	104	0.007	96	0.122	106	0.015	106	1.302	106	1.226	15
2527			min	-50.288	15	-0.13	72	-0.145	70	-0.018	70	-1.375	70	0.13	104
2528		5	max	0.257	107	0.09	17	0.032	96	0.013	106	0	107	0.027	71
2529			min	-0.301	71	-0.054	72	-0.106	15	-0.015	70	0	12	-0.023	107
2530	M474	1	max	1.4	104	0.027	72	-0.024	76	0.028	15	0.241	104	0.337	72
2531			min	-1.958	72	-0.027	104	-0.289	13	0	74	-0.337	72	-0.241	104
2532		2	max	1.41	104	0.013	72	-0.012	76	0.028	15	0.18	104	0.257	72
2533			min	-1.968	72	-0.013	104	-0.144	13	0	74	-0.571	15	-0.237	104
2534		3	max	1.419	104	0.002	73	0	99	0.028	15	0.161	104	0.238	76
2535			min	-1.977	72	-0.002	105	0	100	0	74	-0.686	15	-0.255	17
2536		4	max	1.428	104	0.015	70	0.144	15	0.028	15	0.184	104	0.26	72
2537			min	-1.987	72	-0.015	102	0.012	104	0	74	-0.571	15	-0.24	104
2538		5	max	1.438	104	0.029	70	0.289	15	0.028	15	0.247	104	0.343	72
2539			min	-1.996	72	-0.029	102	0.024	104	0	74	-0.343	72	-0.247	104
2540	M475	1	max	2.805	104	0.027	72	-0.024	76	0.016	13	0.483	104	0.545	72
2541			min	-3.166	72	-0.027	104	-0.289	13	-0.002	76	-0.545	72	-0.483	104
2542		2	max	2.815	104	0.013	72	-0.012	76	0.016	13	0.422	104	0.48	76
2543			min	-3.175	72	-0.013	104	-0.144	13	-0.002	76	-0.56	72	-0.479	104
2544		3	max	2.824	104	0.002	73	0	99	0.016	13	0.403	104	0.461	76
2545			min	-3.185	72	-0.002	105	0	100	-0.002	76	-0.646	15	-0.478	104
2546		4	max	2.834	104	0.015	70	0.144	15	0.016	13	0.425	104	0.484	76
2547			min	-3.194	72	-0.015	106	0.012	104	-0.002	76	-0.563	72	-0.482	104
2548		5	max	2.843	104	0.029	70	0.289	15	0.016	13	0.489	104	0.551	72
2549			min	-3.204	72	-0.029	106	0.024	104	-0.002	76	-0.551	72	-0.489	104
2550	M476	1	max	12.347	104	0.038	72	-0.035	77	0.017	15	2.656	104	2.8	72
2551			min	-13.02	72	-0.038	100	-0.318	13	-0.005	74	-2.8	72	-2.656	104
2552		2	max	12.362	104	0.018	72	-0.017	77	0.017	15	2.575	104	2.709	76
2553			min	-13.035	72	-0.018	100	-0.159	13	-0.005	74	-2.824	72	-2.653	104

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2554		3	max	12.377	104	0.003	73	0	99	0.017	15	2.55	104	2.684	76
2555			min	-13.05	72	-0.003	101	0	101	-0.005	74	-2.834	72	-2.654	104
2556		4	max	12.392	104	0.022	70	0.159	15	0.017	15	2.581	104	2.716	76
2557			min	-13.065	72	-0.022	102	0.017	105	-0.005	74	-2.831	72	-2.659	104
2558		5	max	12.407	104	0.043	70	0.318	15	0.017	15	2.668	104	2.813	72
2559			min	-13.08	72	-0.043	102	0.035	105	-0.005	74	-2.813	72	-2.668	104
2560	M477	1	max	30.796	15	-0.037	96	0.046	74	0.005	68	0	107	-0.381	107
2561			min	4.234	107	-0.436	15	-0.066	102	-0.015	13	0	12	-2.772	15
2562		2	max	66.745	15	0.033	66	0.026	74	0.006	68	0.2	104	-0.06	96
2563			min	1.553	96	-0.115	102	-0.043	102	-0.008	92	-0.234	72	-1.202	15
2564		3	max	72.334	15	0.227	13	0.098	101	0.024	15	1.173	13	0.015	66
2565			min	0.701	96	-0.034	71	-0.178	15	-0.007	73	-0.161	106	-0.529	15
2566		4	max	65.57	15	0.095	72	0.046	102	0.009	100	0.187	104	-0.027	96
2567			min	1.358	96	-0.062	17	-0.03	74	-0.005	68	-0.224	72	-0.903	15
2568		5	max	30.926	15	0.409	15	0.068	102	0.006	92	0	107	-0.423	96
2569			min	4.705	96	0.036	96	-0.047	74	-0.007	68	0	12	-2.783	15
2570	M478	1	max	27.817	13	0.049	106	0.06	74	0.01	98	0	107	0.158	106
2571			min	-1.754	106	-0.381	70	-0.073	102	-0.01	62	0	12	-2.504	13
2572		2	max	61.034	13	0.08	19	0.043	70	0.013	15	0.131	104	-0.084	98
2573			min	-1.991	106	-0.057	100	-0.044	102	-0.004	74	-0.219	72	-0.823	13
2574		3	max	65.689	13	0.082	12	0.182	15	0.021	15	1.175	13	0.029	68
2575			min	-2.67	106	-0.249	15	-0.08	12	-0.006	73	-0.167	106	-0.324	100
2576		4	max	60.803	13	0.063	70	0.04	72	0.006	74	0.14	74	-0.076	98
2577			min	-1.573	106	-0.078	19	-0.041	100	-0.006	106	-0.237	102	-0.828	13
2578		5	max	27.553	13	0.367	70	0.073	72	0.008	66	0	107	0.045	106
2579			min	-0.502	106	-0.039	98	-0.058	104	-0.021	15	0	12	-2.48	13
2580	M479	1	max	0.393	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
2581			min	-0.535	72	-0.729	103	-1.214	15	-0.062	103	-0.253	103	-0.265	71
2582		2	max	0.385	104	0.728	71	-0.31	67	0.062	71	0.259	75	0.264	107
2583			min	-0.527	72	-0.72	103	-1.141	15	-0.062	103	-1.444	103	-1.463	71
2584		3	max	0.289	98	0.129	71	-0.047	96	0.009	71	0.369	75	0.371	107
2585			min	-0.397	62	-0.129	103	-0.152	15	-0.009	103	-2.051	103	-2.074	71
2586		4	max	0.992	106	0.814	103	1.252	15	0.075	103	0.293	75	0.297	107
2587			min	-1.132	70	-0.822	71	0.345	67	-0.076	71	-1.631	103	-1.651	71
2588		5	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
2589			min	-1.14	70	-0.831	71	0.352	67	-0.076	71	-0.287	103	-0.299	71
2590	M480	1	max	1.177	100	0.702	71	-0.302	67	0.062	71	0.043	75	0.044	107
2591			min	-1.181	72	-0.702	103	-1.176	13	-0.062	103	-0.255	103	-0.256	71
2592		2	max	1.169	100	0.694	71	-0.295	67	0.062	71	0.239	75	0.24	107
2593			min	-1.172	72	-0.693	103	-1.103	13	-0.062	103	-1.408	103	-1.409	71
2594		3	max	0.641	100	0.123	71	-0.044	96	0.012	71	0.34	75	0.34	107
2595			min	-0.651	72	-0.122	103	-0.147	15	-0.011	103	-1.995	103	-1.997	71
2596		4	max	0.2	106	0.783	103	1.21	15	0.069	103	0.27	75	0.27	107
2597			min	-0.205	74	-0.783	71	0.328	67	-0.069	71	-1.588	103	-1.589	71
2598		5	max	0.208	106	0.791	103	1.283	15	0.069	103	0.049	75	0.049	107
2599			min	-0.213	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
2600	M481	1	max	1.789	57	5.772	70	0.465	71	0.108	71	0.062	101	11.511	70
2601			min	-2.448	86	-4.76	76	-0.4	77	-0.089	77	-0.058	103	-10.268	106
2602		2	max	1.789	57	5.751	70	0.447	71	0.108	71	0.524	71	5.477	70
2603			min	-2.456	100	-4.772	76	-0.382	77	-0.089	77	-0.46	77	-5.326	102
2604		3	max	2.057	72	5.389	70	0.07	71	0.02	71	0.743	71	0.039	68
2605			min	-2.774	100	-4.991	76	-0.067	103	-0.016	107	-0.648	77	-0.512	100
2606		4	max	2.553	72	4.904	74	0.431	77	0.103	77	0.596	71	5.267	76
2607			min	-3.267	100	-5.528	72	-0.504	71	-0.119	71	-0.526	107	-5.812	100
2608		5	max	2.571	72	4.892	74	0.449	77	0.103	77	0.071	101	11.021	72

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2609			min	-3.285	100	-5.549	72	-0.522	71	-0.119	71	-0.07	103	-10.847	100
2610	M482	1	max	2.015	72	6.39	70	0.514	71	0.103	75	0.182	77	12.803	70
2611			min	-2.687	100	-5.187	76	-0.453	107	-0.094	103	-0.19	71	-11.161	106
2612		2	max	2.033	72	6.369	70	0.496	71	0.103	75	0.339	71	6.122	70
2613			min	-2.705	100	-5.2	76	-0.435	107	-0.094	103	-0.287	107	-5.724	106
2614		3	max	2.348	72	6.006	70	0.127	71	0.017	75	0.615	71	0.04	68
2615			min	-3.023	100	-5.419	76	-0.119	107	-0.021	103	-0.534	107	-0.514	100
2616		4	max	2.844	72	5.482	74	0.379	107	0.1	107	0.527	71	5.723	76
2617			min	-3.515	100	-5.892	72	-0.444	71	-0.122	71	-0.466	107	-6.461	100
2618		5	max	2.862	72	5.469	74	0.398	107	0.1	107	0.063	101	11.794	72
2619			min	-3.534	100	-5.913	72	-0.462	71	-0.122	71	-0.06	103	-12.144	100
2620	M483	1	max	0.69	13	0.714	71	-0.302	67	0.06	71	0.029	75	0.047	107
2621			min	-0.415	76	-0.703	103	-1.182	15	-0.059	103	-0.256	103	-0.278	71
2622		2	max	0.69	13	0.706	71	-0.295	67	0.06	71	0.233	75	0.241	107
2623			min	-0.406	76	-0.694	103	-1.109	15	-0.059	103	-1.41	103	-1.441	71
2624		3	max	0.674	15	0.123	71	-0.044	96	0.008	71	0.337	75	0.341	107
2625			min	-0.114	77	-0.123	103	-0.148	15	-0.008	107	-1.998	103	-2.034	71
2626		4	max	1.07	102	0.783	103	1.216	15	0.072	103	0.264	75	0.272	107
2627			min	-0.803	74	-0.795	71	0.328	66	-0.073	71	-1.59	103	-1.622	71
2628		5	max	1.078	102	0.792	103	1.289	15	0.072	103	0.035	75	0.052	107
2629			min	-0.812	74	-0.804	71	0.335	66	-0.073	71	-0.289	103	-0.311	71
2630	M484	1	max	1.919	70	1.879	15	0.54	75	0.124	77	0	107	0.479	70
2631			min	-1.932	102	0.423	97	-0.54	77	-0.124	71	0	12	-0.482	102
2632		2	max	1.649	70	0.94	15	0.27	75	0.062	77	0.599	75	-0.181	66
2633			min	-1.662	102	0.212	97	-0.27	77	-0.062	101	-0.599	77	-2.131	15
2634		3	max	1.379	70	0.004	74	0	107	0	76	0.799	75	-0.395	66
2635			min	-1.392	102	-0.004	76	0	71	0	15	-0.799	77	-2.817	15
2636		4	max	1.109	70	-0.212	97	0.27	77	0.062	75	0.599	75	-0.294	66
2637			min	-1.122	102	-0.94	15	-0.27	75	-0.062	103	-0.599	77	-2.122	15
2638		5	max	0.838	70	-0.423	97	0.54	77	0.124	75	0	107	0.209	70
2639			min	-0.851	102	-1.88	15	-0.54	75	-0.124	73	0	12	-0.213	102
2640	M519	1	max	3.733	70	1.82	13	0.514	71	0.118	107	0	107	0.932	70
2641			min	-3.356	106	0.404	98	-0.514	73	-0.118	71	0	12	-0.838	106
2642		2	max	3.476	70	0.91	13	0.257	71	0.059	107	0.57	71	0.12	74
2643			min	-3.098	106	0.202	99	-0.257	73	-0.059	71	-0.57	73	-1.965	102
2644		3	max	3.218	70	0.004	74	0	102	0.002	96	0.761	71	-0.1	66
2645			min	-2.841	106	-0.004	76	0	70	-0.002	72	-0.76	73	-2.501	15
2646		4	max	2.961	70	-0.202	98	0.257	73	0.058	105	0.57	71	-0.008	66
2647			min	-2.583	106	-0.91	13	-0.257	71	-0.059	73	-0.57	73	-1.837	102
2648		5	max	2.703	70	-0.404	99	0.514	73	0.117	105	0	107	0.675	70
2649			min	-2.325	106	-1.82	15	-0.514	71	-0.118	73	0	12	-0.58	106
2650	M520	1	max	4.433	100	4.678	70	0.336	101	0.076	103	0.257	71	8.981	70
2651			min	-3.364	76	-3.451	76	-0.339	103	-0.071	101	-0.23	107	-7.909	106
2652		2	max	4.279	100	4.367	70	0.157	101	0.035	103	0.508	71	4.19	70
2653			min	-3.208	76	-3.632	76	-0.157	107	-0.032	105	-0.501	103	-4.25	102
2654		3	max	4.124	100	4.054	70	0.003	71	0.008	64	0.595	71	-0.063	66
2655			min	-3.053	76	-3.817	76	-0.002	107	-0.006	96	-0.587	103	-0.573	15
2656		4	max	3.969	100	3.772	74	0.154	103	0.037	101	0.513	71	3.965	76
2657			min	-2.898	76	-4.13	72	-0.153	105	-0.034	107	-0.504	103	-4.464	100
2658		5	max	3.813	100	3.583	74	0.336	103	0.076	101	0.268	71	8.451	72
2659			min	-2.744	76	-4.449	72	-0.332	101	-0.074	103	-0.237	107	-8.221	100
2660	M521	1	max	4.606	100	5.146	70	0.368	101	0.066	107	0.056	71	9.959	70
2661			min	-3.566	76	-3.773	76	-0.37	103	-0.073	101	-0.031	107	-8.584	106
2662		2	max	4.452	100	4.835	70	0.198	101	0.03	107	0.351	71	4.678	70
2663			min	-3.41	76	-3.954	76	-0.199	103	-0.036	101	-0.339	103	-4.535	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2664		3	max	4.297	100	4.522	70	0.043	101	0.014	106	0.479	71	-0.066	66
2665			min	-3.255	76	-4.139	76	-0.044	103	-0.019	100	-0.47	103	-0.563	15
2666		4	max	4.142	100	4.209	74	0.113	77	0.034	75	0.438	71	4.306	76
2667			min	-3.1	76	-4.404	72	-0.113	71	-0.041	73	-0.431	103	-4.956	100
2668		5	max	3.986	100	4.019	74	0.289	103	0.072	105	0.232	71	9.03	72
2669			min	-2.946	76	-4.723	72	-0.289	101	-0.08	103	-0.211	103	-9.203	100
2670	M522	1	max	3.472	70	1.819	13	0.514	75	0.118	73	0	107	0.867	70
2671			min	-3.557	102	0.403	98	-0.514	77	-0.117	75	0	12	-0.888	102
2672		2	max	3.215	70	0.909	13	0.257	75	0.059	73	0.57	75	0.106	66
2673			min	-3.299	102	0.202	98	-0.257	77	-0.058	75	-0.57	77	-2.149	15
2674		3	max	2.957	70	0.004	74	0	100	0.002	72	0.76	75	-0.1	66
2675			min	-3.041	102	-0.004	76	0	72	-0.001	96	-0.76	77	-2.812	15
2676		4	max	2.7	70	-0.202	98	0.257	77	0.059	71	0.57	75	-0.008	66
2677			min	-2.784	102	-0.909	13	-0.257	75	-0.059	77	-0.57	77	-2.14	15
2678		5	max	2.442	70	-0.404	98	0.514	77	0.118	71	0	107	0.609	70
2679			min	-2.526	102	-1.819	13	-0.514	75	-0.117	77	0	12	-0.631	102
2680	M523	1	max	13.229	15	0.568	72	0.563	71	0.368	71	0.093	71	-0.074	96
2681			min	1.789	96	-0.401	104	-0.549	103	-0.366	103	-0.091	103	-0.961	15
2682		2	max	13.149	15	0.556	72	0.552	71	0.368	71	0.717	71	0.34	104
2683			min	1.78	96	-0.389	104	-0.538	103	-0.366	103	-0.699	103	-1.237	15
2684		3	max	12.272	15	0.274	72	0.227	71	0.024	71	0.992	71	0.721	104
2685			min	1.728	96	-0.115	104	-0.228	103	-0.023	107	-0.974	103	-1.044	72
2686		4	max	10.515	15	0.881	13	0.641	103	0.181	103	1.015	71	0.775	104
2687			min	1.377	96	-0.345	76	-0.642	71	-0.18	71	-0.999	103	-0.93	72
2688		5	max	9.925	15	0.92	100	0.824	103	0.337	103	0.139	71	0.026	104
2689			min	1.273	107	-0.504	76	-0.84	71	-0.337	71	-0.137	103	-0.55	15
2690	M524	1	max	11.141	13	0.261	74	0.269	103	0.017	103	0.042	103	-0.092	98
2691			min	1.566	107	-0.337	102	-0.28	71	-0.017	71	-0.044	71	-0.744	13
2692		2	max	11.061	13	0.25	74	0.257	103	0.017	103	0.336	103	0.254	106
2693			min	1.558	107	-0.325	102	-0.268	71	-0.017	71	-0.35	71	-0.63	70
2694		3	max	10.98	13	0.238	74	0.246	103	0.017	103	0.618	103	0.588	106
2695			min	1.55	107	-0.314	102	-0.257	71	-0.017	71	-0.644	71	-0.884	70
2696		4	max	9.627	13	0.777	102	0.64	71	0.045	71	0.796	103	0.836	106
2697			min	1.037	107	-0.595	74	-0.613	103	-0.042	103	-0.831	71	-0.982	70
2698		5	max	9.546	13	0.788	102	0.652	71	0.045	71	0.103	103	0.016	106
2699			min	1.029	107	-0.607	74	-0.625	103	-0.042	103	-0.108	71	-0.593	13
2700	M525	1	max	4.287	13	0.355	70	0.273	103	0.017	103	0.043	103	-0.032	98
2701			min	0.89	98	-0.313	106	-0.273	71	-0.016	71	-0.043	71	-0.303	13
2702		2	max	4.207	13	0.344	70	0.262	103	0.017	103	0.342	103	0.304	106
2703			min	0.881	98	-0.302	106	-0.262	71	-0.016	71	-0.342	71	-0.603	70
2704		3	max	4.126	13	0.332	70	0.25	103	0.017	103	0.628	103	0.635	106
2705			min	0.871	98	-0.29	106	-0.25	71	-0.016	71	-0.629	71	-0.981	70
2706		4	max	2.728	13	0.72	106	0.625	71	0.044	71	0.81	103	0.881	106
2707			min	0.512	99	-0.828	70	-0.624	103	-0.043	103	-0.811	71	-1.161	70
2708		5	max	2.648	13	0.731	106	0.636	71	0.044	71	0.105	103	0.069	106
2709			min	0.503	99	-0.839	70	-0.636	103	-0.043	103	-0.105	71	-0.229	70
2710	M526	1	max	10.21	16	0.258	103	0.087	102	0.002	98	0.012	102	-0.061	75
2711			min	1.44	75	-0.256	71	-0.09	70	-0.003	62	-0.012	70	-0.71	16
2712		2	max	10.129	16	0.246	103	0.075	102	0.002	98	0.103	102	0.216	75
2713			min	1.432	75	-0.245	71	-0.078	70	-0.003	62	-0.106	70	-0.715	16
2714		3	max	10.049	16	0.234	103	0.064	102	0.002	98	0.181	102	0.48	75
2715			min	1.424	75	-0.233	71	-0.067	70	-0.003	62	-0.188	70	-0.932	103
2716		4	max	8.694	16	0.577	71	0.174	70	0.014	74	0.222	102	0.678	75
2717			min	0.914	75	-0.586	103	-0.167	102	-0.015	102	-0.231	70	-1.04	103
2718		5	max	8.613	16	0.589	71	0.186	70	0.014	74	0.029	102	0.033	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2719			min	0.906	75	-0.598	103	-0.179	102	-0.015	102	-0.03	70	-0.603	16
2720	M527	1	max	7.149	15	0.773	72	0.657	71	0.499	71	0.109	71	-0.02	96
2721			min	1.067	99	-0.41	104	-0.657	103	-0.499	103	-0.108	103	-0.593	15
2722		2	max	7.068	15	0.762	72	0.646	71	0.499	71	0.838	71	0.397	104
2723			min	1.058	99	-0.398	104	-0.645	103	-0.499	103	-0.837	103	-1.241	15
2724		3	max	5.92	15	0.554	15	0.242	75	0.025	71	1.134	71	0.772	104
2725			min	0.989	99	-0.047	96	-0.242	107	-0.025	107	-1.133	103	-1.113	72
2726		4	max	3.966	15	0.631	100	0.708	103	0.236	103	1.125	71	0.741	104
2727			min	0.61	99	-0.411	76	-0.708	71	-0.236	71	-1.124	103	-0.997	72
2728		5	max	3.217	15	0.841	100	0.931	103	0.447	103	0.155	71	0.077	104
2729			min	0.547	99	-0.62	76	-0.931	71	-0.446	71	-0.154	103	-0.189	72
2730	M528	1	max	14.632	15	0.948	72	0.646	71	0.476	71	0.107	71	-0.071	66
2731			min	2.004	67	-0.63	104	-0.662	103	-0.478	103	-0.109	103	-1.113	15
2732		2	max	14.551	15	0.937	72	0.634	71	0.476	71	0.823	71	0.566	104
2733			min	1.995	67	-0.618	104	-0.651	103	-0.478	103	-0.844	103	-1.759	15
2734		3	max	13.453	15	0.569	72	0.233	71	0.026	75	1.108	71	1.185	104
2735			min	1.928	67	-0.261	104	-0.232	107	-0.026	103	-1.13	103	-1.715	72
2736		4	max	11.56	15	1.202	100	0.684	103	0.225	103	1.1	71	1.328	104
2737			min	1.48	75	-0.899	76	-0.682	71	-0.226	71	-1.118	103	-1.742	72
2738		5	max	10.832	15	1.407	100	0.932	103	0.43	103	0.152	71	0.053	74
2739			min	1.342	75	-1.103	76	-0.914	71	-0.429	71	-0.155	103	-0.675	15
2740	M529	1	max	21.052	15	0.479	15	0.249	71	0.231	71	0.041	71	-0.117	96
2741			min	3.15	96	-0.185	66	-0.243	73	-0.23	103	-0.04	73	-1.059	15
2742		2	max	20.973	15	0.478	15	0.239	71	0.231	71	0.314	71	0.08	96
2743			min	3.143	96	-0.167	66	-0.233	73	-0.23	103	-0.306	73	-1.594	15
2744		3	max	20.339	15	0.315	15	0.015	105	0.007	71	0.344	71	0.167	96
2745			min	3.105	96	-0.028	66	-0.016	107	-0.006	107	-0.337	73	-1.259	15
2746		4	max	19.902	15	0.201	13	0.098	73	0.095	73	0.257	71	0.103	96
2747			min	3.069	96	-0.077	68	-0.099	71	-0.094	101	-0.251	73	-1.13	15
2748		5	max	19.464	15	0.31	92	0.229	73	0.196	73	0.039	71	-0.1	96
2749			min	3.03	96	-0.221	68	-0.235	71	-0.196	101	-0.038	73	-0.892	15
2750	M603	1	max	17.668	13	0.036	66	0.019	73	0.003	76	0	71	-0.134	98
2751			min	2.888	98	-0.037	94	-0.019	105	-0.003	104	0	107	-0.821	13
2752		2	max	17.589	13	0.018	66	0.01	73	0.003	76	0.016	73	-0.104	98
2753			min	2.881	98	-0.018	94	-0.01	105	-0.003	104	-0.016	105	-0.82	13
2754		3	max	17.511	13	0	76	0	71	0.003	76	0.022	73	-0.093	98
2755			min	2.873	98	-0.003	13	0	107	-0.003	104	-0.022	105	-0.817	13
2756		4	max	17.432	13	0.018	68	0.01	71	0.003	76	0.016	73	-0.103	98
2757			min	2.865	98	-0.018	92	-0.01	107	-0.003	104	-0.016	105	-0.813	13
2758		5	max	17.354	13	0.036	68	0.019	71	0.003	76	0	71	-0.133	98
2759			min	2.858	98	-0.037	92	-0.019	107	-0.003	104	0	107	-0.807	13
2760	M604	1	max	16.884	13	0.036	66	0.019	73	0.003	104	0	71	-0.138	67
2761			min	2.959	67	-0.037	94	-0.019	105	-0.003	72	0	107	-0.785	13
2762		2	max	16.806	13	0.018	66	0.01	73	0.003	104	0.016	73	-0.11	68
2763			min	2.951	67	-0.018	94	-0.01	105	-0.003	72	-0.016	105	-0.784	13
2764		3	max	16.727	13	0	76	0	71	0.003	104	0.022	73	-0.1	68
2765			min	2.944	67	-0.003	13	0	107	-0.003	72	-0.022	105	-0.781	13
2766		4	max	16.649	13	0.018	68	0.01	71	0.003	104	0.016	73	-0.11	68
2767			min	2.936	67	-0.018	92	-0.01	107	-0.003	72	-0.016	105	-0.777	13
2768		5	max	16.57	13	0.036	68	0.019	71	0.003	104	0	71	-0.136	67
2769			min	2.928	67	-0.037	92	-0.019	107	-0.003	72	0	107	-0.771	13
2770	M605	1	max	21.217	15	0.036	68	0.019	105	0.003	104	0	107	-0.151	67
2771			min	3.242	67	-0.037	92	-0.019	73	-0.003	72	0	71	-0.986	15
2772		2	max	21.139	15	0.018	68	0.01	105	0.003	104	0.016	105	-0.125	66
2773			min	3.234	67	-0.018	92	-0.01	73	-0.003	72	-0.016	73	-0.985	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2774		3	max	21.06	15	0	74	0	107	0.003	104	0.022	105	-0.114	66
2775			min	3.227	67	-0.003	15	0	71	-0.003	72	-0.022	73	-0.982	15
2776		4	max	20.982	15	0.018	66	0.01	107	0.003	104	0.016	105	-0.124	66
2777			min	3.219	67	-0.018	94	-0.01	71	-0.003	72	-0.016	73	-0.978	15
2778		5	max	20.903	15	0.036	66	0.019	107	0.003	104	0	107	-0.149	67
2779			min	3.211	67	-0.037	94	-0.019	71	-0.003	72	0	71	-0.972	15
2780	M606	1	max	7.225	72	0.03	71	-0.021	76	0.003	15	1.554	72	1.441	104
2781			min	-6.699	104	-0.03	107	-0.189	14	-0.001	106	-1.441	104	-1.554	72
2782		2	max	7.24	72	0.015	71	-0.01	76	0.003	15	1.534	72	1.43	104
2783			min	-6.714	104	-0.015	107	-0.095	14	-0.001	106	-1.458	104	-1.581	72
2784		3	max	7.255	72	0.004	72	0	70	0.003	15	1.529	72	1.429	104
2785			min	-6.729	104	-0.004	104	0	42	-0.001	106	-1.466	104	-1.591	72
2786		4	max	7.27	72	0.015	73	0.095	15	0.003	15	1.54	72	1.437	104
2787			min	-6.744	104	-0.015	105	0.01	107	-0.001	106	-1.464	104	-1.587	72
2788		5	max	7.285	72	0.03	73	0.189	15	0.003	15	1.567	72	1.454	104
2789			min	-6.759	104	-0.03	105	0.021	107	-0.001	106	-1.454	104	-1.567	72
2790	M607	1	max	8.014	72	0.03	71	-0.021	44	0.003	76	1.724	72	1.643	104
2791			min	-7.637	104	-0.03	107	-0.189	15	-0.004	100	-1.643	104	-1.724	72
2792		2	max	8.029	72	0.015	71	-0.01	44	0.003	76	1.705	76	1.632	104
2793			min	-7.652	104	-0.015	107	-0.095	15	-0.004	100	-1.66	104	-1.75	72
2794		3	max	8.044	72	0.004	76	0	42	0.003	76	1.703	76	1.631	104
2795			min	-7.667	104	-0.004	104	0	74	-0.004	100	-1.667	104	-1.761	72
2796		4	max	8.059	72	0.015	73	0.095	16	0.003	76	1.711	76	1.638	104
2797			min	-7.682	104	-0.015	105	0.01	74	-0.004	100	-1.666	104	-1.757	72
2798		5	max	8.074	72	0.03	73	0.189	16	0.003	76	1.737	72	1.656	104
2799			min	-7.697	104	-0.03	105	0.021	74	-0.004	100	-1.656	104	-1.737	72
2800	M608	1	max	1.435	72	0.019	103	-0.013	105	0	96	0.247	72	0.19	104
2801			min	-1.107	104	-0.019	71	-0.16	13	0	64	-0.19	104	-0.247	72
2802		2	max	1.426	72	0.009	103	-0.007	105	0	96	0.231	72	0.18	104
2803			min	-1.097	104	-0.009	71	-0.08	13	0	64	-0.197	104	-0.26	72
2804		3	max	1.416	72	0.002	104	0	40	0	96	0.224	72	0.176	104
2805			min	-1.088	104	-0.002	76	0	100	0	64	-0.199	104	-0.263	72
2806		4	max	1.407	72	0.009	101	0.08	16	0	96	0.227	72	0.177	104
2807			min	-1.078	104	-0.009	73	0.007	44	0	64	-0.194	104	-0.257	72
2808		5	max	1.398	72	0.019	101	0.16	16	0	96	0.24	72	0.184	104
2809			min	-1.069	104	-0.019	73	0.013	44	0	64	-0.184	104	-0.24	72
2810	M609	1	max	0.319	66	0.029	104	-0.024	76	0.007	13	0.055	66	0.097	94
2811			min	-0.562	94	-0.029	72	-0.289	13	-0.001	106	-0.097	94	-0.055	66
2812		2	max	0.319	66	0.015	104	-0.012	76	0.007	13	0.022	66	0.065	106
2813			min	-0.562	94	-0.015	72	-0.144	13	-0.001	106	-0.372	15	-0.327	13
2814		3	max	0.319	66	0.002	105	0	76	0.007	13	0.019	104	0.068	106
2815			min	-0.562	94	-0.002	73	0	100	-0.001	106	-0.487	15	-0.442	13
2816		4	max	0.319	66	0.013	106	0.144	15	0.007	13	0.022	66	0.068	106
2817			min	-0.562	94	-0.013	70	0.012	104	-0.001	106	-0.372	15	-0.327	13
2818		5	max	0.319	66	0.027	106	0.289	15	0.007	13	0.055	66	0.097	94
2819			min	-0.562	94	-0.027	70	0.024	104	-0.001	106	-0.097	94	-0.055	66
2820	M610	1	max	0.622	102	0.019	103	-0.013	104	0.001	72	0.107	102	0.064	104
2821			min	-0.371	104	-0.019	71	-0.16	15	-0.001	104	-0.064	104	-0.107	102
2822		2	max	0.613	102	0.009	103	-0.007	104	0.001	72	0.091	102	0.054	104
2823			min	-0.362	104	-0.009	71	-0.08	15	-0.001	104	-0.091	17	-0.132	15
2824		3	max	0.603	102	0.002	104	0	104	0.001	72	0.086	106	0.049	104
2825			min	-0.352	104	-0.002	76	0	106	-0.001	104	-0.125	17	-0.167	15
2826		4	max	0.594	102	0.009	101	0.08	16	0.001	72	0.088	102	0.05	104
2827			min	-0.343	104	-0.009	73	0.007	105	-0.001	104	-0.091	17	-0.132	15
2828		5	max	0.584	102	0.019	101	0.16	16	0.001	72	0.101	102	0.057	104

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2829			min	-0.333	104	-0.019	73	0.013	105	-0.001	104	-0.057	104	-0.101	102
2830	M611	1	max	1.476	104	0.029	104	-0.024	76	0.004	72	0.254	104	0.288	102
2831			min	-1.674	102	-0.029	72	-0.289	13	-0.004	104	-0.288	102	-0.254	104
2832		2	max	1.485	104	0.015	104	-0.012	76	0.004	72	0.261	104	0.294	106
2833			min	-1.683	102	-0.015	72	-0.144	13	-0.004	104	-0.386	15	-0.326	13
2834		3	max	1.495	104	0.002	105	0	76	0.004	72	0.265	104	0.298	106
2835			min	-1.693	102	-0.002	73	0	100	-0.004	104	-0.501	15	-0.441	13
2836		4	max	1.504	104	0.013	106	0.144	15	0.004	72	0.264	104	0.297	106
2837			min	-1.702	102	-0.013	70	0.012	104	-0.004	104	-0.386	15	-0.326	13
2838		5	max	1.514	104	0.027	106	0.289	15	0.004	72	0.26	104	0.294	102
2839			min	-1.712	102	-0.027	70	0.024	104	-0.004	104	-0.295	102	-0.26	104
2840	M612	1	max	10.589	104	0.043	104	-0.035	105	0.005	70	2.277	104	2.39	72
2841			min	-11.111	72	-0.043	72	-0.318	13	-0.005	106	-2.39	72	-2.277	104
2842		2	max	10.604	104	0.022	104	-0.017	105	0.005	70	2.287	104	2.392	76
2843			min	-11.126	72	-0.022	72	-0.159	13	-0.005	106	-2.504	72	-2.365	104
2844		3	max	10.619	104	0.003	105	0	101	0.005	70	2.292	104	2.397	76
2845			min	-11.141	72	-0.003	73	0	12	-0.005	106	-2.544	72	-2.396	104
2846		4	max	10.634	104	0.018	106	0.159	15	0.005	70	2.293	104	2.398	76
2847			min	-11.156	72	-0.018	70	0.017	77	-0.005	106	-2.51	72	-2.371	104
2848		5	max	10.649	104	0.038	106	0.318	15	0.005	70	2.29	104	2.403	72
2849			min	-11.171	72	-0.038	70	0.035	77	-0.005	106	-2.403	72	-2.29	104
2850	M613	1	max	5.265	13	0.036	66	0.019	73	0.001	13	0	71	-0.004	107
2851			min	0.077	107	-0.037	94	-0.019	105	0	68	0	107	-0.244	13
2852		2	max	5.187	13	0.018	66	0.01	73	0.001	13	0.016	73	0.002	98
2853			min	0.07	107	-0.018	94	-0.01	105	0	68	-0.016	105	-0.243	13
2854		3	max	5.108	13	0	76	0	71	0.001	13	0.022	73	0.012	98
2855			min	0.064	107	-0.003	13	0	107	0	68	-0.022	105	-0.241	13
2856		4	max	5.03	13	0.018	68	0.01	71	0.001	13	0.016	73	0.003	98
2857			min	0.057	107	-0.018	92	-0.01	107	0	68	-0.016	105	-0.236	13
2858		5	max	4.951	13	0.036	68	0.019	71	0.001	13	0	71	-0.002	107
2859			min	0.05	107	-0.037	92	-0.019	107	0	68	0	107	-0.231	13
2860	M614	1	max	4.341	16	0.036	66	0.019	73	0	74	0	71	0.002	75
2861			min	-0.041	75	-0.037	94	-0.019	105	-0.001	13	0	107	-0.201	16
2862		2	max	4.262	16	0.018	66	0.01	73	0	74	0.016	73	0.002	75
2863			min	-0.048	75	-0.018	94	-0.01	105	-0.001	13	-0.016	105	-0.2	13
2864		3	max	4.184	16	0	76	0	71	0	74	0.022	73	0.007	68
2865			min	-0.055	75	-0.003	13	0	107	-0.001	13	-0.022	105	-0.198	13
2866		4	max	4.105	16	0.018	68	0.01	71	0	74	0.016	73	0.003	75
2867			min	-0.062	75	-0.018	92	-0.01	107	-0.001	13	-0.016	105	-0.193	13
2868		5	max	4.027	16	0.036	68	0.019	71	0	74	0	71	0.003	75
2869			min	-0.068	75	-0.037	92	-0.019	107	-0.001	13	0	107	-0.188	16
2870	M615	1	max	5.536	15	0.036	68	0.019	105	0.002	13	0	107	-0.014	107
2871			min	0.296	107	-0.037	92	-0.019	73	0	68	0	71	-0.257	15
2872		2	max	5.457	15	0.018	68	0.01	105	0.002	13	0.016	105	0.003	96
2873			min	0.29	107	-0.018	92	-0.01	73	0	68	-0.016	73	-0.256	15
2874		3	max	5.379	15	0	74	0	107	0.002	13	0.022	105	0.014	96
2875			min	0.283	107	-0.003	15	0	71	0	68	-0.022	73	-0.253	15
2876		4	max	5.3	15	0.018	66	0.01	107	0.002	13	0.016	105	0.004	96
2877			min	0.276	107	-0.018	94	-0.01	71	0	68	-0.016	73	-0.249	15
2878		5	max	5.221	15	0.036	66	0.019	107	0.002	13	0	107	-0.013	107
2879			min	0.269	107	-0.037	94	-0.019	71	0	68	0	71	-0.243	15
2880	M616	1	max	6.4	15	0.036	68	0.019	105	0	74	0	107	-0.018	75
2881			min	0.385	75	-0.037	92	-0.019	73	-0.001	13	0	71	-0.297	15
2882		2	max	6.321	15	0.018	68	0.01	105	0	74	0.016	105	-0.01	66
2883			min	0.379	75	-0.018	92	-0.01	73	-0.001	13	-0.016	73	-0.296	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2884		3	max	6.242	15	0	74	0	107	0	74	0.022	105	0.001	66
2885			min	0.372	75	-0.003	15	0	71	-0.001	13	-0.022	73	-0.293	15
2886		4	max	6.164	15	0.018	66	0.01	107	0	74	0.016	105	-0.009	66
2887			min	0.365	75	-0.018	94	-0.01	71	-0.001	13	-0.016	73	-0.289	15
2888		5	max	6.085	15	0.036	66	0.019	107	0	74	0	107	-0.017	75
2889			min	0.358	75	-0.037	94	-0.019	71	-0.001	13	0	71	-0.283	15
2890	M617	1	max	2.767	106	0.293	15	0.028	106	0.002	100	0.189	70	0.176	106
2891			min	-2.967	70	0.023	107	-0.028	74	-0.003	19	-0.176	106	-0.189	70
2892		2	max	2.776	106	0.147	15	0.014	106	0.002	100	0.417	13	0.182	106
2893			min	-2.976	70	0.011	107	-0.014	74	-0.003	19	-0.115	106	-0.417	13
2894		3	max	2.786	106	0.001	71	0	106	0.002	100	0.534	13	0.185	106
2895			min	-2.986	70	-0.001	107	0	74	-0.003	19	-0.095	106	-0.534	13
2896		4	max	2.795	106	-0.011	75	0.014	40	0.002	100	0.417	13	0.184	106
2897			min	-2.995	70	-0.147	13	-0.014	72	-0.003	19	-0.116	106	-0.417	13
2898		5	max	2.805	106	-0.023	75	0.028	40	0.002	100	0.191	70	0.178	106
2899			min	-3.005	70	-0.293	13	-0.028	72	-0.003	19	-0.178	106	-0.191	70
2900	M661	1	max	3.586	106	0.293	15	0.028	72	0	68	0.27	70	0.228	106
2901			min	-4.236	70	0.023	107	-0.028	70	-0.007	13	-0.228	106	-0.27	70
2902		2	max	3.595	106	0.147	15	0.014	72	0	68	0.465	13	0.234	106
2903			min	-4.245	70	0.011	107	-0.014	70	-0.007	13	-0.167	106	-0.465	13
2904		3	max	3.605	106	0.001	71	0	100	0	68	0.582	13	0.237	106
2905			min	-4.255	70	-0.001	107	0	70	-0.007	13	-0.147	106	-0.582	13
2906		4	max	3.614	106	-0.011	75	0.014	100	0	68	0.465	13	0.236	106
2907			min	-4.264	70	-0.147	13	-0.014	42	-0.007	13	-0.168	106	-0.465	13
2908		5	max	3.624	106	-0.023	75	0.028	100	0	68	0.272	70	0.231	106
2909			min	-4.273	70	-0.293	13	-0.028	42	-0.007	13	-0.231	106	-0.272	70
2910	M662	1	max	7.722	106	0.327	13	0.041	76	0	94	0.699	70	0.614	106
2911			min	-8.788	70	0.034	107	-0.041	44	-0.012	13	-0.614	106	-0.699	70
2912		2	max	7.737	106	0.163	13	0.02	76	0	94	0.721	70	0.622	106
2913			min	-8.803	70	0.016	107	-0.02	44	-0.012	13	-0.531	106	-0.811	70
2914		3	max	7.752	106	0.001	71	0	70	0	94	0.729	70	0.625	106
2915			min	-8.818	70	-0.001	107	0	44	-0.012	13	-0.504	106	-0.849	70
2916		4	max	7.767	106	-0.016	75	0.02	70	0	94	0.723	70	0.624	106
2917			min	-8.833	70	-0.163	15	-0.02	106	-0.012	13	-0.534	106	-0.814	70
2918		5	max	7.782	106	-0.034	75	0.041	70	0	94	0.704	70	0.619	106
2919			min	-8.848	70	-0.327	15	-0.041	106	-0.012	13	-0.619	106	-0.704	70
2920	M663	1	max	8.544	76	0.327	13	0.041	106	0.003	68	0.773	100	0.68	76
2921			min	-9.714	100	0.034	107	-0.041	74	-0.016	13	-0.68	76	-0.773	100
2922		2	max	8.559	76	0.163	13	0.02	106	0.003	68	0.794	100	0.687	76
2923			min	-9.729	100	0.016	107	-0.02	74	-0.016	13	-0.597	76	-0.885	100
2924		3	max	8.574	76	0.001	71	0	44	0.003	68	0.803	100	0.69	76
2925			min	-9.744	100	-0.001	103	0	74	-0.016	13	-0.57	76	-0.923	100
2926		4	max	8.589	76	-0.016	75	0.02	44	0.003	68	0.797	100	0.689	76
2927			min	-9.759	100	-0.163	15	-0.02	46	-0.016	13	-0.599	76	-0.887	100
2928		5	max	8.604	76	-0.034	75	0.041	44	0.003	68	0.778	100	0.684	76
2929			min	-9.774	100	-0.327	15	-0.041	46	-0.016	13	-0.684	76	-0.778	100
2930	M664	1	max	2.116	72	0.293	15	0.028	100	0.006	19	0.117	104	0.135	72
2931			min	-1.844	104	0.023	75	-0.028	42	-0.001	70	-0.135	72	-0.117	104
2932		2	max	2.125	72	0.147	15	0.014	100	0.006	19	0.324	13	0.072	68
2933			min	-1.853	104	0.011	75	-0.014	42	-0.001	70	-0.136	76	-0.324	13
2934		3	max	2.135	72	0.001	107	0	100	0.006	19	0.441	13	0.061	68
2935			min	-1.863	104	-0.001	71	0	40	-0.001	70	-0.138	76	-0.441	13
2936		4	max	2.144	72	-0.011	107	0.014	76	0.006	19	0.324	13	0.072	68
2937			min	-1.872	104	-0.147	13	-0.014	40	-0.001	70	-0.137	76	-0.324	13
2938		5	max	2.154	72	-0.023	107	0.028	76	0.006	19	0.12	104	0.137	72

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2939			min	-1.881	104	-0.293	13	-0.028	40	-0.001	70	-0.137	72	-0.12	104
2940	M665	1	max	2.856	76	0.293	15	0.028	70	0.011	13	0.197	70	0.182	76
2941			min	-3.09	70	0.023	75	-0.028	102	0	68	-0.182	76	-0.197	70
2942		2	max	2.866	76	0.147	15	0.014	70	0.011	13	0.371	13	0.12	76
2943			min	-3.099	70	0.011	75	-0.014	102	0	68	-0.188	76	-0.371	13
2944		3	max	2.875	76	0.001	107	0	103	0.011	13	0.487	13	0.1	76
2945			min	-3.108	70	-0.001	71	0	100	0	68	-0.191	76	-0.487	13
2946		4	max	2.885	76	-0.011	107	0.014	106	0.011	13	0.371	13	0.121	76
2947			min	-3.118	70	-0.147	13	-0.014	100	0	68	-0.189	76	-0.371	13
2948		5	max	2.894	76	-0.023	107	0.028	106	0.011	13	0.199	70	0.184	76
2949			min	-3.127	70	-0.293	13	-0.028	100	0	68	-0.184	76	-0.199	70
2950	M666	1	max	6.936	106	0.327	13	0.041	40	0.013	13	0.597	70	0.552	106
2951			min	-7.499	70	0.034	75	-0.041	76	0	98	-0.552	106	-0.597	70
2952		2	max	6.951	106	0.163	13	0.02	40	0.013	13	0.709	70	0.469	106
2953			min	-7.514	70	0.016	75	-0.02	76	0	98	-0.559	106	-0.618	70
2954		3	max	6.966	106	0.001	107	0	103	0.013	13	0.747	70	0.442	106
2955			min	-7.529	70	-0.001	71	0	100	0	98	-0.562	106	-0.626	70
2956		4	max	6.981	106	-0.016	107	0.02	42	0.013	13	0.711	70	0.471	106
2957			min	-7.544	70	-0.163	15	-0.02	100	0	98	-0.562	106	-0.621	70
2958		5	max	6.996	106	-0.034	107	0.041	42	0.013	13	0.601	70	0.556	106
2959			min	-7.56	70	-0.327	15	-0.041	100	0	98	-0.557	106	-0.601	70
2960	M667	1	max	7.971	76	0.327	13	0.041	100	0.006	92	0.708	100	0.634	76
2961			min	-8.895	100	0.034	75	-0.041	102	-0.005	68	-0.634	76	-0.708	100
2962		2	max	7.986	76	0.163	13	0.02	100	0.006	92	0.82	100	0.551	76
2963			min	-8.91	100	0.016	75	-0.02	102	-0.005	68	-0.641	76	-0.729	100
2964		3	max	8.001	76	0.001	107	0	100	0.006	92	0.858	100	0.524	76
2965			min	-8.925	100	-0.001	71	0	71	-0.005	68	-0.645	76	-0.737	100
2966		4	max	8.016	76	-0.016	107	0.02	106	0.006	92	0.822	100	0.553	76
2967			min	-8.94	100	-0.163	15	-0.02	74	-0.005	68	-0.644	76	-0.732	100
2968		5	max	8.031	76	-0.034	107	0.041	106	0.006	92	0.712	100	0.639	76
2969			min	-8.955	100	-0.327	15	-0.041	74	-0.005	68	-0.639	76	-0.712	100
2970	M668	1	max	4.777	70	0.194	15	0.03	71	0.003	64	0.351	106	0.38	70
2971			min	-4.412	106	0.019	76	-0.03	103	-0.002	96	-0.38	70	-0.351	106
2972		2	max	4.762	70	0.097	15	0.015	71	0.003	64	0.371	102	0.356	70
2973			min	-4.397	106	0.009	76	-0.015	103	-0.002	96	-0.356	70	-0.371	102
2974		3	max	4.747	70	0.001	104	0	74	0.003	64	0.377	102	0.348	74
2975			min	-4.382	106	-0.001	72	0	44	-0.002	96	-0.348	74	-0.377	102
2976		4	max	4.732	70	-0.009	104	0.015	107	0.003	64	0.368	102	0.353	70
2977			min	-4.367	106	-0.097	13	-0.015	101	-0.002	96	-0.353	70	-0.368	102
2978		5	max	4.717	70	-0.019	104	0.03	107	0.003	64	0.346	106	0.375	70
2979			min	-4.352	106	-0.194	13	-0.03	101	-0.002	96	-0.375	70	-0.346	106
2980	M669	1	max	1.392	70	0.163	15	0.019	45	0.001	102	0.089	72	0.089	70
2981			min	-1.4	72	0.012	106	-0.019	103	-0.001	104	-0.089	70	-0.089	72
2982		2	max	1.383	70	0.081	15	0.009	45	0.001	102	0.12	15	0.078	74
2983			min	-1.39	72	0.006	106	-0.009	103	-0.001	104	-0.078	74	-0.12	15
2984		3	max	1.373	70	0.001	74	0	42	0.001	102	0.156	15	0.074	74
2985			min	-1.381	72	-0.001	102	0	100	-0.001	104	-0.074	74	-0.156	15
2986		4	max	1.364	70	-0.006	74	0.009	107	0.001	102	0.12	15	0.076	74
2987			min	-1.372	72	-0.081	13	-0.009	71	-0.001	104	-0.076	74	-0.12	15
2988		5	max	1.354	70	-0.012	74	0.019	107	0.001	102	0.087	72	0.086	70
2989			min	-1.362	72	-0.163	13	-0.019	71	-0.001	104	-0.086	70	-0.087	72
2990	M670	1	max	2.023	70	0.163	15	0.019	75	0.001	100	0.113	106	0.129	70
2991			min	-1.777	106	0.012	106	-0.019	103	-0.001	72	-0.129	70	-0.113	106
2992		2	max	2.014	70	0.081	15	0.009	75	0.001	100	0.124	102	0.115	74
2993			min	-1.768	106	0.006	106	-0.009	103	-0.001	72	-0.115	74	-0.124	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2994		3	max	2.004	70	0.001	74	0	76	0.001	100	0.128	102	0.111	74
2995			min	-1.758	106	-0.001	102	0	104	-0.001	72	-0.111	74	-0.128	102
2996		4	max	1.995	70	-0.006	74	0.009	73	0.001	100	0.123	102	0.114	74
2997			min	-1.749	106	-0.081	13	-0.009	71	-0.001	72	-0.114	74	-0.123	102
2998		5	max	1.985	70	-0.012	74	0.019	73	0.001	100	0.111	106	0.126	70
2999			min	-1.739	106	-0.163	13	-0.019	71	-0.001	72	-0.126	70	-0.111	106
3000	M671	1	max	5.534	70	0.194	15	0.03	71	0.002	96	0.388	106	0.44	70
3001			min	-4.878	106	0.019	76	-0.03	73	-0.003	15	-0.44	70	-0.388	106
3002		2	max	5.519	70	0.097	15	0.015	71	0.002	96	0.401	106	0.416	70
3003			min	-4.863	106	0.009	76	-0.015	73	-0.003	15	-0.416	70	-0.401	106
3004		3	max	5.504	70	0.001	104	0	72	0.002	96	0.407	102	0.407	70
3005			min	-4.848	106	-0.001	72	0	70	-0.003	15	-0.407	70	-0.407	102
3006		4	max	5.489	70	-0.009	104	0.015	43	0.002	96	0.398	106	0.413	70
3007			min	-4.833	106	-0.097	13	-0.015	105	-0.003	15	-0.413	70	-0.398	106
3008		5	max	5.474	70	-0.019	104	0.03	43	0.002	96	0.383	106	0.435	70
3009			min	-4.818	106	-0.194	13	-0.03	105	-0.003	15	-0.435	70	-0.383	106
3010	M672	1	max	-0.939	107	0.195	13	0.024	100	0.007	106	0.63	15	0.63	15
3011			min	-12.776	15	0.001	107	-0.024	76	-0.01	13	0.046	107	0.046	107
3012		2	max	-0.954	107	0.097	13	0.012	100	0.007	106	0.854	15	0.411	15
3013			min	-12.839	15	0.001	107	-0.012	76	-0.01	13	0.048	107	0.046	107
3014		3	max	-0.968	107	0	13	0.002	13	0.007	106	0.931	15	0.34	15
3015			min	-12.901	15	0	106	0	75	-0.01	13	0.049	107	0.046	107
3016		4	max	-0.983	107	-0.001	77	0.012	102	0.007	106	0.86	15	0.417	15
3017			min	-12.964	15	-0.097	15	-0.012	74	-0.01	13	0.05	107	0.047	107
3018		5	max	-0.998	107	-0.001	77	0.024	102	0.007	106	0.641	15	0.641	15
3019			min	-13.026	15	-0.195	15	-0.024	74	-0.01	13	0.049	107	0.049	107
3020	M673	1	max	-0.506	107	-0.001	107	0.024	72	0.007	76	0.583	13	0.583	13
3021			min	-11.835	13	-0.195	13	-0.024	104	-0.013	13	0.025	107	0.025	107
3022		2	max	-0.52	107	-0.001	107	0.012	72	0.007	76	0.365	13	0.808	13
3023			min	-11.897	13	-0.097	13	-0.012	104	-0.013	13	0.024	107	0.027	107
3024		3	max	-0.535	107	0	106	0.002	15	0.007	76	0.294	13	0.885	13
3025			min	-11.96	13	0	13	0	105	-0.013	13	0.025	107	0.028	107
3026		4	max	-0.55	107	0.097	15	0.012	70	0.007	76	0.37	13	0.814	13
3027			min	-12.022	13	0.001	77	-0.012	106	-0.013	13	0.026	107	0.028	107
3028		5	max	-0.564	107	0.195	15	0.024	70	0.007	76	0.595	13	0.595	13
3029			min	-12.085	13	0.001	77	-0.024	106	-0.013	13	0.028	107	0.028	107
3030	M674	1	max	-0.265	75	0.195	15	0.024	72	0.008	74	0.514	16	0.514	16
3031			min	-10.431	16	0.001	75	-0.024	104	-0.011	15	0.013	75	0.013	75
3032		2	max	-0.28	75	0.097	15	0.012	72	0.008	74	0.739	16	0.295	16
3033			min	-10.493	16	0.001	75	-0.012	104	-0.011	15	0.015	75	0.013	75
3034		3	max	-0.295	75	0	15	0.002	15	0.008	74	0.816	16	0.224	16
3035			min	-10.556	16	0	74	0	107	-0.011	15	0.016	75	0.006	74
3036		4	max	-0.31	75	-0.001	105	0.012	70	0.008	74	0.745	16	0.301	16
3037			min	-10.618	16	-0.097	13	-0.012	106	-0.011	15	0.016	75	0.014	75
3038		5	max	-0.324	75	-0.001	105	0.024	70	0.008	74	0.526	16	0.526	16
3039			min	-10.681	16	-0.195	13	-0.024	106	-0.011	15	0.016	75	0.016	75
3040	M675	1	max	-1.089	75	-0.001	75	0.024	100	0.007	74	0	102	0	104
3041			min	-14.453	16	-0.195	13	-0.024	76	-0.014	15	0	74	0	15
3042		2	max	-1.104	75	-0.001	75	0.012	100	0.007	74	0.011	74	0.222	13
3043			min	-14.515	16	-0.097	13	-0.012	76	-0.014	15	-0.222	13	-0.011	76
3044		3	max	-1.119	75	0	72	0	15	0.007	74	0.015	74	0.296	13
3045			min	-14.578	16	0	104	0	69	-0.014	15	-0.296	13	-0.015	76
3046		4	max	-1.134	75	0.097	15	0.012	102	0.007	74	0.011	74	0.222	13
3047			min	-14.64	16	0.001	105	-0.012	74	-0.014	15	-0.222	13	-0.011	76
3048		5	max	-1.148	75	0.195	15	0.024	102	0.007	74	0	15	0	100

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3049			min	-14.703	16	0.001	105	-0.024	74	-0.014	15	0	104	0	76
3050	M676	1	max	12.267	74	0.043	72	-0.035	104	0.009	106	2.638	74	2.803	102
3051			min	-13.03	102	-0.043	104	-0.318	15	-0.013	70	-2.803	102	-2.638	74
3052		2	max	12.252	74	0.022	72	-0.017	104	0.009	106	2.551	74	2.692	106
3053			min	-13.015	102	-0.022	104	-0.159	15	-0.013	70	-2.82	102	-2.629	74
3054		3	max	12.237	74	0.003	73	0	100	0.009	106	2.52	74	2.66	106
3055			min	-13	102	-0.003	105	0	12	-0.013	70	-2.823	102	-2.624	74
3056		4	max	12.222	74	0.018	70	0.159	13	0.009	106	2.544	74	2.685	106
3057			min	-12.985	102	-0.018	106	0.017	76	-0.013	70	-2.813	102	-2.622	74
3058		5	max	12.207	74	0.038	70	0.318	13	0.009	106	2.625	74	2.79	102
3059			min	-12.97	102	-0.038	106	0.035	76	-0.013	70	-2.79	102	-2.625	74
3060	M677	1	max	13.76	74	0.038	70	-0.035	77	0.015	70	2.96	74	3.129	102
3061			min	-14.548	102	-0.038	102	-0.318	13	-0.009	106	-3.129	102	-2.96	74
3062		2	max	13.745	74	0.018	70	-0.017	77	0.015	70	2.963	74	3.113	106
3063			min	-14.533	102	-0.018	102	-0.159	13	-0.009	106	-3.237	102	-3.04	74
3064		3	max	13.73	74	0.003	71	0	99	0.015	70	2.961	74	3.111	106
3065			min	-14.518	102	-0.003	103	0	101	-0.009	106	-3.27	102	-3.065	74
3066		4	max	13.715	74	0.022	72	0.159	15	0.015	70	2.956	74	3.106	106
3067			min	-14.503	102	-0.022	100	0.017	105	-0.009	106	-3.23	102	-3.034	74
3068		5	max	13.7	74	0.043	72	0.318	15	0.015	70	2.947	74	3.116	102
3069			min	-14.488	102	-0.043	100	0.035	105	-0.009	106	-3.116	102	-2.947	74
3070	M678	1	max	-5.748	96	0.175	13	0.023	70	0.002	106	1.874	15	1.874	15
3071			min	-38.043	15	0	107	-0.022	106	-0.016	13	0.283	96	0.283	96
3072		2	max	-5.753	96	0.087	13	0.011	70	0.002	106	2.062	15	1.693	15
3073			min	-38.105	15	0	107	-0.011	106	-0.016	13	0.299	96	0.268	96
3074		3	max	-5.758	96	0	70	0.002	15	0.002	106	2.126	15	1.634	15
3075			min	-38.168	15	0	106	0	105	-0.016	13	0.304	96	0.263	96
3076		4	max	-5.763	96	0	77	0.011	72	0.002	106	2.068	15	1.699	15
3077			min	-38.23	15	-0.087	15	-0.011	104	-0.016	13	0.299	96	0.269	96
3078		5	max	-5.769	96	0	77	0.023	72	0.002	106	1.886	15	1.886	15
3079			min	-38.292	15	-0.175	15	-0.022	104	-0.016	13	0.284	96	0.284	96
3080	M679	1	max	-5.215	98	0	107	0.023	102	0.004	106	1.576	13	1.576	13
3081			min	-31.981	13	-0.175	13	-0.022	74	-0.005	70	0.257	98	0.257	98
3082		2	max	-5.221	98	0	107	0.011	102	0.004	106	1.394	13	1.763	13
3083			min	-32.043	13	-0.087	13	-0.011	74	-0.005	70	0.242	98	0.273	98
3084		3	max	-5.226	98	0	106	0.002	13	0.004	106	1.336	13	1.828	13
3085			min	-32.105	13	0	70	0	75	-0.005	70	0.237	98	0.278	98
3086		4	max	-5.231	98	0.087	15	0.011	100	0.004	106	1.4	13	1.769	13
3087			min	-32.168	13	0	77	-0.011	76	-0.005	70	0.242	98	0.273	98
3088		5	max	-5.236	98	0.175	15	0.023	100	0.004	106	1.587	13	1.587	13
3089			min	-32.23	13	0	77	-0.022	76	-0.005	70	0.258	98	0.258	98
3090	M680	1	max	-5.864	68	0	75	0.023	70	0.002	104	1.874	15	1.874	15
3091			min	-38.042	15	-0.175	15	-0.022	106	-0.018	15	0.289	68	0.289	68
3092		2	max	-5.869	68	0	75	0.011	70	0.002	104	1.693	15	2.062	15
3093			min	-38.105	15	-0.087	15	-0.011	106	-0.018	15	0.274	68	0.304	68
3094		3	max	-5.874	68	0	74	0.002	15	0.002	104	1.634	15	2.126	15
3095			min	-38.167	15	0	102	0	107	-0.018	15	0.269	68	0.31	68
3096		4	max	-5.879	68	0.087	13	0.011	72	0.002	104	1.699	15	2.068	15
3097			min	-38.229	15	0	105	-0.011	104	-0.018	15	0.274	68	0.305	68
3098		5	max	-5.884	68	0.175	13	0.023	72	0.002	104	1.886	15	1.886	15
3099			min	-38.292	15	0	105	-0.022	104	-0.018	15	0.29	68	0.29	68
3100	M681	1	max	-5.432	68	0.175	15	0.023	102	0.005	70	1.528	13	1.528	13
3101			min	-31.009	13	0	105	-0.022	74	-0.005	106	0.268	68	0.268	68
3102		2	max	-5.437	68	0.087	15	0.011	102	0.005	70	1.715	13	1.346	13
3103			min	-31.071	13	0	105	-0.011	74	-0.005	106	0.283	68	0.252	68

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3104		3	max	-5.442	68	0	72	0.002	13	0.005	70	1.78	13	1.288	13
3105			min	-31.133	13	0	104	0	77	-0.005	106	0.289	68	0.248	68
3106		4	max	-5.447	68	0	75	0.011	100	0.005	70	1.721	13	1.352	13
3107			min	-31.196	13	-0.087	13	-0.011	76	-0.005	106	0.284	68	0.253	68
3108		5	max	-5.453	68	0	75	0.023	100	0.005	70	1.54	13	1.54	13
3109			min	-31.258	13	-0.175	13	-0.022	76	-0.005	106	0.269	68	0.269	68
3110	M682	1	max	-4.72	96	0.175	13	0.023	70	0.002	76	1.499	15	1.499	15
3111			min	-30.425	15	0	107	-0.022	106	-0.018	13	0.233	96	0.233	96
3112		2	max	-4.725	96	0.087	13	0.011	70	0.002	76	1.686	15	1.318	15
3113			min	-30.488	15	0	107	-0.011	106	-0.018	13	0.248	96	0.217	96
3114		3	max	-4.73	96	0	70	0.002	15	0.002	76	1.751	15	1.259	15
3115			min	-30.55	15	0	106	0	105	-0.018	13	0.253	96	0.213	96
3116		4	max	-4.735	96	0	77	0.011	72	0.002	76	1.692	15	1.323	15
3117			min	-30.612	15	-0.087	15	-0.011	104	-0.018	13	0.249	96	0.218	96
3118		5	max	-4.74	96	0	77	0.023	72	0.002	76	1.511	15	1.511	15
3119			min	-30.675	15	-0.175	15	-0.022	104	-0.018	13	0.233	96	0.233	96
3120	M683	1	max	-4.669	98	0	107	0.023	102	0.003	68	1.31	13	1.31	13
3121			min	-26.588	13	-0.175	13	-0.022	74	-0.014	13	0.23	98	0.23	98
3122		2	max	-4.674	98	0	107	0.011	102	0.003	68	1.128	13	1.497	13
3123			min	-26.65	13	-0.087	13	-0.011	74	-0.014	13	0.215	98	0.246	98
3124		3	max	-4.679	98	0	106	0.002	13	0.003	68	1.07	13	1.562	13
3125			min	-26.712	13	0	70	0	75	-0.014	13	0.21	98	0.251	98
3126		4	max	-4.685	98	0.087	15	0.011	100	0.003	68	1.134	13	1.503	13
3127			min	-26.775	13	0	77	-0.011	76	-0.014	13	0.215	98	0.246	98
3128		5	max	-4.69	98	0.175	15	0.023	100	0.003	68	1.322	13	1.322	13
3129			min	-26.837	13	0	77	-0.022	76	-0.014	13	0.231	98	0.231	98
3130	M684	1	max	-5.032	67	0	75	0.023	70	0.003	104	1.599	15	1.599	15
3131			min	-32.449	15	-0.175	15	-0.022	106	-0.02	15	0.248	67	0.248	67
3132		2	max	-5.037	67	0	75	0.011	70	0.003	104	1.417	15	1.786	15
3133			min	-32.511	15	-0.087	15	-0.011	106	-0.02	15	0.233	67	0.264	67
3134		3	max	-5.042	67	0	74	0.002	15	0.003	104	1.359	15	1.851	15
3135			min	-32.573	15	0	102	0	107	-0.02	15	0.228	67	0.269	67
3136		4	max	-5.048	67	0.087	13	0.011	72	0.003	104	1.423	15	1.792	15
3137			min	-32.636	15	0	105	-0.011	104	-0.02	15	0.233	67	0.264	67
3138		5	max	-5.053	67	0.175	13	0.023	72	0.003	104	1.611	15	1.611	15
3139			min	-32.698	15	0	105	-0.022	104	-0.02	15	0.249	67	0.249	67
3140	M685	1	max	-4.562	66	0.175	15	0.023	102	0.003	96	1.258	16	1.258	16
3141			min	-25.531	16	0	105	-0.022	74	-0.012	15	0.225	66	0.225	66
3142		2	max	-4.567	66	0.087	15	0.011	102	0.003	96	1.445	16	1.076	16
3143			min	-25.593	16	0	105	-0.011	74	-0.012	15	0.24	66	0.21	66
3144		3	max	-4.572	66	0	72	0.002	13	0.003	96	1.51	16	1.018	16
3145			min	-25.655	16	0	104	0	77	-0.012	15	0.246	66	0.205	66
3146		4	max	-4.577	66	0	75	0.011	100	0.003	96	1.451	16	1.082	16
3147			min	-25.718	16	-0.087	13	-0.011	76	-0.012	15	0.241	66	0.21	66
3148		5	max	-4.582	66	0	75	0.023	100	0.003	96	1.27	16	1.27	16
3149			min	-25.78	16	-0.175	13	-0.022	76	-0.012	15	0.226	66	0.226	66
3150	M686	1	max	-0.093	107	0.195	13	0.024	100	0.009	102	0.326	15	0.326	15
3151			min	-6.604	15	0.001	107	-0.024	76	-0.007	74	0.005	107	0.005	107
3152		2	max	-0.108	107	0.097	13	0.012	100	0.009	102	0.55	15	0.169	71
3153			min	-6.666	15	0.001	107	-0.012	76	-0.007	74	0.007	107	0.004	107
3154		3	max	-0.123	107	0	13	0.002	13	0.009	102	0.627	15	0.155	71
3155			min	-6.729	15	0	106	0	75	-0.007	74	0.008	107	0.004	107
3156		4	max	-0.137	107	-0.001	77	0.012	102	0.009	102	0.556	15	0.169	71
3157			min	-6.791	15	-0.097	15	-0.012	74	-0.007	74	0.008	107	0.006	107
3158		5	max	-0.152	107	-0.001	77	0.024	102	0.009	102	0.337	15	0.337	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3159			min	-6.854	15	-0.195	15	-0.024	74	-0.007	74	0.007	107	0.007	107
3160	M687	1	max	0.296	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
3161			min	-5.922	13	-0.195	13	-0.024	104	-0.008	104	-0.015	107	-0.015	107
3162		2	max	0.281	107	-0.001	107	0.012	72	0.009	72	0.158	71	0.517	13
3163			min	-5.985	13	-0.097	13	-0.012	104	-0.008	104	-0.015	107	-0.013	107
3164		3	max	0.267	107	0	106	0.002	15	0.009	72	0.144	71	0.593	13
3165			min	-6.047	13	0	13	0	105	-0.008	104	-0.017	19	-0.012	107
3166		4	max	0.252	107	0.097	15	0.012	70	0.009	72	0.157	71	0.522	13
3167			min	-6.11	13	0.001	77	-0.012	106	-0.008	104	-0.014	107	-0.011	107
3168		5	max	0.237	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
3169			min	-6.172	13	0.001	77	-0.024	106	-0.008	104	-0.012	107	-0.012	107
3170	M688	1	max	-0.243	75	-0.001	75	0.024	100	0.008	104	0.382	16	0.382	16
3171			min	-7.758	16	-0.195	15	-0.024	76	-0.008	72	0.012	75	0.012	75
3172		2	max	-0.258	75	-0.001	75	0.012	100	0.008	104	0.18	100	0.607	16
3173			min	-7.821	16	-0.097	15	-0.012	76	-0.008	72	0.006	76	0.014	75
3174		3	max	-0.273	75	0	74	0.002	13	0.008	104	0.18	100	0.684	16
3175			min	-7.883	16	0	102	0	77	-0.008	72	-0.009	76	0.015	75
3176		4	max	-0.287	75	0.097	13	0.012	102	0.008	104	0.18	100	0.613	16
3177			min	-7.946	16	0.001	105	-0.012	74	-0.008	72	0.006	76	0.015	75
3178		5	max	-0.302	75	0.195	13	0.024	102	0.008	104	0.394	16	0.394	16
3179			min	-8.008	16	0.001	105	-0.024	74	-0.008	72	0.015	75	0.015	75
3180	M689	1	max	0.492	75	0.195	15	0.024	72	0.008	104	0.224	16	0.224	16
3181			min	-4.539	16	0.001	75	-0.024	104	-0.009	72	-0.024	75	-0.024	75
3182		2	max	0.477	75	0.097	15	0.012	72	0.008	104	0.448	16	0.141	103
3183			min	-4.601	16	0.001	75	-0.012	104	-0.009	72	-0.022	75	-0.025	75
3184		3	max	0.463	75	0	102	0.002	15	0.008	104	0.525	16	0.139	102
3185			min	-4.664	16	0	74	0	107	-0.009	72	-0.021	75	-0.081	18
3186		4	max	0.448	75	-0.001	105	0.012	70	0.008	104	0.454	16	0.14	103
3187			min	-4.726	16	-0.097	13	-0.012	106	-0.009	72	-0.021	75	-0.023	74
3188		5	max	0.433	75	-0.001	105	0.024	70	0.008	104	0.236	16	0.236	16
3189			min	-4.789	16	-0.195	13	-0.024	106	-0.009	72	-0.021	75	-0.021	75
3190	M690	1	max	2.631	102	3.635	15	3.001	71	0.738	71	0	107	0.534	104
3191			min	-2.138	104	0.83	99	-3	103	-0.738	103	0	12	-0.657	102
3192		2	max	2.653	102	3.523	15	2.979	71	0.738	71	3.737	71	-0.727	96
3193			min	-2.16	104	0.812	99	-2.979	103	-0.738	103	-3.737	103	-4.754	15
3194		3	max	7.972	102	3.411	15	2.957	71	0.077	62	7.447	71	-1.732	96
3195			min	-7.479	104	-3.035	41	-2.957	103	-0.739	71	-7.447	103	-9.681	102
3196		4	max	7.994	102	-0.812	99	2.979	103	0.738	103	3.737	71	-0.403	104
3197			min	-7.501	104	-3.523	15	-2.979	71	-0.739	71	-3.737	103	-5.857	102
3198		5	max	8.016	102	-0.83	99	3	103	0.738	103	0	107	1.877	104
3199			min	-7.522	104	-3.635	15	-3.001	71	-0.739	71	0	12	-2.001	102
3200	M691	1	max	1.373	102	3.519	15	2.911	71	0.716	71	0	107	0.277	104
3201			min	-1.11	104	0.803	97	-2.912	103	-0.716	103	0	12	-0.343	102
3202		2	max	1.394	102	3.408	15	2.889	71	0.716	71	3.625	71	-0.772	96
3203			min	-1.132	104	0.786	97	-2.89	103	-0.716	103	-3.626	103	-4.404	15
3204		3	max	6.537	102	3.296	15	2.868	71	0.716	71	7.223	71	-1.744	96
3205			min	-6.274	104	-2.931	100	-2.868	103	-0.077	92	-7.225	103	-9.056	102
3206		4	max	6.558	102	-0.786	97	2.89	103	0.716	103	3.625	71	-0.524	96
3207			min	-6.296	104	-3.408	15	-2.889	71	-0.715	71	-3.626	103	-5.365	102
3208		5	max	6.58	102	-0.803	97	2.912	103	0.716	103	0	107	1.577	104
3209			min	-6.318	104	-3.519	15	-2.911	71	-0.715	71	0	12	-1.642	102
3210	M692	1	max	0.204	102	0.204	103	-0.037	66	0	107	0.551	14	0.551	16
3211			min	-0.204	100	-0.204	101	-0.641	15	0	12	-0.057	47	-0.057	75
3212		2	max	0.201	102	0.201	103	-0.035	66	0	107	0.32	14	0.32	16
3213			min	-0.201	100	-0.201	101	-0.613	15	0	12	-0.033	77	-0.033	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3214		3	max	0.198	102	0.198	103	-0.032	66	0	107	0.099	14	0.099	16
3215			min	-0.198	100	-0.198	101	-0.585	15	0	12	-0.01	77	-0.01	75
3216		4	max	0.003	76	0.004	95	-0.002	74	0	107	0.005	14	0.005	16
3217			min	-0.003	70	-0.004	67	-0.028	13	0	12	0	69	0	67
3218		5	max	0	107	0	100	0	70	0	107	0	107	0	107
3219			min	0	12	0	102	0	12	0	12	0	12	0	12
3220	M693	1	max	0.341	102	0.341	77	-0.056	66	0	107	0.883	14	0.883	16
3221			min	-0.341	100	-0.341	45	-1.017	15	0	12	-0.096	77	-0.096	45
3222		2	max	0.338	102	0.338	77	-0.054	66	0	107	0.514	14	0.514	16
3223			min	-0.338	100	-0.338	45	-0.989	15	0	12	-0.056	77	-0.056	75
3224		3	max	0.335	102	0.335	77	-0.052	66	0	107	0.154	14	0.154	16
3225			min	-0.335	100	-0.335	45	-0.961	15	0	12	-0.016	47	-0.016	75
3226		4	max	0.003	106	0.004	69	-0.002	47	0	107	0.005	14	0.005	16
3227			min	-0.003	70	-0.004	93	-0.028	16	0	12	0	69	0	97
3228		5	max	0	107	0	107	0	70	0	107	0	107	0	107
3229			min	0	12	0	72	0	72	0	12	0	12	0	12
3230	M694	1	max	0.251	34	0.198	107	-0.053	66	0	107	0.459	14	0.459	16
3231			min	-0.251	96	-0.198	45	-0.667	15	0	12	-0.044	107	-0.044	45
3232		2	max	0.251	34	0.195	107	-0.051	66	0	107	0.276	14	0.276	16
3233			min	-0.251	96	-0.195	45	-0.646	15	0	12	-0.027	47	-0.027	105
3234		3	max	0.251	34	0.193	107	-0.049	66	0	107	0.098	14	0.098	16
3235			min	-0.251	96	-0.193	45	-0.624	15	0	12	-0.009	77	-0.009	105
3236		4	max	0.002	102	0.003	95	-0.002	105	0	107	0.003	14	0.003	16
3237			min	-0.002	70	-0.003	33	-0.021	15	0	12	0	99	0	37
3238		5	max	0	107	0	70	0	107	0	107	0	107	0	107
3239			min	0	12	0	72	0	72	0	12	0	12	0	12
3240	M695	1	max	0.138	68	0.113	103	-0.032	66	0	107	0.275	14	0.275	16
3241			min	-0.138	92	-0.113	45	-0.406	15	0	12	-0.025	107	-0.025	75
3242		2	max	0.138	68	0.11	103	-0.03	66	0	107	0.164	14	0.164	16
3243			min	-0.138	92	-0.11	45	-0.384	15	0	12	-0.015	107	-0.015	75
3244		3	max	0.138	68	0.108	103	-0.029	66	0	107	0.059	14	0.059	16
3245			min	-0.138	92	-0.108	45	-0.363	15	0	12	-0.005	47	-0.005	75
3246		4	max	0.002	72	0.003	99	-0.002	74	0	107	0.003	14	0.003	16
3247			min	-0.002	104	-0.003	33	-0.022	14	0	12	0	99	0	67
3248		5	max	0	107	0	107	0	70	0	107	0	107	0	107
3249			min	0	12	0	102	0	12	0	12	0	12	0	12
3250	M696	1	max	0.359	72	0.359	73	-0.059	66	0	107	0.928	14	0.928	16
3251			min	-0.359	100	-0.359	45	-1.068	15	0	12	-0.101	77	-0.101	45
3252		2	max	0.356	72	0.356	73	-0.057	66	0	107	0.54	14	0.54	16
3253			min	-0.356	100	-0.356	45	-1.04	15	0	12	-0.059	77	-0.059	45
3254		3	max	0.353	72	0.353	73	-0.054	66	0	107	0.162	14	0.162	16
3255			min	-0.353	100	-0.353	45	-1.012	15	0	12	-0.017	77	-0.017	45
3256		4	max	0.003	106	0.004	39	-0.002	107	0	107	0.005	14	0.005	16
3257			min	-0.003	70	-0.004	93	-0.028	15	0	12	0	69	0	97
3258		5	max	0	107	0	70	0	107	0	107	0	107	0	107
3259			min	0	12	0	72	0	72	0	12	0	12	0	12
3260	M697	1	max	0.138	34	0.113	43	-0.032	66	0	107	0.274	14	0.274	16
3261			min	-0.138	32	-0.113	45	-0.405	15	0	12	-0.025	47	-0.025	45
3262		2	max	0.138	34	0.11	43	-0.03	66	0	107	0.164	14	0.164	16
3263			min	-0.138	32	-0.11	45	-0.383	15	0	12	-0.015	47	-0.015	75
3264		3	max	0.138	34	0.108	43	-0.028	66	0	107	0.059	14	0.059	16
3265			min	-0.138	32	-0.108	45	-0.362	15	0	12	-0.005	47	-0.005	75
3266		4	max	0.002	76	0.003	65	-0.002	74	0	107	0.003	14	0.003	16
3267			min	-0.002	70	-0.003	33	-0.021	14	0	12	0	39	0	67
3268		5	max	0	107	0	107	0	70	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3269			min	0	12	0	102	0	12	0	12	0	12	0	12
3270	M701	1	max	0.26	106	0.26	47	-0.045	66	0	107	0.688	14	0.688	16
3271			min	-0.26	74	-0.26	71	-0.796	15	0	12	-0.073	47	-0.073	75
3272		2	max	0.257	106	0.257	47	-0.043	66	0	107	0.399	14	0.399	16
3273			min	-0.257	74	-0.257	71	-0.768	15	0	12	-0.043	107	-0.043	75
3274		3	max	0.254	106	0.254	47	-0.04	66	0	107	0.122	14	0.122	16
3275			min	-0.254	74	-0.254	71	-0.739	15	0	12	-0.012	107	-0.012	75
3276		4	max	0.003	102	0.004	39	-0.002	75	0	107	0.005	14	0.005	16
3277			min	-0.003	70	-0.004	67	-0.028	14	0	12	0	99	0	97
3278		5	max	0	107	0	70	0	107	0	107	0	107	0	107
3279			min	0	12	0	12	0	72	0	12	0	12	0	12
3280	M702	1	max	0.182	94	0.146	47	-0.04	66	0	107	0.347	14	0.347	16
3281			min	-0.182	36	-0.146	75	-0.507	15	0	12	-0.033	77	-0.033	105
3282		2	max	0.182	94	0.144	47	-0.038	66	0	107	0.207	14	0.207	16
3283			min	-0.182	36	-0.144	75	-0.486	15	0	12	-0.02	77	-0.02	45
3284		3	max	0.182	94	0.141	47	-0.037	66	0	107	0.074	14	0.074	16
3285			min	-0.182	36	-0.141	75	-0.465	15	0	12	-0.007	77	-0.007	45
3286		4	max	0.002	72	0.003	99	-0.002	107	0	107	0.003	14	0.003	16
3287			min	-0.002	104	-0.003	63	-0.021	15	0	12	0	69	0	67
3288		5	max	0	107	0	70	0	107	0	107	0	107	0	107
3289			min	0	12	0	12	0	72	0	12	0	12	0	12
3290	M703	1	max	0.182	68	0.146	77	-0.04	66	0	107	0.348	14	0.348	16
3291			min	-0.182	92	-0.146	101	-0.509	15	0	12	-0.033	77	-0.033	105
3292		2	max	0.182	68	0.144	77	-0.039	66	0	107	0.208	14	0.208	16
3293			min	-0.182	92	-0.144	101	-0.487	15	0	12	-0.02	47	-0.02	105
3294		3	max	0.182	68	0.141	77	-0.037	66	0	107	0.074	14	0.074	16
3295			min	-0.182	92	-0.141	101	-0.465	15	0	12	-0.007	47	-0.007	105
3296		4	max	0.002	72	0.003	65	-0.002	105	0	107	0.003	14	0.003	16
3297			min	-0.002	40	-0.003	33	-0.022	15	0	12	0	39	0	97
3298		5	max	0	107	0	70	0	107	0	107	0	107	0	107
3299			min	0	12	0	12	0	72	0	12	0	12	0	12
3300	M704	1	max	0.251	94	0.198	73	-0.053	66	0	107	0.46	14	0.46	16
3301			min	-0.251	66	-0.198	105	-0.669	15	0	12	-0.044	47	-0.044	75
3302		2	max	0.251	94	0.195	73	-0.051	66	0	107	0.276	14	0.276	16
3303			min	-0.251	66	-0.195	105	-0.647	15	0	12	-0.027	47	-0.027	75
3304		3	max	0.251	94	0.193	73	-0.049	66	0	107	0.098	14	0.098	16
3305			min	-0.251	66	-0.193	105	-0.625	15	0	12	-0.009	47	-0.009	45
3306		4	max	0.002	72	0.003	35	-0.002	45	0	107	0.003	14	0.003	16
3307			min	-0.002	40	-0.003	63	-0.022	16	0	12	0	99	0	97
3308		5	max	0	107	0	70	0	107	0	107	0	107	0	107
3309			min	0	12	0	72	0	72	0	12	0	12	0	12
3310	M705	1	max	0.241	64	0.19	43	-0.051	66	0	107	0.444	14	0.444	16
3311			min	-0.241	96	-0.19	75	-0.646	15	0	12	-0.043	107	-0.043	75
3312		2	max	0.241	64	0.188	43	-0.049	66	0	107	0.266	14	0.266	16
3313			min	-0.241	96	-0.188	75	-0.624	15	0	12	-0.026	107	-0.026	45
3314		3	max	0.241	64	0.186	43	-0.047	66	0	107	0.095	14	0.095	16
3315			min	-0.241	96	-0.186	75	-0.603	15	0	12	-0.009	107	-0.009	45
3316		4	max	0.002	46	0.003	99	-0.002	107	0	107	0.003	14	0.003	16
3317			min	-0.002	44	-0.003	33	-0.021	16	0	12	0	69	0	97
3318		5	max	0	107	0	107	0	107	0	107	0	107	0	107
3319			min	0	12	0	72	0	72	0	12	0	12	0	12
3320	M706	1	max	0.241	68	0.19	73	-0.051	66	0	107	0.445	14	0.445	16
3321			min	-0.241	62	-0.19	41	-0.647	15	0	12	-0.043	107	-0.043	45
3322		2	max	0.241	68	0.188	73	-0.049	66	0	107	0.267	14	0.267	16
3323			min	-0.241	62	-0.188	41	-0.625	15	0	12	-0.026	47	-0.026	45

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3324		3	max	0.241	68	0.186	73	-0.048	66	0	107	0.095	14	0.095	16
3325			min	-0.241	62	-0.186	41	-0.604	15	0	12	-0.009	47	-0.009	75
3326		4	max	0.002	46	0.003	65	-0.002	45	0	107	0.003	14	0.003	16
3327			min	-0.002	44	-0.003	63	-0.022	15	0	12	0	99	0	97
3328		5	max	0	107	0	107	0	107	0	107	0	107	0	107
3329			min	0	12	0	72	0	72	0	12	0	12	0	12
3330	M460	1	max	21.668	15	5.48	100	17.939	103	0	107	0	107	0	107
3331			min	-4.469	104	-5.445	72	-17.7	71	0	12	0	12	0	12
3332		2	max	21.365	15	5.384	100	2.39	71	0	107	13.941	103	8.644	72
3333			min	-4.432	104	-5.385	72	-2.437	103	0	12	-13.765	71	-8.672	100
3334		3	max	21.153	15	5.323	100	2.451	71	0	107	10.009	103	17.179	72
3335			min	-4.474	104	-5.325	72	-2.497	103	0	12	-9.907	71	-17.204	100
3336		4	max	20.096	15	4.156	70	5.15	71	1.043	77	4.687	103	9.402	72
3337			min	0.711	104	-4.841	102	-5.192	103	-1.135	71	-4.654	71	-9.53	100
3338		5	max	0	107	0	100	0	13	0	107	0	107	0	107
3339			min	0	12	0	72	0	107	0	12	0	12	0	12
3340	M471	1	max	24.797	13	11.793	102	18.682	71	0	107	0	107	0	107
3341			min	-3.742	106	-11.807	70	-18.521	103	0	12	0	12	0	12
3342		2	max	24.192	13	3.155	102	2.609	103	0	107	14.448	71	12.924	70
3343			min	-3.919	106	-3.58	70	-2.641	71	0	12	-14.313	103	-12.609	102
3344		3	max	23.979	13	3.094	102	2.697	103	0	107	10.161	71	18.568	70
3345			min	-3.961	106	-3.505	70	-2.733	71	0	12	-10.079	103	-17.588	102
3346		4	max	22.527	13	3.715	76	5.067	103	1.073	71	4.603	71	8.728	70
3347			min	1.126	106	-4.738	100	-5.101	71	-0.989	77	-4.575	103	-8.303	102
3348		5	max	0	107	0	102	0	107	0	107	0	107	0	107
3349			min	0	12	0	70	0	14	0	12	0	12	0	12
3350	M473	1	max	27.149	13	10.941	102	0.191	13	0	107	0	107	0	107
3351			min	-2.033	76	-10.812	70	-0.002	76	0	12	0	12	0	12
3352		2	max	26.537	13	2.913	106	0.187	75	0	107	0.207	14	12.036	70
3353			min	-2.307	76	-3.548	70	-0.197	103	0	12	-0.113	107	-11.675	102
3354		3	max	26.324	13	2.853	106	0.126	75	0	107	0.41	71	17.63	70
3355			min	-2.349	76	-3.475	70	-0.136	103	0	12	-0.37	107	-16.249	102
3356		4	max	24.396	13	3.474	76	0.355	107	0.14	71	0.334	71	8.356	70
3357			min	1.55	68	-4.625	100	-0.37	71	-0.106	77	-0.315	107	-7.709	102
3358		5	max	0	107	0	102	0	15	0	107	0	107	0	107
3359			min	0	12	0	70	0	76	0	12	0	12	0	12
3360	M507	1	max	20.134	15	5.221	100	0.006	74	0	107	0	107	0	107
3361			min	-3.247	74	-5.094	72	-0.121	15	0	12	0	12	0	12
3362		2	max	19.85	15	5.117	100	0.213	103	0	107	0.135	107	8.038	72
3363			min	-3.327	74	-4.971	72	-0.202	75	0	12	-0.156	71	-8.258	100
3364		3	max	19.637	15	5.056	100	0.152	103	0	107	0.418	107	15.913	72
3365			min	-3.369	74	-4.91	72	-0.142	75	0	12	-0.427	71	-16.365	100
3366		4	max	19.054	15	4.065	70	0.407	71	0.117	77	0.357	103	8.726	72
3367			min	1.245	66	-4.531	102	-0.395	107	-0.148	71	-0.358	71	-9.078	100
3368		5	max	0	107	0	100	0	68	0	107	0	107	0	107
3369			min	0	12	0	72	0	13	0	12	0	12	0	12
3370	M508	1	max	0.878	72	0.019	75	-0.013	76	0	74	0.151	72	0.069	104
3371			min	-0.4	104	-0.019	103	-0.16	14	0	102	-0.069	104	-0.151	72
3372		2	max	0.888	72	0.009	75	-0.007	76	0	74	0.138	72	0.062	104
3373			min	-0.41	104	-0.009	103	-0.08	14	0	102	-0.079	104	-0.217	15
3374		3	max	0.897	72	0.002	76	0	42	0	74	0.135	72	0.061	104
3375			min	-0.419	104	-0.002	74	0	40	0	102	-0.084	104	-0.252	15
3376		4	max	0.906	72	0.009	77	0.08	15	0	74	0.141	72	0.065	104
3377			min	-0.429	104	-0.009	101	0.007	104	0	102	-0.082	104	-0.217	15
3378		5	max	0.916	72	0.019	77	0.16	15	0	74	0.158	72	0.075	104

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3379			min	-0.438	104	-0.019	101	0.013	104	0	102	-0.075	104	-0.158	72
3380	M509	1	max	10.5	102	0.213	70	0.135	102	0.001	104	0	107	0.885	74
3381			min	-9.828	74	-0.204	106	-0.106	74	-0.071	15	0	12	-0.945	102
3382		2	max	5.56	76	0.153	103	0.063	104	0.02	13	1.129	72	1.49	16
3383			min	-53.823	13	0.015	67	-0.089	72	-0.011	76	-0.953	104	0.226	75
3384		3	max	3.038	76	0.036	69	0.071	103	0.061	13	0.381	76	0.47	102
3385			min	-64.982	13	-0.241	13	-0.043	94	0.004	105	-0.639	100	-0.037	66
3386		4	max	2.246	76	-0.005	98	0.073	72	0.031	15	0.992	72	1.382	13
3387			min	-53.89	13	-0.119	71	-0.034	104	-0.006	104	-0.791	104	0.208	98
3388		5	max	21.383	71	0.333	75	0.099	70	0.003	76	0	107	1.861	107
3389			min	-20.683	107	-0.345	103	-0.088	106	-0.064	13	0	12	-1.924	71
3390	M510	1	max	0.257	75	0.056	72	0.052	64	0.016	70	0	107	0.027	103
3391			min	-0.301	103	-0.075	17	-0.049	96	-0.012	106	0	12	-0.023	75
3392		2	max	4.765	74	0.121	102	0.135	70	0.019	70	1.413	102	1.096	15
3393			min	-49.36	15	-0.009	66	-0.131	106	-0.015	106	-1.298	74	0.128	74
3394		3	max	3.625	74	0.27	16	0.044	94	0.056	13	0.427	76	0.442	100
3395			min	-59.523	15	-0.282	15	-0.087	16	0.006	75	-0.772	100	-0.134	76
3396		4	max	0.64	75	0.02	104	0.121	106	0.015	106	1.225	106	1.228	15
3397			min	-49.486	15	-0.145	72	-0.144	70	-0.018	70	-1.303	70	0.117	104
3398		5	max	19.981	71	0.317	75	0.023	96	0.015	106	0	107	1.825	103
3399			min	-20.277	103	-0.333	103	-0.099	15	-0.016	70	0	12	-1.798	71
3400	M511	1	max	0.195	96	0.027	106	-0.024	76	0.028	15	0.034	96	0.245	15
3401			min	-1.425	15	-0.027	70	-0.289	13	0	74	-0.245	15	-0.034	96
3402		2	max	0.195	96	0.013	106	-0.012	76	0.028	15	0.001	96	0.081	64
3403			min	-1.425	15	-0.013	70	-0.144	13	0	74	-0.59	15	-0.117	17
3404		3	max	0.195	96	0.002	107	0	99	0.028	15	-0.01	96	0.067	64
3405			min	-1.425	15	-0.002	71	0	100	0	74	-0.705	15	-0.228	17
3406		4	max	0.195	96	0.015	104	0.144	15	0.028	15	0.001	96	0.081	64
3407			min	-1.425	15	-0.015	72	0.012	104	0	74	-0.59	15	-0.117	17
3408		5	max	0.195	96	0.029	104	0.289	15	0.028	15	0.034	96	0.245	15
3409			min	-1.425	15	-0.029	72	0.024	104	0	74	-0.245	15	-0.034	96
3410	M512	1	max	1.432	74	0.027	106	-0.024	76	0.017	13	0.246	74	0.325	72
3411			min	-1.89	72	-0.027	70	-0.289	13	-0.002	76	-0.325	72	-0.246	74
3412		2	max	1.442	74	0.013	106	-0.012	76	0.017	13	0.186	74	0.252	76
3413			min	-1.899	72	-0.013	70	-0.144	13	-0.002	76	-0.549	15	-0.242	74
3414		3	max	1.451	74	0.002	107	0	99	0.017	13	0.167	74	0.233	76
3415			min	-1.909	72	-0.002	71	0	100	-0.002	76	-0.664	15	-0.278	17
3416		4	max	1.46	74	0.015	104	0.144	15	0.017	13	0.189	74	0.255	76
3417			min	-1.918	72	-0.015	72	0.012	104	-0.002	76	-0.549	15	-0.246	74
3418		5	max	1.47	74	0.029	104	0.289	15	0.017	13	0.253	74	0.332	72
3419			min	-1.927	72	-0.029	72	0.024	104	-0.002	76	-0.332	72	-0.253	74
3420	M513	1	max	10.608	104	0.038	72	-0.035	75	0.017	15	2.282	104	2.429	72
3421			min	-11.294	72	-0.038	104	-0.318	13	-0.004	74	-2.429	72	-2.281	104
3422		2	max	10.623	104	0.018	72	-0.017	75	0.017	15	2.201	104	2.333	76
3423			min	-11.309	72	-0.018	104	-0.159	13	-0.004	74	-2.453	72	-2.279	104
3424		3	max	10.638	104	0.003	73	0	99	0.017	15	2.176	104	2.308	76
3425			min	-11.324	72	-0.003	105	0	103	-0.004	74	-2.463	72	-2.28	104
3426		4	max	10.653	104	0.022	70	0.159	15	0.017	15	2.207	104	2.34	76
3427			min	-11.339	72	-0.022	106	0.017	107	-0.004	74	-2.459	72	-2.285	104
3428		5	max	10.668	104	0.043	70	0.318	15	0.017	15	2.294	104	2.442	72
3429			min	-11.355	72	-0.043	106	0.035	107	-0.004	74	-2.442	72	-2.294	104
3430	M514	1	max	31.751	15	-0.038	66	0.047	74	0.005	68	0	107	-0.431	66
3431			min	4.787	66	-0.43	15	-0.065	102	-0.015	13	0	12	-2.858	15
3432		2	max	66.38	15	0.036	66	0.026	74	0.006	68	0.204	104	-0.054	66
3433			min	1.516	66	-0.125	102	-0.042	102	-0.007	92	-0.241	72	-1.161	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3434		3	max	71.797	15	0.226	13	0.092	101	0.024	15	1.166	13	0.013	66
3435			min	0.74	66	-0.031	74	-0.177	15	-0.007	103	-0.162	76	-0.509	15
3436		4	max	65.139	15	0.091	72	0.047	102	0.009	100	0.174	104	-0.027	66
3437			min	1.577	66	-0.058	17	-0.03	74	-0.005	68	-0.211	72	-0.919	15
3438		5	max	29.62	15	0.404	15	0.068	102	0.007	92	0	107	-0.254	75
3439			min	2.821	75	0.035	66	-0.045	74	-0.007	68	0	12	-2.666	15
3440	M515	1	max	27.464	13	0.038	68	0.06	74	0.01	98	0	107	0.042	76
3441			min	-0.472	76	-0.364	100	-0.071	102	-0.01	62	0	12	-2.472	13
3442		2	max	60.536	13	0.08	19	0.04	70	0.013	15	0.144	74	-0.082	68
3443			min	-1.516	76	-0.06	100	-0.041	102	-0.004	74	-0.233	102	-0.815	13
3444		3	max	65.285	13	0.057	72	0.182	15	0.021	15	1.169	13	0.028	68
3445			min	-2.595	76	-0.249	15	-0.079	102	-0.007	103	-0.167	76	-0.323	100
3446		4	max	60.495	13	0.059	70	0.044	72	0.005	74	0.12	74	-0.076	68
3447			min	-1.918	76	-0.078	19	-0.045	100	-0.005	102	-0.233	15	-0.827	13
3448		5	max	27.263	13	0.378	100	0.074	72	0.008	66	0	107	0.158	76
3449			min	-1.758	76	-0.051	76	-0.058	104	-0.021	15	0	12	-2.454	13
3450	M516	1	max	0.394	104	0.736	71	-0.317	67	0.062	71	0.046	75	0.055	107
3451			min	-0.536	72	-0.729	103	-1.214	15	-0.062	103	-0.254	103	-0.265	71
3452		2	max	0.385	104	0.728	71	-0.31	67	0.062	71	0.259	75	0.263	107
3453			min	-0.528	72	-0.72	103	-1.141	15	-0.062	103	-1.444	103	-1.462	71
3454		3	max	0.289	98	0.129	71	-0.047	96	0.009	71	0.369	75	0.371	107
3455			min	-0.397	62	-0.129	103	-0.152	15	-0.009	103	-2.052	103	-2.074	71
3456		4	max	0.991	106	0.814	103	1.252	15	0.075	103	0.293	75	0.297	107
3457			min	-1.132	70	-0.822	71	0.345	96	-0.075	71	-1.632	103	-1.65	71
3458		5	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
3459			min	-1.14	70	-0.83	71	0.352	96	-0.075	71	-0.288	103	-0.299	71
3460	M517	1	max	1.189	100	0.702	71	-0.302	67	0.062	71	0.043	75	0.044	107
3461			min	-1.183	72	-0.702	103	-1.176	13	-0.061	103	-0.255	103	-0.256	71
3462		2	max	1.181	100	0.694	71	-0.295	67	0.062	71	0.239	75	0.24	107
3463			min	-1.174	72	-0.694	103	-1.103	13	-0.061	103	-1.408	103	-1.409	71
3464		3	max	0.653	100	0.123	71	-0.044	96	0.011	71	0.34	75	0.34	107
3465			min	-0.654	72	-0.122	103	-0.147	15	-0.011	103	-1.996	103	-1.997	71
3466		4	max	0.197	106	0.783	103	1.21	16	0.07	103	0.27	75	0.27	107
3467			min	-0.193	74	-0.783	71	0.328	67	-0.069	71	-1.588	103	-1.589	71
3468		5	max	0.206	106	0.791	103	1.283	16	0.07	103	0.049	75	0.049	107
3469			min	-0.201	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
3470	M518	1	max	1.767	57	6.088	70	2.443	71	0.598	71	0.074	77	12.152	70
3471			min	-2.498	100	-5.134	76	-2.269	77	-0.553	77	-0.088	75	-11.032	106
3472		2	max	1.777	72	6.066	70	2.425	71	0.598	71	2.462	71	5.788	70
3473			min	-2.516	100	-5.146	76	-2.251	77	-0.553	77	-2.293	77	-5.697	102
3474		3	max	2.171	72	5.704	70	0.413	71	0.101	71	3.662	71	0.039	68
3475			min	-2.913	100	-5.366	76	-0.392	103	-0.093	107	-3.394	77	-0.511	100
3476		4	max	2.683	72	5.244	74	2.544	77	0.634	77	2.885	71	5.655	76
3477			min	-3.422	100	-5.901	72	-2.759	71	-0.685	71	-2.665	77	-6.135	100
3478		5	max	2.701	72	5.232	74	2.562	77	0.634	77	0.029	101	11.799	72
3479			min	-3.44	100	-5.922	72	-2.777	71	-0.685	71	-0.028	103	-11.499	100
3480	M707	1	max	1.817	57	5.809	100	0.467	71	0.103	75	0.06	101	11.586	70
3481			min	-2.417	86	-4.689	76	-0.4	77	-0.093	73	-0.061	103	-10.126	106
3482		2	max	1.817	57	5.788	100	0.448	71	0.103	75	0.523	71	5.515	70
3483			min	-2.431	100	-4.701	76	-0.382	77	-0.093	73	-0.461	77	-5.227	102
3484		3	max	2.094	72	5.425	70	0.071	71	0.015	75	0.744	71	0.038	68
3485			min	-2.749	100	-4.92	76	-0.066	103	-0.02	103	-0.648	77	-0.512	100
3486		4	max	2.59	72	4.914	104	0.431	77	0.1	77	0.597	71	5.192	76
3487			min	-3.242	100	-5.429	72	-0.504	71	-0.124	71	-0.526	107	-5.853	100
3488		5	max	2.608	72	4.901	104	0.449	77	0.1	77	0.072	101	10.813	72

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3489			min	-3.26	100	-5.45	72	-0.523	71	-0.124	71	-0.07	103	-10.929	100
3490	M708	1	max	0.697	13	0.715	71	-0.302	67	0.06	71	0.028	75	0.048	107
3491			min	-0.419	76	-0.702	103	-1.182	15	-0.059	103	-0.255	103	-0.279	71
3492		2	max	0.697	13	0.706	71	-0.295	67	0.06	71	0.233	75	0.242	107
3493			min	-0.411	76	-0.694	103	-1.109	15	-0.059	103	-1.408	103	-1.443	71
3494		3	max	0.681	15	0.123	71	-0.044	96	0.008	71	0.336	75	0.341	107
3495			min	-0.127	77	-0.122	103	-0.148	15	-0.008	107	-1.996	103	-2.036	71
3496		4	max	1.065	102	0.783	103	1.216	15	0.072	103	0.264	75	0.272	107
3497			min	-0.803	74	-0.796	71	0.328	66	-0.073	71	-1.588	103	-1.623	71
3498		5	max	1.073	102	0.791	103	1.29	15	0.072	103	0.034	75	0.053	107
3499			min	-0.812	74	-0.804	71	0.335	66	-0.073	71	-0.288	103	-0.312	71
3500	M709	1	max	1.919	70	1.879	15	0.54	75	0.124	77	0	107	0.479	70
3501			min	-1.933	102	0.423	97	-0.54	77	-0.124	71	0	12	-0.482	102
3502		2	max	1.648	70	0.94	15	0.27	75	0.062	77	0.599	75	-0.181	66
3503			min	-1.662	102	0.212	97	-0.27	77	-0.062	101	-0.599	77	-2.132	15
3504		3	max	1.378	70	0.004	74	0	72	0	75	0.799	75	-0.395	66
3505			min	-1.392	102	-0.004	76	0	12	0	16	-0.799	77	-2.818	15
3506		4	max	1.108	70	-0.212	97	0.27	77	0.062	75	0.599	75	-0.294	66
3507			min	-1.122	102	-0.94	15	-0.27	75	-0.062	103	-0.599	77	-2.123	15
3508		5	max	0.838	70	-0.423	97	0.54	77	0.124	75	0	107	0.209	70
3509			min	-0.852	102	-1.88	15	-0.54	75	-0.124	73	0	12	-0.213	102
3510	M710	1	max	3.159	70	1.82	15	0.514	71	0.118	107	0	107	0.788	70
3511			min	-2.826	106	0.404	99	-0.514	73	-0.118	71	0	12	-0.705	106
3512		2	max	2.902	70	0.91	15	0.257	71	0.059	107	0.57	71	0.061	66
3513			min	-2.569	106	0.202	99	-0.257	73	-0.059	71	-0.57	73	-1.864	15
3514		3	max	2.644	70	0.004	74	0	72	0.001	96	0.76	71	-0.145	66
3515			min	-2.311	106	-0.004	76	0	100	-0.002	102	-0.76	73	-2.527	15
3516		4	max	2.386	70	-0.202	98	0.257	73	0.058	105	0.57	71	-0.052	66
3517			min	-2.054	106	-0.91	13	-0.257	71	-0.059	73	-0.57	73	-1.855	15
3518		5	max	2.129	70	-0.404	99	0.514	73	0.117	105	0	107	0.531	70
3519			min	-1.796	106	-1.82	15	-0.514	71	-0.117	73	0	12	-0.448	106
3520	M711	1	max	4.573	100	4.912	70	0.389	101	0.088	103	1.183	71	9.472	70
3521			min	-3.566	76	-3.732	76	-0.398	103	-0.083	101	-1.1	77	-8.496	106
3522		2	max	4.418	100	4.601	70	0.167	101	0.036	103	1.432	71	4.435	70
3523			min	-3.41	76	-3.913	76	-0.168	103	-0.033	105	-1.349	73	-4.544	102
3524		3	max	4.263	100	4.288	70	0.012	71	0.017	74	1.529	71	-0.063	66
3525			min	-3.255	76	-4.097	76	-0.012	107	-0.015	76	-1.443	73	-0.576	15
3526		4	max	4.108	100	4.026	74	0.145	103	0.036	101	1.459	71	4.257	76
3527			min	-3.1	76	-4.41	72	-0.145	101	-0.034	107	-1.37	73	-4.709	100
3528		5	max	3.952	100	3.836	74	0.377	103	0.087	101	1.236	71	9.037	72
3529			min	-2.946	76	-4.73	72	-0.369	101	-0.086	103	-1.144	77	-8.71	100
3530	M712	1	max	4.455	100	4.706	70	0.337	101	0.07	103	0.258	71	9.04	70
3531			min	-3.315	76	-3.395	76	-0.339	103	-0.077	101	-0.229	107	-7.797	106
3532		2	max	4.301	100	4.395	100	0.157	105	0.031	107	0.51	71	4.22	70
3533			min	-3.16	76	-3.577	76	-0.158	103	-0.037	101	-0.501	103	-4.171	102
3534		3	max	4.146	100	4.083	100	0.002	75	0.005	96	0.596	71	-0.062	66
3535			min	-3.004	76	-3.762	76	-0.002	103	-0.014	15	-0.588	103	-0.565	15
3536		4	max	3.991	100	3.778	74	0.153	103	0.033	105	0.513	71	3.908	76
3537			min	-2.849	76	-4.054	72	-0.154	101	-0.038	103	-0.506	103	-4.494	100
3538		5	max	3.835	100	3.589	74	0.335	103	0.072	105	0.266	71	8.293	72
3539			min	-2.695	76	-4.372	72	-0.335	101	-0.079	103	-0.239	103	-8.283	100
3540	M713	1	max	4.031	70	1.819	13	0.514	75	0.118	73	0	107	1.006	70
3541			min	-4.053	102	0.403	98	-0.514	73	-0.117	75	0	12	-1.012	102
3542		2	max	3.774	70	0.909	13	0.257	75	0.059	73	0.57	75	0.217	74
3543			min	-3.796	102	0.202	98	-0.257	73	-0.058	75	-0.57	73	-2.157	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3544		3	max	3.516	70	0.004	74	0	70	0.002	102	0.76	75	-0.059	66
3545			min	-3.538	102	-0.004	76	0	102	-0.001	96	-0.76	73	-2.79	15
3546		4	max	3.259	70	-0.202	98	0.257	73	0.059	71	0.57	75	0.089	74
3547			min	-3.281	102	-0.909	13	-0.257	75	-0.059	77	-0.57	73	-2.118	15
3548		5	max	3.001	70	-0.403	98	0.514	73	0.118	71	0	107	0.749	70
3549			min	-3.023	102	-1.819	13	-0.514	75	-0.117	77	0	12	-0.755	102
3550	M714	1	max	13.444	15	0.567	72	0.566	71	0.368	71	0.093	71	-0.089	96
3551			min	1.9	99	-0.402	104	-0.549	103	-0.366	103	-0.09	103	-0.976	15
3552		2	max	13.363	15	0.555	72	0.554	71	0.368	71	0.72	71	0.288	104
3553			min	1.891	99	-0.39	104	-0.537	103	-0.366	103	-0.698	103	-1.252	15
3554		3	max	12.487	15	0.274	72	0.227	71	0.024	71	0.996	71	0.668	104
3555			min	1.807	107	-0.116	104	-0.228	103	-0.023	107	-0.973	103	-0.995	72
3556		4	max	10.729	15	0.884	13	0.641	103	0.181	103	1.019	71	0.722	104
3557			min	1.251	107	-0.347	76	-0.643	71	-0.18	71	-0.999	103	-0.883	72
3558		5	max	10.14	15	0.921	100	0.823	103	0.336	103	0.14	71	-0.028	104
3559			min	1.144	107	-0.505	76	-0.843	71	-0.337	71	-0.137	103	-0.564	15
3560	M715	1	max	10.977	14	0.26	74	0.268	103	0.016	103	0.042	103	-0.1	107
3561			min	1.384	107	-0.336	102	-0.28	71	-0.016	71	-0.044	71	-0.733	13
3562		2	max	10.896	14	0.249	74	0.256	103	0.016	103	0.335	103	0.204	106
3563			min	1.376	107	-0.324	102	-0.269	71	-0.016	71	-0.351	71	-0.573	70
3564		3	max	10.816	14	0.237	74	0.245	103	0.016	103	0.615	103	0.537	106
3565			min	1.368	107	-0.313	102	-0.257	71	-0.016	71	-0.646	71	-0.826	70
3566		4	max	9.463	14	0.774	102	0.642	71	0.045	71	0.792	103	0.783	106
3567			min	0.855	107	-0.594	74	-0.611	103	-0.043	103	-0.833	71	-0.924	70
3568		5	max	9.383	14	0.786	102	0.654	71	0.045	71	0.103	103	-0.034	106
3569			min	0.847	107	-0.605	74	-0.622	103	-0.043	103	-0.108	71	-0.58	13
3570	M716	1	max	4.283	13	0.355	70	0.273	103	0.017	103	0.043	103	-0.032	98
3571			min	0.89	98	-0.313	106	-0.273	71	-0.016	71	-0.043	71	-0.302	13
3572		2	max	4.203	13	0.344	70	0.262	103	0.017	103	0.342	103	0.304	106
3573			min	0.881	98	-0.302	106	-0.262	71	-0.016	71	-0.342	71	-0.602	70
3574		3	max	4.122	13	0.332	70	0.25	103	0.017	103	0.629	103	0.635	106
3575			min	0.872	98	-0.29	106	-0.25	71	-0.016	71	-0.629	71	-0.981	70
3576		4	max	2.724	13	0.72	106	0.624	71	0.044	71	0.81	103	0.881	106
3577			min	0.513	97	-0.827	70	-0.625	103	-0.043	103	-0.81	71	-1.161	70
3578		5	max	2.644	13	0.731	106	0.636	71	0.044	71	0.105	103	0.069	106
3579			min	0.504	97	-0.839	70	-0.636	103	-0.043	103	-0.105	71	-0.228	70
3580	M717	1	max	10.377	13	0.258	103	0.085	102	0.002	98	0.011	102	-0.055	75
3581			min	1.354	75	-0.256	71	-0.087	70	-0.002	62	-0.012	70	-0.722	13
3582		2	max	10.297	13	0.246	103	0.073	102	0.002	98	0.1	102	0.222	75
3583			min	1.346	75	-0.244	71	-0.076	70	-0.002	62	-0.103	70	-0.726	16
3584		3	max	10.216	13	0.235	103	0.062	102	0.002	98	0.176	102	0.485	75
3585			min	1.338	75	-0.233	71	-0.064	70	-0.002	62	-0.181	70	-0.946	103
3586		4	max	8.861	13	0.577	71	0.167	70	0.014	74	0.216	102	0.684	75
3587			min	0.827	75	-0.587	103	-0.162	102	-0.014	102	-0.223	70	-1.053	103
3588		5	max	8.781	13	0.588	71	0.179	70	0.014	74	0.028	102	0.039	75
3589			min	0.819	75	-0.598	103	-0.174	102	-0.014	102	-0.029	70	-0.614	13
3590	M718	1	max	7.15	15	0.774	72	0.657	71	0.499	71	0.109	71	-0.02	96
3591			min	1.069	97	-0.41	104	-0.657	103	-0.499	103	-0.109	103	-0.594	15
3592		2	max	7.07	15	0.762	72	0.646	71	0.499	71	0.838	71	0.397	104
3593			min	1.06	97	-0.398	104	-0.646	103	-0.499	103	-0.838	103	-1.242	15
3594		3	max	5.921	15	0.555	15	0.242	75	0.025	71	1.133	71	0.772	104
3595			min	0.991	97	-0.047	96	-0.242	107	-0.025	107	-1.134	103	-1.112	72
3596		4	max	3.968	15	0.632	100	0.708	103	0.236	103	1.125	71	0.741	104
3597			min	0.612	97	-0.411	76	-0.708	71	-0.236	71	-1.125	103	-0.997	72
3598		5	max	3.219	15	0.841	100	0.931	103	0.447	103	0.154	71	0.077	104

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3599			min	0.55	97	-0.62	76	-0.931	71	-0.446	71	-0.154	103	-0.188	72
3600	M719	1	max	13.892	15	0.817	72	0.548	71	0.366	71	0.09	71	-0.066	66
3601			min	1.847	66	-0.569	104	-0.565	103	-0.368	103	-0.093	103	-1.041	15
3602		2	max	13.811	15	0.806	72	0.537	71	0.366	71	0.697	71	0.55	104
3603			min	1.838	66	-0.558	104	-0.554	103	-0.368	103	-0.719	103	-1.55	15
3604		3	max	12.935	15	0.519	72	0.227	71	0.023	75	0.972	71	1.118	104
3605			min	1.786	66	-0.282	104	-0.227	103	-0.023	103	-0.994	103	-1.643	72
3606		4	max	11.18	15	1.125	100	0.643	103	0.18	103	0.999	71	1.295	104
3607			min	1.291	75	-0.892	76	-0.641	71	-0.181	71	-1.019	103	-1.708	72
3608		5	max	10.59	15	1.285	100	0.843	103	0.337	103	0.137	71	0.09	74
3609			min	1.184	75	-1.053	76	-0.824	71	-0.337	71	-0.14	103	-0.676	15
3610	M720	1	max	20.064	15	0.036	68	0.019	71	0.003	72	0	73	-0.146	99
3611			min	3.142	99	-0.037	92	-0.019	107	-0.003	104	0	105	-0.932	15
3612		2	max	19.985	15	0.018	68	0.01	71	0.003	72	0.016	71	-0.121	96
3613			min	3.135	99	-0.018	92	-0.01	107	-0.003	104	-0.016	107	-0.931	15
3614		3	max	19.907	15	0	74	0	73	0.003	72	0.022	71	-0.11	96
3615			min	3.127	99	-0.003	15	0	105	-0.003	104	-0.022	107	-0.929	15
3616		4	max	19.828	15	0.018	66	0.01	73	0.003	72	0.016	71	-0.12	96
3617			min	3.119	99	-0.018	94	-0.01	105	-0.003	104	-0.016	107	-0.925	15
3618		5	max	19.75	15	0.036	66	0.019	73	0.003	72	0	73	-0.145	99
3619			min	3.111	99	-0.037	94	-0.019	105	-0.003	104	0	105	-0.919	15
3620	M721	1	max	17.606	13	0.036	66	0.019	107	0.003	76	0	105	-0.141	99
3621			min	3.032	99	-0.037	94	-0.019	71	-0.003	104	0	73	-0.818	13
3622		2	max	17.528	13	0.018	66	0.01	107	0.003	76	0.016	107	-0.114	98
3623			min	3.024	99	-0.018	94	-0.01	71	-0.003	104	-0.016	71	-0.817	13
3624		3	max	17.449	13	0	76	0	105	0.003	76	0.022	107	-0.103	98
3625			min	3.016	99	-0.003	13	0	73	-0.003	104	-0.022	71	-0.815	13
3626		4	max	17.371	13	0.018	68	0.01	105	0.003	76	0.016	107	-0.113	98
3627			min	3.009	99	-0.018	92	-0.01	73	-0.003	104	-0.016	71	-0.81	13
3628		5	max	17.292	13	0.036	68	0.019	105	0.003	76	0	105	-0.14	99
3629			min	3.001	99	-0.037	92	-0.019	73	-0.003	104	0	73	-0.805	13
3630	M722	1	max	16.96	13	0.036	66	0.019	107	0.003	104	0	105	-0.13	68
3631			min	2.807	68	-0.037	94	-0.019	71	-0.004	72	0	73	-0.788	13
3632		2	max	16.882	13	0.018	66	0.01	107	0.003	104	0.016	107	-0.1	68
3633			min	2.8	68	-0.018	94	-0.01	71	-0.004	72	-0.016	71	-0.787	13
3634		3	max	16.803	13	0	76	0	105	0.003	104	0.022	107	-0.089	68
3635			min	2.792	68	-0.003	13	0	73	-0.004	72	-0.022	71	-0.784	13
3636		4	max	16.725	13	0.018	68	0.01	105	0.003	104	0.016	107	-0.099	68
3637			min	2.784	68	-0.018	92	-0.01	73	-0.004	72	-0.016	71	-0.78	13
3638		5	max	16.646	13	0.036	68	0.019	105	0.003	104	0	105	-0.129	68
3639			min	2.776	68	-0.037	92	-0.019	73	-0.004	72	0	73	-0.775	13
3640	M723	1	max	21.62	15	0.482	15	0.235	101	0.221	101	0.038	101	-0.12	66
3641			min	3.195	66	-0.179	66	-0.242	103	-0.222	73	-0.039	103	-1.086	15
3642		2	max	21.542	15	0.481	15	0.225	101	0.221	101	0.295	101	0.07	66
3643			min	3.188	66	-0.161	66	-0.232	103	-0.222	73	-0.304	103	-1.625	15
3644		3	max	20.923	15	0.31	15	0.015	75	0.006	105	0.325	101	0.154	66
3645			min	3.151	66	-0.027	66	-0.014	77	-0.006	73	-0.334	103	-1.304	15
3646		4	max	20.497	15	0.187	13	0.096	103	0.091	107	0.242	101	0.092	66
3647			min	3.116	66	-0.075	98	-0.095	101	-0.091	71	-0.25	103	-1.172	15
3648		5	max	20.069	15	0.298	62	0.228	103	0.188	103	0.036	101	-0.104	66
3649			min	3.078	66	-0.214	98	-0.221	101	-0.189	71	-0.037	103	-0.924	15
3650	M724	1	max	7.859	72	0.03	71	-0.021	106	0.004	70	1.69	72	1.622	104
3651			min	-7.539	104	-0.03	107	-0.189	15	-0.003	76	-1.622	104	-1.69	72
3652		2	max	7.874	72	0.015	71	-0.01	106	0.004	70	1.676	76	1.611	104
3653			min	-7.554	104	-0.015	107	-0.095	15	-0.003	76	-1.639	104	-1.717	72

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3654		3	max	7.889	72	0.004	72	0	72	0.004	70	1.674	76	1.61	104
3655			min	-7.569	104	-0.004	104	0	44	-0.003	76	-1.646	104	-1.728	72
3656		4	max	7.904	72	0.015	73	0.095	16	0.004	70	1.682	76	1.617	104
3657			min	-7.585	104	-0.015	105	0.01	44	-0.003	76	-1.645	104	-1.723	72
3658		5	max	7.919	72	0.03	73	0.189	16	0.004	70	1.703	72	1.634	104
3659			min	-7.6	104	-0.03	105	0.021	44	-0.003	76	-1.634	104	-1.703	72
3660	M725	1	max	7.27	72	0.03	71	-0.021	105	0.001	76	1.564	72	1.444	104
3661			min	-6.712	104	-0.03	107	-0.189	16	-0.003	15	-1.444	104	-1.564	72
3662		2	max	7.285	72	0.015	71	-0.01	105	0.001	76	1.544	72	1.433	104
3663			min	-6.727	104	-0.015	107	-0.095	16	-0.003	15	-1.461	104	-1.59	72
3664		3	max	7.3	72	0.004	76	0	76	0.001	76	1.539	72	1.432	104
3665			min	-6.742	104	-0.004	104	0	40	-0.003	15	-1.468	104	-1.601	72
3666		4	max	7.315	72	0.015	73	0.095	13	0.001	76	1.55	72	1.439	104
3667			min	-6.757	104	-0.015	101	0.01	44	-0.003	15	-1.467	104	-1.597	72
3668		5	max	7.33	72	0.03	73	0.189	13	0.001	76	1.577	72	1.457	104
3669			min	-6.772	104	-0.03	101	0.021	44	-0.003	15	-1.457	104	-1.577	72
3670	M726	1	max	0.757	15	0.019	103	-0.013	76	0.001	100	0.13	15	0.06	104
3671			min	-0.347	104	-0.019	75	-0.16	16	-0.001	72	-0.06	104	-0.13	15
3672		2	max	0.757	15	0.009	103	-0.007	76	0.001	100	0.113	72	0.049	104
3673			min	-0.338	104	-0.009	75	-0.08	16	-0.001	72	-0.067	104	-0.236	15
3674		3	max	0.757	15	0.002	104	0	70	0.001	100	0.106	72	0.045	104
3675			min	-0.328	104	-0.002	76	0	102	-0.001	72	-0.068	104	-0.272	15
3676		4	max	0.757	15	0.009	101	0.08	13	0.001	100	0.109	72	0.046	104
3677			min	-0.319	104	-0.009	73	0.007	44	-0.001	72	-0.064	104	-0.236	15
3678		5	max	0.757	15	0.019	101	0.16	13	0.001	100	0.13	15	0.053	104
3679			min	-0.309	104	-0.019	73	0.013	44	-0.001	72	-0.053	104	-0.13	15
3680	M727	1	max	1.459	74	0.029	70	-0.024	76	0.007	13	0.251	74	0.295	102
3681			min	-1.715	102	-0.029	106	-0.289	13	-0.001	76	-0.295	102	-0.251	74
3682		2	max	1.468	74	0.015	70	-0.012	76	0.007	13	0.258	74	0.297	106
3683			min	-1.725	102	-0.015	106	-0.144	13	-0.001	76	-0.378	102	-0.354	13
3684		3	max	1.478	74	0.002	71	0	76	0.007	13	0.262	74	0.3	106
3685			min	-1.734	102	-0.002	107	0	100	-0.001	76	-0.468	15	-0.469	13
3686		4	max	1.487	74	0.013	72	0.144	15	0.007	13	0.262	74	0.3	106
3687			min	-1.744	102	-0.013	104	0.012	104	-0.001	76	-0.381	102	-0.354	13
3688		5	max	1.497	74	0.027	72	0.289	15	0.007	13	0.258	74	0.302	102
3689			min	-1.753	102	-0.027	104	0.024	104	-0.001	76	-0.302	102	-0.258	74
3690	M728	1	max	1.307	102	0.019	103	-0.013	104	0.001	15	0.225	102	0.194	74
3691			min	-1.127	74	-0.019	75	-0.16	14	0	96	-0.194	74	-0.225	102
3692		2	max	1.297	102	0.009	103	-0.007	104	0.001	15	0.213	106	0.184	74
3693			min	-1.118	74	-0.009	75	-0.08	14	0	96	-0.201	74	-0.238	102
3694		3	max	1.288	102	0.002	104	0	104	0.001	15	0.209	106	0.179	74
3695			min	-1.108	74	-0.002	76	0	40	0	96	-0.202	74	-0.241	102
3696		4	max	1.278	102	0.009	101	0.08	16	0.001	15	0.21	106	0.18	74
3697			min	-1.099	74	-0.009	73	0.007	77	0	96	-0.198	74	-0.235	102
3698		5	max	1.269	102	0.019	101	0.16	16	0.001	15	0.218	102	0.187	74
3699			min	-1.089	74	-0.019	73	0.013	77	0	96	-0.187	74	-0.218	102
3700	M729	1	max	2.852	74	0.029	70	-0.024	76	0.004	72	0.491	74	0.514	106
3701			min	-2.988	106	-0.029	106	-0.289	13	-0.003	104	-0.514	106	-0.491	74
3702		2	max	2.861	74	0.015	70	-0.012	76	0.004	72	0.498	74	0.521	106
3703			min	-2.997	106	-0.015	106	-0.144	13	-0.003	104	-0.589	102	-0.554	74
3704		3	max	2.87	74	0.002	71	0	76	0.004	72	0.501	74	0.525	106
3705			min	-3.007	106	-0.002	107	0	100	-0.003	104	-0.618	102	-0.577	74
3706		4	max	2.88	74	0.013	72	0.144	15	0.004	72	0.501	74	0.525	106
3707			min	-3.016	106	-0.013	104	0.012	104	-0.003	104	-0.593	102	-0.558	74
3708		5	max	2.889	74	0.027	72	0.289	15	0.004	72	0.497	74	0.521	106

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3709			min	-3.025	106	-0.027	104	0.024	104	-0.003	104	-0.521	106	-0.497	74
3710	M730	1	max	12.205	104	0.043	70	-0.035	107	0.006	74	2.625	104	2.727	76
3711			min	-12.679	76	-0.043	102	-0.318	13	-0.006	106	-2.727	76	-2.625	104
3712		2	max	12.22	104	0.022	70	-0.017	107	0.006	74	2.635	104	2.736	76
3713			min	-12.694	76	-0.022	102	-0.159	13	-0.006	106	-2.838	72	-2.712	104
3714		3	max	12.235	104	0.003	71	0	103	0.006	74	2.64	104	2.742	76
3715			min	-12.709	76	-0.003	107	0	12	-0.006	106	-2.879	72	-2.744	104
3716		4	max	12.25	104	0.018	72	0.159	15	0.006	74	2.641	104	2.743	76
3717			min	-12.724	76	-0.018	104	0.017	75	-0.006	106	-2.845	72	-2.719	104
3718		5	max	12.265	104	0.038	72	0.318	15	0.006	74	2.638	104	2.74	76
3719			min	-12.739	76	-0.038	104	0.035	75	-0.006	106	-2.74	76	-2.638	104
3720	M731	1	max	5.09	14	0.036	66	0.019	107	0.001	13	0	105	0.004	107
3721			min	-0.09	107	-0.037	94	-0.019	71	0	104	0	73	-0.236	14
3722		2	max	5.011	14	0.018	66	0.01	107	0.001	13	0.016	107	0.005	107
3723			min	-0.097	107	-0.018	94	-0.01	71	0	104	-0.016	71	-0.235	13
3724		3	max	4.933	14	0	76	0	105	0.001	13	0.022	107	0.005	107
3725			min	-0.104	107	-0.003	13	0	73	0	104	-0.022	71	-0.232	13
3726		4	max	4.854	14	0.018	68	0.01	105	0.001	13	0.016	107	0.005	107
3727			min	-0.11	107	-0.018	92	-0.01	73	0	104	-0.016	71	-0.228	13
3728		5	max	4.775	14	0.036	68	0.019	105	0.001	13	0	105	0.005	107
3729			min	-0.117	107	-0.037	92	-0.019	73	0	104	0	73	-0.223	14
3730	M732	1	max	4.515	13	0.036	66	0.019	107	0	107	0	105	0.007	75
3731			min	-0.14	75	-0.037	94	-0.019	71	-0.001	13	0	73	-0.209	13
3732		2	max	4.437	13	0.018	66	0.01	107	0	107	0.016	107	0.007	75
3733			min	-0.147	75	-0.018	94	-0.01	71	-0.001	13	-0.016	71	-0.208	13
3734		3	max	4.358	13	0	76	0	105	0	107	0.022	107	0.016	68
3735			min	-0.153	75	-0.003	13	0	73	-0.001	13	-0.022	71	-0.206	13
3736		4	max	4.279	13	0.018	68	0.01	105	0	107	0.016	107	0.007	75
3737			min	-0.16	75	-0.018	92	-0.01	73	-0.001	13	-0.016	71	-0.202	13
3738		5	max	4.201	13	0.036	68	0.019	105	0	107	0	105	0.008	75
3739			min	-0.167	75	-0.037	92	-0.019	73	-0.001	13	0	73	-0.196	13
3740	M733	1	max	5.759	15	0.036	98	0.019	71	0.002	13	0	73	-0.009	107
3741			min	0.187	107	-0.037	62	-0.019	107	0	104	0	105	-0.267	15
3742		2	max	5.68	15	0.018	98	0.01	71	0.002	13	0.016	71	-0.006	96
3743			min	0.181	107	-0.018	62	-0.01	107	0	104	-0.016	107	-0.266	15
3744		3	max	5.602	15	0	74	0	73	0.002	13	0.022	71	0.004	96
3745			min	0.174	107	-0.003	15	0	105	0	104	-0.022	107	-0.264	15
3746		4	max	5.523	15	0.018	96	0.01	73	0.002	13	0.016	71	-0.006	96
3747			min	0.167	107	-0.018	64	-0.01	105	0	104	-0.016	107	-0.259	15
3748		5	max	5.445	15	0.036	96	0.019	73	0.002	13	0	73	-0.008	107
3749			min	0.16	107	-0.037	64	-0.019	105	0	104	0	105	-0.254	15
3750	M734	1	max	6.17	15	0.036	98	0.019	71	0	107	0	73	-0.01	75
3751			min	0.209	75	-0.037	92	-0.019	107	-0.001	13	0	105	-0.286	15
3752		2	max	6.091	15	0.018	98	0.01	71	0	107	0.016	71	0	66
3753			min	0.202	75	-0.018	92	-0.01	107	-0.001	13	-0.016	107	-0.285	15
3754		3	max	6.013	15	0	74	0	73	0	107	0.022	71	0.011	66
3755			min	0.195	75	-0.003	15	0	105	-0.001	13	-0.022	107	-0.283	15
3756		4	max	5.934	15	0.018	66	0.01	73	0	107	0.016	71	0.001	66
3757			min	0.189	75	-0.018	64	-0.01	105	-0.001	13	-0.016	107	-0.279	15
3758		5	max	5.855	15	0.036	66	0.019	73	0	107	0	73	-0.009	75
3759			min	0.182	75	-0.037	64	-0.019	105	-0.001	13	0	105	-0.273	15
3760	M735	1	max	1.827	106	0.293	15	0.028	76	0.002	100	0.125	70	0.116	106
3761			min	-1.963	70	0.023	77	-0.028	104	-0.003	19	-0.116	106	-0.125	70
3762		2	max	1.837	106	0.147	15	0.014	76	0.002	100	0.403	13	0.123	106
3763			min	-1.972	70	0.011	77	-0.014	104	-0.003	19	-0.06	98	-0.403	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3764		3	max	1.846	106	0.001	105	0	76	0.002	100	0.52	13	0.125	106
3765			min	-1.982	70	-0.001	73	0	42	-0.003	19	-0.05	98	-0.52	13
3766		4	max	1.856	106	-0.011	105	0.014	40	0.002	100	0.403	13	0.124	106
3767			min	-1.991	70	-0.147	13	-0.014	42	-0.003	19	-0.06	98	-0.403	13
3768		5	max	1.865	106	-0.023	105	0.028	40	0.002	100	0.127	70	0.119	106
3769			min	-2.001	70	-0.293	13	-0.028	42	-0.003	19	-0.119	106	-0.127	70
3770	M736	1	max	2.651	106	0.293	15	0.028	72	0	68	0.206	100	0.169	106
3771			min	-3.231	100	0.023	77	-0.028	44	-0.007	13	-0.169	106	-0.206	100
3772		2	max	2.661	106	0.147	15	0.014	72	0	68	0.45	13	0.175	106
3773			min	-3.24	100	0.011	77	-0.014	44	-0.007	13	-0.107	106	-0.45	13
3774		3	max	2.67	106	0.001	105	0	72	0	68	0.567	13	0.177	106
3775			min	-3.249	100	-0.001	73	0	44	-0.007	13	-0.087	106	-0.567	13
3776		4	max	2.68	106	-0.011	105	0.014	100	0	68	0.45	13	0.176	106
3777			min	-3.259	100	-0.147	13	-0.014	102	-0.007	13	-0.108	106	-0.45	13
3778		5	max	2.689	106	-0.023	105	0.028	100	0	68	0.208	100	0.171	106
3779			min	-3.268	100	-0.293	13	-0.028	102	-0.007	13	-0.171	106	-0.208	100
3780	M737	1	max	6.74	106	0.327	13	0.041	72	0	98	0.606	70	0.536	106
3781			min	-7.621	70	0.034	77	-0.041	104	-0.012	13	-0.536	106	-0.606	70
3782		2	max	6.755	106	0.163	13	0.02	72	0	98	0.628	70	0.544	106
3783			min	-7.636	70	0.016	77	-0.02	104	-0.012	13	-0.453	106	-0.718	70
3784		3	max	6.77	106	0.001	105	0	72	0	98	0.67	13	0.547	106
3785			min	-7.651	70	-0.001	73	0	104	-0.012	13	-0.426	106	-0.756	70
3786		4	max	6.785	106	-0.016	105	0.02	100	0	98	0.63	70	0.546	106
3787			min	-7.666	70	-0.163	15	-0.02	102	-0.012	13	-0.456	106	-0.721	70
3788		5	max	6.8	106	-0.034	105	0.041	100	0	98	0.611	70	0.541	106
3789			min	-7.681	70	-0.327	15	-0.041	102	-0.012	13	-0.541	106	-0.611	70
3790	M738	1	max	7.767	76	0.327	13	0.041	46	0.003	68	0.716	100	0.618	76
3791			min	-8.999	100	0.034	77	-0.041	100	-0.016	13	-0.618	76	-0.716	100
3792		2	max	7.782	76	0.163	13	0.02	46	0.003	68	0.738	100	0.625	76
3793			min	-9.014	100	0.016	77	-0.02	100	-0.016	13	-0.535	76	-0.828	100
3794		3	max	7.797	76	0.001	105	0	46	0.003	68	0.746	100	0.629	76
3795			min	-9.029	100	-0.001	73	0	100	-0.016	13	-0.508	76	-0.866	100
3796		4	max	7.812	76	-0.016	105	0.02	70	0.003	68	0.74	100	0.628	76
3797			min	-9.044	100	-0.163	15	-0.02	106	-0.016	13	-0.537	76	-0.83	100
3798		5	max	7.827	76	-0.034	105	0.041	70	0.003	68	0.721	100	0.623	76
3799			min	-9.059	100	-0.327	15	-0.041	106	-0.016	13	-0.623	76	-0.721	100
3800	M739	1	max	3.002	102	0.293	15	0.028	70	0.006	19	0.181	74	0.191	102
3801			min	-2.851	74	0.023	105	-0.028	72	-0.001	74	-0.191	102	-0.181	74
3802		2	max	3.011	102	0.147	15	0.014	70	0.006	19	0.338	13	0.128	106
3803			min	-2.861	74	0.011	105	-0.014	72	-0.001	74	-0.196	106	-0.338	13
3804		3	max	3.021	102	0.001	73	0	70	0.006	19	0.455	13	0.108	106
3805			min	-2.87	74	-0.001	101	0	100	-0.001	74	-0.198	106	-0.455	13
3806		4	max	3.03	102	-0.011	77	0.014	42	0.006	19	0.338	13	0.129	106
3807			min	-2.879	74	-0.147	13	-0.014	100	-0.001	74	-0.197	106	-0.338	13
3808		5	max	3.04	102	-0.023	77	0.028	42	0.006	19	0.184	74	0.193	102
3809			min	-2.889	74	-0.293	13	-0.028	100	-0.001	74	-0.193	102	-0.184	74
3810	M740	1	max	3.785	76	0.293	15	0.028	104	0.011	13	0.26	70	0.241	76
3811			min	-4.085	70	0.023	105	-0.028	42	0	68	-0.241	76	-0.26	70
3812		2	max	3.795	76	0.147	15	0.014	104	0.011	13	0.384	13	0.179	76
3813			min	-4.094	70	0.011	105	-0.014	42	0	68	-0.247	76	-0.384	13
3814		3	max	3.804	76	0.001	73	0	104	0.011	13	0.501	13	0.159	76
3815			min	-4.104	70	-0.001	105	0	70	0	68	-0.25	76	-0.501	13
3816		4	max	3.814	76	-0.011	77	0.014	102	0.011	13	0.384	13	0.181	76
3817			min	-4.113	70	-0.147	13	-0.014	70	0	68	-0.248	76	-0.384	13
3818		5	max	3.823	76	-0.023	77	0.028	102	0.011	13	0.262	70	0.243	76

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3819			min	-4.123	70	-0.293	13	-0.028	70	0	68	-0.243	76	-0.262	70
3820	M741	1	max	7.826	106	0.327	13	0.041	74	0.013	13	0.672	70	0.623	106
3821			min	-8.445	70	0.034	105	-0.041	76	0	98	-0.623	106	-0.672	70
3822		2	max	7.841	106	0.163	13	0.02	74	0.013	13	0.784	70	0.54	106
3823			min	-8.46	70	0.016	105	-0.02	76	0	98	-0.63	106	-0.693	70
3824		3	max	7.856	106	0.001	73	0	74	0.013	13	0.822	70	0.513	106
3825			min	-8.475	70	-0.001	105	0	76	0	98	-0.633	106	-0.702	70
3826		4	max	7.871	106	-0.016	77	0.02	106	0.013	13	0.786	70	0.542	106
3827			min	-8.49	70	-0.163	15	-0.02	70	0	98	-0.632	106	-0.696	70
3828		5	max	7.886	106	-0.034	77	0.041	106	0.013	13	0.677	70	0.627	106
3829			min	-8.505	70	-0.327	15	-0.041	70	0	98	-0.627	106	-0.677	70
3830	M742	1	max	8.643	76	0.327	13	0.041	100	0.006	92	0.746	100	0.688	76
3831			min	-9.373	100	0.034	105	-0.041	46	-0.005	68	-0.688	76	-0.746	100
3832		2	max	8.658	76	0.163	13	0.02	100	0.006	92	0.858	100	0.605	76
3833			min	-9.388	100	0.016	105	-0.02	46	-0.005	68	-0.695	76	-0.767	100
3834		3	max	8.673	76	0.001	73	0	73	0.006	92	0.896	100	0.578	76
3835			min	-9.403	100	-0.001	105	0	74	-0.005	68	-0.698	76	-0.775	100
3836		4	max	8.688	76	-0.016	77	0.02	42	0.006	92	0.86	100	0.607	76
3837			min	-9.418	100	-0.163	15	-0.02	74	-0.005	68	-0.697	76	-0.77	100
3838		5	max	8.703	76	-0.034	77	0.041	42	0.006	92	0.75	100	0.692	76
3839			min	-9.433	100	-0.327	15	-0.041	74	-0.005	68	-0.692	76	-0.75	100
3840	M743	1	max	5.333	70	0.194	15	0.03	71	0.003	94	0.393	106	0.424	70
3841			min	-4.941	106	0.019	76	-0.03	103	-0.002	96	-0.424	70	-0.393	106
3842		2	max	5.318	70	0.097	15	0.015	71	0.003	94	0.41	102	0.4	70
3843			min	-4.926	106	0.009	76	-0.015	103	-0.002	96	-0.4	70	-0.41	102
3844		3	max	5.303	70	0.001	104	0	100	0.003	94	0.417	102	0.393	74
3845			min	-4.911	106	-0.001	72	0	104	-0.002	96	-0.393	74	-0.417	102
3846		4	max	5.288	70	-0.009	104	0.015	73	0.003	94	0.408	102	0.397	70
3847			min	-4.896	106	-0.097	13	-0.015	41	-0.002	96	-0.397	70	-0.408	102
3848		5	max	5.273	70	-0.019	104	0.03	73	0.003	94	0.388	106	0.419	70
3849			min	-4.881	106	-0.194	13	-0.03	41	-0.002	96	-0.419	70	-0.388	106
3850	M744	1	max	1.945	70	0.163	15	0.019	71	0.001	102	0.12	106	0.124	70
3851			min	-1.893	106	0.012	106	-0.019	77	-0.001	104	-0.124	70	-0.12	106
3852		2	max	1.935	70	0.081	15	0.009	71	0.001	102	0.134	102	0.113	74
3853			min	-1.883	106	0.006	106	-0.009	77	-0.001	104	-0.113	74	-0.134	102
3854		3	max	1.926	70	0.001	74	0	46	0.001	102	0.15	15	0.109	74
3855			min	-1.874	106	-0.001	102	0	100	-0.001	104	-0.109	74	-0.15	15
3856		4	max	1.917	70	-0.006	74	0.009	103	0.001	102	0.133	102	0.112	74
3857			min	-1.864	106	-0.081	13	-0.009	41	-0.001	104	-0.112	74	-0.133	102
3858		5	max	1.907	70	-0.012	74	0.019	103	0.001	102	0.118	106	0.121	70
3859			min	-1.855	106	-0.163	13	-0.019	41	-0.001	104	-0.121	70	-0.118	106
3860	M745	1	max	1.467	70	0.163	15	0.019	101	0.001	100	0.08	106	0.093	70
3861			min	-1.26	106	0.012	106	-0.019	73	-0.001	72	-0.093	70	-0.08	106
3862		2	max	1.458	70	0.081	15	0.009	101	0.001	100	0.093	102	0.079	74
3863			min	-1.25	106	0.006	106	-0.009	73	-0.001	72	-0.079	74	-0.093	102
3864		3	max	1.448	70	0.001	74	0	106	0.001	100	0.112	15	0.076	74
3865			min	-1.241	106	-0.001	102	0	70	-0.001	72	-0.076	74	-0.112	15
3866		4	max	1.439	70	-0.006	74	0.009	103	0.001	100	0.091	102	0.078	74
3867			min	-1.231	106	-0.081	13	-0.009	75	-0.001	72	-0.078	74	-0.091	102
3868		5	max	1.429	70	-0.012	74	0.019	103	0.001	100	0.078	106	0.091	70
3869			min	-1.222	106	-0.163	13	-0.019	75	-0.001	72	-0.091	70	-0.078	106
3870	M746	1	max	4.845	70	0.194	15	0.03	105	0.002	96	0.342	106	0.385	70
3871			min	-4.295	106	0.019	76	-0.03	47	-0.003	15	-0.385	70	-0.342	106
3872		2	max	4.83	70	0.097	15	0.015	105	0.002	96	0.357	102	0.361	70
3873			min	-4.28	106	0.009	76	-0.015	47	-0.003	15	-0.361	70	-0.357	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3874		3	max	4.815	70	0.001	104	0	106	0.002	96	0.364	102	0.352	70
3875			min	-4.265	106	-0.001	72	0	44	-0.003	15	-0.352	70	-0.364	102
3876		4	max	4.8	70	-0.009	104	0.015	77	0.002	96	0.355	102	0.359	70
3877			min	-4.25	106	-0.097	13	-0.015	101	-0.003	15	-0.359	70	-0.355	102
3878		5	max	4.785	70	-0.019	104	0.03	77	0.002	96	0.337	106	0.381	70
3879			min	-4.235	106	-0.194	13	-0.03	101	-0.003	15	-0.381	70	-0.337	106
3880	M747	1	max	-0.711	107	0.195	13	0.024	70	0.007	106	0.65	14	0.65	14
3881			min	-13.198	14	0.001	77	-0.024	106	-0.01	13	0.035	107	0.035	107
3882		2	max	-0.726	107	0.097	13	0.012	70	0.007	106	0.875	14	0.432	14
3883			min	-13.261	14	0.001	77	-0.012	106	-0.01	13	0.037	107	0.035	107
3884		3	max	-0.741	107	0	13	0.002	13	0.007	106	0.952	14	0.361	14
3885			min	-13.323	14	0	76	0	105	-0.01	13	0.038	107	0.035	107
3886		4	max	-0.755	107	-0.001	107	0.012	72	0.007	106	0.881	14	0.438	14
3887			min	-13.386	14	-0.097	15	-0.012	104	-0.01	13	0.038	107	0.036	107
3888		5	max	-0.77	107	-0.001	107	0.024	72	0.007	106	0.662	14	0.662	14
3889			min	-13.448	14	-0.195	15	-0.024	104	-0.01	13	0.038	107	0.038	107
3890	M748	1	max	-0.174	107	-0.001	77	0.024	102	0.007	76	0.569	14	0.569	14
3891			min	-11.538	14	-0.195	13	-0.024	74	-0.013	13	0.009	107	0.009	107
3892		2	max	-0.189	107	-0.001	77	0.012	102	0.007	76	0.35	14	0.793	14
3893			min	-11.6	14	-0.097	13	-0.012	74	-0.013	13	0.008	107	0.011	107
3894		3	max	-0.204	107	0	76	0.002	15	0.007	76	0.279	14	0.87	14
3895			min	-11.663	14	0	100	0	75	-0.013	13	0.008	107	0.012	107
3896		4	max	-0.218	107	0.097	15	0.012	100	0.007	76	0.356	14	0.799	14
3897			min	-11.725	14	0.001	107	-0.012	76	-0.013	13	0.01	107	0.012	107
3898		5	max	-0.233	107	0.195	15	0.024	100	0.007	76	0.58	14	0.58	14
3899			min	-11.788	14	0.001	107	-0.024	76	-0.013	13	0.011	107	0.011	107
3900	M749	1	max	-0.109	75	0.195	15	0.024	102	0.007	104	0.53	13	0.53	13
3901			min	-10.746	13	0.001	105	-0.024	74	-0.011	15	0.005	75	0.005	75
3902		2	max	-0.124	75	0.097	15	0.012	102	0.007	104	0.754	13	0.311	13
3903			min	-10.809	13	0.001	105	-0.012	74	-0.011	15	0.007	75	0.005	75
3904		3	max	-0.138	75	0	15	0.002	15	0.007	104	0.831	13	0.24	13
3905			min	-10.871	13	0	104	0	77	-0.011	15	0.008	75	0.005	75
3906		4	max	-0.153	75	-0.001	75	0.012	100	0.007	104	0.76	13	0.317	13
3907			min	-10.934	13	-0.097	13	-0.012	76	-0.011	15	0.009	75	0.006	75
3908		5	max	-0.168	75	-0.001	75	0.024	100	0.007	104	0.541	13	0.541	13
3909			min	-10.996	13	-0.195	13	-0.024	76	-0.011	15	0.008	75	0.008	75
3910	M750	1	max	-0.784	75	-0.001	105	0.024	70	0.007	74	0	72	0	74
3911			min	-13.981	15	-0.195	13	-0.024	106	-0.014	15	0	104	0	102
3912		2	max	-0.799	75	-0.001	105	0.012	70	0.007	74	0.011	104	0.222	13
3913			min	-14.043	15	-0.097	13	-0.012	106	-0.014	15	-0.222	13	-0.011	106
3914		3	max	-0.814	75	0	106	0	15	0.007	74	0.015	104	0.296	13
3915			min	-14.106	15	0	70	0	97	-0.014	15	-0.296	13	-0.015	106
3916		4	max	-0.828	75	0.097	15	0.012	72	0.007	74	0.011	104	0.222	13
3917			min	-14.168	15	0.001	75	-0.012	104	-0.014	15	-0.222	13	-0.011	106
3918		5	max	-0.843	75	0.195	15	0.024	72	0.007	74	0	15	0	70
3919			min	-14.231	15	0.001	75	-0.024	104	-0.014	15	0	74	0	106
3920	M751	1	max	13.768	74	0.043	76	-0.035	107	0.011	106	2.961	74	3.044	102
3921			min	-14.153	102	-0.043	100	-0.318	15	-0.015	70	-3.044	102	-2.961	74
3922		2	max	13.753	74	0.022	76	-0.017	107	0.011	106	2.874	74	2.955	106
3923			min	-14.138	102	-0.022	100	-0.159	15	-0.015	70	-3.061	102	-2.952	74
3924		3	max	13.738	74	0.003	77	0	103	0.011	106	2.843	74	2.924	106
3925			min	-14.123	102	-0.003	101	0	12	-0.015	70	-3.065	102	-2.947	74
3926		4	max	13.723	74	0.018	70	0.159	13	0.011	106	2.867	74	2.949	106
3927			min	-14.108	102	-0.018	102	0.017	75	-0.015	70	-3.055	102	-2.945	74
3928		5	max	13.708	74	0.038	70	0.318	13	0.011	106	2.948	74	3.031	102

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3929			min	-14.093	102	-0.038	102	0.035	75	-0.015	70	-3.031	102	-2.948	74
3930	M752	1	max	12.185	74	0.038	104	-0.035	75	0.013	70	2.621	74	2.831	102
3931			min	-13.163	102	-0.038	72	-0.318	13	-0.008	106	-2.831	102	-2.621	74
3932		2	max	12.17	74	0.018	104	-0.017	75	0.013	70	2.624	74	2.807	102
3933			min	-13.148	102	-0.018	72	-0.159	13	-0.008	106	-2.939	102	-2.702	74
3934		3	max	12.155	74	0.003	105	0	99	0.013	70	2.623	74	2.797	106
3935			min	-13.133	102	-0.003	73	0	103	-0.008	106	-2.972	102	-2.727	74
3936		4	max	12.14	74	0.022	106	0.159	15	0.013	70	2.617	74	2.801	102
3937			min	-13.118	102	-0.022	70	0.017	107	-0.008	106	-2.932	102	-2.695	74
3938		5	max	12.125	74	0.043	106	0.318	15	0.013	70	2.608	74	2.818	102
3939			min	-13.103	102	-0.043	70	0.035	107	-0.008	106	-2.818	102	-2.608	74
3940	M753	1	max	-5.696	98	0.175	13	0.023	100	0.01	77	1.793	15	1.793	15
3941			min	-36.402	15	0	77	-0.022	76	-0.016	13	0.281	98	0.281	98
3942		2	max	-5.701	98	0.087	13	0.011	100	0.01	77	1.981	15	1.612	15
3943			min	-36.465	15	0	77	-0.011	76	-0.016	13	0.296	98	0.265	98
3944		3	max	-5.706	98	0	100	0.002	15	0.01	77	2.045	15	1.553	15
3945			min	-36.527	15	0	76	0	75	-0.016	13	0.302	98	0.261	98
3946		4	max	-5.711	98	0	107	0.011	102	0.01	77	1.987	15	1.618	15
3947			min	-36.589	15	-0.087	15	-0.011	74	-0.016	13	0.297	98	0.266	98
3948		5	max	-5.716	98	0	107	0.023	102	0.01	77	1.805	15	1.805	15
3949			min	-36.652	15	-0.175	15	-0.022	74	-0.016	13	0.282	98	0.282	98
3950	M754	1	max	-5.522	99	0	77	0.023	72	0.013	75	1.571	13	1.571	13
3951			min	-31.891	13	-0.175	13	-0.022	104	-0.013	73	0.272	99	0.272	99
3952		2	max	-5.527	99	0	77	0.011	72	0.013	75	1.39	13	1.759	13
3953			min	-31.953	13	-0.087	13	-0.011	104	-0.013	73	0.257	99	0.288	99
3954		3	max	-5.532	99	0	76	0.002	13	0.013	75	1.331	13	1.823	13
3955			min	-32.016	13	0	100	0	105	-0.013	73	0.252	99	0.293	99
3956		4	max	-5.537	99	0.087	15	0.011	70	0.013	75	1.396	13	1.765	13
3957			min	-32.078	13	0	107	-0.011	106	-0.013	73	0.257	99	0.288	99
3958		5	max	-5.543	99	0.175	15	0.023	70	0.013	75	1.583	13	1.583	13
3959			min	-32.14	13	0	107	-0.022	106	-0.013	73	0.273	99	0.273	99
3960	M755	1	max	-5.821	66	0	105	0.023	100	0.001	104	1.91	15	1.91	15
3961			min	-38.76	15	-0.175	15	-0.022	76	-0.018	15	0.287	66	0.287	66
3962		2	max	-5.826	66	0	105	0.011	100	0.001	104	1.728	15	2.097	15
3963			min	-38.822	15	-0.087	15	-0.011	76	-0.018	15	0.272	66	0.302	66
3964		3	max	-5.831	66	0	104	0.002	15	0.001	104	1.67	15	2.161	15
3965			min	-38.885	15	0	72	0	77	-0.018	15	0.267	66	0.308	66
3966		4	max	-5.836	66	0.087	13	0.011	102	0.001	104	1.734	15	2.103	15
3967			min	-38.947	15	0	75	-0.011	74	-0.018	15	0.272	66	0.303	66
3968		5	max	-5.841	66	0.175	13	0.023	102	0.001	104	1.921	15	1.921	15
3969			min	-39.009	15	0	75	-0.022	74	-0.018	15	0.288	66	0.288	66
3970	M756	1	max	-5.105	68	0.175	15	0.023	72	0.005	70	1.53	13	1.53	13
3971			min	-31.045	13	0	105	-0.022	104	-0.004	106	0.252	68	0.252	68
3972		2	max	-5.111	68	0.087	15	0.011	72	0.005	70	1.717	13	1.348	13
3973			min	-31.107	13	0	105	-0.011	104	-0.004	106	0.267	68	0.236	68
3974		3	max	-5.116	68	0	72	0.002	13	0.005	70	1.781	13	1.289	13
3975			min	-31.169	13	0	104	0	107	-0.004	106	0.273	68	0.232	68
3976		4	max	-5.121	68	0	75	0.011	70	0.005	70	1.723	13	1.354	13
3977			min	-31.231	13	-0.087	13	-0.011	106	-0.004	106	0.268	68	0.237	68
3978		5	max	-5.126	68	0	75	0.023	70	0.005	70	1.541	13	1.541	13
3979			min	-31.294	13	-0.175	13	-0.022	106	-0.004	106	0.253	68	0.253	68
3980	M757	1	max	-4.902	99	0.175	13	0.023	100	0.003	76	1.525	15	1.525	15
3981			min	-30.943	15	0	77	-0.022	76	-0.018	13	0.242	99	0.242	99
3982		2	max	-4.907	99	0.087	13	0.011	100	0.003	76	1.712	15	1.343	15
3983			min	-31.005	15	0	77	-0.011	76	-0.018	13	0.257	99	0.226	99

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
3984		3	max	-4.913	99	0	100	0.002	15	0.003	76	1.776	15	1.284	15
3985			min	-31.067	15	0	76	0	75	-0.018	13	0.262	99	0.222	99
3986		4	max	-4.918	99	0	107	0.011	102	0.003	76	1.718	15	1.349	15
3987			min	-31.13	15	-0.087	15	-0.011	74	-0.018	13	0.258	99	0.227	99
3988		5	max	-4.923	99	0	107	0.023	102	0.003	76	1.536	15	1.536	15
3989			min	-31.192	15	-0.175	15	-0.022	74	-0.018	13	0.242	99	0.242	99
3990	M758	1	max	-4.65	96	0	77	0.023	72	0.003	68	1.305	14	1.305	14
3991			min	-26.496	14	-0.175	13	-0.022	104	-0.014	13	0.229	96	0.229	96
3992		2	max	-4.655	96	0	77	0.011	72	0.003	68	1.124	14	1.493	14
3993			min	-26.558	14	-0.087	13	-0.011	104	-0.014	13	0.214	96	0.245	96
3994		3	max	-4.66	96	0	76	0.002	13	0.003	68	1.065	14	1.557	14
3995			min	-26.62	14	0	100	0	105	-0.014	13	0.209	96	0.25	96
3996		4	max	-4.665	96	0.087	15	0.011	70	0.003	68	1.13	14	1.499	14
3997			min	-26.683	14	0	107	-0.011	106	-0.014	13	0.214	96	0.245	96
3998		5	max	-4.671	96	0.175	15	0.023	70	0.003	68	1.317	14	1.317	14
3999			min	-26.745	14	0	107	-0.022	106	-0.014	13	0.23	96	0.23	96
4000	M759	1	max	-4.766	66	0	105	0.023	100	0.003	104	1.528	15	1.528	15
4001			min	-31.014	15	-0.175	15	-0.022	76	-0.02	15	0.235	66	0.235	66
4002		2	max	-4.772	66	0	105	0.011	100	0.003	104	1.347	15	1.715	15
4003			min	-31.077	15	-0.087	15	-0.011	76	-0.02	15	0.22	66	0.25	66
4004		3	max	-4.777	66	0	104	0.002	15	0.003	104	1.288	15	1.78	15
4005			min	-31.139	15	0	72	0	77	-0.02	15	0.215	66	0.256	66
4006		4	max	-4.782	66	0.087	13	0.011	102	0.003	104	1.352	15	1.721	15
4007			min	-31.201	15	0	75	-0.011	74	-0.02	15	0.22	66	0.251	66
4008		5	max	-4.787	66	0.175	13	0.023	102	0.003	104	1.54	15	1.54	15
4009			min	-31.264	15	0	75	-0.022	74	-0.02	15	0.236	66	0.236	66
4010	M760	1	max	-4.547	68	0.175	15	0.023	72	0.003	96	1.265	13	1.265	13
4011			min	-25.672	13	0	105	-0.022	104	-0.012	15	0.224	68	0.224	68
4012		2	max	-4.552	68	0.087	15	0.011	72	0.003	96	1.452	13	1.083	13
4013			min	-25.735	13	0	105	-0.011	104	-0.012	15	0.24	68	0.209	68
4014		3	max	-4.558	68	0	72	0.002	13	0.003	96	1.517	13	1.025	13
4015			min	-25.797	13	0	104	0	107	-0.012	15	0.245	68	0.204	68
4016		4	max	-4.563	68	0	75	0.011	70	0.003	96	1.458	13	1.089	13
4017			min	-25.859	13	-0.087	13	-0.011	106	-0.012	15	0.24	68	0.209	68
4018		5	max	-4.568	68	0	75	0.023	70	0.003	96	1.277	13	1.277	13
4019			min	-25.922	13	-0.175	13	-0.022	106	-0.012	15	0.225	68	0.225	68
4020	M761	1	max	0.11	107	0.195	13	0.024	70	0.009	102	0.346	14	0.346	14
4021			min	-7.029	14	0.001	77	-0.024	106	-0.007	74	-0.005	107	-0.005	107
4022		2	max	0.095	107	0.097	13	0.012	70	0.009	102	0.571	14	0.186	71
4023			min	-7.091	14	0.001	77	-0.012	106	-0.007	74	-0.003	107	-0.006	107
4024		3	max	0.081	107	0	13	0.002	13	0.009	102	0.648	14	0.18	70
4025			min	-7.154	14	0	76	0	105	-0.007	74	-0.002	107	-0.015	106
4026		4	max	0.066	107	-0.001	107	0.012	72	0.009	102	0.577	14	0.186	71
4027			min	-7.216	14	-0.097	15	-0.012	104	-0.007	74	-0.002	107	-0.004	107
4028		5	max	0.051	107	-0.001	107	0.024	72	0.009	102	0.358	14	0.358	14
4029			min	-7.279	14	-0.195	15	-0.024	104	-0.007	74	-0.003	107	-0.003	107
4030	M762	1	max	0.605	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
4031			min	-5.616	14	-0.195	13	-0.024	74	-0.008	74	-0.03	107	-0.03	107
4032		2	max	0.59	107	-0.001	77	0.012	102	0.009	102	0.163	71	0.501	14
4033			min	-5.679	14	-0.097	13	-0.012	74	-0.008	74	-0.03	107	-0.028	107
4034		3	max	0.576	107	0	76	0.002	15	0.009	102	0.153	72	0.578	14
4035			min	-5.741	14	0	100	0	75	-0.008	74	-0.034	104	-0.027	107
4036		4	max	0.561	107	0.097	15	0.012	100	0.009	102	0.163	71	0.507	14
4037			min	-5.804	14	0.001	107	-0.012	76	-0.008	74	-0.029	107	-0.026	107
4038		5	max	0.546	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4039			min	-5.866	14	0.001	107	-0.024	76	-0.008	74	-0.027	107	-0.027	107
4040	M763	1	max	0.07	75	-0.001	105	0.024	70	0.008	74	0.362	15	0.362	15
4041			min	-7.343	15	-0.195	15	-0.024	106	-0.008	102	-0.003	75	-0.003	75
4042		2	max	0.055	75	-0.001	105	0.012	70	0.008	74	0.184	103	0.587	15
4043			min	-7.405	15	-0.097	15	-0.012	106	-0.008	102	-0.004	75	-0.001	75
4044		3	max	0.04	75	0	104	0.002	13	0.008	74	0.17	103	0.663	15
4045			min	-7.468	15	0	15	0	107	-0.008	102	-0.004	75	0	75
4046		4	max	0.026	75	0.097	13	0.012	72	0.008	74	0.184	103	0.592	15
4047			min	-7.53	15	0.001	75	-0.012	104	-0.008	102	-0.002	75	0	75
4048		5	max	0.011	75	0.195	13	0.024	72	0.008	74	0.374	15	0.374	15
4049			min	-7.593	15	0.001	75	-0.024	104	-0.008	102	-0.001	75	-0.001	75
4050	M764	1	max	0.673	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
4051			min	-4.852	13	0.001	105	-0.024	74	-0.009	72	-0.033	75	-0.033	75
4052		2	max	0.658	75	0.097	15	0.012	102	0.008	104	0.464	13	0.159	103
4053			min	-4.914	13	0.001	105	-0.012	74	-0.009	72	-0.031	75	-0.034	75
4054		3	max	0.643	75	0	15	0.002	15	0.008	104	0.541	13	0.145	103
4055			min	-4.977	13	0	104	0	77	-0.009	72	-0.03	75	-0.068	19
4056		4	max	0.628	75	-0.001	75	0.012	100	0.008	104	0.47	13	0.159	103
4057			min	-5.039	13	-0.097	13	-0.012	76	-0.009	72	-0.03	75	-0.032	75
4058		5	max	0.614	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
4059			min	-5.102	13	-0.195	13	-0.024	76	-0.009	72	-0.03	75	-0.03	75
4060	M765	1	max	1.779	72	3.521	15	2.912	71	0.716	71	0	107	0.312	74
4061			min	-1.25	74	0.803	99	-2.912	103	-0.716	103	0	12	-0.444	72
4062		2	max	1.8	72	3.409	15	2.89	71	0.716	71	3.627	71	-0.771	96
4063			min	-1.272	74	0.786	99	-2.89	103	-0.716	103	-3.626	103	-4.603	15
4064		3	max	6.943	72	3.297	15	2.869	71	0.077	62	7.226	71	-1.743	96
4065			min	-6.414	74	-2.934	103	-2.561	43	-0.716	71	-7.225	103	-9.161	72
4066		4	max	6.965	72	-0.786	99	2.89	103	0.716	103	3.627	71	-0.523	96
4067			min	-6.436	74	-3.409	15	-2.89	71	-0.716	71	-3.626	103	-5.468	72
4068		5	max	6.986	72	-0.803	99	2.912	103	0.716	103	0	107	1.612	74
4069			min	-6.458	74	-3.521	15	-2.912	71	-0.716	71	0	12	-1.744	72
4070	M766	1	max	2.128	76	3.633	15	2.999	71	0.738	71	0	107	0.484	74
4071			min	-1.939	74	0.83	97	-3	103	-0.738	103	0	12	-0.531	76
4072		2	max	2.149	76	3.521	15	2.977	71	0.738	71	3.735	71	-0.746	66
4073			min	-1.961	74	0.812	97	-2.978	103	-0.738	103	-3.736	103	-4.528	15
4074		3	max	7.468	76	3.41	15	2.957	103	0.738	103	7.444	71	-1.751	66
4075			min	-7.28	74	-3.035	103	-0.368	86	-0.077	92	-7.446	103	-9.542	72
4076		4	max	7.49	76	-0.812	97	2.978	103	0.738	103	3.735	71	-0.453	74
4077			min	-7.302	74	-3.521	15	-2.977	71	-0.737	71	-3.736	103	-5.721	72
4078		5	max	7.512	76	-0.83	97	3	103	0.738	103	0	107	1.828	74
4079			min	-7.323	74	-3.633	15	-2.999	71	-0.737	71	0	12	-1.875	76
4080	M768	1	max	0.26	102	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
4081			min	-0.26	44	-0.26	75	-0.796	15	0	12	-0.073	107	-0.073	45
4082		2	max	0.257	102	0.257	43	-0.043	66	0	107	0.399	14	0.399	16
4083			min	-0.257	44	-0.257	75	-0.768	15	0	12	-0.043	107	-0.043	75
4084		3	max	0.254	102	0.254	43	-0.04	66	0	107	0.122	14	0.122	16
4085			min	-0.254	44	-0.254	75	-0.739	15	0	12	-0.012	107	-0.012	105
4086		4	max	0.003	46	0.004	69	-0.002	47	0	107	0.005	14	0.005	16
4087			min	-0.003	104	-0.004	97	-0.028	16	0	12	0	99	0	67
4088		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4089			min	0	12	0	72	0	72	0	12	0	12	0	12
4090	M769	1	max	0.251	38	0.198	73	-0.053	66	0	107	0.459	14	0.459	16
4091			min	-0.251	32	-0.198	71	-0.667	15	0	12	-0.044	107	-0.044	75
4092		2	max	0.251	38	0.195	73	-0.051	66	0	107	0.276	14	0.276	16
4093			min	-0.251	32	-0.195	71	-0.646	15	0	12	-0.027	107	-0.027	105

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4094		3	max	0.251	38	0.193	73	-0.049	66	0	107	0.098	14	0.098	16
4095			min	-0.251	32	-0.193	71	-0.624	15	0	12	-0.009	107	-0.009	105
4096		4	max	0.002	106	0.003	69	-0.002	47	0	107	0.003	14	0.003	16
4097			min	-0.002	74	-0.003	93	-0.021	13	0	12	0	69	0	67
4098		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4099			min	0	12	0	72	0	72	0	12	0	12	0	12
4100	M771	1	max	0.359	102	0.359	73	-0.059	66	0	107	0.928	14	0.928	16
4101			min	-0.359	74	-0.359	101	-1.068	15	0	12	-0.101	47	-0.101	105
4102		2	max	0.356	102	0.356	73	-0.057	66	0	107	0.54	14	0.54	16
4103			min	-0.356	74	-0.356	101	-1.04	15	0	12	-0.059	47	-0.059	105
4104		3	max	0.353	102	0.353	73	-0.054	66	0	107	0.162	14	0.162	16
4105			min	-0.353	74	-0.353	101	-1.012	15	0	12	-0.017	47	-0.017	45
4106		4	max	0.003	72	0.004	35	-0.002	77	0	107	0.005	14	0.005	16
4107			min	-0.003	100	-0.004	93	-0.028	14	0	12	0	39	0	67
4108		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4109			min	0	12	0	72	0	72	0	12	0	12	0	12
4110	M776	1	max	0.26	46	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
4111			min	-0.26	40	-0.26	75	-0.796	15	0	12	-0.073	107	-0.073	45
4112		2	max	0.257	46	0.257	43	-0.043	66	0	107	0.399	14	0.399	16
4113			min	-0.257	40	-0.257	75	-0.768	15	0	12	-0.043	107	-0.043	45
4114		3	max	0.254	46	0.254	43	-0.04	66	0	107	0.122	14	0.122	16
4115			min	-0.254	40	-0.254	75	-0.739	15	0	12	-0.012	47	-0.012	105
4116		4	max	0.003	102	0.004	35	-0.002	107	0	107	0.005	14	0.005	16
4117			min	-0.003	74	-0.004	63	-0.028	16	0	12	0	39	0	67
4118		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4119			min	0	12	0	12	0	72	0	12	0	12	0	12
4120	M777	1	max	0.182	68	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
4121			min	-0.182	96	-0.146	71	-0.507	15	0	12	-0.033	107	-0.033	75
4122		2	max	0.182	68	0.144	103	-0.038	66	0	107	0.207	14	0.207	16
4123			min	-0.182	96	-0.144	71	-0.486	15	0	12	-0.02	47	-0.02	75
4124		3	max	0.182	68	0.141	103	-0.037	66	0	107	0.074	14	0.074	16
4125			min	-0.182	96	-0.141	71	-0.465	15	0	12	-0.007	47	-0.007	105
4126		4	max	0.002	76	0.003	35	-0.002	77	0	107	0.003	14	0.003	16
4127			min	-0.002	74	-0.003	63	-0.021	13	0	12	0	39	0	97
4128		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4129			min	0	12	0	12	0	72	0	12	0	12	0	12
4130	M778	1	max	0.182	68	0.146	103	-0.04	66	0	107	0.348	14	0.348	16
4131			min	-0.182	96	-0.146	105	-0.509	15	0	12	-0.033	47	-0.033	105
4132		2	max	0.182	68	0.144	103	-0.038	66	0	107	0.208	14	0.208	16
4133			min	-0.182	96	-0.144	105	-0.487	15	0	12	-0.02	47	-0.02	45
4134		3	max	0.182	68	0.141	103	-0.037	66	0	107	0.074	14	0.074	16
4135			min	-0.182	96	-0.141	105	-0.465	15	0	12	-0.007	47	-0.007	45
4136		4	max	0.002	42	0.003	69	-0.002	107	0	107	0.003	14	0.003	16
4137			min	-0.002	40	-0.003	63	-0.022	14	0	12	0	39	0	97
4138		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4139			min	0	12	0	12	0	72	0	12	0	12	0	12
4140	M779	1	max	0.251	68	0.198	77	-0.053	66	0	107	0.46	14	0.46	16
4141			min	-0.251	66	-0.198	71	-0.669	15	0	12	-0.044	107	-0.044	105
4142		2	max	0.251	68	0.195	77	-0.051	66	0	107	0.276	14	0.276	16
4143			min	-0.251	66	-0.195	71	-0.647	15	0	12	-0.027	107	-0.027	105
4144		3	max	0.251	68	0.193	77	-0.049	66	0	107	0.098	14	0.098	16
4145			min	-0.251	66	-0.193	71	-0.625	15	0	12	-0.009	77	-0.009	45
4146		4	max	0.002	106	0.003	35	-0.002	77	0	107	0.003	14	0.003	16
4147			min	-0.002	100	-0.003	33	-0.022	15	0	12	0	69	0	97
4148		5	max	0	107	0	70	0	107	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4149			min	0	12	0	72	0	72	0	12	0	12	0	12
4150	M780	1	max	0.182	38	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
4151			min	-0.182	62	-0.146	41	-0.507	15	0	12	-0.033	47	-0.033	45
4152		2	max	0.182	38	0.144	103	-0.038	66	0	107	0.207	14	0.207	16
4153			min	-0.182	62	-0.144	41	-0.486	15	0	12	-0.02	47	-0.02	45
4154		3	max	0.182	38	0.141	103	-0.037	66	0	107	0.074	14	0.074	16
4155			min	-0.182	62	-0.141	41	-0.465	15	0	12	-0.007	77	-0.007	45
4156		4	max	0.002	46	0.003	65	-0.002	47	0	107	0.003	14	0.003	16
4157			min	-0.002	44	-0.003	93	-0.021	16	0	12	0	99	0	97
4158		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4159			min	0	12	0	72	0	72	0	12	0	12	0	12
4160	M781	1	max	0.182	38	0.146	107	-0.04	69	0	107	0.348	14	0.348	16
4161			min	-0.182	36	-0.146	71	-0.509	15	0	12	-0.033	107	-0.033	45
4162		2	max	0.182	38	0.144	107	-0.039	69	0	107	0.208	14	0.208	16
4163			min	-0.182	36	-0.144	71	-0.487	15	0	12	-0.02	47	-0.02	105
4164		3	max	0.182	38	0.141	107	-0.037	69	0	107	0.074	14	0.074	16
4165			min	-0.182	36	-0.141	71	-0.465	15	0	12	-0.007	77	-0.007	105
4166		4	max	0.002	102	0.003	69	-0.002	47	0	107	0.003	14	0.003	16
4167			min	-0.002	70	-0.003	37	-0.022	15	0	12	0	99	0	37
4168		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4169			min	0	12	0	72	0	72	0	12	0	12	0	12
4170	M782	1	max	1.477	102	0.155	14	0.026	47	0.001	101	0	107	0	107
4171			min	-1.221	74	-0.009	46	-0.026	75	-0.001	77	0	12	0	12
4172		2	max	1.457	102	0.078	16	0.013	47	0.001	101	0.192	16	0.019	47
4173			min	-1.22	74	-0.005	46	-0.013	75	-0.001	77	-0.019	75	-0.192	14
4174		3	max	1.437	102	0	107	0	107	0.001	101	0.256	16	0.025	47
4175			min	-1.219	74	0	12	0	12	-0.001	77	-0.025	75	-0.256	14
4176		4	max	1.417	102	0.005	106	0.013	105	0.001	101	0.192	16	0.019	47
4177			min	-1.218	74	-0.078	13	-0.013	73	-0.001	77	-0.019	75	-0.192	14
4178		5	max	1.397	102	0.009	106	0.026	105	0.001	101	0	107	0	107
4179			min	-1.217	74	-0.155	13	-0.026	73	-0.001	77	0	12	0	12
4180	M783	1	max	1.477	100	0.155	16	0.026	101	0.001	107	0	107	0	107
4181			min	-1.221	46	-0.009	74	-0.026	73	-0.001	41	0	12	0	12
4182		2	max	1.457	100	0.078	16	0.013	45	0.001	107	0.192	16	0.019	45
4183			min	-1.22	46	-0.005	74	-0.013	73	-0.001	41	-0.019	47	-0.192	14
4184		3	max	1.437	100	0	107	0	107	0.001	107	0.256	16	0.025	45
4185			min	-1.219	46	0	12	0	12	-0.001	41	-0.025	47	-0.256	13
4186		4	max	1.417	100	0.005	104	0.013	107	0.001	107	0.192	16	0.019	45
4187			min	-1.218	46	-0.078	15	-0.013	41	-0.001	41	-0.019	47	-0.192	14
4188		5	max	1.397	100	0.009	104	0.026	107	0.001	107	0	107	0	107
4189			min	-1.217	46	-0.155	13	-0.026	41	-0.001	41	0	12	0	12
4190	M784	1	max	1.477	102	0.155	14	0.026	107	0.001	75	0	107	0	107
4191			min	-1.221	44	-0.009	46	-0.026	41	-0.001	73	0	12	0	12
4192		2	max	1.457	102	0.078	14	0.013	107	0.001	75	0.192	16	0.019	107
4193			min	-1.22	44	-0.005	46	-0.013	41	-0.001	73	-0.019	45	-0.192	13
4194		3	max	1.437	102	0	107	0	107	0.001	75	0.256	16	0.025	107
4195			min	-1.219	44	0	12	0	12	-0.001	73	-0.025	45	-0.256	13
4196		4	max	1.417	102	0.005	106	0.013	105	0.001	75	0.192	16	0.019	107
4197			min	-1.218	44	-0.078	13	-0.013	73	-0.001	73	-0.019	45	-0.192	14
4198		5	max	1.397	102	0.009	106	0.026	105	0.001	75	0	107	0	107
4199			min	-1.217	44	-0.155	15	-0.026	73	-0.001	73	0	12	0	12
4200	M785	1	max	1.477	100	0.155	13	0.026	75	0.001	73	0	107	0	107
4201			min	-1.221	46	-0.009	44	-0.026	73	-0.001	75	0	12	0	12
4202		2	max	1.457	100	0.078	13	0.013	101	0.001	73	0.192	14	0.019	105
4203			min	-1.22	46	-0.005	44	-0.013	73	-0.001	75	-0.019	47	-0.192	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4204		3	max	1.437	100	0	107	0	107	0.001	73	0.256	13	0.025	105
4205			min	-1.219	46	0	12	0	12	-0.001	75	-0.025	47	-0.256	13
4206		4	max	1.417	100	0.005	104	0.013	103	0.001	73	0.192	13	0.019	105
4207			min	-1.218	46	-0.078	15	-0.013	45	-0.001	75	-0.019	47	-0.192	13
4208		5	max	1.397	100	0.009	104	0.026	103	0.001	73	0	107	0	107
4209			min	-1.217	46	-0.155	15	-0.026	45	-0.001	75	0	12	0	12
4210	M485	1	max	0.173	102	0.173	103	-0.032	98	0	107	0.475	14	0.475	16
4211			min	-0.173	104	-0.173	45	-0.556	13	0	12	-0.048	107	-0.048	45
4212		2	max	0.17	102	0.17	103	-0.03	98	0	107	0.276	14	0.276	16
4213			min	-0.17	104	-0.17	45	-0.527	13	0	12	-0.028	47	-0.028	105
4214		3	max	0.167	102	0.167	103	-0.028	98	0	107	0.086	14	0.086	16
4215			min	-0.167	104	-0.167	45	-0.499	13	0	12	-0.008	47	-0.008	105
4216		4	max	0.003	106	0.004	65	-0.002	77	0	107	0.005	14	0.005	16
4217			min	-0.003	40	-0.004	97	-0.028	13	0	12	0	39	0	67
4218		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4219			min	0	12	0	42	0	76	0	12	0	12	0	12
4220	M497	1	max	0.118	38	0.098	107	-0.029	66	0	107	0.242	14	0.242	16
4221			min	-0.118	62	-0.098	71	-0.36	15	0	12	-0.022	47	-0.022	75
4222		2	max	0.118	38	0.096	107	-0.027	66	0	107	0.144	14	0.144	16
4223			min	-0.118	62	-0.096	71	-0.338	15	0	12	-0.013	107	-0.013	75
4224		3	max	0.118	38	0.093	107	-0.025	66	0	107	0.053	14	0.053	16
4225			min	-0.118	62	-0.093	71	-0.317	15	0	12	-0.005	107	-0.005	105
4226		4	max	0.002	76	0.003	65	-0.002	47	0	107	0.003	14	0.003	16
4227			min	-0.002	70	-0.003	63	-0.022	14	0	12	0	99	0	97
4228		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4229			min	0	12	0	102	0	72	0	12	0	12	0	12
4230	M498	1	max	0.118	38	0.098	47	-0.029	66	0	107	0.241	14	0.241	16
4231			min	-0.118	62	-0.098	41	-0.359	15	0	12	-0.022	107	-0.022	75
4232		2	max	0.118	38	0.096	47	-0.027	66	0	107	0.144	14	0.144	16
4233			min	-0.118	62	-0.096	41	-0.337	15	0	12	-0.013	107	-0.013	75
4234		3	max	0.118	38	0.093	47	-0.025	66	0	107	0.052	14	0.052	16
4235			min	-0.118	62	-0.093	41	-0.316	15	0	12	-0.005	107	-0.005	75
4236		4	max	0.002	46	0.003	69	-0.002	47	0	107	0.003	14	0.003	16
4237			min	-0.002	70	-0.003	97	-0.021	16	0	12	0	99	0	37
4238		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4239			min	0	12	0	102	0	72	0	12	0	12	0	12
4240	M786	1	max	0.173	106	0.173	107	-0.032	98	0	107	0.475	14	0.475	16
4241			min	-0.173	74	-0.173	45	-0.556	13	0	12	-0.048	77	-0.048	75
4242		2	max	0.17	106	0.17	107	-0.03	98	0	107	0.276	14	0.276	16
4243			min	-0.17	74	-0.17	45	-0.527	13	0	12	-0.028	77	-0.028	75
4244		3	max	0.167	106	0.167	107	-0.028	98	0	107	0.086	14	0.086	16
4245			min	-0.167	74	-0.167	45	-0.499	13	0	12	-0.008	77	-0.008	75
4246		4	max	0.003	76	0.004	65	-0.002	77	0	107	0.005	14	0.005	16
4247			min	-0.003	74	-0.004	97	-0.028	16	0	12	0	99	0	67
4248		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4249			min	0	12	0	12	0	76	0	12	0	12	0	12
4250	M787	1	max	0.118	38	0.098	47	-0.029	66	0	107	0.241	14	0.241	16
4251			min	-0.118	96	-0.098	105	-0.359	15	0	12	-0.022	47	-0.022	105
4252		2	max	0.118	38	0.096	47	-0.027	66	0	107	0.144	14	0.144	16
4253			min	-0.118	96	-0.096	105	-0.337	15	0	12	-0.013	77	-0.013	105
4254		3	max	0.118	38	0.093	47	-0.025	66	0	107	0.052	14	0.052	16
4255			min	-0.118	96	-0.093	105	-0.316	15	0	12	-0.005	77	-0.005	105
4256		4	max	0.002	46	0.003	95	-0.002	45	0	107	0.003	14	0.003	16
4257			min	-0.002	70	-0.003	93	-0.021	14	0	12	0	99	0	67
4258		5	max	0	107	0	106	0	107	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4259			min	0	12	0	12	0	72	0	12	0	12	0	12
4260	M788	1	max	0.118	34	0.098	47	-0.029	66	0	107	0.242	14	0.242	16
4261			min	-0.118	66	-0.098	105	-0.36	15	0	12	-0.022	77	-0.022	45
4262		2	max	0.118	34	0.096	47	-0.027	66	0	107	0.144	14	0.144	16
4263			min	-0.118	66	-0.096	105	-0.338	15	0	12	-0.013	77	-0.013	75
4264		3	max	0.118	34	0.093	47	-0.025	66	0	107	0.053	14	0.053	16
4265			min	-0.118	66	-0.093	105	-0.317	15	0	12	-0.005	77	-0.005	75
4266		4	max	0.002	76	0.003	35	-0.002	77	0	107	0.003	14	0.003	16
4267			min	-0.002	70	-0.003	67	-0.022	14	0	12	0	69	0	67
4268		5	max	0	107	0	70	0	107	0	107	0	107	0	107
4269			min	0	12	0	12	0	72	0	12	0	12	0	12
4270	M698	1	max	0.167	106	0.167	43	-0.032	98	0	107	0.461	14	0.461	16
4271			min	-0.167	104	-0.167	71	-0.539	13	0	12	-0.047	107	-0.047	105
4272		2	max	0.164	106	0.164	43	-0.029	98	0	107	0.267	14	0.267	16
4273			min	-0.164	104	-0.164	71	-0.511	13	0	12	-0.027	77	-0.027	105
4274		3	max	0.161	106	0.161	43	-0.027	98	0	107	0.084	14	0.084	16
4275			min	-0.161	104	-0.161	71	-0.483	13	0	12	-0.008	77	-0.008	105
4276		4	max	0.003	42	0.004	99	-0.002	47	0	107	0.005	14	0.005	16
4277			min	-0.003	40	-0.004	63	-0.028	15	0	12	0	99	0	67
4278		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4279			min	0	12	0	42	0	76	0	12	0	12	0	12
4280	M699	1	max	0.113	94	0.094	43	-0.028	66	0	107	0.234	14	0.234	16
4281			min	-0.113	36	-0.094	105	-0.348	15	0	12	-0.021	107	-0.021	105
4282		2	max	0.113	94	0.092	43	-0.026	66	0	107	0.139	14	0.139	16
4283			min	-0.113	36	-0.092	105	-0.326	15	0	12	-0.013	107	-0.013	105
4284		3	max	0.113	94	0.09	43	-0.024	66	0	107	0.051	14	0.051	16
4285			min	-0.113	36	-0.09	105	-0.305	15	0	12	-0.004	47	-0.004	75
4286		4	max	0.002	102	0.003	65	-0.002	45	0	107	0.003	14	0.003	16
4287			min	-0.002	70	-0.003	97	-0.021	16	0	12	0	39	0	97
4288		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4289			min	0	12	0	102	0	72	0	12	0	12	0	12
4290	M700	1	max	0.113	68	0.094	43	-0.028	66	0	107	0.235	14	0.235	16
4291			min	-0.113	66	-0.094	71	-0.349	15	0	12	-0.021	107	-0.021	45
4292		2	max	0.113	68	0.092	43	-0.026	66	0	107	0.14	14	0.14	16
4293			min	-0.113	66	-0.092	71	-0.328	15	0	12	-0.013	107	-0.013	105
4294		3	max	0.113	68	0.09	43	-0.024	66	0	107	0.051	14	0.051	16
4295			min	-0.113	66	-0.09	71	-0.306	15	0	12	-0.004	107	-0.004	105
4296		4	max	0.002	106	0.003	69	-0.002	77	0	107	0.003	14	0.003	16
4297			min	-0.002	70	-0.003	63	-0.022	16	0	12	0	69	0	67
4298		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4299			min	0	12	0	102	0	72	0	12	0	12	0	12
4300	M468	1	max	0.167	76	0.167	103	-0.032	98	0	107	0.461	14	0.461	16
4301			min	-0.167	44	-0.167	41	-0.539	13	0	12	-0.047	77	-0.047	45
4302		2	max	0.164	76	0.164	103	-0.029	98	0	107	0.267	14	0.267	16
4303			min	-0.164	44	-0.164	41	-0.511	13	0	12	-0.027	77	-0.027	105
4304		3	max	0.161	76	0.161	103	-0.027	98	0	107	0.084	14	0.084	16
4305			min	-0.161	44	-0.161	41	-0.483	13	0	12	-0.008	107	-0.008	105
4306		4	max	0.003	106	0.004	95	-0.002	45	0	107	0.005	14	0.005	16
4307			min	-0.003	100	-0.004	63	-0.028	14	0	12	0	69	0	67
4308		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4309			min	0	12	0	102	0	76	0	12	0	12	0	12
4310	M469	1	max	0.113	38	0.094	43	-0.028	66	0	107	0.234	14	0.234	16
4311			min	-0.113	96	-0.094	41	-0.348	15	0	12	-0.021	107	-0.021	45
4312		2	max	0.113	38	0.092	43	-0.026	66	0	107	0.139	14	0.139	16
4313			min	-0.113	96	-0.092	41	-0.326	15	0	12	-0.013	107	-0.013	75

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4314		3	max	0.113	38	0.09	43	-0.024	66	0	107	0.051	14	0.051	16
4315			min	-0.113	96	-0.09	41	-0.305	15	0	12	-0.004	107	-0.004	75
4316		4	max	0.002	46	0.003	99	-0.002	45	0	107	0.003	14	0.003	16
4317			min	-0.002	70	-0.003	33	-0.021	15	0	12	0	39	0	97
4318		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4319			min	0	12	0	102	0	72	0	12	0	12	0	12
4320	M506	1	max	0.113	98	0.094	73	-0.028	66	0	107	0.235	14	0.235	16
4321			min	-0.113	32	-0.094	41	-0.349	15	0	12	-0.021	107	-0.021	45
4322		2	max	0.113	98	0.092	73	-0.026	66	0	107	0.14	14	0.14	16
4323			min	-0.113	32	-0.092	41	-0.328	15	0	12	-0.013	107	-0.013	45
4324		3	max	0.113	98	0.09	73	-0.024	66	0	107	0.051	14	0.051	16
4325			min	-0.113	32	-0.09	41	-0.306	15	0	12	-0.004	107	-0.004	75
4326		4	max	0.002	72	0.003	69	-0.002	45	0	107	0.003	14	0.003	16
4327			min	-0.002	100	-0.003	63	-0.022	14	0	12	0	69	0	67
4328		5	max	0	107	0	107	0	70	0	107	0	107	0	107
4329			min	0	12	0	102	0	72	0	12	0	12	0	12
4330	M767	1	max	4.268	86	0.845	100	0.845	103	0	107	0.422	101	0.422	100
4331			min	2.384	44	-0.845	42	-0.845	41	0	12	-0.422	43	-0.422	42
4332		2	max	4.006	86	0.633	100	0.633	103	0	107	0.238	101	0.238	100
4333			min	2.238	44	-0.633	42	-0.633	41	0	12	-0.238	43	-0.238	42
4334		3	max	3.744	86	0.422	100	0.422	103	0	107	0.106	101	0.106	100
4335			min	2.091	44	-0.422	42	-0.422	41	0	12	-0.106	43	-0.106	42
4336		4	max	3.482	86	0.211	100	0.211	103	0	107	0.026	101	0.026	100
4337			min	1.945	44	-0.211	42	-0.211	41	0	12	-0.026	43	-0.026	42
4338		5	max	3.22	86	0	100	0	103	0	107	0	107	0	107
4339			min	1.799	44	0	42	0	41	0	12	0	12	0	12
4340	M770	1	max	3.112	86	6.875	100	8.537	103	0	107	8.115	71	6.453	100
4341			min	1.738	44	-6.875	42	-8.537	71	0	12	-8.115	103	-6.453	42
4342		2	max	2.85	86	6.664	100	8.326	103	0	107	6.007	71	4.761	100
4343			min	1.592	44	-6.664	42	-8.326	71	0	12	-6.007	103	-4.761	42
4344		3	max	2.588	86	6.453	100	8.115	103	0	107	3.952	71	3.121	100
4345			min	1.445	44	-6.453	42	-8.115	71	0	12	-3.952	103	-3.121	42
4346		4	max	2.326	86	6.242	100	7.904	103	0	107	1.95	71	1.534	100
4347			min	1.299	44	-6.242	42	-7.904	71	0	12	-1.95	103	-1.534	42
4348		5	max	2.064	86	6.031	100	7.693	103	0	107	0	107	0	107
4349			min	1.153	44	-6.031	42	-7.693	71	0	12	0	12	0	12
4350	M772	1	max	2.391	86	0.845	100	0.845	103	0	107	0.422	101	0.422	100
4351			min	1.335	44	-0.845	42	-0.845	41	0	12	-0.422	43	-0.422	42
4352		2	max	2.129	86	0.633	100	0.633	103	0	107	0.238	101	0.238	100
4353			min	1.189	44	-0.633	42	-0.633	41	0	12	-0.238	43	-0.238	42
4354		3	max	1.867	86	0.422	100	0.422	103	0	107	0.106	101	0.106	100
4355			min	1.043	44	-0.422	42	-0.422	41	0	12	-0.106	43	-0.106	42
4356		4	max	1.605	86	0.211	100	0.211	103	0	107	0.026	101	0.026	100
4357			min	0.896	44	-0.211	42	-0.211	41	0	12	-0.026	43	-0.026	42
4358		5	max	1.343	86	0	100	0	103	0	107	0	107	0	107
4359			min	0.75	44	0	42	0	41	0	12	0	12	0	12
4360	M773	1	max	2.391	86	0.845	100	0.845	103	0	107	0.422	101	0.422	100
4361			min	1.335	44	-0.845	42	-0.845	41	0	12	-0.422	43	-0.422	42
4362		2	max	2.129	86	0.633	100	0.633	103	0	107	0.238	101	0.238	100
4363			min	1.189	44	-0.633	42	-0.633	41	0	12	-0.238	43	-0.238	42
4364		3	max	1.867	86	0.422	100	0.422	103	0	107	0.106	101	0.106	100
4365			min	1.043	44	-0.422	42	-0.422	41	0	12	-0.106	43	-0.106	42
4366		4	max	1.605	86	0.211	100	0.211	103	0	107	0.026	101	0.026	100
4367			min	0.896	44	-0.211	42	-0.211	41	0	12	-0.026	43	-0.026	42
4368		5	max	1.343	86	0	100	0	103	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4369			min	0.75	44	0	42	0	41	0	12	0	12	0	12
4370	M774	1	max	1.048	86	3.835	100	12.964	103	0	107	12.542	71	3.412	100
4371			min	0.586	44	-3.835	42	-12.964	71	0	12	-12.542	103	-3.412	42
4372		2	max	0.786	86	3.623	100	12.753	103	0	107	9.327	71	2.48	100
4373			min	0.439	44	-3.623	42	-12.753	71	0	12	-9.327	103	-2.48	42
4374		3	max	0.524	86	3.412	100	12.542	103	0	107	6.165	71	1.601	100
4375			min	0.293	44	-3.412	42	-12.542	71	0	12	-6.165	103	-1.601	42
4376		4	max	0.262	86	3.201	100	12.331	103	0	107	3.056	71	0.774	100
4377			min	0.146	44	-3.201	42	-12.331	71	0	12	-3.056	103	-0.774	42
4378		5	max	0	107	2.99	100	12.12	103	0	107	0	107	0	107
4379			min	0	12	-2.99	42	-12.12	71	0	12	0	12	0	12
4380	M775	1	max	2.164	86	8.552	56	0.845	103	0	107	0.422	101	8.552	56
4381			min	1.209	44	-8.552	86	-0.845	41	0	12	-0.422	43	-8.552	86
4382		2	max	1.902	86	8.552	56	0.633	103	0	107	0.238	101	6.414	56
4383			min	1.062	44	-8.552	86	-0.633	41	0	12	-0.238	43	-6.414	86
4384		3	max	1.64	86	8.552	56	0.422	103	0	107	0.106	101	4.276	56
4385			min	0.916	44	-8.552	86	-0.422	41	0	12	-0.106	43	-4.276	86
4386		4	max	1.378	86	8.552	56	0.211	103	0	107	0.026	101	2.138	56
4387			min	0.77	44	-8.552	86	-0.211	41	0	12	-0.026	43	-2.138	86
4388		5	max	1.116	86	8.552	56	0	103	0	107	0	107	0	107
4389			min	0.623	44	-8.552	86	0	41	0	12	0	12	0	12
4390	M636	1	max	0.223	97	0.679	16	0.329	102	0.001	74	0	107	0	107
4391			min	-0.223	99	0.162	97	-0.329	70	-0.002	102	0	12	0	12
4392		2	max	0.223	97	0.552	16	0.303	102	0.001	74	0.388	102	-0.187	97
4393			min	-0.223	99	0.142	97	-0.303	70	-0.002	102	-0.388	70	-0.756	16
4394		3	max	0.416	73	-0.019	69	0.036	70	0.001	74	0.733	102	-0.343	97
4395			min	-0.416	71	-0.072	14	-0.036	102	-0.002	102	-0.733	70	-1.336	16
4396		4	max	0.442	73	-0.039	69	0.061	70	0.001	74	0.673	102	-0.307	97
4397			min	-0.441	71	-0.199	14	-0.061	102	-0.002	102	-0.673	70	-1.17	16
4398		5	max	0.943	73	-0.271	97	0.586	70	0.001	74	0	107	0	107
4399			min	-0.942	71	-1.052	16	-0.586	102	-0.002	102	0	12	0	12
4400	M637	1	max	0.943	71	1.052	14	0.586	102	0.002	102	0	107	0	107
4401			min	-0.942	73	0.271	99	-0.586	70	-0.001	74	0	12	0	12
4402		2	max	0.442	71	0.199	16	0.061	102	0.002	102	0.673	102	-0.307	99
4403			min	-0.441	73	0.039	67	-0.061	70	-0.001	74	-0.673	70	-1.17	14
4404		3	max	0.416	71	0.072	16	0.036	102	0.002	102	0.733	102	-0.343	99
4405			min	-0.416	73	0.019	67	-0.036	70	-0.001	74	-0.733	70	-1.336	14
4406		4	max	0.223	99	-0.142	99	0.303	70	0.002	102	0.388	102	-0.187	99
4407			min	-0.223	97	-0.552	14	-0.303	102	-0.001	74	-0.388	70	-0.756	14
4408		5	max	0.223	99	-0.162	99	0.329	70	0.002	102	0	107	0	107
4409			min	-0.223	97	-0.679	14	-0.329	102	-0.001	74	0	12	0	12
4410	M789	1	max	0.006	105	0.241	16	0.055	98	0	101	0	107	0	107
4411			min	-0.099	13	0.021	44	-0.055	32	0	103	0	12	0	12
4412		2	max	-0.008	98	0.121	16	0.028	98	0	101	0.053	98	-0.02	107
4413			min	-0.099	13	0.01	44	-0.028	32	0	103	-0.053	32	-0.234	13
4414		3	max	-0.008	98	0	107	0	107	0	101	0.071	98	-0.027	107
4415			min	-0.099	13	0	12	0	12	0	103	-0.071	32	-0.311	13
4416		4	max	-0.008	98	-0.01	107	0.028	96	0	101	0.053	98	-0.02	107
4417			min	-0.099	13	-0.121	13	-0.028	34	0	103	-0.053	32	-0.234	13
4418		5	max	0.006	107	-0.021	107	0.055	96	0	101	0	107	0	107
4419			min	-0.099	13	-0.241	13	-0.055	34	0	103	0	12	0	12
4420	M626	1	max	2.981	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
4421			min	1.665	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
4422		2	max	2.774	86	0.5	100	0.5	103	0	107	0.188	101	0.188	100
4423			min	1.55	44	-0.5	42	-0.5	41	0	12	-0.188	43	-0.188	42

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4424		3	max	2.567	86	0.334	100	0.334	103	0	107	0.083	101	0.083	100
4425			min	1.434	44	-0.334	42	-0.334	41	0	12	-0.083	43	-0.083	42
4426		4	max	2.36	86	0.167	100	0.167	103	0	107	0.021	101	0.021	100
4427			min	1.318	44	-0.167	42	-0.167	41	0	12	-0.021	43	-0.021	42
4428		5	max	2.153	86	0	100	0	103	0	107	0	107	0	107
4429			min	1.203	44	0	42	0	41	0	12	0	12	0	12
4430	M627	1	max	4.328	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
4431			min	2.418	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
4432		2	max	4.121	86	0.5	100	0.5	103	0	107	0.188	101	0.188	100
4433			min	2.302	44	-0.5	42	-0.5	41	0	12	-0.188	43	-0.188	42
4434		3	max	3.914	86	0.334	100	0.334	103	0	107	0.083	101	0.083	100
4435			min	2.186	44	-0.334	42	-0.334	41	0	12	-0.083	43	-0.083	42
4436		4	max	3.707	86	0.167	100	0.167	103	0	107	0.021	101	0.021	100
4437			min	2.071	44	-0.167	42	-0.167	41	0	12	-0.021	43	-0.021	42
4438		5	max	3.5	86	0	100	0	103	0	107	0	107	0	107
4439			min	1.955	44	0	42	0	41	0	12	0	12	0	12
4440	M630	1	max	3.274	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
4441			min	1.829	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
4442		2	max	3.067	86	0.5	100	0.5	103	0	107	0.188	101	0.188	100
4443			min	1.713	44	-0.5	42	-0.5	41	0	12	-0.188	43	-0.188	42
4444		3	max	2.86	86	0.334	100	0.334	103	0	107	0.083	101	0.083	100
4445			min	1.597	44	-0.334	42	-0.334	41	0	12	-0.083	43	-0.083	42
4446		4	max	2.653	86	0.167	100	0.167	103	0	107	0.021	101	0.021	100
4447			min	1.482	44	-0.167	42	-0.167	41	0	12	-0.021	43	-0.021	42
4448		5	max	2.446	86	0	100	0	103	0	107	0	107	0	107
4449			min	1.366	44	0	42	0	41	0	12	0	12	0	12
4450	M641	1	max	4.328	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
4451			min	2.418	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
4452		2	max	4.121	86	0.5	100	0.5	103	0	107	0.188	101	0.188	100
4453			min	2.302	44	-0.5	42	-0.5	41	0	12	-0.188	43	-0.188	42
4454		3	max	3.914	86	0.334	100	0.334	103	0	107	0.083	101	0.083	100
4455			min	2.186	44	-0.334	42	-0.334	41	0	12	-0.083	43	-0.083	42
4456		4	max	3.707	86	0.167	100	0.167	103	0	107	0.021	101	0.021	100
4457			min	2.071	44	-0.167	42	-0.167	41	0	12	-0.021	43	-0.021	42
4458		5	max	3.5	86	0	100	0	103	0	107	0	107	0	107
4459			min	1.955	44	0	42	0	41	0	12	0	12	0	12
4460	M643	1	max	0	107	-0.159	106	0	107	0	107	0	107	0	107
4461			min	0	12	-0.284	26	0	12	0	12	0	12	0	12
4462		2	max	0	107	-0.159	106	0	107	0	107	0	107	0.237	86
4463			min	0	12	-0.284	26	0	12	0	12	0	12	0.132	46
4464		3	max	0	107	-0.33	104	0	107	0	107	0	107	0.573	86
4465			min	0	12	-0.591	26	0	12	0	12	0	12	0.32	44
4466		4	max	0	107	0	107	0	107	0	107	0	107	0	107
4467			min	0	12	0	12	0	12	0	12	0	12	0	12
4468		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4469			min	0	12	0	12	0	12	0	12	0	12	0	12
4470	M790	1	max	1.678	105	-8.385	107	0	107	0	107	0	107	0	107
4471			min	-1.678	43	-15.012	26	0	12	0	12	0	12	0	12
4472		2	max	1.678	105	-8.385	107	0	107	0	107	0	107	12.46	86
4473			min	-1.678	43	-15.012	26	0	12	0	12	0	12	6.96	47
4474		3	max	3.225	107	-8.385	107	0	107	0	107	0	107	24.92	86
4475			min	-3.225	41	-15.012	26	0	12	0	12	0	12	13.92	47
4476		4	max	0.969	103	1.77	86	0	107	0	107	0	107	1.469	86
4477			min	-0.968	41	0.988	47	0	12	0	12	0	12	0.82	77
4478		5	max	0.969	103	1.77	86	0	107	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4479			min	-0.968	41	0.988	47	0	12	0	12	0	12	0	12
4480	M791	1	max	0	107	-0.145	104	0	107	0	107	0	107	0	107
4481			min	0	12	-0.26	26	0	12	0	12	0	12	0	12
4482		2	max	0	107	-0.145	104	0	107	0	107	0	107	0.217	86
4483			min	0	12	-0.26	26	0	12	0	12	0	12	0.121	46
4484		3	max	0	107	-0.291	106	0	107	0	107	0	107	0.521	86
4485			min	0	12	-0.521	26	0	12	0	12	0	12	0.291	46
4486		4	max	0	107	0	107	0	107	0	107	0	107	0	107
4487			min	0	12	0	12	0	12	0	12	0	12	0	12
4488		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4489			min	0	12	0	12	0	12	0	12	0	12	0	12
4490	M792	1	max	0	107	-0.969	107	0	107	0	107	0	107	0	107
4491			min	0	12	-1.735	26	0	12	0	12	0	12	0	12
4492		2	max	0	107	-0.969	107	0	107	0	107	0	107	1.44	86
4493			min	0	12	-1.735	26	0	12	0	12	0	12	0.804	47
4494		3	max	0	107	15.124	86	0	107	0	107	0	107	25.106	86
4495			min	0	12	8.448	47	0	12	0	12	0	12	14.024	45
4496		4	max	0	107	15.124	86	0	107	0	107	0	107	12.553	86
4497			min	0	12	8.448	47	0	12	0	12	0	12	7.012	45
4498		5	max	0	107	15.124	86	0	107	0	107	0	107	0	107
4499			min	0	12	8.448	47	0	12	0	12	0	12	0	12
4500	M793	1	max	0	107	-0.246	107	0	107	0	107	0	107	0	107
4501			min	0	12	-0.44	26	0	12	0	12	0	12	0	12
4502		2	max	0	107	-0.246	107	0	107	0	107	0	107	0.364	86
4503			min	0	12	-0.44	26	0	12	0	12	0	12	0.203	45
4504		3	max	0	107	-0.642	104	0	107	0	107	0	107	0.972	86
4505			min	0	12	-1.149	26	0	12	0	12	0	12	0.543	44
4506		4	max	0	107	0	107	0	107	0	107	0	107	0	107
4507			min	0	12	0	12	0	12	0	12	0	12	0	12
4508		5	max	0	107	0	107	0	107	0	107	0	107	0	107
4509			min	0	12	0	12	0	12	0	12	0	12	0	12
4510	M794	1	max	2.161	57	-6.711	107	0	107	0	107	0	107	0	107
4511			min	-2.161	87	-12.015	56	0	12	0	12	0	12	0	12
4512		2	max	2.161	57	-6.711	107	0	107	0	107	0	107	10.002	56
4513			min	-2.161	87	-12.015	56	0	12	0	12	0	12	5.587	107
4514		3	max	2.161	57	-6.711	107	0	107	0	107	0	107	20.005	56
4515			min	-2.161	87	-12.015	56	0	12	0	12	0	12	11.174	107
4516		4	max	0.032	86	1.431	56	0	107	0	107	0	107	1.191	56
4517			min	-0.032	56	0.799	107	0	12	0	12	0	12	0.665	107
4518		5	max	0.032	86	1.431	56	0	107	0	107	0	107	0	107
4519			min	-0.032	56	0.799	107	0	12	0	12	0	12	0	12
4520	M795	1	max	18.273	86	3.867	103	1.946	102	0	107	0.973	100	19.095	86
4521			min	10.207	75	-3.867	71	-1.946	40	0	12	-0.973	42	6.676	75
4522		2	max	17.67	86	3.381	103	1.46	102	0	107	0.547	100	18.519	86
4523			min	9.87	75	-3.381	71	-1.46	40	0	12	-0.547	42	7.534	75
4524		3	max	17.066	86	2.894	103	0.973	102	0	107	0.243	100	17.943	86
4525			min	9.532	75	-2.894	71	-0.973	40	0	12	-0.243	42	8.271	75
4526		4	max	16.462	86	2.408	103	0.487	102	0	107	0.061	100	17.366	86
4527			min	9.195	75	-2.408	71	-0.487	40	0	12	-0.061	42	8.885	75
4528		5	max	15.858	86	2.305	86	0	102	0	107	0	107	16.79	56
4529			min	8.858	75	-2.305	57	0	40	0	12	0	12	9.378	107
4530	M796	1	max	3.565	86	1.946	100	1.946	103	0	107	0.973	101	1.889	100
4531			min	1.991	46	-1.946	42	-1.946	41	0	12	-0.973	43	-0.43	46
4532		2	max	2.961	86	1.46	100	1.46	103	0	107	0.547	101	1.463	100
4533			min	1.654	46	-1.46	42	-1.46	41	0	12	-0.547	43	-0.004	46

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4534		3	max	2.357	86	0.973	100	0.973	103	0	107	0.243	101	1.159	100
4535			min	1.317	46	-0.973	42	-0.973	41	0	12	-0.243	43	0.3	46
4536		4	max	1.753	86	0.487	100	0.487	103	0	107	0.061	101	0.976	100
4537			min	0.979	46	-0.487	42	-0.487	41	0	12	-0.061	43	0.482	46
4538		5	max	1.149	86	0	100	0	103	0	107	0	107	0.972	86
4539			min	0.642	46	0	42	0	41	0	12	0	12	0.543	44
4540	M797	1	max	3.006	86	1.946	100	1.946	103	0	107	0.973	101	0.653	104
4541			min	1.679	44	-1.946	42	-1.946	41	0	12	-0.973	43	-1.512	42
4542		2	max	2.403	86	1.46	100	1.46	103	0	107	0.547	101	0.227	104
4543			min	1.342	44	-1.46	42	-1.46	41	0	12	-0.547	43	-1.087	42
4544		3	max	1.799	86	0.973	100	0.973	103	0	107	0.243	101	-0.077	104
4545			min	1.005	44	-0.973	42	-0.973	41	0	12	-0.243	43	-0.783	42
4546		4	max	1.195	86	0.487	100	0.487	103	0	107	0.061	101	-0.259	104
4547			min	0.667	44	-0.487	42	-0.487	41	0	12	-0.061	43	-0.6	42
4548		5	max	0.591	86	0	100	0	103	0	107	0	107	-0.32	106
4549			min	0.33	44	0	42	0	41	0	12	0	12	-0.573	26
4550	M798	1	max	22.487	86	6.85	103	1.946	102	0	107	0.973	100	25.519	103
4551			min	12.561	77	-6.85	41	-1.946	40	0	12	-0.973	42	5.777	45
4552		2	max	21.884	86	6.363	103	1.46	102	0	107	0.547	100	23.867	103
4553			min	12.224	77	-6.363	41	-1.46	40	0	12	-0.547	42	7.429	45
4554		3	max	21.28	86	5.877	103	0.973	102	0	107	0.243	100	22.337	103
4555			min	11.886	77	-5.877	41	-0.973	40	0	12	-0.243	42	8.959	45
4556		4	max	20.676	86	5.39	103	0.487	102	0	107	0.061	100	20.929	103
4557			min	11.549	77	-5.39	41	-0.487	40	0	12	-0.061	42	10.367	45
4558		5	max	20.072	86	4.904	103	0	102	0	107	0	107	20.864	86
4559			min	11.212	77	-4.904	41	0	40	0	12	0	12	11.654	47
4560	M799	1	max	22.545	86	1.946	103	1.946	102	0	107	0.973	100	21.082	86
4561			min	12.593	45	-1.946	45	-1.946	40	0	12	-0.973	42	10.803	45
4562		2	max	21.941	86	1.46	103	1.46	102	0	107	0.547	100	21.082	86
4563			min	12.256	45	-1.46	45	-1.46	40	0	12	-0.547	42	11.228	45
4564		3	max	21.337	86	0.973	103	0.973	102	0	107	0.243	100	21.082	86
4565			min	11.918	45	-0.973	45	-0.973	40	0	12	-0.243	42	11.533	45
4566		4	max	20.733	86	0.487	103	0.487	102	0	107	0.061	100	21.082	86
4567			min	11.581	45	-0.487	45	-0.487	40	0	12	-0.061	42	11.715	45
4568		5	max	20.129	86	0	103	0	102	0	107	0	107	21.082	86
4569			min	11.244	45	0	45	0	40	0	12	0	12	11.776	47
4570	M800	1	max	2.937	86	1.946	100	1.946	103	0	107	0.973	101	0.682	104
4571			min	1.64	44	-1.946	42	-1.946	41	0	12	-0.973	43	-1.463	42
4572		2	max	2.333	86	1.46	100	1.46	103	0	107	0.547	101	0.256	104
4573			min	1.303	44	-1.46	42	-1.46	41	0	12	-0.547	43	-1.038	42
4574		3	max	1.729	86	0.973	100	0.973	103	0	107	0.243	101	-0.048	104
4575			min	0.966	44	-0.973	42	-0.973	41	0	12	-0.243	43	-0.734	42
4576		4	max	1.125	86	0.487	100	0.487	103	0	107	0.061	101	-0.23	104
4577			min	0.628	44	-0.487	42	-0.487	41	0	12	-0.061	43	-0.551	42
4578		5	max	0.521	86	0	100	0	103	0	107	0	107	-0.291	106
4579			min	0.291	44	0	42	0	41	0	12	0	12	-0.521	26
4580	M801	1	max	0	107	-0.419	106	0	107	0	107	0	107	0	107
4581			min	0	12	-0.75	26	0	12	0	12	0	12	0	12
4582		2	max	0	107	-0.419	106	0	107	0	107	0	107	0.627	86
4583			min	0	12	-0.75	26	0	12	0	12	0	12	0.35	76
4584		3	max	17.568	71	8.853	101	8.616	72	0	107	14.389	70	14.784	101
4585			min	-17.567	103	-2.366	107	-8.616	70	0	12	-14.389	72	-3.951	107
4586		4	max	17.568	71	8.853	101	8.616	72	0	107	7.195	70	7.392	101
4587			min	-17.567	103	-2.366	107	-8.616	70	0	12	-7.195	72	-1.975	107
4588		5	max	17.568	71	8.853	101	8.616	72	0	107	0	107	0	107

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
4589			min	-17.567	103	-2.366	107	-8.616	70	0	12	0	12	0	12
4590	M802	1	max	12.919	100	19.514	103	10.563	102	14.389	70	9.59	100	15.817	103
4591			min	0.047	76	-19.514	71	-10.563	70	-14.389	72	-9.59	42	-7.367	75
4592		2	max	12.351	100	19.027	103	10.076	102	14.389	70	7.01	70	13.748	100
4593			min	-0.29	76	-19.027	71	-10.076	70	-14.389	72	-7.01	42	-5.316	76
4594		3	max	11.782	100	18.541	103	9.59	102	14.389	70	4.552	70	13.581	100
4595			min	-0.628	76	-18.541	71	-9.59	70	-14.389	72	-4.551	42	-5.165	76
4596		4	max	11.214	100	18.054	103	9.103	102	14.389	70	2.215	100	13.413	100
4597			min	-0.965	76	-18.054	71	-9.103	70	-14.389	72	-2.215	42	-5.014	76
4598		5	max	10.645	100	17.568	103	8.616	102	14.389	70	0	107	13.246	101
4599			min	-1.302	76	-17.568	71	-8.616	70	-14.389	72	0	12	-4.864	107
4600	M803	1	max	1.417	73	0.031	101	0.02	42	0.002	107	0	107	0	107
4601			min	-1.367	105	-0.004	77	-0.02	40	-0.002	71	0	12	0	12
4602		2	max	1.432	73	0.015	101	0.01	102	0.002	107	0.035	102	0.009	76
4603			min	-1.369	105	-0.002	77	-0.01	44	-0.002	71	-0.009	104	-0.035	40
4604		3	max	1.448	73	0	107	0	107	0.002	107	0.047	102	0.013	76
4605			min	-1.372	105	0	12	0	12	-0.002	71	-0.013	104	-0.047	40
4606		4	max	1.463	73	0.002	107	0.01	100	0.002	107	0.035	102	0.009	76
4607			min	-1.374	105	-0.015	41	-0.01	42	-0.002	71	-0.009	104	-0.035	40
4608		5	max	1.479	73	0.004	107	0.02	100	0.002	107	0	107	0	107
4609			min	-1.377	105	-0.031	41	-0.02	42	-0.002	71	0	12	0	12
4610	M804	1	max	1.479	71	0.031	73	0.02	102	0.002	73	0	107	0	107
4611			min	-1.377	107	-0.004	45	-0.02	40	-0.002	105	0	12	0	12
4612		2	max	1.463	71	0.015	73	0.01	102	0.002	73	0.035	72	0.009	46
4613			min	-1.374	107	-0.002	45	-0.01	100	-0.002	105	-0.009	74	-0.035	40
4614		3	max	1.448	71	0	107	0	107	0.002	73	0.047	72	0.013	46
4615			min	-1.372	107	0	12	0	12	-0.002	105	-0.013	74	-0.047	40
4616		4	max	1.432	71	0.002	75	0.01	40	0.002	73	0.035	72	0.009	46
4617			min	-1.369	107	-0.015	103	-0.01	76	-0.002	105	-0.009	74	-0.035	100
4618		5	max	1.417	71	0.004	75	0.02	100	0.002	73	0	107	0	107
4619			min	-1.367	107	-0.031	103	-0.02	42	-0.002	105	0	12	0	12

Maximum Member Section Forces

No Data to Print...

Envelope Maximum Member Section Forces

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
0	M273	max	21.471	0	15	4.699	0	100	0.403	5.645	71	0.101	5.645	77	0.509	4.25	103	19.276	4.25	72
1		min	-4.212	4.25	74	-4.666	0	72	-0.404	5.645	103	-0.133	4.316	71	-0.516	4.25	71	-19.625	4.25	100
2	M313	max	26.491	0	13	11.615	0	102	0.607	5.645	103	0.298	4.25	73	0.733	4.25	75	23.844	4.25	70
3		min	-3.504	4.25	106	-11.499	0	70	-0.588	5.645	75	-0.298	3.52	101	-0.764	4.25	103	-22.087	4.25	102
4	M314	max	27.583	0	13	12.036	0	102	16.374	0	75	0.14	4.648	71	14.168	0.93	75	22.89	4.25	70
5		min	-3.701	4.25	106	-11.916	0	70	-17.296	0	103	-0.106	4.582	77	-14.946	0.93	103	-20.696	4.25	106
6	M336	max	19.994	0	15	5.627	0	100	15.734	0	107	0.117	5.645	77	13.609	0.93	107	22.616	4.25	72
7		min	-4.832	0.863	74	-5.401	0	72	-16.716	0	71	-0.148	4.316	71	-14.459	0.93	71	-23.366	4.25	100
8	M337	max	0.918	5	72	0.019	5	107	0.16	5	13	0	5	106	0.158	5	72	0.076	5	104
9		min	-0.443	5	104	-0.019	5	71	-0.16	0	14	0	0	70	-0.085	2.865	104	-0.252	2.5	15
10	M340	max	20.514	0	103	0.592	20.781	13	0.199	36.219	72	0.061	35.625	13	1.211	43.344	72	1.682	0	75
11		min	-64.58	28.5	13	-0.562	36.219	14	-0.186	49.875	72	-0.071	0	15	-0.996	43.344	104	-1.846	0	103
12	M342	max	18.3	0	107	0.529	13.063	15	0.351	49.875	70	0.056	35.625	13	1.424	13.656	102	1.751	0	71
13		min	-61.102	21.375	15	-0.53	43.938	15	-0.308	7.125	74	-0.065	43.938	15	-1.461	43.344	70	-1.647	0	107
14	M343	max	1.443	9.014	104	0.029	9.014	70	0.289	9.014	15	0.028	9.014	15	0.248	9.014	104	0.345	9.014	72
15		min	-2.003	9.014	72	-0.029	9.014	102	-0.289	0	13	0	0	74	-0.683	4.507	15	-0.258	4.507	17
16	M346	max	2.844	9.014	104	0.029	9.014	70	0.289	9.014	15	0.017	9.014	13	0.489	9.014	104	0.55	9.014	72

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
17		min	-3.196	9.014	72	-0.029	9.014	106	-0.289	0	13	-0.002	0	76	-0.64	4.507	15	-0.489	9.014	104
18	M347	max	12.328	8.4	104	0.043	8.4	70	0.318	8.4	15	0.017	8.4	15	2.651	8.4	104	2.776	8.4	72
19		min	-12.905	8.4	72	-0.043	8.4	102	-0.318	0	13	-0.004	0	74	-2.797	4.725	72	-2.651	8.4	104
20	M349	max	72.296	28.5	15	0.89	50.469	15	0.182	21.375	13	0.024	28.5	15	1.173	28.5	13	1.557	50.469	15
21		min	0.242	29.094	104	-0.91	6.531	15	-0.183	35.625	13	-0.015	0	13	-0.293	39.781	72	-2.855	0	15
22	M350	max	65.686	28.5	13	0.831	50.469	13	0.186	21.375	13	0.021	28.5	15	1.175	28.5	13	1.412	6.531	13
23		min	-2.679	28.5	106	-0.841	6.531	13	-0.184	35.625	13	-0.021	50.469	15	-0.291	40.375	102	-2.523	0	13
24	M351	max	1	4.5	106	0.823	4.5	103	1.325	4.5	15	0.075	4.5	103	0.391	2.906	75	0.393	2.906	107
25		min	-1.14	4.5	70	-0.831	4.5	71	-1.214	0	15	-0.076	2.953	71	-2.172	2.906	103	-2.195	2.906	71
26	M352	max	1.194	0	100	0.791	4.5	103	1.283	4.5	16	0.07	4.5	103	0.359	2.906	75	0.36	2.906	107
27		min	-1.194	0	72	-0.792	4.5	71	-1.176	0	13	-0.069	2.953	71	-2.111	2.906	103	-2.113	2.906	71
28	M353	max	2.429	1.396	57	6.42	0	70	0.506	0	71	0.108	1.396	71	0.702	2.749	71	12.748	0	70
29		min	-3.146	1.396	100	-6.146	4.189	102	-0.468	4.189	71	-0.116	2.793	71	-0.627	2.749	107	-11.773	4.189	70
30	M354	max	2.726	4.189	72	6.282	0	70	0.467	0	71	0.103	1.396	75	0.787	2.749	71	12.57	0	70
31		min	-3.365	4.189	100	-5.874	4.189	102	-0.523	4.189	71	-0.124	2.793	71	-0.687	2.749	107	-11.869	4.189	100
32	M355	max	1.141	4.5	102	0.792	4.5	103	1.289	4.5	15	0.072	4.5	103	0.356	2.906	75	0.361	2.906	107
33		min	-0.885	4.5	74	-0.803	4.5	71	-1.182	0	15	-0.073	2.953	71	-2.112	2.906	103	-2.149	2.906	71
34	M356	max	1.92	0	70	1.879	0	15	0.54	5	77	0.124	5	75	0.799	2.5	75	0.479	0	70
35		min	-1.933	0	102	-1.88	5	15	-0.54	0	77	-0.124	4.01	103	-0.799	2.5	77	-2.817	2.5	15
36	M357	max	3.756	0	70	1.82	0	13	0.514	0	71	0.118	0.99	77	0.761	2.5	71	0.938	0	70
37		min	-3.375	0	106	-1.82	5	15	-0.514	5	71	-0.118	0	71	-0.76	2.5	73	-2.503	2.5	15
38	M358	max	4.324	0	100	5.109	0	70	0.362	0	101	0.076	4.189	101	0.513	2.575	71	9.88	0	70
39		min	-3.34	0	76	-4.837	4.189	102	-0.364	0	103	-0.074	3.622	103	-0.506	2.575	103	-9.036	4.189	70
40	M359	max	4.708	0	100	5.068	0	70	0.338	0	101	0.072	4.189	105	0.596	2.182	71	9.801	0	70
41		min	-3.572	0	76	-4.693	4.189	102	-0.339	0	103	-0.08	3.622	103	-0.588	2.225	103	-8.996	4.189	100
42	M360	max	3.494	0	100	1.819	0	13	0.514	5	107	0.118	0.99	103	0.76	2.5	105	0.872	0	100
43		min	-3.575	0	72	-1.819	5	13	-0.514	0	107	-0.117	4.01	77	-0.76	2.5	107	-2.81	2.5	15
44	M361	max	13.795	0	15	1.011	4.477	13	0.911	4.477	103	0.478	1.166	71	1.19	3.218	71	0.955	2.425	100
45		min	1.294	4.477	107	-0.513	4.477	76	-0.928	4.477	71	-0.475	0	103	-1.173	3.218	103	-1.453	1.166	15
46	M362	max	11.15	0	13	0.833	4.477	102	0.652	4.477	71	0.045	4.477	71	0.853	3.218	103	0.97	3.264	106
47		min	1.016	4.477	107	-0.66	4.477	74	-0.625	4.477	103	-0.042	3.264	103	-0.891	3.218	71	-1.174	3.218	70
48	M363	max	4.287	0	13	0.731	4.477	106	0.636	4.477	71	0.044	4.477	71	0.868	3.218	103	0.948	3.264	106
49		min	0.503	4.477	99	-0.839	4.477	70	-0.636	4.477	103	-0.043	3.264	103	-0.869	3.218	71	-1.302	3.218	70
50	M364	max	10.202	0	16	0.589	4.477	71	0.172	4.477	70	0.013	4.477	74	0.223	3.218	102	0.733	3.264	75
51		min	0.888	4.477	75	-0.598	4.477	103	-0.167	4.477	102	-0.014	3.264	102	-0.229	3.218	70	-1.158	3.218	103
52	M365	max	7.149	0	15	0.841	4.477	100	0.931	4.477	103	0.499	1.166	71	1.204	3.218	71	0.919	2.425	100
53		min	0.548	4.477	99	-0.62	4.477	76	-0.931	4.477	71	-0.499	0	103	-1.203	3.218	103	-1.268	1.166	15
54	M366	max	14.065	0	15	1.291	4.477	100	0.843	4.477	103	0.366	1.166	71	1.071	3.218	71	1.35	3.264	104
55		min	1.361	4.477	75	-1.059	4.477	76	-0.827	4.477	71	-0.368	0	103	-1.087	3.218	103	-1.798	3.218	72
56	M367	max	20.307	0	15	0.036	4.477	66	0.019	4.477	107	0.003	4.477	72	0.022	2.238	105	-0.101	2.238	96
57		min	3.033	4.477	96	-0.037	4.477	94	-0.019	4.477	71	-0.003	0	104	-0.022	2.238	73	-0.944	0	15
58	M368	max	17.669	0	13	0.036	4.477	68	0.019	4.477	71	0.003	4.477	76	0.022	2.238	73	-0.092	2.238	98
59		min	2.826	4.477	98	-0.037	4.477	92	-0.019	4.477	107	-0.003	0	104	-0.022	2.238	105	-0.821	0	13
60	M369	max	16.882	0	13	0.036	4.477	68	0.019	4.477	71	0.003	4.477	104	0.022	2.238	73	-0.099	2.238	68
61		min	2.908	4.477	67	-0.037	4.477	92	-0.019	4.477	107	-0.003	0	72	-0.022	2.238	105	-0.784	0	13
62	M370	max	21.924	0	15	0.489	0	15	0.236	0	101	0.221	1.166	101	0.328	2.378	101	0.172	2.425	66
63		min	3.192	4.477	68	-0.212	4.477	98	-0.242	0	103	-0.223	0	73	-0.336	2.378	103	-1.67	1.166	15
64	M371	max	7.132	5	102	0.03	5	73	0.189	5	15	0.003	5	15	1.534	5	102	1.437	5	104
65		min	-6.683	5	104	-0.03	5	105	-0.189	0	14	-0.001	0	76	-1.45	2.917	104	-1.559	2.76	102
66	M372	max	8.222	5	72	0.03	5	73	0.189	5	15	0.002	5	106	1.768	5	72	1.671	5	104
67		min	-7.767	5	104	-0.03	5	105	-0.189	0	13	-0.004	0	100	-1.683	2.917	104	-1.793	2.76	72
68	M373	max	1.434	0	72	0.019	5	101	0.16	5	14	0	5	96	0.247	0	72	0.191	0	104
69		min	-1.108	0	104	-0.019	5	73	-0.16	0	16	0	0	64	-0.199	2.135	104	-0.263	2.292	72
70	M374	max	0.359	9.014	66	0.029	0	104	0.289	9.014	15	0.007	9.014	13	0.062	0	66	0.104	0	94
71		min	-0.605	0	94	-0.029	0	72	-0.289	0	13	-0.001	0	106	-0.49	4.507	15	-0.439	4.507	13

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
72	M375	max	0.653	0	102	0.019	5	101	0.16	5	13	0.001	5	102	0.112	0	102	0.068	0	74
73		min	-0.394	0	74	-0.019	5	73	-0.16	0	14	-0.001	0	74	-0.123	2.5	17	-0.17	2.5	15
74	M376	max	1.562	9.014	74	0.029	0	104	0.289	9.014	15	0.004	9.014	72	0.273	5.446	74	0.308	5.446	106
75		min	-1.774	9.014	102	-0.029	0	72	-0.289	0	13	-0.004	0	104	-0.507	4.507	15	-0.436	4.507	13
76	M377	max	10.732	8.4	74	0.043	0	104	0.318	8.4	15	0.006	8.4	74	2.311	5.863	74	2.445	8.4	102
77		min	-11.37	8.4	102	-0.043	0	72	-0.318	0	13	-0.006	0	106	-2.587	4.288	102	-2.414	4.288	74
78	M378	max	5.271	0	13	0.036	4.477	68	0.019	4.477	71	0.001	4.477	13	0.022	2.238	73	0.014	2.238	98
79		min	0.037	4.477	107	-0.037	4.477	92	-0.019	4.477	107	0	0	68	-0.022	2.238	105	-0.245	0	13
80	M379	max	4.336	0	16	0.036	4.477	68	0.019	4.477	71	0	4.477	104	0.022	2.238	73	0.007	2.238	68
81		min	-0.085	4.477	75	-0.037	4.477	92	-0.019	4.477	107	-0.001	0	13	-0.022	2.238	105	-0.201	0	16
82	M380	max	5.598	0	15	0.036	4.477	66	0.019	4.477	107	0.002	4.477	13	0.022	2.238	105	0.013	2.238	96
83		min	0.295	4.477	107	-0.037	4.477	94	-0.019	4.477	71	0	0	68	-0.022	2.238	73	-0.26	0	15
84	M381	max	6.337	0	15	0.036	4.477	66	0.019	4.477	107	0	4.477	104	0.022	2.238	105	-0.001	2.238	66
85		min	0.375	4.477	75	-0.037	4.477	94	-0.019	4.477	71	-0.001	0	13	-0.022	2.238	73	-0.294	0	15
86	M382	max	2.858	9.014	106	0.293	0	15	0.028	9.014	40	0.002	9.014	70	0.533	4.507	13	0.188	4.883	106
87		min	-3.067	9.014	70	-0.293	9.014	13	-0.028	0	104	-0.003	0	19	-0.182	9.014	106	-0.533	4.507	13
88	M383	max	3.674	9.014	106	0.293	0	15	0.028	0	46	0	9.014	68	0.581	4.507	13	0.24	4.883	106
89		min	-4.33	9.014	70	-0.293	9.014	13	-0.028	0	40	-0.007	0	13	-0.234	9.014	106	-0.581	4.507	13
90	M384	max	7.746	8.4	106	0.327	0	13	0.041	0	76	0	8.4	98	0.717	4.375	70	0.622	4.813	106
91		min	-8.705	8.4	70	-0.327	8.4	15	-0.041	0	44	-0.012	0	13	-0.616	8.4	106	-0.838	4.2	70
92	M385	max	8.748	8.4	106	0.327	0	13	0.041	0	46	0.003	8.4	68	0.824	4.375	70	0.702	4.813	106
93		min	-10.05	8.4	70	-0.327	8.4	15	-0.041	8.4	72	-0.016	0	13	-0.696	8.4	106	-0.945	4.2	70
94	M386	max	2.177	9.014	72	0.293	0	15	0.028	0	44	0.006	9.014	19	0.442	4.507	13	0.139	9.014	72
95		min	-1.898	9.014	104	-0.293	9.014	13	-0.028	0	46	-0.001	0	100	-0.14	4.883	76	-0.442	4.507	13
96	M387	max	2.915	9.014	76	0.293	0	15	0.028	0	44	0.011	9.014	13	0.488	4.507	13	0.186	9.014	76
97		min	-3.151	9.014	100	-0.293	9.014	13	-0.028	0	42	0	0	98	-0.192	4.883	76	-0.488	4.507	13
98	M388	max	7.087	8.4	76	0.327	0	13	0.041	0	100	0.013	8.4	13	0.763	4.2	100	0.564	8.4	76
99		min	-7.757	8.4	100	-0.327	8.4	15	-0.041	8.4	74	0	0	98	-0.57	4.813	76	-0.642	4.375	100
100	M389	max	7.941	8.4	76	0.327	0	13	0.041	0	100	0.006	8.4	92	0.84	4.2	100	0.632	8.4	76
101		min	-8.731	8.4	100	-0.327	8.4	15	-0.041	0	46	-0.005	0	68	-0.638	4.813	76	-0.72	4.375	100
102	M390	max	4.898	0	100	0.194	0	15	0.03	5	103	0.003	5	94	0.38	2.396	72	0.39	0	100
103		min	-4.469	0	76	-0.194	5	13	-0.03	0	73	-0.002	0	66	-0.39	0	100	-0.38	2.396	72
104	M392	max	1.404	0	100	0.163	0	15	0.019	5	73	0.001	5	102	0.156	2.5	15	0.089	0	100
105		min	-1.413	0	72	-0.163	5	13	-0.019	5	101	-0.001	0	74	-0.089	0	100	-0.156	2.5	15
106	M394	max	2.056	0	70	0.163	0	15	0.019	5	73	0.001	5	100	0.13	2.448	102	0.131	0	70
107		min	-1.806	0	106	-0.163	5	13	-0.019	5	71	-0.001	0	72	-0.131	0	70	-0.13	2.448	102
108	M396	max	5.442	0	70	0.194	0	15	0.03	0	41	0.002	5	66	0.406	2.396	102	0.433	0	70
109		min	-4.853	0	106	-0.194	5	13	-0.03	5	101	-0.003	0	15	-0.433	0	70	-0.406	2.396	102
110	M397	max	-0.988	0	107	0.195	0	13	0.024	0	100	0.007	8.577	106	0.938	4.288	15	0.648	8.577	15
111		min	-13.169	8.577	15	-0.195	8.577	15	-0.024	0	76	-0.01	0	13	0.049	0	107	0.048	2.412	107
112	M398	max	-0.481	0	107	0.195	8.577	15	0.024	0	72	0.007	8.577	106	0.596	8.577	13	0.885	4.288	13
113		min	-12.097	8.577	13	-0.195	0	13	-0.024	0	104	-0.013	0	13	0.023	2.412	107	0.024	0	107
114	M399	max	-0.234	0	75	0.195	0	15	0.024	0	72	0.008	8.577	74	0.815	4.288	16	0.525	8.577	16
115		min	-10.67	8.577	16	-0.195	8.577	13	-0.024	0	104	-0.011	0	15	0.012	0	75	0.003	4.288	74
116	M400	max	-1.116	0	75	0.195	8.577	15	0.024	8.577	102	0.007	8.577	74	0.015	4.288	104	0.296	4.288	13
117		min	-14.56	8.577	16	-0.195	0	13	-0.024	0	76	-0.014	0	15	-0.296	4.288	13	-0.015	4.288	76
118	M401	max	12.207	0	74	0.043	0	72	0.318	8.4	13	0.009	8.4	106	2.625	0	74	2.765	0	102
119		min	-12.854	0	102	-0.043	0	104	-0.318	0	15	-0.013	0	70	-2.786	3.675	102	-2.625	0	74
120	M402	max	13.838	0	104	0.043	8.4	72	0.318	8.4	15	0.014	8.4	70	2.979	2.538	104	3.165	0	102
121		min	-14.714	0	102	-0.043	8.4	100	-0.318	0	13	-0.009	0	106	-3.306	4.113	102	-3.082	4.113	104
122	M403	max	-5.672	0	96	0.175	0	13	0.023	7.955	72	0.002	7.955	106	2.066	4.06	15	1.825	7.955	15
123		min	-37.061	7.955	15	-0.175	7.955	15	-0.022	7.955	104	-0.016	0	13	0.279	0	96	0.259	3.895	96
124	M404	max	-5.16	0	98	0.175	7.955	15	0.023	7.955	100	0.004	7.955	106	1.588	7.955	13	1.828	4.06	13
125		min	-32.234	7.955	13	-0.175	0	13	-0.022	7.955	76	-0.005	0	70	0.234	3.895	98	0.254	0	98
126	M405	max	-5.92	0	98	0.175	7.955	13	0.023	7.955	72	0.002	7.955	104	1.943	7.955	15	2.184	4.06	15

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
127		min	-39.456	7.955	15	-0.175	0	15	-0.022	7.955	104	-0.018	0	15	0.272	3.895	98	0.292	0	98
128	M406	max	-5.403	0	67	0.175	0	15	0.023	7.955	100	0.005	7.955	70	1.779	4.06	13	1.539	7.955	13
129		min	-31.254	7.955	13	-0.175	7.955	13	-0.022	7.955	76	-0.004	0	106	0.266	0	67	0.246	3.895	67
130	M409	max	-4.794	0	96	0.175	0	13	0.023	7.955	72	0.002	7.955	76	1.796	4.06	15	1.556	7.955	15
131		min	-31.588	7.955	15	-0.175	7.955	15	-0.022	7.955	104	-0.018	0	13	0.236	0	96	0.216	3.895	96
132	M410	max	-4.611	0	98	0.175	7.955	15	0.023	7.955	100	0.003	7.955	68	1.322	7.955	13	1.562	4.06	13
133		min	-26.848	7.955	13	-0.175	0	13	-0.022	7.955	76	-0.014	0	13	0.207	3.895	98	0.227	0	98
134	M411	max	-5.004	0	67	0.175	7.955	13	0.023	7.955	72	0.003	7.955	104	1.566	7.955	15	1.806	4.06	15
135		min	-31.786	7.955	15	-0.175	0	15	-0.022	7.955	104	-0.02	0	15	0.227	3.895	67	0.247	0	67
136	M412	max	-4.5	0	66	0.175	0	15	0.023	7.955	100	0.003	7.955	96	1.509	4.06	16	1.269	7.955	16
137		min	-25.77	7.955	16	-0.175	7.955	13	-0.022	7.955	76	-0.012	0	15	0.222	0	66	0.202	3.895	66
138	M413	max	-0.134	0	107	0.195	0	13	0.024	0	100	0.009	8.577	102	0.632	4.288	15	0.343	8.577	15
139		min	-6.959	8.577	15	-0.195	8.577	15	-0.024	0	76	-0.007	0	74	0.007	0	107	0.006	2.412	107
140	M414	max	0.321	0	107	0.195	8.577	15	0.024	0	72	0.009	8.577	72	0.304	8.577	13	0.594	4.288	13
141		min	-6.183	8.577	13	-0.195	0	13	-0.024	0	104	-0.008	0	104	-0.017	4.288	19	-0.016	0	107
142	M415	max	-0.277	0	75	0.195	8.577	13	0.024	0	100	0.008	8.577	74	0.389	8.577	16	0.679	4.288	16
143		min	-7.907	8.577	16	-0.195	0	15	-0.024	0	76	-0.008	0	102	-0.008	4.288	76	0.014	0	75
144	M416	max	0.524	0	75	0.195	0	15	0.024	0	72	0.008	8.577	104	0.525	4.288	15	0.235	8.577	15
145		min	-4.78	8.577	15	-0.195	8.577	13	-0.024	0	104	-0.009	0	72	-0.026	0	75	-0.082	4.288	17
146	M95	max	7.893	5	72	3.635	0	15	3	0	71	0.738	5	103	7.447	2.5	71	1.866	5	104
147		min	-7.475	5	104	-3.635	5	15	-3	5	71	-0.738	2.5	71	-7.446	2.5	103	-9.65	2.5	72
148	M96	max	6.714	5	102	3.52	0	15	2.912	5	103	0.716	2.5	71	7.223	2.5	71	1.591	5	74
149		min	-6.374	5	74	-3.52	5	15	-2.912	0	103	-0.716	0	103	-7.225	2.5	103	-9.09	2.5	102
150	M530	max	21.443	0	15	6.693	0	100	17.444	0	103	0.959	5.645	77	15.118	0.93	103	27.673	4.25	72
151		min	-6.475	4.25	104	-6.593	0	72	-17.44	0	71	-0.991	4.316	71	-15.115	0.93	71	-28.009	4.25	100
152	M531	max	26.192	0	13	13.109	0	102	18.217	0	71	0.783	4.648	71	15.798	0.93	71	27.326	4.25	70
153		min	-5.847	4.25	106	-13.039	0	70	-18.293	0	103	-0.752	4.316	77	-15.846	0.93	103	-25.571	4.25	102
154	M532	max	26.269	0	13	10.705	0	102	0.502	5.645	107	0.165	4.25	103	0.657	4.25	71	20.977	4.25	70
155		min	-2.626	4.25	76	-10.642	0	70	-0.518	5.645	71	-0.165	3.52	71	-0.628	4.25	107	-19.167	4.25	102
156	M533	max	20.27	0	15	5.154	0	100	0.422	5.645	71	0.108	4.516	77	0.528	4.25	103	21.014	4.25	72
157		min	-3.296	4.25	74	-5.074	0	72	-0.411	5.645	107	-0.14	4.316	71	-0.531	4.25	71	-21.428	4.25	100
158	M534	max	0.809	5	72	0.019	0	75	0.16	5	14	0	5	74	0.139	5	72	0.07	5	104
159		min	-0.408	5	104	-0.019	0	43	-0.16	0	16	0	0	15	-0.079	2.865	104	-0.231	2.5	15
160	M535	max	20.709	57	71	0.557	20.781	16	0.18	36.219	72	0.061	35.625	13	1.099	13.656	72	1.828	57	103
161		min	-63.676	28.5	13	-0.557	36.219	13	-0.175	49.875	72	-0.071	0	15	-0.949	13.656	104	-1.864	57	71
162	M536	max	19.742	57	71	0.534	13.063	15	0.362	49.875	70	0.056	35.625	13	1.394	13.656	102	1.778	57	103
163		min	-58.77	28.5	15	-0.526	43.938	15	-0.308	49.875	106	-0.065	43.938	15	-1.401	43.344	70	-1.777	57	71
164	M537	max	0.256	9.014	96	0.029	9.014	104	0.289	9.014	15	0.028	9.014	15	0.044	0	96	0.256	0	15
165		min	-1.488	0	15	-0.029	9.014	72	-0.289	0	13	0	0	74	-0.716	4.507	15	-0.22	4.507	17
166	M538	max	1.451	9.014	74	0.029	9.014	104	0.289	9.014	15	0.017	9.014	13	0.25	9.014	74	0.328	9.014	72
167		min	-1.905	9.014	72	-0.029	9.014	72	-0.289	0	13	-0.002	0	76	-0.663	4.507	15	-0.279	4.507	13
168	M539	max	10.368	8.4	104	0.043	8.4	70	0.318	8.4	15	0.016	8.4	13	2.23	8.4	104	2.307	8.4	76
169		min	-10.725	8.4	76	-0.043	8.4	106	-0.318	0	13	-0.004	0	74	-2.327	4.725	72	-2.23	8.4	104
170	M540	max	69.121	28.5	15	0.875	50.469	15	0.175	21.375	13	0.024	28.5	15	1.137	28.5	13	1.525	50.469	15
171		min	0.441	21.375	74	-0.858	6.531	15	-0.175	35.625	13	-0.015	0	13	-0.281	17.219	72	-2.662	0	15
172	M541	max	64.435	28.5	13	0.827	50.469	13	0.18	21.375	13	0.02	28.5	15	1.143	28.5	13	1.405	50.469	13
173		min	-2.211	21.375	76	-0.821	6.531	13	-0.177	35.625	13	-0.021	50.469	15	-0.275	39.781	102	-2.439	57	13
174	M542	max	0.926	4.5	106	0.823	4.5	103	1.325	4.5	15	0.075	4.5	103	0.391	2.906	75	0.393	2.906	107
175		min	-1.058	4.5	70	-0.831	4.5	71	-1.214	0	15	-0.076	2.953	71	-2.173	2.906	103	-2.195	2.906	71
176	M543	max	1.247	0	100	0.791	4.5	103	1.283	4.5	13	0.071	4.5	103	0.359	2.906	75	0.36	2.906	107
177		min	-1.231	0	76	-0.792	4.5	71	-1.176	0	13	-0.07	2.953	71	-2.112	2.906	103	-2.114	2.906	71
178	M544	max	3.922	4.189	72	7.324	0	70	2.454	4.189	77	0.624	4.189	77	3.611	2.749	71	14.503	0	70
179		min	-4.703	4.189	100	-7.063	4.189	72	-2.528	4.189	71	-0.641	2.793	71	-3.508	2.749	77	-13.805	4.189	100
180	M545	max	2.62	4.189	72	5.704	0	40	0.487	0	71	0.104	1.396	71	0.743	2.749	71	11.371	0	70
181		min	-3.339	4.189	100	-5.419	4.189	72	-0.495	4.189	71	-0.122	2.793	71	-0.651	2.749	107	-10.703	4.189	100

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
182	M546	max	1.121	4.5	102	0.79	4.5	103	1.289	4.5	15	0.072	4.5	103	0.356	2.906	75	0.361	2.906	107
183		min	-0.897	4.5	74	-0.803	4.5	71	-1.182	0	15	-0.073	2.953	71	-2.109	2.906	103	-2.148	2.906	71
184	M547	max	1.863	0	70	1.879	0	15	0.54	5	77	0.124	5	75	0.799	2.5	75	0.465	0	70
185		min	-1.881	0	102	-1.879	5	15	-0.54	0	77	-0.124	4.01	73	-0.799	2.5	77	-2.816	2.5	15
186	M548	max	3.227	0	70	1.82	0	13	0.514	0	71	0.118	0.99	107	0.76	2.5	71	0.805	0	70
187		min	-2.872	0	106	-1.82	5	13	-0.514	5	71	-0.118	0	71	-0.76	2.5	73	-2.516	2.5	15
188	M549	max	4.482	0	100	5.74	0	70	0.424	0	101	0.084	4.189	101	1.291	2.575	71	11.202	0	70
189		min	-3.566	0	76	-5.485	4.189	72	-0.429	0	103	-0.084	3.622	103	-1.262	2.575	73	-10.447	4.189	100
190	M550	max	4.302	0	100	4.622	0	70	0.351	0	101	0.072	4.189	101	0.549	2.575	71	8.86	0	70
191		min	-3.272	0	76	-4.346	4.189	72	-0.352	0	103	-0.078	3.622	103	-0.542	2.575	103	-8.109	4.189	100
192	M551	max	3.848	0	74	1.819	0	13	0.514	5	77	0.118	0.99	73	0.76	2.5	75	0.96	0	74
193		min	-3.974	0	102	-1.819	5	13	-0.514	0	77	-0.117	4.01	77	-0.76	2.5	77	-2.825	2.5	15
194	M552	max	13.112	0	15	0.983	4.477	13	0.906	4.477	103	0.478	1.166	71	1.19	3.218	71	0.916	2.425	100
195		min	0.983	4.477	107	-0.52	4.477	76	-0.928	4.477	71	-0.475	0	103	-1.168	3.218	103	-1.418	1.166	15
196	M553	max	10.976	0	14	0.82	4.477	102	0.653	4.477	71	0.045	4.477	71	0.85	3.218	103	0.911	3.264	106
197		min	0.873	4.477	107	-0.666	4.477	74	-0.622	4.477	103	-0.043	3.264	103	-0.892	3.218	71	-1.133	3.218	70
198	M554	max	4.276	0	13	0.679	4.477	106	0.636	4.477	71	0.044	4.477	71	0.869	3.218	103	0.876	3.264	106
199		min	0.504	4.477	97	-0.78	4.477	70	-0.636	4.477	103	-0.043	3.264	103	-0.868	3.218	71	-1.22	3.218	70
200	M555	max	10.363	0	13	0.589	4.477	71	0.134	4.477	70	0.011	4.477	74	0.182	3.218	102	0.736	3.264	75
201		min	0.845	4.477	75	-0.598	4.477	103	-0.138	4.477	102	-0.011	3.264	102	-0.177	3.218	70	-1.167	3.218	103
202	M556	max	6.59	0	15	0.763	4.477	100	0.84	4.477	103	0.381	1.166	71	1.096	3.218	71	0.813	2.425	104
203		min	0.549	4.477	96	-0.614	4.477	76	-0.84	4.477	71	-0.381	0	103	-1.096	3.218	103	-1.075	2.378	72
204	M557	max	12.3	0	15	0.911	4.477	100	0.554	4.477	103	0.038	4.477	103	0.736	3.218	71	1.118	3.264	104
205		min	1.251	4.477	75	-0.916	4.477	72	-0.543	4.477	71	-0.038	3.684	71	-0.748	3.218	103	-1.599	3.218	72
206	M558	max	19.726	0	15	0.036	4.477	66	0.019	4.477	73	0.003	4.477	72	0.022	2.238	71	-0.109	2.238	96
207		min	3.092	4.477	99	-0.037	4.477	94	-0.019	4.477	105	-0.003	0	104	-0.022	2.238	107	-0.917	0	15
208	M559	max	17.61	0	13	0.036	4.477	68	0.019	4.477	105	0.003	4.477	76	0.022	2.238	107	-0.103	2.238	98
209		min	3.005	4.477	99	-0.037	4.477	92	-0.019	4.477	73	-0.003	0	104	-0.022	2.238	71	-0.818	0	13
210	M560	max	16.935	0	13	0.036	4.477	68	0.019	4.477	105	0.003	4.477	104	0.022	2.238	107	-0.09	2.238	68
211		min	2.8	4.477	68	-0.037	4.477	92	-0.019	4.477	73	-0.003	0	72	-0.022	2.238	71	-0.787	0	13
212	M561	max	20.048	0	15	0.46	0	15	0.24	0	101	0.229	1.166	101	0.336	2.378	101	0.201	2.425	66
213		min	2.991	4.477	66	-0.22	4.477	98	-0.247	0	103	-0.231	0	73	-0.344	2.378	103	-1.544	1.166	15
214	M562	max	7.902	5	72	0.03	0	71	0.189	5	13	0.004	5	70	1.699	5	72	1.635	5	104
215		min	-7.603	5	104	-0.03	0	107	-0.189	0	15	-0.003	0	76	-1.648	2.917	104	-1.724	2.76	72
216	M563	max	6.95	5	72	0.03	0	71	0.189	5	15	0.001	5	76	1.495	5	72	1.418	5	104
217		min	-6.592	5	104	-0.03	0	103	-0.189	0	16	-0.002	0	15	-1.43	2.917	104	-1.52	2.76	72
218	M564	max	0.772	5	15	0.019	0	103	0.16	5	15	0.001	5	100	0.133	0	15	0.06	0	104
219		min	-0.347	0	104	-0.019	0	75	-0.16	0	13	-0.001	0	72	-0.068	2.135	104	-0.274	2.5	15
220	M565	max	1.404	9.014	74	0.029	0	70	0.289	9.014	15	0.007	9.014	13	0.246	5.446	74	0.264	5.446	106
221		min	-1.51	9.014	106	-0.029	0	106	-0.289	0	13	-0.001	0	76	-0.423	4.507	15	-0.51	4.507	13
222	M566	max	1.185	0	106	0.019	0	103	0.16	5	14	0	5	64	0.204	0	106	0.185	0	74
223		min	-1.075	0	74	-0.019	0	75	-0.16	0	16	0	0	96	-0.194	2.135	74	-0.218	2.292	102
224	M567	max	2.793	9.014	74	0.029	0	70	0.289	9.014	15	0.004	9.014	72	0.485	5.446	74	0.489	5.446	106
225		min	-2.815	9.014	106	-0.029	0	106	-0.289	0	13	-0.003	0	104	-0.576	4.601	102	-0.567	4.601	70
226	M568	max	12.266	8.4	104	0.043	0	70	0.318	8.4	15	0.006	8.4	74	2.641	5.863	104	2.734	5.863	76
227		min	-12.698	8.4	76	-0.043	0	102	-0.318	0	13	-0.006	0	102	-2.869	4.288	72	-2.744	4.288	104
228	M569	max	5.084	0	14	0.036	4.477	68	0.019	4.477	105	0.001	4.477	13	0.022	2.238	107	0.004	4.477	107
229		min	-0.092	4.477	107	-0.037	4.477	92	-0.019	4.477	73	0	0	104	-0.022	2.238	71	-0.236	0	14
230	M570	max	4.51	0	13	0.036	4.477	68	0.019	4.477	105	0	4.477	98	0.022	2.238	107	0.015	2.238	68
231		min	-0.14	4.477	75	-0.037	4.477	92	-0.019	4.477	73	-0.001	0	13	-0.022	2.238	71	-0.209	0	13
232	M571	max	4.909	0	15	0.036	4.477	96	0.019	4.477	73	0.001	4.477	13	0.022	2.238	71	0.007	2.238	96
233		min	-0.002	4.477	107	-0.037	4.477	64	-0.019	4.477	105	0	0	104	-0.022	2.238	107	-0.228	0	15
234	M572	max	6.447	0	15	0.036	4.477	66	0.019	4.477	73	0	4.477	107	0.022	2.238	71	0.009	2.238	66
235		min	0.256	4.477	75	-0.037	4.477	64	-0.019	4.477	105	-0.001	0	13	-0.022	2.238	107	-0.299	0	15
236	M573	max	2.015	9.014	106	0.293	0	15	0.028	0	46	0.002	9.014	100	0.528	4.507	13	0.135	4.883	106

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
237		min	-2.217	9.014	70	-0.293	9.014	13	-0.028	0	40	-0.003	0	19	-0.128	9.014	106	-0.528	4.507	13
238	M574	max	2.829	9.014	106	0.293	0	15	0.028	0	76	0	9.014	68	0.572	4.507	13	0.186	4.883	106
239		min	-3.452	9.014	100	-0.293	9.014	13	-0.028	0	70	-0.007	0	13	-0.18	9.014	106	-0.572	4.507	13
240	M575	max	6.642	8.4	106	0.327	0	13	0.041	0	72	0	8.4	98	0.621	4.2	13	0.534	4.813	106
241		min	-7.189	8.4	70	-0.327	8.4	15	-0.041	0	104	-0.012	0	13	-0.528	8.4	106	-0.717	4.2	70
242	M576	max	7.667	8.4	76	0.327	0	13	0.041	0	106	0.003	8.4	68	0.705	4.375	100	0.616	4.813	76
243		min	-8.554	8.4	100	-0.327	8.4	15	-0.041	0	40	-0.016	0	13	-0.61	8.4	76	-0.826	4.2	100
244	M577	max	2.831	9.014	102	0.293	0	15	0.028	0	70	0.006	9.014	15	0.432	4.507	13	0.18	9.014	102
245		min	-2.494	9.014	74	-0.293	9.014	13	-0.028	9.014	40	-0.001	0	74	-0.182	4.883	76	-0.432	4.507	13
246	M578	max	3.574	9.014	76	0.293	0	15	0.028	0	74	0.011	9.014	13	0.478	4.507	13	0.227	9.014	76
247		min	-3.673	9.014	100	-0.293	9.014	13	-0.028	0	106	0	0	77	-0.234	4.883	76	-0.478	4.507	13
248	M579	max	7.737	8.4	106	0.327	0	13	0.041	0	104	0.013	8.4	13	0.805	4.2	70	0.615	8.4	106
249		min	-8.288	8.4	70	-0.327	8.4	15	-0.041	0	102	0	0	98	-0.621	4.813	106	-0.684	4.375	70
250	M580	max	8.56	8.4	76	0.327	0	13	0.041	0	40	0.006	8.4	92	0.88	4.2	100	0.681	8.4	76
251		min	-9.231	8.4	100	-0.327	8.4	15	-0.041	8.4	74	-0.005	0	68	-0.687	4.813	76	-0.759	4.375	100
252	M581	max	5.209	0	70	0.194	0	15	0.03	5	73	0.002	5	94	0.411	2.396	102	0.414	0	70
253		min	-4.853	0	106	-0.194	5	13	-0.03	0	107	-0.002	0	96	-0.414	0	70	-0.411	2.396	102
254	M582	max	1.702	0	74	0.163	0	15	0.019	5	43	0.001	5	102	0.161	2.5	15	0.108	0	74
255		min	-1.777	0	102	-0.163	5	13	-0.019	0	103	-0.001	0	100	-0.108	0	74	-0.161	2.5	15
256	M583	max	1.578	0	70	0.163	0	15	0.019	5	73	0.001	5	100	0.108	2.5	15	0.1	0	70
257		min	-1.341	0	106	-0.163	5	13	-0.019	0	43	-0.001	0	102	-0.1	0	70	-0.108	2.5	15
258	M584	max	4.545	0	70	0.194	0	15	0.03	5	73	0.002	5	96	0.36	2.396	102	0.362	0	70
259		min	-4.2	0	106	-0.194	5	13	-0.03	5	41	-0.002	0	94	-0.362	0	70	-0.36	2.396	102
260	M585	max	-0.414	0	107	0.195	0	13	0.024	0	70	0.007	8.577	106	0.876	4.288	14	0.586	8.577	14
261		min	-11.909	8.577	14	-0.195	8.577	15	-0.024	0	106	-0.01	0	13	0.02	0	107	0.02	2.412	107
262	M586	max	-0.222	0	107	0.195	8.577	15	0.024	0	102	0.007	8.577	76	0.58	8.577	14	0.87	4.288	14
263		min	-11.786	8.577	14	-0.195	0	13	-0.024	0	74	-0.013	0	13	0.01	2.412	107	0.011	0	107
264	M587	max	-0.157	0	75	0.195	0	15	0.024	0	102	0.008	8.577	104	0.831	4.288	13	0.541	8.577	13
265		min	-10.986	8.577	13	-0.195	8.577	13	-0.024	0	74	-0.011	0	15	0.008	0	75	0.007	2.412	75
266	M588	max	-0.905	0	75	0.195	8.577	15	0.024	0	70	0.007	8.577	74	0.015	4.288	104	0.296	4.288	13
267		min	-14.68	8.577	15	-0.195	0	13	-0.024	0	106	-0.013	0	15	-0.296	4.288	13	-0.015	4.288	106
268	M589	max	13.772	0	74	0.043	0	76	0.318	8.4	13	0.01	8.4	106	2.962	0	74	3.04	0	102
269		min	-14.136	0	102	-0.043	0	100	-0.318	0	15	-0.014	0	70	-3.062	3.675	102	-2.962	0	74
270	M590	max	11.866	0	74	0.043	8.4	106	0.318	8.4	15	0.013	8.4	70	2.555	2.538	74	2.687	0	102
271		min	-12.493	0	102	-0.043	8.4	70	-0.318	0	13	-0.007	0	106	-2.828	4.113	102	-2.658	4.113	74
272	M591	max	-5.681	0	98	0.175	0	13	0.023	7.955	102	0.007	7.955	77	2.018	4.06	15	1.778	7.955	15
273		min	-36.096	7.955	15	-0.175	7.955	15	-0.022	7.955	74	-0.016	0	13	0.28	0	98	0.26	3.895	98
274	M592	max	-5.515	0	98	0.175	7.955	15	0.023	7.955	70	0.011	7.955	75	1.583	7.955	13	1.823	4.06	13
275		min	-32.135	7.955	13	-0.175	0	13	-0.022	7.955	106	-0.012	0	73	0.252	3.895	98	0.272	0	98
276	M593	max	-5.666	0	66	0.175	7.955	13	0.023	7.955	102	0.002	7.955	104	1.789	7.955	15	2.029	4.06	15
277		min	-36.32	7.955	15	-0.175	0	15	-0.022	7.955	74	-0.018	0	15	0.259	3.895	66	0.279	0	66
278	M594	max	-5.151	0	68	0.175	0	15	0.023	7.955	70	0.005	7.955	70	1.78	4.06	13	1.54	7.955	13
279		min	-31.264	7.955	13	-0.175	7.955	13	-0.022	7.955	106	-0.004	0	106	0.254	0	68	0.234	3.895	68
280	M595	max	-4.869	0	99	0.175	0	13	0.023	7.955	102	0.003	7.955	76	1.747	4.06	15	1.507	7.955	15
281		min	-30.592	7.955	15	-0.175	7.955	15	-0.022	7.955	74	-0.018	0	13	0.24	0	99	0.22	3.895	99
282	M596	max	-4.682	0	96	0.175	7.955	15	0.023	7.955	70	0.003	7.955	68	1.318	7.955	14	1.558	4.06	14
283		min	-26.753	7.955	14	-0.175	0	13	-0.022	7.955	106	-0.014	0	13	0.211	3.895	96	0.231	0	96
284	M597	max	-4.626	0	66	0.175	7.955	13	0.023	7.955	102	0.003	7.955	104	1.409	7.955	15	1.649	4.06	15
285		min	-28.613	7.955	15	-0.175	0	15	-0.022	7.955	74	-0.02	0	15	0.208	3.895	66	0.228	0	66
286	M598	max	-4.576	0	68	0.175	0	15	0.023	7.955	70	0.003	7.955	96	1.516	4.06	13	1.276	7.955	13
287		min	-25.9	7.955	13	-0.175	7.955	13	-0.022	7.955	106	-0.012	0	15	0.225	0	68	0.205	3.895	68
288	M599	max	0.407	0	107	0.195	0	13	0.024	0	70	0.009	8.577	102	0.573	4.288	14	0.283	8.577	14
289		min	-5.748	8.577	14	-0.195	8.577	15	-0.024	0	106	-0.007	0	74	-0.02	0	107	-0.037	4.288	20
290	M600	max	0.557	0	107	0.195	8.577	15	0.024	0	102	0.009	8.577	102	0.289	8.577	14	0.578	4.288	14
291		min	-5.865	8.577	14	-0.195	0	13	-0.024	0	74	-0.008	0	74	-0.031	4.288	20	-0.027	0	107

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
292	M601	max	-0.075	0	75	0.195	8.577	13	0.024	0	70	0.008	8.577	74	0.402	8.577	15	0.691	4.288	15
293		min	-8.158	8.577	15	-0.195	0	15	-0.024	0	106	-0.009	0	102	0.003	2.412	75	0.004	0	75
294	M602	max	0.623	0	75	0.195	0	15	0.024	0	102	0.008	8.577	104	0.54	4.288	13	0.251	8.577	13
295		min	-5.097	8.577	13	-0.195	8.577	13	-0.024	0	74	-0.009	0	72	-0.031	0	75	-0.068	4.288	19
296	M618	max	6.583	5	72	3.52	0	15	2.827	0	71	0.695	5	103	7.013	2.5	71	1.568	5	74
297		min	-6.283	5	74	-3.52	5	15	-2.827	5	71	-0.695	2.5	71	-7.013	2.5	103	-9.054	2.5	72
298	M619	max	7.481	5	76	3.633	0	15	3	5	103	0.738	5	103	7.443	2.5	71	1.822	5	74
299		min	-7.299	5	74	-3.633	5	15	-3	0	103	-0.738	0	103	-7.446	2.5	103	-9.533	2.5	72
300	M620	max	2.775	0	14	0.234	0	74	0.928	6.374	101	0	6.159	102	1.664	2.65	103	2.498	6.159	102
301		min	-0.78	2.578	77	-0.502	0	102	-0.927	6.374	103	0	6.23	102	-1.668	2.65	101	-0.852	6.159	74
302	M621	max	2.775	0	16	0.234	0	74	0.927	6.374	101	0	6.374	102	1.668	2.65	103	2.498	6.159	102
303		min	-0.78	2.578	75	-0.502	0	102	-0.928	6.374	103	0	2.65	102	-1.664	2.65	101	-0.852	6.159	74
304	M622	max	2.887	0	16	0.911	0	70	0.515	0	103	0.372	6.776	103	3.457	0	101	4.885	0	74
305		min	0	9.708	12	-0.911	0	102	-0.516	0	101	-0.372	4.349	105	-3.456	0	103	-5.573	0	102
306	M623	max	5.576	0	14	2.083	0	70	2.012	0	73	0.318	6.776	73	5.545	0	101	3.683	0	70
307		min	-0.875	9.203	77	-1.941	0	106	-2.007	0	71	-0.318	6.27	105	-5.548	0	103	-3.401	0	106
308	M624	max	5.576	0	16	2.083	0	70	2.007	0	73	0.318	6.776	107	5.548	0	101	3.683	0	70
309		min	-0.875	9.203	75	-1.941	0	106	-2.012	0	71	-0.318	6.27	71	-5.545	0	103	-3.401	0	106
310	M625	max	2.887	0	14	0.911	0	70	0.516	0	103	0.372	6.776	103	3.456	0	101	4.885	0	74
311		min	0	9.708	12	-0.911	0	102	-0.515	0	101	-0.372	0	105	-3.457	0	103	-5.573	0	102
312	M628	max	3.306	0	14	1.447	0	65	1.185	0	106	0	4.292	106	1.021	0.894	106	4.718	4.292	67
313		min	-1.477	4.292	69	-1.137	0	67	-1.317	0	70	0	0.894	70	-1.136	0.894	70	-6.05	4.292	65
314	M629	max	3.306	0	16	1.137	0	69	1.185	0	106	0	4.292	70	1.021	0.894	106	6.05	4.292	63
315		min	-1.477	4.292	67	-1.447	0	63	-1.317	0	70	0	0.894	106	-1.136	0.894	70	-4.718	4.292	69
316	M631	max	1.044	9.759	93	2.066	3.549	63	0.908	3.422	70	0	8.618	65	1.533	8.618	70	5.671	8.618	65
317		min	-1.044	8.745	69	-2.066	8.618	65	-0.908	3.422	102	0	3.549	63	-1.533	8.618	102	-4.736	3.549	69
318	M632	max	0.78	8.083	100	1.666	0	15	0.447	0	103	0.004	3.705	103	1.12	3.789	103	2.755	8.083	70
319		min	-0.513	8.083	76	-1.019	8.083	13	-0.447	0	101	-0.004	0	75	-1.12	3.789	101	-2.102	3.789	15
320	M633	max	0.78	8.083	100	1.666	0	15	0.447	0	103	0.004	8.083	77	1.12	3.789	103	2.755	8.083	70
321		min	-0.513	8.083	76	-1.019	8.083	13	-0.447	0	101	-0.004	0	101	-1.12	3.789	101	-2.102	3.789	15
322	M638	max	1.211	6.384	103	0.142	0	14	0.018	0	106	0	6.384	102	0.16	3.192	14	0.009	3.192	46
323		min	-1.193	6.384	105	-0.142	6.384	15	-0.018	0	44	0	0	74	-0.009	3.192	104	-0.16	3.192	14
324	M639	max	1.211	0	101	0.139	0	16	0.018	0	76	0	6.384	74	0.157	3.192	16	0.009	3.192	46
325		min	-1.193	0	107	-0.139	6.384	14	-0.018	0	44	0	0	102	-0.009	3.192	74	-0.157	3.192	16
326	M640	max	1.505	3.333	74	1.027	3.444	102	0.124	0	103	0.002	10.667	105	0.34	5.333	103	2.083	3.444	102
327		min	-1.563	3.333	102	-1.017	7.222	70	-0.124	0	101	-0.002	7.333	73	-0.34	5.333	101	-2.032	3.444	74
328	M642	max	1.505	3.333	74	1.027	3.444	102	0.124	0	103	0.002	10.667	71	0.34	5.333	103	2.083	3.444	102
329		min	-1.563	3.333	102	-1.017	7.222	70	-0.124	0	101	-0.002	7.333	107	-0.34	5.333	101	-2.032	3.444	74
330	M644	max	2.428	0	102	0.092	0	15	0.014	0	47	0	4.832	67	0.079	2.416	15	0.006	2.416	47
331		min	-2.143	0	74	-0.092	4.832	16	-0.014	0	45	0	0	95	-0.006	2.416	45	-0.079	2.416	14
332	M645	max	2.233	4.832	70	0.094	0	16	0.014	4.832	71	0	4.832	70	0.08	2.416	16	0.006	2.416	47
333		min	-1.983	4.832	106	-0.094	4.832	13	-0.014	4.832	43	0	0	106	-0.006	2.416	45	-0.08	2.416	13
334	M646	max	2.428	0	102	0.092	0	16	0.014	0	73	0	4.832	93	0.079	2.416	16	0.006	2.416	77
335		min	-2.143	0	74	-0.092	4.832	14	-0.014	0	105	0	0	69	-0.006	2.416	105	-0.079	2.416	13
336	M647	max	2.233	4.832	70	0.094	0	16	0.014	4.832	101	0	4.832	106	0.08	2.416	16	0.006	2.416	107
337		min	-1.983	4.832	106	-0.094	4.832	13	-0.014	4.832	43	0	0	70	-0.006	2.416	75	-0.08	2.416	13
338	M648	max	0.033	5.167	107	0.266	0	16	0.057	5.167	96	0	5.167	105	0.073	2.583	98	0	5.167	107
339		min	-0.101	0	13	-0.266	5.167	13	-0.057	5.167	34	0	0	107	-0.073	2.583	32	-0.343	2.583	13
340	M649	max	0.098	1.333	66	0.339	0	13	0.085	0	41	0	2	107	0.025	0	107	0.294	0	16
341		min	-0.098	0	34	0	2	102	-0.085	0	43	0	0	12	-0.294	0	14	-0.025	0	75
342	M650	max	0.079	1.333	96	0.293	0	13	0.07	0	75	0	2	107	0.02	0	107	0.251	0	16
343		min	-0.079	0	64	0	2	102	-0.07	0	103	0	0	12	-0.251	0	14	-0.02	0	75
344	M651	max	0.079	1.333	92	0.293	0	13	0.07	0	105	0	2	107	0.02	0	77	0.251	0	16
345		min	-0.079	0	34	0	2	102	-0.07	0	73	0	0	12	-0.251	0	14	-0.02	0	45
346	M652	max	0.098	1.333	92	0.339	0	13	0.085	0	71	0	2	107	0.025	0	47	0.294	0	16

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
347		min	-0.098	0	34	0	2	102	-0.085	0	73	0	0	12	-0.294	0	14	-0.025	0	75
348	M653	max	0.079	1.333	92	0.293	0	13	0.07	0	75	0	2	107	0.02	0	77	0.251	0	16
349		min	-0.079	0	34	0	2	102	-0.07	0	43	0	0	12	-0.251	0	14	-0.02	0	75
350	M654	max	0.079	1.333	66	0.293	0	13	0.07	0	75	0	2	107	0.02	0	77	0.251	0	16
351		min	-0.079	0	64	0	2	102	-0.07	0	107	0	0	12	-0.251	0	14	-0.02	0	75
352	M655	max	0.098	1.333	92	0.339	0	13	0.085	0	105	0	2	107	0.025	0	47	0.294	0	16
353		min	-0.098	0	38	0	2	102	-0.085	0	47	0	0	12	-0.294	0	14	-0.025	0	105
354	M656	max	0.098	1.333	66	0.339	0	13	0.085	0	71	0	2	107	0.025	0	77	0.294	0	16
355		min	-0.098	0	34	0	2	102	-0.085	0	43	0	0	12	-0.294	0	14	-0.025	0	105
356	M657	max	0.129	0	104	0.433	0	13	0.129	0	71	0	2	107	0.031	0	47	0.326	0	16
357		min	-0.129	0	42	0	2	102	-0.129	0	103	0	0	12	-0.326	0	14	-0.031	0	105
358	M658	max	0.129	0	104	0.433	0	13	0.129	0	71	0	2	107	0.031	0	77	0.326	0	16
359		min	-0.129	0	42	0	2	102	-0.129	0	77	0	0	12	-0.326	0	14	-0.031	0	105
360	M659	max	0.142	0	104	0.468	0	13	0.142	0	105	0	2	107	0.034	0	107	0.353	0	16
361		min	-0.142	0	102	0	2	102	-0.142	0	43	0	0	12	-0.353	0	14	-0.034	0	105
362	M660	max	0.142	0	104	0.468	0	13	0.142	0	71	0	2	107	0.034	0	47	0.353	0	16
363		min	-0.142	0	72	0	2	102	-0.142	0	43	0	0	12	-0.353	0	14	-0.034	0	75
364	M407	max	3.223	0	15	0.661	0	74	0.69	0	107	0	7.866	42	0.417	2.394	107	5.282	7.866	42
365		min	-0.705	7.866	44	-0.81	0	42	-0.756	0	41	0	0.599	44	-0.444	2.223	41	-4.129	7.866	44
366	M408	max	3.223	0	13	0.81	0	100	0.69	0	107	0	7.866	106	0.417	2.394	107	4.129	7.866	106
367		min	-0.705	7.866	46	-0.661	0	46	-0.756	0	41	0	0.599	40	-0.444	2.223	41	-5.282	7.866	40
368	M417	max	3.223	0	13	0.81	0	100	0.756	0	103	0	7.866	100	0.444	2.223	73	4.129	7.866	106
369		min	-0.705	7.866	46	-0.661	0	46	-0.69	0	75	0	0.599	46	-0.417	2.394	75	-5.282	7.866	40
370	M418	max	3.223	0	15	0.661	0	44	0.756	0	73	0	7.866	44	0.444	2.223	73	5.282	7.866	42
371		min	-0.705	7.866	44	-0.81	0	42	-0.69	0	75	0	0.599	42	-0.417	2.394	75	-4.129	7.866	44
372	M419	max	0.05	7.5	107	0.382	0	16	0.082	7.5	96	0	7.5	101	0.155	3.75	98	0	7.5	107
373		min	-0.124	0	15	-0.382	7.5	13	-0.082	0	32	0	0	43	-0.155	3.75	32	-0.717	3.75	13
374	M420	max	0.441	0	102	1.893	0	42	0.35	7.5	101	0	3.203	42	0.896	3.75	103	5.288	0	42
375		min	-0.299	0	44	-1.893	7.5	40	-0.35	0	41	0	2.266	40	-0.896	3.75	41	-4.135	0	44
376	M421	max	0.05	7.5	75	0.382	0	16	0.082	7.5	98	0	7.5	103	0.155	3.75	96	0	7.5	107
377		min	-0.124	0	13	-0.382	7.5	13	-0.082	0	34	0	0	41	-0.155	3.75	34	-0.717	3.75	13
378	M422	max	0.441	7.5	102	1.893	0	100	0.35	7.5	103	0	7.5	100	0.896	3.75	101	5.288	7.5	42
379		min	-0.299	7.5	44	-1.893	7.5	42	-0.35	0	43	0	4.297	42	-0.896	3.75	43	-4.135	7.5	44
380	M423	max	0.974	10.489	103	0.21	0	14	0.03	0	42	0	10.489	42	0.389	5.245	14	0.028	5.245	106
381		min	-0.838	10.489	75	-0.21	10.489	15	-0.03	0	40	0	0	44	-0.028	5.245	74	-0.389	5.245	13
382	M424	max	0.974	10.489	101	0.21	0	16	0.03	0	104	0	10.489	44	0.389	5.245	16	0.028	5.245	104
383		min	-0.838	10.489	77	-0.21	10.489	15	-0.03	0	42	0	0	42	-0.028	5.245	46	-0.389	5.245	13
384	M425	max	0.974	10.489	103	0.21	0	16	0.03	0	106	0	10.489	106	0.389	5.245	16	0.028	5.245	106
385		min	-0.838	10.489	75	-0.21	10.489	16	-0.03	0	40	0	0	40	-0.028	5.245	74	-0.389	5.245	13
386	M426	max	0.974	10.489	101	0.21	0	15	0.03	0	104	0	10.489	100	0.389	5.245	15	0.028	5.245	44
387		min	-0.838	10.489	77	-0.21	10.489	13	-0.03	0	42	0	0	46	-0.028	5.245	46	-0.389	5.245	15
388	M427	max	3.757	0	15	0.834	0	74	0.849	0	47	0.001	7.866	107	5.639	7.866	107	0.533	1.625	42
389		min	-1.158	0.513	74	-0.96	0	42	-0.956	0	41	-0.001	0.599	41	-6.385	7.866	41	-0.477	1.967	44
390	M428	max	3.757	0	13	0.96	0	100	0.849	0	47	0.001	7.866	101	5.639	7.866	107	0.477	1.967	106
391		min	-1.158	0.513	46	-0.834	0	46	-0.956	0	41	-0.001	0.599	77	-6.385	7.866	41	-0.533	1.625	40
392	M429	max	3.757	0	13	0.96	0	100	0.956	0	73	0.001	7.866	75	6.385	7.866	73	0.477	1.967	106
393		min	-1.158	0.513	46	-0.834	0	46	-0.849	0	45	-0.001	0.599	73	-5.639	7.866	75	-0.533	1.625	40
394	M430	max	3.757	0	15	0.834	0	74	0.956	0	73	0.001	7.866	73	6.385	7.866	73	0.533	1.625	42
395		min	-1.158	0.513	44	-0.96	0	42	-0.849	0	45	-0.001	0.599	75	-5.639	7.866	75	-0.477	1.967	44
396	M431	max	0.586	0	101	2.878	0	101	0.541	6.75	100	0	6.75	101	1.238	3.375	102	6.394	6.75	73
397		min	-0.517	0	77	-2.878	6.75	73	-0.541	0	40	0	0	73	-1.238	3.375	40	-5.647	6.75	75
398	M432	max	0.064	5.75	75	0.293	0	16	0.062	0	99	0	5.75	42	0.09	2.875	99	0	5.75	107
399		min	-0.209	0	73	-0.293	5.75	13	-0.062	0	33	0	0	40	-0.09	2.875	33	-0.421	2.875	13
400	M433	max	0.586	0	103	2.878	0	73	0.541	6.75	42	0	6.75	73	1.238	3.375	100	6.394	0	73
401		min	-0.517	0	75	-2.878	6.75	41	-0.541	0	42	0	0	41	-1.238	3.375	42	-5.647	0	75

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
402	M434	max	0.064	5.75	107	0.293	0	16	0.062	0	97	0	5.75	100	0.09	2.875	97	0	5.75	107
403		min	-0.209	0	41	-0.293	5.75	13	-0.062	0	35	0	0	42	-0.09	2.875	35	-0.421	2.875	13
404	M439	max	3.161	0	16	0.757	0	100	0.758	0	73	0.512	4.146	107	2.04	0	101	4.681	0	104
405		min	-0.205	9.203	45	-0.757	0	72	-0.757	0	41	-0.512	0	41	-2.042	0	73	-5.618	0	42
406	M440	max	0.138	1.333	36	0.431	0	13	0.115	0	105	0	2	107	0.034	0	47	0.381	0	16
407		min	-0.138	0	38	0	2	72	-0.115	0	43	0	0	12	-0.381	0	14	-0.034	0	45
408	M441	max	0.138	1.333	96	0.431	0	13	0.115	0	45	0	2	107	0.034	0	107	0.381	0	16
409		min	-0.138	0	38	0	2	72	-0.115	0	73	0	0	12	-0.381	0	14	-0.034	0	105
410	M442	max	0.197	0	104	0.622	0	13	0.197	0	75	0	2	107	0.048	0	47	0.471	0	16
411		min	-0.197	0	42	0	2	72	-0.197	0	77	0	0	12	-0.471	0	14	-0.048	0	75
412	M443	max	3.161	0	14	0.757	0	100	0.757	0	103	0.512	4.146	103	2.042	0	101	4.681	0	44
413		min	-0.205	9.203	47	-0.757	0	42	-0.758	0	41	-0.512	0	45	-2.04	0	73	-5.618	0	72
414	M444	max	0.138	1.333	92	0.431	0	13	0.115	0	45	0	2	107	0.034	0	47	0.381	0	16
415		min	-0.138	0	68	0	2	72	-0.115	0	73	0	0	12	-0.381	0	14	-0.034	0	105
416	M445	max	0.138	1.333	96	0.431	0	13	0.115	0	45	0	2	107	0.034	0	47	0.381	0	16
417		min	-0.138	0	34	0	2	72	-0.115	0	77	0	0	12	-0.381	0	14	-0.034	0	45
418	M446	max	0.197	0	104	0.622	0	13	0.197	0	45	0	2	107	0.048	0	47	0.471	0	16
419		min	-0.197	0	72	0	2	72	-0.197	0	73	0	0	12	-0.471	0	14	-0.048	0	105
420	M447	max	0.718	10.735	101	0.266	0	14	0.03	10.735	106	0.003	10.735	103	0.505	5.368	16	0.022	5.368	104
421		min	-0.692	10.735	77	-0.266	10.735	13	-0.03	10.735	40	-0.002	0	45	-0.022	5.368	46	-0.505	5.368	14
422	M448	max	0.718	10.735	103	0.266	0	16	0.03	10.735	104	0.002	10.735	47	0.505	5.368	16	0.022	5.368	106
423		min	-0.692	10.735	75	-0.266	10.735	13	-0.03	10.735	42	-0.003	0	41	-0.022	5.368	44	-0.505	5.368	13
424	M449	max	2.969	0	16	0.718	0	100	0.719	0	73	0.479	4.146	47	1.928	0	101	4.411	0	104
425		min	-0.389	4.146	45	-0.718	0	72	-0.718	0	41	-0.479	0	41	-1.931	0	73	-5.287	0	42
426	M450	max	0.128	1.333	96	0.41	0	13	0.108	0	101	0	2	107	0.032	0	107	0.361	0	16
427		min	-0.128	0	38	0	2	72	-0.108	0	43	0	0	12	-0.361	0	14	-0.032	0	45
428	M451	max	0.128	1.333	96	0.41	0	13	0.108	0	45	0	2	107	0.032	0	107	0.361	0	16
429		min	-0.128	0	34	0	2	72	-0.108	0	47	0	0	12	-0.361	0	14	-0.032	0	45
430	M452	max	0.185	0	104	0.588	0	13	0.185	0	101	0	2	107	0.045	0	107	0.445	0	16
431		min	-0.185	0	46	0	2	72	-0.185	0	73	0	0	12	-0.445	0	14	-0.045	0	45
432	M453	max	2.969	0	14	0.718	0	100	0.718	0	73	0.479	4.146	103	1.931	0	101	4.411	0	44
433		min	-0.389	4.146	47	-0.718	0	42	-0.719	0	41	-0.479	0	45	-1.928	0	73	-5.287	0	72
434	M454	max	0.128	1.333	96	0.41	0	13	0.108	0	105	0	2	107	0.032	0	107	0.361	0	16
435		min	-0.128	0	34	0	2	72	-0.108	0	77	0	0	12	-0.361	0	14	-0.032	0	75
436	M455	max	0.128	1.333	92	0.41	0	13	0.108	0	45	0	2	107	0.032	0	47	0.361	0	16
437		min	-0.128	0	34	0	2	72	-0.108	0	43	0	0	12	-0.361	0	14	-0.032	0	45
438	M456	max	0.185	0	74	0.588	0	13	0.185	0	45	0	2	107	0.045	0	107	0.445	0	16
439		min	-0.185	0	46	0	2	72	-0.185	0	77	0	0	12	-0.445	0	14	-0.045	0	45
440	M457	max	0.726	8.602	101	0.196	0	15	0.024	0	104	0.004	8.602	73	0.298	4.301	15	0.016	4.301	44
441		min	-0.7	8.602	77	-0.196	8.602	16	-0.024	0	46	-0.004	0	45	-0.016	4.301	46	-0.298	4.301	15
442	M458	max	0.726	8.602	73	0.196	0	16	0.024	0	106	0.004	8.602	47	0.298	4.301	16	0.016	4.301	106
443		min	-0.7	8.602	75	-0.196	8.602	13	-0.024	0	44	-0.004	0	41	-0.016	4.301	44	-0.298	4.301	16
444	M463	max	0.359	0	102	0.359	0	103	0	2.083	107	0	2.083	107	0.928	0	14	0.928	0	16
445		min	-0.359	0	40	-0.359	0	45	-1.068	0	15	0	0	12	-0.101	0	47	-0.101	0	45
446	M464	max	0.167	0	102	0.167	0	77	0	2.083	70	0	2.083	107	0.461	0	14	0.461	0	16
447		min	-0.167	0	74	-0.167	0	101	-0.539	0	15	0	0	12	-0.047	0	77	-0.047	0	45
448	M465	max	0.341	0	46	0.341	0	47	0	2.083	107	0	2.083	107	0.883	0	14	0.883	0	16
449		min	-0.341	0	40	-0.341	0	75	-1.017	0	15	0	0	12	-0.096	0	47	-0.096	0	45
450	M466	max	0.241	0.99	94	0.19	0	77	0	1.583	107	0	1.583	107	0.445	0	14	0.445	0	16
451		min	-0.241	0	66	-0.19	0	101	-0.647	0	15	0	0	12	-0.043	0	77	-0.043	0	105
452	M467	max	0.26	0	76	0.26	0	43	0	2.083	70	0	2.083	107	0.688	0	14	0.688	0	16
453		min	-0.26	0	104	-0.26	0	71	-0.796	0	15	0	0	12	-0.073	0	107	-0.073	0	45
454	M472	max	0.092	0	76	0.092	0	47	0	2.083	70	0	2.083	107	0.28	0	14	0.28	0	16
455		min	-0.092	0	70	-0.092	0	101	-0.334	0	15	0	0	12	-0.026	0	107	-0.026	0	105
456	M486	max	0.187	0.99	94	0.15	0	107	0	1.583	107	0	1.583	107	0.354	0	14	0.354	0	16

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
457		min	-0.187	0	92	-0.15	0	75	-0.518	0	15	0	0	12	-0.033	0	107	-0.033	0	75
458	M487	max	0.059	0.99	94	0.053	0	103	0	1.583	70	0	1.583	107	0.147	0	14	0.147	0	16
459		min	-0.059	0	32	-0.053	0	71	-0.225	0	15	0	0	12	-0.012	0	107	-0.012	0	75
460	M488	max	0.272	0	106	0.272	0	47	0	2.083	107	0	2.083	107	0.716	0	14	0.716	0	16
461		min	-0.272	0	70	-0.272	0	71	-0.828	0	15	0	0	12	-0.076	0	47	-0.076	0	105
462	M489	max	0.059	0.99	64	0.053	0	103	0	1.583	70	0	1.583	107	0.146	0	14	0.146	0	16
463		min	-0.059	0	62	-0.053	0	71	-0.224	0	15	0	0	12	-0.012	0	107	-0.012	0	75
464	M490	max	0.204	0	76	0.204	0	103	0	2.083	70	0	2.083	107	0.551	0	14	0.551	0	16
465		min	-0.204	0	70	-0.204	0	45	-0.641	0	15	0	0	12	-0.057	0	107	-0.057	0	45
466	M491	max	0.138	0.99	94	0.113	0	77	0	1.583	70	0	1.583	107	0.274	0	14	0.274	0	16
467		min	-0.138	0	62	-0.113	0	41	-0.405	0	15	0	0	12	-0.025	0	77	-0.025	0	75
468	M492	max	0.138	0.99	38	0.113	0	107	0	1.583	70	0	1.583	107	0.275	0	14	0.275	0	16
469		min	-0.138	0	96	-0.113	0	75	-0.406	0	15	0	0	12	-0.025	0	47	-0.025	0	75
470	M493	max	0.341	0	76	0.341	0	77	0	2.083	70	0	2.083	107	0.883	0	14	0.883	0	16
471		min	-0.341	0	40	-0.341	0	71	-1.017	0	15	0	0	12	-0.096	0	107	-0.096	0	45
472	M494	max	0.241	0.99	68	0.19	0	107	0	1.583	107	0	1.583	107	0.444	0	14	0.444	0	16
473		min	-0.241	0	96	-0.19	0	105	-0.646	0	15	0	0	12	-0.043	0	47	-0.043	0	75
474	M495	max	0.241	0.99	68	0.19	0	103	0	1.583	107	0	1.583	107	0.445	0	14	0.445	0	16
475		min	-0.241	0	66	-0.19	0	71	-0.647	0	15	0	0	12	-0.043	0	47	-0.043	0	75
476	M496	max	0.187	0.99	34	0.15	0	77	0	1.583	107	0	1.583	107	0.355	0	14	0.355	0	16
477		min	-0.187	0	36	-0.15	0	41	-0.52	0	15	0	0	12	-0.033	0	107	-0.033	0	45
478	M499	max	0.182	0.99	98	0.146	0	103	0	1.583	107	0	1.583	107	0.347	0	14	0.347	0	16
479		min	-0.182	0	66	-0.146	0	101	-0.507	0	15	0	0	12	-0.033	0	107	-0.033	0	45
480	M500	max	0.113	0.99	38	0.094	0	77	0	1.583	70	0	1.583	107	0.234	0	14	0.234	0	16
481		min	-0.113	0	62	-0.094	0	105	-0.348	0	15	0	0	12	-0.021	0	77	-0.021	0	105
482	M501	max	0.113	0.99	94	0.094	0	73	0	1.583	70	0	1.583	107	0.235	0	14	0.235	0	16
483		min	-0.113	0	36	-0.094	0	101	-0.349	0	15	0	0	12	-0.021	0	77	-0.021	0	105
484	M502	max	0.241	0.99	38	0.19	0	73	0	1.583	107	0	1.583	107	0.444	0	14	0.444	0	16
485		min	-0.241	0	32	-0.19	0	45	-0.646	0	15	0	0	12	-0.043	0	107	-0.043	0	105
486	M503	max	0.251	0.99	38	0.198	0	43	0	1.583	107	0	1.583	107	0.459	0	14	0.459	0	16
487		min	-0.251	0	96	-0.198	0	105	-0.667	0	15	0	0	12	-0.044	0	47	-0.044	0	105
488	M504	max	0.251	0.99	98	0.198	0	73	0	1.583	107	0	1.583	107	0.46	0	14	0.46	0	16
489		min	-0.251	0	96	-0.198	0	105	-0.669	0	15	0	0	12	-0.044	0	47	-0.044	0	105
490	M505	max	0.182	0.99	64	0.146	0	73	0	1.583	107	0	1.583	107	0.348	0	14	0.348	0	16
491		min	-0.182	0	32	-0.146	0	105	-0.509	0	15	0	0	12	-0.033	0	107	-0.033	0	45
492	M391	max	21.574	0	15	5.166	0	100	0.429	5.645	75	0.117	5.645	77	0.559	4.25	103	21.411	4.25	72
493		min	-3.326	4.25	104	-5.176	0	72	-0.44	5.645	103	-0.148	4.316	71	-0.55	4.25	75	-21.6	4.25	100
494	M393	max	25.852	0	13	10.936	0	102	0.398	5.645	103	0.137	5.645	71	0.493	4.25	75	21.157	4.25	70
495		min	-2.548	4.25	106	-10.86	0	70	-0.391	5.645	75	-0.107	4.715	77	-0.509	4.25	103	-19.573	4.25	102
496	M395	max	28.536	0	13	12.213	0	102	16.449	0	75	0.363	4.25	103	14.245	0.93	75	23.347	4.25	70
497		min	-3.832	4.25	76	-12.033	0	70	-17.349	0	103	-0.363	3.52	75	-15.005	0.93	103	-20.947	4.25	106
498	M459	max	19.839	0	15	5.771	0	100	15.771	0	107	0.099	4.516	77	13.64	0.93	107	22.992	4.25	72
499		min	-4.961	0.863	74	-5.484	0	72	-16.719	0	71	-0.13	4.582	71	-14.461	0.93	71	-23.983	4.25	100
500	M461	max	0.919	5	72	0.019	5	107	0.16	5	16	0	5	76	0.158	5	72	0.076	5	104
501		min	-0.443	5	104	-0.019	5	71	-0.16	0	13	0	0	13	-0.085	2.865	104	-0.252	2.5	15
502	M462	max	20.33	0	103	0.607	20.781	13	0.195	36.219	72	0.061	35.625	13	1.18	43.344	72	1.676	0	75
503		min	-64.712	28.5	13	-0.575	43.938	13	-0.172	49.875	72	-0.072	0	15	-0.984	43.344	104	-1.83	0	103
504	M470	max	18.36	0	107	0.529	13.063	15	0.348	49.875	70	0.056	35.625	13	1.446	13.656	102	1.753	0	71
505		min	-61.065	21.375	15	-0.531	43.938	15	-0.312	7.125	74	-0.065	43.938	15	-1.458	43.344	70	-1.652	0	107
506	M474	max	1.438	9.014	104	0.029	9.014	70	0.289	9.014	15	0.028	9.014	15	0.247	9.014	104	0.343	9.014	72
507		min	-1.996	9.014	72	-0.029	9.014	102	-0.289	0	13	0	0	74	-0.686	4.507	15	-0.255	4.507	17
508	M475	max	2.843	9.014	104	0.029	9.014	70	0.289	9.014	15	0.016	9.014	13	0.489	9.014	104	0.551	9.014	72
509		min	-3.204	9.014	72	-0.029	9.014	106	-0.289	0	13	-0.002	0	76	-0.646	4.507	15	-0.489	9.014	104
510	M476	max	12.407	8.4	104	0.043	8.4	70	0.318	8.4	15	0.017	8.4	15	2.668	8.4	104	2.813	8.4	72
511		min	-13.08	8.4	72	-0.043	8.4	102	-0.318	0	13	-0.005	0	74	-2.835	4.725	72	-2.668	8.4	104

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
512	M477	max	72.334	28.5	15	0.887	50.469	15	0.182	21.375	13	0.024	28.5	15	1.173	28.5	13	1.638	6.531	15
513		min	0.226	29.094	104	-0.914	6.531	15	-0.182	35.625	13	-0.015	0	13	-0.292	39.781	72	-2.783	57	15
514	M478	max	65.689	28.5	13	0.834	50.469	13	0.186	21.375	13	0.021	28.5	15	1.175	28.5	13	1.417	6.531	13
515		min	-2.67	28.5	106	-0.839	6.531	13	-0.184	35.625	13	-0.021	50.469	15	-0.289	40.375	102	-2.504	0	13
516	M479	max	1	4.5	106	0.823	4.5	103	1.325	4.5	15	0.075	4.5	103	0.391	2.906	75	0.393	2.906	107
517		min	-1.14	4.5	70	-0.831	4.5	71	-1.214	0	15	-0.076	2.953	71	-2.172	2.906	103	-2.195	2.906	71
518	M480	max	1.177	0	100	0.791	4.5	103	1.283	4.5	15	0.069	4.5	103	0.359	2.906	75	0.36	2.906	107
519		min	-1.181	0	72	-0.792	4.5	71	-1.176	0	13	-0.069	2.953	71	-2.111	2.906	103	-2.113	2.906	71
520	M481	max	2.571	4.189	72	5.772	0	70	0.465	0	71	0.108	1.396	71	0.785	2.749	71	11.511	0	70
521		min	-3.285	4.189	100	-5.549	4.189	72	-0.522	4.189	71	-0.119	2.793	71	-0.687	2.749	107	-10.847	4.189	100
522	M482	max	2.862	4.189	72	6.39	0	70	0.514	0	71	0.103	1.396	75	0.694	2.749	71	12.803	0	70
523		min	-3.534	4.189	100	-5.913	4.189	72	-0.462	4.189	71	-0.122	2.793	71	-0.608	2.749	107	-12.144	4.189	100
524	M483	max	1.078	4.5	102	0.792	4.5	103	1.289	4.5	15	0.072	4.5	103	0.356	2.906	75	0.361	2.906	107
525		min	-0.812	4.5	74	-0.804	4.5	71	-1.182	0	15	-0.073	2.953	71	-2.113	2.906	103	-2.15	2.906	71
526	M484	max	1.919	0	70	1.879	0	15	0.54	5	77	0.124	5	75	0.799	2.5	75	0.479	0	70
527		min	-1.932	0	102	-1.88	5	15	-0.54	0	77	-0.124	4.01	73	-0.799	2.5	77	-2.817	2.5	15
528	M519	max	3.733	0	70	1.82	0	13	0.514	0	71	0.118	0.99	107	0.761	2.5	71	0.932	0	70
529		min	-3.356	0	106	-1.82	5	15	-0.514	5	71	-0.118	0	71	-0.76	2.5	73	-2.501	2.5	15
530	M520	max	4.433	0	100	4.678	0	70	0.336	0	101	0.076	4.189	101	0.595	2.225	71	8.981	0	70
531		min	-3.364	0	76	-4.449	4.189	72	-0.339	0	103	-0.074	3.622	103	-0.587	2.182	103	-8.221	4.189	100
532	M521	max	4.606	0	100	5.146	0	70	0.368	0	101	0.072	4.189	105	0.497	2.575	71	9.959	0	70
533		min	-3.566	0	76	-4.723	4.189	72	-0.37	0	103	-0.08	3.622	103	-0.489	2.575	103	-9.203	4.189	100
534	M522	max	3.472	0	70	1.819	0	13	0.514	5	77	0.118	5	71	0.76	2.5	75	0.867	0	70
535		min	-3.557	0	102	-1.819	5	13	-0.514	0	77	-0.117	4.01	77	-0.76	2.5	77	-2.812	2.5	15
536	M523	max	13.229	0	15	0.92	4.477	100	0.824	4.477	103	0.368	1.166	71	1.086	3.218	71	0.847	2.425	104
537		min	1.273	4.477	107	-0.504	4.477	76	-0.84	4.477	71	-0.366	0	103	-1.07	3.218	103	-1.249	1.166	15
538	M524	max	11.141	0	13	0.788	4.477	102	0.652	4.477	71	0.045	4.477	71	0.853	3.218	103	0.903	3.264	106
539		min	1.029	4.477	107	-0.607	4.477	74	-0.625	4.477	103	-0.042	3.264	103	-0.89	3.218	71	-1.095	3.218	70
540	M525	max	4.287	0	13	0.731	4.477	106	0.636	4.477	71	0.044	4.477	71	0.868	3.218	103	0.948	3.264	106
541		min	0.503	4.477	99	-0.839	4.477	70	-0.636	4.477	103	-0.043	3.264	103	-0.869	3.218	71	-1.302	3.218	70
542	M526	max	10.21	0	16	0.589	4.477	71	0.186	4.477	70	0.014	4.477	74	0.238	3.218	102	0.732	3.264	75
543		min	0.906	4.477	75	-0.598	4.477	103	-0.179	4.477	102	-0.015	3.264	102	-0.248	3.218	70	-1.157	3.218	103
544	M527	max	7.149	0	15	0.841	4.477	100	0.931	4.477	103	0.499	1.166	71	1.204	3.218	71	0.919	2.425	100
545		min	0.547	4.477	99	-0.62	4.477	76	-0.931	4.477	71	-0.499	0	103	-1.203	3.218	103	-1.268	1.166	15
546	M528	max	14.632	0	15	1.407	4.477	100	0.932	4.477	103	0.476	1.166	71	1.173	3.218	71	1.432	3.264	104
547		min	1.342	4.477	75	-1.103	4.477	76	-0.914	4.477	71	-0.478	0	103	-1.192	3.218	103	-1.872	3.218	72
548	M529	max	21.052	0	15	0.479	0	15	0.249	0	71	0.231	1.166	71	0.346	2.378	71	0.199	2.425	96
549		min	3.03	4.477	96	-0.221	4.477	68	-0.243	0	73	-0.23	0	103	-0.339	2.378	73	-1.616	1.166	15
550	M603	max	17.668	0	13	0.036	4.477	68	0.019	4.477	71	0.003	4.477	76	0.022	2.238	73	-0.093	2.238	98
551		min	2.858	4.477	98	-0.037	4.477	92	-0.019	4.477	107	-0.003	0	104	-0.022	2.238	105	-0.821	0	13
552	M604	max	16.884	0	13	0.036	4.477	68	0.019	4.477	71	0.003	4.477	104	0.022	2.238	73	-0.1	2.238	68
553		min	2.928	4.477	67	-0.037	4.477	92	-0.019	4.477	107	-0.003	0	72	-0.022	2.238	105	-0.785	0	13
554	M605	max	21.217	0	15	0.036	4.477	66	0.019	4.477	107	0.003	4.477	104	0.022	2.238	105	-0.114	2.238	66
555		min	3.211	4.477	67	-0.037	4.477	94	-0.019	4.477	71	-0.003	0	72	-0.022	2.238	73	-0.986	0	15
556	M606	max	7.285	5	72	0.03	5	73	0.189	5	15	0.003	5	15	1.567	5	72	1.454	5	104
557		min	-6.759	5	104	-0.03	5	105	-0.189	0	14	-0.001	0	106	-1.466	2.917	104	-1.592	2.76	72
558	M607	max	8.074	5	72	0.03	5	73	0.189	5	16	0.003	5	76	1.737	5	72	1.656	5	104
559		min	-7.697	5	104	-0.03	5	105	-0.189	0	15	-0.004	0	100	-1.668	2.917	104	-1.762	2.76	72
560	M608	max	1.435	0	72	0.019	5	101	0.16	5	16	0	5	96	0.247	0	72	0.19	0	104
561		min	-1.107	0	104	-0.019	5	73	-0.16	0	13	0	0	64	-0.199	2.135	104	-0.263	2.292	72
562	M609	max	0.319	9.014	66	0.029	0	104	0.289	9.014	15	0.007	9.014	13	0.055	0	66	0.097	0	94
563		min	-0.562	0	94	-0.029	0	72	-0.289	0	13	-0.001	0	106	-0.487	4.507	15	-0.442	4.507	13
564	M610	max	0.622	0	102	0.019	5	101	0.16	5	16	0.001	5	72	0.107	0	102	0.064	0	104
565		min	-0.371	0	104	-0.019	5	73	-0.16	0	15	-0.001	0	104	-0.125	2.5	17	-0.167	2.5	15
566	M611	max	1.514	9.014	104	0.029	0	104	0.289	9.014	15	0.004	9.014	72	0.265	5.446	104	0.298	5.446	106

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
567		min	-1.712	9.014	102	-0.029	0	72	-0.289	0	13	-0.004	0	104	-0.501	4.507	15	-0.441	4.507	13
568	M612	max	10.649	8.4	104	0.043	0	104	0.318	8.4	15	0.005	8.4	70	2.293	5.863	104	2.403	8.4	72
569		min	-11.171	8.4	72	-0.043	0	72	-0.318	0	13	-0.005	0	106	-2.544	4.288	72	-2.396	4.288	104
570	M613	max	5.265	0	13	0.036	4.477	68	0.019	4.477	71	0.001	4.477	13	0.022	2.238	73	0.012	2.238	98
571		min	0.05	4.477	107	-0.037	4.477	92	-0.019	4.477	107	0	0	68	-0.022	2.238	105	-0.244	0	13
572	M614	max	4.341	0	16	0.036	4.477	68	0.019	4.477	71	0	4.477	74	0.022	2.238	73	0.007	2.238	68
573		min	-0.068	4.477	75	-0.037	4.477	92	-0.019	4.477	107	-0.001	0	13	-0.022	2.238	105	-0.201	0	16
574	M615	max	5.536	0	15	0.036	4.477	66	0.019	4.477	107	0.002	4.477	13	0.022	2.238	105	0.014	2.238	96
575		min	0.269	4.477	107	-0.037	4.477	94	-0.019	4.477	71	0	0	68	-0.022	2.238	73	-0.257	0	15
576	M616	max	6.4	0	15	0.036	4.477	66	0.019	4.477	107	0	4.477	74	0.022	2.238	105	0.001	2.238	66
577		min	0.358	4.477	75	-0.037	4.477	94	-0.019	4.477	71	-0.001	0	13	-0.022	2.238	73	-0.297	0	15
578	M617	max	2.805	9.014	106	0.293	0	15	0.028	0	106	0.002	9.014	100	0.534	4.507	13	0.185	4.883	106
579		min	-3.005	9.014	70	-0.293	9.014	13	-0.028	0	74	-0.003	0	19	-0.178	9.014	106	-0.534	4.507	13
580	M661	max	3.624	9.014	106	0.293	0	15	0.028	9.014	100	0	9.014	68	0.582	4.507	13	0.237	4.883	106
581		min	-4.273	9.014	70	-0.293	9.014	13	-0.028	0	70	-0.007	0	13	-0.231	9.014	106	-0.582	4.507	13
582	M662	max	7.782	8.4	106	0.327	0	13	0.041	8.4	70	0	8.4	94	0.729	4.375	70	0.625	4.813	106
583		min	-8.848	8.4	70	-0.327	8.4	15	-0.041	0	44	-0.012	0	13	-0.619	8.4	106	-0.849	4.2	70
584	M663	max	8.604	8.4	76	0.327	0	13	0.041	8.4	44	0.003	8.4	68	0.803	4.375	100	0.69	4.813	76
585		min	-9.774	8.4	100	-0.327	8.4	15	-0.041	0	74	-0.016	0	13	-0.684	8.4	76	-0.923	4.2	100
586	M664	max	2.154	9.014	72	0.293	0	15	0.028	0	100	0.006	9.014	19	0.441	4.507	13	0.137	9.014	72
587		min	-1.881	9.014	104	-0.293	9.014	13	-0.028	9.014	40	-0.001	0	70	-0.138	4.883	76	-0.441	4.507	13
588	M665	max	2.894	9.014	76	0.293	0	15	0.028	0	70	0.011	9.014	13	0.487	4.507	13	0.184	9.014	76
589		min	-3.127	9.014	70	-0.293	9.014	13	-0.028	9.014	100	0	0	68	-0.191	4.883	76	-0.487	4.507	13
590	M666	max	6.996	8.4	106	0.327	0	13	0.041	8.4	42	0.013	8.4	13	0.747	4.2	70	0.556	8.4	106
591		min	-7.56	8.4	70	-0.327	8.4	15	-0.041	8.4	100	0	0	98	-0.563	4.813	106	-0.626	4.375	70
592	M667	max	8.031	8.4	76	0.327	0	13	0.041	0	100	0.006	8.4	92	0.858	4.2	100	0.639	8.4	76
593		min	-8.955	8.4	100	-0.327	8.4	15	-0.041	0	102	-0.005	0	68	-0.645	4.813	76	-0.737	4.375	100
594	M668	max	4.777	0	70	0.194	0	15	0.03	5	107	0.003	5	64	0.377	2.396	102	0.38	0	70
595		min	-4.412	0	106	-0.194	5	13	-0.03	5	101	-0.002	0	96	-0.38	0	70	-0.377	2.396	102
596	M669	max	1.392	0	70	0.163	0	15	0.019	5	107	0.001	5	102	0.156	2.5	15	0.089	0	70
597		min	-1.4	0	72	-0.163	5	13	-0.019	5	71	-0.001	0	104	-0.089	0	70	-0.156	2.5	15
598	M670	max	2.023	0	70	0.163	0	15	0.019	0	75	0.001	5	100	0.128	2.448	102	0.129	0	70
599		min	-1.777	0	106	-0.163	5	13	-0.019	0	103	-0.001	0	72	-0.129	0	70	-0.128	2.448	102
600	M671	max	5.534	0	70	0.194	0	15	0.03	0	71	0.002	5	96	0.407	2.396	102	0.44	0	70
601		min	-4.878	0	106	-0.194	5	13	-0.03	5	105	-0.003	0	15	-0.44	0	70	-0.407	2.396	102
602	M672	max	-0.939	0	107	0.195	0	13	0.024	0	100	0.007	8.577	106	0.931	4.288	15	0.641	8.577	15
603		min	-13.026	8.577	15	-0.195	8.577	15	-0.024	0	76	-0.01	0	13	0.046	0	107	0.046	2.412	107
604	M673	max	-0.506	0	107	0.195	8.577	15	0.024	0	72	0.007	8.577	76	0.595	8.577	13	0.885	4.288	13
605		min	-12.085	8.577	13	-0.195	0	13	-0.024	0	104	-0.013	0	13	0.024	2.412	107	0.025	0	107
606	M674	max	-0.265	0	75	0.195	0	15	0.024	0	72	0.008	8.577	74	0.816	4.288	16	0.526	8.577	16
607		min	-10.681	8.577	16	-0.195	8.577	13	-0.024	0	104	-0.011	0	15	0.013	0	75	0.006	4.288	74
608	M675	max	-1.089	0	75	0.195	8.577	15	0.024	8.577	102	0.007	8.577	74	0.015	4.288	74	0.296	4.288	13
609		min	-14.703	8.577	16	-0.195	0	13	-0.024	0	76	-0.014	0	15	-0.296	4.288	13	-0.015	4.288	76
610	M676	max	12.267	0	74	0.043	0	72	0.318	8.4	13	0.009	8.4	106	2.638	0	74	2.803	0	102
611		min	-13.03	0	102	-0.043	0	104	-0.318	0	15	-0.013	0	70	-2.824	3.675	102	-2.638	0	74
612	M677	max	13.76	0	74	0.043	8.4	72	0.318	8.4	15	0.015	8.4	70	2.963	2.538	74	3.129	0	102
613		min	-14.548	0	102	-0.043	8.4	100	-0.318	0	13	-0.009	0	106	-3.27	4.113	102	-3.065	4.113	74
614	M678	max	-5.748	0	96	0.175	0	13	0.023	7.955	72	0.002	7.955	106	2.126	4.06	15	1.886	7.955	15
615		min	-38.292	7.955	15	-0.175	7.955	15	-0.022	7.955	104	-0.016	0	13	0.283	0	96	0.263	3.895	96
616	M679	max	-5.215	0	98	0.175	7.955	15	0.023	7.955	100	0.004	7.955	106	1.587	7.955	13	1.828	4.06	13
617		min	-32.23	7.955	13	-0.175	0	13	-0.022	7.955	76	-0.005	0	70	0.237	3.895	98	0.257	0	98
618	M680	max	-5.864	0	68	0.175	7.955	13	0.023	7.955	72	0.002	7.955	104	1.886	7.955	15	2.126	4.06	15
619		min	-38.292	7.955	15	-0.175	0	15	-0.022	7.955	104	-0.018	0	15	0.269	3.895	68	0.289	0	68
620	M681	max	-5.432	0	68	0.175	0	15	0.023	7.955	100	0.005	7.955	70	1.78	4.06	13	1.54	7.955	13
621		min	-31.258	7.955	13	-0.175	7.955	13	-0.022	7.955	76	-0.005	0	106	0.268	0	68	0.248	3.895	68

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
622	M682	max	-4.72	0	96	0.175	0	13	0.023	7.955	72	0.002	7.955	76	1.751	4.06	15	1.511	7.955	15
623		min	-30.675	7.955	15	-0.175	7.955	15	-0.022	7.955	104	-0.018	0	13	0.233	0	96	0.213	3.895	96
624	M683	max	-4.669	0	98	0.175	7.955	15	0.023	7.955	100	0.003	7.955	68	1.322	7.955	13	1.562	4.06	13
625		min	-26.837	7.955	13	-0.175	0	13	-0.022	7.955	76	-0.014	0	13	0.21	3.895	98	0.23	0	98
626	M684	max	-5.032	0	67	0.175	7.955	13	0.023	7.955	72	0.003	7.955	104	1.611	7.955	15	1.851	4.06	15
627		min	-32.698	7.955	15	-0.175	0	15	-0.022	7.955	104	-0.02	0	15	0.228	3.895	67	0.248	0	67
628	M685	max	-4.562	0	66	0.175	0	15	0.023	7.955	100	0.003	7.955	96	1.51	4.06	16	1.27	7.955	16
629		min	-25.78	7.955	16	-0.175	7.955	13	-0.022	7.955	76	-0.012	0	15	0.225	0	66	0.205	3.895	66
630	M686	max	-0.093	0	107	0.195	0	13	0.024	0	100	0.009	8.577	102	0.627	4.288	15	0.337	8.577	15
631		min	-6.854	8.577	15	-0.195	8.577	15	-0.024	0	76	-0.007	0	74	0.005	0	107	0.004	2.412	107
632	M687	max	0.296	0	107	0.195	8.577	15	0.024	0	72	0.009	8.577	72	0.304	8.577	13	0.593	4.288	13
633		min	-6.172	8.577	13	-0.195	0	13	-0.024	0	104	-0.008	0	104	-0.017	4.288	19	-0.015	0	107
634	M688	max	-0.243	0	75	0.195	8.577	13	0.024	0	100	0.008	8.577	104	0.394	8.577	16	0.684	4.288	16
635		min	-8.008	8.577	16	-0.195	0	15	-0.024	0	76	-0.008	0	72	-0.009	4.288	76	0.012	0	75
636	M689	max	0.492	0	75	0.195	0	15	0.024	0	72	0.008	8.577	104	0.525	4.288	16	0.236	8.577	16
637		min	-4.789	8.577	16	-0.195	8.577	13	-0.024	0	104	-0.009	0	72	-0.024	0	75	-0.081	4.288	18
638	M690	max	8.016	5	102	3.635	0	15	3.001	0	71	0.738	5	103	7.447	2.5	71	1.877	5	104
639		min	-7.522	5	104	-3.635	5	15	-3.001	5	71	-0.739	2.5	71	-7.447	2.5	103	-9.681	2.5	102
640	M691	max	6.58	5	102	3.519	0	15	2.912	5	103	0.716	2.5	71	7.223	2.5	71	1.577	5	104
641		min	-6.318	5	104	-3.519	5	15	-2.912	0	103	-0.716	0	103	-7.225	2.5	103	-9.056	2.5	102
642	M692	max	0.204	0	102	0.204	0	103	0	2.083	70	0	2.083	107	0.551	0	14	0.551	0	16
643		min	-0.204	0	100	-0.204	0	101	-0.641	0	15	0	0	12	-0.057	0	47	-0.057	0	75
644	M693	max	0.341	0	102	0.341	0	77	0	2.083	70	0	2.083	107	0.883	0	14	0.883	0	16
645		min	-0.341	0	100	-0.341	0	45	-1.017	0	15	0	0	12	-0.096	0	77	-0.096	0	45
646	M694	max	0.251	0.99	34	0.198	0	107	0	1.583	107	0	1.583	107	0.459	0	14	0.459	0	16
647		min	-0.251	0	96	-0.198	0	45	-0.667	0	15	0	0	12	-0.044	0	107	-0.044	0	45
648	M695	max	0.138	0.99	68	0.113	0	103	0	1.583	70	0	1.583	107	0.275	0	14	0.275	0	16
649		min	-0.138	0	92	-0.113	0	45	-0.406	0	15	0	0	12	-0.025	0	107	-0.025	0	75
650	M696	max	0.359	0	72	0.359	0	73	0	2.083	107	0	2.083	107	0.928	0	14	0.928	0	16
651		min	-0.359	0	100	-0.359	0	45	-1.068	0	15	0	0	12	-0.101	0	77	-0.101	0	45
652	M697	max	0.138	0.99	34	0.113	0	43	0	1.583	70	0	1.583	107	0.274	0	14	0.274	0	16
653		min	-0.138	0	32	-0.113	0	45	-0.405	0	15	0	0	12	-0.025	0	47	-0.025	0	45
654	M701	max	0.26	0	106	0.26	0	47	0	2.083	107	0	2.083	107	0.688	0	14	0.688	0	16
655		min	-0.26	0	74	-0.26	0	71	-0.796	0	15	0	0	12	-0.073	0	47	-0.073	0	75
656	M702	max	0.182	0.99	94	0.146	0	47	0	1.583	107	0	1.583	107	0.347	0	14	0.347	0	16
657		min	-0.182	0	36	-0.146	0	75	-0.507	0	15	0	0	12	-0.033	0	77	-0.033	0	105
658	M703	max	0.182	0.99	68	0.146	0	77	0	1.583	107	0	1.583	107	0.348	0	14	0.348	0	16
659		min	-0.182	0	92	-0.146	0	101	-0.509	0	15	0	0	12	-0.033	0	77	-0.033	0	105
660	M704	max	0.251	0.99	94	0.198	0	73	0	1.583	107	0	1.583	107	0.46	0	14	0.46	0	16
661		min	-0.251	0	66	-0.198	0	105	-0.669	0	15	0	0	12	-0.044	0	47	-0.044	0	75
662	M705	max	0.241	0.99	64	0.19	0	43	0	1.583	107	0	1.583	107	0.444	0	14	0.444	0	16
663		min	-0.241	0	96	-0.19	0	75	-0.646	0	15	0	0	12	-0.043	0	107	-0.043	0	75
664	M706	max	0.241	0.99	68	0.19	0	73	0	1.583	107	0	1.583	107	0.445	0	14	0.445	0	16
665		min	-0.241	0	62	-0.19	0	41	-0.647	0	15	0	0	12	-0.043	0	107	-0.043	0	45
666	M460	max	21.668	0	15	5.48	0	100	17.939	0	103	1.043	5.645	77	15.55	0.93	103	22.815	4.25	72
667		min	-4.502	4.25	104	-5.445	0	72	-17.7	0	71	-1.135	4.316	71	-15.343	0.93	71	-22.838	4.25	100
668	M471	max	24.797	0	13	11.793	0	102	18.682	0	71	1.073	5.645	71	16.194	0.93	71	22.259	4.25	70
669		min	-3.989	4.25	106	-11.807	0	70	-18.521	0	103	-0.989	4.316	77	-16.037	0.93	103	-20.854	4.25	102
670	M473	max	27.149	0	13	10.941	0	102	0.388	5.645	107	0.14	4.648	71	0.52	4.25	71	21.289	4.25	70
671		min	-2.377	4.25	76	-10.812	0	70	-0.403	5.645	71	-0.106	4.715	77	-0.487	4.25	107	-19.243	4.25	102
672	M507	max	20.134	0	15	5.221	0	100	0.44	5.645	71	0.117	4.516	77	0.554	4.25	103	21.108	4.25	72
673		min	-3.397	4.25	74	-5.094	0	72	-0.428	5.645	107	-0.148	4.316	71	-0.554	4.25	71	-21.716	4.25	100
674	M508	max	0.916	5	72	0.019	0	75	0.16	5	15	0	5	74	0.158	5	72	0.075	5	104
675		min	-0.438	5	104	-0.019	0	103	-0.16	0	14	0	0	102	-0.084	2.865	104	-0.252	2.5	15
676	M509	max	21.383	57	71	0.586	20.781	16	0.172	36.219	72	0.061	35.625	13	1.179	13.656	72	1.861	57	107

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
677		min	-64.982	28.5	13	-0.559	36.219	13	-0.187	20.781	72	-0.071	0	15	-0.988	13.656	104	-1.924	57	71
678	M510	max	19.981	57	71	0.543	13.063	15	0.36	49.875	70	0.056	35.625	13	1.488	13.656	102	1.825	57	103
679		min	-59.523	28.5	15	-0.525	43.938	15	-0.303	49.875	106	-0.065	43.938	15	-1.386	43.344	70	-1.798	57	71
680	M511	max	0.195	9.014	96	0.029	9.014	104	0.289	9.014	15	0.028	9.014	15	0.034	0	96	0.245	0	15
681		min	-1.425	0	15	-0.029	9.014	72	-0.289	0	13	0	0	74	-0.705	4.507	15	-0.228	4.507	17
682	M512	max	1.47	9.014	74	0.029	9.014	104	0.289	9.014	15	0.017	9.014	13	0.253	9.014	74	0.332	9.014	72
683		min	-1.927	9.014	72	-0.029	9.014	72	-0.289	0	13	-0.002	0	76	-0.664	4.507	15	-0.278	4.507	17
684	M513	max	10.668	8.4	104	0.043	8.4	70	0.318	8.4	15	0.017	8.4	15	2.294	8.4	104	2.442	8.4	72
685		min	-11.355	8.4	72	-0.043	8.4	106	-0.318	0	13	-0.004	0	74	-2.463	4.725	72	-2.294	8.4	104
686	M514	max	71.797	28.5	15	0.881	50.469	15	0.181	21.375	13	0.024	28.5	15	1.166	28.5	13	1.532	50.469	15
687		min	0.285	21.375	74	-0.907	6.531	15	-0.182	35.625	13	-0.015	0	13	-0.296	17.219	72	-2.858	0	15
688	M515	max	65.285	28.5	13	0.83	50.469	13	0.185	21.375	13	0.021	28.5	15	1.169	28.5	13	1.41	6.531	13
689		min	-2.595	21.375	76	-0.833	6.531	13	-0.183	35.625	13	-0.021	50.469	15	-0.287	17.219	102	-2.472	0	13
690	M516	max	1	4.5	106	0.823	4.5	103	1.325	4.5	15	0.075	4.5	103	0.391	2.906	75	0.393	2.906	107
691		min	-1.14	4.5	70	-0.83	4.5	71	-1.214	0	15	-0.075	2.953	71	-2.173	2.906	103	-2.194	2.906	71
692	M517	max	1.189	0	100	0.791	4.5	103	1.283	4.5	16	0.07	4.5	103	0.359	2.906	75	0.36	2.906	107
693		min	-1.183	0	72	-0.792	4.5	71	-1.176	0	13	-0.069	2.953	71	-2.111	2.906	103	-2.113	2.906	71
694	M518	max	2.701	4.189	72	6.088	0	70	2.562	4.189	77	0.634	4.189	77	3.929	2.749	71	12.152	0	70
695		min	-3.44	4.189	100	-5.922	4.189	72	-2.777	4.189	71	-0.685	2.793	71	-3.628	2.749	77	-11.499	4.189	100
696	M707	max	2.608	4.189	72	5.809	0	100	0.467	0	71	0.103	1.396	75	0.787	2.749	71	11.586	0	70
697		min	-3.26	4.189	100	-5.45	4.189	72	-0.523	4.189	71	-0.124	2.793	71	-0.687	2.749	107	-10.929	4.189	100
698	M708	max	1.073	4.5	102	0.791	4.5	103	1.29	4.5	15	0.072	4.5	103	0.356	2.906	75	0.361	2.906	107
699		min	-0.812	4.5	74	-0.804	4.5	71	-1.182	0	15	-0.073	2.953	71	-2.111	2.906	103	-2.151	2.906	71
700	M709	max	1.919	0	70	1.879	0	15	0.54	5	77	0.124	5	75	0.799	2.5	75	0.479	0	70
701		min	-1.933	0	102	-1.88	5	15	-0.54	0	77	-0.124	4.01	73	-0.799	2.5	77	-2.818	2.5	15
702	M710	max	3.159	0	70	1.82	0	15	0.514	0	71	0.118	0.99	107	0.76	2.5	71	0.788	0	70
703		min	-2.826	0	106	-1.82	5	15	-0.514	5	71	-0.118	0	71	-0.76	2.5	73	-2.527	2.5	15
704	M711	max	4.573	0	100	4.912	0	70	0.389	0	101	0.088	0.567	103	1.533	2.575	71	9.472	0	70
705		min	-3.566	0	76	-4.73	4.189	72	-0.398	0	103	-0.086	3.622	103	-1.446	2.575	73	-8.71	4.189	100
706	M712	max	4.455	0	100	4.706	0	70	0.337	0	101	0.072	4.189	105	0.596	2.182	71	9.04	0	70
707		min	-3.315	0	76	-4.372	4.189	72	-0.339	0	103	-0.079	3.622	103	-0.588	2.225	103	-8.283	4.189	100
708	M713	max	4.031	0	70	1.819	0	13	0.514	5	73	0.118	0.99	73	0.76	2.5	75	1.006	0	70
709		min	-4.053	0	102	-1.819	5	13	-0.514	0	73	-0.117	4.01	77	-0.76	2.5	73	-2.79	2.5	15
710	M714	max	13.444	0	15	0.921	4.477	100	0.823	4.477	103	0.368	1.166	71	1.09	3.218	71	0.794	2.425	104
711		min	1.144	4.477	107	-0.505	4.477	76	-0.843	4.477	71	-0.366	0	103	-1.07	3.218	103	-1.263	1.166	15
712	M715	max	10.977	0	14	0.786	4.477	102	0.654	4.477	71	0.045	4.477	71	0.849	3.218	103	0.851	3.264	106
713		min	0.847	4.477	107	-0.605	4.477	74	-0.622	4.477	103	-0.043	3.264	103	-0.893	3.218	71	-1.037	3.218	70
714	M716	max	4.283	0	13	0.731	4.477	106	0.636	4.477	71	0.044	4.477	71	0.869	3.218	103	0.948	3.264	106
715		min	0.504	4.477	97	-0.839	4.477	70	-0.636	4.477	103	-0.043	3.264	103	-0.869	3.218	71	-1.301	3.218	70
716	M717	max	10.377	0	13	0.588	4.477	71	0.179	4.477	70	0.014	4.477	74	0.231	3.218	102	0.737	3.264	75
717		min	0.819	4.477	75	-0.598	4.477	103	-0.174	4.477	102	-0.014	3.264	102	-0.239	3.218	70	-1.17	3.218	103
718	M718	max	7.15	0	15	0.841	4.477	100	0.931	4.477	103	0.499	1.166	71	1.204	3.218	71	0.919	2.425	100
719		min	0.55	4.477	97	-0.62	4.477	76	-0.931	4.477	71	-0.499	0	103	-1.204	3.218	103	-1.269	1.166	15
720	M719	max	13.892	0	15	1.285	4.477	100	0.843	4.477	103	0.366	1.166	71	1.067	3.218	71	1.394	3.264	104
721		min	1.184	4.477	75	-1.053	4.477	76	-0.824	4.477	71	-0.368	0	103	-1.088	3.218	103	-1.839	3.218	72
722	M720	max	20.064	0	15	0.036	4.477	66	0.019	4.477	73	0.003	4.477	72	0.022	2.238	71	-0.11	2.238	96
723		min	3.111	4.477	99	-0.037	4.477	94	-0.019	4.477	105	-0.003	0	104	-0.022	2.238	107	-0.932	0	15
724	M721	max	17.606	0	13	0.036	4.477	68	0.019	4.477	105	0.003	4.477	76	0.022	2.238	107	-0.103	2.238	98
725		min	3.001	4.477	99	-0.037	4.477	92	-0.019	4.477	73	-0.003	0	104	-0.022	2.238	71	-0.818	0	13
726	M722	max	16.96	0	13	0.036	4.477	68	0.019	4.477	105	0.003	4.477	104	0.022	2.238	107	-0.089	2.238	68
727		min	2.776	4.477	68	-0.037	4.477	92	-0.019	4.477	73	-0.004	0	72	-0.022	2.238	71	-0.788	0	13
728	M723	max	21.62	0	15	0.482	0	15	0.235	0	101	0.221	1.166	101	0.327	2.378	101	0.185	2.425	66
729		min	3.078	4.477	66	-0.214	4.477	98	-0.242	0	103	-0.222	0	73	-0.336	2.378	103	-1.647	1.166	15
730	M724	max	7.919	5	72	0.03	0	71	0.189	5	16	0.004	5	70	1.703	5	72	1.634	5	104
731		min	-7.6	5	104	-0.03	0	107	-0.189	0	15	-0.003	0	76	-1.647	2.917	104	-1.728	2.76	72

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
732	M725	max	7.33	5	72	0.03	0	71	0.189	5	13	0.001	5	76	1.577	5	72	1.457	5	104
733		min	-6.772	5	104	-0.03	0	107	-0.189	0	16	-0.003	0	15	-1.469	2.917	104	-1.601	2.76	72
734	M726	max	0.757	5	15	0.019	0	103	0.16	5	13	0.001	5	100	0.13	0	15	0.06	0	104
735		min	-0.347	0	104	-0.019	0	75	-0.16	0	16	-0.001	0	72	-0.068	2.135	104	-0.272	2.5	15
736	M727	max	1.497	9.014	74	0.029	0	70	0.289	9.014	15	0.007	9.014	13	0.262	5.446	74	0.302	9.014	102
737		min	-1.753	9.014	102	-0.029	0	106	-0.289	0	13	-0.001	0	76	-0.468	4.507	15	-0.469	4.507	13
738	M728	max	1.307	0	102	0.019	0	103	0.16	5	16	0.001	5	15	0.225	0	102	0.194	0	74
739		min	-1.127	0	74	-0.019	0	75	-0.16	0	14	0	0	96	-0.202	2.135	74	-0.241	2.292	102
740	M729	max	2.889	9.014	74	0.029	0	70	0.289	9.014	15	0.004	9.014	72	0.502	5.446	74	0.525	5.446	106
741		min	-3.025	9.014	106	-0.029	0	106	-0.289	0	13	-0.003	0	104	-0.618	4.601	102	-0.577	4.601	74
742	M730	max	12.265	8.4	104	0.043	0	70	0.318	8.4	15	0.006	8.4	74	2.641	5.863	104	2.743	5.863	76
743		min	-12.739	8.4	76	-0.043	0	102	-0.318	0	13	-0.006	0	106	-2.879	4.288	72	-2.744	4.288	104
744	M731	max	5.09	0	14	0.036	4.477	68	0.019	4.477	105	0.001	4.477	13	0.022	2.238	107	0.005	4.477	107
745		min	-0.117	4.477	107	-0.037	4.477	92	-0.019	4.477	73	0	0	104	-0.022	2.238	71	-0.236	0	14
746	M732	max	4.515	0	13	0.036	4.477	68	0.019	4.477	105	0	4.477	107	0.022	2.238	107	0.016	2.238	68
747		min	-0.167	4.477	75	-0.037	4.477	92	-0.019	4.477	73	-0.001	0	13	-0.022	2.238	71	-0.209	0	13
748	M733	max	5.759	0	15	0.036	4.477	96	0.019	4.477	73	0.002	4.477	13	0.022	2.238	71	0.004	2.238	96
749		min	0.16	4.477	107	-0.037	4.477	64	-0.019	4.477	105	0	0	104	-0.022	2.238	107	-0.267	0	15
750	M734	max	6.17	0	15	0.036	4.477	66	0.019	4.477	73	0	4.477	107	0.022	2.238	71	0.011	2.238	66
751		min	0.182	4.477	75	-0.037	4.477	64	-0.019	4.477	105	-0.001	0	13	-0.022	2.238	107	-0.286	0	15
752	M735	max	1.865	9.014	106	0.293	0	15	0.028	0	76	0.002	9.014	100	0.52	4.507	13	0.125	4.883	106
753		min	-2.001	9.014	70	-0.293	9.014	13	-0.028	9.014	42	-0.003	0	19	-0.119	9.014	106	-0.52	4.507	13
754	M736	max	2.689	9.014	106	0.293	0	15	0.028	0	72	0	9.014	68	0.567	4.507	13	0.178	4.883	106
755		min	-3.268	9.014	100	-0.293	9.014	13	-0.028	0	44	-0.007	0	13	-0.171	9.014	106	-0.567	4.507	13
756	M737	max	6.8	8.4	106	0.327	0	13	0.041	0	72	0	8.4	98	0.67	4.2	13	0.547	4.813	106
757		min	-7.681	8.4	70	-0.327	8.4	15	-0.041	0	104	-0.012	0	13	-0.541	8.4	106	-0.756	4.2	70
758	M738	max	7.827	8.4	76	0.327	0	13	0.041	0	46	0.003	8.4	68	0.746	4.375	100	0.629	4.813	76
759		min	-9.059	8.4	100	-0.327	8.4	15	-0.041	0	100	-0.016	0	13	-0.623	8.4	76	-0.866	4.2	100
760	M739	max	3.04	9.014	102	0.293	0	15	0.028	0	70	0.006	9.014	19	0.455	4.507	13	0.193	9.014	102
761		min	-2.889	9.014	74	-0.293	9.014	13	-0.028	9.014	100	-0.001	0	74	-0.198	4.883	106	-0.455	4.507	13
762	M740	max	3.823	9.014	76	0.293	0	15	0.028	0	104	0.011	9.014	13	0.501	4.507	13	0.243	9.014	76
763		min	-4.123	9.014	70	-0.293	9.014	13	-0.028	9.014	70	0	0	68	-0.25	4.883	76	-0.501	4.507	13
764	M741	max	7.886	8.4	106	0.327	0	13	0.041	0	74	0.013	8.4	13	0.822	4.2	70	0.627	8.4	106
765		min	-8.505	8.4	70	-0.327	8.4	15	-0.041	0	76	0	0	98	-0.633	4.813	106	-0.702	4.375	70
766	M742	max	8.703	8.4	76	0.327	0	13	0.041	0	100	0.006	8.4	92	0.896	4.2	100	0.692	8.4	76
767		min	-9.433	8.4	100	-0.327	8.4	15	-0.041	8.4	74	-0.005	0	68	-0.698	4.813	76	-0.775	4.375	100
768	M743	max	5.333	0	70	0.194	0	15	0.03	0	71	0.003	5	94	0.417	2.396	102	0.424	0	70
769		min	-4.941	0	106	-0.194	5	13	-0.03	0	103	-0.002	0	96	-0.424	0	70	-0.417	2.396	102
770	M744	max	1.945	0	70	0.163	0	15	0.019	0	71	0.001	5	102	0.15	2.5	15	0.124	0	70
771		min	-1.893	0	106	-0.163	5	13	-0.019	5	41	-0.001	0	104	-0.124	0	70	-0.15	2.5	15
772	M745	max	1.467	0	70	0.163	0	15	0.019	0	101	0.001	5	100	0.112	2.5	15	0.093	0	70
773		min	-1.26	0	106	-0.163	5	13	-0.019	0	73	-0.001	0	72	-0.093	0	70	-0.112	2.5	15
774	M746	max	4.845	0	70	0.194	0	15	0.03	5	77	0.002	5	96	0.364	2.396	102	0.385	0	70
775		min	-4.295	0	106	-0.194	5	13	-0.03	5	101	-0.003	0	15	-0.385	0	70	-0.364	2.396	102
776	M747	max	-0.711	0	107	0.195	0	13	0.024	0	70	0.007	8.577	106	0.952	4.288	14	0.662	8.577	14
777		min	-13.448	8.577	14	-0.195	8.577	15	-0.024	0	106	-0.01	0	13	0.035	0	107	0.035	2.412	107
778	M748	max	-0.174	0	107	0.195	8.577	15	0.024	0	102	0.007	8.577	76	0.58	8.577	14	0.87	4.288	14
779		min	-11.788	8.577	14	-0.195	0	13	-0.024	0	74	-0.013	0	13	0.008	2.412	107	0.009	0	107
780	M749	max	-0.109	0	75	0.195	0	15	0.024	0	102	0.007	8.577	104	0.831	4.288	13	0.541	8.577	13
781		min	-10.996	8.577	13	-0.195	8.577	13	-0.024	0	74	-0.011	0	15	0.005	0	75	0.005	2.412	75
782	M750	max	-0.784	0	75	0.195	8.577	15	0.024	0	70	0.007	8.577	74	0.015	4.288	104	0.296	4.288	13
783		min	-14.231	8.577	15	-0.195	0	13	-0.024	0	106	-0.014	0	15	-0.296	4.288	13	-0.015	4.288	106
784	M751	max	13.768	0	74	0.043	0	76	0.318	8.4	13	0.011	8.4	106	2.961	0	74	3.044	0	102
785		min	-14.153	0	102	-0.043	0	100	-0.318	0	15	-0.015	0	70	-3.065	3.675	102	-2.961	0	74
786	M752	max	12.185	0	74	0.043	8.4	106	0.318	8.4	15	0.013	8.4	70	2.624	2.538	74	2.831	0	102

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
787		min	-13.163	0	102	-0.043	8.4	70	-0.318	0	13	-0.008	0	106	-2.973	4.113	102	-2.727	4.113	74
788	M753	max	-5.696	0	98	0.175	0	13	0.023	7.955	102	0.01	7.955	77	2.045	4.06	15	1.805	7.955	15
789		min	-36.652	7.955	15	-0.175	7.955	15	-0.022	7.955	74	-0.016	0	13	0.281	0	98	0.261	3.895	98
790	M754	max	-5.522	0	99	0.175	7.955	15	0.023	7.955	70	0.013	7.955	75	1.583	7.955	13	1.823	4.06	13
791		min	-32.14	7.955	13	-0.175	0	13	-0.022	7.955	106	-0.013	0	73	0.252	3.895	99	0.272	0	99
792	M755	max	-5.821	0	66	0.175	7.955	13	0.023	7.955	102	0.001	7.955	104	1.921	7.955	15	2.162	4.06	15
793		min	-39.009	7.955	15	-0.175	0	15	-0.022	7.955	74	-0.018	0	15	0.267	3.895	66	0.287	0	66
794	M756	max	-5.105	0	68	0.175	0	15	0.023	7.955	70	0.005	7.955	70	1.781	4.06	13	1.541	7.955	13
795		min	-31.294	7.955	13	-0.175	7.955	13	-0.022	7.955	106	-0.004	0	106	0.252	0	68	0.232	3.895	68
796	M757	max	-4.902	0	99	0.175	0	13	0.023	7.955	102	0.003	7.955	76	1.776	4.06	15	1.536	7.955	15
797		min	-31.192	7.955	15	-0.175	7.955	15	-0.022	7.955	74	-0.018	0	13	0.242	0	99	0.222	3.895	99
798	M758	max	-4.65	0	96	0.175	7.955	15	0.023	7.955	70	0.003	7.955	68	1.317	7.955	14	1.557	4.06	14
799		min	-26.745	7.955	14	-0.175	0	13	-0.022	7.955	106	-0.014	0	13	0.209	3.895	96	0.229	0	96
800	M759	max	-4.766	0	66	0.175	7.955	13	0.023	7.955	102	0.003	7.955	104	1.54	7.955	15	1.78	4.06	15
801		min	-31.264	7.955	15	-0.175	0	15	-0.022	7.955	74	-0.02	0	15	0.215	3.895	66	0.235	0	66
802	M760	max	-4.547	0	68	0.175	0	15	0.023	7.955	70	0.003	7.955	96	1.517	4.06	13	1.277	7.955	13
803		min	-25.922	7.955	13	-0.175	7.955	13	-0.022	7.955	106	-0.012	0	15	0.224	0	68	0.204	3.895	68
804	M761	max	0.11	0	107	0.195	0	13	0.024	0	70	0.009	8.577	102	0.648	4.288	14	0.358	8.577	14
805		min	-7.279	8.577	14	-0.195	8.577	15	-0.024	0	106	-0.007	0	74	-0.005	0	107	-0.015	4.288	106
806	M762	max	0.605	0	107	0.195	8.577	15	0.024	0	102	0.009	8.577	102	0.289	8.577	14	0.578	4.288	14
807		min	-5.866	8.577	14	-0.195	0	13	-0.024	0	74	-0.008	0	74	-0.034	4.288	104	-0.03	0	107
808	M763	max	0.07	0	75	0.195	8.577	13	0.024	0	70	0.008	8.577	74	0.374	8.577	15	0.663	4.288	15
809		min	-7.593	8.577	15	-0.195	0	15	-0.024	0	106	-0.008	0	102	-0.004	2.412	75	-0.003	0	75
810	M764	max	0.673	0	75	0.195	0	15	0.024	0	102	0.008	8.577	104	0.541	4.288	13	0.251	8.577	13
811		min	-5.102	8.577	13	-0.195	8.577	13	-0.024	0	74	-0.009	0	72	-0.033	0	75	-0.068	4.288	19
812	M765	max	6.986	5	72	3.521	0	15	2.912	0	71	0.716	5	103	7.226	2.5	71	1.612	5	74
813		min	-6.458	5	74	-3.521	5	15	-2.912	5	71	-0.716	2.5	71	-7.225	2.5	103	-9.161	2.5	72
814	M766	max	7.512	5	76	3.633	0	15	3	5	103	0.738	5	103	7.444	2.5	71	1.828	5	74
815		min	-7.323	5	74	-3.633	5	15	-3	0	103	-0.738	0	103	-7.446	2.5	103	-9.542	2.5	72
816	M768	max	0.26	0	102	0.26	0	43	0	2.083	107	0	2.083	107	0.688	0	14	0.688	0	16
817		min	-0.26	0	44	-0.26	0	75	-0.796	0	15	0	0	12	-0.073	0	107	-0.073	0	45
818	M769	max	0.251	0.99	38	0.198	0	73	0	1.583	107	0	1.583	107	0.459	0	14	0.459	0	16
819		min	-0.251	0	32	-0.198	0	71	-0.667	0	15	0	0	12	-0.044	0	107	-0.044	0	75
820	M771	max	0.359	0	102	0.359	0	73	0	2.083	107	0	2.083	107	0.928	0	14	0.928	0	16
821		min	-0.359	0	74	-0.359	0	101	-1.068	0	15	0	0	12	-0.101	0	47	-0.101	0	105
822	M776	max	0.26	0	46	0.26	0	43	0	2.083	107	0	2.083	107	0.688	0	14	0.688	0	16
823		min	-0.26	0	40	-0.26	0	75	-0.796	0	15	0	0	12	-0.073	0	107	-0.073	0	45
824	M777	max	0.182	0.99	68	0.146	0	103	0	1.583	107	0	1.583	107	0.347	0	14	0.347	0	16
825		min	-0.182	0	96	-0.146	0	71	-0.507	0	15	0	0	12	-0.033	0	107	-0.033	0	75
826	M778	max	0.182	0.99	68	0.146	0	103	0	1.583	107	0	1.583	107	0.348	0	14	0.348	0	16
827		min	-0.182	0	96	-0.146	0	105	-0.509	0	15	0	0	12	-0.033	0	47	-0.033	0	105
828	M779	max	0.251	0.99	68	0.198	0	77	0	1.583	107	0	1.583	107	0.46	0	14	0.46	0	16
829		min	-0.251	0	66	-0.198	0	71	-0.669	0	15	0	0	12	-0.044	0	107	-0.044	0	105
830	M780	max	0.182	0.99	38	0.146	0	103	0	1.583	107	0	1.583	107	0.347	0	14	0.347	0	16
831		min	-0.182	0	62	-0.146	0	41	-0.507	0	15	0	0	12	-0.033	0	47	-0.033	0	45
832	M781	max	0.182	0.99	38	0.146	0	107	0	1.583	107	0	1.583	107	0.348	0	14	0.348	0	16
833		min	-0.182	0	36	-0.146	0	71	-0.509	0	15	0	0	12	-0.033	0	107	-0.033	0	45
834	M782	max	1.477	0	102	0.155	0	14	0.026	9.319	105	0.001	9.319	101	0.256	4.659	16	0.025	4.659	47
835		min	-1.221	0	74	-0.155	9.319	13	-0.026	9.319	73	-0.001	0	77	-0.025	4.659	75	-0.256	4.659	14
836	M783	max	1.477	0	100	0.155	0	16	0.026	9.319	107	0.001	9.319	107	0.256	4.659	16	0.025	4.659	45
837		min	-1.221	0	46	-0.155	9.319	13	-0.026	9.319	41	-0.001	0	41	-0.025	4.659	47	-0.256	4.659	13
838	M784	max	1.477	0	102	0.155	0	14	0.026	9.319	105	0.001	9.319	75	0.256	4.659	16	0.025	4.659	107
839		min	-1.221	0	44	-0.155	9.319	15	-0.026	9.319	73	-0.001	0	73	-0.025	4.659	45	-0.256	4.659	13
840	M785	max	1.477	0	100	0.155	0	13	0.026	0	75	0.001	9.319	73	0.256	4.659	13	0.025	4.659	105
841		min	-1.221	0	46	-0.155	9.319	15	-0.026	0	73	-0.001	0	75	-0.025	4.659	47	-0.256	4.659	13

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
842	M485	max	0.173	0	102	0.173	0	103	0	2.083	107	0	2.083	107	0.475	0	14	0.475	0	16
843		min	-0.173	0	104	-0.173	0	45	-0.556	0	13	0	0	12	-0.048	0	107	-0.048	0	45
844	M497	max	0.118	0.99	38	0.098	0	107	0	1.583	107	0	1.583	107	0.242	0	14	0.242	0	16
845		min	-0.118	0	62	-0.098	0	71	-0.36	0	15	0	0	12	-0.022	0	47	-0.022	0	75
846	M498	max	0.118	0.99	38	0.098	0	47	0	1.583	107	0	1.583	107	0.241	0	14	0.241	0	16
847		min	-0.118	0	62	-0.098	0	41	-0.359	0	15	0	0	12	-0.022	0	107	-0.022	0	75
848	M786	max	0.173	0	106	0.173	0	107	0	2.083	107	0	2.083	107	0.475	0	14	0.475	0	16
849		min	-0.173	0	74	-0.173	0	45	-0.556	0	13	0	0	12	-0.048	0	77	-0.048	0	75
850	M787	max	0.118	0.99	38	0.098	0	47	0	1.583	107	0	1.583	107	0.241	0	14	0.241	0	16
851		min	-0.118	0	96	-0.098	0	105	-0.359	0	15	0	0	12	-0.022	0	47	-0.022	0	105
852	M788	max	0.118	0.99	34	0.098	0	47	0	1.583	107	0	1.583	107	0.242	0	14	0.242	0	16
853		min	-0.118	0	66	-0.098	0	105	-0.36	0	15	0	0	12	-0.022	0	77	-0.022	0	45
854	M698	max	0.167	0	106	0.167	0	43	0	2.083	107	0	2.083	107	0.461	0	14	0.461	0	16
855		min	-0.167	0	104	-0.167	0	71	-0.539	0	13	0	0	12	-0.047	0	107	-0.047	0	105
856	M699	max	0.113	0.99	94	0.094	0	43	0	1.583	107	0	1.583	107	0.234	0	14	0.234	0	16
857		min	-0.113	0	36	-0.094	0	105	-0.348	0	15	0	0	12	-0.021	0	107	-0.021	0	105
858	M700	max	0.113	0.99	68	0.094	0	43	0	1.583	107	0	1.583	107	0.235	0	14	0.235	0	16
859		min	-0.113	0	66	-0.094	0	71	-0.349	0	15	0	0	12	-0.021	0	107	-0.021	0	45
860	M468	max	0.167	0	76	0.167	0	103	0	2.083	107	0	2.083	107	0.461	0	14	0.461	0	16
861		min	-0.167	0	44	-0.167	0	41	-0.539	0	13	0	0	12	-0.047	0	77	-0.047	0	45
862	M469	max	0.113	0.99	38	0.094	0	43	0	1.583	107	0	1.583	107	0.234	0	14	0.234	0	16
863		min	-0.113	0	96	-0.094	0	41	-0.348	0	15	0	0	12	-0.021	0	107	-0.021	0	45
864	M506	max	0.113	0.99	98	0.094	0	73	0	1.583	70	0	1.583	107	0.235	0	14	0.235	0	16
865		min	-0.113	0	32	-0.094	0	41	-0.349	0	15	0	0	12	-0.021	0	107	-0.021	0	45
866	M767	max	4.268	0	86	0.845	0	100	0.845	0	103	0	1	107	0.422	0	101	0.422	0	100
867		min	1.799	1	44	-0.845	0	42	-0.845	0	41	0	0	12	-0.422	0	43	-0.422	0	42
868	M770	max	3.112	0	86	6.875	0	100	8.537	0	103	0	1	107	8.115	0	71	6.453	0	100
869		min	1.153	1	44	-6.875	0	42	-8.537	0	71	0	0	12	-8.115	0	103	-6.453	0	42
870	M772	max	2.391	0	86	0.845	0	100	0.845	0	103	0	1	107	0.422	0	101	0.422	0	100
871		min	0.75	1	44	-0.845	0	42	-0.845	0	41	0	0	12	-0.422	0	43	-0.422	0	42
872	M773	max	2.391	0	86	0.845	0	100	0.845	0	103	0	1	107	0.422	0	101	0.422	0	100
873		min	0.75	1	44	-0.845	0	42	-0.845	0	41	0	0	12	-0.422	0	43	-0.422	0	42
874	M774	max	1.048	0	86	3.835	0	100	12.964	0	103	0	1	107	12.542	0	71	3.412	0	100
875		min	0	1	12	-3.835	0	42	-12.964	0	71	0	0	12	-12.542	0	103	-3.412	0	42
876	M775	max	2.164	0	86	8.552	1	56	0.845	0	103	0	1	107	0.422	0	101	8.552	0	56
877		min	0.623	1	44	-8.552	0	86	-0.845	0	41	0	0	12	-0.422	0	43	-8.552	0	86
878	M636	max	0.943	4.917	73	0.679	0	16	0.586	4.917	70	0.001	2.407	74	0.733	2.458	102	0	4.917	107
879		min	-0.942	4.917	71	-1.052	4.917	16	-0.586	4.917	102	-0.002	0	102	-0.733	2.458	70	-1.336	2.458	16
880	M637	max	0.943	0	71	1.052	0	14	0.586	0	102	0.002	1.127	102	0.733	2.458	102	0	4.917	107
881		min	-0.942	0	73	-0.679	4.917	14	-0.586	0	70	-0.001	1.178	74	-0.733	2.458	70	-1.336	2.458	14
882	M789	max	0.006	0	105	0.241	0	16	0.055	5.167	96	0	5.167	101	0.071	2.583	98	0	5.167	107
883		min	-0.099	0	13	-0.241	5.167	13	-0.055	5.167	34	0	0	103	-0.071	2.583	32	-0.311	2.583	13
884	M626	max	2.981	0	86	0.667	0	100	0.667	0	103	0	1	107	0.334	0	101	0.334	0	100
885		min	1.203	1	44	-0.667	0	42	-0.667	0	41	0	0	12	-0.334	0	43	-0.334	0	42
886	M627	max	4.328	0	86	0.667	0	100	0.667	0	103	0	1	107	0.334	0	101	0.334	0	100
887		min	1.955	1	44	-0.667	0	42	-0.667	0	41	0	0	12	-0.334	0	43	-0.334	0	42
888	M630	max	3.274	0	86	0.667	0	100	0.667	0	103	0	1	107	0.334	0	101	0.334	0	100
889		min	1.366	1	44	-0.667	0	42	-0.667	0	41	0	0	12	-0.334	0	43	-0.334	0	42
890	M641	max	4.328	0	86	0.667	0	100	0.667	0	103	0	1	107	0.334	0	101	0.334	0	100
891		min	1.955	1	44	-0.667	0	42	-0.667	0	41	0	0	12	-0.334	0	43	-0.334	0	42
892	M643	max	0	3.33	107	0	3.33	107	0	3.33	107	0	3.33	107	0	3.33	107	0.573	1.665	86
893		min	0	0	12	-0.591	1.353	26	0	0	12	0	0	12	0	0	12	0	0	12
894	M790	max	3.225	1.971	107	5.06	1.971	86	0	3.32	107	0	3.32	107	0	3.32	107	24.92	1.66	86
895		min	-3.225	1.66	41	-15.012	0	26	0	0	12	0	0	12	0	0	12	0	0	12
896	M791	max	0	3.33	107	0	3.33	107	0	3.33	107	0	3.33	107	0	3.33	107	0.521	1.665	86

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
897		min	0	0	12	-0.521	1.353	26	0	0	12	0	0	12	0	0	12	0	0	12
898	M792	max	0	3.32	107	15.124	3.32	86	0	3.32	107	0	3.32	107	0	3.32	107	25.106	1.66	86
899		min	0	0	12	-5.005	1.314	26	0	0	12	0	0	12	0	0	12	0	0	12
900	M793	max	0	3.31	107	0	3.31	107	0	3.31	107	0	3.31	107	0	3.31	107	0.972	1.655	86
901		min	0	0	12	-1.149	1.31	26	0	0	12	0	0	12	0	0	12	0	0	12
902	M794	max	2.161	1.665	57	3.843	1.977	56	0	3.33	107	0	3.33	107	0	3.33	107	20.005	1.665	56
903		min	-2.161	0	87	-12.015	0	56	0	0	12	0	0	12	0	0	12	0	0	12
904	M795	max	18.273	0	86	3.867	0	103	1.946	0	102	0	1	107	0.973	0	100	19.095	0	86
905		min	8.858	1	75	-3.867	0	71	-1.946	0	40	0	0	12	-0.973	0	42	6.676	0	75
906	M796	max	3.565	0	86	1.946	0	100	1.946	0	103	0	1	107	0.973	0	101	1.889	0	100
907		min	0.642	1	46	-1.946	0	42	-1.946	0	41	0	0	12	-0.973	0	43	-0.43	0	46
908	M797	max	3.006	0	86	1.946	0	100	1.946	0	103	0	1	107	0.973	0	101	0.653	0	104
909		min	0.33	1	44	-1.946	0	42	-1.946	0	41	0	0	12	-0.973	0	43	-1.512	0	42
910	M798	max	22.487	0	86	6.85	0	103	1.946	0	102	0	1	107	0.973	0	100	25.519	0	103
911		min	11.212	1	77	-6.85	0	41	-1.946	0	40	0	0	12	-0.973	0	42	5.777	0	45
912	M799	max	22.545	0	86	1.946	0	103	1.946	0	102	0	1	107	0.973	0	100	21.082	0	86
913		min	11.244	1	45	-1.946	0	45	-1.946	0	40	0	0	12	-0.973	0	42	10.803	0	45
914	M800	max	2.937	0	86	1.946	0	100	1.946	0	103	0	1	107	0.973	0	101	0.682	0	104
915		min	0.291	1	44	-1.946	0	42	-1.946	0	41	0	0	12	-0.973	0	43	-1.463	0	42
916	M801	max	17.568	3.34	71	8.853	3.34	101	8.616	3.34	72	0	3.34	107	14.389	1.67	70	14.784	1.67	101
917		min	-17.567	1.67	103	-2.366	1.67	107	-8.616	1.67	70	0	0	12	-14.389	1.67	72	-3.951	1.67	107
918	M802	max	12.919	0	100	19.514	0	103	10.563	0	102	14.389	1	70	9.59	0	100	15.817	0	103
919		min	-1.302	1	76	-19.514	0	71	-10.563	0	70	-14.389	0	72	-9.59	0	42	-7.367	0	75
920	M803	max	1.479	7.132	73	0.031	0	101	0.02	0	42	0.002	7.132	107	0.047	3.566	102	0.013	3.566	76
921		min	-1.377	7.132	105	-0.031	7.132	41	-0.02	0	40	-0.002	0	71	-0.013	3.566	104	-0.047	3.566	40
922	M804	max	1.479	0	71	0.031	0	73	0.02	0	102	0.002	7.132	73	0.047	3.566	72	0.013	3.566	46
923		min	-1.377	0	107	-0.031	7.132	103	-0.02	0	40	-0.002	0	105	-0.013	3.566	74	-0.047	3.566	40

Member End Reactions

No Data to Print...

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
0	M273	I	max	21.471	15	4.699	100	0.135	15	0	107	0	107	0	107
1			min	-4.06	74	-4.666	72	-0.007	74	0	12	0	12	0	12
2		J	max	0	107	0	70	0	13	0	107	0	107	0	107
3			min	0	12	0	102	0	98	0	12	0	12	0	12
4	M313	I	max	26.491	13	11.615	102	0.003	106	0	107	0	107	0	107
5			min	-2.973	106	-11.499	70	-0.173	13	0	12	0	12	0	12
6		J	max	0	107	0	102	0	106	0	107	0	107	0	107
7			min	0	12	0	70	0	15	0	12	0	12	0	12
8	M314	I	max	27.583	13	12.036	102	16.374	75	0	107	0	107	0	107
9			min	-3.438	106	-11.916	70	-17.296	103	0	12	0	12	0	12
10		J	max	0	107	0	102	0	16	0	107	0	107	0	107
11			min	0	12	0	70	0	76	0	12	0	12	0	12
12	M336	I	max	19.994	15	5.627	100	15.734	107	0	107	0	107	0	107
13			min	-4.81	74	-5.401	72	-16.716	71	0	12	0	12	0	12
14		J	max	0	107	0	100	0	68	0	107	0	107	0	107
15			min	0	12	0	72	0	13	0	12	0	12	0	12
16	M337	I	max	0.881	72	0.019	105	-0.013	105	0	106	0.152	72	0.07	104
17			min	-0.405	104	-0.019	73	-0.16	14	0	70	-0.07	104	-0.152	72
18		J	max	0.918	72	0.019	107	0.16	13	0	106	0.158	72	0.076	104
19			min	-0.443	104	-0.019	71	0.013	44	0	70	-0.076	104	-0.158	72
20	M340	I	max	20.514	103	0.312	71	0.127	102	0.001	104	0	107	1.682	75

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
21			min	-18.688	75	-0.316	103	-0.098	74	-0.071	15	0	12	-1.846	103
22		J	max	10.276	102	0.204	106	0.106	70	0.003	76	0	107	0.887	74
23			min	-9.857	74	-0.214	70	-0.097	106	-0.064	13	0	12	-0.925	102
24	M342	I	max	18.3	107	0.326	71	0.048	64	0.016	70	0	107	1.751	71
25			min	-19.454	71	-0.291	107	-0.043	96	-0.013	106	0	12	-1.647	107
26		J	max	0.241	107	0.091	17	0.028	96	0.014	106	0	107	0.026	71
27			min	-0.287	71	-0.053	72	-0.099	15	-0.015	70	0	12	-0.022	107
28	M343	I	max	1.406	104	0.027	72	-0.024	76	0.028	15	0.242	104	0.338	72
29			min	-1.965	72	-0.027	104	-0.289	13	0	74	-0.338	72	-0.242	104
30		J	max	1.443	104	0.029	70	0.289	15	0.028	15	0.248	104	0.345	72
31			min	-2.003	72	-0.029	102	0.024	104	0	74	-0.345	72	-0.248	104
32	M346	I	max	2.806	104	0.027	72	-0.024	76	0.017	13	0.483	104	0.543	72
33			min	-3.158	72	-0.027	104	-0.289	13	-0.002	76	-0.543	72	-0.483	104
34		J	max	2.844	104	0.029	70	0.289	15	0.017	13	0.489	104	0.55	72
35			min	-3.196	72	-0.029	106	0.024	104	-0.002	76	-0.55	72	-0.489	104
36	M347	I	max	12.268	104	0.038	72	-0.035	77	0.017	15	2.638	104	2.763	72
37			min	-12.845	72	-0.038	100	-0.318	13	-0.004	74	-2.763	72	-2.638	104
38		J	max	12.328	104	0.043	70	0.318	15	0.017	15	2.651	104	2.776	72
39			min	-12.905	72	-0.043	102	0.035	105	-0.004	74	-2.776	72	-2.651	104
40	M349	I	max	31.726	15	-0.037	96	0.048	74	0.005	68	0	107	-0.404	99
41			min	4.488	99	-0.433	15	-0.067	102	-0.015	13	0	12	-2.855	15
42		J	max	29.933	15	0.412	15	0.067	102	0.007	92	0	107	-0.416	66
43			min	4.62	66	0.036	96	-0.044	74	-0.007	68	0	12	-2.694	15
44	M350	I	max	28.031	13	0.051	106	0.062	74	0.01	98	0	107	0.166	106
45			min	-1.848	106	-0.383	70	-0.074	102	-0.01	62	0	12	-2.523	13
46		J	max	27.334	13	0.365	70	0.072	72	0.008	66	0	107	0.038	106
47			min	-0.423	106	-0.038	106	-0.055	104	-0.021	15	0	12	-2.46	13
48	M351	I	max	0.393	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
49			min	-0.536	72	-0.729	103	-1.214	15	-0.062	103	-0.253	103	-0.265	71
50		J	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
51			min	-1.14	70	-0.831	71	0.352	67	-0.076	71	-0.287	103	-0.299	71
52	M352	I	max	1.194	100	0.703	71	-0.302	67	0.062	71	0.043	75	0.044	107
53			min	-1.194	72	-0.702	103	-1.176	13	-0.061	103	-0.255	103	-0.256	71
54		J	max	0.192	106	0.791	103	1.283	16	0.07	103	0.049	75	0.049	107
55			min	-0.196	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
56	M353	I	max	2.429	57	6.42	70	0.506	71	0.108	71	0.142	77	12.748	70
57			min	-3.122	100	-5.31	106	-0.442	77	-0.089	47	-0.146	75	-11.316	106
58		J	max	2.146	76	5.473	74	0.409	107	0.104	103	0.064	101	11.836	102
59			min	-2.842	100	-6.146	102	-0.468	71	-0.116	71	-0.063	103	-11.773	70
60	M354	I	max	1.879	72	6.282	70	0.467	71	0.103	75	0.06	101	12.57	70
61			min	-2.519	100	-5.132	106	-0.4	77	-0.094	73	-0.061	103	-11.05	106
62		J	max	2.726	72	5.374	74	0.449	77	0.1	77	0.072	101	11.659	72
63			min	-3.365	100	-5.874	102	-0.523	71	-0.124	71	-0.069	103	-11.869	100
64	M355	I	max	0.68	15	0.714	71	-0.302	67	0.06	71	0.029	75	0.047	107
65			min	-0.35	76	-0.702	103	-1.182	15	-0.059	103	-0.256	103	-0.278	71
66		J	max	1.141	102	0.792	103	1.289	15	0.072	103	0.035	75	0.053	107
67			min	-0.885	74	-0.803	71	0.335	96	-0.073	71	-0.289	103	-0.31	71
68	M356	I	max	1.92	70	1.879	15	0.54	75	0.124	77	0	107	0.479	70
69			min	-1.933	102	0.423	97	-0.54	77	-0.124	101	0	12	-0.482	102
70		J	max	0.839	70	-0.423	97	0.54	77	0.124	75	0	107	0.209	70
71			min	-0.852	102	-1.88	15	-0.54	75	-0.124	103	0	12	-0.213	102
72	M357	I	max	3.756	70	1.82	13	0.514	71	0.118	77	0	107	0.938	70
73			min	-3.375	106	0.404	98	-0.514	73	-0.118	71	0	12	-0.842	106
74		J	max	2.726	70	-0.404	99	0.514	73	0.117	75	0	107	0.68	70
75			min	-2.345	106	-1.82	15	-0.514	71	-0.118	73	0	12	-0.585	106

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
76	M358	I	max	4.324	100	5.109	70	0.362	101	0.072	103	0.09	71	9.88	70
77			min	-3.34	76	-3.809	106	-0.364	103	-0.068	101	-0.066	107	-8.671	106
78		J	max	3.704	100	3.968	74	0.298	103	0.076	101	0.239	71	9.176	102
79			min	-2.719	76	-4.837	102	-0.295	101	-0.074	103	-0.214	107	-9.036	70
80	M359	I	max	4.708	100	5.068	70	0.338	101	0.069	107	0.258	71	9.801	70
81			min	-3.572	76	-3.732	106	-0.339	103	-0.077	101	-0.229	107	-8.512	106
82		J	max	4.087	100	3.952	74	0.334	103	0.072	105	0.266	71	8.934	72
83			min	-2.951	76	-4.693	102	-0.335	101	-0.08	103	-0.239	103	-8.996	100
84	M360	I	max	3.494	100	1.819	13	0.514	105	0.118	103	0	107	0.872	100
85			min	-3.575	72	0.403	68	-0.514	107	-0.117	75	0	12	-0.892	72
86		J	max	2.464	100	-0.404	68	0.514	107	0.118	101	0	107	0.615	100
87			min	-2.545	72	-1.819	13	-0.514	105	-0.117	77	0	12	-0.635	72
88	M361	I	max	13.795	15	0.684	72	0.66	71	0.478	71	0.109	71	-0.069	96
89			min	1.838	96	-0.441	104	-0.645	103	-0.475	103	-0.106	103	-1.021	15
90		J	max	9.993	15	1.011	13	0.911	103	0.43	103	0.154	71	0.035	104
91			min	1.294	107	-0.513	76	-0.928	71	-0.43	71	-0.151	103	-0.537	15
92	M362	I	max	11.15	13	0.283	74	0.269	103	0.017	103	0.042	103	-0.086	98
93			min	1.553	107	-0.355	102	-0.28	71	-0.017	71	-0.044	71	-0.746	13
94		J	max	9.555	13	0.833	102	0.652	71	0.045	71	0.103	103	0.026	106
95			min	1.016	107	-0.66	74	-0.625	103	-0.042	103	-0.108	71	-0.595	13
96	M363	I	max	4.287	13	0.355	70	0.273	103	0.017	103	0.043	103	-0.032	98
97			min	0.89	98	-0.313	106	-0.273	71	-0.016	71	-0.043	71	-0.303	13
98		J	max	2.648	13	0.731	106	0.636	71	0.044	71	0.105	103	0.069	106
99			min	0.503	99	-0.839	70	-0.636	103	-0.043	103	-0.105	71	-0.229	70
100	M364	I	max	10.202	16	0.257	103	0.082	102	0.001	98	0.011	102	-0.059	75
101			min	1.422	75	-0.256	71	-0.084	70	-0.002	62	-0.011	70	-0.709	16
102		J	max	8.605	16	0.589	71	0.172	70	0.013	74	0.027	102	0.034	75
103			min	0.888	75	-0.598	103	-0.167	102	-0.014	102	-0.028	70	-0.602	16
104	M365	I	max	7.149	15	0.773	72	0.657	71	0.499	71	0.109	71	-0.02	96
105			min	1.067	99	-0.41	104	-0.657	103	-0.499	103	-0.108	103	-0.593	15
106		J	max	3.218	15	0.841	100	0.931	103	0.447	103	0.155	71	0.077	104
107			min	0.548	99	-0.62	76	-0.931	71	-0.446	71	-0.154	103	-0.189	72
108	M366	I	max	14.065	15	0.817	72	0.55	71	0.366	71	0.091	71	-0.083	66
109			min	1.985	67	-0.573	104	-0.565	103	-0.368	103	-0.093	103	-1.053	15
110		J	max	10.764	15	1.291	100	0.843	103	0.337	103	0.137	71	0.035	104
111			min	1.361	75	-1.059	76	-0.827	71	-0.337	71	-0.14	103	-0.688	15
112	M367	I	max	20.307	15	0.036	68	0.019	105	0.003	72	0	107	-0.142	96
113			min	3.064	96	-0.037	92	-0.019	73	-0.003	104	0	71	-0.944	15
114		J	max	19.992	15	0.036	66	0.019	107	0.003	72	0	107	-0.141	96
115			min	3.033	96	-0.037	94	-0.019	71	-0.003	104	0	71	-0.93	15
116	M368	I	max	17.669	13	0.036	66	0.019	73	0.003	76	0	71	-0.133	98
117			min	2.857	98	-0.037	94	-0.019	105	-0.003	104	0	107	-0.821	13
118		J	max	17.355	13	0.036	68	0.019	71	0.003	76	0	71	-0.131	98
119			min	2.826	98	-0.037	92	-0.019	107	-0.003	104	0	107	-0.808	13
120	M369	I	max	16.882	13	0.036	66	0.019	73	0.003	104	0	71	-0.137	67
121			min	2.939	67	-0.037	94	-0.019	105	-0.003	72	0	107	-0.784	13
122		J	max	16.567	13	0.036	68	0.019	71	0.003	104	0	71	-0.135	67
123			min	2.908	67	-0.037	92	-0.019	107	-0.003	72	0	107	-0.771	13
124	M370	I	max	21.924	15	0.489	15	0.236	101	0.221	101	0.038	101	-0.133	66
125			min	3.311	68	-0.179	66	-0.242	103	-0.223	73	-0.04	103	-1.101	15
126		J	max	20.373	15	0.296	62	0.229	103	0.188	103	0.036	101	-0.117	66
127			min	3.192	68	-0.212	98	-0.222	101	-0.189	71	-0.038	103	-0.939	15
128	M371	I	max	7.072	102	0.03	71	-0.021	75	0.003	15	1.521	102	1.425	104
129			min	-6.623	104	-0.03	107	-0.189	14	-0.001	76	-1.425	104	-1.521	102
130		J	max	7.132	102	0.03	73	0.189	15	0.003	15	1.534	102	1.437	104

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
131			min	-6.683	104	-0.03	105	0.021	107	-0.001	76	-1.437	104	-1.534	102
132	M372	I	max	8.162	72	0.03	71	-0.021	46	0.002	106	1.756	72	1.658	104
133			min	-7.707	104	-0.03	107	-0.189	13	-0.004	100	-1.658	104	-1.756	72
134		J	max	8.222	72	0.03	73	0.189	15	0.002	106	1.768	72	1.671	104
135			min	-7.767	104	-0.03	105	0.021	105	-0.004	100	-1.671	104	-1.768	72
136	M373	I	max	1.434	72	0.019	103	-0.013	105	0	96	0.247	72	0.191	104
137			min	-1.108	104	-0.019	71	-0.16	16	0	64	-0.191	104	-0.247	72
138		J	max	1.397	72	0.019	101	0.16	14	0	96	0.24	72	0.184	104
139			min	-1.07	104	-0.019	73	0.013	107	0	64	-0.184	104	-0.24	72
140	M374	I	max	0.359	66	0.029	104	-0.024	76	0.007	13	0.062	66	0.104	94
141			min	-0.605	94	-0.029	72	-0.289	13	-0.001	106	-0.104	94	-0.062	66
142		J	max	0.359	66	0.027	106	0.289	15	0.007	13	0.062	66	0.104	94
143			min	-0.605	94	-0.027	70	0.024	104	-0.001	106	-0.104	94	-0.062	66
144	M375	I	max	0.653	102	0.019	103	-0.013	76	0.001	102	0.112	102	0.068	74
145			min	-0.394	74	-0.019	71	-0.16	14	-0.001	74	-0.068	74	-0.112	102
146		J	max	0.615	102	0.019	101	0.16	13	0.001	102	0.106	102	0.061	74
147			min	-0.356	74	-0.019	73	0.013	46	-0.001	74	-0.061	74	-0.106	102
148	M376	I	max	1.525	74	0.029	104	-0.024	106	0.004	72	0.262	74	0.299	102
149			min	-1.736	102	-0.029	72	-0.289	13	-0.004	104	-0.299	102	-0.262	74
150		J	max	1.562	74	0.027	106	0.289	15	0.004	72	0.269	74	0.305	102
151			min	-1.774	102	-0.027	70	0.024	74	-0.004	104	-0.305	102	-0.269	74
152	M377	I	max	10.671	74	0.043	104	-0.035	105	0.006	74	2.295	74	2.433	102
153			min	-11.31	102	-0.043	72	-0.318	13	-0.006	106	-2.433	102	-2.295	74
154		J	max	10.732	74	0.038	106	0.318	15	0.006	74	2.308	74	2.445	102
155			min	-11.37	102	-0.038	70	0.035	77	-0.006	106	-2.446	102	-2.308	74
156	M378	I	max	5.271	13	0.036	66	0.019	73	0.001	13	0	71	-0.003	107
157			min	0.063	107	-0.037	94	-0.019	105	0	68	0	107	-0.245	13
158		J	max	4.957	13	0.036	68	0.019	71	0.001	13	0	71	-0.002	107
159			min	0.037	107	-0.037	92	-0.019	107	0	68	0	107	-0.231	13
160	M379	I	max	4.336	16	0.036	66	0.019	73	0	104	0	71	0.003	75
161			min	-0.058	75	-0.037	94	-0.019	105	-0.001	13	0	107	-0.201	16
162		J	max	4.022	16	0.036	68	0.019	71	0	104	0	71	0.004	75
163			min	-0.085	75	-0.037	92	-0.019	107	-0.001	13	0	107	-0.188	16
164	M380	I	max	5.598	15	0.036	68	0.019	105	0.002	13	0	107	-0.015	107
165			min	0.322	107	-0.037	92	-0.019	73	0	68	0	71	-0.26	15
166		J	max	5.284	15	0.036	66	0.019	107	0.002	13	0	107	-0.014	107
167			min	0.295	107	-0.037	94	-0.019	71	0	68	0	71	-0.246	15
168	M381	I	max	6.337	15	0.036	68	0.019	105	0	104	0	107	-0.019	75
169			min	0.402	75	-0.037	92	-0.019	73	-0.001	13	0	71	-0.294	15
170		J	max	6.023	15	0.036	66	0.019	107	0	104	0	107	-0.017	75
171			min	0.375	75	-0.037	94	-0.019	71	-0.001	13	0	71	-0.281	15
172	M382	I	max	2.82	106	0.293	15	0.028	102	0.002	70	0.193	70	0.179	106
173			min	-3.03	70	0.023	107	-0.028	104	-0.003	19	-0.179	106	-0.193	70
174		J	max	2.858	106	-0.023	75	0.028	40	0.002	70	0.195	70	0.182	106
175			min	-3.067	70	-0.293	13	-0.028	76	-0.003	19	-0.182	106	-0.195	70
176	M383	I	max	3.636	106	0.293	15	0.028	46	0	68	0.273	70	0.231	106
177			min	-4.292	70	0.023	107	-0.028	40	-0.007	13	-0.231	106	-0.273	70
178		J	max	3.674	106	-0.023	75	0.028	44	0	68	0.276	70	0.234	106
179			min	-4.33	70	-0.293	13	-0.028	72	-0.007	13	-0.234	106	-0.276	70
180	M384	I	max	7.685	106	0.327	13	0.041	76	0	98	0.688	70	0.611	106
181			min	-8.645	70	0.034	107	-0.041	44	-0.012	13	-0.611	106	-0.688	70
182		J	max	7.746	106	-0.034	75	0.041	100	0	98	0.692	70	0.616	106
183			min	-8.705	70	-0.327	15	-0.041	42	-0.012	13	-0.616	106	-0.692	70
184	M385	I	max	8.688	106	0.327	13	0.041	46	0.003	68	0.795	70	0.691	106
185			min	-9.99	70	0.034	107	-0.041	70	-0.016	13	-0.691	106	-0.795	70

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
186		J	max	8.748	106	-0.034	75	0.041	104	0.003	68	0.799	70	0.696	106
187			min	-10.05	70	-0.327	15	-0.041	72	-0.016	13	-0.696	106	-0.799	70
188	M386	I	max	2.139	72	0.293	15	0.028	44	0.006	19	0.118	104	0.136	72
189			min	-1.86	104	0.023	75	-0.028	46	-0.001	100	-0.136	72	-0.118	104
190		J	max	2.177	72	-0.023	107	0.028	72	0.006	19	0.121	104	0.139	72
191			min	-1.898	104	-0.293	13	-0.028	104	-0.001	100	-0.139	72	-0.121	104
192	M387	I	max	2.877	76	0.293	15	0.028	44	0.011	13	0.198	100	0.183	76
193			min	-3.114	100	0.023	75	-0.028	42	0	98	-0.183	76	-0.198	100
194		J	max	2.915	76	-0.023	107	0.028	76	0.011	13	0.201	100	0.186	76
195			min	-3.151	100	-0.293	13	-0.028	70	0	98	-0.186	76	-0.201	100
196	M388	I	max	7.027	76	0.327	13	0.041	100	0.013	13	0.612	100	0.559	76
197			min	-7.697	100	0.034	75	-0.041	106	0	98	-0.559	76	-0.612	100
198		J	max	7.087	76	-0.034	107	0.041	102	0.013	13	0.617	100	0.564	76
199			min	-7.757	100	-0.327	15	-0.041	74	0	98	-0.564	76	-0.617	100
200	M389	I	max	7.881	76	0.327	13	0.041	100	0.006	92	0.69	100	0.627	76
201			min	-8.671	100	0.034	75	-0.041	46	-0.005	68	-0.627	76	-0.69	100
202		J	max	7.941	76	-0.034	107	0.041	72	0.006	92	0.695	100	0.632	76
203			min	-8.731	100	-0.327	15	-0.041	74	-0.005	68	-0.632	76	-0.695	100
204	M390	I	max	4.898	100	0.194	15	0.03	101	0.003	94	0.356	76	0.39	100
205			min	-4.469	76	0.019	76	-0.03	73	-0.002	66	-0.39	100	-0.356	76
206		J	max	4.838	100	-0.019	104	0.03	103	0.003	94	0.351	76	0.385	100
207			min	-4.409	76	-0.194	13	-0.03	75	-0.002	66	-0.385	100	-0.351	76
208	M392	I	max	1.404	100	0.163	15	0.019	71	0.001	102	0.09	72	0.089	100
209			min	-1.413	72	0.012	76	-0.019	103	-0.001	74	-0.089	100	-0.09	72
210		J	max	1.366	100	-0.012	104	0.019	73	0.001	102	0.088	72	0.087	100
211			min	-1.375	72	-0.163	13	-0.019	101	-0.001	74	-0.087	100	-0.088	72
212	M394	I	max	2.056	70	0.163	15	0.019	101	0.001	100	0.115	106	0.131	70
213			min	-1.806	106	0.012	106	-0.019	103	-0.001	72	-0.131	70	-0.115	106
214		J	max	2.019	70	-0.012	74	0.019	73	0.001	100	0.113	106	0.128	70
215			min	-1.768	106	-0.163	13	-0.019	71	-0.001	72	-0.128	70	-0.113	106
216	M396	I	max	5.442	70	0.194	15	0.03	41	0.002	66	0.386	106	0.433	70
217			min	-4.853	106	0.019	76	-0.03	103	-0.003	15	-0.433	70	-0.386	106
218		J	max	5.382	70	-0.019	104	0.03	43	0.002	66	0.381	106	0.428	70
219			min	-4.793	106	-0.194	13	-0.03	101	-0.003	15	-0.428	70	-0.381	106
220	M397	I	max	-0.988	107	0.195	13	0.024	100	0.007	106	0.637	15	0.637	15
221			min	-12.919	15	0.001	107	-0.024	76	-0.01	13	0.049	107	0.049	107
222		J	max	-1.047	107	-0.001	77	0.024	102	0.007	106	0.648	15	0.648	15
223			min	-13.169	15	-0.195	15	-0.024	74	-0.01	13	0.052	107	0.052	107
224	M398	I	max	-0.481	107	-0.001	107	0.024	72	0.007	106	0.584	13	0.584	13
225			min	-11.847	13	-0.195	13	-0.024	104	-0.013	13	0.024	107	0.024	107
226		J	max	-0.539	107	0.195	15	0.024	70	0.007	106	0.596	13	0.596	13
227			min	-12.097	13	0.001	77	-0.024	106	-0.013	13	0.027	107	0.027	107
228	M399	I	max	-0.234	75	0.195	15	0.024	72	0.008	74	0.514	16	0.514	16
229			min	-10.42	16	0.001	75	-0.024	104	-0.011	15	0.012	75	0.012	75
230		J	max	-0.293	75	-0.001	105	0.024	70	0.008	74	0.525	16	0.525	16
231			min	-10.67	16	-0.195	13	-0.024	106	-0.011	15	0.014	75	0.014	75
232	M400	I	max	-1.116	75	-0.001	75	0.024	100	0.007	74	0	102	0	104
233			min	-14.31	16	-0.195	13	-0.024	76	-0.014	15	0	74	0	15
234		J	max	-1.175	75	0.195	15	0.024	102	0.007	74	0	15	0	100
235			min	-14.56	16	0.001	105	-0.024	74	-0.014	15	0	104	0	76
236	M401	I	max	12.207	74	0.043	72	-0.035	104	0.009	106	2.625	74	2.765	102
237			min	-12.854	102	-0.043	104	-0.318	15	-0.013	70	-2.765	102	-2.625	74
238		J	max	12.147	74	0.038	70	0.318	13	0.009	106	2.613	74	2.752	102
239			min	-12.794	102	-0.038	106	0.035	76	-0.013	70	-2.752	102	-2.613	74
240	M402	I	max	13.838	104	0.038	70	-0.035	77	0.014	70	2.976	104	3.165	102

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
241			min	-14.714	102	-0.038	102	-0.318	13	-0.009	106	-3.165	102	-2.976	104
242		J	max	13.778	104	0.043	72	0.318	15	0.014	70	2.963	104	3.152	102
243			min	-14.654	102	-0.043	100	0.035	105	-0.009	106	-3.152	102	-2.963	104
244	M403	I	max	-5.672	96	0.175	13	0.023	70	0.002	106	1.814	15	1.814	15
245			min	-36.812	15	0	107	-0.022	106	-0.016	13	0.279	96	0.279	96
246		J	max	-5.693	96	0	77	0.023	72	0.002	106	1.825	15	1.825	15
247			min	-37.061	15	-0.175	15	-0.022	104	-0.016	13	0.28	96	0.28	96
248	M404	I	max	-5.16	98	0	107	0.023	102	0.004	106	1.576	13	1.576	13
249			min	-31.985	13	-0.175	13	-0.022	74	-0.005	70	0.254	98	0.254	98
250		J	max	-5.18	98	0.175	15	0.023	100	0.004	106	1.588	13	1.588	13
251			min	-32.234	13	0	77	-0.022	76	-0.005	70	0.255	98	0.255	98
252	M405	I	max	-5.92	98	0	75	0.023	70	0.002	104	1.932	15	1.932	15
253			min	-39.207	15	-0.175	15	-0.022	106	-0.018	15	0.292	98	0.292	98
254		J	max	-5.941	98	0.175	13	0.023	72	0.002	104	1.943	15	1.943	15
255			min	-39.456	15	0	105	-0.022	104	-0.018	15	0.293	98	0.293	98
256	M406	I	max	-5.403	67	0.175	15	0.023	102	0.005	70	1.528	13	1.528	13
257			min	-31.004	13	0	105	-0.022	74	-0.004	106	0.266	67	0.266	67
258		J	max	-5.424	67	0	75	0.023	100	0.005	70	1.539	13	1.539	13
259			min	-31.254	13	-0.175	13	-0.022	76	-0.004	106	0.267	67	0.267	67
260	M409	I	max	-4.794	96	0.175	13	0.023	70	0.002	76	1.544	15	1.544	15
261			min	-31.339	15	0	107	-0.022	106	-0.018	13	0.236	96	0.236	96
262		J	max	-4.815	96	0	77	0.023	72	0.002	76	1.556	15	1.556	15
263			min	-31.588	15	-0.175	15	-0.022	104	-0.018	13	0.237	96	0.237	96
264	M410	I	max	-4.611	98	0	107	0.023	102	0.003	68	1.311	13	1.311	13
265			min	-26.599	13	-0.175	13	-0.022	74	-0.014	13	0.227	98	0.227	98
266		J	max	-4.632	98	0.175	15	0.023	100	0.003	68	1.322	13	1.322	13
267			min	-26.848	13	0	77	-0.022	76	-0.014	13	0.228	98	0.228	98
268	M411	I	max	-5.004	67	0	75	0.023	70	0.003	104	1.554	15	1.554	15
269			min	-31.537	15	-0.175	15	-0.022	106	-0.02	15	0.247	67	0.247	67
270		J	max	-5.025	67	0.175	13	0.023	72	0.003	104	1.566	15	1.566	15
271			min	-31.786	15	0	105	-0.022	104	-0.02	15	0.248	67	0.248	67
272	M412	I	max	-4.5	66	0.175	15	0.023	102	0.003	96	1.257	16	1.257	16
273			min	-25.52	16	0	105	-0.022	74	-0.012	15	0.222	66	0.222	66
274		J	max	-4.521	66	0	75	0.023	100	0.003	96	1.269	16	1.269	16
275			min	-25.77	16	-0.175	13	-0.022	76	-0.012	15	0.223	66	0.223	66
276	M413	I	max	-0.134	107	0.195	13	0.024	100	0.009	102	0.331	15	0.331	15
277			min	-6.709	15	0.001	107	-0.024	76	-0.007	74	0.007	107	0.007	107
278		J	max	-0.193	107	-0.001	77	0.024	102	0.009	102	0.343	15	0.343	15
279			min	-6.959	15	-0.195	15	-0.024	74	-0.007	74	0.009	107	0.009	107
280	M414	I	max	0.321	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
281			min	-5.933	13	-0.195	13	-0.024	104	-0.008	104	-0.016	107	-0.016	107
282		J	max	0.262	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
283			min	-6.183	13	0.001	77	-0.024	106	-0.008	104	-0.013	107	-0.013	107
284	M415	I	max	-0.277	75	-0.001	75	0.024	100	0.008	74	0.377	16	0.377	16
285			min	-7.657	16	-0.195	15	-0.024	76	-0.008	102	0.014	75	0.014	75
286		J	max	-0.336	75	0.195	13	0.024	102	0.008	74	0.389	16	0.389	16
287			min	-7.907	16	0.001	105	-0.024	74	-0.008	102	0.017	75	0.017	75
288	M416	I	max	0.524	75	0.195	15	0.024	72	0.008	104	0.223	15	0.223	15
289			min	-4.53	15	0.001	75	-0.024	104	-0.009	72	-0.026	75	-0.026	75
290		J	max	0.465	75	-0.001	105	0.024	70	0.008	104	0.235	15	0.235	15
291			min	-4.78	15	-0.195	13	-0.024	106	-0.009	72	-0.023	75	-0.023	75
292	M95	I	max	2.509	72	3.635	15	3	71	0.738	71	0	107	0.522	104
293			min	-2.09	104	0.83	99	-3	103	-0.738	103	0	12	-0.626	72
294		J	max	7.893	72	-0.83	99	3	103	0.738	103	0	107	1.866	104
295			min	-7.475	104	-3.635	15	-3	71	-0.738	71	0	12	-1.97	72

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
296	M96	I	max	1.507	102	3.52	15	2.911	71	0.716	71	0	107	0.291	74
297			min	-1.166	74	0.803	67	-2.912	103	-0.716	103	0	12	-0.376	102
298		J	max	6.714	102	-0.803	67	2.912	103	0.716	103	0	107	1.591	74
299			min	-6.374	74	-3.52	15	-2.911	71	-0.715	71	0	12	-1.676	102
300	M530	I	max	21.443	15	6.693	100	17.444	103	0	107	0	107	0	107
301			min	-6.437	104	-6.593	72	-17.44	71	0	12	0	12	0	12
302		J	max	0	107	0	100	0	13	0	107	0	107	0	107
303			min	0	12	0	72	0	107	0	12	0	12	0	12
304	M531	I	max	26.192	13	13.109	102	18.217	71	0	107	0	107	0	107
305			min	-5.381	106	-13.039	70	-18.293	103	0	12	0	12	0	12
306		J	max	0	107	0	102	0	107	0	107	0	107	0	107
307			min	0	12	0	70	0	14	0	12	0	12	0	12
308	M532	I	max	26.269	13	10.705	102	0.177	13	0	107	0	107	0	107
309			min	-2.188	76	-10.642	70	-0.002	76	0	12	0	12	0	12
310		J	max	0	107	0	102	0	15	0	107	0	107	0	107
311			min	0	12	0	70	0	76	0	12	0	12	0	12
312	M533	I	max	20.27	15	5.154	100	0.005	74	0	107	0	107	0	107
313			min	-3.146	74	-5.074	72	-0.12	15	0	12	0	12	0	12
314		J	max	0	107	0	100	0	68	0	107	0	107	0	107
315			min	0	12	0	72	0	13	0	12	0	12	0	12
316	M534	I	max	0.771	72	0.019	75	-0.013	106	0	74	0.133	72	0.064	104
317			min	-0.37	104	-0.019	43	-0.16	16	0	15	-0.064	104	-0.133	72
318		J	max	0.809	72	0.019	77	0.16	14	0	74	0.139	72	0.07	104
319			min	-0.408	104	-0.019	101	0.013	104	0	15	-0.07	104	-0.139	72
320	M535	I	max	9.965	102	0.205	70	0.133	102	0.001	104	0	107	0.861	74
321			min	-9.568	74	-0.197	106	-0.105	74	-0.071	15	0	12	-0.897	102
322		J	max	20.709	71	0.324	75	0.099	70	0.002	76	0	107	1.828	103
323			min	-20.309	103	-0.339	103	-0.087	106	-0.064	13	0	12	-1.864	71
324	M536	I	max	0.25	75	0.054	72	0.054	64	0.015	70	0	107	0.026	103
325			min	-0.293	103	-0.077	17	-0.051	96	-0.012	106	0	12	-0.023	75
326		J	max	19.742	71	0.312	75	0.024	96	0.014	106	0	107	1.778	103
327			min	-19.759	103	-0.325	103	-0.098	15	-0.016	70	0	12	-1.777	71
328	M537	I	max	0.256	96	0.027	106	-0.024	76	0.028	15	0.044	96	0.256	15
329			min	-1.488	15	-0.027	70	-0.289	13	0	74	-0.256	15	-0.044	96
330		J	max	0.256	96	0.029	104	0.289	15	0.028	15	0.044	96	0.256	15
331			min	-1.488	15	-0.029	72	0.024	104	0	74	-0.256	15	-0.044	96
332	M538	I	max	1.413	74	0.027	106	-0.024	76	0.017	13	0.243	74	0.321	72
333			min	-1.867	72	-0.027	70	-0.289	13	-0.002	76	-0.321	72	-0.243	74
334		J	max	1.451	74	0.029	104	0.289	15	0.017	13	0.25	74	0.328	72
335			min	-1.905	72	-0.029	72	0.024	104	-0.002	76	-0.328	72	-0.25	74
336	M539	I	max	10.308	104	0.038	72	-0.035	75	0.016	13	2.217	104	2.294	76
337			min	-10.665	76	-0.038	104	-0.318	13	-0.004	74	-2.294	76	-2.217	104
338		J	max	10.368	104	0.043	70	0.318	15	0.016	13	2.23	104	2.307	76
339			min	-10.725	76	-0.043	106	0.035	107	-0.004	74	-2.307	76	-2.23	104
340	M540	I	max	29.573	15	-0.038	66	0.048	74	0.005	68	0	107	-0.42	66
341			min	4.661	66	-0.38	15	-0.064	102	-0.015	13	0	12	-2.662	15
342		J	max	29.24	15	0.398	15	0.068	102	0.007	92	0	107	-0.254	75
343			min	2.818	75	0.035	66	-0.045	74	-0.007	68	0	12	-2.632	15
344	M541	I	max	26.947	13	0.032	76	0.06	74	0.01	98	0	107	0.022	76
345			min	-0.247	76	-0.352	100	-0.069	102	-0.01	62	0	12	-2.425	13
346		J	max	27.101	13	0.375	100	0.074	72	0.008	66	0	107	0.146	76
347			min	-1.626	76	-0.049	76	-0.058	104	-0.021	15	0	12	-2.439	13
348	M542	I	max	0.474	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
349			min	-0.607	72	-0.729	103	-1.214	15	-0.061	103	-0.254	103	-0.265	71
350		J	max	0.926	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
351			min	-1.058	70	-0.831	71	0.352	67	-0.076	71	-0.288	103	-0.299	71
352	M543	I	max	1.247	100	0.703	71	-0.302	98	0.061	71	0.043	75	0.044	107
353			min	-1.231	76	-0.702	103	-1.176	13	-0.06	103	-0.256	103	-0.256	71
354		J	max	0.156	102	0.791	103	1.283	13	0.071	103	0.048	75	0.049	107
355			min	-0.145	74	-0.792	71	0.335	67	-0.07	71	-0.288	103	-0.289	71
356	M544	I	max	1.836	70	7.324	70	2.004	71	0.471	71	0.334	77	14.503	70
357			min	-2.625	102	-6.293	76	-1.939	77	-0.453	77	-0.339	75	-13.211	106
358		J	max	3.922	72	6.448	74	2.454	77	0.624	77	0.062	101	13.911	72
359			min	-4.703	100	-7.063	72	-2.528	71	-0.641	71	-0.061	103	-13.805	100
360	M545	I	max	1.786	57	5.704	40	0.487	71	0.104	71	0.055	77	11.371	70
361			min	-2.492	100	-4.646	76	-0.422	77	-0.092	73	-0.062	71	-10.038	106
362		J	max	2.62	72	4.813	104	0.424	107	0.1	107	0.068	101	10.748	72
363			min	-3.339	100	-5.419	72	-0.495	71	-0.122	71	-0.066	103	-10.703	100
364	M546	I	max	0.64	15	0.714	71	-0.302	67	0.06	71	0.029	75	0.048	107
365			min	-0.363	76	-0.701	103	-1.182	15	-0.059	103	-0.254	103	-0.277	71
366		J	max	1.121	102	0.79	103	1.289	15	0.072	103	0.035	75	0.054	107
367			min	-0.897	74	-0.803	71	0.335	96	-0.073	71	-0.287	103	-0.31	71
368	M547	I	max	1.863	70	1.879	15	0.54	75	0.124	77	0	107	0.465	70
369			min	-1.881	102	0.423	97	-0.54	77	-0.124	71	0	12	-0.47	102
370		J	max	0.783	70	-0.423	97	0.54	77	0.124	75	0	107	0.195	70
371			min	-0.8	102	-1.879	15	-0.54	75	-0.124	73	0	12	-0.2	102
372	M548	I	max	3.227	70	1.82	13	0.514	71	0.118	107	0	107	0.805	70
373			min	-2.872	106	0.404	98	-0.514	73	-0.118	71	0	12	-0.717	106
374		J	max	2.197	70	-0.404	99	0.514	73	0.117	105	0	107	0.548	70
375			min	-1.842	106	-1.82	13	-0.514	71	-0.117	73	0	12	-0.46	106
376	M549	I	max	4.482	100	5.74	70	0.424	101	0.082	103	0.807	71	11.202	70
377			min	-3.566	76	-4.501	76	-0.429	103	-0.079	101	-0.778	73	-10.101	106
378		J	max	3.861	100	4.647	74	0.312	103	0.084	101	1.073	71	10.621	72
379			min	-2.945	76	-5.485	72	-0.307	101	-0.084	103	-1.04	77	-10.447	100
380	M550	I	max	4.302	100	4.622	70	0.351	101	0.069	103	0.165	71	8.86	70
381			min	-3.272	76	-3.36	76	-0.352	103	-0.074	101	-0.139	107	-7.721	106
382		J	max	3.682	100	3.519	74	0.314	103	0.072	101	0.25	71	8.238	72
383			min	-2.652	76	-4.346	72	-0.313	101	-0.078	103	-0.225	103	-8.109	100
384	M551	I	max	3.848	74	1.819	13	0.514	75	0.118	73	0	107	0.96	74
385			min	-3.974	102	0.403	98	-0.514	77	-0.117	75	0	12	-0.992	102
386		J	max	2.818	74	-0.404	98	0.514	77	0.118	71	0	107	0.703	74
387			min	-2.943	102	-1.819	13	-0.514	75	-0.117	77	0	12	-0.735	102
388	M552	I	max	13.112	15	0.686	72	0.66	71	0.478	71	0.109	71	-0.078	96
389			min	1.88	99	-0.439	104	-0.64	103	-0.475	103	-0.106	103	-0.975	15
390		J	max	9.311	15	0.983	13	0.906	103	0.429	103	0.154	71	-0.003	104
391			min	0.983	107	-0.52	76	-0.928	71	-0.429	71	-0.15	103	-0.494	15
392	M553	I	max	10.976	14	0.285	74	0.268	103	0.016	103	0.042	103	-0.1	98
393			min	1.41	107	-0.35	102	-0.28	71	-0.016	71	-0.044	71	-0.736	13
394		J	max	9.381	14	0.82	102	0.653	71	0.045	71	0.103	103	-0.023	106
395			min	0.873	107	-0.666	74	-0.622	103	-0.043	103	-0.108	71	-0.588	13
396	M554	I	max	4.276	13	0.332	70	0.273	103	0.017	103	0.043	103	-0.036	98
397			min	0.889	98	-0.292	106	-0.273	71	-0.016	71	-0.043	71	-0.301	13
398		J	max	2.637	13	0.679	106	0.636	71	0.044	71	0.105	103	0.061	106
399			min	0.504	97	-0.78	70	-0.636	103	-0.043	103	-0.105	71	-0.218	70
400	M555	I	max	10.363	13	0.257	103	0.07	102	0.001	98	0.009	102	-0.057	75
401			min	1.379	75	-0.256	71	-0.069	70	-0.001	62	-0.009	70	-0.721	13
402		J	max	8.767	13	0.589	71	0.134	70	0.011	74	0.022	102	0.037	75
403			min	0.845	75	-0.598	103	-0.138	102	-0.011	102	-0.021	70	-0.613	13
404	M556	I	max	6.59	15	0.65	72	0.557	71	0.381	71	0.092	71	-0.027	96
405			min	1.032	96	-0.368	104	-0.557	103	-0.381	103	-0.092	103	-0.533	15

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
406		J	max	3.197	15	0.763	100	0.84	103	0.347	103	0.139	71	0.067	104
407			min	0.549	96	-0.614	76	-0.84	71	-0.346	71	-0.139	103	-0.19	72
408	M557	I	max	12.3	15	0.395	72	0.243	71	0.014	71	0.04	71	-0.089	74
409			min	1.731	75	-0.389	100	-0.252	103	-0.015	103	-0.041	103	-0.859	15
410		J	max	10.81	15	0.911	100	0.554	103	0.038	103	0.09	71	0.03	74
411			min	1.251	75	-0.916	72	-0.543	71	-0.038	71	-0.092	103	-0.755	15
412	M558	I	max	19.726	15	0.036	68	0.019	71	0.003	72	0	73	-0.145	99
413			min	3.123	99	-0.037	92	-0.019	107	-0.003	104	0	105	-0.917	15
414		J	max	19.412	15	0.036	66	0.019	73	0.003	72	0	73	-0.144	99
415			min	3.092	99	-0.037	94	-0.019	105	-0.003	104	0	105	-0.903	15
416	M559	I	max	17.61	13	0.036	66	0.019	107	0.003	76	0	105	-0.141	99
417			min	3.036	99	-0.037	94	-0.019	71	-0.003	104	0	73	-0.818	13
418		J	max	17.296	13	0.036	68	0.019	105	0.003	76	0	105	-0.14	99
419			min	3.005	99	-0.037	92	-0.019	73	-0.003	104	0	73	-0.805	13
420	M560	I	max	16.935	13	0.036	66	0.019	107	0.003	104	0	105	-0.132	68
421			min	2.831	68	-0.037	94	-0.019	71	-0.003	72	0	73	-0.787	13
422		J	max	16.621	13	0.036	68	0.019	105	0.003	104	0	105	-0.13	68
423			min	2.8	68	-0.037	92	-0.019	73	-0.003	72	0	73	-0.773	13
424	M561	I	max	20.048	15	0.46	15	0.24	101	0.229	101	0.039	101	-0.115	66
425			min	3.112	66	-0.185	66	-0.247	103	-0.231	73	-0.04	103	-1.009	15
426		J	max	18.46	15	0.311	62	0.233	103	0.196	103	0.037	101	-0.099	66
427			min	2.991	66	-0.22	98	-0.227	101	-0.196	71	-0.038	103	-0.842	15
428	M562	I	max	7.842	72	0.03	71	-0.021	44	0.004	70	1.687	72	1.622	104
429			min	-7.543	104	-0.03	107	-0.189	15	-0.003	76	-1.622	104	-1.687	72
430		J	max	7.902	72	0.03	73	0.189	13	0.004	70	1.699	72	1.635	104
431			min	-7.603	104	-0.03	105	0.021	47	-0.003	76	-1.635	104	-1.699	72
432	M563	I	max	6.89	72	0.03	71	-0.021	106	0.001	76	1.482	72	1.405	104
433			min	-6.532	104	-0.03	103	-0.189	16	-0.002	15	-1.405	104	-1.482	72
434		J	max	6.95	72	0.03	73	0.189	15	0.001	76	1.495	72	1.418	104
435			min	-6.592	104	-0.03	101	0.021	44	-0.002	15	-1.418	104	-1.495	72
436	M564	I	max	0.772	15	0.019	103	-0.013	46	0.001	100	0.133	15	0.06	104
437			min	-0.347	104	-0.019	75	-0.16	13	-0.001	72	-0.06	104	-0.133	15
438		J	max	0.772	15	0.019	101	0.16	15	0.001	100	0.133	15	0.053	104
439			min	-0.309	104	-0.019	77	0.013	47	-0.001	72	-0.053	104	-0.133	15
440	M565	I	max	1.366	74	0.029	70	-0.024	76	0.007	13	0.235	74	0.253	106
441			min	-1.472	106	-0.029	106	-0.289	13	-0.001	76	-0.253	106	-0.235	74
442		J	max	1.404	74	0.027	72	0.289	15	0.007	13	0.242	74	0.26	106
443			min	-1.51	106	-0.027	104	0.024	104	-0.001	76	-0.26	106	-0.242	74
444	M566	I	max	1.185	106	0.019	103	-0.013	44	0	64	0.204	106	0.185	74
445			min	-1.075	74	-0.019	75	-0.16	16	0	96	-0.185	74	-0.204	106
446		J	max	1.147	106	0.019	101	0.16	14	0	64	0.197	106	0.179	74
447			min	-1.038	74	-0.019	73	0.013	107	0	96	-0.179	74	-0.197	106
448	M567	I	max	2.755	74	0.029	70	-0.024	76	0.004	72	0.474	74	0.478	106
449			min	-2.778	106	-0.029	106	-0.289	13	-0.003	104	-0.478	106	-0.474	74
450		J	max	2.793	74	0.027	72	0.289	15	0.004	72	0.48	74	0.484	106
451			min	-2.815	106	-0.027	104	0.024	104	-0.003	104	-0.484	106	-0.48	74
452	M568	I	max	12.206	104	0.043	70	-0.035	107	0.006	74	2.625	104	2.718	76
453			min	-12.638	76	-0.043	102	-0.318	13	-0.006	102	-2.718	76	-2.625	104
454		J	max	12.266	104	0.038	72	0.318	15	0.006	74	2.638	104	2.731	76
455			min	-12.698	76	-0.038	104	0.035	75	-0.006	102	-2.731	76	-2.638	104
456	M569	I	max	5.084	14	0.036	66	0.019	107	0.001	13	0	105	0.003	107
457			min	-0.065	107	-0.037	94	-0.019	71	0	104	0	73	-0.236	14
458		J	max	4.77	14	0.036	68	0.019	105	0.001	13	0	105	0.004	107
459			min	-0.092	107	-0.037	92	-0.019	73	0	104	0	73	-0.222	14
460	M570	I	max	4.51	13	0.036	66	0.019	107	0	98	0	105	0.005	75

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
461			min	-0.113	75	-0.037	94	-0.019	71	-0.001	13	0	73	-0.209	13
462		J	max	4.195	13	0.036	68	0.019	105	0	98	0	105	0.006	75
463			min	-0.14	75	-0.037	92	-0.019	73	-0.001	13	0	73	-0.196	13
464	M571	I	max	4.909	15	0.036	98	0.019	71	0.001	13	0	73	-0.001	107
465			min	0.025	107	-0.037	62	-0.019	107	0	104	0	105	-0.228	15
466		J	max	4.594	15	0.036	96	0.019	73	0.001	13	0	73	0	107
467			min	-0.002	107	-0.037	64	-0.019	105	0	104	0	105	-0.214	15
468	M572	I	max	6.447	15	0.036	98	0.019	71	0	107	0	73	-0.013	75
469			min	0.283	75	-0.037	92	-0.019	107	-0.001	13	0	105	-0.299	15
470		J	max	6.132	15	0.036	66	0.019	73	0	107	0	73	-0.012	75
471			min	0.256	75	-0.037	64	-0.019	105	-0.001	13	0	105	-0.286	15
472	M573	I	max	1.977	106	0.293	15	0.028	46	0.002	100	0.139	70	0.126	106
473			min	-2.179	70	0.023	77	-0.028	40	-0.003	19	-0.126	106	-0.139	70
474		J	max	2.015	106	-0.023	105	0.028	100	0.002	100	0.141	70	0.128	106
475			min	-2.217	70	-0.293	13	-0.028	72	-0.003	19	-0.128	106	-0.141	70
476	M574	I	max	2.791	106	0.293	15	0.028	76	0	68	0.217	100	0.178	106
477			min	-3.414	100	0.023	77	-0.028	70	-0.007	13	-0.178	106	-0.217	100
478		J	max	2.829	106	-0.023	105	0.028	40	0	68	0.22	100	0.18	106
479			min	-3.452	100	-0.293	13	-0.028	106	-0.007	13	-0.18	106	-0.22	100
480	M575	I	max	6.582	106	0.327	13	0.041	72	0	98	0.567	70	0.524	106
481			min	-7.129	70	0.034	77	-0.041	104	-0.012	13	-0.524	106	-0.567	70
482		J	max	6.642	106	-0.034	105	0.041	40	0	98	0.572	70	0.528	106
483			min	-7.189	70	-0.327	15	-0.041	42	-0.012	13	-0.528	106	-0.572	70
484	M576	I	max	7.607	76	0.327	13	0.041	106	0.003	68	0.676	100	0.605	76
485			min	-8.494	100	0.034	77	-0.041	40	-0.016	13	-0.605	76	-0.676	100
486		J	max	7.667	76	-0.034	105	0.041	70	0.003	68	0.68	100	0.61	76
487			min	-8.554	100	-0.327	15	-0.041	72	-0.016	13	-0.61	76	-0.68	100
488	M577	I	max	2.794	102	0.293	15	0.028	70	0.006	15	0.156	74	0.178	102
489			min	-2.456	74	0.023	105	-0.028	76	-0.001	74	-0.178	102	-0.156	74
490		J	max	2.831	102	-0.023	77	0.028	46	0.006	15	0.159	74	0.18	102
491			min	-2.494	74	-0.293	13	-0.028	40	-0.001	74	-0.18	102	-0.159	74
492	M578	I	max	3.536	76	0.293	15	0.028	74	0.011	13	0.231	100	0.225	76
493			min	-3.635	100	0.023	105	-0.028	106	0	77	-0.225	76	-0.231	100
494		J	max	3.574	76	-0.023	77	0.028	46	0.011	13	0.234	100	0.227	76
495			min	-3.673	100	-0.293	13	-0.028	70	0	77	-0.227	76	-0.234	100
496	M579	I	max	7.676	106	0.327	13	0.041	104	0.013	13	0.655	70	0.611	106
497			min	-8.228	70	0.034	105	-0.041	102	0	98	-0.611	106	-0.655	70
498		J	max	7.737	106	-0.034	77	0.041	106	0.013	13	0.659	70	0.615	106
499			min	-8.288	70	-0.327	15	-0.041	100	0	98	-0.615	106	-0.659	70
500	M580	I	max	8.5	76	0.327	13	0.041	40	0.006	92	0.73	100	0.676	76
501			min	-9.17	100	0.034	105	-0.041	76	-0.005	68	-0.676	76	-0.73	100
502		J	max	8.56	76	-0.034	77	0.041	72	0.006	92	0.734	100	0.681	76
503			min	-9.231	100	-0.327	15	-0.041	74	-0.005	68	-0.681	76	-0.734	100
504	M581	I	max	5.209	70	0.194	15	0.03	71	0.002	94	0.386	106	0.414	70
505			min	-4.853	106	0.019	76	-0.03	107	-0.002	96	-0.414	70	-0.386	106
506		J	max	5.149	70	-0.019	104	0.03	73	0.002	94	0.381	106	0.41	70
507			min	-4.793	106	-0.194	13	-0.03	45	-0.002	96	-0.41	70	-0.381	106
508	M582	I	max	1.702	74	0.163	15	0.019	41	0.001	102	0.113	102	0.108	74
509			min	-1.777	102	0.012	106	-0.019	103	-0.001	100	-0.108	74	-0.113	102
510		J	max	1.664	74	-0.012	74	0.019	43	0.001	102	0.111	102	0.106	74
511			min	-1.739	102	-0.163	13	-0.019	101	-0.001	100	-0.106	74	-0.111	102
512	M583	I	max	1.578	70	0.163	15	0.019	45	0.001	100	0.085	106	0.1	70
513			min	-1.341	106	0.012	106	-0.019	43	-0.001	102	-0.1	70	-0.085	106
514		J	max	1.54	70	-0.012	74	0.019	73	0.001	100	0.083	106	0.098	70
515			min	-1.303	106	-0.163	13	-0.019	71	-0.001	102	-0.098	70	-0.083	106

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
516	M584	I	max	4.545	70	0.194	15	0.03	71	0.002	96	0.334	106	0.362	70
517			min	-4.2	106	0.019	76	-0.03	103	-0.002	94	-0.362	70	-0.334	106
518		J	max	4.485	70	-0.019	104	0.03	73	0.002	96	0.329	106	0.357	70
519			min	-4.14	106	-0.194	13	-0.03	41	-0.002	94	-0.357	70	-0.329	106
520	M585	I	max	-0.414	107	0.195	13	0.024	70	0.007	106	0.575	14	0.575	14
521			min	-11.659	14	0.001	77	-0.024	106	-0.01	13	0.02	107	0.02	107
522		J	max	-0.473	107	-0.001	107	0.024	72	0.007	106	0.586	14	0.586	14
523			min	-11.909	14	-0.195	15	-0.024	104	-0.01	13	0.023	107	0.023	107
524	M586	I	max	-0.222	107	-0.001	77	0.024	102	0.007	76	0.569	14	0.569	14
525			min	-11.536	14	-0.195	13	-0.024	74	-0.013	13	0.011	107	0.011	107
526		J	max	-0.28	107	0.195	15	0.024	100	0.007	76	0.58	14	0.58	14
527			min	-11.786	14	0.001	107	-0.024	76	-0.013	13	0.014	107	0.014	107
528	M587	I	max	-0.157	75	0.195	15	0.024	102	0.008	104	0.529	13	0.529	13
529			min	-10.736	13	0.001	105	-0.024	74	-0.011	15	0.008	75	0.008	75
530		J	max	-0.216	75	-0.001	75	0.024	100	0.008	104	0.541	13	0.541	13
531			min	-10.986	13	-0.195	13	-0.024	76	-0.011	15	0.011	75	0.011	75
532	M588	I	max	-0.905	75	-0.001	105	0.024	70	0.007	74	0	72	0	74
533			min	-14.43	15	-0.195	13	-0.024	106	-0.013	15	0	104	0	102
534		J	max	-0.964	75	0.195	15	0.024	72	0.007	74	0	15	0	70
535			min	-14.68	15	0.001	75	-0.024	104	-0.013	15	0	74	0	106
536	M589	I	max	13.772	74	0.043	76	-0.035	107	0.01	106	2.962	74	3.04	102
537			min	-14.136	102	-0.043	100	-0.318	15	-0.014	70	-3.04	102	-2.962	74
538		J	max	13.712	74	0.038	70	0.318	13	0.01	106	2.949	74	3.027	102
539			min	-14.075	102	-0.038	102	0.035	75	-0.014	70	-3.027	102	-2.949	74
540	M590	I	max	11.866	74	0.038	104	-0.035	75	0.013	70	2.552	74	2.687	102
541			min	-12.493	102	-0.038	72	-0.318	13	-0.007	106	-2.687	102	-2.552	74
542		J	max	11.806	74	0.043	106	0.318	15	0.013	70	2.539	74	2.674	102
543			min	-12.433	102	-0.043	70	0.035	107	-0.007	106	-2.674	102	-2.539	74
544	M591	I	max	-5.681	98	0.175	13	0.023	100	0.007	77	1.766	15	1.766	15
545			min	-35.847	15	0	77	-0.022	76	-0.016	13	0.28	98	0.28	98
546		J	max	-5.702	98	0	107	0.023	102	0.007	77	1.778	15	1.778	15
547			min	-36.096	15	-0.175	15	-0.022	74	-0.016	13	0.281	98	0.281	98
548	M592	I	max	-5.515	98	0	77	0.023	72	0.011	75	1.571	13	1.571	13
549			min	-31.886	13	-0.175	13	-0.022	104	-0.012	73	0.272	98	0.272	98
550		J	max	-5.536	98	0.175	15	0.023	70	0.011	75	1.583	13	1.583	13
551			min	-32.135	13	0	107	-0.022	106	-0.012	73	0.273	98	0.273	98
552	M593	I	max	-5.666	66	0	105	0.023	100	0.002	104	1.777	15	1.777	15
553			min	-36.071	15	-0.175	15	-0.022	76	-0.018	15	0.279	66	0.279	66
554		J	max	-5.687	66	0.175	13	0.023	102	0.002	104	1.789	15	1.789	15
555			min	-36.32	15	0	75	-0.022	74	-0.018	15	0.28	66	0.28	66
556	M594	I	max	-5.151	68	0.175	15	0.023	72	0.005	70	1.528	13	1.528	13
557			min	-31.015	13	0	105	-0.022	104	-0.004	106	0.254	68	0.254	68
558		J	max	-5.172	68	0	75	0.023	70	0.005	70	1.54	13	1.54	13
559			min	-31.264	13	-0.175	13	-0.022	106	-0.004	106	0.255	68	0.255	68
560	M595	I	max	-4.869	99	0.175	13	0.023	100	0.003	76	1.495	15	1.495	15
561			min	-30.342	15	0	77	-0.022	76	-0.018	13	0.24	99	0.24	99
562		J	max	-4.889	99	0	107	0.023	102	0.003	76	1.507	15	1.507	15
563			min	-30.592	15	-0.175	15	-0.022	74	-0.018	13	0.241	99	0.241	99
564	M596	I	max	-4.682	96	0	77	0.023	72	0.003	68	1.306	14	1.306	14
565			min	-26.503	14	-0.175	13	-0.022	104	-0.014	13	0.231	96	0.231	96
566		J	max	-4.702	96	0.175	15	0.023	70	0.003	68	1.318	14	1.318	14
567			min	-26.753	14	0	107	-0.022	106	-0.014	13	0.232	96	0.232	96
568	M597	I	max	-4.626	66	0	105	0.023	100	0.003	104	1.397	15	1.397	15
569			min	-28.364	15	-0.175	15	-0.022	76	-0.02	15	0.228	66	0.228	66
570		J	max	-4.646	66	0.175	13	0.023	102	0.003	104	1.409	15	1.409	15

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
571			min	-28.613	15	0	75	-0.022	74	-0.02	15	0.229	66	0.229	66
572	M598	I	max	-4.576	68	0.175	15	0.023	72	0.003	96	1.264	13	1.264	13
573			min	-25.651	13	0	105	-0.022	104	-0.012	15	0.225	68	0.225	68
574		J	max	-4.597	68	0	75	0.023	70	0.003	96	1.276	13	1.276	13
575			min	-25.9	13	-0.175	13	-0.022	106	-0.012	15	0.226	68	0.226	68
576	M599	I	max	0.407	107	0.195	13	0.024	70	0.009	102	0.271	14	0.271	14
577			min	-5.498	14	0.001	77	-0.024	106	-0.007	74	-0.02	107	-0.02	107
578		J	max	0.349	107	-0.001	107	0.024	72	0.009	102	0.283	14	0.283	14
579			min	-5.748	14	-0.195	15	-0.024	104	-0.007	74	-0.017	107	-0.017	107
580	M600	I	max	0.557	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
581			min	-5.615	14	-0.195	13	-0.024	74	-0.008	74	-0.027	107	-0.027	107
582		J	max	0.498	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14
583			min	-5.865	14	0.001	107	-0.024	76	-0.008	74	-0.025	107	-0.025	107
584	M601	I	max	-0.075	75	-0.001	105	0.024	70	0.008	74	0.39	15	0.39	15
585			min	-7.908	15	-0.195	15	-0.024	106	-0.009	102	0.004	75	0.004	75
586		J	max	-0.134	75	0.195	13	0.024	72	0.008	74	0.402	15	0.402	15
587			min	-8.158	15	0.001	75	-0.024	104	-0.009	102	0.007	75	0.007	75
588	M602	I	max	0.623	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
589			min	-4.847	13	0.001	105	-0.024	74	-0.009	72	-0.031	75	-0.031	75
590		J	max	0.565	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
591			min	-5.097	13	-0.195	13	-0.024	76	-0.009	72	-0.028	75	-0.028	75
592	M618	I	max	1.375	72	3.52	15	2.827	71	0.695	71	0	107	0.268	74
593			min	-1.075	74	0.803	99	-2.827	103	-0.695	103	0	12	-0.343	72
594		J	max	6.583	72	-0.803	99	2.827	103	0.695	103	0	107	1.568	74
595			min	-6.283	74	-3.52	15	-2.827	71	-0.695	71	0	12	-1.643	72
596	M619	I	max	2.097	76	3.633	15	2.999	71	0.738	71	0	107	0.478	74
597			min	-1.915	74	0.83	97	-3	103	-0.738	103	0	12	-0.523	76
598		J	max	7.481	76	-0.83	97	3	103	0.738	103	0	107	1.822	74
599			min	-7.299	74	-3.633	15	-2.999	71	-0.737	71	0	12	-1.867	76
600	M620	I	max	2.775	14	0.234	74	0.674	103	0	107	0	107	0	107
601			min	-0.731	77	-0.502	102	-0.675	101	0	12	0	12	0	12
602		J	max	0	107	0	13	0	71	0	107	0	107	0	107
603			min	0	12	0	106	0	103	0	12	0	12	0	12
604	M621	I	max	2.775	16	0.234	74	0.675	103	0	107	0	107	0	107
605			min	-0.731	75	-0.502	102	-0.674	101	0	12	0	12	0	12
606		J	max	0	107	0	13	0	101	0	107	0	107	0	107
607			min	0	12	0	106	0	73	0	12	0	12	0	12
608	M622	I	max	2.887	16	0.911	70	0.515	103	0.372	103	3.457	101	4.885	74
609			min	0.459	97	-0.911	102	-0.516	101	-0.372	105	-3.456	103	-5.573	102
610		J	max	0	107	0	70	0	103	0	107	0	107	0	107
611			min	0	12	0	15	0	101	0	12	0	12	0	12
612	M623	I	max	5.576	14	2.083	70	2.012	73	0.02	77	5.545	101	3.683	70
613			min	-0.702	77	-1.941	106	-2.007	71	-0.02	105	-5.548	103	-3.401	106
614		J	max	0	107	0	70	0	101	0	107	0	107	0	107
615			min	0	12	0	15	0	103	0	12	0	12	0	12
616	M624	I	max	5.576	16	2.083	70	2.007	73	0.02	107	5.548	101	3.683	70
617			min	-0.702	75	-1.941	106	-2.012	71	-0.02	75	-5.545	103	-3.401	106
618		J	max	0	107	0	70	0	101	0	107	0	107	0	107
619			min	0	12	0	15	0	103	0	12	0	12	0	12
620	M625	I	max	2.887	14	0.911	70	0.516	103	0.372	103	3.456	101	4.885	74
621			min	0.459	99	-0.911	102	-0.515	101	-0.372	105	-3.457	103	-5.573	102
622		J	max	0	107	0	70	0	103	0	107	0	107	0	107
623			min	0	12	0	15	0	101	0	12	0	12	0	12
624	M628	I	max	3.306	14	1.447	65	1.185	106	0	107	0	107	0	107
625			min	-1.316	99	-1.137	67	-1.317	70	0	12	0	12	0	12

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
626		J	max	3.013	93	1.373	65	0.382	70	0	106	0	63	4.718	67
627			min	-1.477	69	-1.062	67	-0.348	106	0	70	0	65	-6.05	65
628	M629	I	max	3.306	16	1.137	69	1.185	106	0	107	0	107	0	107
629			min	-1.316	97	-1.447	63	-1.317	70	0	12	0	12	0	12
630		J	max	3.013	95	1.062	69	0.382	70	0	70	0	65	6.05	63
631			min	-1.477	67	-1.373	63	-0.348	106	0	106	0	63	-4.718	69
632	M631	I	max	0	107	0	71	0	73	0	107	0	107	0	107
633			min	0	12	0	12	0	103	0	12	0	12	0	12
634		J	max	0	107	0	106	0	101	0	107	0	107	0	107
635			min	0	12	0	73	0	71	0	12	0	12	0	12
636	M632	I	max	0.327	15	1.666	15	0.447	103	0.004	103	0	102	2.523	102
637			min	-0.023	66	0.035	66	-0.447	101	-0.004	75	0	74	-0.864	74
638		J	max	0.78	100	0.154	106	0.266	101	0.004	103	0.299	73	2.755	70
639			min	-0.513	76	-1.019	13	-0.266	103	-0.004	75	-0.299	105	-1.872	106
640	M633	I	max	0.327	15	1.666	15	0.447	103	0.004	77	0	74	2.523	102
641			min	-0.023	66	0.035	66	-0.447	101	-0.004	101	0	102	-0.864	74
642		J	max	0.78	100	0.154	106	0.266	101	0.004	77	0.299	107	2.755	70
643			min	-0.513	76	-1.019	13	-0.266	103	-0.004	101	-0.299	71	-1.872	106
644	M638	I	max	1.162	107	0.142	14	0.018	106	0	102	0	107	0	107
645			min	-1.184	101	0	107	-0.018	44	0	74	0	12	0	12
646		J	max	1.211	103	0	47	0.018	104	0	102	0	107	0	107
647			min	-1.193	105	-0.142	15	-0.018	42	0	74	0	12	0	12
648	M639	I	max	1.211	101	0.139	16	0.018	76	0	74	0	107	0	107
649			min	-1.193	107	0	45	-0.018	44	0	102	0	12	0	12
650		J	max	1.162	105	0	105	0.018	104	0	74	0	107	0	107
651			min	-1.184	103	-0.139	14	-0.018	42	0	102	0	12	0	12
652	M640	I	max	1.436	74	0.641	70	0.124	103	0.002	75	0	107	0	107
653			min	-1.494	102	-0.589	106	-0.124	101	-0.002	103	0	12	0	12
654		J	max	1.326	106	0.463	74	0.124	101	0.002	105	0	107	0	107
655			min	-1.363	70	-0.524	102	-0.124	103	-0.002	73	0	12	0	12
656	M642	I	max	1.436	74	0.641	70	0.124	103	0.002	101	0	107	0	107
657			min	-1.494	102	-0.589	106	-0.124	101	-0.002	77	0	12	0	12
658		J	max	1.326	106	0.463	74	0.124	101	0.002	71	0	107	0	107
659			min	-1.363	70	-0.524	102	-0.124	103	-0.002	107	0	12	0	12
660	M644	I	max	2.428	102	0.092	15	0.014	47	0	67	0	107	0	107
661			min	-2.143	74	-0.003	46	-0.014	45	0	95	0	12	0	12
662		J	max	2.386	102	0.003	106	0.014	71	0	67	0	107	0	107
663			min	-2.137	74	-0.092	16	-0.014	107	0	95	0	12	0	12
664	M645	I	max	2.192	70	0.094	16	0.014	107	0	70	0	107	0	107
665			min	-1.977	106	-0.003	44	-0.014	45	0	106	0	12	0	12
666		J	max	2.233	70	0.003	104	0.014	71	0	70	0	107	0	107
667			min	-1.983	106	-0.094	13	-0.014	43	0	106	0	12	0	12
668	M646	I	max	2.428	102	0.092	16	0.014	73	0	93	0	107	0	107
669			min	-2.143	74	-0.003	46	-0.014	105	0	69	0	12	0	12
670		J	max	2.386	102	0.003	106	0.014	71	0	93	0	107	0	107
671			min	-2.137	74	-0.092	14	-0.014	47	0	69	0	12	0	12
672	M647	I	max	2.192	70	0.094	16	0.014	73	0	106	0	107	0	107
673			min	-1.977	106	-0.003	44	-0.014	45	0	70	0	12	0	12
674		J	max	2.233	70	0.003	104	0.014	101	0	106	0	107	0	107
675			min	-1.983	106	-0.094	13	-0.014	43	0	70	0	12	0	12
676	M648	I	max	0.033	105	0.266	16	0.057	98	0	105	0	107	0	107
677			min	-0.101	13	0.037	45	-0.057	32	0	107	0	12	0	12
678		J	max	0.033	107	-0.037	107	0.057	96	0	105	0	107	0	107
679			min	-0.101	13	-0.266	13	-0.057	34	0	107	0	12	0	12
680	M649	I	max	0.098	66	0.339	13	0.085	41	0	107	0.025	107	0.294	16

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
681			min	-0.098	34	0.027	98	-0.085	43	0	12	-0.294	14	-0.025	75
682		J	max	0	107	0	107	0	100	0	107	0	107	0	107
683			min	0	12	0	102	0	72	0	12	0	12	0	12
684	M650	I	max	0.079	96	0.293	13	0.07	75	0	107	0.02	107	0.251	16
685			min	-0.079	64	0.023	98	-0.07	103	0	12	-0.251	14	-0.02	75
686		J	max	0	107	0	100	0	100	0	107	0	107	0	107
687			min	0	12	0	102	0	102	0	12	0	12	0	12
688	M651	I	max	0.079	92	0.293	13	0.07	105	0	107	0.02	77	0.251	16
689			min	-0.079	34	0.023	98	-0.07	73	0	12	-0.251	14	-0.02	45
690		J	max	0	107	0	100	0	70	0	107	0	107	0	107
691			min	0	12	0	102	0	72	0	12	0	12	0	12
692	M652	I	max	0.098	92	0.339	13	0.085	71	0	107	0.025	47	0.294	16
693			min	-0.098	34	0.027	98	-0.085	73	0	12	-0.294	14	-0.025	75
694		J	max	0	107	0	107	0	100	0	107	0	107	0	107
695			min	0	12	0	102	0	72	0	12	0	12	0	12
696	M653	I	max	0.079	92	0.293	13	0.07	75	0	107	0.02	77	0.251	16
697			min	-0.079	34	0.023	98	-0.07	43	0	12	-0.251	14	-0.02	75
698		J	max	0	107	0	100	0	100	0	107	0	107	0	107
699			min	0	12	0	102	0	102	0	12	0	12	0	12
700	M654	I	max	0.079	66	0.293	13	0.07	75	0	107	0.02	77	0.251	16
701			min	-0.079	64	0.023	98	-0.07	107	0	12	-0.251	14	-0.02	75
702		J	max	0	107	0	100	0	70	0	107	0	107	0	107
703			min	0	12	0	102	0	72	0	12	0	12	0	12
704	M655	I	max	0.098	92	0.339	13	0.085	105	0	107	0.025	47	0.294	16
705			min	-0.098	38	0.027	98	-0.085	47	0	12	-0.294	14	-0.025	105
706		J	max	0	107	0	107	0	100	0	107	0	107	0	107
707			min	0	12	0	102	0	72	0	12	0	12	0	12
708	M656	I	max	0.098	66	0.339	13	0.085	71	0	107	0.025	77	0.294	16
709			min	-0.098	34	0.027	98	-0.085	43	0	12	-0.294	14	-0.025	105
710		J	max	0	107	0	107	0	100	0	107	0	107	0	107
711			min	0	12	0	102	0	72	0	12	0	12	0	12
712	M657	I	max	0.129	104	0.433	13	0.129	71	0	107	0.031	47	0.326	16
713			min	-0.129	42	0.026	98	-0.129	103	0	12	-0.326	14	-0.031	105
714		J	max	0	107	0	100	0	100	0	107	0	107	0	107
715			min	0	12	0	102	0	102	0	12	0	12	0	12
716	M658	I	max	0.129	104	0.433	13	0.129	71	0	107	0.031	77	0.326	16
717			min	-0.129	42	0.026	98	-0.129	77	0	12	-0.326	14	-0.031	105
718		J	max	0	107	0	100	0	100	0	107	0	107	0	107
719			min	0	12	0	102	0	72	0	12	0	12	0	12
720	M659	I	max	0.142	104	0.468	13	0.142	105	0	107	0.034	107	0.353	16
721			min	-0.142	102	0.028	98	-0.142	43	0	12	-0.353	14	-0.034	105
722		J	max	0	107	0	107	0	100	0	107	0	107	0	107
723			min	0	12	0	102	0	72	0	12	0	12	0	12
724	M660	I	max	0.142	104	0.468	13	0.142	71	0	107	0.034	47	0.353	16
725			min	-0.142	72	0.028	98	-0.142	43	0	12	-0.353	14	-0.034	75
726		J	max	0	107	0	107	0	100	0	107	0	107	0	107
727			min	0	12	0	102	0	72	0	12	0	12	0	12
728	M407	I	max	3.223	15	0.661	74	0.69	107	0	107	0	107	0	107
729			min	-0.564	44	-0.81	42	-0.756	41	0	12	0	12	0	12
730		J	max	0	107	0	13	0	101	0	107	0	107	0	107
731			min	0	12	0	72	0	43	0	12	0	12	0	12
732	M408	I	max	3.223	13	0.81	100	0.69	107	0	107	0	107	0	107
733			min	-0.564	46	-0.661	46	-0.756	41	0	12	0	12	0	12
734		J	max	0	107	0	100	0	101	0	107	0	107	0	107
735			min	0	12	0	15	0	43	0	12	0	12	0	12

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
736	M417	I	max	3.223	13	0.81	100	0.756	103	0	107	0	107	0	107
737			min	-0.564	46	-0.661	46	-0.69	75	0	12	0	12	0	12
738		J	max	0	107	0	100	0	101	0	107	0	107	0	107
739			min	0	12	0	15	0	43	0	12	0	12	0	12
740	M418	I	max	3.223	15	0.661	44	0.756	73	0	107	0	107	0	107
741			min	-0.564	44	-0.81	42	-0.69	75	0	12	0	12	0	12
742		J	max	0	107	0	13	0	101	0	107	0	107	0	107
743			min	0	12	0	42	0	43	0	12	0	12	0	12
744	M419	I	max	0.05	105	0.382	16	0.082	98	0	101	0	107	0	107
745			min	-0.124	15	0.054	44	-0.082	32	0	43	0	12	0	12
746		J	max	0.05	107	-0.054	107	0.082	96	0	101	0	107	0	107
747			min	-0.124	15	-0.382	13	-0.082	34	0	43	0	12	0	12
748	M420	I	max	0.441	102	1.893	42	0.35	103	0	42	0	44	5.288	42
749			min	-0.299	44	-0.816	44	-0.35	41	0	40	0	42	-4.135	44
750		J	max	0.441	100	0.816	106	0.35	101	0	42	0	106	5.288	100
751			min	-0.299	46	-1.893	40	-0.35	43	0	40	0	40	-4.135	46
752	M421	I	max	0.05	107	0.382	16	0.082	96	0	103	0	107	0	107
753			min	-0.124	13	0.054	44	-0.082	34	0	41	0	12	0	12
754		J	max	0.05	75	-0.054	107	0.082	98	0	103	0	107	0	107
755			min	-0.124	13	-0.382	13	-0.082	32	0	41	0	12	0	12
756	M422	I	max	0.441	100	1.893	100	0.35	101	0	100	0	106	5.288	100
757			min	-0.299	46	-0.816	46	-0.35	43	0	42	0	40	-4.135	46
758		J	max	0.441	102	0.816	44	0.35	103	0	100	0	44	5.288	42
759			min	-0.299	44	-1.893	42	-0.35	41	0	42	0	42	-4.135	44
760	M423	I	max	0.883	103	0.21	14	0.03	42	0	42	0	107	0	107
761			min	-0.825	75	-0.006	77	-0.03	40	0	44	0	12	0	12
762		J	max	0.974	103	0.006	47	0.03	104	0	42	0	107	0	107
763			min	-0.838	75	-0.21	15	-0.03	46	0	44	0	12	0	12
764	M424	I	max	0.883	101	0.21	16	0.03	104	0	44	0	107	0	107
765			min	-0.825	77	-0.006	75	-0.03	42	0	42	0	12	0	12
766		J	max	0.974	101	0.006	45	0.03	106	0	44	0	107	0	107
767			min	-0.838	77	-0.21	15	-0.03	40	0	42	0	12	0	12
768	M425	I	max	0.883	103	0.21	16	0.03	106	0	106	0	107	0	107
769			min	-0.825	75	-0.006	77	-0.03	40	0	40	0	12	0	12
770		J	max	0.974	103	0.006	47	0.03	104	0	106	0	107	0	107
771			min	-0.838	75	-0.21	16	-0.03	42	0	40	0	12	0	12
772	M426	I	max	0.883	101	0.21	15	0.03	104	0	100	0	107	0	107
773			min	-0.825	77	-0.006	105	-0.03	42	0	46	0	12	0	12
774		J	max	0.974	101	0.006	45	0.03	106	0	100	0	107	0	107
775			min	-0.838	77	-0.21	13	-0.03	40	0	46	0	12	0	12
776	M427	I	max	3.757	15	0.834	74	0.849	47	0	107	0	107	0	107
777			min	-1.148	74	-0.96	42	-0.956	41	0	12	0	12	0	12
778		J	max	0	107	0	13	0	16	0	107	0	107	0	107
779			min	0	12	0	34	0	41	0	12	0	12	0	12
780	M428	I	max	3.757	13	0.96	100	0.849	47	0	107	0	107	0	107
781			min	-1.148	46	-0.834	46	-0.956	41	0	12	0	12	0	12
782		J	max	0	107	0	62	0	16	0	107	0	107	0	107
783			min	0	12	0	15	0	41	0	12	0	12	0	12
784	M429	I	max	3.757	13	0.96	100	0.956	73	0	107	0	107	0	107
785			min	-1.148	46	-0.834	46	-0.849	45	0	12	0	12	0	12
786		J	max	0	107	0	92	0	73	0	107	0	107	0	107
787			min	0	12	0	15	0	14	0	12	0	12	0	12
788	M430	I	max	3.757	15	0.834	74	0.956	73	0	107	0	107	0	107
789			min	-1.148	44	-0.96	42	-0.849	45	0	12	0	12	0	12
790		J	max	0	107	0	13	0	73	0	107	0	107	0	107

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
791			min	0	12	0	34	0	14	0	12	0	12	0	12
792	M431	I	max	0.586	101	2.878	101	0.541	102	0	101	0.002	107	6.394	101
793			min	-0.517	77	-1.09	77	-0.541	40	0	73	-0.002	41	-5.647	77
794		J	max	0.586	103	1.09	75	0.541	100	0	101	0.002	75	6.394	73
795			min	-0.517	75	-2.878	73	-0.541	72	0	73	-0.002	73	-5.647	75
796	M432	I	max	0.064	75	0.293	16	0.062	99	0	42	0	107	0	107
797			min	-0.209	73	0.041	44	-0.062	33	0	40	0	12	0	12
798		J	max	0.064	75	-0.041	107	0.062	97	0	42	0	107	0	107
799			min	-0.209	73	-0.293	13	-0.062	35	0	40	0	12	0	12
800	M433	I	max	0.586	103	2.878	73	0.541	100	0	73	0.002	75	6.394	73
801			min	-0.517	75	-1.09	75	-0.541	42	0	41	-0.002	73	-5.647	75
802		J	max	0.586	101	1.09	107	0.541	42	0	73	0.002	107	6.394	101
803			min	-0.517	77	-2.878	41	-0.541	40	0	41	-0.002	41	-5.647	77
804	M434	I	max	0.064	107	0.293	16	0.062	97	0	100	0	107	0	107
805			min	-0.209	41	0.041	46	-0.062	35	0	42	0	12	0	12
806		J	max	0.064	107	-0.041	104	0.062	99	0	100	0	107	0	107
807			min	-0.209	41	-0.293	13	-0.062	33	0	42	0	12	0	12
808	M439	I	max	3.161	16	0.757	100	0.758	73	0.512	107	2.04	101	4.681	104
809			min	-0.11	45	-0.757	72	-0.757	41	-0.512	41	-2.042	73	-5.618	42
810		J	max	0	107	0	100	0	101	0	107	0	107	0	107
811			min	0	12	0	15	0	43	0	12	0	12	0	12
812	M440	I	max	0.138	36	0.431	13	0.115	105	0	107	0.034	47	0.381	16
813			min	-0.138	38	0.034	38	-0.115	43	0	12	-0.381	14	-0.034	45
814		J	max	0	107	0	107	0	100	0	107	0	107	0	107
815			min	0	12	0	72	0	72	0	12	0	12	0	12
816	M441	I	max	0.138	96	0.431	13	0.115	45	0	107	0.034	107	0.381	16
817			min	-0.138	38	0.034	38	-0.115	73	0	12	-0.381	14	-0.034	105
818		J	max	0	107	0	107	0	100	0	107	0	107	0	107
819			min	0	12	0	72	0	72	0	12	0	12	0	12
820	M442	I	max	0.197	104	0.622	13	0.197	75	0	107	0.048	47	0.471	16
821			min	-0.197	42	0.036	38	-0.197	77	0	12	-0.471	14	-0.048	75
822		J	max	0	107	0	107	0	100	0	107	0	107	0	107
823			min	0	12	0	72	0	72	0	12	0	12	0	12
824	M443	I	max	3.161	14	0.757	100	0.757	103	0.512	103	2.042	101	4.681	44
825			min	-0.11	47	-0.757	42	-0.758	41	-0.512	45	-2.04	73	-5.618	72
826		J	max	0	107	0	100	0	101	0	107	0	107	0	107
827			min	0	12	0	15	0	43	0	12	0	12	0	12
828	M444	I	max	0.138	92	0.431	13	0.115	45	0	107	0.034	47	0.381	16
829			min	-0.138	68	0.034	38	-0.115	73	0	12	-0.381	14	-0.034	105
830		J	max	0	107	0	107	0	100	0	107	0	107	0	107
831			min	0	12	0	72	0	72	0	12	0	12	0	12
832	M445	I	max	0.138	96	0.431	13	0.115	45	0	107	0.034	47	0.381	16
833			min	-0.138	34	0.034	38	-0.115	77	0	12	-0.381	14	-0.034	45
834		J	max	0	107	0	107	0	100	0	107	0	107	0	107
835			min	0	12	0	72	0	72	0	12	0	12	0	12
836	M446	I	max	0.197	104	0.622	13	0.197	45	0	107	0.048	47	0.471	16
837			min	-0.197	72	0.036	38	-0.197	73	0	12	-0.471	14	-0.048	105
838		J	max	0	107	0	107	0	100	0	107	0	107	0	107
839			min	0	12	0	72	0	72	0	12	0	12	0	12
840	M447	I	max	0.638	45	0.266	14	0.03	104	0.003	103	0	107	0	107
841			min	-0.665	73	0.004	75	-0.03	42	-0.002	45	0	12	0	12
842		J	max	0.718	101	-0.004	45	0.03	106	0.003	103	0	107	0	107
843			min	-0.692	77	-0.266	13	-0.03	40	-0.002	45	0	12	0	12
844	M448	I	max	0.638	47	0.266	16	0.03	106	0.002	47	0	107	0	107
845			min	-0.665	41	0.004	47	-0.03	40	-0.003	41	0	12	0	12

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
846		J	max	0.718	103	-0.004	107	0.03	104	0.002	47	0	107	0	107
847			min	-0.692	75	-0.266	13	-0.03	42	-0.003	41	0	12	0	12
848	M449	I	max	2.969	16	0.718	100	0.719	73	0.479	47	1.928	101	4.411	104
849			min	-0.309	45	-0.718	72	-0.718	41	-0.479	41	-1.931	73	-5.287	42
850		J	max	0	107	0	100	0	101	0	107	0	107	0	107
851			min	0	12	0	15	0	43	0	12	0	12	0	12
852	M450	I	max	0.128	96	0.41	13	0.108	101	0	107	0.032	107	0.361	16
853			min	-0.128	38	0.032	38	-0.108	43	0	12	-0.361	14	-0.032	45
854		J	max	0	107	0	107	0	100	0	107	0	107	0	107
855			min	0	12	0	72	0	72	0	12	0	12	0	12
856	M451	I	max	0.128	96	0.41	13	0.108	45	0	107	0.032	107	0.361	16
857			min	-0.128	34	0.032	38	-0.108	47	0	12	-0.361	14	-0.032	45
858		J	max	0	107	0	107	0	100	0	107	0	107	0	107
859			min	0	12	0	72	0	72	0	12	0	12	0	12
860	M452	I	max	0.185	104	0.588	13	0.185	101	0	107	0.045	107	0.445	16
861			min	-0.185	46	0.034	38	-0.185	73	0	12	-0.445	14	-0.045	45
862		J	max	0	107	0	107	0	100	0	107	0	107	0	107
863			min	0	12	0	72	0	72	0	12	0	12	0	12
864	M453	I	max	2.969	14	0.718	100	0.718	73	0.479	103	1.931	101	4.411	44
865			min	-0.309	47	-0.718	42	-0.719	41	-0.479	45	-1.928	73	-5.287	72
866		J	max	0	107	0	100	0	101	0	107	0	107	0	107
867			min	0	12	0	15	0	43	0	12	0	12	0	12
868	M454	I	max	0.128	96	0.41	13	0.108	105	0	107	0.032	107	0.361	16
869			min	-0.128	34	0.032	38	-0.108	77	0	12	-0.361	14	-0.032	75
870		J	max	0	107	0	107	0	100	0	107	0	107	0	107
871			min	0	12	0	72	0	72	0	12	0	12	0	12
872	M455	I	max	0.128	92	0.41	13	0.108	45	0	107	0.032	47	0.361	16
873			min	-0.128	34	0.032	38	-0.108	43	0	12	-0.361	14	-0.032	45
874		J	max	0	107	0	107	0	100	0	107	0	107	0	107
875			min	0	12	0	72	0	72	0	12	0	12	0	12
876	M456	I	max	0.185	74	0.588	13	0.185	45	0	107	0.045	107	0.445	16
877			min	-0.185	46	0.034	38	-0.185	77	0	12	-0.445	14	-0.045	45
878		J	max	0	107	0	107	0	100	0	107	0	107	0	107
879			min	0	12	0	72	0	72	0	12	0	12	0	12
880	M457	I	max	0.66	45	0.196	15	0.024	104	0.004	73	0	107	0	107
881			min	-0.687	43	0	75	-0.024	46	-0.004	45	0	12	0	12
882		J	max	0.726	101	0	45	0.024	102	0.004	73	0	107	0	107
883			min	-0.7	77	-0.196	16	-0.024	44	-0.004	45	0	12	0	12
884	M458	I	max	0.66	47	0.196	16	0.024	106	0.004	47	0	107	0	107
885			min	-0.687	41	0	77	-0.024	44	-0.004	41	0	12	0	12
886		J	max	0.726	73	0	47	0.024	100	0.004	47	0	107	0	107
887			min	-0.7	75	-0.196	13	-0.024	46	-0.004	41	0	12	0	12
888	M463	I	max	0.359	102	0.359	103	-0.059	66	0	107	0.928	14	0.928	16
889			min	-0.359	40	-0.359	45	-1.068	15	0	12	-0.101	47	-0.101	45
890		J	max	0	107	0	70	0	107	0	107	0	107	0	107
891			min	0	12	0	72	0	72	0	12	0	12	0	12
892	M464	I	max	0.167	102	0.167	77	-0.032	66	0	107	0.461	14	0.461	16
893			min	-0.167	74	-0.167	101	-0.539	15	0	12	-0.047	77	-0.047	45
894		J	max	0	107	0	100	0	70	0	107	0	107	0	107
895			min	0	12	0	12	0	12	0	12	0	12	0	12
896	M465	I	max	0.341	46	0.341	47	-0.056	66	0	107	0.883	14	0.883	16
897			min	-0.341	40	-0.341	75	-1.017	15	0	12	-0.096	47	-0.096	45
898		J	max	0	107	0	70	0	107	0	107	0	107	0	107
899			min	0	12	0	12	0	72	0	12	0	12	0	12
900	M466	I	max	0.241	94	0.19	77	-0.051	66	0	107	0.445	14	0.445	16

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
901			min	-0.241	66	-0.19	101	-0.647	15	0	12	-0.043	77	-0.043	105
902		J	max	0	107	0	70	0	107	0	107	0	107	0	107
903			min	0	12	0	12	0	72	0	12	0	12	0	12
904	M467	I	max	0.26	76	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
905			min	-0.26	104	-0.26	71	-0.796	15	0	12	-0.073	107	-0.073	45
906		J	max	0	107	0	107	0	70	0	107	0	107	0	107
907			min	0	12	0	72	0	72	0	12	0	12	0	12
908	M472	I	max	0.092	76	0.092	47	-0.021	66	0	107	0.28	14	0.28	16
909			min	-0.092	70	-0.092	101	-0.334	15	0	12	-0.026	107	-0.026	105
910		J	max	0	107	0	107	0	70	0	107	0	107	0	107
911			min	0	12	0	102	0	12	0	12	0	12	0	12
912	M486	I	max	0.187	94	0.15	107	-0.041	66	0	107	0.354	14	0.354	16
913			min	-0.187	92	-0.15	75	-0.518	15	0	12	-0.033	107	-0.033	75
914		J	max	0	107	0	70	0	107	0	107	0	107	0	107
915			min	0	12	0	72	0	72	0	12	0	12	0	12
916	M487	I	max	0.059	94	0.053	103	-0.018	66	0	107	0.147	14	0.147	16
917			min	-0.059	32	-0.053	71	-0.225	15	0	12	-0.012	107	-0.012	75
918		J	max	0	107	0	107	0	70	0	107	0	107	0	107
919			min	0	12	0	102	0	12	0	12	0	12	0	12
920	M488	I	max	0.272	106	0.272	47	-0.047	66	0	107	0.716	14	0.716	16
921			min	-0.272	70	-0.272	71	-0.828	15	0	12	-0.076	47	-0.076	105
922		J	max	0	107	0	70	0	107	0	107	0	107	0	107
923			min	0	12	0	72	0	72	0	12	0	12	0	12
924	M489	I	max	0.059	64	0.053	103	-0.018	66	0	107	0.146	14	0.146	16
925			min	-0.059	62	-0.053	71	-0.224	15	0	12	-0.012	107	-0.012	75
926		J	max	0	107	0	107	0	70	0	107	0	107	0	107
927			min	0	12	0	102	0	12	0	12	0	12	0	12
928	M490	I	max	0.204	76	0.204	103	-0.037	66	0	107	0.551	14	0.551	16
929			min	-0.204	70	-0.204	45	-0.641	15	0	12	-0.057	107	-0.057	45
930		J	max	0	107	0	100	0	70	0	107	0	107	0	107
931			min	0	12	0	102	0	12	0	12	0	12	0	12
932	M491	I	max	0.138	94	0.113	77	-0.032	66	0	107	0.274	14	0.274	16
933			min	-0.138	62	-0.113	41	-0.405	15	0	12	-0.025	77	-0.025	75
934		J	max	0	107	0	100	0	70	0	107	0	107	0	107
935			min	0	12	0	12	0	12	0	12	0	12	0	12
936	M492	I	max	0.138	38	0.113	107	-0.032	66	0	107	0.275	14	0.275	16
937			min	-0.138	96	-0.113	75	-0.406	15	0	12	-0.025	47	-0.025	75
938		J	max	0	107	0	100	0	70	0	107	0	107	0	107
939			min	0	12	0	12	0	12	0	12	0	12	0	12
940	M493	I	max	0.341	76	0.341	77	-0.056	66	0	107	0.883	14	0.883	16
941			min	-0.341	40	-0.341	71	-1.017	15	0	12	-0.096	107	-0.096	45
942		J	max	0	107	0	70	0	70	0	107	0	107	0	107
943			min	0	12	0	12	0	72	0	12	0	12	0	12
944	M494	I	max	0.241	68	0.19	107	-0.051	66	0	107	0.444	14	0.444	16
945			min	-0.241	96	-0.19	105	-0.646	15	0	12	-0.043	47	-0.043	75
946		J	max	0	107	0	70	0	107	0	107	0	107	0	107
947			min	0	12	0	12	0	72	0	12	0	12	0	12
948	M495	I	max	0.241	68	0.19	103	-0.051	66	0	107	0.445	14	0.445	16
949			min	-0.241	66	-0.19	71	-0.647	15	0	12	-0.043	47	-0.043	75
950		J	max	0	107	0	70	0	107	0	107	0	107	0	107
951			min	0	12	0	12	0	72	0	12	0	12	0	12
952	M496	I	max	0.187	34	0.15	77	-0.041	66	0	107	0.355	14	0.355	16
953			min	-0.187	36	-0.15	41	-0.52	15	0	12	-0.033	107	-0.033	45
954		J	max	0	107	0	70	0	107	0	107	0	107	0	107
955			min	0	12	0	72	0	72	0	12	0	12	0	12

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
956	M499	I	max	0.182	98	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
957			min	-0.182	66	-0.146	101	-0.507	15	0	12	-0.033	107	-0.033	45
958		J	max	0	107	0	107	0	107	0	107	0	107	0	107
959			min	0	12	0	72	0	72	0	12	0	12	0	12
960	M500	I	max	0.113	38	0.094	77	-0.028	66	0	107	0.234	14	0.234	16
961			min	-0.113	62	-0.094	105	-0.348	15	0	12	-0.021	77	-0.021	105
962		J	max	0	107	0	100	0	70	0	107	0	107	0	107
963			min	0	12	0	12	0	12	0	12	0	12	0	12
964	M501	I	max	0.113	94	0.094	73	-0.028	66	0	107	0.235	14	0.235	16
965			min	-0.113	36	-0.094	101	-0.349	15	0	12	-0.021	77	-0.021	105
966		J	max	0	107	0	100	0	70	0	107	0	107	0	107
967			min	0	12	0	12	0	12	0	12	0	12	0	12
968	M502	I	max	0.241	38	0.19	73	-0.051	66	0	107	0.444	14	0.444	16
969			min	-0.241	32	-0.19	45	-0.646	15	0	12	-0.043	107	-0.043	105
970		J	max	0	107	0	70	0	107	0	107	0	107	0	107
971			min	0	12	0	12	0	72	0	12	0	12	0	12
972	M503	I	max	0.251	38	0.198	43	-0.053	66	0	107	0.459	14	0.459	16
973			min	-0.251	96	-0.198	105	-0.667	15	0	12	-0.044	47	-0.044	105
974		J	max	0	107	0	70	0	107	0	107	0	107	0	107
975			min	0	12	0	72	0	72	0	12	0	12	0	12
976	M504	I	max	0.251	98	0.198	73	-0.053	66	0	107	0.46	14	0.46	16
977			min	-0.251	96	-0.198	105	-0.669	15	0	12	-0.044	47	-0.044	105
978		J	max	0	107	0	70	0	107	0	107	0	107	0	107
979			min	0	12	0	72	0	72	0	12	0	12	0	12
980	M505	I	max	0.182	64	0.146	73	-0.04	66	0	107	0.348	14	0.348	16
981			min	-0.182	32	-0.146	105	-0.509	15	0	12	-0.033	107	-0.033	45
982		J	max	0	107	0	107	0	107	0	107	0	107	0	107
983			min	0	12	0	72	0	72	0	12	0	12	0	12
984	M391	I	max	21.574	15	5.166	100	0.136	15	0	107	0	107	0	107
985			min	-3.172	104	-5.176	72	-0.006	104	0	12	0	12	0	12
986		J	max	0	107	0	100	0	13	0	107	0	107	0	107
987			min	0	12	0	72	0	98	0	12	0	12	0	12
988	M393	I	max	25.852	13	10.936	102	0.002	76	0	107	0	107	0	107
989			min	-2.194	106	-10.86	70	-0.169	13	0	12	0	12	0	12
990		J	max	0	107	0	102	0	106	0	107	0	107	0	107
991			min	0	12	0	70	0	15	0	12	0	12	0	12
992	M395	I	max	28.536	13	12.213	102	16.449	75	0	107	0	107	0	107
993			min	-3.379	76	-12.033	70	-17.349	103	0	12	0	12	0	12
994		J	max	0	107	0	102	0	16	0	107	0	107	0	107
995			min	0	12	0	70	0	76	0	12	0	12	0	12
996	M459	I	max	19.839	15	5.771	100	15.771	107	0	107	0	107	0	107
997			min	-4.938	74	-5.484	72	-16.719	71	0	12	0	12	0	12
998		J	max	0	107	0	100	0	68	0	107	0	107	0	107
999			min	0	12	0	72	0	13	0	12	0	12	0	12
1000	M461	I	max	0.881	72	0.019	105	-0.013	106	0	76	0.152	72	0.07	104
1001			min	-0.405	104	-0.019	73	-0.16	13	0	13	-0.07	104	-0.152	72
1002		J	max	0.919	72	0.019	107	0.16	16	0	76	0.158	72	0.076	104
1003			min	-0.443	104	-0.019	71	0.013	104	0	13	-0.076	104	-0.158	72
1004	M462	I	max	20.33	103	0.314	71	0.119	102	0.001	104	0	107	1.676	75
1005			min	-18.617	75	-0.312	103	-0.094	74	-0.072	15	0	12	-1.83	103
1006		J	max	10.415	102	0.205	106	0.109	70	0.002	76	0	107	0.891	74
1007			min	-9.904	74	-0.211	70	-0.105	106	-0.065	13	0	12	-0.937	102
1008	M470	I	max	18.36	107	0.326	71	0.041	64	0.017	70	0	107	1.753	71
1009			min	-19.475	71	-0.292	107	-0.039	96	-0.013	106	0	12	-1.652	107
1010		J	max	0.257	107	0.09	17	0.032	96	0.013	106	0	107	0.027	71

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1011			min	-0.301	71	-0.054	72	-0.106	15	-0.015	70	0	12	-0.023	107
1012	M474	I	max	1.4	104	0.027	72	-0.024	76	0.028	15	0.241	104	0.337	72
1013			min	-1.958	72	-0.027	104	-0.289	13	0	74	-0.337	72	-0.241	104
1014		J	max	1.438	104	0.029	70	0.289	15	0.028	15	0.247	104	0.343	72
1015			min	-1.996	72	-0.029	102	0.024	104	0	74	-0.343	72	-0.247	104
1016	M475	I	max	2.805	104	0.027	72	-0.024	76	0.016	13	0.483	104	0.545	72
1017			min	-3.166	72	-0.027	104	-0.289	13	-0.002	76	-0.545	72	-0.483	104
1018		J	max	2.843	104	0.029	70	0.289	15	0.016	13	0.489	104	0.551	72
1019			min	-3.204	72	-0.029	106	0.024	104	-0.002	76	-0.551	72	-0.489	104
1020	M476	I	max	12.347	104	0.038	72	-0.035	77	0.017	15	2.656	104	2.8	72
1021			min	-13.02	72	-0.038	100	-0.318	13	-0.005	74	-2.8	72	-2.656	104
1022		J	max	12.407	104	0.043	70	0.318	15	0.017	15	2.668	104	2.813	72
1023			min	-13.08	72	-0.043	102	0.035	105	-0.005	74	-2.813	72	-2.668	104
1024	M477	I	max	30.796	15	-0.037	96	0.046	74	0.005	68	0	107	-0.381	107
1025			min	4.234	107	-0.436	15	-0.066	102	-0.015	13	0	12	-2.772	15
1026		J	max	30.926	15	0.409	15	0.068	102	0.006	92	0	107	-0.423	96
1027			min	4.705	96	0.036	96	-0.047	74	-0.007	68	0	12	-2.783	15
1028	M478	I	max	27.817	13	0.049	106	0.06	74	0.01	98	0	107	0.158	106
1029			min	-1.754	106	-0.381	70	-0.073	102	-0.01	62	0	12	-2.504	13
1030		J	max	27.553	13	0.367	70	0.073	72	0.008	66	0	107	0.045	106
1031			min	-0.502	106	-0.039	98	-0.058	104	-0.021	15	0	12	-2.48	13
1032	M479	I	max	0.393	104	0.736	71	-0.317	67	0.062	71	0.045	75	0.055	107
1033			min	-0.535	72	-0.729	103	-1.214	15	-0.062	103	-0.253	103	-0.265	71
1034		J	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
1035			min	-1.14	70	-0.831	71	0.352	67	-0.076	71	-0.287	103	-0.299	71
1036	M480	I	max	1.177	100	0.702	71	-0.302	67	0.062	71	0.043	75	0.044	107
1037			min	-1.181	72	-0.702	103	-1.176	13	-0.062	103	-0.255	103	-0.256	71
1038		J	max	0.208	106	0.791	103	1.283	15	0.069	103	0.049	75	0.049	107
1039			min	-0.213	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
1040	M481	I	max	1.789	57	5.772	70	0.465	71	0.108	71	0.062	101	11.511	70
1041			min	-2.448	86	-4.76	76	-0.4	77	-0.089	77	-0.058	103	-10.268	106
1042		J	max	2.571	72	4.892	74	0.449	77	0.103	77	0.071	101	11.021	72
1043			min	-3.285	100	-5.549	72	-0.522	71	-0.119	71	-0.07	103	-10.847	100
1044	M482	I	max	2.015	72	6.39	70	0.514	71	0.103	75	0.182	77	12.803	70
1045			min	-2.687	100	-5.187	76	-0.453	107	-0.094	103	-0.19	71	-11.161	106
1046		J	max	2.862	72	5.469	74	0.398	107	0.1	107	0.063	101	11.794	72
1047			min	-3.534	100	-5.913	72	-0.462	71	-0.122	71	-0.06	103	-12.144	100
1048	M483	I	max	0.69	13	0.714	71	-0.302	67	0.06	71	0.029	75	0.047	107
1049			min	-0.415	76	-0.703	103	-1.182	15	-0.059	103	-0.256	103	-0.278	71
1050		J	max	1.078	102	0.792	103	1.289	15	0.072	103	0.035	75	0.052	107
1051			min	-0.812	74	-0.804	71	0.335	66	-0.073	71	-0.289	103	-0.311	71
1052	M484	I	max	1.919	70	1.879	15	0.54	75	0.124	77	0	107	0.479	70
1053			min	-1.932	102	0.423	97	-0.54	77	-0.124	71	0	12	-0.482	102
1054		J	max	0.838	70	-0.423	97	0.54	77	0.124	75	0	107	0.209	70
1055			min	-0.851	102	-1.88	15	-0.54	75	-0.124	73	0	12	-0.213	102
1056	M519	I	max	3.733	70	1.82	13	0.514	71	0.118	107	0	107	0.932	70
1057			min	-3.356	106	0.404	98	-0.514	73	-0.118	71	0	12	-0.838	106
1058		J	max	2.703	70	-0.404	99	0.514	73	0.117	105	0	107	0.675	70
1059			min	-2.325	106	-1.82	15	-0.514	71	-0.118	73	0	12	-0.58	106
1060	M520	I	max	4.433	100	4.678	70	0.336	101	0.076	103	0.257	71	8.981	70
1061			min	-3.364	76	-3.451	76	-0.339	103	-0.071	101	-0.23	107	-7.909	106
1062		J	max	3.813	100	3.583	74	0.336	103	0.076	101	0.268	71	8.451	72
1063			min	-2.744	76	-4.449	72	-0.332	101	-0.074	103	-0.237	107	-8.221	100
1064	M521	I	max	4.606	100	5.146	70	0.368	101	0.066	107	0.056	71	9.959	70
1065			min	-3.566	76	-3.773	76	-0.37	103	-0.073	101	-0.031	107	-8.584	106

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1066		J	max	3.986	100	4.019	74	0.289	103	0.072	105	0.232	71	9.03	72
1067			min	-2.946	76	-4.723	72	-0.289	101	-0.08	103	-0.211	103	-9.203	100
1068	M522	I	max	3.472	70	1.819	13	0.514	75	0.118	73	0	107	0.867	70
1069			min	-3.557	102	0.403	98	-0.514	77	-0.117	75	0	12	-0.888	102
1070		J	max	2.442	70	-0.404	98	0.514	77	0.118	71	0	107	0.609	70
1071			min	-2.526	102	-1.819	13	-0.514	75	-0.117	77	0	12	-0.631	102
1072	M523	I	max	13.229	15	0.568	72	0.563	71	0.368	71	0.093	71	-0.074	96
1073			min	1.789	96	-0.401	104	-0.549	103	-0.366	103	-0.091	103	-0.961	15
1074		J	max	9.925	15	0.92	100	0.824	103	0.337	103	0.139	71	0.026	104
1075			min	1.273	107	-0.504	76	-0.84	71	-0.337	71	-0.137	103	-0.55	15
1076	M524	I	max	11.141	13	0.261	74	0.269	103	0.017	103	0.042	103	-0.092	98
1077			min	1.566	107	-0.337	102	-0.28	71	-0.017	71	-0.044	71	-0.744	13
1078		J	max	9.546	13	0.788	102	0.652	71	0.045	71	0.103	103	0.016	106
1079			min	1.029	107	-0.607	74	-0.625	103	-0.042	103	-0.108	71	-0.593	13
1080	M525	I	max	4.287	13	0.355	70	0.273	103	0.017	103	0.043	103	-0.032	98
1081			min	0.89	98	-0.313	106	-0.273	71	-0.016	71	-0.043	71	-0.303	13
1082		J	max	2.648	13	0.731	106	0.636	71	0.044	71	0.105	103	0.069	106
1083			min	0.503	99	-0.839	70	-0.636	103	-0.043	103	-0.105	71	-0.229	70
1084	M526	I	max	10.21	16	0.258	103	0.087	102	0.002	98	0.012	102	-0.061	75
1085			min	1.44	75	-0.256	71	-0.09	70	-0.003	62	-0.012	70	-0.71	16
1086		J	max	8.613	16	0.589	71	0.186	70	0.014	74	0.029	102	0.033	75
1087			min	0.906	75	-0.598	103	-0.179	102	-0.015	102	-0.03	70	-0.603	16
1088	M527	I	max	7.149	15	0.773	72	0.657	71	0.499	71	0.109	71	-0.02	96
1089			min	1.067	99	-0.41	104	-0.657	103	-0.499	103	-0.108	103	-0.593	15
1090		J	max	3.217	15	0.841	100	0.931	103	0.447	103	0.155	71	0.077	104
1091			min	0.547	99	-0.62	76	-0.931	71	-0.446	71	-0.154	103	-0.189	72
1092	M528	I	max	14.632	15	0.948	72	0.646	71	0.476	71	0.107	71	-0.071	66
1093			min	2.004	67	-0.63	104	-0.662	103	-0.478	103	-0.109	103	-1.113	15
1094		J	max	10.832	15	1.407	100	0.932	103	0.43	103	0.152	71	0.053	74
1095			min	1.342	75	-1.103	76	-0.914	71	-0.429	71	-0.155	103	-0.675	15
1096	M529	I	max	21.052	15	0.479	15	0.249	71	0.231	71	0.041	71	-0.117	96
1097			min	3.15	96	-0.185	66	-0.243	73	-0.23	103	-0.04	73	-1.059	15
1098		J	max	19.464	15	0.31	92	0.229	73	0.196	73	0.039	71	-0.1	96
1099			min	3.03	96	-0.221	68	-0.235	71	-0.196	101	-0.038	73	-0.892	15
1100	M603	I	max	17.668	13	0.036	66	0.019	73	0.003	76	0	71	-0.134	98
1101			min	2.888	98	-0.037	94	-0.019	105	-0.003	104	0	107	-0.821	13
1102		J	max	17.354	13	0.036	68	0.019	71	0.003	76	0	71	-0.133	98
1103			min	2.858	98	-0.037	92	-0.019	107	-0.003	104	0	107	-0.807	13
1104	M604	I	max	16.884	13	0.036	66	0.019	73	0.003	104	0	71	-0.138	67
1105			min	2.959	67	-0.037	94	-0.019	105	-0.003	72	0	107	-0.785	13
1106		J	max	16.57	13	0.036	68	0.019	71	0.003	104	0	71	-0.136	67
1107			min	2.928	67	-0.037	92	-0.019	107	-0.003	72	0	107	-0.771	13
1108	M605	I	max	21.217	15	0.036	68	0.019	105	0.003	104	0	107	-0.151	67
1109			min	3.242	67	-0.037	92	-0.019	73	-0.003	72	0	71	-0.986	15
1110		J	max	20.903	15	0.036	66	0.019	107	0.003	104	0	107	-0.149	67
1111			min	3.211	67	-0.037	94	-0.019	71	-0.003	72	0	71	-0.972	15
1112	M606	I	max	7.225	72	0.03	71	-0.021	76	0.003	15	1.554	72	1.441	104
1113			min	-6.699	104	-0.03	107	-0.189	14	-0.001	106	-1.441	104	-1.554	72
1114		J	max	7.285	72	0.03	73	0.189	15	0.003	15	1.567	72	1.454	104
1115			min	-6.759	104	-0.03	105	0.021	107	-0.001	106	-1.454	104	-1.567	72
1116	M607	I	max	8.014	72	0.03	71	-0.021	44	0.003	76	1.724	72	1.643	104
1117			min	-7.637	104	-0.03	107	-0.189	15	-0.004	100	-1.643	104	-1.724	72
1118		J	max	8.074	72	0.03	73	0.189	16	0.003	76	1.737	72	1.656	104
1119			min	-7.697	104	-0.03	105	0.021	74	-0.004	100	-1.656	104	-1.737	72
1120	M608	I	max	1.435	72	0.019	103	-0.013	105	0	96	0.247	72	0.19	104

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1121			min	-1.107	104	-0.019	71	-0.16	13	0	64	-0.19	104	-0.247	72
1122		J	max	1.398	72	0.019	101	0.16	16	0	96	0.24	72	0.184	104
1123			min	-1.069	104	-0.019	73	0.013	44	0	64	-0.184	104	-0.24	72
1124	M609	I	max	0.319	66	0.029	104	-0.024	76	0.007	13	0.055	66	0.097	94
1125			min	-0.562	94	-0.029	72	-0.289	13	-0.001	106	-0.097	94	-0.055	66
1126		J	max	0.319	66	0.027	106	0.289	15	0.007	13	0.055	66	0.097	94
1127			min	-0.562	94	-0.027	70	0.024	104	-0.001	106	-0.097	94	-0.055	66
1128	M610	I	max	0.622	102	0.019	103	-0.013	104	0.001	72	0.107	102	0.064	104
1129			min	-0.371	104	-0.019	71	-0.16	15	-0.001	104	-0.064	104	-0.107	102
1130		J	max	0.584	102	0.019	101	0.16	16	0.001	72	0.101	102	0.057	104
1131			min	-0.333	104	-0.019	73	0.013	105	-0.001	104	-0.057	104	-0.101	102
1132	M611	I	max	1.476	104	0.029	104	-0.024	76	0.004	72	0.254	104	0.288	102
1133			min	-1.674	102	-0.029	72	-0.289	13	-0.004	104	-0.288	102	-0.254	104
1134		J	max	1.514	104	0.027	106	0.289	15	0.004	72	0.26	104	0.294	102
1135			min	-1.712	102	-0.027	70	0.024	104	-0.004	104	-0.295	102	-0.26	104
1136	M612	I	max	10.589	104	0.043	104	-0.035	105	0.005	70	2.277	104	2.39	72
1137			min	-11.111	72	-0.043	72	-0.318	13	-0.005	106	-2.39	72	-2.277	104
1138		J	max	10.649	104	0.038	106	0.318	15	0.005	70	2.29	104	2.403	72
1139			min	-11.171	72	-0.038	70	0.035	77	-0.005	106	-2.403	72	-2.29	104
1140	M613	I	max	5.265	13	0.036	66	0.019	73	0.001	13	0	71	-0.004	107
1141			min	0.077	107	-0.037	94	-0.019	105	0	68	0	107	-0.244	13
1142		J	max	4.951	13	0.036	68	0.019	71	0.001	13	0	71	-0.002	107
1143			min	0.05	107	-0.037	92	-0.019	107	0	68	0	107	-0.231	13
1144	M614	I	max	4.341	16	0.036	66	0.019	73	0	74	0	71	0.002	75
1145			min	-0.041	75	-0.037	94	-0.019	105	-0.001	13	0	107	-0.201	16
1146		J	max	4.027	16	0.036	68	0.019	71	0	74	0	71	0.003	75
1147			min	-0.068	75	-0.037	92	-0.019	107	-0.001	13	0	107	-0.188	16
1148	M615	I	max	5.536	15	0.036	68	0.019	105	0.002	13	0	107	-0.014	107
1149			min	0.296	107	-0.037	92	-0.019	73	0	68	0	71	-0.257	15
1150		J	max	5.221	15	0.036	66	0.019	107	0.002	13	0	107	-0.013	107
1151			min	0.269	107	-0.037	94	-0.019	71	0	68	0	71	-0.243	15
1152	M616	I	max	6.4	15	0.036	68	0.019	105	0	74	0	107	-0.018	75
1153			min	0.385	75	-0.037	92	-0.019	73	-0.001	13	0	71	-0.297	15
1154		J	max	6.085	15	0.036	66	0.019	107	0	74	0	107	-0.017	75
1155			min	0.358	75	-0.037	94	-0.019	71	-0.001	13	0	71	-0.283	15
1156	M617	I	max	2.767	106	0.293	15	0.028	106	0.002	100	0.189	70	0.176	106
1157			min	-2.967	70	0.023	107	-0.028	74	-0.003	19	-0.176	106	-0.189	70
1158		J	max	2.805	106	-0.023	75	0.028	40	0.002	100	0.191	70	0.178	106
1159			min	-3.005	70	-0.293	13	-0.028	72	-0.003	19	-0.178	106	-0.191	70
1160	M661	I	max	3.586	106	0.293	15	0.028	72	0	68	0.27	70	0.228	106
1161			min	-4.236	70	0.023	107	-0.028	70	-0.007	13	-0.228	106	-0.27	70
1162		J	max	3.624	106	-0.023	75	0.028	100	0	68	0.272	70	0.231	106
1163			min	-4.273	70	-0.293	13	-0.028	42	-0.007	13	-0.231	106	-0.272	70
1164	M662	I	max	7.722	106	0.327	13	0.041	76	0	94	0.699	70	0.614	106
1165			min	-8.788	70	0.034	107	-0.041	44	-0.012	13	-0.614	106	-0.699	70
1166		J	max	7.782	106	-0.034	75	0.041	70	0	94	0.704	70	0.619	106
1167			min	-8.848	70	-0.327	15	-0.041	106	-0.012	13	-0.619	106	-0.704	70
1168	M663	I	max	8.544	76	0.327	13	0.041	106	0.003	68	0.773	100	0.68	76
1169			min	-9.714	100	0.034	107	-0.041	74	-0.016	13	-0.68	76	-0.773	100
1170		J	max	8.604	76	-0.034	75	0.041	44	0.003	68	0.778	100	0.684	76
1171			min	-9.774	100	-0.327	15	-0.041	46	-0.016	13	-0.684	76	-0.778	100
1172	M664	I	max	2.116	72	0.293	15	0.028	100	0.006	19	0.117	104	0.135	72
1173			min	-1.844	104	0.023	75	-0.028	42	-0.001	70	-0.135	72	-0.117	104
1174		J	max	2.154	72	-0.023	107	0.028	76	0.006	19	0.12	104	0.137	72
1175			min	-1.881	104	-0.293	13	-0.028	40	-0.001	70	-0.137	72	-0.12	104

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1176	M665	I	max	2.856	76	0.293	15	0.028	70	0.011	13	0.197	70	0.182	76
1177			min	-3.09	70	0.023	75	-0.028	102	0	68	-0.182	76	-0.197	70
1178		J	max	2.894	76	-0.023	107	0.028	106	0.011	13	0.199	70	0.184	76
1179			min	-3.127	70	-0.293	13	-0.028	100	0	68	-0.184	76	-0.199	70
1180	M666	I	max	6.936	106	0.327	13	0.041	40	0.013	13	0.597	70	0.552	106
1181			min	-7.499	70	0.034	75	-0.041	76	0	98	-0.552	106	-0.597	70
1182		J	max	6.996	106	-0.034	107	0.041	42	0.013	13	0.601	70	0.556	106
1183			min	-7.56	70	-0.327	15	-0.041	100	0	98	-0.557	106	-0.601	70
1184	M667	I	max	7.971	76	0.327	13	0.041	100	0.006	92	0.708	100	0.634	76
1185			min	-8.895	100	0.034	75	-0.041	102	-0.005	68	-0.634	76	-0.708	100
1186		J	max	8.031	76	-0.034	107	0.041	106	0.006	92	0.712	100	0.639	76
1187			min	-8.955	100	-0.327	15	-0.041	74	-0.005	68	-0.639	76	-0.712	100
1188	M668	I	max	4.777	70	0.194	15	0.03	71	0.003	64	0.351	106	0.38	70
1189			min	-4.412	106	0.019	76	-0.03	103	-0.002	96	-0.38	70	-0.351	106
1190		J	max	4.717	70	-0.019	104	0.03	107	0.003	64	0.346	106	0.375	70
1191			min	-4.352	106	-0.194	13	-0.03	101	-0.002	96	-0.375	70	-0.346	106
1192	M669	I	max	1.392	70	0.163	15	0.019	45	0.001	102	0.089	72	0.089	70
1193			min	-1.4	72	0.012	106	-0.019	103	-0.001	104	-0.089	70	-0.089	72
1194		J	max	1.354	70	-0.012	74	0.019	107	0.001	102	0.087	72	0.086	70
1195			min	-1.362	72	-0.163	13	-0.019	71	-0.001	104	-0.086	70	-0.087	72
1196	M670	I	max	2.023	70	0.163	15	0.019	75	0.001	100	0.113	106	0.129	70
1197			min	-1.777	106	0.012	106	-0.019	103	-0.001	72	-0.129	70	-0.113	106
1198		J	max	1.985	70	-0.012	74	0.019	73	0.001	100	0.111	106	0.126	70
1199			min	-1.739	106	-0.163	13	-0.019	71	-0.001	72	-0.126	70	-0.111	106
1200	M671	I	max	5.534	70	0.194	15	0.03	71	0.002	96	0.388	106	0.44	70
1201			min	-4.878	106	0.019	76	-0.03	73	-0.003	15	-0.44	70	-0.388	106
1202		J	max	5.474	70	-0.019	104	0.03	43	0.002	96	0.383	106	0.435	70
1203			min	-4.818	106	-0.194	13	-0.03	105	-0.003	15	-0.435	70	-0.383	106
1204	M672	I	max	-0.939	107	0.195	13	0.024	100	0.007	106	0.63	15	0.63	15
1205			min	-12.776	15	0.001	107	-0.024	76	-0.01	13	0.046	107	0.046	107
1206		J	max	-0.998	107	-0.001	77	0.024	102	0.007	106	0.641	15	0.641	15
1207			min	-13.026	15	-0.195	15	-0.024	74	-0.01	13	0.049	107	0.049	107
1208	M673	I	max	-0.506	107	-0.001	107	0.024	72	0.007	76	0.583	13	0.583	13
1209			min	-11.835	13	-0.195	13	-0.024	104	-0.013	13	0.025	107	0.025	107
1210		J	max	-0.564	107	0.195	15	0.024	70	0.007	76	0.595	13	0.595	13
1211			min	-12.085	13	0.001	77	-0.024	106	-0.013	13	0.028	107	0.028	107
1212	M674	I	max	-0.265	75	0.195	15	0.024	72	0.008	74	0.514	16	0.514	16
1213			min	-10.431	16	0.001	75	-0.024	104	-0.011	15	0.013	75	0.013	75
1214		J	max	-0.324	75	-0.001	105	0.024	70	0.008	74	0.526	16	0.526	16
1215			min	-10.681	16	-0.195	13	-0.024	106	-0.011	15	0.016	75	0.016	75
1216	M675	I	max	-1.089	75	-0.001	75	0.024	100	0.007	74	0	102	0	104
1217			min	-14.453	16	-0.195	13	-0.024	76	-0.014	15	0	74	0	15
1218		J	max	-1.148	75	0.195	15	0.024	102	0.007	74	0	15	0	100
1219			min	-14.703	16	0.001	105	-0.024	74	-0.014	15	0	104	0	76
1220	M676	I	max	12.267	74	0.043	72	-0.035	104	0.009	106	2.638	74	2.803	102
1221			min	-13.03	102	-0.043	104	-0.318	15	-0.013	70	-2.803	102	-2.638	74
1222		J	max	12.207	74	0.038	70	0.318	13	0.009	106	2.625	74	2.79	102
1223			min	-12.97	102	-0.038	106	0.035	76	-0.013	70	-2.79	102	-2.625	74
1224	M677	I	max	13.76	74	0.038	70	-0.035	77	0.015	70	2.96	74	3.129	102
1225			min	-14.548	102	-0.038	102	-0.318	13	-0.009	106	-3.129	102	-2.96	74
1226		J	max	13.7	74	0.043	72	0.318	15	0.015	70	2.947	74	3.116	102
1227			min	-14.488	102	-0.043	100	0.035	105	-0.009	106	-3.116	102	-2.947	74
1228	M678	I	max	-5.748	96	0.175	13	0.023	70	0.002	106	1.874	15	1.874	15
1229			min	-38.043	15	0	107	-0.022	106	-0.016	13	0.283	96	0.283	96
1230		J	max	-5.769	96	0	77	0.023	72	0.002	106	1.886	15	1.886	15

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1231			min	-38.292	15	-0.175	15	-0.022	104	-0.016	13	0.284	96	0.284	96
1232	M679	I	max	-5.215	98	0	107	0.023	102	0.004	106	1.576	13	1.576	13
1233			min	-31.981	13	-0.175	13	-0.022	74	-0.005	70	0.257	98	0.257	98
1234		J	max	-5.236	98	0.175	15	0.023	100	0.004	106	1.587	13	1.587	13
1235			min	-32.23	13	0	77	-0.022	76	-0.005	70	0.258	98	0.258	98
1236	M680	I	max	-5.864	68	0	75	0.023	70	0.002	104	1.874	15	1.874	15
1237			min	-38.042	15	-0.175	15	-0.022	106	-0.018	15	0.289	68	0.289	68
1238		J	max	-5.884	68	0.175	13	0.023	72	0.002	104	1.886	15	1.886	15
1239			min	-38.292	15	0	105	-0.022	104	-0.018	15	0.29	68	0.29	68
1240	M681	I	max	-5.432	68	0.175	15	0.023	102	0.005	70	1.528	13	1.528	13
1241			min	-31.009	13	0	105	-0.022	74	-0.005	106	0.268	68	0.268	68
1242		J	max	-5.453	68	0	75	0.023	100	0.005	70	1.54	13	1.54	13
1243			min	-31.258	13	-0.175	13	-0.022	76	-0.005	106	0.269	68	0.269	68
1244	M682	I	max	-4.72	96	0.175	13	0.023	70	0.002	76	1.499	15	1.499	15
1245			min	-30.425	15	0	107	-0.022	106	-0.018	13	0.233	96	0.233	96
1246		J	max	-4.74	96	0	77	0.023	72	0.002	76	1.511	15	1.511	15
1247			min	-30.675	15	-0.175	15	-0.022	104	-0.018	13	0.233	96	0.233	96
1248	M683	I	max	-4.669	98	0	107	0.023	102	0.003	68	1.31	13	1.31	13
1249			min	-26.588	13	-0.175	13	-0.022	74	-0.014	13	0.23	98	0.23	98
1250		J	max	-4.69	98	0.175	15	0.023	100	0.003	68	1.322	13	1.322	13
1251			min	-26.837	13	0	77	-0.022	76	-0.014	13	0.231	98	0.231	98
1252	M684	I	max	-5.032	67	0	75	0.023	70	0.003	104	1.599	15	1.599	15
1253			min	-32.449	15	-0.175	15	-0.022	106	-0.02	15	0.248	67	0.248	67
1254		J	max	-5.053	67	0.175	13	0.023	72	0.003	104	1.611	15	1.611	15
1255			min	-32.698	15	0	105	-0.022	104	-0.02	15	0.249	67	0.249	67
1256	M685	I	max	-4.562	66	0.175	15	0.023	102	0.003	96	1.258	16	1.258	16
1257			min	-25.531	16	0	105	-0.022	74	-0.012	15	0.225	66	0.225	66
1258		J	max	-4.582	66	0	75	0.023	100	0.003	96	1.27	16	1.27	16
1259			min	-25.78	16	-0.175	13	-0.022	76	-0.012	15	0.226	66	0.226	66
1260	M686	I	max	-0.093	107	0.195	13	0.024	100	0.009	102	0.326	15	0.326	15
1261			min	-6.604	15	0.001	107	-0.024	76	-0.007	74	0.005	107	0.005	107
1262		J	max	-0.152	107	-0.001	77	0.024	102	0.009	102	0.337	15	0.337	15
1263			min	-6.854	15	-0.195	15	-0.024	74	-0.007	74	0.007	107	0.007	107
1264	M687	I	max	0.296	107	-0.001	107	0.024	72	0.009	72	0.292	13	0.292	13
1265			min	-5.922	13	-0.195	13	-0.024	104	-0.008	104	-0.015	107	-0.015	107
1266		J	max	0.237	107	0.195	15	0.024	70	0.009	72	0.304	13	0.304	13
1267			min	-6.172	13	0.001	77	-0.024	106	-0.008	104	-0.012	107	-0.012	107
1268	M688	I	max	-0.243	75	-0.001	75	0.024	100	0.008	104	0.382	16	0.382	16
1269			min	-7.758	16	-0.195	15	-0.024	76	-0.008	72	0.012	75	0.012	75
1270		J	max	-0.302	75	0.195	13	0.024	102	0.008	104	0.394	16	0.394	16
1271			min	-8.008	16	0.001	105	-0.024	74	-0.008	72	0.015	75	0.015	75
1272	M689	I	max	0.492	75	0.195	15	0.024	72	0.008	104	0.224	16	0.224	16
1273			min	-4.539	16	0.001	75	-0.024	104	-0.009	72	-0.024	75	-0.024	75
1274		J	max	0.433	75	-0.001	105	0.024	70	0.008	104	0.236	16	0.236	16
1275			min	-4.789	16	-0.195	13	-0.024	106	-0.009	72	-0.021	75	-0.021	75
1276	M690	I	max	2.631	102	3.635	15	3.001	71	0.738	71	0	107	0.534	104
1277			min	-2.138	104	0.83	99	-3	103	-0.738	103	0	12	-0.657	102
1278		J	max	8.016	102	-0.83	99	3	103	0.738	103	0	107	1.877	104
1279			min	-7.522	104	-3.635	15	-3.001	71	-0.739	71	0	12	-2.001	102
1280	M691	I	max	1.373	102	3.519	15	2.911	71	0.716	71	0	107	0.277	104
1281			min	-1.11	104	0.803	97	-2.912	103	-0.716	103	0	12	-0.343	102
1282		J	max	6.58	102	-0.803	97	2.912	103	0.716	103	0	107	1.577	104
1283			min	-6.318	104	-3.519	15	-2.911	71	-0.715	71	0	12	-1.642	102
1284	M692	I	max	0.204	102	0.204	103	-0.037	66	0	107	0.551	14	0.551	16
1285			min	-0.204	100	-0.204	101	-0.641	15	0	12	-0.057	47	-0.057	75

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1286		J	max	0	107	0	100	0	70	0	107	0	107	0	107
1287			min	0	12	0	102	0	12	0	12	0	12	0	12
1288	M693	I	max	0.341	102	0.341	77	-0.056	66	0	107	0.883	14	0.883	16
1289			min	-0.341	100	-0.341	45	-1.017	15	0	12	-0.096	77	-0.096	45
1290		J	max	0	107	0	107	0	70	0	107	0	107	0	107
1291			min	0	12	0	72	0	72	0	12	0	12	0	12
1292	M694	I	max	0.251	34	0.198	107	-0.053	66	0	107	0.459	14	0.459	16
1293			min	-0.251	96	-0.198	45	-0.667	15	0	12	-0.044	107	-0.044	45
1294		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1295			min	0	12	0	72	0	72	0	12	0	12	0	12
1296	M695	I	max	0.138	68	0.113	103	-0.032	66	0	107	0.275	14	0.275	16
1297			min	-0.138	92	-0.113	45	-0.406	15	0	12	-0.025	107	-0.025	75
1298		J	max	0	107	0	107	0	70	0	107	0	107	0	107
1299			min	0	12	0	102	0	12	0	12	0	12	0	12
1300	M696	I	max	0.359	72	0.359	73	-0.059	66	0	107	0.928	14	0.928	16
1301			min	-0.359	100	-0.359	45	-1.068	15	0	12	-0.101	77	-0.101	45
1302		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1303			min	0	12	0	72	0	72	0	12	0	12	0	12
1304	M697	I	max	0.138	34	0.113	43	-0.032	66	0	107	0.274	14	0.274	16
1305			min	-0.138	32	-0.113	45	-0.405	15	0	12	-0.025	47	-0.025	45
1306		J	max	0	107	0	107	0	70	0	107	0	107	0	107
1307			min	0	12	0	102	0	12	0	12	0	12	0	12
1308	M701	I	max	0.26	106	0.26	47	-0.045	66	0	107	0.688	14	0.688	16
1309			min	-0.26	74	-0.26	71	-0.796	15	0	12	-0.073	47	-0.073	75
1310		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1311			min	0	12	0	12	0	72	0	12	0	12	0	12
1312	M702	I	max	0.182	94	0.146	47	-0.04	66	0	107	0.347	14	0.347	16
1313			min	-0.182	36	-0.146	75	-0.507	15	0	12	-0.033	77	-0.033	105
1314		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1315			min	0	12	0	12	0	72	0	12	0	12	0	12
1316	M703	I	max	0.182	68	0.146	77	-0.04	66	0	107	0.348	14	0.348	16
1317			min	-0.182	92	-0.146	101	-0.509	15	0	12	-0.033	77	-0.033	105
1318		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1319			min	0	12	0	12	0	72	0	12	0	12	0	12
1320	M704	I	max	0.251	94	0.198	73	-0.053	66	0	107	0.46	14	0.46	16
1321			min	-0.251	66	-0.198	105	-0.669	15	0	12	-0.044	47	-0.044	75
1322		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1323			min	0	12	0	72	0	72	0	12	0	12	0	12
1324	M705	I	max	0.241	64	0.19	43	-0.051	66	0	107	0.444	14	0.444	16
1325			min	-0.241	96	-0.19	75	-0.646	15	0	12	-0.043	107	-0.043	75
1326		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1327			min	0	12	0	72	0	72	0	12	0	12	0	12
1328	M706	I	max	0.241	68	0.19	73	-0.051	66	0	107	0.445	14	0.445	16
1329			min	-0.241	62	-0.19	41	-0.647	15	0	12	-0.043	107	-0.043	45
1330		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1331			min	0	12	0	72	0	72	0	12	0	12	0	12
1332	M460	I	max	21.668	15	5.48	100	17.939	103	0	107	0	107	0	107
1333			min	-4.469	104	-5.445	72	-17.7	71	0	12	0	12	0	12
1334		J	max	0	107	0	100	0	13	0	107	0	107	0	107
1335			min	0	12	0	72	0	107	0	12	0	12	0	12
1336	M471	I	max	24.797	13	11.793	102	18.682	71	0	107	0	107	0	107
1337			min	-3.742	106	-11.807	70	-18.521	103	0	12	0	12	0	12
1338		J	max	0	107	0	102	0	107	0	107	0	107	0	107
1339			min	0	12	0	70	0	14	0	12	0	12	0	12
1340	M473	I	max	27.149	13	10.941	102	0.191	13	0	107	0	107	0	107

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1341			min	-2.033	76	-10.812	70	-0.002	76	0	12	0	12	0	12
1342		J	max	0	107	0	102	0	15	0	107	0	107	0	107
1343			min	0	12	0	70	0	76	0	12	0	12	0	12
1344	M507	I	max	20.134	15	5.221	100	0.006	74	0	107	0	107	0	107
1345			min	-3.247	74	-5.094	72	-0.121	15	0	12	0	12	0	12
1346		J	max	0	107	0	100	0	68	0	107	0	107	0	107
1347			min	0	12	0	72	0	13	0	12	0	12	0	12
1348	M508	I	max	0.878	72	0.019	75	-0.013	76	0	74	0.151	72	0.069	104
1349			min	-0.4	104	-0.019	103	-0.16	14	0	102	-0.069	104	-0.151	72
1350		J	max	0.916	72	0.019	77	0.16	15	0	74	0.158	72	0.075	104
1351			min	-0.438	104	-0.019	101	0.013	104	0	102	-0.075	104	-0.158	72
1352	M509	I	max	10.5	102	0.213	70	0.135	102	0.001	104	0	107	0.885	74
1353			min	-9.828	74	-0.204	106	-0.106	74	-0.071	15	0	12	-0.945	102
1354		J	max	21.383	71	0.333	75	0.099	70	0.003	76	0	107	1.861	107
1355			min	-20.683	107	-0.345	103	-0.088	106	-0.064	13	0	12	-1.924	71
1356	M510	I	max	0.257	75	0.056	72	0.052	64	0.016	70	0	107	0.027	103
1357			min	-0.301	103	-0.075	17	-0.049	96	-0.012	106	0	12	-0.023	75
1358		J	max	19.981	71	0.317	75	0.023	96	0.015	106	0	107	1.825	103
1359			min	-20.277	103	-0.333	103	-0.099	15	-0.016	70	0	12	-1.798	71
1360	M511	I	max	0.195	96	0.027	106	-0.024	76	0.028	15	0.034	96	0.245	15
1361			min	-1.425	15	-0.027	70	-0.289	13	0	74	-0.245	15	-0.034	96
1362		J	max	0.195	96	0.029	104	0.289	15	0.028	15	0.034	96	0.245	15
1363			min	-1.425	15	-0.029	72	0.024	104	0	74	-0.245	15	-0.034	96
1364	M512	I	max	1.432	74	0.027	106	-0.024	76	0.017	13	0.246	74	0.325	72
1365			min	-1.89	72	-0.027	70	-0.289	13	-0.002	76	-0.325	72	-0.246	74
1366		J	max	1.47	74	0.029	104	0.289	15	0.017	13	0.253	74	0.332	72
1367			min	-1.927	72	-0.029	72	0.024	104	-0.002	76	-0.332	72	-0.253	74
1368	M513	I	max	10.608	104	0.038	72	-0.035	75	0.017	15	2.282	104	2.429	72
1369			min	-11.294	72	-0.038	104	-0.318	13	-0.004	74	-2.429	72	-2.281	104
1370		J	max	10.668	104	0.043	70	0.318	15	0.017	15	2.294	104	2.442	72
1371			min	-11.355	72	-0.043	106	0.035	107	-0.004	74	-2.442	72	-2.294	104
1372	M514	I	max	31.751	15	-0.038	66	0.047	74	0.005	68	0	107	-0.431	66
1373			min	4.787	66	-0.43	15	-0.065	102	-0.015	13	0	12	-2.858	15
1374		J	max	29.62	15	0.404	15	0.068	102	0.007	92	0	107	-0.254	75
1375			min	2.821	75	0.035	66	-0.045	74	-0.007	68	0	12	-2.666	15
1376	M515	I	max	27.464	13	0.038	68	0.06	74	0.01	98	0	107	0.042	76
1377			min	-0.472	76	-0.364	100	-0.071	102	-0.01	62	0	12	-2.472	13
1378		J	max	27.263	13	0.378	100	0.074	72	0.008	66	0	107	0.158	76
1379			min	-1.758	76	-0.051	76	-0.058	104	-0.021	15	0	12	-2.454	13
1380	M516	I	max	0.394	104	0.736	71	-0.317	67	0.062	71	0.046	75	0.055	107
1381			min	-0.536	72	-0.729	103	-1.214	15	-0.062	103	-0.254	103	-0.265	71
1382		J	max	1	106	0.823	103	1.325	15	0.075	103	0.052	75	0.061	107
1383			min	-1.14	70	-0.83	71	0.352	96	-0.075	71	-0.288	103	-0.299	71
1384	M517	I	max	1.189	100	0.702	71	-0.302	67	0.062	71	0.043	75	0.044	107
1385			min	-1.183	72	-0.702	103	-1.176	13	-0.061	103	-0.255	103	-0.256	71
1386		J	max	0.206	106	0.791	103	1.283	16	0.07	103	0.049	75	0.049	107
1387			min	-0.201	74	-0.792	71	0.335	67	-0.069	71	-0.288	103	-0.289	71
1388	M518	I	max	1.767	57	6.088	70	2.443	71	0.598	71	0.074	77	12.152	70
1389			min	-2.498	100	-5.134	76	-2.269	77	-0.553	77	-0.088	75	-11.032	106
1390		J	max	2.701	72	5.232	74	2.562	77	0.634	77	0.029	101	11.799	72
1391			min	-3.44	100	-5.922	72	-2.777	71	-0.685	71	-0.028	103	-11.499	100
1392	M707	I	max	1.817	57	5.809	100	0.467	71	0.103	75	0.06	101	11.586	70
1393			min	-2.417	86	-4.689	76	-0.4	77	-0.093	73	-0.061	103	-10.126	106
1394		J	max	2.608	72	4.901	104	0.449	77	0.1	77	0.072	101	10.813	72
1395			min	-3.26	100	-5.45	72	-0.523	71	-0.124	71	-0.07	103	-10.929	100

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1396	M708	I	max	0.697	13	0.715	71	-0.302	67	0.06	71	0.028	75	0.048	107
1397			min	-0.419	76	-0.702	103	-1.182	15	-0.059	103	-0.255	103	-0.279	71
1398		J	max	1.073	102	0.791	103	1.29	15	0.072	103	0.034	75	0.053	107
1399			min	-0.812	74	-0.804	71	0.335	66	-0.073	71	-0.288	103	-0.312	71
1400	M709	I	max	1.919	70	1.879	15	0.54	75	0.124	77	0	107	0.479	70
1401			min	-1.933	102	0.423	97	-0.54	77	-0.124	71	0	12	-0.482	102
1402		J	max	0.838	70	-0.423	97	0.54	77	0.124	75	0	107	0.209	70
1403			min	-0.852	102	-1.88	15	-0.54	75	-0.124	73	0	12	-0.213	102
1404	M710	I	max	3.159	70	1.82	15	0.514	71	0.118	107	0	107	0.788	70
1405			min	-2.826	106	0.404	99	-0.514	73	-0.118	71	0	12	-0.705	106
1406		J	max	2.129	70	-0.404	99	0.514	73	0.117	105	0	107	0.531	70
1407			min	-1.796	106	-1.82	15	-0.514	71	-0.117	73	0	12	-0.448	106
1408	M711	I	max	4.573	100	4.912	70	0.389	101	0.088	103	1.183	71	9.472	70
1409			min	-3.566	76	-3.732	76	-0.398	103	-0.083	101	-1.1	77	-8.496	106
1410		J	max	3.952	100	3.836	74	0.377	103	0.087	101	1.236	71	9.037	72
1411			min	-2.946	76	-4.73	72	-0.369	101	-0.086	103	-1.144	77	-8.71	100
1412	M712	I	max	4.455	100	4.706	70	0.337	101	0.07	103	0.258	71	9.04	70
1413			min	-3.315	76	-3.395	76	-0.339	103	-0.077	101	-0.229	107	-7.797	106
1414		J	max	3.835	100	3.589	74	0.335	103	0.072	105	0.266	71	8.293	72
1415			min	-2.695	76	-4.372	72	-0.335	101	-0.079	103	-0.239	103	-8.283	100
1416	M713	I	max	4.031	70	1.819	13	0.514	75	0.118	73	0	107	1.006	70
1417			min	-4.053	102	0.403	98	-0.514	73	-0.117	75	0	12	-1.012	102
1418		J	max	3.001	70	-0.403	98	0.514	73	0.118	71	0	107	0.749	70
1419			min	-3.023	102	-1.819	13	-0.514	75	-0.117	77	0	12	-0.755	102
1420	M714	I	max	13.444	15	0.567	72	0.566	71	0.368	71	0.093	71	-0.089	96
1421			min	1.9	99	-0.402	104	-0.549	103	-0.366	103	-0.09	103	-0.976	15
1422		J	max	10.14	15	0.921	100	0.823	103	0.336	103	0.14	71	-0.028	104
1423			min	1.144	107	-0.505	76	-0.843	71	-0.337	71	-0.137	103	-0.564	15
1424	M715	I	max	10.977	14	0.26	74	0.268	103	0.016	103	0.042	103	-0.1	107
1425			min	1.384	107	-0.336	102	-0.28	71	-0.016	71	-0.044	71	-0.733	13
1426		J	max	9.383	14	0.786	102	0.654	71	0.045	71	0.103	103	-0.034	106
1427			min	0.847	107	-0.605	74	-0.622	103	-0.043	103	-0.108	71	-0.58	13
1428	M716	I	max	4.283	13	0.355	70	0.273	103	0.017	103	0.043	103	-0.032	98
1429			min	0.89	98	-0.313	106	-0.273	71	-0.016	71	-0.043	71	-0.302	13
1430		J	max	2.644	13	0.731	106	0.636	71	0.044	71	0.105	103	0.069	106
1431			min	0.504	97	-0.839	70	-0.636	103	-0.043	103	-0.105	71	-0.228	70
1432	M717	I	max	10.377	13	0.258	103	0.085	102	0.002	98	0.011	102	-0.055	75
1433			min	1.354	75	-0.256	71	-0.087	70	-0.002	62	-0.012	70	-0.722	13
1434		J	max	8.781	13	0.588	71	0.179	70	0.014	74	0.028	102	0.039	75
1435			min	0.819	75	-0.598	103	-0.174	102	-0.014	102	-0.029	70	-0.614	13
1436	M718	I	max	7.15	15	0.774	72	0.657	71	0.499	71	0.109	71	-0.02	96
1437			min	1.069	97	-0.41	104	-0.657	103	-0.499	103	-0.109	103	-0.594	15
1438		J	max	3.219	15	0.841	100	0.931	103	0.447	103	0.154	71	0.077	104
1439			min	0.55	97	-0.62	76	-0.931	71	-0.446	71	-0.154	103	-0.188	72
1440	M719	I	max	13.892	15	0.817	72	0.548	71	0.366	71	0.09	71	-0.066	66
1441			min	1.847	66	-0.569	104	-0.565	103	-0.368	103	-0.093	103	-1.041	15
1442		J	max	10.59	15	1.285	100	0.843	103	0.337	103	0.137	71	0.09	74
1443			min	1.184	75	-1.053	76	-0.824	71	-0.337	71	-0.14	103	-0.676	15
1444	M720	I	max	20.064	15	0.036	68	0.019	71	0.003	72	0	73	-0.146	99
1445			min	3.142	99	-0.037	92	-0.019	107	-0.003	104	0	105	-0.932	15
1446		J	max	19.75	15	0.036	66	0.019	73	0.003	72	0	73	-0.145	99
1447			min	3.111	99	-0.037	94	-0.019	105	-0.003	104	0	105	-0.919	15
1448	M721	I	max	17.606	13	0.036	66	0.019	107	0.003	76	0	105	-0.141	99
1449			min	3.032	99	-0.037	94	-0.019	71	-0.003	104	0	73	-0.818	13
1450		J	max	17.292	13	0.036	68	0.019	105	0.003	76	0	105	-0.14	99

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1451			min	3.001	99	-0.037	92	-0.019	73	-0.003	104	0	73	-0.805	13
1452	M722	I	max	16.96	13	0.036	66	0.019	107	0.003	104	0	105	-0.13	68
1453			min	2.807	68	-0.037	94	-0.019	71	-0.004	72	0	73	-0.788	13
1454		J	max	16.646	13	0.036	68	0.019	105	0.003	104	0	105	-0.129	68
1455			min	2.776	68	-0.037	92	-0.019	73	-0.004	72	0	73	-0.775	13
1456	M723	I	max	21.62	15	0.482	15	0.235	101	0.221	101	0.038	101	-0.12	66
1457			min	3.195	66	-0.179	66	-0.242	103	-0.222	73	-0.039	103	-1.086	15
1458		J	max	20.069	15	0.298	62	0.228	103	0.188	103	0.036	101	-0.104	66
1459			min	3.078	66	-0.214	98	-0.221	101	-0.189	71	-0.037	103	-0.924	15
1460	M724	I	max	7.859	72	0.03	71	-0.021	106	0.004	70	1.69	72	1.622	104
1461			min	-7.539	104	-0.03	107	-0.189	15	-0.003	76	-1.622	104	-1.69	72
1462		J	max	7.919	72	0.03	73	0.189	16	0.004	70	1.703	72	1.634	104
1463			min	-7.6	104	-0.03	105	0.021	44	-0.003	76	-1.634	104	-1.703	72
1464	M725	I	max	7.27	72	0.03	71	-0.021	105	0.001	76	1.564	72	1.444	104
1465			min	-6.712	104	-0.03	107	-0.189	16	-0.003	15	-1.444	104	-1.564	72
1466		J	max	7.33	72	0.03	73	0.189	13	0.001	76	1.577	72	1.457	104
1467			min	-6.772	104	-0.03	101	0.021	44	-0.003	15	-1.457	104	-1.577	72
1468	M726	I	max	0.757	15	0.019	103	-0.013	76	0.001	100	0.13	15	0.06	104
1469			min	-0.347	104	-0.019	75	-0.16	16	-0.001	72	-0.06	104	-0.13	15
1470		J	max	0.757	15	0.019	101	0.16	13	0.001	100	0.13	15	0.053	104
1471			min	-0.309	104	-0.019	73	0.013	44	-0.001	72	-0.053	104	-0.13	15
1472	M727	I	max	1.459	74	0.029	70	-0.024	76	0.007	13	0.251	74	0.295	102
1473			min	-1.715	102	-0.029	106	-0.289	13	-0.001	76	-0.295	102	-0.251	74
1474		J	max	1.497	74	0.027	72	0.289	15	0.007	13	0.258	74	0.302	102
1475			min	-1.753	102	-0.027	104	0.024	104	-0.001	76	-0.302	102	-0.258	74
1476	M728	I	max	1.307	102	0.019	103	-0.013	104	0.001	15	0.225	102	0.194	74
1477			min	-1.127	74	-0.019	75	-0.16	14	0	96	-0.194	74	-0.225	102
1478		J	max	1.269	102	0.019	101	0.16	16	0.001	15	0.218	102	0.187	74
1479			min	-1.089	74	-0.019	73	0.013	77	0	96	-0.187	74	-0.218	102
1480	M729	I	max	2.852	74	0.029	70	-0.024	76	0.004	72	0.491	74	0.514	106
1481			min	-2.988	106	-0.029	106	-0.289	13	-0.003	104	-0.514	106	-0.491	74
1482		J	max	2.889	74	0.027	72	0.289	15	0.004	72	0.497	74	0.521	106
1483			min	-3.025	106	-0.027	104	0.024	104	-0.003	104	-0.521	106	-0.497	74
1484	M730	I	max	12.205	104	0.043	70	-0.035	107	0.006	74	2.625	104	2.727	76
1485			min	-12.679	76	-0.043	102	-0.318	13	-0.006	106	-2.727	76	-2.625	104
1486		J	max	12.265	104	0.038	72	0.318	15	0.006	74	2.638	104	2.74	76
1487			min	-12.739	76	-0.038	104	0.035	75	-0.006	106	-2.74	76	-2.638	104
1488	M731	I	max	5.09	14	0.036	66	0.019	107	0.001	13	0	105	0.004	107
1489			min	-0.09	107	-0.037	94	-0.019	71	0	104	0	73	-0.236	14
1490		J	max	4.775	14	0.036	68	0.019	105	0.001	13	0	105	0.005	107
1491			min	-0.117	107	-0.037	92	-0.019	73	0	104	0	73	-0.223	14
1492	M732	I	max	4.515	13	0.036	66	0.019	107	0	107	0	105	0.007	75
1493			min	-0.14	75	-0.037	94	-0.019	71	-0.001	13	0	73	-0.209	13
1494		J	max	4.201	13	0.036	68	0.019	105	0	107	0	105	0.008	75
1495			min	-0.167	75	-0.037	92	-0.019	73	-0.001	13	0	73	-0.196	13
1496	M733	I	max	5.759	15	0.036	98	0.019	71	0.002	13	0	73	-0.009	107
1497			min	0.187	107	-0.037	62	-0.019	107	0	104	0	105	-0.267	15
1498		J	max	5.445	15	0.036	96	0.019	73	0.002	13	0	73	-0.008	107
1499			min	0.16	107	-0.037	64	-0.019	105	0	104	0	105	-0.254	15
1500	M734	I	max	6.17	15	0.036	98	0.019	71	0	107	0	73	-0.01	75
1501			min	0.209	75	-0.037	92	-0.019	107	-0.001	13	0	105	-0.286	15
1502		J	max	5.855	15	0.036	66	0.019	73	0	107	0	73	-0.009	75
1503			min	0.182	75	-0.037	64	-0.019	105	-0.001	13	0	105	-0.273	15
1504	M735	I	max	1.827	106	0.293	15	0.028	76	0.002	100	0.125	70	0.116	106
1505			min	-1.963	70	0.023	77	-0.028	104	-0.003	19	-0.116	106	-0.125	70

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1506		J	max	1.865	106	-0.023	105	0.028	40	0.002	100	0.127	70	0.119	106
1507			min	-2.001	70	-0.293	13	-0.028	42	-0.003	19	-0.119	106	-0.127	70
1508	M736	I	max	2.651	106	0.293	15	0.028	72	0	68	0.206	100	0.169	106
1509			min	-3.231	100	0.023	77	-0.028	44	-0.007	13	-0.169	106	-0.206	100
1510		J	max	2.689	106	-0.023	105	0.028	100	0	68	0.208	100	0.171	106
1511			min	-3.268	100	-0.293	13	-0.028	102	-0.007	13	-0.171	106	-0.208	100
1512	M737	I	max	6.74	106	0.327	13	0.041	72	0	98	0.606	70	0.536	106
1513			min	-7.621	70	0.034	77	-0.041	104	-0.012	13	-0.536	106	-0.606	70
1514		J	max	6.8	106	-0.034	105	0.041	100	0	98	0.611	70	0.541	106
1515			min	-7.681	70	-0.327	15	-0.041	102	-0.012	13	-0.541	106	-0.611	70
1516	M738	I	max	7.767	76	0.327	13	0.041	46	0.003	68	0.716	100	0.618	76
1517			min	-8.999	100	0.034	77	-0.041	100	-0.016	13	-0.618	76	-0.716	100
1518		J	max	7.827	76	-0.034	105	0.041	70	0.003	68	0.721	100	0.623	76
1519			min	-9.059	100	-0.327	15	-0.041	106	-0.016	13	-0.623	76	-0.721	100
1520	M739	I	max	3.002	102	0.293	15	0.028	70	0.006	19	0.181	74	0.191	102
1521			min	-2.851	74	0.023	105	-0.028	72	-0.001	74	-0.191	102	-0.181	74
1522		J	max	3.04	102	-0.023	77	0.028	42	0.006	19	0.184	74	0.193	102
1523			min	-2.889	74	-0.293	13	-0.028	100	-0.001	74	-0.193	102	-0.184	74
1524	M740	I	max	3.785	76	0.293	15	0.028	104	0.011	13	0.26	70	0.241	76
1525			min	-4.085	70	0.023	105	-0.028	42	0	68	-0.241	76	-0.26	70
1526		J	max	3.823	76	-0.023	77	0.028	102	0.011	13	0.262	70	0.243	76
1527			min	-4.123	70	-0.293	13	-0.028	70	0	68	-0.243	76	-0.262	70
1528	M741	I	max	7.826	106	0.327	13	0.041	74	0.013	13	0.672	70	0.623	106
1529			min	-8.445	70	0.034	105	-0.041	76	0	98	-0.623	106	-0.672	70
1530		J	max	7.886	106	-0.034	77	0.041	106	0.013	13	0.677	70	0.627	106
1531			min	-8.505	70	-0.327	15	-0.041	70	0	98	-0.627	106	-0.677	70
1532	M742	I	max	8.643	76	0.327	13	0.041	100	0.006	92	0.746	100	0.688	76
1533			min	-9.373	100	0.034	105	-0.041	46	-0.005	68	-0.688	76	-0.746	100
1534		J	max	8.703	76	-0.034	77	0.041	42	0.006	92	0.75	100	0.692	76
1535			min	-9.433	100	-0.327	15	-0.041	74	-0.005	68	-0.692	76	-0.75	100
1536	M743	I	max	5.333	70	0.194	15	0.03	71	0.003	94	0.393	106	0.424	70
1537			min	-4.941	106	0.019	76	-0.03	103	-0.002	96	-0.424	70	-0.393	106
1538		J	max	5.273	70	-0.019	104	0.03	73	0.003	94	0.388	106	0.419	70
1539			min	-4.881	106	-0.194	13	-0.03	41	-0.002	96	-0.419	70	-0.388	106
1540	M744	I	max	1.945	70	0.163	15	0.019	71	0.001	102	0.12	106	0.124	70
1541			min	-1.893	106	0.012	106	-0.019	77	-0.001	104	-0.124	70	-0.12	106
1542		J	max	1.907	70	-0.012	74	0.019	103	0.001	102	0.118	106	0.121	70
1543			min	-1.855	106	-0.163	13	-0.019	41	-0.001	104	-0.121	70	-0.118	106
1544	M745	I	max	1.467	70	0.163	15	0.019	101	0.001	100	0.08	106	0.093	70
1545			min	-1.26	106	0.012	106	-0.019	73	-0.001	72	-0.093	70	-0.08	106
1546		J	max	1.429	70	-0.012	74	0.019	103	0.001	100	0.078	106	0.091	70
1547			min	-1.222	106	-0.163	13	-0.019	75	-0.001	72	-0.091	70	-0.078	106
1548	M746	I	max	4.845	70	0.194	15	0.03	105	0.002	96	0.342	106	0.385	70
1549			min	-4.295	106	0.019	76	-0.03	47	-0.003	15	-0.385	70	-0.342	106
1550		J	max	4.785	70	-0.019	104	0.03	77	0.002	96	0.337	106	0.381	70
1551			min	-4.235	106	-0.194	13	-0.03	101	-0.003	15	-0.381	70	-0.337	106
1552	M747	I	max	-0.711	107	0.195	13	0.024	70	0.007	106	0.65	14	0.65	14
1553			min	-13.198	14	0.001	77	-0.024	106	-0.01	13	0.035	107	0.035	107
1554		J	max	-0.77	107	-0.001	107	0.024	72	0.007	106	0.662	14	0.662	14
1555			min	-13.448	14	-0.195	15	-0.024	104	-0.01	13	0.038	107	0.038	107
1556	M748	I	max	-0.174	107	-0.001	77	0.024	102	0.007	76	0.569	14	0.569	14
1557			min	-11.538	14	-0.195	13	-0.024	74	-0.013	13	0.009	107	0.009	107
1558		J	max	-0.233	107	0.195	15	0.024	100	0.007	76	0.58	14	0.58	14
1559			min	-11.788	14	0.001	107	-0.024	76	-0.013	13	0.011	107	0.011	107
1560	M749	I	max	-0.109	75	0.195	15	0.024	102	0.007	104	0.53	13	0.53	13

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1561			min	-10.746	13	0.001	105	-0.024	74	-0.011	15	0.005	75	0.005	75
1562		J	max	-0.168	75	-0.001	75	0.024	100	0.007	104	0.541	13	0.541	13
1563			min	-10.996	13	-0.195	13	-0.024	76	-0.011	15	0.008	75	0.008	75
1564	M750	I	max	-0.784	75	-0.001	105	0.024	70	0.007	74	0	72	0	74
1565			min	-13.981	15	-0.195	13	-0.024	106	-0.014	15	0	104	0	102
1566		J	max	-0.843	75	0.195	15	0.024	72	0.007	74	0	15	0	70
1567			min	-14.231	15	0.001	75	-0.024	104	-0.014	15	0	74	0	106
1568	M751	I	max	13.768	74	0.043	76	-0.035	107	0.011	106	2.961	74	3.044	102
1569			min	-14.153	102	-0.043	100	-0.318	15	-0.015	70	-3.044	102	-2.961	74
1570		J	max	13.708	74	0.038	70	0.318	13	0.011	106	2.948	74	3.031	102
1571			min	-14.093	102	-0.038	102	0.035	75	-0.015	70	-3.031	102	-2.948	74
1572	M752	I	max	12.185	74	0.038	104	-0.035	75	0.013	70	2.621	74	2.831	102
1573			min	-13.163	102	-0.038	72	-0.318	13	-0.008	106	-2.831	102	-2.621	74
1574		J	max	12.125	74	0.043	106	0.318	15	0.013	70	2.608	74	2.818	102
1575			min	-13.103	102	-0.043	70	0.035	107	-0.008	106	-2.818	102	-2.608	74
1576	M753	I	max	-5.696	98	0.175	13	0.023	100	0.01	77	1.793	15	1.793	15
1577			min	-36.402	15	0	77	-0.022	76	-0.016	13	0.281	98	0.281	98
1578		J	max	-5.716	98	0	107	0.023	102	0.01	77	1.805	15	1.805	15
1579			min	-36.652	15	-0.175	15	-0.022	74	-0.016	13	0.282	98	0.282	98
1580	M754	I	max	-5.522	99	0	77	0.023	72	0.013	75	1.571	13	1.571	13
1581			min	-31.891	13	-0.175	13	-0.022	104	-0.013	73	0.272	99	0.272	99
1582		J	max	-5.543	99	0.175	15	0.023	70	0.013	75	1.583	13	1.583	13
1583			min	-32.14	13	0	107	-0.022	106	-0.013	73	0.273	99	0.273	99
1584	M755	I	max	-5.821	66	0	105	0.023	100	0.001	104	1.91	15	1.91	15
1585			min	-38.76	15	-0.175	15	-0.022	76	-0.018	15	0.287	66	0.287	66
1586		J	max	-5.841	66	0.175	13	0.023	102	0.001	104	1.921	15	1.921	15
1587			min	-39.009	15	0	75	-0.022	74	-0.018	15	0.288	66	0.288	66
1588	M756	I	max	-5.105	68	0.175	15	0.023	72	0.005	70	1.53	13	1.53	13
1589			min	-31.045	13	0	105	-0.022	104	-0.004	106	0.252	68	0.252	68
1590		J	max	-5.126	68	0	75	0.023	70	0.005	70	1.541	13	1.541	13
1591			min	-31.294	13	-0.175	13	-0.022	106	-0.004	106	0.253	68	0.253	68
1592	M757	I	max	-4.902	99	0.175	13	0.023	100	0.003	76	1.525	15	1.525	15
1593			min	-30.943	15	0	77	-0.022	76	-0.018	13	0.242	99	0.242	99
1594		J	max	-4.923	99	0	107	0.023	102	0.003	76	1.536	15	1.536	15
1595			min	-31.192	15	-0.175	15	-0.022	74	-0.018	13	0.242	99	0.242	99
1596	M758	I	max	-4.65	96	0	77	0.023	72	0.003	68	1.305	14	1.305	14
1597			min	-26.496	14	-0.175	13	-0.022	104	-0.014	13	0.229	96	0.229	96
1598		J	max	-4.671	96	0.175	15	0.023	70	0.003	68	1.317	14	1.317	14
1599			min	-26.745	14	0	107	-0.022	106	-0.014	13	0.23	96	0.23	96
1600	M759	I	max	-4.766	66	0	105	0.023	100	0.003	104	1.528	15	1.528	15
1601			min	-31.014	15	-0.175	15	-0.022	76	-0.02	15	0.235	66	0.235	66
1602		J	max	-4.787	66	0.175	13	0.023	102	0.003	104	1.54	15	1.54	15
1603			min	-31.264	15	0	75	-0.022	74	-0.02	15	0.236	66	0.236	66
1604	M760	I	max	-4.547	68	0.175	15	0.023	72	0.003	96	1.265	13	1.265	13
1605			min	-25.672	13	0	105	-0.022	104	-0.012	15	0.224	68	0.224	68
1606		J	max	-4.568	68	0	75	0.023	70	0.003	96	1.277	13	1.277	13
1607			min	-25.922	13	-0.175	13	-0.022	106	-0.012	15	0.225	68	0.225	68
1608	M761	I	max	0.11	107	0.195	13	0.024	70	0.009	102	0.346	14	0.346	14
1609			min	-7.029	14	0.001	77	-0.024	106	-0.007	74	-0.005	107	-0.005	107
1610		J	max	0.051	107	-0.001	107	0.024	72	0.009	102	0.358	14	0.358	14
1611			min	-7.279	14	-0.195	15	-0.024	104	-0.007	74	-0.003	107	-0.003	107
1612	M762	I	max	0.605	107	-0.001	77	0.024	102	0.009	102	0.277	14	0.277	14
1613			min	-5.616	14	-0.195	13	-0.024	74	-0.008	74	-0.03	107	-0.03	107
1614		J	max	0.546	107	0.195	15	0.024	100	0.009	102	0.289	14	0.289	14
1615			min	-5.866	14	0.001	107	-0.024	76	-0.008	74	-0.027	107	-0.027	107

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1616	M763	I	max	0.07	75	-0.001	105	0.024	70	0.008	74	0.362	15	0.362	15
1617			min	-7.343	15	-0.195	15	-0.024	106	-0.008	102	-0.003	75	-0.003	75
1618		J	max	0.011	75	0.195	13	0.024	72	0.008	74	0.374	15	0.374	15
1619			min	-7.593	15	0.001	75	-0.024	104	-0.008	102	-0.001	75	-0.001	75
1620	M764	I	max	0.673	75	0.195	15	0.024	102	0.008	104	0.239	13	0.239	13
1621			min	-4.852	13	0.001	105	-0.024	74	-0.009	72	-0.033	75	-0.033	75
1622		J	max	0.614	75	-0.001	75	0.024	100	0.008	104	0.251	13	0.251	13
1623			min	-5.102	13	-0.195	13	-0.024	76	-0.009	72	-0.03	75	-0.03	75
1624	M765	I	max	1.779	72	3.521	15	2.912	71	0.716	71	0	107	0.312	74
1625			min	-1.25	74	0.803	99	-2.912	103	-0.716	103	0	12	-0.444	72
1626		J	max	6.986	72	-0.803	99	2.912	103	0.716	103	0	107	1.612	74
1627			min	-6.458	74	-3.521	15	-2.912	71	-0.716	71	0	12	-1.744	72
1628	M766	I	max	2.128	76	3.633	15	2.999	71	0.738	71	0	107	0.484	74
1629			min	-1.939	74	0.83	97	-3	103	-0.738	103	0	12	-0.531	76
1630		J	max	7.512	76	-0.83	97	3	103	0.738	103	0	107	1.828	74
1631			min	-7.323	74	-3.633	15	-2.999	71	-0.737	71	0	12	-1.875	76
1632	M768	I	max	0.26	102	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
1633			min	-0.26	44	-0.26	75	-0.796	15	0	12	-0.073	107	-0.073	45
1634		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1635			min	0	12	0	72	0	72	0	12	0	12	0	12
1636	M769	I	max	0.251	38	0.198	73	-0.053	66	0	107	0.459	14	0.459	16
1637			min	-0.251	32	-0.198	71	-0.667	15	0	12	-0.044	107	-0.044	75
1638		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1639			min	0	12	0	72	0	72	0	12	0	12	0	12
1640	M771	I	max	0.359	102	0.359	73	-0.059	66	0	107	0.928	14	0.928	16
1641			min	-0.359	74	-0.359	101	-1.068	15	0	12	-0.101	47	-0.101	105
1642		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1643			min	0	12	0	72	0	72	0	12	0	12	0	12
1644	M776	I	max	0.26	46	0.26	43	-0.045	66	0	107	0.688	14	0.688	16
1645			min	-0.26	40	-0.26	75	-0.796	15	0	12	-0.073	107	-0.073	45
1646		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1647			min	0	12	0	12	0	72	0	12	0	12	0	12
1648	M777	I	max	0.182	68	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
1649			min	-0.182	96	-0.146	71	-0.507	15	0	12	-0.033	107	-0.033	75
1650		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1651			min	0	12	0	12	0	72	0	12	0	12	0	12
1652	M778	I	max	0.182	68	0.146	103	-0.04	66	0	107	0.348	14	0.348	16
1653			min	-0.182	96	-0.146	105	-0.509	15	0	12	-0.033	47	-0.033	105
1654		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1655			min	0	12	0	12	0	72	0	12	0	12	0	12
1656	M779	I	max	0.251	68	0.198	77	-0.053	66	0	107	0.46	14	0.46	16
1657			min	-0.251	66	-0.198	71	-0.669	15	0	12	-0.044	107	-0.044	105
1658		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1659			min	0	12	0	72	0	72	0	12	0	12	0	12
1660	M780	I	max	0.182	38	0.146	103	-0.04	66	0	107	0.347	14	0.347	16
1661			min	-0.182	62	-0.146	41	-0.507	15	0	12	-0.033	47	-0.033	45
1662		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1663			min	0	12	0	72	0	72	0	12	0	12	0	12
1664	M781	I	max	0.182	38	0.146	107	-0.04	69	0	107	0.348	14	0.348	16
1665			min	-0.182	36	-0.146	71	-0.509	15	0	12	-0.033	107	-0.033	45
1666		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1667			min	0	12	0	72	0	72	0	12	0	12	0	12
1668	M782	I	max	1.477	102	0.155	14	0.026	47	0.001	101	0	107	0	107
1669			min	-1.221	74	-0.009	46	-0.026	75	-0.001	77	0	12	0	12
1670		J	max	1.397	102	0.009	106	0.026	105	0.001	101	0	107	0	107

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1671			min	-1.217	74	-0.155	13	-0.026	73	-0.001	77	0	12	0	12
1672	M783	I	max	1.477	100	0.155	16	0.026	101	0.001	107	0	107	0	107
1673			min	-1.221	46	-0.009	74	-0.026	73	-0.001	41	0	12	0	12
1674		J	max	1.397	100	0.009	104	0.026	107	0.001	107	0	107	0	107
1675			min	-1.217	46	-0.155	13	-0.026	41	-0.001	41	0	12	0	12
1676	M784	I	max	1.477	102	0.155	14	0.026	107	0.001	75	0	107	0	107
1677			min	-1.221	44	-0.009	46	-0.026	41	-0.001	73	0	12	0	12
1678		J	max	1.397	102	0.009	106	0.026	105	0.001	75	0	107	0	107
1679			min	-1.217	44	-0.155	15	-0.026	73	-0.001	73	0	12	0	12
1680	M785	I	max	1.477	100	0.155	13	0.026	75	0.001	73	0	107	0	107
1681			min	-1.221	46	-0.009	44	-0.026	73	-0.001	75	0	12	0	12
1682		J	max	1.397	100	0.009	104	0.026	103	0.001	73	0	107	0	107
1683			min	-1.217	46	-0.155	15	-0.026	45	-0.001	75	0	12	0	12
1684	M485	I	max	0.173	102	0.173	103	-0.032	98	0	107	0.475	14	0.475	16
1685			min	-0.173	104	-0.173	45	-0.556	13	0	12	-0.048	107	-0.048	45
1686		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1687			min	0	12	0	42	0	76	0	12	0	12	0	12
1688	M497	I	max	0.118	38	0.098	107	-0.029	66	0	107	0.242	14	0.242	16
1689			min	-0.118	62	-0.098	71	-0.36	15	0	12	-0.022	47	-0.022	75
1690		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1691			min	0	12	0	102	0	72	0	12	0	12	0	12
1692	M498	I	max	0.118	38	0.098	47	-0.029	66	0	107	0.241	14	0.241	16
1693			min	-0.118	62	-0.098	41	-0.359	15	0	12	-0.022	107	-0.022	75
1694		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1695			min	0	12	0	102	0	72	0	12	0	12	0	12
1696	M786	I	max	0.173	106	0.173	107	-0.032	98	0	107	0.475	14	0.475	16
1697			min	-0.173	74	-0.173	45	-0.556	13	0	12	-0.048	77	-0.048	75
1698		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1699			min	0	12	0	12	0	76	0	12	0	12	0	12
1700	M787	I	max	0.118	38	0.098	47	-0.029	66	0	107	0.241	14	0.241	16
1701			min	-0.118	96	-0.098	105	-0.359	15	0	12	-0.022	47	-0.022	105
1702		J	max	0	107	0	106	0	107	0	107	0	107	0	107
1703			min	0	12	0	12	0	72	0	12	0	12	0	12
1704	M788	I	max	0.118	34	0.098	47	-0.029	66	0	107	0.242	14	0.242	16
1705			min	-0.118	66	-0.098	105	-0.36	15	0	12	-0.022	77	-0.022	45
1706		J	max	0	107	0	70	0	107	0	107	0	107	0	107
1707			min	0	12	0	12	0	72	0	12	0	12	0	12
1708	M698	I	max	0.167	106	0.167	43	-0.032	98	0	107	0.461	14	0.461	16
1709			min	-0.167	104	-0.167	71	-0.539	13	0	12	-0.047	107	-0.047	105
1710		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1711			min	0	12	0	42	0	76	0	12	0	12	0	12
1712	M699	I	max	0.113	94	0.094	43	-0.028	66	0	107	0.234	14	0.234	16
1713			min	-0.113	36	-0.094	105	-0.348	15	0	12	-0.021	107	-0.021	105
1714		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1715			min	0	12	0	102	0	72	0	12	0	12	0	12
1716	M700	I	max	0.113	68	0.094	43	-0.028	66	0	107	0.235	14	0.235	16
1717			min	-0.113	66	-0.094	71	-0.349	15	0	12	-0.021	107	-0.021	45
1718		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1719			min	0	12	0	102	0	72	0	12	0	12	0	12
1720	M468	I	max	0.167	76	0.167	103	-0.032	98	0	107	0.461	14	0.461	16
1721			min	-0.167	44	-0.167	41	-0.539	13	0	12	-0.047	77	-0.047	45
1722		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1723			min	0	12	0	102	0	76	0	12	0	12	0	12
1724	M469	I	max	0.113	38	0.094	43	-0.028	66	0	107	0.234	14	0.234	16
1725			min	-0.113	96	-0.094	41	-0.348	15	0	12	-0.021	107	-0.021	45

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1726		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1727			min	0	12	0	102	0	72	0	12	0	12	0	12
1728	M506	I	max	0.113	98	0.094	73	-0.028	66	0	107	0.235	14	0.235	16
1729			min	-0.113	32	-0.094	41	-0.349	15	0	12	-0.021	107	-0.021	45
1730		J	max	0	107	0	107	0	70	0	107	0	107	0	107
1731			min	0	12	0	102	0	72	0	12	0	12	0	12
1732	M767	I	max	4.268	86	0.845	100	0.845	103	0	107	0.422	101	0.422	100
1733			min	2.384	44	-0.845	42	-0.845	41	0	12	-0.422	43	-0.422	42
1734		J	max	3.22	86	0	100	0	103	0	107	0	107	0	107
1735			min	1.799	44	0	42	0	41	0	12	0	12	0	12
1736	M770	I	max	3.112	86	6.875	100	8.537	103	0	107	8.115	71	6.453	100
1737			min	1.738	44	-6.875	42	-8.537	71	0	12	-8.115	103	-6.453	42
1738		J	max	2.064	86	6.031	100	7.693	103	0	107	0	107	0	107
1739			min	1.153	44	-6.031	42	-7.693	71	0	12	0	12	0	12
1740	M772	I	max	2.391	86	0.845	100	0.845	103	0	107	0.422	101	0.422	100
1741			min	1.335	44	-0.845	42	-0.845	41	0	12	-0.422	43	-0.422	42
1742		J	max	1.343	86	0	100	0	103	0	107	0	107	0	107
1743			min	0.75	44	0	42	0	41	0	12	0	12	0	12
1744	M773	I	max	2.391	86	0.845	100	0.845	103	0	107	0.422	101	0.422	100
1745			min	1.335	44	-0.845	42	-0.845	41	0	12	-0.422	43	-0.422	42
1746		J	max	1.343	86	0	100	0	103	0	107	0	107	0	107
1747			min	0.75	44	0	42	0	41	0	12	0	12	0	12
1748	M774	I	max	1.048	86	3.835	100	12.964	103	0	107	12.542	71	3.412	100
1749			min	0.586	44	-3.835	42	-12.964	71	0	12	-12.542	103	-3.412	42
1750		J	max	0	107	2.99	100	12.12	103	0	107	0	107	0	107
1751			min	0	12	-2.99	42	-12.12	71	0	12	0	12	0	12
1752	M775	I	max	2.164	86	8.552	56	0.845	103	0	107	0.422	101	8.552	56
1753			min	1.209	44	-8.552	86	-0.845	41	0	12	-0.422	43	-8.552	86
1754		J	max	1.116	86	8.552	56	0	103	0	107	0	107	0	107
1755			min	0.623	44	-8.552	86	0	41	0	12	0	12	0	12
1756	M636	I	max	0.223	97	0.679	16	0.329	102	0.001	74	0	107	0	107
1757			min	-0.223	99	0.162	97	-0.329	70	-0.002	102	0	12	0	12
1758		J	max	0.943	73	-0.271	97	0.586	70	0.001	74	0	107	0	107
1759			min	-0.942	71	-1.052	16	-0.586	102	-0.002	102	0	12	0	12
1760	M637	I	max	0.943	71	1.052	14	0.586	102	0.002	102	0	107	0	107
1761			min	-0.942	73	0.271	99	-0.586	70	-0.001	74	0	12	0	12
1762		J	max	0.223	99	-0.162	99	0.329	70	0.002	102	0	107	0	107
1763			min	-0.223	97	-0.679	14	-0.329	102	-0.001	74	0	12	0	12
1764	M789	I	max	0.006	105	0.241	16	0.055	98	0	101	0	107	0	107
1765			min	-0.099	13	0.021	44	-0.055	32	0	103	0	12	0	12
1766		J	max	0.006	107	-0.021	107	0.055	96	0	101	0	107	0	107
1767			min	-0.099	13	-0.241	13	-0.055	34	0	103	0	12	0	12
1768	M626	I	max	2.981	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
1769			min	1.665	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
1770		J	max	2.153	86	0	100	0	103	0	107	0	107	0	107
1771			min	1.203	44	0	42	0	41	0	12	0	12	0	12
1772	M627	I	max	4.328	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
1773			min	2.418	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
1774		J	max	3.5	86	0	100	0	103	0	107	0	107	0	107
1775			min	1.955	44	0	42	0	41	0	12	0	12	0	12
1776	M630	I	max	3.274	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100
1777			min	1.829	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
1778		J	max	2.446	86	0	100	0	103	0	107	0	107	0	107
1779			min	1.366	44	0	42	0	41	0	12	0	12	0	12
1780	M641	I	max	4.328	86	0.667	100	0.667	103	0	107	0.334	101	0.334	100

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1781			min	2.418	44	-0.667	42	-0.667	41	0	12	-0.334	43	-0.334	42
1782		J	max	3.5	86	0	100	0	103	0	107	0	107	0	107
1783			min	1.955	44	0	42	0	41	0	12	0	12	0	12
1784	M643	I	max	0	107	-0.159	106	0	107	0	107	0	107	0	107
1785			min	0	12	-0.284	26	0	12	0	12	0	12	0	12
1786		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1787			min	0	12	0	12	0	12	0	12	0	12	0	12
1788	M790	I	max	1.678	105	-8.385	107	0	107	0	107	0	107	0	107
1789			min	-1.678	43	-15.012	26	0	12	0	12	0	12	0	12
1790		J	max	0.969	103	1.77	86	0	107	0	107	0	107	0	107
1791			min	-0.968	41	0.988	47	0	12	0	12	0	12	0	12
1792	M791	I	max	0	107	-0.145	104	0	107	0	107	0	107	0	107
1793			min	0	12	-0.26	26	0	12	0	12	0	12	0	12
1794		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1795			min	0	12	0	12	0	12	0	12	0	12	0	12
1796	M792	I	max	0	107	-0.969	107	0	107	0	107	0	107	0	107
1797			min	0	12	-1.735	26	0	12	0	12	0	12	0	12
1798		J	max	0	107	15.124	86	0	107	0	107	0	107	0	107
1799			min	0	12	8.448	47	0	12	0	12	0	12	0	12
1800	M793	I	max	0	107	-0.246	107	0	107	0	107	0	107	0	107
1801			min	0	12	-0.44	26	0	12	0	12	0	12	0	12
1802		J	max	0	107	0	107	0	107	0	107	0	107	0	107
1803			min	0	12	0	12	0	12	0	12	0	12	0	12
1804	M794	I	max	2.161	57	-6.711	107	0	107	0	107	0	107	0	107
1805			min	-2.161	87	-12.015	56	0	12	0	12	0	12	0	12
1806		J	max	0.032	86	1.431	56	0	107	0	107	0	107	0	107
1807			min	-0.032	56	0.799	107	0	12	0	12	0	12	0	12
1808	M795	I	max	18.273	86	3.867	103	1.946	102	0	107	0.973	100	19.095	86
1809			min	10.207	75	-3.867	71	-1.946	40	0	12	-0.973	42	6.676	75
1810		J	max	15.858	86	2.305	86	0	102	0	107	0	107	16.79	56
1811			min	8.858	75	-2.305	57	0	40	0	12	0	12	9.378	107
1812	M796	I	max	3.565	86	1.946	100	1.946	103	0	107	0.973	101	1.889	100
1813			min	1.991	46	-1.946	42	-1.946	41	0	12	-0.973	43	-0.43	46
1814		J	max	1.149	86	0	100	0	103	0	107	0	107	0.972	86
1815			min	0.642	46	0	42	0	41	0	12	0	12	0.543	44
1816	M797	I	max	3.006	86	1.946	100	1.946	103	0	107	0.973	101	0.653	104
1817			min	1.679	44	-1.946	42	-1.946	41	0	12	-0.973	43	-1.512	42
1818		J	max	0.591	86	0	100	0	103	0	107	0	107	-0.32	106
1819			min	0.33	44	0	42	0	41	0	12	0	12	-0.573	26
1820	M798	I	max	22.487	86	6.85	103	1.946	102	0	107	0.973	100	25.519	103
1821			min	12.561	77	-6.85	41	-1.946	40	0	12	-0.973	42	5.777	45
1822		J	max	20.072	86	4.904	103	0	102	0	107	0	107	20.864	86
1823			min	11.212	77	-4.904	41	0	40	0	12	0	12	11.654	47
1824	M799	I	max	22.545	86	1.946	103	1.946	102	0	107	0.973	100	21.082	86
1825			min	12.593	45	-1.946	45	-1.946	40	0	12	-0.973	42	10.803	45
1826		J	max	20.129	86	0	103	0	102	0	107	0	107	21.082	86
1827			min	11.244	45	0	45	0	40	0	12	0	12	11.776	47
1828	M800	I	max	2.937	86	1.946	100	1.946	103	0	107	0.973	101	0.682	104
1829			min	1.64	44	-1.946	42	-1.946	41	0	12	-0.973	43	-1.463	42
1830		J	max	0.521	86	0	100	0	103	0	107	0	107	-0.291	106
1831			min	0.291	44	0	42	0	41	0	12	0	12	-0.521	26
1832	M801	I	max	0	107	-0.419	106	0	107	0	107	0	107	0	107
1833			min	0	12	-0.75	26	0	12	0	12	0	12	0	12
1834		J	max	17.568	71	8.853	101	8.616	72	0	107	0	107	0	107
1835			min	-17.567	103	-2.366	107	-8.616	70	0	12	0	12	0	12

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1836	M802	I	max	12.919	100	19.514	103	10.563	102	14.389	70	9.59	100	15.817	103
1837			min	0.047	76	-19.514	71	-10.563	70	-14.389	72	-9.59	42	-7.367	75
1838		J	max	10.645	100	17.568	103	8.616	102	14.389	70	0	107	13.246	101
1839			min	-1.302	76	-17.568	71	-8.616	70	-14.389	72	0	12	-4.864	107
1840	M803	I	max	1.417	73	0.031	101	0.02	42	0.002	107	0	107	0	107
1841			min	-1.367	105	-0.004	77	-0.02	40	-0.002	71	0	12	0	12
1842		J	max	1.479	73	0.004	107	0.02	100	0.002	107	0	107	0	107
1843			min	-1.377	105	-0.031	41	-0.02	42	-0.002	71	0	12	0	12
1844	M804	I	max	1.479	71	0.031	73	0.02	102	0.002	73	0	107	0	107
1845			min	-1.377	107	-0.004	45	-0.02	40	-0.002	105	0	12	0	12
1846		J	max	1.417	71	0.004	75	0.02	100	0.002	73	0	107	0	107
1847			min	-1.367	107	-0.031	103	-0.02	42	-0.002	105	0	12	0	12

Member 2nd/1st Moment Ratios

No Data to Print...

Envelope Member 2nd/1st Moment Ratios

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
0	M273	max	0.035	510.446	0.93	50*	-0.55	1.162	4.25	14
1		min	0.114	-1419.122	0.93	13	0.619	0.942	5.645	15
2	M313	max	-0.148	198.012	0.863	14	1.726	1.059	4.25	14
3		min	-0.146	-196.021	0.863	16	1.281	0.983	4.316	60
4	M314	max	-0.217	1.324	0.863	90	-1.858	1.042	4.25	60
5		min	-0.095	0.737	0.863	93	0.378	0.99	5.645	47
6	M336	max	-0.36	1.371	0.93	60	-0.945	1.078	4.25	15
7		min	0.524	0.747	0.93	64	1.81	0.986	4.25	71
8	M337	max	0.009	1.446	0	88	-0.027	1.119	2.5	88
9		min	-0.045	0.806	2.656	78*	0.028	0.72	5	78*
10	M340	max	0.555	1.016	6.531	13	0.796	1.028	13.656	110*
11		min	-0.376	0.944	28.5	62	1.098	0.967	7.125	70
12	M342	max	0.073	1.009	13.656	107	0.556	1.017	13.656	92
13		min	-0.302	0.945	28.5	101	0.592	0.936	0	108*
14	M343	max	-0.051	1.185	4.507	88	0.082	1.088	9.014	101
15		min	0.055	0.824	0	62	-0.052	0.874	4.507	58
16	M346	max	-0.145	1.055	4.601	101	0.056	1.155	9.014	101
17		min	0.06	0.85	0	58	-0.353	0.903	4.695	78*
18	M347	max	-0.153	1.024	4.375	105	0.065	1.058	8.4	105
19		min	0.328	0.961	0	88	0.353	0.959	0	15
20	M349	max	1.173	1.042	28.5	13	-1.264	1.011	0	102
21		min	0.252	1.003	28.5	90	-0.64	0.986	57	104
22	M350	max	1.175	1.037	28.5	13	-1.854	1.016	0	100
23		min	0.226	1.002	28.5	90	-0.376	0.921	57	102
24	M351	max	0.01	1.267	2.906	113*	-0.056	1.221	2.906	103
25		min	-1.045	1.02	2.906	34	0.018	0.793	2.906	85*
26	M352	max	-0.617	1.132	2.906	74	-0.003	1.366	2.953	85*
27		min	-0.004	0.899	2.906	113*	-1.066	1.016	2.906	64
28	M353	max	-0.001	9.748	2.749	40	-5.51	0.86	4.189	96
29		min	-0.001	-7.21	2.749	46	0.775	0.688	4.189	103
30	M354	max	-0.001	1.542	4.189	32	-0.353	1.079	2.749	107
31		min	-0.002	0.591	4.189	42	0.345	0.721	0	47
32	M355	max	0.063	1.192	2.906	53*	-0.575	1.139	2.906	104
33		min	-0.083	0.876	2.906	71	0.004	0.804	0	85*
34	M356	max	-0.799	1	2.5	77	-0.918	1.002	1.979	38
35		min	-0.004	1	2.5	20	-0.702	0.985	3.021	74

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
36	M357	max	0.004	1.001	2.5	14	0.938	1.02	0	70
37		min	-0.76	1	2.5	107	-2.424	0.982	2.5	13
38	M358	max	0.001	2.2	0	32	9.88	0.849	0	70
39		min	0	0.283	4.189	28	0.162	0.618	0	37
40	M359	max	0.016	1.129	2.618	62	-0.255	1.036	2.575	107
41		min	-0.001	0.57	4.189	32	0.278	0.617	0	115*
42	M360	max	-0.76	1	2.5	107	0.664	1.019	0	82*
43		min	0.004	0.999	2.5	18	-0.923	0.972	3.021	70
44	M361	max	-0.015	310.992	2.425	13	-1.283	1.064	1.166	102
45		min	-0.003	-64.777	3.218	30	-0.313	0.981	0	28
46	M362	max	0.008	275.528	3.264	15	-0.229	1.335	3.218	103
47		min	0.002	-52.927	3.218	32	-0.239	0.924	0	30
48	M363	max	-0.002	64.877	3.264	42	-0.156	1.63	3.218	49*
49		min	0	-6.465	3.218	13	-0.128	0.943	0	60
50	M364	max	0.002	2.286	3.218	79*	-0.326	1.319	3.218	100
51		min	-0.004	0.731	3.218	26	-0.111	0.953	0	67
52	M365	max	-0.002	53.294	3.264	42	-1.213	1.063	1.166	102
53		min	0.001	-10.307	3.218	13	-1.063	1	2.378	76
54	M366	max	0.003	48.619	3.264	12	0.908	1.106	3.264	78*
55		min	0.014	-50.782	2.425	15	-0.312	0.966	0	88
56	M367	max	-0.002	0.871	2.238	16	-0.459	1.01	2.192	102
57		min	0.017	0.866	2.238	79*	-0.222	0.979	0	74
58	M368	max	0.002	0.871	2.238	16	-0.411	1.011	2.192	100
59		min	-0.017	0.866	2.238	79*	-0.193	0.977	0	106
60	M369	max	0.002	0.87	2.238	16	-0.375	1.019	2.192	100
61		min	-0.017	0.866	2.238	79*	-0.227	0.976	0	76
62	M370	max	0.016	3.864	2.378	14	-1.67	1.218	1.166	15
63		min	0.004	-1.012	2.425	16	-0.248	0.896	0	74
64	M371	max	0.143	1.133	5	13	-0.311	1.057	2.5	13
65		min	-0.2	0.964	2.5	88	0.172	0.959	5	88
66	M372	max	0.035	1.065	5	107	-0.035	1.065	5	107
67		min	-0.217	0.968	2.5	58	0.189	0.963	5	58
68	M373	max	0.105	1.129	0	13	-0.041	1.118	2.5	101
69		min	-0.028	0.841	2.5	58	0.01	0.654	0	58
70	M374	max	-0.017	1.709	4.131	70	0.023	1.129	0	75
71		min	0.004	0.653	9.014	112*	-0.091	0.938	4.601	78*
72	M375	max	0.021	1.181	5	71	-0.01	1.418	2.5	28
73		min	-0.071	0.821	2.292	70	0.033	0.758	0	108*
74	M376	max	-0.115	1.067	4.413	71	0.013	1.415	0	75
75		min	0.049	0.871	9.014	88	-0.037	0.902	4.507	26
76	M377	max	-0.683	1.035	4.2	13	0.05	1.083	0	105
77		min	0.28	0.958	8.4	88	-0.262	0.919	4.2	13
78	M378	max	0.002	0.87	2.238	16	-0.003	1.282	0	107
79		min	-0.017	0.866	2.238	79*	-0.027	0.954	0	98
80	M379	max	0.002	0.87	2.238	16	-0.002	2.364	0	105
81		min	-0.017	0.866	2.238	79*	0.002	0.609	4.477	45
82	M380	max	-0.002	0.87	2.238	16	-0.015	1.055	0	107
83		min	0.017	0.866	2.238	79*	-0.028	0.955	0	96
84	M381	max	-0.002	0.87	2.238	16	-0.019	1.052	0	75
85		min	0.017	0.866	2.238	79*	-0.042	0.958	0	96
86	M382	max	0.008	1.122	4.319	115*	-0.05	1.061	4.601	101
87		min	-0.006	0.83	9.014	77	0.047	0.966	0	60
88	M383	max	0.007	1.141	3.944	107	-0.073	1.057	4.601	71
89		min	-0.051	0.988	0	60	0.051	0.988	0	60
90	M384	max	0.025	1.064	3.238	77	-0.105	1.038	4.375	71

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
91		min	-0.444	1.003	8.4	80*	0.444	1.003	8.4	80*
92	M385	max	0.031	1.027	3.238	77	-0.121	1.026	4.375	71
93		min	0.071	1.003	4.2	99	-0.115	1.002	4.113	107
94	M386	max	0.034	1.089	4.601	73	-0.022	1.2	4.413	49*
95		min	-0.054	0.984	0	90	0.021	0.851	9.014	101
96	M387	max	0.049	1.078	4.601	73	-0.027	1.173	4.413	71
97		min	-0.064	1.001	9.014	60	0.007	0.838	9.014	105
98	M388	max	0.084	1.051	4.375	73	-0.01	1.225	3.238	75
99		min	0.065	1.007	4.2	99	-0.065	1.007	4.2	99
100	M389	max	0.09	1.033	4.375	73	-0.008	1.195	3.238	75
101		min	0.067	1.003	4.2	99	-0.067	1.003	4.2	99
102	M390	max	-0.019	1.16	5	56	0.011	1.295	5	71
103		min	0.107	0.893	2.5	13	-0.107	0.893	2.5	13
104	M392	max	-0.004	1.922	5	51*	0.029	1.118	5	58
105		min	0.004	0.707	2.5	81*	-0.009	0.81	2.5	101
106	M394	max	-0.003	2.53	5	43	0.011	1.236	5	56
107		min	0.002	0.511	2.5	103	-0.009	0.85	2.5	65
108	M396	max	-0.099	1.124	5	16	0.099	1.124	5	16
109		min	0.094	0.906	2.5	15	-0.094	0.906	2.5	15
110	M397	max	0.255	1.025	8.577	102	0.255	1.025	8.577	102
111		min	0.141	0.964	4.288	74	0.099	0.981	4.378	74
112	M398	max	0.027	1.035	8.577	107	0.027	1.033	6.164	107
113		min	0.087	0.978	4.378	106	0.13	0.961	4.288	106
114	M399	max	0.061	1.103	8.577	74	0.061	1.103	8.577	74
115		min	0.267	0.956	4.288	72	0.195	0.967	6.879	72
116	M400	max	0.001	0.927	4.288	70	0.002	0.927	4.288	105
117		min	-0.002	0.927	4.288	105	-0.001	0.927	4.288	102
118	M401	max	-0.156	1.043	4.638	101	0.274	1.072	8.4	15
119		min	0.328	0.964	8.4	88	-0.262	0.923	4.2	14
120	M402	max	-0.102	1.053	1.75	105	0.075	1.076	8.4	77
121		min	0.364	0.965	0	88	-0.444	0.971	4.2	88
122	M403	max	0.799	1.017	7.955	102	0.799	1.017	7.955	102
123		min	0.48	0.979	3.978	104	0.444	0.984	4.06	104
124	M404	max	0.733	1.015	7.955	100	0.733	1.015	7.955	100
125		min	0.368	0.98	4.06	106	0.404	0.974	3.978	106
126	M405	max	0.781	1.02	7.955	102	0.781	1.02	7.955	102
127		min	0.519	0.981	4.06	74	0.554	0.977	3.978	74
128	M406	max	0.686	1.025	7.955	100	0.686	1.025	7.955	100
129		min	0.453	0.977	3.978	76	0.417	0.982	4.06	76
130	M409	max	0.755	1.018	7.955	102	0.755	1.018	7.955	102
131		min	0.426	0.978	3.978	74	0.391	0.983	4.06	74
132	M410	max	0.653	1.015	7.955	100	0.653	1.015	7.955	100
133		min	0.351	0.982	4.06	106	0.387	0.976	3.978	106
134	M411	max	0.688	1.024	7.955	102	0.688	1.024	7.955	102
135		min	0.457	0.98	4.06	74	0.785	0.975	3.978	70
136	M412	max	0.329	1.028	7.955	104	0.329	1.028	7.955	104
137		min	0.708	0.976	3.978	72	0.648	0.982	4.889	72
138	M413	max	0.01	1.091	6.164	107	0.009	1.101	8.577	107
139		min	0.591	0.971	4.288	17	0.21	0.994	0	71
140	M414	max	0.005	1.091	8.577	115*	0.01	1.003	4.735	115*
141		min	-0.007	0.896	2.412	77	-0.007	0.894	0	77
142	M415	max	0.051	1.071	8.577	106	0.051	1.071	8.577	106
143		min	0.179	0.972	6.879	100	0.638	0.958	4.288	17
144	M416	max	0.017	1.272	8.577	74	0.06	1.119	8.577	70
145		min	-0.007	0.916	0	83*	-0.033	0.797	4.288	104

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
146	M95	max	0.701	1.015	2.5	76	-4.008	1.008	2.5	74
147		min	-0.68	0.985	2.5	104	-2.615	1	2.5	68
148	M96	max	-0.703	1.019	2.5	106	-4.078	1.006	2.5	74
149		min	0.678	0.982	2.5	74	-7.013	1	2.5	60
150	M530	max	0.02	1.771	0.93	26	-0.61	1.125	4.25	14
151		min	-0.153	0.654	0.863	90	0.625	0.942	5.645	15
152	M531	max	-0.342	4.019	0.863	13	1.749	1.053	4.25	16
153		min	-0.033	-2.91	0.863	26	0.354	0.989	5.645	45
154	M532	max	0.072	4.229	0.93	100	1.831	1.063	4.25	15
155		min	-0.025	0.787	4.25	96	-1.912	0.992	4.25	107
156	M533	max	-0.033	1062.716	0.93	50*	-0.527	1.233	4.25	15
157		min	-0.102	-115.981	0.93	14	0.153	0.956	5.645	55*
158	M534	max	0.009	1.401	0	58	-0.025	1.129	2.5	88
159		min	-0.01	0.779	2.5	28	0.029	0.744	5	78*
160	M535	max	0.516	1.014	6.531	13	0.758	1.022	13.656	50*
161		min	-0.354	0.946	29.094	92	1.037	0.967	49.875	100
162	M536	max	0.104	1.023	50.469	45	0.17	1.018	42.156	66
163		min	-0.371	0.944	28.5	103	0.513	0.933	57	78*
164	M537	max	-0.056	1.092	3.005	107	0.01	1.478	0	112*
165		min	0.044	0.962	0	96	-0.007	0.639	9.014	104
166	M538	max	-0.042	1.136	3.005	107	0.063	1.157	0	103
167		min	0.03	0.803	0	88	-0.179	0.881	4.695	108*
168	M539	max	-0.029	1.151	1.75	107	0.055	1.046	0	86
169		min	0.272	0.965	0	88	-0.089	0.937	4.375	103
170	M540	max	1.137	1.041	28.5	13	-1.197	1.011	57	72
171		min	0.252	1.003	28.5	90	-0.628	0.985	0	104
172	M541	max	1.143	1.037	28.5	13	-1.799	1.015	57	70
173		min	0.227	1.002	28.5	90	-0.389	0.93	0	102
174	M542	max	0.01	1.275	2.906	113*	-0.057	1.208	2.906	103
175		min	-1.039	1.019	2.906	34	0.018	0.796	2.906	85*
176	M543	max	-0.62	1.131	2.906	74	-0.003	1.272	2.953	85*
177		min	-0.004	0.887	2.906	113*	-1.062	1.016	2.906	64
178	M544	max	-0.004	4.243	2.749	40	-0.267	1.088	2.749	97
179		min	0.003	0.802	0	52*	0.184	0.704	0	37
180	M545	max	-0.001	2.237	0	54*	-0.553	1.093	2.749	103
181		min	0.001	-1.611	2.749	46	0.551	0.72	0	89
182	M546	max	0.063	1.191	2.906	53*	-0.575	1.141	2.906	104
183		min	-0.083	0.878	2.906	71	0.005	0.832	0	85*
184	M547	max	-0.799	1	2.5	77	-0.908	1.002	1.979	98
185		min	0.004	1	2.5	18	-0.716	0.986	3.021	74
186	M548	max	-0.004	1.001	2.5	16	0.601	1.019	0	112*
187		min	-0.76	1	2.5	107	-0.989	0.976	3.021	70
188	M549	max	0	2.665	0	36	-0.176	1.047	2.575	97
189		min	0	-1.16	0	32	0.159	0.614	0	37
190	M550	max	-0.001	1.174	0	28	-0.257	1.046	2.575	107
191		min	-0.002	0.61	0	42	0.274	0.628	0	115*
192	M551	max	-0.76	1	2.5	77	0.96	1.019	0	70
193		min	0.004	0.999	2.5	18	-0.998	0.984	3.021	62
194	M552	max	-0.002	62.716	3.264	28	-1.216	1.068	1.166	102
195		min	-0.011	-548.683	2.425	17	-0.306	0.985	0	58
196	M553	max	0.001	20.633	3.264	30	-0.244	1.311	3.218	103
197		min	0.004	-144.747	3.218	40	-0.238	0.92	0	90
198	M554	max	0.005	1.273	3.218	16	-0.154	1.676	3.218	49*
199		min	0.002	-58.689	3.218	40	-0.128	0.945	0	30
200	M555	max	0.002	2.739	3.218	26	-0.313	1.303	3.218	40

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
201		min	-0.002	0.528	3.218	111*	-0.114	0.955	0	67
202	M556	max	0.001	4.99	2.425	15	-1.033	1.063	1.166	102
203		min	0.002	-77.984	3.218	40	-0.204	0.998	1.166	58
204	M557	max	0.003	72.2	3.264	40	-0.133	1.195	3.218	67
205		min	-0.002	-15.99	3.218	46	-0.268	0.955	0	88
206	M558	max	0.002	0.87	2.238	14	-0.417	1.015	2.192	72
207		min	-0.017	0.866	2.238	81*	-0.251	0.977	0	104
208	M559	max	-0.002	0.87	2.238	14	-0.378	1.018	2.192	100
209		min	0.017	0.866	2.238	81*	-0.229	0.976	0	106
210	M560	max	-0.002	0.871	2.238	14	-0.402	1.01	2.192	70
211		min	0.017	0.866	2.238	81*	-0.195	0.978	0	106
212	M561	max	0	7.087	2.378	98	-1.544	1.191	1.166	15
213		min	0.008	-440.37	2.425	19	-0.192	0.871	0	74
214	M562	max	0.09	1.278	5	13	-0.035	1.154	0	107
215		min	-0.084	0.834	2.5	17	0.206	0.958	5	88
216	M563	max	0.041	1.081	0	103	-0.019	1.106	0	107
217		min	-0.026	0.933	2.5	107	0.174	0.968	5	88
218	M564	max	0.044	1.119	5	103	-0.023	1.165	2.5	88
219		min	-0.012	0.786	2.5	88	0.023	0.676	0	108*
220	M565	max	-0.077	1.078	4.883	73	0.05	1.126	9.014	43
221		min	0.03	0.832	0	88	-0.05	0.9	4.413	73
222	M566	max	0.012	1.247	5	86	-0.002	1.309	2.5	101
223		min	-0.009	0.86	2.5	63	0.001	0.85	5	41
224	M567	max	-0.025	1.251	6.009	77	-0.022	1.029	6.009	75
225		min	0.09	0.893	0	88	-0.07	0.877	4.413	103
226	M568	max	-0.071	1.11	6.65	107	0.1	1.127	8.4	103
227		min	0.339	0.957	8.4	88	-0.238	0.923	4.2	15
228	M569	max	-0.002	0.87	2.238	14	-0.007	1.127	0	115*
229		min	0.017	0.866	2.238	81*	0.002	0.614	4.477	77
230	M570	max	-0.002	0.87	2.238	14	-0.006	1.109	0	83*
231		min	0.017	0.866	2.238	81*	0.004	0.848	4.477	105
232	M571	max	0.002	0.87	2.238	14	-0.001	17.11	0	107
233		min	-0.017	0.866	2.238	81*	-0.034	0.951	0	96
234	M572	max	0.002	0.87	2.238	14	-0.013	1.05	0	75
235		min	-0.017	0.866	2.238	81*	-0.088	0.957	2.238	68
236	M573	max	0.011	1.124	4.319	85*	-0.05	1.054	4.601	71
237		min	-0.007	0.846	9.014	77	0.044	0.982	9.014	60
238	M574	max	0.01	1.148	3.944	77	-0.067	1.054	4.601	71
239		min	-0.048	1.002	9.014	60	0.048	1.002	9.014	60
240	M575	max	0.012	1.142	3.238	77	-0.079	1.048	4.375	71
241		min	0.068	1.007	4.2	97	-0.068	1.007	4.2	97
242	M576	max	0.021	1.065	3.238	77	-0.092	1.029	4.375	71
243		min	0.072	1.004	4.2	97	-0.072	1.004	4.2	97
244	M577	max	0.008	1.179	5.07	77	-0.021	1.16	4.413	79*
245		min	-0.061	0.975	0	60	0.023	0.886	9.014	71
246	M578	max	0.016	1.102	5.07	77	-0.01	1.127	4.319	83*
247		min	-0.065	0.99	0	60	0.008	0.878	9.014	75
248	M579	max	0.079	1.054	4.375	73	-0.013	1.12	3.238	75
249		min	-0.46	1.002	8.4	80*	0.46	1.002	8.4	80*
250	M580	max	0.084	1.039	4.375	73	-0.012	1.043	3.238	75
251		min	0.102	1.002	4.113	105	-0.062	1.004	4.2	97
252	M581	max	-0.017	1.15	5	56	0.012	1.186	5	71
253		min	0.014	0.895	2.5	63	-0.014	0.895	2.5	63
254	M582	max	-0.002	1.432	2.5	85*	0.029	1.091	5	58
255		min	0.002	0.449	2.5	73	-0.011	0.859	2.5	71

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
256	M583	max	-0.003	2.247	5	103	0.011	1.175	5	79*
257		min	0.012	0.855	2.5	56	-0.012	0.855	2.5	56
258	M584	max	-0.01	1.283	5	73	0.014	1.127	5	63
259		min	0.017	0.882	2.5	56	-0.017	0.882	2.5	56
260	M585	max	0.085	1.07	8.577	106	0.085	1.07	8.577	106
261		min	0.275	0.956	4.288	100	0.203	0.967	6.879	100
262	M586	max	0.074	1.075	8.577	104	0.074	1.075	8.577	104
263		min	0.204	0.966	6.879	102	0.276	0.956	4.288	102
264	M587	max	0.011	1.08	6.164	75	0.011	1.089	8.577	75
265		min	0.134	0.961	4.288	106	0.091	0.979	4.378	106
266	M588	max	0.001	0.927	4.288	100	0.002	0.927	4.288	75
267		min	-0.002	0.927	4.288	105	-0.001	0.927	4.288	72
268	M589	max	-0.035	1.172	6.65	75	0.064	1.142	0	107
269		min	0.386	0.963	8.4	88	-0.083	0.928	4.025	71
270	M590	max	-0.213	1.023	4.375	103	0.089	1.057	8.4	103
271		min	0.307	0.969	8.4	88	-0.387	0.975	4.2	88
272	M591	max	0.737	1.021	7.955	72	0.737	1.021	7.955	72
273		min	0.521	0.978	3.978	104	0.485	0.983	4.06	104
274	M592	max	0.694	1.02	7.955	70	0.694	1.02	7.955	70
275		min	0.42	0.979	4.06	106	0.455	0.974	3.978	106
276	M593	max	0.774	1.014	7.955	102	0.774	1.014	7.955	102
277		min	0.437	0.982	4.06	104	0.472	0.977	3.978	104
278	M594	max	0.72	1.018	7.955	70	0.72	1.018	7.955	70
279		min	0.41	0.978	3.978	106	0.374	0.984	4.06	106
280	M595	max	0.678	1.024	7.955	72	0.678	1.024	7.955	72
281		min	0.48	0.976	3.978	104	0.444	0.981	4.06	104
282	M596	max	0.332	1.025	7.955	104	0.332	1.025	7.955	104
283		min	0.42	0.981	4.06	106	0.716	0.975	3.978	102
284	M597	max	0.692	1.015	7.955	102	0.692	1.015	7.955	102
285		min	0.363	0.981	4.06	104	0.398	0.975	3.978	104
286	M598	max	0.641	1.017	7.955	70	0.641	1.017	7.955	70
287		min	0.392	0.978	3.978	106	0.356	0.984	4.06	106
288	M599	max	0.033	1.117	8.577	106	0.004	1.123	8.577	55*
289		min	-0.015	0.955	0	77	-0.006	0.846	3.842	115*
290	M600	max	0.03	1.112	8.577	104	0.03	1.112	8.577	104
291		min	-0.007	0.897	3.842	85*	-0.004	0.911	0	55*
292	M601	max	0.007	1.123	8.577	75	0.007	1.106	6.164	75
293		min	0.366	0.986	8.577	17	0.647	0.959	4.288	17
294	M602	max	0.031	1.012	4.467	71	0.016	1.103	8.577	71
295		min	-0.005	0.874	0	113*	-0.01	0.899	3.842	113*
296	M618	max	0.513	1.024	2.5	76	-4.102	1.006	2.5	104
297		min	-0.489	0.976	2.5	104	-4.418	1	2.5	83*
298	M619	max	-0.701	1.014	2.5	106	-4.045	1.008	2.5	104
299		min	0.681	0.986	2.5	74	-9.1	1	2.5	110*
300	M620	max	0	1.064	6.159	13	-0.074	1.003	2.936	92
301		min	1.663	1	2.65	77	0.456	1	6.159	58
302	M621	max	0	1.063	6.159	15	-0.074	1.003	2.936	92
303		min	-1.663	1	2.65	75	0.456	1	6.159	58
304	M622	max	0	1.05	0	106	-1.332	1.004	0	16
305		min	0.001	0.98	0	100	-0.148	1	0	97
306	M623	max	0.001	1.031	0	102	3.546	1	0	100
307		min	0.001	0.984	0	100	-0.533	1	6.169	107
308	M624	max	-0.001	1.017	0	100	3.546	1	0	100
309		min	-0.001	0.967	0	102	-0.533	1	6.169	105
310	M625	max	-0.001	1.019	0	100	-1.332	1.004	0	14

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
311		min	0	0.949	0	106	-0.148	1	0	99
312	M628	max	-0.034	1.002	0.894	105	2.731	1.002	4.292	79*
313		min	-0.018	0.997	0.894	107	-0.935	0.999	4.292	18
314	M629	max	-0.034	1.002	0.894	107	-2.731	1.002	4.292	81*
315		min	-0.018	0.997	0.894	105	0.935	0.999	4.292	20
316	M631	max	0	1.008	8.618	41	5.443	1.001	8.618	73
317		min	0.06	0.998	3.549	67	0.7	1	8.745	38
318	M632	max	0	1.126	8.083	19	2.755	1	8.083	70
319		min	0	-1.141	8.083	92	-0.669	1	3.789	77
320	M633	max	0	3.138	8.083	92	2.755	1	8.083	70
321		min	0	1	0	68	-0.669	1	3.789	75
322	M638	max	-0.001	1	3.192	107	0.001	1	3.192	107
323		min	-0.001	1	3.192	77	0.001	1	3.192	77
324	M639	max	-0.001	1	3.192	45	0.001	1	3.192	45
325		min	0.002	1	3.192	53*	-0.002	1	3.192	53*
326	M640	max	0	1.773	7.222	15	-0.065	1.002	8.333	103
327		min	0.34	1.001	5.333	77	0.046	0.999	7.222	56
328	M642	max	0	1.773	7.222	15	-0.065	1.002	8.333	101
329		min	-0.34	1.001	5.333	75	0.046	0.999	7.222	56
330	M644	max	-0.001	1	2.416	84*	0.001	1	2.416	84*
331		min	-0.001	1	2.416	54*	0.001	1	2.416	54*
332	M645	max	0.001	1	2.416	109*	-0.021	1	2.416	101
333		min	0.007	1	2.416	69	0.002	1	2.416	103
334	M646	max	0.003	1	2.416	110*	-0.001	1	2.416	102
335		min	-0.001	1	2.416	54*	0.001	1	2.416	84*
336	M647	max	0.007	1	2.416	97	-0.007	1	2.416	99
337		min	0.007	1	2.416	99	-0.023	1	2.416	12
338	M648	max	0.053	1	2.583	114*	-0.048	1	2.583	105
339		min	-0.006	1	2.583	13	-0.343	1	2.583	13
340	M649	max	-0.081	1	0	88	0.293	1	0	13
341		min	-0.023	0.995	0	98	0.023	0.995	0	98
342	M650	max	-0.067	1	0	92	0.067	1	0	88
343		min	-0.02	0.998	0	98	0.02	0.998	0	98
344	M651	max	-0.067	1	0	92	0.067	1	0	88
345		min	-0.02	0.998	0	98	0.02	0.998	0	98
346	M652	max	-0.081	1	0	88	0.293	1	0	13
347		min	-0.023	0.995	0	98	0.023	0.995	0	98
348	M653	max	-0.067	1	0	92	0.067	1	0	88
349		min	-0.02	0.998	0	98	0.02	0.998	0	98
350	M654	max	-0.067	1	0	92	0.067	1	0	88
351		min	-0.02	0.998	0	98	0.02	0.998	0	98
352	M655	max	-0.081	1	0	88	0.293	1	0	13
353		min	-0.023	0.995	0	98	0.023	0.996	0	98
354	M656	max	-0.081	1	0	88	0.293	1	0	13
355		min	-0.023	0.995	0	98	0.023	0.996	0	98
356	M657	max	-0.113	1	0	100	0.103	1	0	88
357		min	-0.019	0.998	0	98	0.019	0.999	0	98
358	M658	max	-0.113	1	0	100	0.103	1	0	88
359		min	-0.019	0.998	0	98	0.019	0.999	0	98
360	M659	max	-0.113	1	0	88	0.352	1	0	13
361		min	-0.021	0.996	0	98	0.021	0.996	0	98
362	M660	max	-0.113	1	0	88	0.352	1	0	13
363		min	-0.021	0.996	0	98	0.021	0.996	0	98
364	M407	max	0	1.499	0.599	108*	-0.945	1.004	7.866	88
365		min	-0.01	0.998	0.599	88	0.9	0.998	7.866	17

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
366	M408	max	0	1.499	0.599	80*	0.945	1.004	7.866	90
367		min	-0.01	0.998	0.599	30	-0.9	0.998	7.866	19
368	M417	max	0	1.499	0.599	80*	0.945	1.004	7.866	90
369		min	0.01	0.998	0.599	30	-0.9	0.998	7.866	19
370	M418	max	0	1.499	0.599	108*	-0.945	1.004	7.866	88
371		min	0.01	0.998	0.599	88	0.9	0.998	7.866	17
372	M419	max	0.155	1	3.75	98	-0.1	1	3.75	115*
373		min	-0.155	1	3.75	32	-0.717	1	3.75	13
374	M420	max	0	1.002	7.5	100	5.288	1.002	7.5	100
375		min	0.153	1	3.75	39	-0.417	1	3.75	37
376	M421	max	0.155	1	3.75	96	-0.1	1	3.75	115*
377		min	-0.155	1	3.75	34	-0.717	1	3.75	13
378	M422	max	0	1.002	0	100	5.288	1.002	0	100
379		min	0.153	1	3.75	37	-0.417	1	3.75	69
380	M423	max	-0.002	1	5.245	115*	0.002	1	5.245	115*
381		min	0.066	1	5.245	45	-0.004	1	5.245	110*
382	M424	max	0.007	1	5.245	101	-0.007	1	5.245	101
383		min	-0.002	1	5.245	53*	0.002	1	5.245	53*
384	M425	max	-0.011	1	5.245	107	0.011	1	5.245	107
385		min	-0.011	1	5.245	47	0.011	1	5.245	47
386	M426	max	-0.002	1	5.245	83*	0.002	1	5.245	83*
387		min	-0.011	1	5.245	45	0.011	1	5.245	45
388	M427	max	0.209	1.027	6.327	91	-0.013	1.05	0.599	73
389		min	-0.564	0.996	7.866	20	0	-0.902	0.599	51*
390	M428	max	0.209	1.027	6.327	91	0.013	1.05	0.599	73
391		min	-0.564	0.996	7.866	20	0	-0.902	0.599	51*
392	M429	max	-0.209	1.027	6.327	89	0.013	1.05	0.599	101
393		min	0.564	0.996	7.866	18	0	-0.902	0.599	49*
394	M430	max	-0.209	1.027	6.327	89	-0.013	1.05	0.599	101
395		min	0.564	0.996	7.866	18	0	-0.902	0.599	49*
396	M431	max	-0.002	1.011	6.75	73	6.394	1.01	6.75	73
397		min	1.203	1	3.375	68	-0.8	1	3.375	36
398	M432	max	0.065	1	2.875	115*	-0.068	1	2.875	99
399		min	-0.09	1	2.875	33	-0.421	1	2.875	13
400	M433	max	-0.002	1.011	0	73	6.394	1.01	0	73
401		min	1.203	1	3.375	66	-0.8	1	3.375	38
402	M434	max	0.09	1	2.875	97	-0.059	1	2.875	114*
403		min	-0.09	1	2.875	35	-0.421	1	2.875	13
404	M439	max	0.045	1.003	0	14	-1.75	1.006	0	14
405		min	-0.003	0.997	0	15	-4.24	1	0	38
406	M440	max	-0.11	1	0	88	0.38	1	0	13
407		min	-0.03	0.993	0	38	0.03	0.994	0	68
408	M441	max	-0.11	1	0	88	0.38	1	0	13
409		min	-0.03	0.994	0	38	0.03	0.994	0	68
410	M442	max	-0.173	1	0	108*	0.47	1	0	13
411		min	-0.027	0.995	0	38	0.027	0.995	0	68
412	M443	max	-0.045	1.003	0	16	-1.75	1.006	0	16
413		min	0.003	0.997	0	13	-4.24	1	0	68
414	M444	max	-0.11	1	0	88	0.38	1	0	13
415		min	-0.03	0.994	0	38	0.03	0.994	0	68
416	M445	max	-0.11	1	0	88	0.38	1	0	13
417		min	-0.03	0.994	0	38	0.03	0.994	0	68
418	M446	max	-0.173	1	0	108*	0.47	1	0	13
419		min	-0.027	0.995	0	38	0.027	0.995	0	68
420	M447	max	0.008	1	5.368	45	-0.008	1	5.368	45

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
421		min	0.008	1	5.368	75	-0.008	1	5.368	75
422	M448	max	0.056	1	5.368	113*	-0.056	1	5.368	113*
423		min	0.008	1	5.368	47	-0.008	1	5.368	47
424	M449	max	0.045	1.003	0	14	-1.654	1.005	0	14
425		min	-0.003	0.998	0	15	-4.009	1	0	38
426	M450	max	-0.103	1	0	88	0.36	1	0	13
427		min	-0.028	0.994	0	38	0.028	0.995	0	68
428	M451	max	-0.103	1	0	88	0.36	1	0	13
429		min	-0.028	0.994	0	38	0.028	0.995	0	68
430	M452	max	-0.162	1	0	108*	0.444	1	0	13
431		min	-0.026	0.995	0	38	0.026	0.995	0	68
432	M453	max	-0.045	1.003	0	16	-1.654	1.005	0	16
433		min	0.003	0.998	0	13	-4.009	1	0	68
434	M454	max	-0.103	1	0	88	0.36	1	0	13
435		min	-0.028	0.994	0	38	0.028	0.995	0	68
436	M455	max	-0.103	1	0	88	0.36	1	0	13
437		min	-0.028	0.994	0	38	0.028	0.995	0	68
438	M456	max	-0.162	1	0	108*	0.444	1	0	13
439		min	-0.026	0.995	0	38	0.026	0.995	0	68
440	M457	max	0.004	1	4.301	113*	-0.004	1	4.301	113*
441		min	-0.001	1	4.301	45	0.001	1	4.301	45
442	M458	max	-0.001	1	4.301	107	0.001	1	4.301	107
443		min	0.019	1	4.301	51*	-0.019	1	4.301	51*
444	M463	max	0.218	1.014	0	76	0.217	1.011	0	76
445		min	0.051	0.986	0	66	0.051	0.988	0	66
446	M464	max	0.46	1	0	15	0.027	1.002	0	68
447		min	0.026	0.986	0	96	0.027	0.99	0	66
448	M465	max	0.205	1.007	0	76	0.206	1.014	0	76
449		min	0.048	0.981	0	66	0.049	0.994	0	66
450	M466	max	0.092	1.013	0	76	0.092	1.018	0	76
451		min	0.035	0.989	0	66	0.139	0.999	0	58
452	M467	max	0.157	1.013	0	76	0.155	1.002	0	76
453		min	0.038	0.992	0	66	0.038	0.983	0	66
454	M472	max	0.084	1	0	90	0.084	1	0	60
455		min	0.017	0.994	0	96	0.017	0.988	0	66
456	M486	max	0.072	1.014	0	76	0.072	1.013	0	106
457		min	0.028	0.99	0	66	0.028	0.992	0	96
458	M487	max	0.012	1.002	0	98	0.038	1	0	60
459		min	0.012	0.995	0	96	0.011	0.988	0	66
460	M488	max	0.164	1.012	0	76	0.164	1.01	0	76
461		min	0.04	0.988	0	66	0.04	0.99	0	66
462	M489	max	0.038	1.001	0	94	0.014	1	0	109*
463		min	0.012	0.994	0	96	0.011	0.987	0	66
464	M490	max	0.186	1	0	90	0.187	1	0	64
465		min	0.031	0.985	0	96	0.031	0.99	0	66
466	M491	max	0.273	1	0	15	0.022	1.001	0	68
467		min	0.021	0.984	0	96	0.022	0.991	0	66
468	M492	max	0.082	1	0	90	0.022	1.003	0	68
469		min	0.021	0.985	0	96	0.022	0.993	0	66
470	M493	max	0.204	1.005	0	76	0.206	1.011	0	76
471		min	0.048	0.982	0	66	0.049	0.994	0	66
472	M494	max	0.091	1.007	0	76	0.092	1.013	0	106
473		min	0.035	0.984	0	66	0.139	0.998	0	92
474	M495	max	0.092	1.011	0	76	0.092	1.015	0	106
475		min	0.035	0.989	0	66	0.139	1	0	88

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
476	M496	max	0.072	1.017	0	76	0.072	1.015	0	106
477		min	0.028	0.993	0	66	0.028	0.996	0	66
478	M499	max	0.07	1.015	0	76	0.07	1.006	0	106
479		min	0.027	0.996	0	66	0.027	0.988	0	96
480	M500	max	0.233	1	0	15	0.019	1.003	0	68
481		min	0.018	0.986	0	96	0.018	0.99	0	66
482	M501	max	0.234	1	0	15	0.019	1.004	0	68
483		min	0.018	0.987	0	96	0.018	0.993	0	66
484	M502	max	0.091	1.009	0	76	0.092	1.015	0	76
485		min	0.035	0.984	0	66	0.139	0.999	0	62
486	M503	max	0.096	1.015	0	76	0.095	1.014	0	106
487		min	0.036	0.989	0	66	0.036	0.992	0	66
488	M504	max	0.096	1.018	0	76	0.096	1.017	0	76
489		min	0.036	0.993	0	66	0.036	0.997	0	66
490	M505	max	0.071	1.019	0	76	0.07	1.012	0	106
491		min	0.106	0.999	0	58	0.027	0.994	0	66
492	M391	max	0.035	533.715	0.93	50*	-1.179	1.09	4.25	13
493		min	0.114	-1274.628	0.93	13	0.291	0.961	5.645	49*
494	M393	max	-0.145	194.158	0.863	14	1.487	1.054	4.25	14
495		min	-0.143	-192.121	0.863	16	-2.072	0.995	4.25	105
496	M395	max	-0.278	1.253	0.863	90	4.389	1.038	4.25	13
497		min	0.591	0.806	0.93	94	0.429	0.991	4.25	47
498	M459	max	-0.305	1.475	0.93	60	-1.233	1.077	4.25	15
499		min	0.561	0.758	0.93	64	1.714	0.983	4.25	71
500	M461	max	0.009	1.443	0	88	-0.027	1.118	2.5	88
501		min	-0.045	0.805	2.656	78*	0.028	0.718	5	78*
502	M462	max	0.497	1.02	6.531	13	0.821	1.025	13.656	110*
503		min	-0.377	0.943	28.5	62	1.055	0.966	7.125	70
504	M470	max	0.082	1.009	13.656	107	0.554	1.017	13.656	92
505		min	-0.312	0.946	28.5	71	0.781	0.937	0	100
506	M474	max	-0.054	1.167	4.507	88	0.089	1.084	9.014	71
507		min	0.062	0.837	0	62	-0.058	0.88	4.507	58
508	M475	max	-0.152	1.051	4.601	71	0.064	1.133	9.014	71
509		min	0.065	0.856	0	58	-0.36	0.904	4.695	78*
510	M476	max	-0.162	1.021	4.375	105	0.074	1.046	8.4	105
511		min	0.308	0.961	0	58	-2.592	0.965	4.725	70
512	M477	max	1.173	1.042	28.5	13	-1.241	1.011	0	102
513		min	0.477	1.003	28.5	105	-0.656	0.986	57	104
514	M478	max	1.175	1.038	28.5	13	-1.838	1.016	0	100
515		min	0.226	1.002	28.5	90	-0.371	0.921	57	102
516	M479	max	0.01	1.267	2.906	113*	-0.056	1.221	2.906	103
517		min	-1.045	1.02	2.906	34	0.018	0.793	2.906	85*
518	M480	max	-0.616	1.132	2.906	74	-0.003	1.397	2.953	85*
519		min	-0.004	0.903	2.906	113*	-1.067	1.016	2.906	64
520	M481	max	-0.001	9.469	2.749	40	-0.326	1.119	2.749	105
521		min	-0.001	-7.383	2.749	42	0.235	0.701	0	45
522	M482	max	-0.001	1.507	4.189	32	-0.369	1.065	2.749	107
523		min	-0.002	0.594	4.189	42	0.63	0.714	0	103
524	M483	max	0.063	1.196	2.906	53*	-0.579	1.138	2.906	104
525		min	-0.083	0.873	2.906	71	0.004	0.796	0	85*
526	M484	max	-0.799	1	2.5	77	-0.913	1.002	1.979	68
527		min	-0.004	1	2.5	20	-0.702	0.985	3.021	74
528	M519	max	0.004	1.001	2.5	14	0.932	1.02	0	70
529		min	-0.76	1	2.5	107	-2.422	0.982	2.5	13
530	M520	max	-0.001	3.742	4.189	32	-0.241	1.062	2.575	105

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
531		min	0	0.31	4.189	28	0.224	0.604	0	45
532	M521	max	-0.001	2.782	0	32	9.959	0.844	0	70
533		min	-0.014	0.654	0	89	0.293	0.624	0	107
534	M522	max	-0.76	1	2.5	77	0.661	1.019	0	82*
535		min	0.004	0.999	2.5	18	-0.928	0.972	3.021	70
536	M523	max	-0.013	292.736	2.425	13	-1.111	1.063	1.166	102
537		min	-0.003	-60.67	3.218	30	-0.295	0.969	0	88
538	M524	max	0.008	297.998	3.264	15	-0.145	1.318	3.218	115*
539		min	0.002	-53.961	3.218	32	-0.238	0.924	0	90
540	M525	max	-0.002	63.89	3.264	42	-0.156	1.629	3.218	49*
541		min	0	-6.286	3.218	13	-0.128	0.943	0	60
542	M526	max	0.004	1.708	3.218	86	-0.26	1.409	3.218	40
543		min	0	0.059	3.218	79*	-0.112	0.954	0	67
544	M527	max	-0.002	52.289	3.264	42	-1.213	1.063	1.166	102
545		min	0.001	-10.781	3.218	13	-1.063	1	2.378	76
546	M528	max	0.004	55.006	3.264	12	1.341	1.097	3.264	70
547		min	0.016	-60.833	2.425	15	-1.076	1.011	2.378	68
548	M529	max	0	6.424	2.378	98	-1.616	1.204	1.166	15
549		min	-0.008	-433.32	2.425	19	-0.204	0.877	0	104
550	M603	max	0.002	0.871	2.238	16	-0.411	1.011	2.192	100
551		min	-0.017	0.866	2.238	79*	-0.194	0.978	0	106
552	M604	max	0.002	0.87	2.238	16	-0.374	1.019	2.192	100
553		min	-0.017	0.866	2.238	79*	-0.227	0.976	0	76
554	M605	max	-0.002	0.87	2.238	16	-0.435	1.017	2.192	102
555		min	0.017	0.866	2.238	79*	-0.263	0.977	0	74
556	M606	max	0.175	1.097	5	13	-0.342	1.047	2.5	13
557		min	-0.202	0.967	2.5	88	0.174	0.962	5	88
558	M607	max	0.037	1.062	5	107	-0.037	1.062	5	107
559		min	-0.223	0.967	2.5	58	0.195	0.963	5	58
560	M608	max	0.107	1.131	0	13	-0.047	1.102	2.5	71
561		min	-0.031	0.849	2.5	58	0.013	0.704	0	58
562	M609	max	-0.025	1.363	4.131	70	0.046	1.101	0	71
563		min	0.006	0.652	9.014	82*	-0.083	0.937	4.601	78*
564	M610	max	0.026	1.134	5	71	-0.011	1.397	2.5	58
565		min	-0.067	0.812	2.292	70	0.034	0.749	0	78*
566	M611	max	-0.122	1.06	4.413	71	0.033	1.263	0	71
567		min	0.177	0.872	9.014	78*	-0.039	0.908	4.507	56
568	M612	max	-0.65	1.036	4.2	13	0.036	1.105	0	105
569		min	0.285	0.961	8.4	88	-0.242	0.927	4.2	14
570	M613	max	0.002	0.87	2.238	16	-0.004	1.228	0	107
571		min	-0.017	0.866	2.238	79*	-0.029	0.957	0	98
572	M614	max	0.002	0.87	2.238	16	-0.007	1.121	0	83*
573		min	-0.017	0.866	2.238	79*	0.001	0.398	4.477	105
574	M615	max	-0.002	0.87	2.238	16	-0.014	1.057	0	107
575		min	0.017	0.866	2.238	79*	-0.027	0.954	0	96
576	M616	max	-0.002	0.87	2.238	16	-0.018	1.055	0	75
577		min	0.017	0.866	2.238	79*	-0.04	0.958	0	66
578	M617	max	0.01	1.12	4.319	85*	-0.053	1.064	4.601	71
579		min	-0.009	0.892	9.014	77	0.049	0.967	0	60
580	M661	max	0.01	1.13	3.944	77	-0.07	1.059	4.601	71
581		min	-0.053	0.989	0	60	0.053	0.989	0	60
582	M662	max	0.024	1.065	3.238	77	-0.11	1.037	4.375	71
583		min	-0.449	1.003	8.4	80*	0.449	1.003	8.4	80*
584	M663	max	0.022	1.035	3.238	77	-0.114	1.028	4.375	71
585		min	0.072	1.004	4.2	99	-0.111	1.003	4.113	107

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
586	M664	max	0.037	1.081	4.601	73	-0.021	1.202	4.413	79*
587		min	-0.058	0.986	9.014	60	0.024	0.867	9.014	71
588	M665	max	0.053	1.072	4.601	73	-0.008	1.195	4.319	83*
589		min	-0.062	1.004	9.014	60	0.011	0.886	9.014	75
590	M666	max	0.081	1.05	4.375	73	-0.01	1.195	3.238	75
591		min	-0.424	1.008	8.4	84*	0.424	1.008	8.4	84*
592	M667	max	-0.629	1.03	8.4	102	-0.016	1.071	3.238	75
593		min	0.066	1.004	4.2	99	-0.066	1.004	4.2	99
594	M668	max	-0.017	1.159	5	56	0.009	1.316	5	71
595		min	0.017	0.888	2.5	26	-0.017	0.888	2.5	26
596	M669	max	-0.004	1.838	5	81*	0.031	1.11	5	58
597		min	0.022	0.909	2.5	56	-0.01	0.832	2.5	71
598	M670	max	-0.002	4.086	5	103	0.014	1.167	5	79*
599		min	0.011	0.842	2.5	56	-0.011	0.842	2.5	56
600	M671	max	-0.087	1.13	5	15	0.087	1.13	5	15
601		min	0.086	0.915	2.5	19	-0.086	0.915	2.5	19
602	M672	max	0.251	1.025	8.577	102	0.251	1.025	8.577	102
603		min	0.139	0.964	4.288	104	0.096	0.982	4.378	104
604	M673	max	0.028	1.035	8.577	107	0.028	1.033	6.164	107
605		min	0.09	0.979	4.378	106	0.133	0.962	4.288	106
606	M674	max	0.064	1.098	8.577	74	0.064	1.098	8.577	74
607		min	0.268	0.956	4.288	72	0.196	0.967	6.879	72
608	M675	max	0.001	0.927	4.288	70	0.002	0.927	4.288	105
609		min	-0.002	0.927	4.288	105	-0.001	0.927	4.288	102
610	M676	max	-0.667	1.036	4.2	13	0.259	1.081	8.4	14
611		min	0.331	0.967	8.4	88	-0.278	0.924	4.2	13
612	M677	max	-0.09	1.061	1.75	105	0.069	1.085	8.4	77
613		min	0.362	0.965	0	88	-0.442	0.971	4.2	88
614	M678	max	0.815	1.017	7.955	102	0.815	1.017	7.955	102
615		min	0.49	0.979	3.978	104	0.455	0.984	4.06	104
616	M679	max	0.733	1.015	7.955	100	0.733	1.015	7.955	100
617		min	0.371	0.98	4.06	106	0.407	0.975	3.978	106
618	M680	max	0.767	1.02	7.955	102	0.767	1.02	7.955	102
619		min	0.506	0.981	4.06	74	0.541	0.977	3.978	74
620	M681	max	0.685	1.025	7.955	100	0.685	1.025	7.955	100
621		min	0.454	0.977	3.978	76	0.418	0.982	4.06	76
622	M682	max	0.736	1.018	7.955	102	0.736	1.018	7.955	102
623		min	0.415	0.978	3.978	104	0.38	0.983	4.06	104
624	M683	max	0.653	1.015	7.955	100	0.653	1.015	7.955	100
625		min	0.354	0.983	4.06	106	0.39	0.977	3.978	106
626	M684	max	0.707	1.024	7.955	102	0.707	1.024	7.955	102
627		min	0.464	0.98	4.06	74	0.5	0.975	3.978	74
628	M685	max	0.329	1.028	7.955	104	0.329	1.028	7.955	104
629		min	0.709	0.976	3.978	72	0.649	0.982	4.889	72
630	M686	max	0.008	1.109	6.164	107	0.007	1.124	8.577	107
631		min	0.586	0.97	4.288	17	0.211	0.994	0	71
632	M687	max	0.007	1.077	8.577	115*	0.012	1.006	4.735	115*
633		min	-0.01	0.92	2.412	77	-0.009	0.92	0	77
634	M688	max	0.05	1.073	8.577	76	0.05	1.073	8.577	76
635		min	0.18	0.973	6.879	100	0.643	0.958	4.288	17
636	M689	max	0.02	1.222	8.577	74	0.063	1.112	8.577	70
637		min	-0.006	0.895	0	83*	-0.034	0.8	4.288	104
638	M690	max	0.701	1.016	2.5	76	-3.989	1.008	2.5	74
639		min	-0.68	0.984	2.5	104	-2.633	1	2.5	68
640	M691	max	-0.704	1.019	2.5	106	-4.093	1.007	2.5	74

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
641		min	0.678	0.982	2.5	74	-7	1	2.5	60
642	M692	max	0.187	1.001	0	94	0.186	1	0	60
643		min	0.031	0.991	0	96	0.031	0.983	0	66
644	M693	max	0.206	1.013	0	76	0.204	1.001	0	106
645		min	0.049	0.99	0	66	0.048	0.982	0	66
646	M694	max	0.096	1.015	0	76	0.095	1.014	0	106
647		min	0.036	0.99	0	66	0.036	0.992	0	96
648	M695	max	0.022	1.002	0	98	-0.007	1	0	83*
649		min	0.022	0.993	0	96	0.021	0.985	0	66
650	M696	max	0.218	1.013	0	76	0.217	1.011	0	106
651		min	0.051	0.987	0	66	0.051	0.989	0	66
652	M697	max	0.082	1.001	0	94	-0.007	1	0	113*
653		min	0.022	0.992	0	96	0.021	0.982	0	66
654	M701	max	0.156	1.006	0	76	0.157	1.013	0	106
655		min	0.038	0.984	0	66	0.039	0.996	0	66
656	M702	max	0.07	1.009	0	76	0.07	1.015	0	106
657		min	0.027	0.986	0	66	0.106	0.999	0	92
658	M703	max	0.07	1.013	0	76	0.07	1.017	0	106
659		min	0.027	0.99	0	66	0.106	1	0	88
660	M704	max	0.096	1.018	0	76	0.096	1.017	0	106
661		min	0.036	0.994	0	66	0.036	0.997	0	96
662	M705	max	0.092	1.015	0	76	0.091	1.007	0	106
663		min	0.035	0.996	0	66	0.035	0.987	0	96
664	M706	max	0.092	1.02	0	76	0.092	1.013	0	106
665		min	0.139	0.999	0	58	0.035	0.995	0	96
666	M460	max	0.03	35.669	0.863	14	-1.017	1.099	4.25	13
667		min	-0.01	0.143	0.863	15	0.828	0.959	5.645	15
668	M471	max	-0.225	99.152	0.863	16	1.26	1.07	4.25	16
669		min	-0.073	-0.496	0.863	14	0.281	0.983	5.645	45
670	M473	max	0.076	4.42	0.93	100	-1.752	1.054	4.25	60
671		min	-0.024	0.774	4.25	96	-1.854	0.992	4.25	107
672	M507	max	-0.037	725.828	0.93	42	-0.719	1.135	4.25	15
673		min	-0.102	-107.526	0.93	14	0.136	0.944	5.645	47
674	M508	max	0.01	1.444	0	88	-0.028	1.125	2.5	88
675		min	-0.047	0.811	2.656	108*	0.029	0.73	5	78*
676	M509	max	0.529	1.014	6.531	13	0.808	1.022	13.656	80*
677		min	-0.379	0.943	28.5	92	1.052	0.966	49.875	100
678	M510	max	0.099	1.025	50.469	45	0.563	1.017	43.344	32
679		min	-0.369	0.943	28.5	103	0.528	0.932	57	78*
680	M511	max	-0.054	1.105	3.005	107	0.006	3.051	3.568	104
681		min	0.034	0.951	0	96	-0.006	0.695	9.014	74
682	M512	max	-0.031	1.342	4.507	88	0.059	1.188	0	103
683		min	0.155	0.858	9.014	108*	-0.039	0.876	4.695	107
684	M513	max	-0.047	1.085	1.75	107	0.09	1.066	0	103
685		min	0.267	0.962	0	88	-0.059	0.941	4.375	107
686	M514	max	1.166	1.042	28.5	13	-1.224	1.014	0	72
687		min	0.254	1.002	28.5	90	-0.662	0.985	0	104
688	M515	max	1.169	1.037	28.5	13	-1.807	1.016	57	70
689		min	0.228	1.001	28.5	90	-0.376	0.923	0	102
690	M516	max	0.011	1.253	2.906	113*	-0.056	1.216	2.906	103
691		min	-1.045	1.02	2.906	34	0.018	0.794	2.906	85*
692	M517	max	-0.616	1.131	2.906	74	-0.003	1.352	2.953	85*
693		min	-0.004	0.908	2.906	113*	-1.066	1.016	2.906	64
694	M518	max	0.163	1.182	2.749	72	-0.507	1.106	2.749	101
695		min	0.003	0.607	0	40	0.621	0.629	4.189	15

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
696	M707	max	-0.001	1.65	0	54*	-0.368	1.081	2.749	107
697		min	0.001	-2.05	2.749	46	0.598	0.725	0	111*
698	M708	max	0.063	1.204	2.906	53*	-0.58	1.139	2.906	104
699		min	-0.083	0.868	2.906	71	0.004	0.816	0	85*
700	M709	max	-0.799	1	2.5	77	-0.918	1.002	1.979	38
701		min	0.004	1	2.5	18	-0.702	0.985	3.021	74
702	M710	max	-0.004	1.001	2.5	16	0.589	1.019	0	112*
703		min	-0.76	1	2.5	107	-1.008	0.976	3.021	100
704	M711	max	0	15.344	3.578	36	-0.241	1.052	2.575	105
705		min	0	0.535	4.189	28	0.582	0.586	4.189	19
706	M712	max	-0.001	1.336	0	28	-0.189	1.029	2.575	99
707		min	-0.002	0.521	0	42	0.195	0.631	0	97
708	M713	max	-0.76	1	2.5	73	1.006	1.019	0	70
709		min	0.004	0.999	2.5	18	-0.96	0.983	3.021	62
710	M714	max	-0.01	566.547	2.425	17	-1.061	1.068	1.166	102
711		min	-0.003	-122.359	3.218	12	-0.304	0.967	0	88
712	M715	max	0.006	361.031	3.264	17	-0.222	1.348	3.218	103
713		min	0.004	-142.133	3.218	40	-0.239	0.923	0	90
714	M716	max	0.005	1.268	3.218	16	-0.16	1.637	3.218	49*
715		min	0.002	-52.682	3.218	40	-0.128	0.943	0	60
716	M717	max	0.003	1.516	3.218	71	-0.317	1.3	3.218	40
717		min	0	0.326	3.218	79*	-0.113	0.955	0	67
718	M718	max	0.001	5.117	2.425	15	-1.212	1.063	1.166	102
719		min	0.002	-68.317	3.218	40	-1.063	1	2.378	76
720	M719	max	0.004	132.845	3.264	40	0.944	1.098	3.264	78*
721		min	0.014	-69.947	2.425	15	-0.305	0.968	0	88
722	M720	max	0.002	0.87	2.238	14	-0.417	1.016	2.192	102
723		min	-0.017	0.866	2.238	81*	-0.256	0.977	0	104
724	M721	max	-0.002	0.87	2.238	14	-0.376	1.019	2.192	100
725		min	0.017	0.866	2.238	81*	-0.232	0.976	0	106
726	M722	max	-0.002	0.871	2.238	14	-0.405	1.011	2.192	70
727		min	0.017	0.866	2.238	81*	-0.193	0.977	0	106
728	M723	max	0	7.062	2.378	98	-1.647	1.213	1.166	15
729		min	0.008	-452.057	2.425	19	-0.205	0.881	0	74
730	M724	max	0.1	1.261	5	13	-0.037	1.161	0	107
731		min	-0.015	0.944	2.5	99	0.207	0.956	5	88
732	M725	max	0.037	1.05	0	107	-0.037	1.05	0	107
733		min	-0.2	0.97	2.5	88	0.171	0.966	5	88
734	M726	max	0.04	1.146	5	103	-0.025	1.167	2.5	88
735		min	-0.011	0.753	2.5	88	0.023	0.667	0	108*
736	M727	max	-0.095	1.058	4.883	73	0.066	1.085	9.014	73
737		min	0.03	0.822	0	88	-0.265	0.929	4.601	108*
738	M728	max	0.03	1.157	5	73	0.004	1.152	2.5	75
739		min	-0.193	0.888	2.292	100	0.028	0.843	0	88
740	M729	max	-0.031	1.202	6.009	77	-0.009	1.092	6.009	75
741		min	0.091	0.888	0	88	-0.057	0.848	4.413	103
742	M730	max	-0.071	1.126	6.65	107	0.103	1.14	8.4	103
743		min	0.34	0.954	8.4	88	-0.276	0.914	4.2	16
744	M731	max	-0.002	0.87	2.238	14	-0.007	1.154	0	115*
745		min	0.017	0.866	2.238	81*	0.002	0.681	4.477	77
746	M732	max	-0.002	0.87	2.238	14	-0.004	1.141	0	83*
747		min	0.017	0.866	2.238	81*	0.005	0.866	4.477	105
748	M733	max	0.002	0.87	2.238	14	-0.009	1.146	0	107
749		min	-0.017	0.866	2.238	81*	-0.037	0.955	0	96
750	M734	max	0.002	0.87	2.238	14	-0.01	1.077	0	75

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
751		min	-0.017	0.866	2.238	81*	-0.03	0.957	0	66
752	M735	max	0.01	1.151	4.319	85*	-0.047	1.057	4.601	71
753		min	-0.009	0.871	9.014	77	0.043	0.982	9.014	60
754	M736	max	0.011	1.146	3.944	77	-0.063	1.056	4.601	71
755		min	-0.048	1.004	9.014	60	0.048	1.004	9.014	60
756	M737	max	0.024	1.071	3.238	77	-0.093	1.041	4.375	71
757		min	0.071	1.007	4.2	97	-0.071	1.007	4.2	97
758	M738	max	0.029	1.046	3.238	77	0.455	1.03	8.4	110*
759		min	0.075	1.004	4.2	97	-0.075	1.004	4.2	97
760	M739	max	0.012	1.115	5.07	77	-0.02	1.187	4.413	71
761		min	-0.063	0.975	0	60	0.011	0.908	9.014	83*
762	M740	max	0.053	1.082	4.601	73	-0.036	1.102	4.413	71
763		min	-0.067	0.992	0	60	0.005	0.808	9.014	75
764	M741	max	0.084	1.051	4.375	73	-0.013	1.109	3.238	75
765		min	-0.467	1.002	8.4	80*	0.467	1.002	8.4	80*
766	M742	max	0.088	1.038	4.375	73	-0.013	1.032	3.238	75
767		min	0.103	1.001	4.113	105	-0.062	1.004	4.2	97
768	M743	max	-0.019	1.129	5	56	0.012	1.159	5	71
769		min	0.108	0.904	2.5	13	-0.108	0.904	2.5	13
770	M744	max	-0.004	1.865	5	81*	0.038	1.073	5	58
771		min	0.02	0.902	2.5	56	-0.006	0.767	2.5	71
772	M745	max	-0.002	11.762	5	103	0.01	1.199	5	79*
773		min	0.003	0.632	2.5	81*	-0.013	0.867	2.5	56
774	M746	max	-0.09	1.135	5	16	0.09	1.135	5	16
775		min	0.102	0.916	2.5	15	-0.102	0.916	2.5	15
776	M747	max	0.096	1.068	8.577	106	0.096	1.068	8.577	106
777		min	0.306	0.958	4.288	100	0.235	0.968	6.879	100
778	M748	max	0.069	1.086	8.577	104	0.069	1.086	8.577	104
779		min	0.011	0.964	8.577	107	0.28	0.955	4.288	102
780	M749	max	0.009	1.106	6.164	75	0.008	1.12	8.577	75
781		min	0.13	0.96	4.288	106	0.087	0.978	4.378	106
782	M750	max	0.001	0.927	4.288	100	0.002	0.927	4.288	75
783		min	-0.002	0.927	4.288	105	-0.001	0.927	4.288	72
784	M751	max	-0.039	1.159	6.65	75	0.067	1.153	0	107
785		min	0.387	0.96	8.4	88	-0.267	0.925	4.2	15
786	M752	max	-0.263	1.016	4.375	103	0.082	1.032	8.4	107
787		min	0.302	0.967	8.4	88	-0.382	0.973	4.2	88
788	M753	max	0.742	1.022	7.955	72	0.742	1.022	7.955	72
789		min	0.53	0.978	3.978	104	0.494	0.983	4.06	104
790	M754	max	0.69	1.02	7.955	70	0.69	1.02	7.955	70
791		min	0.424	0.979	4.06	106	0.459	0.974	3.978	106
792	M755	max	0.827	1.015	7.955	102	0.827	1.015	7.955	102
793		min	0.46	0.981	4.06	104	0.495	0.977	3.978	104
794	M756	max	0.726	1.018	7.955	70	0.726	1.018	7.955	70
795		min	0.405	0.977	3.978	106	0.369	0.983	4.06	106
796	M757	max	0.685	1.025	7.955	72	0.685	1.025	7.955	72
797		min	0.49	0.976	3.978	104	0.454	0.981	4.06	104
798	M758	max	0.327	1.026	7.955	104	0.327	1.026	7.955	104
799		min	0.66	0.98	4.889	102	0.72	0.975	3.978	102
800	M759	max	0.742	1.016	7.955	42	0.742	1.016	7.955	42
801		min	0.385	0.981	4.06	104	0.42	0.975	3.978	104
802	M760	max	0.645	1.017	7.955	70	0.645	1.017	7.955	70
803		min	0.388	0.978	3.978	106	0.352	0.984	4.06	106
804	M761	max	0.004	1.153	6.164	77	0.003	1.202	8.577	77
805		min	-0.003	0.771	0	47	-0.003	0.793	2.412	47

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
806	M762	max	0.03	1.112	8.577	74	0.024	1.154	8.577	104
807		min	-0.031	0.801	4.288	44	-0.006	0.93	0	55*
808	M763	max	0.002	1.739	8.577	45	0.002	1.457	6.164	45
809		min	-0.004	0.788	2.412	75	-0.003	0.771	0	75
810	M764	max	0.029	1.015	4.467	71	0.014	1.127	8.577	71
811		min	-0.006	0.891	0	113*	-0.011	0.907	3.842	113*
812	M765	max	0.704	1.019	2.5	76	-4.056	1.006	2.5	104
813		min	-0.677	0.981	2.5	104	-4.443	1	2.5	83*
814	M766	max	-0.701	1.015	2.5	106	-4.04	1.008	2.5	104
815		min	0.681	0.985	2.5	74	-9.108	0.999	2.5	110*
816	M768	max	0.157	1.014	0	76	0.155	1.003	0	76
817		min	0.038	0.993	0	66	0.038	0.985	0	66
818	M769	max	0.096	1.015	0	76	0.095	1.014	0	106
819		min	0.036	0.99	0	66	0.036	0.993	0	96
820	M771	max	0.218	1.013	0	76	0.217	1.011	0	76
821		min	0.051	0.987	0	66	0.051	0.989	0	66
822	M776	max	0.156	1.005	0	76	0.157	1.012	0	76
823		min	0.038	0.983	0	66	0.039	0.996	0	66
824	M777	max	0.07	1.007	0	76	0.07	1.014	0	106
825		min	0.027	0.985	0	66	0.106	0.999	0	92
826	M778	max	0.07	1.011	0	76	0.07	1.015	0	106
827		min	0.027	0.989	0	66	0.106	1	0	88
828	M779	max	0.096	1.018	0	76	0.096	1.017	0	106
829		min	0.036	0.994	0	66	0.144	0.997	0	62
830	M780	max	0.07	1.016	0	76	0.07	1.008	0	106
831		min	0.027	0.998	0	66	0.027	0.989	0	96
832	M781	max	0.071	1.021	0	76	0.07	1.014	0	106
833		min	0.106	0.999	0	58	0.027	0.996	0	96
834	M782	max	-0.008	1	4.659	114*	0.008	1	4.659	114*
835		min	-0.003	1	4.659	72	0.003	1	4.659	72
836	M783	max	-0.003	1	4.659	100	0.003	1	4.659	100
837		min	0.005	1	4.659	78*	-0.005	1	4.659	78*
838	M784	max	-0.003	1	4.659	102	0.003	1	4.659	102
839		min	0.005	1	4.659	50*	-0.005	1	4.659	50*
840	M785	max	-0.008	1	4.659	112*	0.008	1	4.659	112*
841		min	-0.016	1	4.659	104	0.003	1	4.659	40
842	M485	max	0.104	1.01	0	76	0.474	1	0	13
843		min	0.027	0.995	0	98	0.027	0.982	0	98
844	M497	max	0.02	1.016	0	68	0.046	1.005	0	76
845		min	0.071	0.999	0	62	0.019	0.991	0	66
846	M498	max	0.047	1.012	0	76	0.078	1	0	80*
847		min	0.071	0.999	0	62	0.019	0.987	0	66
848	M786	max	0.435	1	0	19	0.104	1.009	0	104
849		min	0.027	0.982	0	98	0.027	0.995	0	98
850	M787	max	0.078	1.001	0	80*	0.047	1.011	0	76
851		min	0.019	0.987	0	66	0.071	0.999	0	62
852	M788	max	0.046	1.006	0	76	0.02	1.017	0	68
853		min	0.019	0.99	0	66	0.071	0.999	0	58
854	M698	max	0.1	1.01	0	76	0.46	1	0	13
855		min	0.027	0.996	0	98	0.026	0.982	0	98
856	M699	max	0.045	1.012	0	76	0.075	1	0	80*
857		min	0.068	0.999	0	62	0.018	0.987	0	66
858	M700	max	0.019	1.017	0	68	0.045	1.006	0	76
859		min	0.068	0.999	0	62	0.018	0.99	0	66
860	M468	max	0.1	1.009	0	76	0.46	1	0	13

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
861		min	0.027	0.996	0	98	0.026	0.981	0	98
862	M469	max	0.045	1.011	0	76	0.075	1	0	80*
863		min	0.068	0.999	0	62	0.018	0.986	0	66
864	M506	max	0.019	1.015	0	68	0.045	1.005	0	76
865		min	0.068	0.998	0	62	0.018	0.989	0	66
866	M767	max	0.422	1	0	101	0.422	1	0	100
867		min	-0.422	1	0	47	-0.422	1	0	46
868	M770	max	0.952	1	0	56	6.453	1	0	100
869		min	-4.918	1	0	85*	-4.964	1	0	54*
870	M772	max	0.422	1	0	101	0.422	1	0	100
871		min	-0.422	1	0	47	-0.422	1	0	46
872	M773	max	0.422	1	0	101	0.422	1	0	100
873		min	-0.422	1	0	47	-0.422	1	0	46
874	M774	max	0.713	1	0	56	3.412	1	0	100
875		min	-8.656	1	0	85*	-2.625	1	0	54*
876	M775	max	0.325	1	0	109*	8.552	1	0	56
877		min	-0.422	1	0	47	-0.422	1	0	46
878	M636	max	0.033	1.002	2.458	103	-0.477	1	2.458	107
879		min	0.032	0.998	2.458	101	-0.803	1	2.458	101
880	M637	max	0.033	1.002	2.458	101	-0.477	1	2.458	105
881		min	0.032	0.998	2.458	103	-0.803	1	2.458	103
882	M789	max	0.071	1	2.583	98	-0.027	1	2.583	115*
883		min	-0.005	1	2.583	13	-0.095	1	2.583	12
884	M626	max	0.257	1	0	109*	0.257	1	0	108*
885		min	-0.257	1	0	55*	-0.257	1	0	54*
886	M627	max	0.334	1	0	101	0.334	1	0	100
887		min	-0.334	1	0	47	-0.334	1	0	46
888	M630	max	0.334	1	0	101	0.334	1	0	100
889		min	-0.334	1	0	47	-0.334	1	0	46
890	M641	max	0.334	1	0	101	0.334	1	0	100
891		min	-0.334	1	0	47	-0.334	1	0	46
892	M643	max	NC	NC			0.32	1	1.665	114*
893		min	NC	NC			0.491	1	1.665	15
894	M790	max	NC	NC			23.461	1	1.66	101
895		min	NC	NC			13.92	1	1.66	47
896	M791	max	NC	NC			0.446	1	1.665	94
897		min	NC	NC			0.446	1	1.665	32
898	M792	max	NC	NC			21.52	1	1.66	89
899		min	NC	NC			16.14	1	1.66	17
900	M793	max	NC	NC			0.625	1	1.655	99
901		min	NC	NC			0.625	1	1.655	17
902	M794	max	NC	NC			20.005	1	1.665	56
903		min	NC	NC			17.147	1	1.665	87
904	M795	max	0.749	1	0	108*	18.701	1	0	103
905		min	-0.973	1	0	46	14.392	1	1	14
906	M796	max	0.749	1	0	109*	1.889	1	0	100
907		min	-0.973	1	0	47	0.543	1	1	46
908	M797	max	0.749	1	0	109*	0.429	1	0	112*
909		min	-0.973	1	0	47	-0.539	1	1	40
910	M798	max	0.973	1	0	100	25.519	1	0	103
911		min	-0.749	1	0	54*	13.413	1	1	18
912	M799	max	0.973	1	0	100	20.82	1	0	103
913		min	-0.973	1	0	46	11.776	1	1	53*
914	M800	max	0.973	1	0	101	0.458	1	0	112*
915		min	-0.973	1	0	47	-0.446	1	1	13

Envelope Member 2nd/1st Moment Ratios (Continued)

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
916	M801	max	14.389	1	1.67	70	-2.108	1	1.67	115*
917		min	-11.069	1	1.67	110*	-2.108	1	1.67	114*
918	M802	max	9.59	1	0	70	12.195	1	0	81*
919		min	-9.59	1	0	46	13.61	1	0	107
920	M803	max	-0.001	1	3.566	115*	0.001	1	3.566	115*
921		min	-0.001	1	3.566	55*	0.001	1	3.566	55*
922	M804	max	-0.001	1	3.566	53*	0.001	1	3.566	53*
923		min	-0.001	1	3.566	113*	0.001	1	3.566	113*

Member Section Stresses

No Data to Print...

Envelope Member Section Stresses

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
0	M273	1	max	2.211	15	1.665	100	0.02	15	0	107	0	107	0	107	0	107
1			min	-0.418	74	-1.654	72	-0.001	74	0	12	0	12	0	12	0	12
2		2	max	2.18	15	1.642	100	0.027	107	2.544	100	2.511	72	0.195	103	0.167	75
3			min	-0.427	74	-1.608	72	-0.029	71	-2.511	72	-2.544	100	-0.167	75	-0.195	103
4		3	max	2.158	15	1.621	100	0.018	107	5.049	100	4.964	72	0.519	103	0.511	75
5			min	-0.431	74	-1.587	72	-0.02	71	-4.964	72	-5.049	100	-0.511	75	-0.519	103
6		4	max	2.063	15	1.4	70	0.054	71	2.808	100	2.725	72	0.441	103	0.447	71
7			min	0.106	66	-1.612	102	-0.054	103	-2.725	72	-2.808	100	-0.447	71	-0.441	103
8		5	max	0	107	0	70	0	13	0	107	0	107	0	107	0	107
9			min	0	12	0	102	0	98	0	12	0	12	0	12	0	12
10	M313	1	max	2.728	13	4.116	102	0	106	0	107	0	107	0	107	0	107
11			min	-0.306	106	-4.075	70	-0.025	13	0	12	0	12	0	12	0	12
12		2	max	2.666	13	1.344	102	0.056	71	4.407	102	4.461	70	0.344	75	0.374	103
13			min	-0.335	106	-1.472	70	-0.056	103	-4.461	70	-4.407	102	-0.374	103	-0.344	75
14		3	max	2.588	13	1.263	102	0.023	71	6.317	102	6.723	70	0.866	75	0.903	103
15			min	-0.351	106	-1.386	70	-0.023	107	-6.723	70	-6.317	102	-0.903	103	-0.866	75
16		4	max	2.352	13	1.24	76	0.083	103	3.008	102	3.244	70	0.636	75	0.661	103
17			min	0.107	98	-1.589	100	-0.08	75	-3.244	70	-3.008	102	-0.661	103	-0.636	75
18		5	max	0	107	0	102	0	106	0	107	0	107	0	107	0	107
19			min	0	12	0	70	0	15	0	12	0	12	0	12	0	12
20	M314	1	max	2.841	13	4.265	102	2.364	75	0	107	0	107	0	107	0	107
21			min	-0.354	106	-4.223	70	-2.498	103	0	12	0	12	0	12	0	12
22		2	max	2.777	13	1.084	106	0.423	103	4.347	102	4.485	70	16.094	75	16.978	103
23			min	-0.374	106	-1.325	70	-0.401	75	-4.485	70	-4.347	102	-16.978	103	-16.094	75
24		3	max	2.755	13	1.063	106	0.435	103	5.984	106	6.498	70	10.242	75	10.792	103
25			min	-0.378	106	-1.298	70	-0.412	75	-6.498	70	-5.984	106	-10.792	103	-10.242	75
26		4	max	2.548	13	1.319	76	0.509	103	2.811	102	3.055	70	3.949	75	4.149	103
27			min	0.134	98	-1.73	100	-0.484	75	-3.055	70	-2.811	102	-4.149	103	-3.949	75
28		5	max	0	107	0	102	0	16	0	107	0	107	0	107	0	107
29			min	0	12	0	70	0	76	0	12	0	12	0	12	0	12
30	M336	1	max	2.059	15	1.994	100	2.272	107	0	107	0	107	0	107	0	107
31			min	-0.495	74	-1.914	72	-2.414	71	0	12	0	12	0	12	0	12
32		2	max	2.031	15	1.949	100	0.409	71	3.035	100	2.926	72	15.471	107	16.425	71
33			min	-0.49	74	-1.892	72	-0.383	107	-2.926	72	-3.035	100	-16.425	71	-15.471	107
34		3	max	2.009	15	1.928	100	0.418	71	6.011	100	5.814	72	9.893	107	10.473	71
35			min	-0.495	74	-1.87	72	-0.392	107	-5.814	72	-6.011	100	-10.473	71	-9.893	107
36		4	max	1.956	15	1.551	70	0.5	71	3.324	100	3.186	72	3.856	107	4.066	71
37			min	0.055	74	-1.702	102	-0.472	107	-3.186	72	-3.324	100	-4.066	71	-3.856	107
38		5	max	0	107	0	100	0	68	0	107	0	107	0	107	0	107
39			min	0	12	0	72	0	13	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
40	M337	1	max	0.456	72	0.023	105	-0.016	105	1.034	72	0.476	104	2.135	72	1.08	104
41			min	-0.21	104	-0.023	73	-0.192	14	-0.476	104	-1.034	72	-0.983	104	-2.347	72
42		2	max	0.461	72	0.011	105	-0.008	105	1.477	15	0.428	104	1.952	72	1.24	104
43			min	-0.215	104	-0.011	73	-0.096	14	-0.428	104	-1.477	15	-1.128	104	-2.146	72
44		3	max	0.466	72	0.002	106	0	107	1.719	15	0.419	104	1.906	72	1.31	104
45			min	-0.22	104	-0.002	74	0	12	-0.419	104	-1.719	15	-1.192	104	-2.095	72
46		4	max	0.471	72	0.011	107	0.096	13	1.477	15	0.45	104	1.998	72	1.29	104
47			min	-0.225	104	-0.011	71	0.008	44	-0.45	104	-1.477	15	-1.174	104	-2.196	72
48		5	max	0.476	72	0.023	107	0.192	13	1.079	72	0.52	104	2.227	72	1.181	104
49			min	-0.23	104	-0.023	71	0.016	44	-0.52	104	-1.079	72	-1.074	104	-2.448	72
50	M340	1	max	5.315	103	0.187	71	0.076	102	3.988	103	9.822	75	0	107	0	107
51			min	-4.841	75	-0.19	103	-0.059	74	-3.633	75	-10.782	103	0	12	0	12
52		2	max	0.556	106	0.085	103	0.022	104	-0.506	68	8.797	16	3.703	102	2.947	104
53			min	-13.567	13	0.007	68	-0.039	102	-3.254	16	1.369	68	-2.947	104	-3.703	102
54		3	max	0.749	106	0.033	70	0.016	68	0.087	66	2.834	15	1.401	106	2.36	70
55			min	-16.73	13	-0.139	13	-0.038	71	-1.048	15	-0.234	66	-2.36	70	-1.401	106
56		4	max	1.405	106	-0.005	98	0.06	72	-0.452	98	8.216	14	4.296	72	3.579	104
57			min	-13.966	13	-0.078	71	-0.037	104	-3.039	14	1.221	98	-3.579	104	-4.296	72
58		5	max	2.662	102	0.122	106	0.063	70	1.998	102	5.181	74	0	107	0	107
59			min	-2.554	74	-0.128	70	-0.058	106	-1.916	74	-5.401	102	0	12	0	12
60	M342	1	max	4.741	107	0.196	71	0.029	64	3.557	107	10.225	71	0	107	0	107
61			min	-5.04	71	-0.175	107	-0.026	96	-3.782	71	-9.618	107	0	12	0	12
62		2	max	-0.032	104	0.081	102	0.081	70	-0.261	74	6.496	15	5.026	102	4.545	74
63			min	-13.345	15	-0.012	74	-0.078	106	-2.402	15	0.707	74	-4.545	74	-5.026	102
64		3	max	0.888	104	0.052	72	0.028	71	0.253	76	2.611	100	1.583	106	2.871	70
65			min	-15.83	15	-0.174	15	-0.03	64	-0.966	100	-0.683	76	-2.871	70	-1.583	106
66		4	max	1.199	104	0.005	96	0.075	106	-0.273	104	7.206	15	4.905	106	5.128	70
67			min	-13.017	15	-0.079	72	-0.087	70	-2.665	15	0.738	104	-5.128	70	-4.905	106
68		5	max	0.062	107	0.054	17	0.017	96	0.047	107	0.151	71	0	107	0	107
69			min	-0.074	71	-0.032	72	-0.059	15	-0.056	71	-0.127	107	0	12	0	12
70	M343	1	max	0.728	104	0.033	72	-0.028	76	1.651	104	2.308	72	3.408	104	5.238	72
71			min	-1.018	72	-0.033	104	-0.346	13	-2.308	72	-1.651	104	-4.765	72	-3.746	104
72		2	max	0.733	104	0.016	72	-0.014	76	1.623	104	1.764	72	2.556	104	8.791	15
73			min	-1.023	72	-0.016	104	-0.173	13	-1.764	72	-1.623	104	-7.998	15	-2.81	104
74		3	max	0.738	104	0.002	73	0	107	1.763	17	1.63	76	2.287	104	10.572	15
75			min	-1.028	72	-0.002	105	0	12	-1.63	76	-1.763	17	-9.618	15	-2.514	104
76		4	max	0.743	104	0.018	70	0.173	15	1.646	104	1.786	72	2.602	104	8.791	15
77			min	-1.033	72	-0.018	102	0.014	104	-1.786	72	-1.646	104	-7.998	15	-2.86	104
78		5	max	0.748	104	0.035	70	0.346	15	1.695	104	2.353	72	3.499	104	5.339	72
79			min	-1.038	72	-0.035	102	0.028	104	-2.353	72	-1.695	104	-4.857	72	-3.847	104
80	M346	1	max	1.454	104	0.033	72	-0.028	76	3.296	104	3.709	72	6.803	104	8.417	72
81			min	-1.636	72	-0.033	104	-0.346	13	-3.709	72	-3.296	104	-7.657	72	-7.478	104
82		2	max	1.459	104	0.016	72	-0.014	76	3.268	104	3.271	76	5.951	104	8.654	72
83			min	-1.641	72	-0.016	104	-0.173	13	-3.271	76	-3.268	104	-7.873	72	-6.542	104
84		3	max	1.464	104	0.002	73	0	107	3.266	104	3.141	76	5.682	104	9.909	15
85			min	-1.646	72	-0.002	105	0	12	-3.141	76	-3.266	104	-9.014	15	-6.246	104
86		4	max	1.468	104	0.018	70	0.173	15	3.29	104	3.293	76	5.997	104	8.704	72
87			min	-1.651	72	-0.018	106	0.014	104	-3.293	76	-3.29	104	-7.919	72	-6.592	104
88		5	max	1.473	104	0.035	70	0.346	15	3.34	104	3.754	72	6.895	104	8.517	72
89			min	-1.656	72	-0.035	106	0.028	104	-3.754	72	-3.34	104	-7.749	72	-7.579	104
90	M347	1	max	3.996	104	0.029	72	-0.027	77	9.135	104	9.564	72	18.278	104	21.035	72
91			min	-4.184	72	-0.029	100	-0.244	13	-9.564	72	-9.135	104	-19.138	72	-20.09	104
92		2	max	4.001	104	0.014	72	-0.013	77	9.124	104	9.266	76	17.717	104	21.216	72
93			min	-4.189	72	-0.014	100	-0.122	13	-9.266	76	-9.124	104	-19.302	72	-19.474	104
94		3	max	4.006	104	0.002	73	0	107	9.128	104	9.18	76	17.545	104	21.292	72

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
95			min	-4.194	72	-0.002	101	0	12	-9.18	76	-9.128	104	-19.372	72	-19.285	104
96		4	max	4.011	104	0.017	70	0.122	15	9.147	104	9.288	76	17.762	104	21.265	72
97			min	-4.199	72	-0.017	102	0.013	105	-9.288	76	-9.147	104	-19.347	72	-19.523	104
98		5	max	4.016	104	0.033	70	0.244	15	9.179	104	9.609	72	18.368	104	21.133	72
99			min	-4.203	72	-0.033	102	0.027	105	-9.609	72	-9.179	104	-19.227	72	-20.188	104
100	M349	1	max	8.219	15	-0.022	96	0.029	74	6.168	15	-2.359	99	0	107	0	107
101			min	1.163	99	-0.26	15	-0.04	102	0.872	99	-16.675	15	0	12	0	12
102		2	max	17.3	15	0.019	66	0.017	74	2.535	15	-0.383	96	0.717	104	0.861	72
103			min	0.403	96	-0.067	102	-0.026	102	0.141	96	-6.854	15	-0.861	72	-0.717	104
104		3	max	18.73	15	0.136	13	0.06	71	1.139	15	0.111	66	4.367	13	0.6	106
105			min	0.181	96	-0.02	71	-0.107	15	-0.041	66	-3.081	15	-0.6	106	-4.367	13
106		4	max	16.965	15	0.059	102	0.027	102	2.006	15	-0.124	96	0.719	104	0.843	72
107			min	0.355	96	-0.035	17	-0.017	74	0.046	96	-5.425	15	-0.843	72	-0.719	104
108		5	max	7.755	15	0.247	15	0.04	102	5.819	15	-2.428	66	0	107	0	107
109			min	1.197	66	0.022	96	-0.027	74	0.898	66	-15.733	15	0	12	0	12
110	M350	1	max	7.262	13	0.03	106	0.037	74	5.449	13	0.971	106	0	107	0	107
111			min	-0.479	106	-0.23	70	-0.044	102	-0.359	106	-14.733	13	0	12	0	12
112		2	max	15.816	13	0.048	19	0.026	70	1.78	13	-0.48	98	0.467	104	0.809	72
113			min	-0.519	106	-0.034	100	-0.027	102	0.178	98	-4.813	13	-0.809	72	-0.467	104
114		3	max	17.017	13	0.15	15	0.109	14	0.701	100	0.172	68	4.376	13	0.622	106
115			min	-0.694	106	-0.149	14	-0.108	15	-0.064	68	-1.894	100	-0.622	106	-4.376	13
116		4	max	15.747	13	0.038	70	0.024	72	1.785	13	-0.45	98	0.548	74	0.896	102
117			min	-0.408	106	-0.047	19	-0.024	100	0.166	98	-4.827	13	-0.896	102	-0.548	74
118		5	max	7.081	13	0.219	70	0.043	72	5.314	13	0.222	106	0	107	0	107
119			min	-0.11	106	-0.023	106	-0.033	104	-0.082	106	-14.367	13	0	12	0	12
120	M351	1	max	0.204	104	0.884	71	-0.381	67	1.811	71	0.376	107	0.639	75	3.919	103
121			min	-0.277	72	-0.874	103	-1.457	15	-0.376	107	-1.811	71	-3.566	103	-0.702	75
122		2	max	0.199	104	0.873	71	-0.373	67	9.988	71	1.8	107	3.653	75	22.362	103
123			min	-0.273	72	-0.864	103	-1.369	15	-1.8	107	-9.988	71	-20.343	103	-4.015	75
124		3	max	0.15	98	0.155	71	-0.056	96	14.161	71	2.534	107	5.196	75	31.774	103
125			min	-0.206	62	-0.155	103	-0.183	15	-2.534	107	-14.161	71	-28.905	103	-5.711	75
126		4	max	0.514	106	0.977	103	1.502	15	11.269	71	2.03	107	4.13	75	25.263	103
127			min	-0.586	70	-0.986	71	0.414	67	-2.03	107	-11.269	71	-22.982	103	-4.54	75
128		5	max	0.518	106	0.987	103	1.59	15	2.043	71	0.418	107	0.726	75	4.447	103
129			min	-0.591	70	-0.997	71	0.422	67	-0.418	107	-2.043	71	-4.045	103	-0.798	75
130	M352	1	max	0.619	100	0.843	71	-0.362	67	1.749	71	0.3	107	0.606	75	3.953	103
131			min	-0.619	72	-0.842	103	-1.411	13	-0.3	107	-1.749	71	-3.596	103	-0.666	75
132		2	max	0.614	100	0.833	71	-0.354	67	9.621	71	1.636	107	3.374	75	21.812	103
133			min	-0.614	72	-0.832	103	-1.323	13	-1.636	107	-9.621	71	-19.843	103	-3.708	75
134		3	max	0.341	100	0.147	71	-0.053	96	13.635	71	2.321	107	4.785	75	30.91	103
135			min	-0.345	72	-0.147	103	-0.177	15	-2.321	107	-13.635	71	-28.119	103	-5.26	75
136		4	max	0.095	106	0.939	103	1.452	16	10.85	71	1.845	107	3.804	75	24.598	103
137			min	-0.097	74	-0.94	71	0.394	67	-1.845	107	-10.85	71	-22.378	103	-4.182	75
138		5	max	0.1	106	0.949	103	1.54	16	1.972	71	0.338	107	0.685	75	4.46	103
139			min	-0.101	74	-0.95	71	0.402	67	-0.338	107	-1.972	71	-4.057	103	-0.752	75
140	M353	1	max	0.548	57	4.66	70	0.163	71	13.976	106	15.745	70	0.547	77	0.562	75
141			min	-0.705	100	-3.854	106	-0.142	77	-15.745	70	-13.976	106	-0.562	75	-0.547	77
142		2	max	0.548	57	4.645	70	0.157	71	7.201	102	7.454	70	1.446	71	1.21	107
143			min	-0.709	100	-3.863	106	-0.136	77	-7.454	70	-7.201	102	-1.21	107	-1.446	71
144		3	max	0.54	72	4.382	70	0.035	75	0.573	100	-0.002	68	2.45	71	2.139	107
145			min	-0.707	100	-4.032	102	-0.038	103	0.002	68	-0.573	100	-2.139	107	-2.45	71
146		4	max	0.48	76	3.981	74	0.125	107	7.481	70	6.73	106	2.056	71	1.854	107
147			min	-0.638	100	-4.446	102	-0.145	71	-6.73	106	-7.481	70	-1.854	107	-2.056	71
148		5	max	0.484	76	3.972	74	0.131	107	14.54	70	14.618	102	0.248	101	0.244	103
149			min	-0.642	100	-4.461	102	-0.15	71	-14.618	102	-14.54	70	-0.244	103	-0.248	101

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
150	M354	1	max	0.424	72	4.559	70	0.15	71	13.647	106	15.525	70	0.231	101	0.235	103
151			min	-0.569	100	-3.725	106	-0.128	77	-15.525	70	-13.647	106	-0.235	103	-0.231	101
152		2	max	0.428	72	4.544	70	0.144	71	7.001	106	7.414	70	2.019	71	1.778	77
153			min	-0.573	100	-3.734	106	-0.123	77	-7.414	70	-7.001	106	-1.778	77	-2.019	71
154		3	max	0.499	72	4.281	70	0.023	71	0.641	100	0.05	68	2.87	71	2.5	77
155			min	-0.644	100	-3.89	106	-0.021	107	-0.05	68	-0.641	100	-2.5	77	-2.87	71
156		4	max	0.611	72	3.91	74	0.138	77	7.813	100	6.968	76	2.302	71	2.028	107
157			min	-0.756	100	-4.248	102	-0.162	71	-6.968	76	-7.813	100	-2.028	107	-2.302	71
158		5	max	0.615	72	3.901	74	0.144	77	14.659	100	14.4	72	0.278	101	0.267	103
159			min	-0.76	100	-4.263	102	-0.168	71	-14.4	72	-14.659	100	-0.267	103	-0.278	101
160	M355	1	max	0.352	15	0.857	71	-0.363	67	1.894	71	0.322	107	0.415	75	3.964	103
161			min	-0.181	76	-0.843	103	-1.418	15	-0.322	107	-1.894	71	-3.606	103	-0.456	75
162		2	max	0.352	15	0.847	71	-0.355	67	9.835	71	1.647	107	3.286	75	21.83	103
163			min	-0.177	76	-0.833	103	-1.331	15	-1.647	107	-9.835	71	-19.859	103	-3.612	75
164		3	max	0.348	15	0.148	71	-0.053	96	13.877	71	2.328	107	4.742	75	30.931	103
165			min	-0.096	66	-0.147	103	-0.177	15	-2.328	107	-13.877	71	-28.138	103	-5.213	75
166		4	max	0.587	102	0.94	103	1.459	15	11.065	71	1.855	107	3.721	75	24.617	103
167			min	-0.454	74	-0.954	71	0.393	96	-1.855	107	-11.065	71	-22.394	103	-4.09	75
168		5	max	0.591	102	0.95	103	1.547	15	2.118	71	0.36	107	0.494	75	4.471	103
169			min	-0.459	74	-0.964	71	0.402	96	-0.36	107	-2.118	71	-4.067	103	-0.543	75
170	M356	1	max	0.433	70	1.364	15	0.173	75	0.596	102	0.592	70	0	107	0	107
171			min	-0.436	102	0.307	97	-0.173	77	-0.592	70	-0.596	102	0	12	0	12
172		2	max	0.372	70	0.682	15	0.087	75	2.632	15	-0.224	66	2.311	75	2.311	77
173			min	-0.375	102	0.154	97	-0.087	77	0.224	66	-2.632	15	-2.311	77	-2.311	75
174		3	max	0.311	70	0.003	74	0	107	3.479	15	-0.488	66	3.081	75	3.082	77
175			min	-0.314	102	-0.003	76	0	12	0.488	66	-3.479	15	-3.082	77	-3.081	75
176		4	max	0.25	70	-0.154	97	0.087	77	2.621	15	-0.364	66	2.311	75	2.311	77
177			min	-0.253	102	-0.682	15	-0.087	75	0.364	66	-2.621	15	-2.311	77	-2.311	75
178		5	max	0.189	70	-0.307	97	0.173	77	0.263	102	0.259	70	0	107	0	107
179			min	-0.192	102	-1.364	15	-0.173	75	-0.259	70	-0.263	102	0	12	0	12
180	M357	1	max	0.848	70	1.321	13	0.165	71	1.04	106	1.158	70	0	107	0	107
181			min	-0.762	106	0.293	98	-0.165	73	-1.158	70	-1.04	106	0	12	0	12
182		2	max	0.79	70	0.661	13	0.083	71	2.434	102	0.154	74	2.2	71	2.199	73
183			min	-0.704	106	0.146	99	-0.083	73	-0.154	74	-2.434	102	-2.199	73	-2.2	71
184		3	max	0.732	70	0.003	74	0	102	3.091	15	-0.117	66	2.933	71	2.932	73
185			min	-0.646	106	-0.003	76	0	70	0.117	66	-3.091	15	-2.932	73	-2.933	71
186		4	max	0.674	70	-0.146	98	0.083	73	2.276	102	-0.003	66	2.2	71	2.199	73
187			min	-0.587	106	-0.661	13	-0.083	71	0.003	66	-2.276	102	-2.199	73	-2.2	71
188		5	max	0.615	70	-0.293	99	0.165	73	0.723	106	0.84	70	0	107	0	107
189			min	-0.529	106	-1.321	15	-0.165	71	-0.84	70	-0.723	106	0	12	0	12
190	M358	1	max	0.976	100	3.708	70	0.116	101	10.709	106	12.203	70	0.349	71	0.255	107
191			min	-0.754	76	-2.764	106	-0.117	103	-12.203	70	-10.709	106	-0.255	107	-0.349	71
192		2	max	0.941	100	3.482	70	0.062	101	5.759	102	5.728	70	1.455	71	1.418	103
193			min	-0.719	76	-2.899	106	-0.061	103	-5.728	70	-5.759	102	-1.418	103	-1.455	71
194		3	max	0.906	100	3.255	70	0.012	101	0.707	15	-0.081	66	1.921	71	1.89	103
195			min	-0.684	76	-3.054	102	-0.012	103	0.081	66	-0.707	15	-1.89	103	-1.921	71
196		4	max	0.871	100	3.026	70	0.039	73	5.956	70	5.26	106	1.739	71	1.711	103
197			min	-0.649	76	-3.282	102	-0.038	75	-5.26	106	-5.956	70	-1.711	103	-1.739	71
198		5	max	0.836	100	2.88	74	0.096	103	11.16	70	11.333	102	0.922	71	0.827	107
199			min	-0.614	76	-3.511	102	-0.095	101	-11.333	102	-11.16	70	-0.827	107	-0.922	71
200	M359	1	max	1.063	100	3.678	70	0.108	101	10.513	106	12.105	70	0.996	71	0.882	107
201			min	-0.806	76	-2.709	106	-0.109	103	-12.105	70	-10.513	106	-0.882	107	-0.996	71
202		2	max	1.028	100	3.453	70	0.05	105	5.575	102	5.683	70	1.967	71	1.929	103
203			min	-0.771	76	-2.842	106	-0.051	103	-5.683	70	-5.575	102	-1.929	103	-1.967	71
204		3	max	0.993	100	3.226	70	0.001	76	0.697	15	-0.075	66	2.299	71	2.266	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
205			min	-0.736	76	-2.977	106	-0.001	100	0.075	66	-0.697	15	-2.266	103	-2.299	71
206		4	max	0.958	100	3.006	74	0.049	107	5.99	100	5.243	76	1.982	71	1.95	103
207			min	-0.701	76	-3.177	102	-0.049	101	-5.243	76	-5.99	100	-1.95	103	-1.982	71
208		5	max	0.923	100	2.868	74	0.107	103	11.11	100	11.033	72	1.026	71	0.922	103
209			min	-0.666	76	-3.407	102	-0.108	101	-11.033	72	-11.11	100	-0.922	103	-1.026	71
210	M360	1	max	0.789	100	1.32	13	0.165	105	1.102	72	1.077	100	0	107	0	107
211			min	-0.807	72	0.293	68	-0.165	107	-1.077	100	-1.102	72	0	12	0	12
212		2	max	0.731	100	0.66	13	0.082	105	2.651	15	0.138	96	2.197	105	2.199	107
213			min	-0.749	72	0.146	68	-0.083	107	-0.138	96	-2.651	15	-2.199	107	-2.197	105
214		3	max	0.672	100	0.003	104	0	100	3.471	15	-0.117	96	2.93	105	2.932	107
215			min	-0.691	72	-0.003	106	0	72	0.117	96	-3.471	15	-2.932	107	-2.93	105
216		4	max	0.614	100	-0.146	68	0.083	107	2.641	15	-0.002	96	2.197	105	2.199	107
217			min	-0.633	72	-0.66	13	-0.082	105	0.002	96	-2.641	15	-2.199	107	-2.197	105
218		5	max	0.556	100	-0.293	68	0.165	107	0.784	72	0.76	100	0	107	0	107
219			min	-0.574	72	-1.32	13	-0.165	105	-0.76	100	-0.784	72	0	12	0	12
220	M361	1	max	5.245	15	0.877	72	0.457	71	2.995	15	-0.784	96	0.863	71	0.842	103
221			min	0.699	96	-0.565	104	-0.446	103	0.202	96	-11.621	15	-0.842	103	-0.863	71
222		2	max	5.215	15	0.862	72	0.449	71	4.212	15	4.36	104	6.661	71	6.5	103
223			min	0.695	96	-0.55	104	-0.438	103	-1.124	104	-16.345	15	-6.5	103	-6.661	71
224		3	max	4.797	15	0.419	15	0.161	75	3.305	72	9.042	104	8.923	71	8.764	103
225			min	0.671	96	-0.111	96	-0.162	103	-2.33	104	-12.823	72	-8.764	103	-8.923	71
226		4	max	4.076	15	1.267	13	0.471	103	2.821	72	9.122	104	8.817	71	8.678	103
227			min	0.534	96	-0.396	76	-0.473	71	-2.351	104	-10.944	72	-8.678	103	-8.817	71
228		5	max	3.8	15	1.295	13	0.631	103	1.576	15	0.395	104	1.219	71	1.196	103
229			min	0.492	107	-0.657	76	-0.643	71	-0.102	104	-6.115	15	-1.196	103	-1.219	71
230	M362	1	max	4.24	13	0.362	74	0.186	103	2.189	13	-0.976	98	0.332	103	0.347	71
231			min	0.591	107	-0.455	102	-0.194	71	0.251	98	-8.492	13	-0.347	71	-0.332	103
232		2	max	4.209	13	0.348	74	0.178	103	1.943	70	3.197	106	2.661	103	2.775	71
233			min	0.588	107	-0.441	102	-0.186	71	-0.824	106	-7.538	70	-2.775	71	-2.661	103
234		3	max	4.178	13	0.333	74	0.17	103	2.761	70	7.249	106	4.888	103	5.101	71
235			min	0.585	107	-0.426	102	-0.178	71	-1.868	106	-10.713	70	-5.101	71	-4.888	103
236		4	max	3.664	13	1.054	102	0.444	71	3.099	70	10.227	106	6.297	103	6.576	71
237			min	0.389	107	-0.831	74	-0.425	103	-2.636	106	-12.025	70	-6.576	71	-6.297	103
238		5	max	3.633	13	1.068	102	0.452	71	1.747	13	0.293	106	0.816	103	0.852	71
239			min	0.386	107	-0.846	74	-0.433	103	-0.076	106	-6.778	13	-0.852	71	-0.816	103
240	M363	1	max	1.63	13	0.456	70	0.189	103	0.888	13	-0.362	98	0.338	103	0.339	71
241			min	0.338	98	-0.402	106	-0.189	71	0.093	98	-3.447	13	-0.339	71	-0.338	103
242		2	max	1.599	13	0.441	70	0.181	103	1.769	70	3.462	106	2.707	103	2.709	71
243			min	0.335	98	-0.387	106	-0.181	71	-0.892	106	-6.865	70	-2.709	71	-2.707	103
244		3	max	1.569	13	0.426	70	0.173	103	2.88	70	7.234	106	4.974	103	4.978	71
245			min	0.331	98	-0.372	106	-0.173	71	-1.864	106	-11.175	70	-4.978	71	-4.974	103
246		4	max	1.037	13	0.923	106	0.433	71	3.409	70	10.036	106	6.409	103	6.415	71
247			min	0.195	99	-1.061	70	-0.432	103	-2.586	106	-13.227	70	-6.415	71	-6.409	103
248		5	max	1.007	13	0.937	106	0.441	71	0.671	70	0.789	106	0.83	103	0.831	71
249			min	0.191	99	-1.076	70	-0.44	103	-0.203	106	-2.605	70	-0.831	71	-0.83	103
250	M364	1	max	3.879	16	0.33	103	0.057	102	2.082	16	-0.677	75	0.087	102	0.089	70
251			min	0.541	75	-0.328	71	-0.058	70	0.175	75	-8.08	16	-0.089	70	-0.087	102
252		2	max	3.848	16	0.315	103	0.049	102	2.096	16	2.474	75	0.765	102	0.784	70
253			min	0.538	75	-0.314	71	-0.05	70	-0.638	75	-8.131	16	-0.784	70	-0.765	102
254		3	max	3.818	16	0.301	103	0.041	102	2.739	103	5.479	75	1.342	102	1.377	70
255			min	0.535	75	-0.299	71	-0.042	70	-1.412	75	-10.628	103	-1.377	70	-1.342	102
256		4	max	3.303	16	0.74	71	0.111	70	3.055	103	7.741	75	1.642	102	1.688	70
257			min	0.341	75	-0.752	103	-0.108	102	-1.995	75	-11.853	103	-1.688	70	-1.642	102
258		5	max	3.272	16	0.755	71	0.119	70	1.767	16	0.391	75	0.212	102	0.218	70
259			min	0.338	75	-0.766	103	-0.116	102	-0.101	75	-6.855	16	-0.218	70	-0.212	102

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
260	M365	1	max	2.718	15	0.991	72	0.455	71	1.741	15	-0.23	96	0.859	71	0.859	103
261			min	0.406	99	-0.525	104	-0.455	103	0.059	96	-6.756	15	-0.859	103	-0.859	71
262		2	max	2.688	15	0.977	72	0.447	71	3.642	15	4.52	104	6.632	71	6.626	103
263			min	0.402	99	-0.51	104	-0.447	103	-1.165	104	-14.13	15	-6.626	103	-6.632	71
264		3	max	2.251	15	0.711	15	0.168	75	3.265	72	8.786	104	8.974	71	8.968	103
265			min	0.376	99	-0.061	96	-0.168	107	-2.264	104	-12.668	72	-8.968	103	-8.974	71
266		4	max	1.508	15	0.809	100	0.49	103	2.926	72	8.436	104	8.903	71	8.899	103
267			min	0.232	99	-0.526	76	-0.491	71	-2.174	104	-11.353	72	-8.899	103	-8.903	71
268		5	max	1.224	15	1.078	100	0.645	103	0.553	72	0.878	104	1.223	71	1.222	103
269			min	0.208	99	-0.794	76	-0.645	71	-0.226	104	-2.147	72	-1.222	103	-1.223	71
270	M366	1	max	5.348	15	1.048	72	0.381	71	3.091	15	-0.94	66	0.718	71	0.737	103
271			min	0.755	67	-0.734	104	-0.391	103	0.242	66	-11.993	15	-0.737	103	-0.718	71
272		2	max	5.317	15	1.033	72	0.373	71	4.581	15	5.712	104	5.543	71	5.686	103
273			min	0.751	67	-0.72	104	-0.383	103	-1.472	104	-17.775	15	-5.686	103	-5.543	71
274		3	max	4.984	15	0.668	72	0.157	71	4.688	72	12.204	104	7.719	71	7.865	103
275			min	0.731	67	-0.365	104	-0.157	103	-3.145	104	-18.191	72	-7.865	103	-7.719	71
276		4	max	4.317	15	1.449	100	0.446	103	4.89	72	14.237	104	7.936	71	8.06	103
277			min	0.558	75	-1.152	76	-0.445	71	-3.669	104	-18.972	72	-8.06	103	-7.936	71
278		5	max	4.093	15	1.655	100	0.584	103	2.019	15	0.403	104	1.085	71	1.106	103
279			min	0.518	75	-1.357	76	-0.573	71	-0.104	104	-7.836	15	-1.106	103	-1.085	71
280	M367	1	max	9.189	15	0.062	68	0.015	105	4.482	15	-2.96	96	0	107	0	71
281			min	1.386	96	-0.064	92	-0.015	73	0.676	96	-19.614	15	0	71	0	107
282		2	max	9.153	15	0.031	68	0.007	105	4.477	15	-2.321	96	0.125	105	0.125	73
283			min	1.383	96	-0.032	92	-0.007	73	0.53	96	-19.592	15	-0.125	73	-0.125	105
284		3	max	9.117	15	0	74	0	107	4.464	15	-2.104	96	0.167	105	0.167	73
285			min	1.379	96	-0.005	15	0	71	0.481	96	-19.538	15	-0.167	73	-0.167	105
286		4	max	9.082	15	0.031	66	0.007	107	4.445	15	-2.307	96	0.125	105	0.125	73
287			min	1.376	96	-0.032	94	-0.007	71	0.527	96	-19.451	15	-0.125	73	-0.125	105
288		5	max	9.046	15	0.062	66	0.015	107	4.417	15	-2.932	96	0	107	0	71
289			min	1.372	96	-0.064	94	-0.015	71	0.67	96	-19.331	15	0	71	0	107
290	M368	1	max	7.995	13	0.062	66	0.015	73	3.899	13	-2.76	98	0	71	0	107
291			min	1.293	98	-0.064	94	-0.015	105	0.631	98	-17.065	13	0	107	0	71
292		2	max	7.96	13	0.031	66	0.007	73	3.894	13	-2.121	98	0.125	73	0.125	105
293			min	1.289	98	-0.032	94	-0.007	105	0.485	98	-17.043	13	-0.125	105	-0.125	73
294		3	max	7.924	13	0	76	0	71	3.882	13	-1.904	98	0.167	73	0.167	105
295			min	1.286	98	-0.005	13	0	107	0.435	98	-16.989	13	-0.167	105	-0.167	73
296		4	max	7.889	13	0.031	68	0.007	71	3.862	13	-2.107	98	0.125	73	0.125	105
297			min	1.282	98	-0.032	92	-0.007	107	0.482	98	-16.902	13	-0.125	105	-0.125	73
298		5	max	7.853	13	0.062	68	0.015	71	3.835	13	-2.732	98	0	71	0	107
299			min	1.279	98	-0.064	92	-0.015	107	0.624	98	-16.783	13	0	107	0	71
300	M369	1	max	7.639	13	0.062	66	0.015	73	3.726	13	-2.839	67	0	71	0	107
301			min	1.33	67	-0.064	94	-0.015	105	0.649	67	-16.304	13	0	107	0	71
302		2	max	7.603	13	0.031	66	0.007	73	3.721	13	-2.283	68	0.125	73	0.125	105
303			min	1.326	67	-0.032	94	-0.007	105	0.522	68	-16.282	13	-0.125	105	-0.125	73
304		3	max	7.568	13	0	76	0	71	3.708	13	-2.065	68	0.167	73	0.167	105
305			min	1.323	67	-0.005	13	0	107	0.472	68	-16.228	13	-0.167	105	-0.167	73
306		4	max	7.532	13	0.031	68	0.007	71	3.688	13	-2.269	68	0.125	73	0.125	105
307			min	1.319	67	-0.032	92	-0.007	107	0.518	68	-16.141	13	-0.125	105	-0.125	73
308		5	max	7.497	13	0.062	68	0.015	71	3.661	13	-2.811	67	0	71	0	107
309			min	1.316	67	-0.064	92	-0.015	107	0.642	67	-16.021	13	0	107	0	71
310	M370	1	max	9.92	15	0.85	15	0.182	101	5.228	15	-2.77	66	0.296	101	0.305	103
311			min	1.498	68	-0.311	66	-0.187	103	0.633	66	-22.878	15	-0.305	103	-0.296	101
312		2	max	9.885	15	0.847	15	0.174	101	7.821	15	1.183	66	2.288	101	2.354	103
313			min	1.495	68	-0.28	66	-0.179	103	-0.27	66	-34.228	15	-2.354	103	-2.288	101
314		3	max	9.605	15	0.541	15	0.011	75	6.309	15	2.926	66	2.519	101	2.582	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
315			min	1.475	68	-0.046	66	-0.011	77	-0.669	66	-27.61	15	-2.582	103	-2.519	101
316		4	max	9.412	15	0.319	13	0.074	103	5.67	15	1.64	66	1.877	101	1.93	103
317			min	1.459	68	-0.129	98	-0.073	101	-0.375	66	-24.813	15	-1.93	103	-1.877	101
318		5	max	9.218	15	0.515	62	0.176	103	4.458	15	-2.432	66	0.281	101	0.29	103
319			min	1.444	68	-0.37	98	-0.171	101	0.556	66	-19.511	15	-0.29	103	-0.281	101
320	M371	1	max	2.304	102	0.023	71	-0.016	75	5.266	102	4.932	104	10.537	102	10.846	104
321			min	-2.157	104	-0.023	107	-0.145	14	-4.932	104	-5.266	102	-9.868	104	-11.581	102
322		2	max	2.308	102	0.012	71	-0.008	75	5.358	102	4.895	104	10.398	102	10.976	104
323			min	-2.162	104	-0.012	107	-0.073	14	-4.895	104	-5.358	102	-9.986	104	-11.429	102
324		3	max	2.313	102	0.003	72	0	107	5.396	102	4.89	104	10.367	102	11.036	104
325			min	-2.167	104	-0.003	104	0	12	-4.89	104	-5.396	102	-10.041	104	-11.394	102
326		4	max	2.318	102	0.012	73	0.073	15	5.38	102	4.918	104	10.443	102	11.025	104
327			min	-2.172	104	-0.012	105	0.008	107	-4.917	104	-5.38	102	-10.031	104	-11.478	102
328		5	max	2.323	102	0.023	73	0.145	15	5.311	102	4.977	104	10.626	102	10.945	104
329			min	-2.177	104	-0.023	105	0.016	107	-4.976	104	-5.311	102	-9.958	104	-11.68	102
330	M372	1	max	2.659	72	0.023	71	-0.016	46	6.078	72	5.739	104	12.162	72	12.621	104
331			min	-2.51	104	-0.023	107	-0.145	13	-5.739	104	-6.078	72	-11.483	104	-13.367	72
332		2	max	2.664	72	0.012	71	-0.008	46	6.17	72	5.702	104	12.023	72	12.751	104
333			min	-2.515	104	-0.012	107	-0.073	13	-5.702	104	-6.17	72	-11.601	104	-13.214	72
334		3	max	2.669	72	0.003	72	0	107	6.208	72	5.697	104	11.991	72	12.811	104
335			min	-2.52	104	-0.003	104	0	12	-5.697	104	-6.208	72	-11.655	104	-13.18	72
336		4	max	2.673	72	0.012	73	0.073	15	6.192	72	5.725	104	12.067	72	12.8	104
337			min	-2.525	104	-0.012	105	0.008	105	-5.725	104	-6.192	72	-11.646	104	-13.264	72
338		5	max	2.678	72	0.023	73	0.145	15	6.123	72	5.784	104	12.251	72	12.72	104
339			min	-2.53	104	-0.023	105	0.016	105	-5.784	104	-6.123	72	-11.573	104	-13.465	72
340	M373	1	max	0.743	72	0.023	103	-0.016	105	1.685	72	1.301	104	3.478	72	2.953	104
341			min	-0.574	104	-0.023	71	-0.192	16	-1.301	104	-1.685	72	-2.686	104	-3.823	72
342		2	max	0.738	72	0.011	103	-0.008	105	1.773	72	1.231	104	3.248	72	3.062	104
343			min	-0.569	104	-0.011	71	-0.096	16	-1.231	104	-1.773	72	-2.786	104	-3.571	72
344		3	max	0.733	72	0.002	104	0	107	1.796	72	1.2	104	3.157	72	3.082	104
345			min	-0.564	104	-0.002	76	0	12	-1.2	104	-1.796	72	-2.804	104	-3.47	72
346		4	max	0.728	72	0.011	101	0.096	14	1.751	72	1.209	104	3.203	72	3.012	104
347			min	-0.559	104	-0.011	73	0.008	107	-1.209	104	-1.751	72	-2.74	104	-3.521	72
348		5	max	0.724	72	0.023	101	0.192	14	1.64	72	1.257	104	3.386	72	2.852	104
349			min	-0.554	104	-0.023	73	0.016	107	-1.257	104	-1.64	72	-2.595	104	-3.722	72
350	M374	1	max	0.186	66	0.035	104	-0.028	76	0.421	66	0.711	94	0.87	66	1.613	94
351			min	-0.314	94	-0.035	72	-0.346	13	-0.711	94	-0.421	66	-1.468	94	-0.956	66
352		2	max	0.186	66	0.018	104	-0.014	76	2.213	13	0.497	106	0.412	66	5.808	15
353			min	-0.314	94	-0.018	72	-0.173	13	-0.497	106	-2.213	13	-5.283	15	-0.453	66
354		3	max	0.186	66	0.002	105	0	107	2.998	13	0.521	106	0.383	74	7.589	15
355			min	-0.314	94	-0.002	73	0	12	-0.521	106	-2.998	13	-6.904	15	-0.421	74
356		4	max	0.186	66	0.016	106	0.173	15	2.213	13	0.519	106	0.412	66	5.808	15
357			min	-0.314	94	-0.016	70	0.014	104	-0.519	106	-2.213	13	-5.283	15	-0.453	66
358		5	max	0.186	66	0.033	106	0.346	15	0.421	66	0.711	94	0.87	66	1.613	94
359			min	-0.314	94	-0.033	70	0.028	104	-0.711	94	-0.421	66	-1.468	94	-0.956	66
360	M375	1	max	0.338	102	0.023	103	-0.016	76	0.767	102	0.463	74	1.583	102	1.05	74
361			min	-0.204	74	-0.023	71	-0.192	14	-0.463	74	-0.767	102	-0.955	74	-1.74	102
362		2	max	0.333	102	0.011	103	-0.008	76	0.919	15	0.392	74	1.354	102	1.376	17
363			min	-0.199	74	-0.011	71	-0.096	14	-0.392	74	-0.919	15	-1.252	17	-1.488	102
364		3	max	0.329	102	0.002	104	0	107	1.16	15	0.361	74	1.28	106	1.907	17
365			min	-0.194	74	-0.002	76	0	12	-0.361	74	-1.16	15	-1.734	17	-1.408	106
366		4	max	0.324	102	0.011	101	0.096	13	0.919	15	0.37	74	1.308	102	1.376	17
367			min	-0.189	74	-0.011	73	0.008	46	-0.37	74	-0.919	15	-1.252	17	-1.438	102
368		5	max	0.319	102	0.023	101	0.192	13	0.722	102	0.418	74	1.491	102	0.949	74
369			min	-0.184	74	-0.023	73	0.016	46	-0.418	74	-0.722	102	-0.863	74	-1.639	102

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
370	M376	1	max	0.79	74	0.035	104	-0.028	106	1.791	74	2.039	102	3.697	74	4.626	102
371			min	-0.899	102	-0.035	72	-0.346	13	-2.039	102	-1.791	74	-4.209	102	-4.064	74
372		2	max	0.795	74	0.018	104	-0.014	106	2.226	74	2.074	106	3.799	74	6.066	15
373			min	-0.904	102	-0.018	72	-0.173	13	-2.074	106	-2.226	74	-5.519	15	-4.176	74
374		3	max	0.8	74	0.002	105	0	107	2.978	13	2.098	106	3.849	74	7.847	15
375			min	-0.909	102	-0.002	73	0	12	-2.098	106	-2.978	13	-7.139	15	-4.23	74
376		4	max	0.805	74	0.016	106	0.173	15	2.248	74	2.096	106	3.845	74	6.066	15
377			min	-0.914	102	-0.016	70	0.014	74	-2.096	106	-2.248	74	-5.519	15	-4.227	74
378		5	max	0.81	74	0.033	106	0.346	15	1.835	74	2.083	102	3.788	74	4.727	102
379			min	-0.919	102	-0.033	70	0.028	74	-2.083	102	-1.835	74	-4.3	102	-4.164	74
380	M377	1	max	3.476	74	0.033	104	-0.027	105	7.946	74	8.422	102	15.9	74	18.522	102
381			min	-3.684	102	-0.033	72	-0.244	13	-8.422	102	-7.946	74	-16.852	102	-17.476	74
382		2	max	3.481	74	0.017	104	-0.013	105	8.249	74	8.407	106	15.965	74	19.391	102
383			min	-3.689	102	-0.017	72	-0.122	13	-8.407	106	-8.249	74	-17.642	102	-17.548	74
384		3	max	3.486	74	0.002	105	0	107	8.357	74	8.426	106	16.002	74	19.697	102
385			min	-3.694	102	-0.002	73	0	12	-8.426	106	-8.357	74	-17.92	102	-17.588	74
386		4	max	3.491	74	0.014	106	0.122	15	8.271	74	8.43	106	16.01	74	19.44	102
387			min	-3.699	102	-0.014	70	0.013	77	-8.43	106	-8.271	74	-17.687	102	-17.597	74
388		5	max	3.496	74	0.029	106	0.244	15	7.991	74	8.466	102	15.989	74	18.62	102
389			min	-3.704	102	-0.029	70	0.027	77	-8.466	102	-7.991	74	-16.941	102	-17.574	74
390	M378	1	max	2.385	13	0.062	66	0.015	73	1.162	13	-0.06	107	0	71	0	107
391			min	0.029	107	-0.064	94	-0.015	105	0.014	107	-5.083	13	0	107	0	71
392		2	max	2.349	13	0.031	66	0.007	73	1.157	13	0.071	98	0.125	73	0.125	105
393			min	0.026	107	-0.032	94	-0.007	105	-0.016	98	-5.061	13	-0.125	105	-0.125	73
394		3	max	2.314	13	0	76	0	71	1.144	13	0.289	98	0.167	73	0.167	105
395			min	0.023	107	-0.005	13	0	107	-0.066	98	-5.007	13	-0.167	105	-0.167	73
396		4	max	2.278	13	0.031	68	0.007	71	1.124	13	0.085	98	0.125	73	0.125	105
397			min	0.02	107	-0.032	92	-0.007	107	-0.019	98	-4.92	13	-0.125	105	-0.125	73
398		5	max	2.243	13	0.062	68	0.015	71	1.097	13	-0.036	107	0	71	0	107
399			min	0.017	107	-0.064	92	-0.015	107	0.008	107	-4.801	13	0	107	0	71
400	M379	1	max	1.962	16	0.062	66	0.015	73	0.955	16	0.057	75	0	71	0	107
401			min	-0.026	75	-0.064	94	-0.015	105	-0.013	75	-4.18	16	0	107	0	71
402		2	max	1.927	16	0.031	66	0.007	73	0.95	13	0.063	75	0.125	73	0.125	105
403			min	-0.029	75	-0.032	94	-0.007	105	-0.014	75	-4.156	13	-0.125	105	-0.125	73
404		3	max	1.891	16	0	76	0	71	0.937	13	0.154	68	0.167	73	0.167	105
405			min	-0.032	75	-0.005	13	0	107	-0.035	68	-4.102	13	-0.167	105	-0.167	73
406		4	max	1.856	16	0.031	68	0.007	71	0.917	13	0.075	75	0.125	73	0.125	105
407			min	-0.035	75	-0.032	92	-0.007	107	-0.017	75	-4.015	13	-0.125	105	-0.125	73
408		5	max	1.82	16	0.062	68	0.015	71	0.891	16	0.081	75	0	71	0	107
409			min	-0.038	75	-0.064	92	-0.015	107	-0.019	75	-3.898	16	0	107	0	71
410	M380	1	max	2.533	15	0.062	68	0.015	105	1.234	15	-0.31	107	0	107	0	71
411			min	0.145	107	-0.064	92	-0.015	73	0.071	107	-5.4	15	0	71	0	107
412		2	max	2.498	15	0.031	68	0.007	105	1.229	15	0.059	96	0.125	105	0.125	73
413			min	0.142	107	-0.032	92	-0.007	73	-0.014	96	-5.378	15	-0.125	73	-0.125	105
414		3	max	2.462	15	0	74	0	107	1.216	15	0.277	96	0.167	105	0.167	73
415			min	0.139	107	-0.005	15	0	71	-0.063	96	-5.323	15	-0.167	73	-0.167	105
416		4	max	2.426	15	0.031	66	0.007	107	1.196	15	0.073	96	0.125	105	0.125	73
417			min	0.136	107	-0.032	94	-0.007	71	-0.017	96	-5.236	15	-0.125	73	-0.125	105
418		5	max	2.391	15	0.062	66	0.015	107	1.169	15	-0.286	107	0	107	0	71
419			min	0.133	107	-0.064	94	-0.015	71	0.065	107	-5.117	15	0	71	0	107
420	M381	1	max	2.867	15	0.062	68	0.015	105	1.397	15	-0.387	75	0	107	0	71
421			min	0.182	75	-0.064	92	-0.015	73	0.089	75	-6.114	15	0	71	0	107
422		2	max	2.832	15	0.031	68	0.007	105	1.392	15	-0.229	66	0.125	105	0.125	73
423			min	0.179	75	-0.032	92	-0.007	73	0.052	66	-6.092	15	-0.125	73	-0.125	105
424		3	max	2.796	15	0	74	0	107	1.38	15	-0.012	66	0.167	105	0.167	73

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
425			min	0.176	75	-0.005	15	0	71	0.003	66	-6.037	15	-0.167	73	-0.167	105
426		4	max	2.761	15	0.031	66	0.007	107	1.36	15	-0.215	66	0.125	105	0.125	73
427			min	0.173	75	-0.032	94	-0.007	71	0.049	66	-5.95	15	-0.125	73	-0.125	105
428		5	max	2.725	15	0.062	66	0.015	107	1.332	15	-0.363	75	0	107	0	71
429			min	0.17	75	-0.064	94	-0.015	71	0.083	75	-5.831	15	0	71	0	107
430	M382	1	max	1.461	106	0.352	15	0.034	102	1.316	70	1.225	106	2.717	70	2.78	106
431			min	-1.57	70	0.028	107	-0.034	104	-1.225	106	-1.316	70	-2.529	106	-2.987	70
432		2	max	1.466	106	0.176	15	0.017	102	2.843	13	1.268	106	5.869	13	1.828	106
433			min	-1.575	70	0.013	107	-0.017	104	-1.268	106	-2.843	13	-1.663	106	-6.451	13
434		3	max	1.471	106	0.001	71	0	107	3.64	13	1.285	106	7.514	13	1.517	106
435			min	-1.58	70	-0.001	107	0	12	-1.285	106	-3.64	13	-1.38	106	-8.26	13
436		4	max	1.476	106	-0.013	75	0.017	40	2.843	13	1.276	106	5.869	13	1.847	106
437			min	-1.584	70	-0.176	13	-0.017	76	-1.276	106	-2.843	13	-1.68	106	-6.451	13
438		5	max	1.481	106	-0.028	75	0.034	40	1.333	70	1.242	106	2.751	70	2.817	106
439			min	-1.589	70	-0.352	13	-0.034	76	-1.242	106	-1.333	70	-2.563	106	-3.024	70
440	M383	1	max	1.884	106	0.352	15	0.034	46	1.865	70	1.58	106	3.849	70	3.584	106
441			min	-2.224	70	0.028	107	-0.034	40	-1.58	106	-1.865	70	-3.261	106	-4.231	70
442		2	max	1.889	106	0.176	15	0.017	46	3.166	13	1.622	106	6.536	13	2.632	106
443			min	-2.229	70	0.013	107	-0.017	40	-1.622	106	-3.166	13	-2.394	106	-7.184	13
444		3	max	1.894	106	0.001	71	0	107	3.963	13	1.639	106	8.181	13	2.321	106
445			min	-2.234	70	-0.001	107	0	12	-1.639	106	-3.963	13	-2.111	106	-8.993	13
446		4	max	1.899	106	-0.013	75	0.017	44	3.166	13	1.63	106	6.536	13	2.651	106
447			min	-2.239	70	-0.176	13	-0.017	72	-1.63	106	-3.166	13	-2.411	106	-7.184	13
448		5	max	1.904	106	-0.028	75	0.034	44	1.881	70	1.596	106	3.883	70	3.622	106
449			min	-2.243	70	-0.352	13	-0.034	72	-1.596	106	-1.881	70	-3.295	106	-4.268	70
450	M384	1	max	2.503	106	0.251	13	0.031	76	2.381	70	2.117	106	4.764	70	4.655	106
451			min	-2.816	70	0.026	107	-0.031	44	-2.117	106	-2.381	70	-4.235	106	-5.236	70
452		2	max	2.508	106	0.125	13	0.016	76	2.769	70	2.142	106	4.914	70	4.023	106
453			min	-2.821	70	0.013	107	-0.016	44	-2.142	106	-2.769	70	-3.661	106	-5.401	70
454		3	max	2.513	106	0.001	71	0	107	2.901	70	2.154	106	4.97	70	3.819	106
455			min	-2.826	70	-0.001	107	0	12	-2.153	106	-2.901	70	-3.475	106	-5.462	70
456		4	max	2.518	106	-0.013	75	0.016	100	2.777	70	2.15	106	4.931	70	4.042	106
457			min	-2.83	70	-0.125	15	-0.016	42	-2.15	106	-2.777	70	-3.677	106	-5.42	70
458		5	max	2.523	106	-0.026	75	0.031	100	2.397	70	2.133	106	4.797	70	4.692	106
459			min	-2.835	70	-0.251	15	-0.031	42	-2.133	106	-2.397	70	-4.268	106	-5.272	70
460	M385	1	max	2.83	106	0.251	13	0.031	46	2.751	70	2.393	106	5.505	70	5.262	106
461			min	-3.254	70	0.026	107	-0.031	70	-2.393	106	-2.751	70	-4.788	106	-6.051	70
462		2	max	2.835	106	0.125	13	0.016	46	3.139	70	2.418	106	5.655	70	4.631	106
463			min	-3.259	70	0.013	107	-0.016	70	-2.418	106	-3.139	70	-4.213	106	-6.216	70
464		3	max	2.84	106	0.001	75	0	107	3.271	70	2.43	106	5.711	70	4.426	106
465			min	-3.264	70	-0.001	103	0	12	-2.43	106	-3.271	70	-4.027	106	-6.277	70
466		4	max	2.845	106	-0.013	75	0.016	104	3.147	70	2.427	106	5.672	70	4.649	106
467			min	-3.269	70	-0.125	15	-0.016	72	-2.427	106	-3.147	70	-4.23	106	-6.234	70
468		5	max	2.85	106	-0.026	75	0.031	104	2.768	70	2.409	106	5.538	70	5.299	106
469			min	-3.274	70	-0.251	15	-0.031	72	-2.409	106	-2.768	70	-4.821	106	-6.087	70
470	M386	1	max	1.108	72	0.352	15	0.034	44	0.808	104	0.929	72	1.668	104	2.108	72
471			min	-0.964	104	0.028	75	-0.034	46	-0.929	72	-0.808	104	-1.918	72	-1.834	104
472		2	max	1.113	72	0.176	15	0.017	44	2.217	13	0.494	68	4.576	13	2.125	76
473			min	-0.969	104	0.013	75	-0.017	46	-0.494	68	-2.217	13	-1.933	76	-5.03	13
474		3	max	1.118	72	0.001	107	0	107	3.014	13	0.42	68	6.222	13	2.163	76
475			min	-0.974	104	-0.001	71	0	12	-0.42	68	-3.014	13	-1.968	76	-6.839	13
476		4	max	1.123	72	-0.013	107	0.017	72	2.217	13	0.494	68	4.576	13	2.143	76
477			min	-0.978	104	-0.176	13	-0.017	104	-0.494	68	-2.217	13	-1.95	76	-5.03	13
478		5	max	1.128	72	-0.028	107	0.034	72	0.824	104	0.946	72	1.702	104	2.146	72
479			min	-0.983	104	-0.352	13	-0.034	104	-0.946	72	-0.824	104	-1.952	72	-1.871	104

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
480	M387	1	max	1.491	76	0.352	15	0.034	44	1.353	100	1.25	76	2.792	100	2.836	76
481			min	-1.613	100	0.028	75	-0.034	42	-1.25	76	-1.353	100	-2.58	76	-3.069	100
482		2	max	1.496	76	0.176	15	0.017	44	2.537	13	0.83	76	5.237	13	2.933	76
483			min	-1.618	100	0.013	75	-0.017	42	-0.83	76	-2.537	13	-2.668	76	-5.756	13
484		3	max	1.501	76	0.001	107	0	107	3.334	13	0.693	76	6.882	13	2.972	76
485			min	-1.623	100	-0.001	71	0	12	-0.693	76	-3.334	13	-2.703	76	-7.565	13
486		4	max	1.506	76	-0.013	107	0.017	76	2.537	13	0.839	76	5.237	13	2.952	76
487			min	-1.628	100	-0.176	13	-0.017	70	-0.839	76	-2.537	13	-2.685	76	-5.756	13
488		5	max	1.51	76	-0.028	107	0.034	76	1.369	100	1.266	76	2.826	100	2.874	76
489			min	-1.633	100	-0.352	13	-0.034	70	-1.266	76	-1.369	100	-2.614	76	-3.106	100
490	M388	1	max	2.289	76	0.251	13	0.031	100	2.12	100	1.935	76	4.242	100	4.256	76
491			min	-2.507	100	0.026	75	-0.031	106	-1.935	76	-2.12	100	-3.872	76	-4.662	100
492		2	max	2.294	76	0.125	13	0.016	100	2.195	100	1.648	76	5.018	100	4.313	76
493			min	-2.512	100	0.013	75	-0.016	106	-1.648	76	-2.195	100	-3.924	76	-5.515	100
494		3	max	2.299	76	0.001	107	0	107	2.223	100	1.555	76	5.282	100	4.337	76
495			min	-2.517	100	-0.001	71	0	12	-1.555	76	-2.223	100	-3.946	76	-5.806	100
496		4	max	2.304	76	-0.013	107	0.016	102	2.203	100	1.656	76	5.035	100	4.331	76
497			min	-2.522	100	-0.125	15	-0.016	74	-1.656	76	-2.203	100	-3.94	76	-5.534	100
498		5	max	2.309	76	-0.026	107	0.031	102	2.136	100	1.952	76	4.275	100	4.293	76
499			min	-2.527	100	-0.251	15	-0.031	74	-1.952	76	-2.136	100	-3.906	76	-4.699	100
500	M389	1	max	2.567	76	0.251	13	0.031	100	2.388	100	2.17	76	4.778	100	4.773	76
501			min	-2.824	100	0.026	75	-0.031	46	-2.17	76	-2.388	100	-4.343	76	-5.252	100
502		2	max	2.572	76	0.125	13	0.016	100	2.463	100	1.883	76	5.555	100	4.83	76
503			min	-2.829	100	0.013	75	-0.016	46	-1.883	76	-2.463	100	-4.394	76	-6.105	100
504		3	max	2.577	76	0.001	107	0	107	2.491	100	1.79	76	5.819	100	4.854	76
505			min	-2.834	100	-0.001	71	0	12	-1.79	76	-2.491	100	-4.417	76	-6.396	100
506		4	max	2.582	76	-0.013	107	0.016	72	2.471	100	1.891	76	5.571	100	4.848	76
507			min	-2.839	100	-0.125	15	-0.016	74	-1.891	76	-2.471	100	-4.411	76	-6.123	100
508		5	max	2.587	76	-0.026	107	0.031	72	2.405	100	2.187	76	4.811	100	4.81	76
509			min	-2.844	100	-0.251	15	-0.031	74	-2.187	76	-2.405	100	-4.376	76	-5.288	100
510	M390	1	max	1.596	100	0.149	15	0.023	101	1.231	76	1.349	100	2.463	76	2.967	100
511			min	-1.456	76	0.015	76	-0.023	73	-1.349	100	-1.231	76	-2.699	100	-2.707	76
512		2	max	1.591	100	0.075	15	0.012	101	1.293	72	1.264	100	2.588	72	2.781	100
513			min	-1.451	76	0.007	76	-0.012	73	-1.264	100	-1.293	72	-2.53	100	-2.844	72
514		3	max	1.586	100	0.001	104	0	107	1.316	72	1.235	104	2.633	72	2.716	104
515			min	-1.446	76	-0.001	72	0	12	-1.235	104	-1.316	72	-2.471	104	-2.894	72
516		4	max	1.581	100	-0.007	104	0.012	103	1.285	72	1.256	100	2.571	72	2.763	100
517			min	-1.441	76	-0.075	13	-0.012	75	-1.256	100	-1.285	72	-2.513	100	-2.826	72
518		5	max	1.576	100	-0.015	104	0.023	103	1.214	76	1.333	100	2.43	76	2.931	100
519			min	-1.436	76	-0.149	13	-0.023	75	-1.333	100	-1.214	76	-2.666	100	-2.67	76
520	M392	1	max	0.727	100	0.195	15	0.023	71	0.614	72	0.61	100	1.267	72	1.384	100
521			min	-0.732	72	0.015	76	-0.023	103	-0.61	100	-0.614	72	-1.259	100	-1.393	72
522		2	max	0.722	100	0.098	15	0.011	71	0.816	15	0.534	104	1.685	15	1.213	104
523			min	-0.727	72	0.007	76	-0.011	103	-0.534	104	-0.816	15	-1.103	104	-1.852	15
524		3	max	0.717	100	0.001	104	0	107	1.062	15	0.511	104	2.191	15	1.159	104
525			min	-0.722	72	-0.001	72	0	12	-0.511	104	-1.062	15	-1.054	104	-2.409	15
526		4	max	0.713	100	-0.007	104	0.011	73	0.816	15	0.526	104	1.685	15	1.194	104
527			min	-0.717	72	-0.098	13	-0.011	101	-0.526	104	-0.816	15	-1.086	104	-1.852	15
528		5	max	0.708	100	-0.015	104	0.023	73	0.597	72	0.593	100	1.233	72	1.346	100
529			min	-0.713	72	-0.195	13	-0.023	101	-0.593	100	-0.597	72	-1.225	100	-1.356	72
530	M394	1	max	1.065	70	0.195	15	0.023	101	0.785	106	0.893	70	1.62	106	2.027	70
531			min	-0.936	106	0.015	106	-0.023	103	-0.893	70	-0.785	106	-1.844	70	-1.78	106
532		2	max	1.061	70	0.098	15	0.011	101	0.859	102	0.797	74	1.772	102	1.808	74
533			min	-0.931	106	0.007	106	-0.011	103	-0.797	74	-0.859	102	-1.645	74	-1.948	102
534		3	max	1.056	70	0.001	74	0	107	0.888	102	0.773	74	1.833	102	1.754	74

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
535			min	-0.926	106	-0.001	102	0	12	-0.773	74	-0.888	102	-1.596	74	-2.015	102
536		4	max	1.051	70	-0.007	74	0.011	73	0.85	102	0.789	74	1.756	102	1.79	74
537			min	-0.921	106	-0.098	13	-0.011	71	-0.789	74	-0.85	102	-1.628	74	-1.93	102
538		5	max	1.046	70	-0.015	74	0.023	73	0.768	106	0.877	70	1.586	106	1.99	70
539			min	-0.916	106	-0.195	13	-0.023	71	-0.877	70	-0.768	106	-1.81	70	-1.743	106
540	M396	1	max	1.773	70	0.149	15	0.023	41	1.337	106	1.499	70	2.675	106	3.296	70
541			min	-1.581	106	0.015	76	-0.023	103	-1.499	70	-1.337	106	-2.999	70	-2.94	106
542		2	max	1.768	70	0.075	15	0.012	41	1.384	102	1.414	70	2.77	102	3.11	70
543			min	-1.576	106	0.007	76	-0.012	103	-1.414	70	-1.384	102	-2.83	70	-3.045	102
544		3	max	1.763	70	0.001	104	0	107	1.407	102	1.383	70	2.816	102	3.042	70
545			min	-1.571	106	-0.001	72	0	12	-1.383	70	-1.407	102	-2.768	70	-3.095	102
546		4	max	1.758	70	-0.007	104	0.012	43	1.376	102	1.406	70	2.754	102	3.092	70
547			min	-1.566	106	-0.075	13	-0.012	101	-1.406	70	-1.376	102	-2.813	70	-3.027	102
548		5	max	1.753	70	-0.015	104	0.023	43	1.32	106	1.482	70	2.641	106	3.26	70
549			min	-1.561	106	-0.149	13	-0.023	101	-1.482	70	-1.32	106	-2.966	70	-2.903	106
550	M397	1	max	-0.686	107	0.312	13	0.039	100	-0.604	107	7.895	15	15.927	15	-1.403	107
551			min	-8.971	15	0.002	107	-0.038	76	-7.895	15	0.604	107	1.219	107	-18.328	15
552		2	max	-0.696	107	0.156	13	0.02	100	-0.598	107	5.183	15	21.546	15	-1.457	107
553			min	-9.015	15	0.001	107	-0.019	76	-5.183	15	0.598	107	1.266	107	-24.794	15
554		3	max	-0.706	107	0	13	0.003	13	-0.602	107	4.304	15	23.469	15	-1.489	107
555			min	-9.058	15	0	106	0	75	-4.304	15	0.602	107	1.294	107	-27.006	15
556		4	max	-0.717	107	-0.001	77	0.02	102	-0.615	107	5.256	15	21.695	15	-1.498	107
557			min	-9.101	15	-0.156	15	-0.019	74	-5.256	15	0.615	107	1.301	107	-24.965	15
558		5	max	-0.727	107	-0.002	77	0.039	102	-0.639	107	8.042	15	16.224	15	-1.483	107
559			min	-9.145	15	-0.312	15	-0.038	74	-8.042	15	0.639	107	1.289	107	-18.669	15
560	M398	1	max	-0.334	107	-0.002	107	0.039	72	-0.294	107	7.24	13	14.606	13	-0.683	107
561			min	-8.227	13	-0.312	13	-0.038	104	-7.24	13	0.294	107	0.594	107	-16.808	13
562		2	max	-0.344	107	-0.001	107	0.02	72	-0.318	107	10.025	13	9.135	13	-0.669	107
563			min	-8.27	13	-0.156	13	-0.019	104	-10.025	13	0.318	107	0.581	107	-10.512	13
564		3	max	-0.354	107	0	106	0.003	15	-0.331	107	10.978	13	7.361	13	-0.677	107
565			min	-8.314	13	0	13	0	105	-10.978	13	0.331	107	0.589	107	-8.471	13
566		4	max	-0.364	107	0.156	15	0.02	70	-0.335	107	10.099	13	9.284	13	-0.709	107
567			min	-8.357	13	0.001	77	-0.019	106	-10.099	13	0.335	107	0.616	107	-10.683	13
568		5	max	-0.375	107	0.312	15	0.039	70	-0.329	107	7.387	13	14.903	13	-0.764	107
569			min	-8.401	13	0.002	77	-0.038	106	-7.387	13	0.329	107	0.663	107	-17.149	13
570	M399	1	max	-0.163	75	0.312	15	0.039	72	-0.144	75	6.368	16	12.847	16	-0.334	75
571			min	-7.236	16	0.002	75	-0.038	104	-6.368	16	0.144	75	0.29	75	-14.784	16
572		2	max	-0.173	75	0.156	15	0.02	72	-0.138	75	3.656	16	18.467	16	-0.389	75
573			min	-7.279	16	0.001	75	-0.019	104	-3.656	16	0.138	75	0.338	75	-21.25	16
574		3	max	-0.183	75	0	15	0.003	15	-0.035	74	2.777	16	20.389	16	-0.42	75
575			min	-7.323	16	0	74	0	107	-2.777	16	0.035	74	0.365	75	-23.462	16
576		4	max	-0.193	75	-0.001	105	0.02	70	-0.155	75	3.73	16	18.615	16	-0.429	75
577			min	-7.366	16	-0.156	13	-0.019	106	-3.73	16	0.155	75	0.373	75	-21.421	16
578		5	max	-0.204	75	-0.002	105	0.039	70	-0.178	75	6.515	16	13.144	16	-0.414	75
579			min	-7.409	16	-0.312	13	-0.038	106	-6.515	16	0.178	75	0.36	75	-15.125	16
580	M400	1	max	-0.775	75	-0.002	75	0.039	100	0	15	0	104	0	102	0	74
581			min	-9.937	16	-0.312	13	-0.039	76	0	104	0	15	0	74	0	102
582		2	max	-0.785	75	-0.001	75	0.019	100	0.142	76	2.749	13	0.286	104	6.381	13
583			min	-9.981	16	-0.156	13	-0.019	76	-2.749	13	-0.142	76	-5.545	13	-0.33	104
584		3	max	-0.795	75	0	72	0	15	0.189	76	3.665	13	0.382	104	8.508	13
585			min	-10.024	16	0	104	0	69	-3.665	13	-0.189	76	-7.393	13	-0.439	104
586		4	max	-0.806	75	0.156	15	0.019	102	0.142	76	2.749	13	0.286	74	6.381	13
587			min	-10.068	16	0.001	105	-0.019	74	-2.749	13	-0.142	76	-5.545	13	-0.33	74
588		5	max	-0.816	75	0.312	15	0.039	102	0	76	0	100	0	15	0	104
589			min	-10.111	16	0.002	105	-0.039	74	0	100	0	76	0	104	0	15

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
590	M401	1	max	3.976	74	0.033	72	-0.027	104	9.089	74	9.571	102	18.188	74	21.05	102
591			min	-4.187	102	-0.033	104	-0.244	15	-9.571	102	-9.089	74	-19.152	102	-19.991	74
592		2	max	3.971	74	0.017	72	-0.013	104	9.057	74	9.206	106	17.582	74	21.182	102
593			min	-4.182	102	-0.017	104	-0.122	15	-9.206	106	-9.057	74	-19.271	102	-19.325	74
594		3	max	3.966	74	0.002	73	0	107	9.038	74	9.098	106	17.366	74	21.209	102
595			min	-4.177	102	-0.002	105	0	12	-9.098	106	-9.038	74	-19.296	102	-19.087	74
596		4	max	3.962	74	0.014	70	0.122	13	9.034	74	9.184	106	17.538	74	21.133	102
597			min	-4.172	102	-0.014	106	0.013	76	-9.184	106	-9.034	74	-19.227	102	-19.276	74
598		5	max	3.957	74	0.029	70	0.244	13	9.045	74	9.526	102	18.098	74	20.952	102
599			min	-4.167	102	-0.029	106	0.027	76	-9.526	102	-9.045	74	-19.062	102	-19.892	74
600	M402	1	max	4.507	104	0.029	70	-0.027	77	10.304	104	10.957	102	20.618	104	24.097	102
601			min	-4.793	102	-0.029	102	-0.244	13	-10.957	102	-10.304	104	-21.924	102	-22.662	104
602		2	max	4.503	104	0.014	70	-0.013	77	10.584	104	10.881	106	20.638	104	24.916	102
603			min	-4.788	102	-0.014	102	-0.122	13	-10.881	106	-10.584	104	-22.669	102	-22.684	104
604		3	max	4.498	104	0.002	71	0	107	10.67	104	10.877	106	20.63	104	25.173	102
605			min	-4.783	102	-0.002	103	0	12	-10.877	106	-10.67	104	-22.903	102	-22.675	104
606		4	max	4.493	104	0.017	72	0.122	15	10.562	104	10.859	106	20.594	104	24.867	102
607			min	-4.778	102	-0.017	100	0.013	105	-10.858	106	-10.562	104	-22.624	102	-22.635	104
608		5	max	4.488	104	0.033	72	0.244	15	10.259	104	10.912	102	20.528	104	23.998	102
609			min	-4.773	102	-0.033	100	0.027	105	-10.912	102	-10.259	104	-21.834	102	-22.563	104
610	M403	1	max	-3.939	96	0.28	13	0.036	70	-3.465	96	22.491	15	45.375	15	-8.045	96
611			min	-25.564	15	-0.001	107	-0.036	106	-22.491	15	3.465	96	6.991	96	-52.214	15
612		2	max	-3.943	96	0.14	13	0.018	70	-3.278	96	20.24	15	50.064	15	-8.495	96
613			min	-25.607	15	0	107	-0.018	106	-20.24	15	3.278	96	7.382	96	-57.61	15
614		3	max	-3.946	96	0	70	0.003	15	-3.217	96	19.514	15	51.676	15	-8.649	96
615			min	-25.65	15	0	106	0	105	-19.514	15	3.217	96	7.516	96	-59.465	15
616		4	max	-3.95	96	0	77	0.018	72	-3.284	96	20.313	15	50.211	15	-8.509	96
617			min	-25.694	15	-0.14	15	-0.018	104	-20.313	15	3.284	96	7.394	96	-57.78	15
618		5	max	-3.954	96	0.001	77	0.036	72	-3.478	96	22.638	15	45.67	15	-8.073	96
619			min	-25.737	15	-0.28	15	-0.036	104	-22.638	15	3.478	96	7.016	96	-52.553	15
620	M404	1	max	-3.583	98	0.001	107	0.036	102	-3.152	98	19.542	13	39.425	13	-7.318	98
621			min	-22.212	13	-0.28	13	-0.036	74	-19.542	13	3.152	98	6.36	98	-45.368	13
622		2	max	-3.587	98	0	107	0.018	102	-3.346	98	21.867	13	34.884	13	-6.883	98
623			min	-22.255	13	-0.14	13	-0.018	74	-21.867	13	3.346	98	5.981	98	-40.141	13
624		3	max	-3.59	98	0	106	0.003	13	-3.412	98	22.666	13	33.419	13	-6.742	98
625			min	-22.298	13	0	70	0	75	-22.666	13	3.412	98	5.859	98	-38.456	13
626		4	max	-3.594	98	0.14	15	0.018	100	-3.352	98	21.94	13	35.031	13	-6.897	98
627			min	-22.341	13	0	77	-0.018	76	-21.94	13	3.352	98	5.993	98	-40.311	13
628		5	max	-3.598	98	0.28	15	0.036	100	-3.164	98	19.688	13	39.72	13	-7.346	98
629			min	-22.385	13	-0.001	77	-0.036	76	-19.688	13	3.164	98	6.384	98	-45.707	13
630	M405	1	max	-4.111	98	0.001	75	0.036	70	-3.617	98	23.955	15	48.326	15	-8.396	98
631			min	-27.227	15	-0.28	15	-0.036	106	-23.954	15	3.617	98	7.296	98	-55.611	15
632		2	max	-4.115	98	0	75	0.018	70	-3.81	98	26.279	15	43.785	15	-7.961	98
633			min	-27.27	15	-0.14	15	-0.018	106	-26.279	15	3.81	98	6.918	98	-50.384	15
634		3	max	-4.118	98	0	74	0.003	15	-3.877	98	27.078	15	42.32	15	-7.82	98
635			min	-27.314	15	0	102	0	107	-27.078	15	3.877	98	6.796	98	-48.699	15
636		4	max	-4.122	98	0.14	13	0.018	72	-3.816	98	26.352	15	43.932	15	-7.975	98
637			min	-27.357	15	0	105	-0.018	104	-26.352	15	3.816	98	6.93	98	-50.554	15
638		5	max	-4.125	98	0.28	13	0.036	72	-3.629	98	24.101	15	48.621	15	-8.424	98
639			min	-27.4	15	-0.001	105	-0.036	104	-24.101	15	3.629	98	7.321	98	-55.95	15
640	M406	1	max	-3.752	67	0.28	15	0.036	102	-3.301	67	18.943	13	38.217	13	-7.663	67
641			min	-21.531	13	-0.001	105	-0.036	74	-18.943	13	3.301	67	6.659	67	-43.977	13
642		2	max	-3.756	67	0.14	15	0.018	102	-3.113	67	16.692	13	42.906	13	-8.112	67
643			min	-21.574	13	0	105	-0.018	74	-16.692	13	3.113	67	7.05	67	-49.373	13
644		3	max	-3.759	67	0	72	0.003	13	-3.053	67	15.966	13	44.518	13	-8.267	67

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
645			min	-21.617	13	0	104	0	77	-15.966	13	3.053	67	7.184	67	-51.228	13
646		4	max	-3.763	67	0	75	0.018	100	-3.119	67	16.765	13	43.054	13	-8.127	67
647			min	-21.661	13	-0.14	13	-0.018	76	-16.765	13	3.119	67	7.062	67	-49.543	13
648		5	max	-3.766	67	0.001	75	0.036	100	-3.313	67	19.09	13	38.512	13	-7.691	67
649			min	-21.704	13	-0.28	13	-0.036	76	-19.09	13	3.313	67	6.684	67	-44.317	13
650	M409	1	max	-3.329	96	0.28	13	0.036	70	-2.929	96	19.148	15	38.63	15	-6.8	96
651			min	-21.763	15	-0.001	107	-0.036	106	-19.148	15	2.929	96	5.909	96	-44.452	15
652		2	max	-3.333	96	0.14	13	0.018	70	-2.742	96	16.897	15	43.319	15	-7.249	96
653			min	-21.806	15	0	107	-0.018	106	-16.897	15	2.742	96	6.3	96	-49.848	15
654		3	max	-3.337	96	0	70	0.003	15	-2.681	96	16.171	15	44.931	15	-7.404	96
655			min	-21.85	15	0	106	0	105	-16.171	15	2.681	96	6.434	96	-51.703	15
656		4	max	-3.34	96	0	77	0.018	72	-2.748	96	16.97	15	43.466	15	-7.263	96
657			min	-21.893	15	-0.14	15	-0.018	104	-16.97	15	2.748	96	6.312	96	-50.018	15
658		5	max	-3.344	96	0.001	77	0.036	72	-2.941	96	19.294	15	38.925	15	-6.828	96
659			min	-21.936	15	-0.28	15	-0.036	104	-19.294	15	2.941	96	5.934	96	-44.792	15
660	M410	1	max	-3.202	98	0.001	107	0.036	102	-2.817	98	16.252	13	32.787	13	-6.54	98
661			min	-18.471	13	-0.28	13	-0.036	74	-16.252	13	2.817	98	5.683	98	-37.729	13
662		2	max	-3.206	98	0	107	0.018	102	-3.011	98	18.576	13	28.246	13	-6.105	98
663			min	-18.515	13	-0.14	13	-0.018	74	-18.576	13	3.011	98	5.305	98	-32.503	13
664		3	max	-3.209	98	0	106	0.003	13	-3.077	98	19.375	13	26.781	13	-5.964	98
665			min	-18.558	13	0	70	0	75	-19.375	13	3.077	98	5.183	98	-30.817	13
666		4	max	-3.213	98	0.14	15	0.018	100	-3.017	98	18.649	13	28.393	13	-6.119	98
667			min	-18.601	13	0	77	-0.018	76	-18.649	13	3.017	98	5.317	98	-32.673	13
668		5	max	-3.216	98	0.28	15	0.036	100	-2.829	98	16.398	13	33.082	13	-6.568	98
669			min	-18.644	13	-0.001	77	-0.036	76	-16.398	13	2.829	98	5.708	98	-38.068	13
670	M411	1	max	-3.475	67	0.001	75	0.036	70	-3.057	67	19.269	15	38.874	15	-7.098	67
671			min	-21.901	15	-0.28	15	-0.036	106	-19.269	15	3.057	67	6.168	67	-44.733	15
672		2	max	-3.479	67	0	75	0.018	70	-3.251	67	21.593	15	34.332	15	-6.663	67
673			min	-21.944	15	-0.14	15	-0.018	106	-21.593	15	3.251	67	5.79	67	-39.507	15
674		3	max	-3.483	67	0	74	0.003	15	-3.318	67	22.392	15	32.867	15	-6.522	67
675			min	-21.987	15	0	102	0	107	-22.392	15	3.318	67	5.668	67	-37.821	15
676		4	max	-3.486	67	0.14	13	0.018	72	-3.257	67	21.666	15	34.479	15	-6.677	67
677			min	-22.031	15	0	105	-0.018	104	-21.666	15	3.257	67	5.802	67	-39.676	15
678		5	max	-3.49	67	0.28	13	0.036	72	-3.07	67	19.415	15	39.168	15	-7.126	67
679			min	-22.074	15	-0.001	105	-0.036	104	-19.415	15	3.07	67	6.193	67	-45.072	15
680	M412	1	max	-3.125	66	0.28	15	0.036	102	-2.749	66	15.593	16	31.458	16	-6.383	66
681			min	-17.722	16	-0.001	105	-0.036	74	-15.593	16	2.749	66	5.547	66	-36.2	16
682		2	max	-3.129	66	0.14	15	0.018	102	-2.562	66	13.342	16	36.148	16	-6.832	66
683			min	-17.766	16	0	105	-0.018	74	-13.342	16	2.562	66	5.937	66	-41.596	16
684		3	max	-3.132	66	0	72	0.003	13	-2.501	66	12.616	16	37.76	16	-6.987	66
685			min	-17.809	16	0	104	0	77	-12.616	16	2.501	66	6.072	66	-43.451	16
686		4	max	-3.136	66	0	75	0.018	100	-2.568	66	13.415	16	36.295	16	-6.847	66
687			min	-17.852	16	-0.14	13	-0.018	76	-13.415	16	2.568	66	5.95	66	-41.766	16
688		5	max	-3.14	66	0.001	75	0.036	100	-2.762	66	15.739	16	31.753	16	-6.411	66
689			min	-17.896	16	-0.28	13	-0.036	76	-15.739	16	2.762	66	5.571	66	-36.539	16
690	M413	1	max	-0.093	107	0.312	13	0.039	100	-0.083	107	4.101	15	8.274	15	-0.192	107
691			min	-4.659	15	0.002	107	-0.038	76	-4.101	15	0.083	107	0.167	107	-9.521	15
692		2	max	-0.103	107	0.156	13	0.02	100	-0.076	107	2.079	71	13.894	15	-0.247	107
693			min	-4.702	15	0.001	107	-0.019	76	-2.079	71	0.076	107	0.214	107	-15.988	15
694		3	max	-0.114	107	0	13	0.003	13	-0.08	107	1.905	71	15.816	15	-0.278	107
695			min	-4.746	15	0	106	0	75	-1.905	71	0.08	107	0.242	107	-18.2	15
696		4	max	-0.124	107	-0.001	77	0.02	102	-0.094	107	2.076	71	14.042	15	-0.287	107
697			min	-4.789	15	-0.156	15	-0.019	74	-2.076	71	0.094	107	0.249	107	-16.158	15
698		5	max	-0.134	107	-0.002	77	0.039	102	-0.117	107	4.248	15	8.571	15	-0.272	107
699			min	-4.833	15	-0.312	15	-0.038	74	-4.248	15	0.117	107	0.237	107	-9.863	15

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
700	M414	1	max	0.223	107	-0.002	107	0.039	72	0.195	107	3.627	13	7.317	13	0.453	107
701			min	-4.12	13	-0.312	13	-0.038	104	-3.627	13	-0.195	107	-0.394	107	-8.42	13
702		2	max	0.213	107	-0.001	107	0.02	72	0.172	107	6.412	13	3.99	71	0.468	107
703			min	-4.163	13	-0.156	13	-0.019	104	-6.412	13	-0.172	107	-0.407	107	-4.591	71
704		3	max	0.202	107	0	106	0.003	15	0.158	107	7.365	13	3.637	71	0.493	19
705			min	-4.207	13	0	13	0	105	-7.365	13	-0.158	107	-0.428	19	-4.186	71
706		4	max	0.192	107	0.156	15	0.02	70	0.154	107	6.486	13	3.984	71	0.428	107
707			min	-4.25	13	0.001	77	-0.019	106	-6.486	13	-0.154	107	-0.372	107	-4.584	71
708		5	max	0.182	107	0.312	15	0.039	70	0.161	107	3.774	13	7.614	13	0.373	107
709			min	-4.294	13	0.002	77	-0.038	106	-3.774	13	-0.161	107	-0.324	107	-8.762	13
710	M415	1	max	-0.193	75	-0.002	75	0.039	100	-0.17	75	4.681	16	9.443	16	-0.395	75
711			min	-5.317	16	-0.312	15	-0.038	76	-4.681	16	0.17	75	0.343	75	-10.866	16
712		2	max	-0.203	75	-0.001	75	0.02	100	-0.194	75	7.466	16	4.467	70	-0.175	76
713			min	-5.361	16	-0.156	15	-0.019	76	-7.466	16	0.194	75	0.152	76	-5.14	70
714		3	max	-0.213	75	0	74	0.003	13	-0.207	75	8.419	16	4.48	70	0.237	76
715			min	-5.404	16	0	102	0	77	-8.419	16	0.207	75	-0.206	76	-5.155	70
716		4	max	-0.223	75	0.156	13	0.02	102	-0.211	75	7.539	16	4.485	70	-0.187	76
717			min	-5.448	16	0.001	105	-0.019	74	-7.539	16	0.211	75	0.163	76	-5.161	70
718		5	max	-0.233	75	0.312	13	0.039	102	-0.205	75	4.828	16	9.739	16	-0.475	75
719			min	-5.491	16	0.002	105	-0.038	74	-4.828	16	0.205	75	0.413	75	-11.207	16
720	M416	1	max	0.364	75	0.312	15	0.039	72	0.319	75	2.77	15	5.589	15	0.741	75
721			min	-3.146	15	0.002	75	-0.038	104	-2.77	15	-0.319	75	-0.644	75	-6.431	15
722		2	max	0.353	75	0.156	15	0.02	72	0.336	74	1.761	102	11.208	15	0.686	75
723			min	-3.189	15	0.001	75	-0.019	104	-1.761	102	-0.336	74	-0.596	75	-12.897	15
724		3	max	0.343	75	0	102	0.003	15	1.016	17	1.767	102	13.13	15	0.655	75
725			min	-3.233	15	0	74	0	107	-1.767	102	-1.016	17	-0.569	75	-15.11	15
726		4	max	0.333	75	-0.001	105	0.02	70	0.33	74	1.77	102	11.356	15	0.646	75
727			min	-3.276	15	-0.156	13	-0.019	106	-1.77	102	-0.33	74	-0.561	75	-13.068	15
728		5	max	0.323	75	-0.002	105	0.039	70	0.285	75	2.917	15	5.886	15	0.661	75
729			min	-3.319	15	-0.312	13	-0.038	106	-2.917	15	-0.285	75	-0.574	75	-6.773	15
730	M95	1	max	0.566	72	2.638	15	0.963	71	0.773	72	0.644	104	0	107	0	107
731			min	-0.472	104	0.602	99	-0.963	103	-0.644	104	-0.773	72	0	12	0	12
732		2	max	0.571	72	2.557	15	0.956	71	5.834	15	-0.916	96	14.411	71	14.409	103
733			min	-0.477	104	0.59	99	-0.956	103	0.916	96	-5.834	15	-14.409	103	-14.411	71
734		3	max	1.772	72	2.476	15	0.949	71	11.918	72	-2.157	96	28.717	71	28.713	103
735			min	-1.677	104	-2.203	41	-0.949	103	2.157	96	-11.918	72	-28.713	103	-28.717	71
736		4	max	1.777	72	-0.59	99	0.956	103	7.195	72	-0.513	104	14.411	71	14.409	103
737			min	-1.682	104	-2.557	15	-0.956	71	0.513	104	-7.195	72	-14.409	103	-14.411	71
738		5	max	1.782	72	-0.602	99	0.963	103	2.433	72	2.304	104	0	107	0	107
739			min	-1.687	104	-2.638	15	-0.963	71	-2.304	104	-2.433	72	0	12	0	12
740	M96	1	max	0.34	102	2.555	15	0.935	71	0.465	102	0.36	74	0	107	0	107
741			min	-0.263	74	0.583	67	-0.935	103	-0.36	74	-0.465	102	0	12	0	12
742		2	max	0.345	102	2.474	15	0.928	71	5.477	15	-0.933	66	13.98	71	13.984	103
743			min	-0.268	74	0.57	67	-0.928	103	0.933	66	-5.477	15	-13.984	103	-13.98	71
744		3	max	1.506	102	2.392	15	0.921	71	11.227	102	-2.133	66	27.855	71	27.863	103
745			min	-1.429	74	-2.128	100	-0.921	103	2.133	66	-11.227	102	-27.863	103	-27.855	71
746		4	max	1.511	102	-0.57	67	0.928	103	6.668	102	-0.627	66	13.98	71	13.984	103
747			min	-1.434	74	-2.474	15	-0.928	71	0.627	66	-6.668	102	-13.984	103	-13.98	71
748		5	max	1.516	102	-0.583	67	0.935	103	2.07	102	1.965	74	0	107	0	107
749			min	-1.439	74	-2.555	15	-0.935	71	-1.965	74	-2.07	102	0	12	0	12
750	M530	1	max	2.208	15	2.372	100	2.519	103	0	107	0	107	0	107	0	107
751			min	-0.663	104	-2.337	72	-2.518	71	0	12	0	12	0	12	0	12
752		2	max	2.177	15	2.339	100	0.348	71	3.622	100	3.575	72	17.649	103	17.647	71
753			min	-0.66	104	-2.313	72	-0.348	103	-3.575	72	-3.622	100	-17.647	71	-17.649	103
754		3	max	2.155	15	2.318	100	0.357	71	7.197	100	7.109	72	12.568	103	12.573	71

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
755			min	-0.664	104	-2.292	72	-0.357	103	-7.109	72	-7.197	100	-12.573	71	-12.568	103
756		4	max	2.059	15	1.46	70	0.714	71	3.964	100	3.886	72	5.839	103	5.846	71
757			min	-0.005	104	-1.682	102	-0.714	103	-3.886	72	-3.964	100	-5.846	71	-5.839	103
758		5	max	0	107	0	100	0	13	0	107	0	107	0	107	0	107
759			min	0	12	0	72	0	107	0	12	0	12	0	12	0	12
760	M531	1	max	2.697	13	4.646	102	2.63	71	0	107	0	107	0	107	0	107
761			min	-0.554	106	-4.621	70	-2.642	103	0	12	0	12	0	12	0	12
762		2	max	2.635	13	1.589	102	0.355	103	5.024	102	5.078	70	18.501	71	18.556	103
763			min	-0.573	106	-1.699	70	-0.354	71	-5.078	70	-5.024	102	-18.556	103	-18.501	71
764		3	max	2.547	13	1.495	102	0.398	103	7.28	102	7.694	70	13.04	71	13.076	103
765			min	-0.591	106	-1.598	70	-0.397	71	-7.694	70	-7.28	102	-13.076	103	-13.04	71
766		4	max	2.299	13	1.315	76	0.714	103	3.471	102	3.72	70	5.791	71	5.807	103
767			min	0.036	106	-1.648	100	-0.712	71	-3.72	70	-3.471	102	-5.807	103	-5.791	71
768		5	max	0	107	0	102	0	107	0	107	0	107	0	107	0	107
769			min	0	12	0	70	0	14	0	12	0	12	0	12	0	12
770	M532	1	max	2.705	13	3.794	102	0.026	13	0	107	0	107	0	107	0	107
771			min	-0.225	76	-3.771	70	0	76	0	12	0	12	0	12	0	12
772		2	max	2.642	13	1.086	102	0.043	75	3.956	102	4.049	70	0.316	71	0.251	107
773			min	-0.253	76	-1.245	70	-0.044	103	-4.049	70	-3.956	102	-0.251	107	-0.316	71
774		3	max	2.586	13	1.031	102	0.021	75	5.531	102	5.953	70	0.747	71	0.697	107
775			min	-0.264	76	-1.186	70	-0.022	103	-5.953	70	-5.531	102	-0.697	107	-0.747	71
776		4	max	2.351	13	1.214	76	0.068	107	2.617	102	2.84	70	0.563	71	0.54	107
777			min	0.156	68	-1.584	100	-0.07	71	-2.84	70	-2.617	102	-0.54	107	-0.563	71
778		5	max	0	107	0	102	0	15	0	107	0	107	0	107	0	107
779			min	0	12	0	70	0	76	0	12	0	12	0	12	0	12
780	M533	1	max	2.088	15	1.827	100	0.001	74	0	107	0	107	0	107	0	107
781			min	-0.324	74	-1.798	72	-0.017	15	0	12	0	12	0	12	0	12
782		2	max	2.058	15	1.789	100	0.03	103	2.783	100	2.733	72	0.169	107	0.198	71
783			min	-0.332	74	-1.754	72	-0.028	75	-2.733	72	-2.783	100	-0.198	71	-0.169	107
784		3	max	2.036	15	1.768	100	0.021	103	5.513	100	5.409	72	0.522	107	0.537	71
785			min	-0.337	74	-1.732	72	-0.019	75	-5.409	72	-5.513	100	-0.537	71	-0.522	107
786		4	max	1.968	15	1.388	70	0.056	71	3.061	100	2.966	72	0.452	103	0.455	71
787			min	0.136	66	-1.593	102	-0.055	107	-2.966	72	-3.061	100	-0.455	71	-0.452	103
788		5	max	0	107	0	100	0	68	0	107	0	107	0	107	0	107
789			min	0	12	0	72	0	13	0	12	0	12	0	12	0	12
790	M534	1	max	0.399	72	0.023	75	-0.016	106	0.905	72	0.435	104	1.869	72	0.987	104
791			min	-0.192	104	-0.023	43	-0.192	16	-0.435	104	-0.905	72	-0.898	104	-2.054	72
792		2	max	0.404	72	0.011	75	-0.008	106	1.338	15	0.387	104	1.685	72	1.147	104
793			min	-0.197	104	-0.011	43	-0.096	16	-0.387	104	-1.338	15	-1.043	104	-1.853	72
794		3	max	0.409	72	0.002	76	0	107	1.579	15	0.378	104	1.64	72	1.217	104
795			min	-0.202	104	-0.002	74	0	12	-0.378	104	-1.579	15	-1.107	104	-1.802	72
796		4	max	0.414	72	0.011	77	0.096	14	1.338	15	0.409	104	1.731	72	1.197	104
797			min	-0.207	104	-0.011	101	0.008	104	-0.409	104	-1.338	15	-1.089	104	-1.903	72
798		5	max	0.419	72	0.023	77	0.192	14	0.95	72	0.48	104	1.96	72	1.088	104
799			min	-0.212	104	-0.023	101	0.016	104	-0.48	104	-0.95	72	-0.99	104	-2.155	72
800	M535	1	max	2.582	102	0.123	70	0.08	102	1.937	102	5.029	74	0	107	0	107
801			min	-2.479	74	-0.118	106	-0.063	74	-1.86	74	-5.237	102	0	12	0	12
802		2	max	1.454	76	0.084	103	0.035	104	-0.449	75	7.719	16	3.936	72	3.415	104
803			min	-13.061	13	0.008	75	-0.046	72	-2.855	16	1.214	75	-3.415	104	-3.936	72
804		3	max	0.813	76	0.143	13	0.037	103	0.061	66	2.855	15	1.259	76	2.281	100
805			min	-16.496	13	-0.037	70	-0.031	102	-1.056	15	-0.164	66	-2.281	100	-1.259	76
806		4	max	0.54	76	-0.004	98	0.049	72	-0.462	98	8.166	14	3.865	72	3.025	104
807			min	-13.906	13	-0.072	71	-0.022	104	-3.02	14	1.25	98	-3.025	104	-3.865	72
808		5	max	5.365	71	0.194	75	0.06	70	4.026	71	10.675	103	0	107	0	107
809			min	-5.261	103	-0.203	103	-0.052	106	-3.948	103	-10.885	71	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
810	M536	1	max	0.065	75	0.032	72	0.033	64	0.049	75	0.154	103	0	107	0	107
811			min	-0.076	103	-0.046	17	-0.03	96	-0.057	103	-0.132	75	0	12	0	12
812		2	max	1.128	74	0.071	102	0.079	70	-0.291	74	6.289	15	4.944	102	4.67	74
813			min	-12.524	15	-0.006	17	-0.072	106	-2.326	15	0.788	74	-4.67	74	-4.944	102
814		3	max	0.849	74	0.164	15	0.019	102	0.24	76	2.482	100	1.438	76	2.771	100
815			min	-15.225	15	-0.05	72	-0.056	15	-0.918	100	-0.648	76	-2.771	100	-1.438	76
816		4	max	0.121	75	0.012	104	0.075	106	-0.251	104	7.133	15	4.685	106	4.903	70
817			min	-12.682	15	-0.086	72	-0.087	70	-2.638	15	0.678	104	-4.903	70	-4.685	106
818		5	max	5.115	71	0.187	75	0.014	96	3.838	71	10.385	103	0	107	0	107
819			min	-5.119	103	-0.195	103	-0.059	15	-3.841	103	-10.376	71	0	12	0	12
820	M537	1	max	0.133	96	0.033	106	-0.028	76	0.301	96	1.748	15	0.622	96	3.966	15
821			min	-0.771	15	-0.033	70	-0.346	13	-1.748	15	-0.301	96	-3.608	15	-0.683	96
822		2	max	0.133	96	0.016	106	-0.014	76	0.741	17	0.654	64	0.164	96	9.309	15
823			min	-0.771	15	-0.016	70	-0.173	13	-0.654	64	-0.741	17	-8.468	15	-0.18	96
824		3	max	0.133	96	0.002	107	0	107	1.501	17	0.556	64	0.012	96	11.09	15
825			min	-0.771	15	-0.002	71	0	12	-0.556	64	-1.501	17	-10.088	15	-0.013	96
826		4	max	0.133	96	0.018	104	0.173	15	0.741	17	0.654	64	0.164	96	9.309	15
827			min	-0.771	15	-0.018	72	0.014	104	-0.654	64	-0.741	17	-8.468	15	-0.18	96
828		5	max	0.133	96	0.035	104	0.346	15	0.301	96	1.748	15	0.622	96	3.966	15
829			min	-0.771	15	-0.035	72	0.028	104	-1.748	15	-0.301	96	-3.608	15	-0.683	96
830	M538	1	max	0.732	74	0.033	106	-0.028	76	1.66	74	2.193	72	3.426	74	4.977	72
831			min	-0.968	72	-0.033	70	-0.346	13	-2.193	72	-1.66	74	-4.528	72	-3.766	74
832		2	max	0.737	74	0.016	106	-0.014	76	1.632	74	1.692	76	2.574	74	8.496	15
833			min	-0.972	72	-0.016	70	-0.173	13	-1.692	76	-1.632	74	-7.729	15	-2.83	74
834		3	max	0.742	74	0.002	107	0	107	1.906	13	1.562	76	2.306	74	10.277	15
835			min	-0.977	72	-0.002	71	0	12	-1.562	76	-1.906	13	-9.349	15	-2.534	74
836		4	max	0.747	74	0.018	104	0.173	15	1.654	74	1.714	76	2.62	74	8.496	15
837			min	-0.982	72	-0.018	72	0.014	104	-1.714	76	-1.654	74	-7.729	15	-2.88	74
838		5	max	0.752	74	0.035	104	0.346	15	1.704	74	2.238	72	3.518	74	5.078	72
839			min	-0.987	72	-0.035	72	0.028	104	-2.238	72	-1.704	74	-4.619	72	-3.867	74
840	M539	1	max	3.358	104	0.029	72	-0.027	75	7.675	104	7.941	76	15.358	104	17.466	76
841			min	-3.474	76	-0.029	104	-0.244	13	-7.941	76	-7.675	104	-15.89	76	-16.88	104
842		2	max	3.362	104	0.014	72	-0.013	75	7.665	104	7.661	76	14.797	104	17.636	72
843			min	-3.479	76	-0.014	104	-0.122	13	-7.661	76	-7.665	104	-16.046	72	-16.264	104
844		3	max	3.367	104	0.002	73	0	107	7.669	104	7.575	76	14.625	104	17.713	72
845			min	-3.484	76	-0.002	105	0	12	-7.575	76	-7.669	104	-16.115	72	-16.075	104
846		4	max	3.372	104	0.017	70	0.122	15	7.687	104	7.684	76	14.842	104	17.685	72
847			min	-3.489	76	-0.017	106	0.013	107	-7.684	76	-7.687	104	-16.09	72	-16.313	104
848		5	max	3.377	104	0.033	70	0.244	15	7.72	104	7.986	76	15.447	104	17.564	76
849			min	-3.494	76	-0.033	106	0.027	107	-7.986	76	-7.72	104	-15.98	76	-16.979	104
850	M540	1	max	7.661	15	-0.023	66	0.029	74	5.749	15	-2.45	66	0	107	0	107
851			min	1.208	66	-0.228	15	-0.038	102	0.906	66	-15.543	15	0	12	0	12
852		2	max	16.398	15	0.02	66	0.018	74	2.372	15	-0.387	66	0.664	104	0.821	72
853			min	0.527	66	-0.071	102	-0.026	102	0.143	66	-6.414	15	-0.821	72	-0.664	104
854		3	max	17.907	15	0.138	13	0.052	101	1.042	15	0.033	66	4.232	13	0.571	76
855			min	0.203	74	-0.017	71	-0.102	15	-0.012	66	-2.817	15	-0.571	76	-4.232	13
856		4	max	16.357	15	0.051	72	0.027	102	1.936	15	-0.158	66	0.694	104	0.785	72
857			min	0.416	66	-0.041	17	-0.017	74	0.059	66	-5.235	15	-0.785	72	-0.694	104
858		5	max	7.575	15	0.239	15	0.041	102	5.684	15	-1.481	75	0	107	0	107
859			min	0.73	75	0.021	66	-0.027	74	0.548	75	-15.369	15	0	12	0	12
860	M541	1	max	6.981	13	0.019	76	0.036	74	5.238	13	0.13	76	0	107	0	107
861			min	-0.064	76	-0.211	100	-0.041	102	-0.048	76	-14.163	13	0	12	0	12
862		2	max	15.436	13	0.047	19	0.026	70	1.761	13	-0.462	68	0.448	74	0.794	102
863			min	-0.286	76	-0.037	100	-0.025	102	0.171	68	-4.761	13	-0.794	102	-0.448	74
864		3	max	16.693	13	0.034	72	0.106	15	0.686	100	0.139	68	4.256	13	0.591	76

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
865			min	-0.573	76	-0.149	15	-0.046	102	-0.052	68	-1.854	100	-0.591	76	-4.256	13
866		4	max	15.528	13	0.033	70	0.025	72	1.756	13	-0.49	68	0.501	74	0.816	102
867			min	-0.425	76	-0.049	19	-0.025	100	0.181	68	-4.747	13	-0.816	102	-0.501	74
868		5	max	7.021	13	0.225	100	0.044	72	5.268	13	0.855	76	0	107	0	107
869			min	-0.421	76	-0.029	76	-0.035	104	-0.316	76	-14.244	13	0	12	0	12
870	M542	1	max	0.246	104	0.884	71	-0.381	67	1.81	71	0.373	107	0.641	75	3.933	103
871			min	-0.314	72	-0.875	103	-1.457	15	-0.373	107	-1.81	71	-3.578	103	-0.704	75
872		2	max	0.241	104	0.873	71	-0.373	67	9.988	71	1.798	107	3.653	75	22.384	103
873			min	-0.31	72	-0.865	103	-1.369	15	-1.798	107	-9.988	71	-20.363	103	-4.016	75
874		3	max	0.106	98	0.155	71	-0.056	96	14.161	71	2.533	107	5.196	75	31.8	103
875			min	-0.16	62	-0.155	103	-0.183	15	-2.533	107	-14.161	71	-28.929	103	-5.711	75
876		4	max	0.476	106	0.978	103	1.502	15	11.268	71	2.028	107	4.131	75	25.286	103
877			min	-0.544	70	-0.986	71	0.414	67	-2.028	107	-11.268	71	-23.003	103	-4.541	75
878		5	max	0.48	106	0.988	103	1.59	15	2.043	71	0.415	107	0.727	75	4.461	103
879			min	-0.548	70	-0.997	71	0.422	67	-0.415	107	-2.043	71	-4.058	103	-0.8	75
880	M543	1	max	0.646	100	0.843	71	-0.362	98	1.751	71	0.298	107	0.605	75	3.96	103
881			min	-0.638	76	-0.843	103	-1.411	13	-0.298	107	-1.751	71	-3.602	103	-0.665	75
882		2	max	0.642	100	0.833	71	-0.354	98	9.624	71	1.635	107	3.373	75	21.823	103
883			min	-0.633	76	-0.833	103	-1.324	13	-1.635	107	-9.624	71	-19.853	103	-3.708	75
884		3	max	0.368	100	0.147	71	-0.053	96	13.638	71	2.321	107	4.785	75	30.922	103
885			min	-0.363	72	-0.147	103	-0.177	15	-2.321	107	-13.638	71	-28.131	103	-5.26	75
886		4	max	0.076	102	0.939	103	1.452	13	10.853	71	1.844	107	3.804	75	24.61	103
887			min	-0.07	74	-0.94	71	0.394	67	-1.844	107	-10.853	71	-22.388	103	-4.181	75
888		5	max	0.081	102	0.95	103	1.54	13	1.974	71	0.336	107	0.683	75	4.467	103
889			min	-0.075	74	-0.95	71	0.402	67	-0.336	107	-1.974	71	-4.063	103	-0.751	75
890	M544	1	max	0.414	70	5.316	70	0.643	71	16.316	106	17.912	70	1.288	77	1.306	75
891			min	-0.593	102	-4.568	76	-0.623	77	-17.912	70	-16.316	106	-1.306	75	-1.288	77
892		2	max	0.41	70	5.301	70	0.638	71	8.204	102	8.452	70	6.753	71	6.508	73
893			min	-0.588	102	-4.577	76	-0.617	77	-8.452	70	-8.204	102	-6.508	73	-6.753	71
894		3	max	0.464	72	5.038	70	0.268	71	0.688	100	0.103	76	11.828	71	11.459	77
895			min	-0.641	100	-4.736	76	-0.265	77	-0.103	76	-0.688	100	-11.459	77	-11.828	71
896		4	max	0.881	72	4.689	74	0.782	77	8.823	100	8.138	76	10.284	71	9.995	77
897			min	-1.057	100	-5.111	72	-0.806	71	-8.138	76	-8.823	100	-9.995	77	-10.284	71
898		5	max	0.885	72	4.68	74	0.788	77	17.05	100	17.181	72	0.24	101	0.236	103
899			min	-1.062	100	-5.126	72	-0.812	71	-17.181	72	-17.05	100	-0.236	103	-0.24	101
900	M545	1	max	0.403	57	4.14	40	0.156	71	12.397	106	14.043	70	0.214	77	0.24	71
901			min	-0.563	100	-3.372	76	-0.135	77	-14.043	70	-12.397	106	-0.24	71	-0.214	77
902		2	max	0.404	72	4.124	40	0.151	71	6.415	102	6.68	70	1.691	71	1.465	107
903			min	-0.567	100	-3.381	76	-0.13	77	-6.68	70	-6.415	102	-1.465	107	-1.691	71
904		3	max	0.476	72	3.861	70	0.031	71	0.627	100	0.044	68	2.637	71	2.296	107
905			min	-0.638	100	-3.54	76	-0.029	107	-0.044	68	-0.627	100	-2.296	107	-2.637	71
906		4	max	0.587	72	3.503	104	0.13	107	7.086	100	6.356	76	2.175	71	1.923	107
907			min	-0.75	100	-3.918	72	-0.153	71	-6.356	76	-7.086	100	-1.923	107	-2.175	71
908		5	max	0.592	72	3.494	104	0.136	107	13.219	100	13.274	72	0.26	101	0.253	103
909			min	-0.754	100	-3.933	72	-0.159	71	-13.274	72	-13.219	100	-0.253	103	-0.26	101
910	M546	1	max	0.331	15	0.857	71	-0.363	67	1.893	71	0.33	107	0.412	75	3.932	103
911			min	-0.188	76	-0.841	103	-1.418	15	-0.33	107	-1.893	71	-3.577	103	-0.453	75
912		2	max	0.331	15	0.846	71	-0.355	67	9.832	71	1.652	107	3.285	75	21.778	103
913			min	-0.183	76	-0.831	103	-1.33	15	-1.652	107	-9.832	71	-19.812	103	-3.611	75
914		3	max	0.327	15	0.148	71	-0.053	96	13.875	71	2.33	107	4.742	75	30.871	103
915			min	-0.098	66	-0.147	103	-0.177	15	-2.33	107	-13.875	71	-28.084	103	-5.212	75
916		4	max	0.577	102	0.938	103	1.459	15	11.063	71	1.859	107	3.72	75	24.565	103
917			min	-0.46	74	-0.954	71	0.393	96	-1.859	107	-11.063	71	-22.347	103	-4.089	75
918		5	max	0.581	102	0.948	103	1.547	15	2.117	71	0.368	107	0.491	75	4.439	103
919			min	-0.465	74	-0.964	71	0.402	96	-0.368	107	-2.117	71	-4.038	103	-0.54	75

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
920	M547	1	max	0.421	70	1.364	15	0.173	75	0.58	102	0.574	70	0	107	0	107
921			min	-0.425	102	0.307	97	-0.173	77	-0.574	70	-0.58	102	0	12	0	12
922		2	max	0.36	70	0.682	15	0.087	75	2.631	15	-0.241	66	2.311	75	2.311	77
923			min	-0.364	102	0.154	97	-0.087	77	0.241	66	-2.631	15	-2.311	77	-2.311	75
924		3	max	0.299	70	0.003	74	0	107	3.479	15	-0.505	66	3.081	75	3.082	77
925			min	-0.303	102	-0.003	76	0	12	0.505	66	-3.479	15	-3.082	77	-3.081	75
926		4	max	0.238	70	-0.154	97	0.087	77	2.62	15	-0.381	66	2.311	75	2.311	77
927			min	-0.242	102	-0.682	13	-0.087	75	0.381	66	-2.62	15	-2.311	77	-2.311	75
928		5	max	0.177	70	-0.307	97	0.173	77	0.247	102	0.241	70	0	107	0	107
929			min	-0.181	102	-1.364	15	-0.173	75	-0.241	70	-0.247	102	0	12	0	12
930	M548	1	max	0.729	70	1.321	13	0.165	71	0.885	106	0.995	70	0	107	0	107
931			min	-0.648	106	0.293	98	-0.165	73	-0.995	70	-0.885	106	0	12	0	12
932		2	max	0.67	70	0.66	13	0.083	71	2.287	15	0.081	66	2.199	71	2.199	73
933			min	-0.59	106	0.146	99	-0.083	73	-0.081	66	-2.287	15	-2.199	73	-2.199	71
934		3	max	0.612	70	0.003	74	0	72	3.107	15	-0.174	66	2.933	71	2.932	73
935			min	-0.532	106	-0.003	76	0	100	0.174	66	-3.107	15	-2.932	73	-2.933	71
936		4	max	0.554	70	-0.146	98	0.083	73	2.276	15	-0.059	66	2.199	71	2.199	73
937			min	-0.474	106	-0.661	13	-0.083	71	0.059	66	-2.276	15	-2.199	73	-2.199	71
938		5	max	0.496	70	-0.293	99	0.165	73	0.568	106	0.677	70	0	107	0	107
939			min	-0.416	106	-1.321	13	-0.165	71	-0.677	70	-0.568	106	0	12	0	12
940	M549	1	max	1.012	100	4.166	70	0.136	101	12.475	106	13.835	70	3.112	71	2.999	73
941			min	-0.805	76	-3.267	76	-0.138	103	-13.835	70	-12.475	106	-2.999	73	-3.112	71
942		2	max	0.977	100	3.941	70	0.071	101	6.583	102	6.544	70	4.291	71	4.183	73
943			min	-0.77	76	-3.398	76	-0.071	103	-6.544	70	-6.583	102	-4.183	73	-4.291	71
944		3	max	0.942	100	3.714	70	0.02	101	0.709	15	-0.084	66	4.869	71	4.758	73
945			min	-0.735	76	-3.531	76	-0.02	103	0.084	66	-0.709	15	-4.758	73	-4.869	71
946		4	max	0.907	100	3.511	74	0.03	103	6.89	100	6.256	76	4.799	71	4.685	73
947			min	-0.7	76	-3.749	72	-0.03	105	-6.256	76	-6.89	100	-4.685	73	-4.799	71
948		5	max	0.872	100	3.373	74	0.1	103	12.903	100	13.118	72	4.138	71	4.012	77
949			min	-0.665	76	-3.981	72	-0.099	101	-13.118	72	-12.903	100	-4.012	77	-4.138	71
950	M550	1	max	0.971	100	3.355	70	0.113	101	9.536	106	10.942	70	0.637	71	0.535	107
951			min	-0.739	76	-2.439	76	-0.113	103	-10.942	70	-9.536	106	-0.535	107	-0.637	71
952		2	max	0.936	100	3.128	70	0.056	101	5.116	102	5.098	70	1.681	71	1.645	103
953			min	-0.703	76	-2.571	76	-0.057	103	-5.098	70	-5.116	102	-1.645	103	-1.681	71
954		3	max	0.901	100	2.902	100	0.007	101	0.701	15	-0.081	66	2.087	71	2.057	103
955			min	-0.668	76	-2.705	76	-0.007	103	0.081	66	-0.701	15	-2.057	103	-2.087	71
956		4	max	0.866	100	2.691	74	0.043	77	5.445	100	4.783	76	1.845	71	1.817	103
957			min	-0.633	76	-2.923	72	-0.043	101	-4.783	76	-5.445	100	-1.817	103	-1.845	71
958		5	max	0.831	100	2.554	74	0.101	103	10.015	100	10.175	72	0.966	71	0.869	103
959			min	-0.599	76	-3.154	72	-0.1	101	-10.175	72	-10.015	100	-0.869	103	-0.966	71
960	M551	1	max	0.869	74	1.32	13	0.165	75	1.225	102	1.186	74	0	107	0	107
961			min	-0.897	102	0.293	98	-0.165	77	-1.186	74	-1.225	102	0	12	0	12
962		2	max	0.81	74	0.66	13	0.082	75	2.67	15	0.218	74	2.197	75	2.199	77
963			min	-0.839	102	0.146	98	-0.083	77	-0.218	74	-2.67	15	-2.199	77	-2.197	75
964		3	max	0.752	74	0.003	74	0	70	3.489	15	-0.108	66	2.93	75	2.932	77
965			min	-0.781	102	-0.003	76	0	106	0.108	66	-3.489	15	-2.932	77	-2.93	75
966		4	max	0.694	74	-0.146	98	0.083	77	2.659	15	0.059	74	2.197	75	2.199	77
967			min	-0.723	102	-0.66	13	-0.082	75	-0.059	74	-2.659	15	-2.199	77	-2.197	75
968		5	max	0.636	74	-0.293	98	0.165	77	0.907	102	0.869	74	0	107	0	107
969			min	-0.664	102	-1.32	13	-0.165	75	-0.869	74	-0.907	102	0	12	0	12
970	M552	1	max	4.986	15	0.88	72	0.457	71	2.861	15	-0.887	96	0.862	71	0.837	103
971			min	0.715	99	-0.563	104	-0.443	103	0.229	96	-11.099	15	-0.837	103	-0.862	71
972		2	max	4.955	15	0.865	72	0.449	71	4.11	15	3.912	104	6.655	71	6.456	103
973			min	0.711	99	-0.548	104	-0.435	103	-1.008	104	-15.946	15	-6.456	103	-6.655	71
974		3	max	4.537	15	0.434	15	0.161	75	3.137	72	8.555	104	8.919	71	8.719	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
975			min	0.649	107	-0.11	96	-0.162	103	-2.205	104	-12.17	72	-8.719	103	-8.919	71
976		4	max	3.817	15	1.231	13	0.471	103	2.669	72	8.604	104	8.814	71	8.639	103
977			min	0.426	107	-0.406	76	-0.473	71	-2.217	104	-10.355	72	-8.639	103	-8.814	71
978		5	max	3.54	15	1.26	13	0.628	103	1.45	15	-0.039	104	1.218	71	1.19	103
979			min	0.374	107	-0.666	76	-0.643	71	0.01	104	-5.626	15	-1.19	103	-1.218	71
980	M553	1	max	4.173	14	0.366	74	0.185	103	2.159	13	-1.142	98	0.331	103	0.348	71
981			min	0.536	107	-0.449	102	-0.194	71	0.294	98	-8.376	13	-0.348	71	-0.331	103
982		2	max	4.143	14	0.351	74	0.178	103	1.797	70	2.605	106	2.652	103	2.779	71
983			min	0.533	107	-0.434	102	-0.186	71	-0.671	106	-6.971	70	-2.779	71	-2.652	103
984		3	max	4.112	14	0.336	74	0.17	103	2.629	70	6.616	106	4.871	103	5.109	71
985			min	0.53	107	-0.419	102	-0.178	71	-1.705	106	-10.2	70	-5.109	71	-4.871	103
986		4	max	3.598	14	1.037	102	0.444	71	2.976	70	9.566	106	6.274	103	6.587	71
987			min	0.335	107	-0.839	74	-0.423	103	-2.465	106	-11.549	70	-6.587	71	-6.274	103
988		5	max	3.567	14	1.052	102	0.452	71	1.725	13	-0.266	106	0.813	103	0.853	71
989			min	0.332	107	-0.854	74	-0.431	103	0.069	106	-6.694	13	-0.853	71	-0.813	103
990	M554	1	max	1.626	13	0.425	70	0.189	103	0.884	13	-0.408	98	0.338	103	0.338	71
991			min	0.338	98	-0.374	106	-0.189	71	0.105	98	-3.429	13	-0.338	71	-0.338	103
992		2	max	1.595	13	0.41	70	0.181	103	1.678	70	3.151	106	2.708	103	2.707	71
993			min	0.335	98	-0.359	106	-0.181	71	-0.812	106	-6.509	70	-2.707	71	-2.708	103
994		3	max	1.565	13	0.395	70	0.173	103	2.71	70	6.65	106	4.975	103	4.973	71
995			min	0.331	98	-0.345	106	-0.173	71	-1.714	106	-10.514	70	-4.973	71	-4.975	103
996		4	max	1.033	13	0.856	106	0.432	71	3.186	70	9.271	106	6.413	103	6.411	71
997			min	0.195	97	-0.986	70	-0.433	103	-2.389	106	-12.361	70	-6.411	71	-6.413	103
998		5	max	1.003	13	0.87	106	0.44	71	0.641	70	0.691	106	0.831	103	0.83	71
999			min	0.192	97	-1	70	-0.441	103	-0.178	106	-2.488	70	-0.83	71	-0.831	103
1000	M555	1	max	3.94	13	0.33	103	0.049	102	2.115	13	-0.644	75	0.071	102	0.069	70
1001			min	0.524	75	-0.328	71	-0.048	70	0.166	75	-8.205	13	-0.069	70	-0.071	102
1002		2	max	3.91	13	0.315	103	0.041	102	2.128	16	2.503	75	0.643	102	0.627	70
1003			min	0.521	75	-0.313	71	-0.04	70	-0.645	75	-8.255	16	-0.627	70	-0.643	102
1004		3	max	3.879	13	0.3	103	0.033	102	2.767	103	5.504	75	1.113	102	1.083	70
1005			min	0.518	75	-0.298	71	-0.032	70	-1.418	75	-10.736	103	-1.083	70	-1.113	102
1006		4	max	3.364	13	0.74	71	0.085	70	3.085	103	7.772	75	1.342	102	1.303	70
1007			min	0.324	75	-0.752	103	-0.087	102	-2.003	75	-11.969	103	-1.303	70	-1.342	102
1008		5	max	3.333	13	0.755	71	0.093	70	1.798	13	0.424	75	0.173	102	0.168	70
1009			min	0.321	75	-0.767	103	-0.095	102	-0.109	75	-6.978	13	-0.168	70	-0.173	102
1010	M556	1	max	2.506	15	0.834	72	0.386	71	1.564	15	-0.311	96	0.727	71	0.727	103
1011			min	0.392	96	-0.471	104	-0.386	103	0.08	96	-6.067	15	-0.727	103	-0.727	71
1012		2	max	2.475	15	0.819	72	0.378	71	3.036	15	3.997	104	5.61	71	5.61	103
1013			min	0.389	96	-0.456	104	-0.378	103	-1.03	104	-11.78	15	-5.61	103	-5.61	71
1014		3	max	2.13	15	0.549	15	0.163	71	3.013	72	7.894	104	7.858	71	7.859	103
1015			min	0.368	97	-0.091	104	-0.163	103	-2.035	104	-11.689	72	-7.859	103	-7.858	71
1016		4	max	1.444	15	0.771	100	0.461	103	2.839	72	8.128	104	8.091	71	8.092	103
1017			min	0.228	97	-0.58	76	-0.461	71	-2.095	104	-11.017	72	-8.092	103	-8.091	71
1018		5	max	1.215	15	0.978	100	0.582	103	0.557	72	0.759	104	1.102	71	1.102	103
1019			min	0.209	96	-0.787	76	-0.582	71	-0.196	104	-2.161	72	-1.102	103	-1.102	71
1020	M557	1	max	4.677	15	0.507	72	0.169	71	2.521	15	-1.018	74	0.313	71	0.325	103
1021			min	0.658	75	-0.499	100	-0.175	103	0.262	74	-9.78	15	-0.325	103	-0.313	71
1022		2	max	4.646	15	0.492	72	0.161	71	2.6	15	3.8	104	2.419	71	2.507	103
1023			min	0.655	75	-0.484	100	-0.167	103	-0.979	104	-10.087	15	-2.507	103	-2.419	71
1024		3	max	4.616	15	0.463	72	0.142	71	3.699	72	8.465	104	4.295	71	4.392	103
1025			min	0.652	75	-0.465	100	-0.143	103	-2.182	104	-14.353	72	-4.392	103	-4.295	71
1026		4	max	4.141	15	1.149	100	0.356	103	4.288	72	11.787	104	5.425	71	5.51	103
1027			min	0.479	75	-1.151	72	-0.356	71	-3.038	104	-16.639	72	-5.51	103	-5.425	71
1028		5	max	4.11	15	1.168	100	0.384	103	2.217	15	0.34	74	0.71	71	0.725	103
1029			min	0.476	75	-1.174	72	-0.376	71	-0.088	74	-8.603	15	-0.725	103	-0.71	71

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1030	M558	1	max	8.926	15	0.062	68	0.015	71	4.354	15	-3.017	99	0	73	0	105
1031			min	1.413	99	-0.064	92	-0.015	107	0.689	99	-19.053	15	0	105	0	73
1032		2	max	8.89	15	0.031	68	0.007	71	4.349	15	-2.477	96	0.125	71	0.125	107
1033			min	1.41	99	-0.032	92	-0.007	107	0.566	96	-19.031	15	-0.125	107	-0.125	71
1034		3	max	8.855	15	0	74	0	73	4.336	15	-2.26	96	0.167	71	0.167	107
1035			min	1.406	99	-0.005	15	0	105	0.516	96	-18.976	15	-0.167	107	-0.167	71
1036		4	max	8.819	15	0.031	66	0.007	73	4.316	15	-2.463	96	0.125	71	0.125	107
1037			min	1.403	99	-0.032	94	-0.007	105	0.563	96	-18.889	15	-0.125	107	-0.125	71
1038		5	max	8.783	15	0.062	66	0.015	73	4.289	15	-2.989	99	0	73	0	105
1039			min	1.399	99	-0.064	94	-0.015	105	0.683	99	-18.77	15	0	105	0	73
1040	M559	1	max	7.968	13	0.062	66	0.015	107	3.886	13	-2.933	99	0	105	0	73
1041			min	1.374	99	-0.064	94	-0.015	71	0.67	99	-17.008	13	0	73	0	105
1042		2	max	7.933	13	0.031	66	0.007	107	3.881	13	-2.358	98	0.125	107	0.125	71
1043			min	1.37	99	-0.032	94	-0.007	71	0.539	98	-16.986	13	-0.125	71	-0.125	107
1044		3	max	7.897	13	0	76	0	105	3.869	13	-2.14	98	0.167	107	0.167	71
1045			min	1.367	99	-0.005	13	0	73	0.489	98	-16.932	13	-0.167	71	-0.167	107
1046		4	max	7.862	13	0.031	68	0.007	105	3.849	13	-2.344	98	0.125	107	0.125	71
1047			min	1.363	99	-0.032	92	-0.007	73	0.536	98	-16.845	13	-0.125	71	-0.125	107
1048		5	max	7.826	13	0.062	68	0.015	105	3.822	13	-2.905	99	0	105	0	73
1049			min	1.36	99	-0.064	92	-0.015	73	0.664	99	-16.725	13	0	73	0	105
1050	M560	1	max	7.663	13	0.062	66	0.015	107	3.737	13	-2.735	68	0	105	0	73
1051			min	1.281	68	-0.064	94	-0.015	71	0.625	68	-16.356	13	0	73	0	105
1052		2	max	7.627	13	0.031	66	0.007	107	3.732	13	-2.096	68	0.125	107	0.125	71
1053			min	1.277	68	-0.032	94	-0.007	71	0.479	68	-16.334	13	-0.125	71	-0.125	107
1054		3	max	7.592	13	0	76	0	105	3.72	13	-1.879	68	0.167	107	0.167	71
1055			min	1.274	68	-0.005	13	0	73	0.429	68	-16.279	13	-0.167	71	-0.167	107
1056		4	max	7.556	13	0.031	68	0.007	105	3.7	13	-2.082	68	0.125	107	0.125	71
1057			min	1.27	68	-0.032	92	-0.007	73	0.476	68	-16.192	13	-0.125	71	-0.125	107
1058		5	max	7.521	13	0.062	68	0.015	105	3.673	13	-2.707	68	0	105	0	73
1059			min	1.267	68	-0.064	92	-0.015	73	0.619	68	-16.073	13	0	73	0	105
1060	M561	1	max	9.072	15	0.799	15	0.185	101	4.79	15	-2.398	66	0.302	101	0.311	103
1061			min	1.408	66	-0.322	66	-0.19	103	0.548	66	-20.964	15	-0.311	103	-0.302	101
1062		2	max	9.036	15	0.797	15	0.178	101	7.229	15	1.701	66	2.334	101	2.403	103
1063			min	1.404	66	-0.291	66	-0.183	103	-0.389	66	-31.636	15	-2.403	103	-2.334	101
1064		3	max	8.749	15	0.541	15	0.012	75	5.609	15	3.506	66	2.574	101	2.639	103
1065			min	1.388	66	-0.049	66	-0.012	77	-0.801	66	-24.546	15	-2.639	103	-2.574	101
1066		4	max	8.551	15	0.366	13	0.076	103	5.037	15	2.174	66	1.916	101	1.97	103
1067			min	1.371	66	-0.134	98	-0.075	101	-0.497	66	-22.043	15	-1.97	103	-1.916	101
1068		5	max	8.353	15	0.541	62	0.18	103	3.998	15	-2.049	66	0.287	101	0.296	103
1069			min	1.354	66	-0.383	98	-0.175	101	0.468	66	-17.496	15	-0.296	103	-0.287	101
1070	M562	1	max	2.554	72	0.023	71	-0.016	44	5.839	72	5.617	104	11.684	72	12.353	104
1071			min	-2.457	104	-0.023	107	-0.145	15	-5.617	104	-5.839	72	-11.238	104	-12.842	72
1072		2	max	2.559	72	0.012	71	-0.008	44	5.931	72	5.58	104	11.584	76	12.482	104
1073			min	-2.462	104	-0.012	107	-0.073	15	-5.58	104	-5.931	72	-11.357	104	-12.732	76
1074		3	max	2.564	72	0.003	72	0	107	5.969	72	5.575	104	11.574	76	12.542	104
1075			min	-2.467	104	-0.003	104	0	12	-5.575	104	-5.969	72	-11.411	104	-12.722	76
1076		4	max	2.569	72	0.012	73	0.073	13	5.953	72	5.602	104	11.629	76	12.532	104
1077			min	-2.472	104	-0.012	105	0.008	47	-5.602	104	-5.953	72	-11.401	104	-12.782	76
1078		5	max	2.574	72	0.023	73	0.145	13	5.884	72	5.661	104	11.773	72	12.451	104
1079			min	-2.477	104	-0.023	105	0.016	47	-5.661	104	-5.884	72	-11.328	104	-12.94	72
1080	M563	1	max	2.244	72	0.023	71	-0.016	106	5.13	72	4.864	104	10.266	72	10.697	104
1081			min	-2.128	104	-0.023	103	-0.145	16	-4.864	104	-5.13	72	-9.732	104	-11.283	72
1082		2	max	2.249	72	0.012	71	-0.008	106	5.222	72	4.827	104	10.133	76	10.827	104
1083			min	-2.133	104	-0.012	103	-0.073	16	-4.827	104	-5.222	72	-9.85	104	-11.137	76
1084		3	max	2.254	72	0.003	76	0	107	5.26	72	4.822	104	10.123	76	10.887	104

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1085			min	-2.137	104	-0.003	104	0	12	-4.822	104	-5.26	72	-9.905	104	-11.127	76
1086		4	max	2.259	72	0.012	73	0.073	15	5.245	72	4.85	104	10.178	76	10.876	104
1087			min	-2.142	104	-0.012	101	0.008	44	-4.85	104	-5.245	72	-9.895	104	-11.187	76
1088		5	max	2.264	72	0.023	73	0.145	15	5.175	72	4.909	104	10.355	72	10.796	104
1089			min	-2.147	104	-0.023	101	0.016	44	-4.909	104	-5.175	72	-9.822	104	-11.382	72
1090	M564	1	max	0.4	15	0.023	103	-0.016	46	0.907	15	0.408	104	1.871	15	0.925	104
1091			min	-0.18	104	-0.023	75	-0.192	13	-0.408	104	-0.907	15	-0.841	104	-2.057	15
1092		2	max	0.4	15	0.011	103	-0.008	46	1.631	15	0.337	104	1.597	72	1.034	104
1093			min	-0.175	104	-0.011	75	-0.096	13	-0.337	104	-1.631	15	-0.941	104	-1.756	72
1094		3	max	0.4	15	0.002	104	0	107	1.873	15	0.306	104	1.506	72	1.054	104
1095			min	-0.17	104	-0.002	76	0	12	-0.306	104	-1.873	15	-0.959	104	-1.655	72
1096		4	max	0.4	15	0.011	101	0.096	15	1.631	15	0.315	104	1.552	72	0.984	104
1097			min	-0.165	104	-0.011	77	0.008	47	-0.315	104	-1.631	15	-0.895	104	-1.706	72
1098		5	max	0.4	15	0.023	101	0.192	15	0.907	15	0.363	104	1.871	15	0.824	104
1099			min	-0.16	104	-0.023	77	0.016	47	-0.363	104	-0.907	15	-0.75	104	-2.057	15
1100	M565	1	max	0.708	74	0.035	70	-0.028	76	1.604	74	1.729	106	3.312	74	3.924	106
1101			min	-0.763	106	-0.035	106	-0.346	13	-1.729	106	-1.604	74	-3.57	106	-3.64	74
1102		2	max	0.713	74	0.018	70	-0.014	76	2.698	13	1.779	106	3.414	74	5.202	102
1103			min	-0.768	106	-0.018	106	-0.173	13	-1.779	106	-2.698	13	-4.732	102	-3.753	74
1104		3	max	0.717	74	0.002	71	0	107	3.483	13	1.803	106	3.463	74	6.545	15
1105			min	-0.773	106	-0.002	107	0	12	-1.803	106	-3.483	13	-5.954	15	-3.807	74
1106		4	max	0.722	74	0.016	72	0.173	15	2.698	13	1.801	106	3.46	74	5.252	102
1107			min	-0.778	106	-0.016	104	0.014	104	-1.801	106	-2.698	13	-4.778	102	-3.803	74
1108		5	max	0.727	74	0.033	72	0.346	15	1.649	74	1.774	106	3.403	74	4.025	106
1109			min	-0.782	106	-0.033	104	0.028	104	-1.774	106	-1.649	74	-3.661	106	-3.741	74
1110	M566	1	max	0.614	106	0.023	103	-0.016	44	1.392	106	1.263	74	2.873	106	2.866	74
1111			min	-0.557	74	-0.023	75	-0.192	16	-1.263	74	-1.392	106	-2.607	74	-3.158	106
1112		2	max	0.609	106	0.011	103	-0.008	44	1.467	102	1.193	74	2.728	106	2.975	74
1113			min	-0.552	74	-0.011	75	-0.096	16	-1.193	74	-1.467	102	-2.707	74	-2.999	106
1114		3	max	0.604	106	0.002	104	0	107	1.489	102	1.162	74	2.664	106	2.995	74
1115			min	-0.547	74	-0.002	76	0	12	-1.162	74	-1.489	102	-2.724	74	-2.929	106
1116		4	max	0.599	106	0.011	101	0.096	14	1.445	102	1.17	74	2.682	106	2.925	74
1117			min	-0.542	74	-0.011	73	0.008	107	-1.17	74	-1.445	102	-2.661	74	-2.948	106
1118		5	max	0.594	106	0.023	101	0.192	14	1.348	106	1.219	74	2.782	106	2.765	74
1119			min	-0.538	74	-0.023	73	0.016	107	-1.219	74	-1.348	106	-2.516	74	-3.058	106
1120	M567	1	max	1.427	74	0.035	70	-0.028	76	3.236	74	3.262	106	6.679	74	7.403	106
1121			min	-1.439	106	-0.035	106	-0.346	13	-3.262	106	-3.236	74	-6.734	106	-7.342	74
1122		2	max	1.432	74	0.018	70	-0.014	76	3.673	70	3.312	106	6.782	74	8.482	102
1123			min	-1.444	106	-0.018	106	-0.173	13	-3.312	106	-3.673	70	-7.716	102	-7.455	74
1124		3	max	1.437	74	0.002	71	0	107	3.869	70	3.336	106	6.831	74	8.928	102
1125			min	-1.449	106	-0.002	107	0	12	-3.336	106	-3.869	70	-8.122	102	-7.509	74
1126		4	max	1.442	74	0.016	72	0.173	15	3.695	70	3.334	106	6.827	74	8.533	102
1127			min	-1.454	106	-0.016	104	0.014	104	-3.334	106	-3.695	70	-7.762	102	-7.505	74
1128		5	max	1.447	74	0.033	72	0.346	15	3.28	74	3.307	106	6.771	74	7.503	106
1129			min	-1.459	106	-0.033	104	0.028	104	-3.307	106	-3.28	74	-6.826	106	-7.443	74
1130	M568	1	max	3.976	104	0.033	70	-0.027	107	9.089	104	9.411	76	18.186	104	20.697	76
1131			min	-4.117	76	-0.033	102	-0.244	13	-9.41	76	-9.089	104	-18.83	76	-19.989	104
1132		2	max	3.981	104	0.017	70	-0.013	107	9.391	104	9.443	76	18.251	104	21.535	72
1133			min	-4.122	76	-0.017	102	-0.122	13	-9.443	76	-9.391	104	-19.593	72	-20.061	104
1134		3	max	3.986	104	0.002	71	0	107	9.499	104	9.461	76	18.288	104	21.841	72
1135			min	-4.126	76	-0.002	107	0	12	-9.461	76	-9.499	104	-19.871	72	-20.101	104
1136		4	max	3.991	104	0.014	72	0.122	15	9.414	104	9.466	76	18.296	104	21.584	72
1137			min	-4.131	76	-0.014	104	0.013	75	-9.466	76	-9.414	104	-19.637	72	-20.11	104
1138		5	max	3.995	104	0.029	72	0.244	15	9.133	104	9.455	76	18.276	104	20.795	76
1139			min	-4.136	76	-0.029	104	0.027	75	-9.455	76	-9.133	104	-18.92	76	-20.087	104

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1140	M569	1	max	2.3	14	0.062	66	0.015	107	1.12	14	0.064	107	0	105	0	73
1141			min	-0.029	107	-0.064	94	-0.015	71	-0.015	107	-4.903	14	0	73	0	105
1142		2	max	2.265	14	0.031	66	0.007	107	1.115	13	0.07	107	0.125	107	0.125	71
1143			min	-0.033	107	-0.032	94	-0.007	71	-0.016	107	-4.879	13	-0.125	71	-0.125	107
1144		3	max	2.229	14	0	76	0	105	1.102	13	0.082	98	0.167	107	0.167	71
1145			min	-0.036	107	-0.005	13	0	73	-0.019	98	-4.825	13	-0.167	71	-0.167	107
1146		4	max	2.194	14	0.031	68	0.007	105	1.083	13	0.082	107	0.125	107	0.125	71
1147			min	-0.039	107	-0.032	92	-0.007	73	-0.019	107	-4.738	13	-0.125	71	-0.125	107
1148		5	max	2.158	14	0.062	68	0.015	105	1.056	14	0.088	107	0	105	0	73
1149			min	-0.042	107	-0.064	92	-0.015	73	-0.02	107	-4.62	14	0	73	0	105
1150	M570	1	max	2.041	13	0.062	66	0.015	107	0.993	13	0.11	75	0	105	0	73
1151			min	-0.051	75	-0.064	94	-0.015	71	-0.025	75	-4.348	13	0	73	0	105
1152		2	max	2.005	13	0.031	66	0.007	107	0.988	13	0.116	75	0.125	107	0.125	71
1153			min	-0.054	75	-0.032	94	-0.007	71	-0.026	75	-4.326	13	-0.125	71	-0.125	107
1154		3	max	1.969	13	0	76	0	105	0.976	13	0.318	68	0.167	107	0.167	71
1155			min	-0.057	75	-0.005	13	0	73	-0.073	68	-4.271	13	-0.167	71	-0.167	107
1156		4	max	1.934	13	0.031	68	0.007	105	0.956	13	0.128	75	0.125	107	0.125	71
1157			min	-0.06	75	-0.032	92	-0.007	73	-0.029	75	-4.184	13	-0.125	71	-0.125	107
1158		5	max	1.898	13	0.062	68	0.015	105	0.929	13	0.134	75	0	105	0	73
1159			min	-0.063	75	-0.064	92	-0.015	73	-0.031	75	-4.065	13	0	73	0	105
1160	M571	1	max	2.221	15	0.062	98	0.015	71	1.082	15	-0.024	107	0	73	0	105
1161			min	0.011	107	-0.064	62	-0.015	107	0.005	107	-4.733	15	0	105	0	73
1162		2	max	2.186	15	0.031	98	0.007	71	1.077	15	-0.018	107	0.125	71	0.125	107
1163			min	0.008	107	-0.032	62	-0.007	107	0.004	107	-4.711	15	-0.125	107	-0.125	71
1164		3	max	2.15	15	0	74	0	73	1.064	15	0.15	96	0.167	71	0.167	107
1165			min	0.005	107	-0.005	15	0	105	-0.034	96	-4.657	15	-0.167	107	-0.167	71
1166		4	max	2.115	15	0.031	96	0.007	73	1.044	15	-0.005	107	0.125	71	0.125	107
1167			min	0.002	107	-0.032	64	-0.007	105	0.001	107	-4.57	15	-0.125	107	-0.125	71
1168		5	max	2.079	15	0.062	96	0.015	73	1.017	15	0.001	107	0	73	0	105
1169			min	-0.001	107	-0.064	64	-0.015	105	0	107	-4.451	15	0	105	0	73
1170	M572	1	max	2.917	15	0.062	98	0.015	71	1.421	15	-0.272	75	0	73	0	105
1171			min	0.128	75	-0.064	92	-0.015	107	0.062	75	-6.22	15	0	105	0	73
1172		2	max	2.881	15	0.031	98	0.007	71	1.416	15	-0.033	66	0.125	71	0.125	107
1173			min	0.125	75	-0.032	92	-0.007	107	0.007	66	-6.198	15	-0.125	107	-0.125	71
1174		3	max	2.846	15	0	74	0	73	1.404	15	0.185	66	0.167	71	0.167	107
1175			min	0.122	75	-0.005	15	0	105	-0.042	66	-6.143	15	-0.167	107	-0.167	71
1176		4	max	2.81	15	0.031	66	0.007	73	1.384	15	-0.019	66	0.125	71	0.125	107
1177			min	0.119	75	-0.032	64	-0.007	105	0.004	66	-6.056	15	-0.125	107	-0.125	71
1178		5	max	2.775	15	0.062	66	0.015	73	1.357	15	-0.248	75	0	73	0	105
1179			min	0.116	75	-0.064	64	-0.015	105	0.057	75	-5.937	15	0	105	0	73
1180	M573	1	max	1.024	106	0.352	15	0.034	46	0.947	70	0.859	106	1.954	70	1.949	106
1181			min	-1.129	70	0.028	77	-0.034	40	-0.859	106	-0.947	70	-1.773	106	-2.148	70
1182		2	max	1.029	106	0.176	15	0.017	46	2.806	13	0.902	106	5.792	13	1.028	98
1183			min	-1.134	70	0.013	77	-0.017	40	-0.902	106	-2.806	13	-0.935	98	-6.367	13
1184		3	max	1.034	106	0.001	105	0	107	3.603	13	0.919	106	7.438	13	0.86	98
1185			min	-1.139	70	-0.001	73	0	12	-0.919	106	-3.603	13	-0.783	98	-8.176	13
1186		4	max	1.039	106	-0.013	105	0.017	100	2.806	13	0.91	106	5.792	13	1.028	98
1187			min	-1.144	70	-0.176	13	-0.017	72	-0.91	106	-2.806	13	-0.935	98	-6.367	13
1188		5	max	1.044	106	-0.028	105	0.034	100	0.963	70	0.875	106	1.988	70	1.986	106
1189			min	-1.149	70	-0.352	13	-0.034	72	-0.875	106	-0.963	70	-1.807	106	-2.186	70
1190	M574	1	max	1.446	106	0.352	15	0.034	76	1.483	100	1.212	106	3.062	100	2.751	106
1191			min	-1.769	100	0.028	77	-0.034	70	-1.212	106	-1.483	100	-2.503	106	-3.365	100
1192		2	max	1.451	106	0.176	15	0.017	76	3.11	13	1.255	106	6.421	13	1.799	106
1193			min	-1.774	100	0.013	77	-0.017	70	-1.255	106	-3.11	13	-1.636	106	-7.058	13
1194		3	max	1.456	106	0.001	105	0	107	3.908	13	1.272	106	8.066	13	1.488	106

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1195			min	-1.779	100	-0.001	73	0	12	-1.272	106	-3.908	13	-1.353	106	-8.867	13
1196		4	max	1.461	106	-0.013	105	0.017	40	3.11	13	1.263	106	6.421	13	1.818	106
1197			min	-1.784	100	-0.176	13	-0.017	106	-1.263	106	-3.11	13	-1.653	106	-7.058	13
1198		5	max	1.466	106	-0.028	105	0.034	40	1.5	100	1.229	106	3.096	100	2.788	106
1199			min	-1.789	100	-0.352	13	-0.034	106	-1.229	106	-1.5	100	-2.537	106	-3.403	100
1200	M575	1	max	2.144	106	0.251	13	0.031	72	1.963	70	1.813	106	3.928	70	3.986	106
1201			min	-2.322	70	0.026	77	-0.031	104	-1.813	106	-1.963	70	-3.627	106	-4.318	70
1202		2	max	2.149	106	0.125	13	0.016	72	2.351	70	1.838	106	4.079	70	3.355	106
1203			min	-2.327	70	0.013	77	-0.016	104	-1.838	106	-2.351	70	-3.052	106	-4.483	70
1204		3	max	2.154	106	0.001	105	0	107	2.483	70	1.849	106	4.305	13	3.15	106
1205			min	-2.332	70	-0.001	73	0	12	-1.849	106	-2.483	70	-2.866	106	-4.732	13
1206		4	max	2.159	106	-0.013	105	0.016	40	2.36	70	1.846	106	4.095	70	3.373	106
1207			min	-2.337	70	-0.125	15	-0.016	42	-1.846	106	-2.36	70	-3.069	106	-4.501	70
1208		5	max	2.163	106	-0.026	105	0.031	40	1.98	70	1.829	106	3.962	70	4.023	106
1209			min	-2.342	70	-0.251	15	-0.031	42	-1.829	106	-1.98	70	-3.66	106	-4.354	70
1210	M576	1	max	2.478	76	0.251	13	0.031	106	2.339	100	2.095	76	4.681	100	4.607	76
1211			min	-2.767	100	0.026	77	-0.031	40	-2.095	76	-2.339	100	-4.192	76	-5.145	100
1212		2	max	2.483	76	0.125	13	0.016	106	2.727	100	2.121	76	4.831	100	3.976	76
1213			min	-2.772	100	0.013	77	-0.016	40	-2.121	76	-2.727	100	-3.617	76	-5.31	100
1214		3	max	2.488	76	0.001	105	0	107	2.859	100	2.132	76	4.887	100	3.771	76
1215			min	-2.776	100	-0.001	73	0	12	-2.132	76	-2.859	100	-3.431	76	-5.371	100
1216		4	max	2.492	76	-0.013	105	0.016	70	2.735	100	2.129	76	4.848	100	3.994	76
1217			min	-2.781	100	-0.125	15	-0.016	72	-2.129	76	-2.735	100	-3.634	76	-5.328	100
1218		5	max	2.497	76	-0.026	105	0.031	70	2.356	100	2.111	76	4.714	100	4.644	76
1219			min	-2.786	100	-0.251	15	-0.031	72	-2.111	76	-2.356	100	-4.225	76	-5.181	100
1220	M577	1	max	1.447	102	0.352	15	0.034	70	1.067	74	1.214	102	2.203	74	2.754	102
1221			min	-1.273	74	0.028	105	-0.034	76	-1.214	102	-1.067	74	-2.505	102	-2.421	74
1222		2	max	1.452	102	0.176	15	0.017	70	2.152	13	0.762	76	4.443	13	2.777	76
1223			min	-1.278	74	0.013	105	-0.017	76	-0.762	76	-2.152	13	-2.527	76	-4.884	13
1224		3	max	1.457	102	0.001	73	0	107	2.949	13	0.625	76	6.088	13	2.816	76
1225			min	-1.282	74	-0.001	101	0	12	-0.625	76	-2.949	13	-2.562	76	-6.693	13
1226		4	max	1.462	102	-0.013	77	0.017	46	2.152	13	0.77	76	4.443	13	2.796	76
1227			min	-1.287	74	-0.176	13	-0.017	40	-0.77	76	-2.152	13	-2.544	76	-4.884	13
1228		5	max	1.467	102	-0.028	77	0.034	46	1.083	74	1.23	102	2.237	74	2.791	102
1229			min	-1.292	74	-0.352	13	-0.034	40	-1.23	102	-1.083	74	-2.539	102	-2.458	74
1230	M578	1	max	1.832	76	0.352	15	0.034	74	1.579	100	1.536	76	3.26	100	3.486	76
1231			min	-1.883	100	0.028	105	-0.034	106	-1.536	76	-1.579	100	-3.171	76	-3.583	100
1232		2	max	1.837	76	0.176	15	0.017	74	2.463	13	1.117	76	5.084	13	3.583	76
1233			min	-1.888	100	0.013	105	-0.017	106	-1.117	76	-2.463	13	-3.259	76	-5.589	13
1234		3	max	1.842	76	0.001	73	0	107	3.26	13	0.979	76	6.73	13	3.621	76
1235			min	-1.893	100	-0.001	105	0	12	-0.979	76	-3.26	13	-3.294	76	-7.398	13
1236		4	max	1.847	76	-0.013	77	0.017	46	2.463	13	1.125	76	5.084	13	3.601	76
1237			min	-1.898	100	-0.176	13	-0.017	70	-1.125	76	-2.463	13	-3.276	76	-5.589	13
1238		5	max	1.852	76	-0.028	77	0.034	46	1.595	100	1.553	76	3.293	100	3.523	76
1239			min	-1.903	100	-0.352	13	-0.034	70	-1.553	76	-1.595	100	-3.205	76	-3.62	100
1240	M579	1	max	2.5	106	0.251	13	0.031	104	2.266	70	2.114	106	4.534	70	4.65	106
1241			min	-2.68	70	0.026	105	-0.031	102	-2.114	106	-2.266	70	-4.23	106	-4.984	70
1242		2	max	2.505	106	0.125	13	0.016	104	2.341	70	1.827	106	5.311	70	4.706	106
1243			min	-2.685	70	0.013	105	-0.016	102	-1.827	106	-2.341	70	-4.282	106	-5.837	70
1244		3	max	2.51	106	0.001	73	0	107	2.369	70	1.734	106	5.575	70	4.731	106
1245			min	-2.69	70	-0.001	105	0	12	-1.734	106	-2.369	70	-4.304	106	-6.128	70
1246		4	max	2.515	106	-0.013	77	0.016	106	2.349	70	1.835	106	5.327	70	4.724	106
1247			min	-2.695	70	-0.125	15	-0.016	100	-1.835	106	-2.349	70	-4.298	106	-5.855	70
1248		5	max	2.52	106	-0.026	77	0.031	106	2.283	70	2.131	106	4.567	70	4.686	106
1249			min	-2.7	70	-0.251	15	-0.031	100	-2.131	106	-2.283	70	-4.263	106	-5.02	70

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1250	M580	1	max	2.769	76	0.251	13	0.031	40	2.526	100	2.341	76	5.054	100	5.148	76
1251			min	-2.987	100	0.026	105	-0.031	76	-2.341	76	-2.526	100	-4.684	76	-5.555	100
1252		2	max	2.774	76	0.125	13	0.016	40	2.601	100	2.054	76	5.83	100	5.205	76
1253			min	-2.992	100	0.013	105	-0.016	76	-2.054	76	-2.601	100	-4.735	76	-6.408	100
1254		3	max	2.778	76	0.001	73	0	107	2.629	100	1.961	76	6.094	100	5.23	76
1255			min	-2.997	100	-0.001	105	0	12	-1.961	76	-2.629	100	-4.758	76	-6.698	100
1256		4	max	2.783	76	-0.013	77	0.016	72	2.609	100	2.062	76	5.846	100	5.223	76
1257			min	-3.002	100	-0.125	15	-0.016	74	-2.062	76	-2.609	100	-4.752	76	-6.426	100
1258		5	max	2.788	76	-0.026	77	0.031	72	2.542	100	2.357	76	5.087	100	5.185	76
1259			min	-3.007	100	-0.251	15	-0.031	74	-2.357	76	-2.542	100	-4.717	76	-5.591	100
1260	M581	1	max	1.697	70	0.149	15	0.023	71	1.337	106	1.435	70	2.675	106	3.155	70
1261			min	-1.581	106	0.015	76	-0.023	107	-1.435	70	-1.337	106	-2.87	70	-2.94	106
1262		2	max	1.692	70	0.075	15	0.012	71	1.4	102	1.35	70	2.801	102	2.969	70
1263			min	-1.576	106	0.007	76	-0.012	107	-1.35	70	-1.4	102	-2.701	70	-3.078	102
1264		3	max	1.687	70	0.001	104	0	107	1.422	102	1.328	74	2.846	102	2.921	74
1265			min	-1.571	106	-0.001	72	0	12	-1.328	74	-1.422	102	-2.657	74	-3.128	102
1266		4	max	1.682	70	-0.007	104	0.012	73	1.391	102	1.342	70	2.784	102	2.95	70
1267			min	-1.566	106	-0.075	13	-0.012	45	-1.342	70	-1.391	102	-2.684	70	-3.06	102
1268		5	max	1.677	70	-0.015	104	0.023	73	1.32	106	1.418	70	2.641	106	3.119	70
1269			min	-1.561	106	-0.149	13	-0.023	45	-1.418	70	-1.32	106	-2.837	70	-2.903	106
1270	M582	1	max	0.882	74	0.195	15	0.023	41	0.772	102	0.739	74	1.593	102	1.678	74
1271			min	-0.921	102	0.015	106	-0.023	103	-0.739	74	-0.772	102	-1.526	74	-1.752	102
1272		2	max	0.877	74	0.098	15	0.011	41	0.868	102	0.676	74	1.791	102	1.534	74
1273			min	-0.916	102	0.007	106	-0.011	103	-0.676	74	-0.868	102	-1.395	74	-1.969	102
1274		3	max	0.872	74	0.001	74	0	107	1.099	15	0.652	74	2.268	15	1.48	74
1275			min	-0.911	102	-0.001	102	0	12	-0.652	74	-1.099	15	-1.346	74	-2.493	15
1276		4	max	0.867	74	-0.007	74	0.011	43	0.859	102	0.668	74	1.774	102	1.515	74
1277			min	-0.906	102	-0.098	13	-0.011	101	-0.668	74	-0.859	102	-1.378	74	-1.95	102
1278		5	max	0.862	74	-0.015	74	0.023	43	0.755	102	0.723	74	1.56	102	1.64	74
1279			min	-0.901	102	-0.195	13	-0.023	101	-0.723	74	-0.755	102	-1.492	74	-1.714	102
1280	M583	1	max	0.818	70	0.195	15	0.023	45	0.582	106	0.686	70	1.202	106	1.556	70
1281			min	-0.695	106	0.015	106	-0.023	43	-0.686	70	-0.582	106	-1.415	70	-1.322	106
1282		2	max	0.813	70	0.098	15	0.011	45	0.664	102	0.587	74	1.37	102	1.331	74
1283			min	-0.69	106	0.007	106	-0.011	43	-0.587	74	-0.664	102	-1.211	74	-1.506	102
1284		3	max	0.808	70	0.001	74	0	107	0.738	15	0.563	74	1.524	15	1.277	74
1285			min	-0.685	106	-0.001	102	0	12	-0.563	74	-0.738	15	-1.162	74	-1.675	15
1286		4	max	0.803	70	-0.007	74	0.011	73	0.655	102	0.578	74	1.353	102	1.313	74
1287			min	-0.68	106	-0.098	13	-0.011	71	-0.578	74	-0.655	102	-1.194	74	-1.487	102
1288		5	max	0.798	70	-0.015	74	0.023	73	0.566	106	0.669	70	1.168	106	1.519	70
1289			min	-0.675	106	-0.195	13	-0.023	71	-0.669	70	-0.566	106	-1.381	70	-1.284	106
1290	M584	1	max	1.481	70	0.149	15	0.023	71	1.157	106	1.252	70	2.314	106	2.753	70
1291			min	-1.368	106	0.015	76	-0.023	103	-1.252	70	-1.157	106	-2.505	70	-2.544	106
1292		2	max	1.476	70	0.075	15	0.012	71	1.224	102	1.167	70	2.45	102	2.567	70
1293			min	-1.363	106	0.007	76	-0.012	103	-1.167	70	-1.224	102	-2.335	70	-2.693	102
1294		3	max	1.471	70	0.001	104	0	107	1.247	102	1.144	74	2.495	102	2.516	74
1295			min	-1.358	106	-0.001	72	0	12	-1.144	74	-1.247	102	-2.289	74	-2.743	102
1296		4	max	1.466	70	-0.007	104	0.012	73	1.216	102	1.159	70	2.433	102	2.549	70
1297			min	-1.353	106	-0.075	13	-0.012	41	-1.159	70	-1.216	102	-2.319	70	-2.674	102
1298		5	max	1.461	70	-0.015	104	0.023	73	1.14	106	1.235	70	2.281	106	2.717	70
1299			min	-1.348	106	-0.149	13	-0.023	41	-1.235	70	-1.14	106	-2.472	70	-2.507	106
1300	M585	1	max	-0.288	107	0.312	13	0.039	70	-0.254	107	7.125	14	14.374	14	-0.589	107
1301			min	-8.096	14	0.002	77	-0.038	106	-7.125	14	0.254	107	0.512	107	-16.541	14
1302		2	max	-0.298	107	0.156	13	0.02	70	-0.247	107	4.413	14	19.993	14	-0.644	107
1303			min	-8.14	14	0.001	77	-0.019	106	-4.413	14	0.247	107	0.559	107	-23.007	14
1304		3	max	-0.308	107	0	13	0.003	13	-0.251	107	3.534	14	21.916	14	-0.675	107

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1305			min	-8.183	14	0	76	0	105	-3.534	14	0.251	107	0.587	107	-25.219	14
1306		4	max	-0.318	107	-0.001	107	0.02	72	-0.265	107	4.487	14	20.142	14	-0.684	107
1307			min	-8.226	14	-0.156	15	-0.019	104	-4.487	14	0.265	107	0.594	107	-23.178	14
1308		5	max	-0.328	107	-0.002	107	0.039	72	-0.288	107	7.272	14	14.671	14	-0.669	107
1309			min	-8.27	14	-0.312	15	-0.038	104	-7.272	14	0.288	107	0.582	107	-16.882	14
1310	M586	1	max	-0.154	107	-0.002	77	0.039	102	-0.136	107	7.05	14	14.223	14	-0.316	107
1311			min	-8.011	14	-0.312	13	-0.038	74	-7.05	14	0.136	107	0.274	107	-16.367	14
1312		2	max	-0.164	107	-0.001	77	0.02	102	-0.16	107	9.835	14	8.752	14	-0.301	107
1313			min	-8.055	14	-0.156	13	-0.019	74	-9.835	14	0.16	107	0.262	107	-10.071	14
1314		3	max	-0.174	107	0	76	0.003	15	-0.173	107	10.788	14	6.978	14	-0.31	107
1315			min	-8.098	14	0	100	0	75	-10.788	14	0.173	107	0.269	107	-8.03	14
1316		4	max	-0.185	107	0.156	15	0.02	100	-0.177	107	9.909	14	8.9	14	-0.341	107
1317			min	-8.141	14	0.001	107	-0.019	76	-9.909	14	0.177	107	0.297	107	-10.242	14
1318		5	max	-0.195	107	0.312	15	0.039	100	-0.171	107	7.197	14	14.52	14	-0.396	107
1319			min	-8.185	14	0.002	107	-0.038	76	-7.197	14	0.171	107	0.344	107	-16.708	14
1320	M587	1	max	-0.109	75	0.312	15	0.039	102	-0.097	75	6.562	13	13.238	13	-0.225	75
1321			min	-7.456	13	0.002	105	-0.038	74	-6.562	13	0.097	75	0.195	75	-15.233	13
1322		2	max	-0.119	75	0.156	15	0.02	102	-0.091	75	3.85	13	18.857	13	-0.279	75
1323			min	-7.499	13	0.001	105	-0.019	74	-3.85	13	0.091	75	0.243	75	-21.699	13
1324		3	max	-0.13	75	0	15	0.003	15	-0.094	75	2.97	13	20.779	13	-0.311	75
1325			min	-7.543	13	0	104	0	77	-2.97	13	0.094	75	0.27	75	-23.912	13
1326		4	max	-0.14	75	-0.001	75	0.02	100	-0.108	75	3.923	13	19.005	13	-0.32	75
1327			min	-7.586	13	-0.156	13	-0.019	76	-3.923	13	0.108	75	0.278	75	-21.87	13
1328		5	max	-0.15	75	-0.002	75	0.039	100	-0.131	75	6.709	13	13.535	13	-0.305	75
1329			min	-7.629	13	-0.312	13	-0.038	76	-6.709	13	0.131	75	0.265	75	-15.575	13
1330	M588	1	max	-0.629	75	-0.002	105	0.039	70	0	102	0	74	0	72	0	104
1331			min	-10.021	15	-0.312	13	-0.039	106	0	74	0	102	0	104	0	72
1332		2	max	-0.639	75	-0.001	105	0.019	70	0.142	106	2.749	13	0.286	104	6.381	13
1333			min	-10.064	15	-0.156	13	-0.019	106	-2.749	13	-0.142	106	-5.545	13	-0.33	104
1334		3	max	-0.649	75	0	106	0	15	0.189	106	3.665	13	0.382	104	8.508	13
1335			min	-10.107	15	0	70	0	97	-3.665	13	-0.189	106	-7.393	13	-0.439	104
1336		4	max	-0.659	75	0.156	15	0.019	72	0.142	106	2.749	13	0.286	104	6.381	13
1337			min	-10.151	15	0.001	75	-0.019	104	-2.749	13	-0.142	106	-5.545	13	-0.33	104
1338		5	max	-0.67	75	0.312	15	0.039	72	0	106	0	70	0	15	0	74
1339			min	-10.194	15	0.002	75	-0.039	104	0	70	0	106	0	74	0	15
1340	M589	1	max	4.486	74	0.033	76	-0.027	107	10.255	74	10.526	102	20.519	74	23.149	102
1341			min	-4.604	102	-0.033	100	-0.244	15	-10.525	102	-10.255	74	-21.061	102	-22.553	74
1342		2	max	4.481	74	0.017	76	-0.013	107	10.222	74	10.219	106	19.914	74	23.281	102
1343			min	-4.6	102	-0.017	100	-0.122	15	-10.219	106	-10.222	74	-21.181	102	-21.888	74
1344		3	max	4.476	74	0.002	77	0	107	10.204	74	10.111	106	19.697	74	23.308	102
1345			min	-4.595	102	-0.002	101	0	12	-10.111	106	-10.204	74	-21.206	102	-21.65	74
1346		4	max	4.471	74	0.014	70	0.122	13	10.2	74	10.197	106	19.869	74	23.231	102
1347			min	-4.59	102	-0.014	102	0.013	75	-10.197	106	-10.2	74	-21.136	102	-21.839	74
1348		5	max	4.466	74	0.029	70	0.244	13	10.21	74	10.481	102	20.43	74	23.05	102
1349			min	-4.585	102	-0.029	102	0.027	75	-10.481	102	-10.21	74	-20.972	102	-22.455	74
1350	M590	1	max	3.865	74	0.029	104	-0.027	75	8.836	74	9.302	102	17.68	74	20.459	102
1351			min	-4.069	102	-0.029	72	-0.244	13	-9.302	102	-8.836	74	-18.613	102	-19.432	74
1352		2	max	3.86	74	0.014	104	-0.013	75	9.116	74	9.251	106	17.7	74	21.278	102
1353			min	-4.064	102	-0.014	72	-0.122	13	-9.251	106	-9.116	74	-19.359	102	-19.455	74
1354		3	max	3.855	74	0.002	105	0	107	9.202	74	9.247	106	17.692	74	21.535	102
1355			min	-4.059	102	-0.002	73	0	12	-9.247	106	-9.202	74	-19.593	102	-19.446	74
1356		4	max	3.85	74	0.017	106	0.122	15	9.093	74	9.229	106	17.655	74	21.229	102
1357			min	-4.055	102	-0.017	70	0.013	107	-9.229	106	-9.093	74	-19.314	102	-19.406	74
1358		5	max	3.846	74	0.033	106	0.244	15	8.791	74	9.257	102	17.59	74	20.36	102
1359			min	-4.05	102	-0.033	70	0.027	107	-9.257	102	-8.791	74	-18.524	102	-19.334	74

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1360	M591	1	max	-3.945	98	0.28	13	0.036	100	-3.471	98	21.902	15	44.186	15	-8.057	98
1361			min	-24.894	15	-0.001	77	-0.036	76	-21.902	15	3.471	98	7.002	98	-50.846	15
1362		2	max	-3.949	98	0.14	13	0.018	100	-3.283	98	19.651	15	48.875	15	-8.507	98
1363			min	-24.937	15	0	77	-0.018	76	-19.651	15	3.283	98	7.393	98	-56.242	15
1364		3	max	-3.952	98	0	100	0.003	15	-3.223	98	18.925	15	50.487	15	-8.661	98
1365			min	-24.98	15	0	76	0	75	-18.925	15	3.223	98	7.527	98	-58.097	15
1366		4	max	-3.956	98	0	107	0.018	102	-3.289	98	19.724	15	49.022	15	-8.521	98
1367			min	-25.024	15	-0.14	15	-0.018	74	-19.724	15	3.289	98	7.405	98	-56.411	15
1368		5	max	-3.96	98	0.001	107	0.036	102	-3.483	98	22.048	15	44.481	15	-8.086	98
1369			min	-25.067	15	-0.28	15	-0.036	74	-22.048	15	3.483	98	7.026	98	-51.185	15
1370	M592	1	max	-3.83	98	0.001	77	0.036	72	-3.369	98	19.482	13	39.304	13	-7.822	98
1371			min	-22.143	13	-0.28	13	-0.036	104	-19.482	13	3.369	98	6.797	98	-45.228	13
1372		2	max	-3.833	98	0	77	0.018	72	-3.563	98	21.806	13	34.762	13	-7.386	98
1373			min	-22.186	13	-0.14	13	-0.018	104	-21.806	13	3.563	98	6.419	98	-40.001	13
1374		3	max	-3.837	98	0	72	0.003	13	-3.629	98	22.605	13	33.297	13	-7.246	98
1375			min	-22.23	13	0	100	0	105	-22.605	13	3.629	98	6.297	98	-38.316	13
1376		4	max	-3.841	98	0.14	15	0.018	70	-3.569	98	21.879	13	34.909	13	-7.4	98
1377			min	-22.273	13	0	107	-0.018	106	-21.879	13	3.569	98	6.431	98	-40.171	13
1378		5	max	-3.844	98	0.28	15	0.036	70	-3.381	98	19.628	13	39.598	13	-7.85	98
1379			min	-22.316	13	-0.001	107	-0.036	106	-19.628	13	3.381	98	6.822	98	-45.567	13
1380	M593	1	max	-3.935	66	0.001	105	0.036	100	-3.462	66	22.039	15	44.461	15	-8.037	66
1381			min	-25.049	15	-0.28	15	-0.036	76	-22.039	15	3.462	66	6.984	66	-51.163	15
1382		2	max	-3.939	66	0	105	0.018	100	-3.655	66	24.363	15	39.919	15	-7.601	66
1383			min	-25.092	15	-0.14	15	-0.018	76	-24.363	15	3.655	66	6.606	66	-45.936	15
1384		3	max	-3.942	66	0	104	0.003	15	-3.722	66	25.162	15	38.455	15	-7.461	66
1385			min	-25.136	15	0	72	0	77	-25.162	15	3.722	66	6.484	66	-44.251	15
1386		4	max	-3.946	66	0.14	13	0.018	102	-3.662	66	24.436	15	40.067	15	-7.615	66
1387			min	-25.179	15	0	75	-0.018	74	-24.436	15	3.662	66	6.618	66	-46.106	15
1388		5	max	-3.949	66	0.28	13	0.036	102	-3.474	66	22.185	15	44.756	15	-8.065	66
1389			min	-25.222	15	-0.001	75	-0.036	74	-22.185	15	3.474	66	7.008	66	-51.502	15
1390	M594	1	max	-3.577	68	0.28	15	0.036	72	-3.147	68	18.95	13	38.23	13	-7.306	68
1391			min	-21.538	13	-0.001	105	-0.036	104	-18.95	13	3.147	68	6.349	68	-43.993	13
1392		2	max	-3.581	68	0.14	15	0.018	72	-2.96	68	16.699	13	42.919	13	-7.756	68
1393			min	-21.582	13	0	105	-0.018	104	-16.699	13	2.96	68	6.74	68	-49.389	13
1394		3	max	-3.585	68	0	72	0.003	13	-2.899	68	15.973	13	44.532	13	-7.91	68
1395			min	-21.625	13	0	104	0	107	-15.973	13	2.899	68	6.874	68	-51.244	13
1396		4	max	-3.588	68	0	75	0.018	70	-2.966	68	16.772	13	43.067	13	-7.77	68
1397			min	-21.668	13	-0.14	13	-0.018	106	-16.772	13	2.966	68	6.752	68	-49.558	13
1398		5	max	-3.592	68	0.001	75	0.036	70	-3.159	68	19.096	13	38.525	13	-7.335	68
1399			min	-21.711	13	-0.28	13	-0.036	106	-19.096	13	3.159	68	6.374	68	-44.332	13
1400	M595	1	max	-3.381	99	0.28	13	0.036	100	-2.974	99	18.539	15	37.401	15	-6.905	99
1401			min	-21.071	15	-0.001	77	-0.036	76	-18.539	15	2.975	99	6.001	99	-43.039	15
1402		2	max	-3.385	99	0.14	13	0.018	100	-2.787	99	16.288	15	42.09	15	-7.355	99
1403			min	-21.114	15	0	77	-0.018	76	-16.288	15	2.787	99	6.391	99	-48.434	15
1404		3	max	-3.388	99	0	100	0.003	15	-2.726	99	15.562	15	43.703	15	-7.509	99
1405			min	-21.158	15	0	76	0	75	-15.562	15	2.726	99	6.526	99	-50.29	15
1406		4	max	-3.392	99	0	107	0.018	102	-2.793	99	16.361	15	42.238	15	-7.369	99
1407			min	-21.201	15	-0.14	15	-0.018	74	-16.361	15	2.793	99	6.404	99	-48.604	15
1408		5	max	-3.395	99	0.001	107	0.036	102	-2.987	99	18.685	15	37.696	15	-6.934	99
1409			min	-21.244	15	-0.28	15	-0.036	74	-18.685	15	2.987	99	6.025	99	-43.378	15
1410	M596	1	max	-3.251	96	0.001	77	0.036	72	-2.86	96	16.194	14	32.67	14	-6.64	96
1411			min	-18.405	14	-0.28	13	-0.036	104	-16.194	14	2.86	96	5.77	96	-37.594	14
1412		2	max	-3.255	96	0	77	0.018	72	-3.054	96	18.518	14	28.128	14	-6.205	96
1413			min	-18.448	14	-0.14	13	-0.018	104	-18.518	14	3.054	96	5.392	96	-32.368	14
1414		3	max	-3.258	96	0	76	0.003	13	-3.12	96	19.317	14	26.664	14	-6.064	96

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1415			min	-18.492	14	0	100	0	105	-19.317	14	3.12	96	5.27	96	-30.682	14
1416		4	max	-3.262	96	0.14	15	0.018	70	-3.06	96	18.591	14	28.276	14	-6.219	96
1417			min	-18.535	14	0	107	-0.018	106	-18.591	14	3.06	96	5.404	96	-32.538	14
1418		5	max	-3.266	96	0.28	15	0.036	70	-2.872	96	16.34	14	32.965	14	-6.668	96
1419			min	-18.578	14	-0.001	107	-0.036	106	-16.34	14	2.872	96	5.795	96	-37.933	14
1420	M597	1	max	-3.212	66	0.001	105	0.036	100	-2.826	66	17.33	15	34.962	15	-6.561	66
1421			min	-19.697	15	-0.28	15	-0.036	76	-17.33	15	2.826	66	5.701	66	-40.232	15
1422		2	max	-3.216	66	0	105	0.018	100	-3.02	66	19.655	15	30.421	15	-6.125	66
1423			min	-19.74	15	-0.14	15	-0.018	76	-19.655	15	3.02	66	5.323	66	-35.006	15
1424		3	max	-3.219	66	0	104	0.003	15	-3.086	66	20.454	15	28.956	15	-5.985	66
1425			min	-19.783	15	0	72	0	77	-20.454	15	3.086	66	5.201	66	-33.32	15
1426		4	max	-3.223	66	0.14	13	0.018	102	-3.026	66	19.728	15	30.568	15	-6.139	66
1427			min	-19.827	15	0	75	-0.018	74	-19.728	15	3.026	66	5.335	66	-35.176	15
1428		5	max	-3.227	66	0.28	13	0.036	102	-2.838	66	17.476	15	35.257	15	-6.589	66
1429			min	-19.87	15	-0.001	75	-0.036	74	-17.476	15	2.838	66	5.726	66	-40.571	15
1430	M598	1	max	-3.178	68	0.28	15	0.036	72	-2.796	68	15.673	13	31.619	13	-6.491	68
1431			min	-17.813	13	-0.001	105	-0.036	104	-15.673	13	2.796	68	5.64	68	-36.385	13
1432		2	max	-3.182	68	0.14	15	0.018	72	-2.608	68	13.422	13	36.308	13	-6.94	68
1433			min	-17.856	13	0	105	-0.018	104	-13.422	13	2.608	68	6.031	68	-41.781	13
1434		3	max	-3.185	68	0	72	0.003	13	-2.548	68	12.696	13	37.921	13	-7.095	68
1435			min	-17.9	13	0	104	0	107	-12.696	13	2.548	68	6.165	68	-43.636	13
1436		4	max	-3.189	68	0	75	0.018	70	-2.614	68	13.495	13	36.456	13	-6.954	68
1437			min	-17.943	13	-0.14	13	-0.018	106	-13.495	13	2.614	68	6.043	68	-41.951	13
1438		5	max	-3.192	68	0.001	75	0.036	70	-2.808	68	15.819	13	31.914	13	-6.519	68
1439			min	-17.986	13	-0.28	13	-0.036	106	-15.819	13	2.808	68	5.665	68	-36.725	13
1440	M599	1	max	0.283	107	0.312	13	0.039	70	0.248	107	3.362	14	6.782	14	0.576	107
1441			min	-3.818	14	0.002	77	-0.038	106	-3.362	14	-0.248	107	-0.501	107	-7.804	14
1442		2	max	0.273	107	0.156	13	0.02	70	0.255	107	1.942	71	12.401	14	0.522	107
1443			min	-3.861	14	0.001	77	-0.019	106	-1.942	71	-0.255	107	-0.453	107	-14.27	14
1444		3	max	0.263	107	0	13	0.003	13	0.456	20	1.829	70	14.323	14	0.49	107
1445			min	-3.905	14	0	76	0	105	-1.829	70	-0.456	20	-0.426	107	-16.482	14
1446		4	max	0.252	107	-0.001	107	0.02	72	0.237	107	1.939	71	12.549	14	0.481	107
1447			min	-3.948	14	-0.156	15	-0.019	104	-1.939	71	-0.237	107	-0.418	107	-14.441	14
1448		5	max	0.242	107	-0.002	107	0.039	72	0.214	107	3.509	14	7.079	14	0.496	107
1449			min	-3.992	14	-0.312	15	-0.038	104	-3.509	14	-0.214	107	-0.431	107	-8.145	14
1450	M600	1	max	0.387	107	-0.002	77	0.039	102	0.339	107	3.433	14	6.926	14	0.788	107
1451			min	-3.899	14	-0.312	13	-0.038	74	-3.433	14	-0.339	107	-0.685	107	-7.97	14
1452		2	max	0.376	107	-0.001	77	0.02	102	0.316	107	6.218	14	4.007	71	0.802	107
1453			min	-3.943	14	-0.156	13	-0.019	74	-6.218	14	-0.316	107	-0.697	107	-4.611	71
1454		3	max	0.366	107	0	76	0.003	15	0.302	107	7.171	14	3.676	72	0.885	20
1455			min	-3.986	14	0	100	0	75	-7.171	14	-0.302	107	-0.769	20	-4.23	72
1456		4	max	0.356	107	0.156	15	0.02	100	0.299	107	6.292	14	4.001	71	0.762	107
1457			min	-4.03	14	0.001	107	-0.019	76	-6.292	14	-0.299	107	-0.662	107	-4.604	71
1458		5	max	0.346	107	0.312	15	0.039	100	0.305	107	3.58	14	7.222	14	0.708	107
1459			min	-4.073	14	0.002	107	-0.038	76	-3.58	14	-0.305	107	-0.615	107	-8.311	14
1460	M601	1	max	-0.052	75	-0.002	105	0.039	70	-0.046	75	4.834	15	9.751	15	-0.108	75
1461			min	-5.491	15	-0.312	15	-0.038	106	-4.834	15	0.046	75	0.094	75	-11.221	15
1462		2	max	-0.062	75	-0.001	105	0.02	70	-0.07	75	7.619	15	4.784	103	-0.093	75
1463			min	-5.535	15	-0.156	15	-0.019	106	-7.619	15	0.07	75	0.081	75	-5.506	103
1464		3	max	-0.072	75	0	104	0.003	13	-0.084	75	8.572	15	4.432	103	-0.102	75
1465			min	-5.578	15	0	15	0	107	-8.572	15	0.084	75	0.088	75	-5.1	103
1466		4	max	-0.083	75	0.156	13	0.02	72	-0.087	75	7.692	15	4.778	103	-0.133	75
1467			min	-5.622	15	0.001	75	-0.019	104	-7.692	15	0.087	75	0.116	75	-5.499	103
1468		5	max	-0.093	75	0.312	13	0.039	72	-0.081	75	4.981	15	10.048	15	-0.188	75
1469			min	-5.665	15	0.002	75	-0.038	104	-4.981	15	0.081	75	0.163	75	-11.562	15

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1470	M602	1	max	0.433	75	0.312	15	0.039	102	0.38	75	2.964	13	5.979	13	0.883	75
1471			min	-3.366	13	0.002	105	-0.038	74	-2.964	13	-0.38	75	-0.767	75	-6.881	13
1472		2	max	0.423	75	0.156	15	0.02	102	0.386	75	1.947	103	11.599	13	0.828	75
1473			min	-3.409	13	0.001	105	-0.019	74	-1.947	103	-0.386	75	-0.72	75	-13.347	13
1474		3	max	0.413	75	0	15	0.003	15	0.844	19	1.773	103	13.521	13	0.796	75
1475			min	-3.453	13	0	104	0	77	-1.773	103	-0.844	19	-0.692	75	-15.559	13
1476		4	max	0.402	75	-0.001	75	0.02	100	0.369	75	1.944	103	11.747	13	0.788	75
1477			min	-3.496	13	-0.156	13	-0.019	76	-1.944	103	-0.369	75	-0.685	75	-13.518	13
1478		5	max	0.392	75	-0.002	75	0.039	100	0.346	75	3.111	13	6.276	13	0.802	75
1479			min	-3.54	13	-0.312	13	-0.038	76	-3.111	13	-0.346	75	-0.697	75	-7.222	13
1480	M618	1	max	0.31	72	2.555	15	0.908	71	0.424	72	0.331	74	0	107	0	107
1481			min	-0.243	74	0.583	99	-0.908	103	-0.331	74	-0.424	72	0	12	0	12
1482		2	max	0.315	72	2.474	15	0.901	71	5.562	15	-1.008	96	13.575	71	13.574	103
1483			min	-0.248	74	0.57	99	-0.901	103	1.008	96	-5.562	15	-13.574	103	-13.575	71
1484		3	max	1.476	72	2.393	15	0.894	71	11.182	72	-2.208	96	27.045	71	27.043	103
1485			min	-1.408	74	-2.262	86	-0.751	73	2.208	96	-11.182	72	-27.043	103	-27.045	71
1486		4	max	1.481	72	-0.57	99	0.901	103	6.625	72	-0.702	96	13.575	71	13.574	103
1487			min	-1.413	74	-2.474	15	-0.901	71	0.702	96	-6.625	72	-13.574	103	-13.575	71
1488		5	max	1.486	72	-0.583	99	0.908	103	2.029	72	1.937	74	0	107	0	107
1489			min	-1.418	74	-2.555	15	-0.908	71	-1.937	74	-2.029	72	0	12	0	12
1490	M619	1	max	0.473	76	2.637	15	0.963	71	0.646	76	0.59	74	0	107	0	107
1491			min	-0.432	74	0.602	97	-0.963	103	-0.59	74	-0.646	76	0	12	0	12
1492		2	max	0.478	76	2.556	15	0.956	71	5.583	15	-0.939	66	14.404	71	14.409	103
1493			min	-0.437	74	0.59	97	-0.956	103	0.939	66	-5.583	15	-14.409	103	-14.404	71
1494		3	max	1.679	76	2.475	15	0.949	103	11.773	72	-2.18	66	28.703	71	28.713	103
1495			min	-1.638	74	-2.203	103	-0.118	86	2.18	66	-11.773	72	-28.713	103	-28.703	71
1496		4	max	1.684	76	-0.59	97	0.956	103	7.055	72	-0.567	74	14.404	71	14.409	103
1497			min	-1.643	74	-2.556	15	-0.956	71	0.567	74	-7.055	72	-14.409	103	-14.404	71
1498		5	max	1.689	76	-0.602	97	0.963	103	2.306	76	2.25	74	0	107	0	107
1499			min	-1.648	74	-2.637	15	-0.963	71	-2.25	74	-2.306	76	0	12	0	12
1500	M620	1	max	0.392	14	0.121	74	0.13	103	0	107	0	107	0	107	0	107
1501			min	-0.103	77	-0.258	102	-0.13	101	0	12	0	12	0	12	0	12
1502		2	max	0.365	14	0.096	74	0.12	103	0.208	74	0.472	102	2.381	103	2.386	101
1503			min	-0.108	77	-0.234	102	-0.121	101	-0.472	102	-0.208	74	-2.386	101	-2.381	103
1504		3	max	0.313	15	0.062	74	0.077	101	0.36	74	0.889	102	2.895	103	2.902	101
1505			min	-0.016	77	-0.2	102	-0.077	103	-0.889	102	-0.36	74	-2.902	101	-2.895	103
1506		4	max	0.287	15	0.038	74	0.086	101	0.456	74	1.249	102	1.347	103	1.35	101
1507			min	-0.021	77	-0.175	102	-0.086	103	-1.249	102	-0.456	74	-1.35	101	-1.347	103
1508		5	max	0	107	0	13	0	71	0	107	0	107	0	107	0	107
1509			min	0	12	0	106	0	103	0	12	0	12	0	12	0	12
1510	M621	1	max	0.392	16	0.121	74	0.13	103	0	107	0	107	0	107	0	107
1511			min	-0.103	75	-0.258	102	-0.13	101	0	12	0	12	0	12	0	12
1512		2	max	0.365	16	0.096	74	0.121	103	0.208	74	0.472	102	2.386	103	2.381	101
1513			min	-0.108	75	-0.234	102	-0.12	101	-0.472	102	-0.208	74	-2.381	101	-2.386	103
1514		3	max	0.313	15	0.062	74	0.077	101	0.36	74	0.889	102	2.902	103	2.895	101
1515			min	-0.016	75	-0.2	102	-0.077	103	-0.889	102	-0.36	74	-2.895	101	-2.902	103
1516		4	max	0.286	15	0.038	74	0.086	101	0.456	74	1.249	102	1.35	103	1.347	101
1517			min	-0.021	75	-0.175	102	-0.086	103	-1.249	102	-0.456	74	-1.347	101	-1.35	103
1518		5	max	0	107	0	13	0	101	0	107	0	107	0	107	0	107
1519			min	0	12	0	106	0	73	0	12	0	12	0	12	0	12
1520	M622	1	max	0.408	16	0.469	70	0.099	103	3.206	102	2.81	74	7.368	101	7.365	103
1521			min	0.065	97	-0.469	102	-0.099	101	-2.81	74	-3.206	102	-7.365	103	-7.368	101
1522		2	max	0.37	16	0.434	70	0.086	103	1.982	102	1.588	74	4.875	101	4.874	103
1523			min	0.057	97	-0.434	102	-0.086	101	-1.588	74	-1.982	102	-4.874	103	-4.875	101
1524		3	max	0.237	16	0.23	70	0.086	103	0.958	102	0.596	66	2.649	101	2.649	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1525			min	0.027	37	-0.23	102	-0.086	101	-0.596	66	-0.958	102	-2.649	103	-2.649	101
1526		4	max	0.133	16	0.123	62	0.046	103	0.491	15	0.139	66	0.651	101	0.651	103
1527			min	0.015	67	-0.123	94	-0.046	101	-0.139	66	-0.491	15	-0.651	103	-0.651	101
1528		5	max	0	107	0	70	0	103	0	107	0	107	0	107	0	107
1529			min	0	12	0	15	0	101	0	12	0	12	0	12	0	12
1530	M623	1	max	0.788	14	1.072	70	0.387	73	1.957	106	2.119	70	11.817	101	11.823	103
1531			min	-0.099	77	-0.999	106	-0.386	71	-2.119	70	-1.957	106	-11.823	103	-11.817	101
1532		2	max	0.656	14	0.275	70	0.371	103	0.833	102	0.631	74	1.636	101	1.633	103
1533			min	-0.116	107	-0.107	106	-0.372	101	-0.631	74	-0.833	102	-1.633	103	-1.636	101
1534		3	max	0.392	14	0.648	100	0.052	101	0.901	15	0.012	96	5.621	103	5.623	101
1535			min	-0.05	107	-0.51	76	-0.052	103	-0.012	96	-0.901	15	-5.623	101	-5.621	103
1536		4	max	0.178	101	0.145	70	0.141	101	0.423	15	0.178	66	3.298	103	3.304	101
1537			min	-0.112	77	-0.145	102	-0.141	103	-0.178	66	-0.423	15	-3.304	101	-3.298	103
1538		5	max	0	107	0	70	0	101	0	107	0	107	0	107	0	107
1539			min	0	12	0	15	0	103	0	12	0	12	0	12	0	12
1540	M624	1	max	0.788	16	1.072	70	0.386	73	1.957	106	2.119	70	11.823	101	11.817	103
1541			min	-0.099	75	-0.999	106	-0.387	71	-2.119	70	-1.957	106	-11.817	103	-11.823	101
1542		2	max	0.656	16	0.275	70	0.372	103	0.833	102	0.631	74	1.633	101	1.636	103
1543			min	-0.116	105	-0.107	106	-0.371	101	-0.631	74	-0.833	102	-1.636	103	-1.633	101
1544		3	max	0.392	16	0.648	100	0.052	101	0.901	15	0.012	96	5.623	103	5.621	101
1545			min	-0.05	105	-0.51	76	-0.052	103	-0.012	96	-0.901	15	-5.621	101	-5.623	103
1546		4	max	0.178	103	0.145	70	0.141	101	0.423	15	0.178	66	3.304	103	3.298	101
1547			min	-0.112	75	-0.145	102	-0.141	103	-0.178	66	-0.423	15	-3.298	101	-3.304	103
1548		5	max	0	107	0	70	0	101	0	107	0	107	0	107	0	107
1549			min	0	12	0	15	0	103	0	12	0	12	0	12	0	12
1550	M625	1	max	0.408	14	0.469	70	0.099	103	3.206	102	2.81	74	7.365	101	7.368	103
1551			min	0.065	99	-0.469	102	-0.099	101	-2.81	74	-3.206	102	-7.368	103	-7.365	101
1552		2	max	0.37	14	0.434	70	0.086	103	1.982	102	1.588	74	4.874	101	4.875	103
1553			min	0.057	99	-0.434	102	-0.086	101	-1.588	74	-1.982	102	-4.875	103	-4.874	101
1554		3	max	0.237	16	0.23	70	0.086	103	0.958	102	0.596	66	2.649	101	2.649	103
1555			min	0.027	67	-0.23	102	-0.086	101	-0.596	66	-0.958	102	-2.649	103	-2.649	101
1556		4	max	0.133	15	0.123	62	0.046	103	0.491	15	0.139	66	0.651	101	0.651	103
1557			min	0.015	67	-0.123	94	-0.046	101	-0.139	66	-0.491	15	-0.651	103	-0.651	101
1558		5	max	0	107	0	70	0	103	0	107	0	107	0	107	0	107
1559			min	0	12	0	15	0	101	0	12	0	12	0	12	0	12
1560	M628	1	max	0.467	14	0.745	65	0.228	106	0	107	0	107	0	107	0	107
1561			min	-0.186	99	-0.585	67	-0.253	70	0	12	0	12	0	12	0	12
1562		2	max	0.439	93	0.735	65	0.056	70	0.887	95	0.696	67	2.078	106	2.311	70
1563			min	-0.199	69	-0.575	67	-0.05	106	-0.696	67	-0.887	95	-2.311	70	-2.078	106
1564		3	max	0.434	93	0.726	65	0.062	70	1.763	65	1.38	67	1.454	106	1.609	70
1565			min	-0.202	69	-0.566	67	-0.055	106	-1.38	67	-1.763	65	-1.609	70	-1.454	106
1566		4	max	0.43	93	0.716	65	0.068	70	2.628	65	2.053	67	0.761	106	0.838	70
1567			min	-0.205	69	-0.556	67	-0.061	106	-2.053	67	-2.628	65	-0.838	70	-0.761	106
1568		5	max	0.426	93	0.707	65	0.073	70	3.481	65	2.715	67	0	63	0	65
1569			min	-0.209	69	-0.547	67	-0.067	106	-2.715	67	-3.481	65	0	65	0	63
1570	M629	1	max	0.467	16	0.585	69	0.228	106	0	107	0	107	0	107	0	107
1571			min	-0.186	97	-0.745	63	-0.253	70	0	12	0	12	0	12	0	12
1572		2	max	0.439	95	0.575	69	0.056	70	0.696	69	0.887	93	2.078	106	2.311	70
1573			min	-0.199	67	-0.735	63	-0.05	106	-0.887	93	-0.696	69	-2.311	70	-2.078	106
1574		3	max	0.434	95	0.566	69	0.062	70	1.38	69	1.763	63	1.454	106	1.609	70
1575			min	-0.202	67	-0.726	63	-0.055	106	-1.763	63	-1.38	69	-1.609	70	-1.454	106
1576		4	max	0.43	95	0.556	69	0.068	70	2.053	69	2.628	63	0.761	106	0.838	70
1577			min	-0.205	67	-0.716	63	-0.061	106	-2.628	63	-2.053	69	-0.838	70	-0.761	106
1578		5	max	0.426	95	0.547	69	0.073	70	2.715	69	3.481	63	0	65	0	63
1579			min	-0.209	67	-0.707	63	-0.067	106	-3.481	63	-2.715	69	0	63	0	65

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1580	M631	1	max	0	107	0	71	0	73	0	107	0	107	0	107	0	107
1581			min	0	12	0	12	0	103	0	12	0	12	0	12	0	12
1582		2	max	0.147	99	-0.215	67	0.173	70	-0.31	67	1.178	16	2.392	70	2.392	102
1583			min	-0.147	63	-0.805	16	-0.173	102	-1.178	16	0.31	67	-2.392	102	-2.392	70
1584		3	max	-0.014	98	1.025	63	0	95	-0.136	69	0.485	15	3.077	70	3.077	102
1585			min	-0.051	16	-1.025	65	0	93	-0.485	15	0.136	69	-3.077	102	-3.077	70
1586		4	max	0.147	93	0.805	14	0.173	102	-0.31	69	1.178	14	2.392	70	2.392	102
1587			min	-0.147	69	0.215	69	-0.173	70	-1.178	14	0.31	69	-2.392	102	-2.392	70
1588		5	max	0	107	0	106	0	101	0	107	0	107	0	107	0	107
1589			min	0	12	0	73	0	71	0	12	0	12	0	12	0	12
1590	M632	1	max	0.062	15	0.89	15	0.129	103	0.682	74	1.99	102	0.001	102	0	74
1591			min	-0.004	66	0.019	66	-0.129	101	-1.99	102	-0.682	74	0	74	-0.001	102
1592		2	max	0.062	13	0.537	15	0.078	103	0.888	70	0.178	106	3.258	103	3.258	101
1593			min	0.004	68	-0.08	74	-0.078	101	-0.178	106	-0.888	70	-3.258	101	-3.258	103
1594		3	max	0.106	100	0.206	106	0.013	101	1.64	15	-0.119	96	4.384	103	4.384	101
1595			min	-0.056	76	-0.306	70	-0.013	103	0.119	96	-1.64	15	-4.384	101	-4.384	103
1596		4	max	0.14	100	0.098	106	0.065	101	1.345	102	0.812	74	3.141	103	3.14	101
1597			min	-0.09	76	-0.489	70	-0.065	103	-0.812	74	-1.345	102	-3.14	101	-3.141	103
1598		5	max	0.148	100	0.082	106	0.077	101	1.477	106	2.174	70	1.182	73	1.182	105
1599			min	-0.097	76	-0.544	13	-0.077	103	-2.174	70	-1.477	106	-1.182	105	-1.182	73
1600	M633	1	max	0.062	15	0.89	15	0.129	103	0.682	74	1.99	102	0	74	0.001	102
1601			min	-0.004	66	0.019	66	-0.129	101	-1.99	102	-0.682	74	-0.001	102	0	74
1602		2	max	0.062	13	0.537	15	0.078	103	0.888	70	0.178	106	3.258	103	3.258	101
1603			min	0.004	68	-0.08	74	-0.078	101	-0.178	106	-0.888	70	-3.258	101	-3.258	103
1604		3	max	0.106	100	0.206	106	0.013	101	1.64	15	-0.119	96	4.384	103	4.384	101
1605			min	-0.056	76	-0.306	70	-0.013	103	0.119	96	-1.64	15	-4.384	101	-4.384	103
1606		4	max	0.14	100	0.098	106	0.065	101	1.345	102	0.812	74	3.14	103	3.141	101
1607			min	-0.09	76	-0.489	70	-0.065	103	-0.812	74	-1.345	102	-3.141	101	-3.14	103
1608		5	max	0.148	100	0.082	106	0.077	101	1.477	106	2.174	70	1.182	107	1.182	71
1609			min	-0.097	76	-0.544	13	-0.077	103	-2.174	70	-1.477	106	-1.182	71	-1.182	107
1610	M638	1	max	0.807	107	0.227	14	0.029	106	0	107	0	107	0	107	0	107
1611			min	-0.822	101	-0.001	107	-0.029	44	0	12	0	12	0	12	0	12
1612		2	max	0.815	107	0.114	14	0.014	106	1.491	14	0.083	46	3.009	14	0.192	104
1613			min	-0.823	101	0	107	-0.014	74	-0.083	46	-1.491	14	-0.167	104	-3.462	14
1614		3	max	0.823	103	0	107	0	107	1.988	14	0.111	46	4.011	14	0.257	104
1615			min	-0.824	101	0	12	0	12	-0.111	46	-1.988	14	-0.223	104	-4.616	14
1616		4	max	0.832	103	0	47	0.014	70	1.491	14	0.083	46	3.009	14	0.192	104
1617			min	-0.826	105	-0.114	15	-0.014	102	-0.083	46	-1.491	14	-0.167	104	-3.462	14
1618		5	max	0.841	103	0.001	47	0.029	104	0	107	0	107	0	107	0	107
1619			min	-0.828	105	-0.227	15	-0.029	42	0	12	0	12	0	12	0	12
1620	M639	1	max	0.841	101	0.223	16	0.029	76	0	107	0	107	0	107	0	107
1621			min	-0.828	107	-0.001	45	-0.029	44	0	12	0	12	0	12	0	12
1622		2	max	0.832	101	0.112	16	0.014	46	1.464	16	0.083	46	2.954	16	0.192	74
1623			min	-0.826	107	0	45	-0.014	70	-0.083	46	-1.464	16	-0.167	74	-3.399	16
1624		3	max	0.823	101	0	107	0	107	1.952	16	0.111	46	3.939	16	0.257	74
1625			min	-0.824	103	0	12	0	12	-0.111	46	-1.952	16	-0.223	74	-4.532	16
1626		4	max	0.815	105	0	105	0.014	100	1.464	16	0.083	46	2.954	16	0.192	74
1627			min	-0.823	103	-0.112	14	-0.014	72	-0.083	46	-1.464	16	-0.167	74	-3.399	13
1628		5	max	0.807	105	0.001	105	0.029	104	0	107	0	107	0	107	0	107
1629			min	-0.822	103	-0.223	14	-0.029	42	0	12	0	12	0	12	0	12
1630	M640	1	max	0.273	74	0.342	70	0.036	103	0	107	0	107	0	107	0	107
1631			min	-0.284	102	-0.314	106	-0.036	101	0	12	0	12	0	12	0	12
1632		2	max	0.283	74	0.314	74	0.02	103	1.281	70	1.281	102	1.015	103	1.015	101
1633			min	-0.295	102	-0.342	102	-0.02	101	-1.281	102	-1.281	70	-1.015	101	-1.015	103
1634		3	max	0.073	13	0.524	102	0	101	0.183	70	0.154	106	1.344	103	1.345	101

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1635			min	-0.026	68	-0.519	74	0	103	-0.154	106	-0.183	70	-1.345	101	-1.344	103
1636		4	max	0.262	106	0.274	70	0.02	101	1.035	102	1.015	74	1.014	103	1.015	101
1637			min	-0.27	70	-0.251	106	-0.02	103	-1.015	74	-1.035	102	-1.015	101	-1.014	103
1638		5	max	0.252	106	0.247	74	0.036	101	0	107	0	107	0	107	0	107
1639			min	-0.259	70	-0.28	102	-0.036	103	0	12	0	12	0	12	0	12
1640	M642	1	max	0.273	74	0.342	70	0.036	103	0	107	0	107	0	107	0	107
1641			min	-0.284	102	-0.314	106	-0.036	101	0	12	0	12	0	12	0	12
1642		2	max	0.283	74	0.314	74	0.02	103	1.281	70	1.281	102	1.015	103	1.015	101
1643			min	-0.295	102	-0.342	102	-0.02	101	-1.281	102	-1.281	70	-1.015	101	-1.015	103
1644		3	max	0.073	13	0.524	102	0	101	0.183	70	0.154	106	1.345	103	1.344	101
1645			min	-0.026	68	-0.519	74	0	103	-0.154	106	-0.183	70	-1.344	101	-1.345	103
1646		4	max	0.262	106	0.274	70	0.02	101	1.035	102	1.015	74	1.015	103	1.014	101
1647			min	-0.27	70	-0.251	106	-0.02	103	-1.015	74	-1.035	102	-1.014	101	-1.015	103
1648		5	max	0.252	106	0.247	74	0.036	101	0	107	0	107	0	107	0	107
1649			min	-0.259	70	-0.28	102	-0.036	103	0	12	0	12	0	12	0	12
1650	M644	1	max	1.686	102	0.148	15	0.022	77	0	107	0	107	0	107	0	107
1651			min	-1.488	74	-0.005	46	-0.022	45	0	12	0	12	0	12	0	12
1652		2	max	1.679	102	0.074	15	0.011	73	0.733	15	0.055	47	1.478	15	0.128	45
1653			min	-1.487	74	-0.002	46	-0.011	45	-0.055	47	-0.733	14	-0.111	45	-1.701	15
1654		3	max	1.672	102	0	107	0	107	0.977	15	0.074	47	1.971	15	0.171	45
1655			min	-1.486	74	0	12	0	12	-0.074	47	-0.977	14	-0.148	45	-2.268	15
1656		4	max	1.665	102	0.002	106	0.011	105	0.733	15	0.055	47	1.478	15	0.128	45
1657			min	-1.485	74	-0.074	16	-0.011	107	-0.055	47	-0.733	14	-0.111	45	-1.701	15
1658		5	max	1.657	102	0.005	106	0.022	71	0	107	0	107	0	107	0	107
1659			min	-1.484	74	-0.148	16	-0.022	107	0	12	0	12	0	12	0	12
1660	M645	1	max	1.522	70	0.15	16	0.022	107	0	107	0	107	0	107	0	107
1661			min	-1.373	106	-0.005	44	-0.022	45	0	12	0	12	0	12	0	12
1662		2	max	1.529	70	0.075	16	0.011	107	0.746	16	0.055	47	1.506	16	0.128	105
1663			min	-1.374	106	-0.002	44	-0.011	45	-0.055	47	-0.746	13	-0.111	45	-1.733	13
1664		3	max	1.536	70	0	107	0	107	0.995	16	0.074	47	2.008	16	0.171	105
1665			min	-1.375	106	0	12	0	12	-0.074	47	-0.995	13	-0.148	45	-2.31	13
1666		4	max	1.544	70	0.002	104	0.011	101	0.746	16	0.055	47	1.506	16	0.128	105
1667			min	-1.376	106	-0.075	13	-0.011	47	-0.055	47	-0.746	13	-0.111	45	-1.733	13
1668		5	max	1.551	70	0.005	104	0.022	71	0	107	0	107	0	107	0	107
1669			min	-1.377	106	-0.15	13	-0.022	43	0	12	0	12	0	12	0	12
1670	M646	1	max	1.686	102	0.148	16	0.022	73	0	107	0	107	0	107	0	107
1671			min	-1.488	74	-0.005	46	-0.022	105	0	12	0	12	0	12	0	12
1672		2	max	1.679	102	0.074	16	0.011	73	0.733	16	0.055	77	1.478	16	0.128	105
1673			min	-1.487	74	-0.002	46	-0.011	105	-0.055	77	-0.733	13	-0.111	105	-1.701	13
1674		3	max	1.672	102	0	107	0	107	0.977	16	0.074	77	1.971	16	0.171	105
1675			min	-1.486	74	0	12	0	12	-0.074	77	-0.977	13	-0.148	105	-2.268	13
1676		4	max	1.665	102	0.002	106	0.011	45	0.733	16	0.055	77	1.478	16	0.128	105
1677			min	-1.485	74	-0.074	14	-0.011	47	-0.055	77	-0.733	13	-0.111	105	-1.701	13
1678		5	max	1.657	102	0.005	106	0.022	71	0	107	0	107	0	107	0	107
1679			min	-1.484	74	-0.148	14	-0.022	47	0	12	0	12	0	12	0	12
1680	M647	1	max	1.522	70	0.15	16	0.022	73	0	107	0	107	0	107	0	107
1681			min	-1.373	106	-0.005	44	-0.022	45	0	12	0	12	0	12	0	12
1682		2	max	1.529	70	0.075	16	0.011	73	0.746	16	0.055	107	1.506	16	0.128	75
1683			min	-1.374	106	-0.002	44	-0.011	45	-0.055	47	-0.746	13	-0.111	75	-1.733	13
1684		3	max	1.536	70	0	107	0	107	0.995	16	0.074	107	2.008	16	0.171	75
1685			min	-1.375	106	0	12	0	12	-0.074	47	-0.995	13	-0.148	75	-2.31	13
1686		4	max	1.544	70	0.002	104	0.011	101	0.746	16	0.055	107	1.506	16	0.128	75
1687			min	-1.376	106	-0.075	13	-0.011	47	-0.055	47	-0.746	13	-0.111	75	-1.733	13
1688		5	max	1.551	70	0.005	104	0.022	101	0	107	0	107	0	107	0	107
1689			min	-1.377	106	-0.15	13	-0.022	43	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1690	M648	1	max	0.006	105	0.142	16	0.016	98	0	107	0	107	0	107	0	107
1691			min	-0.019	13	0.02	45	-0.016	32	0	12	0	12	0	12	0	12
1692		2	max	0.001	105	0.071	16	0.008	98	0.203	16	-0.028	105	0.217	98	0.217	96
1693			min	-0.019	13	0.01	45	-0.008	32	0.028	45	-0.203	13	-0.217	32	-0.217	34
1694		3	max	-0.002	98	0	107	0	107	0.271	16	-0.038	105	0.29	98	0.29	96
1695			min	-0.019	13	0	12	0	12	0.038	45	-0.271	13	-0.29	32	-0.29	34
1696		4	max	0.001	107	-0.01	107	0.008	96	0.203	16	-0.028	105	0.217	98	0.217	96
1697			min	-0.019	13	-0.071	13	-0.008	34	0.028	45	-0.203	13	-0.217	32	-0.217	34
1698		5	max	0.006	107	-0.02	107	0.016	96	0	107	0	107	0	107	0	107
1699			min	-0.019	13	-0.142	13	-0.016	34	0	12	0	12	0	12	0	12
1700	M649	1	max	0.068	66	0.542	13	0.136	41	0.308	75	3.646	16	0.621	107	8.464	14
1701			min	-0.068	34	0.043	98	-0.136	43	-3.646	16	-0.308	75	-7.355	14	-0.714	107
1702		2	max	0.068	66	0.497	13	0.132	41	0.19	75	2.217	16	0.384	107	5.146	14
1703			min	-0.068	34	0.039	98	-0.132	43	-2.217	16	-0.19	75	-4.472	14	-0.442	107
1704		3	max	0.068	66	0.453	13	0.127	41	0.077	75	0.911	16	0.155	107	2.116	14
1705			min	-0.068	34	0.036	98	-0.127	43	-0.911	16	-0.077	75	-1.839	14	-0.179	107
1706		4	max	0.002	100	0.045	15	0.006	97	0.004	67	0.062	16	0.008	99	0.144	14
1707			min	-0.002	106	0.003	106	-0.006	35	-0.062	16	-0.004	67	-0.125	14	-0.009	99
1708		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
1709			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1710	M650	1	max	0.055	96	0.469	13	0.113	75	0.252	75	3.107	16	0.509	107	7.214	14
1711			min	-0.055	64	0.037	98	-0.113	103	-3.107	16	-0.252	75	-6.269	14	-0.586	107
1712		2	max	0.055	96	0.424	13	0.108	75	0.156	105	1.88	16	0.314	107	4.365	14
1713			min	-0.055	64	0.034	98	-0.108	103	-1.88	16	-0.156	105	-3.793	14	-0.362	107
1714		3	max	0.055	96	0.379	13	0.104	75	0.063	105	0.777	16	0.127	77	1.803	14
1715			min	-0.055	64	0.03	98	-0.104	103	-0.777	16	-0.063	105	-1.567	14	-0.146	77
1716		4	max	0.002	100	0.045	15	0.006	37	0.004	67	0.062	16	0.008	39	0.144	14
1717			min	-0.002	72	0.003	106	-0.006	99	-0.062	16	-0.004	67	-0.125	14	-0.009	39
1718		5	max	0	107	0	100	0	100	0	107	0	107	0	107	0	107
1719			min	0	12	0	102	0	102	0	12	0	12	0	12	0	12
1720	M651	1	max	0.055	92	0.469	13	0.113	105	0.252	45	3.107	16	0.509	77	7.214	14
1721			min	-0.055	34	0.037	98	-0.113	73	-3.107	16	-0.252	45	-6.269	14	-0.586	77
1722		2	max	0.055	92	0.424	13	0.108	105	0.156	75	1.88	16	0.314	77	4.365	14
1723			min	-0.055	34	0.034	98	-0.108	73	-1.88	16	-0.156	75	-3.793	14	-0.362	77
1724		3	max	0.055	92	0.379	13	0.104	105	0.063	75	0.777	16	0.127	77	1.803	14
1725			min	-0.055	34	0.03	98	-0.104	73	-0.777	16	-0.063	75	-1.567	14	-0.146	77
1726		4	max	0.002	74	0.045	14	0.006	33	0.004	97	0.062	16	0.008	39	0.144	14
1727			min	-0.002	42	0.003	106	-0.006	65	-0.062	16	-0.004	97	-0.125	14	-0.009	39
1728		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
1729			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1730	M652	1	max	0.068	92	0.542	13	0.136	71	0.308	75	3.646	16	0.621	47	8.464	14
1731			min	-0.068	34	0.043	98	-0.136	73	-3.646	16	-0.308	75	-7.355	14	-0.714	47
1732		2	max	0.068	92	0.497	13	0.132	71	0.19	45	2.217	16	0.384	47	5.146	14
1733			min	-0.068	34	0.039	98	-0.132	73	-2.217	16	-0.19	45	-4.472	14	-0.442	47
1734		3	max	0.068	92	0.453	13	0.127	71	0.077	45	0.911	16	0.155	107	2.116	14
1735			min	-0.068	34	0.036	98	-0.127	73	-0.911	16	-0.077	45	-1.839	14	-0.179	107
1736		4	max	0.002	44	0.045	16	0.006	67	0.004	97	0.062	16	0.008	99	0.144	14
1737			min	-0.002	42	0.003	106	-0.006	95	-0.062	16	-0.004	97	-0.125	14	-0.009	99
1738		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
1739			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1740	M653	1	max	0.055	92	0.469	13	0.113	75	0.252	75	3.107	16	0.509	77	7.214	14
1741			min	-0.055	34	0.037	98	-0.113	43	-3.107	16	-0.252	75	-6.269	14	-0.586	77
1742		2	max	0.055	92	0.424	13	0.108	75	0.156	105	1.88	16	0.314	77	4.365	14
1743			min	-0.055	34	0.034	98	-0.108	43	-1.88	16	-0.156	105	-3.793	14	-0.362	77
1744		3	max	0.055	92	0.379	13	0.104	75	0.063	105	0.777	16	0.127	77	1.803	14

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1745			min	-0.055	34	0.03	98	-0.104	43	-0.777	16	-0.063	105	-1.567	14	-0.146	77
1746		4	max	0.002	104	0.045	16	0.006	97	0.004	67	0.062	16	0.008	39	0.144	14
1747			min	-0.002	42	0.003	106	-0.006	69	-0.062	16	-0.004	67	-0.125	14	-0.009	39
1748		5	max	0	107	0	100	0	100	0	107	0	107	0	107	0	107
1749			min	0	12	0	102	0	102	0	12	0	12	0	12	0	12
1750	M654	1	max	0.055	66	0.469	13	0.113	75	0.252	75	3.107	16	0.509	77	7.214	14
1751			min	-0.055	64	0.037	98	-0.113	107	-3.107	16	-0.252	75	-6.269	14	-0.586	77
1752		2	max	0.055	66	0.424	13	0.108	75	0.156	45	1.88	16	0.314	77	4.365	14
1753			min	-0.055	64	0.034	98	-0.108	107	-1.88	16	-0.156	45	-3.793	14	-0.362	77
1754		3	max	0.055	66	0.379	13	0.104	75	0.063	45	0.777	16	0.127	77	1.803	14
1755			min	-0.055	64	0.03	98	-0.104	107	-0.777	16	-0.063	45	-1.567	14	-0.146	77
1756		4	max	0.002	100	0.045	16	0.006	37	0.004	97	0.062	16	0.008	69	0.144	14
1757			min	-0.002	42	0.003	106	-0.006	35	-0.062	16	-0.004	97	-0.125	14	-0.009	69
1758		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
1759			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1760	M655	1	max	0.068	92	0.542	13	0.136	105	0.308	105	3.646	16	0.621	47	8.464	14
1761			min	-0.068	38	0.043	98	-0.136	47	-3.646	16	-0.308	105	-7.355	14	-0.714	47
1762		2	max	0.068	92	0.497	13	0.132	105	0.19	105	2.217	16	0.384	47	5.146	14
1763			min	-0.068	38	0.039	98	-0.132	47	-2.217	16	-0.19	105	-4.472	14	-0.442	47
1764		3	max	0.068	92	0.453	13	0.127	105	0.077	75	0.911	16	0.155	77	2.116	14
1765			min	-0.068	38	0.036	98	-0.127	47	-0.911	16	-0.077	75	-1.839	14	-0.179	77
1766		4	max	0.002	104	0.045	16	0.006	67	0.004	37	0.062	16	0.008	99	0.144	14
1767			min	-0.002	72	0.003	106	-0.006	95	-0.062	16	-0.004	37	-0.125	14	-0.009	99
1768		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
1769			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1770	M656	1	max	0.068	66	0.542	13	0.136	71	0.308	105	3.646	16	0.621	77	8.464	14
1771			min	-0.068	34	0.043	98	-0.136	43	-3.646	16	-0.308	105	-7.355	14	-0.714	77
1772		2	max	0.068	66	0.497	13	0.132	71	0.19	105	2.217	16	0.384	77	5.146	14
1773			min	-0.068	34	0.039	98	-0.132	43	-2.217	16	-0.19	105	-4.472	14	-0.442	77
1774		3	max	0.068	66	0.453	13	0.127	71	0.077	75	0.911	16	0.155	77	2.116	14
1775			min	-0.068	34	0.036	98	-0.127	43	-0.911	16	-0.077	75	-1.839	14	-0.179	77
1776		4	max	0.002	104	0.045	13	0.006	37	0.004	67	0.062	16	0.008	99	0.144	14
1777			min	-0.002	42	0.003	106	-0.006	65	-0.062	16	-0.004	67	-0.125	14	-0.009	99
1778		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
1779			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1780	M657	1	max	0.09	104	0.693	13	0.207	71	0.389	105	4.044	16	0.785	47	9.388	14
1781			min	-0.09	42	0.042	98	-0.207	103	-4.044	16	-0.389	105	-8.158	14	-0.904	47
1782		2	max	0.088	104	0.649	13	0.202	71	0.21	75	2.201	16	0.424	47	5.11	14
1783			min	-0.088	42	0.038	98	-0.202	103	-2.201	16	-0.21	75	-4.44	14	-0.488	47
1784		3	max	0.086	104	0.605	13	0.198	71	0.035	75	0.48	16	0.071	47	1.114	14
1785			min	-0.086	42	0.034	98	-0.198	103	-0.48	16	-0.035	75	-0.968	14	-0.082	47
1786		4	max	0.002	44	0.044	13	0.006	67	0.004	67	0.061	16	0.008	39	0.142	14
1787			min	-0.002	46	0.003	106	-0.006	35	-0.061	16	-0.004	67	-0.123	14	-0.009	39
1788		5	max	0	107	0	100	0	100	0	107	0	107	0	107	0	107
1789			min	0	12	0	102	0	102	0	12	0	12	0	12	0	12
1790	M658	1	max	0.09	104	0.693	13	0.207	71	0.389	105	4.044	16	0.785	77	9.388	14
1791			min	-0.09	42	0.042	98	-0.207	77	-4.044	16	-0.389	105	-8.158	14	-0.904	77
1792		2	max	0.088	104	0.649	13	0.202	71	0.21	105	2.201	16	0.424	47	5.11	14
1793			min	-0.088	42	0.038	98	-0.202	77	-2.201	16	-0.21	105	-4.44	14	-0.488	47
1794		3	max	0.086	104	0.605	13	0.198	71	0.035	105	0.48	16	0.071	107	1.114	14
1795			min	-0.086	42	0.034	98	-0.198	77	-0.48	16	-0.035	105	-0.968	14	-0.082	107
1796		4	max	0.002	100	0.044	13	0.006	37	0.004	97	0.061	16	0.008	69	0.142	14
1797			min	-0.002	42	0.003	106	-0.006	95	-0.061	16	-0.004	97	-0.123	14	-0.009	69
1798		5	max	0	107	0	100	0	100	0	107	0	107	0	107	0	107
1799			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1800	M659	1	max	0.098	104	0.748	13	0.227	105	0.427	105	4.373	16	0.862	107	10.152	14
1801			min	-0.098	102	0.044	98	-0.227	43	-4.373	16	-0.427	105	-8.822	14	-0.992	107
1802		2	max	0.096	104	0.704	13	0.222	105	0.231	105	2.378	16	0.465	107	5.521	14
1803			min	-0.096	102	0.041	98	-0.222	43	-2.378	16	-0.231	105	-4.798	14	-0.536	107
1804		3	max	0.094	104	0.66	13	0.218	105	0.038	45	0.505	16	0.077	77	1.173	14
1805			min	-0.094	102	0.037	98	-0.218	43	-0.505	16	-0.038	45	-1.019	14	-0.088	77
1806		4	max	0.002	104	0.044	15	0.006	33	0.004	37	0.061	16	0.008	69	0.142	14
1807			min	-0.002	42	0.003	106	-0.006	39	-0.061	16	-0.004	37	-0.123	14	-0.009	69
1808		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
1809			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1810	M660	1	max	0.098	104	0.748	13	0.227	71	0.427	75	4.373	16	0.862	47	10.152	14
1811			min	-0.098	72	0.044	98	-0.227	43	-4.373	16	-0.427	75	-8.822	14	-0.992	47
1812		2	max	0.096	104	0.704	13	0.222	71	0.231	75	2.378	16	0.465	107	5.521	14
1813			min	-0.096	72	0.041	98	-0.222	43	-2.378	16	-0.231	75	-4.798	14	-0.536	107
1814		3	max	0.094	104	0.66	13	0.218	71	0.038	45	0.505	16	0.077	107	1.173	14
1815			min	-0.094	72	0.037	98	-0.218	43	-0.505	16	-0.038	45	-1.019	14	-0.088	107
1816		4	max	0.002	104	0.044	15	0.006	37	0.004	37	0.061	16	0.008	39	0.142	14
1817			min	-0.002	42	0.003	106	-0.006	69	-0.061	16	-0.004	37	-0.123	14	-0.009	39
1818		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
1819			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
1820	M407	1	max	0.455	15	0.34	74	0.133	107	0	107	0	107	0	107	0	107
1821			min	-0.08	44	-0.417	42	-0.145	41	0	12	0	12	0	12	0	12
1822		2	max	0.366	15	0.296	44	0.006	95	0.722	44	0.895	42	0.885	107	0.945	101
1823			min	-0.084	44	-0.371	42	-0.005	37	-0.895	42	-0.722	44	-0.945	41	-0.885	77
1824		3	max	0.334	15	0.267	44	0.01	101	1.367	44	1.713	42	0.8	107	0.839	101
1825			min	-0.089	44	-0.342	42	-0.009	77	-1.713	42	-1.367	44	-0.839	41	-0.8	77
1826		4	max	0.303	15	0.237	44	0.021	101	1.945	44	2.464	42	0.467	107	0.485	101
1827			min	-0.095	44	-0.313	42	-0.02	77	-2.464	42	-1.945	44	-0.485	41	-0.467	77
1828		5	max	0	107	0	13	0	101	0	107	0	107	0	107	0	107
1829			min	0	12	0	72	0	43	0	12	0	12	0	12	0	12
1830	M408	1	max	0.455	13	0.417	100	0.133	107	0	107	0	107	0	107	0	107
1831			min	-0.08	46	-0.34	46	-0.145	41	0	12	0	12	0	12	0	12
1832		2	max	0.366	13	0.371	100	0.006	95	0.895	100	0.722	106	0.885	107	0.945	101
1833			min	-0.084	46	-0.296	46	-0.005	37	-0.722	46	-0.895	40	-0.945	41	-0.885	77
1834		3	max	0.334	13	0.342	100	0.01	101	1.713	100	1.367	106	0.8	107	0.839	101
1835			min	-0.089	46	-0.267	46	-0.009	77	-1.367	46	-1.713	40	-0.839	41	-0.8	77
1836		4	max	0.303	13	0.313	100	0.021	101	2.464	100	1.945	106	0.467	107	0.485	101
1837			min	-0.095	46	-0.237	46	-0.02	77	-1.945	46	-2.464	40	-0.485	41	-0.467	77
1838		5	max	0	107	0	100	0	101	0	107	0	107	0	107	0	107
1839			min	0	12	0	15	0	43	0	12	0	12	0	12	0	12
1840	M417	1	max	0.455	13	0.417	100	0.145	103	0	107	0	107	0	107	0	107
1841			min	-0.08	46	-0.34	46	-0.133	75	0	12	0	12	0	12	0	12
1842		2	max	0.366	13	0.371	100	0.005	99	0.895	100	0.722	106	0.945	73	0.885	105
1843			min	-0.084	46	-0.296	46	-0.006	33	-0.722	46	-0.895	40	-0.885	75	-0.945	73
1844		3	max	0.334	13	0.342	100	0.009	105	1.713	100	1.367	106	0.839	73	0.8	75
1845			min	-0.089	46	-0.267	46	-0.01	43	-1.367	46	-1.713	40	-0.8	75	-0.839	73
1846		4	max	0.303	13	0.313	100	0.02	105	2.464	100	1.945	106	0.485	73	0.467	75
1847			min	-0.095	46	-0.237	46	-0.021	43	-1.945	46	-2.464	40	-0.467	75	-0.485	73
1848		5	max	0	107	0	100	0	101	0	107	0	107	0	107	0	107
1849			min	0	12	0	15	0	43	0	12	0	12	0	12	0	12
1850	M418	1	max	0.455	15	0.34	44	0.145	73	0	107	0	107	0	107	0	107
1851			min	-0.08	44	-0.417	42	-0.133	75	0	12	0	12	0	12	0	12
1852		2	max	0.366	15	0.296	44	0.005	99	0.722	44	0.895	42	0.945	73	0.885	105
1853			min	-0.084	44	-0.371	42	-0.006	33	-0.895	42	-0.722	44	-0.885	75	-0.945	73
1854		3	max	0.334	15	0.267	44	0.009	105	1.367	44	1.713	42	0.839	73	0.8	105

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1855			min	-0.089	44	-0.342	42	-0.01	43	-1.713	42	-1.367	44	-0.8	75	-0.839	73
1856		4	max	0.303	15	0.237	44	0.02	105	1.945	44	2.464	42	0.485	73	0.467	105
1857			min	-0.095	44	-0.313	42	-0.021	43	-2.464	42	-1.945	44	-0.467	75	-0.485	73
1858		5	max	0	107	0	13	0	101	0	107	0	107	0	107	0	107
1859			min	0	12	0	42	0	43	0	12	0	12	0	12	0	12
1860	M419	1	max	0.009	105	0.204	16	0.024	98	0	107	0	107	0	107	0	107
1861			min	-0.024	15	0.029	44	-0.024	32	0	12	0	12	0	12	0	12
1862		2	max	0.006	44	0.102	16	0.012	98	0.424	16	-0.059	107	0.458	98	0.458	96
1863			min	-0.024	15	0.014	44	-0.012	32	0.059	44	-0.424	13	-0.458	32	-0.458	34
1864		3	max	0.006	44	0	107	0	107	0.565	16	-0.079	107	0.611	98	0.611	96
1865			min	-0.024	15	0	12	0	12	0.079	44	-0.565	13	-0.611	32	-0.611	34
1866		4	max	0.006	44	-0.014	107	0.012	96	0.424	16	-0.059	107	0.458	98	0.458	96
1867			min	-0.024	15	-0.102	13	-0.012	34	0.059	44	-0.424	13	-0.458	32	-0.458	34
1868		5	max	0.009	107	-0.029	107	0.024	96	0	107	0	107	0	107	0	107
1869			min	-0.024	15	-0.204	13	-0.024	34	0	12	0	12	0	12	0	12
1870	M420	1	max	0.084	102	1.011	42	0.101	103	3.262	44	4.173	42	0.001	44	0.001	42
1871			min	-0.057	44	-0.436	44	-0.101	41	-4.173	42	-3.262	44	-0.001	42	-0.001	44
1872		2	max	0.076	102	0.987	42	0.09	103	2.199	100	1.564	106	2.453	103	2.453	101
1873			min	-0.049	44	-0.45	44	-0.09	41	-1.564	46	-2.199	40	-2.453	41	-2.453	43
1874		3	max	0.032	14	0.651	42	0	42	1.496	16	-0.329	97	3.541	103	3.541	101
1875			min	0.007	66	-0.651	40	0	40	0.329	37	-1.496	16	-3.541	41	-3.541	43
1876		4	max	0.076	100	0.45	106	0.09	101	2.199	42	1.564	44	2.453	103	2.453	101
1877			min	-0.049	46	-0.987	40	-0.09	43	-1.564	44	-2.199	42	-2.453	41	-2.453	43
1878		5	max	0.084	100	0.436	106	0.101	101	3.262	106	4.173	100	0.001	106	0.001	100
1879			min	-0.057	46	-1.011	40	-0.101	43	-4.173	40	-3.262	46	-0.001	40	-0.001	46
1880	M421	1	max	0.009	107	0.204	16	0.024	96	0	107	0	107	0	107	0	107
1881			min	-0.024	13	0.029	44	-0.024	34	0	12	0	12	0	12	0	12
1882		2	max	0.006	106	0.102	16	0.012	96	0.424	16	-0.059	107	0.458	96	0.458	98
1883			min	-0.024	13	0.014	44	-0.012	34	0.059	44	-0.424	13	-0.458	34	-0.458	32
1884		3	max	0.006	106	0	107	0	107	0.565	16	-0.079	107	0.611	96	0.611	98
1885			min	-0.024	13	0	12	0	12	0.079	44	-0.565	13	-0.611	34	-0.611	32
1886		4	max	0.006	106	-0.014	107	0.012	98	0.424	16	-0.059	107	0.458	96	0.458	98
1887			min	-0.024	13	-0.102	13	-0.012	32	0.059	44	-0.424	13	-0.458	34	-0.458	32
1888		5	max	0.009	75	-0.029	107	0.024	98	0	107	0	107	0	107	0	107
1889			min	-0.024	13	-0.204	13	-0.024	32	0	12	0	12	0	12	0	12
1890	M422	1	max	0.084	100	1.011	100	0.101	101	3.262	106	4.173	100	0.001	106	0.001	100
1891			min	-0.057	46	-0.436	46	-0.101	43	-4.173	40	-3.262	46	-0.001	40	-0.001	46
1892		2	max	0.076	100	0.987	100	0.09	101	2.199	42	1.564	44	2.453	101	2.453	103
1893			min	-0.049	46	-0.45	46	-0.09	43	-1.564	44	-2.199	42	-2.453	43	-2.453	41
1894		3	max	0.032	16	0.651	100	0	100	1.496	14	-0.329	69	3.541	101	3.541	103
1895			min	0.007	66	-0.651	42	0	42	0.329	69	-1.496	14	-3.541	43	-3.541	41
1896		4	max	0.076	102	0.45	44	0.09	103	2.199	100	1.564	106	2.453	101	2.453	103
1897			min	-0.049	44	-0.987	42	-0.09	41	-1.564	46	-2.199	40	-2.453	43	-2.453	41
1898		5	max	0.084	102	0.436	44	0.101	103	3.262	44	4.173	42	0.001	44	0.001	42
1899			min	-0.057	44	-1.011	42	-0.101	41	-4.173	42	-3.262	44	-0.001	42	-0.001	44
1900	M423	1	max	0.613	103	0.336	14	0.047	42	0	107	0	107	0	107	0	107
1901			min	-0.573	75	-0.01	77	-0.047	40	0	12	0	12	0	12	0	12
1902		2	max	0.629	103	0.168	16	0.024	42	3.622	16	0.257	106	7.306	14	0.597	74
1903			min	-0.575	75	-0.005	77	-0.024	40	-0.257	46	-3.622	13	-0.519	74	-8.407	13
1904		3	max	0.645	103	0	107	0	107	4.829	16	0.343	106	9.742	14	0.796	74
1905			min	-0.577	75	0	12	0	12	-0.343	46	-4.829	13	-0.692	74	-11.21	13
1906		4	max	0.661	103	0.005	47	0.024	74	3.622	16	0.257	106	7.306	14	0.597	74
1907			min	-0.58	75	-0.168	15	-0.024	46	-0.257	46	-3.622	13	-0.519	74	-8.407	13
1908		5	max	0.676	103	0.01	47	0.047	104	0	107	0	107	0	107	0	107
1909			min	-0.582	75	-0.336	15	-0.047	46	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1910	M424	1	max	0.613	101	0.336	16	0.047	104	0	107	0	107	0	107	0	107
1911			min	-0.573	77	-0.01	75	-0.047	42	0	12	0	12	0	12	0	12
1912		2	max	0.629	101	0.168	14	0.024	104	3.622	14	0.257	104	7.306	16	0.597	106
1913			min	-0.575	77	-0.005	75	-0.024	42	-0.257	104	-3.622	13	-0.519	46	-8.407	13
1914		3	max	0.645	101	0	107	0	107	4.829	14	0.343	104	9.742	16	0.796	106
1915			min	-0.577	77	0	12	0	12	-0.343	104	-4.829	13	-0.692	46	-11.21	13
1916		4	max	0.661	101	0.005	45	0.024	106	3.622	14	0.257	104	7.306	16	0.597	106
1917			min	-0.58	77	-0.168	15	-0.024	44	-0.257	104	-3.622	13	-0.519	46	-8.407	13
1918		5	max	0.676	101	0.01	45	0.047	106	0	107	0	107	0	107	0	107
1919			min	-0.582	77	-0.336	15	-0.047	40	0	12	0	12	0	12	0	12
1920	M425	1	max	0.613	103	0.336	16	0.047	106	0	107	0	107	0	107	0	107
1921			min	-0.573	75	-0.01	77	-0.047	40	0	12	0	12	0	12	0	12
1922		2	max	0.629	103	0.168	15	0.024	106	3.622	15	0.257	106	7.306	16	0.597	74
1923			min	-0.575	75	-0.005	77	-0.024	40	-0.257	46	-3.622	13	-0.519	74	-8.407	13
1924		3	max	0.645	103	0	107	0	107	4.829	15	0.343	106	9.742	16	0.796	74
1925			min	-0.577	75	0	12	0	12	-0.343	46	-4.829	13	-0.692	74	-11.21	13
1926		4	max	0.661	103	0.005	47	0.024	104	3.622	15	0.257	106	7.306	16	0.597	74
1927			min	-0.58	75	-0.168	16	-0.024	46	-0.257	46	-3.622	13	-0.519	74	-8.407	13
1928		5	max	0.676	103	0.01	47	0.047	104	0	107	0	107	0	107	0	107
1929			min	-0.582	75	-0.336	16	-0.047	42	0	12	0	12	0	12	0	12
1930	M426	1	max	0.613	101	0.336	15	0.047	104	0	107	0	107	0	107	0	107
1931			min	-0.573	77	-0.01	105	-0.047	42	0	12	0	12	0	12	0	12
1932		2	max	0.629	101	0.168	16	0.024	104	3.622	16	0.257	44	7.306	15	0.597	106
1933			min	-0.575	77	-0.005	105	-0.024	42	-0.257	44	-3.622	15	-0.519	46	-8.407	15
1934		3	max	0.645	101	0	107	0	107	4.829	16	0.343	44	9.742	15	0.796	106
1935			min	-0.577	77	0	12	0	12	-0.343	44	-4.829	15	-0.692	46	-11.21	15
1936		4	max	0.661	101	0.005	45	0.024	106	3.622	16	0.257	44	7.306	15	0.597	106
1937			min	-0.58	77	-0.168	13	-0.024	44	-0.257	44	-3.622	15	-0.519	46	-8.407	15
1938		5	max	0.676	101	0.01	45	0.047	106	0	107	0	107	0	107	0	107
1939			min	-0.582	77	-0.336	13	-0.047	40	0	12	0	12	0	12	0	12
1940	M427	1	max	0.531	15	0.429	74	0.163	47	0	107	0	107	0	107	0	107
1941			min	-0.162	74	-0.494	42	-0.184	41	0	12	0	12	0	12	0	12
1942		2	max	0.421	15	0.009	94	0.148	107	0.274	44	0.306	42	3.507	107	3.933	101
1943			min	-0.118	77	-0.005	66	-0.166	41	-0.306	42	-0.274	44	-3.933	41	-3.507	77
1944		3	max	0.404	101	0.035	42	0.137	107	0.239	44	0.259	42	6.739	107	7.576	101
1945			min	-0.124	77	-0.03	44	-0.155	41	-0.259	42	-0.239	44	-7.576	41	-6.739	77
1946		4	max	0.395	101	0.064	42	0.126	107	0.137	104	0.146	42	9.722	107	10.969	101
1947			min	-0.129	77	-0.059	44	-0.144	41	-0.146	42	-0.137	44	-10.969	41	-9.722	77
1948		5	max	0	107	0	13	0	16	0	107	0	107	0	107	0	107
1949			min	0	12	0	34	0	41	0	12	0	12	0	12	0	12
1950	M428	1	max	0.531	13	0.494	100	0.163	47	0	107	0	107	0	107	0	107
1951			min	-0.162	46	-0.429	46	-0.184	41	0	12	0	12	0	12	0	12
1952		2	max	0.421	13	0.005	98	0.148	107	0.306	100	0.274	106	3.507	107	3.933	101
1953			min	-0.118	77	-0.009	32	-0.166	41	-0.274	46	-0.306	40	-3.933	41	-3.507	77
1954		3	max	0.404	101	0.03	106	0.137	107	0.259	100	0.239	106	6.739	107	7.576	101
1955			min	-0.124	77	-0.035	40	-0.155	41	-0.239	46	-0.259	40	-7.576	41	-6.739	77
1956		4	max	0.395	101	0.059	106	0.126	107	0.146	100	0.137	106	9.722	107	10.969	101
1957			min	-0.129	77	-0.064	40	-0.144	41	-0.137	46	-0.146	40	-10.969	41	-9.722	77
1958		5	max	0	107	0	62	0	16	0	107	0	107	0	107	0	107
1959			min	0	12	0	15	0	41	0	12	0	12	0	12	0	12
1960	M429	1	max	0.531	13	0.494	100	0.184	73	0	107	0	107	0	107	0	107
1961			min	-0.162	46	-0.429	46	-0.163	45	0	12	0	12	0	12	0	12
1962		2	max	0.421	13	0.005	98	0.166	73	0.306	100	0.274	106	3.933	73	3.507	75
1963			min	-0.118	75	-0.009	32	-0.148	75	-0.274	46	-0.306	40	-3.507	75	-3.933	73
1964		3	max	0.404	73	0.03	106	0.155	73	0.259	100	0.239	106	7.576	73	6.739	75

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
1965			min	-0.124	75	-0.035	40	-0.137	75	-0.239	46	-0.259	40	-6.739	75	-7.576	73
1966		4	max	0.395	73	0.059	106	0.144	73	0.146	100	0.137	106	10.969	73	9.722	75
1967			min	-0.129	75	-0.064	40	-0.126	75	-0.137	46	-0.146	40	-9.722	75	-10.969	73
1968		5	max	0	107	0	92	0	73	0	107	0	107	0	107	0	107
1969			min	0	12	0	15	0	14	0	12	0	12	0	12	0	12
1970	M430	1	max	0.531	15	0.429	74	0.184	73	0	107	0	107	0	107	0	107
1971			min	-0.162	44	-0.494	42	-0.163	45	0	12	0	12	0	12	0	12
1972		2	max	0.421	15	0.009	94	0.166	73	0.274	74	0.306	42	3.933	73	3.507	75
1973			min	-0.118	75	-0.005	66	-0.148	75	-0.306	42	-0.274	44	-3.507	75	-3.933	73
1974		3	max	0.404	73	0.035	42	0.155	73	0.239	74	0.259	42	7.576	73	6.739	75
1975			min	-0.124	75	-0.03	44	-0.137	75	-0.259	42	-0.239	44	-6.739	75	-7.576	73
1976		4	max	0.395	73	0.064	42	0.144	73	0.137	74	0.146	42	10.969	73	9.722	75
1977			min	-0.129	75	-0.059	44	-0.126	75	-0.146	42	-0.137	44	-9.722	75	-10.969	73
1978		5	max	0	107	0	13	0	73	0	107	0	107	0	107	0	107
1979			min	0	12	0	34	0	14	0	12	0	12	0	12	0	12
1980	M431	1	max	0.111	101	1.537	101	0.156	102	4.455	107	5.045	101	0.008	107	0.009	101
1981			min	-0.098	77	-0.582	77	-0.156	40	-5.045	41	-4.455	77	-0.009	41	-0.008	77
1982		2	max	0.105	101	1.515	101	0.146	102	3.448	73	1.678	75	3.494	102	3.495	100
1983			min	-0.092	77	-0.595	77	-0.146	40	-1.678	75	-3.448	73	-3.495	40	-3.494	72
1984		3	max	0.018	13	0.94	101	0	101	2.836	15	-0.632	36	4.892	102	4.893	100
1985			min	0.004	69	-0.94	73	0	73	0.632	36	-2.836	15	-4.893	40	-4.892	72
1986		4	max	0.105	103	0.595	75	0.146	100	3.448	101	1.678	107	3.494	102	3.495	100
1987			min	-0.092	75	-1.515	73	-0.146	72	-1.678	77	-3.448	41	-3.495	40	-3.494	72
1988		5	max	0.111	103	0.582	75	0.156	100	4.455	75	5.045	73	0.008	75	0.009	73
1989			min	-0.098	75	-1.537	73	-0.156	72	-5.045	73	-4.455	75	-0.009	73	-0.008	75
1990	M432	1	max	0.012	75	0.156	16	0.018	99	0	107	0	107	0	107	0	107
1991			min	-0.04	73	0.022	44	-0.018	33	0	12	0	12	0	12	0	12
1992		2	max	0.012	75	0.078	16	0.009	99	0.249	16	-0.035	107	0.266	99	0.266	97
1993			min	-0.04	73	0.011	44	-0.009	33	0.035	44	-0.249	13	-0.266	33	-0.266	35
1994		3	max	0.012	75	0	107	0	107	0.332	16	-0.047	107	0.355	99	0.355	97
1995			min	-0.04	73	0	12	0	12	0.047	44	-0.332	13	-0.355	33	-0.355	35
1996		4	max	0.012	75	-0.011	107	0.009	97	0.249	16	-0.035	107	0.266	99	0.266	97
1997			min	-0.04	73	-0.078	13	-0.009	35	0.035	44	-0.249	13	-0.266	33	-0.266	35
1998		5	max	0.012	75	-0.022	107	0.018	97	0	107	0	107	0	107	0	107
1999			min	-0.04	73	-0.156	13	-0.018	35	0	12	0	12	0	12	0	12
2000	M433	1	max	0.111	103	1.537	73	0.156	100	4.455	75	5.045	73	0.008	75	0.009	73
2001			min	-0.098	75	-0.582	75	-0.156	42	-5.045	73	-4.455	75	-0.009	73	-0.008	75
2002		2	max	0.105	103	1.515	73	0.146	100	3.448	101	1.678	107	3.494	100	3.495	42
2003			min	-0.092	75	-0.595	75	-0.146	42	-1.678	77	-3.448	41	-3.495	42	-3.494	40
2004		3	max	0.018	15	0.94	73	0	73	2.836	13	-0.632	38	4.892	100	4.893	42
2005			min	0.004	69	-0.94	41	0	41	0.632	38	-2.836	13	-4.893	42	-4.892	40
2006		4	max	0.105	101	0.595	107	0.146	42	3.448	73	1.678	75	3.494	100	3.495	42
2007			min	-0.092	77	-1.515	41	-0.146	40	-1.678	75	-3.448	73	-3.495	42	-3.494	40
2008		5	max	0.111	101	0.582	107	0.156	42	4.455	107	5.045	101	0.008	107	0.009	101
2009			min	-0.098	77	-1.537	41	-0.156	40	-5.045	41	-4.455	77	-0.009	41	-0.008	77
2010	M434	1	max	0.012	107	0.156	16	0.018	97	0	107	0	107	0	107	0	107
2011			min	-0.04	41	0.022	46	-0.018	35	0	12	0	12	0	12	0	12
2012		2	max	0.012	107	0.078	16	0.009	97	0.249	16	-0.035	106	0.266	97	0.266	99
2013			min	-0.04	41	0.011	46	-0.009	35	0.035	46	-0.249	13	-0.266	35	-0.266	33
2014		3	max	0.012	107	0	107	0	107	0.332	16	-0.047	106	0.355	97	0.355	99
2015			min	-0.04	41	0	12	0	12	0.047	46	-0.332	13	-0.355	35	-0.355	33
2016		4	max	0.012	107	-0.011	104	0.009	99	0.249	16	-0.035	106	0.266	97	0.266	99
2017			min	-0.04	41	-0.078	13	-0.009	33	0.035	46	-0.249	13	-0.266	35	-0.266	33
2018		5	max	0.012	107	-0.022	104	0.018	99	0	107	0	107	0	107	0	107
2019			min	-0.04	41	-0.156	13	-0.018	33	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2020	M439	1	max	0.446	16	0.39	100	0.146	73	3.232	42	2.693	104	4.347	101	4.353	73
2021			min	-0.015	45	-0.39	72	-0.146	41	-2.693	104	-3.232	42	-4.353	73	-4.347	41
2022		2	max	0.409	16	0.355	100	0.133	73	2.221	42	1.683	104	0.605	75	0.607	73
2023			min	-0.022	45	-0.355	72	-0.133	41	-1.683	104	-2.221	42	-0.607	73	-0.605	75
2024		3	max	0.328	16	0.305	100	0.001	101	1.316	42	0.791	36	1.926	73	1.925	101
2025			min	0.013	45	-0.305	72	-0.001	77	-0.791	36	-1.316	42	-1.925	41	-1.926	73
2026		4	max	0.203	16	0.169	100	0.052	101	0.638	15	0.187	36	1.519	73	1.517	101
2027			min	-0.013	45	-0.169	72	-0.052	73	-0.187	36	-0.638	15	-1.517	41	-1.519	73
2028		5	max	0	107	0	100	0	101	0	107	0	107	0	107	0	107
2029			min	0	12	0	15	0	43	0	12	0	12	0	12	0	12
2030	M440	1	max	0.096	36	0.69	13	0.184	105	0.419	45	4.723	16	0.845	47	10.965	14
2031			min	-0.096	38	0.054	38	-0.184	43	-4.723	16	-0.419	45	-9.529	14	-0.972	47
2032		2	max	0.096	36	0.645	13	0.179	105	0.26	45	2.89	16	0.524	47	6.709	14
2033			min	-0.096	38	0.051	38	-0.179	43	-2.89	16	-0.26	45	-5.83	14	-0.603	47
2034		3	max	0.096	36	0.6	13	0.175	105	0.105	45	1.181	16	0.211	107	2.741	14
2035			min	-0.096	38	0.047	38	-0.175	43	-1.181	16	-0.105	45	-2.382	14	-0.243	77
2036		4	max	0.002	100	0.045	14	0.006	33	0.004	97	0.062	16	0.008	69	0.144	14
2037			min	-0.002	46	0.003	46	-0.006	39	-0.062	16	-0.004	37	-0.125	14	-0.009	69
2038		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2039			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2040	M441	1	max	0.096	96	0.69	13	0.184	45	0.419	105	4.723	16	0.845	107	10.965	14
2041			min	-0.096	38	0.054	38	-0.184	73	-4.723	16	-0.419	105	-9.529	14	-0.972	77
2042		2	max	0.096	96	0.645	13	0.179	45	0.26	105	2.89	16	0.524	107	6.709	14
2043			min	-0.096	38	0.051	38	-0.179	73	-2.89	16	-0.26	105	-5.83	14	-0.603	77
2044		3	max	0.096	96	0.6	13	0.175	45	0.105	75	1.181	16	0.211	107	2.741	14
2045			min	-0.096	38	0.047	38	-0.175	73	-1.181	16	-0.105	75	-2.382	14	-0.243	77
2046		4	max	0.002	100	0.045	14	0.006	97	0.004	97	0.062	16	0.008	69	0.144	14
2047			min	-0.002	72	0.003	46	-0.006	69	-0.062	16	-0.004	37	-0.125	14	-0.009	69
2048		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2049			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2050	M442	1	max	0.137	104	0.996	13	0.316	75	0.597	75	5.842	16	1.205	47	13.563	14
2051			min	-0.137	42	0.057	38	-0.316	77	-5.842	16	-0.597	75	-11.786	14	-1.386	47
2052		2	max	0.135	104	0.952	13	0.311	75	0.322	105	3.169	16	0.65	47	7.358	14
2053			min	-0.135	42	0.054	38	-0.311	77	-3.169	16	-0.322	105	-6.394	14	-0.748	47
2054		3	max	0.133	104	0.908	13	0.307	75	0.051	45	0.618	16	0.103	47	1.435	14
2055			min	-0.133	42	0.05	38	-0.307	77	-0.618	16	-0.051	45	-1.247	14	-0.119	47
2056		4	max	0.002	100	0.044	16	0.006	93	0.004	97	0.061	16	0.008	69	0.142	14
2057			min	-0.002	46	0.003	46	-0.006	65	-0.061	16	-0.004	37	-0.123	14	-0.009	69
2058		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2059			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2060	M443	1	max	0.446	14	0.39	100	0.146	103	3.232	102	2.693	44	4.353	101	4.347	73
2061			min	-0.015	47	-0.39	42	-0.146	41	-2.693	44	-3.232	72	-4.347	73	-4.353	41
2062		2	max	0.409	14	0.355	100	0.133	103	2.221	102	1.683	44	0.607	101	0.605	107
2063			min	-0.022	47	-0.355	42	-0.133	41	-1.683	44	-2.221	72	-0.605	77	-0.607	41
2064		3	max	0.328	14	0.305	100	0.001	105	1.316	42	0.791	36	1.925	73	1.926	101
2065			min	0.013	47	-0.305	42	-0.001	43	-0.791	36	-1.316	42	-1.926	41	-1.925	73
2066		4	max	0.203	14	0.169	100	0.052	101	0.638	15	0.187	36	1.517	73	1.519	101
2067			min	-0.013	47	-0.169	42	-0.052	73	-0.187	36	-0.638	15	-1.519	41	-1.517	73
2068		5	max	0	107	0	100	0	101	0	107	0	107	0	107	0	107
2069			min	0	12	0	15	0	43	0	12	0	12	0	12	0	12
2070	M444	1	max	0.096	92	0.69	13	0.184	45	0.419	105	4.723	16	0.845	47	10.965	14
2071			min	-0.096	68	0.054	38	-0.184	73	-4.723	16	-0.419	105	-9.529	14	-0.972	47
2072		2	max	0.096	92	0.645	13	0.179	45	0.26	75	2.89	16	0.524	47	6.709	14
2073			min	-0.096	68	0.051	38	-0.179	73	-2.89	16	-0.26	75	-5.83	14	-0.603	47
2074		3	max	0.096	92	0.6	13	0.175	45	0.105	75	1.181	16	0.211	47	2.741	14

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2075			min	-0.096	68	0.047	38	-0.175	73	-1.181	16	-0.105	75	-2.382	14	-0.243	47
2076		4	max	0.002	104	0.045	13	0.006	33	0.004	97	0.062	16	0.008	69	0.144	14
2077			min	-0.002	42	0.003	46	-0.006	95	-0.062	16	-0.004	37	-0.125	14	-0.009	69
2078		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2079			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2080	M445	1	max	0.096	96	0.69	13	0.184	45	0.419	45	4.723	16	0.845	47	10.965	14
2081			min	-0.096	34	0.054	38	-0.184	77	-4.723	16	-0.419	45	-9.529	14	-0.972	47
2082		2	max	0.096	96	0.645	13	0.179	45	0.26	45	2.89	16	0.524	47	6.709	14
2083			min	-0.096	34	0.051	38	-0.179	77	-2.89	16	-0.26	45	-5.83	14	-0.603	47
2084		3	max	0.096	96	0.6	13	0.175	45	0.105	45	1.181	16	0.211	47	2.741	14
2085			min	-0.096	34	0.047	38	-0.175	77	-1.181	16	-0.105	45	-2.382	14	-0.243	47
2086		4	max	0.002	104	0.045	15	0.006	97	0.004	97	0.062	16	0.008	69	0.144	14
2087			min	-0.002	42	0.003	46	-0.006	35	-0.062	16	-0.004	37	-0.125	14	-0.009	69
2088		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2089			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2090	M446	1	max	0.137	104	0.996	13	0.316	45	0.597	105	5.842	16	1.205	47	13.563	14
2091			min	-0.137	72	0.057	38	-0.316	73	-5.842	16	-0.597	105	-11.786	14	-1.386	47
2092		2	max	0.135	104	0.952	13	0.311	45	0.322	105	3.169	16	0.65	47	7.358	14
2093			min	-0.135	72	0.054	38	-0.311	73	-3.169	16	-0.322	105	-6.394	14	-0.748	47
2094		3	max	0.133	104	0.908	13	0.307	45	0.051	105	0.618	16	0.103	107	1.435	14
2095			min	-0.133	72	0.05	38	-0.307	73	-0.618	16	-0.051	105	-1.247	14	-0.119	77
2096		4	max	0.002	104	0.044	14	0.006	97	0.004	97	0.061	16	0.008	69	0.142	14
2097			min	-0.002	42	0.003	46	-0.006	69	-0.061	16	-0.004	37	-0.123	14	-0.009	69
2098		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2099			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2100	M447	1	max	0.443	45	0.426	14	0.048	104	0	107	0	107	0	107	0	107
2101			min	-0.462	73	0.007	75	-0.048	42	0	12	0	12	0	12	0	12
2102		2	max	0.456	45	0.213	16	0.024	104	4.695	14	0.206	104	9.472	16	0.479	106
2103			min	-0.465	73	0.004	75	-0.024	42	-0.206	44	-4.695	14	-0.416	46	-10.899	14
2104		3	max	0.469	101	0	107	0	107	6.26	14	0.275	104	12.629	16	0.639	106
2105			min	-0.469	73	0	12	0	12	-0.275	44	-6.26	14	-0.555	46	-14.532	14
2106		4	max	0.484	101	-0.004	45	0.024	106	4.695	14	0.206	104	9.472	16	0.479	106
2107			min	-0.475	77	-0.213	13	-0.024	40	-0.206	44	-4.695	14	-0.416	46	-10.899	14
2108		5	max	0.499	101	-0.007	45	0.048	106	0	107	0	107	0	107	0	107
2109			min	-0.481	77	-0.426	13	-0.048	40	0	12	0	12	0	12	0	12
2110	M448	1	max	0.443	47	0.426	16	0.048	106	0	107	0	107	0	107	0	107
2111			min	-0.462	41	0.007	47	-0.048	40	0	12	0	12	0	12	0	12
2112		2	max	0.456	47	0.213	16	0.024	106	4.695	16	0.206	106	9.472	16	0.479	104
2113			min	-0.465	41	0.004	47	-0.024	40	-0.206	46	-4.695	13	-0.416	44	-10.899	13
2114		3	max	0.469	103	0	107	0	107	6.26	16	0.275	106	12.629	16	0.639	104
2115			min	-0.469	41	0	12	0	12	-0.275	46	-6.26	13	-0.555	44	-14.532	13
2116		4	max	0.484	103	-0.004	107	0.024	104	4.695	16	0.206	106	9.472	16	0.479	104
2117			min	-0.475	75	-0.213	13	-0.024	42	-0.206	46	-4.695	13	-0.416	44	-10.899	13
2118		5	max	0.499	103	-0.007	107	0.048	104	0	107	0	107	0	107	0	107
2119			min	-0.481	75	-0.426	13	-0.048	42	0	12	0	12	0	12	0	12
2120	M449	1	max	0.419	16	0.37	100	0.138	73	3.042	42	2.538	104	4.108	101	4.115	73
2121			min	-0.044	45	-0.37	72	-0.138	41	-2.538	104	-3.042	42	-4.115	73	-4.108	41
2122		2	max	0.382	16	0.335	100	0.125	73	2.086	42	1.582	104	0.57	75	0.572	73
2123			min	-0.05	45	-0.335	72	-0.125	41	-1.582	104	-2.086	42	-0.572	73	-0.57	75
2124		3	max	0.309	16	0.288	100	0	101	1.233	42	0.744	36	1.816	73	1.814	101
2125			min	-0.003	45	-0.288	72	0	47	-0.744	36	-1.233	42	-1.814	41	-1.816	73
2126		4	max	0.188	16	0.158	100	0.049	101	0.604	15	0.175	36	1.436	73	1.435	101
2127			min	-0.027	45	-0.158	72	-0.049	73	-0.175	36	-0.604	15	-1.435	41	-1.436	73
2128		5	max	0	107	0	100	0	101	0	107	0	107	0	107	0	107
2129			min	0	12	0	15	0	43	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2130	M450	1	max	0.089	96	0.656	13	0.172	101	0.391	45	4.474	16	0.789	107	10.386	14
2131			min	-0.089	38	0.052	38	-0.172	43	-4.474	16	-0.391	45	-9.025	14	-0.907	77
2132		2	max	0.089	96	0.611	13	0.167	101	0.242	45	2.734	16	0.489	107	6.347	14
2133			min	-0.089	38	0.048	38	-0.167	43	-2.734	16	-0.242	45	-5.516	14	-0.563	77
2134		3	max	0.089	96	0.566	13	0.163	101	0.098	75	1.118	16	0.197	107	2.596	14
2135			min	-0.089	38	0.044	38	-0.163	43	-1.118	16	-0.098	75	-2.256	14	-0.227	77
2136		4	max	0.002	104	0.045	13	0.006	93	0.004	97	0.062	16	0.008	69	0.144	14
2137			min	-0.002	42	0.003	46	-0.006	69	-0.062	16	-0.004	37	-0.125	14	-0.009	69
2138		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2139			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2140	M451	1	max	0.089	96	0.656	13	0.172	45	0.391	45	4.474	16	0.789	107	10.386	14
2141			min	-0.089	34	0.052	38	-0.172	47	-4.474	16	-0.391	45	-9.025	14	-0.907	77
2142		2	max	0.089	96	0.611	13	0.167	45	0.242	45	2.734	16	0.489	107	6.347	14
2143			min	-0.089	34	0.048	38	-0.167	47	-2.734	16	-0.242	45	-5.516	14	-0.563	77
2144		3	max	0.089	96	0.566	13	0.163	45	0.098	45	1.118	16	0.197	107	2.596	14
2145			min	-0.089	34	0.044	38	-0.163	47	-1.118	16	-0.098	45	-2.256	14	-0.227	77
2146		4	max	0.002	104	0.045	13	0.006	33	0.004	97	0.062	16	0.008	69	0.144	14
2147			min	-0.002	42	0.003	46	-0.006	35	-0.062	16	-0.004	37	-0.125	14	-0.009	69
2148		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2149			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2150	M452	1	max	0.128	104	0.94	13	0.296	101	0.559	45	5.513	16	1.129	107	12.799	14
2151			min	-0.128	46	0.054	38	-0.296	73	-5.513	16	-0.559	45	-11.123	14	-1.299	77
2152		2	max	0.127	104	0.896	13	0.292	101	0.302	75	2.992	16	0.609	107	6.946	14
2153			min	-0.127	46	0.051	38	-0.292	73	-2.992	16	-0.302	75	-6.036	14	-0.701	77
2154		3	max	0.125	104	0.852	13	0.287	101	0.048	75	0.593	16	0.097	107	1.376	14
2155			min	-0.125	46	0.047	38	-0.287	73	-0.593	16	-0.048	75	-1.196	14	-0.112	77
2156		4	max	0.002	100	0.044	15	0.006	97	0.004	97	0.061	16	0.008	99	0.142	14
2157			min	-0.002	42	0.003	46	-0.006	65	-0.061	16	-0.004	37	-0.123	14	-0.009	39
2158		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2159			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2160	M453	1	max	0.419	14	0.37	100	0.138	73	3.042	102	2.538	44	4.115	101	4.108	73
2161			min	-0.044	47	-0.37	42	-0.138	41	-2.538	44	-3.042	72	-4.108	73	-4.115	41
2162		2	max	0.382	14	0.335	100	0.125	73	2.086	102	1.582	44	0.572	101	0.57	107
2163			min	-0.05	47	-0.335	42	-0.125	41	-1.582	44	-2.086	72	-0.57	77	-0.572	41
2164		3	max	0.309	14	0.288	100	0	45	1.233	42	0.744	96	1.814	73	1.816	101
2165			min	-0.003	47	-0.288	42	0	73	-0.744	66	-1.233	42	-1.816	41	-1.814	73
2166		4	max	0.188	14	0.158	100	0.049	101	0.604	15	0.175	96	1.435	73	1.436	101
2167			min	-0.027	47	-0.158	42	-0.049	43	-0.175	66	-0.604	15	-1.436	41	-1.435	73
2168		5	max	0	107	0	100	0	101	0	107	0	107	0	107	0	107
2169			min	0	12	0	15	0	43	0	12	0	12	0	12	0	12
2170	M454	1	max	0.089	96	0.656	13	0.172	105	0.391	105	4.474	16	0.789	107	10.386	14
2171			min	-0.089	34	0.052	38	-0.172	77	-4.474	16	-0.391	75	-9.025	14	-0.907	77
2172		2	max	0.089	96	0.611	13	0.167	105	0.242	75	2.734	16	0.489	47	6.347	14
2173			min	-0.089	34	0.048	38	-0.167	77	-2.734	16	-0.242	75	-5.516	14	-0.563	47
2174		3	max	0.089	96	0.566	13	0.163	105	0.098	75	1.118	16	0.197	47	2.596	14
2175			min	-0.089	34	0.044	38	-0.163	77	-1.118	16	-0.098	75	-2.256	14	-0.227	47
2176		4	max	0.002	104	0.045	14	0.006	93	0.004	97	0.062	16	0.008	99	0.144	14
2177			min	-0.002	46	0.003	46	-0.006	35	-0.062	16	-0.004	37	-0.125	14	-0.009	39
2178		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2179			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2180	M455	1	max	0.089	92	0.656	13	0.172	45	0.391	45	4.474	16	0.789	47	10.386	14
2181			min	-0.089	34	0.052	38	-0.172	43	-4.474	16	-0.391	45	-9.025	14	-0.907	47
2182		2	max	0.089	92	0.611	13	0.167	45	0.242	105	2.734	16	0.489	47	6.347	14
2183			min	-0.089	34	0.048	38	-0.167	43	-2.734	16	-0.242	75	-5.516	14	-0.563	47
2184		3	max	0.089	92	0.566	13	0.163	45	0.098	105	1.118	16	0.197	47	2.596	14

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2185			min	-0.089	34	0.044	38	-0.163	43	-1.118	16	-0.098	75	-2.256	14	-0.227	47
2186		4	max	0.002	104	0.045	14	0.006	33	0.004	97	0.062	16	0.008	99	0.144	14
2187			min	-0.002	46	0.003	46	-0.006	39	-0.062	16	-0.004	37	-0.125	14	-0.009	39
2188		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2189			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2190	M456	1	max	0.128	74	0.94	13	0.296	45	0.559	45	5.513	16	1.129	107	12.799	14
2191			min	-0.128	46	0.054	38	-0.296	77	-5.513	16	-0.559	45	-11.123	14	-1.299	77
2192		2	max	0.127	74	0.896	13	0.292	45	0.302	75	2.992	16	0.609	107	6.946	14
2193			min	-0.127	46	0.051	38	-0.292	77	-2.992	16	-0.302	75	-6.036	14	-0.701	77
2194		3	max	0.125	74	0.852	13	0.287	45	0.048	75	0.593	16	0.097	47	1.376	14
2195			min	-0.125	46	0.047	38	-0.287	77	-0.593	16	-0.048	75	-1.196	14	-0.112	47
2196		4	max	0.002	104	0.044	16	0.006	93	0.004	97	0.061	16	0.008	99	0.142	14
2197			min	-0.002	42	0.003	46	-0.006	95	-0.061	16	-0.004	37	-0.123	14	-0.009	39
2198		5	max	0	107	0	107	0	100	0	107	0	107	0	107	0	107
2199			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2200	M457	1	max	0.458	45	0.314	15	0.039	104	0	107	0	107	0	107	0	107
2201			min	-0.477	43	-0.001	75	-0.039	46	0	12	0	12	0	12	0	12
2202		2	max	0.469	45	0.157	15	0.019	104	2.772	15	0.149	44	5.592	15	0.347	106
2203			min	-0.478	43	0	75	-0.019	46	-0.149	44	-2.772	15	-0.302	46	-6.435	15
2204		3	max	0.479	101	0	107	0	107	3.696	15	0.199	44	7.457	15	0.463	106
2205			min	-0.479	43	0	12	0	12	-0.199	44	-3.696	15	-0.402	46	-8.58	15
2206		4	max	0.492	101	0	45	0.019	102	2.772	15	0.149	44	5.592	15	0.347	106
2207			min	-0.483	77	-0.157	16	-0.019	40	-0.149	44	-2.772	15	-0.302	46	-6.435	15
2208		5	max	0.504	101	0.001	45	0.039	102	0	107	0	107	0	107	0	107
2209			min	-0.486	77	-0.314	16	-0.039	44	0	12	0	12	0	12	0	12
2210	M458	1	max	0.458	47	0.314	16	0.039	106	0	107	0	107	0	107	0	107
2211			min	-0.477	41	-0.001	77	-0.039	44	0	12	0	12	0	12	0	12
2212		2	max	0.469	47	0.157	16	0.019	106	2.772	16	0.149	106	5.592	16	0.347	74
2213			min	-0.478	41	0	77	-0.019	44	-0.149	46	-2.772	16	-0.302	44	-6.435	16
2214		3	max	0.479	73	0	107	0	107	3.696	16	0.199	106	7.457	16	0.463	74
2215			min	-0.479	41	0	12	0	12	-0.199	46	-3.696	16	-0.402	44	-8.58	16
2216		4	max	0.492	73	0	47	0.019	100	2.772	16	0.149	106	5.592	16	0.347	74
2217			min	-0.483	75	-0.157	13	-0.019	42	-0.149	46	-2.772	16	-0.302	44	-6.435	16
2218		5	max	0.504	73	0.001	47	0.039	100	0	107	0	107	0	107	0	107
2219			min	-0.486	75	-0.314	13	-0.039	46	0	12	0	12	0	12	0	12
2220	M463	1	max	0.249	102	0.575	103	-0.094	66	1.254	45	11.511	16	23.223	14	2.911	47
2221			min	-0.249	40	-0.575	45	-1.709	15	-11.511	16	-1.254	45	-2.53	47	-26.724	14
2222		2	max	0.247	102	0.57	103	-0.091	66	0.731	45	6.693	16	13.503	14	1.696	47
2223			min	-0.247	40	-0.57	45	-1.664	15	-6.693	16	-0.731	45	-1.474	47	-15.538	14
2224		3	max	0.245	102	0.565	103	-0.087	66	0.212	75	2.005	16	4.045	14	0.492	107
2225			min	-0.245	40	-0.565	45	-1.619	15	-2.005	16	-0.212	75	-0.427	107	-4.655	14
2226		4	max	0.002	76	0.007	65	-0.003	107	0.004	97	0.065	16	0.131	14	0.01	99
2227			min	-0.002	100	-0.007	33	-0.045	13	-0.065	16	-0.004	97	-0.008	99	-0.151	14
2228		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2229			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2230	M464	1	max	0.116	102	0.267	77	-0.05	66	0.578	45	5.719	16	11.538	14	1.342	77
2231			min	-0.116	74	-0.267	101	-0.863	15	-5.719	16	-0.578	45	-1.166	77	-13.277	14
2232		2	max	0.114	102	0.262	77	-0.047	66	0.336	75	3.314	16	6.687	14	0.781	77
2233			min	-0.114	74	-0.262	101	-0.818	15	-3.314	16	-0.336	75	-0.679	77	-7.694	14
2234		3	max	0.112	102	0.258	77	-0.043	66	0.099	75	1.04	16	2.098	14	0.23	77
2235			min	-0.112	74	-0.258	101	-0.773	15	-1.04	16	-0.099	75	-0.2	77	-2.414	14
2236		4	max	0.002	106	0.007	99	-0.003	74	0.004	97	0.065	16	0.131	14	0.01	69
2237			min	-0.002	70	-0.007	63	-0.045	16	-0.065	16	-0.004	97	-0.008	69	-0.151	14
2238		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
2239			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2240	M465	1	max	0.237	46	0.545	47	-0.09	66	1.188	45	10.955	16	22.101	14	2.759	47
2241			min	-0.237	40	-0.545	75	-1.628	15	-10.955	16	-1.188	45	-2.398	47	-25.432	14
2242		2	max	0.234	46	0.54	47	-0.086	66	0.693	105	6.369	16	12.849	14	1.608	47
2243			min	-0.234	40	-0.54	75	-1.583	15	-6.369	16	-0.693	105	-1.397	47	-14.785	14
2244		3	max	0.232	46	0.536	47	-0.083	66	0.201	105	1.912	16	3.858	14	0.466	47
2245			min	-0.232	40	-0.536	75	-1.538	15	-1.912	16	-0.201	105	-0.405	47	-4.44	14
2246		4	max	0.002	42	0.007	99	-0.003	45	0.004	97	0.065	16	0.131	14	0.01	69
2247			min	-0.002	40	-0.007	93	-0.045	13	-0.065	16	-0.004	97	-0.008	69	-0.151	14
2248		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2249			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
2250	M466	1	max	0.167	94	0.304	77	-0.082	66	0.529	105	5.522	16	11.14	14	1.227	77
2251			min	-0.167	66	-0.304	101	-1.036	15	-5.522	16	-0.529	105	-1.067	77	-12.82	14
2252		2	max	0.167	94	0.301	77	-0.079	66	0.319	105	3.311	16	6.679	14	0.74	77
2253			min	-0.167	66	-0.301	101	-1.001	15	-3.311	16	-0.319	105	-0.643	77	-7.686	14
2254		3	max	0.167	94	0.297	77	-0.076	66	0.111	45	1.176	16	2.372	14	0.258	77
2255			min	-0.167	66	-0.297	101	-0.966	15	-1.176	16	-0.111	45	-0.224	77	-2.73	14
2256		4	max	0.002	46	0.005	65	-0.002	47	0.002	67	0.038	16	0.077	14	0.006	69
2257			min	-0.002	40	-0.005	33	-0.035	13	-0.038	16	-0.002	67	-0.005	69	-0.089	14
2258		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2259			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
2260	M467	1	max	0.181	76	0.416	43	-0.072	66	0.905	45	8.527	16	17.202	14	2.101	107
2261			min	-0.181	104	-0.416	71	-1.273	15	-8.527	16	-0.905	45	-1.826	107	-19.795	14
2262		2	max	0.178	76	0.411	43	-0.068	66	0.527	45	4.952	16	9.991	14	1.224	107
2263			min	-0.178	104	-0.411	71	-1.228	15	-4.952	16	-0.527	45	-1.064	107	-11.497	14
2264		3	max	0.176	76	0.407	43	-0.064	66	0.154	45	1.508	16	3.042	14	0.357	77
2265			min	-0.176	104	-0.407	71	-1.183	15	-1.508	16	-0.154	45	-0.31	77	-3.5	14
2266		4	max	0.002	106	0.007	35	-0.003	47	0.004	97	0.065	16	0.131	14	0.01	39
2267			min	-0.002	74	-0.007	97	-0.045	13	-0.065	16	-0.004	97	-0.008	39	-0.151	14
2268		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
2269			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2270	M472	1	max	0.064	76	0.148	47	-0.033	66	0.316	105	3.467	16	6.995	14	0.734	107
2271			min	-0.064	70	-0.148	101	-0.534	15	-3.467	16	-0.316	105	-0.638	107	-8.05	14
2272		2	max	0.062	76	0.143	47	-0.03	66	0.184	105	2.001	16	4.037	14	0.427	107
2273			min	-0.062	70	-0.143	101	-0.489	15	-2.001	16	-0.184	105	-0.371	107	-4.645	14
2274		3	max	0.06	76	0.138	47	-0.026	66	0.055	45	0.665	16	1.341	14	0.129	107
2275			min	-0.06	70	-0.138	101	-0.444	15	-0.665	16	-0.055	45	-0.112	107	-1.543	14
2276		4	max	0.002	102	0.007	65	-0.003	74	0.004	67	0.065	16	0.131	14	0.01	39
2277			min	-0.002	70	-0.007	97	-0.045	14	-0.065	16	-0.004	67	-0.008	39	-0.151	14
2278		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
2279			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
2280	M486	1	max	0.13	94	0.239	107	-0.066	66	0.414	75	4.393	16	8.862	14	0.962	107
2281			min	-0.13	92	-0.239	75	-0.829	15	-4.393	16	-0.414	75	-0.836	107	-10.198	14
2282		2	max	0.13	94	0.236	107	-0.063	66	0.249	75	2.629	16	5.304	14	0.579	47
2283			min	-0.13	92	-0.236	75	-0.795	15	-2.629	16	-0.249	75	-0.503	47	-6.103	14
2284		3	max	0.13	94	0.232	107	-0.06	66	0.087	75	0.94	16	1.897	14	0.202	47
2285			min	-0.13	92	-0.232	75	-0.761	15	-0.94	16	-0.087	75	-0.176	47	-2.183	14
2286		4	max	0.002	46	0.005	95	-0.002	45	0.002	97	0.038	16	0.076	14	0.006	39
2287			min	-0.002	74	-0.005	33	-0.034	13	-0.038	16	-0.002	97	-0.005	39	-0.087	14
2288		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2289			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2290	M487	1	max	0.041	94	0.085	103	-0.029	66	0.144	75	1.823	16	3.678	14	0.334	107
2291			min	-0.041	32	-0.085	71	-0.36	15	-1.823	16	-0.144	75	-0.29	107	-4.232	14
2292		2	max	0.041	94	0.082	103	-0.026	66	0.086	75	1.076	16	2.171	14	0.2	107
2293			min	-0.041	32	-0.082	71	-0.326	15	-1.076	16	-0.086	75	-0.174	107	-2.498	14
2294		3	max	0.041	94	0.078	103	-0.023	66	0.031	75	0.405	16	0.818	14	0.071	47

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2295			min	-0.041	32	-0.078	71	-0.291	15	-0.405	16	-0.031	75	-0.062	47	-0.941	14
2296		4	max	0.002	102	0.005	99	-0.002	74	0.002	97	0.038	16	0.077	14	0.006	69
2297			min	-0.002	70	-0.005	67	-0.035	14	-0.038	16	-0.002	97	-0.005	69	-0.089	14
2298		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
2299			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
2300	M488	1	max	0.189	106	0.436	47	-0.075	66	0.949	105	8.88	16	17.915	14	2.202	47
2301			min	-0.189	70	-0.436	71	-1.325	15	-8.88	16	-0.949	105	-1.914	47	-20.615	14
2302		2	max	0.187	106	0.431	47	-0.071	66	0.553	75	5.158	16	10.407	14	1.283	77
2303			min	-0.187	70	-0.431	71	-1.28	15	-5.158	16	-0.553	75	-1.115	77	-11.975	14
2304		3	max	0.185	106	0.426	47	-0.067	66	0.161	75	1.567	16	3.161	14	0.373	77
2305			min	-0.185	70	-0.426	71	-1.235	15	-1.567	16	-0.161	75	-0.325	77	-3.637	14
2306		4	max	0.002	102	0.007	65	-0.003	77	0.004	67	0.065	16	0.131	14	0.01	69
2307			min	-0.002	70	-0.007	97	-0.045	14	-0.065	16	-0.004	67	-0.008	69	-0.151	14
2308		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2309			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2310	M489	1	max	0.041	64	0.085	103	-0.028	66	0.144	75	1.812	16	3.656	14	0.334	107
2311			min	-0.041	62	-0.085	71	-0.358	15	-1.812	16	-0.144	75	-0.29	107	-4.207	14
2312		2	max	0.041	64	0.082	103	-0.026	66	0.086	75	1.07	16	2.158	14	0.2	107
2313			min	-0.041	62	-0.082	71	-0.324	15	-1.07	16	-0.086	75	-0.174	107	-2.484	14
2314		3	max	0.041	64	0.078	103	-0.023	66	0.031	75	0.403	16	0.812	14	0.071	107
2315			min	-0.041	62	-0.078	71	-0.29	15	-0.403	16	-0.031	75	-0.062	107	-0.934	14
2316		4	max	0.002	102	0.005	95	-0.002	74	0.002	37	0.038	16	0.076	14	0.006	69
2317			min	-0.002	70	-0.005	97	-0.034	13	-0.038	16	-0.002	37	-0.005	69	-0.087	14
2318		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
2319			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
2320	M490	1	max	0.142	76	0.327	103	-0.059	66	0.709	45	6.832	16	13.782	14	1.645	107
2321			min	-0.142	70	-0.327	45	-1.026	15	-6.832	16	-0.709	45	-1.43	107	-15.86	14
2322		2	max	0.14	76	0.322	103	-0.055	66	0.413	75	3.963	16	7.996	14	0.958	107
2323			min	-0.14	70	-0.322	45	-0.981	15	-3.963	16	-0.413	75	-0.833	107	-9.201	14
2324		3	max	0.138	76	0.317	103	-0.052	66	0.121	75	1.225	16	2.472	14	0.281	107
2325			min	-0.138	70	-0.317	45	-0.936	15	-1.225	16	-0.121	75	-0.244	107	-2.844	14
2326		4	max	0.002	102	0.007	65	-0.003	74	0.004	67	0.065	16	0.131	14	0.01	69
2327			min	-0.002	104	-0.007	37	-0.045	13	-0.065	16	-0.004	67	-0.008	69	-0.151	14
2328		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
2329			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
2330	M491	1	max	0.096	94	0.18	77	-0.051	66	0.31	75	3.398	16	6.855	14	0.72	77
2331			min	-0.096	62	-0.18	41	-0.647	15	-3.398	16	-0.31	75	-0.626	77	-7.888	14
2332		2	max	0.096	94	0.177	77	-0.048	66	0.187	75	2.028	16	4.091	14	0.433	107
2333			min	-0.096	62	-0.177	41	-0.613	15	-2.028	16	-0.187	75	-0.377	107	-4.708	14
2334		3	max	0.096	94	0.173	77	-0.046	66	0.065	75	0.733	16	1.479	14	0.152	107
2335			min	-0.096	62	-0.173	41	-0.579	15	-0.733	16	-0.065	75	-0.132	107	-1.701	14
2336		4	max	0.002	46	0.005	35	-0.002	74	0.002	37	0.038	16	0.076	14	0.006	69
2337			min	-0.002	74	-0.005	93	-0.034	14	-0.038	16	-0.002	37	-0.005	69	-0.087	14
2338		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
2339			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
2340	M492	1	max	0.096	38	0.18	107	-0.051	66	0.31	75	3.409	16	6.877	14	0.72	47
2341			min	-0.096	96	-0.18	75	-0.65	15	-3.409	16	-0.31	75	-0.626	47	-7.914	14
2342		2	max	0.096	38	0.177	107	-0.049	66	0.187	75	2.034	16	4.104	14	0.433	47
2343			min	-0.096	96	-0.177	75	-0.615	15	-2.034	16	-0.187	75	-0.377	47	-4.722	14
2344		3	max	0.096	38	0.173	107	-0.046	66	0.065	75	0.736	16	1.484	14	0.152	47
2345			min	-0.096	96	-0.173	75	-0.58	15	-0.736	16	-0.065	75	-0.132	47	-1.708	14
2346		4	max	0.002	102	0.005	65	-0.002	74	0.002	97	0.038	16	0.077	14	0.006	99
2347			min	-0.002	70	-0.005	67	-0.035	13	-0.038	16	-0.002	97	-0.005	99	-0.089	14
2348		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
2349			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2350	M493	1	max	0.237	76	0.545	77	-0.09	66	1.188	45	10.955	16	22.101	14	2.759	107
2351			min	-0.237	40	-0.545	71	-1.628	15	-10.955	16	-1.188	45	-2.398	107	-25.432	14
2352		2	max	0.234	76	0.54	77	-0.087	66	0.693	75	6.369	16	12.849	14	1.608	107
2353			min	-0.234	40	-0.54	71	-1.583	15	-6.369	16	-0.693	75	-1.397	107	-14.785	14
2354		3	max	0.232	76	0.536	77	-0.083	66	0.201	75	1.912	16	3.858	14	0.466	107
2355			min	-0.232	40	-0.536	71	-1.538	15	-1.912	16	-0.201	75	-0.405	107	-4.44	14
2356		4	max	0.002	106	0.007	69	-0.003	47	0.004	37	0.065	16	0.131	14	0.01	39
2357			min	-0.002	74	-0.007	97	-0.045	16	-0.065	16	-0.004	37	-0.008	39	-0.151	14
2358		5	max	0	107	0	70	0	70	0	107	0	107	0	107	0	107
2359			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
2360	M494	1	max	0.167	68	0.304	107	-0.081	66	0.529	75	5.511	16	11.118	14	1.227	47
2361			min	-0.167	96	-0.304	105	-1.033	15	-5.511	16	-0.529	75	-1.067	47	-12.794	14
2362		2	max	0.167	68	0.301	107	-0.078	66	0.319	45	3.305	16	6.667	14	0.74	47
2363			min	-0.167	96	-0.301	105	-0.999	15	-3.305	16	-0.319	45	-0.643	47	-7.672	14
2364		3	max	0.167	68	0.297	107	-0.076	66	0.111	45	1.173	16	2.367	14	0.258	47
2365			min	-0.167	96	-0.297	105	-0.965	15	-1.173	16	-0.111	45	-0.224	47	-2.723	14
2366		4	max	0.002	46	0.005	35	-0.002	107	0.002	67	0.038	16	0.076	14	0.006	39
2367			min	-0.002	40	-0.005	37	-0.034	13	-0.038	16	-0.002	67	-0.005	39	-0.087	14
2368		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2369			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
2370	M495	1	max	0.167	68	0.304	103	-0.082	66	0.529	75	5.522	16	11.14	14	1.227	47
2371			min	-0.167	66	-0.304	71	-1.036	15	-5.522	16	-0.529	75	-1.067	47	-12.82	14
2372		2	max	0.167	68	0.301	103	-0.079	66	0.319	45	3.311	16	6.679	14	0.74	107
2373			min	-0.167	66	-0.301	71	-1.001	15	-3.311	16	-0.319	45	-0.643	107	-7.686	14
2374		3	max	0.167	68	0.297	103	-0.076	66	0.111	45	1.176	16	2.372	14	0.258	107
2375			min	-0.167	66	-0.297	71	-0.966	15	-1.176	16	-0.111	45	-0.224	107	-2.73	14
2376		4	max	0.002	46	0.005	95	-0.002	47	0.002	97	0.038	16	0.077	14	0.006	69
2377			min	-0.002	40	-0.005	33	-0.035	13	-0.038	16	-0.002	97	-0.005	69	-0.089	14
2378		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2379			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
2380	M496	1	max	0.13	34	0.239	77	-0.066	66	0.414	45	4.404	16	8.884	14	0.962	107
2381			min	-0.13	36	-0.239	41	-0.832	15	-4.404	16	-0.414	45	-0.836	107	-10.224	14
2382		2	max	0.13	34	0.236	77	-0.063	66	0.249	45	2.635	16	5.316	14	0.579	107
2383			min	-0.13	36	-0.236	41	-0.797	15	-2.635	16	-0.249	45	-0.503	107	-6.118	14
2384		3	max	0.13	34	0.232	77	-0.06	66	0.087	45	0.943	16	1.902	14	0.202	107
2385			min	-0.13	36	-0.232	41	-0.762	15	-0.943	16	-0.087	45	-0.176	107	-2.189	14
2386		4	max	0.002	42	0.005	35	-0.002	105	0.002	37	0.038	16	0.077	14	0.006	99
2387			min	-0.002	40	-0.005	93	-0.035	14	-0.038	16	-0.002	37	-0.005	99	-0.089	14
2388		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2389			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2390	M499	1	max	0.126	98	0.233	103	-0.064	66	0.404	45	4.299	16	8.674	14	0.938	107
2391			min	-0.126	66	-0.233	101	-0.812	15	-4.299	16	-0.404	45	-0.815	107	-9.981	14
2392		2	max	0.126	98	0.23	103	-0.061	66	0.243	105	2.572	16	5.19	14	0.565	107
2393			min	-0.126	66	-0.23	101	-0.778	15	-2.572	16	-0.243	105	-0.491	107	-5.972	14
2394		3	max	0.126	98	0.226	103	-0.058	66	0.085	105	0.921	16	1.857	14	0.197	107
2395			min	-0.126	66	-0.226	101	-0.743	15	-0.921	16	-0.085	105	-0.171	107	-2.137	14
2396		4	max	0.002	42	0.005	99	-0.002	45	0.002	37	0.038	16	0.076	14	0.006	99
2397			min	-0.002	40	-0.005	93	-0.034	13	-0.038	16	-0.002	37	-0.005	99	-0.087	14
2398		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
2399			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2400	M500	1	max	0.079	38	0.15	77	-0.044	66	0.258	105	2.9	16	5.852	14	0.6	77
2401			min	-0.079	62	-0.15	105	-0.557	15	-2.9	16	-0.258	105	-0.521	77	-6.734	14
2402		2	max	0.079	38	0.147	77	-0.041	66	0.155	105	1.727	16	3.485	14	0.36	77
2403			min	-0.079	62	-0.147	105	-0.522	15	-1.727	16	-0.155	105	-0.313	77	-4.01	14
2404		3	max	0.079	38	0.143	77	-0.038	66	0.055	45	0.629	16	1.27	14	0.127	107

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2405			min	-0.079	62	-0.143	105	-0.488	15	-0.629	16	-0.055	45	-0.11	107	-1.461	14
2406		4	max	0.002	46	0.005	99	-0.002	74	0.002	67	0.038	16	0.076	14	0.006	39
2407			min	-0.002	70	-0.005	33	-0.034	14	-0.038	16	-0.002	67	-0.005	39	-0.087	14
2408		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
2409			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
2410	M501	1	max	0.079	94	0.15	73	-0.044	66	0.258	105	2.911	16	5.874	14	0.6	77
2411			min	-0.079	36	-0.15	101	-0.559	15	-2.911	16	-0.258	105	-0.521	77	-6.759	14
2412		2	max	0.079	94	0.147	73	-0.041	66	0.155	105	1.734	16	3.497	14	0.36	77
2413			min	-0.079	36	-0.147	101	-0.524	15	-1.734	16	-0.155	105	-0.313	77	-4.024	14
2414		3	max	0.079	94	0.143	73	-0.038	66	0.055	75	0.632	16	1.275	14	0.127	77
2415			min	-0.079	36	-0.143	101	-0.489	15	-0.632	16	-0.055	75	-0.11	77	-1.467	14
2416		4	max	0.002	106	0.005	69	-0.002	74	0.002	37	0.038	16	0.077	14	0.006	69
2417			min	-0.002	70	-0.005	97	-0.035	13	-0.038	16	-0.002	37	-0.005	69	-0.089	14
2418		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
2419			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
2420	M502	1	max	0.167	38	0.304	73	-0.081	66	0.529	105	5.511	16	11.118	14	1.227	107
2421			min	-0.167	32	-0.304	45	-1.033	15	-5.511	16	-0.529	105	-1.067	107	-12.794	14
2422		2	max	0.167	38	0.301	73	-0.078	66	0.319	105	3.305	16	6.667	14	0.74	107
2423			min	-0.167	32	-0.301	45	-0.999	15	-3.305	16	-0.319	105	-0.643	107	-7.672	14
2424		3	max	0.167	38	0.297	73	-0.076	66	0.111	105	1.173	16	2.367	14	0.258	107
2425			min	-0.167	32	-0.297	45	-0.965	15	-1.173	16	-0.111	105	-0.224	107	-2.723	14
2426		4	max	0.002	46	0.005	69	-0.002	75	0.002	37	0.038	16	0.076	14	0.006	99
2427			min	-0.002	44	-0.005	63	-0.034	15	-0.038	16	-0.002	37	-0.005	99	-0.087	14
2428		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2429			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
2430	M503	1	max	0.174	38	0.316	43	-0.084	66	0.549	105	5.698	16	11.496	14	1.276	47
2431			min	-0.174	96	-0.316	105	-1.067	15	-5.698	16	-0.549	105	-1.109	47	-13.228	14
2432		2	max	0.174	38	0.313	43	-0.081	66	0.331	105	3.418	16	6.895	14	0.769	107
2433			min	-0.174	96	-0.313	105	-1.033	15	-3.418	16	-0.331	105	-0.668	107	-7.934	14
2434		3	max	0.174	38	0.309	43	-0.078	66	0.115	75	1.212	16	2.445	14	0.268	107
2435			min	-0.174	96	-0.309	105	-0.999	15	-1.212	16	-0.115	75	-0.233	107	-2.814	14
2436		4	max	0.002	102	0.005	69	-0.002	77	0.002	67	0.038	16	0.076	14	0.006	39
2437			min	-0.002	100	-0.005	37	-0.034	16	-0.038	16	-0.002	67	-0.005	39	-0.087	14
2438		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2439			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2440	M504	1	max	0.174	98	0.316	73	-0.084	66	0.549	105	5.709	16	11.518	14	1.276	47
2441			min	-0.174	96	-0.316	105	-1.07	15	-5.709	16	-0.549	105	-1.109	47	-13.254	14
2442		2	max	0.174	98	0.313	73	-0.082	66	0.331	105	3.424	16	6.907	14	0.769	47
2443			min	-0.174	96	-0.313	105	-1.035	15	-3.424	16	-0.331	105	-0.668	47	-7.948	14
2444		3	max	0.174	98	0.309	73	-0.079	66	0.115	75	1.215	16	2.451	14	0.268	47
2445			min	-0.174	96	-0.309	105	-1	15	-1.215	16	-0.115	75	-0.233	47	-2.82	14
2446		4	max	0.002	46	0.005	95	-0.002	75	0.002	97	0.038	16	0.077	14	0.006	69
2447			min	-0.002	74	-0.005	93	-0.035	13	-0.038	16	-0.002	97	-0.005	69	-0.089	14
2448		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
2449			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
2450	M505	1	max	0.126	64	0.233	73	-0.065	66	0.404	45	4.31	16	8.696	14	0.938	107
2451			min	-0.126	32	-0.233	105	-0.814	15	-4.31	16	-0.404	45	-0.815	107	-10.006	14
2452		2	max	0.126	64	0.23	73	-0.062	66	0.243	45	2.579	16	5.202	14	0.565	107
2453			min	-0.126	32	-0.23	105	-0.78	15	-2.579	16	-0.243	45	-0.491	107	-5.986	14
2454		3	max	0.126	64	0.226	73	-0.059	66	0.085	75	0.923	16	1.863	14	0.197	77
2455			min	-0.126	32	-0.226	105	-0.745	15	-0.923	16	-0.085	75	-0.171	77	-2.144	14
2456		4	max	0.002	42	0.005	35	-0.002	75	0.002	97	0.038	16	0.077	14	0.006	69
2457			min	-0.002	70	-0.005	33	-0.035	15	-0.038	16	-0.002	97	-0.005	69	-0.089	14
2458		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
2459			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2460	M391	1	max	2.222	15	1.831	100	0.02	15	0	107	0	107	0	107	0	107
2461			min	-0.327	104	-1.834	72	-0.001	104	0	12	0	12	0	12	0	12
2462		2	max	2.191	15	1.807	100	0.029	107	2.797	100	2.786	72	0.207	103	0.175	75
2463			min	-0.335	104	-1.786	72	-0.031	71	-2.786	72	-2.797	100	-0.175	75	-0.207	103
2464		3	max	2.169	15	1.785	100	0.021	107	5.554	100	5.511	72	0.562	103	0.543	75
2465			min	-0.34	104	-1.764	72	-0.022	71	-5.511	72	-5.554	100	-0.543	75	-0.562	103
2466		4	max	2.067	15	1.426	70	0.057	75	3.084	100	3.019	72	0.471	103	0.463	75
2467			min	0.136	96	-1.641	102	-0.059	103	-3.019	72	-3.084	100	-0.463	75	-0.471	103
2468		5	max	0	107	0	100	0	13	0	107	0	107	0	107	0	107
2469			min	0	12	0	72	0	98	0	12	0	12	0	12	0	12
2470	M393	1	max	2.662	13	3.876	102	0	76	0	107	0	107	0	107	0	107
2471			min	-0.226	106	-3.849	70	-0.024	13	0	12	0	12	0	12	0	12
2472		2	max	2.599	13	1.063	102	0.028	71	4.01	102	4.109	70	0.163	75	0.188	103
2473			min	-0.255	106	-1.24	70	-0.027	107	-4.109	70	-4.01	102	-0.188	103	-0.163	75
2474		3	max	2.577	13	1.041	102	0.019	71	5.625	102	5.992	70	0.493	75	0.517	103
2475			min	-0.26	106	-1.214	70	-0.019	107	-5.992	70	-5.625	102	-0.517	103	-0.493	75
2476		4	max	2.42	13	1.249	76	0.053	103	2.672	102	2.836	70	0.415	75	0.428	103
2477			min	0.147	98	-1.63	100	-0.052	75	-2.836	70	-2.672	102	-0.428	103	-0.415	75
2478		5	max	0	107	0	102	0	106	0	107	0	107	0	107	0	107
2479			min	0	12	0	70	0	15	0	12	0	12	0	12	0	12
2480	M395	1	max	2.939	13	4.328	102	2.375	75	0	107	0	107	0	107	0	107
2481			min	-0.348	76	-4.264	70	-2.505	103	0	12	0	12	0	12	0	12
2482		2	max	2.876	13	1.178	102	0.389	103	4.47	102	4.553	70	16.392	75	17.255	103
2483			min	-0.365	76	-1.372	70	-0.368	75	-4.553	70	-4.47	102	-17.255	103	-16.392	75
2484		3	max	2.788	13	1.083	102	0.432	103	6.108	106	6.668	70	10.748	75	11.285	103
2485			min	-0.384	76	-1.272	70	-0.409	75	-6.668	70	-6.108	106	-11.285	103	-10.748	75
2486		4	max	2.487	13	1.316	76	0.546	103	2.83	102	3.167	70	4.243	71	4.435	103
2487			min	0.125	68	-1.693	100	-0.521	71	-3.167	70	-2.83	102	-4.435	103	-4.243	71
2488		5	max	0	107	0	102	0	16	0	107	0	107	0	107	0	107
2489			min	0	12	0	70	0	76	0	12	0	12	0	12	0	12
2490	M459	1	max	2.043	15	2.045	100	2.277	107	0	107	0	107	0	107	0	107
2491			min	-0.509	74	-1.944	72	-2.414	71	0	12	0	12	0	12	0	12
2492		2	max	2.015	15	2.001	100	0.411	71	3.113	100	2.973	72	15.492	107	16.413	71
2493			min	-0.504	74	-1.924	72	-0.386	107	-2.973	72	-3.113	100	-16.413	71	-15.492	107
2494		3	max	1.993	15	1.98	100	0.42	71	6.169	100	5.91	72	9.866	107	10.427	71
2495			min	-0.508	74	-1.902	72	-0.395	107	-5.91	72	-6.169	100	-10.427	71	-9.866	107
2496		4	max	1.949	15	1.534	70	0.494	71	3.406	100	3.241	72	3.833	107	4.036	71
2497			min	0.051	74	-1.676	102	-0.468	107	-3.241	72	-3.406	100	-4.036	71	-3.833	107
2498		5	max	0	107	0	100	0	68	0	107	0	107	0	107	0	107
2499			min	0	12	0	72	0	13	0	12	0	12	0	12	0	12
2500	M461	1	max	0.456	72	0.023	105	-0.016	106	1.035	72	0.476	104	2.136	72	1.081	104
2501			min	-0.21	104	-0.023	73	-0.192	13	-0.476	104	-1.035	72	-0.983	104	-2.348	72
2502		2	max	0.461	72	0.011	105	-0.008	106	1.478	15	0.428	104	1.952	72	1.24	104
2503			min	-0.215	104	-0.011	73	-0.096	13	-0.428	104	-1.478	15	-1.128	104	-2.146	72
2504		3	max	0.466	72	0.002	106	0	107	1.719	15	0.419	104	1.906	72	1.31	104
2505			min	-0.22	104	-0.002	74	0	12	-0.419	104	-1.719	15	-1.192	104	-2.096	72
2506		4	max	0.471	72	0.011	107	0.096	16	1.478	15	0.45	104	1.998	72	1.291	104
2507			min	-0.225	104	-0.011	71	0.008	104	-0.45	104	-1.478	15	-1.174	104	-2.196	72
2508		5	max	0.476	72	0.023	107	0.192	16	1.079	72	0.521	104	2.227	72	1.181	104
2509			min	-0.23	104	-0.023	71	0.016	104	-0.521	104	-1.079	72	-1.075	104	-2.448	72
2510	M462	1	max	5.267	103	0.188	71	0.071	102	3.952	103	9.785	75	0	107	0	107
2511			min	-4.823	75	-0.187	103	-0.056	74	-3.619	75	-10.685	103	0	12	0	12
2512		2	max	0.59	106	0.089	103	0.023	104	-0.501	68	9.223	13	3.803	72	2.987	104
2513			min	-13.531	13	0.006	68	-0.042	72	-3.411	13	1.356	68	-2.987	104	-3.803	72
2514		3	max	0.748	106	0.032	70	0.017	68	0.078	66	2.884	15	1.403	106	2.363	70

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2515			min	-16.765	13	-0.139	13	-0.038	71	-1.067	15	-0.212	66	-2.363	70	-1.403	106
2516		4	max	1.398	106	-0.005	99	0.058	72	-0.447	99	7.8	14	4.19	72	3.54	104
2517			min	-14.027	13	-0.074	71	-0.036	104	-2.885	14	1.208	99	-3.54	104	-4.19	72
2518		5	max	2.698	102	0.123	106	0.065	70	2.025	102	5.205	74	0	107	0	107
2519			min	-2.566	74	-0.127	70	-0.063	106	-1.925	74	-5.474	102	0	12	0	12
2520	M470	1	max	4.756	107	0.196	71	0.025	64	3.569	107	10.236	71	0	107	0	107
2521			min	-5.045	71	-0.175	107	-0.023	96	-3.786	71	-9.65	107	0	12	0	12
2522		2	max	-0.035	104	0.082	102	0.082	70	-0.254	74	6.54	15	5.099	102	4.569	74
2523			min	-13.327	15	-0.012	74	-0.08	102	-2.419	15	0.687	74	-4.569	74	-5.099	102
2524		3	max	0.889	104	0.052	72	0.029	71	0.255	76	2.615	100	1.585	106	2.874	70
2525			min	-15.82	15	-0.174	15	-0.03	64	-0.967	100	-0.689	76	-2.874	70	-1.585	106
2526		4	max	1.203	104	0.004	96	0.073	106	-0.281	104	7.16	15	4.848	106	5.121	70
2527			min	-13.028	15	-0.078	72	-0.087	70	-2.648	15	0.76	104	-5.121	70	-4.848	106
2528		5	max	0.067	107	0.054	17	0.019	96	0.05	107	0.158	71	0	107	0	107
2529			min	-0.078	71	-0.032	72	-0.064	15	-0.058	71	-0.135	107	0	12	0	12
2530	M474	1	max	0.725	104	0.033	72	-0.028	76	1.645	104	2.3	72	3.395	104	5.22	72
2531			min	-1.015	72	-0.033	104	-0.346	13	-2.3	72	-1.645	104	-4.748	72	-3.732	104
2532		2	max	0.73	104	0.016	72	-0.014	76	1.617	104	1.756	72	2.543	104	8.844	15
2533			min	-1.02	72	-0.016	104	-0.173	13	-1.756	72	-1.617	104	-8.046	15	-2.795	104
2534		3	max	0.735	104	0.002	73	0	107	1.744	17	1.623	76	2.274	104	10.625	15
2535			min	-1.025	72	-0.002	105	0	12	-1.623	76	-1.744	17	-9.666	15	-2.5	104
2536		4	max	0.74	104	0.018	70	0.173	15	1.639	104	1.778	72	2.589	104	8.844	15
2537			min	-1.029	72	-0.018	102	0.014	104	-1.778	72	-1.639	104	-8.046	15	-2.846	104
2538		5	max	0.745	104	0.035	70	0.346	15	1.689	104	2.345	72	3.486	104	5.32	72
2539			min	-1.034	72	-0.035	102	0.028	104	-2.345	72	-1.689	104	-4.84	72	-3.832	104
2540	M475	1	max	1.454	104	0.033	72	-0.028	76	3.295	104	3.718	72	6.802	104	8.437	72
2541			min	-1.64	72	-0.033	104	-0.346	13	-3.718	72	-3.295	104	-7.676	72	-7.477	104
2542		2	max	1.458	104	0.016	72	-0.014	76	3.268	104	3.279	76	5.95	104	8.675	72
2543			min	-1.645	72	-0.016	104	-0.173	13	-3.279	76	-3.268	104	-7.891	72	-6.54	104
2544		3	max	1.463	104	0.002	73	0	107	3.266	104	3.149	76	5.681	104	10	15
2545			min	-1.65	72	-0.002	105	0	12	-3.149	76	-3.266	104	-9.097	15	-6.245	104
2546		4	max	1.468	104	0.018	70	0.173	15	3.29	104	3.301	76	5.996	104	8.725	72
2547			min	-1.655	72	-0.018	106	0.014	104	-3.301	76	-3.29	104	-7.937	72	-6.591	104
2548		5	max	1.473	104	0.035	70	0.346	15	3.339	104	3.763	72	6.893	104	8.538	72
2549			min	-1.66	72	-0.035	106	0.028	104	-3.763	72	-3.339	104	-7.767	72	-7.577	104
2550	M476	1	max	4.022	104	0.029	72	-0.027	77	9.194	104	9.695	72	18.396	104	21.323	72
2551			min	-4.241	72	-0.029	100	-0.244	13	-9.695	72	-9.194	104	-19.4	72	-20.219	104
2552		2	max	4.027	104	0.014	72	-0.013	77	9.183	104	9.38	76	17.835	104	21.504	72
2553			min	-4.246	72	-0.014	100	-0.122	13	-9.38	76	-9.183	104	-19.564	72	-19.603	104
2554		3	max	4.032	104	0.002	73	0	107	9.187	104	9.294	76	17.663	104	21.58	72
2555			min	-4.251	72	-0.002	101	0	12	-9.294	76	-9.187	104	-19.634	72	-19.414	104
2556		4	max	4.036	104	0.017	70	0.122	15	9.206	104	9.402	76	17.88	104	21.553	72
2557			min	-4.256	72	-0.017	102	0.013	105	-9.402	76	-9.206	104	-19.609	72	-19.653	104
2558		5	max	4.041	104	0.033	70	0.244	15	9.238	104	9.74	72	18.485	104	21.421	72
2559			min	-4.261	72	-0.033	102	0.027	105	-9.74	72	-9.238	104	-19.489	72	-20.318	104
2560	M477	1	max	7.978	15	-0.022	96	0.028	74	5.987	15	-2.226	107	0	107	0	107
2561			min	1.097	107	-0.262	15	-0.04	102	0.823	107	-16.186	15	0	12	0	12
2562		2	max	17.291	15	0.02	66	0.016	74	2.596	15	-0.349	96	0.743	104	0.87	72
2563			min	0.402	96	-0.069	102	-0.026	102	0.129	96	-7.02	15	-0.87	72	-0.743	104
2564		3	max	18.739	15	0.136	13	0.059	101	1.144	15	0.086	66	4.367	13	0.6	106
2565			min	0.182	96	-0.02	71	-0.107	15	-0.032	66	-3.092	15	-0.6	106	-4.367	13
2566		4	max	16.987	15	0.057	72	0.028	102	1.952	15	-0.158	96	0.695	104	0.835	72
2567			min	0.352	96	-0.037	17	-0.018	74	0.058	96	-5.276	15	-0.835	72	-0.695	104
2568		5	max	8.012	15	0.246	15	0.041	102	6.012	15	-2.473	96	0	107	0	107
2569			min	1.219	96	0.022	96	-0.028	74	0.915	96	-16.254	15	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2570	M478	1	max	7.206	13	0.03	106	0.036	74	5.408	13	0.922	106	0	107	0	107
2571			min	-0.455	106	-0.228	70	-0.044	102	-0.341	106	-14.621	13	0	12	0	12
2572		2	max	15.812	13	0.048	19	0.026	70	1.777	13	-0.491	98	0.487	104	0.815	72
2573			min	-0.516	106	-0.034	100	-0.026	102	0.182	98	-4.804	13	-0.815	72	-0.487	104
2574		3	max	17.018	13	0.049	12	0.109	15	0.701	100	0.172	68	4.376	13	0.622	106
2575			min	-0.692	106	-0.15	15	-0.048	12	-0.064	68	-1.895	100	-0.622	106	-4.376	13
2576		4	max	15.752	13	0.038	70	0.024	72	1.788	13	-0.446	98	0.52	74	0.881	102
2577			min	-0.408	106	-0.047	19	-0.025	100	0.165	98	-4.835	13	-0.881	102	-0.52	74
2578		5	max	7.138	13	0.22	70	0.044	72	5.356	13	0.264	106	0	107	0	107
2579			min	-0.13	106	-0.024	98	-0.035	104	-0.098	106	-14.482	13	0	12	0	12
2580	M479	1	max	0.204	104	0.884	71	-0.381	67	1.811	71	0.376	107	0.639	75	3.919	103
2581			min	-0.277	72	-0.874	103	-1.457	15	-0.376	107	-1.811	71	-3.566	103	-0.703	75
2582		2	max	0.199	104	0.873	71	-0.373	67	9.988	71	1.8	107	3.653	75	22.362	103
2583			min	-0.273	72	-0.864	103	-1.369	15	-1.8	107	-9.988	71	-20.343	103	-4.015	75
2584		3	max	0.15	98	0.155	71	-0.056	96	14.161	71	2.534	107	5.196	75	31.774	103
2585			min	-0.206	62	-0.155	103	-0.183	15	-2.534	107	-14.161	71	-28.905	103	-5.711	75
2586		4	max	0.514	106	0.977	103	1.502	15	11.269	71	2.03	107	4.13	75	25.263	103
2587			min	-0.586	70	-0.986	71	0.414	67	-2.03	107	-11.269	71	-22.982	103	-4.54	75
2588		5	max	0.518	106	0.987	103	1.59	15	2.043	71	0.418	107	0.726	75	4.447	103
2589			min	-0.591	70	-0.997	71	0.422	67	-0.418	107	-2.043	71	-4.045	103	-0.798	75
2590	M480	1	max	0.61	100	0.843	71	-0.362	67	1.748	71	0.3	107	0.607	75	3.952	103
2591			min	-0.612	72	-0.842	103	-1.411	13	-0.3	107	-1.748	71	-3.595	103	-0.668	75
2592		2	max	0.606	100	0.833	71	-0.354	67	9.62	71	1.636	107	3.374	75	21.81	103
2593			min	-0.607	72	-0.832	103	-1.323	13	-1.636	107	-9.62	71	-19.841	103	-3.709	75
2594		3	max	0.332	100	0.147	71	-0.053	96	13.633	71	2.321	107	4.785	75	30.907	103
2595			min	-0.337	72	-0.147	103	-0.177	15	-2.321	107	-13.633	71	-28.117	103	-5.26	75
2596		4	max	0.103	106	0.939	103	1.452	15	10.848	71	1.845	107	3.805	75	24.596	103
2597			min	-0.106	74	-0.94	71	0.394	67	-1.845	107	-10.848	71	-22.376	103	-4.183	75
2598		5	max	0.108	106	0.949	103	1.54	15	1.971	71	0.338	107	0.686	75	4.458	103
2599			min	-0.111	74	-0.95	71	0.402	67	-0.338	107	-1.971	71	-4.056	103	-0.754	75
2600	M481	1	max	0.404	57	4.19	70	0.149	71	12.681	106	14.217	70	0.238	101	0.225	103
2601			min	-0.553	86	-3.455	76	-0.129	77	-14.217	70	-12.681	106	-0.225	103	-0.238	101
2602		2	max	0.404	57	4.174	70	0.143	71	6.578	102	6.764	70	2.019	71	1.774	77
2603			min	-0.554	100	-3.464	76	-0.123	77	-6.764	70	-6.578	102	-1.774	77	-2.019	71
2604		3	max	0.464	72	3.911	70	0.023	71	0.632	100	0.048	68	2.865	71	2.498	77
2605			min	-0.626	100	-3.623	76	-0.021	103	-0.048	68	-0.632	100	-2.498	77	-2.865	71
2606		4	max	0.576	72	3.56	74	0.138	77	7.178	100	6.505	76	2.297	71	2.029	107
2607			min	-0.737	100	-4.012	72	-0.162	71	-6.505	76	-7.178	100	-2.029	107	-2.297	71
2608		5	max	0.58	72	3.551	74	0.144	77	13.397	100	13.611	72	0.275	101	0.271	103
2609			min	-0.741	100	-4.028	72	-0.168	71	-13.611	72	-13.397	100	-0.271	103	-0.275	101
2610	M482	1	max	0.455	72	4.639	70	0.165	71	13.785	106	15.813	70	0.703	77	0.732	71
2611			min	-0.607	100	-3.765	76	-0.145	107	-15.813	70	-13.785	106	-0.732	71	-0.703	77
2612		2	max	0.459	72	4.623	70	0.159	71	7.069	106	7.561	70	1.307	71	1.105	107
2613			min	-0.611	100	-3.774	76	-0.14	107	-7.561	70	-7.069	106	-1.105	107	-1.307	71
2614		3	max	0.53	72	4.36	70	0.041	71	0.635	100	0.049	68	2.37	71	2.059	107
2615			min	-0.682	100	-3.933	76	-0.038	107	-0.049	68	-0.635	100	-2.059	107	-2.37	71
2616		4	max	0.642	72	3.979	74	0.122	107	7.98	100	7.069	76	2.033	71	1.798	107
2617			min	-0.794	100	-4.277	72	-0.143	71	-7.069	76	-7.98	100	-1.798	107	-2.033	71
2618		5	max	0.646	72	3.97	74	0.128	107	14.999	100	14.566	72	0.243	101	0.232	103
2619			min	-0.798	100	-4.292	72	-0.148	71	-14.566	72	-14.999	100	-0.232	103	-0.243	101
2620	M483	1	max	0.358	13	0.857	71	-0.363	67	1.898	71	0.32	107	0.411	75	3.972	103
2621			min	-0.215	76	-0.843	103	-1.419	15	-0.32	107	-1.898	71	-3.613	103	-0.452	75
2622		2	max	0.358	13	0.847	71	-0.355	67	9.84	71	1.647	107	3.284	75	21.842	103
2623			min	-0.21	76	-0.833	103	-1.331	15	-1.647	107	-9.84	71	-19.87	103	-3.61	75
2624		3	max	0.349	15	0.148	71	-0.053	96	13.883	71	2.327	107	4.742	75	30.944	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2625			min	-0.059	77	-0.147	103	-0.177	15	-2.327	107	-13.883	71	-28.151	103	-5.212	75
2626		4	max	0.554	102	0.94	103	1.46	15	11.071	71	1.855	107	3.719	75	24.629	103
2627			min	-0.416	74	-0.954	71	0.394	66	-1.855	107	-11.071	71	-22.405	103	-4.088	75
2628		5	max	0.559	102	0.95	103	1.547	15	2.122	71	0.358	107	0.49	75	4.478	103
2629			min	-0.421	74	-0.965	71	0.402	66	-0.358	107	-2.122	71	-4.074	103	-0.539	75
2630	M484	1	max	0.433	70	1.364	15	0.173	75	0.596	102	0.592	70	0	107	0	107
2631			min	-0.436	102	0.307	97	-0.173	77	-0.592	70	-0.596	102	0	12	0	12
2632		2	max	0.372	70	0.682	15	0.087	75	2.632	15	-0.224	66	2.311	75	2.311	77
2633			min	-0.375	102	0.154	97	-0.087	77	0.224	66	-2.632	15	-2.311	77	-2.311	75
2634		3	max	0.311	70	0.003	74	0	107	3.479	15	-0.488	66	3.081	75	3.082	77
2635			min	-0.314	102	-0.003	76	0	12	0.488	66	-3.479	15	-3.082	77	-3.081	75
2636		4	max	0.25	70	-0.154	97	0.087	77	2.621	15	-0.364	66	2.311	75	2.311	77
2637			min	-0.253	102	-0.682	15	-0.087	75	0.364	66	-2.621	15	-2.311	77	-2.311	75
2638		5	max	0.189	70	-0.307	97	0.173	77	0.262	102	0.258	70	0	107	0	107
2639			min	-0.192	102	-1.364	15	-0.173	75	-0.258	70	-0.262	102	0	12	0	12
2640	M519	1	max	0.843	70	1.321	13	0.165	71	1.034	106	1.151	70	0	107	0	107
2641			min	-0.757	106	0.293	98	-0.165	73	-1.151	70	-1.034	106	0	12	0	12
2642		2	max	0.785	70	0.661	13	0.083	71	2.427	102	0.148	74	2.2	71	2.199	73
2643			min	-0.699	106	0.146	99	-0.083	73	-0.148	74	-2.427	102	-2.199	73	-2.2	71
2644		3	max	0.726	70	0.003	74	0	102	3.088	15	-0.124	66	2.933	71	2.932	73
2645			min	-0.641	106	-0.003	76	0	70	0.124	66	-3.088	15	-2.932	73	-2.933	71
2646		4	max	0.668	70	-0.146	98	0.083	73	2.269	102	-0.009	66	2.2	71	2.199	73
2647			min	-0.583	106	-0.661	13	-0.083	71	0.009	66	-2.269	102	-2.199	73	-2.2	71
2648		5	max	0.61	70	-0.293	99	0.165	73	0.717	106	0.833	70	0	107	0	107
2649			min	-0.525	106	-1.321	15	-0.165	71	-0.833	70	-0.717	106	0	12	0	12
2650	M520	1	max	1.001	100	3.396	70	0.108	101	9.768	106	11.093	70	0.991	71	0.885	107
2651			min	-0.759	76	-2.505	76	-0.109	103	-11.093	70	-9.768	106	-0.885	107	-0.991	71
2652		2	max	0.966	100	3.17	70	0.051	101	5.249	102	5.175	70	1.959	71	1.931	103
2653			min	-0.724	76	-2.637	76	-0.05	107	-5.175	70	-5.249	102	-1.931	103	-1.959	71
2654		3	max	0.931	100	2.942	70	0.001	71	0.708	15	-0.077	66	2.294	71	2.264	103
2655			min	-0.689	76	-2.771	76	-0.001	107	0.077	66	-0.708	15	-2.264	103	-2.294	71
2656		4	max	0.896	100	2.738	74	0.049	103	5.513	100	4.896	76	1.98	71	1.945	103
2657			min	-0.654	76	-2.998	72	-0.049	105	-4.896	76	-5.513	100	-1.945	103	-1.98	71
2658		5	max	0.861	100	2.601	74	0.108	103	10.154	100	10.438	72	1.032	71	0.915	107
2659			min	-0.619	76	-3.229	72	-0.107	101	-10.438	72	-10.154	100	-0.915	107	-1.032	71
2660	M521	1	max	1.04	100	3.735	70	0.118	101	10.601	106	12.3	70	0.215	71	0.119	107
2661			min	-0.805	76	-2.739	76	-0.119	103	-12.3	70	-10.601	106	-0.119	107	-0.215	71
2662		2	max	1.005	100	3.509	70	0.064	101	5.601	102	5.778	70	1.353	71	1.308	103
2663			min	-0.77	76	-2.87	76	-0.064	103	-5.778	70	-5.601	102	-1.308	103	-1.353	71
2664		3	max	0.97	100	3.282	70	0.014	101	0.696	15	-0.081	66	1.846	71	1.812	103
2665			min	-0.735	76	-3.004	76	-0.014	103	0.081	66	-0.696	15	-1.812	103	-1.846	71
2666		4	max	0.935	100	3.055	74	0.036	77	6.121	100	5.318	76	1.69	71	1.663	103
2667			min	-0.7	76	-3.197	72	-0.036	71	-5.318	76	-6.121	100	-1.663	103	-1.69	71
2668		5	max	0.9	100	2.918	74	0.093	103	11.367	100	11.153	72	0.896	71	0.812	103
2669			min	-0.665	76	-3.428	72	-0.093	101	-11.153	72	-11.367	100	-0.812	103	-0.896	71
2670	M522	1	max	0.784	70	1.32	13	0.165	75	1.096	102	1.07	70	0	107	0	107
2671			min	-0.803	102	0.293	98	-0.165	77	-1.07	70	-1.096	102	0	12	0	12
2672		2	max	0.726	70	0.66	13	0.082	75	2.654	15	0.131	66	2.197	75	2.199	77
2673			min	-0.745	102	0.146	98	-0.083	77	-0.131	66	-2.654	15	-2.199	77	-2.197	75
2674		3	max	0.668	70	0.003	74	0	100	3.474	15	-0.124	66	2.93	75	2.932	77
2675			min	-0.687	102	-0.003	76	0	72	0.124	66	-3.474	15	-2.932	77	-2.93	75
2676		4	max	0.609	70	-0.146	98	0.083	77	2.644	15	-0.009	66	2.197	75	2.199	77
2677			min	-0.628	102	-0.66	13	-0.082	75	0.009	66	-2.644	15	-2.199	77	-2.197	75
2678		5	max	0.551	70	-0.293	98	0.165	77	0.779	102	0.753	70	0	107	0	107
2679			min	-0.57	102	-1.32	13	-0.165	75	-0.753	70	-0.779	102	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2680	M523	1	max	5.03	15	0.728	72	0.39	71	2.819	15	-0.847	96	0.735	71	0.716	103
2681			min	0.68	96	-0.514	104	-0.38	103	0.218	96	-10.94	15	-0.716	103	-0.735	71
2682		2	max	4.999	15	0.713	72	0.382	71	3.632	15	3.876	104	5.672	71	5.53	103
2683			min	0.677	96	-0.499	104	-0.372	103	-0.999	104	-14.092	15	-5.53	103	-5.672	71
2684		3	max	4.666	15	0.351	72	0.157	71	3.063	72	8.208	104	7.851	71	7.708	103
2685			min	0.657	96	-0.148	104	-0.158	103	-2.115	104	-11.885	72	-7.708	103	-7.851	71
2686		4	max	3.998	15	1.129	13	0.444	103	2.73	72	8.827	104	8.032	71	7.908	103
2687			min	0.524	96	-0.442	76	-0.445	71	-2.275	104	-10.594	72	-7.908	103	-8.032	71
2688		5	max	3.774	15	1.18	100	0.571	103	1.614	15	0.298	104	1.102	71	1.081	103
2689			min	0.484	107	-0.646	76	-0.582	71	-0.077	104	-6.263	15	-1.081	103	-1.102	71
2690	M524	1	max	4.236	13	0.335	74	0.186	103	2.185	13	-1.043	98	0.332	103	0.347	71
2691			min	0.595	107	-0.432	102	-0.194	71	0.269	98	-8.477	13	-0.347	71	-0.332	103
2692		2	max	4.206	13	0.32	74	0.178	103	1.85	70	2.893	106	2.661	103	2.773	71
2693			min	0.592	107	-0.417	102	-0.186	71	-0.746	106	-7.178	70	-2.773	71	-2.661	103
2694		3	max	4.175	13	0.305	74	0.17	103	2.594	70	6.701	106	4.888	103	5.098	71
2695			min	0.589	107	-0.402	102	-0.178	71	-1.727	106	-10.066	70	-5.098	71	-4.888	103
2696		4	max	3.66	13	0.996	102	0.443	71	2.883	70	9.516	106	6.3	103	6.574	71
2697			min	0.394	107	-0.763	74	-0.425	103	-2.453	106	-11.186	70	-6.574	71	-6.3	103
2698		5	max	3.63	13	1.01	102	0.451	71	1.74	13	0.18	106	0.816	103	0.851	71
2699			min	0.391	107	-0.778	74	-0.433	103	-0.046	106	-6.75	13	-0.851	71	-0.816	103
2700	M525	1	max	1.63	13	0.456	70	0.189	103	0.888	13	-0.362	98	0.338	103	0.339	71
2701			min	0.338	98	-0.401	106	-0.189	71	0.093	98	-3.447	13	-0.339	71	-0.338	103
2702		2	max	1.599	13	0.441	70	0.181	103	1.769	70	3.462	106	2.707	103	2.709	71
2703			min	0.335	98	-0.387	106	-0.181	71	-0.892	106	-6.864	70	-2.709	71	-2.707	103
2704		3	max	1.569	13	0.426	70	0.173	103	2.88	70	7.233	106	4.974	103	4.978	71
2705			min	0.331	98	-0.372	106	-0.173	71	-1.864	106	-11.173	70	-4.978	71	-4.974	103
2706		4	max	1.037	13	0.923	106	0.433	71	3.408	70	10.034	106	6.409	103	6.415	71
2707			min	0.195	99	-1.061	70	-0.432	103	-2.586	106	-13.224	70	-6.415	71	-6.409	103
2708		5	max	1.007	13	0.937	106	0.441	71	0.671	70	0.789	106	0.83	103	0.831	71
2709			min	0.191	99	-1.076	70	-0.44	103	-0.203	106	-2.604	70	-0.831	71	-0.83	103
2710	M526	1	max	3.882	16	0.33	103	0.06	102	2.084	16	-0.691	75	0.093	102	0.096	70
2711			min	0.548	75	-0.328	71	-0.062	70	0.178	75	-8.086	16	-0.096	70	-0.093	102
2712		2	max	3.851	16	0.315	103	0.052	102	2.097	16	2.461	75	0.812	102	0.841	70
2713			min	0.544	75	-0.314	71	-0.054	70	-0.634	75	-8.138	16	-0.841	70	-0.812	102
2714		3	max	3.821	16	0.301	103	0.044	102	2.737	103	5.466	75	1.43	102	1.484	70
2715			min	0.541	75	-0.299	71	-0.046	70	-1.409	75	-10.618	103	-1.484	70	-1.43	102
2716		4	max	3.306	16	0.74	71	0.121	70	3.051	103	7.726	75	1.758	102	1.829	70
2717			min	0.347	75	-0.752	103	-0.116	102	-1.991	75	-11.84	103	-1.829	70	-1.758	102
2718		5	max	3.275	16	0.755	71	0.128	70	1.768	16	0.377	75	0.227	102	0.236	70
2719			min	0.344	75	-0.766	103	-0.124	102	-0.097	75	-6.861	16	-0.236	70	-0.227	102
2720	M527	1	max	2.718	15	0.992	72	0.455	71	1.741	15	-0.23	96	0.859	71	0.859	103
2721			min	0.406	99	-0.525	104	-0.455	103	0.059	96	-6.756	15	-0.859	103	-0.859	71
2722		2	max	2.688	15	0.977	72	0.447	71	3.642	15	4.522	104	6.632	71	6.626	103
2723			min	0.402	99	-0.511	104	-0.447	103	-1.165	104	-14.129	15	-6.626	103	-6.632	71
2724		3	max	2.251	15	0.711	15	0.168	75	3.265	72	8.788	104	8.974	71	8.968	103
2725			min	0.376	99	-0.061	96	-0.168	107	-2.265	104	-12.67	72	-8.968	103	-8.974	71
2726		4	max	1.508	15	0.809	100	0.49	103	2.926	72	8.437	104	8.903	71	8.898	103
2727			min	0.232	99	-0.526	76	-0.491	71	-2.174	104	-11.355	72	-8.898	103	-8.903	71
2728		5	max	1.223	15	1.078	100	0.645	103	0.553	72	0.878	104	1.223	71	1.222	103
2729			min	0.208	99	-0.794	76	-0.645	71	-0.226	104	-2.147	72	-1.222	103	-1.223	71
2730	M528	1	max	5.563	15	1.215	72	0.447	71	3.267	15	-0.814	66	0.844	71	0.866	103
2731			min	0.762	67	-0.808	104	-0.459	103	0.21	66	-12.675	15	-0.866	103	-0.844	71
2732		2	max	5.533	15	1.201	72	0.439	71	5.162	15	6.444	104	6.511	71	6.683	103
2733			min	0.758	67	-0.793	104	-0.451	103	-1.661	104	-20.028	15	-6.683	103	-6.511	71
2734		3	max	5.115	15	0.73	72	0.161	71	5.032	72	13.492	104	8.772	71	8.944	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2735			min	0.733	67	-0.334	104	-0.161	107	-3.477	104	-19.526	72	-8.944	103	-8.772	71
2736		4	max	4.395	15	1.541	100	0.474	103	5.112	72	15.12	104	8.704	71	8.851	103
2737			min	0.563	75	-1.152	76	-0.473	71	-3.897	104	-19.835	72	-8.851	103	-8.704	71
2738		5	max	4.119	15	1.804	100	0.646	103	1.981	15	0.598	74	1.2	71	1.224	103
2739			min	0.51	75	-1.414	76	-0.633	71	-0.154	74	-7.685	15	-1.224	103	-1.2	71
2740	M529	1	max	9.526	15	0.833	15	0.192	71	5.027	15	-2.436	96	0.314	71	0.306	73
2741			min	1.425	96	-0.322	66	-0.187	73	0.557	96	-22.002	15	-0.306	73	-0.314	71
2742		2	max	9.49	15	0.831	15	0.184	71	7.57	15	1.661	96	2.421	71	2.36	73
2743			min	1.422	96	-0.291	66	-0.18	73	-0.38	96	-33.129	15	-2.36	73	-2.421	71
2744		3	max	9.203	15	0.549	15	0.012	105	5.977	15	3.468	96	2.656	71	2.6	73
2745			min	1.405	96	-0.049	66	-0.012	107	-0.792	96	-26.157	15	-2.6	73	-2.656	71
2746		4	max	9.005	15	0.35	13	0.075	73	5.366	15	2.136	96	1.984	71	1.937	73
2747			min	1.389	96	-0.134	68	-0.076	71	-0.488	96	-23.484	15	-1.937	73	-1.984	71
2748		5	max	8.807	15	0.538	92	0.177	73	4.235	15	-2.086	96	0.298	71	0.29	73
2749			min	1.371	96	-0.384	68	-0.181	71	0.477	96	-18.535	15	-0.29	73	-0.298	71
2750	M603	1	max	7.995	13	0.062	66	0.015	73	3.899	13	-2.79	98	0	71	0	107
2751			min	1.307	98	-0.064	94	-0.015	105	0.638	98	-17.064	13	0	107	0	71
2752		2	max	7.959	13	0.031	66	0.007	73	3.894	13	-2.152	98	0.125	73	0.125	105
2753			min	1.304	98	-0.032	94	-0.007	105	0.492	98	-17.042	13	-0.125	105	-0.125	73
2754		3	max	7.923	13	0	76	0	71	3.882	13	-1.935	98	0.167	73	0.167	105
2755			min	1.3	98	-0.005	13	0	107	0.442	98	-16.988	13	-0.167	105	-0.167	73
2756		4	max	7.888	13	0.031	68	0.007	71	3.862	13	-2.138	98	0.125	73	0.125	105
2757			min	1.297	98	-0.032	92	-0.007	107	0.489	98	-16.901	13	-0.125	105	-0.125	73
2758		5	max	7.852	13	0.062	68	0.015	71	3.835	13	-2.763	98	0	71	0	107
2759			min	1.293	98	-0.064	92	-0.015	107	0.631	98	-16.781	13	0	107	0	71
2760	M604	1	max	7.64	13	0.062	66	0.015	73	3.726	13	-2.859	67	0	71	0	107
2761			min	1.339	67	-0.064	94	-0.015	105	0.653	67	-16.307	13	0	107	0	71
2762		2	max	7.604	13	0.031	66	0.007	73	3.721	13	-2.291	68	0.125	73	0.125	105
2763			min	1.335	67	-0.032	94	-0.007	105	0.524	68	-16.285	13	-0.125	105	-0.125	73
2764		3	max	7.569	13	0	76	0	71	3.709	13	-2.074	68	0.167	73	0.167	105
2765			min	1.332	67	-0.005	13	0	107	0.474	68	-16.23	13	-0.167	105	-0.167	73
2766		4	max	7.533	13	0.031	68	0.007	71	3.689	13	-2.277	68	0.125	73	0.125	105
2767			min	1.328	67	-0.032	92	-0.007	107	0.52	68	-16.143	13	-0.125	105	-0.125	73
2768		5	max	7.498	13	0.062	68	0.015	71	3.662	13	-2.831	67	0	71	0	107
2769			min	1.325	67	-0.064	92	-0.015	107	0.647	67	-16.024	13	0	107	0	71
2770	M605	1	max	9.601	15	0.062	68	0.015	105	4.683	15	-3.132	67	0	107	0	71
2771			min	1.467	67	-0.064	92	-0.015	73	0.716	67	-20.494	15	0	71	0	107
2772		2	max	9.565	15	0.031	68	0.007	105	4.678	15	-2.596	66	0.125	105	0.125	73
2773			min	1.464	67	-0.032	92	-0.007	73	0.593	66	-20.472	15	-0.125	73	-0.125	105
2774		3	max	9.529	15	0	74	0	107	4.665	15	-2.379	66	0.167	105	0.167	73
2775			min	1.46	67	-0.005	15	0	71	0.544	66	-20.418	15	-0.167	73	-0.167	105
2776		4	max	9.494	15	0.031	66	0.007	107	4.646	15	-2.582	66	0.125	105	0.125	73
2777			min	1.457	67	-0.032	94	-0.007	71	0.59	66	-20.331	15	-0.125	73	-0.125	105
2778		5	max	9.458	15	0.062	66	0.015	107	4.618	15	-3.104	67	0	107	0	71
2779			min	1.453	67	-0.064	94	-0.015	71	0.709	67	-20.211	15	0	71	0	107
2780	M606	1	max	2.354	72	0.023	71	-0.016	76	5.38	72	4.988	104	10.765	72	10.97	104
2781			min	-2.182	104	-0.023	107	-0.145	14	-4.988	104	-5.38	72	-9.981	104	-11.832	72
2782		2	max	2.358	72	0.012	71	-0.008	76	5.472	72	4.951	104	10.626	72	11.1	104
2783			min	-2.187	104	-0.012	107	-0.073	14	-4.951	104	-5.472	72	-10.099	104	-11.68	72
2784		3	max	2.363	72	0.003	72	0	107	5.51	72	4.947	104	10.595	72	11.16	104
2785			min	-2.192	104	-0.003	104	0	12	-4.947	104	-5.51	72	-10.153	104	-11.645	72
2786		4	max	2.368	72	0.012	73	0.073	15	5.494	72	4.974	104	10.671	72	11.149	104
2787			min	-2.197	104	-0.012	105	0.008	107	-4.974	104	-5.494	72	-10.144	104	-11.729	72
2788		5	max	2.373	72	0.023	73	0.145	15	5.425	72	5.033	104	10.855	72	11.069	104
2789			min	-2.202	104	-0.023	105	0.016	107	-5.033	104	-5.425	72	-10.071	104	-11.931	72

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2790	M607	1	max	2.61	72	0.023	71	-0.016	44	5.967	72	5.687	104	11.941	72	12.507	104
2791			min	-2.488	104	-0.023	107	-0.145	15	-5.687	104	-5.968	72	-11.379	104	-13.124	72
2792		2	max	2.615	72	0.012	71	-0.008	44	6.059	72	5.65	104	11.809	76	12.637	104
2793			min	-2.493	104	-0.012	107	-0.073	15	-5.65	104	-6.059	72	-11.497	104	-12.98	76
2794		3	max	2.62	72	0.003	76	0	107	6.097	72	5.645	104	11.8	76	12.696	104
2795			min	-2.497	104	-0.003	104	0	12	-5.645	104	-6.097	72	-11.551	104	-12.969	76
2796		4	max	2.625	72	0.012	73	0.073	16	6.082	72	5.673	104	11.854	76	12.686	104
2797			min	-2.502	104	-0.012	105	0.008	74	-5.673	104	-6.082	72	-11.542	104	-13.029	76
2798		5	max	2.63	72	0.023	73	0.145	16	6.012	72	5.732	104	12.03	72	12.605	104
2799			min	-2.507	104	-0.023	105	0.016	74	-5.732	104	-6.012	72	-11.469	104	-13.223	72
2800	M608	1	max	0.744	72	0.023	103	-0.016	105	1.686	72	1.3	104	3.48	72	2.949	104
2801			min	-0.573	104	-0.023	71	-0.192	13	-1.3	104	-1.686	72	-2.683	104	-3.825	72
2802		2	max	0.739	72	0.011	103	-0.008	105	1.775	72	1.229	104	3.251	72	3.058	104
2803			min	-0.568	104	-0.011	71	-0.096	13	-1.229	104	-1.775	72	-2.782	104	-3.573	72
2804		3	max	0.734	72	0.002	104	0	107	1.797	72	1.198	104	3.159	72	3.078	104
2805			min	-0.564	104	-0.002	76	0	12	-1.198	104	-1.797	72	-2.8	104	-3.473	72
2806		4	max	0.729	72	0.011	101	0.096	16	1.752	72	1.207	104	3.205	72	3.008	104
2807			min	-0.559	104	-0.011	73	0.008	44	-1.207	104	-1.752	72	-2.737	104	-3.523	72
2808		5	max	0.724	72	0.023	101	0.192	16	1.641	72	1.255	104	3.388	72	2.848	104
2809			min	-0.554	104	-0.023	73	0.016	44	-1.255	104	-1.641	72	-2.591	104	-3.725	72
2810	M609	1	max	0.165	66	0.035	104	-0.028	76	0.375	66	0.66	94	0.774	66	1.497	94
2811			min	-0.291	94	-0.035	72	-0.346	13	-0.66	94	-0.375	66	-1.361	94	-0.85	66
2812		2	max	0.165	66	0.018	104	-0.014	76	2.233	13	0.443	106	0.316	66	5.756	15
2813			min	-0.291	94	-0.018	72	-0.173	13	-0.443	106	-2.233	13	-5.236	15	-0.347	66
2814		3	max	0.165	66	0.002	105	0	107	3.018	13	0.467	106	0.273	104	7.536	15
2815			min	-0.291	94	-0.002	73	0	12	-0.467	106	-3.018	13	-6.856	15	-0.3	104
2816		4	max	0.165	66	0.016	106	0.173	15	2.233	13	0.465	106	0.316	66	5.756	15
2817			min	-0.291	94	-0.016	70	0.014	104	-0.465	106	-2.233	13	-5.236	15	-0.347	66
2818		5	max	0.165	66	0.033	106	0.346	15	0.375	66	0.66	94	0.774	66	1.497	94
2819			min	-0.291	94	-0.033	70	0.028	104	-0.66	94	-0.375	66	-1.361	94	-0.85	66
2820	M610	1	max	0.322	102	0.023	103	-0.016	104	0.731	102	0.436	104	1.508	102	0.989	104
2821			min	-0.192	104	-0.023	71	-0.192	15	-0.436	104	-0.731	102	-0.9	104	-1.658	102
2822		2	max	0.317	102	0.011	103	-0.008	104	0.901	15	0.366	104	1.279	102	1.409	17
2823			min	-0.187	104	-0.011	71	-0.096	15	-0.366	104	-0.901	15	-1.282	17	-1.406	102
2824		3	max	0.313	102	0.002	104	0	107	1.142	15	0.335	104	1.212	106	1.94	17
2825			min	-0.183	104	-0.002	76	0	12	-0.335	104	-1.142	15	-1.765	17	-1.332	106
2826		4	max	0.308	102	0.011	101	0.096	16	0.901	15	0.343	104	1.234	102	1.409	17
2827			min	-0.178	104	-0.011	73	0.008	105	-0.343	104	-0.901	15	-1.282	17	-1.356	102
2828		5	max	0.303	102	0.023	101	0.192	16	0.686	102	0.392	104	1.417	102	0.889	104
2829			min	-0.173	104	-0.023	73	0.016	105	-0.392	104	-0.686	102	-0.808	104	-1.557	102
2830	M611	1	max	0.765	104	0.035	104	-0.028	76	1.733	104	1.966	102	3.578	104	4.461	102
2831			min	-0.867	102	-0.035	72	-0.346	13	-1.966	102	-1.733	104	-4.058	102	-3.933	104
2832		2	max	0.77	104	0.018	104	-0.014	76	2.228	13	2.008	106	3.681	104	5.977	15
2833			min	-0.872	102	-0.018	72	-0.173	13	-2.008	106	-2.228	13	-5.437	15	-4.046	104
2834		3	max	0.774	104	0.002	105	0	107	3.013	13	2.032	106	3.73	104	7.757	15
2835			min	-0.877	102	-0.002	73	0	12	-2.032	106	-3.013	13	-7.057	15	-4.1	104
2836		4	max	0.779	104	0.016	106	0.173	15	2.228	13	2.03	106	3.726	104	5.977	15
2837			min	-0.882	102	-0.016	70	0.014	104	-2.03	106	-2.228	13	-5.437	15	-4.096	104
2838		5	max	0.784	104	0.033	106	0.346	15	1.778	104	2.01	102	3.67	104	4.562	102
2839			min	-0.887	102	-0.033	70	0.028	104	-2.01	102	-1.778	104	-4.15	102	-4.034	104
2840	M612	1	max	3.449	104	0.033	104	-0.027	105	7.884	104	8.273	72	15.777	104	18.195	72
2841			min	-3.619	72	-0.033	72	-0.244	13	-8.273	72	-7.884	104	-16.554	72	-17.34	104
2842		2	max	3.454	104	0.017	104	-0.013	105	8.187	104	8.28	76	15.842	104	19.064	72
2843			min	-3.624	72	-0.017	72	-0.122	13	-8.28	76	-8.187	104	-17.345	72	-17.412	104
2844		3	max	3.459	104	0.002	105	0	107	8.295	104	8.298	76	15.879	104	19.37	72

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2845			min	-3.629	72	-0.002	73	0	12	-8.298	76	-8.295	104	-17.623	72	-17.453	104
2846		4	max	3.464	104	0.014	106	0.122	15	8.209	104	8.303	76	15.887	104	19.113	72
2847			min	-3.634	72	-0.014	70	0.013	77	-8.303	76	-8.209	104	-17.39	72	-17.461	104
2848		5	max	3.469	104	0.029	106	0.244	15	7.929	104	8.318	72	15.866	104	18.294	72
2849			min	-3.639	72	-0.029	70	0.027	77	-8.318	72	-7.929	104	-16.644	72	-17.439	104
2850	M613	1	max	2.383	13	0.062	66	0.015	73	1.16	13	-0.074	107	0	71	0	107
2851			min	0.035	107	-0.064	94	-0.015	105	0.017	107	-5.078	13	0	107	0	71
2852		2	max	2.347	13	0.031	66	0.007	73	1.155	13	0.04	98	0.125	73	0.125	105
2853			min	0.032	107	-0.032	94	-0.007	105	-0.009	98	-5.056	13	-0.125	105	-0.125	73
2854		3	max	2.311	13	0	76	0	71	1.143	13	0.257	98	0.167	73	0.167	105
2855			min	0.029	107	-0.005	13	0	107	-0.059	98	-5.002	13	-0.167	105	-0.167	73
2856		4	max	2.276	13	0.031	68	0.007	71	1.123	13	0.054	98	0.125	73	0.125	105
2857			min	0.026	107	-0.032	92	-0.007	107	-0.012	98	-4.915	13	-0.125	105	-0.125	73
2858		5	max	2.24	13	0.062	68	0.015	71	1.096	13	-0.05	107	0	71	0	107
2859			min	0.023	107	-0.064	92	-0.015	107	0.011	107	-4.795	13	0	107	0	71
2860	M614	1	max	1.964	16	0.062	66	0.015	73	0.956	16	0.041	75	0	71	0	107
2861			min	-0.019	75	-0.064	94	-0.015	105	-0.009	75	-4.184	16	0	107	0	71
2862		2	max	1.929	16	0.031	66	0.007	73	0.951	13	0.047	75	0.125	73	0.125	105
2863			min	-0.022	75	-0.032	94	-0.007	105	-0.011	75	-4.161	13	-0.125	105	-0.125	73
2864		3	max	1.893	16	0	76	0	71	0.938	13	0.146	68	0.167	73	0.167	105
2865			min	-0.025	75	-0.005	13	0	107	-0.033	68	-4.107	13	-0.167	105	-0.167	73
2866		4	max	1.858	16	0.031	68	0.007	71	0.919	13	0.059	75	0.125	73	0.125	105
2867			min	-0.028	75	-0.032	92	-0.007	107	-0.013	75	-4.02	13	-0.125	105	-0.125	73
2868		5	max	1.822	16	0.062	68	0.015	71	0.892	16	0.065	75	0	71	0	107
2869			min	-0.031	75	-0.064	92	-0.015	107	-0.015	75	-3.902	16	0	107	0	71
2870	M615	1	max	2.505	15	0.062	68	0.015	105	1.22	15	-0.285	107	0	107	0	71
2871			min	0.134	107	-0.064	92	-0.015	73	0.065	107	-5.339	15	0	71	0	107
2872		2	max	2.469	15	0.031	68	0.007	105	1.215	15	0.07	96	0.125	105	0.125	73
2873			min	0.131	107	-0.032	92	-0.007	73	-0.016	96	-5.317	15	-0.125	73	-0.125	105
2874		3	max	2.434	15	0	74	0	107	1.203	15	0.287	96	0.167	105	0.167	73
2875			min	0.128	107	-0.005	15	0	71	-0.066	96	-5.263	15	-0.167	73	-0.167	105
2876		4	max	2.398	15	0.031	66	0.007	107	1.183	15	0.084	96	0.125	105	0.125	73
2877			min	0.125	107	-0.032	94	-0.007	71	-0.019	96	-5.176	15	-0.125	73	-0.125	105
2878		5	max	2.363	15	0.062	66	0.015	107	1.155	15	-0.261	107	0	107	0	71
2879			min	0.122	107	-0.064	94	-0.015	71	0.06	107	-5.057	15	0	71	0	107
2880	M616	1	max	2.896	15	0.062	68	0.015	105	1.411	15	-0.371	75	0	107	0	71
2881			min	0.174	75	-0.064	92	-0.015	73	0.085	75	-6.174	15	0	71	0	107
2882		2	max	2.86	15	0.031	68	0.007	105	1.406	15	-0.2	66	0.125	105	0.125	73
2883			min	0.171	75	-0.032	92	-0.007	73	0.046	66	-6.152	15	-0.125	73	-0.125	105
2884		3	max	2.825	15	0	74	0	107	1.393	15	0.018	66	0.167	105	0.167	73
2885			min	0.168	75	-0.005	15	0	71	-0.004	66	-6.098	15	-0.167	73	-0.167	105
2886		4	max	2.789	15	0.031	66	0.007	107	1.373	15	-0.186	66	0.125	105	0.125	73
2887			min	0.165	75	-0.032	94	-0.007	71	0.042	66	-6.011	15	-0.125	73	-0.125	105
2888		5	max	2.754	15	0.062	66	0.015	107	1.346	15	-0.347	75	0	107	0	71
2889			min	0.162	75	-0.064	94	-0.015	71	0.079	75	-5.891	15	0	71	0	107
2890	M617	1	max	1.434	106	0.352	15	0.034	106	1.289	70	1.202	106	2.661	70	2.727	106
2891			min	-1.537	70	0.028	107	-0.034	74	-1.202	106	-1.289	70	-2.481	106	-2.925	70
2892		2	max	1.438	106	0.176	15	0.017	106	2.848	13	1.245	106	5.878	13	1.775	106
2893			min	-1.542	70	0.013	107	-0.017	74	-1.245	106	-2.848	13	-1.615	106	-6.462	13
2894		3	max	1.443	106	0.001	71	0	107	3.645	13	1.262	106	7.524	13	1.464	106
2895			min	-1.547	70	-0.001	107	0	12	-1.262	106	-3.645	13	-1.332	106	-8.27	13
2896		4	max	1.448	106	-0.013	75	0.017	40	2.848	13	1.253	106	5.878	13	1.794	106
2897			min	-1.552	70	-0.176	13	-0.017	72	-1.253	106	-2.848	13	-1.632	106	-6.462	13
2898		5	max	1.453	106	-0.028	75	0.034	40	1.305	70	1.218	106	2.695	70	2.765	106
2899			min	-1.557	70	-0.352	13	-0.034	72	-1.218	106	-1.305	70	-2.515	106	-2.962	70

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2900	M661	1	max	1.858	106	0.352	15	0.034	72	1.84	70	1.558	106	3.798	70	3.535	106
2901			min	-2.195	70	0.028	107	-0.034	70	-1.558	106	-1.84	70	-3.216	106	-4.175	70
2902		2	max	1.863	106	0.176	15	0.017	72	3.173	13	1.6	106	6.55	13	2.582	106
2903			min	-2.2	70	0.013	107	-0.017	70	-1.6	106	-3.173	13	-2.349	106	-7.2	13
2904		3	max	1.868	106	0.001	71	0	107	3.97	13	1.617	106	8.195	13	2.271	106
2905			min	-2.204	70	-0.001	107	0	12	-1.617	106	-3.97	13	-2.066	106	-9.009	13
2906		4	max	1.873	106	-0.013	75	0.017	100	3.173	13	1.609	106	6.55	13	2.601	106
2907			min	-2.209	70	-0.176	13	-0.017	42	-1.609	106	-3.173	13	-2.366	106	-7.2	13
2908		5	max	1.877	106	-0.028	75	0.034	100	1.856	70	1.574	106	3.832	70	3.572	106
2909			min	-2.214	70	-0.352	13	-0.034	42	-1.574	106	-1.856	70	-3.249	106	-4.213	70
2910	M662	1	max	2.515	106	0.251	13	0.031	76	2.42	70	2.127	106	4.843	70	4.677	106
2911			min	-2.863	70	0.026	107	-0.031	44	-2.127	106	-2.42	70	-4.255	106	-5.323	70
2912		2	max	2.52	106	0.125	13	0.016	76	2.808	70	2.152	106	4.993	70	4.045	106
2913			min	-2.867	70	0.013	107	-0.016	44	-2.152	106	-2.808	70	-3.68	106	-5.488	70
2914		3	max	2.525	106	0.001	71	0	107	2.94	70	2.163	106	5.049	70	3.841	106
2915			min	-2.872	70	-0.001	107	0	12	-2.163	106	-2.94	70	-3.494	106	-5.549	70
2916		4	max	2.53	106	-0.013	75	0.016	70	2.816	70	2.16	106	5.01	70	4.063	106
2917			min	-2.877	70	-0.125	15	-0.016	106	-2.16	106	-2.817	70	-3.697	106	-5.506	70
2918		5	max	2.535	106	-0.026	75	0.031	70	2.437	70	2.143	106	4.876	70	4.713	106
2919			min	-2.882	70	-0.251	15	-0.031	106	-2.143	106	-2.437	70	-4.288	106	-5.359	70
2920	M663	1	max	2.783	76	0.251	13	0.031	106	2.675	100	2.353	76	5.353	100	5.175	76
2921			min	-3.164	100	0.026	107	-0.031	74	-2.353	76	-2.675	100	-4.708	76	-5.884	100
2922		2	max	2.788	76	0.125	13	0.016	106	3.063	100	2.379	76	5.504	100	4.543	76
2923			min	-3.169	100	0.013	107	-0.016	74	-2.379	76	-3.063	100	-4.134	76	-6.049	100
2924		3	max	2.793	76	0.001	71	0	107	3.195	100	2.39	76	5.559	100	4.339	76
2925			min	-3.174	100	-0.001	103	0	12	-2.39	76	-3.195	100	-3.948	76	-6.11	100
2926		4	max	2.798	76	-0.013	75	0.016	44	3.072	100	2.387	76	5.52	100	4.562	76
2927			min	-3.179	100	-0.125	15	-0.016	46	-2.387	76	-3.072	100	-4.15	76	-6.067	100
2928		5	max	2.803	76	-0.026	75	0.031	44	2.692	100	2.37	76	5.386	100	5.211	76
2929			min	-3.184	100	-0.251	15	-0.031	46	-2.37	76	-2.692	100	-4.741	76	-5.92	100
2930	M664	1	max	1.096	72	0.352	15	0.034	100	0.801	104	0.919	72	1.653	104	2.086	72
2931			min	-0.955	104	0.028	75	-0.034	42	-0.919	72	-0.801	104	-1.897	72	-1.817	104
2932		2	max	1.101	72	0.176	15	0.017	100	2.212	13	0.489	68	4.567	13	2.106	76
2933			min	-0.96	104	0.013	75	-0.017	42	-0.489	68	-2.212	13	-1.916	76	-5.02	13
2934		3	max	1.106	72	0.001	107	0	107	3.009	13	0.416	68	6.212	13	2.144	76
2935			min	-0.965	104	-0.001	71	0	12	-0.416	68	-3.009	13	-1.951	76	-6.829	13
2936		4	max	1.111	72	-0.013	107	0.017	76	2.212	13	0.489	68	4.567	13	2.124	76
2937			min	-0.97	104	-0.176	13	-0.017	40	-0.489	68	-2.212	13	-1.933	76	-5.02	13
2938		5	max	1.116	72	-0.028	107	0.034	76	0.817	104	0.936	72	1.687	104	2.123	72
2939			min	-0.975	104	-0.352	13	-0.034	40	-0.936	72	-0.817	104	-1.931	72	-1.855	104
2940	M665	1	max	1.48	76	0.352	15	0.034	70	1.342	70	1.241	76	2.771	70	2.816	76
2941			min	-1.601	70	0.028	75	-0.034	102	-1.241	76	-1.342	70	-2.561	76	-3.046	70
2942		2	max	1.485	76	0.176	15	0.017	70	2.53	13	0.821	76	5.222	13	2.912	76
2943			min	-1.606	70	0.013	75	-0.017	102	-0.821	76	-2.53	13	-2.649	76	-5.741	13
2944		3	max	1.49	76	0.001	107	0	107	3.327	13	0.684	76	6.868	13	2.951	76
2945			min	-1.611	70	-0.001	71	0	12	-0.684	76	-3.327	13	-2.684	76	-7.549	13
2946		4	max	1.495	76	-0.013	107	0.017	106	2.53	13	0.829	76	5.222	13	2.931	76
2947			min	-1.615	70	-0.176	13	-0.017	100	-0.829	76	-2.53	13	-2.666	76	-5.741	13
2948		5	max	1.5	76	-0.028	107	0.034	106	1.359	70	1.257	76	2.804	70	2.853	76
2949			min	-1.62	70	-0.352	13	-0.034	100	-1.257	76	-1.359	70	-2.595	76	-3.083	70
2950	M666	1	max	2.259	106	0.251	13	0.031	40	2.065	70	1.91	106	4.133	70	4.201	106
2951			min	-2.443	70	0.026	75	-0.031	76	-1.91	106	-2.065	70	-3.822	106	-4.542	70
2952		2	max	2.264	106	0.125	13	0.016	40	2.141	70	1.623	106	4.909	70	4.257	106
2953			min	-2.448	70	0.013	75	-0.016	76	-1.623	106	-2.141	70	-3.873	106	-5.396	70
2954		3	max	2.269	106	0.001	107	0	107	2.168	70	1.53	106	5.173	70	4.282	106

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
2955			min	-2.453	70	-0.001	71	0	12	-1.53	106	-2.168	70	-3.896	106	-5.686	70
2956		4	max	2.274	106	-0.013	107	0.016	42	2.149	70	1.631	106	4.926	70	4.275	106
2957			min	-2.457	70	-0.125	15	-0.016	100	-1.631	106	-2.149	70	-3.89	106	-5.414	70
2958		5	max	2.279	106	-0.026	107	0.031	42	2.082	70	1.927	106	4.166	70	4.237	106
2959			min	-2.462	70	-0.251	15	-0.031	100	-1.927	106	-2.082	70	-3.855	106	-4.579	70
2960	M667	1	max	2.596	76	0.251	13	0.031	100	2.45	100	2.195	76	4.902	100	4.828	76
2961			min	-2.897	100	0.026	75	-0.031	102	-2.195	76	-2.45	100	-4.392	76	-5.388	100
2962		2	max	2.601	76	0.125	13	0.016	100	2.525	100	1.908	76	5.678	100	4.884	76
2963			min	-2.902	100	0.013	75	-0.016	102	-1.908	76	-2.525	100	-4.444	76	-6.241	100
2964		3	max	2.606	76	0.001	107	0	107	2.553	100	1.815	76	5.942	100	4.909	76
2965			min	-2.907	100	-0.001	71	0	12	-1.815	76	-2.553	100	-4.466	76	-6.531	100
2966		4	max	2.611	76	-0.013	107	0.016	106	2.533	100	1.916	76	5.695	100	4.902	76
2967			min	-2.912	100	-0.125	15	-0.016	74	-1.916	76	-2.533	100	-4.46	76	-6.259	100
2968		5	max	2.616	76	-0.026	107	0.031	106	2.466	100	2.212	76	4.935	100	4.864	76
2969			min	-2.917	100	-0.251	15	-0.031	74	-2.212	76	-2.466	100	-4.426	76	-5.424	100
2970	M668	1	max	1.556	70	0.149	15	0.023	71	1.215	106	1.316	70	2.431	106	2.893	70
2971			min	-1.437	106	0.015	76	-0.023	103	-1.316	70	-1.215	106	-2.632	70	-2.672	106
2972		2	max	1.551	70	0.075	15	0.012	71	1.283	102	1.231	70	2.567	102	2.707	70
2973			min	-1.432	106	0.007	76	-0.012	103	-1.231	70	-1.283	102	-2.463	70	-2.821	102
2974		3	max	1.546	70	0.001	104	0	107	1.305	102	1.206	74	2.612	102	2.653	74
2975			min	-1.427	106	-0.001	72	0	12	-1.206	74	-1.305	102	-2.413	74	-2.871	102
2976		4	max	1.541	70	-0.007	104	0.012	107	1.274	102	1.223	70	2.55	102	2.689	70
2977			min	-1.422	106	-0.075	13	-0.012	101	-1.223	70	-1.274	102	-2.446	70	-2.803	102
2978		5	max	1.536	70	-0.015	104	0.023	107	1.199	106	1.299	70	2.398	106	2.857	70
2979			min	-1.418	106	-0.149	13	-0.023	101	-1.299	70	-1.199	106	-2.599	70	-2.636	106
2980	M669	1	max	0.721	70	0.195	15	0.023	45	0.608	72	0.605	70	1.255	72	1.372	70
2981			min	-0.725	72	0.015	106	-0.023	103	-0.605	70	-0.608	72	-1.249	70	-1.38	72
2982		2	max	0.716	70	0.098	15	0.011	45	0.82	15	0.53	74	1.694	15	1.203	74
2983			min	-0.72	72	0.007	106	-0.011	103	-0.53	74	-0.82	15	-1.094	74	-1.862	15
2984		3	max	0.712	70	0.001	74	0	107	1.066	15	0.506	74	2.2	15	1.149	74
2985			min	-0.716	72	-0.001	102	0	12	-0.506	74	-1.066	15	-1.045	74	-2.418	15
2986		4	max	0.707	70	-0.007	74	0.011	107	0.82	15	0.522	74	1.694	15	1.184	74
2987			min	-0.711	72	-0.098	13	-0.011	71	-0.522	74	-0.82	15	-1.077	74	-1.862	15
2988		5	max	0.702	70	-0.015	74	0.023	107	0.592	72	0.588	70	1.221	72	1.335	70
2989			min	-0.706	72	-0.195	13	-0.023	71	-0.588	70	-0.592	72	-1.215	70	-1.343	72
2990	M670	1	max	1.048	70	0.195	15	0.023	75	0.772	106	0.879	70	1.594	106	1.994	70
2991			min	-0.921	106	0.015	106	-0.023	103	-0.879	70	-0.772	106	-1.814	70	-1.752	106
2992		2	max	1.043	70	0.098	15	0.011	75	0.845	102	0.784	74	1.744	102	1.779	74
2993			min	-0.916	106	0.007	106	-0.011	103	-0.784	74	-0.845	102	-1.618	74	-1.917	102
2994		3	max	1.039	70	0.001	74	0	107	0.874	102	0.76	74	1.804	102	1.725	74
2995			min	-0.911	106	-0.001	102	0	12	-0.76	74	-0.874	102	-1.569	74	-1.983	102
2996		4	max	1.034	70	-0.007	74	0.011	73	0.837	102	0.776	74	1.727	102	1.76	74
2997			min	-0.906	106	-0.098	13	-0.011	71	-0.776	74	-0.837	102	-1.601	74	-1.898	102
2998		5	max	1.029	70	-0.015	74	0.023	73	0.756	106	0.863	70	1.56	106	1.957	70
2999			min	-0.901	106	-0.195	13	-0.023	71	-0.863	70	-0.756	106	-1.78	70	-1.715	106
3000	M671	1	max	1.803	70	0.149	15	0.023	71	1.343	106	1.524	70	2.688	106	3.352	70
3001			min	-1.589	106	0.015	76	-0.023	73	-1.524	70	-1.343	106	-3.05	70	-2.955	106
3002		2	max	1.798	70	0.075	15	0.012	71	1.387	106	1.439	70	2.776	106	3.165	70
3003			min	-1.584	106	0.007	76	-0.012	73	-1.439	70	-1.387	106	-2.88	70	-3.051	106
3004		3	max	1.793	70	0.001	104	0	107	1.408	102	1.408	70	2.818	102	3.097	70
3005			min	-1.579	106	-0.001	72	0	12	-1.408	70	-1.408	102	-2.818	70	-3.097	102
3006		4	max	1.788	70	-0.007	104	0.012	43	1.379	106	1.431	70	2.759	106	3.147	70
3007			min	-1.574	106	-0.075	13	-0.012	105	-1.431	70	-1.379	106	-2.863	70	-3.033	106
3008		5	max	1.783	70	-0.015	104	0.023	43	1.327	106	1.507	70	2.655	106	3.315	70
3009			min	-1.569	106	-0.149	13	-0.023	105	-1.507	70	-1.327	106	-3.016	70	-2.918	106

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3010	M672	1	max	-0.652	107	0.312	13	0.039	100	-0.574	107	7.808	15	15.752	15	-1.333	107
3011			min	-8.872	15	0.002	107	-0.038	76	-7.808	15	0.574	107	1.158	107	-18.126	15
3012		2	max	-0.662	107	0.156	13	0.02	100	-0.568	107	5.096	15	21.371	15	-1.388	107
3013			min	-8.916	15	0.001	107	-0.019	76	-5.096	15	0.568	107	1.206	107	-24.592	15
3014		3	max	-0.672	107	0	13	0.003	13	-0.572	107	4.217	15	23.293	15	-1.419	107
3015			min	-8.959	15	0	106	0	75	-4.217	15	0.572	107	1.233	107	-26.804	15
3016		4	max	-0.683	107	-0.001	77	0.02	102	-0.585	107	5.169	15	21.519	15	-1.428	107
3017			min	-9.003	15	-0.156	15	-0.019	74	-5.169	15	0.585	107	1.241	107	-24.763	15
3018		5	max	-0.693	107	-0.002	77	0.039	102	-0.609	107	7.955	15	16.048	15	-1.413	107
3019			min	-9.046	15	-0.312	15	-0.038	74	-7.955	15	0.609	107	1.228	107	-18.467	15
3020	M673	1	max	-0.351	107	-0.002	107	0.039	72	-0.31	107	7.233	13	14.591	13	-0.719	107
3021			min	-8.219	13	-0.312	13	-0.038	104	-7.233	13	0.31	107	0.625	107	-16.791	13
3022		2	max	-0.361	107	-0.001	107	0.02	72	-0.333	107	10.018	13	9.12	13	-0.704	107
3023			min	-8.262	13	-0.156	13	-0.019	104	-10.018	13	0.333	107	0.612	107	-10.495	13
3024		3	max	-0.372	107	0	106	0.003	15	-0.347	107	10.971	13	7.346	13	-0.713	107
3025			min	-8.305	13	0	13	0	105	-10.971	13	0.347	107	0.619	107	-8.453	13
3026		4	max	-0.382	107	0.156	15	0.02	70	-0.35	107	10.091	13	9.269	13	-0.744	107
3027			min	-8.349	13	0.001	77	-0.019	106	-10.091	13	0.35	107	0.647	107	-10.666	13
3028		5	max	-0.392	107	0.312	15	0.039	70	-0.344	107	7.38	13	14.888	13	-0.799	107
3029			min	-8.392	13	0.002	77	-0.038	106	-7.38	13	0.344	107	0.694	107	-17.132	13
3030	M674	1	max	-0.184	75	0.312	15	0.039	72	-0.163	75	6.375	16	12.861	16	-0.378	75
3031			min	-7.244	16	0.002	75	-0.038	104	-6.375	16	0.163	75	0.329	75	-14.799	16
3032		2	max	-0.195	75	0.156	15	0.02	72	-0.157	75	3.663	16	18.48	16	-0.433	75
3033			min	-7.287	16	0.001	75	-0.019	104	-3.663	16	0.157	75	0.376	75	-21.266	16
3034		3	max	-0.205	75	0	15	0.003	15	-0.072	74	2.784	16	20.403	16	-0.464	75
3035			min	-7.33	16	0	74	0	107	-2.784	16	0.072	74	0.404	75	-23.478	16
3036		4	max	-0.215	75	-0.001	105	0.02	70	-0.174	75	3.737	16	18.628	16	-0.473	75
3037			min	-7.374	16	-0.156	13	-0.019	106	-3.737	16	0.174	75	0.411	75	-21.436	16
3038		5	max	-0.225	75	-0.002	105	0.039	70	-0.197	75	6.522	16	13.158	16	-0.458	75
3039			min	-7.417	16	-0.312	13	-0.038	106	-6.522	16	0.197	75	0.398	75	-15.141	16
3040	M675	1	max	-0.757	75	-0.002	75	0.039	100	0	15	0	104	0	102	0	74
3041			min	-10.036	16	-0.312	13	-0.039	76	0	104	0	15	0	74	0	102
3042		2	max	-0.767	75	-0.001	75	0.019	100	0.142	76	2.749	13	0.286	74	6.381	13
3043			min	-10.08	16	-0.156	13	-0.019	76	-2.749	13	-0.142	76	-5.545	13	-0.33	74
3044		3	max	-0.777	75	0	72	0	15	0.189	76	3.665	13	0.382	74	8.508	13
3045			min	-10.123	16	0	104	0	69	-3.665	13	-0.189	76	-7.393	13	-0.439	74
3046		4	max	-0.787	75	0.156	15	0.019	102	0.142	76	2.749	13	0.286	74	6.381	13
3047			min	-10.167	16	0.001	105	-0.019	74	-2.749	13	-0.142	76	-5.545	13	-0.33	74
3048		5	max	-0.797	75	0.312	15	0.039	102	0	76	0	100	0	15	0	104
3049			min	-10.21	16	0.002	105	-0.039	74	0	100	0	76	0	104	0	15
3050	M676	1	max	3.996	74	0.033	72	-0.027	104	9.134	74	9.703	102	18.277	74	21.339	102
3051			min	-4.244	102	-0.033	104	-0.244	15	-9.702	102	-9.134	74	-19.414	102	-20.089	74
3052		2	max	3.991	74	0.017	72	-0.013	104	9.101	74	9.319	106	17.672	74	21.47	102
3053			min	-4.239	102	-0.017	104	-0.122	15	-9.319	106	-9.101	74	-19.534	102	-19.423	74
3054		3	max	3.986	74	0.002	73	0	107	9.083	74	9.211	106	17.455	74	21.498	102
3055			min	-4.235	102	-0.002	105	0	12	-9.211	106	-9.083	74	-19.559	102	-19.185	74
3056		4	max	3.981	74	0.014	70	0.122	13	9.079	74	9.297	106	17.627	74	21.421	102
3057			min	-4.23	102	-0.014	106	0.013	76	-9.297	106	-9.079	74	-19.489	102	-19.374	74
3058		5	max	3.976	74	0.029	70	0.244	13	9.089	74	9.658	102	18.187	74	21.24	102
3059			min	-4.225	102	-0.029	106	0.027	76	-9.658	102	-9.089	74	-19.325	102	-19.99	74
3060	M677	1	max	4.482	74	0.029	70	-0.027	77	10.246	74	10.833	102	20.502	74	23.825	102
3061			min	-4.739	102	-0.029	102	-0.244	13	-10.833	102	-10.246	74	-21.676	102	-22.535	74
3062		2	max	4.477	74	0.014	70	-0.013	77	10.526	74	10.776	106	20.523	74	24.645	102
3063			min	-4.734	102	-0.014	102	-0.122	13	-10.776	106	-10.526	74	-22.422	102	-22.557	74
3064		3	max	4.472	74	0.002	71	0	107	10.612	74	10.772	106	20.515	74	24.901	102

Envelope Member Section Stresses (Continued)

Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3065		min	-4.729	102	-0.002	103	0	12	-10.772	106	-10.612	74	-22.656	102	-22.548	74
3066	4	max	4.468	74	0.017	72	0.122	15	10.504	74	10.754	106	20.478	74	24.595	102
3067		min	-4.724	102	-0.017	100	0.013	105	-10.754	106	-10.504	74	-22.377	102	-22.508	74
3068	5	max	4.463	74	0.033	72	0.244	15	10.201	74	10.788	102	20.413	74	23.727	102
3069		min	-4.719	102	-0.033	100	0.027	105	-10.788	102	-10.201	74	-21.587	102	-22.436	74
3070	M678 1	max	-3.992	96	0.28	13	0.036	70	-3.512	96	23.243	15	46.892	15	-8.152	96
3071		min	-26.419	15	-0.001	107	-0.036	106	-23.243	15	3.512	96	7.084	96	-53.96	15
3072	2	max	-3.995	96	0.14	13	0.018	70	-3.324	96	20.992	15	51.581	15	-8.602	96
3073		min	-26.462	15	0	107	-0.018	106	-20.992	15	3.324	96	7.475	96	-59.356	15
3074	3	max	-3.999	96	0	70	0.003	15	-3.264	96	20.266	15	53.193	15	-8.756	96
3075		min	-26.505	15	0	106	0	105	-20.266	15	3.264	96	7.609	96	-61.211	15
3076	4	max	-4.002	96	0	77	0.018	72	-3.33	96	21.065	15	51.729	15	-8.616	96
3077		min	-26.549	15	-0.14	15	-0.018	104	-21.065	15	3.33	96	7.487	96	-59.526	15
3078	5	max	-4.006	96	0.001	77	0.036	72	-3.524	96	23.39	15	47.187	15	-8.18	96
3079		min	-26.592	15	-0.28	15	-0.036	104	-23.39	15	3.524	96	7.109	96	-54.299	15
3080	M679 1	max	-3.622	98	0.001	107	0.036	102	-3.186	98	19.54	13	39.421	13	-7.397	98
3081		min	-22.209	13	-0.28	13	-0.036	74	-19.54	13	3.186	98	6.428	98	-45.362	13
3082	2	max	-3.625	98	0	107	0.018	102	-3.38	98	21.864	13	34.879	13	-6.962	98
3083		min	-22.252	13	-0.14	13	-0.018	74	-21.864	13	3.38	98	6.05	98	-40.136	13
3084	3	max	-3.629	98	0	106	0.003	13	-3.446	98	22.663	13	33.414	13	-6.821	98
3085		min	-22.295	13	0	70	0	75	-22.663	13	3.446	98	5.928	98	-38.45	13
3086	4	max	-3.633	98	0.14	15	0.018	100	-3.386	98	21.937	13	35.026	13	-6.976	98
3087		min	-22.339	13	0	77	-0.018	76	-21.937	13	3.386	98	6.062	98	-40.306	13
3088	5	max	-3.636	98	0.28	15	0.036	100	-3.198	98	19.686	13	39.715	13	-7.425	98
3089		min	-22.382	13	-0.001	77	-0.036	76	-19.686	13	3.198	98	6.453	98	-45.702	13
3090	M680 1	max	-4.072	68	0.001	75	0.036	70	-3.582	68	23.243	15	46.891	15	-8.316	68
3091		min	-26.418	15	-0.28	15	-0.036	106	-23.243	15	3.582	68	7.227	68	-53.959	15
3092	2	max	-4.076	68	0	75	0.018	70	-3.776	68	25.567	15	42.349	15	-7.881	68
3093		min	-26.461	15	-0.14	15	-0.018	106	-25.567	15	3.776	68	6.849	68	-48.732	15
3094	3	max	-4.079	68	0	74	0.003	15	-3.843	68	26.366	15	40.884	15	-7.741	68
3095		min	-26.505	15	0	102	0	107	-26.366	15	3.843	68	6.727	68	-47.047	15
3096	4	max	-4.083	68	0.14	13	0.018	72	-3.782	68	25.64	15	42.497	15	-7.895	68
3097		min	-26.548	15	0	105	-0.018	104	-25.64	15	3.782	68	6.861	68	-48.902	15
3098	5	max	-4.086	68	0.28	13	0.036	72	-3.595	68	23.389	15	47.186	15	-8.345	68
3099		min	-26.591	15	-0.001	105	-0.036	104	-23.389	15	3.595	68	7.252	68	-54.298	15
3100	M681 1	max	-3.772	68	0.28	15	0.036	102	-3.319	68	18.946	13	38.223	13	-7.704	68
3101		min	-21.534	13	-0.001	105	-0.036	74	-18.946	13	3.319	68	6.695	68	-43.984	13
3102	2	max	-3.776	68	0.14	15	0.018	102	-3.131	68	16.695	13	42.912	13	-8.153	68
3103		min	-21.577	13	0	105	-0.018	74	-16.695	13	3.131	68	7.085	68	-49.38	13
3104	3	max	-3.779	68	0	72	0.003	13	-3.07	68	15.969	13	44.524	13	-8.308	68
3105		min	-21.62	13	0	104	0	77	-15.969	13	3.07	68	7.22	68	-51.235	13
3106	4	max	-3.783	68	0	75	0.018	100	-3.137	68	16.768	13	43.059	13	-8.168	68
3107		min	-21.664	13	-0.14	13	-0.018	76	-16.768	13	3.137	68	7.098	68	-49.549	13
3108	5	max	-3.786	68	0.001	75	0.036	100	-3.331	68	19.092	13	38.518	13	-7.732	68
3109		min	-21.707	13	-0.28	13	-0.036	76	-19.092	13	3.331	68	6.719	68	-44.323	13
3110	M682 1	max	-3.277	96	0.28	13	0.036	70	-2.883	96	18.59	15	37.504	15	-6.694	96
3111		min	-21.129	15	-0.001	107	-0.036	106	-18.59	15	2.883	96	5.817	96	-43.156	15
3112	2	max	-3.281	96	0.14	13	0.018	70	-2.696	96	16.339	15	42.193	15	-7.143	96
3113		min	-21.172	15	0	107	-0.018	106	-16.339	15	2.696	96	6.208	96	-48.552	15
3114	3	max	-3.285	96	0	70	0.003	15	-2.635	96	15.613	15	43.805	15	-7.298	96
3115		min	-21.215	15	0	106	0	105	-15.613	15	2.635	96	6.342	96	-50.408	15
3116	4	max	-3.288	96	0	77	0.018	72	-2.702	96	16.412	15	42.34	15	-7.158	96
3117		min	-21.259	15	-0.14	15	-0.018	104	-16.412	15	2.702	96	6.22	96	-48.722	15
3118	5	max	-3.292	96	0.001	77	0.036	72	-2.896	96	18.736	15	37.799	15	-6.722	96
3119		min	-21.302	15	-0.28	15	-0.036	104	-18.736	15	2.896	96	5.842	96	-43.496	15

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3120	M683	1	max	-3.242	98	0.001	107	0.036	102	-2.853	98	16.245	13	32.774	13	-6.622	98
3121			min	-18.464	13	-0.28	13	-0.036	74	-16.245	13	2.853	98	5.755	98	-37.714	13
3122		2	max	-3.246	98	0	107	0.018	102	-3.046	98	18.57	13	28.232	13	-6.187	98
3123			min	-18.507	13	-0.14	13	-0.018	74	-18.57	13	3.046	98	5.377	98	-32.487	13
3124		3	max	-3.25	98	0	106	0.003	13	-3.113	98	19.369	13	26.767	13	-6.046	98
3125			min	-18.55	13	0	70	0	75	-19.369	13	3.113	98	5.254	98	-30.802	13
3126		4	max	-3.253	98	0.14	15	0.018	100	-3.052	98	18.643	13	28.379	13	-6.201	98
3127			min	-18.593	13	0	77	-0.018	76	-18.643	13	3.052	98	5.389	98	-32.657	13
3128		5	max	-3.257	98	0.28	15	0.036	100	-2.865	98	16.391	13	33.069	13	-6.651	98
3129			min	-18.637	13	-0.001	77	-0.036	76	-16.391	13	2.865	98	5.779	98	-38.053	13
3130	M684	1	max	-3.495	67	0.001	75	0.036	70	-3.074	67	19.826	15	39.997	15	-7.137	67
3131			min	-22.534	15	-0.28	15	-0.036	106	-19.826	15	3.074	67	6.202	67	-46.026	15
3132		2	max	-3.498	67	0	75	0.018	70	-3.268	67	22.15	15	35.456	15	-6.702	67
3133			min	-22.577	15	-0.14	15	-0.018	106	-22.15	15	3.268	67	5.824	67	-40.8	15
3134		3	max	-3.502	67	0	74	0.003	15	-3.335	67	22.949	15	33.991	15	-6.561	67
3135			min	-22.62	15	0	102	0	107	-22.949	15	3.335	67	5.702	67	-39.114	15
3136		4	max	-3.505	67	0.14	13	0.018	72	-3.274	67	22.223	15	35.603	15	-6.716	67
3137			min	-22.664	15	0	105	-0.018	104	-22.223	15	3.274	67	5.836	67	-40.969	15
3138		5	max	-3.509	67	0.28	13	0.036	72	-3.087	67	19.972	15	40.292	15	-7.165	67
3139			min	-22.707	15	-0.001	105	-0.036	104	-19.972	15	3.087	67	6.227	67	-46.365	15
3140	M685	1	max	-3.168	66	0.28	15	0.036	102	-2.787	66	15.6	16	31.471	16	-6.47	66
3141			min	-17.73	16	-0.001	105	-0.036	74	-15.6	16	2.787	66	5.622	66	-36.215	16
3142		2	max	-3.171	66	0.14	15	0.018	102	-2.599	66	13.349	16	36.16	16	-6.919	66
3143			min	-17.773	16	0	105	-0.018	74	-13.348	16	2.599	66	6.013	66	-41.611	16
3144		3	max	-3.175	66	0	72	0.003	13	-2.539	66	12.622	16	37.773	16	-7.074	66
3145			min	-17.816	16	0	104	0	77	-12.622	16	2.539	66	6.147	66	-43.466	16
3146		4	max	-3.179	66	0	75	0.018	100	-2.606	66	13.422	16	36.308	16	-6.934	66
3147			min	-17.86	16	-0.14	13	-0.018	76	-13.422	16	2.606	66	6.025	66	-41.781	16
3148		5	max	-3.182	66	0.001	75	0.036	100	-2.799	66	15.746	16	31.766	16	-6.498	66
3149			min	-17.903	16	-0.28	13	-0.036	76	-15.746	16	2.799	66	5.647	66	-36.554	16
3150	M686	1	max	-0.065	107	0.312	13	0.039	100	-0.058	107	4.037	15	8.144	15	-0.134	107
3151			min	-4.586	15	0.002	107	-0.038	76	-4.037	15	0.058	107	0.116	107	-9.372	15
3152		2	max	-0.075	107	0.156	13	0.02	100	-0.051	107	2.102	71	13.764	15	-0.188	107
3153			min	-4.629	15	0.001	107	-0.019	76	-2.102	71	0.051	107	0.164	107	-15.838	15
3154		3	max	-0.085	107	0	13	0.003	13	-0.055	107	1.927	71	15.686	15	-0.22	107
3155			min	-4.673	15	0	106	0	75	-1.927	71	0.055	107	0.191	107	-18.051	15
3156		4	max	-0.095	107	-0.001	77	0.02	102	-0.069	107	2.099	71	13.912	15	-0.229	107
3157			min	-4.716	15	-0.156	15	-0.019	74	-2.099	71	0.069	107	0.199	107	-16.009	15
3158		5	max	-0.106	107	-0.002	77	0.039	102	-0.092	107	4.184	15	8.441	15	-0.214	107
3159			min	-4.76	15	-0.312	15	-0.038	74	-4.184	15	0.092	107	0.186	107	-9.714	15
3160	M687	1	max	0.206	107	-0.002	107	0.039	72	0.18	107	3.621	13	7.304	13	0.418	107
3161			min	-4.113	13	-0.312	13	-0.038	104	-3.621	13	-0.18	107	-0.364	107	-8.405	13
3162		2	max	0.195	107	-0.001	107	0.02	72	0.157	107	6.406	13	3.945	71	0.433	107
3163			min	-4.156	13	-0.156	13	-0.019	104	-6.406	13	-0.157	107	-0.376	107	-4.54	71
3164		3	max	0.185	107	0	106	0.003	15	0.143	107	7.359	13	3.593	71	0.503	19
3165			min	-4.199	13	0	13	0	105	-7.359	13	-0.143	107	-0.437	19	-4.134	71
3166		4	max	0.175	107	0.156	15	0.02	70	0.139	107	6.479	13	3.939	71	0.393	107
3167			min	-4.243	13	0.001	77	-0.019	106	-6.479	13	-0.139	107	-0.341	107	-4.532	71
3168		5	max	0.165	107	0.312	15	0.039	70	0.146	107	3.768	13	7.601	13	0.338	107
3169			min	-4.286	13	0.002	77	-0.038	106	-3.768	13	-0.146	107	-0.294	107	-8.746	13
3170	M688	1	max	-0.169	75	-0.002	75	0.039	100	-0.149	75	4.742	16	9.567	16	-0.347	75
3171			min	-5.388	16	-0.312	15	-0.038	76	-4.742	16	0.149	75	0.301	75	-11.009	16
3172		2	max	-0.179	75	-0.001	75	0.02	100	-0.173	75	7.528	16	4.495	100	-0.161	76
3173			min	-5.431	16	-0.156	15	-0.019	76	-7.528	16	0.173	75	0.14	76	-5.173	100
3174		3	max	-0.189	75	0	74	0.003	13	-0.186	75	8.481	16	4.508	100	0.251	76

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3175			min	-5.474	16	0	102	0	77	-8.481	16	0.186	75	-0.218	76	-5.188	100
3176		4	max	-0.2	75	0.156	13	0.02	102	-0.19	75	7.601	16	4.513	100	-0.173	76
3177			min	-5.518	16	0.001	105	-0.019	74	-7.601	16	0.19	75	0.15	76	-5.194	100
3178		5	max	-0.21	75	0.312	13	0.039	102	-0.184	75	4.889	16	9.864	16	-0.427	75
3179			min	-5.561	16	0.002	105	-0.038	74	-4.889	16	0.184	75	0.371	75	-11.35	16
3180	M689	1	max	0.342	75	0.312	15	0.039	72	0.3	75	2.775	16	5.599	16	0.696	75
3181			min	-3.152	16	0.002	75	-0.038	104	-2.775	16	-0.3	75	-0.605	75	-6.443	16
3182		2	max	0.332	75	0.156	15	0.02	72	0.306	75	1.743	103	11.219	16	0.642	75
3183			min	-3.195	16	0.001	75	-0.019	104	-1.743	103	-0.306	75	-0.558	75	-12.909	16
3184		3	max	0.321	75	0	102	0.003	15	1.01	18	1.729	102	13.141	16	0.61	75
3185			min	-3.239	16	0	74	0	107	-1.729	102	-1.01	18	-0.53	75	-15.122	16
3186		4	max	0.311	75	-0.001	105	0.02	70	0.291	74	1.74	103	11.367	16	0.602	75
3187			min	-3.282	16	-0.156	13	-0.019	106	-1.74	103	-0.291	74	-0.523	75	-13.08	16
3188		5	max	0.301	75	-0.002	105	0.039	70	0.265	75	2.923	16	5.896	16	0.616	75
3189			min	-3.325	16	-0.312	13	-0.038	106	-2.923	16	-0.265	75	-0.535	75	-6.785	16
3190	M690	1	max	0.594	102	2.638	15	0.963	71	0.811	102	0.659	104	0	107	0	107
3191			min	-0.483	104	0.602	99	-0.963	103	-0.659	104	-0.811	102	0	12	0	12
3192		2	max	0.599	102	2.557	15	0.956	71	5.871	15	-0.898	96	14.411	71	14.41	103
3193			min	-0.488	104	0.59	99	-0.956	103	0.898	96	-5.871	15	-14.41	103	-14.411	71
3194		3	max	1.8	102	2.476	15	0.949	71	11.957	102	-2.139	96	28.718	71	28.716	103
3195			min	-1.688	104	-2.203	41	-0.949	103	2.139	96	-11.957	102	-28.716	103	-28.718	71
3196		4	max	1.804	102	-0.59	99	0.956	103	7.233	102	-0.498	104	14.411	71	14.41	103
3197			min	-1.693	104	-2.557	15	-0.956	71	0.498	104	-7.233	102	-14.41	103	-14.411	71
3198		5	max	1.809	102	-0.602	99	0.963	103	2.471	102	2.319	104	0	107	0	107
3199			min	-1.698	104	-2.638	15	-0.963	71	-2.319	104	-2.471	102	0	12	0	12
3200	M691	1	max	0.31	102	2.555	15	0.935	71	0.423	102	0.342	104	0	107	0	107
3201			min	-0.251	104	0.583	97	-0.935	103	-0.342	104	-0.423	102	0	12	0	12
3202		2	max	0.315	102	2.473	15	0.928	71	5.44	15	-0.953	96	13.979	71	13.982	103
3203			min	-0.256	104	0.57	97	-0.928	103	0.953	96	-5.44	15	-13.982	103	-13.979	71
3204		3	max	1.476	102	2.392	15	0.921	71	11.185	102	-2.154	96	27.853	71	27.86	103
3205			min	-1.416	104	-2.128	100	-0.921	103	2.154	96	-11.185	102	-27.86	103	-27.853	71
3206		4	max	1.48	102	-0.57	97	0.928	103	6.626	102	-0.647	96	13.979	71	13.982	103
3207			min	-1.421	104	-2.473	15	-0.928	71	0.647	96	-6.626	102	-13.982	103	-13.979	71
3208		5	max	1.485	102	-0.583	97	0.935	103	2.028	102	1.947	104	0	107	0	107
3209			min	-1.426	104	-2.555	15	-0.935	71	-1.947	104	-2.028	102	0	12	0	12
3210	M692	1	max	0.142	102	0.327	103	-0.059	66	0.709	75	6.832	16	13.782	14	1.645	47
3211			min	-0.142	100	-0.327	101	-1.026	15	-6.832	16	-0.709	75	-1.43	47	-15.86	14
3212		2	max	0.14	102	0.322	103	-0.055	66	0.413	75	3.963	16	7.996	14	0.958	77
3213			min	-0.14	100	-0.322	101	-0.981	15	-3.963	16	-0.413	75	-0.833	77	-9.201	14
3214		3	max	0.138	102	0.317	103	-0.052	66	0.121	75	1.225	16	2.472	14	0.281	77
3215			min	-0.138	100	-0.317	101	-0.936	15	-1.225	16	-0.121	75	-0.244	77	-2.844	14
3216		4	max	0.002	76	0.007	95	-0.003	74	0.004	67	0.065	16	0.131	14	0.01	69
3217			min	-0.002	70	-0.007	67	-0.045	13	-0.065	16	-0.004	67	-0.008	69	-0.151	14
3218		5	max	0	107	0	100	0	70	0	107	0	107	0	107	0	107
3219			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
3220	M693	1	max	0.237	102	0.545	77	-0.09	66	1.188	45	10.955	16	22.101	14	2.759	77
3221			min	-0.237	100	-0.545	45	-1.628	15	-10.955	16	-1.188	45	-2.398	77	-25.432	14
3222		2	max	0.234	102	0.54	77	-0.086	66	0.693	75	6.369	16	12.849	14	1.608	77
3223			min	-0.234	100	-0.54	45	-1.583	15	-6.369	16	-0.693	75	-1.397	77	-14.785	14
3224		3	max	0.232	102	0.536	77	-0.083	66	0.201	75	1.912	16	3.858	14	0.466	47
3225			min	-0.232	100	-0.536	45	-1.538	15	-1.912	16	-0.201	75	-0.405	47	-4.44	14
3226		4	max	0.002	106	0.007	69	-0.003	47	0.004	97	0.065	16	0.131	14	0.01	69
3227			min	-0.002	70	-0.007	93	-0.045	16	-0.065	16	-0.004	97	-0.008	69	-0.151	14
3228		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
3229			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3230	M694	1	max	0.174	34	0.316	107	-0.084	66	0.549	45	5.698	16	11.496	14	1.276	107
3231			min	-0.174	96	-0.316	45	-1.067	15	-5.698	16	-0.549	45	-1.109	107	-13.228	14
3232		2	max	0.174	34	0.313	107	-0.081	66	0.331	105	3.418	16	6.895	14	0.769	47
3233			min	-0.174	96	-0.313	45	-1.033	15	-3.418	16	-0.331	105	-0.668	47	-7.934	14
3234		3	max	0.174	34	0.309	107	-0.078	66	0.115	105	1.212	16	2.445	14	0.268	77
3235			min	-0.174	96	-0.309	45	-0.999	15	-1.212	16	-0.115	105	-0.233	77	-2.814	14
3236		4	max	0.002	102	0.005	95	-0.002	105	0.002	37	0.038	16	0.076	14	0.006	99
3237			min	-0.002	70	-0.005	33	-0.034	15	-0.038	16	-0.002	37	-0.005	99	-0.087	14
3238		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
3239			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
3240	M695	1	max	0.096	68	0.18	103	-0.051	66	0.31	75	3.409	16	6.877	14	0.72	107
3241			min	-0.096	92	-0.18	45	-0.65	15	-3.409	16	-0.31	75	-0.626	107	-7.914	14
3242		2	max	0.096	68	0.177	103	-0.049	66	0.187	75	2.034	16	4.104	14	0.433	107
3243			min	-0.096	92	-0.177	45	-0.615	15	-2.034	16	-0.187	75	-0.377	107	-4.722	14
3244		3	max	0.096	68	0.173	103	-0.046	66	0.065	75	0.736	16	1.484	14	0.152	47
3245			min	-0.096	92	-0.173	45	-0.58	15	-0.736	16	-0.065	75	-0.132	47	-1.708	14
3246		4	max	0.002	72	0.005	99	-0.002	74	0.002	67	0.038	16	0.077	14	0.006	99
3247			min	-0.002	104	-0.005	33	-0.035	14	-0.038	16	-0.002	67	-0.005	99	-0.089	14
3248		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
3249			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
3250	M696	1	max	0.249	72	0.575	73	-0.094	66	1.254	45	11.511	16	23.223	14	2.911	77
3251			min	-0.249	100	-0.575	45	-1.709	15	-11.511	16	-1.254	45	-2.53	77	-26.724	14
3252		2	max	0.247	72	0.57	73	-0.091	66	0.731	45	6.693	16	13.503	14	1.696	77
3253			min	-0.247	100	-0.57	45	-1.664	15	-6.693	16	-0.731	45	-1.474	77	-15.538	14
3254		3	max	0.245	72	0.565	73	-0.087	66	0.212	45	2.005	16	4.045	14	0.492	77
3255			min	-0.245	100	-0.565	45	-1.619	15	-2.005	16	-0.212	45	-0.427	77	-4.655	14
3256		4	max	0.002	106	0.007	39	-0.003	107	0.004	97	0.065	16	0.131	14	0.01	69
3257			min	-0.002	70	-0.007	93	-0.045	15	-0.065	16	-0.004	97	-0.008	69	-0.151	14
3258		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
3259			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
3260	M697	1	max	0.096	34	0.18	43	-0.051	66	0.31	45	3.398	16	6.855	14	0.72	47
3261			min	-0.096	32	-0.18	45	-0.647	15	-3.398	16	-0.31	45	-0.626	47	-7.888	14
3262		2	max	0.096	34	0.177	43	-0.048	66	0.187	75	2.028	16	4.091	14	0.433	47
3263			min	-0.096	32	-0.177	45	-0.613	15	-2.028	16	-0.187	75	-0.377	47	-4.708	14
3264		3	max	0.096	34	0.173	43	-0.046	66	0.065	75	0.733	16	1.479	14	0.152	47
3265			min	-0.096	32	-0.173	45	-0.579	15	-0.733	16	-0.065	75	-0.132	47	-1.701	14
3266		4	max	0.002	76	0.005	65	-0.002	74	0.002	67	0.038	16	0.076	14	0.006	39
3267			min	-0.002	70	-0.005	33	-0.034	14	-0.038	16	-0.002	67	-0.005	39	-0.087	14
3268		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
3269			min	0	12	0	102	0	12	0	12	0	12	0	12	0	12
3270	M701	1	max	0.181	106	0.416	47	-0.072	66	0.905	75	8.527	16	17.202	14	2.101	47
3271			min	-0.181	74	-0.416	71	-1.273	15	-8.527	16	-0.905	75	-1.826	47	-19.795	14
3272		2	max	0.178	106	0.411	47	-0.068	66	0.527	75	4.952	16	9.991	14	1.224	107
3273			min	-0.178	74	-0.411	71	-1.228	15	-4.952	16	-0.527	75	-1.064	107	-11.497	14
3274		3	max	0.176	106	0.407	47	-0.064	66	0.154	75	1.508	16	3.042	14	0.357	107
3275			min	-0.176	74	-0.407	71	-1.183	15	-1.508	16	-0.154	75	-0.31	107	-3.5	14
3276		4	max	0.002	102	0.007	39	-0.003	75	0.004	97	0.065	16	0.131	14	0.01	99
3277			min	-0.002	70	-0.007	67	-0.045	14	-0.065	16	-0.004	97	-0.008	99	-0.151	14
3278		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
3279			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
3280	M702	1	max	0.126	94	0.233	47	-0.064	66	0.404	105	4.299	16	8.674	14	0.938	77
3281			min	-0.126	36	-0.233	75	-0.812	15	-4.299	16	-0.404	105	-0.815	77	-9.981	14
3282		2	max	0.126	94	0.23	47	-0.061	66	0.243	45	2.572	16	5.19	14	0.565	77
3283			min	-0.126	36	-0.23	75	-0.778	15	-2.572	16	-0.243	45	-0.491	77	-5.972	14
3284		3	max	0.126	94	0.226	47	-0.059	66	0.085	45	0.921	16	1.857	14	0.197	77

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3285			min	-0.126	36	-0.226	75	-0.743	15	-0.921	16	-0.085	45	-0.171	77	-2.137	14
3286		4	max	0.002	72	0.005	99	-0.002	107	0.002	67	0.038	16	0.076	14	0.006	69
3287			min	-0.002	104	-0.005	63	-0.034	15	-0.038	16	-0.002	67	-0.005	69	-0.087	14
3288		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
3289			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
3290	M703	1	max	0.126	68	0.233	77	-0.065	66	0.404	105	4.31	16	8.696	14	0.938	77
3291			min	-0.126	92	-0.233	101	-0.814	15	-4.31	16	-0.404	105	-0.815	77	-10.006	14
3292		2	max	0.126	68	0.23	77	-0.062	66	0.243	105	2.579	16	5.202	14	0.565	47
3293			min	-0.126	92	-0.23	101	-0.78	15	-2.579	16	-0.243	105	-0.491	47	-5.986	14
3294		3	max	0.126	68	0.226	77	-0.059	66	0.085	105	0.923	16	1.863	14	0.197	47
3295			min	-0.126	92	-0.226	101	-0.745	15	-0.923	16	-0.085	105	-0.171	47	-2.144	14
3296		4	max	0.002	72	0.005	65	-0.002	105	0.002	97	0.038	16	0.077	14	0.006	39
3297			min	-0.002	40	-0.005	33	-0.035	15	-0.038	16	-0.002	97	-0.005	39	-0.089	14
3298		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
3299			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
3300	M704	1	max	0.174	94	0.316	73	-0.084	66	0.549	75	5.709	16	11.518	14	1.276	47
3301			min	-0.174	66	-0.316	105	-1.07	15	-5.709	16	-0.549	75	-1.109	47	-13.254	14
3302		2	max	0.174	94	0.313	73	-0.082	66	0.331	75	3.424	16	6.907	14	0.769	47
3303			min	-0.174	66	-0.313	105	-1.035	15	-3.424	16	-0.331	75	-0.668	47	-7.948	14
3304		3	max	0.174	94	0.309	73	-0.079	66	0.115	45	1.215	16	2.451	14	0.268	47
3305			min	-0.174	66	-0.309	105	-1	15	-1.215	16	-0.115	45	-0.233	47	-2.82	14
3306		4	max	0.002	72	0.005	35	-0.002	45	0.002	97	0.038	16	0.077	14	0.006	99
3307			min	-0.002	40	-0.005	63	-0.035	16	-0.038	16	-0.002	97	-0.005	99	-0.089	14
3308		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
3309			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
3310	M705	1	max	0.167	64	0.304	43	-0.081	66	0.529	75	5.511	16	11.118	14	1.227	107
3311			min	-0.167	96	-0.304	75	-1.033	15	-5.511	16	-0.529	75	-1.067	107	-12.794	14
3312		2	max	0.167	64	0.301	43	-0.078	66	0.319	45	3.305	16	6.667	14	0.74	107
3313			min	-0.167	96	-0.301	75	-0.999	15	-3.305	16	-0.319	45	-0.643	107	-7.672	14
3314		3	max	0.167	64	0.297	43	-0.076	66	0.111	45	1.173	16	2.367	14	0.258	107
3315			min	-0.167	96	-0.297	75	-0.965	15	-1.173	16	-0.111	45	-0.224	107	-2.723	14
3316		4	max	0.002	46	0.005	99	-0.002	107	0.002	97	0.038	16	0.076	14	0.006	69
3317			min	-0.002	44	-0.005	33	-0.034	16	-0.038	16	-0.002	97	-0.005	69	-0.087	14
3318		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
3319			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
3320	M706	1	max	0.167	68	0.304	73	-0.082	66	0.529	45	5.522	16	11.14	14	1.227	107
3321			min	-0.167	62	-0.304	41	-1.036	15	-5.522	16	-0.529	45	-1.067	107	-12.82	14
3322		2	max	0.167	68	0.301	73	-0.079	66	0.319	45	3.311	16	6.679	14	0.74	47
3323			min	-0.167	62	-0.301	41	-1.001	15	-3.311	16	-0.319	45	-0.643	47	-7.686	14
3324		3	max	0.167	68	0.297	73	-0.076	66	0.111	75	1.176	16	2.372	14	0.258	47
3325			min	-0.167	62	-0.297	41	-0.966	15	-1.176	16	-0.111	75	-0.224	47	-2.73	14
3326		4	max	0.002	46	0.005	65	-0.002	45	0.002	97	0.038	16	0.077	14	0.006	99
3327			min	-0.002	44	-0.005	63	-0.035	15	-0.038	16	-0.002	97	-0.005	99	-0.089	14
3328		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
3329			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
3330	M460	1	max	2.232	15	1.942	100	2.59	103	0	107	0	107	0	107	0	107
3331			min	-0.46	104	-1.93	72	-2.556	71	0	12	0	12	0	12	0	12
3332		2	max	2.2	15	1.908	100	0.345	71	2.961	100	2.951	72	18.192	103	17.962	71
3333			min	-0.456	104	-1.908	72	-0.352	103	-2.951	72	-2.961	100	-17.962	71	-18.192	103
3334		3	max	2.178	15	1.886	100	0.354	71	5.873	100	5.865	72	13.061	103	12.928	71
3335			min	-0.461	104	-1.887	72	-0.361	103	-5.865	72	-5.873	100	-12.928	71	-13.061	103
3336		4	max	2.07	15	1.473	70	0.744	71	3.253	100	3.21	72	6.117	103	6.073	71
3337			min	0.073	104	-1.716	102	-0.75	103	-3.21	72	-3.253	100	-6.073	71	-6.117	103
3338		5	max	0	107	0	100	0	13	0	107	0	107	0	107	0	107
3339			min	0	12	0	72	0	107	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3340	M471	1	max	2.554	13	4.179	102	2.698	71	0	107	0	107	0	107	0	107
3341			min	-0.385	106	-4.184	70	-2.674	103	0	12	0	12	0	12	0	12
3342		2	max	2.491	13	1.118	102	0.377	103	4.305	102	4.412	70	18.854	71	18.677	103
3343			min	-0.404	106	-1.269	70	-0.381	71	-4.412	70	-4.305	102	-18.677	103	-18.854	71
3344		3	max	2.47	13	1.096	102	0.39	103	6.005	102	6.339	70	13.259	71	13.152	103
3345			min	-0.408	106	-1.242	70	-0.395	71	-6.339	70	-6.005	102	-13.152	103	-13.259	71
3346		4	max	2.32	13	1.317	76	0.732	103	2.835	102	2.98	70	6.006	71	5.97	103
3347			min	0.116	106	-1.679	100	-0.737	71	-2.98	70	-2.835	102	-5.97	103	-6.006	71
3348		5	max	0	107	0	102	0	107	0	107	0	107	0	107	0	107
3349			min	0	12	0	70	0	14	0	12	0	12	0	12	0	12
3350	M473	1	max	2.796	13	3.877	102	0.028	13	0	107	0	107	0	107	0	107
3351			min	-0.209	76	-3.832	70	0	76	0	12	0	12	0	12	0	12
3352		2	max	2.733	13	1.032	106	0.027	75	3.986	102	4.109	70	0.27	14	0.147	107
3353			min	-0.238	76	-1.258	70	-0.028	103	-4.109	70	-3.986	102	-0.147	107	-0.27	14
3354		3	max	2.711	13	1.011	106	0.018	75	5.547	102	6.019	70	0.535	71	0.483	107
3355			min	-0.242	76	-1.231	70	-0.02	103	-6.019	70	-5.547	102	-0.483	107	-0.535	71
3356		4	max	2.513	13	1.231	76	0.051	107	2.632	102	2.853	70	0.436	71	0.411	107
3357			min	0.16	68	-1.639	100	-0.053	71	-2.853	70	-2.632	102	-0.411	107	-0.436	71
3358		5	max	0	107	0	102	0	15	0	107	0	107	0	107	0	107
3359			min	0	12	0	70	0	76	0	12	0	12	0	12	0	12
3360	M507	1	max	2.074	15	1.85	100	0.001	74	0	107	0	107	0	107	0	107
3361			min	-0.334	74	-1.805	72	-0.017	15	0	12	0	12	0	12	0	12
3362		2	max	2.044	15	1.813	100	0.031	103	2.819	100	2.744	72	0.176	107	0.204	71
3363			min	-0.343	74	-1.762	72	-0.029	75	-2.744	72	-2.819	100	-0.204	71	-0.176	107
3364		3	max	2.022	15	1.792	100	0.022	103	5.587	100	5.433	72	0.545	107	0.557	71
3365			min	-0.347	74	-1.74	72	-0.02	75	-5.433	72	-5.587	100	-0.557	71	-0.545	107
3366		4	max	1.962	15	1.44	70	0.059	71	3.099	100	2.979	72	0.466	103	0.467	71
3367			min	0.128	66	-1.606	102	-0.057	107	-2.979	72	-3.099	100	-0.467	71	-0.466	103
3368		5	max	0	107	0	100	0	68	0	107	0	107	0	107	0	107
3369			min	0	12	0	72	0	13	0	12	0	12	0	12	0	12
3370	M508	1	max	0.455	72	0.023	75	-0.016	76	1.031	72	0.47	104	2.129	72	1.067	104
3371			min	-0.207	104	-0.023	103	-0.192	14	-0.47	104	-1.031	72	-0.971	104	-2.34	72
3372		2	max	0.46	72	0.011	75	-0.008	76	1.48	15	0.422	104	1.946	72	1.226	104
3373			min	-0.212	104	-0.011	103	-0.096	14	-0.422	104	-1.48	15	-1.116	104	-2.139	72
3374		3	max	0.465	72	0.002	76	0	107	1.722	15	0.413	104	1.9	72	1.296	104
3375			min	-0.217	104	-0.002	74	0	12	-0.413	104	-1.722	15	-1.179	104	-2.088	72
3376		4	max	0.47	72	0.011	77	0.096	15	1.48	15	0.444	104	1.991	72	1.277	104
3377			min	-0.222	104	-0.011	101	0.008	104	-0.444	104	-1.48	15	-1.162	104	-2.189	72
3378		5	max	0.475	72	0.023	77	0.192	15	1.076	72	0.515	104	2.221	72	1.168	104
3379			min	-0.227	104	-0.023	101	0.016	104	-0.515	104	-1.076	72	-1.062	104	-2.441	72
3380	M509	1	max	2.72	102	0.128	70	0.081	102	2.041	102	5.166	74	0	107	0	107
3381			min	-2.546	74	-0.123	106	-0.064	74	-1.911	74	-5.519	102	0	12	0	12
3382		2	max	1.44	76	0.092	103	0.038	104	-0.489	75	8.702	16	4.204	72	3.548	104
3383			min	-13.944	13	0.009	67	-0.053	72	-3.219	16	1.322	75	-3.548	104	-4.204	72
3384		3	max	0.787	76	0.022	69	0.042	103	0.079	66	2.743	102	1.42	76	2.378	100
3385			min	-16.835	13	-0.144	13	-0.026	94	-1.015	102	-0.214	66	-2.378	100	-1.42	76
3386		4	max	0.582	76	-0.003	98	0.044	72	-0.448	98	8.068	13	3.695	72	2.947	104
3387			min	-13.961	13	-0.071	71	-0.02	104	-2.984	13	1.212	98	-2.947	104	-3.695	72
3388		5	max	5.54	71	0.2	75	0.059	70	4.157	71	10.871	107	0	107	0	107
3389			min	-5.358	107	-0.207	103	-0.053	106	-4.021	107	-11.239	71	0	12	0	12
3390	M510	1	max	0.067	75	0.034	72	0.031	64	0.05	75	0.158	103	0	107	0	107
3391			min	-0.078	103	-0.045	17	-0.029	96	-0.059	103	-0.135	75	0	12	0	12
3392		2	max	1.235	74	0.073	102	0.081	70	-0.277	74	6.402	15	5.261	102	4.832	74
3393			min	-12.788	15	-0.005	66	-0.079	106	-2.368	15	0.75	74	-4.832	74	-5.261	102
3394		3	max	0.939	74	0.162	16	0.026	94	0.289	76	2.581	100	1.588	76	2.873	100

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3395			min	-15.421	15	-0.169	15	-0.052	16	-0.954	100	-0.781	76	-2.873	100	-1.588	76
3396		4	max	0.166	75	0.012	104	0.072	106	-0.253	104	7.174	15	4.56	106	4.85	70
3397			min	-12.82	15	-0.087	72	-0.087	70	-2.654	15	0.683	104	-4.85	70	-4.56	106
3398		5	max	5.176	71	0.19	75	0.014	96	3.884	71	10.658	103	0	107	0	107
3399			min	-5.253	103	-0.2	103	-0.06	15	-3.942	103	-10.502	71	0	12	0	12
3400	M511	1	max	0.101	96	0.033	106	-0.028	76	0.23	96	1.674	15	0.474	96	3.799	15
3401			min	-0.738	15	-0.033	70	-0.346	13	-1.674	15	-0.23	96	-3.456	15	-0.521	96
3402		2	max	0.101	96	0.016	106	-0.014	76	0.799	17	0.555	64	0.016	96	9.141	15
3403			min	-0.738	15	-0.016	70	-0.173	13	-0.555	64	-0.799	17	-8.316	15	-0.018	96
3404		3	max	0.101	96	0.002	107	0	107	1.559	17	0.457	64	-0.136	96	10.922	15
3405			min	-0.738	15	-0.002	71	0	12	-0.457	64	-1.559	17	-9.936	15	0.15	96
3406		4	max	0.101	96	0.018	104	0.173	15	0.799	17	0.555	64	0.016	96	9.141	15
3407			min	-0.738	15	-0.018	72	0.014	104	-0.555	64	-0.799	17	-8.316	15	-0.018	96
3408		5	max	0.101	96	0.035	104	0.346	15	0.23	96	1.674	15	0.474	96	3.799	15
3409			min	-0.738	15	-0.035	72	0.028	104	-1.674	15	-0.23	96	-3.456	15	-0.521	96
3410	M512	1	max	0.742	74	0.033	106	-0.028	76	1.682	74	2.219	72	3.472	74	5.036	72
3411			min	-0.979	72	-0.033	70	-0.346	13	-2.219	72	-1.682	74	-4.582	72	-3.817	74
3412		2	max	0.747	74	0.016	106	-0.014	76	1.655	74	1.719	76	2.62	74	8.508	15
3413			min	-0.984	72	-0.016	70	-0.173	13	-1.719	76	-1.655	74	-7.74	15	-2.88	74
3414		3	max	0.752	74	0.002	107	0	107	1.896	17	1.589	76	2.352	74	10.289	15
3415			min	-0.989	72	-0.002	71	0	12	-1.589	76	-1.896	17	-9.36	15	-2.585	74
3416		4	max	0.757	74	0.018	104	0.173	15	1.677	74	1.741	76	2.666	74	8.508	15
3417			min	-0.994	72	-0.018	72	0.014	104	-1.741	76	-1.677	74	-7.74	15	-2.931	74
3418		5	max	0.762	74	0.035	104	0.346	15	1.726	74	2.264	72	3.564	74	5.137	72
3419			min	-0.999	72	-0.035	72	0.028	104	-2.264	72	-1.726	74	-4.673	72	-3.917	74
3420	M513	1	max	3.455	104	0.029	72	-0.027	75	7.899	104	8.41	72	15.805	104	18.496	72
3421			min	-3.679	72	-0.029	104	-0.244	13	-8.41	72	-7.899	104	-16.828	72	-17.372	104
3422		2	max	3.46	104	0.014	72	-0.013	75	7.888	104	8.077	76	15.244	104	18.677	72
3423			min	-3.684	72	-0.014	104	-0.122	13	-8.077	76	-7.888	104	-16.993	72	-16.756	104
3424		3	max	3.465	104	0.002	73	0	107	7.892	104	7.991	76	15.072	104	18.754	72
3425			min	-3.689	72	-0.002	105	0	12	-7.991	76	-7.892	104	-17.062	72	-16.567	104
3426		4	max	3.47	104	0.017	70	0.122	15	7.911	104	8.1	76	15.289	104	18.726	72
3427			min	-3.694	72	-0.017	106	0.013	107	-8.1	76	-7.911	104	-17.037	72	-16.805	104
3428		5	max	3.475	104	0.033	70	0.244	15	7.943	104	8.455	72	15.895	104	18.595	72
3429			min	-3.699	72	-0.033	106	0.027	107	-8.455	72	-7.943	104	-16.918	72	-17.47	104
3430	M514	1	max	8.226	15	-0.023	66	0.028	74	6.172	15	-2.516	66	0	107	0	107
3431			min	1.24	66	-0.258	15	-0.039	102	0.931	66	-16.688	15	0	12	0	12
3432		2	max	17.197	15	0.022	66	0.016	74	2.508	15	-0.316	66	0.758	104	0.895	72
3433			min	0.393	66	-0.075	102	-0.025	102	0.117	66	-6.781	15	-0.895	72	-0.758	104
3434		3	max	18.6	15	0.136	13	0.055	101	1.099	15	0.075	66	4.343	13	0.602	76
3435			min	0.192	66	-0.018	74	-0.106	15	-0.028	66	-2.97	15	-0.602	76	-4.343	13
3436		4	max	16.875	15	0.054	72	0.028	102	1.985	15	-0.155	66	0.648	104	0.785	72
3437			min	0.408	66	-0.035	17	-0.018	74	0.057	66	-5.368	15	-0.785	72	-0.648	104
3438		5	max	7.674	15	0.242	15	0.041	102	5.758	15	-1.483	75	0	107	0	107
3439			min	0.731	75	0.021	66	-0.027	74	0.548	75	-15.568	15	0	12	0	12
3440	M515	1	max	7.115	13	0.023	68	0.036	74	5.339	13	0.248	76	0	107	0	107
3441			min	-0.122	76	-0.218	100	-0.043	102	-0.092	76	-14.435	13	0	12	0	12
3442		2	max	15.683	13	0.048	19	0.024	70	1.76	13	-0.48	68	0.535	74	0.868	102
3443			min	-0.393	76	-0.036	100	-0.024	102	0.177	68	-4.759	13	-0.868	102	-0.535	74
3444		3	max	16.913	13	0.034	72	0.109	15	0.698	100	0.165	68	4.353	13	0.621	76
3445			min	-0.672	76	-0.149	15	-0.047	102	-0.061	68	-1.886	100	-0.621	76	-4.353	13
3446		4	max	15.672	13	0.035	70	0.026	72	1.786	13	-0.443	68	0.449	74	0.867	15
3447			min	-0.497	76	-0.047	19	-0.027	100	0.164	68	-4.828	13	-0.867	15	-0.449	74
3448		5	max	7.063	13	0.227	100	0.044	72	5.3	13	0.924	76	0	107	0	107
3449			min	-0.455	76	-0.031	76	-0.035	104	-0.342	76	-14.329	13	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3450	M516	1	max	0.204	104	0.883	71	-0.381	67	1.807	71	0.374	107	0.644	75	3.927	103
3451			min	-0.278	72	-0.875	103	-1.457	15	-0.374	107	-1.807	71	-3.573	103	-0.708	75
3452		2	max	0.2	104	0.873	71	-0.373	67	9.983	71	1.799	107	3.655	75	22.374	103
3453			min	-0.273	72	-0.865	103	-1.369	15	-1.799	107	-9.983	71	-20.354	103	-4.017	75
3454		3	max	0.15	98	0.155	71	-0.056	96	14.155	71	2.534	107	5.196	75	31.788	103
3455			min	-0.206	62	-0.155	103	-0.183	15	-2.534	107	-14.155	71	-28.918	103	-5.712	75
3456		4	max	0.514	106	0.977	103	1.502	15	11.264	71	2.029	107	4.132	75	25.276	103
3457			min	-0.586	70	-0.986	71	0.414	96	-2.029	107	-11.264	71	-22.994	103	-4.542	75
3458		5	max	0.518	106	0.987	103	1.59	15	2.04	71	0.416	107	0.731	75	4.455	103
3459			min	-0.591	70	-0.996	71	0.422	96	-0.416	107	-2.04	71	-4.053	103	-0.803	75
3460	M517	1	max	0.616	100	0.843	71	-0.362	67	1.747	71	0.299	107	0.608	75	3.953	103
3461			min	-0.613	72	-0.842	103	-1.411	13	-0.299	107	-1.747	71	-3.597	103	-0.668	75
3462		2	max	0.612	100	0.833	71	-0.354	67	9.62	71	1.636	107	3.374	75	21.813	103
3463			min	-0.609	72	-0.832	103	-1.323	13	-1.636	107	-9.62	71	-19.843	103	-3.709	75
3464		3	max	0.338	100	0.147	71	-0.053	96	13.633	71	2.321	107	4.786	75	30.911	103
3465			min	-0.339	72	-0.147	103	-0.177	15	-2.321	107	-13.633	71	-28.12	103	-5.26	75
3466		4	max	0.102	106	0.939	103	1.452	16	10.848	71	1.844	107	3.805	75	24.599	103
3467			min	-0.1	74	-0.94	71	0.394	67	-1.844	107	-10.848	71	-22.378	103	-4.183	75
3468		5	max	0.107	106	0.949	103	1.54	16	1.971	71	0.337	107	0.686	75	4.46	103
3469			min	-0.104	74	-0.95	71	0.402	67	-0.337	107	-1.971	71	-4.057	103	-0.754	75
3470	M518	1	max	0.399	57	4.419	70	0.784	71	13.625	106	15.008	70	0.285	77	0.338	75
3471			min	-0.564	100	-3.726	76	-0.729	77	-15.008	70	-13.625	106	-0.338	75	-0.285	77
3472		2	max	0.401	72	4.403	70	0.778	71	7.036	102	7.148	70	9.492	71	8.843	77
3473			min	-0.568	100	-3.736	76	-0.723	77	-7.148	70	-7.036	102	-8.843	77	-9.492	71
3474		3	max	0.49	72	4.14	70	0.133	71	0.631	100	0.048	68	14.123	71	13.089	77
3475			min	-0.657	100	-3.895	76	-0.126	103	-0.048	68	-0.631	100	-13.089	77	-14.123	71
3476		4	max	0.606	72	3.806	74	0.817	77	7.577	100	6.984	76	11.125	71	10.276	77
3477			min	-0.772	100	-4.283	72	-0.886	71	-6.984	76	-7.577	100	-10.276	77	-11.125	71
3478		5	max	0.61	72	3.797	74	0.823	77	14.202	100	14.573	72	0.113	101	0.108	103
3479			min	-0.777	100	-4.299	72	-0.892	71	-14.573	72	-14.202	100	-0.108	103	-0.113	101
3480	M707	1	max	0.41	57	4.217	100	0.15	71	12.506	106	14.31	70	0.231	101	0.233	103
3481			min	-0.546	86	-3.403	76	-0.128	77	-14.31	70	-12.506	106	-0.233	103	-0.231	101
3482		2	max	0.41	57	4.201	100	0.144	71	6.455	102	6.811	70	2.018	71	1.777	77
3483			min	-0.549	100	-3.412	76	-0.123	77	-6.811	70	-6.455	102	-1.777	77	-2.018	71
3484		3	max	0.473	72	3.937	70	0.023	71	0.632	100	0.047	68	2.869	71	2.5	77
3485			min	-0.621	100	-3.571	76	-0.021	103	-0.047	68	-0.632	100	-2.5	77	-2.869	71
3486		4	max	0.585	72	3.567	104	0.138	77	7.229	100	6.413	76	2.301	71	2.029	107
3487			min	-0.732	100	-3.941	72	-0.162	71	-6.413	76	-7.229	100	-2.029	107	-2.301	71
3488		5	max	0.589	72	3.558	104	0.144	77	13.498	100	13.355	72	0.278	101	0.269	103
3489			min	-0.736	100	-3.956	72	-0.168	71	-13.355	72	-13.498	100	-0.269	103	-0.278	101
3490	M708	1	max	0.361	13	0.858	71	-0.363	67	1.905	71	0.326	107	0.4	75	3.955	103
3491			min	-0.217	76	-0.843	103	-1.419	15	-0.326	107	-1.905	71	-3.598	103	-0.439	75
3492		2	max	0.361	13	0.848	71	-0.355	67	9.85	71	1.649	107	3.279	75	21.815	103
3493			min	-0.213	76	-0.832	103	-1.331	15	-1.649	107	-9.85	71	-19.846	103	-3.605	75
3494		3	max	0.353	15	0.148	71	-0.053	96	13.895	71	2.329	107	4.739	75	30.914	103
3495			min	-0.066	77	-0.147	103	-0.177	15	-2.329	107	-13.895	71	-28.123	103	-5.21	75
3496		4	max	0.552	102	0.939	103	1.46	15	11.081	71	1.857	107	3.714	75	24.602	103
3497			min	-0.416	74	-0.955	71	0.394	66	-1.857	107	-11.081	71	-22.381	103	-4.083	75
3498		5	max	0.556	102	0.949	103	1.547	15	2.129	71	0.364	107	0.479	75	4.462	103
3499			min	-0.421	74	-0.965	71	0.402	66	-0.364	107	-2.129	71	-4.059	103	-0.526	75
3500	M709	1	max	0.433	70	1.364	15	0.173	75	0.596	102	0.591	70	0	107	0	107
3501			min	-0.436	102	0.307	97	-0.173	77	-0.591	70	-0.596	102	0	12	0	12
3502		2	max	0.372	70	0.682	15	0.087	75	2.633	15	-0.223	66	2.311	75	2.311	77
3503			min	-0.375	102	0.154	97	-0.087	77	0.223	66	-2.633	15	-2.311	77	-2.311	75
3504		3	max	0.311	70	0.003	74	0	107	3.48	15	-0.488	66	3.081	75	3.082	77

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3505			min	-0.314	102	-0.003	76	0	12	0.488	66	-3.48	15	-3.082	77	-3.081	75
3506		4	max	0.25	70	-0.154	97	0.087	77	2.622	15	-0.363	66	2.311	75	2.311	77
3507			min	-0.253	102	-0.682	15	-0.087	75	0.363	66	-2.622	15	-2.311	77	-2.311	75
3508		5	max	0.189	70	-0.307	97	0.173	77	0.263	102	0.258	70	0	107	0	107
3509			min	-0.192	102	-1.364	15	-0.173	75	-0.258	70	-0.263	102	0	12	0	12
3510	M710	1	max	0.713	70	1.321	15	0.165	71	0.871	106	0.974	70	0	107	0	107
3511			min	-0.638	106	0.293	99	-0.165	73	-0.974	70	-0.871	106	0	12	0	12
3512		2	max	0.655	70	0.66	15	0.083	71	2.302	15	0.075	66	2.199	71	2.199	73
3513			min	-0.58	106	0.146	99	-0.083	73	-0.075	66	-2.302	15	-2.199	73	-2.199	71
3514		3	max	0.597	70	0.003	74	0	72	3.122	15	-0.179	66	2.932	71	2.932	73
3515			min	-0.522	106	-0.003	76	0	100	0.179	66	-3.122	15	-2.932	73	-2.932	71
3516		4	max	0.539	70	-0.146	98	0.083	73	2.291	15	-0.065	66	2.199	71	2.199	73
3517			min	-0.464	106	-0.66	13	-0.083	71	0.065	66	-2.291	15	-2.199	73	-2.199	71
3518		5	max	0.481	70	-0.293	99	0.165	73	0.554	106	0.656	70	0	107	0	107
3519			min	-0.405	106	-1.321	15	-0.165	71	-0.656	70	-0.554	106	0	12	0	12
3520	M711	1	max	1.032	100	3.566	70	0.125	101	10.494	106	11.698	70	4.561	71	4.242	77
3521			min	-0.805	76	-2.709	76	-0.128	103	-11.698	70	-10.494	106	-4.242	77	-4.561	71
3522		2	max	0.997	100	3.34	70	0.054	101	5.612	102	5.477	70	5.524	71	5.201	73
3523			min	-0.77	76	-2.84	76	-0.054	103	-5.477	70	-5.612	102	-5.201	73	-5.524	71
3524		3	max	0.962	100	3.113	70	0.004	71	0.711	15	-0.078	66	5.897	71	5.566	73
3525			min	-0.735	76	-2.974	76	-0.004	107	0.078	66	-0.711	15	-5.566	73	-5.897	71
3526		4	max	0.927	100	2.922	74	0.046	103	5.816	100	5.258	76	5.624	71	5.284	73
3527			min	-0.7	76	-3.201	72	-0.047	101	-5.258	76	-5.816	100	-5.284	73	-5.624	71
3528		5	max	0.892	100	2.785	74	0.121	103	10.758	100	11.161	72	4.764	71	4.411	77
3529			min	-0.665	76	-3.433	72	-0.118	101	-11.161	72	-10.758	100	-4.411	77	-4.764	71
3530	M712	1	max	1.006	100	3.416	70	0.108	101	9.629	106	11.165	70	0.995	71	0.884	107
3531			min	-0.748	76	-2.464	76	-0.109	103	-11.165	70	-9.629	106	-0.884	107	-0.995	71
3532		2	max	0.971	100	3.19	100	0.05	105	5.151	102	5.212	70	1.965	71	1.931	103
3533			min	-0.713	76	-2.597	76	-0.051	103	-5.212	70	-5.151	102	-1.931	103	-1.965	71
3534		3	max	0.936	100	2.963	100	0.001	75	0.698	15	-0.077	66	2.297	71	2.267	103
3535			min	-0.678	76	-2.731	76	-0.001	103	0.077	66	-0.698	15	-2.267	103	-2.297	71
3536		4	max	0.901	100	2.742	74	0.049	103	5.551	100	4.827	76	1.98	71	1.951	103
3537			min	-0.643	76	-2.942	72	-0.049	101	-4.827	76	-5.551	100	-1.951	103	-1.98	71
3538		5	max	0.866	100	2.605	74	0.107	103	10.23	100	10.242	72	1.025	71	0.921	103
3539			min	-0.608	76	-3.174	72	-0.107	101	-10.242	72	-10.23	100	-0.921	103	-1.025	71
3540	M713	1	max	0.91	70	1.32	13	0.165	75	1.249	102	1.243	70	0	107	0	107
3541			min	-0.915	102	0.293	98	-0.165	73	-1.243	70	-1.249	102	0	12	0	12
3542		2	max	0.852	70	0.66	13	0.082	75	2.664	102	0.268	74	2.198	75	2.199	73
3543			min	-0.857	102	0.146	98	-0.083	73	-0.268	74	-2.664	102	-2.199	73	-2.198	75
3544		3	max	0.794	70	0.003	74	0	70	3.446	15	-0.073	66	2.93	75	2.932	73
3545			min	-0.799	102	-0.003	76	0	102	0.073	66	-3.446	15	-2.932	73	-2.93	75
3546		4	max	0.736	70	-0.146	98	0.083	73	2.616	15	0.11	74	2.198	75	2.199	73
3547			min	-0.741	102	-0.66	13	-0.082	75	-0.11	74	-2.616	15	-2.199	73	-2.198	75
3548		5	max	0.677	70	-0.293	98	0.165	73	0.932	102	0.925	70	0	107	0	107
3549			min	-0.682	102	-1.32	13	-0.165	75	-0.925	70	-0.932	102	0	12	0	12
3550	M714	1	max	5.112	15	0.726	72	0.392	71	2.863	15	-1.012	96	0.739	71	0.716	103
3551			min	0.722	99	-0.515	104	-0.38	103	0.261	96	-11.109	15	-0.716	103	-0.739	71
3552		2	max	5.081	15	0.711	72	0.384	71	3.674	15	3.277	104	5.7	71	5.523	103
3553			min	0.719	99	-0.5	104	-0.372	103	-0.844	104	-14.256	15	-5.523	103	-5.7	71
3554		3	max	4.748	15	0.352	72	0.157	71	2.919	72	7.612	104	7.883	71	7.703	103
3555			min	0.687	107	-0.148	104	-0.158	103	-1.962	104	-11.326	72	-7.703	103	-7.883	71
3556		4	max	4.08	15	1.134	13	0.444	103	2.592	72	8.226	104	8.062	71	7.904	103
3557			min	0.476	107	-0.444	76	-0.445	71	-2.12	104	-10.056	72	-7.904	103	-8.062	71
3558		5	max	3.856	15	1.18	100	0.57	103	1.656	15	-0.314	104	1.107	71	1.08	103
3559			min	0.435	107	-0.648	76	-0.584	71	0.081	104	-6.427	15	-1.08	103	-1.107	71

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3560	M715	1	max	4.174	14	0.334	74	0.185	103	2.15	13	-1.138	107	0.331	103	0.348	71
3561			min	0.526	107	-0.43	102	-0.194	71	0.293	107	-8.342	13	-0.348	71	-0.331	103
3562		2	max	4.143	14	0.319	74	0.177	103	1.683	70	2.319	106	2.65	103	2.781	71
3563			min	0.523	107	-0.416	102	-0.186	71	-0.598	106	-6.531	70	-2.781	71	-2.65	103
3564		3	max	4.112	14	0.304	74	0.169	103	2.425	70	6.115	106	4.867	103	5.112	71
3565			min	0.52	107	-0.401	102	-0.178	71	-1.576	106	-9.407	70	-5.112	71	-4.867	103
3566		4	max	3.598	14	0.992	102	0.445	71	2.711	70	8.921	106	6.271	103	6.593	71
3567			min	0.325	107	-0.761	74	-0.423	103	-2.299	106	-10.521	70	-6.593	71	-6.271	103
3568		5	max	3.568	14	1.007	102	0.453	71	1.703	13	-0.384	106	0.812	103	0.854	71
3569			min	0.322	107	-0.776	74	-0.431	103	0.099	106	-6.609	13	-0.854	71	-0.812	103
3570	M716	1	max	1.629	13	0.456	70	0.189	103	0.887	13	-0.363	98	0.339	103	0.338	71
3571			min	0.339	98	-0.401	106	-0.189	71	0.094	98	-3.443	13	-0.338	71	-0.339	103
3572		2	max	1.598	13	0.441	70	0.181	103	1.768	70	3.461	106	2.709	103	2.708	71
3573			min	0.335	98	-0.387	106	-0.181	71	-0.892	106	-6.861	70	-2.708	71	-2.709	103
3574		3	max	1.567	13	0.426	70	0.173	103	2.879	70	7.232	106	4.977	103	4.975	71
3575			min	0.332	98	-0.372	106	-0.173	71	-1.864	106	-11.17	70	-4.975	71	-4.977	103
3576		4	max	1.036	13	0.922	106	0.432	71	3.407	70	10.033	106	6.414	103	6.411	71
3577			min	0.195	97	-1.061	70	-0.433	103	-2.586	106	-13.221	70	-6.411	71	-6.414	103
3578		5	max	1.005	13	0.937	106	0.44	71	0.67	70	0.789	106	0.831	103	0.83	71
3579			min	0.192	97	-1.076	70	-0.441	103	-0.203	106	-2.601	70	-0.83	71	-0.831	103
3580	M717	1	max	3.946	13	0.33	103	0.059	102	2.118	13	-0.623	75	0.09	102	0.093	70
3581			min	0.515	75	-0.328	71	-0.06	70	0.161	75	-8.217	13	-0.093	70	-0.09	102
3582		2	max	3.915	13	0.315	103	0.051	102	2.13	16	2.526	75	0.792	102	0.814	70
3583			min	0.512	75	-0.313	71	-0.052	70	-0.651	75	-8.266	16	-0.814	70	-0.792	102
3584		3	max	3.884	13	0.301	103	0.043	102	2.775	103	5.528	75	1.391	102	1.433	70
3585			min	0.509	75	-0.299	71	-0.044	70	-1.425	75	-10.767	103	-1.433	70	-1.391	102
3586		4	max	3.369	13	0.74	71	0.116	70	3.091	103	7.789	75	1.707	102	1.762	70
3587			min	0.315	75	-0.752	103	-0.112	102	-2.007	75	-11.993	103	-1.762	70	-1.707	102
3588		5	max	3.339	13	0.754	71	0.124	70	1.801	13	0.444	75	0.221	102	0.228	70
3589			min	0.311	75	-0.767	103	-0.12	102	-0.115	75	-6.99	13	-0.228	70	-0.221	102
3590	M718	1	max	2.719	15	0.992	72	0.455	71	1.742	15	-0.232	96	0.859	71	0.859	103
3591			min	0.407	97	-0.525	104	-0.455	103	0.06	96	-6.759	15	-0.859	103	-0.859	71
3592		2	max	2.688	15	0.977	72	0.447	71	3.645	15	4.517	104	6.629	71	6.63	103
3593			min	0.403	97	-0.511	104	-0.447	103	-1.164	104	-14.143	15	-6.63	103	-6.629	71
3594		3	max	2.251	15	0.711	15	0.168	75	3.264	72	8.786	104	8.971	71	8.972	103
3595			min	0.377	97	-0.061	96	-0.168	107	-2.264	104	-12.666	72	-8.972	103	-8.971	71
3596		4	max	1.509	15	0.81	100	0.491	103	2.926	72	8.437	104	8.901	71	8.902	103
3597			min	0.233	97	-0.527	76	-0.491	71	-2.174	104	-11.352	72	-8.902	103	-8.901	71
3598		5	max	1.224	15	1.078	100	0.645	103	0.552	72	0.873	104	1.223	71	1.223	103
3599			min	0.209	97	-0.795	76	-0.645	71	-0.225	104	-2.141	72	-1.223	103	-1.223	71
3600	M719	1	max	5.282	15	1.048	72	0.38	71	3.056	15	-0.749	66	0.715	71	0.738	103
3601			min	0.702	66	-0.73	104	-0.392	103	0.193	66	-11.857	15	-0.738	103	-0.715	71
3602		2	max	5.251	15	1.033	72	0.372	71	4.548	15	6.267	104	5.519	71	5.693	103
3603			min	0.699	66	-0.715	104	-0.384	103	-1.615	104	-17.647	15	-5.693	103	-5.519	71
3604		3	max	4.918	15	0.665	72	0.157	71	4.821	72	12.727	104	7.692	71	7.87	103
3605			min	0.679	66	-0.362	104	-0.157	103	-3.28	104	-18.707	72	-7.87	103	-7.692	71
3606		4	max	4.251	15	1.442	100	0.445	103	5.011	72	14.752	104	7.911	71	8.065	103
3607			min	0.491	75	-1.144	76	-0.444	71	-3.802	104	-19.445	72	-8.065	103	-7.911	71
3608		5	max	4.027	15	1.647	100	0.584	103	1.985	15	1.028	74	1.081	71	1.107	103
3609			min	0.45	75	-1.35	76	-0.571	71	-0.265	74	-7.703	15	-1.107	103	-1.081	71
3610	M720	1	max	9.079	15	0.062	68	0.015	71	4.428	15	-3.036	99	0	73	0	105
3611			min	1.422	99	-0.064	92	-0.015	107	0.694	99	-19.379	15	0	105	0	73
3612		2	max	9.043	15	0.031	68	0.007	71	4.423	15	-2.509	96	0.125	71	0.125	107
3613			min	1.418	99	-0.032	92	-0.007	107	0.573	96	-19.357	15	-0.125	107	-0.125	71
3614		3	max	9.008	15	0	74	0	73	4.411	15	-2.292	96	0.167	71	0.167	107

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3615			min	1.415	99	-0.005	15	0	105	0.524	96	-19.303	15	-0.167	107	-0.167	71
3616		4	max	8.972	15	0.031	66	0.007	73	4.391	15	-2.495	96	0.125	71	0.125	107
3617			min	1.411	99	-0.032	94	-0.007	105	0.57	96	-19.216	15	-0.125	107	-0.125	71
3618		5	max	8.936	15	0.062	66	0.015	73	4.364	15	-3.008	99	0	73	0	105
3619			min	1.408	99	-0.064	94	-0.015	105	0.687	99	-19.097	15	0	105	0	73
3620	M721	1	max	7.967	13	0.062	66	0.015	107	3.886	13	-2.929	99	0	105	0	73
3621			min	1.372	99	-0.064	94	-0.015	71	0.669	99	-17.004	13	0	73	0	105
3622		2	max	7.931	13	0.031	66	0.007	107	3.881	13	-2.365	98	0.125	107	0.125	71
3623			min	1.368	99	-0.032	94	-0.007	71	0.54	98	-16.983	13	-0.125	71	-0.125	107
3624		3	max	7.896	13	0	76	0	105	3.868	13	-2.147	98	0.167	107	0.167	71
3625			min	1.365	99	-0.005	13	0	73	0.491	98	-16.928	13	-0.167	71	-0.167	107
3626		4	max	7.86	13	0.031	68	0.007	105	3.848	13	-2.351	98	0.125	107	0.125	71
3627			min	1.361	99	-0.032	92	-0.007	73	0.537	98	-16.841	13	-0.125	71	-0.125	107
3628		5	max	7.825	13	0.062	68	0.015	105	3.821	13	-2.901	99	0	105	0	73
3629			min	1.358	99	-0.064	92	-0.015	73	0.663	99	-16.722	13	0	73	0	105
3630	M722	1	max	7.674	13	0.062	66	0.015	107	3.743	13	-2.712	68	0	105	0	73
3631			min	1.27	68	-0.064	94	-0.015	71	0.62	68	-16.38	13	0	73	0	105
3632		2	max	7.639	13	0.031	66	0.007	107	3.738	13	-2.074	68	0.125	107	0.125	71
3633			min	1.267	68	-0.032	94	-0.007	71	0.474	68	-16.358	13	-0.125	71	-0.125	107
3634		3	max	7.603	13	0	76	0	105	3.725	13	-1.856	68	0.167	107	0.167	71
3635			min	1.263	68	-0.005	13	0	73	0.424	68	-16.304	13	-0.167	71	-0.167	107
3636		4	max	7.568	13	0.031	68	0.007	105	3.706	13	-2.06	68	0.125	107	0.125	71
3637			min	1.26	68	-0.032	92	-0.007	73	0.471	68	-16.217	13	-0.125	71	-0.125	107
3638		5	max	7.532	13	0.062	68	0.015	105	3.678	13	-2.684	68	0	105	0	73
3639			min	1.256	68	-0.064	92	-0.015	73	0.613	68	-16.098	13	0	73	0	105
3640	M723	1	max	9.783	15	0.839	15	0.181	101	5.156	15	-2.5	66	0.295	101	0.304	103
3641			min	1.446	66	-0.311	66	-0.186	103	0.571	66	-22.563	15	-0.304	103	-0.295	101
3642		2	max	9.747	15	0.837	15	0.173	101	7.716	15	1.454	66	2.278	101	2.347	103
3643			min	1.442	66	-0.28	66	-0.179	103	-0.332	66	-33.768	15	-2.347	103	-2.278	101
3644		3	max	9.468	15	0.539	15	0.011	75	6.195	15	3.197	66	2.51	101	2.575	103
3645			min	1.426	66	-0.046	66	-0.011	77	-0.731	66	-27.111	15	-2.575	103	-2.51	101
3646		4	max	9.275	15	0.324	13	0.074	103	5.568	15	1.911	66	1.87	101	1.924	103
3647			min	1.41	66	-0.13	98	-0.073	101	-0.437	66	-24.368	15	-1.924	103	-1.87	101
3648		5	max	9.081	15	0.518	62	0.176	103	4.386	15	-2.163	66	0.28	101	0.289	103
3649			min	1.393	66	-0.371	98	-0.171	101	0.494	66	-19.195	15	-0.289	103	-0.28	101
3650	M724	1	max	2.56	72	0.023	71	-0.016	106	5.852	72	5.614	104	11.71	72	12.347	104
3651			min	-2.456	104	-0.023	107	-0.145	15	-5.614	104	-5.852	72	-11.233	104	-12.87	72
3652		2	max	2.565	72	0.012	71	-0.008	106	5.944	72	5.577	104	11.608	76	12.477	104
3653			min	-2.461	104	-0.012	107	-0.073	15	-5.577	104	-5.944	72	-11.351	104	-12.758	76
3654		3	max	2.57	72	0.003	72	0	107	5.982	72	5.573	104	11.598	76	12.536	104
3655			min	-2.466	104	-0.003	104	0	12	-5.573	104	-5.982	72	-11.406	104	-12.748	76
3656		4	max	2.575	72	0.012	73	0.073	16	5.966	72	5.6	104	11.652	76	12.526	104
3657			min	-2.471	104	-0.012	105	0.008	44	-5.6	104	-5.966	72	-11.396	104	-12.807	76
3658		5	max	2.58	72	0.023	73	0.145	16	5.897	72	5.659	104	11.799	72	12.445	104
3659			min	-2.475	104	-0.023	105	0.016	44	-5.659	104	-5.897	72	-11.323	104	-12.969	72
3660	M725	1	max	2.368	72	0.023	71	-0.016	105	5.413	72	4.998	104	10.832	72	10.992	104
3661			min	-2.186	104	-0.023	107	-0.145	16	-4.998	104	-5.413	72	-10.001	104	-11.906	72
3662		2	max	2.373	72	0.012	71	-0.008	105	5.505	72	4.961	104	10.693	72	11.122	104
3663			min	-2.191	104	-0.012	107	-0.073	16	-4.961	104	-5.505	72	-10.119	104	-11.753	72
3664		3	max	2.378	72	0.003	76	0	107	5.543	72	4.957	104	10.662	72	11.181	104
3665			min	-2.196	104	-0.003	104	0	12	-4.957	104	-5.543	72	-10.173	104	-11.719	72
3666		4	max	2.383	72	0.012	73	0.073	13	5.528	72	4.984	104	10.738	72	11.171	104
3667			min	-2.201	104	-0.012	101	0.008	44	-4.984	104	-5.528	72	-10.163	104	-11.802	72
3668		5	max	2.388	72	0.023	73	0.145	13	5.458	72	5.043	104	10.922	72	11.09	104
3669			min	-2.206	104	-0.023	101	0.016	44	-5.043	104	-5.458	72	-10.09	104	-12.004	72

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3670	M726	1	max	0.392	15	0.023	103	-0.016	76	0.889	15	0.408	104	1.836	15	0.925	104
3671			min	-0.18	104	-0.023	75	-0.192	16	-0.408	104	-0.889	15	-0.842	104	-2.018	15
3672		2	max	0.392	15	0.011	103	-0.008	76	1.614	15	0.337	104	1.587	72	1.035	104
3673			min	-0.175	104	-0.011	75	-0.096	16	-0.337	104	-1.614	15	-0.941	104	-1.745	72
3674		3	max	0.392	15	0.002	104	0	107	1.855	15	0.307	104	1.496	72	1.054	104
3675			min	-0.17	104	-0.002	76	0	12	-0.307	104	-1.855	15	-0.959	104	-1.644	72
3676		4	max	0.392	15	0.011	101	0.096	13	1.614	15	0.315	104	1.542	72	0.984	104
3677			min	-0.165	104	-0.011	73	0.008	44	-0.315	104	-1.614	15	-0.895	104	-1.695	72
3678		5	max	0.392	15	0.023	101	0.192	13	0.889	15	0.363	104	1.836	15	0.825	104
3679			min	-0.16	104	-0.023	73	0.016	44	-0.363	104	-0.889	15	-0.75	104	-2.018	15
3680	M727	1	max	0.756	74	0.035	70	-0.028	76	1.714	74	2.015	102	3.537	74	4.572	102
3681			min	-0.889	102	-0.035	106	-0.346	13	-2.015	102	-1.714	74	-4.159	102	-3.888	74
3682		2	max	0.761	74	0.018	70	-0.014	76	2.418	13	2.027	106	3.64	74	5.858	102
3683			min	-0.894	102	-0.018	106	-0.173	13	-2.027	106	-2.418	13	-5.329	102	-4.001	74
3684		3	max	0.766	74	0.002	71	0	107	3.203	13	2.051	106	3.689	74	7.252	15
3685			min	-0.899	102	-0.002	107	0	12	-2.051	106	-3.203	13	-6.597	15	-4.055	74
3686		4	max	0.771	74	0.016	72	0.173	15	2.418	13	2.049	106	3.685	74	5.908	102
3687			min	-0.903	102	-0.016	104	0.014	104	-2.049	106	-2.418	13	-5.375	102	-4.051	74
3688		5	max	0.775	74	0.033	72	0.346	15	1.758	74	2.059	102	3.629	74	4.672	102
3689			min	-0.908	102	-0.033	104	0.028	104	-2.059	102	-1.758	74	-4.25	102	-3.989	74
3690	M728	1	max	0.677	102	0.023	103	-0.016	104	1.535	102	1.324	74	3.168	102	3.004	74
3691			min	-0.584	74	-0.023	75	-0.192	14	-1.324	74	-1.535	102	-2.733	74	-3.483	102
3692		2	max	0.672	102	0.011	103	-0.008	104	1.624	102	1.253	74	3.008	106	3.113	74
3693			min	-0.579	74	-0.011	75	-0.096	14	-1.253	74	-1.624	102	-2.832	74	-3.306	106
3694		3	max	0.667	102	0.002	104	0	107	1.646	102	1.223	74	2.944	106	3.133	74
3695			min	-0.574	74	-0.002	76	0	12	-1.223	74	-1.646	102	-2.85	74	-3.236	106
3696		4	max	0.662	102	0.011	101	0.096	16	1.602	102	1.231	74	2.962	106	3.063	74
3697			min	-0.569	74	-0.011	73	0.008	77	-1.231	74	-1.602	102	-2.786	74	-3.256	106
3698		5	max	0.658	102	0.023	101	0.192	16	1.491	102	1.279	74	3.077	102	2.903	74
3699			min	-0.564	74	-0.023	73	0.016	77	-1.279	74	-1.491	102	-2.641	74	-3.382	102
3700	M729	1	max	1.477	74	0.035	70	-0.028	76	3.349	74	3.509	106	6.914	74	7.963	106
3701			min	-1.548	106	-0.035	106	-0.346	13	-3.509	106	-3.349	74	-7.244	106	-7.6	74
3702		2	max	1.482	74	0.018	70	-0.014	76	3.784	74	3.559	106	7.016	74	9.129	102
3703			min	-1.553	106	-0.018	106	-0.173	13	-3.559	106	-3.784	74	-8.305	102	-7.713	74
3704		3	max	1.487	74	0.002	71	0	107	3.936	74	3.583	106	7.066	74	9.574	102
3705			min	-1.558	106	-0.002	107	0	12	-3.583	106	-3.937	74	-8.71	102	-7.767	74
3706		4	max	1.492	74	0.016	72	0.173	15	3.806	74	3.581	106	7.062	74	9.179	102
3707			min	-1.563	106	-0.016	104	0.014	104	-3.581	106	-3.806	74	-8.35	102	-7.763	74
3708		5	max	1.497	74	0.033	72	0.346	15	3.394	74	3.554	106	7.005	74	8.063	106
3709			min	-1.568	106	-0.033	104	0.028	104	-3.554	106	-3.394	74	-7.335	106	-7.701	74
3710	M730	1	max	3.976	104	0.033	70	-0.027	107	9.088	104	9.441	76	18.185	104	20.764	76
3711			min	-4.13	76	-0.033	102	-0.244	13	-9.441	76	-9.088	104	-18.892	76	-19.988	104
3712		2	max	3.981	104	0.017	70	-0.013	107	9.391	104	9.474	76	18.25	104	21.612	72
3713			min	-4.135	76	-0.017	102	-0.122	13	-9.474	76	-9.391	104	-19.663	72	-20.06	104
3714		3	max	3.985	104	0.002	71	0	107	9.499	104	9.492	76	18.287	104	21.918	72
3715			min	-4.14	76	-0.002	107	0	12	-9.492	76	-9.499	104	-19.941	72	-20.1	104
3716		4	max	3.99	104	0.014	72	0.122	15	9.413	104	9.496	76	18.295	104	21.661	72
3717			min	-4.145	76	-0.014	104	0.013	75	-9.496	76	-9.413	104	-19.708	72	-20.109	104
3718		5	max	3.995	104	0.029	72	0.244	15	9.133	104	9.486	76	18.275	104	20.863	76
3719			min	-4.15	76	-0.029	104	0.027	75	-9.486	76	-9.133	104	-18.981	76	-20.086	104
3720	M731	1	max	2.303	14	0.062	66	0.015	107	1.122	14	0.088	107	0	105	0	73
3721			min	-0.041	107	-0.064	94	-0.015	71	-0.02	107	-4.908	14	0	73	0	105
3722		2	max	2.267	14	0.031	66	0.007	107	1.116	13	0.094	107	0.125	107	0.125	71
3723			min	-0.044	107	-0.032	94	-0.007	71	-0.022	107	-4.884	13	-0.125	71	-0.125	107
3724		3	max	2.232	14	0	76	0	105	1.104	13	0.1	107	0.167	107	0.167	71

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3725			min	-0.047	107	-0.005	13	0	73	-0.023	107	-4.83	13	-0.167	71	-0.167	107
3726		4	max	2.196	14	0.031	68	0.007	105	1.084	13	0.106	107	0.125	107	0.125	71
3727			min	-0.05	107	-0.032	92	-0.007	73	-0.024	107	-4.743	13	-0.125	71	-0.125	107
3728		5	max	2.161	14	0.062	68	0.015	105	1.057	14	0.112	107	0	105	0	73
3729			min	-0.053	107	-0.064	92	-0.015	73	-0.026	107	-4.625	14	0	73	0	105
3730	M732	1	max	2.043	13	0.062	66	0.015	107	0.995	13	0.136	75	0	105	0	73
3731			min	-0.063	75	-0.064	94	-0.015	71	-0.031	75	-4.353	13	0	73	0	105
3732		2	max	2.008	13	0.031	66	0.007	107	0.99	13	0.142	75	0.125	107	0.125	71
3733			min	-0.066	75	-0.032	94	-0.007	71	-0.032	75	-4.331	13	-0.125	71	-0.125	107
3734		3	max	1.972	13	0	76	0	105	0.977	13	0.337	68	0.167	107	0.167	71
3735			min	-0.069	75	-0.005	13	0	73	-0.077	68	-4.277	13	-0.167	71	-0.167	107
3736		4	max	1.936	13	0.031	68	0.007	105	0.957	13	0.154	75	0.125	107	0.125	71
3737			min	-0.072	75	-0.032	92	-0.007	73	-0.035	75	-4.19	13	-0.125	71	-0.125	107
3738		5	max	1.901	13	0.062	68	0.015	105	0.93	13	0.16	75	0	105	0	73
3739			min	-0.075	75	-0.064	92	-0.015	73	-0.037	75	-4.07	13	0	73	0	105
3740	M733	1	max	2.606	15	0.062	98	0.015	71	1.269	15	-0.18	107	0	73	0	105
3741			min	0.085	107	-0.064	62	-0.015	107	0.041	107	-5.555	15	0	105	0	73
3742		2	max	2.57	15	0.031	98	0.007	71	1.264	15	-0.131	96	0.125	71	0.125	107
3743			min	0.082	107	-0.032	62	-0.007	107	0.03	96	-5.533	15	-0.125	107	-0.125	71
3744		3	max	2.535	15	0	74	0	73	1.252	15	0.087	96	0.167	71	0.167	107
3745			min	0.079	107	-0.005	15	0	105	-0.02	96	-5.479	15	-0.167	107	-0.167	71
3746		4	max	2.499	15	0.031	96	0.007	73	1.232	15	-0.117	96	0.125	71	0.125	107
3747			min	0.076	107	-0.032	64	-0.007	105	0.027	96	-5.392	15	-0.125	107	-0.125	71
3748		5	max	2.464	15	0.062	96	0.015	73	1.205	15	-0.156	107	0	73	0	105
3749			min	0.073	107	-0.064	64	-0.015	105	0.036	107	-5.272	15	0	105	0	73
3750	M734	1	max	2.792	15	0.062	98	0.015	71	1.36	15	-0.201	75	0	73	0	105
3751			min	0.095	75	-0.064	92	-0.015	107	0.046	75	-5.952	15	0	105	0	73
3752		2	max	2.756	15	0.031	98	0.007	71	1.355	15	0.01	66	0.125	71	0.125	107
3753			min	0.091	75	-0.032	92	-0.007	107	-0.002	66	-5.93	15	-0.125	107	-0.125	71
3754		3	max	2.721	15	0	74	0	73	1.343	15	0.228	66	0.167	71	0.167	107
3755			min	0.088	75	-0.005	15	0	105	-0.052	66	-5.876	15	-0.167	107	-0.167	71
3756		4	max	2.685	15	0.031	66	0.007	73	1.323	15	0.024	66	0.125	71	0.125	107
3757			min	0.085	75	-0.032	64	-0.007	105	-0.006	66	-5.789	15	-0.125	107	-0.125	71
3758		5	max	2.649	15	0.062	66	0.015	73	1.295	15	-0.177	75	0	73	0	105
3759			min	0.082	75	-0.064	64	-0.015	105	0.04	75	-5.669	15	0	105	0	73
3760	M735	1	max	0.947	106	0.352	15	0.034	76	0.853	70	0.794	106	1.76	70	1.801	106
3761			min	-1.017	70	0.028	77	-0.034	104	-0.794	106	-0.853	70	-1.639	106	-1.935	70
3762		2	max	0.952	106	0.176	15	0.017	76	2.75	13	0.837	106	5.677	13	0.936	98
3763			min	-1.022	70	0.013	77	-0.017	104	-0.837	106	-2.75	13	-0.852	98	-6.24	13
3764		3	max	0.957	106	0.001	105	0	107	3.547	13	0.853	106	7.322	13	0.769	98
3765			min	-1.027	70	-0.001	73	0	12	-0.853	106	-3.547	13	-0.699	98	-8.049	13
3766		4	max	0.962	106	-0.013	105	0.017	40	2.75	13	0.845	106	5.677	13	0.936	98
3767			min	-1.032	70	-0.176	13	-0.017	42	-0.845	106	-2.75	13	-0.852	98	-6.24	13
3768		5	max	0.966	106	-0.028	105	0.034	40	0.869	70	0.81	106	1.794	70	1.839	106
3769			min	-1.037	70	-0.352	13	-0.034	42	-0.81	106	-0.869	70	-1.673	106	-1.972	70
3770	M736	1	max	1.374	106	0.352	15	0.034	72	1.403	100	1.152	106	2.897	100	2.614	106
3771			min	-1.674	100	0.028	77	-0.034	44	-1.152	106	-1.403	100	-2.378	106	-3.185	100
3772		2	max	1.379	106	0.176	15	0.017	72	3.07	13	1.194	106	6.338	13	1.661	106
3773			min	-1.679	100	0.013	77	-0.017	44	-1.194	106	-3.07	13	-1.511	106	-6.967	13
3774		3	max	1.384	106	0.001	105	0	107	3.867	13	1.211	106	7.983	13	1.35	106
3775			min	-1.684	100	-0.001	73	0	12	-1.211	106	-3.867	13	-1.228	106	-8.775	13
3776		4	max	1.388	106	-0.013	105	0.017	100	3.07	13	1.203	106	6.338	13	1.68	106
3777			min	-1.689	100	-0.176	13	-0.017	102	-1.203	106	-3.07	13	-1.528	106	-6.967	13
3778		5	max	1.393	106	-0.028	105	0.034	100	1.42	100	1.168	106	2.931	100	2.651	106
3779			min	-1.693	100	-0.352	13	-0.034	102	-1.168	106	-1.42	100	-2.412	106	-3.222	100

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3780	M737	1	max	2.196	106	0.251	13	0.031	72	2.099	70	1.856	106	4.2	70	4.083	106
3781			min	-2.482	70	0.026	77	-0.031	104	-1.856	106	-2.099	70	-3.714	106	-4.616	70
3782		2	max	2.2	106	0.125	13	0.016	72	2.487	70	1.882	106	4.35	70	3.451	106
3783			min	-2.487	70	0.013	77	-0.016	104	-1.882	106	-2.487	70	-3.14	106	-4.781	70
3784		3	max	2.205	106	0.001	105	0	107	2.619	70	1.893	106	4.64	13	3.246	106
3785			min	-2.492	70	-0.001	73	0	12	-1.893	106	-2.619	70	-2.954	106	-5.099	13
3786		4	max	2.21	106	-0.013	105	0.016	100	2.495	70	1.89	106	4.367	70	3.469	106
3787			min	-2.497	70	-0.125	15	-0.016	102	-1.89	106	-2.495	70	-3.156	106	-4.8	70
3788		5	max	2.215	106	-0.026	105	0.031	100	2.115	70	1.873	106	4.233	70	4.119	106
3789			min	-2.502	70	-0.251	15	-0.031	102	-1.873	106	-2.115	70	-3.747	106	-4.652	70
3790	M738	1	max	2.53	76	0.251	13	0.031	46	2.478	100	2.139	76	4.959	100	4.705	76
3791			min	-2.931	100	0.026	77	-0.031	100	-2.139	76	-2.478	100	-4.28	76	-5.451	100
3792		2	max	2.535	76	0.125	13	0.016	46	2.866	100	2.165	76	5.11	100	4.073	76
3793			min	-2.936	100	0.013	77	-0.016	100	-2.165	76	-2.866	100	-3.706	76	-5.616	100
3794		3	max	2.54	76	0.001	105	0	107	2.999	100	2.176	76	5.165	100	3.868	76
3795			min	-2.941	100	-0.001	73	0	12	-2.176	76	-2.999	100	-3.52	76	-5.677	100
3796		4	max	2.545	76	-0.013	105	0.016	70	2.875	100	2.173	76	5.126	100	4.091	76
3797			min	-2.946	100	-0.125	15	-0.016	106	-2.173	76	-2.875	100	-3.722	76	-5.634	100
3798		5	max	2.55	76	-0.026	105	0.031	70	2.495	100	2.156	76	4.992	100	4.741	76
3799			min	-2.951	100	-0.251	15	-0.031	106	-2.156	76	-2.495	100	-4.313	76	-5.487	100
3800	M739	1	max	1.555	102	0.352	15	0.034	70	1.239	74	1.304	102	2.557	74	2.959	102
3801			min	-1.477	74	0.028	105	-0.034	72	-1.304	102	-1.239	74	-2.692	102	-2.811	74
3802		2	max	1.56	102	0.176	15	0.017	70	2.306	13	0.873	106	4.76	13	3.029	106
3803			min	-1.482	74	0.013	105	-0.017	72	-0.873	106	-2.306	13	-2.755	106	-5.232	13
3804		3	max	1.565	102	0.001	73	0	107	3.103	13	0.735	106	6.405	13	3.067	106
3805			min	-1.487	74	-0.001	101	0	12	-0.735	106	-3.103	13	-2.79	106	-7.041	13
3806		4	max	1.57	102	-0.013	77	0.017	42	2.306	13	0.881	106	4.76	13	3.048	106
3807			min	-1.492	74	-0.176	13	-0.017	100	-0.881	106	-2.306	13	-2.772	106	-5.232	13
3808		5	max	1.575	102	-0.028	77	0.034	42	1.255	74	1.32	102	2.591	74	2.996	102
3809			min	-1.497	74	-0.352	13	-0.034	100	-1.32	102	-1.255	74	-2.726	102	-2.848	74
3810	M740	1	max	1.961	76	0.352	15	0.034	104	1.775	70	1.644	76	3.663	70	3.731	76
3811			min	-2.117	70	0.028	105	-0.034	42	-1.644	76	-1.775	70	-3.395	76	-4.027	70
3812		2	max	1.966	76	0.176	15	0.017	104	2.62	13	1.225	76	5.409	13	3.828	76
3813			min	-2.121	70	0.013	105	-0.017	42	-1.225	76	-2.62	13	-3.483	76	-5.945	13
3814		3	max	1.971	76	0.001	73	0	107	3.417	13	1.088	76	7.054	13	3.867	76
3815			min	-2.126	70	-0.001	105	0	12	-1.088	76	-3.417	13	-3.518	76	-7.754	13
3816		4	max	1.976	76	-0.013	77	0.017	102	2.62	13	1.233	76	5.409	13	3.847	76
3817			min	-2.131	70	-0.176	13	-0.017	70	-1.233	76	-2.62	13	-3.5	76	-5.945	13
3818		5	max	1.981	76	-0.028	77	0.034	102	1.791	70	1.661	76	3.697	70	3.769	76
3819			min	-2.136	70	-0.352	13	-0.034	70	-1.661	76	-1.791	70	-3.428	76	-4.064	70
3820	M741	1	max	2.549	106	0.251	13	0.031	74	2.326	70	2.155	106	4.654	70	4.74	106
3821			min	-2.751	70	0.026	105	-0.031	76	-2.155	106	-2.326	70	-4.313	106	-5.115	70
3822		2	max	2.554	106	0.125	13	0.016	74	2.401	70	1.868	106	5.43	70	4.797	106
3823			min	-2.756	70	0.013	105	-0.016	76	-1.868	106	-2.401	70	-4.364	106	-5.968	70
3824		3	max	2.559	106	0.001	73	0	107	2.429	70	1.775	106	5.694	70	4.822	106
3825			min	-2.761	70	-0.001	105	0	12	-1.775	106	-2.429	70	-4.387	106	-6.259	70
3826		4	max	2.564	106	-0.013	77	0.016	106	2.409	70	1.876	106	5.447	70	4.815	106
3827			min	-2.765	70	-0.125	15	-0.016	70	-1.876	106	-2.409	70	-4.381	106	-5.987	70
3828		5	max	2.569	106	-0.026	77	0.031	106	2.342	70	2.172	106	4.687	70	4.777	106
3829			min	-2.77	70	-0.251	15	-0.031	70	-2.172	106	-2.342	70	-4.346	106	-5.151	70
3830	M742	1	max	2.815	76	0.251	13	0.031	100	2.581	100	2.38	76	5.165	100	5.235	76
3831			min	-3.053	100	0.026	105	-0.031	46	-2.38	76	-2.581	100	-4.763	76	-5.677	100
3832		2	max	2.82	76	0.125	13	0.016	100	2.656	100	2.093	76	5.941	100	5.291	76
3833			min	-3.058	100	0.013	105	-0.016	46	-2.093	76	-2.656	100	-4.814	76	-6.53	100
3834		3	max	2.825	76	0.001	73	0	107	2.684	100	2	76	6.206	100	5.316	76

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3835			min	-3.063	100	-0.001	105	0	12	-2	76	-2.684	100	-4.837	76	-6.821	100
3836		4	max	2.83	76	-0.013	77	0.016	42	2.665	100	2.101	76	5.958	100	5.31	76
3837			min	-3.068	100	-0.125	15	-0.016	74	-2.101	76	-2.665	100	-4.831	76	-6.549	100
3838		5	max	2.835	76	-0.026	77	0.031	42	2.598	100	2.397	76	5.198	100	5.271	76
3839			min	-3.073	100	-0.251	15	-0.031	74	-2.397	76	-2.598	100	-4.796	76	-5.714	100
3840	M743	1	max	1.737	70	0.149	15	0.023	71	1.361	106	1.469	70	2.723	106	3.23	70
3841			min	-1.609	106	0.015	76	-0.023	103	-1.469	70	-1.361	106	-2.939	70	-2.993	106
3842		2	max	1.732	70	0.075	15	0.012	71	1.421	102	1.384	70	2.844	102	3.044	70
3843			min	-1.604	106	0.007	76	-0.012	103	-1.384	70	-1.421	102	-2.769	70	-3.126	102
3844		3	max	1.727	70	0.001	104	0	107	1.444	102	1.36	74	2.889	102	2.99	74
3845			min	-1.6	106	-0.001	72	0	12	-1.36	74	-1.444	102	-2.721	74	-3.176	102
3846		4	max	1.722	70	-0.007	104	0.012	73	1.413	102	1.376	70	2.827	102	3.026	70
3847			min	-1.595	106	-0.075	13	-0.012	41	-1.376	70	-1.413	102	-2.753	70	-3.107	102
3848		5	max	1.717	70	-0.015	104	0.023	73	1.344	106	1.452	70	2.69	106	3.194	70
3849			min	-1.59	106	-0.149	13	-0.023	41	-1.452	70	-1.344	106	-2.906	70	-2.956	106
3850	M744	1	max	1.008	70	0.195	15	0.023	71	0.822	106	0.845	70	1.697	106	1.917	70
3851			min	-0.981	106	0.015	106	-0.023	77	-0.845	70	-0.822	106	-1.744	70	-1.866	106
3852		2	max	1.003	70	0.098	15	0.011	71	0.917	102	0.771	74	1.892	102	1.75	74
3853			min	-0.976	106	0.007	106	-0.011	77	-0.771	74	-0.917	102	-1.592	74	-2.08	102
3854		3	max	0.998	70	0.001	74	0	107	1.023	15	0.747	74	2.113	15	1.696	74
3855			min	-0.971	106	-0.001	102	0	12	-0.747	74	-1.023	15	-1.543	74	-2.322	15
3856		4	max	0.993	70	-0.007	74	0.011	103	0.908	102	0.763	74	1.875	102	1.731	74
3857			min	-0.966	106	-0.098	13	-0.011	41	-0.763	74	-0.908	102	-1.575	74	-2.061	102
3858		5	max	0.988	70	-0.015	74	0.023	103	0.806	106	0.828	70	1.664	106	1.88	70
3859			min	-0.961	106	-0.195	13	-0.023	41	-0.828	70	-0.806	106	-1.71	70	-1.829	106
3860	M745	1	max	0.76	70	0.195	15	0.023	101	0.547	106	0.637	70	1.129	106	1.446	70
3861			min	-0.653	106	0.015	106	-0.023	73	-0.637	70	-0.547	106	-1.316	70	-1.242	106
3862		2	max	0.755	70	0.098	15	0.011	101	0.632	102	0.542	74	1.304	102	1.23	74
3863			min	-0.648	106	0.007	106	-0.011	73	-0.542	74	-0.632	102	-1.119	74	-1.434	102
3864		3	max	0.75	70	0.001	74	0	107	0.762	15	0.518	74	1.574	15	1.175	74
3865			min	-0.643	106	-0.001	102	0	12	-0.518	74	-0.762	15	-1.069	74	-1.73	15
3866		4	max	0.745	70	-0.007	74	0.011	103	0.624	102	0.534	74	1.287	102	1.211	74
3867			min	-0.638	106	-0.098	13	-0.011	75	-0.534	74	-0.624	102	-1.102	74	-1.415	102
3868		5	max	0.741	70	-0.015	74	0.023	103	0.531	106	0.621	70	1.096	106	1.409	70
3869			min	-0.633	106	-0.195	13	-0.023	75	-0.621	70	-0.531	106	-1.282	70	-1.204	106
3870	M746	1	max	1.578	70	0.149	15	0.023	105	1.183	106	1.334	70	2.367	106	2.935	70
3871			min	-1.399	106	0.015	76	-0.023	47	-1.334	70	-1.183	106	-2.67	70	-2.602	106
3872		2	max	1.573	70	0.075	15	0.012	105	1.237	102	1.25	70	2.475	102	2.748	70
3873			min	-1.394	106	0.007	76	-0.012	47	-1.25	70	-1.237	102	-2.501	70	-2.721	102
3874		3	max	1.568	70	0.001	104	0	107	1.26	102	1.219	70	2.521	102	2.68	70
3875			min	-1.389	106	-0.001	72	0	12	-1.219	70	-1.26	102	-2.439	70	-2.771	102
3876		4	max	1.564	70	-0.007	104	0.012	77	1.229	102	1.241	70	2.459	102	2.73	70
3877			min	-1.384	106	-0.075	13	-0.012	101	-1.241	70	-1.229	102	-2.484	70	-2.703	102
3878		5	max	1.559	70	-0.015	104	0.023	77	1.166	106	1.318	70	2.334	106	2.898	70
3879			min	-1.38	106	-0.149	13	-0.023	101	-1.318	70	-1.166	106	-2.637	70	-2.565	106
3880	M747	1	max	-0.494	107	0.312	13	0.039	70	-0.435	107	8.065	14	16.272	14	-1.01	107
3881			min	-9.165	14	0.002	77	-0.038	106	-8.065	14	0.435	107	0.878	107	-18.724	14
3882		2	max	-0.504	107	0.156	13	0.02	70	-0.429	107	5.354	14	21.891	14	-1.065	107
3883			min	-9.209	14	0.001	77	-0.019	106	-5.354	14	0.429	107	0.925	107	-25.19	14
3884		3	max	-0.514	107	0	13	0.003	13	-0.433	107	4.474	14	23.813	14	-1.097	107
3885			min	-9.252	14	0	76	0	105	-4.474	14	0.433	107	0.953	107	-27.403	14
3886		4	max	-0.525	107	-0.001	107	0.02	72	-0.446	107	5.427	14	22.039	14	-1.105	107
3887			min	-9.296	14	-0.156	15	-0.019	104	-5.427	14	0.446	107	0.96	107	-25.361	14
3888		5	max	-0.535	107	-0.002	107	0.039	72	-0.47	107	8.213	14	16.568	14	-1.091	107
3889			min	-9.339	14	-0.312	15	-0.038	104	-8.213	14	0.47	107	0.948	107	-19.066	14

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3890	M748	1	max	-0.121	107	-0.002	77	0.039	102	-0.107	107	7.051	14	14.225	14	-0.249	107
3891			min	-8.012	14	-0.312	13	-0.038	74	-7.051	14	0.107	107	0.216	107	-16.37	14
3892		2	max	-0.131	107	-0.001	77	0.02	102	-0.131	107	9.837	14	8.754	14	-0.234	107
3893			min	-8.056	14	-0.156	13	-0.019	74	-9.837	14	0.131	107	0.203	107	-10.074	14
3894		3	max	-0.141	107	0	76	0.003	15	-0.144	107	10.789	14	6.98	14	-0.243	107
3895			min	-8.099	14	0	100	0	75	-10.789	14	0.144	107	0.211	107	-8.032	14
3896		4	max	-0.152	107	0.156	15	0.02	100	-0.148	107	9.91	14	8.903	14	-0.274	107
3897			min	-8.143	14	0.001	107	-0.019	76	-9.91	14	0.148	107	0.238	107	-10.245	14
3898		5	max	-0.162	107	0.312	15	0.039	100	-0.142	107	7.198	14	14.522	14	-0.329	107
3899			min	-8.186	14	0.002	107	-0.038	76	-7.198	14	0.142	107	0.286	107	-16.711	14
3900	M749	1	max	-0.076	75	0.312	15	0.039	102	-0.067	75	6.568	13	13.25	13	-0.156	75
3901			min	-7.463	13	0.002	105	-0.038	74	-6.568	13	0.067	75	0.136	75	-15.247	13
3902		2	max	-0.086	75	0.156	15	0.02	102	-0.061	75	3.856	13	18.869	13	-0.211	75
3903			min	-7.506	13	0.001	105	-0.019	74	-3.856	13	0.061	75	0.183	75	-21.713	13
3904		3	max	-0.096	75	0	15	0.003	15	-0.065	75	2.977	13	20.792	13	-0.242	75
3905			min	-7.55	13	0	104	0	77	-2.977	13	0.065	75	0.211	75	-23.926	13
3906		4	max	-0.106	75	-0.001	75	0.02	100	-0.078	75	3.929	13	19.018	13	-0.251	75
3907			min	-7.593	13	-0.156	13	-0.019	76	-3.929	13	0.078	75	0.218	75	-21.884	13
3908		5	max	-0.116	75	-0.002	75	0.039	100	-0.102	75	6.715	13	13.547	13	-0.236	75
3909			min	-7.636	13	-0.312	13	-0.038	76	-6.715	13	0.102	75	0.205	75	-15.589	13
3910	M750	1	max	-0.545	75	-0.002	105	0.039	70	0	102	0	74	0	72	0	104
3911			min	-9.709	15	-0.312	13	-0.039	106	0	74	0	102	0	104	0	72
3912		2	max	-0.555	75	-0.001	105	0.019	70	0.142	106	2.749	13	0.286	104	6.381	13
3913			min	-9.752	15	-0.156	13	-0.019	106	-2.749	13	-0.142	106	-5.545	13	-0.33	104
3914		3	max	-0.565	75	0	106	0	15	0.189	106	3.665	13	0.382	104	8.508	13
3915			min	-9.796	15	0	70	0	97	-3.665	13	-0.189	106	-7.393	13	-0.439	104
3916		4	max	-0.575	75	0.156	15	0.019	72	0.142	106	2.749	13	0.286	104	6.381	13
3917			min	-9.839	15	0.001	75	-0.019	104	-2.749	13	-0.142	106	-5.545	13	-0.33	104
3918		5	max	-0.586	75	0.312	15	0.039	72	0	106	0	70	0	15	0	74
3919			min	-9.882	15	0.002	75	-0.039	104	0	70	0	106	0	74	0	15
3920	M751	1	max	4.485	74	0.033	76	-0.027	107	10.252	74	10.538	102	20.514	74	23.177	102
3921			min	-4.61	102	-0.033	100	-0.244	15	-10.538	102	-10.252	74	-21.087	102	-22.548	74
3922		2	max	4.48	74	0.017	76	-0.013	107	10.219	74	10.232	106	19.909	74	23.309	102
3923			min	-4.605	102	-0.017	100	-0.122	15	-10.232	106	-10.219	74	-21.207	102	-21.882	74
3924		3	max	4.475	74	0.002	77	0	107	10.201	74	10.124	106	19.692	74	23.336	102
3925			min	-4.6	102	-0.002	101	0	12	-10.124	106	-10.201	74	-21.232	102	-21.644	74
3926		4	max	4.47	74	0.014	70	0.122	13	10.197	74	10.209	106	19.864	74	23.26	102
3927			min	-4.595	102	-0.014	102	0.013	75	-10.209	106	-10.197	74	-21.162	102	-21.833	74
3928		5	max	4.465	74	0.029	70	0.244	13	10.207	74	10.494	102	20.425	74	23.079	102
3929			min	-4.59	102	-0.029	102	0.027	75	-10.494	102	-10.207	74	-20.997	102	-22.449	74
3930	M752	1	max	3.969	74	0.029	104	-0.027	75	9.073	74	9.801	102	18.155	74	21.557	102
3931			min	-4.288	102	-0.029	72	-0.244	13	-9.801	102	-9.073	74	-19.612	102	-19.955	74
3932		2	max	3.964	74	0.014	104	-0.013	75	9.353	74	9.719	102	18.176	74	22.376	102
3933			min	-4.283	102	-0.014	72	-0.122	13	-9.719	102	-9.353	74	-20.358	102	-19.978	74
3934		3	max	3.959	74	0.002	105	0	107	9.439	74	9.685	106	18.168	74	22.633	102
3935			min	-4.278	102	-0.002	73	0	12	-9.685	106	-9.439	74	-20.592	102	-19.969	74
3936		4	max	3.954	74	0.017	106	0.122	15	9.331	74	9.697	102	18.131	74	22.327	102
3937			min	-4.273	102	-0.017	70	0.013	107	-9.697	102	-9.331	74	-20.313	102	-19.928	74
3938		5	max	3.95	74	0.033	106	0.244	15	9.029	74	9.757	102	18.066	74	21.458	102
3939			min	-4.268	102	-0.033	70	0.027	107	-9.757	102	-9.029	74	-19.523	102	-19.857	74
3940	M753	1	max	-3.955	98	0.28	13	0.036	100	-3.48	98	22.241	15	44.87	15	-8.078	98
3941			min	-25.279	15	-0.001	77	-0.036	76	-22.241	15	3.48	98	7.02	98	-51.633	15
3942		2	max	-3.959	98	0.14	13	0.018	100	-3.292	98	19.99	15	49.559	15	-8.528	98
3943			min	-25.323	15	0	77	-0.018	76	-19.99	15	3.292	98	7.411	98	-57.029	15
3944		3	max	-3.962	98	0	100	0.003	15	-3.232	98	19.264	15	51.171	15	-8.682	98

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
3945			min	-25.366	15	0	76	0	75	-19.264	15	3.232	98	7.545	98	-58.884	15
3946		4	max	-3.966	98	0	107	0.018	102	-3.298	98	20.063	15	49.707	15	-8.542	98
3947			min	-25.409	15	-0.14	15	-0.018	74	-20.063	15	3.298	98	7.423	98	-57.199	15
3948		5	max	-3.97	98	0.001	107	0.036	102	-3.492	98	22.387	15	45.165	15	-8.106	98
3949			min	-25.453	15	-0.28	15	-0.036	74	-22.387	15	3.492	98	7.045	98	-51.972	15
3950	M754	1	max	-3.835	99	0.001	77	0.036	72	-3.374	99	19.485	13	39.31	13	-7.832	99
3951			min	-22.147	13	-0.28	13	-0.036	104	-19.485	13	3.374	99	6.806	99	-45.235	13
3952		2	max	-3.838	99	0	77	0.018	72	-3.567	99	21.809	13	34.768	13	-7.396	99
3953			min	-22.19	13	-0.14	13	-0.018	104	-21.809	13	3.567	99	6.428	99	-40.009	13
3954		3	max	-3.842	99	0	76	0.003	13	-3.634	99	22.609	13	33.303	13	-7.256	99
3955			min	-22.233	13	0	100	0	105	-22.609	13	3.634	99	6.306	99	-38.323	13
3956		4	max	-3.845	99	0.14	15	0.018	70	-3.573	99	21.883	13	34.916	13	-7.411	99
3957			min	-22.276	13	0	107	-0.018	106	-21.883	13	3.573	99	6.44	99	-40.178	13
3958		5	max	-3.849	99	0.28	15	0.036	70	-3.386	99	19.631	13	39.605	13	-7.86	99
3959			min	-22.32	13	-0.001	107	-0.036	106	-19.631	13	3.386	99	6.83	99	-45.574	13
3960	M755	1	max	-4.042	66	0.001	105	0.036	100	-3.556	66	23.681	15	47.775	15	-8.256	66
3961			min	-26.917	15	-0.28	15	-0.036	76	-23.681	15	3.556	66	7.174	66	-54.976	15
3962		2	max	-4.046	66	0	105	0.018	100	-3.75	66	26.006	15	43.234	15	-7.82	66
3963			min	-26.96	15	-0.14	15	-0.018	76	-26.006	15	3.75	66	6.796	66	-49.75	15
3964		3	max	-4.049	66	0	104	0.003	15	-3.816	66	26.805	15	41.769	15	-7.68	66
3965			min	-27.003	15	0	72	0	77	-26.805	15	3.816	66	6.674	66	-48.065	15
3966		4	max	-4.053	66	0.14	13	0.018	102	-3.756	66	26.079	15	43.381	15	-7.834	66
3967			min	-27.046	15	0	75	-0.018	74	-26.079	15	3.756	66	6.808	66	-49.92	15
3968		5	max	-4.057	66	0.28	13	0.036	102	-3.568	66	23.827	15	48.07	15	-8.284	66
3969			min	-27.09	15	-0.001	75	-0.036	74	-23.827	15	3.568	66	7.199	66	-55.316	15
3970	M756	1	max	-3.545	68	0.28	15	0.036	72	-3.119	68	18.968	13	38.267	13	-7.241	68
3971			min	-21.559	13	-0.001	105	-0.036	104	-18.968	13	3.119	68	6.293	68	-44.034	13
3972		2	max	-3.549	68	0.14	15	0.018	72	-2.932	68	16.717	13	42.956	13	-7.691	68
3973			min	-21.602	13	0	105	-0.018	104	-16.717	13	2.932	68	6.683	68	-49.43	13
3974		3	max	-3.553	68	0	72	0.003	13	-2.871	68	15.991	13	44.568	13	-7.845	68
3975			min	-21.645	13	0	104	0	107	-15.991	13	2.871	68	6.818	68	-51.286	13
3976		4	max	-3.556	68	0	75	0.018	70	-2.938	68	16.79	13	43.103	13	-7.705	68
3977			min	-21.689	13	-0.14	13	-0.018	106	-16.79	13	2.938	68	6.696	68	-49.6	13
3978		5	max	-3.56	68	0.001	75	0.036	70	-3.131	68	19.114	13	38.562	13	-7.269	68
3979			min	-21.732	13	-0.28	13	-0.036	106	-19.114	13	3.131	68	6.317	68	-44.374	13
3980	M757	1	max	-3.404	99	0.28	13	0.036	100	-2.995	99	18.906	15	38.141	15	-6.953	99
3981			min	-21.488	15	-0.001	77	-0.036	76	-18.906	15	2.995	99	6.042	99	-43.89	15
3982		2	max	-3.408	99	0.14	13	0.018	100	-2.807	99	16.655	15	42.83	15	-7.402	99
3983			min	-21.531	15	0	77	-0.018	76	-16.655	15	2.807	99	6.433	99	-49.286	15
3984		3	max	-3.411	99	0	100	0.003	15	-2.747	99	15.929	15	44.442	15	-7.557	99
3985			min	-21.575	15	0	76	0	75	-15.929	15	2.747	99	6.567	99	-51.141	15
3986		4	max	-3.415	99	0	107	0.018	102	-2.814	99	16.728	15	42.978	15	-7.416	99
3987			min	-21.618	15	-0.14	15	-0.018	74	-16.728	15	2.814	99	6.445	99	-49.456	15
3988		5	max	-3.419	99	0.001	107	0.036	102	-3.007	99	19.052	15	38.436	15	-6.981	99
3989			min	-21.661	15	-0.28	15	-0.036	74	-19.052	15	3.007	99	6.067	99	-44.229	15
3990	M758	1	max	-3.229	96	0.001	77	0.036	72	-2.841	96	16.189	14	32.66	14	-6.595	96
3991			min	-18.4	14	-0.28	13	-0.036	104	-16.189	14	2.841	96	5.731	96	-37.583	14
3992		2	max	-3.233	96	0	77	0.018	72	-3.034	96	18.513	14	28.119	14	-6.159	96
3993			min	-18.443	14	-0.14	13	-0.018	104	-18.513	14	3.034	96	5.353	96	-32.357	14
3994		3	max	-3.236	96	0	76	0.003	13	-3.101	96	19.313	14	26.654	14	-6.019	96
3995			min	-18.486	14	0	100	0	105	-19.313	14	3.101	96	5.231	96	-30.671	14
3996		4	max	-3.24	96	0.14	15	0.018	70	-3.04	96	18.587	14	28.266	14	-6.174	96
3997			min	-18.53	14	0	107	-0.018	106	-18.586	14	3.04	96	5.365	96	-32.527	14
3998		5	max	-3.243	96	0.28	15	0.036	70	-2.853	96	16.335	14	32.955	14	-6.623	96
3999			min	-18.573	14	-0.001	107	-0.036	106	-16.335	14	2.853	96	5.756	96	-37.922	14

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4000	M759	1	max	-3.31	66	0.001	105	0.036	100	-2.912	66	18.95	15	38.229	15	-6.76	66
4001			min	-21.538	15	-0.28	15	-0.036	76	-18.95	15	2.912	66	5.875	66	-43.992	15
4002		2	max	-3.314	66	0	105	0.018	100	-3.106	66	21.274	15	33.688	15	-6.325	66
4003			min	-21.581	15	-0.14	15	-0.018	76	-21.274	15	3.106	66	5.497	66	-38.765	15
4004		3	max	-3.317	66	0	104	0.003	15	-3.172	66	22.073	15	32.223	15	-6.185	66
4005			min	-21.624	15	0	72	0	77	-22.073	15	3.172	66	5.375	66	-37.08	15
4006		4	max	-3.321	66	0.14	13	0.018	102	-3.112	66	21.347	15	33.835	15	-6.339	66
4007			min	-21.668	15	0	75	-0.018	74	-21.347	15	3.112	66	5.509	66	-38.935	15
4008		5	max	-3.324	66	0.28	13	0.036	102	-2.924	66	19.096	15	38.524	15	-6.789	66
4009			min	-21.711	15	-0.001	75	-0.036	74	-19.096	15	2.924	66	5.899	66	-44.331	15
4010	M760	1	max	-3.158	68	0.28	15	0.036	72	-2.778	68	15.686	13	31.646	13	-6.449	68
4011			min	-17.828	13	-0.001	105	-0.036	104	-15.686	13	2.778	68	5.605	68	-36.416	13
4012		2	max	-3.161	68	0.14	15	0.018	72	-2.591	68	13.435	13	36.335	13	-6.899	68
4013			min	-17.871	13	0	105	-0.018	104	-13.435	13	2.591	68	5.995	68	-41.812	13
4014		3	max	-3.165	68	0	72	0.003	13	-2.53	68	12.709	13	37.947	13	-7.053	68
4015			min	-17.915	13	0	104	0	107	-12.709	13	2.53	68	6.13	68	-43.667	13
4016		4	max	-3.169	68	0	75	0.018	70	-2.597	68	13.508	13	36.483	13	-6.913	68
4017			min	-17.958	13	-0.14	13	-0.018	106	-13.508	13	2.597	68	6.008	68	-41.981	13
4018		5	max	-3.172	68	0.001	75	0.036	70	-2.79	68	15.832	13	31.941	13	-6.478	68
4019			min	-18.001	13	-0.28	13	-0.036	106	-15.832	13	2.79	68	5.629	68	-36.755	13
4020	M761	1	max	0.076	107	0.312	13	0.039	70	0.066	107	4.297	14	8.668	14	0.154	107
4021			min	-4.881	14	0.002	77	-0.038	106	-4.297	14	-0.066	107	-0.134	107	-9.975	14
4022		2	max	0.066	107	0.156	13	0.02	70	0.073	107	2.308	71	14.288	14	0.1	107
4023			min	-4.925	14	0.001	77	-0.019	106	-2.308	71	-0.073	107	-0.087	107	-16.441	14
4024		3	max	0.056	107	0	13	0.003	13	0.181	106	2.237	70	16.21	14	0.068	107
4025			min	-4.968	14	0	76	0	105	-2.237	70	-0.181	106	-0.059	107	-18.653	14
4026		4	max	0.046	107	-0.001	107	0.02	72	0.055	107	2.305	71	14.436	14	0.06	107
4027			min	-5.011	14	-0.156	15	-0.019	104	-2.305	71	-0.055	107	-0.052	107	-16.612	14
4028		5	max	0.036	107	-0.002	107	0.039	72	0.032	107	4.444	14	8.965	14	0.074	107
4029			min	-5.055	14	-0.312	15	-0.038	104	-4.444	14	-0.032	107	-0.064	107	-10.317	14
4030	M762	1	max	0.42	107	-0.002	77	0.039	102	0.369	107	3.434	14	6.927	14	0.857	107
4031			min	-3.9	14	-0.312	13	-0.038	74	-3.434	14	-0.369	107	-0.744	107	-7.971	14
4032		2	max	0.41	107	-0.001	77	0.02	102	0.345	107	6.219	14	4.072	71	0.871	107
4033			min	-3.943	14	-0.156	13	-0.019	74	-6.219	14	-0.345	107	-0.757	107	-4.686	71
4034		3	max	0.4	107	0	76	0.003	15	0.332	107	7.172	14	3.828	72	0.983	104
4035			min	-3.987	14	0	100	0	75	-7.172	14	-0.332	107	-0.854	104	-4.404	72
4036		4	max	0.39	107	0.156	15	0.02	100	0.328	107	6.292	14	4.066	71	0.831	107
4037			min	-4.03	14	0.001	107	-0.019	76	-6.292	14	-0.328	107	-0.722	107	-4.679	71
4038		5	max	0.379	107	0.312	15	0.039	100	0.334	107	3.581	14	7.224	14	0.776	107
4039			min	-4.074	14	0.002	107	-0.038	76	-3.581	14	-0.334	107	-0.675	107	-8.312	14
4040	M763	1	max	0.048	75	-0.002	105	0.039	70	0.042	75	4.488	15	9.055	15	0.097	75
4041			min	-5.099	15	-0.312	15	-0.038	106	-4.488	15	-0.042	75	-0.085	75	-10.42	15
4042		2	max	0.038	75	-0.001	105	0.02	70	0.018	75	7.274	15	4.597	103	0.112	75
4043			min	-5.142	15	-0.156	15	-0.019	106	-7.274	15	-0.018	75	-0.097	75	-5.29	103
4044		3	max	0.028	75	0	104	0.003	13	0.005	75	8.227	15	4.245	103	0.103	75
4045			min	-5.186	15	0	15	0	107	-8.227	15	-0.005	75	-0.09	75	-4.884	103
4046		4	max	0.018	75	0.156	13	0.02	72	0.001	75	7.347	15	4.591	103	0.072	75
4047			min	-5.229	15	0.001	75	-0.019	104	-7.347	15	-0.001	75	-0.062	75	-5.283	103
4048		5	max	0.008	75	0.312	13	0.039	72	0.007	75	4.635	15	9.351	15	0.017	75
4049			min	-5.273	15	0.002	75	-0.038	104	-4.635	15	-0.007	75	-0.015	75	-10.761	15
4050	M764	1	max	0.467	75	0.312	15	0.039	102	0.41	75	2.967	13	5.985	13	0.952	75
4051			min	-3.369	13	0.002	105	-0.038	74	-2.967	13	-0.41	75	-0.828	75	-6.887	13
4052		2	max	0.457	75	0.156	15	0.02	102	0.416	75	1.977	103	11.604	13	0.898	75
4053			min	-3.413	13	0.001	105	-0.019	74	-1.977	103	-0.416	75	-0.78	75	-13.353	13
4054		3	max	0.447	75	0	15	0.003	15	0.844	19	1.803	103	13.527	13	0.866	75

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4055			min	-3.456	13	0	104	0	77	-1.803	103	-0.844	19	-0.753	75	-15.566	13
4056		4	max	0.436	75	-0.001	75	0.02	100	0.399	75	1.974	103	11.753	13	0.857	75
4057			min	-3.499	13	-0.156	13	-0.019	76	-1.974	103	-0.399	75	-0.745	75	-13.524	13
4058		5	max	0.426	75	-0.002	75	0.039	100	0.376	75	3.114	13	6.282	13	0.872	75
4059			min	-3.543	13	-0.312	13	-0.038	76	-3.114	13	-0.376	75	-0.758	75	-7.229	13
4060	M765	1	max	0.402	72	2.556	15	0.935	71	0.548	72	0.385	74	0	107	0	107
4061			min	-0.282	74	0.583	99	-0.935	103	-0.385	74	-0.548	72	0	12	0	12
4062		2	max	0.406	72	2.475	15	0.928	71	5.685	15	-0.952	96	13.985	71	13.983	103
4063			min	-0.287	74	0.57	99	-0.928	103	0.952	96	-5.685	15	-13.983	103	-13.985	71
4064		3	max	1.567	72	2.393	15	0.921	71	11.314	72	-2.152	96	27.865	71	27.862	103
4065			min	-1.448	74	-2.129	103	-0.822	43	2.152	96	-11.314	72	-27.862	103	-27.865	71
4066		4	max	1.572	72	-0.57	99	0.928	103	6.753	72	-0.646	96	13.985	71	13.983	103
4067			min	-1.453	74	-2.475	15	-0.928	71	0.646	96	-6.753	72	-13.983	103	-13.985	71
4068		5	max	1.577	72	-0.583	99	0.935	103	2.153	72	1.991	74	0	107	0	107
4069			min	-1.458	74	-2.556	15	-0.935	71	-1.991	74	-2.153	72	0	12	0	12
4070	M766	1	max	0.48	76	2.637	15	0.963	71	0.656	76	0.598	74	0	107	0	107
4071			min	-0.438	74	0.602	97	-0.963	103	-0.598	74	-0.656	76	0	12	0	12
4072		2	max	0.485	76	2.556	15	0.956	71	5.592	15	-0.922	66	14.404	71	14.408	103
4073			min	-0.443	74	0.59	97	-0.956	103	0.922	66	-5.592	15	-14.408	103	-14.404	71
4074		3	max	1.686	76	2.475	15	0.949	103	11.785	72	-2.163	66	28.704	71	28.712	103
4075			min	-1.643	74	-2.203	103	-0.118	86	2.163	66	-11.785	72	-28.712	103	-28.704	71
4076		4	max	1.691	76	-0.59	97	0.956	103	7.065	72	-0.56	74	14.404	71	14.408	103
4077			min	-1.648	74	-2.556	15	-0.956	71	0.56	74	-7.065	72	-14.408	103	-14.404	71
4078		5	max	1.696	76	-0.602	97	0.963	103	2.315	76	2.257	74	0	107	0	107
4079			min	-1.653	74	-2.637	15	-0.963	71	-2.257	74	-2.315	76	0	12	0	12
4080	M768	1	max	0.181	102	0.416	43	-0.072	66	0.905	45	8.527	16	17.202	14	2.101	107
4081			min	-0.181	44	-0.416	75	-1.273	15	-8.527	16	-0.905	45	-1.826	107	-19.795	14
4082		2	max	0.178	102	0.411	43	-0.068	66	0.527	75	4.952	16	9.991	14	1.224	107
4083			min	-0.178	44	-0.411	75	-1.228	15	-4.952	16	-0.527	75	-1.064	107	-11.497	14
4084		3	max	0.176	102	0.407	43	-0.064	66	0.154	105	1.508	16	3.042	14	0.357	107
4085			min	-0.176	44	-0.407	75	-1.183	15	-1.508	16	-0.154	105	-0.31	107	-3.5	14
4086		4	max	0.002	46	0.007	69	-0.003	47	0.004	67	0.065	16	0.131	14	0.01	99
4087			min	-0.002	104	-0.007	97	-0.045	16	-0.065	16	-0.004	67	-0.008	99	-0.151	14
4088		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4089			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
4090	M769	1	max	0.174	38	0.316	73	-0.084	66	0.549	75	5.698	16	11.496	14	1.276	107
4091			min	-0.174	32	-0.316	71	-1.067	15	-5.698	16	-0.549	75	-1.109	107	-13.228	14
4092		2	max	0.174	38	0.313	73	-0.081	66	0.331	105	3.418	16	6.895	14	0.769	107
4093			min	-0.174	32	-0.313	71	-1.033	15	-3.418	16	-0.331	105	-0.668	107	-7.934	14
4094		3	max	0.174	38	0.309	73	-0.078	66	0.115	105	1.212	16	2.445	14	0.268	107
4095			min	-0.174	32	-0.309	71	-0.999	15	-1.212	16	-0.115	105	-0.233	107	-2.814	14
4096		4	max	0.002	106	0.005	69	-0.002	47	0.002	67	0.038	16	0.076	14	0.006	69
4097			min	-0.002	74	-0.005	93	-0.034	13	-0.038	16	-0.002	67	-0.005	69	-0.087	14
4098		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4099			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
4100	M771	1	max	0.249	102	0.575	73	-0.095	66	1.254	105	11.511	16	23.223	14	2.911	47
4101			min	-0.249	74	-0.575	101	-1.709	15	-11.511	16	-1.254	105	-2.53	47	-26.724	14
4102		2	max	0.247	102	0.57	73	-0.091	66	0.731	105	6.693	16	13.503	14	1.696	47
4103			min	-0.247	74	-0.57	101	-1.664	15	-6.693	16	-0.731	105	-1.474	47	-15.538	14
4104		3	max	0.245	102	0.565	73	-0.087	66	0.212	45	2.005	16	4.045	14	0.492	47
4105			min	-0.245	74	-0.565	101	-1.619	15	-2.005	16	-0.212	45	-0.427	47	-4.655	14
4106		4	max	0.002	72	0.007	35	-0.003	77	0.004	67	0.065	16	0.131	14	0.01	39
4107			min	-0.002	100	-0.007	93	-0.045	14	-0.065	16	-0.004	67	-0.008	39	-0.151	14
4108		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4109			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4110	M776	1	max	0.181	46	0.416	43	-0.072	66	0.905	45	8.527	16	17.202	14	2.101	107
4111			min	-0.181	40	-0.416	75	-1.273	15	-8.527	16	-0.905	45	-1.826	107	-19.795	14
4112		2	max	0.178	46	0.411	43	-0.068	66	0.527	45	4.952	16	9.991	14	1.224	107
4113			min	-0.178	40	-0.411	75	-1.228	15	-4.952	16	-0.527	45	-1.064	107	-11.497	14
4114		3	max	0.176	46	0.407	43	-0.064	66	0.154	105	1.508	16	3.042	14	0.357	47
4115			min	-0.176	40	-0.407	75	-1.183	15	-1.508	16	-0.154	105	-0.31	47	-3.5	14
4116		4	max	0.002	102	0.007	35	-0.003	107	0.004	67	0.065	16	0.131	14	0.01	39
4117			min	-0.002	74	-0.007	63	-0.045	16	-0.065	16	-0.004	67	-0.008	39	-0.151	14
4118		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4119			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
4120	M777	1	max	0.126	68	0.233	103	-0.064	66	0.404	75	4.299	16	8.674	14	0.938	107
4121			min	-0.126	96	-0.233	71	-0.812	15	-4.299	16	-0.404	75	-0.815	107	-9.981	14
4122		2	max	0.126	68	0.23	103	-0.061	66	0.243	75	2.572	16	5.19	14	0.565	47
4123			min	-0.126	96	-0.23	71	-0.778	15	-2.572	16	-0.243	75	-0.491	47	-5.972	14
4124		3	max	0.126	68	0.226	103	-0.058	66	0.085	105	0.921	16	1.857	14	0.197	47
4125			min	-0.126	96	-0.226	71	-0.743	15	-0.921	16	-0.085	105	-0.171	47	-2.137	14
4126		4	max	0.002	76	0.005	35	-0.002	77	0.002	97	0.038	16	0.076	14	0.006	39
4127			min	-0.002	74	-0.005	63	-0.034	13	-0.038	16	-0.002	97	-0.005	39	-0.087	14
4128		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4129			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
4130	M778	1	max	0.126	68	0.233	103	-0.064	66	0.404	105	4.31	16	8.696	14	0.938	47
4131			min	-0.126	96	-0.233	105	-0.814	15	-4.31	16	-0.404	105	-0.815	47	-10.006	14
4132		2	max	0.126	68	0.23	103	-0.062	66	0.243	45	2.579	16	5.202	14	0.565	47
4133			min	-0.126	96	-0.23	105	-0.78	15	-2.579	16	-0.243	45	-0.491	47	-5.986	14
4134		3	max	0.126	68	0.226	103	-0.059	66	0.085	45	0.923	16	1.863	14	0.197	47
4135			min	-0.126	96	-0.226	105	-0.745	15	-0.923	16	-0.085	45	-0.171	47	-2.144	14
4136		4	max	0.002	42	0.005	69	-0.002	107	0.002	97	0.038	16	0.077	14	0.006	39
4137			min	-0.002	40	-0.005	63	-0.035	14	-0.038	16	-0.002	97	-0.005	39	-0.089	14
4138		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4139			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
4140	M779	1	max	0.174	68	0.316	77	-0.085	66	0.549	105	5.709	16	11.518	14	1.276	107
4141			min	-0.174	66	-0.316	71	-1.07	15	-5.709	16	-0.549	105	-1.109	107	-13.254	14
4142		2	max	0.174	68	0.313	77	-0.082	66	0.331	105	3.424	16	6.907	14	0.769	107
4143			min	-0.174	66	-0.313	71	-1.035	15	-3.424	16	-0.331	105	-0.668	107	-7.948	14
4144		3	max	0.174	68	0.309	77	-0.079	66	0.115	45	1.215	16	2.451	14	0.268	77
4145			min	-0.174	66	-0.309	71	-1	15	-1.215	16	-0.115	45	-0.233	77	-2.82	14
4146		4	max	0.002	106	0.005	35	-0.002	77	0.002	97	0.038	16	0.077	14	0.006	69
4147			min	-0.002	100	-0.005	33	-0.035	15	-0.038	16	-0.002	97	-0.005	69	-0.089	14
4148		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4149			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
4150	M780	1	max	0.126	38	0.233	103	-0.064	66	0.404	45	4.299	16	8.674	14	0.938	47
4151			min	-0.126	62	-0.233	41	-0.812	15	-4.299	16	-0.404	45	-0.815	47	-9.981	14
4152		2	max	0.126	38	0.23	103	-0.061	66	0.243	45	2.572	16	5.19	14	0.565	47
4153			min	-0.126	62	-0.23	41	-0.778	15	-2.572	16	-0.243	45	-0.491	47	-5.972	14
4154		3	max	0.126	38	0.226	103	-0.059	66	0.085	45	0.921	16	1.857	14	0.197	77
4155			min	-0.126	62	-0.226	41	-0.743	15	-0.921	16	-0.085	45	-0.171	77	-2.137	14
4156		4	max	0.002	46	0.005	65	-0.002	47	0.002	97	0.038	16	0.076	14	0.006	99
4157			min	-0.002	44	-0.005	93	-0.034	16	-0.038	16	-0.002	97	-0.005	99	-0.087	14
4158		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4159			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
4160	M781	1	max	0.126	38	0.233	107	-0.065	69	0.404	45	4.31	16	8.696	14	0.938	107
4161			min	-0.126	36	-0.233	71	-0.814	15	-4.31	16	-0.404	45	-0.815	107	-10.006	14
4162		2	max	0.126	38	0.23	107	-0.062	69	0.243	105	2.579	16	5.202	14	0.565	47
4163			min	-0.126	36	-0.23	71	-0.78	15	-2.579	16	-0.243	105	-0.491	47	-5.986	14
4164		3	max	0.126	38	0.226	107	-0.059	69	0.085	105	0.923	16	1.863	14	0.197	77

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4165			min	-0.126	36	-0.226	71	-0.745	15	-0.923	16	-0.085	105	-0.171	77	-2.144	14
4166		4	max	0.002	102	0.005	69	-0.002	47	0.002	37	0.038	16	0.077	14	0.006	99
4167			min	-0.002	70	-0.005	37	-0.035	15	-0.038	16	-0.002	37	-0.005	99	-0.089	14
4168		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4169			min	0	12	0	72	0	72	0	12	0	12	0	12	0	12
4170	M782	1	max	1.026	102	0.248	14	0.042	47	0	107	0	107	0	107	0	107
4171			min	-0.848	74	-0.015	46	-0.042	75	0	12	0	12	0	12	0	12
4172		2	max	1.012	102	0.124	16	0.021	47	2.379	14	0.23	47	4.799	16	0.535	105
4173			min	-0.847	74	-0.008	46	-0.021	75	-0.23	47	-2.379	14	-0.465	75	-5.522	13
4174		3	max	0.998	102	0	107	0	107	3.171	14	0.307	47	6.398	16	0.713	105
4175			min	-0.847	74	0	12	0	12	-0.307	47	-3.171	14	-0.619	75	-7.363	14
4176		4	max	0.984	102	0.008	106	0.021	105	2.379	16	0.23	47	4.799	16	0.535	105
4177			min	-0.846	74	-0.124	13	-0.021	43	-0.23	47	-2.379	14	-0.465	75	-5.522	14
4178		5	max	0.97	102	0.015	106	0.042	105	0	107	0	107	0	107	0	107
4179			min	-0.845	74	-0.248	13	-0.042	73	0	12	0	12	0	12	0	12
4180	M783	1	max	1.026	100	0.248	16	0.042	101	0	107	0	107	0	107	0	107
4181			min	-0.848	46	-0.015	74	-0.042	73	0	12	0	12	0	12	0	12
4182		2	max	1.012	100	0.124	16	0.021	45	2.379	16	0.23	45	4.799	16	0.535	107
4183			min	-0.847	46	-0.008	74	-0.021	73	-0.23	45	-2.379	14	-0.465	47	-5.522	13
4184		3	max	0.998	100	0	107	0	107	3.171	16	0.307	45	6.398	16	0.713	107
4185			min	-0.847	46	0	12	0	12	-0.307	45	-3.171	13	-0.619	47	-7.363	13
4186		4	max	0.984	100	0.008	104	0.021	107	2.379	16	0.23	45	4.799	16	0.535	107
4187			min	-0.846	46	-0.124	15	-0.021	41	-0.23	45	-2.379	14	-0.465	47	-5.522	13
4188		5	max	0.97	100	0.015	104	0.042	107	0	107	0	107	0	107	0	107
4189			min	-0.845	46	-0.248	13	-0.042	41	0	12	0	12	0	12	0	12
4190	M784	1	max	1.026	102	0.248	14	0.042	107	0	107	0	107	0	107	0	107
4191			min	-0.848	44	-0.015	46	-0.042	41	0	12	0	12	0	12	0	12
4192		2	max	1.012	102	0.124	14	0.021	107	2.379	15	0.23	107	4.799	16	0.535	45
4193			min	-0.847	44	-0.008	46	-0.021	41	-0.23	47	-2.379	13	-0.465	45	-5.522	13
4194		3	max	0.998	102	0	107	0	107	3.171	15	0.307	107	6.398	16	0.713	45
4195			min	-0.847	44	0	12	0	12	-0.307	47	-3.171	13	-0.619	45	-7.363	13
4196		4	max	0.984	102	0.008	106	0.021	105	2.379	14	0.23	107	4.799	16	0.535	45
4197			min	-0.846	44	-0.124	13	-0.021	73	-0.23	47	-2.379	14	-0.465	45	-5.522	13
4198		5	max	0.97	102	0.015	106	0.042	105	0	107	0	107	0	107	0	107
4199			min	-0.845	44	-0.248	15	-0.042	73	0	12	0	12	0	12	0	12
4200	M785	1	max	1.026	100	0.248	13	0.042	75	0	107	0	107	0	107	0	107
4201			min	-0.848	46	-0.015	44	-0.042	73	0	12	0	12	0	12	0	12
4202		2	max	1.012	100	0.124	13	0.021	101	2.379	13	0.23	105	4.799	14	0.535	47
4203			min	-0.847	46	-0.008	44	-0.021	73	-0.23	75	-2.379	13	-0.465	47	-5.522	13
4204		3	max	0.998	100	0	107	0	107	3.171	13	0.307	105	6.398	13	0.713	47
4205			min	-0.847	46	0	12	0	12	-0.307	75	-3.171	13	-0.619	47	-7.363	13
4206		4	max	0.984	100	0.008	104	0.021	107	2.379	13	0.23	105	4.799	13	0.535	47
4207			min	-0.846	46	-0.124	15	-0.021	45	-0.23	75	-2.379	13	-0.465	47	-5.522	13
4208		5	max	0.97	100	0.015	104	0.042	103	0	107	0	107	0	107	0	107
4209			min	-0.845	46	-0.248	15	-0.042	45	0	12	0	12	0	12	0	12
4210	M485	1	max	0.12	102	0.277	103	-0.052	98	0.6	45	5.896	16	11.894	14	1.392	107
4211			min	-0.12	104	-0.277	45	-0.889	13	-5.896	16	-0.6	45	-1.21	107	-13.687	14
4212		2	max	0.118	102	0.272	103	-0.048	98	0.349	105	3.417	16	6.894	14	0.811	47
4213			min	-0.118	104	-0.272	45	-0.844	13	-3.417	16	-0.349	105	-0.704	47	-7.934	14
4214		3	max	0.116	102	0.268	103	-0.044	98	0.103	105	1.069	16	2.157	14	0.238	47
4215			min	-0.116	104	-0.268	45	-0.799	13	-1.069	16	-0.103	105	-0.207	47	-2.482	14
4216		4	max	0.002	106	0.007	65	-0.003	77	0.004	67	0.065	16	0.131	14	0.01	39
4217			min	-0.002	40	-0.007	97	-0.045	13	-0.065	16	-0.004	67	-0.008	39	-0.151	14
4218		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4219			min	0	12	0	42	0	76	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4220	M497	1	max	0.082	38	0.156	107	-0.046	66	0.269	75	3.005	16	6.062	14	0.624	47
4221			min	-0.082	62	-0.156	71	-0.576	15	-3.005	16	-0.269	75	-0.542	47	-6.976	14
4222		2	max	0.082	38	0.153	107	-0.043	66	0.162	75	1.79	16	3.611	14	0.375	107
4223			min	-0.082	62	-0.153	71	-0.541	15	-1.79	16	-0.162	75	-0.326	107	-4.156	14
4224		3	max	0.082	38	0.149	107	-0.04	66	0.057	105	0.652	16	1.314	14	0.132	107
4225			min	-0.082	62	-0.149	71	-0.507	15	-0.652	16	-0.057	105	-0.115	107	-1.512	14
4226		4	max	0.002	76	0.005	65	-0.002	47	0.002	97	0.038	16	0.077	14	0.006	99
4227			min	-0.002	70	-0.005	63	-0.035	14	-0.038	16	-0.002	97	-0.005	99	-0.089	14
4228		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4229			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
4230	M498	1	max	0.082	38	0.156	47	-0.046	66	0.269	75	2.994	16	6.04	14	0.624	107
4231			min	-0.082	62	-0.156	41	-0.574	15	-2.994	16	-0.269	75	-0.542	107	-6.951	14
4232		2	max	0.082	38	0.153	47	-0.043	66	0.162	75	1.784	16	3.599	14	0.375	107
4233			min	-0.082	62	-0.153	41	-0.539	15	-1.784	16	-0.162	75	-0.326	107	-4.141	14
4234		3	max	0.082	38	0.149	47	-0.04	66	0.057	75	0.649	16	1.309	14	0.132	107
4235			min	-0.082	62	-0.149	41	-0.505	15	-0.649	16	-0.057	75	-0.115	107	-1.506	14
4236		4	max	0.002	46	0.005	69	-0.002	47	0.002	37	0.038	16	0.076	14	0.006	99
4237			min	-0.002	70	-0.005	97	-0.034	16	-0.038	16	-0.002	37	-0.005	99	-0.087	14
4238		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4239			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
4240	M786	1	max	0.12	106	0.277	107	-0.052	98	0.6	75	5.896	16	11.894	14	1.392	77
4241			min	-0.12	74	-0.277	45	-0.889	13	-5.896	16	-0.6	75	-1.21	77	-13.687	14
4242		2	max	0.118	106	0.272	107	-0.048	98	0.349	75	3.417	16	6.894	14	0.811	77
4243			min	-0.118	74	-0.272	45	-0.844	13	-3.417	16	-0.349	75	-0.704	77	-7.934	14
4244		3	max	0.116	106	0.268	107	-0.044	98	0.103	75	1.069	16	2.157	14	0.238	77
4245			min	-0.116	74	-0.268	45	-0.799	13	-1.069	16	-0.103	75	-0.207	77	-2.482	14
4246		4	max	0.002	76	0.007	65	-0.003	77	0.004	67	0.065	16	0.131	14	0.01	99
4247			min	-0.002	74	-0.007	97	-0.045	16	-0.065	16	-0.004	67	-0.008	99	-0.151	14
4248		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4249			min	0	12	0	12	0	76	0	12	0	12	0	12	0	12
4250	M787	1	max	0.082	38	0.156	47	-0.046	66	0.269	105	2.994	16	6.04	14	0.624	47
4251			min	-0.082	96	-0.156	105	-0.574	15	-2.994	16	-0.269	105	-0.542	47	-6.951	14
4252		2	max	0.082	38	0.153	47	-0.043	66	0.162	105	1.784	16	3.599	14	0.375	77
4253			min	-0.082	96	-0.153	105	-0.539	15	-1.784	16	-0.162	105	-0.326	77	-4.141	14
4254		3	max	0.082	38	0.149	47	-0.04	66	0.057	105	0.649	16	1.309	14	0.132	77
4255			min	-0.082	96	-0.149	105	-0.505	15	-0.649	16	-0.057	105	-0.115	77	-1.506	14
4256		4	max	0.002	46	0.005	95	-0.002	45	0.002	67	0.038	16	0.076	14	0.006	99
4257			min	-0.002	70	-0.005	93	-0.034	14	-0.038	16	-0.002	67	-0.005	99	-0.087	14
4258		5	max	0	107	0	106	0	107	0	107	0	107	0	107	0	107
4259			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
4260	M788	1	max	0.082	34	0.156	47	-0.046	66	0.269	45	3.005	16	6.062	14	0.624	77
4261			min	-0.082	66	-0.156	105	-0.576	15	-3.005	16	-0.269	45	-0.542	77	-6.976	14
4262		2	max	0.082	34	0.153	47	-0.043	66	0.162	75	1.79	16	3.611	14	0.375	77
4263			min	-0.082	66	-0.153	105	-0.541	15	-1.79	16	-0.162	75	-0.326	77	-4.156	14
4264		3	max	0.082	34	0.149	47	-0.04	66	0.057	75	0.652	16	1.314	14	0.132	77
4265			min	-0.082	66	-0.149	105	-0.507	15	-0.652	16	-0.057	75	-0.115	77	-1.512	14
4266		4	max	0.002	76	0.005	35	-0.002	77	0.002	67	0.038	16	0.077	14	0.006	69
4267			min	-0.002	70	-0.005	67	-0.035	14	-0.038	16	-0.002	67	-0.005	69	-0.089	14
4268		5	max	0	107	0	70	0	107	0	107	0	107	0	107	0	107
4269			min	0	12	0	12	0	72	0	12	0	12	0	12	0	12
4270	M698	1	max	0.116	106	0.267	43	-0.05	98	0.578	105	5.719	16	11.538	14	1.342	107
4271			min	-0.116	104	-0.267	71	-0.863	13	-5.719	16	-0.578	105	-1.166	107	-13.277	14
4272		2	max	0.114	106	0.262	43	-0.047	98	0.336	105	3.314	16	6.687	14	0.781	77
4273			min	-0.114	104	-0.262	71	-0.818	13	-3.314	16	-0.336	105	-0.679	77	-7.694	14
4274		3	max	0.112	106	0.258	43	-0.043	98	0.099	105	1.04	16	2.098	14	0.23	77

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4275			min	-0.112	104	-0.258	71	-0.773	13	-1.04	16	-0.099	105	-0.2	77	-2.414	14
4276		4	max	0.002	42	0.007	99	-0.003	47	0.004	67	0.065	16	0.131	14	0.01	99
4277			min	-0.002	40	-0.007	63	-0.045	15	-0.065	16	-0.004	67	-0.008	99	-0.151	14
4278		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4279			min	0	12	0	42	0	76	0	12	0	12	0	12	0	12
4280	M699	1	max	0.079	94	0.15	43	-0.044	66	0.258	105	2.9	16	5.852	14	0.6	107
4281			min	-0.079	36	-0.15	105	-0.557	15	-2.9	16	-0.258	105	-0.521	107	-6.734	14
4282		2	max	0.079	94	0.147	43	-0.041	66	0.155	105	1.727	16	3.485	14	0.36	107
4283			min	-0.079	36	-0.147	105	-0.522	15	-1.727	16	-0.155	105	-0.313	107	-4.01	14
4284		3	max	0.079	94	0.143	43	-0.039	66	0.055	75	0.629	16	1.27	14	0.127	47
4285			min	-0.079	36	-0.143	105	-0.488	15	-0.629	16	-0.055	75	-0.11	47	-1.461	14
4286		4	max	0.002	102	0.005	65	-0.002	45	0.002	97	0.038	16	0.076	14	0.006	39
4287			min	-0.002	70	-0.005	97	-0.034	16	-0.038	16	-0.002	97	-0.005	39	-0.087	14
4288		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4289			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
4290	M700	1	max	0.079	68	0.15	43	-0.044	66	0.258	45	2.911	16	5.874	14	0.6	107
4291			min	-0.079	66	-0.15	71	-0.559	15	-2.911	16	-0.258	45	-0.521	107	-6.759	14
4292		2	max	0.079	68	0.147	43	-0.042	66	0.155	105	1.734	16	3.497	14	0.36	107
4293			min	-0.079	66	-0.147	71	-0.524	15	-1.734	16	-0.155	105	-0.313	107	-4.024	14
4294		3	max	0.079	68	0.143	43	-0.039	66	0.055	105	0.632	16	1.275	14	0.127	107
4295			min	-0.079	66	-0.143	71	-0.49	15	-0.632	16	-0.055	105	-0.11	107	-1.467	14
4296		4	max	0.002	106	0.005	69	-0.002	77	0.002	67	0.038	16	0.077	14	0.006	69
4297			min	-0.002	70	-0.005	63	-0.035	16	-0.038	16	-0.002	67	-0.005	69	-0.089	14
4298		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4299			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
4300	M468	1	max	0.116	76	0.267	103	-0.05	98	0.578	45	5.719	16	11.538	14	1.342	77
4301			min	-0.116	44	-0.267	41	-0.863	13	-5.719	16	-0.578	45	-1.166	77	-13.277	14
4302		2	max	0.114	76	0.262	103	-0.047	98	0.336	105	3.314	16	6.687	14	0.781	77
4303			min	-0.114	44	-0.262	41	-0.818	13	-3.314	16	-0.336	105	-0.679	77	-7.694	14
4304		3	max	0.112	76	0.258	103	-0.043	98	0.099	105	1.04	16	2.098	14	0.23	107
4305			min	-0.112	44	-0.258	41	-0.773	13	-1.04	16	-0.099	105	-0.2	107	-2.414	14
4306		4	max	0.002	106	0.007	95	-0.003	45	0.004	67	0.065	16	0.131	14	0.01	69
4307			min	-0.002	100	-0.007	63	-0.045	14	-0.065	16	-0.004	67	-0.008	69	-0.151	14
4308		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4309			min	0	12	0	102	0	76	0	12	0	12	0	12	0	12
4310	M469	1	max	0.079	38	0.15	43	-0.044	66	0.258	45	2.9	16	5.852	14	0.6	107
4311			min	-0.079	96	-0.15	41	-0.557	15	-2.9	16	-0.258	45	-0.521	107	-6.734	14
4312		2	max	0.079	38	0.147	43	-0.041	66	0.155	75	1.727	16	3.485	14	0.36	107
4313			min	-0.079	96	-0.147	41	-0.522	15	-1.727	16	-0.155	75	-0.313	107	-4.01	14
4314		3	max	0.079	38	0.143	43	-0.039	66	0.055	75	0.629	16	1.27	14	0.127	107
4315			min	-0.079	96	-0.143	41	-0.488	15	-0.629	16	-0.055	75	-0.11	107	-1.461	14
4316		4	max	0.002	46	0.005	99	-0.002	45	0.002	97	0.038	16	0.076	14	0.006	39
4317			min	-0.002	70	-0.005	33	-0.034	15	-0.038	16	-0.002	97	-0.005	39	-0.087	14
4318		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4319			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12
4320	M506	1	max	0.079	98	0.15	73	-0.044	66	0.258	45	2.911	16	5.874	14	0.6	107
4321			min	-0.079	32	-0.15	41	-0.559	15	-2.911	16	-0.258	45	-0.521	107	-6.759	14
4322		2	max	0.079	98	0.147	73	-0.041	66	0.155	45	1.734	16	3.497	14	0.36	107
4323			min	-0.079	32	-0.147	41	-0.524	15	-1.734	16	-0.155	45	-0.313	107	-4.024	14
4324		3	max	0.079	98	0.143	73	-0.039	66	0.055	75	0.632	16	1.275	14	0.127	107
4325			min	-0.079	32	-0.143	41	-0.49	15	-0.632	16	-0.055	75	-0.11	107	-1.467	14
4326		4	max	0.002	72	0.005	69	-0.002	45	0.002	67	0.038	16	0.077	14	0.006	69
4327			min	-0.002	100	-0.005	63	-0.035	14	-0.038	16	-0.002	67	-0.005	69	-0.089	14
4328		5	max	0	107	0	107	0	70	0	107	0	107	0	107	0	107
4329			min	0	12	0	102	0	72	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4330	M767	1	max	0.006	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4331			min	0.003	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4332		2	max	0.005	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4333			min	0.003	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4334		3	max	0.005	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4335			min	0.003	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4336		4	max	0.005	86	0	100	0	103	0	102	0	100	0	101	0	103
4337			min	0.003	44	0	42	0	41	0	40	0	42	0	43	0	41
4338		5	max	0.004	86	0	107	0	107	0	107	0	107	0	107	0	107
4339			min	0.002	44	0	12	0	12	0	12	0	12	0	12	0	12
4340	M770	1	max	0.004	86	0.014	100	0.018	103	0.034	102	0.034	100	0.042	71	0.042	103
4341			min	0.002	44	-0.014	42	-0.018	71	-0.034	40	-0.034	42	-0.042	103	-0.042	71
4342		2	max	0.004	86	0.014	100	0.017	103	0.025	102	0.025	100	0.031	71	0.031	103
4343			min	0.002	44	-0.014	42	-0.017	71	-0.025	40	-0.025	42	-0.031	103	-0.031	71
4344		3	max	0.004	86	0.013	100	0.017	103	0.016	102	0.016	100	0.021	71	0.021	103
4345			min	0.002	44	-0.013	42	-0.017	71	-0.016	40	-0.016	42	-0.021	103	-0.021	71
4346		4	max	0.003	86	0.013	100	0.016	103	0.008	102	0.008	100	0.01	71	0.01	103
4347			min	0.002	44	-0.013	42	-0.016	71	-0.008	40	-0.008	42	-0.01	103	-0.01	71
4348		5	max	0.003	86	0.012	100	0.016	103	0	107	0	107	0	107	0	107
4349			min	0.002	44	-0.012	42	-0.016	71	0	12	0	12	0	12	0	12
4350	M772	1	max	0.003	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4351			min	0.002	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4352		2	max	0.003	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4353			min	0.002	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4354		3	max	0.003	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4355			min	0.001	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4356		4	max	0.002	86	0	100	0	103	0	102	0	100	0	101	0	103
4357			min	0.001	44	0	42	0	41	0	40	0	42	0	43	0	41
4358		5	max	0.002	86	0	107	0	107	0	107	0	107	0	107	0	107
4359			min	0.001	44	0	12	0	12	0	12	0	12	0	12	0	12
4360	M773	1	max	0.003	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4361			min	0.002	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4362		2	max	0.003	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4363			min	0.002	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4364		3	max	0.003	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4365			min	0.001	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4366		4	max	0.002	86	0	100	0	103	0	102	0	100	0	101	0	103
4367			min	0.001	44	0	42	0	41	0	40	0	42	0	43	0	41
4368		5	max	0.002	86	0	107	0	107	0	107	0	107	0	107	0	107
4369			min	0.001	44	0	12	0	12	0	12	0	12	0	12	0	12
4370	M774	1	max	0.001	86	0.008	100	0.027	103	0.018	102	0.018	100	0.066	71	0.066	103
4371			min	0.001	44	-0.008	42	-0.027	71	-0.018	40	-0.018	42	-0.066	103	-0.066	71
4372		2	max	0.001	86	0.007	100	0.026	103	0.013	102	0.013	100	0.049	71	0.049	103
4373			min	0.001	44	-0.007	42	-0.026	71	-0.013	40	-0.013	42	-0.049	103	-0.049	71
4374		3	max	0.001	86	0.007	100	0.026	103	0.008	102	0.008	100	0.032	71	0.032	103
4375			min	0	44	-0.007	42	-0.026	71	-0.008	40	-0.008	42	-0.032	103	-0.032	71
4376		4	max	0	86	0.007	100	0.025	103	0.004	102	0.004	100	0.016	71	0.016	103
4377			min	0	44	-0.007	42	-0.025	71	-0.004	40	-0.004	42	-0.016	103	-0.016	71
4378		5	max	0	107	0.006	100	0.025	103	0	107	0	107	0	107	0	107
4379			min	0	12	-0.006	42	-0.025	71	0	12	0	12	0	12	0	12
4380	M775	1	max	0.003	86	0.018	56	0.002	103	0.045	86	0.045	56	0.002	101	0.002	103
4381			min	0.002	44	-0.018	86	-0.002	41	-0.045	56	-0.045	86	-0.002	43	-0.002	41
4382		2	max	0.003	86	0.018	56	0.001	103	0.034	86	0.034	56	0.001	101	0.001	103
4383			min	0.001	44	-0.018	86	-0.001	41	-0.034	56	-0.034	86	-0.001	43	-0.001	41
4384		3	max	0.002	86	0.018	56	0.001	103	0.022	86	0.022	56	0.001	101	0.001	103

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4385			min	0.001	44	-0.018	86	-0.001	41	-0.022	56	-0.022	86	-0.001	43	-0.001	41
4386		4	max	0.002	86	0.018	56	0	103	0.011	86	0.011	56	0	101	0	103
4387			min	0.001	44	-0.018	86	0	41	-0.011	56	-0.011	86	0	43	0	41
4388		5	max	0.002	86	0.018	56	0	107	0	107	0	107	0	107	0	107
4389			min	0.001	44	-0.018	86	0	12	0	12	0	12	0	12	0	12
4390	M636	1	max	0.042	97	0.362	16	0.095	102	0	107	0	107	0	107	0	107
4391			min	-0.042	99	0.087	97	-0.095	70	0	12	0	12	0	12	0	12
4392		2	max	0.042	97	0.295	16	0.088	102	0.597	16	-0.147	97	1.535	102	1.535	70
4393			min	-0.042	99	0.076	97	-0.088	70	0.147	97	-0.597	16	-1.535	70	-1.535	102
4394		3	max	0.079	73	-0.01	69	0.01	70	1.054	16	-0.27	97	2.896	102	2.896	70
4395			min	-0.079	71	-0.039	14	-0.01	102	0.27	97	-1.054	16	-2.896	70	-2.896	102
4396		4	max	0.084	73	-0.021	69	0.018	70	0.923	16	-0.242	97	2.661	102	2.661	70
4397			min	-0.084	71	-0.106	14	-0.018	102	0.242	97	-0.923	16	-2.661	70	-2.661	102
4398		5	max	0.179	73	-0.145	97	0.169	70	0	107	0	107	0	107	0	107
4399			min	-0.179	71	-0.562	16	-0.169	102	0	12	0	12	0	12	0	12
4400	M637	1	max	0.179	71	0.562	14	0.169	102	0	107	0	107	0	107	0	107
4401			min	-0.179	73	0.145	99	-0.169	70	0	12	0	12	0	12	0	12
4402		2	max	0.084	71	0.106	16	0.018	102	0.923	14	-0.242	99	2.661	102	2.661	70
4403			min	-0.084	73	0.021	67	-0.018	70	0.242	99	-0.923	14	-2.661	70	-2.661	102
4404		3	max	0.079	71	0.039	16	0.01	102	1.054	14	-0.27	99	2.896	102	2.896	70
4405			min	-0.079	73	0.01	67	-0.01	70	0.27	99	-1.054	14	-2.896	70	-2.896	102
4406		4	max	0.042	99	-0.076	99	0.088	70	0.597	14	-0.147	99	1.535	102	1.535	70
4407			min	-0.042	97	-0.295	14	-0.088	102	0.147	99	-0.597	14	-1.535	70	-1.535	102
4408		5	max	0.042	99	-0.087	99	0.095	70	0	107	0	107	0	107	0	107
4409			min	-0.042	97	-0.362	14	-0.095	102	0	12	0	12	0	12	0	12
4410	M789	1	max	0.002	105	0.18	16	0.034	98	0	107	0	107	0	107	0	107
4411			min	-0.033	13	0.015	44	-0.034	32	0	12	0	12	0	12	0	12
4412		2	max	-0.003	98	0.09	16	0.017	98	0.359	16	-0.031	107	0.603	98	0.603	96
4413			min	-0.033	13	0.008	44	-0.017	32	0.031	44	-0.359	13	-0.603	32	-0.603	34
4414		3	max	-0.003	98	0	107	0	107	0.479	16	-0.041	107	0.804	98	0.804	96
4415			min	-0.033	13	0	12	0	12	0.041	44	-0.479	13	-0.804	32	-0.804	34
4416		4	max	-0.003	98	-0.008	107	0.017	96	0.359	16	-0.031	107	0.603	98	0.603	96
4417			min	-0.033	13	-0.09	13	-0.017	34	0.031	44	-0.359	13	-0.603	32	-0.603	34
4418		5	max	0.002	107	-0.015	107	0.034	96	0	107	0	107	0	107	0	107
4419			min	-0.033	13	-0.18	13	-0.034	34	0	12	0	12	0	12	0	12
4420	M626	1	max	0.005	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4421			min	0.003	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4422		2	max	0.005	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4423			min	0.003	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4424		3	max	0.004	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4425			min	0.002	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4426		4	max	0.004	86	0	100	0	103	0	102	0	100	0	101	0	103
4427			min	0.002	44	0	42	0	41	0	40	0	42	0	43	0	41
4428		5	max	0.004	86	0	107	0	107	0	107	0	107	0	107	0	107
4429			min	0.002	44	0	12	0	12	0	12	0	12	0	12	0	12
4430	M627	1	max	0.008	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4431			min	0.004	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4432		2	max	0.007	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4433			min	0.004	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4434		3	max	0.007	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4435			min	0.004	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4436		4	max	0.006	86	0	100	0	103	0	102	0	100	0	101	0	103
4437			min	0.004	44	0	42	0	41	0	40	0	42	0	43	0	41
4438		5	max	0.006	86	0	107	0	107	0	107	0	107	0	107	0	107
4439			min	0.003	44	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4440	M630	1	max	0.006	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4441			min	0.003	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4442		2	max	0.005	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4443			min	0.003	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4444		3	max	0.005	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4445			min	0.003	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4446		4	max	0.005	86	0	100	0	103	0	102	0	100	0	101	0	103
4447			min	0.003	44	0	42	0	41	0	40	0	42	0	43	0	41
4448		5	max	0.004	86	0	107	0	107	0	107	0	107	0	107	0	107
4449			min	0.002	44	0	12	0	12	0	12	0	12	0	12	0	12
4450	M641	1	max	0.008	86	0.002	100	0.002	103	0.002	102	0.002	100	0.002	101	0.002	103
4451			min	0.004	44	-0.002	42	-0.002	41	-0.002	40	-0.002	42	-0.002	43	-0.002	41
4452		2	max	0.007	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4453			min	0.004	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4454		3	max	0.007	86	0.001	100	0.001	103	0.001	102	0.001	100	0.001	101	0.001	103
4455			min	0.004	44	-0.001	42	-0.001	41	-0.001	40	-0.001	42	-0.001	43	-0.001	41
4456		4	max	0.006	86	0	100	0	103	0	102	0	100	0	101	0	103
4457			min	0.004	44	0	42	0	41	0	40	0	42	0	43	0	41
4458		5	max	0.006	86	0	107	0	107	0	107	0	107	0	107	0	107
4459			min	0.003	44	0	12	0	12	0	12	0	12	0	12	0	12
4460	M643	1	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4461			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4462		2	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4463			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4464		3	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4465			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4466		4	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4467			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4468		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4469			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4470	M790	1	max	0	105	0	107	0	107	0	107	0	107	0	107	0	107
4471			min	0	43	0	12	0	12	0	12	0	12	0	12	0	12
4472		2	max	0	105	0	107	0	107	0	107	0	107	0	107	0	107
4473			min	0	43	0	12	0	12	0	12	0	12	0	12	0	12
4474		3	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4475			min	0	41	0	12	0	12	0	12	0	12	0	12	0	12
4476		4	max	0	103	0	107	0	107	0	107	0	107	0	107	0	107
4477			min	0	41	0	12	0	12	0	12	0	12	0	12	0	12
4478		5	max	0	103	0	107	0	107	0	107	0	107	0	107	0	107
4479			min	0	41	0	12	0	12	0	12	0	12	0	12	0	12
4480	M791	1	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4481			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4482		2	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4483			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4484		3	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4485			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4486		4	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4487			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4488		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4489			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4490	M792	1	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4491			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4492		2	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4493			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4494		3	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4495			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4496		4	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4497			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4498		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4499			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4500	M793	1	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4501			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4502		2	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4503			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4504		3	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4505			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4506		4	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4507			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4508		5	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4509			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4510	M794	1	max	0	57	0	107	0	107	0	107	0	107	0	107	0	107
4511			min	0	87	0	12	0	12	0	12	0	12	0	12	0	12
4512		2	max	0	57	0	107	0	107	0	107	0	107	0	107	0	107
4513			min	0	87	0	12	0	12	0	12	0	12	0	12	0	12
4514		3	max	0	57	0	107	0	107	0	107	0	107	0	107	0	107
4515			min	0	87	0	12	0	12	0	12	0	12	0	12	0	12
4516		4	max	0	86	0	107	0	107	0	107	0	107	0	107	0	107
4517			min	0	56	0	12	0	12	0	12	0	12	0	12	0	12
4518		5	max	0	86	0	107	0	107	0	107	0	107	0	107	0	107
4519			min	0	56	0	12	0	12	0	12	0	12	0	12	0	12
4520	M795	1	max	0.011	86	0.003	103	0.002	102	-0.006	75	0.017	86	0.002	100	0.002	102
4521			min	0.006	75	-0.003	71	-0.002	40	-0.017	86	0.006	75	-0.002	42	-0.002	40
4522		2	max	0.011	86	0.003	103	0.001	102	-0.007	75	0.016	86	0.001	100	0.001	102
4523			min	0.006	75	-0.003	71	-0.001	40	-0.016	86	0.007	75	-0.001	42	-0.001	40
4524		3	max	0.01	86	0.003	103	0.001	102	-0.007	75	0.016	86	0.001	100	0.001	102
4525			min	0.006	75	-0.003	71	-0.001	40	-0.016	86	0.007	75	-0.001	42	-0.001	40
4526		4	max	0.01	86	0.002	103	0	102	-0.008	75	0.015	86	0	100	0	102
4527			min	0.005	75	-0.002	71	0	40	-0.015	86	0.008	75	0	42	0	40
4528		5	max	0.009	86	0.002	86	0	107	-0.008	107	0.015	56	0	107	0	107
4529			min	0.005	75	-0.002	57	0	12	-0.015	56	0.008	107	0	12	0	12
4530	M796	1	max	0.002	86	0.002	100	0.002	103	0	106	0.002	100	0.002	101	0.002	103
4531			min	0.001	46	-0.002	42	-0.002	41	-0.002	40	0	46	-0.002	43	-0.002	41
4532		2	max	0.002	86	0.001	100	0.001	103	0	106	0.001	100	0.001	101	0.001	103
4533			min	0.001	46	-0.001	42	-0.001	41	-0.001	40	0	46	-0.001	43	-0.001	41
4534		3	max	0.001	86	0.001	100	0.001	103	0	106	0.001	100	0.001	101	0.001	103
4535			min	0.001	46	-0.001	42	-0.001	41	-0.001	40	0	46	-0.001	43	-0.001	41
4536		4	max	0.001	86	0	100	0	103	0	106	0.001	100	0	101	0	103
4537			min	0.001	46	0	42	0	41	-0.001	40	0	46	0	43	0	41
4538		5	max	0.001	86	0	107	0	107	0	104	0.001	86	0	107	0	107
4539			min	0	46	0	12	0	12	-0.001	26	0	44	0	12	0	12
4540	M797	1	max	0.002	86	0.002	100	0.002	103	0.001	102	0.001	104	0.002	101	0.002	103
4541			min	0.001	44	-0.002	42	-0.002	41	-0.001	44	-0.001	42	-0.002	43	-0.002	41
4542		2	max	0.001	86	0.001	100	0.001	103	0.001	102	0	104	0.001	101	0.001	103
4543			min	0.001	44	-0.001	42	-0.001	41	0	44	-0.001	42	-0.001	43	-0.001	41
4544		3	max	0.001	86	0.001	100	0.001	103	0.001	102	0	104	0.001	101	0.001	103
4545			min	0.001	44	-0.001	42	-0.001	41	0	44	-0.001	42	-0.001	43	-0.001	41
4546		4	max	0.001	86	0	100	0	103	0.001	102	0	104	0	101	0	103
4547			min	0	44	0	42	0	41	0	44	-0.001	42	0	43	0	41
4548		5	max	0	86	0	107	0	107	0.001	86	0	106	0	107	0	107
4549			min	0	44	0	12	0	12	0	46	-0.001	26	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4550	M798	1	max	0.013	86	0.006	103	0.002	102	-0.005	105	0.022	103	0.002	100	0.002	102
4551			min	0.007	77	-0.006	41	-0.002	40	-0.022	43	0.005	45	-0.002	42	-0.002	40
4552		2	max	0.013	86	0.006	103	0.001	102	-0.006	105	0.021	103	0.001	100	0.001	102
4553			min	0.007	77	-0.006	41	-0.001	40	-0.021	43	0.006	45	-0.001	42	-0.001	40
4554		3	max	0.013	86	0.005	103	0.001	102	-0.008	105	0.02	103	0.001	100	0.001	102
4555			min	0.007	77	-0.005	41	-0.001	40	-0.02	43	0.008	45	-0.001	42	-0.001	40
4556		4	max	0.012	86	0.005	103	0	102	-0.009	105	0.018	103	0	100	0	102
4557			min	0.007	77	-0.005	41	0	40	-0.018	43	0.009	45	0	42	0	40
4558		5	max	0.012	86	0.004	103	0	107	-0.01	107	0.018	86	0	107	0	107
4559			min	0.007	77	-0.004	41	0	12	-0.018	26	0.01	47	0	12	0	12
4560	M799	1	max	0.013	86	0.002	103	0.002	102	-0.009	105	0.018	86	0.002	100	0.002	102
4561			min	0.007	45	-0.002	45	-0.002	40	-0.018	26	0.009	45	-0.002	42	-0.002	40
4562		2	max	0.013	86	0.001	103	0.001	102	-0.01	105	0.018	86	0.001	100	0.001	102
4563			min	0.007	45	-0.001	45	-0.001	40	-0.018	26	0.01	45	-0.001	42	-0.001	40
4564		3	max	0.013	86	0.001	103	0.001	102	-0.01	105	0.018	86	0.001	100	0.001	102
4565			min	0.007	45	-0.001	45	-0.001	40	-0.018	26	0.01	45	-0.001	42	-0.001	40
4566		4	max	0.012	86	0	103	0	102	-0.01	105	0.018	86	0	100	0	102
4567			min	0.007	45	0	45	0	40	-0.018	26	0.01	45	0	42	0	40
4568		5	max	0.012	86	0	107	0	107	-0.01	107	0.018	86	0	107	0	107
4569			min	0.007	45	0	12	0	12	-0.018	26	0.01	47	0	12	0	12
4570	M800	1	max	0.002	86	0.002	100	0.002	103	0.001	102	0.001	104	0.002	101	0.002	103
4571			min	0.001	44	-0.002	42	-0.002	41	-0.001	44	-0.001	42	-0.002	43	-0.002	41
4572		2	max	0.001	86	0.001	100	0.001	103	0.001	102	0	104	0.001	101	0.001	103
4573			min	0.001	44	-0.001	42	-0.001	41	0	44	-0.001	42	-0.001	43	-0.001	41
4574		3	max	0.001	86	0.001	100	0.001	103	0.001	102	0	104	0.001	101	0.001	103
4575			min	0.001	44	-0.001	42	-0.001	41	0	44	-0.001	42	-0.001	43	-0.001	41
4576		4	max	0.001	86	0	100	0	103	0	102	0	104	0	101	0	103
4577			min	0	44	0	42	0	41	0	44	0	42	0	43	0	41
4578		5	max	0	86	0	107	0	107	0	86	0	106	0	107	0	107
4579			min	0	44	0	12	0	12	0	46	0	26	0	12	0	12
4580	M801	1	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4581			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4582		2	max	0	107	0	107	0	107	0	107	0	107	0	107	0	107
4583			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
4584		3	max	0	71	0	107	0	107	0	107	0	107	0	107	0	107
4585			min	0	103	0	12	0	12	0	12	0	12	0	12	0	12
4586		4	max	0	71	0	107	0	107	0	107	0	107	0	107	0	107
4587			min	0	103	0	12	0	12	0	12	0	12	0	12	0	12
4588		5	max	0	71	0	107	0	107	0	107	0	107	0	107	0	107
4589			min	0	103	0	12	0	12	0	12	0	12	0	12	0	12
4590	M802	1	max	0.008	100	0.017	103	0.009	102	0.006	75	0.014	103	0.024	100	0.024	102
4591			min	0	76	-0.017	71	-0.009	70	-0.014	103	-0.006	75	-0.024	42	-0.024	40
4592		2	max	0.007	100	0.017	103	0.009	102	0.005	76	0.012	100	0.018	70	0.018	102
4593			min	0	76	-0.017	71	-0.009	70	-0.012	100	-0.005	76	-0.018	42	-0.018	70
4594		3	max	0.007	100	0.017	103	0.009	102	0.005	76	0.012	100	0.012	100	0.012	102
4595			min	0	76	-0.017	71	-0.009	70	-0.012	100	-0.005	76	-0.012	42	-0.012	40
4596		4	max	0.007	100	0.016	103	0.008	102	0.004	76	0.012	100	0.006	100	0.006	102
4597			min	-0.001	76	-0.016	71	-0.008	70	-0.012	100	-0.004	76	-0.006	42	-0.006	40
4598		5	max	0.006	100	0.016	103	0.008	102	0.004	107	0.012	101	0	107	0	107
4599			min	-0.001	76	-0.016	71	-0.008	70	-0.012	101	-0.004	107	0	12	0	12
4600	M803	1	max	0.984	73	0.049	101	0.032	42	0	107	0	107	0	107	0	107
4601			min	-0.949	105	-0.006	77	-0.032	40	0	12	0	12	0	12	0	12
4602		2	max	0.995	73	0.025	101	0.016	102	0.435	40	0.117	76	0.878	102	0.272	104
4603			min	-0.951	105	-0.003	77	-0.016	44	-0.117	76	-0.435	40	-0.237	104	-1.011	42
4604		3	max	1.005	73	0	107	0	107	0.58	40	0.156	76	1.171	102	0.363	104

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
4605			min	-0.952	105	0	12	0	12	-0.156	76	-0.58	40	-0.316	104	-1.347	42
4606		4	max	1.016	73	0.003	107	0.016	100	0.435	40	0.117	76	0.878	102	0.272	104
4607			min	-0.954	105	-0.025	41	-0.016	42	-0.117	76	-0.435	40	-0.237	104	-1.011	102
4608		5	max	1.027	73	0.006	107	0.032	100	0	107	0	107	0	107	0	107
4609			min	-0.956	105	-0.049	41	-0.032	42	0	12	0	12	0	12	0	12
4610	M804	1	max	1.027	71	0.049	73	0.032	102	0	107	0	107	0	107	0	107
4611			min	-0.956	107	-0.006	45	-0.032	40	0	12	0	12	0	12	0	12
4612		2	max	1.016	71	0.025	73	0.016	102	0.435	100	0.117	46	0.878	72	0.272	74
4613			min	-0.954	107	-0.003	45	-0.016	100	-0.117	46	-0.435	40	-0.237	74	-1.011	72
4614		3	max	1.005	71	0	107	0	107	0.58	100	0.156	46	1.171	72	0.363	74
4615			min	-0.952	107	0	12	0	12	-0.156	46	-0.58	40	-0.316	74	-1.347	72
4616		4	max	0.995	71	0.003	75	0.016	40	0.435	100	0.117	46	0.878	72	0.272	74
4617			min	-0.951	107	-0.025	103	-0.016	76	-0.117	46	-0.435	100	-0.237	74	-1.011	72
4618		5	max	0.984	71	0.006	75	0.032	100	0	107	0	107	0	107	0	107
4619			min	-0.949	107	-0.049	103	-0.032	42	0	12	0	12	0	12	0	12

Member Section Deflections - Service

No Data to Print...

Envelope Member Section Deflections - Service

No Data to Print...

Member Section Deflections - Strength

No Data to Print...

Envelope Member Section Deflections - Strength

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
0	M273	1	max	0	107	0	107	0.693	71	0.016	103	NC	107	NC	107
1			min	0	12	0	12	-0.358	107	-0.017	71	NC	12	157.608	13
2		2	max	0.011	57	0.08	102	0.64	71	0.016	103	NC	107	NC	107
3			min	-0.013	86	-0.085	70	-0.387	107	-0.017	71	4353.304	100	210.464	13
4		3	max	0.023	57	0.152	102	0.586	71	0.016	103	NC	107	NC	107
5			min	-0.026	86	-0.161	70	-0.417	103	-0.017	71	2845.783	100	316.015	13
6		4	max	0.034	57	0.209	102	0.53	71	0.016	103	NC	107	NC	107
7			min	-0.039	86	-0.222	70	-0.463	103	-0.017	71	3843.852	100	469.394	101
8		5	max	0.046	57	0.254	102	0.472	71	0.015	103	NC	107	NC	107
9			min	-0.051	86	-0.271	70	-0.508	103	-0.017	71	3343.081	56	347.861	101
10	M313	1	max	0	107	0	107	0.362	107	0.008	71	NC	107	NC	107
11			min	0	12	0	12	-0.7	71	-0.006	107	NC	12	153.443	15
12		2	max	0.011	57	0.101	70	0.392	107	0.008	71	NC	107	NC	107
13			min	-0.013	86	-0.096	102	-0.645	71	-0.006	107	2825.629	70	204.898	15
14		3	max	0.022	57	0.186	70	0.423	103	0.008	71	NC	107	NC	107
15			min	-0.026	86	-0.176	102	-0.588	71	-0.007	107	2056.451	70	307.683	15
16		4	max	0.034	57	0.248	70	0.47	103	0.009	71	NC	107	NC	107
17			min	-0.039	86	-0.235	102	-0.527	71	-0.007	107	2951.304	70	448.729	101
18		5	max	0.045	57	0.297	70	0.515	103	0.009	71	NC	107	NC	107
19			min	-0.051	86	-0.281	102	-0.465	71	-0.007	107	NC	12	329.728	101
20	M314	1	max	0	107	0	107	0	107	0.019	71	NC	107	NC	107
21			min	0	12	0	12	0	12	-0.018	103	NC	12	NC	12
22		2	max	0.011	57	0.1	70	0.076	107	0.019	71	NC	107	NC	98
23			min	-0.013	86	-0.093	106	-0.161	71	-0.018	103	2874.347	70	622.217	15
24		3	max	0.022	57	0.182	70	0.088	107	0.019	71	NC	107	NC	98
25			min	-0.026	86	-0.169	106	-0.26	71	-0.018	103	2122.564	70	302.534	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
26		4	max	0.034	57	0.244	70	0.057	107	0.019	71	NC	107	NC	98
27			min	-0.039	86	-0.226	106	-0.387	15	-0.018	103	3063.744	70	197.644	15
28		5	max	0.045	57	0.292	70	0.011	107	0.019	71	NC	107	NC	107
29			min	-0.052	86	-0.271	106	-0.523	15	-0.017	103	NC	12	146.342	15
30	M336	1	max	0	107	0	107	0	107	0.018	107	NC	107	NC	107
31			min	0	12	0	12	0	12	-0.02	71	NC	12	NC	12
32		2	max	0.011	57	0.088	76	0.16	71	0.018	107	NC	107	NC	102
33			min	-0.013	86	-0.094	100	-0.073	107	-0.02	71	3654.77	100	1060.083	71
34		3	max	0.023	57	0.166	76	0.257	71	0.018	107	NC	107	NC	98
35			min	-0.026	86	-0.178	100	-0.086	107	-0.02	71	2391.402	100	738.416	86
36		4	max	0.034	57	0.226	76	0.372	13	0.018	107	NC	107	NC	97
37			min	-0.039	86	-0.243	100	-0.059	107	-0.02	71	3232.524	100	484.893	86
38		5	max	0.046	57	0.271	76	0.487	13	0.018	107	NC	107	NC	107
39			min	-0.051	86	-0.293	100	-0.018	107	-0.02	71	NC	12	359.952	86
40	M337	1	max	1.168	106	0.238	107	2.547	15	0	75	NC	107	NC	107
41			min	-1.195	74	-0.406	71	0.322	66	-0.001	103	NC	12	NC	12
42		2	max	1.16	106	0.236	107	2.48	15	0	75	NC	107	NC	99
43			min	-1.189	104	-0.412	71	0.373	66	-0.001	103	3186.677	72	398.961	94
44		3	max	1.166	76	0.234	107	2.415	13	0	75	NC	107	7031.642	69
45			min	-1.196	104	-0.414	71	0.366	68	0	103	2389.192	72	202.591	94
46		4	max	1.173	76	0.233	107	2.349	13	0	75	NC	107	4491.887	69
47			min	-1.203	104	-0.411	71	0.317	68	0	107	3163.026	72	137.079	94
48		5	max	1.179	76	0.233	107	2.28	13	0	71	NC	107	3267.67	69
49			min	-1.21	104	-0.404	71	0.272	68	0	107	NC	12	103.659	15
50	M340	1	max	0.107	71	0.007	86	0.063	70	0.005	106	NC	107	NC	107
51			min	-0.052	107	-0.006	57	-0.059	106	-0.005	70	NC	12	NC	12
52		2	max	0.244	71	1.937	15	0.937	74	0.091	15	2479.989	66	NC	107
53			min	-0.161	107	0.271	66	-0.983	102	-0.009	74	353.296	15	740.294	102
54		3	max	0.405	71	2.545	15	1.216	74	0.027	15	2095.854	66	NC	107
55			min	-0.238	107	0.322	66	-1.198	106	-0.017	74	268.847	15	592.247	74
56		4	max	0.558	71	1.892	15	0.98	74	0.007	106	2507.449	66	NC	107
57			min	-0.304	107	0.268	66	-0.991	106	-0.073	13	361.788	15	734.272	106
58		5	max	0.664	71	0.007	86	0.063	70	0.005	102	NC	107	NC	107
59			min	-0.381	107	-0.006	57	-0.061	102	-0.005	70	NC	12	NC	12
60	M342	1	max	0.106	71	0.007	86	0.057	100	0.004	76	NC	107	NC	107
61			min	-0.05	107	-0.006	57	-0.053	76	-0.005	100	NC	12	NC	12
62		2	max	0.244	71	1.697	13	0.952	104	0.044	15	3040.738	98	NC	107
63			min	-0.157	107	0.221	68	-0.971	76	-0.004	104	403.28	13	743.818	76
64		3	max	0.404	71	2.28	13	1.228	104	0.017	76	2475.158	68	NC	107
65			min	-0.233	107	0.272	68	-1.194	76	-0.023	13	300.144	13	581.386	104
66		4	max	0.554	71	1.694	13	0.994	104	0.001	76	2971.295	68	NC	107
67			min	-0.3	107	0.226	68	-0.989	76	-0.076	13	403.935	13	724.203	104
68		5	max	0.659	71	0.007	86	0.052	70	0.004	102	NC	107	NC	107
69			min	-0.376	107	-0.006	57	-0.049	102	-0.004	70	NC	12	NC	12
70	M343	1	max	0.737	104	1.125	70	2.225	13	0.019	13	NC	107	NC	107
71			min	-0.841	72	-1.013	106	0.289	68	-0.014	76	NC	12	NC	12
72		2	max	0.724	104	1.044	70	2.491	13	0.016	104	NC	107	NC	107
73			min	-0.825	72	-0.879	106	0.388	68	-0.018	72	577.978	15	309.65	15
74		3	max	0.71	104	1.002	70	2.636	15	0.016	74	NC	107	NC	107
75			min	-0.81	72	-0.827	106	0.371	66	-0.022	102	422.422	15	190.114	15
76		4	max	0.696	104	0.993	70	2.624	15	0.017	74	NC	107	NC	107
77			min	-0.794	72	-0.856	106	0.326	66	-0.039	15	577.978	15	172.64	15
78		5	max	0.683	104	1.023	70	2.483	15	0.017	74	NC	107	NC	103
79			min	-0.779	72	-0.969	106	0.289	66	-0.058	15	NC	12	195.088	15
80	M346	1	max	0.629	104	1.001	70	2.174	13	0.019	104	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
81			min	-0.715	72	-0.944	106	0.299	68	-0.028	15	NC	12	NC	12
82		2	max	0.614	104	0.794	70	2.338	14	0.016	74	NC	107	NC	105
83			min	-0.699	72	-0.689	106	0.349	66	-0.039	15	473.636	72	671.872	100
84		3	max	0.6	104	0.693	70	2.393	15	0.013	74	NC	107	NC	12
85			min	-0.682	72	-0.58	106	0.292	66	-0.051	15	355.056	72	409.973	100
86		4	max	0.585	104	0.693	70	2.293	15	0.01	74	NC	107	5332.227	13
87			min	-0.666	72	-0.615	106	0.259	66	-0.062	15	472.689	72	303.37	92
88		5	max	0.571	104	0.799	70	2.072	15	0.007	74	NC	107	8704.403	76
89			min	-0.65	72	-0.796	106	0.253	66	-0.073	15	NC	12	245.782	92
90	M347	1	max	0.473	104	0.791	70	1.734	13	0.003	92	NC	107	NC	107
91			min	-0.534	72	-0.768	106	0.248	68	-0.031	15	NC	12	NC	12
92		2	max	0.457	104	0.349	70	1.673	15	0.004	104	NC	107	NC	94
93			min	-0.517	72	-0.292	106	0.196	74	-0.035	15	251.489	72	260.344	100
94		3	max	0.44	104	0.164	71	1.569	15	0.005	104	NC	107	1728.427	94
95			min	-0.499	72	-0.1	107	0.067	74	-0.04	15	188.566	72	158.73	70
96		4	max	0.424	104	0.175	70	1.401	15	0.006	104	NC	107	4610.734	68
97			min	-0.481	72	-0.129	106	0.08	74	-0.044	15	251.293	72	131.363	13
98		5	max	0.408	104	0.445	70	1.18	15	0.007	74	NC	107	1420.228	98
99			min	-0.463	72	-0.442	106	0.137	66	-0.048	15	NC	12	89.796	13
100	M349	1	max	0.444	15	0.04	57	0.25	106	0.002	106	NC	107	NC	107
101			min	-0.034	107	-0.047	86	-0.27	70	-0.002	70	NC	12	NC	12
102		2	max	0.382	71	-0.242	66	0.585	106	0.017	13	2547.599	96	NC	107
103			min	-0.132	107	-1.949	15	-0.689	70	-0.01	98	352.377	15	1635.241	70
104		3	max	0.415	71	-0.295	66	0.707	106	0.018	96	2106.972	66	NC	107
105			min	-0.243	107	-2.553	15	-0.938	70	-0.022	64	268.752	15	1027.418	70
106		4	max	0.447	71	-0.239	66	0.589	106	0.011	92	2561.171	96	NC	107
107			min	-0.363	103	-1.899	15	-0.69	70	-0.012	68	361.682	15	1641.752	70
108		5	max	0.5	71	0.04	57	0.259	102	0.002	102	NC	107	NC	107
109			min	-0.488	103	-0.046	86	-0.274	70	-0.002	70	NC	12	NC	12
110	M350	1	max	0.419	13	0.041	57	0.25	76	0.002	76	NC	107	NC	107
111			min	-0.039	107	-0.046	86	-0.27	100	-0.002	100	NC	12	NC	12
112		2	max	0.377	71	-0.195	68	0.582	76	0.015	66	3101.273	98	NC	107
113			min	-0.135	107	-1.706	13	-0.672	100	-0.017	94	402.369	13	1653.562	70
114		3	max	0.413	71	-0.245	68	0.694	76	0.017	96	2486.082	68	NC	107
115			min	-0.243	107	-2.285	13	-0.904	100	-0.047	15	300.065	13	1040.612	70
116		4	max	0.449	71	-0.197	68	0.575	106	0.013	96	3042.157	98	NC	107
117			min	-0.36	103	-1.701	13	-0.659	70	-0.033	15	403.578	13	1661.875	70
118		5	max	0.505	71	0.041	57	0.234	102	0.002	106	NC	107	NC	107
119			min	-0.482	103	-0.046	86	-0.249	70	-0.002	70	NC	12	NC	12
120	M351	1	max	0.873	106	0.605	107	2.572	15	0.002	71	NC	107	NC	107
121			min	-1.045	70	-0.759	71	0.32	66	-0.002	103	NC	12	NC	12
122		2	max	0.866	106	1.237	103	2.646	15	0.018	103	NC	64	NC	101
123			min	-1.038	70	-1.3	71	0.393	66	-0.019	71	85.025	103	371.279	92
124		3	max	0.86	106	1.519	103	2.643	13	0.028	103	NC	62	2216.195	101
125			min	-1.031	70	-1.538	71	0.415	68	-0.029	71	59.367	103	224.242	92
126		4	max	0.854	106	1.276	103	2.531	13	0.02	103	NC	64	3902.797	95
127			min	-1.024	70	-1.335	71	0.356	68	-0.02	71	82.04	103	177.385	64
128		5	max	0.856	76	0.634	107	2.332	13	0.005	71	NC	107	3416.004	69
129			min	-1.027	100	-0.79	71	0.272	68	-0.005	103	NC	12	103.441	94
130	M352	1	max	0.737	106	0.45	107	1.894	15	0	75	NC	107	NC	107
131			min	-0.78	70	-0.632	71	0.255	66	-0.005	15	NC	12	NC	12
132		2	max	0.731	106	1.006	107	1.973	15	0.018	107	NC	72	NC	94
133			min	-0.774	70	-1.102	71	0.307	69	-0.021	71	88.165	103	500.987	92
134		3	max	0.725	106	1.238	103	1.976	13	0.028	107	NC	64	NC	102
135			min	-0.767	70	-1.284	71	0.305	68	-0.032	71	61.579	103	328.955	92

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
136		4	max	0.723	76	0.965	103	1.871	13	0.021	107	NC	64	9731.682	95
137			min	-0.765	100	-1.045	71	0.267	68	-0.025	71	85.113	103	268.047	15
138		5	max	0.73	76	0.326	107	1.68	13	-0.001	68	NC	107	NC	104
139			min	-0.772	100	-0.482	71	0.208	68	-0.006	13	NC	12	118.944	15
140	M353	1	max	0.212	102	0.032	70	0.533	103	0.007	15	NC	107	NC	107
141			min	-0.224	70	-0.037	102	-0.653	71	0.001	99	NC	12	NC	12
142		2	max	0.206	102	0.037	70	0.749	103	0.006	14	NC	107	NC	97
143			min	-0.218	70	-0.044	102	-0.905	71	0	75	4784.224	102	200.763	71
144		3	max	0.2	102	0.03	57	0.841	103	0.006	13	NC	107	NC	97
145			min	-0.211	70	-0.039	86	-1.011	71	-0.001	75	NC	12	141.716	71
146		4	max	0.193	102	0.035	72	0.77	103	0.006	13	NC	107	NC	97
147			min	-0.205	70	-0.044	100	-0.928	71	0	75	4801.388	100	186.592	71
148		5	max	0.186	102	0.031	72	0.534	103	0.006	13	NC	107	NC	107
149			min	-0.198	70	-0.036	100	-0.66	71	0.001	98	NC	12	NC	12
150	M354	1	max	0.204	106	0.032	70	0.176	107	-0.001	76	NC	107	NC	107
151			min	-0.22	70	-0.037	102	-0.411	71	-0.007	15	NC	12	NC	12
152		2	max	0.198	106	0.037	70	0.437	107	0	77	NC	107	NC	97
153			min	-0.213	70	-0.043	102	-0.71	71	-0.007	13	4907.412	102	168.225	71
154		3	max	0.192	106	0.03	57	0.54	107	0.001	77	NC	107	NC	97
155			min	-0.207	70	-0.039	86	-0.827	71	-0.007	13	NC	12	120.782	71
156		4	max	0.197	76	0.037	72	0.45	107	0	77	NC	107	NC	97
157			min	-0.212	100	-0.046	100	-0.722	71	-0.006	13	4198.898	100	161.527	71
158		5	max	0.203	76	0.032	72	0.18	107	-0.001	68	NC	107	NC	107
159			min	-0.218	100	-0.037	100	-0.411	71	-0.006	13	NC	12	NC	12
160	M355	1	max	0.722	106	0.705	103	1.845	15	0.005	14	NC	107	NC	107
161			min	-0.777	70	-0.825	71	0.25	66	-0.001	107	NC	12	NC	12
162		2	max	0.716	106	1.326	103	1.94	15	0.019	103	NC	64	NC	98
163			min	-0.77	70	-1.35	71	0.301	66	-0.016	75	88.108	103	466.794	103
164		3	max	0.71	106	1.598	103	1.955	13	0.029	103	NC	62	NC	71
165			min	-0.762	70	-1.582	71	0.305	68	-0.026	75	61.54	103	327.541	92
166		4	max	0.703	106	1.363	103	1.859	13	0.021	103	NC	62	NC	65
167			min	-0.755	70	-1.388	71	0.269	68	-0.018	75	85.06	103	345.946	96
168		5	max	0.699	76	0.736	103	1.674	13	0.007	71	NC	107	5440.618	88
169			min	-0.75	100	-0.865	71	0.21	68	-0.004	107	NC	12	147.509	15
170	M356	1	max	0.682	106	-0.295	66	0.243	107	0	77	NC	107	NC	107
171			min	-0.922	70	-2.553	15	-0.415	71	0	101	NC	12	NC	12
172		2	max	0.675	106	-0.344	66	0.255	107	0.018	75	NC	107	NC	106
173			min	-0.915	70	-2.496	15	-0.427	71	-0.018	103	3889.317	15	4942.783	77
174		3	max	0.668	106	-0.355	68	0.26	107	0.024	75	NC	104	NC	106
175			min	-0.907	70	-2.432	13	-0.431	71	-0.024	103	2789.623	15	3519.358	77
176		4	max	0.662	106	-0.301	68	0.255	107	0.018	105	NC	107	NC	106
177			min	-0.899	70	-2.363	13	-0.426	71	-0.018	73	3894.768	15	4942.783	77
178		5	max	0.655	76	-0.245	68	0.243	107	0	103	NC	107	NC	107
179			min	-0.892	100	-2.285	13	-0.414	71	0	75	NC	12	NC	12
180	M357	1	max	0.563	106	-0.235	66	0.12	107	-0.001	66	NC	107	NC	107
181			min	-0.66	70	-1.877	15	-0.399	15	-0.008	15	NC	12	NC	12
182		2	max	0.557	106	-0.258	66	0.132	107	0.015	75	NC	107	NC	106
183			min	-0.653	70	-1.827	15	-0.406	71	-0.02	103	4416.264	15	5194.175	71
184		3	max	0.55	106	-0.255	68	0.137	107	0.02	75	NC	104	NC	106
185			min	-0.645	70	-1.771	13	-0.409	71	-0.025	103	3154.067	15	3698.365	71
186		4	max	0.543	106	-0.223	68	0.133	107	0.015	75	NC	107	NC	106
187			min	-0.638	70	-1.708	13	-0.403	71	-0.02	103	4423.299	15	5194.176	71
188		5	max	0.549	76	-0.187	68	0.123	107	-0.001	68	NC	107	NC	107
189			min	-0.644	100	-1.637	13	-0.389	71	-0.008	13	NC	12	NC	12
190	M358	1	max	0.268	102	0.041	57	0.551	103	0.006	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
191			min	-0.283	70	-0.047	86	-0.533	71	0.001	99	NC	12	NC	12
192		2	max	0.261	102	0.042	70	0.628	103	0.006	14	NC	107	NC	106
193			min	-0.276	70	-0.051	102	-0.615	71	0	107	5603.981	102	648.261	71
194		3	max	0.254	102	0.039	57	0.637	103	0.006	13	NC	107	NC	106
195			min	-0.27	70	-0.049	86	-0.627	71	0	107	NC	12	585.294	71
196		4	max	0.248	102	0.04	72	0.643	103	0.006	13	NC	107	NC	106
197			min	-0.263	70	-0.05	100	-0.634	71	0	107	5605.954	70	559.328	71
198		5	max	0.242	102	0.04	57	0.556	103	0.006	13	NC	107	NC	107
199			min	-0.258	70	-0.046	86	-0.548	71	0.001	98	NC	12	NC	12
200	M359	1	max	0.258	106	0.04	57	0.094	107	-0.001	76	NC	107	NC	107
201			min	-0.279	70	-0.047	86	-0.481	14	-0.007	16	NC	12	NC	12
202		2	max	0.252	106	0.042	70	0.199	107	0	45	NC	107	NC	106
203			min	-0.272	70	-0.051	102	-0.526	71	-0.007	13	5764.803	102	469.926	71
204		3	max	0.246	106	0.039	57	0.203	107	0	45	NC	107	NC	106
205			min	-0.265	70	-0.049	86	-0.527	71	-0.007	13	NC	12	457.422	71
206		4	max	0.252	76	0.042	72	0.202	107	0	45	NC	107	NC	106
207			min	-0.271	100	-0.052	100	-0.523	71	-0.006	13	5341.12	100	467.157	71
208		5	max	0.258	76	0.04	57	0.099	107	-0.001	68	NC	107	NC	107
209			min	-0.279	100	-0.047	86	-0.456	13	-0.006	13	NC	12	NC	12
210	M360	1	max	0.569	106	-0.231	66	0.384	103	0.009	15	NC	107	NC	107
211			min	-0.665	70	-1.823	15	-0.434	71	0.001	66	NC	12	NC	12
212		2	max	0.562	106	-0.253	66	0.394	103	0.021	101	NC	107	NC	106
213			min	-0.658	70	-1.787	15	-0.446	71	-0.015	77	3887.873	15	5195.476	107
214		3	max	0.556	106	-0.25	68	0.398	103	0.026	101	NC	104	NC	106
215			min	-0.65	70	-1.744	13	-0.451	71	-0.021	107	2792.752	15	3699.297	107
216		4	max	0.549	106	-0.221	68	0.392	103	0.02	71	NC	107	NC	106
217			min	-0.643	70	-1.692	13	-0.448	71	-0.015	107	3893.321	15	5195.476	107
218		5	max	0.542	106	-0.189	68	0.38	103	0.008	13	NC	107	NC	107
219			min	-0.635	70	-1.632	13	-0.437	71	0.001	98	NC	12	NC	12
220	M361	1	max	-0.255	66	0.921	74	0.329	107	0.004	76	NC	107	NC	107
221			min	-1.809	15	-0.949	106	-0.589	71	-0.004	104	NC	12	218.132	15
222		2	max	-0.249	66	0.878	74	0.481	107	0.081	103	NC	105	NC	106
223			min	-1.812	15	-0.897	102	-0.707	71	-0.081	71	1266.791	72	293.426	14
224		3	max	-0.243	66	0.826	70	0.506	107	0.088	103	NC	105	NC	106
225			min	-1.814	15	-0.819	106	-0.69	71	-0.089	71	643.921	13	341.018	71
226		4	max	-0.237	66	0.762	70	0.506	103	0.063	103	NC	105	NC	106
227			min	-1.817	15	-0.715	106	-0.64	71	-0.064	71	382.919	13	392.475	71
228		5	max	-0.231	66	0.678	70	0.397	103	0.002	76	NC	107	NC	107
229			min	-1.819	15	-0.589	106	-0.475	71	-0.002	100	273.976	13	558.109	93
230	M362	1	max	-0.214	68	0.946	76	0.576	71	0.004	106	NC	107	NC	107
231			min	-1.624	13	-0.938	104	-0.317	107	-0.004	70	762.626	77	221.216	13
232		2	max	-0.208	68	0.868	76	0.64	71	0.003	76	NC	105	NC	97
233			min	-1.626	13	-0.888	100	-0.414	107	-0.004	100	1183.709	77	296.283	13
234		3	max	-0.202	68	0.783	76	0.696	71	0.005	71	NC	105	NC	97
235			min	-1.629	13	-0.832	100	-0.503	107	-0.006	103	1060.8	70	322.062	71
236		4	max	-0.196	68	0.682	76	0.713	71	0.007	71	NC	105	NC	97
237			min	-1.631	13	-0.75	100	-0.567	103	-0.008	103	1318.465	70	260.012	71
238		5	max	-0.19	68	0.565	106	0.483	71	0.002	76	NC	107	NC	107
239			min	-1.633	13	-0.649	70	-0.396	103	-0.002	100	NC	12	NC	12
240	M363	1	max	-0.271	68	1.161	76	0.418	71	0.001	13	NC	107	NC	107
241			min	-2.286	13	-1.199	104	-0.247	107	0	76	NC	12	2416.878	73
242		2	max	-0.265	68	1.063	76	0.51	71	0.003	71	NC	105	NC	97
243			min	-2.287	13	-1.159	100	-0.336	107	-0.003	103	1557.387	70	629.281	71
244		3	max	-0.259	68	0.957	76	0.593	71	0.006	71	NC	105	NC	97
245			min	-2.288	13	-1.105	100	-0.418	107	-0.005	103	1022.772	70	330.107	71

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
246		4	max	-0.253	68	0.835	76	0.638	71	0.007	71	NC	105	NC	97
247			min	-2.289	13	-1.025	100	-0.463	107	-0.007	103	1245.175	70	266.515	71
248		5	max	-0.247	68	0.689	76	0.443	71	0	77	NC	107	NC	107
249			min	-2.29	13	-0.912	100	-0.272	107	0	101	NC	12	NC	12
250	M364	1	max	-0.21	68	0.238	71	0.906	104	0.004	74	NC	107	NC	107
251			min	-1.622	13	-0.159	107	-0.914	76	-0.004	106	NC	12	554.092	73
252		2	max	-0.204	68	0.285	71	0.859	100	0.004	70	NC	97	NC	107
253			min	-1.624	13	-0.182	107	-0.85	76	-0.004	106	1570.654	103	767.426	73
254		3	max	-0.198	68	0.328	71	0.818	100	0.004	70	9181.173	97	NC	107
255			min	-1.627	13	-0.19	107	-0.783	76	-0.004	106	687.337	13	778.557	13
256		4	max	-0.192	68	0.36	71	0.767	100	0.004	70	NC	97	NC	107
257			min	-1.629	13	-0.176	107	-0.708	76	-0.004	106	366.548	13	508.23	13
258		5	max	-0.186	68	0.376	71	0.658	100	0.002	70	NC	107	NC	107
259			min	-1.631	13	-0.134	107	-0.575	76	-0.001	106	229.548	13	346.311	13
260	M365	1	max	-0.319	66	1.19	74	0.26	107	0.001	13	NC	107	NC	107
261			min	-2.542	15	-1.162	106	-0.428	71	0	105	NC	12	7773.13	73
262		2	max	-0.313	66	1.146	70	0.406	107	0.085	103	NC	105	NC	106
263			min	-2.543	15	-1.086	106	-0.578	71	-0.085	71	702.676	13	366.299	71
264		3	max	-0.307	66	1.097	70	0.419	107	0.092	103	NC	58	NC	106
265			min	-2.545	15	-0.986	106	-0.592	71	-0.092	71	317.849	13	340.805	71
266		4	max	-0.301	66	1.028	70	0.401	107	0.066	103	NC	58	NC	106
267			min	-2.546	15	-0.861	106	-0.575	71	-0.066	71	202.312	13	391.62	71
268		5	max	-0.295	66	0.941	70	0.268	107	0	77	NC	107	NC	107
269			min	-2.547	15	-0.713	106	-0.44	71	0	101	147.626	13	5271.156	16
270	M366	1	max	-0.259	66	0.894	74	0.177	107	0.004	74	NC	107	NC	107
271			min	-1.861	15	-0.921	106	-0.256	71	-0.003	106	NC	12	1220.881	97
272		2	max	-0.253	66	0.867	74	0.293	107	0.062	103	NC	105	NC	106
273			min	-1.864	15	-0.893	102	-0.417	71	-0.062	71	931.316	72	421.635	103
274		3	max	-0.247	66	0.825	70	0.297	107	0.069	103	NC	105	NC	106
275			min	-1.867	15	-0.831	102	-0.464	71	-0.068	71	662.721	72	388.079	103
276		4	max	-0.241	66	0.765	70	0.274	107	0.05	103	NC	105	NC	106
277			min	-1.87	15	-0.729	106	-0.485	71	-0.049	71	515.146	13	440.496	103
278		5	max	-0.235	66	0.674	70	0.148	107	0.002	70	NC	107	NC	107
279			min	-1.872	15	-0.588	106	-0.402	71	-0.001	106	303.328	13	473.824	102
280	M367	1	max	-0.14	66	0.533	74	0.341	107	0.006	76	NC	107	NC	107
281			min	-0.971	15	-0.564	102	-0.622	71	-0.006	104	408.219	104	166.378	15
282		2	max	-0.135	66	0.493	74	0.359	107	0.005	76	NC	96	NC	107
283			min	-0.976	15	-0.579	102	-0.584	71	-0.005	104	575.481	15	221.838	15
284		3	max	-0.129	66	0.466	74	0.376	107	0.004	76	NC	77	NC	107
285			min	-0.982	15	-0.564	102	-0.546	71	-0.004	100	432.071	15	332.757	15
286		4	max	-0.124	66	0.453	74	0.404	103	0.003	76	NC	75	NC	107
287			min	-0.987	15	-0.518	102	-0.507	71	-0.003	100	576.871	15	473.49	101
288		5	max	-0.118	66	0.469	70	0.435	103	0.002	106	NC	107	NC	107
289			min	-0.992	15	-0.443	102	-0.468	71	-0.002	70	436.984	62	353.512	101
290	M368	1	max	-0.111	68	0.508	76	0.617	71	0.006	76	NC	107	NC	107
291			min	-0.876	13	-0.502	104	-0.337	107	-0.006	104	455.529	72	171.041	13
292		2	max	-0.106	68	0.462	76	0.581	71	0.005	76	NC	68	NC	107
293			min	-0.88	13	-0.525	100	-0.355	107	-0.005	104	661.761	13	228.055	13
294		3	max	-0.1	68	0.428	76	0.545	71	0.004	76	NC	94	NC	107
295			min	-0.885	13	-0.525	100	-0.372	107	-0.004	100	496.93	13	342.082	13
296		4	max	-0.095	68	0.406	76	0.509	71	0.003	76	NC	106	NC	107
297			min	-0.889	13	-0.498	70	-0.399	103	-0.003	100	663.6	13	500.96	101
298		5	max	-0.089	68	0.408	106	0.472	71	0.002	76	NC	107	NC	107
299			min	-0.894	13	-0.459	70	-0.429	103	-0.002	100	581.2	98	373.923	101
300	M369	1	max	-0.108	68	0.495	72	0.168	71	0.006	104	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
301			min	-0.881	13	-0.486	104	-0.107	107	-0.006	76	691.112	72	NC	12
302		2	max	-0.103	68	0.455	76	0.214	71	0.005	104	NC	102	NC	107
303			min	-0.885	13	-0.518	100	-0.101	107	-0.005	76	692.786	13	704.407	16
304		3	max	-0.097	68	0.431	76	0.261	71	0.004	100	NC	94	NC	107
305			min	-0.89	13	-0.529	100	-0.094	107	-0.004	76	520.257	13	352.153	16
306		4	max	-0.092	68	0.42	76	0.317	13	0.003	100	NC	76	NC	107
307			min	-0.894	13	-0.515	100	-0.086	107	-0.003	76	694.802	13	234.727	16
308		5	max	-0.086	68	0.423	76	0.394	13	0.002	70	NC	107	NC	107
309			min	-0.898	13	-0.476	100	-0.079	107	-0.002	106	609.429	98	176.017	16
310	M370	1	max	-0.143	66	0.523	74	0.119	107	0.005	74	NC	107	NC	107
311			min	-1.011	15	-0.559	102	-0.174	71	-0.006	102	749.59	100	623.463	104
312		2	max	-0.137	66	0.505	74	0.159	107	0.063	73	NC	104	NC	106
313			min	-1.016	15	-0.601	102	-0.274	71	-0.064	101	427.447	15	831.955	104
314		3	max	-0.132	66	0.49	74	0.148	107	0.068	73	NC	104	NC	106
315			min	-1.022	15	-0.593	102	-0.321	71	-0.068	101	333.13	15	869.963	61
316		4	max	-0.126	66	0.472	74	0.129	107	0.047	73	NC	104	NC	106
317			min	-1.027	15	-0.538	102	-0.359	71	-0.046	101	456.972	15	561.911	61
318		5	max	-0.121	66	0.469	70	0.082	107	0.003	70	NC	107	NC	107
319			min	-1.033	15	-0.441	102	-0.417	15	-0.002	106	451.572	62	406.217	61
320	M371	1	max	0.528	102	0.338	107	0.917	15	0.014	15	NC	107	NC	107
321			min	-0.509	74	-0.628	71	0.133	66	0.002	66	NC	12	NC	12
322		2	max	0.518	102	0.337	107	0.894	13	0.013	15	NC	107	NC	99
323			min	-0.501	74	-0.63	71	0.123	68	0.002	69	771.81	102	965.062	72
324		3	max	0.523	72	0.336	107	0.873	13	0.013	13	NC	107	NC	99
325			min	-0.506	104	-0.63	71	0.108	68	0.002	68	578.74	102	620.266	15
326		4	max	0.53	72	0.335	107	0.85	13	0.013	13	NC	107	NC	100
327			min	-0.511	104	-0.628	71	0.101	68	0.002	68	770.711	102	410.597	15
328		5	max	0.536	72	0.334	107	0.826	13	0.012	13	NC	107	8839.284	99
329			min	-0.517	104	-0.622	71	0.104	68	0.002	68	NC	12	307.292	15
330	M372	1	max	0.525	102	0.113	107	1.058	15	-0.002	68	NC	107	NC	107
331			min	-0.503	74	-0.159	71	0.152	66	-0.015	15	NC	12	NC	12
332		2	max	0.519	72	0.118	104	1.023	13	-0.002	68	NC	107	NC	99
333			min	-0.499	104	-0.17	72	0.143	68	-0.014	15	668.149	72	697.96	102
334		3	max	0.525	72	0.13	104	0.99	13	-0.002	68	NC	107	NC	88
335			min	-0.504	104	-0.184	72	0.123	68	-0.013	13	501.024	72	412.266	15
336		4	max	0.531	72	0.109	107	0.956	13	-0.002	68	NC	107	4866.405	67
337			min	-0.51	104	-0.165	71	0.114	68	-0.013	13	667.326	72	274.849	15
338		5	max	0.538	72	0.108	107	0.92	13	-0.002	68	NC	107	3600.262	67
339			min	-0.515	104	-0.161	71	0.116	68	-0.012	13	NC	12	206.82	15
340	M373	1	max	1.112	104	0.318	71	2.084	13	0.004	13	NC	107	NC	107
341			min	-1.107	76	-0.195	107	0.258	68	0	68	NC	12	NC	12
342		2	max	1.105	104	0.315	71	2.141	13	0.004	13	NC	107	NC	99
343			min	-1.101	76	-0.199	107	0.292	68	0.001	68	1967.041	72	484.256	15
344		3	max	1.098	104	0.314	71	2.196	13	0.004	13	NC	107	NC	69
345			min	-1.094	76	-0.201	107	0.33	68	0.001	67	1481.808	72	244.595	15
346		4	max	1.092	104	0.315	71	2.248	15	0.004	15	NC	107	7415.784	69
347			min	-1.088	106	-0.201	107	0.348	66	0.001	66	1976.162	72	166.139	15
348		5	max	1.096	74	0.318	71	2.302	15	0.004	15	NC	107	5740.201	69
349			min	-1.095	106	-0.2	107	0.303	66	0	66	NC	12	126.454	15
350	M374	1	max	0.889	70	1.105	72	2.335	13	0.014	76	NC	107	NC	107
351			min	-0.727	106	-1.059	104	0.255	68	-0.019	13	NC	12	NC	12
352		2	max	0.903	70	1.157	72	2.518	13	0.015	106	NC	107	NC	99
353			min	-0.74	106	-1.05	104	0.322	68	-0.024	13	1022.381	15	481.286	15
354		3	max	0.917	70	1.173	72	2.605	13	0.016	106	NC	100	NC	99
355			min	-0.753	106	-1.034	104	0.37	68	-0.029	13	732.839	15	306.724	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
356		4	max	0.932	70	1.145	72	2.566	15	0.017	106	NC	100	NC	99
357			min	-0.765	106	-1.008	104	0.387	69	-0.033	13	1022.381	15	307.863	15
358		5	max	0.946	70	1.079	72	2.436	15	0.018	106	NC	107	NC	107
359			min	-0.778	106	-0.975	104	0.352	66	-0.038	13	NC	12	285.759	64
360	M375	1	max	1.135	104	0.487	71	2.104	13	0	68	NC	107	NC	107
361			min	-1.132	76	-0.267	107	0.262	68	-0.004	13	NC	12	NC	12
362		2	max	1.128	104	0.488	71	2.174	13	-0.001	68	NC	107	NC	100
363			min	-1.125	76	-0.272	107	0.299	68	-0.004	13	4604.358	102	423.895	15
364		3	max	1.121	104	0.489	71	2.236	13	-0.001	69	NC	107	8552.583	58
365			min	-1.118	76	-0.274	107	0.339	68	-0.005	14	3489.246	102	217.472	15
366		4	max	1.114	104	0.489	71	2.291	15	-0.001	66	NC	107	4556.971	88
367			min	-1.111	106	-0.274	107	0.352	66	-0.005	15	4654.646	102	150.002	15
368		5	max	1.12	74	0.49	71	2.344	15	0	66	NC	107	3349.454	69
369			min	-1.118	106	-0.272	107	0.31	66	-0.005	15	NC	12	116.077	15
370	M376	1	max	0.878	70	1.125	72	2.305	13	0.013	106	NC	107	NC	107
371			min	-0.696	106	-1.02	104	0.253	68	-0.073	13	NC	12	NC	12
372		2	max	0.891	70	1.24	72	2.389	13	0.01	106	NC	107	NC	13
373			min	-0.707	106	-1.086	104	0.322	68	-0.072	13	696.885	102	691.061	70
374		3	max	0.905	70	1.258	72	2.378	13	0.008	106	NC	77	4491.184	19
375			min	-0.719	106	-1.075	104	0.355	69	-0.071	13	517.005	102	387.501	70
376		4	max	0.918	70	1.172	72	2.241	15	0.005	106	NC	107	NC	90
377			min	-0.731	106	-0.986	104	0.327	66	-0.07	13	694.837	102	281.687	92
378		5	max	0.932	70	0.988	72	2.007	15	0.003	106	NC	107	9396.201	106
379			min	-0.743	106	-0.82	104	0.303	69	-0.069	13	NC	12	179.579	13
380	M377	1	max	0.805	70	1.036	72	1.858	13	-0.001	68	NC	107	NC	107
381			min	-0.603	106	-0.873	104	0.218	68	-0.065	13	NC	12	NC	12
382		2	max	0.814	70	1.313	72	1.762	13	-0.001	98	NC	107	5157.859	64
383			min	-0.611	106	-1.115	104	0.257	74	-0.064	13	274.841	102	296.028	100
384		3	max	0.824	70	1.347	72	1.625	15	0	106	NC	99	NC	102
385			min	-0.619	106	-1.133	104	0.149	74	-0.063	13	205.662	102	175.572	13
386		4	max	0.834	70	1.135	72	1.429	15	0.002	106	NC	107	5894.199	68
387			min	-0.627	106	-0.925	104	0.172	74	-0.061	13	274.607	102	107.299	13
388		5	max	0.843	70	0.68	72	1.183	13	0.003	106	NC	107	837.655	68
389			min	-0.635	106	-0.493	104	0.158	68	-0.06	13	NC	12	74.707	13
390	M378	1	max	-0.261	68	1.109	76	0.485	71	0.001	106	NC	107	NC	107
391			min	-2.096	13	-1.119	104	-0.269	107	-0.001	70	114.496	72	412.682	13
392		2	max	-0.255	68	0.993	76	0.472	71	0.001	76	NC	107	NC	107
393			min	-2.097	13	-1.044	100	-0.277	107	-0.001	100	154.497	72	550.243	13
394		3	max	-0.249	68	0.879	76	0.459	71	0.001	76	NC	107	NC	107
395			min	-2.099	13	-0.972	100	-0.285	107	-0.002	100	234.422	72	825.365	13
396		4	max	-0.243	68	0.764	76	0.445	71	0.001	76	NC	107	NC	107
397			min	-2.1	13	-0.892	100	-0.292	107	-0.002	100	473.215	76	1271.584	86
398		5	max	-0.237	68	0.654	106	0.431	71	0.001	76	NC	107	NC	107
399			min	-2.101	13	-0.808	70	-0.299	107	-0.002	100	5842.272	94	953.687	86
400	M379	1	max	-0.26	68	1.084	76	0.32	71	0.002	70	NC	107	NC	107
401			min	-2.099	13	-1.095	104	-0.195	107	-0.001	106	123.068	72	1118.99	93
402		2	max	-0.253	68	0.974	76	0.339	71	0.002	70	NC	105	NC	107
403			min	-2.1	13	-1.026	100	-0.193	107	-0.001	106	167.262	72	1511.994	93
404		3	max	-0.247	68	0.866	76	0.357	71	0.002	70	NC	105	NC	107
405			min	-2.101	13	-0.96	100	-0.19	107	-0.001	106	255.667	72	895.467	13
406		4	max	-0.241	68	0.761	76	0.375	71	0.002	70	NC	105	NC	107
407			min	-2.103	13	-0.889	100	-0.188	107	-0.001	106	521.801	72	596.978	13
408		5	max	-0.235	68	0.659	76	0.393	71	0.002	70	NC	107	NC	107
409			min	-2.104	13	-0.813	100	-0.184	107	-0.001	106	1467.796	98	447.733	13
410	M380	1	max	-0.308	66	1.107	74	0.273	107	0.001	106	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
411			min	-2.328	15	-1.105	106	-0.488	71	-0.001	70	145.287	104	426.333	15
412		2	max	-0.302	66	1.025	74	0.28	107	0.001	76	NC	107	NC	107
413			min	-2.33	15	-1.008	106	-0.474	71	-0.001	100	194.594	104	568.444	15
414		3	max	-0.296	66	0.957	70	0.287	107	0.001	76	NC	107	NC	107
415			min	-2.331	15	-0.905	106	-0.46	71	-0.002	100	293.008	104	852.666	15
416		4	max	-0.289	66	0.894	70	0.294	107	0.001	76	NC	107	NC	107
417			min	-2.333	15	-0.796	106	-0.445	71	-0.002	100	297.121	13	1262.614	86
418		5	max	-0.283	66	0.833	70	0.301	107	0.001	76	NC	107	NC	107
419			min	-2.334	15	-0.68	106	-0.43	71	-0.002	100	196.183	13	945.198	101
420	M381	1	max	-0.303	66	1.091	74	0.2	107	0.002	70	NC	107	NC	107
421			min	-2.313	15	-1.089	106	-0.321	71	-0.001	106	154.341	104	994.579	93
422		2	max	-0.297	66	1.008	74	0.196	107	0.002	70	NC	105	NC	107
423			min	-2.315	15	-0.992	106	-0.341	71	-0.001	106	209.978	104	1341.887	93
424		3	max	-0.291	66	0.942	70	0.192	107	0.002	70	NC	105	NC	107
425			min	-2.316	15	-0.891	106	-0.36	71	-0.001	106	321.259	104	740.075	15
426		4	max	-0.285	66	0.882	70	0.188	107	0.002	70	NC	105	NC	107
427			min	-2.318	15	-0.785	106	-0.379	71	-0.001	106	318.725	13	493.383	15
428		5	max	-0.278	66	0.828	70	0.183	107	0.002	70	NC	107	NC	107
429			min	-2.32	15	-0.676	106	-0.397	71	-0.001	106	204.875	13	370.037	15
430	M382	1	max	0.485	106	-0.295	66	0.75	100	0.019	64	NC	107	NC	107
431			min	-0.76	70	-2.553	15	-0.628	76	-0.015	96	NC	12	NC	12
432		2	max	0.471	106	-0.365	68	0.677	100	0.019	64	NC	107	NC	107
433			min	-0.744	70	-2.612	14	-0.603	72	-0.015	96	587.475	13	599.809	13
434		3	max	0.456	106	-0.302	68	0.635	100	0.019	64	NC	107	NC	64
435			min	-0.728	70	-2.575	13	-0.601	72	-0.015	96	421.778	13	369.203	13
436		4	max	0.442	106	-0.257	68	0.624	100	0.019	64	NC	107	NC	94
437			min	-0.712	70	-2.395	13	-0.605	72	-0.016	96	587.475	13	340.141	13
438		5	max	0.427	106	-0.235	68	0.643	100	0.019	64	NC	107	NC	102
439			min	-0.696	70	-2.102	13	-0.622	72	-0.016	96	NC	12	392.846	13
440	M383	1	max	0.402	106	-0.28	66	0.625	100	0.013	68	NC	107	NC	107
441			min	-0.673	70	-2.324	15	-0.622	72	-0.018	92	NC	12	NC	12
442		2	max	0.387	106	-0.301	68	0.518	100	0.013	98	NC	107	NC	107
443			min	-0.656	70	-2.346	13	-0.576	72	-0.017	62	529.958	13	595.86	13
444		3	max	0.372	106	-0.235	68	0.461	104	0.013	98	NC	107	NC	90
445			min	-0.639	70	-2.257	13	-0.551	72	-0.016	62	382.082	13	376.499	13
446		4	max	0.357	106	-0.195	68	0.444	104	0.013	98	NC	107	NC	90
447			min	-0.623	70	-2.009	13	-0.541	72	-0.015	62	529.958	13	332.096	70
448		5	max	0.342	106	-0.187	68	0.467	104	0.013	98	NC	107	NC	90
449			min	-0.606	70	-1.637	13	-0.551	72	-0.014	62	NC	12	314.742	70
450	M384	1	max	0.309	106	-0.235	66	0.459	104	0.006	98	NC	107	NC	107
451			min	-0.58	70	-1.877	15	-0.562	72	-0.019	13	NC	12	NC	12
452		2	max	0.294	106	-0.202	68	0.361	104	0.006	98	NC	107	NC	107
453			min	-0.563	70	-1.712	13	-0.491	72	-0.016	13	950.601	70	634.672	70
454		3	max	0.28	106	-0.131	68	0.299	104	0.006	98	NC	107	7409.888	107
455			min	-0.547	70	-1.502	13	-0.446	72	-0.013	13	710.468	70	361.939	70
456		4	max	0.265	106	-0.092	68	0.272	104	0.006	98	NC	107	5211.798	99
457			min	-0.531	70	-1.228	13	-0.426	72	-0.011	62	949.565	70	280.655	70
458		5	max	0.25	106	-0.087	68	0.281	104	0.006	98	NC	107	5189.729	97
459			min	-0.514	70	-0.902	13	-0.431	72	-0.01	62	NC	12	251.661	70
460	M385	1	max	0.177	106	-0.121	66	0.3	104	0.002	68	NC	107	NC	107
461			min	-0.447	70	-1.04	15	-0.46	72	-0.019	13	NC	12	NC	12
462		2	max	0.162	106	-0.045	68	0.189	104	0.001	68	NC	107	NC	107
463			min	-0.43	70	-0.869	13	-0.369	72	-0.015	13	829.166	70	588.064	70
464		3	max	0.147	106	0.026	76	0.121	104	0	68	NC	107	NC	107
465			min	-0.414	70	-0.645	13	-0.31	72	-0.011	13	619.985	70	338.813	70

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
466		4	max	0.132	106	0.058	76	0.094	104	0	74	NC	107	NC	107
467			min	-0.399	13	-0.353	13	-0.289	15	-0.007	13	828.378	70	266.367	70
468		5	max	0.119	76	0.041	57	0.108	104	0.001	104	NC	107	NC	107
469			min	-0.398	13	-0.046	86	-0.278	72	-0.003	72	NC	12	243.542	70
470	M386	1	max	0.538	72	-0.295	66	0.632	106	0.015	96	NC	107	NC	107
471			min	-0.535	100	-2.553	15	-0.93	70	-0.019	64	NC	12	NC	12
472		2	max	0.551	72	-0.365	69	0.666	106	0.015	96	NC	107	NC	105
473			min	-0.548	100	-2.573	15	-0.958	70	-0.019	64	744.047	13	3125.059	102
474		3	max	0.564	72	-0.305	68	0.674	106	0.015	96	NC	90	NC	98
475			min	-0.561	100	-2.523	13	-0.951	70	-0.019	64	528.173	13	2256.215	103
476		4	max	0.577	72	-0.26	68	0.653	106	0.015	96	NC	107	NC	106
477			min	-0.574	100	-2.354	13	-0.901	70	-0.022	15	744.047	13	861.243	100
478		5	max	0.59	72	-0.236	68	0.607	106	0.015	96	NC	107	NC	102
479			min	-0.587	100	-2.1	13	-0.815	70	-0.026	15	NC	12	393.835	13
480	M387	1	max	0.526	72	-0.284	66	0.658	106	0.017	92	NC	107	NC	107
481			min	-0.524	100	-2.338	15	-0.858	70	-0.013	68	NC	12	NC	12
482		2	max	0.539	72	-0.303	68	0.687	106	0.016	92	NC	90	NC	106
483			min	-0.537	100	-2.317	13	-0.892	70	-0.014	68	654.899	13	2326.299	19
484		3	max	0.551	72	-0.237	68	0.681	106	0.014	92	NC	90	NC	105
485			min	-0.549	100	-2.21	13	-0.877	70	-0.014	68	467.89	13	1511.513	100
486		4	max	0.564	72	-0.198	68	0.639	106	0.012	92	NC	90	NC	90
487			min	-0.561	100	-1.97	13	-0.806	70	-0.016	15	654.899	13	571.86	100
488		5	max	0.576	72	-0.189	68	0.561	106	0.011	96	NC	107	NC	90
489			min	-0.574	100	-1.632	13	-0.686	70	-0.023	15	NC	12	302.573	100
490	M388	1	max	0.491	72	-0.231	66	0.624	102	0.01	92	NC	107	NC	107
491			min	-0.504	100	-1.823	15	-0.745	70	-0.008	68	NC	12	NC	12
492		2	max	0.501	72	-0.191	68	0.637	102	0.009	92	NC	107	NC	107
493			min	-0.515	100	-1.657	13	-0.759	70	-0.008	68	975.392	100	2508.122	100
494		3	max	0.512	72	-0.124	68	0.619	102	0.009	92	NC	77	NC	99
495			min	-0.525	100	-1.455	13	-0.73	70	-0.008	68	725.894	100	816.615	100
496		4	max	0.523	72	-0.09	68	0.568	102	0.008	92	NC	107	8263.149	69
497			min	-0.536	100	-1.198	13	-0.656	70	-0.008	68	974.302	100	399.163	100
498		5	max	0.534	72	-0.09	68	0.485	102	0.008	92	NC	107	4609.682	69
499			min	-0.546	100	-0.897	13	-0.538	70	-0.011	19	NC	12	237.279	100
500	M389	1	max	0.419	72	-0.12	66	0.568	102	0.007	92	NC	107	NC	107
501			min	-0.436	100	-0.998	15	-0.609	70	-0.003	68	NC	12	NC	12
502		2	max	0.43	72	-0.039	68	0.577	102	0.005	92	NC	107	NC	107
503			min	-0.446	100	-0.819	13	-0.629	70	-0.002	68	879.681	100	2585.315	72
504		3	max	0.44	72	0.037	76	0.549	102	0.004	13	NC	69	NC	107
505			min	-0.456	100	-0.6	13	-0.601	70	-0.001	68	655.161	100	854.617	100
506		4	max	0.451	72	0.063	76	0.486	102	0.004	13	NC	107	NC	107
507			min	-0.466	100	-0.325	13	-0.523	70	0	68	878.794	100	401.606	100
508		5	max	0.461	72	0.041	57	0.386	102	0.004	15	NC	107	NC	107
509			min	-0.477	100	-0.046	86	-0.399	70	-0.001	74	NC	12	233.497	100
510	M390	1	max	0.431	102	-0.12	66	0.446	103	0.012	15	NC	107	NC	107
511			min	-0.477	70	-0.998	15	-0.454	71	0.001	96	NC	12	NC	12
512		2	max	0.425	106	-0.117	66	0.446	103	0.012	15	NC	107	NC	107
513			min	-0.47	70	-0.977	15	-0.457	71	0.002	96	3119.687	72	966.321	72
514		3	max	0.419	106	-0.123	66	0.445	103	0.012	14	NC	107	NC	107
515			min	-0.463	70	-0.953	15	-0.459	71	0.002	99	2334.182	72	514.657	72
516		4	max	0.413	106	-0.115	68	0.443	103	0.011	13	NC	107	NC	107
517			min	-0.456	70	-0.926	13	-0.46	71	0.002	98	3126.347	72	367.332	72
518		5	max	0.406	106	-0.09	68	0.44	103	0.011	13	NC	107	NC	105
519			min	-0.45	70	-0.897	13	-0.459	71	0.001	98	NC	12	296.228	72
520	M392	1	max	0.662	106	-0.284	66	0.302	107	0.004	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
521			min	-0.825	70	-2.338	15	-0.426	71	0	66	NC	12	NC	12
522		2	max	0.655	106	-0.313	66	0.303	107	0.004	15	NC	107	NC	107
523			min	-0.817	70	-2.29	15	-0.43	71	0	66	3676.842	15	1916.848	72
524		3	max	0.648	106	-0.33	68	0.304	107	0.004	14	NC	107	NC	107
525			min	-0.81	70	-2.233	13	-0.431	71	0.001	77	2632.118	15	1049.101	72
526		4	max	0.642	106	-0.287	68	0.303	107	0.004	13	NC	107	NC	107
527			min	-0.802	70	-2.171	13	-0.43	71	0	68	3676.843	15	774.723	72
528		5	max	0.635	106	-0.236	68	0.301	107	0.004	13	NC	107	NC	107
529			min	-0.795	70	-2.1	13	-0.427	71	0	68	NC	12	649.672	72
530	M394	1	max	0.659	106	-0.28	66	0.181	107	0	66	NC	107	NC	107
531			min	-0.821	70	-2.324	15	-0.401	71	-0.004	15	NC	12	NC	12
532		2	max	0.652	106	-0.309	66	0.182	107	0	66	NC	107	NC	107
533			min	-0.814	70	-2.273	15	-0.402	71	-0.004	15	3658.723	102	5834.527	102
534		3	max	0.646	106	-0.328	69	0.183	107	-0.001	67	NC	107	NC	107
535			min	-0.807	70	-2.219	14	-0.402	71	-0.004	16	2730.788	102	2212.096	102
536		4	max	0.639	106	-0.286	68	0.183	107	0	68	NC	107	NC	107
537			min	-0.8	70	-2.162	13	-0.4	71	-0.004	13	3670.377	102	1182.399	102
538		5	max	0.639	76	-0.235	68	0.183	107	0	68	NC	107	NC	107
539			min	-0.799	100	-2.102	13	-0.397	71	-0.004	13	NC	12	742.039	102
540	M396	1	max	0.427	106	-0.121	66	0.07	107	-0.001	66	NC	107	NC	107
541			min	-0.474	70	-1.04	15	-0.446	15	-0.013	15	NC	12	NC	12
542		2	max	0.421	106	-0.12	66	0.072	107	-0.002	66	NC	107	NC	107
543			min	-0.468	70	-1.007	15	-0.44	15	-0.012	15	2871.179	70	1633.846	102
544		3	max	0.415	106	-0.126	69	0.073	107	-0.002	69	NC	107	NC	107
545			min	-0.461	70	-0.972	15	-0.433	14	-0.012	15	2162.385	70	735.434	102
546		4	max	0.413	76	-0.116	68	0.074	107	-0.002	98	NC	107	NC	99
547			min	-0.458	100	-0.936	13	-0.427	13	-0.011	13	2876.82	70	445.375	102
548		5	max	0.421	76	-0.087	68	0.074	107	-0.001	98	NC	107	NC	77
549			min	-0.467	100	-0.902	13	-0.421	13	-0.011	13	NC	12	306.215	102
550	M397	1	max	0.066	66	-0.184	96	1.095	106	0.019	106	NC	107	NC	107
551			min	-0.988	15	-2.131	15	-1.122	74	-0.036	13	NC	12	NC	12
552		2	max	0.079	66	-0.235	96	0.826	106	0.013	106	3582.99	107	6367.733	70
553			min	-0.978	15	-2.578	15	-1.206	70	-0.027	13	180.561	15	128.31	15
554		3	max	0.093	66	-0.248	96	0.649	106	0.007	106	2669.588	107	1555.651	96
555			min	-0.968	15	-2.661	15	-1.169	70	-0.019	13	132.652	15	90.744	15
556		4	max	0.106	66	-0.217	96	0.561	106	0.002	96	3551.243	107	6451.248	96
557			min	-0.957	15	-2.333	15	-0.995	70	-0.011	15	180.215	15	94.376	72
558		5	max	0.12	66	-0.143	99	0.565	106	0.008	96	NC	107	NC	88
559			min	-0.947	15	-1.639	15	-0.692	70	-0.009	64	NC	12	88.829	76
560	M398	1	max	0.081	68	1.953	13	1.11	104	0.014	106	NC	107	NC	107
561			min	-0.866	13	0.137	98	-1.124	76	-0.071	13	NC	12	NC	12
562		2	max	0.095	68	1.714	13	0.887	104	0.008	106	8180.229	107	NC	107
563			min	-0.857	13	0.104	98	-1.128	72	-0.06	13	939.024	13	259.246	100
564		3	max	0.108	68	1.563	13	0.729	104	0.002	106	6102.813	107	NC	107
565			min	-0.848	13	0.089	98	-1.04	72	-0.049	15	731.667	71	150.096	100
566		4	max	0.122	68	1.455	13	0.629	104	0.003	96	8016.756	107	NC	69
567			min	-0.839	13	0.087	98	-0.847	72	-0.039	15	929.772	13	117.648	100
568		5	max	0.135	68	1.436	13	0.624	70	0.009	96	NC	107	NC	88
569			min	-0.83	13	0.102	98	-0.566	106	-0.028	15	NC	12	90.825	76
570	M399	1	max	-0.05	98	-0.137	68	1.092	104	0.019	104	NC	107	NC	107
571			min	-1.243	13	-1.692	13	-1.106	76	-0.031	15	NC	12	NC	12
572		2	max	-0.061	98	-0.198	68	0.927	104	0.013	104	NC	75	9618.814	75
573			min	-1.235	13	-2.083	13	-1.188	72	-0.021	15	205.018	16	192.071	15
574		3	max	-0.071	98	-0.215	68	0.793	104	0.006	104	9181.718	75	7664.252	75
575			min	-1.227	13	-2.155	13	-1.135	72	-0.011	13	150.205	16	151.881	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
576		4	max	-0.082	98	-0.186	68	0.689	104	0.006	94	NC	75	NC	75
577			min	-1.219	13	-1.862	13	-0.929	72	-0.007	66	204.573	16	132.845	100
578		5	max	-0.093	98	-0.114	68	0.639	100	0.013	94	NC	107	NC	99
579			min	-1.211	13	-1.248	13	-0.582	76	-0.012	66	NC	12	98.277	76
580	M400	1	max	-0.078	107	1.861	15	1.137	106	0.018	74	NC	107	NC	107
581			min	-1.373	15	0.173	66	-1.123	74	-0.06	15	NC	12	NC	12
582		2	max	-0.087	107	1.96	15	1.032	106	0.012	74	NC	105	NC	105
583			min	-1.361	15	0.18	66	-1.019	74	-0.048	15	477.328	13	395.512	76
584		3	max	-0.096	107	1.93	15	0.906	106	0.006	74	NC	105	NC	101
585			min	-1.35	15	0.176	66	-0.906	74	-0.037	15	340.097	13	189.9	76
586		4	max	-0.105	107	1.727	15	0.751	106	0.001	98	NC	105	NC	97
587			min	-1.339	15	0.158	66	-0.792	70	-0.025	13	477.329	13	120.67	72
588		5	max	-0.114	107	1.395	15	0.574	106	0.007	98	NC	107	NC	45
589			min	-1.328	15	0.129	66	-0.674	70	-0.014	13	NC	12	86.206	72
590	M401	1	max	0.353	106	0.22	107	0.016	106	0.006	70	NC	107	NC	107
591			min	-0.583	70	-0.392	71	-0.026	70	-0.003	106	NC	12	NC	12
592		2	max	0.346	106	0.436	106	0.355	102	0.009	70	NC	105	9382.167	66
593			min	-0.574	70	-0.576	70	-0.191	74	-0.005	106	252.289	102	205.48	15
594		3	max	0.338	106	0.459	106	0.534	102	0.012	70	NC	99	1504.392	66
595			min	-0.565	70	-0.594	70	-0.213	74	-0.008	106	189.314	102	108.044	15
596		4	max	0.331	106	0.224	107	0.684	15	0.016	70	NC	105	1306.837	74
597			min	-0.556	70	-0.378	71	-0.093	74	-0.01	106	252.486	102	76.609	15
598		5	max	0.323	106	0.538	104	0.815	13	0.019	70	NC	107	390.006	68
599			min	-0.547	70	-0.724	72	0.127	68	-0.012	106	NC	12	60.805	13
600	M402	1	max	0.177	72	0.032	107	0.023	101	0.002	107	NC	107	NC	107
601			min	-0.134	104	-0.062	71	-0.011	77	-0.005	71	NC	12	NC	12
602		2	max	0.195	72	0.583	106	0.367	102	0.004	106	NC	99	NC	100
603			min	-0.151	104	-0.569	74	-0.167	74	-0.008	70	213.804	102	183.571	15
604		3	max	0.214	72	0.837	102	0.601	15	0.006	106	8958.131	99	3441.055	74
605			min	-0.168	104	-0.806	74	-0.174	74	-0.012	70	160.175	102	97.038	15
606		4	max	0.232	72	0.776	102	0.793	15	0.009	106	NC	99	492.908	104
607			min	-0.185	104	-0.754	74	-0.012	74	-0.016	70	213.946	102	68.998	13
608		5	max	0.25	72	0.407	106	0.936	13	0.011	106	NC	107	517.688	98
609			min	-0.202	104	-0.413	70	0.094	68	-0.019	70	NC	12	54.85	13
610	M403	1	max	0.293	75	0.012	107	0.511	106	0.009	106	NC	107	NC	107
611			min	-0.443	103	-1.052	15	-0.593	70	-0.053	13	NC	12	NC	12
612		2	max	0.314	71	-0.108	99	0.071	106	0.007	106	654.48	96	489.759	96
613			min	-0.445	103	-1.84	15	-1.683	13	-0.04	13	93.715	15	60.935	15
614		3	max	0.339	71	-0.121	99	-0.122	106	0.006	76	488.463	96	528.743	104
615			min	-0.447	103	-1.962	14	-2.216	13	-0.026	13	69.698	15	45.076	15
616		4	max	0.363	71	-0.019	107	-0.073	106	0.004	76	654.131	96	4129.941	74
617			min	-0.45	103	-1.382	14	-1.714	13	-0.013	13	93.629	15	58.479	15
618		5	max	0.388	71	0.217	107	0.223	106	0.005	71	NC	107	NC	107
619			min	-0.452	103	-0.32	71	-0.35	70	-0.004	77	NC	12	140.13	72
620	M404	1	max	0.302	71	0.844	13	0.457	104	0.018	106	NC	107	NC	107
621			min	-0.428	103	-0.055	107	-0.569	72	-0.019	70	NC	12	NC	12
622		2	max	0.325	71	0.211	71	0.062	104	0.014	106	882.818	98	605.623	76
623			min	-0.432	103	-0.298	103	-1.328	15	-0.015	70	159.951	13	84.241	13
624		3	max	0.349	71	0.081	75	-0.112	104	0.011	106	666.044	98	824.645	76
625			min	-0.435	103	-0.48	103	-1.694	15	-0.011	70	121.523	13	64.196	13
626		4	max	0.373	71	0.089	68	-0.07	104	0.007	107	882.183	98	1980.059	106
627			min	-0.439	103	-0.476	103	-1.3	15	-0.008	71	159.701	13	88.436	13
628		5	max	0.396	71	0.241	71	0.211	74	0.009	107	NC	107	NC	103
629			min	-0.443	103	-0.284	103	-0.297	102	-0.01	71	NC	12	164.678	72
630	M405	1	max	0.003	107	0.722	15	0.505	106	0.007	74	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
631			min	-0.562	15	0.071	66	-0.585	70	-0.058	15	NC	12	NC	12
632		2	max	-0.001	107	-0.021	98	0.106	106	0.006	74	758.08	98	448.078	96
633			min	-0.534	15	-0.308	13	-1.59	13	-0.044	15	124.64	15	64.324	15
634		3	max	-0.005	107	-0.108	98	-0.073	106	0.005	74	571.456	98	354.68	96
635			min	-0.506	15	-0.814	15	-2.085	13	-0.029	15	94.425	15	47.714	15
636		4	max	-0.004	77	-0.109	99	-0.036	106	0.007	75	757.613	98	7611.354	104
637			min	-0.478	15	-0.833	15	-1.631	13	-0.015	15	124.489	15	60.888	15
638		5	max	0.015	77	0.033	107	0.221	106	0.011	71	NC	107	NC	101
639			min	-0.45	15	-0.329	15	-0.351	70	-0.01	103	NC	12	158.036	72
640	M406	1	max	0.011	107	-0.074	68	0.444	104	0.02	70	NC	107	NC	107
641			min	-0.509	13	-0.754	13	-0.562	72	-0.017	106	NC	12	NC	12
642		2	max	0.006	107	-0.188	68	0.086	104	0.015	70	684.067	67	478.89	68
643			min	-0.487	13	-1.415	13	-1.484	15	-0.013	106	108.15	13	75.106	13
644		3	max	0.001	107	-0.208	67	-0.068	104	0.011	70	510.432	67	422.136	76
645			min	-0.465	13	-1.499	13	-1.908	15	-0.01	106	80.331	13	56.896	13
646		4	max	-0.001	77	-0.087	75	-0.019	104	0.008	73	683.686	67	NC	46
647			min	-0.443	13	-0.972	16	-1.448	15	-0.008	75	108.036	13	79.594	13
648		5	max	0.017	77	0.187	71	0.235	104	0.01	103	NC	107	NC	99
649			min	-0.42	13	-0.086	107	-0.319	72	-0.011	71	NC	12	196.665	72
650	M409	1	max	0.13	66	-0.116	96	0.905	106	0.006	106	NC	107	NC	107
651			min	-0.709	15	-1.702	15	-0.96	70	-0.062	13	NC	12	NC	12
652		2	max	0.145	66	-0.217	96	0.426	106	0.005	106	761.852	96	1372.071	104
653			min	-0.687	15	-2.401	15	-1.447	13	-0.047	13	107.198	15	68.992	15
654		3	max	0.159	66	-0.236	99	0.183	106	0.003	106	568.143	96	5455.984	74
655			min	-0.664	15	-2.518	15	-1.924	13	-0.032	13	79.63	15	50.392	15
656		4	max	0.174	66	-0.16	99	0.174	106	0.001	106	761.379	96	1357.062	70
657			min	-0.642	15	-2.02	15	-1.509	13	-0.017	15	107.086	15	63.173	15
658		5	max	0.189	66	0.015	107	0.4	106	0.004	96	NC	107	NC	87
659			min	-0.626	103	-0.939	14	-0.544	70	-0.004	64	NC	12	84.577	72
660	M410	1	max	0.143	68	1.499	13	0.902	104	0.001	76	NC	107	NC	107
661			min	-0.614	13	0.061	98	-0.995	72	-0.061	13	NC	12	NC	12
662		2	max	0.158	68	0.835	13	0.49	104	0	76	1001.839	98	5617.395	76
663			min	-0.595	13	-0.073	107	-1.341	72	-0.05	13	202.795	13	106.454	13
664		3	max	0.173	68	0.495	13	0.27	104	-0.002	76	756.445	98	933.714	72
665			min	-0.592	103	-0.162	107	-1.388	15	-0.039	13	154.612	13	82.696	13
666		4	max	0.187	68	0.448	13	0.238	104	0	96	1001.022	98	2450.414	68
667			min	-0.596	103	-0.158	107	-1.071	72	-0.028	15	202.394	13	79.367	100
668		5	max	0.202	68	0.726	13	0.411	74	0.005	96	NC	107	NC	95
669			min	-0.601	103	-0.063	107	-0.469	102	-0.017	15	NC	12	88.295	76
670	M411	1	max	-0.07	107	1.44	15	0.883	106	0.008	74	NC	107	NC	107
671			min	-1.097	15	0.141	66	-0.938	70	-0.076	15	NC	12	NC	12
672		2	max	-0.074	107	0.633	15	0.478	106	0.006	74	913.521	67	684.252	104
673			min	-1.074	15	0.005	66	-1.421	70	-0.06	15	162.81	15	79.516	15
674		3	max	-0.078	107	0.23	19	0.264	106	0.003	74	689.35	67	2671.875	104
675			min	-1.052	15	-0.104	73	-1.676	13	-0.044	15	123.723	15	58.445	15
676		4	max	-0.082	107	0.191	15	0.238	106	0.001	74	912.842	67	NC	70
677			min	-1.029	15	-0.073	73	-1.33	13	-0.027	15	162.551	15	72.517	15
678		5	max	-0.086	107	0.558	15	0.404	106	0.002	68	NC	107	NC	101
679			min	-1.006	15	0.033	67	-0.545	70	-0.012	13	NC	12	93.971	72
680	M412	1	max	-0.05	107	-0.125	68	0.88	104	0.004	104	NC	107	NC	107
681			min	-0.979	13	-1.297	13	-0.972	72	-0.037	15	NC	12	NC	12
682		2	max	-0.055	107	-0.234	68	0.521	104	0.002	104	806.126	66	909.485	76
683			min	-0.96	13	-1.876	13	-1.396	72	-0.028	15	126.557	16	91.409	13
684		3	max	-0.06	107	-0.259	68	0.328	104	0	104	600.962	66	NC	46
685			min	-0.942	13	-1.963	13	-1.59	15	-0.018	15	93.849	16	69.81	13

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
686		4	max	-0.064	107	-0.196	68	0.298	104	0.002	98	805.597	66	896.424	68
687			min	-0.924	13	-1.526	13	-1.195	15	-0.009	13	126.401	16	87.871	100
688		5	max	-0.069	107	-0.048	68	0.434	104	0.006	94	NC	107	NC	99
689			min	-0.905	13	-0.595	13	-0.491	72	-0.006	66	NC	12	99.069	76
690	M413	1	max	0.007	66	-0.217	96	1.154	106	0.023	15	NC	107	NC	107
691			min	-1.174	15	-2.311	15	-1.198	74	-0.014	74	NC	12	NC	12
692		2	max	0.02	66	-0.26	96	0.943	106	0.018	15	NC	107	2956.882	107
693			min	-1.169	15	-2.657	15	-1.25	70	-0.008	74	256.635	15	183.621	13
694		3	max	0.033	66	-0.276	96	0.792	106	0.013	13	NC	107	1591.442	107
695			min	-1.164	15	-2.753	15	-1.212	70	-0.002	68	186.932	15	122.532	13
696		4	max	0.046	66	-0.261	96	0.698	106	0.011	92	NC	107	1667.284	96
697			min	-1.159	15	-2.55	15	-1.074	70	-0.008	68	255.937	15	108.023	72
698		5	max	0.059	66	-0.22	96	0.663	106	0.016	92	NC	107	NC	101
699			min	-1.153	15	-2.093	15	-0.845	70	-0.014	68	NC	12	95.832	72
700	M414	1	max	0.024	68	2.056	13	1.193	104	0.014	76	NC	107	NC	107
701			min	-1.035	13	0.162	98	-1.171	76	-0.019	13	NC	12	NC	12
702		2	max	0.037	68	2.062	13	1.025	104	0.007	76	NC	107	NC	69
703			min	-1.03	13	0.161	98	-1.112	72	-0.021	13	1461.218	71	353.226	100
704		3	max	0.049	68	2.049	13	0.897	104	0.003	66	NC	103	NC	69
705			min	-1.025	13	0.163	98	-1.014	72	-0.023	15	1080.847	19	198.009	104
706		4	max	0.062	68	1.971	13	0.801	104	0.009	66	NC	107	NC	92
707			min	-1.021	13	0.165	98	-0.852	72	-0.026	15	1462.152	71	141.399	104
708		5	max	0.075	68	1.876	13	0.792	70	0.014	96	NC	107	NC	101
709			min	-1.016	13	0.171	98	-0.652	106	-0.029	15	NC	12	98.592	72
710	M415	1	max	-0.075	107	2.038	15	1.161	106	0.015	74	NC	107	NC	107
711			min	-1.541	15	0.15	66	-1.203	74	-0.022	102	NC	12	NC	12
712		2	max	-0.085	107	1.985	15	1.028	106	0.008	74	NC	106	NC	105
713			min	-1.535	15	0.132	66	-1.287	70	-0.019	15	1166.5	70	296.937	13
714		3	max	-0.094	107	1.942	15	0.904	106	0.001	68	NC	106	NC	105
715			min	-1.529	15	0.128	66	-1.258	70	-0.017	13	879.603	70	170.116	72
716		4	max	-0.104	107	1.866	15	0.781	106	0.007	68	NC	106	NC	105
717			min	-1.523	15	0.134	66	-1.11	70	-0.015	13	1164.742	70	120.748	72
718		5	max	-0.114	107	1.804	15	0.668	106	0.013	68	NC	107	NC	98
719			min	-1.517	15	0.154	66	-0.846	70	-0.017	92	NC	12	97.399	72
720	M416	1	max	-0.037	98	-0.12	68	1.198	104	0.02	13	NC	107	NC	107
721			min	-1.41	13	-1.841	13	-1.178	76	-0.014	76	NC	12	NC	12
722		2	max	-0.048	98	-0.171	68	1.083	104	0.019	13	NC	105	NC	105
723			min	-1.406	13	-2.138	13	-1.192	72	-0.007	76	301.163	15	420.292	100
724		3	max	-0.06	98	-0.192	68	0.973	104	0.02	15	9988.943	105	NC	105
725			min	-1.403	13	-2.223	13	-1.122	72	-0.003	66	218.275	15	226.433	100
726		4	max	-0.071	98	-0.178	68	0.864	104	0.02	15	NC	105	NC	105
727			min	-1.399	13	-2.05	13	-0.936	72	-0.009	96	300.203	15	155.262	104
728		5	max	-0.082	98	-0.133	68	0.804	100	0.021	15	NC	107	NC	98
729			min	-1.396	13	-1.663	13	-0.666	76	-0.015	96	NC	12	100.413	72
730	M95	1	max	0.925	106	-0.261	66	0.166	107	-0.001	66	NC	107	NC	107
731			min	-0.9	74	-1.86	15	-0.219	71	-0.009	15	NC	12	NC	12
732		2	max	0.919	76	-0.29	66	0.251	107	0.114	107	9671.918	96	NC	46
733			min	-0.897	104	-1.836	15	-0.306	71	-0.122	71	1568.762	72	691.673	71
734		3	max	0.925	76	-0.285	68	0.289	107	0.232	103	6349.817	96	NC	46
735			min	-0.904	104	-1.795	13	-0.346	71	-0.24	71	1025.018	72	472.977	71
736		4	max	0.931	76	-0.251	68	0.249	107	0.114	107	NC	96	NC	46
737			min	-0.91	104	-1.718	13	-0.307	71	-0.122	71	1466.555	72	691.673	71
738		5	max	0.938	72	-0.21	68	0.161	107	-0.001	68	NC	107	NC	107
739			min	-0.916	104	-1.623	13	-0.22	71	-0.009	13	NC	12	NC	12
740	M96	1	max	0.953	106	-0.257	66	0.301	107	0.01	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
741			min	-0.928	74	-1.809	15	-0.586	71	0.001	96	NC	12	NC	12
742		2	max	0.947	76	-0.284	66	0.384	107	0.118	103	9633.972	66	NC	46
743			min	-0.923	104	-1.795	15	-0.669	71	-0.11	75	1661.414	15	712.838	103
744		3	max	0.954	76	-0.279	68	0.421	107	0.232	103	6353.552	66	NC	46
745			min	-0.93	104	-1.765	13	-0.706	71	-0.224	71	1096.922	102	487.454	103
746		4	max	0.96	76	-0.25	68	0.382	107	0.118	103	NC	96	NC	46
747			min	-0.937	104	-1.701	13	-0.666	71	-0.11	75	1573.162	102	712.838	103
748		5	max	0.966	76	-0.214	68	0.297	107	0.009	13	NC	107	NC	107
749			min	-0.943	104	-1.619	13	-0.58	71	0.001	98	NC	12	NC	12
750	M530	1	max	0	107	0	107	0	107	0.072	73	NC	107	NC	107
751			min	0	12	0	12	0	12	-0.074	71	NC	12	NC	12
752		2	max	0.011	57	0.106	72	0.09	75	0.072	73	NC	107	NC	98
753			min	-0.013	86	-0.11	100	-0.171	103	-0.074	71	3048.141	100	644.97	13
754		3	max	0.023	57	0.2	72	0.112	75	0.072	73	NC	107	NC	106
755			min	-0.026	86	-0.209	100	-0.275	103	-0.074	71	1990.698	100	321.974	13
756		4	max	0.034	57	0.271	72	0.085	75	0.071	73	NC	107	NC	99
757			min	-0.039	86	-0.284	100	-0.357	13	-0.073	71	2692.832	100	214.399	13
758		5	max	0.046	57	0.325	72	0.035	75	0.068	73	NC	107	NC	107
759			min	-0.051	86	-0.341	100	-0.476	13	-0.07	71	NC	12	160.679	13
760	M531	1	max	0	107	0	107	0	107	0.057	71	NC	107	NC	107
761			min	0	12	0	12	0	12	-0.055	73	NC	12	NC	12
762		2	max	0.011	57	0.116	70	0.177	103	0.057	71	NC	107	NC	104
763			min	-0.013	86	-0.111	102	-0.093	75	-0.055	73	2474.254	70	898.411	103
764		3	max	0.023	57	0.212	70	0.282	103	0.058	71	NC	107	NC	91
765			min	-0.026	86	-0.202	102	-0.115	75	-0.056	73	1796.964	70	747.865	56
766		4	max	0.034	57	0.284	70	0.365	15	0.058	71	NC	107	NC	99
767			min	-0.039	86	-0.271	102	-0.086	75	-0.056	73	2576.802	70	485.718	56
768		5	max	0.045	57	0.339	70	0.485	15	0.056	71	NC	107	NC	107
769			min	-0.052	86	-0.323	102	-0.034	75	-0.054	73	NC	12	358.142	56
770	M532	1	max	0	107	0	107	0.699	73	0.013	71	NC	107	NC	107
771			min	0	12	0	12	-0.365	105	-0.011	103	NC	12	149.295	15
772		2	max	0.011	57	0.09	70	0.642	73	0.013	71	NC	107	NC	105
773			min	-0.013	86	-0.085	102	-0.394	105	-0.011	103	3153.883	70	199.641	15
774		3	max	0.023	57	0.165	70	0.585	73	0.013	71	NC	107	NC	105
775			min	-0.026	86	-0.155	102	-0.425	101	-0.012	103	2316.935	70	300.132	15
776		4	max	0.034	57	0.221	70	0.525	73	0.013	71	NC	107	NC	105
777			min	-0.039	86	-0.207	102	-0.472	101	-0.012	103	3338.397	70	437.265	103
778		5	max	0.046	57	0.264	70	0.464	73	0.013	71	NC	107	NC	105
779			min	-0.052	86	-0.247	102	-0.518	101	-0.012	103	NC	12	322.399	103
780	M533	1	max	0	107	0	107	0.364	105	0.017	107	NC	107	NC	107
781			min	0	12	0	12	-0.687	73	-0.019	71	NC	12	167.237	13
782		2	max	0.011	57	0.081	72	0.391	105	0.017	107	NC	107	NC	105
783			min	-0.013	86	-0.086	100	-0.634	73	-0.019	71	3977.106	100	223.254	13
784		3	max	0.023	57	0.153	72	0.421	101	0.017	107	NC	107	NC	105
785			min	-0.026	86	-0.162	100	-0.581	73	-0.019	71	2600.263	100	335.092	13
786		4	max	0.034	57	0.208	72	0.466	101	0.017	107	NC	107	NC	105
787			min	-0.039	86	-0.221	100	-0.525	73	-0.018	71	3514.444	100	469.323	100
788		5	max	0.046	57	0.249	72	0.51	101	0.016	103	NC	107	NC	105
789			min	-0.051	86	-0.266	100	-0.469	73	-0.018	71	NC	12	348.106	103
790	M534	1	max	1.132	76	0.408	73	2.429	15	0	75	NC	107	NC	107
791			min	-1.174	74	-0.24	105	0.31	66	-0.001	103	NC	12	NC	12
792		2	max	1.139	76	0.402	73	2.385	15	0	75	NC	107	NC	99
793			min	-1.178	104	-0.242	105	0.359	66	-0.001	103	3665.228	72	472.702	94
794		3	max	1.146	76	0.399	73	2.341	13	0	75	NC	107	NC	99
795			min	-1.185	104	-0.242	105	0.352	68	-0.001	103	2747.843	72	239.913	94

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
796		4	max	1.153	76	0.398	73	2.294	13	0	75	NC	107	8341.698	99
797			min	-1.192	104	-0.241	105	0.307	68	-0.001	103	3633.975	72	162.22	94
798		5	max	1.16	76	0.4	73	2.244	13	0	75	NC	107	5744.359	99
799			min	-1.199	100	-0.238	105	0.265	68	0	103	NC	12	123.488	94
800	M535	1	max	0.384	105	0.007	86	0.057	70	0.004	102	NC	107	NC	107
801			min	-0.662	73	-0.006	57	-0.054	102	-0.004	70	NC	12	NC	12
802		2	max	0.307	105	1.819	15	0.956	74	0.092	15	2592.049	66	NC	107
803			min	-0.556	73	0.259	66	-0.98	106	-0.008	74	376.264	15	738.559	76
804		3	max	0.24	105	2.427	15	1.195	74	0.027	72	2171.966	66	NC	105
805			min	-0.407	73	0.31	66	-1.162	76	-0.018	104	282.014	15	602.426	104
806		4	max	0.164	105	1.832	15	0.935	74	0.008	106	2625.823	66	NC	107
807			min	-0.247	73	0.256	66	-0.94	106	-0.074	13	373.653	15	776.434	76
808		5	max	0.063	75	0.007	86	0.072	70	0.005	102	NC	107	NC	107
809			min	-0.117	103	-0.006	57	-0.069	102	-0.006	70	NC	12	NC	12
810	M536	1	max	0.381	105	0.007	86	0.052	100	0.004	72	NC	107	NC	107
811			min	-0.653	73	-0.006	57	-0.049	72	-0.004	100	NC	12	NC	12
812		2	max	0.305	105	1.661	13	0.98	104	0.046	15	3069.127	68	NC	107
813			min	-0.547	73	0.218	68	-0.985	76	-0.004	104	411.938	13	733.839	76
814		3	max	0.238	105	2.244	13	1.219	100	0.018	76	2538.349	68	NC	105
815			min	-0.4	73	0.265	68	-1.174	76	-0.022	13	304.99	13	590.255	100
816		4	max	0.161	105	1.674	13	0.956	104	0.002	76	3119.31	68	NC	105
817			min	-0.242	73	0.215	68	-0.949	76	-0.076	13	408.796	13	765.61	104
818		5	max	0.061	75	0.007	86	0.067	100	0.005	72	NC	107	NC	107
819			min	-0.113	103	-0.006	57	-0.065	72	-0.006	100	NC	12	NC	12
820	M537	1	max	0.862	70	1.047	104	2.189	13	0.019	13	NC	107	NC	107
821			min	-0.697	106	-1.079	72	0.283	68	-0.015	76	NC	12	NC	12
822		2	max	0.876	70	1.053	100	2.444	13	0.017	104	NC	96	NC	107
823			min	-0.709	106	-1.029	76	0.362	68	-0.018	72	537.47	15	345.563	15
824		3	max	0.891	70	1.043	100	2.568	15	0.017	104	8765.442	66	NC	103
825			min	-0.722	106	-1.008	76	0.375	66	-0.022	72	393.519	15	220.453	15
826		4	max	0.905	70	1.004	104	2.531	15	0.017	104	NC	96	NC	99
827			min	-0.734	106	-1.007	76	0.328	66	-0.039	15	537.47	15	216.095	15
828		5	max	0.919	70	0.961	104	2.359	15	0.017	104	NC	107	7106.557	67
829			min	-0.747	106	-1.051	72	0.279	66	-0.057	15	NC	12	271.283	92
830	M538	1	max	0.848	70	1.011	104	2.135	13	0.018	104	NC	107	NC	107
831			min	-0.661	106	-1.095	72	0.293	68	-0.028	15	NC	12	NC	12
832		2	max	0.862	70	0.88	104	2.289	16	0.015	104	NC	88	NC	105
833			min	-0.673	106	-0.926	72	0.346	66	-0.04	15	603.957	15	823.452	19
834		3	max	0.875	70	0.807	100	2.327	15	0.012	104	NC	88	NC	105
835			min	-0.685	106	-0.847	72	0.296	66	-0.051	15	440.903	15	436.141	92
836		4	max	0.889	70	0.781	104	2.208	15	0.009	104	NC	88	NC	106
837			min	-0.696	106	-0.858	72	0.261	66	-0.062	15	603.957	15	296.003	92
838		5	max	0.902	70	0.813	104	1.962	15	0.006	74	NC	107	3071.799	94
839			min	-0.708	106	-0.959	72	0.241	66	-0.074	15	NC	12	227.366	92
840	M539	1	max	0.763	70	0.868	104	1.703	13	0.004	96	NC	107	NC	107
841			min	-0.558	106	-1.007	72	0.247	68	-0.032	15	NC	12	NC	12
842		2	max	0.772	70	0.462	104	1.629	15	0.004	104	NC	107	3590.577	64
843			min	-0.566	106	-0.59	72	0.201	74	-0.036	15	303.082	72	296.058	100
844		3	max	0.782	70	0.265	104	1.517	15	0.005	104	NC	107	NC	102
845			min	-0.574	106	-0.395	72	0.092	74	-0.041	15	227.238	72	178.609	100
846		4	max	0.792	70	0.274	104	1.345	15	0.005	104	NC	107	NC	68
847			min	-0.582	106	-0.422	72	0.103	74	-0.045	15	302.797	72	124.972	13
848		5	max	0.801	70	0.493	104	1.127	15	0.006	104	NC	107	1009.598	68
849			min	-0.591	106	-0.671	72	0.132	66	-0.049	15	NC	12	86.419	13
850	M540	1	max	0.491	101	0.04	57	0.229	102	0.002	102	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
851			min	-0.498	73	-0.046	86	-0.244	70	-0.002	70	NC	12	NC	12
852		2	max	0.368	101	-0.232	66	0.564	106	0.018	13	2614.09	66	NC	107
853			min	-0.444	73	-1.832	15	-0.667	70	-0.01	98	374.945	15	1685.129	70
854		3	max	0.25	105	-0.284	66	0.697	106	0.018	66	2180.319	66	NC	105
855			min	-0.411	73	-2.434	15	-0.926	70	-0.022	94	281.917	15	1056.296	70
856		4	max	0.142	105	-0.227	66	0.6	106	0.011	62	2666.889	66	NC	107
857			min	-0.378	73	-1.837	15	-0.702	70	-0.012	98	373.73	15	1683.616	70
858		5	max	0.059	75	0.04	57	0.299	102	0.003	102	NC	107	NC	107
859			min	-0.415	15	-0.046	86	-0.313	70	-0.003	70	NC	12	NC	12
860	M541	1	max	0.484	101	0.041	57	0.23	72	0.002	76	NC	107	NC	107
861			min	-0.501	73	-0.046	86	-0.245	100	-0.002	100	NC	12	NC	12
862		2	max	0.363	101	-0.192	68	0.572	76	0.015	66	3079.99	68	NC	107
863			min	-0.446	73	-1.671	13	-0.663	100	-0.017	94	410.831	13	1707.374	100
864		3	max	0.247	105	-0.239	68	0.707	76	0.017	66	2547.443	68	NC	105
865			min	-0.41	73	-2.249	13	-0.92	100	-0.046	15	304.923	13	1069.008	100
866		4	max	0.141	105	-0.186	68	0.611	76	0.013	66	3167.219	68	NC	107
867			min	-0.374	73	-1.681	13	-0.699	100	-0.033	15	408.46	13	1700.564	100
868		5	max	0.059	75	0.041	57	0.3	72	0.003	76	NC	107	NC	107
869			min	-0.407	13	-0.046	86	-0.314	100	-0.003	100	NC	12	NC	12
870	M542	1	max	0.851	106	0.716	73	2.457	15	0.002	71	NC	107	NC	107
871			min	-1.029	70	-0.533	105	0.308	66	-0.002	103	NC	12	NC	12
872		2	max	0.845	106	1.266	73	2.551	15	0.019	103	NC	64	NC	72
873			min	-1.022	70	-1.011	105	0.381	66	-0.019	71	84.958	103	349.749	92
874		3	max	0.844	76	1.51	73	2.566	13	0.029	103	NC	64	NC	90
875			min	-1.02	100	-1.223	105	0.399	68	-0.029	71	59.321	103	209.095	92
876		4	max	0.851	76	1.304	73	2.473	13	0.02	103	NC	64	9783.717	12
877			min	-1.027	100	-1.046	105	0.344	68	-0.021	71	81.977	103	185.991	92
878		5	max	0.857	76	0.752	73	2.292	13	0.005	71	NC	107	6385.51	99
879			min	-1.033	100	-0.569	105	0.265	68	-0.005	103	NC	12	122.823	94
880	M543	1	max	0.71	106	0.678	73	1.784	15	0	75	NC	107	NC	107
881			min	-0.756	70	-0.52	105	0.244	66	-0.005	15	NC	12	NC	12
882		2	max	0.704	106	1.194	73	1.881	15	0.018	107	NC	72	NC	105
883			min	-0.75	70	-0.952	105	0.292	67	-0.021	71	88.13	103	449.362	103
884		3	max	0.7	76	1.413	73	1.902	13	0.028	107	NC	64	8466.456	94
885			min	-0.745	100	-1.132	105	0.293	68	-0.032	71	61.555	103	301.933	92
886		4	max	0.707	76	1.2	73	1.815	13	0.02	107	NC	72	NC	106
887			min	-0.752	100	-0.945	105	0.259	68	-0.024	71	85.08	103	317.694	92
888		5	max	0.713	76	0.652	73	1.642	13	0	75	NC	107	3634.957	58
889			min	-0.759	100	-0.473	105	0.204	68	-0.006	13	NC	12	176.411	15
890	M544	1	max	0.244	102	0.033	70	0.75	73	0.006	15	NC	107	NC	107
891			min	-0.256	70	-0.038	102	-0.567	75	0.001	106	NC	12	NC	12
892		2	max	0.238	106	0.039	70	1.91	73	0.01	73	NC	107	NC	97
893			min	-0.25	70	-0.046	102	-1.763	75	-0.006	75	4268.58	102	42.304	71
894		3	max	0.233	76	0.03	57	2.438	73	0.015	73	NC	107	NC	97
895			min	-0.244	70	-0.039	86	-2.306	75	-0.011	75	NC	12	29.201	71
896		4	max	0.238	76	0.039	72	2.075	73	0.013	73	NC	107	NC	97
897			min	-0.249	100	-0.048	100	-1.932	75	-0.009	75	3756.278	100	37.67	71
898		5	max	0.244	72	0.033	72	0.791	73	0.006	13	NC	107	NC	107
899			min	-0.255	100	-0.039	100	-0.613	75	0.001	98	NC	12	NC	12
900	M545	1	max	0.187	102	0.032	70	0.644	73	-0.001	67	NC	107	NC	107
901			min	-0.199	70	-0.036	102	-0.528	101	-0.007	15	NC	12	NC	12
902		2	max	0.18	106	0.036	70	0.877	73	0	77	NC	107	NC	97
903			min	-0.193	70	-0.042	102	-0.729	101	-0.006	16	5266.402	102	185.142	71
904		3	max	0.175	76	0.03	57	0.972	73	0	77	NC	107	NC	46
905			min	-0.186	70	-0.039	86	-0.811	101	-0.006	13	NC	12	131.574	71

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
906		4	max	0.18	72	0.036	72	0.893	73	0	77	NC	107	NC	97
907			min	-0.192	100	-0.044	100	-0.743	101	-0.006	13	4562.212	100	174.297	71
908		5	max	0.187	72	0.032	72	0.647	73	-0.001	68	NC	107	NC	107
909			min	-0.198	100	-0.037	100	-0.528	101	-0.006	13	NC	12	NC	12
910	M546	1	max	0.714	106	0.66	73	1.79	15	0.004	15	NC	107	NC	107
911			min	-0.772	70	-0.451	105	0.239	66	0	107	NC	12	NC	12
912		2	max	0.707	106	1.182	73	1.893	15	0.02	103	NC	64	NC	105
913			min	-0.765	70	-0.903	105	0.288	67	-0.017	75	88.27	103	445.191	103
914		3	max	0.706	76	1.428	103	1.917	13	0.03	103	NC	62	8721.624	94
915			min	-0.763	100	-1.117	75	0.295	68	-0.027	75	61.651	103	299.519	92
916		4	max	0.713	76	1.204	73	1.829	13	0.022	103	NC	64	5947.379	12
917			min	-0.77	100	-0.925	105	0.259	68	-0.019	75	85.212	103	308.5	92
918		5	max	0.719	76	0.667	73	1.653	13	0.006	71	NC	107	4911.241	99
919			min	-0.777	100	-0.463	105	0.2	68	-0.003	107	NC	12	181.895	15
920	M547	1	max	0.674	106	-0.284	66	0.411	73	0	107	NC	107	NC	107
921			min	-0.91	70	-2.434	15	-0.25	105	0	15	NC	12	NC	12
922		2	max	0.667	106	-0.33	66	0.423	73	0.018	105	NC	107	NC	106
923			min	-0.902	70	-2.397	15	-0.262	105	-0.018	73	3890.468	15	4942.899	77
924		3	max	0.66	106	-0.34	68	0.428	73	0.024	105	NC	104	NC	106
925			min	-0.895	70	-2.355	13	-0.266	105	-0.024	73	2790.415	15	3519.441	77
926		4	max	0.664	76	-0.291	68	0.422	73	0.018	105	NC	107	NC	106
927			min	-0.899	100	-2.307	13	-0.26	105	-0.018	73	3895.923	15	4942.899	77
928		5	max	0.671	76	-0.239	68	0.41	73	0	107	NC	107	NC	107
929			min	-0.907	100	-2.249	13	-0.248	105	0	71	NC	12	NC	12
930	M548	1	max	0.545	106	-0.225	66	0.432	73	-0.001	66	NC	107	NC	107
931			min	-0.637	70	-1.762	15	-0.388	101	-0.008	15	NC	12	NC	12
932		2	max	0.538	106	-0.245	66	0.444	73	0.015	75	NC	107	NC	106
933			min	-0.63	70	-1.733	15	-0.398	101	-0.021	103	4390.973	15	5194.714	71
934		3	max	0.531	106	-0.243	68	0.449	73	0.021	75	NC	104	NC	106
935			min	-0.622	70	-1.697	13	-0.401	101	-0.026	103	3136.871	15	3698.751	71
936		4	max	0.534	76	-0.215	68	0.444	73	0.015	75	NC	107	NC	106
937			min	-0.626	100	-1.654	13	-0.395	101	-0.021	103	4397.927	15	5194.714	71
938		5	max	0.542	76	-0.184	68	0.433	73	-0.001	68	NC	107	NC	107
939			min	-0.634	100	-1.603	13	-0.382	101	-0.008	13	NC	12	NC	12
940	M549	1	max	0.308	102	0.04	57	0.515	103	0.006	14	NC	107	NC	107
941			min	-0.323	70	-0.047	86	-0.218	75	0	107	NC	12	NC	12
942		2	max	0.302	106	0.044	70	0.763	73	0.006	13	NC	107	NC	106
943			min	-0.316	70	-0.052	102	-0.479	75	-0.001	107	4992.593	102	195.701	71
944		3	max	0.296	76	0.039	57	0.783	73	0.006	13	NC	107	NC	106
945			min	-0.31	70	-0.049	86	-0.5	75	-0.001	107	NC	12	183.846	71
946		4	max	0.302	76	0.044	72	0.791	73	0.006	13	NC	107	NC	106
947			min	-0.317	100	-0.053	100	-0.51	75	-0.001	107	4728.369	100	180.22	71
948		5	max	0.31	72	0.04	57	0.528	103	0.006	13	NC	107	NC	107
949			min	-0.325	100	-0.047	86	-0.237	75	0.001	107	NC	12	NC	12
950	M550	1	max	0.236	102	0.041	57	0.536	73	-0.001	67	NC	107	NC	107
951			min	-0.252	70	-0.047	86	-0.558	101	-0.007	15	NC	12	NC	12
952		2	max	0.229	106	0.041	70	0.621	73	0	105	NC	107	NC	106
953			min	-0.245	70	-0.05	102	-0.639	101	-0.006	16	6199.636	102	555.069	71
954		3	max	0.224	76	0.039	57	0.629	73	0	105	NC	107	NC	106
955			min	-0.239	70	-0.049	86	-0.645	101	-0.006	13	NC	12	521.061	71
956		4	max	0.23	76	0.041	72	0.633	73	0	105	NC	107	NC	106
957			min	-0.246	100	-0.051	100	-0.646	101	-0.006	13	5795.478	100	514.782	71
958		5	max	0.237	72	0.04	57	0.545	73	-0.001	68	NC	107	NC	107
959			min	-0.253	100	-0.047	86	-0.558	101	-0.006	13	NC	12	NC	12
960	M551	1	max	0.581	106	-0.219	66	0.391	73	0.008	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
961			min	-0.678	70	-1.765	15	-0.13	105	0.001	66	NC	12	NC	12
962		2	max	0.575	106	-0.243	66	0.402	73	0.02	101	NC	107	NC	106
963			min	-0.671	70	-1.74	15	-0.141	105	-0.015	77	3865.555	15	5195.67	77
964		3	max	0.568	106	-0.24	68	0.405	73	0.025	101	NC	104	NC	106
965			min	-0.663	70	-1.706	13	-0.146	105	-0.02	77	2777.401	15	3699.436	77
966		4	max	0.572	76	-0.211	68	0.399	73	0.02	101	NC	107	NC	106
967			min	-0.667	100	-1.664	13	-0.141	105	-0.015	77	3870.939	15	5195.671	77
968		5	max	0.58	76	-0.178	68	0.387	73	0.008	13	NC	107	NC	107
969			min	-0.675	100	-1.613	13	-0.129	105	0.001	68	NC	12	NC	12
970	M552	1	max	-0.243	66	0.876	74	0.259	73	0.003	76	NC	107	NC	107
971			min	-1.752	15	-0.899	106	-0.182	105	-0.004	104	NC	12	566.028	87
972		2	max	-0.237	66	0.846	74	0.428	73	0.08	103	NC	107	NC	102
973			min	-1.755	15	-0.859	102	-0.31	105	-0.081	71	1345.361	72	366.024	71
974		3	max	-0.231	66	0.809	70	0.471	73	0.088	103	NC	105	NC	89
975			min	-1.757	15	-0.795	106	-0.313	105	-0.089	71	667.981	13	341.253	71
976		4	max	-0.225	66	0.759	70	0.487	73	0.063	103	NC	107	NC	100
977			min	-1.76	15	-0.708	106	-0.288	105	-0.064	71	398.509	13	392.718	71
978		5	max	-0.219	66	0.689	70	0.399	73	0.001	76	NC	107	NC	107
979			min	-1.762	15	-0.599	106	-0.159	105	-0.002	100	286.127	13	504.484	56
980	M553	1	max	-0.203	68	0.909	76	0.17	105	0.004	106	NC	107	NC	107
981			min	-1.605	13	-0.902	104	-0.245	73	-0.004	70	546.436	71	566.913	87
982		2	max	-0.197	68	0.849	76	0.239	105	0.003	76	NC	105	NC	89
983			min	-1.607	13	-0.874	100	-0.353	73	-0.004	100	809.534	71	612.968	71
984		3	max	-0.191	68	0.784	76	0.302	105	0.005	71	NC	105	NC	99
985			min	-1.609	13	-0.838	100	-0.455	73	-0.006	103	1116.404	70	321.537	71
986		4	max	-0.185	68	0.703	76	0.333	105	0.007	71	NC	105	NC	106
987			min	-1.612	13	-0.778	100	-0.525	73	-0.008	103	1381.845	70	259.587	71
988		5	max	-0.179	68	0.601	76	0.16	105	0.001	106	NC	107	NC	107
989			min	-1.614	13	-0.689	100	-0.395	73	-0.002	100	NC	12	495.039	70
990	M554	1	max	-0.264	68	1.142	76	0.25	105	0.001	13	NC	107	NC	107
991			min	-2.25	13	-1.192	100	-0.412	73	0	74	460.433	75	2097.225	71
992		2	max	-0.258	68	1.05	76	0.327	105	0.003	71	NC	105	NC	104
993			min	-2.251	13	-1.157	100	-0.49	73	-0.003	103	634.13	75	629.568	103
994		3	max	-0.252	68	0.951	76	0.398	105	0.006	71	NC	105	NC	97
995			min	-2.252	13	-1.106	100	-0.561	73	-0.005	103	979.056	75	330.256	103
996		4	max	-0.246	68	0.837	76	0.436	105	0.007	71	NC	105	NC	97
997			min	-2.252	13	-1.031	100	-0.6	73	-0.007	103	1326.492	70	266.634	103
998		5	max	-0.24	68	0.701	76	0.272	105	0	104	NC	107	NC	107
999			min	-2.253	13	-0.926	100	-0.435	73	0	72	NC	12	NC	12
1000	M555	1	max	-0.208	68	0.311	105	0.933	104	0.004	74	NC	107	NC	107
1001			min	-1.588	13	-0.561	73	-0.927	76	-0.004	106	590.77	71	1746.527	67
1002		2	max	-0.202	68	0.337	105	0.874	100	0.004	70	NC	104	NC	107
1003			min	-1.59	13	-0.566	73	-0.852	76	-0.004	106	948.645	71	2386.455	67
1004		3	max	-0.196	68	0.358	105	0.818	100	0.004	70	NC	103	NC	107
1005			min	-1.593	13	-0.554	73	-0.776	76	-0.004	106	1112.833	43	1213.222	13
1006		4	max	-0.19	68	0.368	105	0.755	100	0.004	70	NC	76	NC	107
1007			min	-1.595	13	-0.518	73	-0.693	76	-0.003	106	821.07	86	774.73	13
1008		5	max	-0.184	68	0.372	101	0.647	100	0.002	100	NC	105	NC	107
1009			min	-1.597	13	-0.454	73	-0.564	76	-0.002	76	496.466	103	482.958	13
1010	M556	1	max	-0.308	66	1.168	74	0.426	73	0.001	13	NC	107	NC	107
1011			min	-2.423	15	-1.125	106	-0.258	105	0	75	NC	12	3677.012	71
1012		2	max	-0.302	66	1.127	70	0.544	73	0.065	103	NC	107	NC	106
1013			min	-2.425	15	-1.052	106	-0.377	105	-0.065	71	794.139	13	425.76	103
1014		3	max	-0.296	66	1.078	70	0.555	73	0.071	103	NC	88	NC	106
1015			min	-2.426	15	-0.958	106	-0.389	105	-0.071	71	358.627	13	390.758	103

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1016		4	max	-0.29	66	1.012	70	0.541	73	0.051	103	NC	107	NC	106
1017			min	-2.427	15	-0.841	106	-0.377	105	-0.051	71	226.709	13	442.641	103
1018		5	max	-0.283	66	0.929	70	0.432	73	0	107	NC	107	NC	107
1019			min	-2.428	15	-0.702	106	-0.27	105	0	71	164.204	13	8134.902	100
1020	M557	1	max	-0.248	66	0.913	74	0.573	73	0.003	104	NC	107	NC	107
1021			min	-1.747	15	-0.922	106	-0.319	105	-0.003	76	NC	12	208.435	15
1022		2	max	-0.242	66	0.864	74	0.598	73	0.003	100	NC	105	NC	99
1023			min	-1.75	15	-0.872	106	-0.384	105	-0.003	76	1183.247	72	278.821	16
1024		3	max	-0.236	66	0.807	70	0.58	73	0.005	103	NC	95	NC	97
1025			min	-1.753	15	-0.803	106	-0.408	105	-0.005	71	808.153	72	418.568	16
1026		4	max	-0.23	66	0.741	70	0.548	73	0.007	103	NC	105	NC	97
1027			min	-1.755	15	-0.702	106	-0.422	101	-0.006	71	815.84	13	669.709	100
1028		5	max	-0.224	66	0.651	70	0.458	73	0.002	100	NC	107	NC	107
1029			min	-1.758	15	-0.566	106	-0.387	101	-0.002	76	409.256	13	471.427	86
1030	M558	1	max	-0.132	66	0.509	74	0.17	73	0.005	76	NC	107	NC	107
1031			min	-0.943	15	-0.536	102	-0.115	105	-0.005	104	1028.988	104	NC	12
1032		2	max	-0.126	66	0.478	74	0.217	73	0.005	76	NC	96	NC	107
1033			min	-0.948	15	-0.559	102	-0.108	105	-0.005	104	592.497	15	691.45	14
1034		3	max	-0.121	66	0.464	74	0.264	73	0.004	106	NC	104	NC	107
1035			min	-0.953	15	-0.555	102	-0.101	105	-0.004	70	444.861	15	345.676	14
1036		4	max	-0.115	66	0.465	74	0.312	15	0.003	106	NC	88	NC	107
1037			min	-0.958	15	-0.524	102	-0.094	105	-0.003	70	593.971	15	230.411	14
1038		5	max	-0.11	66	0.494	70	0.39	15	0.002	106	NC	107	NC	107
1039			min	-0.963	15	-0.465	102	-0.086	105	-0.002	70	464.6	62	172.781	14
1040	M559	1	max	-0.103	68	0.486	72	0.112	105	0.006	76	NC	107	NC	107
1041			min	-0.865	13	-0.481	104	-0.166	73	-0.006	104	1159.673	75	NC	12
1042		2	max	-0.097	68	0.458	76	0.106	105	0.005	76	NC	76	NC	107
1043			min	-0.87	13	-0.525	100	-0.213	73	-0.005	100	664.001	13	701.636	14
1044		3	max	-0.092	68	0.444	76	0.1	105	0.004	76	NC	94	NC	107
1045			min	-0.875	13	-0.545	100	-0.259	73	-0.004	100	498.614	13	350.768	14
1046		4	max	-0.086	68	0.445	76	0.093	105	0.003	76	7613.566	90	NC	107
1047			min	-0.879	13	-0.541	100	-0.306	13	-0.003	100	665.853	13	233.804	14
1048		5	max	-0.081	68	0.459	76	0.086	105	0.002	106	NC	107	NC	107
1049			min	-0.884	13	-0.512	100	-0.383	13	-0.002	100	595.03	98	175.325	14
1050	M560	1	max	-0.108	68	0.512	76	0.342	105	0.006	104	NC	107	NC	107
1051			min	-0.86	13	-0.512	104	-0.611	73	-0.006	76	495.602	72	182.216	13
1052		2	max	-0.103	68	0.468	76	0.359	105	0.005	104	NC	69	NC	105
1053			min	-0.864	13	-0.538	100	-0.576	73	-0.005	76	690.6	13	242.954	13
1054		3	max	-0.097	68	0.436	76	0.376	105	0.004	100	NC	102	NC	105
1055			min	-0.869	13	-0.539	100	-0.54	73	-0.004	76	518.614	13	364.431	13
1056		4	max	-0.091	68	0.416	76	0.402	101	0.003	100	NC	106	NC	105
1057			min	-0.873	13	-0.512	100	-0.505	73	-0.003	76	692.603	13	501.504	103
1058		5	max	-0.086	68	0.407	76	0.432	101	0.002	70	NC	107	NC	105
1059			min	-0.878	13	-0.46	100	-0.469	73	-0.002	106	696.015	98	374.328	103
1060	M561	1	max	-0.137	66	0.537	74	0.629	73	0.006	104	NC	107	NC	107
1061			min	-0.954	15	-0.559	102	-0.351	105	-0.006	76	506.414	100	161.351	15
1062		2	max	-0.132	66	0.517	74	0.644	73	0.066	73	NC	58	NC	106
1063			min	-0.959	15	-0.596	102	-0.417	105	-0.066	101	480.532	15	216.148	16
1064		3	max	-0.126	66	0.495	74	0.603	73	0.071	73	NC	88	NC	107
1065			min	-0.964	15	-0.583	102	-0.433	101	-0.071	101	377.35	15	324.595	16
1066		4	max	-0.12	66	0.466	74	0.554	73	0.048	73	NC	69	NC	106
1067			min	-0.969	15	-0.522	102	-0.454	101	-0.048	101	518.844	15	578.038	91
1068		5	max	-0.115	66	0.447	70	0.474	73	0.003	70	NC	107	NC	106
1069			min	-0.974	15	-0.418	102	-0.445	101	-0.002	106	524.456	62	345.009	103
1070	M562	1	max	0.499	102	0.163	73	0.89	15	0.013	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1071			min	-0.483	74	-0.116	105	0.124	66	0.002	68	NC	12	NC	12
1072		2	max	0.5	72	0.161	73	0.873	13	0.013	15	NC	107	NC	107
1073			min	-0.483	104	-0.117	105	0.118	68	0.002	68	694.741	76	790.331	72
1074		3	max	0.507	72	0.186	70	0.857	13	0.013	13	NC	107	NC	99
1075			min	-0.488	104	-0.144	106	0.1	68	0.002	68	520.863	76	507.709	102
1076		4	max	0.513	72	0.174	70	0.838	13	0.012	13	NC	107	NC	99
1077			min	-0.494	104	-0.131	106	0.093	68	0.002	68	693.851	76	471.881	102
1078		5	max	0.519	72	0.16	73	0.816	13	0.012	13	NC	107	9203.012	97
1079			min	-0.499	104	-0.113	105	0.095	68	0.002	68	NC	12	370.852	15
1080	M563	1	max	0.534	106	0.626	73	0.998	15	-0.002	66	NC	107	NC	107
1081			min	-0.525	74	-0.342	105	0.146	66	-0.013	15	NC	12	NC	12
1082		2	max	0.533	76	0.623	73	0.974	13	-0.002	66	NC	107	NC	99
1083			min	-0.523	104	-0.343	105	0.137	68	-0.013	15	792.308	72	1089.465	102
1084		3	max	0.539	76	0.62	73	0.952	13	-0.002	67	NC	107	NC	99
1085			min	-0.529	104	-0.344	105	0.121	68	-0.013	16	594.107	72	583.722	15
1086		4	max	0.545	76	0.618	73	0.926	13	-0.002	68	NC	107	NC	88
1087			min	-0.535	104	-0.342	105	0.114	68	-0.013	13	791.151	72	384.691	15
1088		5	max	0.551	72	0.616	73	0.899	13	-0.002	68	NC	107	NC	106
1089			min	-0.54	104	-0.339	105	0.115	68	-0.012	13	NC	12	286.555	15
1090	M564	1	max	1.123	104	0.272	105	2.045	13	0.004	13	NC	107	NC	107
1091			min	-1.106	76	-0.482	73	0.254	68	0	68	NC	12	NC	12
1092		2	max	1.116	104	0.273	105	2.08	13	0.004	13	NC	107	NC	107
1093			min	-1.099	76	-0.49	73	0.284	68	0	68	3927.811	72	693.045	94
1094		3	max	1.109	104	0.273	105	2.113	13	0.004	13	NC	107	NC	99
1095			min	-1.092	76	-0.494	73	0.318	68	0.001	67	2971.999	72	338.707	94
1096		4	max	1.102	104	0.274	105	2.145	15	0.004	15	NC	107	NC	99
1097			min	-1.086	76	-0.494	73	0.332	66	0	66	3964.348	72	221.137	94
1098		5	max	1.099	74	0.274	105	2.179	15	0.004	15	NC	107	NC	99
1099			min	-1.08	106	-0.49	73	0.293	66	0	66	NC	12	162.381	94
1100	M565	1	max	0.728	104	0.976	106	2.298	13	0.015	76	NC	107	NC	107
1101			min	-0.819	72	-1.099	70	0.247	68	-0.019	13	NC	12	NC	12
1102		2	max	0.714	104	1.098	106	2.449	13	0.015	76	NC	99	NC	105
1103			min	-0.804	72	-1.171	70	0.321	68	-0.023	13	796.264	102	602.091	15
1104		3	max	0.701	104	1.134	106	2.517	13	0.016	76	NC	88	NC	99
1105			min	-0.789	72	-1.18	70	0.369	68	-0.028	13	589.821	102	394.829	15
1106		4	max	0.687	104	1.08	106	2.471	15	0.017	76	NC	105	NC	107
1107			min	-0.774	72	-1.125	70	0.37	66	-0.033	13	793.591	102	378.581	64
1108		5	max	0.673	104	0.939	106	2.345	15	0.018	76	NC	107	NC	107
1109			min	-0.759	72	-1.005	70	0.338	66	-0.038	13	NC	12	304.811	92
1110	M566	1	max	1.103	104	0.2	105	2.074	13	0	68	NC	107	NC	107
1111			min	-1.095	76	-0.314	73	0.252	68	-0.004	13	NC	12	NC	12
1112		2	max	1.096	104	0.204	105	2.132	13	-0.001	68	NC	107	NC	99
1113			min	-1.088	76	-0.319	73	0.286	68	-0.004	13	2360.009	106	530.525	15
1114		3	max	1.089	104	0.206	105	2.179	13	-0.001	68	NC	107	7369.923	99
1115			min	-1.081	76	-0.322	73	0.323	68	-0.004	13	1777.582	106	276.381	15
1116		4	max	1.082	104	0.205	105	2.218	15	-0.001	66	NC	107	5560.008	99
1117			min	-1.075	76	-0.323	73	0.34	66	-0.004	15	2373.15	106	193.855	94
1118		5	max	1.079	74	0.203	105	2.252	15	0	66	NC	107	4729.29	99
1119			min	-1.068	76	-0.321	73	0.297	66	-0.004	15	NC	12	143.095	94
1120	M567	1	max	0.626	104	0.914	106	2.275	13	0.014	76	NC	107	NC	107
1121			min	-0.705	72	-0.976	70	0.242	68	-0.073	13	NC	12	NC	12
1122		2	max	0.611	104	1.105	106	2.335	13	0.011	76	NC	107	NC	20
1123			min	-0.689	72	-1.128	74	0.32	68	-0.072	13	479.26	106	483.874	100
1124		3	max	0.597	104	1.147	106	2.311	16	0.009	76	NC	107	NC	90
1125			min	-0.673	72	-1.153	74	0.341	67	-0.071	13	357.191	106	286.943	100

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1126		4	max	0.582	104	1.035	106	2.175	15	0.007	76	NC	107	4021.943	60
1127			min	-0.657	72	-1.037	74	0.306	66	-0.07	13	478.29	106	233.865	100
1128		5	max	0.568	104	0.775	106	1.951	15	0.004	106	NC	107	7342.924	106
1129			min	-0.641	72	-0.781	74	0.29	67	-0.069	13	NC	12	165.164	13
1130	M568	1	max	0.486	104	0.744	106	1.839	13	-0.001	68	NC	107	NC	107
1131			min	-0.542	72	-0.767	70	0.206	68	-0.065	13	NC	12	NC	12
1132		2	max	0.469	104	1.068	106	1.732	13	0	76	NC	107	5799.67	64
1133			min	-0.525	72	-1.066	74	0.229	74	-0.064	13	247.287	72	261.445	100
1134		3	max	0.453	104	1.124	106	1.591	15	0.002	76	NC	107	2675.334	102
1135			min	-0.507	72	-1.111	74	0.106	74	-0.062	13	185.085	72	160.856	100
1136		4	max	0.437	104	0.908	106	1.394	15	0.003	76	NC	107	NC	68
1137			min	-0.489	72	-0.9	74	0.133	74	-0.061	13	247.097	72	104.675	13
1138		5	max	0.421	104	0.424	106	1.154	13	0.004	76	NC	107	939.576	68
1139			min	-0.472	72	-0.433	70	0.152	68	-0.06	13	NC	12	73.579	13
1140	M569	1	max	-0.251	68	1.072	76	0.2	105	0.001	76	NC	105	NC	107
1141			min	-2.066	13	-1.085	104	-0.317	73	-0.001	100	132.447	72	1081.495	95
1142		2	max	-0.245	68	0.969	76	0.198	105	0.001	76	NC	104	NC	107
1143			min	-2.067	13	-1.027	100	-0.336	73	-0.001	100	180.747	72	1460.674	95
1144		3	max	-0.239	68	0.869	76	0.195	105	0.001	76	NC	107	NC	107
1145			min	-2.069	13	-0.969	100	-0.354	73	-0.002	100	277.443	72	843.536	13
1146		4	max	-0.232	68	0.772	76	0.193	105	0.001	76	NC	107	NC	107
1147			min	-2.07	13	-0.905	100	-0.372	73	-0.002	100	568.779	76	562.357	13
1148		5	max	-0.226	68	0.678	76	0.19	105	0.001	76	NC	107	NC	107
1149			min	-2.071	13	-0.836	100	-0.39	73	-0.002	13	1415.575	98	421.768	13
1150	M570	1	max	-0.255	68	1.089	76	0.274	105	0.001	100	NC	107	NC	107
1151			min	-2.06	13	-1.112	104	-0.48	73	-0.001	76	123.083	72	463.032	13
1152		2	max	-0.249	68	0.981	76	0.281	105	0.001	100	NC	101	NC	106
1153			min	-2.061	13	-1.047	100	-0.467	73	-0.001	76	165.832	72	617.377	13
1154		3	max	-0.242	68	0.873	76	0.289	105	0.002	100	NC	101	NC	106
1155			min	-2.062	13	-0.977	100	-0.454	73	-0.001	76	250.777	76	926.066	13
1156		4	max	-0.236	68	0.766	76	0.296	105	0.002	100	NC	101	NC	106
1157			min	-2.063	13	-0.9	100	-0.441	73	-0.001	76	502.618	76	1306.796	86
1158		5	max	-0.23	68	0.659	76	0.303	105	0.002	100	NC	107	NC	106
1159			min	-2.065	13	-0.816	100	-0.428	73	-0.001	76	719.967	45	980.096	86
1160	M571	1	max	-0.295	66	1.073	74	0.324	73	0.001	76	NC	106	NC	107
1161			min	-2.238	15	-1.06	106	-0.202	105	-0.002	100	169.963	104	1107.899	95
1162		2	max	-0.289	66	0.999	70	0.341	73	0.001	76	NC	107	NC	107
1163			min	-2.239	15	-0.969	106	-0.2	105	-0.002	100	230.261	104	1496.808	95
1164		3	max	-0.283	66	0.939	70	0.359	73	0.001	76	NC	107	NC	107
1165			min	-2.24	15	-0.875	106	-0.197	105	-0.002	100	350.734	104	908.681	15
1166		4	max	-0.277	66	0.883	70	0.376	73	0.001	76	NC	107	NC	107
1167			min	-2.242	15	-0.778	106	-0.194	105	-0.002	100	321.223	13	605.787	15
1168		5	max	-0.271	66	0.832	70	0.393	73	0.001	76	NC	107	NC	107
1169			min	-2.243	15	-0.677	106	-0.191	105	-0.002	13	213.456	13	454.34	15
1170	M572	1	max	-0.293	66	1.091	74	0.487	73	0.001	100	NC	107	NC	107
1171			min	-2.191	15	-1.073	106	-0.275	105	-0.001	76	152.332	104	374.687	15
1172		2	max	-0.287	66	1.01	70	0.473	73	0.002	100	NC	105	NC	107
1173			min	-2.192	15	-0.979	106	-0.284	105	-0.001	76	204.771	104	499.583	15
1174		3	max	-0.281	66	0.94	70	0.458	73	0.002	100	NC	105	NC	107
1175			min	-2.194	15	-0.879	106	-0.291	105	-0.001	76	309.453	104	749.374	15
1176		4	max	-0.274	66	0.874	70	0.443	73	0.002	100	NC	105	NC	107
1177			min	-2.196	15	-0.773	106	-0.299	105	-0.001	76	387.333	13	1167.786	86
1178		5	max	-0.268	66	0.812	70	0.427	73	0.002	100	NC	107	NC	107
1179			min	-2.197	15	-0.66	106	-0.306	105	-0.001	76	240.97	13	875.839	86
1180	M573	1	max	0.531	72	-0.284	66	0.911	70	0.019	94	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1181			min	-0.537	100	-2.434	15	-0.621	106	-0.015	66	NC	12	NC	12
1182		2	max	0.544	72	-0.351	68	0.846	70	0.019	94	NC	107	NC	94
1183			min	-0.55	100	-2.512	16	-0.602	106	-0.015	66	594.905	13	606.067	13
1184		3	max	0.557	72	-0.294	68	0.804	70	0.019	94	NC	107	NC	94
1185			min	-0.563	100	-2.494	13	-0.591	106	-0.016	66	426.882	13	372.76	13
1186		4	max	0.57	72	-0.252	68	0.783	70	0.019	94	NC	107	NC	94
1187			min	-0.576	100	-2.334	13	-0.583	106	-0.016	66	594.905	13	343.164	13
1188		5	max	0.583	72	-0.23	68	0.785	70	0.019	94	NC	107	5065.802	64
1189			min	-0.589	100	-2.063	13	-0.584	106	-0.016	66	NC	12	395.544	13
1190	M574	1	max	0.519	72	-0.269	66	0.83	70	0.013	98	NC	107	NC	107
1191			min	-0.524	100	-2.201	15	-0.638	106	-0.018	62	NC	12	NC	12
1192		2	max	0.532	72	-0.287	68	0.731	70	0.013	98	NC	107	NC	90
1193			min	-0.536	100	-2.243	13	-0.589	106	-0.017	62	539.058	13	599.003	13
1194		3	max	0.544	72	-0.227	68	0.667	70	0.013	98	NC	107	NC	90
1195			min	-0.548	100	-2.174	13	-0.557	106	-0.016	62	388.385	13	377.173	13
1196		4	max	0.557	72	-0.192	68	0.639	70	0.013	98	NC	107	NC	90
1197			min	-0.561	100	-1.95	13	-0.537	106	-0.015	62	539.058	13	330.174	100
1198		5	max	0.57	72	-0.184	68	0.647	70	0.013	98	NC	107	NC	90
1199			min	-0.573	100	-1.603	13	-0.534	106	-0.014	62	NC	12	296.147	100
1200	M575	1	max	0.486	72	-0.225	66	0.709	70	0.006	98	NC	107	NC	107
1201			min	-0.505	100	-1.762	15	-0.599	102	-0.019	13	NC	12	NC	12
1202		2	max	0.497	72	-0.193	68	0.609	70	0.006	98	NC	107	9645.56	107
1203			min	-0.516	100	-1.612	13	-0.531	102	-0.016	13	1138.498	70	662.037	70
1204		3	max	0.508	72	-0.129	68	0.541	70	0.006	98	NC	107	5221.691	67
1205			min	-0.526	100	-1.423	13	-0.486	102	-0.013	13	850.315	70	370.118	100
1206		4	max	0.519	72	-0.093	68	0.505	70	0.006	98	NC	107	4272.727	67
1207			min	-0.537	100	-1.175	13	-0.46	102	-0.011	62	1137.013	70	279.622	100
1208		5	max	0.53	72	-0.087	68	0.501	70	0.006	98	NC	107	4051.948	67
1209			min	-0.548	100	-0.881	13	-0.456	102	-0.01	62	NC	12	242.084	100
1210	M576	1	max	0.416	72	-0.115	66	0.576	70	0.002	68	NC	107	NC	107
1211			min	-0.438	100	-0.98	15	-0.541	102	-0.019	13	NC	12	NC	12
1212		2	max	0.427	72	-0.043	68	0.465	70	0.001	68	NC	107	NC	107
1213			min	-0.449	100	-0.815	13	-0.455	102	-0.015	13	966.482	100	614.5	70
1214		3	max	0.438	72	0.026	76	0.392	70	0	68	NC	107	9436.755	107
1215			min	-0.459	100	-0.603	13	-0.396	102	-0.011	13	722.295	100	348.005	70
1216		4	max	0.448	72	0.054	76	0.358	70	-0.001	68	NC	107	7657.368	97
1217			min	-0.469	100	-0.329	13	-0.361	102	-0.007	13	965.412	100	267.393	70
1218		5	max	0.459	72	0.041	57	0.363	70	0.001	104	NC	107	NC	105
1219			min	-0.479	100	-0.046	86	-0.353	102	-0.003	15	NC	12	236.766	70
1220	M577	1	max	0.475	106	-0.284	66	0.631	76	0.015	66	NC	107	NC	107
1221			min	-0.74	70	-2.434	15	-0.759	100	-0.019	94	NC	12	NC	12
1222		2	max	0.46	106	-0.347	68	0.68	76	0.015	66	NC	107	NC	105
1223			min	-0.725	70	-2.473	16	-0.801	100	-0.019	94	765.053	13	2012.252	102
1224		3	max	0.446	106	-0.288	68	0.696	76	0.015	66	NC	107	NC	100
1225			min	-0.709	70	-2.444	13	-0.801	100	-0.02	94	542.265	13	1428.021	102
1226		4	max	0.431	106	-0.247	68	0.676	72	0.015	66	NC	107	NC	98
1227			min	-0.693	70	-2.298	13	-0.753	100	-0.022	15	765.053	13	977.478	13
1228		5	max	0.417	106	-0.226	68	0.631	72	0.015	66	NC	107	5512.873	106
1229			min	-0.678	70	-2.07	13	-0.661	100	-0.026	15	NC	12	413.316	13
1230	M578	1	max	0.399	106	-0.272	66	0.625	72	0.017	62	NC	107	NC	107
1231			min	-0.661	70	-2.247	15	-0.644	100	-0.013	98	NC	12	NC	12
1232		2	max	0.384	106	-0.287	68	0.67	72	0.015	62	NC	107	NC	105
1233			min	-0.645	70	-2.24	13	-0.693	100	-0.014	98	673.504	13	2451.163	19
1234		3	max	0.369	106	-0.223	68	0.675	72	0.014	62	NC	90	NC	106
1235			min	-0.628	70	-2.149	13	-0.686	100	-0.014	98	480.535	13	2113.116	92

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1236		4	max	0.354	106	-0.186	68	0.64	72	0.012	62	NC	107	8317.229	60
1237			min	-0.612	70	-1.929	13	-0.616	100	-0.016	15	673.504	13	759.161	100
1238		5	max	0.339	106	-0.178	68	0.565	72	0.011	66	NC	107	NC	60
1239			min	-0.595	70	-1.613	13	-0.493	104	-0.023	15	NC	12	352.819	100
1240	M579	1	max	0.316	106	-0.219	66	0.568	72	0.01	62	NC	107	NC	107
1241			min	-0.576	70	-1.765	15	-0.482	104	-0.008	98	NC	12	NC	12
1242		2	max	0.301	106	-0.182	68	0.592	72	0.009	62	NC	107	NC	106
1243			min	-0.56	70	-1.61	13	-0.505	104	-0.008	98	920.767	70	4030.517	92
1244		3	max	0.286	106	-0.115	68	0.58	72	0.009	62	NC	107	NC	105
1245			min	-0.544	70	-1.419	13	-0.485	104	-0.008	98	685.537	70	1068.448	100
1246		4	max	0.272	106	-0.081	68	0.533	72	0.008	62	NC	107	6016.388	69
1247			min	-0.527	70	-1.175	13	-0.42	104	-0.008	98	919.795	70	474.55	100
1248		5	max	0.257	106	-0.082	68	0.451	72	0.008	62	NC	107	3581.972	69
1249			min	-0.511	70	-0.887	13	-0.312	104	-0.011	19	NC	12	268.066	100
1250	M580	1	max	0.193	106	-0.111	66	0.473	72	0.007	92	NC	107	NC	107
1251			min	-0.45	70	-0.969	15	-0.327	104	-0.003	68	NC	12	NC	12
1252		2	max	0.178	106	-0.036	68	0.492	72	0.005	92	NC	107	NC	107
1253			min	-0.433	70	-0.796	13	-0.353	104	-0.002	68	837.523	100	4565.357	102
1254		3	max	0.163	106	0.047	76	0.471	72	0.004	13	NC	107	NC	105
1255			min	-0.417	70	-0.583	13	-0.332	104	-0.001	68	623.971	100	1093.665	70
1256		4	max	0.149	76	0.07	76	0.411	72	0.004	13	NC	107	NC	105
1257			min	-0.4	100	-0.316	13	-0.261	104	0	74	836.719	100	467.259	70
1258		5	max	0.158	76	0.041	57	0.311	72	0.004	72	NC	107	7737.29	105
1259			min	-0.41	100	-0.046	86	-0.143	104	-0.001	104	NC	12	258.983	70
1260	M581	1	max	0.459	106	-0.111	66	0.417	15	0.012	15	NC	107	NC	107
1261			min	-0.504	70	-0.969	15	-0.081	105	0.001	66	NC	12	NC	12
1262		2	max	0.453	106	-0.11	66	0.411	16	0.012	15	NC	107	NC	107
1263			min	-0.497	70	-0.953	15	-0.083	105	0.002	66	2882.515	102	1114.205	102
1264		3	max	0.447	106	-0.116	67	0.408	13	0.011	16	NC	107	NC	107
1265			min	-0.491	70	-0.933	15	-0.083	105	0.002	67	2157.118	102	603.185	102
1266		4	max	0.451	76	-0.108	68	0.408	13	0.011	13	NC	107	NC	107
1267			min	-0.495	100	-0.911	13	-0.083	105	0.002	68	2888.199	102	438.816	102
1268		5	max	0.459	76	-0.082	68	0.409	13	0.011	13	NC	107	NC	105
1269			min	-0.504	100	-0.887	13	-0.082	105	0.001	68	NC	12	361.855	102
1270	M582	1	max	0.662	106	-0.272	66	0.397	73	0.004	15	NC	107	NC	107
1271			min	-0.825	70	-2.247	15	-0.189	105	0	66	NC	12	NC	12
1272		2	max	0.655	106	-0.3	66	0.397	73	0.004	15	NC	107	NC	107
1273			min	-0.818	70	-2.215	15	-0.192	105	0	66	3524.644	15	2477.26	102
1274		3	max	0.649	106	-0.316	67	0.396	73	0.004	14	NC	107	NC	107
1275			min	-0.81	70	-2.174	16	-0.193	105	0.001	69	2527.927	15	1434.9	102
1276		4	max	0.653	76	-0.275	68	0.395	73	0.004	13	NC	107	NC	107
1277			min	-0.815	100	-2.127	13	-0.191	105	0	68	3524.645	15	1141.575	102
1278		5	max	0.66	76	-0.226	68	0.394	73	0.004	13	NC	107	NC	107
1279			min	-0.823	100	-2.07	13	-0.188	105	0	68	NC	12	1057.448	102
1280	M583	1	max	0.643	106	-0.269	66	0.423	73	0	66	NC	107	NC	107
1281			min	-0.804	70	-2.201	15	-0.308	105	-0.004	15	NC	12	NC	12
1282		2	max	0.636	106	-0.297	66	0.424	73	0	66	NC	107	NC	107
1283			min	-0.796	70	-2.172	15	-0.309	105	-0.004	15	4729.697	102	3473.188	72
1284		3	max	0.63	106	-0.314	68	0.424	73	0	75	NC	107	NC	107
1285			min	-0.789	70	-2.139	13	-0.308	105	-0.004	16	3525.154	102	1515.343	72
1286		4	max	0.633	76	-0.275	68	0.424	73	0	68	NC	107	NC	107
1287			min	-0.793	100	-2.104	13	-0.307	105	-0.004	13	4749.19	102	893.073	72
1288		5	max	0.641	76	-0.23	68	0.423	73	0	68	NC	107	NC	107
1289			min	-0.801	100	-2.063	13	-0.304	105	-0.004	13	NC	12	601.48	72
1290	M584	1	max	0.404	106	-0.115	66	0.453	73	-0.001	66	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1291			min	-0.45	70	-0.98	15	-0.449	101	-0.012	15	NC	12	NC	12
1292		2	max	0.398	106	-0.114	66	0.455	73	-0.002	66	NC	107	NC	107
1293			min	-0.443	70	-0.958	15	-0.448	101	-0.011	15	3294.885	102	1514.43	102
1294		3	max	0.392	106	-0.119	66	0.455	73	-0.002	67	NC	107	NC	107
1295			min	-0.436	70	-0.934	15	-0.447	101	-0.011	16	2464.936	102	694.191	102
1296		4	max	0.396	76	-0.111	68	0.456	73	-0.002	68	NC	107	NC	107
1297			min	-0.44	100	-0.908	13	-0.445	101	-0.011	13	3302.315	102	426.828	102
1298		5	max	0.404	76	-0.087	68	0.456	73	-0.001	68	NC	107	NC	107
1299			min	-0.449	100	-0.881	13	-0.442	101	-0.011	13	NC	12	297.24	102
1300	M585	1	max	-0.063	105	-0.166	66	1.058	106	0.019	76	NC	107	NC	107
1301			min	-1.31	15	-1.816	15	-1.093	74	-0.036	13	NC	12	NC	12
1302		2	max	-0.073	105	-0.228	66	0.879	106	0.014	76	7848.179	107	NC	107
1303			min	-1.301	15	-2.237	15	-1.228	70	-0.027	13	192.116	14	140.085	13
1304		3	max	-0.082	105	-0.245	66	0.742	106	0.008	76	5802.058	107	NC	107
1305			min	-1.292	15	-2.316	15	-1.214	70	-0.019	13	140.957	14	99.15	13
1306		4	max	-0.091	105	-0.213	66	0.643	106	0.002	66	7697.372	107	NC	47
1307			min	-1.283	15	-2.008	15	-1.038	70	-0.011	15	191.725	14	114.893	72
1308		5	max	-0.1	105	-0.136	66	0.585	106	0.008	66	NC	107	NC	99
1309			min	-1.274	15	-1.356	15	-0.71	70	-0.009	94	NC	12	102.161	76
1310	M586	1	max	-0.046	105	1.694	13	1.083	104	0.015	76	NC	107	NC	107
1311			min	-1.218	13	0.134	68	-1.093	76	-0.071	13	NC	12	NC	12
1312		2	max	-0.055	105	1.467	13	0.943	104	0.009	76	NC	107	5499.816	77
1313			min	-1.209	13	0.089	68	-1.167	72	-0.06	13	942.127	71	312.037	15
1314		3	max	-0.064	105	1.321	13	0.826	104	0.002	76	NC	107	3728.672	77
1315			min	-1.2	13	0.07	68	-1.116	72	-0.049	15	720.893	71	197.457	100
1316		4	max	-0.073	105	1.213	13	0.726	104	0.003	66	NC	107	4826.584	68
1317			min	-1.191	13	0.074	68	-0.928	72	-0.039	15	942.514	71	148.913	100
1318		5	max	-0.082	105	1.188	13	0.673	100	0.009	66	NC	107	NC	99
1319			min	-1.182	13	0.103	68	-0.61	76	-0.028	15	NC	12	106.534	76
1320	M587	1	max	0.073	68	-0.153	98	1.102	104	0.019	104	NC	107	NC	107
1321			min	-0.859	13	-1.893	13	-1.104	76	-0.031	15	NC	12	NC	12
1322		2	max	0.086	68	-0.198	105	0.868	104	0.012	104	NC	105	NC	105
1323			min	-0.85	13	-2.294	13	-1.131	72	-0.021	15	201.557	13	180.376	16
1324		3	max	0.099	68	-0.179	105	0.708	104	0.005	104	NC	75	4688.67	105
1325			min	-0.842	13	-2.371	13	-1.059	72	-0.011	13	147.727	13	139.537	16
1326		4	max	0.113	68	-0.155	105	0.618	104	0.006	94	NC	105	NC	68
1327			min	-0.833	13	-2.077	13	-0.867	72	-0.007	66	201.127	13	116.59	100
1328		5	max	0.126	68	-0.123	98	0.623	100	0.013	94	NC	107	NC	97
1329			min	-0.825	13	-1.455	13	-0.566	76	-0.012	66	NC	12	95.621	76
1330	M588	1	max	0.06	66	1.991	15	1.12	106	0.018	104	NC	107	NC	107
1331			min	-0.941	15	0.198	96	-1.123	74	-0.06	15	NC	12	NC	12
1332		2	max	0.074	66	2.093	15	1.015	106	0.012	104	NC	105	NC	99
1333			min	-0.929	15	0.203	96	-1.014	74	-0.048	15	477.328	13	391.05	76
1334		3	max	0.088	66	2.066	15	0.887	106	0.006	104	NC	105	NC	99
1335			min	-0.918	15	0.197	96	-0.896	70	-0.036	15	340.096	13	187.841	76
1336		4	max	0.101	66	1.865	15	0.731	106	0.001	98	NC	105	NC	99
1337			min	-0.907	15	0.174	105	-0.777	70	-0.025	13	477.329	13	119.43	76
1338		5	max	0.115	66	1.536	15	0.553	106	0.007	98	NC	107	NC	103
1339			min	-0.896	15	0.145	96	-0.651	70	-0.014	13	NC	12	85.972	76
1340	M589	1	max	0.153	102	0.064	73	0.015	105	0.005	73	NC	107	NC	107
1341			min	-0.114	74	-0.035	105	-0.025	73	-0.003	105	NC	12	NC	12
1342		2	max	0.161	72	0.33	102	0.375	102	0.009	70	NC	105	NC	66
1343			min	-0.122	104	-0.284	74	-0.216	74	-0.005	106	229.327	102	210.619	15
1344		3	max	0.18	72	0.385	102	0.56	102	0.012	70	NC	105	2911.202	70
1345			min	-0.138	104	-0.335	74	-0.247	74	-0.008	106	172.075	102	110.32	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1346		4	max	0.198	72	0.148	102	0.669	15	0.016	70	NC	105	1945.787	74
1347			min	-0.155	104	-0.109	74	-0.117	74	-0.01	106	229.49	102	77.903	15
1348		5	max	0.216	72	0.396	74	0.805	13	0.02	70	NC	107	470.439	75
1349			min	-0.172	104	-0.389	76	0.112	75	-0.013	106	NC	12	61.538	13
1350	M590	1	max	0.372	106	0.394	73	0.025	100	0.003	106	NC	107	NC	107
1351			min	-0.597	70	-0.226	105	-0.013	76	-0.006	70	NC	12	NC	12
1352		2	max	0.365	106	0.794	72	0.328	102	0.005	106	NC	105	NC	70
1353			min	-0.587	70	-0.594	104	-0.137	74	-0.009	70	250.679	102	190.226	15
1354		3	max	0.357	106	1.035	72	0.579	15	0.006	106	NC	75	NC	104
1355			min	-0.578	70	-0.824	104	-0.141	74	-0.012	70	187.765	102	100.172	15
1356		4	max	0.35	106	1.008	72	0.769	15	0.008	106	NC	105	524.428	74
1357			min	-0.569	70	-0.807	104	0	74	-0.015	70	250.874	102	70.931	13
1358		5	max	0.342	106	0.714	72	0.915	13	0.01	106	NC	107	486.825	68
1359			min	-0.56	70	-0.542	104	0.095	68	-0.018	70	NC	12	56.195	13
1360	M591	1	max	0.014	105	-0.087	66	0.488	106	0.009	76	NC	107	NC	107
1361			min	-0.529	15	-0.773	15	-0.573	70	-0.053	13	NC	12	NC	12
1362		2	max	0.01	105	-0.208	69	0.112	106	0.008	76	653.582	98	434.983	96
1363			min	-0.503	15	-1.546	15	-1.65	13	-0.039	13	95.84	15	62.64	15
1364		3	max	0.008	75	-0.221	69	-0.049	106	0.016	75	487.795	98	340.327	96
1365			min	-0.477	15	-1.667	15	-2.168	13	-0.026	13	71.265	15	46.394	15
1366		4	max	0.027	75	-0.099	77	0.003	106	0.024	75	653.234	98	1201.384	104
1367			min	-0.452	15	-1.102	14	-1.677	13	-0.027	73	95.75	15	60.424	15
1368		5	max	0.045	75	0.202	73	0.269	106	0.033	71	NC	107	NC	97
1369			min	-0.426	15	-0.108	105	-0.392	70	-0.032	73	NC	12	198.124	72
1370	M592	1	max	0.019	105	0.583	13	0.439	104	0.019	106	NC	107	NC	107
1371			min	-0.496	13	0.045	68	-0.552	72	-0.02	70	NC	12	NC	12
1372		2	max	0.014	105	-0.018	96	0.104	104	0.015	106	819.797	98	493.178	68
1373			min	-0.473	13	-0.232	15	-1.319	15	-0.016	70	160.572	13	84.3	13
1374		3	max	0.011	75	-0.106	98	-0.032	104	0.02	77	618.236	98	386.756	68
1375			min	-0.45	13	-0.637	13	-1.686	15	-0.022	71	122.001	13	64.154	13
1376		4	max	0.029	75	-0.096	98	0.025	104	0.03	77	819.25	98	1448.214	76
1377			min	-0.427	13	-0.669	13	-1.295	15	-0.032	71	160.321	13	88.002	13
1378		5	max	0.047	75	0.063	105	0.281	104	0.04	77	NC	107	NC	95
1379			min	-0.405	13	-0.292	13	-0.368	72	-0.041	71	NC	12	259.348	72
1380	M593	1	max	0.295	77	0.936	16	0.506	106	0.007	104	NC	107	NC	107
1381			min	-0.442	101	-0.048	105	-0.592	70	-0.058	15	NC	12	NC	12
1382		2	max	0.315	73	0.208	77	0.087	106	0.006	74	795.559	66	495.955	96
1383			min	-0.444	101	-0.317	101	-1.471	13	-0.044	15	137.856	15	70.979	15
1384		3	max	0.34	73	0.077	66	-0.102	106	0.005	74	599.859	66	598.561	104
1385			min	-0.447	101	-0.516	101	-1.916	13	-0.029	15	104.548	15	52.913	15
1386		4	max	0.364	73	0.08	66	-0.067	106	0.004	75	795.044	66	1081.04	74
1387			min	-0.45	101	-0.507	101	-1.494	13	-0.015	15	137.67	15	68.409	15
1388		5	max	0.389	73	0.232	73	0.198	106	0.008	71	NC	107	NC	103
1389			min	-0.453	101	-0.289	101	-0.317	70	-0.007	103	NC	12	146.527	76
1390	M594	1	max	0.298	77	0.029	105	0.466	104	0.019	70	NC	107	NC	107
1391			min	-0.428	101	-0.984	13	-0.572	72	-0.016	106	NC	12	NC	12
1392		2	max	0.321	73	-0.073	105	0.062	104	0.015	70	714.188	68	557.614	76
1393			min	-0.432	101	-1.651	13	-1.466	15	-0.012	106	108.119	13	74.15	13
1394		3	max	0.345	73	-0.075	105	-0.115	104	0.01	70	532.787	68	690.851	76
1395			min	-0.436	101	-1.741	13	-1.897	15	-0.009	106	80.308	13	55.816	13
1396		4	max	0.368	73	0.024	105	-0.067	104	0.008	73	713.772	68	1494.64	106
1397			min	-0.44	101	-1.22	16	-1.445	15	-0.008	75	108.005	13	76.514	13
1398		5	max	0.392	73	0.223	105	0.208	104	0.01	103	NC	107	NC	105
1399			min	-0.444	101	-0.319	73	-0.296	72	-0.01	71	NC	12	172.77	72
1400	M595	1	max	-0.053	105	-0.149	66	0.862	106	0.008	106	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1401			min	-1.035	15	-1.399	15	-0.923	70	-0.063	13	NC	12	NC	12
1402		2	max	-0.057	105	-0.262	66	0.463	106	0.006	106	751.406	99	581.282	104
1403			min	-1.013	15	-2.082	15	-1.431	70	-0.048	13	110.083	15	71.309	15
1404		3	max	-0.061	105	-0.285	66	0.259	106	0.004	106	560.397	99	1121.275	104
1405			min	-0.991	15	-2.199	15	-1.879	13	-0.033	13	81.752	15	52.153	15
1406		4	max	-0.065	105	-0.216	69	0.248	106	0.001	106	750.946	99	4083.182	100
1407			min	-0.969	15	-1.716	15	-1.474	13	-0.018	15	109.965	15	65.651	15
1408		5	max	-0.069	105	-0.055	68	0.433	106	0.003	96	NC	107	NC	99
1409			min	-0.948	15	-0.664	15	-0.575	70	-0.004	64	NC	12	103.012	72
1410	M596	1	max	-0.039	105	1.231	13	0.871	104	0.002	76	NC	107	NC	107
1411			min	-0.958	13	0.108	68	-0.965	72	-0.061	13	NC	12	NC	12
1412		2	max	-0.044	105	0.572	13	0.535	104	0.001	76	984.737	96	788.078	76
1413			min	-0.939	13	-0.02	68	-1.388	72	-0.05	13	203.759	14	106.318	13
1414		3	max	-0.048	105	0.237	17	0.358	104	-0.001	76	743.447	96	5649.599	76
1415			min	-0.92	13	-0.119	72	-1.457	72	-0.039	13	155.36	14	82.343	13
1416		4	max	-0.053	105	0.19	13	0.335	104	0	66	983.949	96	1236.343	102
1417			min	-0.901	13	-0.089	72	-1.17	72	-0.028	15	203.354	14	95.406	100
1418		5	max	-0.057	105	0.468	13	0.471	104	0.005	66	NC	107	NC	97
1419			min	-0.882	13	0.026	68	-0.528	72	-0.017	15	NC	12	109.269	76
1420	M597	1	max	0.122	66	1.608	15	0.883	106	0.007	74	NC	107	NC	107
1421			min	-0.685	15	0.113	96	-0.952	70	-0.077	15	NC	12	NC	12
1422		2	max	0.137	66	0.887	15	0.447	106	0.005	74	998.248	66	2310.925	104
1423			min	-0.665	15	-0.074	105	-1.328	70	-0.06	15	186.432	15	90.588	15
1424		3	max	0.151	66	0.519	16	0.22	106	0.002	74	753.716	66	1088.584	74
1425			min	-0.645	15	-0.166	105	-1.515	13	-0.044	15	141.947	15	67.107	15
1426		4	max	0.167	77	0.47	13	0.195	106	0	74	997.438	66	959.669	96
1427			min	-0.624	15	-0.16	105	-1.2	13	-0.028	15	186.092	15	72.945	72
1428		5	max	0.185	77	0.775	16	0.378	106	0.002	68	NC	107	NC	97
1429			min	-0.62	101	-0.057	105	-0.51	70	-0.012	13	NC	12	89.622	76
1430	M598	1	max	0.134	68	-0.087	98	0.901	104	0.004	104	NC	107	NC	107
1431			min	-0.61	13	-1.517	13	-0.974	72	-0.038	15	NC	12	NC	12
1432		2	max	0.149	68	-0.189	98	0.482	104	0.002	104	794.199	68	2537.055	76
1433			min	-0.592	13	-2.104	13	-1.341	72	-0.028	15	126.047	13	88.996	13
1434		3	max	0.163	68	-0.209	98	0.261	104	0	107	592.122	68	1104.791	106
1435			min	-0.588	101	-2.196	13	-1.573	15	-0.018	15	93.475	13	67.204	13
1436		4	max	0.178	68	-0.132	105	0.236	104	0.002	98	793.684	68	1010.237	68
1437			min	-0.593	101	-1.762	13	-1.188	15	-0.009	13	125.892	13	79.05	100
1438		5	max	0.195	77	0.041	105	0.41	104	0.006	94	NC	107	NC	95
1439			min	-0.598	101	-0.833	13	-0.469	72	-0.007	66	NC	12	93.028	76
1440	M599	1	max	-0.064	105	-0.153	66	1.125	106	0.023	15	NC	107	NC	107
1441			min	-1.48	15	-1.972	15	-1.184	70	-0.015	104	NC	12	NC	12
1442		2	max	-0.074	105	-0.206	66	0.999	106	0.018	15	NC	107	NC	100
1443			min	-1.476	15	-2.292	15	-1.278	70	-0.008	104	279.611	14	209.632	13
1444		3	max	-0.084	105	-0.226	66	0.882	106	0.013	13	NC	77	5891.477	77
1445			min	-1.472	15	-2.382	15	-1.257	70	-0.002	104	203.144	14	139.735	13
1446		4	max	-0.094	105	-0.21	66	0.771	106	0.011	62	NC	107	7429.782	77
1447			min	-1.468	15	-2.197	15	-1.111	70	-0.008	98	278.784	14	129.104	72
1448		5	max	-0.104	105	-0.161	66	0.669	106	0.016	62	NC	107	NC	99
1449			min	-1.463	15	-1.781	15	-0.849	70	-0.014	98	NC	12	105.7	76
1450	M600	1	max	-0.043	105	1.792	13	1.188	104	0.015	76	NC	107	NC	107
1451			min	-1.381	13	0.115	68	-1.157	76	-0.019	13	NC	12	NC	12
1452		2	max	-0.053	105	1.809	13	1.096	104	0.007	76	NC	103	NC	107
1453			min	-1.376	13	0.1	68	-1.16	72	-0.021	13	1453.321	71	498.128	100
1454		3	max	-0.063	105	1.8	13	1	104	0.003	66	NC	103	NC	107
1455			min	-1.372	13	0.099	68	-1.091	72	-0.023	15	977.763	20	262.684	100

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1456		4	max	-0.073	105	1.721	13	0.893	104	0.009	66	NC	103	NC	88
1457			min	-1.367	13	0.106	68	-0.924	72	-0.026	15	1454.24	71	171.567	104
1458		5	max	-0.083	105	1.619	13	0.828	100	0.015	66	NC	107	NC	99
1459			min	-1.363	13	0.127	68	-0.684	76	-0.029	15	NC	12	108.762	76
1460	M601	1	max	0.004	66	2.173	15	1.118	76	0.015	104	NC	107	NC	107
1461			min	-1.109	15	0.224	96	-1.178	70	-0.023	72	NC	12	NC	12
1462		2	max	0.017	66	2.111	15	0.925	106	0.008	104	NC	105	2370.125	97
1463			min	-1.103	15	0.212	96	-1.212	70	-0.02	15	1169.771	103	275.664	72
1464		3	max	0.03	66	2.066	15	0.784	106	0.001	104	NC	105	1694.842	97
1465			min	-1.097	15	0.209	96	-1.165	70	-0.017	13	899.48	103	155.204	72
1466		4	max	0.043	66	1.991	15	0.688	106	0.007	98	NC	105	2255.587	98
1467			min	-1.091	15	0.211	96	-1.034	70	-0.015	13	1170.369	103	117.214	72
1468		5	max	0.056	66	1.935	15	0.644	106	0.013	98	NC	107	NC	99
1469			min	-1.085	15	0.222	96	-0.823	70	-0.017	62	NC	12	101.836	76
1470	M602	1	max	0.017	68	-0.184	98	1.18	104	0.019	13	NC	107	NC	107
1471			min	-1.024	13	-2.046	13	-1.152	76	-0.015	76	NC	12	NC	12
1472		2	max	0.029	68	-0.227	98	1.004	104	0.019	13	8075.346	105	4871.812	101
1473			min	-1.021	13	-2.351	13	-1.119	72	-0.007	76	293.749	13	336.101	100
1474		3	max	0.042	68	-0.221	105	0.875	104	0.02	15	6148.149	105	4706.981	67
1475			min	-1.017	13	-2.439	13	-1.037	72	-0.004	66	213.078	13	192.783	100
1476		4	max	0.055	68	-0.216	105	0.79	104	0.02	15	8241.401	105	NC	69
1477			min	-1.013	13	-2.263	13	-0.874	72	-0.009	66	292.836	13	145.034	104
1478		5	max	0.068	68	-0.191	98	0.798	100	0.021	15	NC	107	NC	99
1479			min	-1.009	13	-1.866	13	-0.659	76	-0.015	66	NC	12	104.426	76
1480	M618	1	max	0.926	106	-0.25	66	0.582	73	-0.001	66	NC	107	NC	107
1481			min	-0.922	74	-1.746	15	-0.304	105	-0.009	15	NC	12	NC	12
1482		2	max	0.929	76	-0.276	66	0.649	73	0.107	107	9097.248	96	NC	106
1483			min	-0.923	104	-1.74	15	-0.373	105	-0.114	71	1642.571	15	734.346	71
1484		3	max	0.936	76	-0.272	68	0.678	73	0.217	103	6040.161	96	NC	46
1485			min	-0.93	104	-1.719	13	-0.405	105	-0.225	71	1089.102	15	502.167	71
1486		4	max	0.942	76	-0.243	68	0.644	73	0.107	107	9835.558	96	NC	106
1487			min	-0.936	104	-1.663	13	-0.372	105	-0.114	71	1581.918	72	734.346	71
1488		5	max	0.948	76	-0.208	68	0.573	73	-0.001	68	NC	107	NC	107
1489			min	-0.943	104	-1.589	13	-0.303	105	-0.008	13	NC	12	NC	12
1490	M619	1	max	0.902	106	-0.245	66	0.222	73	0.009	15	NC	107	NC	107
1491			min	-0.883	74	-1.752	15	-0.169	105	0.001	66	NC	12	NC	12
1492		2	max	0.908	76	-0.274	66	0.289	73	0.122	103	9500.259	66	NC	46
1493			min	-0.886	104	-1.748	15	-0.238	105	-0.114	75	1597.604	72	691.781	103
1494		3	max	0.915	76	-0.27	68	0.32	73	0.24	103	6250.913	66	NC	46
1495			min	-0.893	104	-1.728	13	-0.269	105	-0.232	71	1041.494	72	473.05	103
1496		4	max	0.921	72	-0.24	68	0.287	73	0.122	103	NC	96	NC	46
1497			min	-0.899	104	-1.673	13	-0.236	105	-0.114	75	1491.731	72	691.781	103
1498		5	max	0.928	72	-0.204	68	0.217	73	0.009	13	NC	107	NC	107
1499			min	-0.905	104	-1.6	13	-0.165	105	0.001	98	NC	12	NC	12
1500	M620	1	max	0	107	0	107	0	107	0.003	103	NC	107	NC	107
1501			min	0	12	0	12	0	12	-0.003	101	NC	12	NC	12
1502		2	max	0	77	0.013	102	0.031	101	0.003	103	NC	107	NC	106
1503			min	0	14	-0.01	74	-0.031	73	-0.003	101	NC	12	4172.145	101
1504		3	max	0	77	0.024	102	0.049	101	0.003	103	NC	107	NC	106
1505			min	-0.001	14	-0.018	74	-0.049	73	-0.003	101	NC	12	3131.656	101
1506		4	max	0	77	0.03	102	0.051	101	0.003	103	NC	107	NC	106
1507			min	-0.001	14	-0.025	74	-0.05	77	-0.003	101	NC	12	4875.415	101
1508		5	max	0	77	0.031	102	0.045	101	0.003	103	NC	107	NC	107
1509			min	-0.001	14	-0.03	74	-0.045	77	-0.003	101	9266.297	58	NC	12
1510	M621	1	max	0	107	0	107	0	107	0.003	103	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1511			min	0	12	0	12	0	12	-0.003	101	NC	12	NC	12
1512		2	max	0	75	0.013	102	0.031	71	0.003	103	NC	107	NC	106
1513			min	0	16	-0.01	74	-0.031	103	-0.003	101	NC	12	4172.145	103
1514		3	max	0	75	0.024	102	0.049	71	0.003	103	NC	107	NC	106
1515			min	-0.001	16	-0.018	74	-0.049	103	-0.003	101	NC	12	3131.656	103
1516		4	max	0	75	0.03	102	0.05	75	0.003	103	NC	107	NC	106
1517			min	-0.001	16	-0.025	74	-0.051	103	-0.003	101	NC	12	4875.415	103
1518		5	max	0	75	0.031	102	0.045	75	0.003	103	NC	107	NC	107
1519			min	-0.001	16	-0.03	74	-0.045	103	-0.003	101	9266.295	58	NC	12
1520	M622	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
1521			min	0	12	0	12	0	12	0	12	NC	12	NC	12
1522		2	max	0	97	0.014	102	0.037	101	0.012	105	NC	107	NC	106
1523			min	0	16	-0.012	74	-0.037	103	-0.012	103	8233.899	102	3162.412	101
1524		3	max	0	97	0.047	102	0.129	101	0.023	105	NC	107	NC	106
1525			min	-0.001	16	-0.039	74	-0.129	103	-0.023	103	2505.236	102	904.255	101
1526		4	max	0	97	0.088	102	0.251	101	0.034	105	NC	107	NC	106
1527			min	-0.001	16	-0.071	74	-0.251	103	-0.034	103	1331.159	102	464.798	101
1528		5	max	0	97	0.131	102	0.381	101	0.037	105	NC	107	NC	106
1529			min	-0.001	16	-0.104	74	-0.381	103	-0.037	103	885.977	102	305.778	101
1530	M623	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
1531			min	0	12	0	12	0	12	0	12	NC	12	NC	12
1532		2	max	0	107	0.007	106	0.048	101	0.001	105	NC	107	NC	106
1533			min	-0.001	14	-0.008	70	-0.048	103	-0.001	77	NC	12	5293.493	101
1534		3	max	0	107	0.021	102	0.115	101	0.001	105	NC	107	NC	106
1535			min	-0.002	14	-0.021	74	-0.115	103	-0.001	107	5542.02	102	1856.978	101
1536		4	max	0	107	0.04	102	0.128	101	0.005	105	NC	107	NC	106
1537			min	-0.002	14	-0.033	74	-0.128	103	-0.005	107	2931.078	102	2367.465	101
1538		5	max	0	107	0.06	102	0.105	101	0.008	105	NC	107	NC	107
1539			min	-0.002	14	-0.044	74	-0.105	103	-0.008	77	1936.242	102	NC	12
1540	M624	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
1541			min	0	12	0	12	0	12	0	12	NC	12	NC	12
1542		2	max	0	105	0.007	106	0.048	101	0.001	75	NC	107	NC	106
1543			min	-0.001	16	-0.008	70	-0.048	103	-0.001	107	NC	12	5293.493	103
1544		3	max	0	105	0.021	102	0.115	101	0.001	105	NC	107	NC	106
1545			min	-0.002	16	-0.021	74	-0.115	103	-0.001	107	5542.019	102	1856.978	103
1546		4	max	0	105	0.04	102	0.128	101	0.005	105	NC	107	NC	106
1547			min	-0.002	16	-0.033	74	-0.128	103	-0.005	107	2931.078	102	2367.465	103
1548		5	max	0	105	0.06	102	0.105	101	0.008	75	NC	107	NC	107
1549			min	-0.002	16	-0.044	74	-0.105	103	-0.008	107	1936.242	102	NC	12
1550	M625	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
1551			min	0	12	0	12	0	12	0	12	NC	12	NC	12
1552		2	max	0	99	0.014	102	0.037	101	0.012	105	NC	107	NC	106
1553			min	0	14	-0.012	74	-0.037	103	-0.012	103	8233.899	102	3162.412	103
1554		3	max	0	99	0.047	102	0.129	101	0.023	105	NC	107	NC	106
1555			min	-0.001	14	-0.039	74	-0.129	103	-0.023	103	2505.236	102	904.255	103
1556		4	max	0	99	0.088	102	0.251	101	0.034	105	NC	107	NC	106
1557			min	-0.001	14	-0.071	74	-0.251	103	-0.034	103	1331.159	102	464.798	103
1558		5	max	0	99	0.131	102	0.381	101	0.037	105	NC	107	NC	106
1559			min	-0.001	14	-0.104	74	-0.381	103	-0.037	103	885.977	102	305.778	103
1560	M628	1	max	0	107	0	107	0	107	0.001	70	NC	107	NC	107
1561			min	0	12	0	12	0	12	-0.001	102	NC	12	NC	12
1562		2	max	0	99	0.017	67	0.01	70	0.001	70	NC	107	NC	107
1563			min	0	71	-0.018	65	-0.009	106	-0.001	102	NC	12	9027.127	70
1564		3	max	0	99	0.033	67	0.015	70	0.001	70	NC	106	NC	107
1565			min	0	63	-0.034	65	-0.015	106	-0.001	102	8109.176	65	7614.559	70

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1566		4	max	0	69	0.046	67	0.017	70	0.001	70	NC	107	NC	107
1567			min	-0.001	93	-0.047	65	-0.017	106	-0.001	102	9292.471	65	NC	12
1568		5	max	0	69	0.055	63	0.017	70	0.001	70	NC	107	NC	107
1569			min	-0.001	93	-0.055	65	-0.017	106	-0.001	102	NC	12	NC	12
1570	M629	1	max	0	107	0	107	0	107	0.001	102	NC	107	NC	107
1571			min	0	12	0	12	0	12	-0.001	70	NC	12	NC	12
1572		2	max	0	97	0.018	63	0.01	70	0.001	102	NC	107	NC	107
1573			min	0	73	-0.017	69	-0.009	106	-0.001	70	NC	12	9027.126	70
1574		3	max	0	97	0.034	63	0.015	70	0.001	102	NC	107	NC	107
1575			min	0	65	-0.033	69	-0.015	106	-0.001	70	8109.176	63	7614.559	70
1576		4	max	0	67	0.047	63	0.017	70	0.001	102	NC	107	NC	107
1577			min	-0.001	95	-0.046	69	-0.017	106	-0.001	70	9292.471	63	NC	12
1578		5	max	0	67	0.055	63	0.017	70	0.001	102	NC	107	NC	107
1579			min	-0.001	95	-0.055	65	-0.017	106	-0.001	70	NC	12	NC	12
1580	M631	1	max	0.055	65	0.015	69	0.089	70	0	68	NC	107	NC	107
1581			min	-0.055	63	-0.029	93	-0.089	102	0	13	3695.199	63	NC	12
1582		2	max	0.055	65	0.002	69	0.025	70	0	68	NC	107	NC	107
1583			min	-0.055	63	-0.004	93	-0.025	102	0	13	7716.393	67	2286.131	102
1584		3	max	0.055	65	0.002	13	0.003	102	0	68	NC	107	NC	107
1585			min	-0.055	63	0.001	98	-0.003	74	0	13	7552.787	15	1596.084	102
1586		4	max	0.055	65	0.002	67	0.025	70	0	68	NC	106	NC	107
1587			min	-0.055	63	-0.004	95	-0.025	102	0	13	7716.393	69	2286.132	102
1588		5	max	0.055	65	0.015	67	0.089	70	0	68	NC	106	NC	107
1589			min	-0.055	63	-0.029	95	-0.089	102	0	13	3695.199	65	NC	12
1590	M632	1	max	0.028	74	0	77	0.047	101	0	103	NC	107	NC	107
1591			min	-0.032	102	-0.001	15	-0.047	77	0	75	NC	12	NC	12
1592		2	max	0.028	74	-0.002	96	0.118	101	0	103	NC	107	NC	106
1593			min	-0.032	102	-0.012	15	-0.118	103	0	75	9194.857	15	1935.164	103
1594		3	max	0.028	74	-0.001	96	0.159	101	0	93	NC	107	NC	106
1595			min	-0.032	102	-0.017	15	-0.158	103	0	69	6073.434	15	1376.074	103
1596		4	max	0.028	74	0.001	74	0.159	101	0	101	NC	107	NC	106
1597			min	-0.031	102	-0.012	15	-0.159	103	0	73	9117.6	15	1930.079	103
1598		5	max	0.028	74	0	107	0.129	101	0	101	NC	107	NC	107
1599			min	-0.031	102	-0.002	14	-0.129	103	0	103	NC	12	NC	12
1600	M633	1	max	0.028	74	0	75	0.047	75	0	77	NC	107	NC	107
1601			min	-0.032	102	-0.001	15	-0.047	103	0	101	NC	12	NC	12
1602		2	max	0.028	74	-0.002	96	0.118	101	0	77	NC	107	NC	106
1603			min	-0.032	102	-0.012	15	-0.118	103	0	101	9194.884	15	1935.164	101
1604		3	max	0.028	74	-0.001	96	0.158	101	0	67	NC	107	NC	106
1605			min	-0.032	102	-0.017	15	-0.159	103	0	95	6073.438	15	1376.074	101
1606		4	max	0.028	74	0.001	74	0.159	101	0	71	NC	107	NC	106
1607			min	-0.031	102	-0.012	15	-0.159	103	0	103	9117.589	15	1930.079	101
1608		5	max	0.028	74	0	105	0.129	101	0	101	NC	107	NC	107
1609			min	-0.031	102	-0.002	16	-0.129	103	0	103	NC	12	NC	12
1610	M638	1	max	0.038	103	0.027	77	0.029	74	0.002	71	NC	107	NC	107
1611			min	-0.037	75	-0.028	101	-0.032	102	-0.002	107	NC	12	NC	12
1612		2	max	0.037	103	0.027	77	0.031	74	0.002	71	NC	107	NC	107
1613			min	-0.037	75	-0.066	14	-0.044	15	-0.002	107	1181.849	14	1903.004	13
1614		3	max	0.036	103	0.026	77	0.029	74	0.002	71	NC	107	NC	107
1615			min	-0.036	75	-0.092	14	-0.06	15	-0.002	107	842.067	14	1336.051	13
1616		4	max	0.036	103	0.026	77	0.023	74	0.002	71	NC	107	NC	107
1617			min	-0.035	75	-0.066	14	-0.045	15	-0.002	103	1181.849	14	1778.71	13
1618		5	max	0.035	103	0.025	77	0.014	74	0.002	75	NC	107	NC	107
1619			min	-0.035	75	-0.025	101	-0.019	102	-0.002	103	NC	12	2552.593	70
1620	M639	1	max	0.035	77	0.025	75	0.014	74	0.002	77	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1621			min	-0.035	101	-0.025	103	-0.019	102	-0.002	101	NC	12	NC	12
1622		2	max	0.035	77	0.026	75	0.023	74	0.002	73	NC	105	NC	107
1623			min	-0.036	101	-0.065	16	-0.044	15	-0.002	101	1203.736	13	2049.869	15
1624		3	max	0.036	77	0.026	75	0.029	74	0.002	73	NC	105	NC	107
1625			min	-0.036	101	-0.091	16	-0.059	15	-0.002	105	857.662	13	1473.456	15
1626		4	max	0.037	77	0.027	75	0.031	74	0.002	73	NC	105	NC	107
1627			min	-0.037	101	-0.065	16	-0.043	15	-0.002	105	1203.736	13	2138.124	15
1628		5	max	0.037	77	0.027	75	0.029	74	0.002	73	NC	107	NC	107
1629			min	-0.038	101	-0.028	103	-0.032	102	-0.002	105	NC	12	2552.593	70
1630	M640	1	max	0.017	70	0	107	0.104	101	0.002	101	NC	107	NC	107
1631			min	-0.017	106	-0.002	14	-0.104	103	-0.002	103	NC	12	NC	12
1632		2	max	0.017	70	0.008	106	0.118	101	0.002	101	NC	107	NC	106
1633			min	-0.017	106	-0.009	70	-0.118	103	-0.002	77	NC	12	4727.457	101
1634		3	max	0.017	70	0.003	106	0.116	101	0.001	101	NC	107	NC	106
1635			min	-0.016	106	-0.004	70	-0.116	103	-0.001	77	NC	12	3368.279	101
1636		4	max	0.017	70	0.003	74	0.092	101	0.001	101	NC	107	NC	106
1637			min	-0.017	106	-0.004	102	-0.092	103	-0.001	77	NC	12	4728.4	101
1638		5	max	0.017	70	0	69	0.055	63	0.001	63	NC	107	NC	107
1639			min	-0.017	106	-0.001	93	-0.055	65	0	69	NC	12	NC	12
1640	M642	1	max	0.017	70	0	105	0.104	101	0.002	101	NC	107	NC	107
1641			min	-0.017	106	-0.002	16	-0.104	103	-0.002	103	NC	12	NC	12
1642		2	max	0.017	70	0.008	106	0.118	101	0.002	75	NC	107	NC	106
1643			min	-0.017	106	-0.009	70	-0.118	103	-0.002	103	NC	12	4727.457	103
1644		3	max	0.017	70	0.003	106	0.116	101	0.001	75	NC	107	NC	106
1645			min	-0.016	106	-0.004	70	-0.116	103	-0.001	103	NC	12	3368.279	103
1646		4	max	0.017	70	0.003	74	0.092	101	0.001	75	NC	107	NC	106
1647			min	-0.017	106	-0.004	102	-0.092	103	-0.001	103	NC	12	4728.4	103
1648		5	max	0.017	70	0	67	0.055	63	0	67	NC	107	NC	107
1649			min	-0.017	106	-0.001	95	-0.055	65	-0.001	65	NC	12	NC	12
1650	M644	1	max	0.001	74	0.001	106	0.008	101	0.001	101	NC	107	NC	107
1651			min	-0.002	102	-0.002	70	-0.008	103	-0.001	103	NC	12	NC	12
1652		2	max	0.002	74	0.006	106	0.038	105	0.001	101	NC	107	NC	106
1653			min	-0.003	102	-0.019	13	-0.04	103	-0.001	77	3177.658	15	970.885	103
1654		3	max	0.003	74	0.01	106	0.066	105	0.001	101	NC	107	NC	106
1655			min	-0.004	102	-0.027	13	-0.069	103	-0.001	77	2264.081	15	495.408	103
1656		4	max	0.004	74	0.014	106	0.093	105	0.001	101	NC	107	NC	106
1657			min	-0.005	102	-0.021	13	-0.096	103	-0.001	77	3177.658	15	338.866	103
1658		5	max	0.005	74	0.018	106	0.12	101	0.001	101	NC	107	NC	106
1659			min	-0.006	102	-0.019	70	-0.119	103	-0.001	77	NC	12	260.113	101
1660	M645	1	max	0.01	70	0.014	74	0.101	101	0	93	NC	107	NC	107
1661			min	-0.009	106	-0.014	102	-0.101	103	0	69	NC	12	NC	12
1662		2	max	0.009	70	0.012	74	0.081	105	0	93	NC	107	NC	106
1663			min	-0.008	106	-0.02	15	-0.083	103	0	69	3119.869	14	1356.497	101
1664		3	max	0.008	70	0.011	74	0.06	105	0.001	93	NC	107	NC	106
1665			min	-0.007	106	-0.027	15	-0.063	103	-0.001	69	2222.906	14	671.873	101
1666		4	max	0.007	70	0.008	74	0.037	105	0.001	93	NC	107	NC	106
1667			min	-0.006	106	-0.019	15	-0.04	103	-0.001	65	3119.869	13	442.774	101
1668		5	max	0.006	70	0.006	70	0.014	67	0.001	97	NC	107	NC	106
1669			min	-0.006	106	-0.006	106	-0.015	65	-0.001	65	NC	12	328.668	101
1670	M646	1	max	0.001	74	0.001	106	0.008	101	0.001	101	NC	107	NC	107
1671			min	-0.002	102	-0.002	70	-0.008	103	-0.001	103	NC	12	NC	12
1672		2	max	0.002	74	0.006	106	0.038	105	0.001	75	NC	107	NC	106
1673			min	-0.003	102	-0.019	13	-0.04	103	-0.001	103	3177.658	15	970.315	103
1674		3	max	0.003	74	0.01	106	0.066	105	0.001	75	NC	107	NC	106
1675			min	-0.004	102	-0.027	13	-0.069	103	-0.001	103	2264.081	13	495.112	103

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1676		4	max	0.004	74	0.014	106	0.093	105	0.001	75	NC	107	NC	106
1677			min	-0.005	102	-0.021	13	-0.096	103	-0.001	103	3177.658	15	338.658	103
1678		5	max	0.005	74	0.018	106	0.119	101	0.001	75	NC	107	NC	106
1679			min	-0.006	102	-0.019	70	-0.12	103	-0.001	103	NC	12	260.113	103
1680	M647	1	max	0.01	70	0.014	74	0.101	101	0	67	NC	107	NC	107
1681			min	-0.009	106	-0.014	102	-0.101	103	0	95	NC	12	NC	12
1682		2	max	0.009	70	0.012	74	0.081	105	0	67	NC	107	NC	106
1683			min	-0.008	106	-0.02	15	-0.083	103	0	95	3119.869	13	1374.912	101
1684		3	max	0.008	70	0.011	74	0.06	105	0.001	67	NC	107	NC	106
1685			min	-0.007	106	-0.027	15	-0.063	103	-0.001	95	2222.906	14	680.907	101
1686		4	max	0.007	70	0.008	74	0.037	105	0.001	63	NC	107	NC	106
1687			min	-0.006	106	-0.019	15	-0.039	103	-0.001	95	3119.869	14	448.659	101
1688		5	max	0.006	70	0.006	70	0.015	63	0.001	63	NC	107	NC	106
1689			min	-0.006	106	-0.006	106	-0.014	69	-0.001	99	NC	12	328.668	103
1690	M648	1	max	0.11	103	0	107	0.042	74	0	74	NC	107	NC	107
1691			min	-0.11	101	-0.002	14	-0.056	102	-0.001	102	NC	12	NC	12
1692		2	max	0.11	103	0	107	0.043	74	0	74	NC	107	NC	107
1693			min	-0.11	101	-0.003	14	-0.057	102	-0.001	102	NC	12	NC	12
1694		3	max	0.11	103	0	106	0.043	74	0	74	NC	107	NC	107
1695			min	-0.11	101	-0.003	13	-0.058	102	-0.001	102	NC	12	NC	12
1696		4	max	0.11	103	0	105	0.043	74	0	74	NC	107	NC	107
1697			min	-0.11	101	-0.003	16	-0.057	102	-0.001	102	NC	12	NC	12
1698		5	max	0.11	103	0	105	0.042	74	0	74	NC	107	NC	107
1699			min	-0.11	101	-0.002	16	-0.056	102	-0.001	102	NC	12	NC	12
1700	M649	1	max	0.122	102	0	97	0.354	103	0.004	103	NC	107	NC	107
1701			min	-0.097	74	-0.001	16	-0.354	101	-0.004	101	NC	12	1610.927	16
1702		2	max	0.122	102	0.006	74	0.579	103	0.004	103	NC	107	NC	106
1703			min	-0.097	74	-0.011	15	-0.581	101	-0.004	101	2291.59	102	105.843	41
1704		3	max	0.122	102	0.01	74	0.805	107	0.004	103	NC	107	NC	106
1705			min	-0.097	74	-0.027	15	-0.81	101	-0.004	101	944.393	15	52.606	71
1706		4	max	0.122	102	0.015	66	1.032	107	0.004	103	9605.749	69	NC	98
1707			min	-0.097	74	-0.045	15	-1.041	101	-0.004	101	551.439	15	34.946	71
1708		5	max	0.122	102	0.02	66	1.259	107	0.004	103	6795.017	69	NC	98
1709			min	-0.097	74	-0.063	15	-1.271	101	-0.004	101	388.382	15	26.161	41
1710	M650	1	max	0.056	102	0	107	0.11	103	0.001	101	NC	107	NC	107
1711			min	-0.042	74	-0.002	14	-0.11	101	-0.001	103	NC	12	NC	12
1712		2	max	0.056	102	0.001	66	0.159	107	0.001	101	NC	107	NC	106
1713			min	-0.042	74	-0.009	15	-0.16	101	-0.001	103	3419.373	15	478.71	101
1714		3	max	0.056	102	0.002	66	0.209	107	0.001	101	NC	107	NC	106
1715			min	-0.042	74	-0.021	15	-0.213	101	-0.001	103	1255.631	15	234.157	101
1716		4	max	0.056	102	0.003	66	0.259	107	0.001	101	NC	100	NC	98
1717			min	-0.042	74	-0.035	15	-0.266	101	-0.001	103	721.428	15	154.094	101
1718		5	max	0.056	102	0.004	66	0.309	107	0.001	101	8730.194	104	NC	98
1719			min	-0.042	74	-0.05	15	-0.319	101	-0.001	103	504.378	15	114.802	101
1720	M651	1	max	0.056	102	0	105	0.11	103	0.001	101	NC	107	NC	107
1721			min	-0.042	74	-0.002	16	-0.11	101	-0.001	103	NC	12	NC	12
1722		2	max	0.056	102	0.001	66	0.159	107	0.001	101	NC	107	NC	106
1723			min	-0.042	74	-0.009	15	-0.16	101	-0.001	103	3419.392	15	478.673	71
1724		3	max	0.056	102	0.002	66	0.209	107	0.001	101	NC	107	NC	106
1725			min	-0.042	74	-0.021	15	-0.213	101	-0.001	103	1255.636	15	234.14	71
1726		4	max	0.056	102	0.003	66	0.259	107	0.001	101	NC	100	NC	98
1727			min	-0.042	74	-0.035	15	-0.266	101	-0.001	103	721.43	15	154.083	71
1728		5	max	0.056	102	0.004	66	0.309	107	0.001	101	8730.21	104	NC	98
1729			min	-0.042	74	-0.05	15	-0.319	101	-0.001	103	504.379	15	114.793	71
1730	M652	1	max	0.122	102	0	99	0.354	103	0.004	103	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1731			min	-0.097	74	-0.001	14	-0.354	101	-0.004	101	NC	12	1610.927	16
1732		2	max	0.122	102	0.006	74	0.579	103	0.004	103	NC	107	NC	106
1733			min	-0.097	74	-0.011	15	-0.581	101	-0.004	101	2291.59	102	105.843	41
1734		3	max	0.122	102	0.01	74	0.805	107	0.004	103	NC	107	NC	106
1735			min	-0.097	74	-0.027	15	-0.81	101	-0.004	101	944.393	15	52.606	71
1736		4	max	0.122	102	0.015	66	1.032	107	0.004	103	9605.132	69	NC	98
1737			min	-0.097	74	-0.045	15	-1.041	101	-0.004	101	551.439	15	34.946	41
1738		5	max	0.122	102	0.02	66	1.259	107	0.004	103	6794.605	69	NC	98
1739			min	-0.097	74	-0.063	15	-1.271	101	-0.004	101	388.382	15	26.161	41
1740	M653	1	max	0.045	102	0	107	0.123	103	0.001	101	NC	107	NC	107
1741			min	-0.036	74	-0.002	14	-0.123	101	-0.001	103	NC	12	NC	12
1742		2	max	0.045	102	0.001	66	0.163	107	0.001	101	NC	107	NC	106
1743			min	-0.036	74	-0.009	15	-0.165	101	-0.001	103	3521.247	15	577.305	101
1744		3	max	0.045	102	0.002	66	0.205	107	0.001	101	NC	107	NC	106
1745			min	-0.036	74	-0.021	15	-0.208	101	-0.001	103	1282.889	15	281.127	101
1746		4	max	0.045	102	0.003	66	0.246	107	0.001	101	NC	104	NC	98
1747			min	-0.036	74	-0.035	15	-0.253	101	-0.001	103	734.885	15	184.528	101
1748		5	max	0.045	102	0.004	66	0.288	107	0.001	101	9086.063	104	NC	98
1749			min	-0.036	74	-0.049	15	-0.298	101	-0.001	103	513.137	15	137.294	101
1750	M654	1	max	0.045	102	0	105	0.123	103	0.001	101	NC	107	NC	107
1751			min	-0.036	74	-0.002	16	-0.123	101	-0.001	103	NC	12	NC	12
1752		2	max	0.045	102	0.001	66	0.163	107	0.001	101	NC	107	NC	106
1753			min	-0.036	74	-0.009	15	-0.165	101	-0.001	103	3521.267	15	577.32	101
1754		3	max	0.045	102	0.002	66	0.205	107	0.001	101	NC	107	NC	106
1755			min	-0.036	74	-0.021	15	-0.208	101	-0.001	103	1282.895	15	281.135	101
1756		4	max	0.045	102	0.003	66	0.246	107	0.001	101	NC	104	NC	98
1757			min	-0.036	74	-0.035	15	-0.253	101	-0.001	103	734.887	15	184.533	101
1758		5	max	0.045	102	0.004	66	0.288	107	0.001	101	9086.071	104	NC	98
1759			min	-0.036	74	-0.049	15	-0.298	101	-0.001	103	513.139	15	137.298	101
1760	M655	1	max	0.1	102	0	99	0.287	103	0.004	103	NC	107	NC	107
1761			min	-0.08	74	-0.001	14	-0.287	101	-0.004	101	NC	12	1561.189	16
1762		2	max	0.1	102	0.006	74	0.501	103	0.004	103	NC	107	NC	106
1763			min	-0.08	74	-0.011	102	-0.503	101	-0.004	101	2316.332	102	111.018	101
1764		3	max	0.1	102	0.01	74	0.717	107	0.004	103	NC	107	NC	106
1765			min	-0.08	74	-0.026	15	-0.722	101	-0.004	101	962.317	15	55.162	101
1766		4	max	0.1	102	0.015	66	0.933	107	0.004	103	NC	58	NC	98
1767			min	-0.08	74	-0.044	15	-0.942	101	-0.004	101	560.585	15	36.638	101
1768		5	max	0.1	102	0.02	66	1.15	107	0.004	103	6940.597	69	NC	98
1769			min	-0.08	74	-0.062	15	-1.162	101	-0.004	101	394.425	15	27.425	101
1770	M656	1	max	0.1	102	0	97	0.287	103	0.004	103	NC	107	NC	107
1771			min	-0.08	74	-0.001	16	-0.287	101	-0.004	101	NC	12	1561.189	16
1772		2	max	0.1	102	0.006	74	0.501	103	0.004	103	NC	107	NC	106
1773			min	-0.08	74	-0.011	102	-0.503	101	-0.004	101	2316.332	102	111.018	71
1774		3	max	0.1	102	0.01	74	0.717	107	0.004	103	NC	107	NC	106
1775			min	-0.08	74	-0.026	15	-0.722	101	-0.004	101	962.317	15	55.162	41
1776		4	max	0.1	102	0.015	66	0.933	107	0.004	103	NC	58	NC	98
1777			min	-0.08	74	-0.044	15	-0.942	101	-0.004	101	560.585	15	36.638	41
1778		5	max	0.1	102	0.02	66	1.15	107	0.004	103	6941.027	69	NC	98
1779			min	-0.08	74	-0.062	15	-1.162	101	-0.004	101	394.425	15	27.425	41
1780	M657	1	max	0.036	102	0	107	0.129	103	0	101	NC	107	NC	107
1781			min	-0.031	74	-0.002	14	-0.129	101	0	103	NC	12	5576.484	91
1782		2	max	0.036	102	0.001	66	0.154	107	0	101	NC	107	NC	106
1783			min	-0.031	74	-0.009	15	-0.156	101	0	103	3181.562	15	912.053	101
1784		3	max	0.036	102	0.002	66	0.18	107	0	101	NC	107	NC	106
1785			min	-0.031	74	-0.023	15	-0.185	101	0	103	1141.4	15	431.441	101

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1786		4	max	0.036	102	0.002	66	0.206	107	0	101	NC	104	NC	98
1787			min	-0.031	74	-0.038	15	-0.215	101	0	103	668.153	15	280.413	101
1788		5	max	0.036	102	0.003	66	0.232	107	0	101	NC	104	NC	98
1789			min	-0.031	74	-0.053	15	-0.245	101	0	103	471.038	15	207.674	101
1790	M658	1	max	0.036	102	0	105	0.129	103	0	101	NC	107	NC	107
1791			min	-0.031	74	-0.002	16	-0.129	101	0	103	NC	12	5617.934	61
1792		2	max	0.036	102	0.001	66	0.154	107	0	101	NC	107	NC	106
1793			min	-0.031	74	-0.009	15	-0.156	101	0	103	3181.578	15	912.251	101
1794		3	max	0.036	102	0.002	66	0.18	107	0	101	NC	107	NC	106
1795			min	-0.031	74	-0.023	15	-0.185	101	0	103	1141.404	15	431.529	101
1796		4	max	0.036	102	0.002	66	0.206	107	0	101	NC	104	NC	98
1797			min	-0.031	74	-0.038	15	-0.215	101	0	103	668.155	15	280.469	101
1798		5	max	0.036	102	0.003	66	0.232	107	0	101	NC	104	NC	98
1799			min	-0.031	74	-0.053	15	-0.245	101	0	103	471.039	15	207.715	101
1800	M659	1	max	0.079	102	0	99	0.225	103	0.004	103	NC	107	NC	107
1801			min	-0.065	74	-0.001	14	-0.225	101	-0.004	101	NC	12	1344.036	16
1802		2	max	0.079	102	0.005	74	0.42	107	0.004	103	NC	107	NC	106
1803			min	-0.065	74	-0.011	15	-0.422	101	-0.004	101	2267.892	102	121.73	71
1804		3	max	0.079	102	0.01	66	0.617	107	0.004	103	NC	107	NC	106
1805			min	-0.065	74	-0.027	15	-0.622	101	-0.004	101	917.238	15	60.362	101
1806		4	max	0.079	102	0.015	66	0.814	107	0.004	103	NC	99	NC	98
1807			min	-0.065	74	-0.045	15	-0.824	101	-0.004	101	546.083	15	40.083	71
1808		5	max	0.079	102	0.02	66	1.01	107	0.004	103	8959.23	69	NC	98
1809			min	-0.065	74	-0.063	15	-1.025	101	-0.004	101	387.93	15	30.003	41
1810	M660	1	max	0.079	102	0	97	0.225	103	0.004	103	NC	107	NC	107
1811			min	-0.065	74	-0.001	16	-0.225	101	-0.004	101	NC	12	1344.036	16
1812		2	max	0.079	102	0.005	74	0.42	107	0.004	103	NC	107	NC	106
1813			min	-0.065	74	-0.011	15	-0.422	101	-0.004	101	2267.892	102	121.73	71
1814		3	max	0.079	102	0.01	66	0.617	107	0.004	103	NC	107	NC	106
1815			min	-0.065	74	-0.027	15	-0.622	101	-0.004	101	917.238	15	60.362	41
1816		4	max	0.079	102	0.015	66	0.813	107	0.004	103	NC	99	NC	98
1817			min	-0.065	74	-0.045	15	-0.824	101	-0.004	101	546.083	15	40.083	41
1818		5	max	0.079	102	0.02	66	1.01	107	0.004	103	8959.945	69	NC	98
1819			min	-0.065	74	-0.063	15	-1.025	101	-0.004	101	387.93	15	30.003	41
1820	M407	1	max	0	107	0	107	0	107	0.002	103	NC	107	NC	107
1821			min	0	12	0	12	0	12	-0.002	45	NC	12	NC	12
1822		2	max	0	44	0.053	42	0.012	101	0.002	103	NC	107	NC	107
1823			min	0	15	-0.05	44	-0.011	77	-0.002	45	6996.62	42	NC	12
1824		3	max	0	44	0.1	42	0.016	101	0.002	103	NC	107	NC	106
1825			min	-0.001	15	-0.096	44	-0.015	77	-0.002	45	4427.601	42	8090.243	41
1826		4	max	0	44	0.136	42	0.014	101	0.002	103	NC	107	NC	107
1827			min	-0.001	15	-0.132	44	-0.013	77	-0.002	41	5141.12	42	NC	12
1828		5	max	0	44	0.156	106	0.008	105	0.002	103	NC	107	NC	107
1829			min	-0.001	15	-0.157	40	-0.008	43	-0.002	41	NC	12	NC	12
1830	M408	1	max	0	107	0	107	0	107	0.002	45	NC	107	NC	107
1831			min	0	12	0	12	0	12	-0.002	43	NC	12	NC	12
1832		2	max	0	106	0.05	106	0.012	101	0.002	45	NC	107	NC	107
1833			min	0	13	-0.053	40	-0.011	77	-0.002	43	6996.62	40	NC	12
1834		3	max	0	106	0.096	106	0.016	101	0.002	45	NC	107	NC	106
1835			min	-0.001	13	-0.1	40	-0.015	77	-0.002	43	4427.601	40	8090.243	41
1836		4	max	0	106	0.132	106	0.014	101	0.002	101	NC	107	NC	107
1837			min	-0.001	13	-0.136	40	-0.013	77	-0.002	43	5141.12	40	NC	12
1838		5	max	0	106	0.157	42	0.008	105	0.002	101	NC	107	NC	107
1839			min	-0.001	13	-0.156	44	-0.008	73	-0.002	43	NC	12	NC	12
1840	M417	1	max	0	107	0	107	0	107	0.002	101	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1841			min	0	12	0	12	0	12	-0.002	47	NC	12	NC	12
1842		2	max	0	106	0.05	106	0.011	75	0.002	101	NC	107	NC	107
1843			min	0	13	-0.053	40	-0.012	73	-0.002	47	6996.62	40	NC	12
1844		3	max	0	106	0.096	106	0.015	75	0.002	101	NC	107	NC	106
1845			min	-0.001	13	-0.1	40	-0.016	73	-0.002	47	4427.601	40	8090.243	73
1846		4	max	0	106	0.132	106	0.013	75	0.002	101	NC	107	NC	107
1847			min	-0.001	13	-0.136	40	-0.014	73	-0.002	43	5141.12	40	NC	12
1848		5	max	0	106	0.157	42	0.008	101	0.002	101	NC	107	NC	107
1849			min	-0.001	13	-0.156	44	-0.008	77	-0.002	43	NC	12	NC	12
1850	M418	1	max	0	107	0	107	0	107	0.002	47	NC	107	NC	107
1851			min	0	12	0	12	0	12	-0.002	41	NC	12	NC	12
1852		2	max	0	44	0.053	42	0.011	105	0.002	47	NC	107	NC	107
1853			min	0	15	-0.05	44	-0.012	73	-0.002	41	6996.62	42	NC	12
1854		3	max	0	44	0.1	42	0.015	105	0.002	47	NC	107	NC	106
1855			min	-0.001	15	-0.096	44	-0.016	73	-0.002	41	4427.601	42	8090.243	73
1856		4	max	0	44	0.136	42	0.013	105	0.002	103	NC	107	NC	107
1857			min	-0.001	15	-0.132	44	-0.014	73	-0.002	41	5141.12	42	NC	12
1858		5	max	0	44	0.156	106	0.008	101	0.002	103	NC	107	NC	107
1859			min	-0.001	15	-0.157	40	-0.008	77	-0.002	41	NC	12	NC	12
1860	M419	1	max	0.009	107	0	44	0.154	100	0.001	100	NC	107	NC	107
1861			min	-0.009	41	-0.001	15	-0.154	42	-0.001	46	NC	12	NC	12
1862		2	max	0.009	107	0	44	0.159	100	0.001	100	NC	107	NC	107
1863			min	-0.009	41	-0.005	15	-0.159	42	-0.001	46	NC	12	NC	12
1864		3	max	0.009	103	0	44	0.162	100	0.001	100	NC	107	NC	107
1865			min	-0.009	41	-0.006	15	-0.161	42	-0.001	46	NC	12	NC	12
1866		4	max	0.009	103	0	44	0.159	100	0.001	100	NC	107	NC	107
1867			min	-0.009	75	-0.005	15	-0.159	42	-0.001	46	NC	12	NC	12
1868		5	max	0.009	103	0	44	0.154	100	0.001	100	NC	107	NC	107
1869			min	-0.009	75	-0.001	15	-0.154	42	-0.001	46	NC	12	NC	12
1870	M420	1	max	0.154	100	0	44	0.009	105	0	73	NC	107	NC	107
1871			min	-0.154	42	-0.001	15	-0.009	43	0	75	NC	12	NC	12
1872		2	max	0.154	100	0.001	106	0.042	101	0	73	NC	107	NC	106
1873			min	-0.154	42	-0.01	13	-0.042	43	0	75	9416.937	40	2670.81	41
1874		3	max	0.154	100	-0.003	97	0.056	101	0	73	NC	107	NC	106
1875			min	-0.154	42	-0.014	16	-0.057	43	0	75	6976.829	16	1881.296	41
1876		4	max	0.154	100	0.001	44	0.042	101	0	73	NC	107	NC	106
1877			min	-0.154	42	-0.01	15	-0.042	43	0	75	9416.937	42	2670.81	41
1878		5	max	0.154	100	0	106	0.009	75	0	73	NC	107	NC	107
1879			min	-0.154	42	-0.001	13	-0.009	73	0	75	NC	12	NC	12
1880	M421	1	max	0.009	75	0	106	0.154	42	0.001	42	NC	107	NC	107
1881			min	-0.009	73	-0.001	13	-0.154	40	-0.001	44	NC	12	NC	12
1882		2	max	0.009	75	0	106	0.159	42	0.001	42	NC	107	NC	107
1883			min	-0.009	73	-0.005	13	-0.159	40	-0.001	44	NC	12	NC	12
1884		3	max	0.009	101	0	106	0.162	42	0.001	42	NC	107	NC	107
1885			min	-0.009	73	-0.006	13	-0.161	40	-0.001	44	NC	12	NC	12
1886		4	max	0.009	101	0	106	0.159	42	0.001	42	NC	107	NC	107
1887			min	-0.009	77	-0.005	13	-0.159	40	-0.001	44	NC	12	NC	12
1888		5	max	0.009	101	0	106	0.154	42	0.001	42	NC	107	NC	107
1889			min	-0.009	77	-0.001	13	-0.154	40	-0.001	44	NC	12	NC	12
1890	M422	1	max	0.154	42	0	106	0.009	107	0	101	NC	107	NC	107
1891			min	-0.154	40	-0.001	13	-0.009	41	0	77	NC	12	NC	12
1892		2	max	0.154	42	0.001	44	0.042	103	0	101	NC	107	NC	106
1893			min	-0.154	40	-0.01	15	-0.042	41	0	77	9416.937	42	2670.81	43
1894		3	max	0.154	42	-0.003	99	0.056	103	0	101	NC	107	NC	106
1895			min	-0.154	40	-0.014	14	-0.057	41	0	77	6976.829	14	1881.296	43

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1896		4	max	0.154	42	0.001	106	0.042	103	0	101	NC	107	NC	106
1897			min	-0.154	40	-0.01	13	-0.042	41	0	77	9416.937	40	2670.81	43
1898		5	max	0.154	42	0	44	0.009	107	0	101	NC	107	NC	107
1899			min	-0.154	40	-0.001	15	-0.009	41	0	77	NC	12	NC	12
1900	M423	1	max	0.006	103	0.006	107	0.154	100	0.001	101	NC	107	NC	107
1901			min	-0.006	75	-0.007	41	-0.154	42	-0.001	77	NC	12	NC	12
1902		2	max	0.005	73	0.017	107	0.16	44	0.001	101	NC	107	NC	107
1903			min	-0.005	75	-0.426	14	-0.261	15	-0.001	77	296.201	13	486.12	13
1904		3	max	0.005	73	0.021	107	0.142	44	0.001	101	NC	104	NC	107
1905			min	-0.004	75	-0.597	14	-0.362	15	-0.001	77	211.043	13	343.968	13
1906		4	max	0.004	73	0.016	107	0.091	44	0.001	44	NC	107	NC	107
1907			min	-0.003	75	-0.425	14	-0.258	15	-0.001	42	296.201	13	470.713	13
1908		5	max	0.003	73	0.003	73	0.014	44	0.001	44	NC	107	NC	107
1909			min	-0.003	75	-0.002	75	-0.014	42	-0.002	42	NC	12	448.768	40
1910	M424	1	max	0.006	101	0.006	105	0.154	42	0.001	105	NC	107	NC	107
1911			min	-0.006	77	-0.007	43	-0.154	40	-0.001	43	NC	12	NC	12
1912		2	max	0.005	101	0.017	75	0.161	106	0.001	105	NC	106	NC	105
1913			min	-0.005	77	-0.426	16	-0.261	13	-0.001	43	296.201	13	487.806	15
1914		3	max	0.005	101	0.021	75	0.143	106	0.001	105	NC	106	NC	105
1915			min	-0.004	77	-0.597	16	-0.362	13	-0.001	43	211.043	13	345.658	15
1916		4	max	0.004	101	0.016	75	0.091	106	0.001	42	NC	106	NC	105
1917			min	-0.003	77	-0.425	16	-0.257	13	-0.001	44	296.201	13	475.486	15
1918		5	max	0.003	101	0.003	101	0.014	42	0.002	42	NC	107	NC	107
1919			min	-0.003	77	-0.002	77	-0.014	44	-0.001	44	NC	12	448.768	40
1920	M425	1	max	0.006	73	0.006	107	0.154	100	0.001	107	NC	107	NC	107
1921			min	-0.006	75	-0.007	41	-0.154	42	-0.001	41	NC	12	NC	12
1922		2	max	0.005	73	0.017	107	0.161	44	0.001	107	NC	107	NC	107
1923			min	-0.005	75	-0.426	14	-0.261	15	-0.001	41	296.201	13	487.806	13
1924		3	max	0.005	73	0.021	107	0.143	44	0.001	107	NC	104	NC	107
1925			min	-0.004	75	-0.597	14	-0.362	15	-0.001	41	211.043	13	345.658	13
1926		4	max	0.004	73	0.016	107	0.091	44	0.001	100	NC	107	NC	107
1927			min	-0.003	75	-0.425	14	-0.257	15	-0.001	46	296.201	13	475.486	13
1928		5	max	0.003	73	0.003	73	0.014	100	0.002	100	NC	107	NC	107
1929			min	-0.003	75	-0.002	75	-0.014	46	-0.001	46	NC	12	448.768	42
1930	M426	1	max	0.006	101	0.006	75	0.154	42	0.001	103	NC	107	NC	107
1931			min	-0.006	77	-0.007	73	-0.154	40	-0.001	75	NC	12	NC	12
1932		2	max	0.005	101	0.017	105	0.16	106	0.001	103	NC	106	NC	105
1933			min	-0.005	77	-0.426	16	-0.261	13	-0.001	75	296.201	15	486.12	15
1934		3	max	0.005	101	0.021	105	0.142	106	0.001	103	NC	106	NC	105
1935			min	-0.004	77	-0.597	16	-0.362	13	-0.001	75	211.043	16	343.968	15
1936		4	max	0.004	101	0.016	105	0.091	106	0.001	106	NC	106	NC	105
1937			min	-0.003	77	-0.425	16	-0.258	13	-0.001	40	296.201	16	470.713	15
1938		5	max	0.003	101	0.003	101	0.014	106	0.001	106	NC	107	NC	107
1939			min	-0.003	77	-0.002	77	-0.014	40	-0.002	40	NC	12	448.768	42
1940	M427	1	max	0	107	0	107	0	107	0.002	106	NC	107	NC	107
1941			min	0	12	0	12	0	12	-0.002	40	NC	12	NC	12
1942		2	max	0	107	0.005	42	0.225	101	0.002	106	NC	107	NC	106
1943			min	0	15	-0.005	74	-0.216	77	-0.002	40	NC	12	1302.132	41
1944		3	max	0	107	0.008	42	0.418	101	0.002	106	NC	107	NC	106
1945			min	-0.001	41	-0.008	74	-0.404	77	-0.002	40	NC	12	822.131	41
1946		4	max	0	107	0.009	42	0.55	101	0.002	106	NC	107	NC	106
1947			min	-0.001	41	-0.009	74	-0.538	73	-0.002	40	NC	12	954.297	41
1948		5	max	0.001	107	0.01	42	0.596	101	0.002	102	NC	107	NC	107
1949			min	-0.002	41	-0.01	74	-0.599	73	-0.002	40	NC	12	7511.078	16
1950	M428	1	max	0	107	0	107	0	107	0.002	42	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1951			min	0	12	0	12	0	12	-0.002	104	NC	12	NC	12
1952		2	max	0	107	0.005	106	0.225	101	0.002	42	NC	107	NC	106
1953			min	0	13	-0.005	40	-0.216	77	-0.002	104	NC	12	1302.132	41
1954		3	max	0	107	0.008	106	0.418	101	0.002	42	NC	107	NC	106
1955			min	-0.001	41	-0.008	40	-0.404	77	-0.002	104	NC	12	822.131	41
1956		4	max	0	107	0.009	106	0.55	101	0.002	42	NC	107	NC	106
1957			min	-0.001	41	-0.009	40	-0.538	73	-0.002	104	NC	12	954.297	41
1958		5	max	0.001	107	0.01	106	0.596	101	0.002	42	NC	107	NC	107
1959			min	-0.002	41	-0.01	40	-0.599	73	-0.002	40	NC	12	7511.078	16
1960	M429	1	max	0	107	0	107	0	107	0.002	104	NC	107	NC	107
1961			min	0	12	0	12	0	12	-0.002	42	NC	12	NC	12
1962		2	max	0	75	0.005	106	0.216	75	0.002	104	NC	107	NC	106
1963			min	0	13	-0.005	40	-0.225	73	-0.002	42	NC	12	1302.132	73
1964		3	max	0	75	0.008	106	0.404	75	0.002	104	NC	107	NC	106
1965			min	-0.001	73	-0.008	40	-0.418	73	-0.002	42	NC	12	822.131	73
1966		4	max	0	75	0.009	106	0.538	101	0.002	104	NC	107	NC	106
1967			min	-0.001	73	-0.009	40	-0.55	73	-0.002	42	NC	12	954.297	73
1968		5	max	0.001	75	0.01	106	0.599	101	0.002	100	NC	107	NC	107
1969			min	-0.002	73	-0.01	40	-0.596	73	-0.002	42	NC	12	7511.078	14
1970	M430	1	max	0	107	0	107	0	107	0.002	100	NC	107	NC	107
1971			min	0	12	0	12	0	12	-0.002	46	NC	12	NC	12
1972		2	max	0	75	0.005	42	0.216	75	0.002	100	NC	107	NC	106
1973			min	0	15	-0.005	44	-0.225	73	-0.002	46	NC	12	1302.132	73
1974		3	max	0	75	0.008	42	0.404	75	0.002	100	NC	107	NC	106
1975			min	-0.001	73	-0.008	44	-0.418	73	-0.002	46	NC	12	822.131	73
1976		4	max	0	75	0.009	42	0.538	101	0.002	100	NC	107	NC	106
1977			min	-0.001	73	-0.009	44	-0.55	73	-0.002	46	NC	12	954.297	73
1978		5	max	0.001	75	0.01	42	0.599	101	0.002	100	NC	107	NC	107
1979			min	-0.002	73	-0.01	44	-0.596	73	-0.002	72	NC	12	7511.078	14
1980	M431	1	max	0.594	73	0.001	107	0.01	74	0	92	NC	107	NC	107
1981			min	-0.594	41	-0.002	41	-0.01	42	0	38	NC	12	NC	12
1982		2	max	0.594	73	-0.001	75	0.048	74	0	92	NC	106	NC	107
1983			min	-0.594	41	-0.017	16	-0.048	72	0	38	5285.272	16	2121.512	40
1984		3	max	0.594	73	-0.005	36	0.064	44	0	92	NC	107	NC	107
1985			min	-0.594	41	-0.023	15	-0.064	72	0	38	3702.263	15	1497.757	40
1986		4	max	0.594	73	-0.001	107	0.048	74	0	92	NC	107	NC	107
1987			min	-0.594	41	-0.017	14	-0.048	72	0	38	5285.272	14	2121.512	40
1988		5	max	0.594	73	0.001	75	0.01	74	0	92	NC	107	NC	107
1989			min	-0.594	41	-0.002	73	-0.01	42	0	38	NC	12	NC	12
1990	M432	1	max	0.01	74	0.001	75	0.594	101	0.001	101	NC	107	NC	107
1991			min	-0.01	42	-0.002	73	-0.594	73	-0.001	77	NC	12	NC	12
1992		2	max	0.01	74	0	75	0.596	101	0.001	101	NC	107	NC	107
1993			min	-0.01	42	-0.003	15	-0.596	73	-0.001	77	NC	12	NC	12
1994		3	max	0.01	100	0	75	0.597	101	0.001	101	NC	107	NC	107
1995			min	-0.01	42	-0.003	16	-0.597	73	-0.001	77	NC	12	NC	12
1996		4	max	0.01	100	0	75	0.596	101	0.001	101	NC	107	NC	107
1997			min	-0.01	46	-0.003	13	-0.596	73	-0.001	77	NC	12	NC	12
1998		5	max	0.01	100	0.001	75	0.594	101	0.001	101	NC	107	NC	107
1999			min	-0.01	46	-0.002	73	-0.594	73	-0.001	77	NC	12	NC	12
2000	M433	1	max	0.594	101	0.001	75	0.01	106	0	94	NC	107	NC	107
2001			min	-0.594	73	-0.002	73	-0.01	40	0	36	NC	12	NC	12
2002		2	max	0.594	101	-0.001	107	0.048	106	0	94	NC	107	NC	107
2003			min	-0.594	73	-0.017	14	-0.048	40	0	36	5285.272	14	2121.512	42
2004		3	max	0.594	101	-0.005	38	0.064	106	0	94	NC	107	NC	107
2005			min	-0.594	73	-0.023	13	-0.064	40	0	36	3702.263	13	1497.757	42

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2006		4	max	0.594	101	-0.001	75	0.048	106	0	94	NC	106	NC	107
2007			min	-0.594	73	-0.017	16	-0.048	40	0	36	5285.272	16	2121.512	42
2008		5	max	0.594	101	0.001	107	0.01	106	0	94	NC	107	NC	107
2009			min	-0.594	73	-0.002	41	-0.01	40	0	36	NC	12	NC	12
2010	M434	1	max	0.01	106	0.001	107	0.594	73	0.001	73	NC	107	NC	107
2011			min	-0.01	40	-0.002	41	-0.594	41	-0.001	75	NC	12	NC	12
2012		2	max	0.01	106	0	107	0.596	73	0.001	73	NC	107	NC	107
2013			min	-0.01	40	-0.003	13	-0.596	41	-0.001	75	NC	12	NC	12
2014		3	max	0.01	42	0	107	0.597	73	0.001	73	NC	107	NC	107
2015			min	-0.01	40	-0.003	14	-0.597	41	-0.001	75	NC	12	NC	12
2016		4	max	0.01	42	0	107	0.596	73	0.001	73	NC	107	NC	107
2017			min	-0.01	74	-0.003	15	-0.596	41	-0.001	75	NC	12	NC	12
2018		5	max	0.01	42	0.001	107	0.594	73	0.001	73	NC	107	NC	107
2019			min	-0.01	74	-0.002	41	-0.594	41	-0.001	75	NC	12	NC	12
2020	M439	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
2021			min	0	12	0	12	0	12	0	12	NC	12	NC	12
2022		2	max	0	45	0.014	42	0.018	101	0.016	101	NC	107	NC	107
2023			min	-0.001	16	-0.012	104	-0.018	73	-0.016	77	8108.392	42	NC	12
2024		3	max	0	45	0.049	42	0.042	101	0.032	101	NC	107	NC	106
2025			min	-0.001	16	-0.039	104	-0.042	73	-0.032	77	2365.886	42	4984.236	73
2026		4	max	0	45	0.096	42	0.048	75	0.046	101	NC	107	NC	106
2027			min	-0.001	16	-0.074	104	-0.048	73	-0.046	77	1212.162	42	5991.793	73
2028		5	max	0	45	0.147	42	0.038	75	0.051	101	NC	99	NC	107
2029			min	-0.002	16	-0.109	104	-0.038	73	-0.051	77	791.701	42	NC	12
2030	M440	1	max	0.137	42	0	45	0.041	73	0	101	NC	107	NC	107
2031			min	-0.102	104	-0.002	16	-0.041	75	0	77	NC	12	NC	12
2032		2	max	0.137	42	0.006	36	0.35	107	0	101	NC	107	NC	106
2033			min	-0.102	104	-0.014	15	-0.351	41	0	77	1901.606	15	77.235	41
2034		3	max	0.137	42	0.012	36	0.66	107	0	101	NC	99	NC	106
2035			min	-0.102	104	-0.035	15	-0.666	41	0	77	726.431	15	38.389	41
2036		4	max	0.137	42	0.017	36	0.971	107	0	101	6658.716	99	NC	98
2037			min	-0.102	104	-0.058	15	-0.982	41	0	77	424.234	15	25.502	41
2038		5	max	0.137	42	0.023	36	1.282	107	0	101	4714.678	99	9687.897	38
2039			min	-0.102	104	-0.082	15	-1.298	41	0	77	298.989	15	19.092	41
2040	M441	1	max	0.11	42	0	45	0.046	73	0	101	NC	107	NC	107
2041			min	-0.084	104	-0.001	16	-0.046	75	0	77	NC	12	NC	12
2042		2	max	0.11	42	0.006	36	0.341	107	0	101	NC	107	NC	106
2043			min	-0.084	104	-0.014	15	-0.343	41	0	77	1949.018	15	80.949	41
2044		3	max	0.11	42	0.012	36	0.637	107	0	101	NC	99	NC	106
2045			min	-0.084	104	-0.034	15	-0.643	41	0	77	740.188	15	40.223	41
2046		4	max	0.11	42	0.017	36	0.934	107	0	101	6793.608	99	NC	98
2047			min	-0.084	104	-0.057	15	-0.944	41	0	77	431.256	15	26.716	41
2048		5	max	0.11	42	0.023	36	1.23	107	0	101	4804.742	99	9705.679	38
2049			min	-0.084	104	-0.08	15	-1.246	41	0	77	303.634	15	19.999	41
2050	M442	1	max	0.086	42	0	45	0.049	73	0	101	NC	107	NC	107
2051			min	-0.067	104	-0.001	16	-0.049	75	0	77	NC	12	NC	12
2052		2	max	0.086	42	0.006	36	0.317	107	0	101	NC	107	NC	106
2053			min	-0.067	104	-0.014	15	-0.319	41	0	77	1841.152	15	88.615	41
2054		3	max	0.086	42	0.012	36	0.587	107	0	101	NC	99	NC	98
2055			min	-0.067	104	-0.036	15	-0.595	41	0	77	693.266	15	43.935	41
2056		4	max	0.086	42	0.017	36	0.858	107	0	101	9273.363	92	NC	98
2057			min	-0.067	104	-0.059	15	-0.871	41	0	77	413.333	15	29.175	41
2058		5	max	0.086	42	0.023	36	1.128	107	0	101	NC	92	NC	98
2059			min	-0.067	104	-0.083	15	-1.148	41	0	77	294.034	15	21.838	41
2060	M443	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2061			min	0	12	0	12	0	12	0	12	NC	12	NC	12
2062		2	max	0	47	0.014	102	0.018	101	0.016	45	NC	107	NC	107
2063			min	-0.001	14	-0.012	44	-0.018	43	-0.016	43	8108.388	72	NC	12
2064		3	max	0	47	0.049	102	0.042	101	0.032	105	NC	107	NC	106
2065			min	-0.001	14	-0.039	44	-0.042	73	-0.032	43	2365.885	72	4984.236	41
2066		4	max	0	47	0.096	102	0.048	101	0.046	45	NC	107	NC	106
2067			min	-0.001	14	-0.074	44	-0.048	77	-0.046	43	1212.161	72	5991.793	41
2068		5	max	0	47	0.147	102	0.038	101	0.051	105	NC	99	NC	107
2069			min	-0.002	14	-0.109	44	-0.038	77	-0.051	43	791.7	72	NC	12
2070	M444	1	max	0.137	102	0	47	0.041	107	0	75	NC	107	NC	107
2071			min	-0.102	44	-0.002	14	-0.041	41	0	43	NC	12	NC	12
2072		2	max	0.137	102	0.006	36	0.35	107	0	75	NC	107	NC	106
2073			min	-0.102	44	-0.014	15	-0.351	41	0	43	1901.605	15	77.243	41
2074		3	max	0.137	102	0.012	36	0.66	107	0	75	NC	99	NC	106
2075			min	-0.102	44	-0.035	15	-0.666	41	0	43	726.431	15	38.393	41
2076		4	max	0.137	102	0.017	36	0.971	107	0	75	6644.045	99	NC	98
2077			min	-0.102	44	-0.058	15	-0.982	41	0	43	424.234	15	25.505	41
2078		5	max	0.137	102	0.023	36	1.282	107	0	75	4704.869	99	NC	98
2079			min	-0.102	44	-0.082	15	-1.298	41	0	43	298.989	15	19.094	41
2080	M445	1	max	0.11	102	0	47	0.046	107	0	75	NC	107	NC	107
2081			min	-0.084	44	-0.001	14	-0.046	41	0	43	NC	12	NC	12
2082		2	max	0.11	102	0.006	36	0.341	107	0	75	NC	107	NC	106
2083			min	-0.084	44	-0.014	15	-0.343	41	0	43	1949.018	15	80.956	41
2084		3	max	0.11	102	0.012	36	0.637	107	0	75	NC	99	NC	106
2085			min	-0.084	44	-0.034	15	-0.643	41	0	43	740.188	15	40.227	41
2086		4	max	0.11	102	0.017	36	0.934	107	0	75	6779.727	99	NC	98
2087			min	-0.084	44	-0.057	15	-0.944	41	0	43	431.256	15	26.719	41
2088		5	max	0.11	102	0.023	36	1.23	107	0	75	4795.484	99	NC	98
2089			min	-0.084	44	-0.08	15	-1.246	41	0	43	303.634	15	20.001	41
2090	M446	1	max	0.086	102	0	47	0.049	107	0	75	NC	107	NC	107
2091			min	-0.067	44	-0.001	14	-0.049	41	0	43	NC	12	NC	12
2092		2	max	0.086	102	0.006	36	0.317	107	0	75	NC	107	NC	106
2093			min	-0.067	44	-0.014	15	-0.319	41	0	43	1841.151	15	88.623	41
2094		3	max	0.086	102	0.012	36	0.587	107	0	75	NC	99	NC	98
2095			min	-0.067	44	-0.036	15	-0.595	41	0	43	693.265	15	43.939	41
2096		4	max	0.086	102	0.017	36	0.858	107	0	75	9273.337	92	NC	98
2097			min	-0.067	44	-0.059	15	-0.871	41	0	43	413.333	15	29.177	41
2098		5	max	0.086	102	0.023	36	1.128	107	0	75	NC	92	NC	98
2099			min	-0.067	44	-0.083	15	-1.148	41	0	43	294.034	15	21.84	41
2100	M447	1	max	0.036	101	0.019	75	0.137	42	0.024	103	NC	107	NC	107
2101			min	-0.036	77	-0.02	73	-0.102	104	-0.024	45	NC	12	NC	12
2102		2	max	0.035	101	0.009	75	0.146	106	0.021	103	NC	106	NC	106
2103			min	-0.035	77	-0.579	16	-0.3	13	-0.021	45	223.246	14	344.606	15
2104		3	max	0.035	101	0.004	75	0.14	106	0.019	103	NC	106	NC	92
2105			min	-0.034	77	-0.811	16	-0.451	13	-0.018	45	159.063	14	237.963	15
2106		4	max	0.034	101	0.008	75	0.101	106	0.016	103	NC	106	NC	100
2107			min	-0.034	77	-0.578	16	-0.323	13	-0.016	45	223.246	14	299.739	15
2108		5	max	0.033	101	0.017	75	0.038	102	0.013	103	NC	107	NC	99
2109			min	-0.033	77	-0.017	73	-0.031	44	-0.013	75	NC	12	656.593	42
2110	M448	1	max	0.036	73	0.019	107	0.102	44	0.024	47	NC	107	NC	107
2111			min	-0.036	75	-0.02	41	-0.137	72	-0.024	41	NC	12	NC	12
2112		2	max	0.035	73	0.009	107	0.126	104	0.021	47	NC	107	NC	107
2113			min	-0.035	75	-0.579	14	-0.404	15	-0.021	41	223.246	16	398.603	13
2114		3	max	0.035	73	0.004	107	0.125	104	0.018	47	NC	104	NC	107
2115			min	-0.034	75	-0.811	14	-0.53	15	-0.019	41	159.063	15	292.729	13

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2116		4	max	0.034	73	0.008	107	0.09	104	0.016	47	NC	107	NC	107
2117			min	-0.034	75	-0.578	14	-0.376	15	-0.016	41	223.246	15	463.625	13
2118		5	max	0.033	73	0.017	107	0.031	104	0.013	107	NC	107	NC	99
2119			min	-0.033	75	-0.017	41	-0.038	42	-0.013	41	NC	12	656.592	72
2120	M449	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
2121			min	0	12	0	12	0	12	0	12	NC	12	NC	12
2122		2	max	0	45	0.014	42	0.017	101	0.015	101	NC	107	NC	107
2123			min	0	16	-0.011	104	-0.017	73	-0.015	47	8619.529	42	NC	12
2124		3	max	0	45	0.046	42	0.04	75	0.03	101	NC	107	NC	106
2125			min	-0.001	16	-0.037	104	-0.04	73	-0.03	47	2516.639	42	5282.619	73
2126		4	max	0	45	0.09	42	0.045	75	0.043	101	NC	107	NC	106
2127			min	-0.001	16	-0.069	104	-0.045	73	-0.043	47	1290.051	42	6345.314	73
2128		5	max	0	45	0.138	42	0.036	75	0.048	101	NC	99	NC	107
2129			min	-0.001	16	-0.103	104	-0.036	73	-0.048	47	842.92	42	NC	12
2130	M450	1	max	0.128	42	0	45	0.038	73	0	101	NC	107	NC	107
2131			min	-0.096	104	-0.001	16	-0.038	75	0	77	NC	12	NC	12
2132		2	max	0.128	42	0.006	36	0.327	107	0	101	NC	107	NC	106
2133			min	-0.096	104	-0.013	15	-0.328	41	0	77	2010.194	15	82.715	41
2134		3	max	0.128	42	0.011	36	0.617	107	0	101	NC	99	NC	106
2135			min	-0.096	104	-0.033	15	-0.622	41	0	77	767.881	15	41.113	41
2136		4	max	0.128	42	0.016	36	0.907	107	0	101	7131.674	99	NC	98
2137			min	-0.096	104	-0.055	15	-0.917	41	0	77	448.396	15	27.312	41
2138		5	max	0.128	42	0.021	36	1.197	107	0	101	5051.827	99	NC	98
2139			min	-0.096	104	-0.077	15	-1.212	41	0	77	315.968	15	20.446	41
2140	M451	1	max	0.104	42	0	45	0.044	73	0	101	NC	107	NC	107
2141			min	-0.079	104	-0.001	16	-0.044	75	0	77	NC	12	NC	12
2142		2	max	0.104	42	0.006	36	0.319	107	0	101	NC	107	NC	106
2143			min	-0.079	104	-0.013	15	-0.321	41	0	77	2060.361	15	86.662	41
2144		3	max	0.104	42	0.011	36	0.596	107	0	101	NC	99	NC	106
2145			min	-0.079	104	-0.032	15	-0.601	41	0	77	782.435	15	43.062	41
2146		4	max	0.104	42	0.016	36	0.873	107	0	101	7277.331	99	NC	98
2147			min	-0.079	104	-0.054	15	-0.883	41	0	77	455.823	15	28.602	41
2148		5	max	0.104	42	0.021	36	1.15	107	0	101	5149.167	99	NC	98
2149			min	-0.079	104	-0.076	15	-1.165	41	0	77	320.88	15	21.411	41
2150	M452	1	max	0.081	42	0	45	0.046	73	0	101	NC	107	NC	107
2151			min	-0.063	104	-0.001	16	-0.046	75	0	77	NC	12	NC	12
2152		2	max	0.081	42	0.006	36	0.297	107	0	101	NC	107	NC	106
2153			min	-0.063	104	-0.014	15	-0.299	41	0	77	1949.91	15	94.83	41
2154		3	max	0.081	42	0.011	36	0.549	107	0	101	NC	99	NC	98
2155			min	-0.063	104	-0.034	15	-0.556	41	0	77	734.228	15	47.016	41
2156		4	max	0.081	42	0.016	36	0.802	107	0	101	9395.735	92	NC	98
2157			min	-0.063	104	-0.056	15	-0.815	41	0	77	437.588	15	31.22	41
2158		5	max	0.081	42	0.021	36	1.054	107	0	101	NC	92	NC	98
2159			min	-0.063	104	-0.078	15	-1.073	41	0	77	311.194	15	23.368	41
2160	M453	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
2161			min	0	12	0	12	0	12	0	12	NC	12	NC	12
2162		2	max	0	47	0.014	102	0.017	101	0.015	45	NC	107	NC	107
2163			min	0	14	-0.011	44	-0.017	73	-0.015	43	8619.523	72	NC	12
2164		3	max	0	47	0.046	102	0.04	101	0.03	105	NC	107	NC	106
2165			min	-0.001	14	-0.037	44	-0.04	77	-0.03	43	2516.636	72	5282.619	41
2166		4	max	0	47	0.09	102	0.045	101	0.043	105	NC	107	NC	106
2167			min	-0.001	14	-0.069	44	-0.045	77	-0.043	43	1290.05	72	6345.314	41
2168		5	max	0	47	0.138	102	0.036	101	0.048	105	NC	99	NC	107
2169			min	-0.001	14	-0.103	44	-0.036	77	-0.048	43	842.919	72	NC	12
2170	M454	1	max	0.128	102	0	47	0.038	107	0	75	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2171			min	-0.096	44	-0.001	14	-0.038	41	0	43	NC	12	NC	12
2172		2	max	0.128	102	0.006	36	0.327	107	0	75	NC	107	NC	106
2173			min	-0.096	44	-0.013	15	-0.329	41	0	43	2010.193	15	82.726	41
2174		3	max	0.128	102	0.011	36	0.617	107	0	75	NC	99	NC	106
2175			min	-0.096	44	-0.033	15	-0.622	41	0	43	767.88	15	41.118	41
2176		4	max	0.128	102	0.016	36	0.907	107	0	75	7107.714	99	NC	98
2177			min	-0.096	44	-0.055	15	-0.917	41	0	43	448.396	15	27.315	41
2178		5	max	0.128	102	0.021	36	1.197	107	0	75	5035.794	99	NC	98
2179			min	-0.096	44	-0.077	15	-1.212	41	0	43	315.968	15	20.449	41
2180	M455	1	max	0.104	102	0	47	0.044	107	0	75	NC	107	NC	107
2181			min	-0.079	44	-0.001	14	-0.044	41	0	43	NC	12	NC	12
2182		2	max	0.104	102	0.006	36	0.319	107	0	75	NC	107	NC	106
2183			min	-0.079	44	-0.013	15	-0.321	41	0	43	2060.36	15	86.673	41
2184		3	max	0.104	102	0.011	36	0.596	107	0	75	NC	99	NC	106
2185			min	-0.079	44	-0.032	15	-0.601	41	0	43	782.435	15	43.068	41
2186		4	max	0.104	102	0.016	36	0.873	107	0	75	7254.658	99	NC	98
2187			min	-0.079	44	-0.054	15	-0.883	41	0	43	455.823	15	28.606	41
2188		5	max	0.104	102	0.021	36	1.15	107	0	75	5134.03	99	NC	98
2189			min	-0.079	44	-0.076	15	-1.165	41	0	43	320.88	15	21.413	41
2190	M456	1	max	0.081	102	0	47	0.046	107	0	75	NC	107	NC	107
2191			min	-0.063	44	-0.001	14	-0.046	41	0	43	NC	12	NC	12
2192		2	max	0.081	102	0.006	36	0.297	107	0	75	NC	107	NC	106
2193			min	-0.063	44	-0.014	15	-0.299	41	0	43	1949.909	15	94.842	41
2194		3	max	0.081	102	0.011	36	0.549	107	0	75	NC	99	NC	98
2195			min	-0.063	44	-0.034	15	-0.556	41	0	43	734.228	15	47.022	41
2196		4	max	0.081	102	0.016	36	0.802	107	0	75	9395.704	92	NC	98
2197			min	-0.063	44	-0.056	15	-0.815	41	0	43	437.588	15	31.224	41
2198		5	max	0.081	102	0.021	36	1.054	107	0	75	NC	92	NC	98
2199			min	-0.063	44	-0.078	15	-1.073	41	0	43	311.194	15	23.371	41
2200	M457	1	max	0.031	101	0.022	75	0.128	42	0.028	73	NC	107	NC	107
2201			min	-0.031	77	-0.023	73	-0.096	104	-0.028	45	NC	12	NC	12
2202		2	max	0.031	101	0.022	75	0.117	42	0.025	73	NC	106	NC	105
2203			min	-0.03	77	-0.22	16	-0.116	104	-0.025	45	471.866	15	655.153	15
2204		3	max	0.03	101	0.022	75	0.102	106	0.022	73	NC	106	NC	105
2205			min	-0.03	77	-0.309	16	-0.151	13	-0.021	45	336.204	15	435.714	15
2206		4	max	0.03	101	0.021	75	0.074	106	0.018	103	NC	106	8039.362	88
2207			min	-0.029	77	-0.22	16	-0.109	13	-0.018	45	471.866	14	490.494	15
2208		5	max	0.029	101	0.02	75	0.036	102	0.015	103	NC	107	NC	99
2209			min	-0.029	77	-0.02	73	-0.029	44	-0.015	75	NC	12	560.352	42
2210	M458	1	max	0.031	73	0.022	107	0.096	44	0.028	47	NC	107	NC	107
2211			min	-0.031	75	-0.023	41	-0.128	72	-0.028	41	NC	12	NC	12
2212		2	max	0.031	73	0.022	107	0.097	44	0.025	47	NC	107	NC	107
2213			min	-0.03	75	-0.22	14	-0.186	15	-0.025	41	471.866	16	941.175	13
2214		3	max	0.03	73	0.022	107	0.088	74	0.021	47	NC	107	NC	107
2215			min	-0.03	75	-0.309	14	-0.226	15	-0.022	41	336.204	16	731.335	13
2216		4	max	0.03	73	0.021	107	0.064	104	0.018	47	NC	107	NC	105
2217			min	-0.029	75	-0.22	14	-0.16	15	-0.018	41	471.866	16	985.303	34
2218		5	max	0.029	73	0.02	107	0.029	104	0.015	107	NC	107	NC	99
2219			min	-0.029	75	-0.02	41	-0.036	42	-0.015	41	NC	12	560.351	72
2220	M463	1	max	1.145	70	0.658	71	2.549	15	0.001	71	NC	107	NC	107
2221			min	-1.082	106	-0.485	107	0.315	66	-0.001	107	213.717	93	262.468	104
2222		2	max	1.148	70	1.218	71	2.605	15	0.001	71	NC	98	NC	94
2223			min	-1.085	106	-1.04	107	0.333	66	-0.001	107	44.64	71	371.087	104
2224		3	max	1.151	70	1.789	71	2.681	15	0.001	71	NC	98	5097.504	68
2225			min	-1.088	106	-1.598	107	0.353	66	-0.001	107	22.098	71	181.834	13

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2226		4	max	1.155	70	2.364	71	2.762	15	0.001	71	NC	98	NC	68
2227			min	-1.091	106	-2.157	107	0.372	66	-0.001	107	14.654	71	112.705	13
2228		5	max	1.158	70	2.938	71	2.844	15	0.001	71	NC	106	NC	104
2229			min	-1.094	106	-2.717	107	0.392	66	-0.001	107	10.962	71	81.662	13
2230	M464	1	max	0.136	70	0.623	71	0.018	86	-0.001	96	NC	106	NC	106
2231			min	-0.129	102	-0.403	107	-0.015	57	-0.007	15	157.494	75	1295.956	67
2232		2	max	0.139	70	0.579	71	0.038	100	-0.001	96	NC	98	NC	105
2233			min	-0.132	102	-0.367	107	-0.03	76	-0.007	15	217.109	75	828.212	70
2234		3	max	0.143	70	0.574	70	0.064	100	-0.001	96	NC	98	NC	103
2235			min	-0.136	102	-0.349	106	-0.044	76	-0.007	15	329.389	75	391.339	70
2236		4	max	0.146	70	0.582	70	0.091	100	-0.001	96	NC	98	NC	107
2237			min	-0.139	102	-0.351	106	-0.059	76	-0.007	15	246.895	43	253.535	70
2238		5	max	0.149	70	0.59	70	0.122	70	-0.001	96	NC	107	NC	107
2239			min	-0.142	102	-0.354	106	-0.076	106	-0.007	15	185.755	43	187.527	70
2240	M465	1	max	0.877	74	0.783	71	1.814	15	0	75	NC	107	NC	107
2241			min	-0.894	102	-0.557	107	0.251	66	-0.005	15	206.627	93	308.992	104
2242		2	max	0.88	74	1.32	71	1.851	15	0	75	NC	60	NC	99
2243			min	-0.898	102	-1.085	107	0.268	66	-0.005	15	46.541	71	439.842	104
2244		3	max	0.883	74	1.868	71	1.905	15	0	75	NC	64	NC	99
2245			min	-0.901	102	-1.616	107	0.286	66	-0.005	15	23.042	71	261.346	13
2246		4	max	0.886	74	2.419	71	1.966	14	0	75	NC	64	NC	70
2247			min	-0.904	102	-2.148	107	0.294	69	-0.005	15	15.281	71	157.896	13
2248		5	max	0.889	74	2.97	71	2.028	13	0	75	NC	104	NC	104
2249			min	-0.908	102	-2.681	107	0.292	68	-0.005	15	11.431	71	113.118	13
2250	M466	1	max	0.74	70	0.666	71	1.821	15	0.002	107	NC	107	NC	107
2251			min	-0.682	106	-0.546	103	0.236	66	-0.005	71	336.319	93	131.249	104
2252		2	max	0.743	70	0.922	71	1.846	15	0.002	107	NC	60	NC	105
2253			min	-0.685	106	-0.796	103	0.239	66	-0.005	71	74.459	71	176.704	104
2254		3	max	0.745	70	1.18	71	1.877	15	0.002	107	NC	64	NC	36
2255			min	-0.687	106	-1.046	103	0.242	66	-0.005	71	37.024	71	180.596	72
2256		4	max	0.748	70	1.439	71	1.91	15	0.002	107	NC	87	NC	96
2257			min	-0.689	106	-1.296	103	0.246	66	-0.005	71	24.606	71	119.186	72
2258		5	max	0.75	70	1.698	71	1.943	15	0.002	107	NC	104	NC	104
2259			min	-0.692	106	-1.546	103	0.249	66	-0.005	71	18.427	71	88.958	72
2260	M467	1	max	0.866	74	0.477	71	1.866	15	0.005	15	NC	107	NC	107
2261			min	-0.891	102	-0.352	107	0.255	66	-0.001	107	276.551	69	462.03	98
2262		2	max	0.869	74	0.887	71	1.889	15	0.005	15	NC	58	NC	99
2263			min	-0.895	102	-0.759	107	0.273	66	-0.001	107	61.06	71	627.424	98
2264		3	max	0.872	74	1.304	71	1.926	15	0.005	15	NC	62	NC	99
2265			min	-0.898	102	-1.169	107	0.288	69	-0.001	107	30.23	71	375.483	13
2266		4	max	0.875	74	1.724	71	1.969	14	0.005	15	NC	62	NC	99
2267			min	-0.901	102	-1.579	107	0.29	68	-0.001	107	20.048	71	224.264	13
2268		5	max	0.878	74	2.144	71	2.014	13	0.005	15	NC	98	NC	104
2269			min	-0.905	102	-1.99	107	0.28	68	-0.001	107	14.997	71	159.824	13
2270	M472	1	max	0.121	70	0.405	105	0.018	86	0.007	15	NC	107	NC	106
2271			min	-0.114	102	-0.62	73	-0.016	57	0.001	66	91.539	43	1019.874	56
2272		2	max	0.124	70	0.349	105	0.039	100	0.007	15	NC	96	NC	105
2273			min	-0.117	102	-0.561	70	-0.032	72	0.001	66	122.323	43	966.284	70
2274		3	max	0.128	70	0.366	106	0.064	100	0.007	15	NC	96	NC	107
2275			min	-0.12	102	-0.576	70	-0.05	76	0.001	66	163.864	71	465.755	70
2276		4	max	0.131	70	0.384	106	0.089	100	0.007	15	NC	100	NC	107
2277			min	-0.124	102	-0.591	70	-0.067	76	0.001	66	110.291	75	304.661	70
2278		5	max	0.134	70	0.403	106	0.114	100	0.007	15	NC	105	NC	107
2279			min	-0.127	102	-0.612	71	-0.085	76	0.001	66	83.075	75	226.357	70
2280	M486	1	max	1.069	70	0.448	105	2.431	15	0	73	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2281			min	-0.941	106	-0.613	73	0.296	66	0	105	201.91	63	168.508	104
2282		2	max	1.071	70	0.785	105	2.465	15	0	73	NC	102	NC	107
2283			min	-0.944	106	-0.95	73	0.305	66	0	105	55.618	71	226.882	104
2284		3	max	1.074	70	1.124	105	2.502	15	0	73	NC	106	NC	107
2285			min	-0.946	106	-1.287	73	0.314	66	0	105	27.719	71	211.225	72
2286		4	max	1.076	70	1.464	105	2.542	15	0	73	NC	106	NC	107
2287			min	-0.948	106	-1.625	73	0.323	66	0	105	18.446	71	139.516	72
2288		5	max	1.079	70	1.804	105	2.581	15	0	73	NC	106	NC	107
2289			min	-0.95	106	-1.962	73	0.332	66	0	105	13.822	71	104.172	72
2290	M487	1	max	0.219	70	0.47	101	0.038	86	0.007	15	NC	107	NC	107
2291			min	-0.205	102	-0.528	73	-0.033	57	0.001	67	85.525	43	379.423	70
2292		2	max	0.221	70	0.424	101	0.046	100	0.007	15	NC	96	NC	107
2293			min	-0.208	102	-0.473	73	-0.039	72	0.001	67	114.117	43	499.509	70
2294		3	max	0.224	70	0.417	102	0.058	100	0.007	15	NC	96	NC	107
2295			min	-0.21	102	-0.472	70	-0.048	72	0.001	67	151.413	71	745.856	70
2296		4	max	0.226	70	0.431	102	0.07	100	0.007	15	NC	96	NC	107
2297			min	-0.213	102	-0.484	70	-0.057	72	0.001	67	101.295	71	523.786	40
2298		5	max	0.229	70	0.445	102	0.082	100	0.007	15	NC	105	NC	107
2299			min	-0.215	102	-0.496	70	-0.067	72	0.001	67	76.106	71	390.515	40
2300	M488	1	max	1.125	70	0.437	105	2.43	15	0.001	71	NC	107	NC	106
2301			min	-1.048	106	-0.605	73	0.304	66	-0.001	107	207.455	63	261.106	104
2302		2	max	1.129	70	0.861	105	2.477	15	0.001	71	NC	106	NC	94
2303			min	-1.051	106	-1.026	73	0.321	66	-0.001	107	58.468	71	363.752	104
2304		3	max	1.132	70	1.292	105	2.539	15	0.001	71	NC	106	NC	107
2305			min	-1.054	106	-1.448	73	0.338	66	-0.001	107	28.945	71	217.06	13
2306		4	max	1.135	70	1.724	105	2.606	15	0.001	71	NC	98	NC	107
2307			min	-1.057	106	-1.87	73	0.356	66	-0.001	107	19.196	71	135.253	13
2308		5	max	1.139	70	2.157	105	2.673	15	0.001	71	NC	99	NC	107
2309			min	-1.06	106	-2.293	73	0.374	66	-0.001	107	14.359	71	98.214	13
2310	M489	1	max	0.176	70	0.433	101	0.028	86	0.007	15	NC	107	NC	106
2311			min	-0.165	102	-0.575	73	-0.024	57	0.001	66	87.809	43	530.647	66
2312		2	max	0.178	70	0.389	101	0.039	100	0.007	15	NC	96	NC	107
2313			min	-0.168	102	-0.522	73	-0.034	72	0.001	66	117.167	43	704.008	66
2314		3	max	0.181	70	0.382	102	0.054	100	0.007	15	NC	96	NC	107
2315			min	-0.17	102	-0.521	70	-0.045	72	0.001	66	154.468	71	605.539	70
2316		4	max	0.183	70	0.396	102	0.068	100	0.007	15	NC	96	NC	107
2317			min	-0.173	102	-0.533	70	-0.056	72	0.001	66	103.346	71	399.973	70
2318		5	max	0.186	70	0.41	102	0.083	100	0.007	15	NC	105	NC	107
2319			min	-0.175	102	-0.545	70	-0.068	76	0.001	66	77.65	71	298.622	70
2320	M490	1	max	0.155	70	0.109	75	0.018	86	0.002	75	NC	107	NC	107
2321			min	-0.148	102	-0.225	103	-0.016	57	-0.006	15	310.318	100	1030.506	73
2322		2	max	0.159	70	0.16	77	0.048	100	0.002	75	NC	98	NC	107
2323			min	-0.152	102	-0.273	71	-0.038	76	-0.006	15	70.723	71	719.926	70
2324		3	max	0.162	70	0.5	77	0.084	100	0.002	75	NC	98	NC	107
2325			min	-0.155	102	-0.62	71	-0.061	76	-0.006	15	35.683	71	338.967	70
2326		4	max	0.165	70	0.84	77	0.121	100	0.002	75	NC	102	NC	107
2327			min	-0.158	102	-0.966	71	-0.082	76	-0.006	15	23.905	71	219.243	70
2328		5	max	0.168	70	1.181	77	0.158	100	0.002	75	NC	102	NC	107
2329			min	-0.162	102	-1.311	71	-0.104	76	-0.006	15	17.968	75	162.042	70
2330	M491	1	max	0.226	70	0.113	75	0.028	86	-0.001	75	NC	107	NC	107
2331			min	-0.216	102	-0.294	103	-0.024	57	-0.006	15	359.536	100	543.499	98
2332		2	max	0.229	70	0.032	77	0.045	100	-0.001	75	NC	98	NC	107
2333			min	-0.218	102	-0.265	15	-0.038	72	-0.006	15	69.083	71	731.617	98
2334		3	max	0.231	70	0.296	77	0.064	100	-0.001	75	NC	98	NC	107
2335			min	-0.221	102	-0.481	71	-0.053	76	-0.006	15	34.646	71	457.367	70

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2336		4	max	0.234	70	0.561	77	0.084	100	-0.001	75	NC	98	NC	107
2337			min	-0.223	102	-0.753	71	-0.068	76	-0.006	15	23.137	71	300.418	70
2338		5	max	0.236	70	0.826	77	0.104	100	-0.001	75	NC	104	NC	107
2339			min	-0.226	102	-1.026	71	-0.084	76	-0.006	15	17.368	71	223.714	70
2340	M492	1	max	0.281	70	0.088	75	0.038	86	-0.001	106	NC	107	NC	107
2341			min	-0.268	102	-0.36	15	-0.033	57	-0.006	14	361.477	100	386.448	102
2342		2	max	0.283	70	0.008	77	0.05	100	-0.001	106	NC	98	NC	107
2343			min	-0.27	102	-0.36	15	-0.043	72	-0.006	14	69.156	71	530.021	102
2344		3	max	0.286	70	0.273	77	0.066	100	-0.001	106	NC	98	NC	107
2345			min	-0.273	102	-0.522	71	-0.054	72	-0.006	14	34.683	71	580.846	70
2346		4	max	0.289	70	0.538	77	0.083	100	-0.001	106	NC	98	NC	107
2347			min	-0.275	102	-0.795	71	-0.066	76	-0.006	14	23.162	71	380.007	70
2348		5	max	0.291	70	0.802	77	0.1	100	-0.001	106	NC	104	NC	107
2349			min	-0.278	102	-1.067	71	-0.078	76	-0.006	14	17.386	71	282.449	70
2350	M493	1	max	0.845	74	0.385	105	1.758	15	0.001	75	NC	107	NC	107
2351			min	-0.857	102	-0.504	73	0.239	66	-0.004	15	191.227	63	560.583	104
2352		2	max	0.848	74	0.915	105	1.793	15	0.001	75	NC	94	NC	107
2353			min	-0.86	102	-1.028	73	0.255	66	-0.004	15	46.652	71	661.752	13
2354		3	max	0.851	74	1.454	105	1.847	15	0.001	75	NC	94	NC	107
2355			min	-0.863	102	-1.553	73	0.272	67	-0.004	15	23.096	71	265.437	13
2356		4	max	0.854	74	1.996	105	1.907	16	0.001	75	NC	94	NC	107
2357			min	-0.867	102	-2.079	73	0.278	68	-0.004	15	15.317	71	160.133	13
2358		5	max	0.857	74	2.54	101	1.968	13	0.001	75	NC	98	NC	107
2359			min	-0.87	102	-2.605	73	0.272	68	-0.004	15	11.458	71	114.647	13
2360	M494	1	max	0.802	70	0.384	105	1.761	15	-0.001	66	NC	107	NC	107
2361			min	-0.783	106	-0.549	73	0.231	66	-0.004	15	188.976	63	240.443	104
2362		2	max	0.805	70	0.806	105	1.785	15	-0.001	66	NC	64	NC	107
2363			min	-0.786	106	-0.967	73	0.239	66	-0.004	15	44.495	71	326.33	104
2364		3	max	0.807	70	1.23	105	1.814	15	-0.001	66	NC	30	NC	107
2365			min	-0.788	106	-1.385	73	0.247	66	-0.004	15	22.174	71	271.881	72
2366		4	max	0.81	70	1.654	105	1.844	15	-0.001	66	NC	87	NC	107
2367			min	-0.79	106	-1.804	73	0.256	66	-0.004	15	14.755	71	178.532	72
2368		5	max	0.812	70	2.079	105	1.875	15	-0.001	66	NC	98	NC	104
2369			min	-0.792	106	-2.223	73	0.264	66	-0.004	15	11.056	71	132.937	72
2370	M495	1	max	0.741	70	0.32	105	1.764	15	0.001	107	NC	107	NC	107
2371			min	-0.68	106	-0.529	73	0.224	66	-0.004	14	273.142	63	167.549	104
2372		2	max	0.744	70	0.57	105	1.788	15	0.001	107	NC	64	NC	107
2373			min	-0.682	106	-0.775	73	0.227	66	-0.004	14	74.564	71	226.179	104
2374		3	max	0.746	70	0.822	105	1.818	15	0.001	107	NC	64	NC	96
2375			min	-0.684	106	-1.021	73	0.231	66	-0.004	14	37.076	71	211.533	72
2376		4	max	0.749	70	1.075	105	1.849	15	0.001	107	NC	87	NC	96
2377			min	-0.687	106	-1.267	73	0.234	66	-0.004	14	24.641	71	139.365	72
2378		5	max	0.751	70	1.328	105	1.881	15	0.001	107	NC	100	NC	104
2379			min	-0.689	106	-1.513	73	0.238	66	-0.004	14	18.452	71	103.935	72
2380	M496	1	max	0.99	70	0.404	105	2.433	15	0.002	103	NC	107	NC	107
2381			min	-0.804	106	-0.568	73	0.289	66	-0.002	71	307.7	63	131.353	104
2382		2	max	0.993	70	0.605	105	2.469	15	0.002	103	NC	106	NC	107
2383			min	-0.807	106	-0.768	73	0.294	66	-0.002	71	93.023	71	176.476	104
2384		3	max	0.995	70	0.807	105	2.509	15	0.002	103	NC	106	4990.881	107
2385			min	-0.809	106	-0.968	73	0.299	66	-0.002	71	46.26	71	171.405	72
2386		4	max	0.998	70	1.01	105	2.55	15	0.002	103	NC	106	3292.72	107
2387			min	-0.811	106	-1.168	73	0.305	66	-0.002	71	30.747	71	113.41	72
2388		5	max	1	70	1.213	105	2.592	15	0.002	103	NC	106	NC	104
2389			min	-0.814	106	-1.368	73	0.311	66	-0.002	71	23.025	71	84.75	72
2390	M499	1	max	0.818	70	0.527	71	1.87	15	0.005	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2391			min	-0.817	102	-0.353	107	0.247	66	0.001	96	235.037	35	205.184	104
2392		2	max	0.82	70	0.856	71	1.891	15	0.005	15	NC	90	NC	105
2393			min	-0.82	102	-0.682	107	0.255	66	0.001	96	57.437	103	276.773	104
2394		3	max	0.823	70	1.186	71	1.917	15	0.005	15	NC	90	NC	68
2395			min	-0.822	102	-1.012	107	0.264	66	0.001	96	28.701	103	260.331	72
2396		4	max	0.825	70	1.518	71	1.944	15	0.005	15	NC	58	NC	68
2397			min	-0.825	102	-1.342	107	0.272	66	0.001	96	19.128	103	171.632	72
2398		5	max	0.828	70	1.849	71	1.97	15	0.005	15	NC	98	NC	104
2399			min	-0.827	102	-1.672	107	0.281	66	0.001	96	14.344	103	128.038	72
2400	M500	1	max	0.198	70	0.578	71	0.028	86	-0.001	96	NC	106	NC	106
2401			min	-0.187	102	-0.432	103	-0.024	57	-0.007	15	127.024	71	535.955	94
2402		2	max	0.2	70	0.539	71	0.038	100	-0.001	96	NC	98	NC	105
2403			min	-0.19	102	-0.4	103	-0.032	72	-0.007	15	171.316	71	731.425	58
2404		3	max	0.203	70	0.518	70	0.052	100	-0.001	96	NC	98	NC	105
2405			min	-0.192	102	-0.371	102	-0.042	76	-0.007	15	258.082	71	524.421	70
2406		4	max	0.205	70	0.522	70	0.067	100	-0.001	96	NC	98	NC	107
2407			min	-0.195	102	-0.373	102	-0.052	76	-0.007	15	223.503	77	344.682	70
2408		5	max	0.208	70	0.527	70	0.081	100	-0.001	96	NC	107	NC	107
2409			min	-0.197	102	-0.376	102	-0.063	76	-0.007	15	167.984	77	256.75	70
2410	M501	1	max	0.246	70	0.53	71	0.038	86	-0.001	99	NC	106	NC	105
2411			min	-0.233	102	-0.468	103	-0.033	57	-0.006	15	118.016	71	421.553	106
2412		2	max	0.248	70	0.489	71	0.045	100	-0.001	99	NC	98	NC	105
2413			min	-0.235	102	-0.434	103	-0.038	72	-0.006	15	159.038	71	570.627	106
2414		3	max	0.251	70	0.469	70	0.057	100	-0.001	99	NC	98	NC	107
2415			min	-0.238	102	-0.405	102	-0.045	72	-0.006	15	239.511	71	666.026	70
2416		4	max	0.253	70	0.473	70	0.069	100	-0.001	99	NC	98	NC	107
2417			min	-0.24	102	-0.408	102	-0.053	76	-0.006	15	202.039	77	436.088	70
2418		5	max	0.256	70	0.477	70	0.081	100	-0.001	99	NC	107	NC	107
2419			min	-0.243	102	-0.41	102	-0.062	76	-0.006	15	151.82	77	324.249	70
2420	M502	1	max	0.817	70	0.758	71	1.818	15	0	77	NC	107	NC	107
2421			min	-0.804	106	-0.58	107	0.243	66	-0.005	15	222.01	93	175.204	104
2422		2	max	0.82	70	1.186	71	1.843	15	0	77	NC	60	NC	99
2423			min	-0.806	106	-1.003	107	0.251	66	-0.005	15	44.426	71	236.644	104
2424		3	max	0.822	70	1.617	71	1.873	15	0	77	NC	64	NC	98
2425			min	-0.808	106	-1.426	107	0.259	66	-0.005	15	22.14	71	225.869	72
2426		4	max	0.825	70	2.048	71	1.904	15	0	77	NC	87	NC	98
2427			min	-0.811	106	-1.849	107	0.268	66	-0.005	15	14.733	71	148.694	72
2428		5	max	0.827	70	2.479	71	1.936	15	0	77	NC	104	NC	104
2429			min	-0.813	106	-2.273	107	0.276	66	-0.005	15	11.039	71	110.851	72
2430	M503	1	max	1.088	70	0.669	71	2.551	15	0.001	73	NC	107	NC	107
2431			min	-0.968	106	-0.495	107	0.307	66	-0.001	101	235.742	93	157.984	104
2432		2	max	1.09	70	1.113	71	2.589	15	0.001	73	NC	106	NC	98
2433			min	-0.97	106	-0.937	107	0.316	66	-0.001	101	42.798	71	213.22	104
2434		3	max	1.093	70	1.56	71	2.632	15	0.001	73	NC	106	NC	98
2435			min	-0.973	106	-1.381	107	0.326	66	-0.001	101	21.328	71	193.004	72
2436		4	max	1.095	70	2.007	71	2.678	15	0.001	73	NC	106	NC	98
2437			min	-0.975	106	-1.824	107	0.335	66	-0.001	101	14.192	71	127.233	72
2438		5	max	1.098	70	2.455	71	2.724	15	0.001	73	NC	102	NC	104
2439			min	-0.977	106	-2.267	107	0.344	66	-0.001	101	10.635	71	94.914	72
2440	M504	1	max	1.006	70	0.611	71	2.552	15	0.003	103	NC	107	NC	107
2441			min	-0.822	106	-0.437	107	0.3	66	-0.003	71	377.218	93	123.011	104
2442		2	max	1.008	70	0.874	71	2.592	15	0.003	103	NC	106	NC	96
2443			min	-0.824	106	-0.698	107	0.304	66	-0.003	71	72.211	71	165.575	104
2444		3	max	1.011	70	1.14	71	2.638	15	0.003	103	NC	106	NC	96
2445			min	-0.827	106	-0.961	107	0.31	66	-0.003	71	35.904	71	158.331	72

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2446		4	max	1.014	70	1.407	71	2.686	15	0.003	103	NC	106	6460.723	96
2447			min	-0.829	106	-1.223	107	0.315	66	-0.003	71	23.862	71	104.584	72
2448		5	max	1.016	70	1.674	71	2.733	15	0.003	103	NC	106	NC	104
2449			min	-0.831	106	-1.486	107	0.32	66	-0.003	71	17.869	71	78.091	72
2450	M505	1	max	0.742	70	0.521	71	1.875	15	0.005	16	NC	107	NC	107
2451			min	-0.693	106	-0.298	107	0.24	66	-0.001	75	372.957	39	130.16	104
2452		2	max	0.745	70	0.717	71	1.904	15	0.005	16	NC	90	NC	66
2453			min	-0.695	106	-0.495	107	0.241	66	-0.001	75	95.622	103	174.831	104
2454		3	max	0.747	70	0.915	71	1.937	15	0.005	16	NC	90	NC	36
2455			min	-0.698	106	-0.693	107	0.242	66	-0.001	75	47.763	103	175.397	72
2456		4	max	0.75	70	1.114	71	1.972	15	0.005	16	NC	87	NC	96
2457			min	-0.7	106	-0.892	107	0.244	66	-0.001	75	31.826	103	116.053	72
2458		5	max	0.752	70	1.312	71	2.007	15	0.005	16	NC	100	NC	104
2459			min	-0.702	106	-1.09	107	0.245	66	-0.001	75	23.865	103	86.725	72
2460	M391	1	max	0	107	0	107	0.693	71	0.018	103	NC	107	NC	107
2461			min	0	12	0	12	-0.358	107	-0.02	71	NC	12	157.417	13
2462		2	max	0.011	57	0.083	72	0.64	71	0.018	103	NC	107	NC	107
2463			min	-0.013	86	-0.087	100	-0.387	107	-0.02	71	3954.535	100	210.211	13
2464		3	max	0.023	57	0.156	72	0.586	71	0.018	103	NC	107	NC	107
2465			min	-0.026	86	-0.164	100	-0.417	103	-0.02	71	2584.046	100	315.636	13
2466		4	max	0.034	57	0.212	72	0.529	71	0.018	103	NC	107	NC	107
2467			min	-0.039	86	-0.224	100	-0.464	103	-0.02	71	3491.361	100	470.892	101
2468		5	max	0.046	57	0.255	72	0.472	71	0.018	103	NC	107	NC	107
2469			min	-0.051	86	-0.269	100	-0.509	103	-0.019	71	NC	12	348.509	101
2470	M393	1	max	0	107	0	107	0.364	107	0.02	71	NC	107	NC	107
2471			min	0	12	0	12	-0.702	71	-0.018	107	NC	12	152.672	15
2472		2	max	0.011	57	0.091	70	0.392	107	0.02	71	NC	107	NC	107
2473			min	-0.013	86	-0.087	102	-0.645	71	-0.018	107	3126.38	70	203.843	15
2474		3	max	0.023	57	0.167	70	0.423	103	0.02	71	NC	107	NC	107
2475			min	-0.026	86	-0.158	102	-0.587	71	-0.018	107	2301.871	70	306.061	15
2476		4	max	0.034	57	0.223	70	0.471	103	0.019	71	NC	107	NC	107
2477			min	-0.039	86	-0.212	102	-0.527	71	-0.017	107	3316.885	70	441.22	101
2478		5	max	0.045	57	0.267	70	0.517	103	0.019	71	NC	107	NC	107
2479			min	-0.052	86	-0.253	102	-0.466	71	-0.017	107	NC	12	327.218	101
2480	M395	1	max	0	107	0	107	0	107	0.005	71	NC	107	NC	107
2481			min	0	12	0	12	0	12	-0.004	103	NC	12	NC	12
2482		2	max	0.011	57	0.102	70	0.078	107	0.005	71	NC	107	NC	99
2483			min	-0.013	86	-0.094	106	-0.163	71	-0.004	103	2806.147	70	623.268	15
2484		3	max	0.022	57	0.186	70	0.091	107	0.006	71	NC	107	NC	98
2485			min	-0.026	86	-0.171	106	-0.264	71	-0.004	103	2068.17	70	303.247	15
2486		4	max	0.034	57	0.249	70	0.061	107	0.007	71	NC	107	NC	98
2487			min	-0.039	86	-0.229	106	-0.386	15	-0.005	103	2989.216	70	198.217	15
2488		5	max	0.045	57	0.298	70	0.013	107	0.007	71	NC	107	NC	107
2489			min	-0.052	86	-0.274	106	-0.521	15	-0.006	103	NC	12	146.82	15
2490	M459	1	max	0	107	0	107	0	107	0.015	107	NC	107	NC	107
2491			min	0	12	0	12	0	12	-0.017	71	NC	12	NC	12
2492		2	max	0.011	57	0.089	76	0.16	71	0.015	107	NC	107	NC	102
2493			min	-0.013	86	-0.096	100	-0.072	107	-0.017	71	3560.796	100	1062.436	71
2494		3	max	0.023	57	0.169	76	0.256	71	0.015	107	NC	107	NC	98
2495			min	-0.026	86	-0.183	100	-0.085	107	-0.017	71	2329.408	100	733.373	86
2496		4	max	0.034	57	0.229	76	0.371	13	0.015	107	NC	107	NC	97
2497			min	-0.039	86	-0.249	100	-0.059	107	-0.017	71	3149.348	100	482.442	86
2498		5	max	0.046	57	0.275	76	0.486	13	0.015	107	NC	107	NC	107
2499			min	-0.051	86	-0.299	100	-0.018	107	-0.016	71	NC	12	358.541	86
2500	M461	1	max	1.167	106	0.24	107	2.547	15	0	75	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2501			min	-1.194	74	-0.407	71	0.323	66	-0.001	103	NC	12	NC	12
2502		2	max	1.161	76	0.237	107	2.481	15	0	75	NC	107	NC	99
2503			min	-1.192	104	-0.413	71	0.373	66	-0.001	103	3186.277	72	398.624	64
2504		3	max	1.168	76	0.235	107	2.415	13	0	75	NC	107	7385.035	99
2505			min	-1.199	104	-0.415	71	0.366	68	0	103	2388.892	72	202.528	64
2506		4	max	1.175	76	0.234	107	2.349	13	0	75	NC	107	4625.21	99
2507			min	-1.206	104	-0.411	71	0.317	68	0	107	3162.631	72	137.113	64
2508		5	max	1.182	76	0.233	107	2.279	13	0	71	NC	107	3305.495	99
2509			min	-1.212	104	-0.404	71	0.272	68	0	107	NC	12	103.375	15
2510	M462	1	max	0.108	71	0.007	86	0.064	70	0.005	106	NC	107	NC	107
2511			min	-0.054	107	-0.006	57	-0.059	106	-0.005	70	NC	12	NC	12
2512		2	max	0.245	71	1.933	15	0.936	74	0.091	15	2463.282	66	NC	107
2513			min	-0.163	107	0.273	66	-0.982	102	-0.009	74	354.021	15	740.772	102
2514		3	max	0.406	71	2.546	15	1.216	74	0.027	15	2091.639	66	NC	107
2515			min	-0.239	107	0.322	66	-1.198	106	-0.017	104	268.792	15	591.428	74
2516		4	max	0.559	71	1.897	15	0.979	74	0.007	106	2516.117	66	NC	107
2517			min	-0.306	107	0.267	66	-0.99	106	-0.073	13	360.715	15	732.165	106
2518		5	max	0.665	71	0.007	86	0.057	70	0.004	102	NC	107	NC	107
2519			min	-0.382	107	-0.006	57	-0.055	102	-0.005	70	NC	12	NC	12
2520	M470	1	max	0.106	71	0.007	86	0.059	100	0.004	76	NC	107	NC	107
2521			min	-0.05	107	-0.006	57	-0.054	76	-0.005	100	NC	12	NC	12
2522		2	max	0.244	71	1.696	13	0.953	104	0.044	15	3029.962	68	NC	107
2523			min	-0.157	107	0.221	68	-0.972	76	-0.004	104	403.405	13	744.618	76
2524		3	max	0.404	71	2.28	13	1.231	104	0.017	76	2474.856	68	NC	107
2525			min	-0.233	107	0.272	68	-1.196	76	-0.023	13	300.162	13	581.255	104
2526		4	max	0.553	71	1.695	13	0.999	104	0.001	76	2972.089	68	NC	107
2527			min	-0.3	107	0.226	68	-0.993	76	-0.076	13	403.861	13	723.319	104
2528		5	max	0.659	71	0.007	86	0.053	100	0.004	72	NC	107	NC	107
2529			min	-0.376	107	-0.006	57	-0.051	72	-0.004	100	NC	12	NC	12
2530	M474	1	max	0.739	104	1.124	70	2.225	13	0.019	13	NC	107	NC	107
2531			min	-0.842	72	-1.012	106	0.289	68	-0.014	76	NC	12	NC	12
2532		2	max	0.725	104	1.04	70	2.491	13	0.016	104	NC	107	NC	107
2533			min	-0.826	72	-0.875	106	0.388	68	-0.018	72	573.552	15	310.048	15
2534		3	max	0.712	104	0.997	70	2.636	15	0.016	104	NC	107	NC	107
2535			min	-0.811	72	-0.822	106	0.37	66	-0.022	72	419.268	15	190.61	15
2536		4	max	0.698	104	0.99	70	2.623	15	0.017	104	NC	107	NC	107
2537			min	-0.795	72	-0.853	106	0.325	66	-0.039	15	573.552	15	173.497	15
2538		5	max	0.684	104	1.023	70	2.48	15	0.017	104	NC	107	NC	103
2539			min	-0.78	72	-0.969	106	0.29	66	-0.058	15	NC	12	196.968	15
2540	M475	1	max	0.63	104	1	70	2.173	13	0.019	104	NC	107	NC	107
2541			min	-0.715	72	-0.943	106	0.299	68	-0.028	15	NC	12	NC	12
2542		2	max	0.615	104	0.79	70	2.337	14	0.016	104	NC	107	NC	105
2543			min	-0.699	72	-0.684	106	0.347	66	-0.039	15	472.479	72	675.765	100
2544		3	max	0.601	104	0.688	70	2.391	15	0.013	104	NC	107	NC	12
2545			min	-0.683	72	-0.574	106	0.29	66	-0.05	15	354.189	72	412.627	100
2546		4	max	0.586	104	0.689	70	2.29	15	0.01	74	NC	107	8870.794	13
2547			min	-0.667	72	-0.61	106	0.259	66	-0.061	15	471.537	72	305.548	92
2548		5	max	0.572	104	0.799	74	2.065	15	0.007	74	NC	107	5877.229	76
2549			min	-0.651	72	-0.796	106	0.255	66	-0.072	15	NC	12	247.352	92
2550	M476	1	max	0.473	104	0.79	70	1.733	13	0.003	92	NC	107	NC	107
2551			min	-0.533	72	-0.767	106	0.248	68	-0.031	15	NC	12	NC	12
2552		2	max	0.456	104	0.345	70	1.672	15	0.004	104	NC	107	NC	94
2553			min	-0.515	72	-0.284	106	0.192	74	-0.035	15	248.092	72	257.915	100
2554		3	max	0.44	104	0.165	71	1.566	15	0.005	104	NC	107	1795.202	94
2555			min	-0.497	72	-0.096	107	0.061	74	-0.04	15	186.02	72	157.095	70

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2556		4	max	0.424	104	0.171	70	1.394	15	0.006	104	NC	107	4051.404	68
2557			min	-0.479	72	-0.119	106	0.074	74	-0.044	15	247.901	72	128.734	13
2558		5	max	0.407	104	0.444	70	1.166	15	0.007	104	NC	107	1393.543	98
2559			min	-0.462	72	-0.439	106	0.135	66	-0.048	15	NC	12	87.854	13
2560	M477	1	max	0.443	15	0.04	57	0.253	106	0.002	106	NC	107	NC	107
2561			min	-0.037	107	-0.047	86	-0.275	70	-0.002	70	NC	12	NC	12
2562		2	max	0.384	71	-0.243	66	0.581	106	0.017	13	2544.895	96	NC	107
2563			min	-0.134	107	-1.944	15	-0.686	70	-0.01	98	353.198	15	1635.72	70
2564		3	max	0.416	71	-0.296	66	0.697	106	0.018	66	2102.167	66	NC	107
2565			min	-0.244	107	-2.553	15	-0.927	70	-0.023	94	268.7	15	1027.849	70
2566		4	max	0.448	71	-0.238	66	0.572	106	0.011	62	2568.199	96	NC	107
2567			min	-0.365	103	-1.905	15	-0.67	70	-0.012	98	360.509	15	1642.678	70
2568		5	max	0.501	71	0.04	57	0.234	102	0.002	102	NC	107	NC	107
2569			min	-0.489	103	-0.046	86	-0.247	70	-0.002	70	NC	12	NC	12
2570	M478	1	max	0.419	13	0.041	57	0.254	76	0.002	76	NC	107	NC	107
2571			min	-0.038	107	-0.046	86	-0.276	100	-0.003	100	NC	12	NC	12
2572		2	max	0.376	71	-0.195	68	0.589	76	0.015	66	3090.979	98	NC	107
2573			min	-0.134	107	-1.705	13	-0.681	100	-0.017	94	402.525	13	1654.213	70
2574		3	max	0.413	71	-0.245	68	0.705	76	0.017	66	2486.67	68	NC	107
2575			min	-0.243	107	-2.285	13	-0.917	100	-0.047	15	300.083	13	1041.034	70
2576		4	max	0.449	71	-0.197	68	0.582	76	0.013	66	3034.218	98	NC	107
2577			min	-0.36	103	-1.701	13	-0.665	100	-0.033	15	403.482	13	1662.719	70
2578		5	max	0.504	71	0.041	57	0.235	72	0.002	76	NC	107	NC	107
2579			min	-0.482	103	-0.046	86	-0.248	100	-0.002	100	NC	12	NC	12
2580	M479	1	max	0.865	106	0.606	107	2.572	15	0.002	71	NC	107	NC	107
2581			min	-1.037	70	-0.76	71	0.32	66	-0.002	103	NC	12	NC	12
2582		2	max	0.859	106	1.238	103	2.647	15	0.018	103	NC	64	NC	101
2583			min	-1.03	70	-1.301	71	0.394	66	-0.019	71	85.025	103	371.443	92
2584		3	max	0.853	76	1.52	103	2.643	13	0.028	103	NC	62	2066.722	101
2585			min	-1.024	100	-1.539	71	0.415	68	-0.029	71	59.367	103	224.362	92
2586		4	max	0.859	76	1.276	103	2.531	13	0.02	103	NC	64	4097.144	95
2587			min	-1.031	100	-1.335	71	0.356	68	-0.02	71	82.04	103	176.82	64
2588		5	max	0.866	76	0.634	107	2.332	13	0.005	71	NC	107	3486.165	99
2589			min	-1.038	100	-0.79	71	0.272	68	-0.005	103	NC	12	103.52	64
2590	M480	1	max	0.739	106	0.481	107	1.889	15	0	75	NC	107	NC	107
2591			min	-0.784	70	-0.663	71	0.256	66	-0.005	15	NC	12	NC	12
2592		2	max	0.733	106	1.029	107	1.969	15	0.018	107	NC	72	NC	94
2593			min	-0.777	70	-1.125	71	0.307	69	-0.021	71	88.172	103	497.659	103
2594		3	max	0.727	106	1.254	103	1.973	13	0.028	107	NC	64	NC	102
2595			min	-0.77	100	-1.299	71	0.305	68	-0.032	71	61.583	103	330.722	92
2596		4	max	0.733	76	0.974	103	1.869	13	0.021	107	NC	64	NC	95
2597			min	-0.777	100	-1.053	71	0.266	68	-0.025	71	85.119	103	276.499	15
2598		5	max	0.74	76	0.328	107	1.679	13	-0.001	68	NC	107	NC	104
2599			min	-0.784	100	-0.483	71	0.208	68	-0.006	13	NC	12	121.137	15
2600	M481	1	max	0.191	102	0.032	70	0.549	103	0.007	15	NC	107	NC	107
2601			min	-0.201	70	-0.036	102	-0.671	71	0.001	99	NC	12	NC	12
2602		2	max	0.185	102	0.036	70	0.807	103	0.006	14	NC	107	NC	97
2603			min	-0.195	70	-0.043	102	-0.971	71	0	75	5154.915	102	168.489	71
2604		3	max	0.179	76	0.03	57	0.908	103	0.006	13	NC	107	NC	97
2605			min	-0.189	70	-0.039	86	-1.089	71	-0.001	75	NC	12	120.993	71
2606		4	max	0.185	72	0.036	72	0.817	103	0.006	13	NC	107	NC	97
2607			min	-0.194	100	-0.045	100	-0.986	71	0	75	4510.91	100	161.838	71
2608		5	max	0.191	72	0.032	72	0.547	103	0.006	13	NC	107	NC	107
2609			min	-0.201	100	-0.037	100	-0.676	71	0.001	98	NC	12	NC	12
2610	M482	1	max	0.206	106	0.032	70	0.16	107	-0.001	76	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2611			min	-0.224	70	-0.037	102	-0.392	71	-0.007	15	NC	12	NC	12
2612		2	max	0.2	106	0.037	70	0.368	107	0	47	NC	107	NC	97
2613			min	-0.218	70	-0.044	102	-0.632	71	-0.007	13	4890.436	102	209.311	71
2614		3	max	0.195	76	0.03	57	0.459	107	0.001	107	NC	107	NC	46
2615			min	-0.211	70	-0.039	86	-0.734	71	-0.007	13	NC	12	146.536	71
2616		4	max	0.2	76	0.037	72	0.391	107	0	107	NC	107	NC	97
2617			min	-0.217	100	-0.046	100	-0.654	71	-0.006	13	4127.42	100	191.498	71
2618		5	max	0.206	76	0.032	72	0.163	107	-0.001	68	NC	107	NC	107
2619			min	-0.223	100	-0.038	100	-0.391	71	-0.006	13	NC	12	NC	12
2620	M483	1	max	0.707	106	0.677	103	1.852	15	0.005	14	NC	107	NC	107
2621			min	-0.759	70	-0.796	71	0.25	66	-0.001	107	NC	12	NC	12
2622		2	max	0.7	106	1.305	103	1.945	15	0.019	103	NC	64	9947.93	98
2623			min	-0.752	70	-1.328	71	0.301	66	-0.017	75	88.071	103	465.751	103
2624		3	max	0.697	76	1.584	103	1.959	13	0.029	103	NC	62	NC	101
2625			min	-0.747	100	-1.568	71	0.306	68	-0.026	75	61.515	103	325.686	92
2626		4	max	0.703	76	1.355	103	1.861	13	0.021	103	NC	64	NC	65
2627			min	-0.754	100	-1.38	71	0.269	68	-0.018	75	85.025	103	342.966	96
2628		5	max	0.709	76	0.735	103	1.675	13	0.007	71	NC	107	5064.291	88
2629			min	-0.761	100	-0.863	71	0.21	68	-0.004	107	NC	12	142.967	15
2630	M484	1	max	0.672	106	-0.296	66	0.244	107	0	107	NC	107	NC	107
2631			min	-0.911	70	-2.553	15	-0.417	71	0	15	NC	12	NC	12
2632		2	max	0.665	106	-0.344	66	0.256	107	0.018	105	NC	107	NC	106
2633			min	-0.903	70	-2.496	15	-0.428	71	-0.018	73	3889.303	15	4942.78	77
2634		3	max	0.658	106	-0.355	68	0.261	107	0.024	105	NC	104	NC	106
2635			min	-0.896	70	-2.432	13	-0.432	71	-0.024	73	2789.613	15	3519.356	77
2636		4	max	0.66	76	-0.302	68	0.256	107	0.018	105	NC	107	NC	106
2637			min	-0.897	100	-2.363	13	-0.426	71	-0.018	73	3894.755	15	4942.78	77
2638		5	max	0.667	76	-0.245	68	0.243	107	0	103	NC	107	NC	107
2639			min	-0.905	100	-2.285	13	-0.413	71	0	75	NC	12	NC	12
2640	M519	1	max	0.56	106	-0.236	66	0.122	107	-0.001	66	NC	107	NC	107
2641			min	-0.657	70	-1.872	15	-0.4	15	-0.009	15	NC	12	NC	12
2642		2	max	0.554	106	-0.258	66	0.133	107	0.014	75	NC	107	NC	106
2643			min	-0.65	70	-1.823	15	-0.407	71	-0.02	103	4419.98	15	5194.402	71
2644		3	max	0.547	106	-0.255	68	0.138	107	0.02	75	NC	104	NC	106
2645			min	-0.643	70	-1.768	13	-0.41	71	-0.025	103	3156.594	15	3698.528	71
2646		4	max	0.55	76	-0.223	68	0.134	107	0.015	75	NC	107	NC	106
2647			min	-0.645	100	-1.706	13	-0.403	71	-0.02	103	4427.026	15	5194.402	71
2648		5	max	0.557	76	-0.187	68	0.122	107	-0.001	68	NC	107	NC	107
2649			min	-0.653	100	-1.636	13	-0.389	71	-0.008	13	NC	12	NC	12
2650	M520	1	max	0.242	102	0.04	57	0.573	103	0.007	15	NC	107	NC	107
2651			min	-0.255	70	-0.047	86	-0.554	71	0.001	99	NC	12	NC	12
2652		2	max	0.235	102	0.041	70	0.676	103	0.006	14	NC	107	NC	106
2653			min	-0.248	70	-0.05	102	-0.662	71	0	107	6061.418	102	471.708	71
2654		3	max	0.229	76	0.039	57	0.678	103	0.006	13	NC	107	NC	106
2655			min	-0.242	70	-0.049	86	-0.666	71	0	107	NC	12	458.587	71
2656		4	max	0.235	72	0.041	72	0.674	103	0.006	13	NC	107	NC	106
2657			min	-0.249	100	-0.051	100	-0.665	71	0	107	5736.381	100	467.784	71
2658		5	max	0.243	72	0.04	57	0.567	103	0.006	13	NC	107	NC	107
2659			min	-0.256	100	-0.047	86	-0.559	71	0.001	98	NC	12	NC	12
2660	M521	1	max	0.261	106	0.04	57	0.071	107	-0.001	76	NC	107	NC	107
2661			min	-0.284	70	-0.047	86	-0.48	15	-0.007	16	NC	12	NC	12
2662		2	max	0.255	106	0.042	70	0.143	107	0	75	NC	107	NC	106
2663			min	-0.277	70	-0.051	102	-0.472	14	-0.007	13	5751.727	102	701.21	71
2664		3	max	0.249	76	0.039	57	0.157	107	0	75	NC	107	NC	106
2665			min	-0.271	70	-0.049	86	-0.479	71	-0.007	13	NC	12	619.747	71

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2666		4	max	0.255	76	0.042	72	0.166	107	0	75	NC	107	NC	106
2667			min	-0.278	100	-0.052	100	-0.485	71	-0.006	13	5239.062	100	582.15	71
2668		5	max	0.262	76	0.04	57	0.086	107	-0.001	68	NC	107	NC	107
2669			min	-0.285	100	-0.047	86	-0.455	13	-0.006	13	NC	12	NC	12
2670	M522	1	max	0.551	106	-0.231	66	0.385	103	0.009	15	NC	107	NC	107
2671			min	-0.645	70	-1.83	15	-0.435	71	0.001	96	NC	12	NC	12
2672		2	max	0.544	106	-0.253	66	0.395	103	0.021	71	NC	107	NC	106
2673			min	-0.638	70	-1.793	15	-0.447	71	-0.015	107	3884.35	15	5195.284	77
2674		3	max	0.538	106	-0.251	68	0.399	103	0.026	71	NC	104	NC	106
2675			min	-0.63	70	-1.748	13	-0.452	71	-0.021	107	2790.329	15	3699.159	77
2676		4	max	0.541	76	-0.222	68	0.393	103	0.02	71	NC	107	NC	106
2677			min	-0.633	100	-1.694	13	-0.448	71	-0.015	107	3889.788	15	5195.284	77
2678		5	max	0.548	76	-0.189	68	0.38	103	0.008	13	NC	107	NC	107
2679			min	-0.641	100	-1.632	13	-0.437	71	0.001	98	NC	12	NC	12
2680	M523	1	max	-0.254	66	0.919	74	0.328	107	0.003	106	NC	107	NC	107
2681			min	-1.816	15	-0.946	106	-0.587	71	-0.004	74	NC	12	218.913	15
2682		2	max	-0.249	66	0.87	74	0.461	107	0.062	103	NC	105	NC	106
2683			min	-1.819	15	-0.887	102	-0.686	71	-0.063	71	1369.686	72	293.965	14
2684		3	max	-0.243	66	0.811	70	0.486	107	0.068	103	NC	99	NC	106
2685			min	-1.821	15	-0.805	106	-0.668	71	-0.069	71	648.792	13	389.129	71
2686		4	max	-0.237	66	0.744	70	0.49	103	0.049	103	NC	99	NC	106
2687			min	-1.824	15	-0.7	106	-0.623	71	-0.05	71	385.663	13	441.828	71
2688		5	max	-0.231	66	0.658	70	0.395	103	0.002	76	NC	107	NC	107
2689			min	-1.826	15	-0.572	106	-0.473	71	-0.002	100	274.586	13	557.964	93
2690	M524	1	max	-0.214	68	0.951	76	0.576	71	0.004	106	NC	107	NC	107
2691			min	-1.624	13	-0.943	104	-0.317	107	-0.004	70	659.574	73	221.221	13
2692		2	max	-0.208	68	0.874	76	0.64	71	0.003	76	NC	105	NC	97
2693			min	-1.627	13	-0.894	100	-0.414	107	-0.004	100	1064.853	73	296.291	13
2694		3	max	-0.202	68	0.791	76	0.696	71	0.005	71	NC	105	NC	97
2695			min	-1.629	13	-0.839	100	-0.503	107	-0.006	103	1129.246	70	322.207	71
2696		4	max	-0.196	68	0.692	76	0.712	71	0.007	71	NC	105	NC	97
2697			min	-1.631	13	-0.761	100	-0.567	103	-0.007	103	1407.544	70	260.126	71
2698		5	max	-0.19	68	0.572	76	0.482	71	0.002	106	NC	107	NC	107
2699			min	-1.634	13	-0.656	100	-0.396	103	-0.002	70	NC	12	NC	12
2700	M525	1	max	-0.271	68	1.164	76	0.418	71	0.001	13	NC	107	NC	107
2701			min	-2.286	13	-1.202	104	-0.247	107	0	76	NC	12	2386.865	73
2702		2	max	-0.265	68	1.068	76	0.509	71	0.003	71	NC	105	NC	97
2703			min	-2.287	13	-1.165	100	-0.337	107	-0.003	103	1557.66	70	629.285	71
2704		3	max	-0.259	68	0.964	76	0.593	71	0.006	71	NC	105	NC	97
2705			min	-2.288	13	-1.113	100	-0.418	107	-0.005	103	1022.956	70	330.109	71
2706		4	max	-0.253	68	0.844	76	0.638	71	0.007	71	NC	105	NC	97
2707			min	-2.289	13	-1.035	100	-0.463	107	-0.007	103	1245.404	70	266.517	71
2708		5	max	-0.246	68	0.7	76	0.443	71	0	107	NC	107	NC	107
2709			min	-2.29	13	-0.925	100	-0.272	107	0	71	NC	12	NC	12
2710	M526	1	max	-0.21	68	0.238	71	0.908	104	0.004	74	NC	107	NC	107
2711			min	-1.622	13	-0.159	107	-0.915	76	-0.004	106	NC	12	574.539	73
2712		2	max	-0.204	68	0.284	71	0.865	100	0.004	70	NC	97	NC	107
2713			min	-1.624	13	-0.182	107	-0.854	76	-0.004	106	1572.412	103	799.212	73
2714		3	max	-0.198	68	0.327	71	0.827	100	0.004	70	9303.753	97	NC	107
2715			min	-1.626	13	-0.19	107	-0.791	76	-0.004	106	687.786	13	769.57	13
2716		4	max	-0.192	68	0.36	71	0.779	100	0.004	70	NC	97	NC	107
2717			min	-1.628	13	-0.176	107	-0.718	76	-0.004	106	366.67	13	503.34	13
2718		5	max	-0.186	68	0.376	71	0.667	100	0.002	70	NC	107	NC	107
2719			min	-1.63	13	-0.134	107	-0.583	76	-0.001	106	229.574	13	345.839	13
2720	M527	1	max	-0.32	66	1.189	74	0.261	107	0.001	13	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2721			min	-2.542	15	-1.161	106	-0.429	71	0	75	NC	12	8392.624	73
2722		2	max	-0.314	66	1.143	70	0.407	107	0.085	103	NC	105	NC	106
2723			min	-2.544	15	-1.082	106	-0.579	71	-0.085	71	702.881	13	366.295	71
2724		3	max	-0.308	66	1.091	70	0.42	107	0.092	103	NC	58	NC	106
2725			min	-2.545	15	-0.98	106	-0.593	71	-0.092	71	317.934	13	340.802	71
2726		4	max	-0.302	66	1.02	70	0.403	107	0.066	103	NC	58	NC	106
2727			min	-2.546	15	-0.853	106	-0.576	71	-0.066	71	202.364	13	391.616	71
2728		5	max	-0.295	66	0.93	70	0.27	107	0	107	NC	106	NC	107
2729			min	-2.547	15	-0.703	106	-0.442	71	0	71	147.663	13	4782.746	16
2730	M528	1	max	-0.26	66	0.894	74	0.182	107	0.004	104	NC	107	NC	107
2731			min	-1.855	15	-0.921	106	-0.26	71	-0.003	106	NC	12	1228.498	97
2732		2	max	-0.254	66	0.871	74	0.317	107	0.081	103	NC	105	NC	106
2733			min	-1.859	15	-0.896	102	-0.44	71	-0.08	71	865.722	72	364.517	103
2734		3	max	-0.248	66	0.83	70	0.32	107	0.089	103	NC	105	NC	106
2735			min	-1.862	15	-0.834	102	-0.488	71	-0.088	71	622.418	72	339.867	103
2736		4	max	-0.243	66	0.768	70	0.293	107	0.064	103	NC	105	NC	106
2737			min	-1.864	15	-0.73	106	-0.505	71	-0.063	71	507.56	13	391.059	103
2738		5	max	-0.237	66	0.672	70	0.153	107	0.002	100	NC	107	NC	107
2739			min	-1.867	15	-0.586	106	-0.407	71	-0.001	76	302.092	13	473.422	102
2740	M529	1	max	-0.141	66	0.535	74	0.349	107	0.006	106	NC	107	NC	107
2741			min	-0.989	15	-0.57	102	-0.632	71	-0.006	104	558.653	100	166.187	15
2742		2	max	-0.135	66	0.515	74	0.415	107	0.066	103	NC	104	NC	106
2743			min	-0.995	15	-0.609	102	-0.647	71	-0.066	71	451.206	15	222.652	14
2744		3	max	-0.13	66	0.495	74	0.432	103	0.071	103	NC	88	NC	106
2745			min	-1	15	-0.596	102	-0.607	71	-0.071	71	353.11	15	334.353	14
2746		4	max	-0.124	66	0.468	74	0.453	103	0.048	103	NC	104	NC	106
2747			min	-1.005	15	-0.534	102	-0.558	71	-0.048	71	485.055	15	585.609	89
2748		5	max	-0.119	66	0.451	70	0.444	103	0.002	106	NC	107	NC	107
2749			min	-1.01	15	-0.426	102	-0.477	71	-0.003	70	510.991	62	351.543	101
2750	M603	1	max	-0.111	68	0.516	72	0.617	71	0.006	76	NC	107	NC	107
2751			min	-0.876	13	-0.508	104	-0.337	107	-0.006	104	501.851	72	170.953	13
2752		2	max	-0.106	68	0.472	76	0.581	71	0.005	76	NC	69	NC	107
2753			min	-0.881	13	-0.535	100	-0.355	107	-0.005	104	661.816	13	227.938	13
2754		3	max	-0.1	68	0.441	76	0.545	71	0.004	76	NC	102	NC	107
2755			min	-0.885	13	-0.538	100	-0.372	107	-0.004	100	496.972	13	341.907	13
2756		4	max	-0.095	68	0.421	76	0.509	71	0.003	76	NC	106	NC	107
2757			min	-0.89	13	-0.515	100	-0.399	103	-0.003	100	663.656	13	501.994	101
2758		5	max	-0.089	68	0.413	76	0.472	71	0.002	106	NC	107	NC	107
2759			min	-0.895	13	-0.464	100	-0.43	103	-0.002	70	728.091	98	374.691	101
2760	M604	1	max	-0.108	68	0.491	72	0.167	71	0.006	104	NC	107	NC	107
2761			min	-0.88	13	-0.486	104	-0.107	107	-0.006	72	772.793	72	NC	12
2762		2	max	-0.103	68	0.454	76	0.214	71	0.005	104	NC	102	NC	107
2763			min	-0.884	13	-0.52	100	-0.101	107	-0.005	76	692.677	13	704.947	16
2764		3	max	-0.097	68	0.432	76	0.261	71	0.004	100	NC	94	NC	107
2765			min	-0.889	13	-0.532	100	-0.094	107	-0.004	76	520.175	13	352.423	16
2766		4	max	-0.092	68	0.423	76	0.317	13	0.003	100	NC	76	NC	107
2767			min	-0.893	13	-0.52	100	-0.086	107	-0.003	76	694.692	13	234.907	16
2768		5	max	-0.086	68	0.428	76	0.394	13	0.002	70	NC	107	NC	107
2769			min	-0.898	13	-0.483	100	-0.079	107	-0.002	106	594.874	98	176.152	16
2770	M605	1	max	-0.143	66	0.517	74	0.113	107	0.005	74	NC	107	NC	107
2771			min	-0.994	15	-0.549	102	-0.168	71	-0.006	102	606.374	104	NC	12
2772		2	max	-0.137	66	0.476	74	0.105	107	0.005	74	NC	96	NC	107
2773			min	-1	15	-0.563	102	-0.217	71	-0.005	102	550.691	15	625.486	16
2774		3	max	-0.132	66	0.452	74	0.096	107	0.004	74	NC	92	NC	107
2775			min	-1.005	15	-0.549	102	-0.266	71	-0.004	106	413.441	15	312.703	16

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2776		4	max	-0.126	66	0.443	74	0.087	107	0.003	70	NC	104	NC	107
2777			min	-1.011	15	-0.506	102	-0.33	15	-0.003	106	551.964	15	208.436	16
2778		5	max	-0.121	66	0.464	70	0.077	107	0.002	70	NC	107	NC	107
2779			min	-1.016	15	-0.435	102	-0.417	15	-0.002	106	452.275	62	156.304	16
2780	M606	1	max	0.529	102	0.339	107	0.933	15	0.014	15	NC	107	NC	107
2781			min	-0.508	74	-0.629	71	0.134	66	0.002	66	NC	12	NC	12
2782		2	max	0.527	72	0.337	107	0.906	13	0.013	15	NC	107	NC	99
2783			min	-0.506	104	-0.632	71	0.123	68	0.002	66	755.325	72	917.966	72
2784		3	max	0.533	72	0.336	107	0.881	13	0.013	14	NC	107	NC	99
2785			min	-0.512	104	-0.632	71	0.107	68	0.002	69	566.381	72	527.903	15
2786		4	max	0.539	72	0.335	107	0.854	13	0.013	13	NC	107	NC	104
2787			min	-0.518	104	-0.628	71	0.101	68	0.002	68	754.273	72	351.978	15
2788		5	max	0.546	72	0.335	107	0.826	13	0.012	13	NC	107	6454.736	99
2789			min	-0.523	104	-0.622	71	0.104	68	0.002	68	NC	12	265.132	15
2790	M607	1	max	0.52	102	0.114	107	1.042	15	-0.002	68	NC	107	NC	107
2791			min	-0.501	74	-0.161	71	0.151	66	-0.014	15	NC	12	NC	12
2792		2	max	0.515	72	0.118	104	1.012	13	-0.002	68	NC	107	NC	99
2793			min	-0.498	104	-0.168	72	0.143	68	-0.014	15	680.569	72	724.617	72
2794		3	max	0.521	72	0.129	104	0.983	13	-0.002	68	NC	107	NC	88
2795			min	-0.503	104	-0.182	72	0.123	68	-0.013	13	510.336	72	457.669	72
2796		4	max	0.527	72	0.11	107	0.952	13	-0.002	68	NC	107	6999.072	88
2797			min	-0.509	104	-0.164	71	0.114	68	-0.013	13	679.715	72	307.702	15
2798		5	max	0.533	72	0.109	107	0.92	13	-0.002	68	NC	107	3916.625	39
2799			min	-0.514	104	-0.16	71	0.116	68	-0.012	13	NC	12	230.455	15
2800	M608	1	max	1.114	104	0.317	71	2.083	13	0.004	13	NC	107	NC	107
2801			min	-1.109	76	-0.195	107	0.258	68	0	68	NC	12	NC	12
2802		2	max	1.107	104	0.315	71	2.14	13	0.004	13	NC	107	NC	99
2803			min	-1.102	76	-0.2	107	0.291	68	0.001	68	1965.626	72	489.603	15
2804		3	max	1.1	104	0.315	71	2.194	13	0.004	16	NC	107	NC	99
2805			min	-1.096	76	-0.202	107	0.329	68	0.001	67	1480.738	72	247.184	15
2806		4	max	1.094	104	0.316	71	2.246	15	0.004	15	NC	107	7441.344	99
2807			min	-1.089	76	-0.203	107	0.349	66	0	66	1974.734	72	167.835	15
2808		5	max	1.096	74	0.319	71	2.299	15	0.004	15	NC	107	5976.325	99
2809			min	-1.095	106	-0.202	107	0.304	66	0	66	NC	12	127.689	15
2810	M609	1	max	0.888	70	1.107	72	2.335	13	0.014	76	NC	107	NC	107
2811			min	-0.727	106	-1.062	104	0.254	68	-0.019	13	NC	12	NC	12
2812		2	max	0.903	70	1.16	72	2.518	13	0.015	76	NC	107	NC	99
2813			min	-0.74	106	-1.053	104	0.322	68	-0.024	13	1036.351	15	479.087	15
2814		3	max	0.917	70	1.176	72	2.605	13	0.016	76	NC	100	NC	99
2815			min	-0.752	106	-1.037	104	0.37	68	-0.029	13	742.404	15	304.446	15
2816		4	max	0.931	70	1.148	72	2.568	15	0.017	76	NC	107	NC	99
2817			min	-0.765	106	-1.012	104	0.388	69	-0.033	13	1036.351	15	303.695	15
2818		5	max	0.945	70	1.082	72	2.44	15	0.018	76	NC	107	NC	107
2819			min	-0.777	106	-0.978	104	0.352	66	-0.038	13	NC	12	283.533	64
2820	M610	1	max	1.139	104	0.486	71	2.104	13	0	68	NC	107	NC	107
2821			min	-1.135	76	-0.267	107	0.262	68	-0.004	13	NC	12	NC	12
2822		2	max	1.132	104	0.487	71	2.175	13	-0.001	68	NC	107	NC	100
2823			min	-1.128	76	-0.271	107	0.299	68	-0.004	13	4861.028	102	418.077	15
2824		3	max	1.125	104	0.488	71	2.238	13	-0.001	69	NC	107	9694.148	58
2825			min	-1.121	76	-0.274	107	0.339	68	-0.005	14	3685.894	102	214.515	15
2826		4	max	1.118	104	0.49	71	2.294	15	-0.001	66	NC	107	5056.517	58
2827			min	-1.114	76	-0.274	107	0.352	66	-0.005	15	4917.113	102	147.967	15
2828		5	max	1.119	74	0.491	71	2.347	15	0	66	NC	107	3348.263	99
2829			min	-1.118	106	-0.273	107	0.31	66	-0.005	15	NC	12	114.512	15
2830	M611	1	max	0.877	70	1.128	72	2.305	13	0.013	76	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2831			min	-0.695	106	-1.023	104	0.253	68	-0.073	13	NC	12	NC	12
2832		2	max	0.891	70	1.243	72	2.389	13	0.01	76	NC	107	NC	13
2833			min	-0.707	106	-1.089	104	0.323	68	-0.072	13	717.72	102	696.676	100
2834		3	max	0.904	70	1.261	72	2.379	13	0.008	76	NC	107	5203.554	19
2835			min	-0.719	106	-1.079	104	0.356	69	-0.071	13	532.289	102	389.027	100
2836		4	max	0.917	70	1.175	72	2.244	15	0.006	106	NC	107	NC	60
2837			min	-0.731	106	-0.99	104	0.328	66	-0.07	13	715.547	102	281.321	92
2838		5	max	0.931	70	0.992	72	2.012	15	0.003	106	NC	107	8399.435	106
2839			min	-0.742	106	-0.824	104	0.303	69	-0.069	13	NC	12	182.834	13
2840	M612	1	max	0.804	70	1.039	72	1.858	13	-0.001	68	NC	107	NC	107
2841			min	-0.603	106	-0.876	104	0.217	68	-0.065	13	NC	12	NC	12
2842		2	max	0.813	70	1.312	72	1.763	13	-0.001	68	NC	107	5218.172	64
2843			min	-0.611	106	-1.116	104	0.26	74	-0.064	13	279.587	72	299.02	100
2844		3	max	0.823	70	1.346	72	1.63	15	0	76	NC	99	NC	102
2845			min	-0.619	106	-1.134	104	0.153	74	-0.063	13	209.205	72	180.119	13
2846		4	max	0.833	70	1.137	72	1.44	15	0.002	76	NC	107	6319.099	68
2847			min	-0.627	106	-0.928	104	0.176	74	-0.062	13	279.344	72	110.19	13
2848		5	max	0.842	70	0.689	72	1.202	13	0.003	76	NC	107	868.868	68
2849			min	-0.635	106	-0.498	104	0.159	68	-0.061	13	NC	12	76.798	13
2850	M613	1	max	-0.261	68	1.112	76	0.485	71	0.001	106	NC	107	NC	107
2851			min	-2.096	13	-1.123	104	-0.269	107	-0.001	70	117.346	72	412.946	13
2852		2	max	-0.255	68	0.999	76	0.472	71	0.001	106	NC	107	NC	107
2853			min	-2.097	13	-1.051	100	-0.277	107	-0.001	70	158.365	72	550.595	13
2854		3	max	-0.249	68	0.887	76	0.459	71	0.001	106	NC	107	NC	107
2855			min	-2.099	13	-0.982	100	-0.285	107	-0.002	70	240.322	72	825.893	13
2856		4	max	-0.243	68	0.775	76	0.445	71	0.001	106	NC	107	NC	107
2857			min	-2.1	13	-0.904	100	-0.292	107	-0.002	70	483.806	76	1278.21	86
2858		5	max	-0.237	68	0.664	76	0.431	71	0.001	106	NC	107	NC	107
2859			min	-2.101	13	-0.819	100	-0.299	107	-0.002	13	NC	12	958.657	86
2860	M614	1	max	-0.26	68	1.086	76	0.32	71	0.002	70	NC	107	NC	107
2861			min	-2.099	13	-1.097	104	-0.195	107	-0.001	106	125.405	72	1111.67	93
2862		2	max	-0.253	68	0.978	76	0.339	71	0.002	70	NC	105	NC	107
2863			min	-2.1	13	-1.031	100	-0.193	107	-0.001	106	170.532	72	1501.972	93
2864		3	max	-0.247	68	0.872	76	0.357	71	0.002	70	NC	105	NC	107
2865			min	-2.101	13	-0.967	100	-0.19	107	-0.001	106	260.809	72	895.059	13
2866		4	max	-0.241	68	0.769	76	0.375	71	0.002	70	NC	105	NC	107
2867			min	-2.102	13	-0.898	100	-0.188	107	-0.001	106	532.614	72	596.706	13
2868		5	max	-0.235	68	0.668	76	0.392	71	0.002	70	NC	107	NC	107
2869			min	-2.103	13	-0.824	100	-0.184	107	-0.001	106	1735.742	98	447.529	13
2870	M615	1	max	-0.308	66	1.106	74	0.274	107	0.001	106	NC	107	NC	107
2871			min	-2.332	15	-1.104	106	-0.489	71	-0.001	70	149.242	104	429.15	15
2872		2	max	-0.302	66	1.02	74	0.282	107	0.001	106	NC	107	NC	107
2873			min	-2.333	15	-1.003	106	-0.475	71	-0.002	70	199.885	104	572.201	15
2874		3	max	-0.296	66	0.949	70	0.289	107	0.001	106	NC	107	NC	107
2875			min	-2.335	15	-0.897	106	-0.461	71	-0.002	70	300.96	104	858.302	15
2876		4	max	-0.29	66	0.881	70	0.296	107	0.001	106	NC	107	NC	107
2877			min	-2.336	15	-0.785	106	-0.446	71	-0.002	70	297.157	13	1259.38	86
2878		5	max	-0.283	66	0.818	70	0.302	107	0.001	106	NC	107	NC	107
2879			min	-2.338	15	-0.667	106	-0.431	71	-0.002	13	196.469	13	941.633	101
2880	M616	1	max	-0.304	66	1.091	74	0.201	107	0.002	70	NC	107	NC	107
2881			min	-2.311	15	-1.089	106	-0.322	71	-0.001	106	157.814	104	997.581	93
2882		2	max	-0.298	66	1.006	74	0.197	107	0.002	70	NC	105	NC	107
2883			min	-2.312	15	-0.99	106	-0.342	71	-0.001	106	214.837	104	1345.986	93
2884		3	max	-0.292	66	0.939	70	0.193	107	0.002	70	NC	105	NC	107
2885			min	-2.314	15	-0.888	106	-0.361	71	-0.001	106	328.9	104	735.285	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2886		4	max	-0.286	66	0.877	70	0.189	107	0.002	70	NC	105	NC	107
2887			min	-2.315	15	-0.781	106	-0.38	71	-0.001	106	318.79	13	490.19	15
2888		5	max	-0.28	66	0.822	70	0.185	107	0.002	70	NC	107	NC	107
2889			min	-2.317	15	-0.67	106	-0.399	71	-0.001	106	204.623	13	367.642	15
2890	M617	1	max	0.481	106	-0.296	66	0.762	100	0.019	94	NC	107	NC	107
2891			min	-0.755	70	-2.553	15	-0.638	76	-0.015	66	NC	12	NC	12
2892		2	max	0.466	106	-0.365	68	0.688	100	0.019	94	NC	107	NC	94
2893			min	-0.739	70	-2.613	14	-0.613	72	-0.015	66	586.577	13	600.782	13
2894		3	max	0.452	106	-0.302	68	0.646	100	0.019	94	NC	107	NC	94
2895			min	-0.723	70	-2.576	13	-0.61	72	-0.016	66	421.161	13	370.084	13
2896		4	max	0.437	106	-0.257	68	0.633	100	0.019	94	NC	107	NC	94
2897			min	-0.707	70	-2.395	13	-0.614	72	-0.016	66	586.577	13	341.448	13
2898		5	max	0.423	106	-0.235	68	0.652	100	0.019	94	NC	107	NC	102
2899			min	-0.691	70	-2.102	13	-0.631	72	-0.016	66	NC	12	395.504	13
2900	M661	1	max	0.399	106	-0.281	66	0.635	100	0.013	98	NC	107	NC	107
2901			min	-0.67	70	-2.321	15	-0.631	72	-0.018	62	NC	12	NC	12
2902		2	max	0.384	106	-0.3	68	0.527	100	0.013	98	NC	107	NC	107
2903			min	-0.653	70	-2.345	13	-0.584	72	-0.017	62	528.855	13	596.738	13
2904		3	max	0.369	106	-0.234	68	0.469	104	0.013	98	NC	107	NC	90
2905			min	-0.637	70	-2.256	13	-0.558	72	-0.016	62	381.317	13	377.426	13
2906		4	max	0.354	106	-0.195	68	0.452	104	0.012	98	NC	107	NC	90
2907			min	-0.62	70	-2.009	13	-0.547	72	-0.015	62	528.855	13	341.12	70
2908		5	max	0.339	106	-0.187	68	0.474	104	0.012	98	NC	107	NC	90
2909			min	-0.603	70	-1.636	13	-0.557	72	-0.014	62	NC	12	324.434	70
2910	M662	1	max	0.308	106	-0.236	66	0.466	104	0.006	98	NC	107	NC	107
2911			min	-0.579	70	-1.872	15	-0.569	72	-0.019	13	NC	12	NC	12
2912		2	max	0.293	106	-0.199	68	0.366	104	0.006	98	NC	107	NC	107
2913			min	-0.562	70	-1.71	13	-0.497	72	-0.016	13	935.978	70	637.456	70
2914		3	max	0.278	106	-0.128	68	0.303	104	0.006	98	NC	107	5447.083	107
2915			min	-0.546	70	-1.503	13	-0.451	72	-0.013	13	699.576	70	364.616	70
2916		4	max	0.264	106	-0.09	68	0.276	104	0.006	98	NC	107	4184.199	97
2917			min	-0.53	70	-1.229	13	-0.43	72	-0.011	62	934.974	70	283.859	70
2918		5	max	0.249	106	-0.087	68	0.286	104	0.006	98	NC	107	4007.457	97
2919			min	-0.513	70	-0.901	13	-0.435	72	-0.01	62	NC	12	255.957	70
2920	M663	1	max	0.178	106	-0.122	66	0.304	104	0.002	68	NC	107	NC	107
2921			min	-0.448	70	-1.023	15	-0.464	72	-0.019	13	NC	12	NC	12
2922		2	max	0.163	106	-0.044	68	0.195	104	0.001	68	NC	107	NC	107
2923			min	-0.431	70	-0.853	13	-0.374	72	-0.015	13	851.439	100	606.081	70
2924		3	max	0.148	106	0.027	76	0.127	104	0	68	NC	107	NC	107
2925			min	-0.415	70	-0.632	13	-0.314	72	-0.011	13	636.586	100	349.281	70
2926		4	max	0.133	106	0.058	76	0.099	104	0	74	NC	107	NC	107
2927			min	-0.4	13	-0.346	13	-0.285	15	-0.007	13	850.608	100	274.688	70
2928		5	max	0.122	76	0.041	57	0.113	104	0.001	104	NC	107	NC	107
2929			min	-0.399	13	-0.046	86	-0.28	72	-0.003	72	NC	12	251.274	70
2930	M664	1	max	0.546	72	-0.296	66	0.624	106	0.015	66	NC	107	NC	107
2931			min	-0.543	100	-2.553	15	-0.921	70	-0.019	94	NC	12	NC	12
2932		2	max	0.559	72	-0.366	69	0.657	106	0.015	66	NC	107	NC	105
2933			min	-0.556	100	-2.573	14	-0.949	70	-0.019	94	745.505	13	3209.617	72
2934		3	max	0.572	72	-0.306	68	0.664	106	0.015	66	NC	90	NC	98
2935			min	-0.569	100	-2.523	13	-0.94	70	-0.02	94	529.153	13	2357.49	73
2936		4	max	0.585	72	-0.261	68	0.643	106	0.015	66	NC	107	NC	106
2937			min	-0.583	100	-2.354	13	-0.889	70	-0.022	15	745.505	13	878.283	70
2938		5	max	0.598	72	-0.237	68	0.594	106	0.015	66	NC	107	8318.235	72
2939			min	-0.596	100	-2.1	13	-0.801	70	-0.026	15	NC	12	391.163	13
2940	M665	1	max	0.536	72	-0.284	66	0.646	106	0.017	62	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2941			min	-0.534	100	-2.342	15	-0.845	70	-0.013	98	NC	12	NC	12
2942		2	max	0.548	72	-0.304	68	0.675	106	0.016	62	NC	90	NC	107
2943			min	-0.546	100	-2.319	13	-0.879	70	-0.014	98	656.595	13	2359.329	19
2944		3	max	0.561	72	-0.239	68	0.669	106	0.014	62	NC	90	NC	105
2945			min	-0.558	100	-2.211	13	-0.863	70	-0.014	98	469.045	13	1537.678	70
2946		4	max	0.573	72	-0.199	68	0.625	106	0.013	62	NC	90	NC	90
2947			min	-0.571	100	-1.971	13	-0.79	70	-0.016	15	656.595	13	578.643	70
2948		5	max	0.586	72	-0.189	68	0.546	106	0.011	66	NC	107	NC	90
2949			min	-0.583	100	-1.632	13	-0.668	70	-0.023	15	NC	12	305.545	70
2950	M666	1	max	0.502	72	-0.231	66	0.608	102	0.01	62	NC	107	NC	107
2951			min	-0.516	100	-1.83	15	-0.729	70	-0.008	98	NC	12	NC	12
2952		2	max	0.513	72	-0.194	68	0.621	102	0.009	62	NC	107	NC	107
2953			min	-0.526	100	-1.66	13	-0.741	70	-0.008	98	997.415	70	2505.384	70
2954		3	max	0.524	72	-0.127	68	0.602	102	0.009	62	NC	107	NC	99
2955			min	-0.537	100	-1.456	13	-0.711	70	-0.008	98	742.153	70	822.064	70
2956		4	max	0.535	72	-0.092	68	0.55	102	0.008	62	NC	107	6340.531	99
2957			min	-0.548	100	-1.198	13	-0.636	70	-0.008	98	996.275	70	403.293	70
2958		5	max	0.546	72	-0.09	68	0.466	102	0.008	62	NC	107	3754.095	99
2959			min	-0.558	100	-0.898	13	-0.519	70	-0.011	19	NC	12	240.254	70
2960	M667	1	max	0.432	72	-0.119	66	0.551	102	0.007	92	NC	107	NC	107
2961			min	-0.449	100	-1.017	15	-0.592	70	-0.003	68	NC	12	NC	12
2962		2	max	0.442	72	-0.04	68	0.559	102	0.005	92	NC	107	NC	107
2963			min	-0.459	100	-0.836	13	-0.612	70	-0.002	68	860.261	100	2638.582	102
2964		3	max	0.453	72	0.036	76	0.531	102	0.004	13	9757.407	67	NC	107
2965			min	-0.469	100	-0.613	13	-0.583	70	-0.001	68	640.796	100	863.414	70
2966		4	max	0.463	72	0.062	76	0.466	102	0.004	13	NC	107	NC	107
2967			min	-0.479	100	-0.333	13	-0.504	70	0	68	859.413	100	402.064	70
2968		5	max	0.474	72	0.041	57	0.364	102	0.004	15	NC	107	NC	107
2969			min	-0.489	100	-0.046	86	-0.375	70	-0.001	104	NC	12	232.613	70
2970	M668	1	max	0.411	106	-0.119	66	0.447	103	0.012	15	NC	107	NC	107
2971			min	-0.455	70	-1.017	15	-0.456	71	0.001	96	NC	12	NC	12
2972		2	max	0.405	106	-0.117	66	0.446	103	0.012	15	NC	107	NC	107
2973			min	-0.448	70	-0.992	15	-0.458	71	0.002	96	3144.99	102	977.339	102
2974		3	max	0.399	106	-0.123	66	0.445	103	0.011	14	NC	107	NC	107
2975			min	-0.441	70	-0.963	15	-0.46	71	0.002	99	2353.068	102	520.634	102
2976		4	max	0.402	76	-0.116	68	0.443	103	0.011	13	NC	107	NC	105
2977			min	-0.445	100	-0.931	13	-0.46	71	0.002	98	3151.759	102	371.691	102
2978		5	max	0.41	76	-0.09	68	0.44	103	0.011	13	NC	107	NC	105
2979			min	-0.454	100	-0.898	13	-0.459	71	0.001	98	NC	12	299.827	102
2980	M669	1	max	0.647	106	-0.284	66	0.303	107	0.004	15	NC	107	NC	107
2981			min	-0.809	70	-2.342	15	-0.427	71	0	66	NC	12	NC	12
2982		2	max	0.641	106	-0.313	66	0.304	107	0.004	15	NC	107	NC	107
2983			min	-0.801	70	-2.293	15	-0.43	71	0	66	3659.45	15	1963.47	102
2984		3	max	0.634	106	-0.331	68	0.304	107	0.004	14	NC	107	NC	107
2985			min	-0.794	70	-2.235	14	-0.432	71	0.001	77	2620.231	15	1076.165	102
2986		4	max	0.637	76	-0.287	68	0.303	107	0.004	13	NC	107	NC	107
2987			min	-0.796	100	-2.172	13	-0.43	71	0	68	3659.45	15	796.159	102
2988		5	max	0.644	76	-0.237	68	0.301	107	0.004	13	NC	107	NC	107
2989			min	-0.805	100	-2.1	13	-0.426	71	0	68	NC	12	669.117	102
2990	M670	1	max	0.652	106	-0.281	66	0.183	107	0	66	NC	107	NC	107
2991			min	-0.814	70	-2.321	15	-0.403	71	-0.004	15	NC	12	NC	12
2992		2	max	0.645	106	-0.31	66	0.184	107	0	66	NC	107	NC	107
2993			min	-0.807	70	-2.271	15	-0.403	71	-0.004	15	3718.6	102	6373.811	72
2994		3	max	0.639	106	-0.328	69	0.184	107	-0.001	67	NC	107	NC	107
2995			min	-0.8	70	-2.217	14	-0.402	71	-0.004	16	2775.259	102	2374.827	72

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
2996		4	max	0.641	76	-0.286	68	0.183	107	0	68	NC	107	NC	107
2997			min	-0.802	100	-2.161	13	-0.4	71	-0.004	13	3730.639	102	1255.787	72
2998		5	max	0.649	76	-0.235	68	0.183	107	0	68	NC	107	NC	107
2999			min	-0.811	100	-2.102	13	-0.397	71	-0.004	13	NC	12	782.6	72
3000	M671	1	max	0.427	106	-0.122	66	0.072	107	-0.001	96	NC	107	NC	107
3001			min	-0.474	70	-1.023	15	-0.446	15	-0.013	15	NC	12	NC	12
3002		2	max	0.421	106	-0.12	66	0.073	107	-0.002	96	NC	107	NC	107
3003			min	-0.467	70	-0.993	15	-0.44	15	-0.012	15	2820.747	70	1680.167	72
3004		3	max	0.414	106	-0.125	69	0.074	107	-0.002	99	NC	107	NC	107
3005			min	-0.461	70	-0.962	15	-0.433	14	-0.012	15	2124.247	70	754.328	72
3006		4	max	0.418	76	-0.115	68	0.074	107	-0.002	68	NC	107	NC	107
3007			min	-0.464	100	-0.931	13	-0.426	13	-0.011	13	2826.191	70	455.841	72
3008		5	max	0.426	76	-0.087	68	0.074	107	-0.001	68	NC	107	NC	107
3009			min	-0.473	100	-0.901	13	-0.42	13	-0.011	13	NC	12	312.86	72
3010	M672	1	max	0.067	66	-0.183	96	1.094	106	0.019	76	NC	107	NC	107
3011			min	-0.991	15	-2.134	15	-1.121	74	-0.036	13	NC	12	NC	12
3012		2	max	0.08	66	-0.234	96	0.824	106	0.013	76	3757.871	107	4437.112	70
3013			min	-0.981	15	-2.577	15	-1.202	70	-0.027	13	181.797	15	129.416	15
3014		3	max	0.093	66	-0.246	96	0.645	106	0.008	76	2798.99	107	1338.001	96
3015			min	-0.971	15	-2.66	15	-1.161	70	-0.019	13	133.542	15	91.502	15
3016		4	max	0.107	66	-0.215	96	0.551	106	0.002	66	3722.965	107	3095.067	96
3017			min	-0.961	15	-2.334	15	-0.982	70	-0.011	15	181.447	15	96.271	72
3018		5	max	0.12	66	-0.142	99	0.548	106	0.008	66	NC	107	NC	97
3019			min	-0.951	15	-1.645	15	-0.673	70	-0.009	94	NC	12	90.793	76
3020	M673	1	max	0.081	68	1.953	13	1.114	104	0.014	76	NC	107	NC	107
3021			min	-0.867	13	0.138	98	-1.128	76	-0.071	13	NC	12	NC	12
3022		2	max	0.094	68	1.714	13	0.893	104	0.008	76	7761.009	107	NC	107
3023			min	-0.858	13	0.104	98	-1.134	72	-0.06	13	941.877	13	263.159	100
3024		3	max	0.108	68	1.563	13	0.738	104	0.002	76	5791.623	107	NC	107
3025			min	-0.849	13	0.088	98	-1.049	72	-0.049	15	738.864	71	152.833	100
3026		4	max	0.121	68	1.455	13	0.641	104	0.003	66	7613.712	107	NC	103
3027			min	-0.839	13	0.086	98	-0.86	72	-0.039	15	932.569	13	120.277	100
3028		5	max	0.135	68	1.436	13	0.631	100	0.01	66	NC	107	NC	101
3029			min	-0.83	13	0.103	98	-0.573	76	-0.028	15	NC	12	92.865	76
3030	M674	1	max	-0.051	98	-0.137	68	1.094	104	0.019	104	NC	107	NC	107
3031			min	-1.242	13	-1.692	13	-1.108	76	-0.031	15	NC	12	NC	12
3032		2	max	-0.062	98	-0.198	68	0.931	104	0.013	104	NC	75	7311.066	75
3033			min	-1.234	13	-2.083	13	-1.193	72	-0.021	15	204.896	16	192.022	15
3034		3	max	-0.073	98	-0.216	68	0.799	104	0.006	104	8339.755	75	5349.452	75
3035			min	-1.226	13	-2.155	13	-1.142	72	-0.011	13	150.117	16	151.881	15
3036		4	max	-0.083	98	-0.187	68	0.697	104	0.006	94	NC	75	6902.699	75
3037			min	-1.218	13	-1.862	13	-0.936	72	-0.007	66	204.451	16	134.723	100
3038		5	max	-0.094	98	-0.114	68	0.648	100	0.013	94	NC	107	NC	101
3039			min	-1.21	13	-1.248	13	-0.59	76	-0.012	66	NC	12	99.349	76
3040	M675	1	max	-0.076	107	1.859	15	1.137	106	0.018	104	NC	107	NC	107
3041			min	-1.37	15	0.174	66	-1.122	74	-0.06	15	NC	12	NC	12
3042		2	max	-0.085	107	1.957	15	1.031	106	0.012	104	NC	105	NC	105
3043			min	-1.359	15	0.181	66	-1.018	74	-0.048	15	477.328	13	399.868	76
3044		3	max	-0.094	107	1.927	15	0.904	106	0.006	104	NC	105	NC	105
3045			min	-1.348	15	0.177	66	-0.904	74	-0.036	15	340.097	13	191.907	76
3046		4	max	-0.103	107	1.723	15	0.749	106	0.001	98	NC	105	NC	97
3047			min	-1.337	15	0.158	66	-0.79	70	-0.025	13	477.329	13	121.893	76
3048		5	max	-0.112	107	1.391	15	0.571	106	0.007	98	NC	107	NC	45
3049			min	-1.325	15	0.129	66	-0.671	70	-0.014	13	NC	12	87.071	72
3050	M676	1	max	0.352	106	0.224	107	0.015	106	0.006	70	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3051			min	-0.58	70	-0.396	71	-0.025	70	-0.003	106	NC	12	NC	12
3052		2	max	0.344	106	0.443	106	0.357	102	0.009	70	NC	105	NC	66
3053			min	-0.571	70	-0.581	70	-0.19	74	-0.005	106	248.861	102	203.866	15
3054		3	max	0.337	106	0.467	106	0.536	102	0.012	70	NC	99	1520.448	66
3055			min	-0.562	70	-0.598	70	-0.213	74	-0.007	106	186.74	102	107.484	15
3056		4	max	0.33	106	0.228	107	0.687	15	0.015	70	NC	105	1305.086	74
3057			min	-0.553	70	-0.38	71	-0.092	74	-0.009	106	249.053	102	76.44	15
3058		5	max	0.322	106	0.543	104	0.814	13	0.018	70	NC	107	393.128	68
3059			min	-0.544	70	-0.73	72	0.127	68	-0.011	106	NC	12	60.866	13
3060	M677	1	max	0.176	72	0.033	107	0.023	101	0.003	107	NC	107	NC	107
3061			min	-0.134	104	-0.063	71	-0.011	77	-0.005	71	NC	12	NC	12
3062		2	max	0.194	72	0.578	106	0.363	102	0.004	106	NC	99	NC	100
3063			min	-0.151	104	-0.568	74	-0.166	74	-0.008	70	216.18	102	185.367	15
3064		3	max	0.213	72	0.829	102	0.594	15	0.007	106	NC	69	3586.616	74
3065			min	-0.168	104	-0.804	74	-0.173	74	-0.012	70	161.953	102	97.782	15
3066		4	max	0.231	72	0.769	106	0.787	15	0.009	106	NC	105	486.428	104
3067			min	-0.185	104	-0.751	74	-0.011	74	-0.016	70	216.325	102	69.347	13
3068		5	max	0.249	72	0.404	106	0.934	13	0.011	106	NC	107	519.244	98
3069			min	-0.202	104	-0.412	70	0.093	68	-0.019	70	NC	12	54.99	13
3070	M678	1	max	0.293	75	0.011	107	0.511	106	0.008	76	NC	107	NC	107
3071			min	-0.445	103	-1.068	14	-0.592	70	-0.053	13	NC	12	NC	12
3072		2	max	0.313	71	-0.109	99	0.059	106	0.007	76	646.65	96	468.904	96
3073			min	-0.448	103	-1.882	15	-1.732	13	-0.04	13	91.136	15	59.052	15
3074		3	max	0.338	71	-0.122	99	-0.143	106	0.006	76	482.647	96	470.908	104
3075			min	-0.45	103	-2.009	14	-2.281	13	-0.027	13	67.796	15	43.677	15
3076		4	max	0.363	71	-0.02	107	-0.097	106	0.007	75	646.31	96	2027.381	74
3077			min	-0.452	103	-1.417	14	-1.764	13	-0.013	13	91.055	15	56.617	15
3078		5	max	0.387	71	0.222	107	0.199	106	0.011	71	NC	107	NC	101
3079			min	-0.454	103	-0.326	71	-0.325	70	-0.01	107	NC	12	144.999	72
3080	M679	1	max	0.302	71	0.845	13	0.463	104	0.017	106	NC	107	NC	107
3081			min	-0.428	103	-0.055	107	-0.578	72	-0.019	70	NC	12	NC	12
3082		2	max	0.325	71	0.213	71	0.07	104	0.014	106	872.311	98	587.211	76
3083			min	-0.432	103	-0.299	103	-1.332	15	-0.015	70	159.975	13	84.317	13
3084		3	max	0.349	71	0.083	75	-0.101	104	0.01	106	658.07	98	757.485	76
3085			min	-0.436	103	-0.482	103	-1.697	15	-0.011	70	121.541	13	64.28	13
3086		4	max	0.372	71	0.089	68	-0.055	104	0.008	107	871.691	98	1169.497	106
3087			min	-0.439	103	-0.478	103	-1.303	15	-0.009	71	159.725	13	88.663	13
3088		5	max	0.396	71	0.242	71	0.212	104	0.01	107	NC	107	NC	93
3089			min	-0.443	103	-0.285	103	-0.3	72	-0.011	71	NC	12	172.226	72
3090	M680	1	max	0.005	107	0.713	15	0.501	106	0.008	74	NC	107	NC	107
3091			min	-0.556	15	0.071	66	-0.582	70	-0.058	15	NC	12	NC	12
3092		2	max	0.001	107	-0.02	98	0.11	106	0.006	74	766.068	68	447.124	96
3093			min	-0.529	15	-0.286	13	-1.546	13	-0.044	15	129.242	15	66.425	15
3094		3	max	-0.002	107	-0.107	98	-0.065	106	0.005	74	577.509	68	351.056	96
3095			min	-0.501	15	-0.781	15	-2.024	13	-0.029	15	97.947	15	49.279	15
3096		4	max	-0.002	77	-0.108	99	-0.028	106	0.004	74	765.591	68	6351.603	104
3097			min	-0.474	15	-0.805	15	-1.585	13	-0.015	15	129.079	15	62.886	15
3098		5	max	0.016	77	0.029	107	0.225	106	0.004	71	NC	107	NC	101
3099			min	-0.447	15	-0.325	15	-0.355	70	-0.003	102	NC	12	162.243	72
3100	M681	1	max	0.011	107	-0.074	68	0.444	104	0.02	70	NC	107	NC	107
3101			min	-0.509	13	-0.754	13	-0.559	72	-0.017	106	NC	12	NC	12
3102		2	max	0.006	107	-0.188	68	0.087	104	0.016	70	680.767	68	470.372	68
3103			min	-0.486	13	-1.415	13	-1.479	15	-0.013	106	108.137	13	75.069	13
3104		3	max	0.001	107	-0.209	67	-0.065	104	0.011	70	507.982	68	408.83	76
3105			min	-0.464	13	-1.499	13	-1.904	15	-0.01	106	80.321	13	56.858	13

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3106		4	max	0.001	77	-0.089	75	-0.015	104	0.007	100	680.39	68	NC	76
3107			min	-0.442	13	-0.973	16	-1.444	15	-0.007	75	108.023	13	79.496	13
3108		5	max	0.018	77	0.185	71	0.24	104	0.009	103	NC	107	NC	99
3109			min	-0.42	13	-0.085	107	-0.323	72	-0.009	71	NC	12	202.237	72
3110	M682	1	max	0.131	66	-0.114	96	0.905	106	0.006	106	NC	107	NC	107
3111			min	-0.716	15	-1.705	15	-0.957	70	-0.062	13	NC	12	NC	12
3112		2	max	0.145	66	-0.214	96	0.431	106	0.005	106	772.633	96	1395.7	104
3113			min	-0.694	15	-2.386	15	-1.407	13	-0.047	13	109.836	15	70.798	15
3114		3	max	0.16	66	-0.233	99	0.187	106	0.003	106	576.136	96	2232.779	74
3115			min	-0.672	15	-2.498	15	-1.872	13	-0.032	13	81.571	15	51.668	15
3116		4	max	0.175	66	-0.158	99	0.169	106	0.001	106	772.146	96	944.11	96
3117			min	-0.65	15	-2.009	15	-1.469	13	-0.017	14	109.718	15	64.649	15
3118		5	max	0.19	66	0.015	107	0.381	106	0.003	96	NC	107	NC	99
3119			min	-0.629	103	-0.951	14	-0.521	70	-0.004	64	NC	12	86.935	72
3120	M683	1	max	0.143	68	1.499	13	0.907	104	0.002	76	NC	107	NC	107
3121			min	-0.614	13	0.062	98	-1	72	-0.061	13	NC	12	NC	12
3122		2	max	0.158	68	0.836	13	0.498	104	0	76	987.742	98	4119.686	76
3123			min	-0.595	13	-0.073	107	-1.349	72	-0.05	13	202.906	13	106.531	13
3124		3	max	0.173	68	0.496	13	0.281	104	-0.002	76	745.73	98	820.007	72
3125			min	-0.592	103	-0.162	107	-1.389	15	-0.039	13	154.698	13	82.768	13
3126		4	max	0.187	68	0.448	13	0.252	104	0	66	986.948	98	1614.767	68
3127			min	-0.597	103	-0.159	107	-1.087	72	-0.028	15	202.505	13	80.853	100
3128		5	max	0.202	68	0.727	13	0.416	104	0.005	66	NC	107	NC	101
3129			min	-0.602	103	-0.062	107	-0.476	72	-0.018	15	NC	12	90.531	76
3130	M684	1	max	-0.067	107	1.433	15	0.881	106	0.008	74	NC	107	NC	107
3131			min	-1.091	15	0.143	66	-0.938	70	-0.076	15	NC	12	NC	12
3132		2	max	-0.071	107	0.602	15	0.466	106	0.006	74	907.908	67	637.654	104
3133			min	-1.068	15	0.006	66	-1.432	70	-0.059	15	157.091	15	77.239	15
3134		3	max	-0.075	107	0.193	19	0.249	106	0.003	74	685.089	67	1878.91	104
3135			min	-1.044	15	-0.117	73	-1.729	13	-0.043	15	119.322	15	56.809	15
3136		4	max	-0.079	107	0.158	19	0.226	106	0.001	74	907.238	67	NC	70
3137			min	-1.021	15	-0.084	73	-1.371	13	-0.027	15	156.85	15	70.641	15
3138		5	max	-0.083	107	0.541	15	0.402	106	0.002	68	NC	107	NC	101
3139			min	-0.998	15	0.03	68	-0.545	70	-0.012	13	NC	12	94.791	72
3140	M685	1	max	-0.05	107	-0.125	68	0.881	104	0.004	104	NC	107	NC	107
3141			min	-0.978	13	-1.297	13	-0.973	72	-0.037	15	NC	12	NC	12
3142		2	max	-0.055	107	-0.235	68	0.523	104	0.002	104	796.464	66	885.832	76
3143			min	-0.959	13	-1.876	13	-1.398	72	-0.028	15	126.516	16	91.365	13
3144		3	max	-0.06	107	-0.259	68	0.331	104	0.001	104	593.801	66	NC	46
3145			min	-0.941	13	-1.963	13	-1.589	15	-0.018	15	93.819	16	69.775	13
3146		4	max	-0.064	107	-0.196	68	0.303	104	0.002	98	795.947	66	839.707	68
3147			min	-0.923	13	-1.526	13	-1.194	15	-0.009	13	126.36	16	88.513	100
3148		5	max	-0.069	107	-0.048	68	0.44	104	0.006	98	NC	107	NC	99
3149			min	-0.904	13	-0.595	13	-0.497	72	-0.006	66	NC	12	100.006	76
3150	M686	1	max	0.007	66	-0.217	96	1.153	106	0.023	15	NC	107	NC	107
3151			min	-1.176	15	-2.31	15	-1.197	74	-0.014	104	NC	12	NC	12
3152		2	max	0.02	66	-0.258	96	0.942	106	0.018	15	NC	107	2622.85	107
3153			min	-1.171	15	-2.655	15	-1.248	70	-0.008	104	258.482	15	185.269	13
3154		3	max	0.033	66	-0.274	96	0.789	106	0.013	13	NC	107	1376.322	107
3155			min	-1.165	15	-2.75	15	-1.207	70	-0.002	98	188.238	15	123.548	13
3156		4	max	0.046	66	-0.26	96	0.69	106	0.011	62	NC	107	1334.695	96
3157			min	-1.16	15	-2.549	15	-1.065	70	-0.008	98	257.775	15	110.151	72
3158		5	max	0.059	66	-0.219	96	0.649	106	0.016	62	NC	107	NC	45
3159			min	-1.155	15	-2.096	15	-0.83	70	-0.014	98	NC	12	98.139	72
3160	M687	1	max	0.023	68	2.055	13	1.195	104	0.014	76	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3161			min	-1.035	13	0.163	98	-1.173	76	-0.019	13	NC	12	NC	12
3162		2	max	0.036	68	2.062	13	1.03	104	0.007	76	NC	107	7900.474	17
3163			min	-1.03	13	0.16	98	-1.117	72	-0.021	13	1482.012	71	359.833	100
3164		3	max	0.049	68	2.049	13	0.904	104	0.003	66	NC	103	NC	69
3165			min	-1.026	13	0.162	98	-1.022	72	-0.023	15	1077.878	19	201.932	104
3166		4	max	0.062	68	1.971	13	0.811	104	0.009	66	NC	107	NC	99
3167			min	-1.021	13	0.164	98	-0.863	72	-0.026	15	1482.973	71	144.504	104
3168		5	max	0.075	68	1.876	13	0.803	100	0.015	66	NC	107	NC	98
3169			min	-1.016	13	0.172	98	-0.663	76	-0.029	15	NC	12	100.893	76
3170	M688	1	max	-0.073	107	2.039	15	1.16	106	0.015	104	NC	107	NC	107
3171			min	-1.541	15	0.15	66	-1.202	74	-0.022	72	NC	12	NC	12
3172		2	max	-0.082	107	1.982	15	1.022	106	0.008	104	NC	106	NC	70
3173			min	-1.534	15	0.134	66	-1.282	70	-0.019	15	1158.23	100	292.89	13
3174		3	max	-0.092	107	1.937	15	0.896	106	0.001	98	NC	106	7961.259	105
3175			min	-1.528	15	0.13	66	-1.25	70	-0.017	13	873.334	100	172.484	72
3176		4	max	-0.102	107	1.862	15	0.773	106	0.007	98	NC	106	NC	105
3177			min	-1.522	15	0.136	66	-1.102	70	-0.015	13	1156.498	100	122.464	72
3178		5	max	-0.111	107	1.802	15	0.661	106	0.013	98	NC	107	NC	45
3179			min	-1.516	15	0.155	66	-0.839	70	-0.017	62	NC	12	98.825	72
3180	M689	1	max	-0.038	98	-0.12	68	1.201	104	0.02	13	NC	107	NC	107
3181			min	-1.409	13	-1.842	13	-1.18	76	-0.015	76	NC	12	NC	12
3182		2	max	-0.05	98	-0.172	68	1.088	104	0.019	13	NC	105	NC	71
3183			min	-1.406	13	-2.138	13	-1.197	72	-0.007	76	300.957	16	428.447	100
3184		3	max	-0.061	98	-0.192	68	0.98	104	0.02	15	8645.707	105	NC	71
3185			min	-1.402	13	-2.224	13	-1.13	72	-0.004	66	218.131	16	230.954	100
3186		4	max	-0.072	98	-0.178	68	0.873	104	0.02	15	NC	105	NC	105
3187			min	-1.399	13	-2.05	13	-0.945	72	-0.009	66	299.999	16	157.982	104
3188		5	max	-0.083	98	-0.134	68	0.815	100	0.021	15	NC	107	NC	98
3189			min	-1.395	13	-1.663	13	-0.675	76	-0.015	66	NC	12	101.915	76
3190	M690	1	max	0.923	106	-0.263	66	0.168	107	-0.001	66	NC	107	NC	107
3191			min	-0.899	74	-1.854	15	-0.22	71	-0.009	15	NC	12	NC	12
3192		2	max	0.919	76	-0.291	66	0.252	107	0.114	107	9807.182	96	NC	46
3193			min	-0.898	104	-1.831	15	-0.307	71	-0.122	71	1561.214	102	691.66	71
3194		3	max	0.926	76	-0.284	68	0.29	107	0.232	103	6427.443	96	NC	46
3195			min	-0.904	104	-1.792	13	-0.347	71	-0.24	71	1020.713	102	472.967	71
3196		4	max	0.932	76	-0.25	68	0.249	107	0.114	107	NC	96	NC	46
3197			min	-0.91	104	-1.717	13	-0.307	71	-0.122	71	1459.956	102	691.66	71
3198		5	max	0.938	72	-0.21	68	0.162	107	-0.001	68	NC	107	NC	107
3199			min	-0.916	104	-1.623	13	-0.22	71	-0.009	13	NC	12	NC	12
3200	M691	1	max	0.953	106	-0.256	66	0.303	107	0.01	15	NC	107	NC	107
3201			min	-0.928	74	-1.816	15	-0.587	71	0.001	96	NC	12	NC	12
3202		2	max	0.952	76	-0.284	66	0.385	107	0.118	103	9480.367	96	NC	46
3203			min	-0.928	104	-1.8	15	-0.669	71	-0.11	75	1669.906	15	712.895	103
3204		3	max	0.959	76	-0.28	68	0.422	107	0.232	103	6264.271	96	NC	46
3205			min	-0.935	104	-1.768	13	-0.706	71	-0.224	71	1102.378	102	487.493	103
3206		4	max	0.965	76	-0.25	68	0.382	107	0.118	103	NC	96	NC	46
3207			min	-0.941	104	-1.703	13	-0.666	71	-0.11	75	1581.571	102	712.895	103
3208		5	max	0.971	76	-0.214	68	0.298	107	0.009	13	NC	107	NC	107
3209			min	-0.947	104	-1.62	13	-0.58	71	0.001	98	NC	12	NC	12
3210	M692	1	max	0.136	70	0.209	71	0.018	86	0.007	15	NC	106	NC	107
3211			min	-0.126	106	-0.09	107	-0.016	57	-0.001	107	293.49	75	1060.408	73
3212		2	max	0.14	70	0.191	101	0.044	100	0.007	15	NC	105	NC	107
3213			min	-0.129	106	-0.07	107	-0.033	76	-0.001	107	410.597	103	810.996	70
3214		3	max	0.143	70	0.2	15	0.076	100	0.007	15	NC	105	NC	107
3215			min	-0.132	102	-0.052	107	-0.051	76	-0.001	107	581.908	102	378.994	70

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3216		4	max	0.146	70	0.22	15	0.11	100	0.007	15	NC	105	NC	107
3217			min	-0.135	102	-0.034	107	-0.068	76	-0.001	107	375.542	102	244.253	70
3218		5	max	0.15	70	0.24	15	0.143	100	0.007	15	NC	107	NC	107
3219			min	-0.139	102	-0.046	74	-0.085	76	-0.001	107	277.12	102	180.221	70
3220	M693	1	max	0.87	74	0.518	71	1.86	15	0.005	15	NC	107	NC	107
3221			min	-0.895	102	-0.392	107	0.257	66	-0.001	107	280.156	69	437.129	98
3222		2	max	0.873	74	1.051	71	1.887	15	0.005	15	NC	62	NC	99
3223			min	-0.898	102	-0.921	107	0.276	66	-0.001	107	46.912	71	595.737	98
3224		3	max	0.876	74	1.594	71	1.933	15	0.005	15	NC	62	NC	94
3225			min	-0.901	102	-1.454	107	0.288	69	-0.001	107	23.223	71	314.546	13
3226		4	max	0.879	74	2.141	71	1.987	13	0.005	15	NC	88	NC	94
3227			min	-0.905	102	-1.988	107	0.283	68	-0.001	107	15.401	71	186.478	13
3228		5	max	0.882	74	2.688	71	2.041	13	0.005	15	NC	98	NC	104
3229			min	-0.908	102	-2.522	107	0.272	68	-0.001	107	11.521	71	132.519	13
3230	M694	1	max	1.081	70	0.67	71	2.551	15	0.001	73	NC	107	NC	107
3231			min	-0.962	106	-0.497	107	0.308	66	-0.001	101	236.944	93	162.144	104
3232		2	max	1.084	70	1.114	71	2.589	15	0.001	73	NC	106	NC	98
3233			min	-0.964	106	-0.939	107	0.316	66	-0.001	101	42.786	71	218.904	104
3234		3	max	1.086	70	1.561	71	2.633	15	0.001	73	NC	106	7693.663	98
3235			min	-0.967	106	-1.382	107	0.325	66	-0.001	101	21.322	71	196.466	72
3236		4	max	1.089	70	2.009	71	2.679	15	0.001	73	NC	102	4650.225	98
3237			min	-0.969	106	-1.826	107	0.333	66	-0.001	101	14.189	71	129.49	72
3238		5	max	1.091	70	2.457	71	2.724	15	0.001	73	NC	102	NC	104
3239			min	-0.971	106	-2.269	107	0.342	66	-0.001	101	10.632	71	96.588	72
3240	M695	1	max	0.246	70	0.38	15	0.039	86	0.007	15	NC	106	NC	107
3241			min	-0.227	106	-0.063	107	-0.033	57	0.001	76	168.67	75	434.516	106
3242		2	max	0.249	70	0.385	15	0.048	100	0.007	15	NC	96	NC	107
3243			min	-0.229	106	-0.039	107	-0.04	72	0.001	76	228.338	75	590.339	106
3244		3	max	0.251	70	0.393	15	0.063	100	0.007	15	NC	96	NC	107
3245			min	-0.231	106	-0.015	107	-0.049	72	0.001	76	344.433	75	650.341	70
3246		4	max	0.254	70	0.402	15	0.078	100	0.007	15	NC	96	NC	107
3247			min	-0.233	106	0.008	107	-0.059	76	0.001	76	258.688	103	424.506	70
3248		5	max	0.256	70	0.41	15	0.092	100	0.007	15	NC	107	NC	107
3249			min	-0.236	106	0.017	66	-0.069	76	0.001	76	194.258	103	315.186	70
3250	M696	1	max	1.141	70	0.659	71	2.549	15	0.001	71	NC	107	NC	107
3251			min	-1.078	106	-0.487	107	0.316	66	-0.001	107	214.372	93	274.154	104
3252		2	max	1.144	70	1.219	71	2.605	15	0.001	71	NC	98	NC	94
3253			min	-1.082	106	-1.041	107	0.333	66	-0.001	107	44.632	71	388.648	104
3254		3	max	1.148	70	1.79	71	2.681	15	0.001	71	NC	98	3573.375	68
3255			min	-1.085	106	-1.6	107	0.351	66	-0.001	107	22.094	71	181.862	13
3256		4	max	1.151	70	2.365	71	2.763	15	0.001	71	NC	98	7152.596	68
3257			min	-1.088	106	-2.159	107	0.37	66	-0.001	107	14.652	71	112.721	13
3258		5	max	1.154	70	2.94	71	2.844	15	0.001	71	NC	106	NC	104
3259			min	-1.09	106	-2.718	107	0.388	66	-0.001	107	10.96	71	81.673	13
3260	M697	1	max	0.198	70	0.276	71	0.028	86	0.007	15	NC	106	NC	107
3261			min	-0.183	106	-0.089	107	-0.024	57	0.001	107	193.686	75	536.717	98
3262		2	max	0.201	70	0.28	15	0.042	100	0.007	15	NC	96	NC	107
3263			min	-0.185	106	-0.068	107	-0.035	72	0.001	107	262.801	75	722.438	98
3264		3	max	0.203	70	0.288	15	0.059	100	0.007	15	NC	96	NC	107
3265			min	-0.187	106	-0.049	107	-0.047	76	0.001	107	396.754	75	516.8	70
3266		4	max	0.206	70	0.296	15	0.077	100	0.007	15	NC	96	NC	107
3267			min	-0.189	106	-0.029	107	-0.059	76	0.001	107	327.786	43	338.795	70
3268		5	max	0.208	70	0.305	15	0.095	100	0.007	15	NC	107	NC	107
3269			min	-0.192	102	-0.011	74	-0.072	76	0.001	107	246.229	43	252.059	70
3270	M701	1	max	0.867	74	0.744	71	1.821	15	0	75	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3271			min	-0.884	102	-0.52	107	0.25	66	-0.005	15	218.017	93	287.294	104
3272		2	max	0.87	74	1.158	71	1.853	15	0	75	NC	64	NC	99
3273			min	-0.887	102	-0.926	107	0.264	66	-0.005	15	60.409	71	401.075	104
3274		3	max	0.873	74	1.58	71	1.9	15	0	75	NC	64	NC	94
3275			min	-0.891	102	-1.335	107	0.279	66	-0.005	15	29.911	71	283.714	72
3276		4	max	0.876	74	2.004	71	1.951	15	0	75	NC	90	5455.704	68
3277			min	-0.894	102	-1.744	107	0.289	69	-0.005	15	19.838	71	183.08	72
3278		5	max	0.879	74	2.429	71	2.003	13	0	75	NC	104	NC	104
3279			min	-0.897	102	-2.153	107	0.291	68	-0.005	15	14.84	71	132.064	13
3280	M702	1	max	0.801	70	0.721	71	1.825	15	0	77	NC	107	NC	107
3281			min	-0.79	106	-0.544	107	0.243	66	-0.005	15	227.156	93	179.647	104
3282		2	max	0.804	70	1.054	71	1.848	15	0	77	NC	87	NC	98
3283			min	-0.792	106	-0.872	107	0.249	66	-0.005	15	57.124	71	241.966	104
3284		3	max	0.806	70	1.388	71	1.875	15	0	77	NC	87	NC	98
3285			min	-0.795	106	-1.2	107	0.256	66	-0.005	15	28.469	71	237.976	72
3286		4	max	0.809	70	1.724	71	1.904	15	0	77	NC	87	NC	98
3287			min	-0.797	106	-1.529	107	0.263	66	-0.005	15	18.945	71	157.046	72
3288		5	max	0.811	70	2.059	71	1.933	15	0	77	NC	104	NC	104
3289			min	-0.799	106	-1.857	107	0.27	66	-0.005	15	14.196	71	117.211	72
3290	M703	1	max	0.721	70	0.642	71	1.828	15	0.001	107	NC	107	NC	107
3291			min	-0.666	106	-0.522	103	0.235	66	-0.005	71	349.737	93	135.793	104
3292		2	max	0.724	70	0.842	71	1.852	15	0.001	107	NC	60	NC	96
3293			min	-0.668	106	-0.717	103	0.238	66	-0.005	71	94.781	71	182.45	104
3294		3	max	0.726	70	1.045	71	1.881	15	0.001	107	NC	64	NC	96
3295			min	-0.671	106	-0.913	103	0.24	66	-0.005	71	47.136	71	189.543	72
3296		4	max	0.729	70	1.248	71	1.91	15	0.001	107	NC	87	NC	96
3297			min	-0.673	106	-1.108	103	0.243	66	-0.005	71	31.33	71	125.34	72
3298		5	max	0.731	70	1.451	71	1.94	15	0.001	107	NC	104	NC	104
3299			min	-0.675	106	-1.304	103	0.246	66	-0.005	71	23.462	71	93.639	72
3300	M704	1	max	0.997	70	0.612	71	2.553	15	0.003	103	NC	107	NC	107
3301			min	-0.814	106	-0.439	107	0.3	66	-0.003	71	381.354	93	125.515	104
3302		2	max	0.999	70	0.875	71	2.593	15	0.003	103	NC	106	NC	96
3303			min	-0.816	106	-0.7	107	0.304	66	-0.003	71	72.168	71	168.978	104
3304		3	max	1.002	70	1.142	71	2.639	15	0.003	103	NC	106	5794.716	96
3305			min	-0.818	106	-0.962	107	0.309	66	-0.003	71	35.883	71	160.648	72
3306		4	max	1.004	70	1.409	71	2.686	15	0.003	103	NC	106	3585.436	96
3307			min	-0.82	106	-1.225	107	0.313	66	-0.003	71	23.848	71	106.1	72
3308		5	max	1.007	70	1.676	71	2.734	15	0.003	103	NC	104	NC	104
3309			min	-0.823	106	-1.488	107	0.317	66	-0.003	71	17.858	71	79.219	72
3310	M705	1	max	0.823	70	0.566	71	1.865	15	0.005	15	NC	107	NC	107
3311			min	-0.82	102	-0.392	107	0.249	66	0.001	96	240.223	35	213.526	104
3312		2	max	0.825	70	0.99	71	1.888	15	0.005	15	NC	90	NC	97
3313			min	-0.823	102	-0.816	107	0.257	66	0.001	96	44.631	103	289.242	104
3314		3	max	0.828	70	1.417	71	1.916	15	0.005	15	NC	58	NC	68
3315			min	-0.825	102	-1.241	107	0.265	66	0.001	96	22.301	103	257.435	72
3316		4	max	0.83	70	1.845	71	1.946	15	0.005	15	NC	58	NC	98
3317			min	-0.828	102	-1.667	107	0.273	66	0.001	96	14.863	103	169.174	72
3318		5	max	0.833	70	2.272	71	1.976	15	0.005	15	NC	98	NC	104
3319			min	-0.83	102	-2.092	107	0.281	66	0.001	96	11.137	71	126.013	72
3320	M706	1	max	0.744	70	0.548	71	1.87	15	0.005	15	NC	107	NC	107
3321			min	-0.694	106	-0.325	107	0.241	66	-0.001	75	375.546	39	129.587	104
3322		2	max	0.747	70	0.799	71	1.9	15	0.005	15	NC	90	NC	66
3323			min	-0.696	106	-0.577	107	0.241	66	-0.001	75	75.002	103	174.451	104
3324		3	max	0.749	70	1.053	71	1.936	15	0.005	15	NC	58	NC	66
3325			min	-0.698	106	-0.83	107	0.241	66	-0.001	75	37.462	103	171.55	72

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3326		4	max	0.752	70	1.307	71	1.973	15	0.005	15	NC	87	NC	96
3327			min	-0.7	106	-1.083	107	0.241	66	-0.001	75	24.962	103	113.271	72
3328		5	max	0.754	70	1.562	71	2.011	15	0.005	15	NC	100	NC	104
3329			min	-0.703	106	-1.336	107	0.241	66	-0.001	75	18.718	103	84.562	72
3330	M460	1	max	0	107	0	107	0	107	0.08	77	NC	107	NC	107
3331			min	0	12	0	12	0	12	-0.086	71	NC	12	NC	12
3332		2	max	0.011	57	0.089	72	0.093	75	0.08	77	NC	107	NC	98
3333			min	-0.013	86	-0.092	100	-0.176	103	-0.086	71	3739.105	100	643.618	15
3334		3	max	0.023	57	0.167	72	0.116	75	0.08	77	NC	107	NC	106
3335			min	-0.026	86	-0.174	100	-0.282	103	-0.086	71	2444.544	100	321.752	15
3336		4	max	0.034	57	0.228	72	0.089	75	0.079	77	NC	107	NC	99
3337			min	-0.039	86	-0.237	100	-0.363	13	-0.085	71	3303.978	100	214.477	15
3338		5	max	0.046	57	0.273	72	0.038	75	0.076	77	NC	107	NC	107
3339			min	-0.051	86	-0.284	100	-0.483	13	-0.082	71	NC	12	160.848	15
3340	M471	1	max	0	107	0	107	0	107	0.083	71	NC	107	NC	107
3341			min	0	12	0	12	0	12	-0.078	77	NC	12	NC	12
3342		2	max	0.011	57	0.097	70	0.179	103	0.083	71	NC	107	NC	104
3343			min	-0.013	86	-0.093	102	-0.095	75	-0.078	77	2929.826	70	686.947	17
3344		3	max	0.023	57	0.177	70	0.287	103	0.083	71	NC	107	NC	91
3345			min	-0.026	86	-0.17	102	-0.117	75	-0.078	77	2170.011	70	343.343	17
3346		4	max	0.034	57	0.236	70	0.374	15	0.082	71	NC	107	NC	99
3347			min	-0.039	86	-0.227	102	-0.088	75	-0.076	77	3137.056	70	228.837	17
3348		5	max	0.046	57	0.283	70	0.497	15	0.08	71	NC	107	NC	107
3349			min	-0.052	86	-0.271	102	-0.035	75	-0.074	77	NC	12	171.607	17
3350	M473	1	max	0	107	0	107	0.705	73	0.019	71	NC	107	NC	107
3351			min	0	12	0	12	-0.364	105	-0.018	103	NC	12	142.812	15
3352		2	max	0.011	57	0.092	70	0.645	73	0.019	71	NC	107	NC	105
3353			min	-0.013	86	-0.086	102	-0.394	105	-0.018	103	3120.978	70	190.975	15
3354		3	max	0.022	57	0.168	70	0.585	73	0.019	71	NC	107	NC	105
3355			min	-0.026	86	-0.156	102	-0.425	101	-0.018	103	2293.785	70	287.106	15
3356		4	max	0.034	57	0.225	70	0.524	73	0.019	71	NC	107	NC	105
3357			min	-0.039	86	-0.208	102	-0.474	101	-0.018	103	3302.046	70	418.909	103
3358		5	max	0.045	57	0.269	70	0.461	73	0.019	71	NC	107	NC	105
3359			min	-0.052	86	-0.249	106	-0.523	101	-0.017	103	NC	12	310.538	103
3360	M507	1	max	0	107	0	107	0.363	105	0.018	107	NC	107	NC	107
3361			min	0	12	0	12	-0.69	73	-0.02	71	NC	12	164.746	13
3362		2	max	0.011	57	0.081	72	0.391	105	0.018	107	NC	107	NC	105
3363			min	-0.013	86	-0.087	100	-0.637	73	-0.02	71	3928.616	100	219.916	13
3364		3	max	0.023	57	0.154	72	0.42	101	0.018	107	NC	107	NC	105
3365			min	-0.026	86	-0.165	100	-0.583	73	-0.02	71	2569.128	100	330.055	13
3366		4	max	0.034	57	0.209	72	0.466	101	0.018	107	NC	107	NC	105
3367			min	-0.039	86	-0.225	100	-0.527	73	-0.02	71	3471.967	100	462.72	100
3368		5	max	0.046	57	0.25	76	0.51	101	0.018	107	NC	107	NC	105
3369			min	-0.051	86	-0.271	100	-0.47	73	-0.02	71	NC	12	343.175	103
3370	M508	1	max	1.156	76	0.409	73	2.537	15	0	75	NC	107	NC	107
3371			min	-1.191	74	-0.241	105	0.314	66	-0.001	103	NC	12	NC	12
3372		2	max	1.163	76	0.402	73	2.469	15	0	75	NC	107	NC	99
3373			min	-1.195	104	-0.243	105	0.363	66	-0.001	103	3196.701	72	407.272	64
3374		3	max	1.17	76	0.399	73	2.401	13	0	75	NC	107	5680.131	99
3375			min	-1.202	104	-0.243	105	0.353	68	-0.001	103	2396.706	72	206.903	94
3376		4	max	1.177	76	0.399	73	2.333	13	0	75	NC	107	3631.066	99
3377			min	-1.209	104	-0.242	105	0.305	68	0	103	3172.902	72	136.03	15
3378		5	max	1.183	76	0.402	73	2.262	13	0	75	NC	107	2637.876	99
3379			min	-1.216	104	-0.238	105	0.26	68	0	103	NC	12	100.688	15
3380	M509	1	max	0.383	105	0.007	86	0.058	70	0.004	102	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3381			min	-0.666	73	-0.006	57	-0.054	102	-0.005	70	NC	12	NC	12
3382		2	max	0.307	105	1.933	15	0.976	74	0.092	15	2530.281	66	NC	107
3383			min	-0.56	73	0.266	66	-1.009	106	-0.007	74	354.08	15	714.531	76
3384		3	max	0.241	105	2.536	15	1.211	74	0.027	15	2149.442	66	NC	105
3385			min	-0.409	73	0.314	66	-1.186	76	-0.017	104	269.789	15	590.954	104
3386		4	max	0.164	105	1.877	15	0.933	74	0.008	76	2617.686	66	NC	107
3387			min	-0.247	73	0.257	66	-0.938	76	-0.073	13	364.556	15	770.635	76
3388		5	max	0.064	75	0.007	86	0.061	70	0.005	102	NC	107	NC	107
3389			min	-0.118	103	-0.006	57	-0.059	102	-0.005	70	NC	12	NC	12
3390	M510	1	max	0.381	105	0.007	86	0.053	100	0.004	72	NC	107	NC	107
3391			min	-0.656	73	-0.006	57	-0.05	72	-0.004	100	NC	12	NC	12
3392		2	max	0.305	105	1.676	13	0.999	104	0.045	15	3104.575	68	NC	107
3393			min	-0.55	73	0.216	68	-1.013	76	-0.004	104	408.328	13	710.314	76
3394		3	max	0.238	105	2.262	13	1.234	104	0.017	76	2584.195	68	NC	105
3395			min	-0.402	73	0.26	68	-1.197	76	-0.023	13	302.567	13	579.414	104
3396		4	max	0.161	105	1.686	13	0.954	104	0.002	76	3167.551	68	NC	105
3397			min	-0.243	73	0.211	68	-0.947	76	-0.076	13	405.957	13	760.369	104
3398		5	max	0.062	75	0.007	86	0.056	100	0.004	72	NC	107	NC	107
3399			min	-0.116	103	-0.006	57	-0.054	72	-0.005	100	NC	12	NC	12
3400	M511	1	max	0.871	70	1.059	104	2.207	13	0.019	13	NC	107	NC	107
3401			min	-0.709	106	-1.098	72	0.277	68	-0.014	76	NC	12	NC	12
3402		2	max	0.885	70	1.063	100	2.484	13	0.016	104	NC	96	NC	107
3403			min	-0.722	106	-1.051	76	0.357	68	-0.018	72	549.947	15	299.134	15
3404		3	max	0.9	70	1.054	100	2.632	15	0.017	104	NC	96	NC	107
3405			min	-0.734	106	-1.032	76	0.383	66	-0.022	72	402.433	15	183.437	15
3406		4	max	0.914	70	1.019	104	2.622	15	0.017	104	NC	96	NC	99
3407			min	-0.747	106	-1.033	72	0.335	66	-0.039	15	549.947	15	165.943	15
3408		5	max	0.928	70	0.977	104	2.478	15	0.017	104	NC	107	NC	97
3409			min	-0.759	106	-1.076	72	0.283	66	-0.058	15	NC	12	186.345	15
3410	M512	1	max	0.858	70	1.025	104	2.153	13	0.018	104	NC	107	NC	107
3411			min	-0.675	106	-1.119	72	0.29	68	-0.029	15	NC	12	NC	12
3412		2	max	0.872	70	0.894	104	2.329	13	0.015	104	NC	107	NC	99
3413			min	-0.687	106	-0.949	72	0.351	66	-0.04	15	602.828	15	625.897	19
3414		3	max	0.885	70	0.818	104	2.389	15	0.012	104	NC	88	NC	101
3415			min	-0.698	106	-0.871	72	0.303	66	-0.051	15	440.101	15	482.074	19
3416		4	max	0.899	70	0.794	104	2.292	15	0.009	104	NC	107	NC	105
3417			min	-0.71	106	-0.883	72	0.268	66	-0.062	15	602.828	15	330.765	92
3418		5	max	0.912	70	0.827	104	2.069	15	0.006	104	NC	107	4964.677	60
3419			min	-0.722	106	-0.986	72	0.249	66	-0.073	15	NC	12	253.816	92
3420	M513	1	max	0.771	70	0.882	104	1.714	13	0.003	96	NC	107	NC	107
3421			min	-0.569	106	-1.032	72	0.243	68	-0.031	15	NC	12	NC	12
3422		2	max	0.781	70	0.465	104	1.662	15	0.004	104	NC	107	NC	64
3423			min	-0.577	106	-0.593	72	0.203	74	-0.036	15	286.02	72	297.205	100
3424		3	max	0.791	70	0.263	104	1.563	15	0.004	104	NC	107	2760.936	102
3425			min	-0.585	106	-0.389	72	0.094	74	-0.04	15	214.45	72	180.264	100
3426		4	max	0.8	70	0.273	104	1.399	15	0.005	104	NC	107	NC	106
3427			min	-0.593	106	-0.42	72	0.107	74	-0.044	15	285.766	72	137.715	13
3428		5	max	0.81	70	0.499	104	1.181	15	0.006	104	NC	107	1168.681	68
3429			min	-0.601	106	-0.686	72	0.136	66	-0.048	15	NC	12	93.286	13
3430	M514	1	max	0.494	101	0.04	57	0.23	106	0.002	106	NC	107	NC	107
3431			min	-0.497	73	-0.047	86	-0.249	70	-0.002	70	NC	12	NC	12
3432		2	max	0.37	101	-0.236	66	0.568	106	0.017	13	2570.216	66	NC	107
3433			min	-0.445	73	-1.944	15	-0.67	70	-0.01	98	353.171	15	1637.308	70
3434		3	max	0.25	105	-0.287	66	0.689	106	0.018	66	2160.124	66	NC	105
3435			min	-0.414	73	-2.544	15	-0.914	70	-0.023	94	269.674	15	1037.146	70

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3436		4	max	0.141	105	-0.228	66	0.572	106	0.011	62	2653.797	66	NC	107
3437			min	-0.382	73	-1.884	15	-0.667	70	-0.012	98	364.353	15	1674.41	70
3438		5	max	0.06	75	0.04	57	0.251	102	0.002	102	NC	107	NC	107
3439			min	-0.425	15	-0.046	86	-0.261	70	-0.002	70	NC	12	NC	12
3440	M515	1	max	0.484	101	0.041	57	0.231	76	0.002	76	NC	107	NC	107
3441			min	-0.502	73	-0.046	86	-0.25	100	-0.002	100	NC	12	NC	12
3442		2	max	0.363	101	-0.19	68	0.576	76	0.015	66	3116.782	68	NC	107
3443			min	-0.447	73	-1.685	13	-0.665	100	-0.017	94	407.302	13	1658.287	100
3444		3	max	0.247	105	-0.234	68	0.699	76	0.017	66	2596.634	68	NC	105
3445			min	-0.412	73	-2.267	13	-0.908	100	-0.047	15	302.494	13	1048.63	100
3446		4	max	0.141	105	-0.183	68	0.584	76	0.013	66	3213.435	68	NC	107
3447			min	-0.377	73	-1.692	13	-0.664	100	-0.033	15	405.666	13	1688.23	100
3448		5	max	0.062	75	0.041	57	0.252	72	0.002	76	NC	107	NC	107
3449			min	-0.414	13	-0.046	86	-0.262	100	-0.002	100	NC	12	NC	12
3450	M516	1	max	0.855	106	0.749	73	2.563	15	0.002	71	NC	107	NC	107
3451			min	-1.027	70	-0.564	105	0.311	66	-0.002	103	NC	12	NC	12
3452		2	max	0.849	106	1.292	73	2.635	15	0.018	103	NC	64	NC	101
3453			min	-1.02	70	-1.035	105	0.383	66	-0.019	71	84.987	103	373.28	92
3454		3	max	0.849	76	1.528	73	2.629	13	0.028	103	NC	62	2849.286	101
3455			min	-1.019	100	-1.239	105	0.402	68	-0.029	71	59.342	103	225.705	92
3456		4	max	0.855	76	1.315	73	2.516	13	0.02	103	NC	64	4916.539	95
3457			min	-1.026	100	-1.055	105	0.343	68	-0.02	71	82.005	103	182.192	64
3458		5	max	0.861	76	0.756	73	2.315	13	0.005	71	NC	107	2741.311	99
3459			min	-1.032	100	-0.57	105	0.261	68	-0.005	103	NC	12	100.715	15
3460	M517	1	max	0.736	106	0.775	73	1.889	15	0.001	75	NC	107	NC	107
3461			min	-0.78	70	-0.613	105	0.249	66	-0.005	16	NC	12	NC	12
3462		2	max	0.73	106	1.268	73	1.965	15	0.017	107	NC	72	NC	94
3463			min	-0.774	70	-1.023	105	0.297	67	-0.021	71	88.162	103	515.108	103
3464		3	max	0.727	76	1.465	73	1.964	13	0.027	107	NC	64	NC	101
3465			min	-0.769	100	-1.181	105	0.296	68	-0.031	71	61.577	103	347.851	92
3466		4	max	0.733	76	1.229	73	1.855	13	0.02	107	NC	64	7474.536	95
3467			min	-0.776	100	-0.972	105	0.26	68	-0.024	71	85.11	103	243.352	15
3468		5	max	0.74	76	0.659	73	1.66	13	0	75	NC	107	1846.577	67
3469			min	-0.783	100	-0.478	105	0.202	68	-0.006	13	NC	12	112.215	15
3470	M518	1	max	0.205	102	0.032	70	0.832	73	0.006	15	NC	107	NC	107
3471			min	-0.213	70	-0.037	102	-0.674	75	0.001	106	NC	12	NC	12
3472		2	max	0.198	102	0.037	70	2.197	73	0.012	73	NC	107	NC	46
3473			min	-0.207	70	-0.043	102	-2.143	75	-0.008	75	4874.567	102	34.173	71
3474		3	max	0.192	76	0.03	57	2.741	73	0.016	73	NC	107	NC	46
3475			min	-0.2	70	-0.039	86	-2.731	75	-0.013	75	NC	12	24.442	71
3476		4	max	0.198	72	0.037	72	2.268	73	0.013	73	NC	107	NC	46
3477			min	-0.206	100	-0.045	100	-2.226	75	-0.01	75	4308.436	100	32.578	71
3478		5	max	0.205	72	0.032	72	0.848	73	0.006	13	NC	107	NC	107
3479			min	-0.212	100	-0.037	100	-0.698	75	0.001	98	NC	12	NC	12
3480	M707	1	max	0.188	102	0.032	70	0.654	73	-0.001	67	NC	107	NC	107
3481			min	-0.203	70	-0.036	102	-0.538	101	-0.007	15	NC	12	NC	12
3482		2	max	0.182	106	0.036	70	0.914	73	0	77	NC	107	NC	97
3483			min	-0.196	70	-0.043	102	-0.762	101	-0.007	16	5238.339	102	168.308	71
3484		3	max	0.176	76	0.03	57	1.017	73	0	77	NC	107	NC	97
3485			min	-0.19	70	-0.039	86	-0.849	101	-0.007	13	NC	12	120.84	71
3486		4	max	0.182	76	0.036	72	0.926	73	0	77	NC	107	NC	97
3487			min	-0.196	100	-0.045	100	-0.77	101	-0.006	13	4486.166	100	161.603	71
3488		5	max	0.188	72	0.032	72	0.658	73	-0.001	68	NC	107	NC	107
3489			min	-0.202	100	-0.037	100	-0.536	101	-0.006	13	NC	12	NC	12
3490	M708	1	max	0.689	106	0.635	73	1.831	15	0.005	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3491			min	-0.741	70	-0.422	105	0.24	66	0	107	NC	12	NC	12
3492		2	max	0.683	106	1.164	73	1.928	15	0.02	103	NC	64	NC	105
3493			min	-0.734	70	-0.882	105	0.289	67	-0.017	75	88.153	103	461.94	103
3494		3	max	0.682	76	1.42	103	1.944	13	0.03	103	NC	62	NC	76
3495			min	-0.732	100	-1.105	75	0.294	68	-0.027	75	61.571	103	306.418	92
3496		4	max	0.689	76	1.2	73	1.85	13	0.022	103	NC	64	5440.258	12
3497			min	-0.739	100	-0.917	105	0.257	68	-0.019	75	85.102	103	321.075	92
3498		5	max	0.695	76	0.669	73	1.666	13	0.006	71	NC	107	NC	70
3499			min	-0.746	100	-0.461	105	0.197	68	-0.003	107	NC	12	151.858	15
3500	M709	1	max	0.664	106	-0.287	66	0.414	73	0	106	NC	107	NC	107
3501			min	-0.899	70	-2.544	15	-0.25	105	0	71	NC	12	NC	12
3502		2	max	0.657	106	-0.334	66	0.426	73	0.018	105	NC	107	NC	106
3503			min	-0.892	70	-2.484	15	-0.262	105	-0.018	73	3888.336	15	4942.891	77
3504		3	max	0.651	106	-0.342	68	0.43	73	0.024	105	NC	104	NC	106
3505			min	-0.884	70	-2.418	13	-0.266	105	-0.024	73	2788.95	15	3519.436	77
3506		4	max	0.655	76	-0.289	68	0.425	73	0.018	105	NC	107	NC	106
3507			min	-0.888	100	-2.347	13	-0.26	105	-0.018	73	3893.785	15	4942.891	77
3508		5	max	0.662	76	-0.234	68	0.413	73	0	107	NC	107	NC	107
3509			min	-0.896	100	-2.267	13	-0.248	105	0	71	NC	12	NC	12
3510	M710	1	max	0.548	106	-0.229	66	0.432	73	-0.001	66	NC	107	NC	107
3511			min	-0.641	70	-1.873	15	-0.39	101	-0.008	15	NC	12	NC	12
3512		2	max	0.541	106	-0.249	66	0.444	73	0.015	75	NC	107	NC	106
3513			min	-0.634	70	-1.819	15	-0.399	101	-0.021	103	4368.131	15	5194.969	71
3514		3	max	0.534	106	-0.246	68	0.45	73	0.021	75	NC	104	NC	106
3515			min	-0.626	70	-1.759	13	-0.402	101	-0.026	103	3121.324	15	3698.933	71
3516		4	max	0.538	76	-0.216	68	0.446	73	0.015	75	NC	107	NC	106
3517			min	-0.63	100	-1.692	13	-0.395	101	-0.021	103	4375.013	15	5194.969	71
3518		5	max	0.545	76	-0.182	68	0.435	73	-0.001	68	NC	107	NC	107
3519			min	-0.638	100	-1.617	13	-0.382	101	-0.008	13	NC	12	NC	12
3520	M711	1	max	0.259	102	0.04	57	0.571	103	0.006	14	NC	107	NC	107
3521			min	-0.27	70	-0.047	86	-0.269	75	0.001	107	NC	12	NC	12
3522		2	max	0.252	102	0.042	70	0.878	103	0.006	13	NC	107	NC	97
3523			min	-0.263	70	-0.051	102	-0.598	75	-0.001	107	5729.009	102	152.334	71
3524		3	max	0.246	76	0.039	57	0.886	103	0.006	13	NC	107	NC	97
3525			min	-0.257	70	-0.049	86	-0.608	75	-0.001	107	NC	12	148.339	71
3526		4	max	0.253	72	0.042	72	0.881	103	0.006	13	NC	107	NC	97
3527			min	-0.263	100	-0.051	100	-0.605	75	-0.001	107	5476.226	100	150.342	71
3528		5	max	0.26	72	0.04	57	0.568	103	0.006	13	NC	107	NC	107
3529			min	-0.271	100	-0.047	86	-0.275	75	0	107	NC	12	NC	12
3530	M712	1	max	0.237	106	0.04	57	0.545	73	-0.001	67	NC	107	NC	107
3531			min	-0.257	70	-0.047	86	-0.574	101	-0.007	15	NC	12	NC	12
3532		2	max	0.231	106	0.042	70	0.647	73	0	105	NC	107	NC	106
3533			min	-0.25	70	-0.05	102	-0.669	101	-0.007	16	6161.475	102	470.445	71
3534		3	max	0.225	76	0.039	57	0.651	73	0	105	NC	107	NC	106
3535			min	-0.243	70	-0.049	86	-0.669	101	-0.006	13	NC	12	457.895	71
3536		4	max	0.232	76	0.041	72	0.651	73	0	105	NC	107	NC	106
3537			min	-0.25	100	-0.051	100	-0.665	101	-0.006	13	5704.501	100	467.614	71
3538		5	max	0.239	76	0.04	57	0.552	73	-0.001	68	NC	107	NC	107
3539			min	-0.258	100	-0.047	86	-0.564	101	-0.006	13	NC	12	NC	12
3540	M713	1	max	0.551	106	-0.22	66	0.396	73	0.009	15	NC	107	NC	107
3541			min	-0.641	70	-1.809	15	-0.128	105	0.001	66	NC	12	NC	12
3542		2	max	0.544	106	-0.244	66	0.406	73	0.02	101	NC	107	NC	106
3543			min	-0.634	70	-1.774	15	-0.14	105	-0.014	77	3917.914	15	5195.265	73
3544		3	max	0.538	106	-0.24	68	0.409	73	0.026	101	NC	104	NC	106
3545			min	-0.626	70	-1.733	13	-0.145	105	-0.02	77	2813.406	15	3699.146	73

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3546		4	max	0.542	76	-0.21	68	0.403	73	0.02	101	NC	107	NC	106
3547			min	-0.631	100	-1.683	13	-0.14	105	-0.015	77	3923.446	15	5195.265	73
3548		5	max	0.55	76	-0.175	68	0.39	73	0.008	13	NC	107	NC	107
3549			min	-0.639	100	-1.624	13	-0.129	105	0.001	68	NC	12	NC	12
3550	M714	1	max	-0.244	66	0.872	74	0.257	73	0.004	76	NC	106	NC	107
3551			min	-1.795	15	-0.894	106	-0.179	105	-0.004	104	8584.616	107	546.866	87
3552		2	max	-0.238	66	0.831	74	0.408	73	0.062	103	NC	107	NC	102
3553			min	-1.798	15	-0.845	102	-0.288	105	-0.062	71	1445.455	72	420.793	71
3554		3	max	-0.232	66	0.783	70	0.453	73	0.068	103	NC	107	NC	89
3555			min	-1.8	15	-0.775	106	-0.291	105	-0.069	71	757.622	13	387.431	71
3556		4	max	-0.226	66	0.727	70	0.473	73	0.049	103	NC	107	NC	100
3557			min	-1.803	15	-0.683	106	-0.27	105	-0.05	71	440.063	13	439.974	71
3558		5	max	-0.22	66	0.653	70	0.4	73	0.001	76	NC	107	NC	107
3559			min	-1.805	15	-0.57	106	-0.155	105	-0.002	100	309.696	13	491.04	56
3560	M715	1	max	-0.2	68	0.905	76	0.17	105	0.004	106	NC	107	NC	107
3561			min	-1.616	13	-0.898	104	-0.247	73	-0.004	70	570.305	71	577.799	102
3562		2	max	-0.194	68	0.838	76	0.239	105	0.003	76	NC	105	NC	93
3563			min	-1.618	13	-0.86	100	-0.356	73	-0.004	100	841.935	71	612.431	71
3564		3	max	-0.188	68	0.765	76	0.302	105	0.006	71	NC	105	NC	99
3565			min	-1.62	13	-0.814	100	-0.458	73	-0.006	103	1211.072	70	321.253	71
3566		4	max	-0.182	68	0.679	76	0.333	105	0.007	71	NC	105	NC	106
3567			min	-1.623	13	-0.747	100	-0.528	73	-0.008	103	1504.144	70	259.355	71
3568		5	max	-0.176	68	0.572	76	0.16	105	0.001	76	NC	107	NC	107
3569			min	-1.625	13	-0.654	100	-0.399	73	-0.002	100	NC	12	484.903	70
3570	M716	1	max	-0.26	68	1.164	76	0.25	105	0.001	15	NC	107	NC	107
3571			min	-2.268	13	-1.205	100	-0.414	73	0	74	447.117	75	2097.61	71
3572		2	max	-0.253	68	1.067	76	0.327	105	0.003	71	NC	105	NC	106
3573			min	-2.269	13	-1.166	100	-0.492	73	-0.003	103	615.869	75	629.415	103
3574		3	max	-0.247	68	0.962	76	0.398	105	0.006	71	NC	105	NC	97
3575			min	-2.27	13	-1.111	100	-0.564	73	-0.005	103	951.495	75	330.178	103
3576		4	max	-0.241	68	0.84	76	0.437	105	0.007	71	NC	105	NC	97
3577			min	-2.27	13	-1.03	100	-0.603	73	-0.007	103	1245.733	70	266.573	103
3578		5	max	-0.235	68	0.695	76	0.272	105	0	107	NC	107	NC	107
3579			min	-2.271	13	-0.917	100	-0.437	73	0	71	NC	12	9837.953	14
3580	M717	1	max	-0.205	68	0.31	105	0.952	104	0.004	74	NC	107	NC	107
3581			min	-1.602	13	-0.564	73	-0.955	76	-0.004	106	586.194	71	917.758	57
3582		2	max	-0.199	68	0.337	105	0.894	100	0.004	70	NC	104	NC	107
3583			min	-1.604	13	-0.569	73	-0.88	76	-0.004	106	941.172	71	1261.26	57
3584		3	max	-0.193	68	0.358	105	0.84	100	0.004	70	NC	76	NC	107
3585			min	-1.606	13	-0.556	73	-0.804	76	-0.004	106	1054.666	103	985.932	13
3586		4	max	-0.187	68	0.368	105	0.777	100	0.004	70	NC	76	NC	107
3587			min	-1.609	13	-0.52	73	-0.717	76	-0.004	106	807.899	86	641.087	13
3588		5	max	-0.181	68	0.372	101	0.653	100	0.002	100	NC	105	NC	107
3589			min	-1.611	13	-0.456	73	-0.571	76	-0.001	76	497.827	86	429.588	13
3590	M718	1	max	-0.311	66	1.184	74	0.43	73	0.001	15	NC	107	NC	107
3591			min	-2.533	15	-1.148	76	-0.262	105	0	75	NC	12	3926.811	71
3592		2	max	-0.305	66	1.137	70	0.569	73	0.085	103	NC	107	NC	106
3593			min	-2.535	15	-1.07	106	-0.4	105	-0.085	71	786.39	13	366.397	103
3594		3	max	-0.299	66	1.084	70	0.58	73	0.092	103	NC	105	NC	106
3595			min	-2.536	15	-0.97	106	-0.412	105	-0.092	71	351.644	13	340.888	103
3596		4	max	-0.293	66	1.01	70	0.562	73	0.066	103	NC	107	NC	106
3597			min	-2.537	15	-0.844	106	-0.396	105	-0.066	71	222.699	13	391.704	103
3598		5	max	-0.287	66	0.918	70	0.437	73	0	107	NC	107	NC	107
3599			min	-2.538	15	-0.695	106	-0.273	105	0	71	162.025	13	7932.154	100
3600	M719	1	max	-0.254	66	0.934	74	0.586	73	0.004	104	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3601			min	-1.857	15	-0.952	106	-0.327	105	-0.003	76	NC	12	200.74	15
3602		2	max	-0.248	66	0.895	74	0.675	73	0.063	103	NC	105	NC	99
3603			min	-1.86	15	-0.911	102	-0.453	105	-0.062	71	901.339	72	269.572	16
3604		3	max	-0.242	66	0.839	70	0.654	73	0.069	103	NC	105	NC	89
3605			min	-1.863	15	-0.839	102	-0.477	105	-0.068	71	642.929	72	387.704	103
3606		4	max	-0.236	66	0.764	70	0.609	73	0.05	103	NC	107	NC	97
3607			min	-1.866	15	-0.727	106	-0.481	101	-0.049	71	654.818	13	440.11	103
3608		5	max	-0.23	66	0.656	70	0.468	73	0.002	100	NC	106	NC	107
3609			min	-1.868	15	-0.573	106	-0.398	101	-0.002	76	365.947	13	455.413	86
3610	M720	1	max	-0.132	66	0.5	74	0.171	73	0.006	76	NC	107	NC	107
3611			min	-0.964	15	-0.527	102	-0.115	105	-0.005	104	623.555	104	NC	12
3612		2	max	-0.126	66	0.461	74	0.219	73	0.005	76	NC	96	NC	107
3613			min	-0.969	15	-0.544	102	-0.108	105	-0.005	104	582.475	15	671.167	14
3614		3	max	-0.121	66	0.438	74	0.266	73	0.004	106	NC	92	NC	107
3615			min	-0.974	15	-0.533	102	-0.101	105	-0.004	70	437.329	15	335.538	14
3616		4	max	-0.115	66	0.43	74	0.319	15	0.003	106	NC	104	NC	107
3617			min	-0.98	15	-0.494	102	-0.093	105	-0.003	70	583.9	15	223.654	14
3618		5	max	-0.11	66	0.45	70	0.4	15	0.002	106	NC	107	NC	107
3619			min	-0.985	15	-0.428	102	-0.085	105	-0.002	70	487.219	62	167.715	14
3620	M721	1	max	-0.101	68	0.478	72	0.112	105	0.006	76	NC	107	NC	107
3621			min	-0.871	13	-0.472	104	-0.168	73	-0.006	104	874.085	72	NC	12
3622		2	max	-0.096	68	0.442	76	0.106	105	0.005	76	NC	106	NC	107
3623			min	-0.876	13	-0.507	100	-0.215	73	-0.005	100	664.141	13	693.167	14
3624		3	max	-0.09	68	0.421	76	0.1	105	0.004	76	NC	94	NC	107
3625			min	-0.881	13	-0.519	100	-0.262	73	-0.004	100	498.72	13	346.535	14
3626		4	max	-0.085	68	0.414	76	0.093	105	0.003	76	9620.769	90	NC	107
3627			min	-0.885	13	-0.506	100	-0.311	13	-0.003	100	665.994	13	230.983	14
3628		5	max	-0.079	68	0.421	76	0.086	105	0.002	76	NC	107	NC	107
3629			min	-0.89	13	-0.469	100	-0.389	13	-0.002	100	606.752	98	173.21	14
3630	M722	1	max	-0.107	68	0.526	76	0.341	105	0.006	104	NC	107	NC	107
3631			min	-0.868	13	-0.522	104	-0.614	73	-0.006	76	453.91	72	179.555	13
3632		2	max	-0.101	68	0.48	76	0.359	105	0.005	104	NC	69	NC	105
3633			min	-0.872	13	-0.545	100	-0.578	73	-0.005	76	689.556	13	239.407	13
3634		3	max	-0.096	68	0.446	76	0.376	105	0.004	100	NC	102	NC	105
3635			min	-0.877	13	-0.545	100	-0.543	73	-0.004	76	517.829	13	359.11	13
3636		4	max	-0.09	68	0.423	76	0.402	101	0.003	100	NC	106	NC	105
3637			min	-0.881	13	-0.518	100	-0.507	73	-0.003	76	691.553	13	494.361	103
3638		5	max	-0.084	68	0.411	76	0.432	101	0.002	100	NC	107	NC	105
3639			min	-0.885	13	-0.464	100	-0.47	73	-0.002	106	718.983	98	369.021	103
3640	M723	1	max	-0.141	66	0.548	74	0.633	73	0.006	104	NC	107	NC	107
3641			min	-1.011	15	-0.577	102	-0.35	105	-0.006	72	481.417	100	154.353	15
3642		2	max	-0.135	66	0.524	74	0.645	73	0.064	73	NC	104	NC	106
3643			min	-1.016	15	-0.614	102	-0.416	105	-0.064	101	435.218	15	206.784	16
3644		3	max	-0.13	66	0.499	74	0.604	73	0.068	73	NC	28	NC	107
3645			min	-1.022	15	-0.598	102	-0.432	105	-0.068	101	339.489	15	310.547	16
3646		4	max	-0.124	66	0.469	74	0.554	73	0.047	73	NC	104	NC	106
3647			min	-1.027	15	-0.533	102	-0.455	101	-0.046	101	465.801	15	555.451	91
3648		5	max	-0.119	66	0.45	70	0.473	73	0.003	70	NC	107	NC	106
3649			min	-1.032	15	-0.424	102	-0.448	101	-0.002	106	525.406	62	332.575	103
3650	M724	1	max	0.491	102	0.163	73	0.91	15	0.014	15	NC	107	NC	107
3651			min	-0.476	74	-0.116	105	0.124	66	0.002	68	NC	12	NC	12
3652		2	max	0.493	72	0.161	73	0.889	13	0.013	15	NC	107	NC	99
3653			min	-0.476	104	-0.117	105	0.118	68	0.002	68	693.34	76	746.29	72
3654		3	max	0.5	72	0.185	70	0.87	13	0.013	13	NC	107	NC	99
3655			min	-0.481	104	-0.143	106	0.1	68	0.002	68	519.813	76	472.119	102

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3656		4	max	0.506	72	0.174	70	0.847	13	0.012	13	NC	107	NC	99
3657			min	-0.487	104	-0.131	106	0.092	68	0.002	68	692.453	76	424.9	15
3658		5	max	0.512	72	0.161	73	0.822	13	0.012	13	NC	107	NC	88
3659			min	-0.492	104	-0.113	105	0.094	68	0.002	68	NC	12	315.329	15
3660	M725	1	max	0.549	106	0.631	73	1.057	15	-0.002	66	NC	107	NC	107
3661			min	-0.535	74	-0.341	105	0.15	66	-0.014	15	NC	12	NC	12
3662		2	max	0.549	76	0.626	73	1.018	13	-0.002	67	NC	107	NC	99
3663			min	-0.534	104	-0.343	105	0.138	68	-0.014	15	750.647	72	754.852	15
3664		3	max	0.555	72	0.622	73	0.982	13	-0.002	67	NC	107	NC	70
3665			min	-0.54	104	-0.344	105	0.12	68	-0.013	16	562.874	72	380.613	15
3666		4	max	0.561	72	0.62	73	0.945	13	-0.002	68	NC	107	4206.576	67
3667			min	-0.545	104	-0.342	105	0.112	68	-0.013	13	749.608	72	254.346	15
3668		5	max	0.568	72	0.619	73	0.907	13	-0.002	68	NC	107	7900.797	62
3669			min	-0.551	104	-0.339	105	0.114	68	-0.012	13	NC	12	191.8	15
3670	M726	1	max	1.143	104	0.272	105	2.062	13	0.004	13	NC	107	NC	107
3671			min	-1.134	76	-0.484	73	0.25	68	0	68	NC	12	NC	12
3672		2	max	1.136	104	0.272	105	2.123	13	0.004	13	NC	107	NC	100
3673			min	-1.127	76	-0.492	73	0.284	68	0	68	3951.577	72	458.434	15
3674		3	max	1.129	104	0.273	105	2.181	13	0.004	13	NC	107	6927.712	99
3675			min	-1.12	76	-0.496	73	0.322	68	0.001	67	2990.143	72	230.848	15
3676		4	max	1.122	104	0.273	105	2.238	15	0.004	15	NC	107	4839.328	99
3677			min	-1.113	76	-0.496	73	0.336	66	0	66	3988.56	72	156.239	15
3678		5	max	1.119	74	0.274	105	2.297	15	0.004	15	NC	107	3765.756	99
3679			min	-1.107	106	-0.493	73	0.297	66	0	66	NC	12	118.508	15
3680	M727	1	max	0.734	104	0.994	106	2.317	13	0.014	76	NC	107	NC	107
3681			min	-0.829	72	-1.111	70	0.243	68	-0.019	13	NC	12	NC	12
3682		2	max	0.72	104	1.128	106	2.493	13	0.015	76	NC	97	NC	99
3683			min	-0.814	72	-1.185	70	0.328	68	-0.024	13	703.647	102	486.531	15
3684		3	max	0.706	104	1.167	106	2.579	13	0.016	76	NC	88	NC	99
3685			min	-0.798	72	-1.195	74	0.382	68	-0.028	13	521.967	102	307.714	15
3686		4	max	0.693	104	1.105	106	2.547	15	0.017	76	NC	97	NC	99
3687			min	-0.783	72	-1.134	74	0.365	66	-0.033	13	701.559	102	304.512	15
3688		5	max	0.679	104	0.946	106	2.424	15	0.018	76	NC	107	NC	105
3689			min	-0.768	72	-1.008	70	0.34	66	-0.038	13	NC	12	291.343	64
3690	M728	1	max	1.11	104	0.2	105	2.09	13	0	68	NC	107	NC	107
3691			min	-1.105	76	-0.316	73	0.248	68	-0.004	13	NC	12	NC	12
3692		2	max	1.103	104	0.203	105	2.162	13	-0.001	68	NC	107	NC	100
3693			min	-1.099	76	-0.322	73	0.283	68	-0.004	13	2142.733	106	417.331	15
3694		3	max	1.097	104	0.205	105	2.225	13	-0.001	68	NC	107	6704.403	58
3695			min	-1.092	76	-0.325	73	0.322	68	-0.005	13	1613.292	106	214.482	15
3696		4	max	1.09	104	0.205	105	2.28	15	-0.001	66	NC	107	3502.974	99
3697			min	-1.085	76	-0.324	73	0.344	66	-0.005	15	2153.561	106	148.201	15
3698		5	max	1.086	74	0.203	105	2.332	15	0	66	NC	107	2812.614	99
3699			min	-1.079	76	-0.321	73	0.3	66	-0.005	15	NC	12	114.906	15
3700	M729	1	max	0.626	104	0.921	106	2.291	13	0.014	76	NC	107	NC	107
3701			min	-0.707	72	-0.981	70	0.238	68	-0.073	13	NC	12	NC	12
3702		2	max	0.612	104	1.124	106	2.367	13	0.011	76	NC	107	NC	105
3703			min	-0.691	72	-1.139	74	0.326	68	-0.072	13	445.303	102	480.879	100
3704		3	max	0.597	104	1.169	106	2.354	16	0.009	76	NC	77	4053.015	75
3705			min	-0.675	72	-1.163	74	0.335	66	-0.071	13	331.658	102	285.934	100
3706		4	max	0.583	104	1.049	106	2.221	15	0.007	76	NC	107	NC	60
3707			min	-0.659	72	-1.043	74	0.3	66	-0.07	13	444.466	102	233.959	100
3708		5	max	0.568	104	0.77	106	1.992	15	0.004	76	NC	107	6112.15	72
3709			min	-0.643	72	-0.778	74	0.291	67	-0.069	13	NC	12	179.301	13
3710	M730	1	max	0.482	104	0.742	106	1.849	13	0	68	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3711			min	-0.539	72	-0.766	70	0.202	68	-0.065	13	NC	12	NC	12
3712		2	max	0.466	104	1.066	106	1.747	13	0	76	NC	107	8757.761	64
3713			min	-0.522	72	-1.064	74	0.232	74	-0.064	13	246.396	72	260.65	100
3714		3	max	0.449	104	1.121	106	1.609	15	0.001	76	NC	107	2073.187	102
3715			min	-0.504	72	-1.107	74	0.108	74	-0.062	13	184.42	72	160.188	100
3716		4	max	0.433	104	0.904	106	1.415	15	0.003	76	NC	107	NC	106
3717			min	-0.486	72	-0.894	74	0.134	74	-0.061	13	246.207	72	106.648	13
3718		5	max	0.417	104	0.417	106	1.175	13	0.004	76	NC	107	1039.111	68
3719			min	-0.468	72	-0.426	70	0.154	68	-0.06	13	NC	12	74.753	13
3720	M731	1	max	-0.247	68	1.081	76	0.2	105	0.001	76	NC	105	NC	107
3721			min	-2.082	13	-1.091	104	-0.319	73	-0.002	100	125.151	72	1063.506	95
3722		2	max	-0.241	68	0.971	76	0.198	105	0.001	76	NC	104	NC	107
3723			min	-2.083	13	-1.024	100	-0.338	73	-0.002	100	170.729	72	1436.068	95
3724		3	max	-0.234	68	0.865	76	0.195	105	0.001	76	NC	107	NC	107
3725			min	-2.084	13	-0.959	100	-0.356	73	-0.002	100	261.98	72	829.775	13
3726		4	max	-0.228	68	0.761	76	0.193	105	0.001	76	NC	107	NC	107
3727			min	-2.085	13	-0.888	100	-0.375	73	-0.002	100	534.284	76	553.183	13
3728		5	max	-0.222	68	0.661	76	0.19	105	0.001	76	NC	107	NC	107
3729			min	-2.087	13	-0.813	100	-0.393	73	-0.002	13	1555.321	98	414.887	13
3730	M732	1	max	-0.251	68	1.116	76	0.273	105	0.001	100	NC	107	NC	107
3731			min	-2.078	13	-1.131	104	-0.483	73	-0.001	76	116.061	72	458.339	13
3732		2	max	-0.245	68	1.001	76	0.281	105	0.001	100	NC	101	NC	107
3733			min	-2.079	13	-1.058	100	-0.47	73	-0.001	76	156.145	72	611.119	13
3734		3	max	-0.239	68	0.887	76	0.289	105	0.002	100	NC	101	NC	107
3735			min	-2.08	13	-0.984	100	-0.457	73	-0.001	76	235.809	76	916.68	13
3736		4	max	-0.232	68	0.773	76	0.296	105	0.002	100	NC	101	NC	107
3737			min	-2.081	13	-0.902	100	-0.443	73	-0.001	76	472.155	76	1507.204	87
3738		5	max	-0.226	68	0.66	76	0.303	105	0.002	100	NC	107	NC	107
3739			min	-2.082	13	-0.813	100	-0.43	73	-0.001	76	687.086	45	1130.402	87
3740	M733	1	max	-0.298	66	1.079	74	0.324	73	0.001	76	NC	106	NC	107
3741			min	-2.317	15	-1.07	76	-0.203	105	-0.002	100	155.831	104	1052.905	95
3742		2	max	-0.292	66	0.994	74	0.343	73	0.001	76	NC	103	NC	107
3743			min	-2.318	15	-0.972	106	-0.2	105	-0.002	100	211.726	104	1421.573	95
3744		3	max	-0.285	66	0.926	70	0.361	73	0.001	76	NC	107	NC	107
3745			min	-2.32	15	-0.872	106	-0.197	105	-0.002	100	323.488	104	855.346	15
3746		4	max	-0.279	66	0.864	70	0.379	73	0.001	76	NC	107	NC	107
3747			min	-2.321	15	-0.768	106	-0.194	105	-0.002	100	339.182	13	570.23	15
3748		5	max	-0.273	66	0.808	70	0.397	73	0.001	76	NC	107	NC	107
3749			min	-2.323	15	-0.66	106	-0.19	105	-0.002	13	219.183	13	427.673	15
3750	M734	1	max	-0.297	66	1.11	74	0.49	73	0.001	100	NC	107	NC	107
3751			min	-2.309	15	-1.098	106	-0.276	105	-0.001	76	143.635	104	367.398	15
3752		2	max	-0.291	66	1.022	74	0.475	73	0.002	100	NC	105	NC	107
3753			min	-2.31	15	-0.999	106	-0.284	105	-0.001	76	192.628	104	489.864	15
3754		3	max	-0.285	66	0.948	70	0.46	73	0.002	100	NC	105	NC	107
3755			min	-2.312	15	-0.892	106	-0.292	105	-0.001	76	290.425	104	734.796	15
3756		4	max	-0.279	66	0.877	70	0.445	73	0.002	100	NC	105	NC	107
3757			min	-2.313	15	-0.78	106	-0.3	105	-0.001	76	371.053	13	1333.196	87
3758		5	max	-0.273	66	0.809	70	0.429	73	0.002	100	NC	107	NC	107
3759			min	-2.315	15	-0.661	106	-0.307	105	-0.001	76	234.257	13	999.486	95
3760	M735	1	max	0.529	72	-0.287	66	0.9	70	0.019	94	NC	107	NC	107
3761			min	-0.531	100	-2.544	15	-0.611	106	-0.015	66	NC	12	NC	12
3762		2	max	0.543	72	-0.358	67	0.841	70	0.019	94	NC	107	NC	102
3763			min	-0.544	100	-2.595	15	-0.597	106	-0.015	66	606.469	13	612.917	13
3764		3	max	0.556	72	-0.3	68	0.801	70	0.019	94	NC	107	NC	102
3765			min	-0.557	100	-2.553	13	-0.589	106	-0.016	66	434.814	13	376.116	13

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3766		4	max	0.569	72	-0.254	68	0.782	70	0.019	94	NC	107	NC	94
3767			min	-0.57	100	-2.371	13	-0.582	106	-0.016	66	606.469	13	345.117	13
3768		5	max	0.582	72	-0.226	68	0.782	70	0.019	94	NC	107	8289.976	102
3769			min	-0.583	100	-2.081	13	-0.583	106	-0.016	66	NC	12	394.937	13
3770	M736	1	max	0.52	72	-0.273	66	0.825	70	0.013	98	NC	107	NC	107
3771			min	-0.523	100	-2.319	15	-0.636	106	-0.018	62	NC	12	NC	12
3772		2	max	0.533	72	-0.296	68	0.731	70	0.013	98	NC	107	NC	90
3773			min	-0.535	100	-2.332	13	-0.59	106	-0.017	62	545.841	13	609.399	13
3774		3	max	0.545	72	-0.234	68	0.67	70	0.013	98	NC	107	NC	90
3775			min	-0.547	100	-2.236	13	-0.56	106	-0.016	62	393.077	13	384.076	13
3776		4	max	0.558	72	-0.195	68	0.643	70	0.013	98	NC	107	NC	90
3777			min	-0.559	100	-1.987	13	-0.541	106	-0.015	62	545.841	13	344.725	100
3778		5	max	0.571	72	-0.182	68	0.65	70	0.013	98	NC	107	NC	90
3779			min	-0.572	100	-1.617	13	-0.537	106	-0.014	62	NC	12	308.35	100
3780	M737	1	max	0.487	72	-0.229	66	0.71	70	0.006	98	NC	107	NC	107
3781			min	-0.507	100	-1.873	15	-0.602	102	-0.019	13	NC	12	NC	12
3782		2	max	0.498	72	-0.195	68	0.607	70	0.006	98	NC	107	9000.336	67
3783			min	-0.517	100	-1.703	13	-0.534	102	-0.016	13	1069.841	70	651.529	100
3784		3	max	0.509	72	-0.127	68	0.538	70	0.006	98	NC	107	5236.525	67
3785			min	-0.528	100	-1.491	13	-0.488	102	-0.013	13	799.238	70	366.471	100
3786		4	max	0.52	72	-0.09	68	0.503	70	0.006	98	NC	107	4328.45	67
3787			min	-0.538	100	-1.215	13	-0.462	102	-0.011	62	1068.53	70	279.104	100
3788		5	max	0.531	72	-0.086	68	0.504	70	0.006	98	NC	107	4169.356	67
3789			min	-0.549	100	-0.889	13	-0.459	102	-0.01	62	NC	12	244.217	100
3790	M738	1	max	0.416	72	-0.119	66	0.576	70	0.002	68	NC	107	NC	107
3791			min	-0.441	100	-1.039	15	-0.545	102	-0.019	13	NC	12	NC	12
3792		2	max	0.427	72	-0.042	68	0.462	70	0.001	68	NC	107	NC	107
3793			min	-0.451	100	-0.866	13	-0.457	102	-0.015	13	915.243	100	608.051	70
3794		3	max	0.438	72	0.022	76	0.389	70	0	68	NC	107	9066.593	107
3795			min	-0.461	100	-0.642	13	-0.397	102	-0.011	13	684.13	100	346.604	70
3796		4	max	0.448	72	0.052	76	0.357	70	-0.001	68	NC	107	9694.274	105
3797			min	-0.471	100	-0.351	13	-0.361	102	-0.007	13	914.283	100	268.611	70
3798		5	max	0.459	72	0.041	57	0.366	70	0.001	104	NC	107	NC	105
3799			min	-0.481	100	-0.046	86	-0.353	102	-0.003	15	NC	12	240.665	70
3800	M739	1	max	0.466	106	-0.287	66	0.625	76	0.015	66	NC	107	NC	107
3801			min	-0.732	70	-2.544	15	-0.749	100	-0.019	94	NC	12	NC	12
3802		2	max	0.451	106	-0.347	68	0.676	76	0.015	66	NC	107	NC	105
3803			min	-0.716	70	-2.568	16	-0.795	100	-0.019	94	716.95	13	2071.359	102
3804		3	max	0.437	106	-0.282	68	0.69	76	0.015	66	NC	90	NC	104
3805			min	-0.7	70	-2.519	13	-0.794	100	-0.02	94	509.932	13	1536.049	102
3806		4	max	0.422	106	-0.239	68	0.667	72	0.015	66	NC	107	NC	98
3807			min	-0.684	70	-2.347	13	-0.74	100	-0.022	15	716.95	13	955.545	13
3808		5	max	0.407	106	-0.222	68	0.616	72	0.015	66	NC	107	NC	102
3809			min	-0.668	70	-2.085	13	-0.638	100	-0.026	15	NC	12	396.577	13
3810	M740	1	max	0.384	106	-0.274	66	0.614	72	0.017	62	NC	107	NC	107
3811			min	-0.646	70	-2.327	15	-0.622	100	-0.014	98	NC	12	NC	12
3812		2	max	0.369	106	-0.284	68	0.659	72	0.016	62	NC	90	NC	105
3813			min	-0.629	70	-2.312	13	-0.675	100	-0.014	98	635.061	13	2193.331	19
3814		3	max	0.354	106	-0.216	68	0.662	72	0.014	62	NC	90	NC	106
3815			min	-0.612	70	-2.207	13	-0.667	100	-0.014	98	454.37	13	2189.759	92
3816		4	max	0.339	106	-0.178	68	0.622	72	0.013	62	NC	90	NC	90
3817			min	-0.596	70	-1.966	13	-0.592	100	-0.016	15	635.061	13	699.51	100
3818		5	max	0.323	106	-0.175	68	0.54	72	0.011	66	NC	107	NC	90
3819			min	-0.579	70	-1.624	13	-0.461	104	-0.023	15	NC	12	325.28	100
3820	M741	1	max	0.293	106	-0.22	66	0.548	72	0.01	62	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3821			min	-0.553	70	-1.809	15	-0.452	104	-0.008	98	NC	12	NC	12
3822		2	max	0.278	106	-0.182	68	0.57	72	0.01	62	NC	107	NC	105
3823			min	-0.537	70	-1.645	13	-0.475	104	-0.008	98	900.185	70	3681.752	100
3824		3	max	0.263	106	-0.114	68	0.556	72	0.009	62	NC	107	NC	105
3825			min	-0.521	70	-1.446	13	-0.453	104	-0.008	98	670.323	70	996.482	100
3826		4	max	0.249	106	-0.079	68	0.505	72	0.009	62	NC	107	6243.924	69
3827			min	-0.504	70	-1.191	13	-0.385	104	-0.008	98	899.256	70	449.758	100
3828		5	max	0.234	106	-0.08	68	0.419	72	0.008	62	NC	107	3685.15	67
3829			min	-0.488	70	-0.893	13	-0.273	104	-0.011	19	NC	12	256.083	100
3830	M742	1	max	0.164	106	-0.111	66	0.445	72	0.007	92	NC	107	NC	107
3831			min	-0.422	70	-0.991	15	-0.291	104	-0.003	68	NC	12	NC	12
3832		2	max	0.149	106	-0.036	68	0.462	72	0.005	92	NC	107	NC	107
3833			min	-0.406	70	-0.813	13	-0.316	104	-0.002	68	821.58	100	3653.09	102
3834		3	max	0.134	106	0.047	76	0.438	72	0.004	13	NC	77	NC	105
3835			min	-0.389	70	-0.596	13	-0.293	104	-0.001	68	612.171	100	1013.79	100
3836		4	max	0.122	76	0.071	76	0.374	72	0.004	13	NC	107	NC	105
3837			min	-0.377	13	-0.323	13	-0.219	104	0	104	820.806	100	442.027	100
3838		5	max	0.131	76	0.041	57	0.27	72	0.004	15	NC	107	NC	105
3839			min	-0.385	100	-0.046	86	-0.098	104	-0.001	104	NC	12	247.345	100
3840	M743	1	max	0.419	106	-0.111	66	0.428	15	0.012	15	NC	107	NC	107
3841			min	-0.459	70	-0.991	15	-0.08	105	0.001	66	NC	12	NC	12
3842		2	max	0.413	106	-0.11	66	0.421	16	0.012	15	NC	107	NC	107
3843			min	-0.452	70	-0.97	15	-0.082	105	0.002	66	2839.016	102	1039.165	102
3844		3	max	0.407	106	-0.117	67	0.417	13	0.011	16	NC	107	NC	107
3845			min	-0.446	70	-0.947	15	-0.083	105	0.002	67	2124.637	102	560.106	102
3846		4	max	0.412	76	-0.108	68	0.416	13	0.011	13	NC	107	NC	107
3847			min	-0.45	100	-0.921	13	-0.082	105	0.002	68	2844.531	102	405.357	102
3848		5	max	0.42	76	-0.08	68	0.416	13	0.011	13	NC	107	NC	105
3849			min	-0.459	100	-0.893	13	-0.082	105	0.001	68	NC	12	332.213	102
3850	M744	1	max	0.643	106	-0.274	66	0.4	73	0.004	15	NC	107	NC	107
3851			min	-0.8	70	-2.327	15	-0.189	105	0	66	NC	12	NC	12
3852		2	max	0.636	106	-0.302	66	0.4	73	0.004	15	NC	107	NC	107
3853			min	-0.793	70	-2.277	15	-0.191	105	0	66	3428.104	102	2146.159	102
3854		3	max	0.63	106	-0.318	67	0.4	73	0.004	14	NC	107	NC	107
3855			min	-0.786	70	-2.219	16	-0.192	105	0.001	69	2559.438	102	1226.691	102
3856		4	max	0.634	76	-0.274	68	0.399	73	0.004	13	NC	107	NC	107
3857			min	-0.791	100	-2.157	13	-0.191	105	0	68	3438.332	102	957.837	102
3858		5	max	0.642	76	-0.222	68	0.397	73	0.004	13	NC	107	NC	107
3859			min	-0.799	100	-2.085	13	-0.188	105	0	68	NC	12	864.162	102
3860	M745	1	max	0.642	106	-0.273	66	0.425	73	0	66	NC	107	NC	107
3861			min	-0.8	70	-2.319	15	-0.309	105	-0.004	15	NC	12	NC	12
3862		2	max	0.635	106	-0.301	66	0.425	73	0	66	NC	107	NC	107
3863			min	-0.793	70	-2.265	15	-0.309	105	-0.004	15	4966.585	102	3644.838	72
3864		3	max	0.628	106	-0.317	68	0.426	73	0	75	NC	107	NC	107
3865			min	-0.785	70	-2.207	13	-0.309	105	-0.004	16	3700.556	102	1590.457	72
3866		4	max	0.632	76	-0.275	68	0.426	73	0	68	NC	107	NC	107
3867			min	-0.79	100	-2.146	13	-0.307	105	-0.004	13	4988.084	102	937.288	72
3868		5	max	0.64	76	-0.226	68	0.425	73	0	68	NC	107	NC	107
3869			min	-0.798	100	-2.081	13	-0.304	105	-0.004	13	NC	12	631.296	72
3870	M746	1	max	0.408	106	-0.119	66	0.452	73	-0.001	66	NC	107	NC	107
3871			min	-0.453	70	-1.039	15	-0.452	101	-0.012	15	NC	12	NC	12
3872		2	max	0.402	106	-0.116	66	0.454	73	-0.002	66	NC	107	NC	107
3873			min	-0.446	70	-1.003	15	-0.451	101	-0.012	15	3251.285	70	1473.784	72
3874		3	max	0.396	106	-0.121	66	0.456	73	-0.002	67	NC	107	NC	107
3875			min	-0.439	70	-0.966	15	-0.449	101	-0.012	15	2439.504	102	676.651	102

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3876		4	max	0.4	76	-0.112	68	0.457	73	-0.002	68	NC	107	NC	107
3877			min	-0.444	100	-0.927	13	-0.446	101	-0.011	13	3258.519	70	416.533	102
3878		5	max	0.408	76	-0.086	68	0.457	73	-0.001	68	NC	107	NC	107
3879			min	-0.453	100	-0.889	13	-0.442	101	-0.011	13	NC	12	290.359	102
3880	M747	1	max	-0.07	105	-0.169	66	1.066	76	0.019	76	NC	107	NC	107
3881			min	-1.349	15	-1.886	15	-1.101	74	-0.036	13	NC	12	NC	12
3882		2	max	-0.079	105	-0.235	66	0.868	106	0.013	76	4855.918	107	6453.088	107
3883			min	-1.339	15	-2.34	15	-1.256	70	-0.027	13	178.183	14	128.529	14
3884		3	max	-0.088	105	-0.253	66	0.717	106	0.007	76	3609.574	107	NC	107
3885			min	-1.329	15	-2.425	15	-1.242	70	-0.019	13	130.941	14	91.647	13
3886		4	max	-0.097	105	-0.22	66	0.612	106	0.002	66	4797.757	107	NC	47
3887			min	-1.319	15	-2.094	15	-1.046	70	-0.011	15	177.847	14	105.664	72
3888		5	max	-0.106	105	-0.138	66	0.555	106	0.008	66	NC	107	NC	99
3889			min	-1.308	15	-1.392	15	-0.676	70	-0.009	94	NC	12	94.762	76
3890	M748	1	max	-0.047	105	1.705	13	1.09	104	0.015	76	NC	107	NC	107
3891			min	-1.229	13	0.131	68	-1.102	76	-0.071	13	NC	12	NC	12
3892		2	max	-0.056	105	1.477	13	0.944	104	0.008	76	NC	107	5348.793	77
3893			min	-1.22	13	0.086	68	-1.173	72	-0.06	13	930.023	71	307.976	15
3894		3	max	-0.065	105	1.329	13	0.819	104	0.002	76	NC	107	3491.46	77
3895			min	-1.211	13	0.067	68	-1.115	72	-0.049	15	711.447	71	185.235	100
3896		4	max	-0.074	105	1.22	13	0.707	104	0.003	66	NC	107	NC	68
3897			min	-1.202	13	0.071	68	-0.916	72	-0.039	15	930.4	71	137.701	100
3898		5	max	-0.083	105	1.194	13	0.637	100	0.01	66	NC	107	NC	99
3899			min	-1.193	13	0.102	68	-0.582	76	-0.028	15	NC	12	98.808	76
3900	M749	1	max	0.074	68	-0.152	98	1.121	104	0.019	104	NC	107	NC	107
3901			min	-0.864	13	-1.91	13	-1.131	76	-0.031	15	NC	12	NC	12
3902		2	max	0.087	68	-0.199	105	0.878	104	0.012	104	NC	105	9989.151	105
3903			min	-0.855	13	-2.311	13	-1.148	72	-0.021	15	201.451	13	181.811	16
3904		3	max	0.1	68	-0.181	105	0.712	104	0.005	104	NC	75	6100.187	71
3905			min	-0.847	13	-2.387	13	-1.069	72	-0.011	13	147.651	13	141.014	100
3906		4	max	0.114	68	-0.156	105	0.619	104	0.006	94	NC	105	NC	101
3907			min	-0.839	13	-2.091	13	-0.872	72	-0.007	66	201.021	13	113.317	100
3908		5	max	0.127	68	-0.123	98	0.625	100	0.013	94	NC	107	NC	97
3909			min	-0.83	13	-1.469	13	-0.57	76	-0.012	66	NC	12	91.779	76
3910	M750	1	max	0.058	66	2.093	15	1.147	106	0.018	104	NC	107	NC	107
3911			min	-1	15	0.205	96	-1.143	74	-0.06	15	NC	12	NC	12
3912		2	max	0.071	66	2.193	15	1.036	106	0.012	104	NC	105	NC	99
3913			min	-0.989	15	0.21	96	-1.03	74	-0.048	15	477.328	13	374.408	76
3914		3	max	0.085	66	2.163	15	0.903	106	0.006	104	NC	105	NC	99
3915			min	-0.979	15	0.204	96	-0.906	74	-0.037	15	340.097	13	180.149	76
3916		4	max	0.098	66	1.96	15	0.741	106	0.001	98	NC	105	NC	99
3917			min	-0.968	15	0.183	96	-0.783	70	-0.025	13	477.329	13	114.757	76
3918		5	max	0.112	66	1.628	15	0.557	106	0.007	98	NC	107	NC	103
3919			min	-0.957	15	0.152	96	-0.654	70	-0.014	13	NC	12	82.681	72
3920	M751	1	max	0.148	102	0.063	73	0.015	105	0.005	73	NC	107	NC	107
3921			min	-0.108	74	-0.035	105	-0.025	73	-0.003	105	NC	12	NC	12
3922		2	max	0.156	72	0.338	102	0.373	102	0.008	70	NC	105	NC	66
3923			min	-0.115	104	-0.292	74	-0.212	74	-0.004	106	229.045	102	208.892	15
3924		3	max	0.174	72	0.393	102	0.558	102	0.012	70	NC	105	2656.008	70
3925			min	-0.132	104	-0.342	74	-0.243	74	-0.007	106	171.864	102	109.467	15
3926		4	max	0.192	72	0.155	102	0.675	15	0.015	70	NC	105	1834.92	74
3927			min	-0.149	104	-0.115	74	-0.112	74	-0.01	106	229.208	102	77.336	15
3928		5	max	0.211	72	0.392	104	0.811	13	0.019	70	NC	107	482.127	75
3929			min	-0.166	104	-0.385	76	0.11	75	-0.012	106	NC	12	61.101	13
3930	M752	1	max	0.375	106	0.396	73	0.026	100	0.003	106	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3931			min	-0.601	70	-0.225	105	-0.013	76	-0.006	70	NC	12	NC	12
3932		2	max	0.367	106	0.819	72	0.341	102	0.005	106	NC	99	NC	100
3933			min	-0.592	70	-0.604	104	-0.142	74	-0.009	70	238.277	102	185.018	15
3934		3	max	0.36	106	1.07	72	0.599	15	0.006	106	9376.095	69	7082.024	104
3935			min	-0.583	70	-0.84	104	-0.147	74	-0.012	70	178.487	102	98.025	15
3936		4	max	0.353	106	1.038	72	0.786	15	0.008	106	NC	99	529.261	74
3937			min	-0.574	70	-0.821	104	-0.003	74	-0.015	70	238.453	102	69.896	13
3938		5	max	0.345	106	0.727	72	0.922	13	0.01	106	NC	107	496.021	68
3939			min	-0.564	70	-0.548	104	0.093	68	-0.018	70	NC	12	55.767	13
3940	M753	1	max	0.012	105	-0.089	66	0.48	106	0.009	76	NC	107	NC	107
3941			min	-0.54	15	-0.791	15	-0.566	70	-0.053	13	NC	12	NC	12
3942		2	max	0.008	105	-0.211	69	0.094	106	0.011	75	652.05	98	438.225	96
3943			min	-0.514	15	-1.572	15	-1.672	13	-0.039	13	94.606	15	61.853	15
3944		3	max	0.009	75	-0.224	69	-0.078	106	0.023	75	486.658	98	346.111	96
3945			min	-0.488	15	-1.691	15	-2.196	13	-0.028	73	70.355	15	45.853	15
3946		4	max	0.028	75	-0.094	77	-0.036	106	0.034	75	651.704	98	4229.193	104
3947			min	-0.462	15	-1.116	14	-1.696	13	-0.035	73	94.518	15	59.865	15
3948		5	max	0.046	75	0.213	73	0.221	106	0.046	71	NC	107	NC	97
3949			min	-0.436	15	-0.116	105	-0.341	70	-0.043	77	NC	12	169.889	72
3950	M754	1	max	0.019	105	0.587	13	0.432	104	0.018	106	NC	107	NC	107
3951			min	-0.502	13	0.044	68	-0.545	72	-0.02	70	NC	12	NC	12
3952		2	max	0.014	105	-0.017	96	0.09	104	0.015	106	818.63	99	499.415	68
3953			min	-0.479	13	-0.23	15	-1.321	15	-0.016	70	160.54	13	84.067	13
3954		3	max	0.013	75	-0.107	98	-0.056	104	0.023	77	617.351	99	408.826	76
3955			min	-0.456	13	-0.637	13	-1.689	15	-0.026	71	121.976	13	63.89	13
3956		4	max	0.031	75	-0.097	98	-0.011	104	0.033	77	818.085	99	NC	76
3957			min	-0.433	13	-0.671	13	-1.3	15	-0.037	71	160.289	13	87.276	13
3958		5	max	0.049	75	0.067	105	0.231	104	0.044	77	NC	107	NC	95
3959			min	-0.41	13	-0.296	13	-0.321	72	-0.048	71	NC	12	213.137	72
3960	M755	1	max	0.292	77	0.98	16	0.52	106	0.007	104	NC	107	NC	107
3961			min	-0.449	101	-0.041	105	-0.604	70	-0.058	15	NC	12	NC	12
3962		2	max	0.311	77	0.203	77	0.071	106	0.006	74	772.302	66	490.135	96
3963			min	-0.451	101	-0.33	101	-1.58	13	-0.044	15	126.367	15	65.48	15
3964		3	max	0.335	73	0.073	66	-0.131	106	0.005	74	582.232	66	541.026	104
3965			min	-0.453	101	-0.544	15	-2.064	13	-0.029	15	95.746	15	48.706	15
3966		4	max	0.36	73	0.077	66	-0.09	106	0.007	75	771.817	66	1169.43	74
3967			min	-0.455	101	-0.566	15	-1.611	13	-0.015	15	126.212	15	62.631	15
3968		5	max	0.385	73	0.232	73	0.197	106	0.011	71	NC	107	NC	103
3969			min	-0.458	101	-0.296	101	-0.325	70	-0.01	103	NC	12	139.504	72
3970	M756	1	max	0.299	77	0.028	105	0.475	104	0.019	70	NC	107	NC	107
3971			min	-0.428	101	-0.994	13	-0.587	72	-0.016	106	NC	12	NC	12
3972		2	max	0.322	73	-0.073	105	0.064	104	0.015	70	719.988	68	594.397	76
3973			min	-0.432	101	-1.66	13	-1.473	15	-0.013	106	108.035	13	74.434	13
3974		3	max	0.346	73	-0.075	105	-0.116	104	0.011	70	537.091	68	795.109	76
3975			min	-0.436	101	-1.748	13	-1.902	15	-0.009	106	80.246	13	56.163	13
3976		4	max	0.369	73	0.025	105	-0.068	104	0.009	73	719.565	68	1116.975	106
3977			min	-0.44	101	-1.224	13	-1.446	15	-0.008	75	107.921	13	77.572	13
3978		5	max	0.393	73	0.224	105	0.211	104	0.01	103	NC	107	NC	103
3979			min	-0.444	101	-0.32	73	-0.297	72	-0.011	71	NC	12	164.703	72
3980	M757	1	max	-0.057	105	-0.15	66	0.858	106	0.008	76	NC	107	NC	107
3981			min	-1.058	15	-1.435	15	-0.92	70	-0.062	13	NC	12	NC	12
3982		2	max	-0.061	105	-0.265	66	0.449	106	0.006	106	746.797	99	626.177	104
3983			min	-1.036	15	-2.127	15	-1.441	13	-0.047	13	108.327	15	70.35	15
3984		3	max	-0.065	105	-0.289	66	0.237	106	0.003	106	556.979	99	1694.764	104
3985			min	-1.014	15	-2.243	15	-1.908	13	-0.032	13	80.461	15	51.565	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
3986		4	max	-0.069	105	-0.219	69	0.218	106	0.001	106	746.343	99	NC	40
3987			min	-0.992	15	-1.749	15	-1.493	13	-0.017	15	108.212	15	65.298	15
3988		5	max	-0.073	105	-0.056	68	0.395	106	0.003	96	NC	107	NC	99
3989			min	-0.97	15	-0.677	15	-0.532	70	-0.004	64	NC	12	96.106	72
3990	M758	1	max	-0.039	105	1.238	13	0.868	104	0.002	76	NC	107	NC	107
3991			min	-0.967	13	0.106	68	-0.961	72	-0.061	13	NC	12	NC	12
3992		2	max	-0.044	105	0.578	13	0.526	104	0.001	76	992.39	96	885.79	76
3993			min	-0.948	13	-0.022	68	-1.38	72	-0.05	13	203.839	14	105.711	13
3994		3	max	-0.049	105	0.241	17	0.341	104	-0.001	76	749.264	96	NC	46
3995			min	-0.929	13	-0.122	72	-1.442	72	-0.039	13	155.421	14	81.603	13
3996		4	max	-0.053	105	0.193	13	0.307	104	0	66	991.59	96	964.497	68
3997			min	-0.91	13	-0.092	72	-1.146	72	-0.028	15	203.433	14	90.338	100
3998		5	max	-0.058	105	0.469	13	0.429	104	0.005	66	NC	107	NC	97
3999			min	-0.891	13	0.026	68	-0.492	72	-0.017	15	NC	12	101.138	76
4000	M759	1	max	0.119	66	1.694	15	0.908	106	0.007	74	NC	107	NC	107
4001			min	-0.737	15	0.121	96	-0.971	70	-0.076	15	NC	12	NC	12
4002		2	max	0.133	66	0.899	15	0.44	106	0.004	74	964.975	66	1871.423	104
4003			min	-0.715	15	-0.072	105	-1.375	70	-0.06	15	166.28	15	81.877	15
4004		3	max	0.148	66	0.499	16	0.198	106	0.002	74	728.43	66	1177.946	74
4005			min	-0.692	15	-0.171	105	-1.654	13	-0.044	15	126.397	15	60.506	15
4006		4	max	0.163	66	0.459	13	0.176	106	0	74	964.218	66	1121.706	96
4007			min	-0.67	15	-0.163	105	-1.308	13	-0.027	13	166.01	15	68.748	72
4008		5	max	0.178	66	0.814	16	0.379	106	0.003	68	NC	107	NC	103
4009			min	-0.648	15	-0.049	105	-0.517	70	-0.012	13	NC	12	85.72	76
4010	M760	1	max	0.135	68	-0.089	98	0.92	104	0.004	104	NC	107	NC	107
4011			min	-0.613	13	-1.533	13	-1.004	72	-0.037	15	NC	12	NC	12
4012		2	max	0.15	68	-0.19	98	0.492	104	0.002	104	798.727	68	4357.562	76
4013			min	-0.595	13	-2.118	13	-1.361	72	-0.028	15	125.963	13	89.575	13
4014		3	max	0.164	68	-0.21	98	0.266	104	0	107	595.478	68	838.562	106
4015			min	-0.59	101	-2.209	13	-1.586	15	-0.018	15	93.413	13	67.894	13
4016		4	max	0.179	68	-0.133	105	0.239	104	0.002	98	798.206	68	1359.27	68
4017			min	-0.594	101	-1.772	13	-1.197	15	-0.009	13	125.808	13	77.65	100
4018		5	max	0.195	77	0.04	105	0.414	104	0.006	94	NC	107	NC	97
4019			min	-0.599	101	-0.84	13	-0.473	72	-0.006	66	NC	12	88.937	76
4020	M761	1	max	-0.075	105	-0.157	66	1.147	76	0.023	15	NC	107	NC	107
4021			min	-1.538	15	-2.067	15	-1.2	70	-0.014	104	NC	12	NC	12
4022		2	max	-0.085	105	-0.213	66	0.999	106	0.018	15	NC	107	NC	100
4023			min	-1.533	15	-2.422	15	-1.315	70	-0.008	104	251.185	14	183.897	13
4024		3	max	-0.094	105	-0.235	66	0.869	106	0.013	13	NC	107	NC	77
4025			min	-1.527	15	-2.519	15	-1.295	70	-0.002	98	183.074	14	124.358	13
4026		4	max	-0.104	105	-0.217	66	0.752	106	0.011	62	NC	107	NC	77
4027			min	-1.522	15	-2.314	15	-1.129	70	-0.008	98	250.517	14	117.148	72
4028		5	max	-0.113	105	-0.165	66	0.651	106	0.016	62	NC	107	NC	99
4029			min	-1.516	15	-1.848	15	-0.828	70	-0.014	98	NC	12	97.549	76
4030	M762	1	max	-0.045	105	1.805	13	1.205	104	0.015	76	NC	107	NC	107
4031			min	-1.394	13	0.111	68	-1.18	76	-0.019	13	NC	12	NC	12
4032		2	max	-0.055	105	1.821	13	1.108	104	0.007	76	NC	103	NC	107
4033			min	-1.389	13	0.096	68	-1.18	72	-0.021	13	1393.927	72	468.618	100
4034		3	max	-0.064	105	1.812	13	1.005	104	0.003	66	NC	103	NC	107
4035			min	-1.385	13	0.094	68	-1.104	72	-0.023	15	977.985	17	243.69	104
4036		4	max	-0.074	105	1.732	13	0.887	104	0.009	66	NC	103	NC	96
4037			min	-1.381	13	0.102	68	-0.925	72	-0.026	15	1391.417	72	157.987	104
4038		5	max	-0.084	105	1.629	13	0.806	100	0.015	66	NC	107	NC	99
4039			min	-1.376	13	0.124	68	-0.668	76	-0.029	15	NC	12	100.447	76
4040	M763	1	max	0.001	66	2.268	15	1.142	76	0.014	104	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4041			min	-1.169	15	0.23	96	-1.191	74	-0.022	15	NC	12	NC	12
4042		2	max	0.014	66	2.223	15	0.942	106	0.008	104	NC	105	2565.53	105
4043			min	-1.163	15	0.22	96	-1.206	70	-0.019	15	1227.536	103	270.382	72
4044		3	max	0.027	66	2.184	15	0.795	106	0.001	98	NC	105	1808.497	96
4045			min	-1.157	15	0.218	96	-1.15	70	-0.017	13	945.076	103	151.204	72
4046		4	max	0.04	66	2.107	15	0.694	106	0.007	98	NC	105	2011.549	96
4047			min	-1.151	15	0.219	96	-1.02	70	-0.016	13	1228.195	103	113.248	72
4048		5	max	0.053	66	2.037	15	0.644	106	0.013	98	NC	107	NC	99
4049			min	-1.146	15	0.228	96	-0.818	70	-0.017	62	NC	12	97.26	76
4050	M764	1	max	0.018	68	-0.183	98	1.196	104	0.019	13	NC	107	NC	107
4051			min	-1.031	13	-2.063	13	-1.174	76	-0.014	76	NC	12	NC	12
4052		2	max	0.031	68	-0.226	98	1.01	104	0.019	13	7608.8	105	4215.939	101
4053			min	-1.027	13	-2.369	13	-1.131	72	-0.007	76	293.642	13	321.386	100
4054		3	max	0.044	68	-0.223	105	0.874	104	0.02	15	5787.886	105	4931.565	67
4055			min	-1.023	13	-2.456	13	-1.042	72	-0.004	66	213.003	13	184.339	100
4056		4	max	0.056	68	-0.217	105	0.786	104	0.02	15	7756.048	105	NC	69
4057			min	-1.019	13	-2.28	13	-0.875	72	-0.01	66	292.73	13	138.301	104
4058		5	max	0.069	68	-0.191	98	0.794	100	0.021	15	NC	107	NC	99
4059			min	-1.015	13	-1.883	13	-0.659	76	-0.015	66	NC	12	99.793	76
4060	M765	1	max	0.956	106	-0.256	66	0.587	73	-0.001	66	NC	107	NC	107
4061			min	-0.94	74	-1.856	15	-0.304	105	-0.009	15	NC	12	NC	12
4062		2	max	0.959	76	-0.281	66	0.651	73	0.11	107	9489.004	96	NC	46
4063			min	-0.942	104	-1.827	15	-0.37	105	-0.117	71	1616.003	15	712.777	71
4064		3	max	0.966	76	-0.275	68	0.679	73	0.224	103	6269.389	96	NC	46
4065			min	-0.949	104	-1.781	13	-0.401	105	-0.232	71	1073.47	15	487.412	71
4066		4	max	0.972	76	-0.243	68	0.645	73	0.11	107	NC	96	NC	46
4067			min	-0.955	104	-1.701	13	-0.37	105	-0.117	71	1556.094	72	712.777	71
4068		5	max	0.978	76	-0.206	68	0.576	73	-0.001	68	NC	107	NC	107
4069			min	-0.961	104	-1.603	13	-0.302	105	-0.009	13	NC	12	NC	12
4070	M766	1	max	0.899	76	-0.246	66	0.222	73	0.01	15	NC	107	NC	107
4071			min	-0.88	74	-1.795	15	-0.17	105	0.001	66	NC	12	NC	12
4072		2	max	0.906	76	-0.274	66	0.29	73	0.122	103	9627.906	66	NC	46
4073			min	-0.884	104	-1.783	15	-0.239	105	-0.114	75	1595.367	72	691.785	103
4074		3	max	0.913	76	-0.27	68	0.321	73	0.24	103	6324.472	66	NC	46
4075			min	-0.891	104	-1.755	13	-0.27	105	-0.232	71	1040.199	72	473.053	103
4076		4	max	0.919	76	-0.238	68	0.288	73	0.122	103	NC	96	NC	46
4077			min	-0.897	104	-1.692	13	-0.236	105	-0.114	75	1489.78	72	691.785	103
4078		5	max	0.926	72	-0.2	68	0.219	73	0.009	13	NC	107	NC	107
4079			min	-0.903	104	-1.612	13	-0.166	105	0.001	68	NC	12	NC	12
4080	M768	1	max	0.893	74	0.512	105	1.861	15	0.005	15	NC	107	NC	106
4081			min	-0.909	102	-0.732	73	0.25	66	0	107	213.173	63	333.889	104
4082		2	max	0.896	74	0.919	105	1.881	15	0.005	15	NC	88	NC	107
4083			min	-0.912	102	-1.14	73	0.266	66	0	107	60.835	71	469.828	104
4084		3	max	0.899	74	1.332	105	1.916	15	0.005	15	NC	88	NC	107
4085			min	-0.916	102	-1.548	73	0.281	67	0	107	30.12	71	335.171	72
4086		4	max	0.902	74	1.748	105	1.955	13	0.005	15	NC	88	NC	107
4087			min	-0.919	102	-1.957	73	0.281	68	0	107	19.976	71	215.016	72
4088		5	max	0.905	74	2.163	105	1.997	13	0.005	15	NC	104	NC	107
4089			min	-0.922	102	-2.366	73	0.272	68	0	107	14.943	71	158.313	72
4090	M769	1	max	1.073	70	0.488	105	2.542	15	0.001	73	NC	107	NC	107
4091			min	-0.951	106	-0.656	73	0.299	66	-0.001	101	198.108	63	157.275	104
4092		2	max	1.076	70	0.928	105	2.577	15	0.001	73	NC	104	NC	107
4093			min	-0.954	106	-1.095	73	0.307	66	-0.001	101	42.78	71	212.251	104
4094		3	max	1.078	70	1.37	105	2.618	15	0.001	73	NC	106	NC	107
4095			min	-0.956	106	-1.534	73	0.315	66	-0.001	101	21.319	71	194.992	72

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4096		4	max	1.081	70	1.813	105	2.661	15	0.001	73	NC	106	NC	107
4097			min	-0.958	106	-1.974	73	0.324	66	-0.001	101	14.187	71	128.529	72
4098		5	max	1.083	70	2.256	105	2.704	15	0.001	73	NC	106	NC	107
4099			min	-0.96	106	-2.413	73	0.332	66	-0.001	101	10.63	71	95.875	72
4100	M771	1	max	1.135	70	0.479	105	2.54	15	0.001	71	NC	107	NC	107
4101			min	-1.066	106	-0.648	73	0.307	66	-0.001	107	196.742	63	260.491	104
4102		2	max	1.139	70	1.035	105	2.592	15	0.001	71	NC	106	NC	107
4103			min	-1.069	106	-1.2	73	0.324	66	-0.001	107	44.623	71	368.121	104
4104		3	max	1.142	70	1.6	105	2.664	15	0.001	71	NC	106	NC	107
4105			min	-1.072	106	-1.754	73	0.342	66	-0.001	107	22.09	71	192.411	13
4106		4	max	1.145	70	2.168	105	2.742	15	0.001	71	NC	98	NC	107
4107			min	-1.075	106	-2.308	73	0.36	66	-0.001	107	14.649	71	118.775	13
4108		5	max	1.149	70	2.736	105	2.82	15	0.001	71	NC	99	NC	107
4109			min	-1.078	106	-2.862	73	0.378	66	-0.001	107	10.958	71	85.903	13
4110	M776	1	max	0.829	74	0.346	105	1.8	15	0.001	75	NC	107	NC	106
4111			min	-0.843	102	-0.467	73	0.24	66	-0.005	15	201.034	63	355.79	104
4112		2	max	0.832	74	0.754	105	1.829	15	0.001	75	NC	90	NC	99
4113			min	-0.846	102	-0.869	73	0.255	66	-0.005	15	60.581	71	502.302	104
4114		3	max	0.835	74	1.168	105	1.873	15	0.001	75	NC	90	NC	107
4115			min	-0.849	102	-1.273	73	0.271	66	-0.005	15	29.995	71	316.216	72
4116		4	max	0.838	74	1.584	105	1.921	16	0.001	75	NC	90	NC	107
4117			min	-0.853	102	-1.677	73	0.279	67	-0.005	15	19.893	71	195.504	13
4118		5	max	0.841	74	2	105	1.971	13	0.001	75	NC	98	NC	107
4119			min	-0.856	102	-2.081	73	0.277	68	-0.005	15	14.881	71	140.224	13
4120	M777	1	max	0.775	70	0.347	105	1.804	15	-0.001	66	NC	107	NC	107
4121			min	-0.762	106	-0.514	73	0.232	66	-0.005	15	192.31	63	209.368	104
4122		2	max	0.778	70	0.673	105	1.825	15	-0.001	66	NC	87	NC	107
4123			min	-0.764	106	-0.838	73	0.24	66	-0.005	15	57.224	71	282.469	104
4124		3	max	0.78	70	1.002	105	1.85	15	-0.001	66	NC	87	NC	107
4125			min	-0.767	106	-1.162	73	0.248	66	-0.005	15	28.519	71	264.286	72
4126		4	max	0.783	70	1.331	105	1.877	15	-0.001	66	NC	87	NC	107
4127			min	-0.769	106	-1.486	73	0.256	66	-0.005	15	18.978	71	174.215	72
4128		5	max	0.785	70	1.66	105	1.903	15	-0.001	66	NC	98	NC	107
4129			min	-0.771	106	-1.81	73	0.264	66	-0.005	15	14.221	71	129.957	72
4130	M778	1	max	0.708	70	0.294	105	1.807	15	0.001	107	NC	107	NC	107
4131			min	-0.654	106	-0.508	73	0.225	66	-0.005	14	280.156	63	154.939	104
4132		2	max	0.71	70	0.489	105	1.829	15	0.001	107	NC	30	NC	107
4133			min	-0.656	106	-0.699	73	0.229	66	-0.005	14	94.931	71	208.398	104
4134		3	max	0.713	70	0.686	105	1.856	15	0.001	107	NC	30	NC	96
4135			min	-0.658	106	-0.891	73	0.232	66	-0.005	14	47.21	71	208.195	72
4136		4	max	0.715	70	0.884	105	1.883	15	0.001	107	NC	87	6858.388	96
4137			min	-0.66	106	-1.083	73	0.237	66	-0.005	14	31.379	71	137.565	72
4138		5	max	0.718	70	1.081	105	1.911	15	0.001	107	NC	100	NC	104
4139			min	-0.663	106	-1.275	73	0.241	66	-0.005	14	23.499	71	102.733	72
4140	M779	1	max	0.986	70	0.432	105	2.543	15	0.003	103	NC	107	NC	107
4141			min	-0.804	106	-0.598	73	0.292	66	-0.003	71	298.411	63	122.579	104
4142		2	max	0.989	70	0.691	105	2.581	15	0.003	103	NC	106	NC	107
4143			min	-0.807	106	-0.856	73	0.295	66	-0.003	71	72.156	71	164.989	104
4144		3	max	0.991	70	0.953	105	2.624	15	0.003	103	NC	106	NC	96
4145			min	-0.809	106	-1.115	73	0.299	66	-0.003	71	35.877	71	159.668	72
4146		4	max	0.994	70	1.216	105	2.668	15	0.003	103	NC	106	6550.223	96
4147			min	-0.811	106	-1.373	73	0.304	66	-0.003	71	23.844	71	105.459	72
4148		5	max	0.996	70	1.478	105	2.713	15	0.003	103	NC	106	NC	104
4149			min	-0.813	106	-1.632	73	0.308	66	-0.003	71	17.855	71	78.742	72
4150	M780	1	max	0.829	70	0.535	105	1.866	15	0.005	15	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4151			min	-0.824	106	-0.706	73	0.242	66	0.001	105	209.851	63	171.935	104
4152		2	max	0.832	70	0.86	105	1.885	15	0.005	15	NC	90	NC	107
4153			min	-0.826	106	-1.034	73	0.248	66	0.001	105	57.251	103	231.488	104
4154		3	max	0.835	70	1.187	105	1.907	15	0.005	15	NC	90	NC	98
4155			min	-0.829	102	-1.362	73	0.255	66	0.001	105	28.608	103	237.118	72
4156		4	max	0.837	70	1.515	105	1.932	15	0.005	15	NC	87	NC	98
4157			min	-0.831	102	-1.69	73	0.261	66	0.001	105	19.066	103	156.481	72
4158		5	max	0.84	70	1.842	105	1.956	15	0.005	15	NC	104	NC	104
4159			min	-0.834	102	-2.019	73	0.268	66	0.001	105	14.298	103	116.79	72
4160	M781	1	max	0.737	70	0.513	101	1.87	15	0.005	16	NC	107	NC	107
4161			min	-0.688	106	-0.627	73	0.234	66	-0.001	75	330.662	95	114.57	104
4162		2	max	0.739	70	0.706	101	1.897	15	0.005	16	NC	90	NC	66
4163			min	-0.69	106	-0.822	73	0.233	66	-0.001	75	95.263	103	153.756	104
4164		3	max	0.742	70	0.902	101	1.928	15	0.005	16	NC	90	NC	66
4165			min	-0.692	106	-1.019	73	0.233	66	-0.001	75	47.584	103	163.242	72
4166		4	max	0.744	70	1.098	101	1.96	15	0.005	16	NC	87	NC	66
4167			min	-0.695	106	-1.215	73	0.232	66	-0.001	75	31.707	103	108.066	72
4168		5	max	0.747	70	1.294	101	1.992	15	0.005	16	NC	104	NC	104
4169			min	-0.697	106	-1.411	73	0.232	66	-0.001	75	23.775	103	80.776	72
4170	M782	1	max	0.001	74	0.001	42	0.061	101	0.006	101	NC	107	NC	107
4171			min	-0.001	42	-0.001	74	-0.058	77	-0.005	77	NC	12	NC	12
4172		2	max	0.002	74	0.016	106	0.22	75	0.004	101	NC	105	NC	106
4173			min	-0.002	42	-0.221	13	-0.245	73	-0.004	73	507.641	16	347.928	73
4174		3	max	0.003	74	0.023	106	0.364	75	0.003	75	NC	105	NC	106
4175			min	-0.004	42	-0.31	13	-0.401	73	-0.003	73	361.694	14	183.03	73
4176		4	max	0.004	74	0.02	106	0.486	75	0.002	75	NC	105	NC	106
4177			min	-0.005	42	-0.221	13	-0.513	73	-0.002	73	507.641	14	130.415	73
4178		5	max	0.005	74	0.008	106	0.594	101	0.001	98	NC	107	NC	106
4179			min	-0.006	42	-0.008	40	-0.594	73	-0.002	40	NC	12	104.305	73
4180	M783	1	max	0.001	106	0.001	100	0.058	107	0.005	107	NC	107	NC	107
4181			min	-0.001	40	-0.001	46	-0.061	41	-0.006	41	NC	12	NC	12
4182		2	max	0.002	106	0.016	74	0.219	107	0.004	73	NC	107	NC	104
4183			min	-0.002	40	-0.221	15	-0.247	41	-0.004	41	507.641	14	349.375	41
4184		3	max	0.003	106	0.023	74	0.364	107	0.003	73	NC	107	NC	100
4185			min	-0.004	40	-0.31	15	-0.402	41	-0.003	75	361.694	14	183.831	41
4186		4	max	0.004	106	0.02	74	0.486	107	0.002	73	NC	107	NC	104
4187			min	-0.005	40	-0.221	15	-0.514	41	-0.002	75	507.641	14	131.026	41
4188		5	max	0.005	106	0.008	74	0.594	73	0.002	102	NC	107	NC	106
4189			min	-0.006	40	-0.008	42	-0.594	41	-0.001	66	NC	12	104.305	73
4190	M784	1	max	0.001	74	0.001	42	0.058	75	0.005	75	NC	107	NC	107
4191			min	-0.001	42	-0.001	44	-0.061	73	-0.006	73	NC	12	NC	12
4192		2	max	0.002	74	0.016	106	0.219	75	0.004	101	NC	105	NC	106
4193			min	-0.002	42	-0.221	13	-0.247	73	-0.004	73	507.641	14	349.375	73
4194		3	max	0.003	74	0.023	106	0.364	75	0.003	101	NC	105	NC	102
4195			min	-0.004	42	-0.31	13	-0.402	73	-0.003	77	361.694	13	183.831	73
4196		4	max	0.004	74	0.02	106	0.486	75	0.002	101	NC	105	NC	106
4197			min	-0.005	42	-0.221	13	-0.514	73	-0.002	77	507.641	13	131.026	73
4198		5	max	0.005	74	0.008	106	0.594	101	0.002	100	NC	107	NC	106
4199			min	-0.006	42	-0.008	40	-0.594	73	-0.001	68	NC	12	104.305	41
4200	M785	1	max	0.001	106	0.001	100	0.061	73	0.006	73	NC	107	NC	107
4201			min	-0.001	40	-0.001	46	-0.058	75	-0.005	75	NC	12	NC	12
4202		2	max	0.002	106	0.016	74	0.22	107	0.004	73	NC	107	NC	104
4203			min	-0.002	40	-0.221	15	-0.245	41	-0.004	41	507.641	13	347.928	41
4204		3	max	0.003	106	0.023	74	0.364	107	0.003	107	NC	107	NC	104
4205			min	-0.004	40	-0.31	15	-0.401	41	-0.003	41	361.694	13	183.03	41

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4206		4	max	0.004	106	0.02	74	0.486	107	0.002	107	NC	107	NC	104
4207			min	-0.005	40	-0.221	15	-0.513	41	-0.002	41	507.641	13	130.415	41
4208		5	max	0.005	106	0.008	74	0.594	73	0.001	96	NC	107	NC	106
4209			min	-0.006	40	-0.008	42	-0.594	41	-0.002	72	NC	12	104.305	41
4210	M485	1	max	0.516	74	0.458	105	0.957	15	0.006	15	NC	107	NC	106
4211			min	-0.596	102	-0.683	73	0.133	66	0.001	66	147.534	63	328.2	98
4212		2	max	0.519	74	0.891	105	0.947	13	0.006	15	NC	88	NC	105
4213			min	-0.599	102	-1.115	73	0.132	68	0.001	66	57.445	101	441.68	98
4214		3	max	0.522	74	1.329	105	0.95	13	0.006	15	NC	88	NC	95
4215			min	-0.603	102	-1.548	73	0.116	68	0.001	66	28.546	101	664.762	98
4216		4	max	0.525	74	1.768	105	0.956	13	0.006	15	NC	88	NC	95
4217			min	-0.606	102	-1.981	73	0.1	68	0.001	66	18.968	101	470.924	62
4218		5	max	0.528	74	2.207	105	0.962	13	0.006	15	NC	104	NC	107
4219			min	-0.609	102	-2.414	73	0.085	68	0.001	66	14.203	101	344.704	62
4220	M497	1	max	0.457	74	0.482	101	0.975	15	0.006	16	NC	107	NC	107
4221			min	-0.497	102	-0.563	73	0.119	66	0	75	246.287	99	391.099	104
4222		2	max	0.459	74	0.676	101	1.017	15	0.006	16	NC	87	NC	96
4223			min	-0.499	102	-0.758	73	0.122	66	0	75	97.357	73	454.04	15
4224		3	max	0.462	74	0.871	101	1.062	15	0.006	16	NC	87	7385.226	96
4225			min	-0.502	102	-0.953	73	0.126	66	0	75	48.645	73	219.094	15
4226		4	max	0.464	74	1.067	101	1.108	15	0.006	16	NC	87	8512.097	70
4227			min	-0.504	102	-1.149	73	0.13	66	0	75	32.419	73	143.257	15
4228		5	max	0.466	74	1.262	101	1.153	15	0.006	16	NC	104	NC	104
4229			min	-0.507	102	-1.344	73	0.133	66	0	75	24.311	73	106.421	15
4230	M498	1	max	0.491	74	0.477	101	0.966	15	0.006	15	NC	107	NC	107
4231			min	-0.576	102	-0.636	73	0.126	66	0.001	75	144.256	63	454.642	104
4232		2	max	0.493	74	0.814	101	0.982	15	0.006	15	NC	87	NC	107
4233			min	-0.579	102	-0.974	73	0.133	66	0.001	75	56.203	73	616.673	104
4234		3	max	0.496	74	1.153	101	1.001	15	0.006	15	NC	87	NC	99
4235			min	-0.581	102	-1.312	73	0.139	67	0.001	75	28.066	101	477.527	72
4236		4	max	0.498	74	1.493	101	1.021	15	0.006	15	NC	87	NC	94
4237			min	-0.584	102	-1.65	73	0.142	67	0.001	75	18.689	101	314.055	72
4238		5	max	0.5	74	1.833	101	1.041	13	0.006	15	NC	104	NC	104
4239			min	-0.586	102	-1.989	73	0.142	68	0.001	75	14.008	101	234.005	72
4240	M786	1	max	0.515	74	0.686	71	0.993	15	-0.001	96	NC	107	NC	106
4241			min	-0.61	102	-0.457	107	0.136	66	-0.006	15	148.701	93	339.874	98
4242		2	max	0.518	74	1.122	71	0.983	14	-0.001	96	NC	57	NC	105
4243			min	-0.613	102	-0.887	107	0.136	68	-0.006	15	57.412	71	457.508	98
4244		3	max	0.521	74	1.562	71	0.986	13	-0.001	96	8921.366	60	NC	105
4245			min	-0.617	102	-1.32	107	0.121	68	-0.006	15	28.529	71	688.651	98
4246		4	max	0.524	74	2.005	71	0.993	13	-0.001	96	NC	60	NC	107
4247			min	-0.62	102	-1.753	107	0.105	68	-0.006	15	18.957	71	482.804	62
4248		5	max	0.527	74	2.447	71	0.999	13	-0.001	96	NC	104	NC	107
4249			min	-0.623	102	-2.187	107	0.09	68	-0.006	15	14.194	71	353.197	62
4250	M787	1	max	0.491	74	0.639	71	1.002	15	-0.001	107	NC	107	NC	107
4251			min	-0.59	102	-0.475	103	0.13	66	-0.006	15	141.188	93	484.098	104
4252		2	max	0.493	74	0.978	71	1.021	15	-0.001	107	NC	57	NC	99
4253			min	-0.592	102	-0.812	103	0.136	66	-0.006	15	56.049	71	657.281	104
4254		3	max	0.495	74	1.319	71	1.042	15	-0.001	107	NC	20	NC	68
4255			min	-0.595	102	-1.149	103	0.143	69	-0.006	15	27.965	71	466.931	13
4256		4	max	0.498	74	1.66	71	1.064	15	-0.001	107	NC	87	NC	68
4257			min	-0.597	102	-1.486	103	0.146	69	-0.006	15	18.621	71	298.864	13
4258		5	max	0.5	74	2	71	1.086	14	-0.001	107	NC	104	NC	104
4259			min	-0.6	102	-1.823	103	0.148	68	-0.006	15	13.958	71	219.766	13
4260	M788	1	max	0.459	74	0.566	71	1.012	15	0	107	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4261			min	-0.508	102	-0.481	103	0.123	66	-0.006	14	226.474	93	421.763	104
4262		2	max	0.462	74	0.762	71	1.058	15	0	107	NC	57	NC	96
4263			min	-0.511	102	-0.673	103	0.126	66	-0.006	14	96.951	71	412.585	15
4264		3	max	0.464	74	0.959	71	1.107	15	0	107	6253.175	27	NC	70
4265			min	-0.513	102	-0.867	103	0.13	66	-0.006	14	48.298	71	199.727	15
4266		4	max	0.466	74	1.157	71	1.157	15	0	107	NC	87	NC	70
4267			min	-0.516	102	-1.06	103	0.133	66	-0.006	14	32.132	71	130.815	15
4268		5	max	0.469	74	1.355	71	1.207	15	0	107	NC	104	NC	104
4269			min	-0.518	102	-1.253	103	0.137	66	-0.006	14	24.075	71	97.259	15
4270	M698	1	max	0.523	74	0.455	105	1.014	15	0.006	15	NC	107	NC	106
4271			min	-0.614	102	-0.683	73	0.136	66	0.001	66	146.999	63	333.872	94
4272		2	max	0.526	74	0.873	105	1.001	16	0.006	15	NC	87	NC	105
4273			min	-0.617	102	-1.099	73	0.136	68	0.001	66	59.599	101	455.744	98
4274		3	max	0.529	74	1.294	105	1.001	13	0.006	15	NC	88	NC	101
4275			min	-0.621	102	-1.515	73	0.121	68	0.001	66	29.616	101	685.947	98
4276		4	max	0.532	74	1.717	105	1.003	13	0.006	15	NC	88	NC	95
4277			min	-0.624	102	-1.932	73	0.105	68	0.001	66	19.679	101	509.635	62
4278		5	max	0.535	74	2.14	105	1.005	13	0.006	15	NC	104	NC	107
4279			min	-0.627	102	-2.349	73	0.09	68	0.001	66	14.735	101	372.644	62
4280	M699	1	max	0.495	74	0.474	101	1.024	15	0.006	15	NC	107	NC	107
4281			min	-0.591	102	-0.635	73	0.13	66	0.001	75	143.695	63	429.372	104
4282		2	max	0.497	74	0.799	101	1.041	15	0.006	15	NC	87	NC	107
4283			min	-0.594	102	-0.96	73	0.136	66	0.001	75	58.416	73	581.475	104
4284		3	max	0.499	74	1.126	101	1.061	15	0.006	15	NC	87	NC	99
4285			min	-0.596	102	-1.285	73	0.142	67	0.001	75	29.146	101	451.209	72
4286		4	max	0.501	74	1.453	101	1.081	15	0.006	15	NC	57	NC	68
4287			min	-0.599	102	-1.611	73	0.146	67	0.001	75	19.408	101	297.111	72
4288		5	max	0.504	74	1.78	101	1.102	16	0.006	15	NC	104	NC	104
4289			min	-0.601	102	-1.936	73	0.147	68	0.001	75	14.547	101	221.509	72
4290	M700	1	max	0.46	74	0.482	101	1.034	15	0.006	16	NC	107	NC	107
4291			min	-0.507	102	-0.561	73	0.123	66	0	75	245.667	63	390.53	104
4292		2	max	0.462	74	0.668	101	1.08	15	0.006	16	NC	87	NC	96
4293			min	-0.51	102	-0.749	73	0.127	66	0	75	101.229	73	412.573	15
4294		3	max	0.464	74	0.856	101	1.129	15	0.006	16	NC	87	6790.041	96
4295			min	-0.512	102	-0.937	73	0.13	66	0	75	50.58	73	199.922	15
4296		4	max	0.467	74	1.045	101	1.179	15	0.006	16	NC	87	NC	70
4297			min	-0.515	102	-1.125	73	0.134	66	0	75	33.708	73	131.012	15
4298		5	max	0.469	74	1.233	101	1.229	15	0.006	16	NC	104	NC	104
4299			min	-0.517	102	-1.313	73	0.137	66	0	75	25.278	73	97.428	15
4300	M468	1	max	0.504	74	0.315	71	1.015	15	0.006	15	NC	107	NC	106
4301			min	-0.601	102	-0.197	107	0.138	66	0.001	107	178.699	65	320.068	94
4302		2	max	0.507	74	0.733	71	1.003	14	0.006	15	NC	88	NC	106
4303			min	-0.605	102	-0.611	107	0.143	69	0.001	107	59.791	101	432.854	98
4304		3	max	0.51	74	1.156	71	1.004	13	0.006	15	NC	88	NC	105
4305			min	-0.608	102	-1.026	107	0.128	68	0.001	107	29.711	101	651.382	98
4306		4	max	0.513	74	1.58	71	1.008	13	0.006	15	NC	88	NC	105
4307			min	-0.611	102	-1.441	107	0.112	68	0.001	107	19.742	101	469.906	62
4308		5	max	0.516	74	2.005	71	1.011	13	0.006	15	NC	88	NC	107
4309			min	-0.615	102	-1.857	107	0.096	68	0.001	107	14.782	101	344.269	62
4310	M469	1	max	0.487	74	0.365	71	1.025	15	0.006	15	NC	107	NC	107
4311			min	-0.587	102	-0.184	107	0.132	66	0.001	96	149.375	65	642.847	104
4312		2	max	0.489	74	0.689	71	1.043	15	0.006	15	NC	87	NC	105
4313			min	-0.59	102	-0.507	107	0.14	66	0.001	96	58.538	101	877.387	104
4314		3	max	0.492	74	1.015	71	1.065	15	0.006	15	NC	87	NC	94
4315			min	-0.592	102	-0.83	107	0.146	69	0.001	96	29.207	101	454.996	13

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4316		4	max	0.494	74	1.341	71	1.087	14	0.006	15	NC	57	NC	94
4317			min	-0.595	102	-1.154	107	0.149	69	0.001	96	19.448	101	291.873	13
4318		5	max	0.496	74	1.667	71	1.11	14	0.006	15	NC	100	NC	104
4319			min	-0.597	102	-1.478	107	0.152	68	0.001	96	14.577	101	214.844	13
4320	M506	1	max	0.467	74	0.391	71	1.034	15	0.006	15	NC	107	NC	107
4321			min	-0.515	102	-0.145	107	0.125	66	0.001	96	242.893	69	644.179	104
4322		2	max	0.469	74	0.576	71	1.083	15	0.006	15	NC	87	NC	100
4323			min	-0.517	102	-0.331	107	0.13	66	0.001	96	101.453	73	393.208	15
4324		3	max	0.471	74	0.763	71	1.134	15	0.006	15	NC	87	NC	100
4325			min	-0.52	102	-0.517	107	0.136	66	0.001	96	50.692	73	190.815	15
4326		4	max	0.474	74	0.951	71	1.186	15	0.006	15	NC	87	NC	100
4327			min	-0.522	102	-0.704	107	0.141	66	0.001	96	33.783	73	125.141	15
4328		5	max	0.476	74	1.138	71	1.238	15	0.006	15	NC	104	NC	104
4329			min	-0.525	102	-0.89	107	0.146	66	0.001	96	25.334	73	93.097	15
4330	M767	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4331			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4332		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4333			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4334		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4335			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4336		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4337			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4338		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4339			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4340	M770	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4341			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4342		2	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4343			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4344		3	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4345			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4346		4	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4347			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4348		5	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4349			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4350	M772	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4351			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4352		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4353			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4354		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4355			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4356		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4357			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4358		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4359			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4360	M773	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4361			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4362		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4363			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4364		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4365			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4366		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4367			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4368		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4369			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4370	M774	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4371			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4372		2	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4373			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4374		3	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4375			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4376		4	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4377			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4378		5	max	0	107	0	102	0	71	0	107	NC	107	NC	107
4379			min	0	26	0	40	0	103	0	12	NC	12	NC	12
4380	M775	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4381			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4382		2	max	0	107	0	86	0	101	0	107	NC	107	NC	107
4383			min	0	26	0	56	0	43	0	12	NC	12	NC	12
4384		3	max	0	107	0	86	0	101	0	107	NC	107	NC	107
4385			min	0	26	0	56	0	43	0	12	NC	12	NC	12
4386		4	max	0	107	0	86	0	101	0	107	NC	107	NC	107
4387			min	0	26	0	56	0	43	0	12	NC	12	NC	12
4388		5	max	0	107	0	86	0	101	0	107	NC	107	NC	107
4389			min	0	26	0	56	0	43	0	12	NC	12	NC	12
4390	M636	1	max	0.104	103	0	97	0.032	74	0.001	74	NC	107	NC	107
4391			min	-0.104	101	-0.001	16	-0.038	102	-0.001	102	NC	12	NC	12
4392		2	max	0.104	103	-0.001	99	0.04	74	0.001	74	NC	107	NC	107
4393			min	-0.104	101	-0.004	14	-0.044	102	-0.001	102	NC	12	5360.531	70
4394		3	max	0.104	103	-0.001	99	0.041	74	0.001	74	NC	107	NC	107
4395			min	-0.104	101	-0.006	14	-0.044	102	-0.001	102	NC	12	3562.631	70
4396		4	max	0.104	103	-0.001	99	0.033	74	0.001	74	NC	107	NC	107
4397			min	-0.104	101	-0.005	14	-0.035	102	-0.001	102	NC	12	4722.707	70
4398		5	max	0.104	103	0	107	0.017	70	0	74	NC	107	NC	107
4399			min	-0.104	101	-0.002	14	-0.017	106	-0.001	102	NC	12	NC	12
4400	M637	1	max	0.104	103	0	105	0.017	70	0	74	NC	107	NC	107
4401			min	-0.104	101	-0.002	16	-0.017	106	-0.001	102	NC	12	NC	12
4402		2	max	0.104	103	-0.001	97	0.033	74	0.001	74	NC	107	NC	107
4403			min	-0.104	101	-0.005	16	-0.035	102	-0.001	102	NC	12	4722.707	70
4404		3	max	0.104	103	-0.001	97	0.041	74	0.001	74	NC	107	NC	107
4405			min	-0.104	101	-0.006	16	-0.044	102	-0.001	102	NC	12	3562.631	70
4406		4	max	0.104	103	-0.001	97	0.04	74	0.001	74	NC	107	NC	107
4407			min	-0.104	101	-0.004	16	-0.044	102	-0.001	102	NC	12	5360.53	70
4408		5	max	0.104	103	0	99	0.032	74	0.001	74	NC	107	NC	107
4409			min	-0.104	101	-0.001	14	-0.038	102	-0.001	102	NC	12	NC	12
4410	M789	1	max	0.104	103	0	107	0.017	70	0	74	NC	107	NC	107
4411			min	-0.104	101	-0.002	14	-0.017	106	-0.001	102	NC	12	NC	12
4412		2	max	0.104	103	0	107	0.02	70	0	74	NC	107	NC	107
4413			min	-0.104	101	-0.003	14	-0.02	106	-0.001	102	NC	12	NC	12
4414		3	max	0.104	103	0	106	0.021	70	0	74	NC	107	NC	107
4415			min	-0.104	101	-0.004	13	-0.021	106	-0.001	102	NC	12	8801.589	36
4416		4	max	0.104	103	0	105	0.02	70	0	74	NC	107	NC	107
4417			min	-0.104	101	-0.003	16	-0.02	106	-0.001	102	NC	12	NC	12
4418		5	max	0.104	103	0	105	0.017	70	0	74	NC	107	NC	107
4419			min	-0.104	101	-0.002	16	-0.017	106	-0.001	102	NC	12	NC	12
4420	M626	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4421			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4422		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4423			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4424		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4425			min	0	26	0	40	0	43	0	12	NC	12	NC	12

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4426		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4427			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4428		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4429			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4430	M627	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4431			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4432		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4433			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4434		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4435			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4436		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4437			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4438		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4439			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4440	M630	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4441			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4442		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4443			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4444		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4445			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4446		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4447			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4448		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4449			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4450	M641	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4451			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4452		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4453			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4454		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4455			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4456		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4457			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4458		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4459			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4460	M643	1	max	0	104	0	104	0	101	0	101	NC	107	NC	107
4461			min	0	42	0	42	0	43	0	43	NC	12	NC	12
4462		2	max	0	104	0	104	0	101	0	101	NC	107	NC	107
4463			min	0	42	0	42	0	43	0	43	NC	12	NC	12
4464		3	max	0	104	0	104	0	101	0	101	NC	107	NC	107
4465			min	0	42	0	26	0	43	0	43	NC	12	NC	12
4466		4	max	0	104	0	106	0	101	0	101	NC	107	NC	107
4467			min	0	42	0	40	0	43	0	43	NC	12	NC	12
4468		5	max	0	104	0	106	0	101	0	101	NC	107	NC	107
4469			min	0	42	0	40	0	43	0	43	NC	12	NC	12
4470	M790	1	max	0	105	0	105	0	102	0	102	NC	107	NC	107
4471			min	0	43	0	43	0	40	0	40	NC	12	NC	12
4472		2	max	0	105	0	105	0	102	0	102	NC	107	NC	107
4473			min	0	43	0	26	0	40	0	40	NC	12	NC	12
4474		3	max	0	105	0	107	0	102	0	102	NC	107	NC	107
4475			min	0	43	0	26	0	40	0	40	NC	12	NC	12
4476		4	max	0	105	0	107	0	102	0	102	NC	107	NC	107
4477			min	0	43	0	41	0	40	0	40	NC	12	NC	12
4478		5	max	0	105	0	107	0	102	0	102	NC	107	NC	107
4479			min	0	43	0	41	0	40	0	40	NC	12	NC	12
4480	M791	1	max	0	104	0	104	0	101	0	101	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4481			min	0	42	0	42	0	43	0	43	NC	12	NC	12
4482		2	max	0	104	0	104	0	101	0	101	NC	107	NC	107
4483			min	0	42	0	42	0	43	0	43	NC	12	NC	12
4484		3	max	0	104	0	107	0	101	0	101	NC	107	NC	107
4485			min	0	42	0	26	0	43	0	43	NC	12	NC	12
4486		4	max	0	104	0	106	0	101	0	101	NC	107	NC	107
4487			min	0	42	0	40	0	43	0	43	NC	12	NC	12
4488		5	max	0	104	0	106	0	101	0	101	NC	107	NC	107
4489			min	0	42	0	40	0	43	0	43	NC	12	NC	12
4490	M792	1	max	0	103	0	107	0	100	0	100	NC	107	NC	107
4491			min	0	45	0	41	0	42	0	42	NC	12	NC	12
4492		2	max	0	103	0	107	0	100	0	100	NC	107	NC	107
4493			min	0	45	0	26	0	42	0	42	NC	12	NC	12
4494		3	max	0	103	0	105	0	100	0	100	NC	107	NC	107
4495			min	0	45	0	26	0	42	0	42	NC	12	NC	12
4496		4	max	0	103	0	105	0	100	0	100	NC	107	NC	107
4497			min	0	45	0	26	0	42	0	42	NC	12	NC	12
4498		5	max	0	103	0	105	0	100	0	100	NC	107	NC	107
4499			min	0	45	0	26	0	42	0	42	NC	12	NC	12
4500	M793	1	max	0	106	0	106	0	103	0	103	NC	107	NC	107
4501			min	0	40	0	40	0	41	0	41	NC	12	NC	12
4502		2	max	0	106	0	106	0	103	0	103	NC	107	NC	107
4503			min	0	40	0	26	0	41	0	41	NC	12	NC	12
4504		3	max	0	106	0	106	0	103	0	103	NC	107	NC	107
4505			min	0	40	0	26	0	41	0	41	NC	12	NC	12
4506		4	max	0	106	0	104	0	103	0	103	NC	107	NC	107
4507			min	0	40	0	42	0	41	0	41	NC	12	NC	12
4508		5	max	0	106	0	104	0	103	0	103	NC	107	NC	107
4509			min	0	40	0	42	0	41	0	41	NC	12	NC	12
4510	M794	1	max	0	75	0	75	0	72	0	102	NC	107	NC	107
4511			min	0	103	0	86	0	40	0	40	NC	12	NC	12
4512		2	max	0	75	0	75	0	102	0	102	NC	107	NC	107
4513			min	0	103	0	86	0	40	0	40	NC	12	NC	12
4514		3	max	0	75	0	75	0	102	0	102	NC	107	NC	107
4515			min	0	103	0	86	0	40	0	40	NC	12	NC	12
4516		4	max	0	75	0	107	0	102	0	102	NC	107	NC	107
4517			min	0	103	0	56	0	40	0	40	NC	12	NC	12
4518		5	max	0	75	0	107	0	102	0	102	NC	107	NC	107
4519			min	0	103	0	56	0	40	0	40	NC	12	NC	12
4520	M795	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4521			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4522		2	max	0	75	0	71	0	100	0	107	NC	107	NC	107
4523			min	0	86	0	103	0	42	0	12	NC	12	NC	12
4524		3	max	0	75	0	75	0	100	0	107	NC	107	NC	107
4525			min	0	86	0	103	0	42	0	12	NC	12	NC	12
4526		4	max	0	75	0	75	0	100	0	107	NC	107	NC	107
4527			min	0	86	0	103	0	42	0	12	NC	12	NC	12
4528		5	max	0	75	0	75	0	100	0	107	NC	107	NC	107
4529			min	0	86	0	103	0	42	0	12	NC	12	NC	12
4530	M796	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4531			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4532		2	max	0	106	0	106	0	101	0	107	NC	107	NC	107
4533			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4534		3	max	0	106	0	106	0	101	0	107	NC	107	NC	107
4535			min	0	26	0	40	0	43	0	12	NC	12	NC	12

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4536		4	max	0	106	0	106	0	101	0	107	NC	107	NC	107
4537			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4538		5	max	0	106	0	106	0	101	0	107	NC	107	NC	107
4539			min	0	26	0	40	0	43	0	12	NC	12	NC	12
4540	M797	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4541			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4542		2	max	0	104	0	102	0	101	0	107	NC	107	NC	107
4543			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4544		3	max	0	104	0	102	0	101	0	107	NC	107	NC	107
4545			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4546		4	max	0	104	0	102	0	101	0	107	NC	107	NC	107
4547			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4548		5	max	0	104	0	102	0	101	0	107	NC	107	NC	107
4549			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4550	M798	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4551			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4552		2	max	0	107	0	105	0	100	0	107	NC	107	NC	107
4553			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4554		3	max	0	107	0	105	0	100	0	107	NC	107	NC	107
4555			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4556		4	max	0	107	0	105	0	100	0	107	NC	107	NC	107
4557			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4558		5	max	0	107	0	105	0	100	0	107	NC	107	NC	107
4559			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4560	M799	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4561			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4562		2	max	0	105	0	105	0	100	0	107	NC	107	NC	107
4563			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4564		3	max	0	105	0	105	0	100	0	107	NC	107	NC	107
4565			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4566		4	max	0	105	0	105	0	100	0	107	NC	107	NC	107
4567			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4568		5	max	0	105	0	105	0	100	0	107	NC	107	NC	107
4569			min	0	26	0	43	0	42	0	12	NC	12	NC	12
4570	M800	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107
4571			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4572		2	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4573			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4574		3	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4575			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4576		4	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4577			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4578		5	max	0	107	0	102	0	101	0	107	NC	107	NC	107
4579			min	0	26	0	44	0	43	0	12	NC	12	NC	12
4580	M801	1	max	0	103	0	107	0	76	0	70	NC	107	NC	107
4581			min	0	75	0	71	0	74	0	42	NC	12	NC	12
4582		2	max	0	103	0	107	0	100	0	70	NC	107	NC	107
4583			min	0	75	0	71	0	102	0	42	NC	12	NC	12
4584		3	max	0	103	0	76	0	70	0	70	NC	107	NC	107
4585			min	0	75	0	100	0	42	0	42	NC	12	NC	12
4586		4	max	0	103	0	76	0	70	0	70	NC	107	NC	107
4587			min	0	75	0	100	0	72	0	42	NC	12	NC	12
4588		5	max	0	103	0	76	0	70	0	70	NC	107	NC	107
4589			min	0	75	0	100	0	72	0	42	NC	12	NC	12
4590	M802	1	max	0	107	0	107	0	107	0	107	NC	107	NC	107

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
4591			min	0	12	0	12	0	12	0	12	NC	12	NC	12
4592		2	max	0	76	0	71	0	70	0	72	NC	107	NC	107
4593			min	0	100	0	103	0	42	0	70	NC	12	NC	12
4594		3	max	0	76	0	75	0	70	0	72	NC	107	NC	107
4595			min	0	100	0	103	0	42	0	70	NC	12	NC	12
4596		4	max	0	76	0	75	0	70	0	72	NC	107	NC	107
4597			min	0	100	0	103	0	42	0	70	NC	12	NC	12
4598		5	max	0	76	0	75	0	70	0	72	NC	107	NC	107
4599			min	0	100	0	103	0	42	0	70	NC	12	NC	12
4600	M803	1	max	0.08	73	0.076	107	0.042	74	0.005	77	NC	107	NC	107
4601			min	-0.079	105	-0.077	71	-0.056	102	-0.006	101	NC	12	NC	12
4602		2	max	0.079	73	0.077	107	0.044	74	0.004	77	NC	107	NC	107
4603			min	-0.078	105	-0.095	71	-0.065	102	-0.004	101	4357.332	101	6397.086	66
4604		3	max	0.078	73	0.077	107	0.042	74	0.003	77	NC	107	NC	107
4605			min	-0.077	105	-0.102	71	-0.063	102	-0.003	101	3104.599	101	3549.072	66
4606		4	max	0.077	73	0.074	107	0.032	74	0.002	77	NC	107	NC	105
4607			min	-0.076	105	-0.093	71	-0.046	102	-0.002	101	4357.332	101	2183.105	102
4608		5	max	0.076	73	0.071	107	0.017	70	0.001	77	NC	107	NC	99
4609			min	-0.075	105	-0.071	71	-0.017	106	-0.001	101	NC	12	1097.614	102
4610	M804	1	max	0.075	107	0.071	105	0.017	70	0.001	75	NC	107	NC	107
4611			min	-0.076	71	-0.071	73	-0.017	106	-0.001	103	NC	12	NC	12
4612		2	max	0.076	107	0.074	105	0.032	74	0.002	75	NC	105	NC	105
4613			min	-0.077	71	-0.093	73	-0.046	102	-0.002	103	4357.332	73	2207.485	102
4614		3	max	0.077	107	0.077	105	0.042	74	0.003	75	NC	105	NC	105
4615			min	-0.078	71	-0.102	73	-0.063	102	-0.003	103	3104.599	73	1295.913	102
4616		4	max	0.078	107	0.077	105	0.044	74	0.004	75	NC	105	NC	105
4617			min	-0.079	71	-0.095	73	-0.065	102	-0.004	103	4357.332	73	1100.669	102
4618		5	max	0.079	107	0.076	105	0.042	74	0.005	75	NC	107	NC	99
4619			min	-0.08	71	-0.077	73	-0.056	102	-0.006	103	NC	12	1097.613	102

Beam Deflections

No Data to Print...

Envelope Beam Deflections

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
0	M340	1	max	1.781	0.001	NC	67
1		1	min	2.969	-0.07	1154	103
2		2	max	7.719	0.001	NC	35
3		2	min	13.063	-0.048	1699	15
4		3	max	13.656	-0.001	NC	66
5		3	min	16.625	0.048	1884	13
6		4	max	21.375	-0.001	NC	77
7		4	min	24.938	0.047	1917	15
8		5	max	29.094	0.002	NC	66
9		5	min	32.063	0.072	1257	15
10		6	max	43.344	0.002	NC	96
11		6	min	40.375	0.083	1078	15
12		7	max	43.938	0.004	NC	66
13		7	min	48.094	0.086	938	13
14		8	max	56.406	0.001	NC	20
15		8	min	50.469	0.045	1808	15
16	M342	1	max	1.188	-0.001	NC	97
17		1	min	2.969	-0.062	1311	103
18		2	max	7.719	-0.001	NC	26

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
19		2	min	13.063	-0.044	1829	13
20		3	max	20.188	0.001	NC	60
21		3	min	16.625	0.04	2270	15
22		4	max	21.375	0.001	NC	75
23		4	min	24.938	0.052	1733	13
24		5	max	29.094	0.001	NC	68
25		5	min	32.656	0.059	1520	13
26		6	max	43.344	0.002	NC	98
27		6	min	40.375	0.077	1172	14
28		7	max	43.938	0.002	NC	68
29		7	min	48.094	0.076	1068	13
30		8	max	54.625	0.001	NC	58
31		8	min	50.469	0.041	1985	13
32	M349	1	max	5.344	0.001	NC	67
33		1	min	2.375	-0.061	1318	13
34		2	max	8.313	-0.001	NC	26
35		2	min	13.063	0.045	1818	15
36		3	max	20.188	0.001	NC	95
37		3	min	16.625	-0.04	2234	15
38		4	max	27.906	-0.001	NC	66
39		4	min	24.938	-0.048	1871	15
40		5	max	29.094	-0.001	NC	66
41		5	min	32.063	-0.064	1406	15
42		6	max	43.344	-0.002	NC	66
43		6	min	40.375	-0.074	1212	15
44		7	max	43.938	-0.004	NC	98
45		7	min	47.5	-0.076	1064	15
46		8	max	52.25	-0.003	NC	76
47		8	min	54.031	-0.087	932	13
48	M350	1	max	5.344	-0.001	NC	105
49		1	min	2.375	-0.054	1490	13
50		2	max	8.906	0.001	NC	19
51		2	min	13.063	0.042	1941	13
52		3	max	20.781	0.001	NC	76
53		3	min	17.219	-0.035	2597	15
54		4	max	21.375	-0.001	NC	100
55		4	min	24.938	-0.048	1871	13
56		5	max	29.094	-0.001	NC	76
57		5	min	32.063	-0.056	1614	13
58		6	max	43.344	-0.002	NC	98
59		6	min	39.781	-0.07	1285	13
60		7	max	43.938	-0.004	NC	98
61		7	min	47.5	-0.067	1213	13
62		8	max	56.406	-0.001	NC	76
63		8	min	54.031	-0.081	1005	13
64	M351	1	max	2.859	-0.001	NC	58
65		1	min	2.531	1.064	50	103
66	M352	1	max	0.656	0.001	NC	57
67		1	min	2.531	1.027	52	103
68	M353	1	max	3.098	-0.001	NC	75
69		1	min	3.447	-0.016	3103	70
70	M354	1	max	2.618	-0.001	NC	73
71		1	min	3.36	-0.018	2771	100
72	M355	1	max	0.094	0.001	NC	58
73		1	min	2.484	1.025	52	103

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
74	M356	1	max	0.208	-0.001	NC	98
75		1	min	2.5	-0.022	2789	15
76	M357	1	max	4.896	-0.001	NC	34
77		1	min	2.5	-0.019	3154	15
78	M358	1	max	3.186	-0.001	NC	45
79		1	min	3.578	-0.015	3371	70
80	M359	1	max	1.44	-0.001	NC	65
81		1	min	3.578	-0.015	3248	100
82	M360	1	max	1.667	-0.001	NC	104
83		1	min	2.5	-0.021	2792	15
84	M95	1	max	0.104	-0.001	NC	98
85		1	min	2.5	-0.059	1025	72
86	M96	1	max	4.896	-0.001	NC	68
87		1	min	2.5	-0.055	1097	102
88	M535	1	max	0.594	-0.001	NC	39
89		1	min	5.344	-0.044	1856	15
90		2	max	10.688	0.001	NC	89
91		2	min	13.063	-0.045	1814	15
92		3	max	20.188	-0.001	NC	38
93		3	min	16.625	0.041	2201	13
94		4	max	21.375	-0.001	NC	43
95		4	min	24.938	0.044	2042	15
96		5	max	29.094	0.001	NC	66
97		5	min	32.063	0.069	1300	15
98		6	max	43.344	0.002	NC	66
99		6	min	40.375	0.083	1087	15
100		7	max	43.938	0.004	NC	66
101		7	min	48.094	0.084	959	13
102		8	max	55.813	0.001	NC	87
103		8	min	54.625	-0.058	1403	71
104	M536	1	max	0.594	-0.001	NC	97
105		1	min	5.344	-0.039	2068	15
106		2	max	7.719	0.001	NC	41
107		2	min	13.063	-0.043	1865	13
108		3	max	20.188	-0.001	NC	96
109		3	min	16.625	0.038	2383	15
110		4	max	21.375	0.001	NC	102
111		4	min	24.938	0.051	1779	13
112		5	max	29.094	0.001	NC	98
113		5	min	32.656	0.059	1525	13
114		6	max	43.344	0.003	NC	98
115		6	min	40.375	0.076	1180	13
116		7	max	43.938	0.002	NC	68
117		7	min	48.094	0.075	1074	15
118		8	max	53.438	0.001	NC	65
119		8	min	54.625	-0.055	1481	71
120	M540	1	max	4.156	0.001	NC	64
121		1	min	2.375	-0.06	1352	13
122		2	max	10.094	-0.001	NC	96
123		2	min	13.063	0.043	1896	15
124		3	max	20.781	0.001	NC	44
125		3	min	16.625	-0.037	2457	15
126		4	max	27.906	-0.001	NC	36
127		4	min	24.938	-0.047	1918	15
128		5	max	29.094	-0.001	NC	66

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
129		5	min	32.063	-0.06	1507	15
130		6	max	43.344	-0.002	NC	66
131		6	min	39.781	-0.073	1226	15
132		7	max	43.938	-0.004	NC	68
133		7	min	47.5	-0.075	1076	15
134		8	max	52.844	0.001	NC	105
135		8	min	54.031	-0.085	953	13
136	M541	1	max	1.188	-0.001	NC	68
137		1	min	2.375	-0.052	1552	13
138		2	max	8.906	-0.001	NC	76
139		2	min	13.063	0.041	1967	13
140		3	max	14.25	-0.001	NC	64
141		3	min	17.219	-0.034	2679	15
142		4	max	27.906	-0.001	NC	98
143		4	min	24.938	-0.048	1882	13
144		5	max	29.094	-0.001	NC	38
145		5	min	32.063	-0.054	1651	13
146		6	max	43.344	-0.002	NC	68
147		6	min	39.781	-0.07	1294	13
148		7	max	43.938	-0.004	NC	68
149		7	min	47.5	-0.067	1216	13
150		8	max	56.406	-0.001	NC	45
151		8	min	54.031	-0.08	1015	13
152	M542	1	max	1.547	-0.001	NC	62
153		1	min	2.484	1.065	50	103
154	M543	1	max	3.703	-0.001	NC	57
155		1	min	2.531	1.027	52	103
156	M544	1	max	4.146	-0.001	NC	91
157		1	min	3.404	-0.02	2453	100
158	M545	1	max	0.655	-0.001	NC	105
159		1	min	3.36	-0.017	3029	100
160	M546	1	max	2.766	-0.001	NC	56
161		1	min	2.531	1.022	52	103
162	M547	1	max	4.844	-0.001	NC	100
163		1	min	2.5	-0.022	2790	15
164	M548	1	max	0.365	-0.001	NC	67
165		1	min	2.5	-0.019	3136	15
166	M549	1	max	4.015	-0.001	NC	95
167		1	min	3.578	-0.018	2850	100
168	M550	1	max	2.618	-0.001	NC	75
169		1	min	3.535	-0.014	3560	100
170	M551	1	max	4.896	-0.001	NC	76
171		1	min	2.5	-0.022	2777	15
172	M618	1	max	4.792	-0.001	NC	96
173		1	min	2.5	-0.055	1089	15
174	M619	1	max	4.896	-0.001	NC	98
175		1	min	2.5	-0.058	1041	72
176	M631	1	max	3.168	-0.001	NC	17
177		1	min	0	-0.028	3043	63
178		2	max	4.309	0.001	NC	12
179		2	min	3.549	0	NC	12
180		3	max	8.998	-0.001	NC	17
181		3	min	12.167	-0.028	3043	65
182	M632	1	max	7.831	-0.001	NC	38
183		1	min	4.042	-0.016	6073	15

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
184	M633	1	max	7.831	-0.001	NC	38
185		1	min	4.042	-0.016	6073	15
186	M640	1	max	2.111	-0.001	NC	62
187		1	min	0	0	NC	12
188		2	max	4.222	0.001	NC	72
189		2	min	3.444	0	NC	12
190		3	max	9.667	0.001	NC	44
191		3	min	7.333	0	NC	12
192	M642	1	max	2.111	-0.001	NC	62
193		1	min	0	0	NC	12
194		2	max	4.222	0.001	NC	72
195		2	min	3.444	0	NC	12
196		3	max	9.667	0.001	NC	44
197		3	min	7.333	0	NC	12
198	M648	1	max	1.937	-0.001	NC	18
199		1	min	0	0	NC	12
200	M649	1	max	2	-0.001	NC	77
201		1	min	2	-0.041	1170	14
202	M650	1	max	0.625	-0.001	NC	74
203		1	min	2	-0.035	1375	14
204	M651	1	max	0.625	-0.001	NC	74
205		1	min	2	-0.035	1375	14
206	M652	1	max	2	-0.001	NC	77
207		1	min	2	-0.041	1170	14
208	M653	1	max	0.625	-0.001	NC	74
209		1	min	2	-0.035	1375	14
210	M654	1	max	0.625	-0.001	NC	74
211		1	min	2	-0.035	1375	14
212	M655	1	max	2	-0.001	NC	77
213		1	min	2	-0.041	1170	14
214	M656	1	max	2	-0.001	NC	77
215		1	min	2	-0.041	1170	14
216	M657	1	max	0.396	-0.001	NC	61
217		1	min	2	-0.041	1181	14
218	M658	1	max	0.396	-0.001	NC	31
219		1	min	2	-0.041	1181	14
220	M659	1	max	0.375	-0.001	NC	61
221		1	min	2	-0.044	1095	14
222	M660	1	max	0.375	-0.001	NC	31
223		1	min	2	-0.044	1095	14
224	M419	1	max	0.469	-0.001	NC	16
225		1	min	0	0	NC	12
226	M420	1	max	6.484	-0.001	NC	97
227		1	min	3.672	-0.013	6972	13
228	M421	1	max	0.469	-0.001	NC	16
229		1	min	0	0	NC	12
230	M422	1	max	6.484	-0.001	NC	99
231		1	min	3.828	-0.013	6972	13
232	M431	1	max	6.469	-0.001	NC	65
233		1	min	3.375	-0.022	3702	15
234	M432	1	max	1.198	-0.001	NC	19
235		1	min	0	0	NC	12
236	M433	1	max	0.281	-0.001	NC	65
237		1	min	3.375	-0.022	3702	13
238	M434	1	max	4.552	-0.001	NC	19

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
239		1	min	0	0	NC	12
240	M440	1	max	0.354	-0.001	NC	100
241		1	min	2	-0.053	901	14
242	M441	1	max	0.354	-0.001	NC	100
243		1	min	2	-0.053	901	14
244	M442	1	max	0.292	-0.001	NC	102
245		1	min	2	-0.058	825	14
246	M444	1	max	0.354	-0.001	NC	100
247		1	min	2	-0.053	901	14
248	M445	1	max	0.354	-0.001	NC	100
249		1	min	2	-0.053	901	14
250	M446	1	max	0.292	-0.001	NC	102
251		1	min	2	-0.058	825	14
252	M450	1	max	0.375	-0.001	NC	93
253		1	min	2	-0.05	951	14
254	M451	1	max	0.375	-0.001	NC	33
255		1	min	2	-0.05	951	14
256	M452	1	max	1.292	-0.001	NC	47
257		1	min	2	-0.055	873	14
258	M454	1	max	0.375	-0.001	NC	93
259		1	min	2	-0.05	951	14
260	M455	1	max	0.375	-0.001	NC	93
261		1	min	2	-0.05	951	14
262	M456	1	max	1.292	-0.001	NC	107
263		1	min	2	-0.055	873	14
264	M463	1	max	0.282	0.001	NC	89
265		1	min	2.083	0.078	642	14
266	M464	1	max	0.412	0.001	NC	100
267		1	min	2.083	0.039	1287	14
268	M465	1	max	0.369	0.001	NC	106
269		1	min	2.083	0.074	675	14
270	M466	1	max	0.462	0.001	NC	58
271		1	min	1.583	0.022	1702	14
272	M467	1	max	0.933	0.001	NC	66
273		1	min	2.083	0.058	866	14
274	M472	1	max	0.76	0.001	NC	46
275		1	min	2.083	0.024	2111	14
276	M486	1	max	0.528	0.001	NC	27
277		1	min	1.583	0.018	2139	14
278	M487	1	max	1.385	0.001	NC	97
279		1	min	1.583	0.007	5144	14
280	M488	1	max	0.911	0.001	NC	36
281		1	min	2.083	0.06	832	14
282	M489	1	max	1.385	0.001	NC	97
283		1	min	1.583	0.007	5176	14
284	M490	1	max	1.063	0.001	NC	68
285		1	min	2.083	0.046	1079	14
286	M491	1	max	0.346	0.001	NC	71
287		1	min	1.583	0.014	2764	14
288	M492	1	max	0.346	0.001	NC	101
289		1	min	1.583	0.014	2756	14
290	M493	1	max	0.369	0.001	NC	106
291		1	min	2.083	0.074	675	14
292	M494	1	max	0.462	0.001	NC	58
293		1	min	1.583	0.022	1706	14

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
294	M495	1	max	0.462	0.001	NC	58
295		1	min	1.583	0.022	1702	14
296	M496	1	max	0.528	0.001	NC	27
297		1	min	1.583	0.018	2134	14
298	M499	1	max	1.237	0.001	NC	96
299		1	min	1.583	0.017	2186	14
300	M500	1	max	0.693	0.001	NC	62
301		1	min	1.583	0.012	3238	14
302	M501	1	max	0.693	0.001	NC	34
303		1	min	1.583	0.012	3225	14
304	M502	1	max	0.462	0.001	NC	58
305		1	min	1.583	0.022	1706	14
306	M503	1	max	1.023	0.001	NC	98
307		1	min	1.583	0.023	1650	14
308	M504	1	max	1.023	0.001	NC	96
309		1	min	1.583	0.023	1646	14
310	M505	1	max	1.237	0.001	NC	66
311		1	min	1.583	0.017	2180	14
312	M462	1	max	0.594	0.001	NC	67
313		1	min	2.969	-0.07	1162	103
314		2	max	9.5	-0.001	NC	41
315		2	min	13.063	-0.049	1659	15
316		3	max	20.188	0.001	NC	71
317		3	min	16.625	0.05	1785	13
318		4	max	27.906	0.001	NC	77
319		4	min	24.938	0.046	1959	15
320		5	max	29.094	0.002	NC	66
321		5	min	32.063	0.072	1243	15
322		6	max	43.344	0.002	NC	96
323		6	min	40.375	0.081	1117	15
324		7	max	43.938	0.004	NC	66
325		7	min	48.094	0.09	902	13
326		8	max	52.844	0.001	NC	56
327		8	min	50.469	0.046	1771	15
328	M470	1	max	5.344	0.001	NC	71
329		1	min	2.969	-0.062	1308	103
330		2	max	10.094	0.001	NC	61
331		2	min	13.063	-0.044	1825	13
332		3	max	19.594	0.001	NC	96
333		3	min	16.625	0.04	2256	15
334		4	max	21.375	0.001	NC	75
335		4	min	24.938	0.052	1736	13
336		5	max	29.094	0.001	NC	68
337		5	min	32.656	0.059	1518	13
338		6	max	43.344	0.002	NC	98
339		6	min	40.375	0.077	1176	14
340		7	max	43.938	0.003	NC	68
341		7	min	48.094	0.076	1062	13
342		8	max	51.656	-0.001	NC	68
343		8	min	50.469	0.041	1985	13
344	M477	1	max	1.781	-0.001	NC	77
345		1	min	2.375	-0.056	1458	13
346		2	max	9.5	-0.001	NC	97
347		2	min	13.063	0.045	1795	15
348		3	max	20.188	-0.001	NC	96

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
349		3	min	16.625	-0.041	2188	15
350		4	max	27.906	-0.001	NC	66
351		4	min	24.938	-0.048	1880	15
352		5	max	29.094	-0.001	NC	66
353		5	min	32.063	-0.064	1404	15
354		6	max	43.344	-0.002	NC	96
355		6	min	39.781	-0.073	1229	15
356		7	max	43.938	-0.004	NC	98
357		7	min	47.5	-0.075	1073	15
358		8	max	51.656	-0.004	NC	76
359		8	min	54.031	-0.094	860	13
360	M478	1	max	2.375	0.001	NC	107
361		1	min	2.375	-0.054	1512	13
362		2	max	10.688	-0.001	NC	56
363		2	min	13.063	0.042	1942	13
364		3	max	19	-0.001	NC	104
365		3	min	17.219	-0.035	2605	15
366		4	max	21.375	-0.001	NC	100
367		4	min	24.938	-0.048	1869	13
368		5	max	35.625	-0.001	NC	98
369		5	min	32.063	-0.056	1616	13
370		6	max	43.344	-0.002	NC	98
371		6	min	39.781	-0.07	1284	13
372		7	max	43.938	-0.004	NC	98
373		7	min	47.5	-0.066	1219	13
374		8	max	56.406	-0.001	NC	76
375		8	min	54.031	-0.081	994	13
376	M479	1	max	1.359	0.001	NC	62
377		1	min	2.531	1.064	50	103
378	M480	1	max	3.703	-0.001	NC	57
379		1	min	2.531	1.027	52	103
380	M481	1	max	3.796	-0.001	NC	33
381		1	min	3.36	-0.017	2993	100
382	M482	1	max	2.793	-0.001	NC	37
383		1	min	3.36	-0.018	2720	100
384	M483	1	max	0.141	-0.001	NC	72
385		1	min	2.484	1.025	52	103
386	M484	1	max	0.208	-0.001	NC	98
387		1	min	2.5	-0.022	2789	15
388	M519	1	max	4.896	-0.001	NC	64
389		1	min	2.5	-0.019	3156	15
390	M520	1	max	0.873	-0.001	NC	33
391		1	min	3.535	-0.014	3518	100
392	M521	1	max	0.829	-0.001	NC	107
393		1	min	3.578	-0.016	3183	100
394	M522	1	max	1.615	-0.001	NC	74
395		1	min	2.5	-0.022	2790	15
396	M690	1	max	0.104	-0.001	NC	68
397		1	min	2.5	-0.059	1020	102
398	M691	1	max	0.052	-0.001	NC	76
399		1	min	2.5	-0.054	1102	102
400	M692	1	max	0.369	0.001	NC	100
401		1	min	2.083	0.046	1079	14
402	M693	1	max	1.128	0.001	NC	69
403		1	min	2.083	0.074	675	14

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
404	M694	1	max	1.023	0.001	NC	98
405		1	min	1.583	0.023	1650	14
406	M695	1	max	1.484	0.001	NC	68
407		1	min	1.583	0.014	2756	14
408	M696	1	max	0.282	0.001	NC	59
409		1	min	2.083	0.078	642	14
410	M697	1	max	0.346	0.001	NC	71
411		1	min	1.583	0.014	2764	14
412	M701	1	max	0.933	0.001	NC	68
413		1	min	2.083	0.058	866	14
414	M702	1	max	1.253	0.001	NC	38
415		1	min	1.583	0.017	2186	14
416	M703	1	max	1.253	0.001	NC	36
417		1	min	1.583	0.017	2180	14
418	M704	1	max	1.023	0.001	NC	96
419		1	min	1.583	0.023	1646	14
420	M705	1	max	1.039	0.001	NC	38
421		1	min	1.583	0.022	1706	14
422	M706	1	max	0.247	0.001	NC	14
423		1	min	1.583	0.022	1702	14
424	M509	1	max	3.563	0.001	NC	44
425		1	min	4.75	-0.048	1701	15
426		2	max	8.313	0.001	NC	47
427		2	min	13.063	-0.048	1704	15
428		3	max	20.188	0.001	NC	92
429		3	min	16.625	0.048	1878	13
430		4	max	21.375	-0.001	NC	103
431		4	min	24.938	0.047	1903	15
432		5	max	29.094	0.001	NC	66
433		5	min	32.063	0.072	1257	15
434		6	max	43.344	0.002	NC	66
435		6	min	40.375	0.082	1095	15
436		7	max	43.938	0.004	NC	66
437		7	min	48.094	0.086	947	13
438		8	max	53.438	-0.001	NC	27
439		8	min	54.625	-0.059	1361	71
440	M510	1	max	0.594	-0.001	NC	97
441		1	min	5.344	-0.04	2037	15
442		2	max	8.313	-0.001	NC	107
443		2	min	13.063	-0.044	1846	13
444		3	max	20.188	-0.001	NC	66
445		3	min	16.625	0.038	2340	15
446		4	max	21.375	0.001	NC	102
447		4	min	24.938	0.051	1759	13
448		5	max	29.688	0.001	NC	76
449		5	min	32.656	0.059	1517	13
450		6	max	43.344	0.002	NC	68
451		6	min	40.375	0.077	1176	13
452		7	max	43.938	0.002	NC	68
453		7	min	48.094	0.075	1073	14
454		8	max	51.656	0.001	NC	60
455		8	min	54.625	-0.055	1463	71
456	M514	1	max	4.75	0.001	NC	35
457		1	min	2.375	-0.062	1302	13
458		2	max	8.313	-0.001	NC	56

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
459		2	min	13.063	0.044	1824	15
460		3	max	14.25	-0.001	NC	98
461		3	min	16.625	-0.04	2230	15
462		4	max	22.563	-0.001	NC	36
463		4	min	24.938	-0.048	1885	15
464		5	max	35.625	-0.001	NC	66
465		5	min	32.063	-0.065	1392	15
466		6	max	43.344	-0.002	NC	66
467		6	min	40.375	-0.074	1222	15
468		7	max	43.938	-0.004	NC	68
469		7	min	47.5	-0.075	1083	15
470		8	max	53.438	0.001	NC	45
471		8	min	54.031	-0.086	936	13
472	M515	1	max	3.563	-0.001	NC	72
473		1	min	2.375	-0.053	1533	13
474		2	max	10.688	0.001	NC	70
475		2	min	13.063	0.041	1954	13
476		3	max	14.25	0.001	NC	32
477		3	min	17.219	-0.034	2657	15
478		4	max	27.906	-0.001	NC	98
479		4	min	24.938	-0.048	1874	13
480		5	max	29.094	-0.001	NC	98
481		5	min	32.063	-0.055	1629	13
482		6	max	43.344	-0.002	NC	68
483		6	min	39.781	-0.07	1288	13
484		7	max	43.938	-0.004	NC	68
485		7	min	47.5	-0.067	1214	13
486		8	max	55.219	0.001	NC	76
487		8	min	54.031	-0.08	1008	13
488	M516	1	max	2.859	-0.001	NC	58
489		1	min	2.531	1.065	50	103
490	M517	1	max	4.266	-0.001	NC	69
491		1	min	2.531	1.028	52	103
492	M518	1	max	3.753	-0.001	NC	19
493		1	min	3.36	-0.018	2848	100
494	M707	1	max	2.662	-0.001	NC	37
495		1	min	3.36	-0.017	2975	100
496	M708	1	max	0.047	-0.001	NC	60
497		1	min	2.484	1.023	52	103
498	M709	1	max	0.208	-0.001	NC	98
499		1	min	2.5	-0.022	2789	15
500	M710	1	max	0.99	-0.001	NC	44
501		1	min	2.5	-0.019	3121	15
502	M711	1	max	3.796	-0.001	NC	29
503		1	min	3.578	-0.015	3341	100
504	M712	1	max	0.742	-0.001	NC	101
505		1	min	3.535	-0.014	3496	100
506	M713	1	max	0.417	-0.001	NC	70
507		1	min	2.5	-0.021	2813	15
508	M765	1	max	4.896	-0.001	NC	98
509		1	min	2.5	-0.056	1073	15
510	M766	1	max	4.896	-0.001	NC	98
511		1	min	2.5	-0.058	1040	72
512	M768	1	max	0.933	0.001	NC	66
513		1	min	2.083	0.058	866	14

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
514	M769	1	max	1.023	0.001	NC	98
515		1	min	1.583	0.023	1650	14
516	M771	1	max	0.282	0.001	NC	29
517		1	min	2.083	0.078	642	14
518	M776	1	max	0.326	0.001	NC	93
519		1	min	2.083	0.058	866	14
520	M777	1	max	1.253	0.001	NC	38
521		1	min	1.583	0.017	2186	14
522	M778	1	max	1.253	0.001	NC	96
523		1	min	1.583	0.017	2180	14
524	M779	1	max	1.023	0.001	NC	96
525		1	min	1.583	0.023	1646	14
526	M780	1	max	0.676	0.001	NC	76
527		1	min	1.583	0.017	2186	14
528	M781	1	max	0.676	0.001	NC	106
529		1	min	1.583	0.017	2180	14
530	M485	1	max	0.391	0.001	NC	56
531		1	min	2.083	0.04	1249	14
532	M497	1	max	0.676	0.001	NC	58
533		1	min	1.583	0.012	3125	14
534	M498	1	max	0.412	0.001	NC	105
535		1	min	1.583	0.012	3137	14
536	M786	1	max	0.391	0.001	NC	86
537		1	min	2.083	0.04	1249	14
538	M787	1	max	0.412	0.001	NC	75
539		1	min	1.583	0.012	3137	14
540	M788	1	max	0.874	0.001	NC	46
541		1	min	1.583	0.012	3125	14
542	M698	1	max	0.825	0.001	NC	97
543		1	min	2.083	0.039	1287	14
544	M699	1	max	0.891	0.001	NC	74
545		1	min	1.583	0.012	3238	14
546	M700	1	max	0.363	0.001	NC	17
547		1	min	1.583	0.012	3225	14
548	M468	1	max	0.825	0.001	NC	97
549		1	min	2.083	0.039	1287	14
550	M469	1	max	0.363	0.001	NC	18
551		1	min	1.583	0.012	3238	14
552	M506	1	max	0.363	0.001	NC	17
553		1	min	1.583	0.012	3225	14
554	M636	1	max	4.609	-0.001	NC	14
555		1	min	0	0	NC	12
556	M637	1	max	0.307	-0.001	NC	16
557		1	min	0	0	NC	12
558	M789	1	max	0.861	-0.001	NC	19
559		1	min	0	0	NC	12

Beam Deflection Checks

No Data to Print...

Envelope Beam Deflection Checks

No Data to Print...

Member Torsion Stresses

No Data to Print...

Envelope Member Torsion Stresses

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
0	M273	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1			min	0	12	0	12	0	12	0	12	0	12	0	12
2		2	max	0	107	0	107	0	107	0	107	0	107	0	107
3			min	0	12	0	12	0	12	0	12	0	12	0	12
4		3	max	0	107	0	107	0	107	0	107	0	107	0	107
5			min	0	12	0	12	0	12	0	12	0	12	0	12
6		4	max	0.101	77	0.121	77	0	107	0.049	77	0.597	71	0.597	71
7			min	-0.133	71	-0.159	71	0	12	-0.064	71	-0.454	77	-0.454	77
8		5	max	0	107	0	107	0	107	0	107	0	107	0	107
9			min	0	12	0	12	0	12	0	12	0	12	0	12
10	M313	1	max	0	107	0	107	0	107	0	107	0	107	0	107
11			min	0	12	0	12	0	12	0	12	0	12	0	12
12		2	max	0	107	0	107	0	107	0	107	0	107	0	107
13			min	0	12	0	12	0	12	0	12	0	12	0	12
14		3	max	0.206	73	0.326	73	0	107	0.095	73	0	107	0	107
15			min	-0.206	105	-0.326	105	0	12	-0.095	105	0	12	0	12
16		4	max	0.08	103	0.096	103	0	107	0.039	103	0.48	101	0.48	101
17			min	-0.107	101	-0.128	101	0	12	-0.052	101	-0.361	103	-0.361	103
18		5	max	0	107	0	107	0	107	0	107	0	107	0	107
19			min	0	12	0	12	0	12	0	12	0	12	0	12
20	M314	1	max	0	107	0	107	0	107	0	107	0	107	0	107
21			min	0	12	0	12	0	12	0	12	0	12	0	12
22		2	max	0	107	0	107	0	107	0	107	0	107	0	107
23			min	0	12	0	12	0	12	0	12	0	12	0	12
24		3	max	0	107	0	107	0	107	0	107	0	107	0	107
25			min	0	12	0	12	0	12	0	12	0	12	0	12
26		4	max	0.14	71	0.167	71	0	107	0.068	71	0.475	77	0.475	77
27			min	-0.106	77	-0.126	77	0	12	-0.051	77	-0.629	71	-0.629	71
28		5	max	0	107	0	107	0	107	0	107	0	107	0	107
29			min	0	12	0	12	0	12	0	12	0	12	0	12
30	M336	1	max	0	107	0	107	0	107	0	107	0	107	0	107
31			min	0	12	0	12	0	12	0	12	0	12	0	12
32		2	max	0	107	0	107	0	107	0	107	0	107	0	107
33			min	0	12	0	12	0	12	0	12	0	12	0	12
34		3	max	0	107	0	107	0	107	0	107	0	107	0	107
35			min	0	12	0	12	0	12	0	12	0	12	0	12
36		4	max	0.117	77	0.14	77	0	107	0.057	77	0.665	71	0.665	71
37			min	-0.148	71	-0.177	71	0	12	-0.072	71	-0.527	77	-0.527	77
38		5	max	0	107	0	107	0	107	0	107	0	107	0	107
39			min	0	12	0	12	0	12	0	12	0	12	0	12
40	M337	1	max	0	106	0.014	106	NC		NC		NC		NC	
41			min	0	70	-0.024	70	NC		NC		NC		NC	
42		2	max	0	106	0.014	106	NC		NC		NC		NC	
43			min	0	70	-0.024	70	NC		NC		NC		NC	
44		3	max	0	106	0.014	106	NC		NC		NC		NC	
45			min	0	70	-0.024	70	NC		NC		NC		NC	
46		4	max	0	106	0.014	106	NC		NC		NC		NC	
47			min	0	70	-0.024	70	NC		NC		NC		NC	
48		5	max	0	106	0.014	106	NC		NC		NC		NC	
49			min	0	70	-0.024	70	NC		NC		NC		NC	
50	M340	1	max	0.001	104	0.027	104	NC		NC		NC		NC	
51			min	-0.071	15	-2.436	15	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
52		2	max	0.019	13	0.661	13	NC		NC		NC		NC	
53			min	-0.009	76	-0.301	76	NC		NC		NC		NC	
54		3	max	0.061	13	2.101	13	NC		NC		NC		NC	
55			min	0.006	107	0.197	107	NC		NC		NC		NC	
56		4	max	0.031	15	1.058	15	NC		NC		NC		NC	
57			min	-0.008	104	-0.281	104	NC		NC		NC		NC	
58		5	max	0.003	76	0.086	76	NC		NC		NC		NC	
59			min	-0.064	13	-2.208	13	NC		NC		NC		NC	
60	M342	1	max	0.016	70	0.563	70	NC		NC		NC		NC	
61			min	-0.013	106	-0.441	106	NC		NC		NC		NC	
62		2	max	0.019	70	0.666	70	NC		NC		NC		NC	
63			min	-0.015	106	-0.519	106	NC		NC		NC		NC	
64		3	max	0.056	13	1.923	13	NC		NC		NC		NC	
65			min	0.005	107	0.164	107	NC		NC		NC		NC	
66		4	max	0.015	106	0.531	106	NC		NC		NC		NC	
67			min	-0.018	70	-0.609	70	NC		NC		NC		NC	
68		5	max	0.014	106	0.471	106	NC		NC		NC		NC	
69			min	-0.015	70	-0.53	70	NC		NC		NC		NC	
70	M343	1	max	0.028	15	1.947	15	NC		NC		NC		NC	
71			min	0	74	-0.03	74	NC		NC		NC		NC	
72		2	max	0.028	15	1.947	15	NC		NC		NC		NC	
73			min	0	74	-0.03	74	NC		NC		NC		NC	
74		3	max	0.028	15	1.947	15	NC		NC		NC		NC	
75			min	0	74	-0.03	74	NC		NC		NC		NC	
76		4	max	0.028	15	1.947	15	NC		NC		NC		NC	
77			min	0	74	-0.03	74	NC		NC		NC		NC	
78		5	max	0.028	15	1.947	15	NC		NC		NC		NC	
79			min	0	74	-0.03	74	NC		NC		NC		NC	
80	M346	1	max	0.017	13	1.141	13	NC		NC		NC		NC	
81			min	-0.002	76	-0.128	76	NC		NC		NC		NC	
82		2	max	0.017	13	1.141	13	NC		NC		NC		NC	
83			min	-0.002	76	-0.128	76	NC		NC		NC		NC	
84		3	max	0.017	13	1.141	13	NC		NC		NC		NC	
85			min	-0.002	76	-0.128	76	NC		NC		NC		NC	
86		4	max	0.017	13	1.141	13	NC		NC		NC		NC	
87			min	-0.002	76	-0.128	76	NC		NC		NC		NC	
88		5	max	0.017	13	1.141	13	NC		NC		NC		NC	
89			min	-0.002	76	-0.128	76	NC		NC		NC		NC	
90	M347	1	max	0.017	15	0.576	15	NC		NC		NC		NC	
91			min	-0.004	74	-0.149	74	NC		NC		NC		NC	
92		2	max	0.017	15	0.576	15	NC		NC		NC		NC	
93			min	-0.004	74	-0.149	74	NC		NC		NC		NC	
94		3	max	0.017	15	0.576	15	NC		NC		NC		NC	
95			min	-0.004	74	-0.149	74	NC		NC		NC		NC	
96		4	max	0.017	15	0.576	15	NC		NC		NC		NC	
97			min	-0.004	74	-0.149	74	NC		NC		NC		NC	
98		5	max	0.017	15	0.576	15	NC		NC		NC		NC	
99			min	-0.004	74	-0.149	74	NC		NC		NC		NC	
100	M349	1	max	0.005	68	0.176	68	NC		NC		NC		NC	
101			min	-0.015	13	-0.525	13	NC		NC		NC		NC	
102		2	max	0.006	68	0.214	68	NC		NC		NC		NC	
103			min	-0.007	92	-0.257	92	NC		NC		NC		NC	
104		3	max	0.024	15	0.829	15	NC		NC		NC		NC	
105			min	-0.007	103	-0.233	103	NC		NC		NC		NC	
106		4	max	0.009	100	0.302	100	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
107			min	-0.005	68	-0.182	68	NC		NC		NC		NC	
108		5	max	0.007	92	0.229	92	NC		NC		NC		NC	
109			min	-0.007	68	-0.247	68	NC		NC		NC		NC	
110	M350	1	max	0.01	98	0.332	98	NC		NC		NC		NC	
111			min	-0.01	62	-0.351	62	NC		NC		NC		NC	
112		2	max	0.013	15	0.449	15	NC		NC		NC		NC	
113			min	-0.004	104	-0.141	104	NC		NC		NC		NC	
114		3	max	0.021	15	0.706	15	NC		NC		NC		NC	
115			min	-0.006	73	-0.218	73	NC		NC		NC		NC	
116		4	max	0.006	74	0.196	74	NC		NC		NC		NC	
117			min	-0.006	106	-0.198	106	NC		NC		NC		NC	
118		5	max	0.008	66	0.28	66	NC		NC		NC		NC	
119			min	-0.021	15	-0.726	15	NC		NC		NC		NC	
120	M351	1	max	0.062	71	4.268	71	NC		NC		NC		NC	
121			min	-0.062	103	-4.226	103	NC		NC		NC		NC	
122		2	max	0.062	71	4.268	71	NC		NC		NC		NC	
123			min	-0.062	103	-4.226	103	NC		NC		NC		NC	
124		3	max	0.009	71	0.637	71	NC		NC		NC		NC	
125			min	-0.009	103	-0.64	103	NC		NC		NC		NC	
126		4	max	0.075	103	5.117	103	NC		NC		NC		NC	
127			min	-0.076	71	-5.171	71	NC		NC		NC		NC	
128		5	max	0.075	103	5.117	103	NC		NC		NC		NC	
129			min	-0.076	71	-5.171	71	NC		NC		NC		NC	
130	M352	1	max	0.062	71	4.247	71	NC		NC		NC		NC	
131			min	-0.061	103	-4.206	103	NC		NC		NC		NC	
132		2	max	0.062	71	4.247	71	NC		NC		NC		NC	
133			min	-0.061	103	-4.206	103	NC		NC		NC		NC	
134		3	max	0.011	71	0.781	71	NC		NC		NC		NC	
135			min	-0.011	103	-0.744	103	NC		NC		NC		NC	
136		4	max	0.07	103	4.778	103	NC		NC		NC		NC	
137			min	-0.069	71	-4.744	71	NC		NC		NC		NC	
138		5	max	0.07	103	4.778	103	NC		NC		NC		NC	
139			min	-0.069	71	-4.744	71	NC		NC		NC		NC	
140	M353	1	max	0.108	71	0	107	0	107	0.218	71	3.806	71	3.806	71
141			min	-0.089	47	0	12	0	12	-0.18	47	-3.14	47	-3.14	47
142		2	max	0.108	71	0.43	71	0	107	0.19	71	2.105	71	2.105	71
143			min	-0.089	47	-0.355	47	0	12	-0.157	47	-1.736	47	-1.736	47
144		3	max	0.018	71	0.107	71	0	107	0.03	71	0.098	71	0.098	71
145			min	-0.018	107	-0.103	107	0	12	-0.029	107	-0.095	107	-0.095	107
146		4	max	0.104	103	0.575	103	0	107	0.171	103	0.973	71	0.973	71
147			min	-0.116	71	-0.641	71	0	12	-0.191	71	-0.873	103	-0.873	103
148		5	max	0.104	103	0.34	103	0	107	0.187	103	2.638	71	2.638	71
149			min	-0.116	71	-0.379	71	0	12	-0.208	71	-2.366	103	-2.366	103
150	M354	1	max	0.103	75	0	107	0	107	0.209	75	3.64	75	3.64	75
151			min	-0.094	73	0	12	0	12	-0.189	73	-3.293	73	-3.293	73
152		2	max	0.103	75	0.411	75	0	107	0.182	75	2.013	75	2.013	75
153			min	-0.094	73	-0.372	73	0	12	-0.164	73	-1.821	73	-1.821	73
154		3	max	0.015	75	0.089	75	0	107	0.025	75	0.082	75	0.082	75
155			min	-0.021	103	-0.12	103	0	12	-0.034	103	-0.111	103	-0.111	103
156		4	max	0.1	77	0.554	77	0	107	0.165	77	1.047	71	1.047	71
157			min	-0.124	71	-0.69	71	0	12	-0.205	71	-0.841	77	-0.841	77
158		5	max	0.1	77	0.327	77	0	107	0.18	77	2.837	71	2.837	71
159			min	-0.124	71	-0.407	71	0	12	-0.224	71	-2.28	77	-2.28	77
160	M355	1	max	0.06	71	4.133	71	NC		NC		NC		NC	
161			min	-0.059	103	-4.062	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
162		2	max	0.06	71	4.133	71	NC		NC		NC		NC	
163			min	-0.059	103	-4.062	103	NC		NC		NC		NC	
164		3	max	0.009	71	0.599	71	NC		NC		NC		NC	
165			min	-0.009	107	-0.598	107	NC		NC		NC		NC	
166		4	max	0.072	103	4.928	103	NC		NC		NC		NC	
167			min	-0.073	71	-5.002	71	NC		NC		NC		NC	
168		5	max	0.072	103	4.928	103	NC		NC		NC		NC	
169			min	-0.073	71	-5.002	71	NC		NC		NC		NC	
170	M356	1	max	0.124	77	3.826	77	NC		NC		NC		NC	
171			min	-0.124	101	-3.831	101	NC		NC		NC		NC	
172		2	max	0.062	77	1.912	77	NC		NC		NC		NC	
173			min	-0.062	101	-1.917	101	NC		NC		NC		NC	
174		3	max	0	76	0	76	NC		NC		NC		NC	
175			min	0	16	-0.006	16	NC		NC		NC		NC	
176		4	max	0.062	75	1.913	75	NC		NC		NC		NC	
177			min	-0.062	103	-1.919	103	NC		NC		NC		NC	
178		5	max	0.124	75	3.827	75	NC		NC		NC		NC	
179			min	-0.124	103	-3.834	103	NC		NC		NC		NC	
180	M357	1	max	0.118	77	3.63	77	NC		NC		NC		NC	
181			min	-0.118	71	-3.642	71	NC		NC		NC		NC	
182		2	max	0.059	77	1.816	77	NC		NC		NC		NC	
183			min	-0.059	71	-1.827	71	NC		NC		NC		NC	
184		3	max	0.001	66	0.046	66	NC		NC		NC		NC	
185			min	-0.002	102	-0.056	102	NC		NC		NC		NC	
186		4	max	0.058	75	1.806	75	NC		NC		NC		NC	
187			min	-0.059	73	-1.816	73	NC		NC		NC		NC	
188		5	max	0.117	75	3.62	75	NC		NC		NC		NC	
189			min	-0.118	73	-3.63	73	NC		NC		NC		NC	
190	M358	1	max	0.072	103	0	107	0	107	0.145	103	2.534	103	2.534	103
191			min	-0.068	101	0	12	0	12	-0.138	101	-2.406	101	-2.406	101
192		2	max	0.034	103	0.135	103	0	107	0.06	103	0.661	103	0.661	103
193			min	-0.032	105	-0.125	105	0	12	-0.055	105	-0.613	105	-0.613	105
194		3	max	0.008	64	0.048	64	0	107	0.013	64	0.044	64	0.044	64
195			min	-0.006	96	-0.035	96	0	12	-0.01	96	-0.032	96	-0.032	96
196		4	max	0.038	71	0.209	71	0	107	0.062	71	0.295	107	0.295	107
197			min	-0.035	107	-0.195	107	0	12	-0.058	107	-0.317	71	-0.317	71
198		5	max	0.076	101	0.25	101	0	107	0.137	101	1.689	103	1.689	103
199			min	-0.074	103	-0.242	103	0	12	-0.133	103	-1.74	101	-1.74	101
200	M359	1	max	0.069	107	0	107	0	107	0.14	107	2.439	107	2.439	107
201			min	-0.077	101	0	12	0	12	-0.156	101	-2.724	101	-2.724	101
202		2	max	0.031	107	0.121	107	0	107	0.054	107	0.594	107	0.594	107
203			min	-0.037	101	-0.148	101	0	12	-0.066	101	-0.727	101	-0.727	101
204		3	max	0.014	76	0.083	76	0	107	0.023	76	0.076	76	0.076	76
205			min	-0.02	100	-0.113	100	0	12	-0.032	100	-0.104	100	-0.104	100
206		4	max	0.033	105	0.181	105	0	107	0.054	105	0.334	103	0.334	103
207			min	-0.04	103	-0.22	103	0	12	-0.066	103	-0.275	105	-0.275	105
208		5	max	0.072	105	0.234	105	0	107	0.129	105	1.825	103	1.825	103
209			min	-0.08	103	-0.262	103	0	12	-0.144	103	-1.634	105	-1.634	105
210	M360	1	max	0.118	103	3.64	103	NC		NC		NC		NC	
211			min	-0.117	75	-3.618	75	NC		NC		NC		NC	
212		2	max	0.059	103	1.826	103	NC		NC		NC		NC	
213			min	-0.058	75	-1.805	75	NC		NC		NC		NC	
214		3	max	0.002	102	0.066	102	NC		NC		NC		NC	
215			min	-0.002	66	-0.047	66	NC		NC		NC		NC	
216		4	max	0.059	101	1.827	101	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
217			min	-0.059	77	-1.809	77	NC		NC		NC		NC	
218		5	max	0.118	101	3.64	101	NC		NC		NC		NC	
219			min	-0.117	77	-3.624	77	NC		NC		NC		NC	
220	M361	1	max	0.478	71	22.119	71	NC		NC		NC		NC	
221			min	-0.475	103	-22.018	103	NC		NC		NC		NC	
222		2	max	0.478	71	22.119	71	NC		NC		NC		NC	
223			min	-0.475	103	-22.018	103	NC		NC		NC		NC	
224		3	max	0.026	71	1.213	71	NC		NC		NC		NC	
225			min	-0.025	107	-1.174	107	NC		NC		NC		NC	
226		4	max	0.226	103	10.467	103	NC		NC		NC		NC	
227			min	-0.225	71	-10.421	71	NC		NC		NC		NC	
228		5	max	0.43	103	19.895	103	NC		NC		NC		NC	
229			min	-0.43	71	-19.901	71	NC		NC		NC		NC	
230	M362	1	max	0.017	103	0.766	103	NC		NC		NC		NC	
231			min	-0.017	71	-0.776	71	NC		NC		NC		NC	
232		2	max	0.017	103	0.766	103	NC		NC		NC		NC	
233			min	-0.017	71	-0.776	71	NC		NC		NC		NC	
234		3	max	0.017	103	0.766	103	NC		NC		NC		NC	
235			min	-0.017	71	-0.776	71	NC		NC		NC		NC	
236		4	max	0.045	71	2.07	71	NC		NC		NC		NC	
237			min	-0.042	103	-1.955	103	NC		NC		NC		NC	
238		5	max	0.045	71	2.07	71	NC		NC		NC		NC	
239			min	-0.042	103	-1.955	103	NC		NC		NC		NC	
240	M363	1	max	0.017	103	0.771	103	NC		NC		NC		NC	
241			min	-0.016	71	-0.754	71	NC		NC		NC		NC	
242		2	max	0.017	103	0.771	103	NC		NC		NC		NC	
243			min	-0.016	71	-0.754	71	NC		NC		NC		NC	
244		3	max	0.017	103	0.771	103	NC		NC		NC		NC	
245			min	-0.016	71	-0.754	71	NC		NC		NC		NC	
246		4	max	0.044	71	2.021	71	NC		NC		NC		NC	
247			min	-0.043	103	-2.001	103	NC		NC		NC		NC	
248		5	max	0.044	71	2.021	71	NC		NC		NC		NC	
249			min	-0.043	103	-2.001	103	NC		NC		NC		NC	
250	M364	1	max	0.001	98	0.067	98	NC		NC		NC		NC	
251			min	-0.002	62	-0.106	62	NC		NC		NC		NC	
252		2	max	0.001	98	0.067	98	NC		NC		NC		NC	
253			min	-0.002	62	-0.106	62	NC		NC		NC		NC	
254		3	max	0.001	98	0.067	98	NC		NC		NC		NC	
255			min	-0.002	62	-0.106	62	NC		NC		NC		NC	
256		4	max	0.013	74	0.614	74	NC		NC		NC		NC	
257			min	-0.014	102	-0.639	102	NC		NC		NC		NC	
258		5	max	0.013	74	0.614	74	NC		NC		NC		NC	
259			min	-0.014	102	-0.639	102	NC		NC		NC		NC	
260	M365	1	max	0.499	71	23.113	71	NC		NC		NC		NC	
261			min	-0.499	103	-23.095	103	NC		NC		NC		NC	
262		2	max	0.499	71	23.113	71	NC		NC		NC		NC	
263			min	-0.499	103	-23.095	103	NC		NC		NC		NC	
264		3	max	0.025	71	1.169	71	NC		NC		NC		NC	
265			min	-0.025	107	-1.156	107	NC		NC		NC		NC	
266		4	max	0.236	103	10.938	103	NC		NC		NC		NC	
267			min	-0.236	71	-10.923	71	NC		NC		NC		NC	
268		5	max	0.447	103	20.685	103	NC		NC		NC		NC	
269			min	-0.446	71	-20.671	71	NC		NC		NC		NC	
270	M366	1	max	0.366	71	16.962	71	NC		NC		NC		NC	
271			min	-0.368	103	-17.045	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
272		2	max	0.366	71	16.962	71	NC		NC		NC		NC	
273			min	-0.368	103	-17.045	103	NC		NC		NC		NC	
274		3	max	0.023	75	1.067	75	NC		NC		NC		NC	
275			min	-0.024	103	-1.098	103	NC		NC		NC		NC	
276		4	max	0.18	103	8.336	103	NC		NC		NC		NC	
277			min	-0.181	71	-8.37	71	NC		NC		NC		NC	
278		5	max	0.337	103	15.608	103	NC		NC		NC		NC	
279			min	-0.337	71	-15.594	71	NC		NC		NC		NC	
280	M367	1	max	0.003	72	0.21	72	NC		NC		NC		NC	
281			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
282		2	max	0.003	72	0.21	72	NC		NC		NC		NC	
283			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
284		3	max	0.003	72	0.21	72	NC		NC		NC		NC	
285			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
286		4	max	0.003	72	0.21	72	NC		NC		NC		NC	
287			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
288		5	max	0.003	72	0.21	72	NC		NC		NC		NC	
289			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
290	M368	1	max	0.003	76	0.207	76	NC		NC		NC		NC	
291			min	-0.003	104	-0.195	104	NC		NC		NC		NC	
292		2	max	0.003	76	0.207	76	NC		NC		NC		NC	
293			min	-0.003	104	-0.195	104	NC		NC		NC		NC	
294		3	max	0.003	76	0.207	76	NC		NC		NC		NC	
295			min	-0.003	104	-0.195	104	NC		NC		NC		NC	
296		4	max	0.003	76	0.207	76	NC		NC		NC		NC	
297			min	-0.003	104	-0.195	104	NC		NC		NC		NC	
298		5	max	0.003	76	0.207	76	NC		NC		NC		NC	
299			min	-0.003	104	-0.195	104	NC		NC		NC		NC	
300	M369	1	max	0.003	104	0.183	104	NC		NC		NC		NC	
301			min	-0.003	72	-0.208	72	NC		NC		NC		NC	
302		2	max	0.003	104	0.183	104	NC		NC		NC		NC	
303			min	-0.003	72	-0.208	72	NC		NC		NC		NC	
304		3	max	0.003	104	0.183	104	NC		NC		NC		NC	
305			min	-0.003	72	-0.208	72	NC		NC		NC		NC	
306		4	max	0.003	104	0.183	104	NC		NC		NC		NC	
307			min	-0.003	72	-0.208	72	NC		NC		NC		NC	
308		5	max	0.003	104	0.183	104	NC		NC		NC		NC	
309			min	-0.003	72	-0.208	72	NC		NC		NC		NC	
310	M370	1	max	0.221	101	13.699	101	NC		NC		NC		NC	
311			min	-0.223	73	-13.776	73	NC		NC		NC		NC	
312		2	max	0.221	101	13.699	101	NC		NC		NC		NC	
313			min	-0.223	73	-13.776	73	NC		NC		NC		NC	
314		3	max	0.006	105	0.372	105	NC		NC		NC		NC	
315			min	-0.007	73	-0.411	73	NC		NC		NC		NC	
316		4	max	0.09	107	5.587	107	NC		NC		NC		NC	
317			min	-0.091	71	-5.639	71	NC		NC		NC		NC	
318		5	max	0.188	103	11.646	103	NC		NC		NC		NC	
319			min	-0.189	71	-11.683	71	NC		NC		NC		NC	
320	M371	1	max	0.003	15	0.094	15	NC		NC		NC		NC	
321			min	-0.001	76	-0.037	76	NC		NC		NC		NC	
322		2	max	0.003	15	0.094	15	NC		NC		NC		NC	
323			min	-0.001	76	-0.037	76	NC		NC		NC		NC	
324		3	max	0.003	15	0.094	15	NC		NC		NC		NC	
325			min	-0.001	76	-0.037	76	NC		NC		NC		NC	
326		4	max	0.003	15	0.094	15	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
327			min	-0.001	76	-0.037	76	NC		NC		NC		NC	
328		5	max	0.003	15	0.094	15	NC		NC		NC		NC	
329			min	-0.001	76	-0.037	76	NC		NC		NC		NC	
330	M372	1	max	0.002	106	0.087	106	NC		NC		NC		NC	
331			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
332		2	max	0.002	106	0.087	106	NC		NC		NC		NC	
333			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
334		3	max	0.002	106	0.087	106	NC		NC		NC		NC	
335			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
336		4	max	0.002	106	0.087	106	NC		NC		NC		NC	
337			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
338		5	max	0.002	106	0.087	106	NC		NC		NC		NC	
339			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
340	M373	1	max	0	96	0.025	96	NC		NC		NC		NC	
341			min	0	64	-0.026	64	NC		NC		NC		NC	
342		2	max	0	96	0.025	96	NC		NC		NC		NC	
343			min	0	64	-0.026	64	NC		NC		NC		NC	
344		3	max	0	96	0.025	96	NC		NC		NC		NC	
345			min	0	64	-0.026	64	NC		NC		NC		NC	
346		4	max	0	96	0.025	96	NC		NC		NC		NC	
347			min	0	64	-0.026	64	NC		NC		NC		NC	
348		5	max	0	96	0.025	96	NC		NC		NC		NC	
349			min	0	64	-0.026	64	NC		NC		NC		NC	
350	M374	1	max	0.007	13	0.495	13	NC		NC		NC		NC	
351			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
352		2	max	0.007	13	0.495	13	NC		NC		NC		NC	
353			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
354		3	max	0.007	13	0.495	13	NC		NC		NC		NC	
355			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
356		4	max	0.007	13	0.495	13	NC		NC		NC		NC	
357			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
358		5	max	0.007	13	0.495	13	NC		NC		NC		NC	
359			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
360	M375	1	max	0.001	102	0.052	102	NC		NC		NC		NC	
361			min	-0.001	74	-0.039	74	NC		NC		NC		NC	
362		2	max	0.001	102	0.052	102	NC		NC		NC		NC	
363			min	-0.001	74	-0.039	74	NC		NC		NC		NC	
364		3	max	0.001	102	0.052	102	NC		NC		NC		NC	
365			min	-0.001	74	-0.039	74	NC		NC		NC		NC	
366		4	max	0.001	102	0.052	102	NC		NC		NC		NC	
367			min	-0.001	74	-0.039	74	NC		NC		NC		NC	
368		5	max	0.001	102	0.052	102	NC		NC		NC		NC	
369			min	-0.001	74	-0.039	74	NC		NC		NC		NC	
370	M376	1	max	0.004	72	0.278	72	NC		NC		NC		NC	
371			min	-0.004	104	-0.248	104	NC		NC		NC		NC	
372		2	max	0.004	72	0.278	72	NC		NC		NC		NC	
373			min	-0.004	104	-0.248	104	NC		NC		NC		NC	
374		3	max	0.004	72	0.278	72	NC		NC		NC		NC	
375			min	-0.004	104	-0.248	104	NC		NC		NC		NC	
376		4	max	0.004	72	0.278	72	NC		NC		NC		NC	
377			min	-0.004	104	-0.248	104	NC		NC		NC		NC	
378		5	max	0.004	72	0.278	72	NC		NC		NC		NC	
379			min	-0.004	104	-0.248	104	NC		NC		NC		NC	
380	M377	1	max	0.006	74	0.196	74	NC		NC		NC		NC	
381			min	-0.006	106	-0.196	106	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
382		2	max	0.006	74	0.196	74	NC		NC		NC		NC	
383			min	-0.006	106	-0.196	106	NC		NC		NC		NC	
384		3	max	0.006	74	0.196	74	NC		NC		NC		NC	
385			min	-0.006	106	-0.196	106	NC		NC		NC		NC	
386		4	max	0.006	74	0.196	74	NC		NC		NC		NC	
387			min	-0.006	106	-0.196	106	NC		NC		NC		NC	
388		5	max	0.006	74	0.196	74	NC		NC		NC		NC	
389			min	-0.006	106	-0.196	106	NC		NC		NC		NC	
390	M378	1	max	0.001	13	0.09	13	NC		NC		NC		NC	
391			min	0	68	0	68	NC		NC		NC		NC	
392		2	max	0.001	13	0.09	13	NC		NC		NC		NC	
393			min	0	68	0	68	NC		NC		NC		NC	
394		3	max	0.001	13	0.09	13	NC		NC		NC		NC	
395			min	0	68	0	68	NC		NC		NC		NC	
396		4	max	0.001	13	0.09	13	NC		NC		NC		NC	
397			min	0	68	0	68	NC		NC		NC		NC	
398		5	max	0.001	13	0.09	13	NC		NC		NC		NC	
399			min	0	68	0	68	NC		NC		NC		NC	
400	M379	1	max	0	104	0.011	104	NC		NC		NC		NC	
401			min	-0.001	13	-0.039	13	NC		NC		NC		NC	
402		2	max	0	104	0.011	104	NC		NC		NC		NC	
403			min	-0.001	13	-0.039	13	NC		NC		NC		NC	
404		3	max	0	104	0.011	104	NC		NC		NC		NC	
405			min	-0.001	13	-0.039	13	NC		NC		NC		NC	
406		4	max	0	104	0.011	104	NC		NC		NC		NC	
407			min	-0.001	13	-0.039	13	NC		NC		NC		NC	
408		5	max	0	104	0.011	104	NC		NC		NC		NC	
409			min	-0.001	13	-0.039	13	NC		NC		NC		NC	
410	M380	1	max	0.002	13	0.1	13	NC		NC		NC		NC	
411			min	0	68	0.001	68	NC		NC		NC		NC	
412		2	max	0.002	13	0.1	13	NC		NC		NC		NC	
413			min	0	68	0.001	68	NC		NC		NC		NC	
414		3	max	0.002	13	0.1	13	NC		NC		NC		NC	
415			min	0	68	0.001	68	NC		NC		NC		NC	
416		4	max	0.002	13	0.1	13	NC		NC		NC		NC	
417			min	0	68	0.001	68	NC		NC		NC		NC	
418		5	max	0.002	13	0.1	13	NC		NC		NC		NC	
419			min	0	68	0.001	68	NC		NC		NC		NC	
420	M381	1	max	0	104	0.015	104	NC		NC		NC		NC	
421			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
422		2	max	0	104	0.015	104	NC		NC		NC		NC	
423			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
424		3	max	0	104	0.015	104	NC		NC		NC		NC	
425			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
426		4	max	0	104	0.015	104	NC		NC		NC		NC	
427			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
428		5	max	0	104	0.015	104	NC		NC		NC		NC	
429			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
430	M382	1	max	0.002	70	0.12	70	NC		NC		NC		NC	
431			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
432		2	max	0.002	70	0.12	70	NC		NC		NC		NC	
433			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
434		3	max	0.002	70	0.12	70	NC		NC		NC		NC	
435			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
436		4	max	0.002	70	0.12	70	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
437			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
438		5	max	0.002	70	0.12	70	NC		NC		NC		NC	
439			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
440	M383	1	max	0	68	0.003	68	NC		NC		NC		NC	
441			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
442		2	max	0	68	0.003	68	NC		NC		NC		NC	
443			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
444		3	max	0	68	0.003	68	NC		NC		NC		NC	
445			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
446		4	max	0	68	0.003	68	NC		NC		NC		NC	
447			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
448		5	max	0	68	0.003	68	NC		NC		NC		NC	
449			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
450	M384	1	max	0	98	0.007	98	NC		NC		NC		NC	
451			min	-0.012	13	-0.421	13	NC		NC		NC		NC	
452		2	max	0	98	0.007	98	NC		NC		NC		NC	
453			min	-0.012	13	-0.421	13	NC		NC		NC		NC	
454		3	max	0	98	0.007	98	NC		NC		NC		NC	
455			min	-0.012	13	-0.421	13	NC		NC		NC		NC	
456		4	max	0	98	0.007	98	NC		NC		NC		NC	
457			min	-0.012	13	-0.421	13	NC		NC		NC		NC	
458		5	max	0	98	0.007	98	NC		NC		NC		NC	
459			min	-0.012	13	-0.421	13	NC		NC		NC		NC	
460	M385	1	max	0.003	68	0.105	68	NC		NC		NC		NC	
461			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
462		2	max	0.003	68	0.105	68	NC		NC		NC		NC	
463			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
464		3	max	0.003	68	0.105	68	NC		NC		NC		NC	
465			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
466		4	max	0.003	68	0.105	68	NC		NC		NC		NC	
467			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
468		5	max	0.003	68	0.105	68	NC		NC		NC		NC	
469			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
470	M386	1	max	0.006	19	0.407	19	NC		NC		NC		NC	
471			min	-0.001	100	-0.093	100	NC		NC		NC		NC	
472		2	max	0.006	19	0.407	19	NC		NC		NC		NC	
473			min	-0.001	100	-0.093	100	NC		NC		NC		NC	
474		3	max	0.006	19	0.407	19	NC		NC		NC		NC	
475			min	-0.001	100	-0.093	100	NC		NC		NC		NC	
476		4	max	0.006	19	0.407	19	NC		NC		NC		NC	
477			min	-0.001	100	-0.093	100	NC		NC		NC		NC	
478		5	max	0.006	19	0.407	19	NC		NC		NC		NC	
479			min	-0.001	100	-0.093	100	NC		NC		NC		NC	
480	M387	1	max	0.011	13	0.762	13	NC		NC		NC		NC	
481			min	0	98	0.026	98	NC		NC		NC		NC	
482		2	max	0.011	13	0.762	13	NC		NC		NC		NC	
483			min	0	98	0.026	98	NC		NC		NC		NC	
484		3	max	0.011	13	0.762	13	NC		NC		NC		NC	
485			min	0	98	0.026	98	NC		NC		NC		NC	
486		4	max	0.011	13	0.762	13	NC		NC		NC		NC	
487			min	0	98	0.026	98	NC		NC		NC		NC	
488		5	max	0.011	13	0.762	13	NC		NC		NC		NC	
489			min	0	98	0.026	98	NC		NC		NC		NC	
490	M388	1	max	0.013	13	0.458	13	NC		NC		NC		NC	
491			min	0	98	0.005	98	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
492		2	max	0.013	13	0.458	13	NC		NC		NC		NC	
493			min	0	98	0.005	98	NC		NC		NC		NC	
494		3	max	0.013	13	0.458	13	NC		NC		NC		NC	
495			min	0	98	0.005	98	NC		NC		NC		NC	
496		4	max	0.013	13	0.458	13	NC		NC		NC		NC	
497			min	0	98	0.005	98	NC		NC		NC		NC	
498		5	max	0.013	13	0.458	13	NC		NC		NC		NC	
499			min	0	98	0.005	98	NC		NC		NC		NC	
500	M389	1	max	0.006	92	0.221	92	NC		NC		NC		NC	
501			min	-0.005	68	-0.164	68	NC		NC		NC		NC	
502		2	max	0.006	92	0.221	92	NC		NC		NC		NC	
503			min	-0.005	68	-0.164	68	NC		NC		NC		NC	
504		3	max	0.006	92	0.221	92	NC		NC		NC		NC	
505			min	-0.005	68	-0.164	68	NC		NC		NC		NC	
506		4	max	0.006	92	0.221	92	NC		NC		NC		NC	
507			min	-0.005	68	-0.164	68	NC		NC		NC		NC	
508		5	max	0.006	92	0.221	92	NC		NC		NC		NC	
509			min	-0.005	68	-0.164	68	NC		NC		NC		NC	
510	M390	1	max	0.003	94	0.093	94	NC		NC		NC		NC	
511			min	-0.002	66	-0.062	66	NC		NC		NC		NC	
512		2	max	0.003	94	0.093	94	NC		NC		NC		NC	
513			min	-0.002	66	-0.062	66	NC		NC		NC		NC	
514		3	max	0.003	94	0.093	94	NC		NC		NC		NC	
515			min	-0.002	66	-0.062	66	NC		NC		NC		NC	
516		4	max	0.003	94	0.093	94	NC		NC		NC		NC	
517			min	-0.002	66	-0.062	66	NC		NC		NC		NC	
518		5	max	0.003	94	0.093	94	NC		NC		NC		NC	
519			min	-0.002	66	-0.062	66	NC		NC		NC		NC	
520	M392	1	max	0.001	102	0.067	102	NC		NC		NC		NC	
521			min	-0.001	74	-0.052	74	NC		NC		NC		NC	
522		2	max	0.001	102	0.067	102	NC		NC		NC		NC	
523			min	-0.001	74	-0.052	74	NC		NC		NC		NC	
524		3	max	0.001	102	0.067	102	NC		NC		NC		NC	
525			min	-0.001	74	-0.052	74	NC		NC		NC		NC	
526		4	max	0.001	102	0.067	102	NC		NC		NC		NC	
527			min	-0.001	74	-0.052	74	NC		NC		NC		NC	
528		5	max	0.001	102	0.067	102	NC		NC		NC		NC	
529			min	-0.001	74	-0.052	74	NC		NC		NC		NC	
530	M394	1	max	0.001	100	0.044	100	NC		NC		NC		NC	
531			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
532		2	max	0.001	100	0.044	100	NC		NC		NC		NC	
533			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
534		3	max	0.001	100	0.044	100	NC		NC		NC		NC	
535			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
536		4	max	0.001	100	0.044	100	NC		NC		NC		NC	
537			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
538		5	max	0.001	100	0.044	100	NC		NC		NC		NC	
539			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
540	M396	1	max	0.002	66	0.059	66	NC		NC		NC		NC	
541			min	-0.003	15	-0.1	15	NC		NC		NC		NC	
542		2	max	0.002	66	0.059	66	NC		NC		NC		NC	
543			min	-0.003	15	-0.1	15	NC		NC		NC		NC	
544		3	max	0.002	66	0.059	66	NC		NC		NC		NC	
545			min	-0.003	15	-0.1	15	NC		NC		NC		NC	
546		4	max	0.002	66	0.059	66	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
547			min	-0.003	15	-0.1	15	NC		NC		NC		NC	
548		5	max	0.002	66	0.059	66	NC		NC		NC		NC	
549			min	-0.003	15	-0.1	15	NC		NC		NC		NC	
550	M397	1	max	0.007	106	0.645	106	NC		NC		NC		NC	
551			min	-0.01	13	-0.914	13	NC		NC		NC		NC	
552		2	max	0.007	106	0.645	106	NC		NC		NC		NC	
553			min	-0.01	13	-0.914	13	NC		NC		NC		NC	
554		3	max	0.007	106	0.645	106	NC		NC		NC		NC	
555			min	-0.01	13	-0.914	13	NC		NC		NC		NC	
556		4	max	0.007	106	0.645	106	NC		NC		NC		NC	
557			min	-0.01	13	-0.914	13	NC		NC		NC		NC	
558		5	max	0.007	106	0.645	106	NC		NC		NC		NC	
559			min	-0.01	13	-0.914	13	NC		NC		NC		NC	
560	M398	1	max	0.007	106	0.668	106	NC		NC		NC		NC	
561			min	-0.013	13	-1.217	13	NC		NC		NC		NC	
562		2	max	0.007	106	0.668	106	NC		NC		NC		NC	
563			min	-0.013	13	-1.217	13	NC		NC		NC		NC	
564		3	max	0.007	106	0.668	106	NC		NC		NC		NC	
565			min	-0.013	13	-1.217	13	NC		NC		NC		NC	
566		4	max	0.007	106	0.668	106	NC		NC		NC		NC	
567			min	-0.013	13	-1.217	13	NC		NC		NC		NC	
568		5	max	0.007	106	0.668	106	NC		NC		NC		NC	
569			min	-0.013	13	-1.217	13	NC		NC		NC		NC	
570	M399	1	max	0.008	74	0.741	74	NC		NC		NC		NC	
571			min	-0.011	15	-1.061	15	NC		NC		NC		NC	
572		2	max	0.008	74	0.741	74	NC		NC		NC		NC	
573			min	-0.011	15	-1.061	15	NC		NC		NC		NC	
574		3	max	0.008	74	0.741	74	NC		NC		NC		NC	
575			min	-0.011	15	-1.061	15	NC		NC		NC		NC	
576		4	max	0.008	74	0.741	74	NC		NC		NC		NC	
577			min	-0.011	15	-1.061	15	NC		NC		NC		NC	
578		5	max	0.008	74	0.741	74	NC		NC		NC		NC	
579			min	-0.011	15	-1.061	15	NC		NC		NC		NC	
580	M400	1	max	0.007	74	0.64	74	NC		NC		NC		NC	
581			min	-0.014	15	-1.296	15	NC		NC		NC		NC	
582		2	max	0.007	74	0.64	74	NC		NC		NC		NC	
583			min	-0.014	15	-1.296	15	NC		NC		NC		NC	
584		3	max	0.007	74	0.64	74	NC		NC		NC		NC	
585			min	-0.014	15	-1.296	15	NC		NC		NC		NC	
586		4	max	0.007	74	0.64	74	NC		NC		NC		NC	
587			min	-0.014	15	-1.296	15	NC		NC		NC		NC	
588		5	max	0.007	74	0.64	74	NC		NC		NC		NC	
589			min	-0.014	15	-1.296	15	NC		NC		NC		NC	
590	M401	1	max	0.009	106	0.308	106	NC		NC		NC		NC	
591			min	-0.013	70	-0.443	70	NC		NC		NC		NC	
592		2	max	0.009	106	0.308	106	NC		NC		NC		NC	
593			min	-0.013	70	-0.443	70	NC		NC		NC		NC	
594		3	max	0.009	106	0.308	106	NC		NC		NC		NC	
595			min	-0.013	70	-0.443	70	NC		NC		NC		NC	
596		4	max	0.009	106	0.308	106	NC		NC		NC		NC	
597			min	-0.013	70	-0.443	70	NC		NC		NC		NC	
598		5	max	0.009	106	0.308	106	NC		NC		NC		NC	
599			min	-0.013	70	-0.443	70	NC		NC		NC		NC	
600	M402	1	max	0.014	70	0.504	70	NC		NC		NC		NC	
601			min	-0.009	106	-0.316	106	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
602		2	max	0.014	70	0.504	70	NC		NC		NC		NC	
603			min	-0.009	106	-0.316	106	NC		NC		NC		NC	
604		3	max	0.014	70	0.504	70	NC		NC		NC		NC	
605			min	-0.009	106	-0.316	106	NC		NC		NC		NC	
606		4	max	0.014	70	0.504	70	NC		NC		NC		NC	
607			min	-0.009	106	-0.316	106	NC		NC		NC		NC	
608		5	max	0.014	70	0.504	70	NC		NC		NC		NC	
609			min	-0.009	106	-0.316	106	NC		NC		NC		NC	
610	M403	1	max	0.002	106	0.18	106	NC		NC		NC		NC	
611			min	-0.016	13	-1.535	13	NC		NC		NC		NC	
612		2	max	0.002	106	0.18	106	NC		NC		NC		NC	
613			min	-0.016	13	-1.535	13	NC		NC		NC		NC	
614		3	max	0.002	106	0.18	106	NC		NC		NC		NC	
615			min	-0.016	13	-1.535	13	NC		NC		NC		NC	
616		4	max	0.002	106	0.18	106	NC		NC		NC		NC	
617			min	-0.016	13	-1.535	13	NC		NC		NC		NC	
618		5	max	0.002	106	0.18	106	NC		NC		NC		NC	
619			min	-0.016	13	-1.535	13	NC		NC		NC		NC	
620	M404	1	max	0.004	106	0.42	106	NC		NC		NC		NC	
621			min	-0.005	70	-0.461	70	NC		NC		NC		NC	
622		2	max	0.004	106	0.42	106	NC		NC		NC		NC	
623			min	-0.005	70	-0.461	70	NC		NC		NC		NC	
624		3	max	0.004	106	0.42	106	NC		NC		NC		NC	
625			min	-0.005	70	-0.461	70	NC		NC		NC		NC	
626		4	max	0.004	106	0.42	106	NC		NC		NC		NC	
627			min	-0.005	70	-0.461	70	NC		NC		NC		NC	
628		5	max	0.004	106	0.42	106	NC		NC		NC		NC	
629			min	-0.005	70	-0.461	70	NC		NC		NC		NC	
630	M405	1	max	0.002	104	0.144	104	NC		NC		NC		NC	
631			min	-0.018	15	-1.683	15	NC		NC		NC		NC	
632		2	max	0.002	104	0.144	104	NC		NC		NC		NC	
633			min	-0.018	15	-1.683	15	NC		NC		NC		NC	
634		3	max	0.002	104	0.144	104	NC		NC		NC		NC	
635			min	-0.018	15	-1.683	15	NC		NC		NC		NC	
636		4	max	0.002	104	0.144	104	NC		NC		NC		NC	
637			min	-0.018	15	-1.683	15	NC		NC		NC		NC	
638		5	max	0.002	104	0.144	104	NC		NC		NC		NC	
639			min	-0.018	15	-1.683	15	NC		NC		NC		NC	
640	M406	1	max	0.005	70	0.509	70	NC		NC		NC		NC	
641			min	-0.004	106	-0.424	106	NC		NC		NC		NC	
642		2	max	0.005	70	0.509	70	NC		NC		NC		NC	
643			min	-0.004	106	-0.424	106	NC		NC		NC		NC	
644		3	max	0.005	70	0.509	70	NC		NC		NC		NC	
645			min	-0.004	106	-0.424	106	NC		NC		NC		NC	
646		4	max	0.005	70	0.509	70	NC		NC		NC		NC	
647			min	-0.004	106	-0.424	106	NC		NC		NC		NC	
648		5	max	0.005	70	0.509	70	NC		NC		NC		NC	
649			min	-0.004	106	-0.424	106	NC		NC		NC		NC	
650	M409	1	max	0.002	76	0.219	76	NC		NC		NC		NC	
651			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
652		2	max	0.002	76	0.219	76	NC		NC		NC		NC	
653			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
654		3	max	0.002	76	0.219	76	NC		NC		NC		NC	
655			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
656		4	max	0.002	76	0.219	76	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
657			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
658		5	max	0.002	76	0.219	76	NC		NC		NC		NC	
659			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
660	M410	1	max	0.003	68	0.251	68	NC		NC		NC		NC	
661			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
662		2	max	0.003	68	0.251	68	NC		NC		NC		NC	
663			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
664		3	max	0.003	68	0.251	68	NC		NC		NC		NC	
665			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
666		4	max	0.003	68	0.251	68	NC		NC		NC		NC	
667			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
668		5	max	0.003	68	0.251	68	NC		NC		NC		NC	
669			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
670	M411	1	max	0.003	104	0.298	104	NC		NC		NC		NC	
671			min	-0.02	15	-1.893	15	NC		NC		NC		NC	
672		2	max	0.003	104	0.298	104	NC		NC		NC		NC	
673			min	-0.02	15	-1.893	15	NC		NC		NC		NC	
674		3	max	0.003	104	0.298	104	NC		NC		NC		NC	
675			min	-0.02	15	-1.893	15	NC		NC		NC		NC	
676		4	max	0.003	104	0.298	104	NC		NC		NC		NC	
677			min	-0.02	15	-1.893	15	NC		NC		NC		NC	
678		5	max	0.003	104	0.298	104	NC		NC		NC		NC	
679			min	-0.02	15	-1.893	15	NC		NC		NC		NC	
680	M412	1	max	0.003	96	0.274	96	NC		NC		NC		NC	
681			min	-0.012	15	-1.117	15	NC		NC		NC		NC	
682		2	max	0.003	96	0.274	96	NC		NC		NC		NC	
683			min	-0.012	15	-1.117	15	NC		NC		NC		NC	
684		3	max	0.003	96	0.274	96	NC		NC		NC		NC	
685			min	-0.012	15	-1.117	15	NC		NC		NC		NC	
686		4	max	0.003	96	0.274	96	NC		NC		NC		NC	
687			min	-0.012	15	-1.117	15	NC		NC		NC		NC	
688		5	max	0.003	96	0.274	96	NC		NC		NC		NC	
689			min	-0.012	15	-1.117	15	NC		NC		NC		NC	
690	M413	1	max	0.009	102	0.835	102	NC		NC		NC		NC	
691			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
692		2	max	0.009	102	0.835	102	NC		NC		NC		NC	
693			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
694		3	max	0.009	102	0.835	102	NC		NC		NC		NC	
695			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
696		4	max	0.009	102	0.835	102	NC		NC		NC		NC	
697			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
698		5	max	0.009	102	0.835	102	NC		NC		NC		NC	
699			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
700	M414	1	max	0.009	72	0.868	72	NC		NC		NC		NC	
701			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
702		2	max	0.009	72	0.868	72	NC		NC		NC		NC	
703			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
704		3	max	0.009	72	0.868	72	NC		NC		NC		NC	
705			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
706		4	max	0.009	72	0.868	72	NC		NC		NC		NC	
707			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
708		5	max	0.009	72	0.868	72	NC		NC		NC		NC	
709			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
710	M415	1	max	0.008	74	0.733	74	NC		NC		NC		NC	
711			min	-0.008	102	-0.808	102	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
712		2	max	0.008	74	0.733	74	NC		NC		NC		NC	
713			min	-0.008	102	-0.808	102	NC		NC		NC		NC	
714		3	max	0.008	74	0.733	74	NC		NC		NC		NC	
715			min	-0.008	102	-0.808	102	NC		NC		NC		NC	
716		4	max	0.008	74	0.733	74	NC		NC		NC		NC	
717			min	-0.008	102	-0.808	102	NC		NC		NC		NC	
718		5	max	0.008	74	0.733	74	NC		NC		NC		NC	
719			min	-0.008	102	-0.808	102	NC		NC		NC		NC	
720	M416	1	max	0.008	104	0.767	104	NC		NC		NC		NC	
721			min	-0.009	72	-0.833	72	NC		NC		NC		NC	
722		2	max	0.008	104	0.767	104	NC		NC		NC		NC	
723			min	-0.009	72	-0.833	72	NC		NC		NC		NC	
724		3	max	0.008	104	0.767	104	NC		NC		NC		NC	
725			min	-0.009	72	-0.833	72	NC		NC		NC		NC	
726		4	max	0.008	104	0.767	104	NC		NC		NC		NC	
727			min	-0.009	72	-0.833	72	NC		NC		NC		NC	
728		5	max	0.008	104	0.767	104	NC		NC		NC		NC	
729			min	-0.009	72	-0.833	72	NC		NC		NC		NC	
730	M95	1	max	0.738	71	22.786	71	NC		NC		NC		NC	
731			min	-0.738	103	-22.799	103	NC		NC		NC		NC	
732		2	max	0.738	71	22.786	71	NC		NC		NC		NC	
733			min	-0.738	103	-22.799	103	NC		NC		NC		NC	
734		3	max	0.077	62	2.381	62	NC		NC		NC		NC	
735			min	-0.738	71	-22.811	71	NC		NC		NC		NC	
736		4	max	0.738	103	22.792	103	NC		NC		NC		NC	
737			min	-0.738	71	-22.811	71	NC		NC		NC		NC	
738		5	max	0.738	103	22.792	103	NC		NC		NC		NC	
739			min	-0.738	71	-22.811	71	NC		NC		NC		NC	
740	M96	1	max	0.716	71	22.129	71	NC		NC		NC		NC	
741			min	-0.716	103	-22.105	103	NC		NC		NC		NC	
742		2	max	0.716	71	22.129	71	NC		NC		NC		NC	
743			min	-0.716	103	-22.105	103	NC		NC		NC		NC	
744		3	max	0.716	71	22.129	71	NC		NC		NC		NC	
745			min	-0.077	92	-2.376	92	NC		NC		NC		NC	
746		4	max	0.716	103	22.127	103	NC		NC		NC		NC	
747			min	-0.715	71	-22.09	71	NC		NC		NC		NC	
748		5	max	0.716	103	22.127	103	NC		NC		NC		NC	
749			min	-0.715	71	-22.09	71	NC		NC		NC		NC	
750	M530	1	max	0	107	0	107	0	107	0	107	0	107	0	107
751			min	0	12	0	12	0	12	0	12	0	12	0	12
752		2	max	0	107	0	107	0	107	0	107	0	107	0	107
753			min	0	12	0	12	0	12	0	12	0	12	0	12
754		3	max	0	107	0	107	0	107	0	107	0	107	0	107
755			min	0	12	0	12	0	12	0	12	0	12	0	12
756		4	max	0.959	77	1.148	77	0	107	0.464	77	4.454	71	4.454	71
757			min	-0.991	71	-1.186	71	0	12	-0.479	71	-4.312	77	-4.312	77
758		5	max	0	107	0	107	0	107	0	107	0	107	0	107
759			min	0	12	0	12	0	12	0	12	0	12	0	12
760	M531	1	max	0	107	0	107	0	107	0	107	0	107	0	107
761			min	0	12	0	12	0	12	0	12	0	12	0	12
762		2	max	0	107	0	107	0	107	0	107	0	107	0	107
763			min	0	12	0	12	0	12	0	12	0	12	0	12
764		3	max	0.253	73	0.4	73	0	107	0.116	73	0	107	0	107
765			min	-0.253	71	-0.4	71	0	12	-0.116	71	0	12	0	12
766		4	max	0.672	71	0.804	71	0	107	0.325	71	2.883	77	2.883	77

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
767			min	-0.641	77	-0.767	77	0	12	-0.31	77	-3.021	71	-3.021	71
768		5	max	0	107	0	107	0	107	0	107	0	107	0	107
769			min	0	12	0	12	0	12	0	12	0	12	0	12
770	M532	1	max	0	107	0	107	0	107	0	107	0	107	0	107
771			min	0	12	0	12	0	12	0	12	0	12	0	12
772		2	max	0	107	0	107	0	107	0	107	0	107	0	107
773			min	0	12	0	12	0	12	0	12	0	12	0	12
774		3	max	0.113	77	0.179	77	0	107	0.052	77	0	107	0	107
775			min	-0.113	101	-0.179	101	0	12	-0.052	101	0	12	0	12
776		4	max	0.039	71	0.047	71	0	107	0.019	71	0.119	101	0.119	101
777			min	-0.026	101	-0.032	101	0	12	-0.013	101	-0.175	71	-0.175	71
778		5	max	0	107	0	107	0	107	0	107	0	107	0	107
779			min	0	12	0	12	0	12	0	12	0	12	0	12
780	M533	1	max	0	107	0	107	0	107	0	107	0	107	0	107
781			min	0	12	0	12	0	12	0	12	0	12	0	12
782		2	max	0	107	0	107	0	107	0	107	0	107	0	107
783			min	0	12	0	12	0	12	0	12	0	12	0	12
784		3	max	0	107	0	107	0	107	0	107	0	107	0	107
785			min	0	12	0	12	0	12	0	12	0	12	0	12
786		4	max	0.108	77	0.13	77	0	107	0.052	77	0.629	71	0.629	71
787			min	-0.14	71	-0.168	71	0	12	-0.068	71	-0.488	77	-0.488	77
788		5	max	0	107	0	107	0	107	0	107	0	107	0	107
789			min	0	12	0	12	0	12	0	12	0	12	0	12
790	M534	1	max	0	74	0.01	74	NC		NC		NC		NC	
791			min	0	15	-0.03	15	NC		NC		NC		NC	
792		2	max	0	74	0.01	74	NC		NC		NC		NC	
793			min	0	15	-0.03	15	NC		NC		NC		NC	
794		3	max	0	74	0.01	74	NC		NC		NC		NC	
795			min	0	15	-0.03	15	NC		NC		NC		NC	
796		4	max	0	74	0.01	74	NC		NC		NC		NC	
797			min	0	15	-0.03	15	NC		NC		NC		NC	
798		5	max	0	74	0.01	74	NC		NC		NC		NC	
799			min	0	15	-0.03	15	NC		NC		NC		NC	
800	M535	1	max	0.001	104	0.031	104	NC		NC		NC		NC	
801			min	-0.071	15	-2.446	15	NC		NC		NC		NC	
802		2	max	0.021	13	0.706	13	NC		NC		NC		NC	
803			min	-0.01	76	-0.343	76	NC		NC		NC		NC	
804		3	max	0.061	13	2.102	13	NC		NC		NC		NC	
805			min	0.004	75	0.137	75	NC		NC		NC		NC	
806		4	max	0.031	15	1.079	15	NC		NC		NC		NC	
807			min	-0.006	104	-0.207	104	NC		NC		NC		NC	
808		5	max	0.002	76	0.081	76	NC		NC		NC		NC	
809			min	-0.064	13	-2.201	13	NC		NC		NC		NC	
810	M536	1	max	0.015	70	0.53	70	NC		NC		NC		NC	
811			min	-0.012	106	-0.406	106	NC		NC		NC		NC	
812		2	max	0.019	70	0.648	70	NC		NC		NC		NC	
813			min	-0.014	106	-0.484	106	NC		NC		NC		NC	
814		3	max	0.056	13	1.931	13	NC		NC		NC		NC	
815			min	0.006	75	0.207	75	NC		NC		NC		NC	
816		4	max	0.016	106	0.532	106	NC		NC		NC		NC	
817			min	-0.018	70	-0.614	70	NC		NC		NC		NC	
818		5	max	0.014	106	0.493	106	NC		NC		NC		NC	
819			min	-0.016	70	-0.551	70	NC		NC		NC		NC	
820	M537	1	max	0.028	15	1.933	15	NC		NC		NC		NC	
821			min	0	74	-0.023	74	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
822		2	max	0.028	15	1.933	15	NC		NC		NC		NC	
823			min	0	74	-0.023	74	NC		NC		NC		NC	
824		3	max	0.028	15	1.933	15	NC		NC		NC		NC	
825			min	0	74	-0.023	74	NC		NC		NC		NC	
826		4	max	0.028	15	1.933	15	NC		NC		NC		NC	
827			min	0	74	-0.023	74	NC		NC		NC		NC	
828		5	max	0.028	15	1.933	15	NC		NC		NC		NC	
829			min	0	74	-0.023	74	NC		NC		NC		NC	
830	M538	1	max	0.017	13	1.169	13	NC		NC		NC		NC	
831			min	-0.002	76	-0.132	76	NC		NC		NC		NC	
832		2	max	0.017	13	1.169	13	NC		NC		NC		NC	
833			min	-0.002	76	-0.132	76	NC		NC		NC		NC	
834		3	max	0.017	13	1.169	13	NC		NC		NC		NC	
835			min	-0.002	76	-0.132	76	NC		NC		NC		NC	
836		4	max	0.017	13	1.169	13	NC		NC		NC		NC	
837			min	-0.002	76	-0.132	76	NC		NC		NC		NC	
838		5	max	0.017	13	1.169	13	NC		NC		NC		NC	
839			min	-0.002	76	-0.132	76	NC		NC		NC		NC	
840	M539	1	max	0.016	13	0.572	13	NC		NC		NC		NC	
841			min	-0.004	74	-0.13	74	NC		NC		NC		NC	
842		2	max	0.016	13	0.572	13	NC		NC		NC		NC	
843			min	-0.004	74	-0.13	74	NC		NC		NC		NC	
844		3	max	0.016	13	0.572	13	NC		NC		NC		NC	
845			min	-0.004	74	-0.13	74	NC		NC		NC		NC	
846		4	max	0.016	13	0.572	13	NC		NC		NC		NC	
847			min	-0.004	74	-0.13	74	NC		NC		NC		NC	
848		5	max	0.016	13	0.572	13	NC		NC		NC		NC	
849			min	-0.004	74	-0.13	74	NC		NC		NC		NC	
850	M540	1	max	0.005	68	0.173	68	NC		NC		NC		NC	
851			min	-0.015	13	-0.524	13	NC		NC		NC		NC	
852		2	max	0.006	68	0.206	68	NC		NC		NC		NC	
853			min	-0.007	92	-0.244	92	NC		NC		NC		NC	
854		3	max	0.024	15	0.812	15	NC		NC		NC		NC	
855			min	-0.007	103	-0.24	103	NC		NC		NC		NC	
856		4	max	0.009	100	0.305	100	NC		NC		NC		NC	
857			min	-0.005	68	-0.183	68	NC		NC		NC		NC	
858		5	max	0.007	92	0.226	92	NC		NC		NC		NC	
859			min	-0.007	68	-0.244	68	NC		NC		NC		NC	
860	M541	1	max	0.01	98	0.336	98	NC		NC		NC		NC	
861			min	-0.01	62	-0.355	62	NC		NC		NC		NC	
862		2	max	0.013	15	0.454	15	NC		NC		NC		NC	
863			min	-0.004	104	-0.136	104	NC		NC		NC		NC	
864		3	max	0.02	15	0.689	15	NC		NC		NC		NC	
865			min	-0.007	103	-0.234	103	NC		NC		NC		NC	
866		4	max	0.006	74	0.193	74	NC		NC		NC		NC	
867			min	-0.006	106	-0.193	106	NC		NC		NC		NC	
868		5	max	0.008	66	0.279	66	NC		NC		NC		NC	
869			min	-0.021	15	-0.727	15	NC		NC		NC		NC	
870	M542	1	max	0.062	71	4.246	71	NC		NC		NC		NC	
871			min	-0.061	103	-4.209	103	NC		NC		NC		NC	
872		2	max	0.062	71	4.246	71	NC		NC		NC		NC	
873			min	-0.061	103	-4.209	103	NC		NC		NC		NC	
874		3	max	0.009	71	0.614	71	NC		NC		NC		NC	
875			min	-0.009	103	-0.62	103	NC		NC		NC		NC	
876		4	max	0.075	103	5.141	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
877			min	-0.076	71	-5.194	71	NC		NC		NC		NC	
878		5	max	0.075	103	5.141	103	NC		NC		NC		NC	
879			min	-0.076	71	-5.194	71	NC		NC		NC		NC	
880	M543	1	max	0.061	71	4.185	71	NC		NC		NC		NC	
881			min	-0.06	103	-4.141	103	NC		NC		NC		NC	
882		2	max	0.061	71	4.185	71	NC		NC		NC		NC	
883			min	-0.06	103	-4.141	103	NC		NC		NC		NC	
884		3	max	0.01	71	0.719	71	NC		NC		NC		NC	
885			min	-0.01	107	-0.679	107	NC		NC		NC		NC	
886		4	max	0.071	103	4.847	103	NC		NC		NC		NC	
887			min	-0.07	71	-4.808	71	NC		NC		NC		NC	
888		5	max	0.071	103	4.847	103	NC		NC		NC		NC	
889			min	-0.07	71	-4.808	71	NC		NC		NC		NC	
890	M544	1	max	0.471	71	0	107	0	107	0.949	71	16.567	71	16.567	71
891			min	-0.453	77	0	12	0	12	-0.914	77	-15.951	77	-15.951	77
892		2	max	0.471	71	1.872	71	0	107	0.827	71	9.163	71	9.163	71
893			min	-0.453	77	-1.802	77	0	12	-0.796	77	-8.822	77	-8.822	77
894		3	max	0.189	71	1.093	71	0	107	0.31	71	1.003	71	1.003	71
895			min	-0.185	77	-1.069	77	0	12	-0.303	77	-0.982	77	-0.982	77
896		4	max	0.624	77	3.46	77	0	107	1.031	77	5.394	71	5.394	71
897			min	-0.641	71	-3.554	71	0	12	-1.059	71	-5.251	77	-5.251	77
898		5	max	0.624	77	2.043	77	0	107	1.123	77	14.621	71	14.621	71
899			min	-0.641	71	-2.098	71	0	12	-1.154	71	-14.233	77	-14.233	77
900	M545	1	max	0.104	71	0	107	0	107	0.209	71	3.648	71	3.648	71
901			min	-0.092	73	0	12	0	12	-0.185	73	-3.228	73	-3.228	73
902		2	max	0.104	71	0.412	71	0	107	0.182	71	2.017	71	2.017	71
903			min	-0.092	73	-0.365	73	0	12	-0.161	73	-1.785	73	-1.785	73
904		3	max	0.017	75	0.096	75	0	107	0.027	75	0.088	75	0.088	75
905			min	-0.019	103	-0.112	103	0	12	-0.032	103	-0.103	103	-0.103	103
906		4	max	0.1	107	0.555	107	0	107	0.165	107	1.026	71	1.026	71
907			min	-0.122	71	-0.676	71	0	12	-0.201	71	-0.843	107	-0.843	107
908		5	max	0.1	107	0.328	107	0	107	0.18	107	2.782	71	2.782	71
909			min	-0.122	71	-0.399	71	0	12	-0.22	71	-2.284	107	-2.284	107
910	M546	1	max	0.06	71	4.128	71	NC		NC		NC		NC	
911			min	-0.059	103	-4.055	103	NC		NC		NC		NC	
912		2	max	0.06	71	4.128	71	NC		NC		NC		NC	
913			min	-0.059	103	-4.055	103	NC		NC		NC		NC	
914		3	max	0.009	71	0.595	71	NC		NC		NC		NC	
915			min	-0.009	103	-0.598	103	NC		NC		NC		NC	
916		4	max	0.072	103	4.919	103	NC		NC		NC		NC	
917			min	-0.073	71	-5.006	71	NC		NC		NC		NC	
918		5	max	0.072	103	4.919	103	NC		NC		NC		NC	
919			min	-0.073	71	-5.006	71	NC		NC		NC		NC	
920	M547	1	max	0.124	77	3.825	77	NC		NC		NC		NC	
921			min	-0.124	71	-3.832	71	NC		NC		NC		NC	
922		2	max	0.062	77	1.91	77	NC		NC		NC		NC	
923			min	-0.062	101	-1.918	101	NC		NC		NC		NC	
924		3	max	0	66	0	66	NC		NC		NC		NC	
925			min	0	15	-0.011	15	NC		NC		NC		NC	
926		4	max	0.062	75	1.913	75	NC		NC		NC		NC	
927			min	-0.062	103	-1.921	103	NC		NC		NC		NC	
928		5	max	0.124	75	3.827	75	NC		NC		NC		NC	
929			min	-0.124	73	-3.836	73	NC		NC		NC		NC	
930	M548	1	max	0.118	107	3.631	107	NC		NC		NC		NC	
931			min	-0.118	71	-3.636	71	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
932		2	max	0.059	107	1.817	107	NC		NC		NC		NC	
933			min	-0.059	71	-1.821	71	NC		NC		NC		NC	
934		3	max	0.001	100	0.045	100	NC		NC		NC		NC	
935			min	-0.002	102	-0.049	102	NC		NC		NC		NC	
936		4	max	0.059	105	1.81	105	NC		NC		NC		NC	
937			min	-0.059	73	-1.813	73	NC		NC		NC		NC	
938		5	max	0.117	105	3.624	105	NC		NC		NC		NC	
939			min	-0.117	73	-3.627	73	NC		NC		NC		NC	
940	M549	1	max	0.082	103	0	107	0	107	0.165	103	2.878	103	2.878	103
941			min	-0.079	101	0	12	0	12	-0.16	101	-2.786	101	-2.786	101
942		2	max	0.035	103	0.138	103	0	107	0.061	103	0.675	103	0.675	103
943			min	-0.033	105	-0.133	105	0	12	-0.059	105	-0.649	105	-0.649	105
944		3	max	0.017	74	0.099	74	0	107	0.028	74	0.091	74	0.091	74
945			min	-0.016	76	-0.092	76	0	12	-0.026	76	-0.085	76	-0.085	76
946		4	max	0.036	71	0.198	71	0	107	0.059	71	0.289	107	0.289	107
947			min	-0.034	107	-0.191	107	0	12	-0.057	107	-0.301	71	-0.301	71
948		5	max	0.084	101	0.276	101	0	107	0.152	101	1.915	103	1.915	103
949			min	-0.084	103	-0.275	103	0	12	-0.151	103	-1.923	101	-1.923	101
950	M550	1	max	0.069	103	0	107	0	107	0.14	103	2.444	103	2.444	103
951			min	-0.074	101	0	12	0	12	-0.149	101	-2.603	101	-2.603	101
952		2	max	0.031	107	0.125	107	0	107	0.055	107	0.612	107	0.612	107
953			min	-0.035	101	-0.141	101	0	12	-0.062	101	-0.689	101	-0.689	101
954		3	max	0.005	96	0.029	96	0	107	0.008	96	0.027	96	0.027	96
955			min	-0.011	15	-0.063	15	0	12	-0.018	15	-0.058	15	-0.058	15
956		4	max	0.034	45	0.188	45	0	107	0.056	45	0.318	103	0.318	103
957			min	-0.038	103	-0.21	103	0	12	-0.062	103	-0.286	45	-0.286	45
958		5	max	0.072	101	0.237	101	0	107	0.131	101	1.77	103	1.77	103
959			min	-0.078	103	-0.254	103	0	12	-0.14	103	-1.654	101	-1.654	101
960	M551	1	max	0.118	73	3.635	73	NC		NC		NC		NC	
961			min	-0.117	75	-3.622	75	NC		NC		NC		NC	
962		2	max	0.059	73	1.821	73	NC		NC		NC		NC	
963			min	-0.059	75	-1.809	75	NC		NC		NC		NC	
964		3	max	0.002	94	0.053	94	NC		NC		NC		NC	
965			min	-0.001	96	-0.044	96	NC		NC		NC		NC	
966		4	max	0.059	71	1.82	71	NC		NC		NC		NC	
967			min	-0.059	77	-1.811	77	NC		NC		NC		NC	
968		5	max	0.118	71	3.634	71	NC		NC		NC		NC	
969			min	-0.117	77	-3.626	77	NC		NC		NC		NC	
970	M552	1	max	0.478	71	22.133	71	NC		NC		NC		NC	
971			min	-0.475	103	-22.022	103	NC		NC		NC		NC	
972		2	max	0.478	71	22.133	71	NC		NC		NC		NC	
973			min	-0.475	103	-22.022	103	NC		NC		NC		NC	
974		3	max	0.027	71	1.229	71	NC		NC		NC		NC	
975			min	-0.026	107	-1.192	107	NC		NC		NC		NC	
976		4	max	0.226	103	10.447	103	NC		NC		NC		NC	
977			min	-0.225	71	-10.407	71	NC		NC		NC		NC	
978		5	max	0.429	103	19.861	103	NC		NC		NC		NC	
979			min	-0.429	71	-19.884	71	NC		NC		NC		NC	
980	M553	1	max	0.016	103	0.743	103	NC		NC		NC		NC	
981			min	-0.016	71	-0.758	71	NC		NC		NC		NC	
982		2	max	0.016	103	0.743	103	NC		NC		NC		NC	
983			min	-0.016	71	-0.758	71	NC		NC		NC		NC	
984		3	max	0.016	103	0.743	103	NC		NC		NC		NC	
985			min	-0.016	71	-0.758	71	NC		NC		NC		NC	
986		4	max	0.045	71	2.093	71	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
987			min	-0.043	103	-1.969	103	NC		NC		NC		NC	
988		5	max	0.045	71	2.093	71	NC		NC		NC		NC	
989			min	-0.043	103	-1.969	103	NC		NC		NC		NC	
990	M554	1	max	0.017	103	0.766	103	NC		NC		NC		NC	
991			min	-0.016	71	-0.754	71	NC		NC		NC		NC	
992		2	max	0.017	103	0.766	103	NC		NC		NC		NC	
993			min	-0.016	71	-0.754	71	NC		NC		NC		NC	
994		3	max	0.017	103	0.766	103	NC		NC		NC		NC	
995			min	-0.016	71	-0.754	71	NC		NC		NC		NC	
996		4	max	0.044	71	2.018	71	NC		NC		NC		NC	
997			min	-0.043	103	-2.008	103	NC		NC		NC		NC	
998		5	max	0.044	71	2.018	71	NC		NC		NC		NC	
999			min	-0.043	103	-2.008	103	NC		NC		NC		NC	
1000	M555	1	max	0.001	98	0.024	98	NC		NC		NC		NC	
1001			min	-0.001	62	-0.055	62	NC		NC		NC		NC	
1002		2	max	0.001	98	0.024	98	NC		NC		NC		NC	
1003			min	-0.001	62	-0.055	62	NC		NC		NC		NC	
1004		3	max	0.001	98	0.024	98	NC		NC		NC		NC	
1005			min	-0.001	62	-0.055	62	NC		NC		NC		NC	
1006		4	max	0.011	74	0.488	74	NC		NC		NC		NC	
1007			min	-0.011	102	-0.529	102	NC		NC		NC		NC	
1008		5	max	0.011	74	0.488	74	NC		NC		NC		NC	
1009			min	-0.011	102	-0.529	102	NC		NC		NC		NC	
1010	M556	1	max	0.381	71	17.641	71	NC		NC		NC		NC	
1011			min	-0.381	103	-17.631	103	NC		NC		NC		NC	
1012		2	max	0.381	71	17.641	71	NC		NC		NC		NC	
1013			min	-0.381	103	-17.631	103	NC		NC		NC		NC	
1014		3	max	0.022	71	1.029	71	NC		NC		NC		NC	
1015			min	-0.022	107	-1.018	107	NC		NC		NC		NC	
1016		4	max	0.188	103	8.688	103	NC		NC		NC		NC	
1017			min	-0.187	71	-8.677	71	NC		NC		NC		NC	
1018		5	max	0.347	103	16.049	103	NC		NC		NC		NC	
1019			min	-0.346	71	-16.038	71	NC		NC		NC		NC	
1020	M557	1	max	0.014	71	0.641	71	NC		NC		NC		NC	
1021			min	-0.015	103	-0.703	103	NC		NC		NC		NC	
1022		2	max	0.014	71	0.641	71	NC		NC		NC		NC	
1023			min	-0.015	103	-0.703	103	NC		NC		NC		NC	
1024		3	max	0.013	71	0.595	71	NC		NC		NC		NC	
1025			min	-0.014	103	-0.632	103	NC		NC		NC		NC	
1026		4	max	0.036	103	1.647	103	NC		NC		NC		NC	
1027			min	-0.036	71	-1.683	71	NC		NC		NC		NC	
1028		5	max	0.038	103	1.739	103	NC		NC		NC		NC	
1029			min	-0.038	71	-1.737	71	NC		NC		NC		NC	
1030	M558	1	max	0.003	72	0.203	72	NC		NC		NC		NC	
1031			min	-0.003	104	-0.175	104	NC		NC		NC		NC	
1032		2	max	0.003	72	0.203	72	NC		NC		NC		NC	
1033			min	-0.003	104	-0.175	104	NC		NC		NC		NC	
1034		3	max	0.003	72	0.203	72	NC		NC		NC		NC	
1035			min	-0.003	104	-0.175	104	NC		NC		NC		NC	
1036		4	max	0.003	72	0.203	72	NC		NC		NC		NC	
1037			min	-0.003	104	-0.175	104	NC		NC		NC		NC	
1038		5	max	0.003	72	0.203	72	NC		NC		NC		NC	
1039			min	-0.003	104	-0.175	104	NC		NC		NC		NC	
1040	M559	1	max	0.003	76	0.2	76	NC		NC		NC		NC	
1041			min	-0.003	104	-0.187	104	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1042		2	max	0.003	76	0.2	76	NC		NC		NC		NC	
1043			min	-0.003	104	-0.187	104	NC		NC		NC		NC	
1044		3	max	0.003	76	0.2	76	NC		NC		NC		NC	
1045			min	-0.003	104	-0.187	104	NC		NC		NC		NC	
1046		4	max	0.003	76	0.2	76	NC		NC		NC		NC	
1047			min	-0.003	104	-0.187	104	NC		NC		NC		NC	
1048		5	max	0.003	76	0.2	76	NC		NC		NC		NC	
1049			min	-0.003	104	-0.187	104	NC		NC		NC		NC	
1050	M560	1	max	0.003	104	0.189	104	NC		NC		NC		NC	
1051			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
1052		2	max	0.003	104	0.189	104	NC		NC		NC		NC	
1053			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
1054		3	max	0.003	104	0.189	104	NC		NC		NC		NC	
1055			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
1056		4	max	0.003	104	0.189	104	NC		NC		NC		NC	
1057			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
1058		5	max	0.003	104	0.189	104	NC		NC		NC		NC	
1059			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
1060	M561	1	max	0.229	101	14.202	101	NC		NC		NC		NC	
1061			min	-0.231	73	-14.27	73	NC		NC		NC		NC	
1062		2	max	0.229	101	14.202	101	NC		NC		NC		NC	
1063			min	-0.231	73	-14.27	73	NC		NC		NC		NC	
1064		3	max	0.006	105	0.382	105	NC		NC		NC		NC	
1065			min	-0.007	73	-0.414	73	NC		NC		NC		NC	
1066		4	max	0.094	107	5.821	107	NC		NC		NC		NC	
1067			min	-0.095	71	-5.865	71	NC		NC		NC		NC	
1068		5	max	0.196	103	12.115	103	NC		NC		NC		NC	
1069			min	-0.196	71	-12.143	71	NC		NC		NC		NC	
1070	M562	1	max	0.004	70	0.125	70	NC		NC		NC		NC	
1071			min	-0.003	76	-0.096	76	NC		NC		NC		NC	
1072		2	max	0.004	70	0.125	70	NC		NC		NC		NC	
1073			min	-0.003	76	-0.096	76	NC		NC		NC		NC	
1074		3	max	0.004	70	0.125	70	NC		NC		NC		NC	
1075			min	-0.003	76	-0.096	76	NC		NC		NC		NC	
1076		4	max	0.004	70	0.125	70	NC		NC		NC		NC	
1077			min	-0.003	76	-0.096	76	NC		NC		NC		NC	
1078		5	max	0.004	70	0.125	70	NC		NC		NC		NC	
1079			min	-0.003	76	-0.096	76	NC		NC		NC		NC	
1080	M563	1	max	0.001	76	0.042	76	NC		NC		NC		NC	
1081			min	-0.002	15	-0.078	15	NC		NC		NC		NC	
1082		2	max	0.001	76	0.042	76	NC		NC		NC		NC	
1083			min	-0.002	15	-0.078	15	NC		NC		NC		NC	
1084		3	max	0.001	76	0.042	76	NC		NC		NC		NC	
1085			min	-0.002	15	-0.078	15	NC		NC		NC		NC	
1086		4	max	0.001	76	0.042	76	NC		NC		NC		NC	
1087			min	-0.002	15	-0.078	15	NC		NC		NC		NC	
1088		5	max	0.001	76	0.042	76	NC		NC		NC		NC	
1089			min	-0.002	15	-0.078	15	NC		NC		NC		NC	
1090	M564	1	max	0.001	100	0.038	100	NC		NC		NC		NC	
1091			min	-0.001	72	-0.041	72	NC		NC		NC		NC	
1092		2	max	0.001	100	0.038	100	NC		NC		NC		NC	
1093			min	-0.001	72	-0.041	72	NC		NC		NC		NC	
1094		3	max	0.001	100	0.038	100	NC		NC		NC		NC	
1095			min	-0.001	72	-0.041	72	NC		NC		NC		NC	
1096		4	max	0.001	100	0.038	100	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1097			min	-0.001	72	-0.041	72	NC		NC		NC		NC	
1098		5	max	0.001	100	0.038	100	NC		NC		NC		NC	
1099			min	-0.001	72	-0.041	72	NC		NC		NC		NC	
1100	M565	1	max	0.007	13	0.493	13	NC		NC		NC		NC	
1101			min	-0.001	76	-0.086	76	NC		NC		NC		NC	
1102		2	max	0.007	13	0.493	13	NC		NC		NC		NC	
1103			min	-0.001	76	-0.086	76	NC		NC		NC		NC	
1104		3	max	0.007	13	0.493	13	NC		NC		NC		NC	
1105			min	-0.001	76	-0.086	76	NC		NC		NC		NC	
1106		4	max	0.007	13	0.493	13	NC		NC		NC		NC	
1107			min	-0.001	76	-0.086	76	NC		NC		NC		NC	
1108		5	max	0.007	13	0.493	13	NC		NC		NC		NC	
1109			min	-0.001	76	-0.086	76	NC		NC		NC		NC	
1110	M566	1	max	0	64	0.026	64	NC		NC		NC		NC	
1111			min	0	96	-0.023	96	NC		NC		NC		NC	
1112		2	max	0	64	0.026	64	NC		NC		NC		NC	
1113			min	0	96	-0.023	96	NC		NC		NC		NC	
1114		3	max	0	64	0.026	64	NC		NC		NC		NC	
1115			min	0	96	-0.023	96	NC		NC		NC		NC	
1116		4	max	0	64	0.026	64	NC		NC		NC		NC	
1117			min	0	96	-0.023	96	NC		NC		NC		NC	
1118		5	max	0	64	0.026	64	NC		NC		NC		NC	
1119			min	0	96	-0.023	96	NC		NC		NC		NC	
1120	M567	1	max	0.004	72	0.256	72	NC		NC		NC		NC	
1121			min	-0.003	104	-0.221	104	NC		NC		NC		NC	
1122		2	max	0.004	72	0.256	72	NC		NC		NC		NC	
1123			min	-0.003	104	-0.221	104	NC		NC		NC		NC	
1124		3	max	0.004	72	0.256	72	NC		NC		NC		NC	
1125			min	-0.003	104	-0.221	104	NC		NC		NC		NC	
1126		4	max	0.004	72	0.256	72	NC		NC		NC		NC	
1127			min	-0.003	104	-0.221	104	NC		NC		NC		NC	
1128		5	max	0.004	72	0.256	72	NC		NC		NC		NC	
1129			min	-0.003	104	-0.221	104	NC		NC		NC		NC	
1130	M568	1	max	0.006	74	0.208	74	NC		NC		NC		NC	
1131			min	-0.006	102	-0.213	102	NC		NC		NC		NC	
1132		2	max	0.006	74	0.208	74	NC		NC		NC		NC	
1133			min	-0.006	102	-0.213	102	NC		NC		NC		NC	
1134		3	max	0.006	74	0.208	74	NC		NC		NC		NC	
1135			min	-0.006	102	-0.213	102	NC		NC		NC		NC	
1136		4	max	0.006	74	0.208	74	NC		NC		NC		NC	
1137			min	-0.006	102	-0.213	102	NC		NC		NC		NC	
1138		5	max	0.006	74	0.208	74	NC		NC		NC		NC	
1139			min	-0.006	102	-0.213	102	NC		NC		NC		NC	
1140	M569	1	max	0.001	13	0.081	13	NC		NC		NC		NC	
1141			min	0	104	-0.01	104	NC		NC		NC		NC	
1142		2	max	0.001	13	0.081	13	NC		NC		NC		NC	
1143			min	0	104	-0.01	104	NC		NC		NC		NC	
1144		3	max	0.001	13	0.081	13	NC		NC		NC		NC	
1145			min	0	104	-0.01	104	NC		NC		NC		NC	
1146		4	max	0.001	13	0.081	13	NC		NC		NC		NC	
1147			min	0	104	-0.01	104	NC		NC		NC		NC	
1148		5	max	0.001	13	0.081	13	NC		NC		NC		NC	
1149			min	0	104	-0.01	104	NC		NC		NC		NC	
1150	M570	1	max	0	98	0.004	98	NC		NC		NC		NC	
1151			min	-0.001	13	-0.042	13	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1152		2	max	0	98	0.004	98	NC		NC		NC		NC	
1153			min	-0.001	13	-0.042	13	NC		NC		NC		NC	
1154		3	max	0	98	0.004	98	NC		NC		NC		NC	
1155			min	-0.001	13	-0.042	13	NC		NC		NC		NC	
1156		4	max	0	98	0.004	98	NC		NC		NC		NC	
1157			min	-0.001	13	-0.042	13	NC		NC		NC		NC	
1158		5	max	0	98	0.004	98	NC		NC		NC		NC	
1159			min	-0.001	13	-0.042	13	NC		NC		NC		NC	
1160	M571	1	max	0.001	13	0.09	13	NC		NC		NC		NC	
1161			min	0	104	-0.014	104	NC		NC		NC		NC	
1162		2	max	0.001	13	0.09	13	NC		NC		NC		NC	
1163			min	0	104	-0.014	104	NC		NC		NC		NC	
1164		3	max	0.001	13	0.09	13	NC		NC		NC		NC	
1165			min	0	104	-0.014	104	NC		NC		NC		NC	
1166		4	max	0.001	13	0.09	13	NC		NC		NC		NC	
1167			min	0	104	-0.014	104	NC		NC		NC		NC	
1168		5	max	0.001	13	0.09	13	NC		NC		NC		NC	
1169			min	0	104	-0.014	104	NC		NC		NC		NC	
1170	M572	1	max	0	107	0.004	107	NC		NC		NC		NC	
1171			min	-0.001	13	-0.046	13	NC		NC		NC		NC	
1172		2	max	0	107	0.004	107	NC		NC		NC		NC	
1173			min	-0.001	13	-0.046	13	NC		NC		NC		NC	
1174		3	max	0	107	0.004	107	NC		NC		NC		NC	
1175			min	-0.001	13	-0.046	13	NC		NC		NC		NC	
1176		4	max	0	107	0.004	107	NC		NC		NC		NC	
1177			min	-0.001	13	-0.046	13	NC		NC		NC		NC	
1178		5	max	0	107	0.004	107	NC		NC		NC		NC	
1179			min	-0.001	13	-0.046	13	NC		NC		NC		NC	
1180	M573	1	max	0.002	100	0.121	100	NC		NC		NC		NC	
1181			min	-0.003	19	-0.221	19	NC		NC		NC		NC	
1182		2	max	0.002	100	0.121	100	NC		NC		NC		NC	
1183			min	-0.003	19	-0.221	19	NC		NC		NC		NC	
1184		3	max	0.002	100	0.121	100	NC		NC		NC		NC	
1185			min	-0.003	19	-0.221	19	NC		NC		NC		NC	
1186		4	max	0.002	100	0.121	100	NC		NC		NC		NC	
1187			min	-0.003	19	-0.221	19	NC		NC		NC		NC	
1188		5	max	0.002	100	0.121	100	NC		NC		NC		NC	
1189			min	-0.003	19	-0.221	19	NC		NC		NC		NC	
1190	M574	1	max	0	68	-0.003	68	NC		NC		NC		NC	
1191			min	-0.007	13	-0.464	13	NC		NC		NC		NC	
1192		2	max	0	68	-0.003	68	NC		NC		NC		NC	
1193			min	-0.007	13	-0.464	13	NC		NC		NC		NC	
1194		3	max	0	68	-0.003	68	NC		NC		NC		NC	
1195			min	-0.007	13	-0.464	13	NC		NC		NC		NC	
1196		4	max	0	68	-0.003	68	NC		NC		NC		NC	
1197			min	-0.007	13	-0.464	13	NC		NC		NC		NC	
1198		5	max	0	68	-0.003	68	NC		NC		NC		NC	
1199			min	-0.007	13	-0.464	13	NC		NC		NC		NC	
1200	M575	1	max	0	98	0.009	98	NC		NC		NC		NC	
1201			min	-0.012	13	-0.427	13	NC		NC		NC		NC	
1202		2	max	0	98	0.009	98	NC		NC		NC		NC	
1203			min	-0.012	13	-0.427	13	NC		NC		NC		NC	
1204		3	max	0	98	0.009	98	NC		NC		NC		NC	
1205			min	-0.012	13	-0.427	13	NC		NC		NC		NC	
1206		4	max	0	98	0.009	98	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1207			min	-0.012	13	-0.427	13	NC		NC		NC		NC	
1208		5	max	0	98	0.009	98	NC		NC		NC		NC	
1209			min	-0.012	13	-0.427	13	NC		NC		NC		NC	
1210	M576	1	max	0.003	68	0.104	68	NC		NC		NC		NC	
1211			min	-0.016	13	-0.541	13	NC		NC		NC		NC	
1212		2	max	0.003	68	0.104	68	NC		NC		NC		NC	
1213			min	-0.016	13	-0.541	13	NC		NC		NC		NC	
1214		3	max	0.003	68	0.104	68	NC		NC		NC		NC	
1215			min	-0.016	13	-0.541	13	NC		NC		NC		NC	
1216		4	max	0.003	68	0.104	68	NC		NC		NC		NC	
1217			min	-0.016	13	-0.541	13	NC		NC		NC		NC	
1218		5	max	0.003	68	0.104	68	NC		NC		NC		NC	
1219			min	-0.016	13	-0.541	13	NC		NC		NC		NC	
1220	M577	1	max	0.006	15	0.416	15	NC		NC		NC		NC	
1221			min	-0.001	74	-0.084	74	NC		NC		NC		NC	
1222		2	max	0.006	15	0.416	15	NC		NC		NC		NC	
1223			min	-0.001	74	-0.084	74	NC		NC		NC		NC	
1224		3	max	0.006	15	0.416	15	NC		NC		NC		NC	
1225			min	-0.001	74	-0.084	74	NC		NC		NC		NC	
1226		4	max	0.006	15	0.416	15	NC		NC		NC		NC	
1227			min	-0.001	74	-0.084	74	NC		NC		NC		NC	
1228		5	max	0.006	15	0.416	15	NC		NC		NC		NC	
1229			min	-0.001	74	-0.084	74	NC		NC		NC		NC	
1230	M578	1	max	0.011	13	0.757	13	NC		NC		NC		NC	
1231			min	0	77	0.022	77	NC		NC		NC		NC	
1232		2	max	0.011	13	0.757	13	NC		NC		NC		NC	
1233			min	0	77	0.022	77	NC		NC		NC		NC	
1234		3	max	0.011	13	0.757	13	NC		NC		NC		NC	
1235			min	0	77	0.022	77	NC		NC		NC		NC	
1236		4	max	0.011	13	0.757	13	NC		NC		NC		NC	
1237			min	0	77	0.022	77	NC		NC		NC		NC	
1238		5	max	0.011	13	0.757	13	NC		NC		NC		NC	
1239			min	0	77	0.022	77	NC		NC		NC		NC	
1240	M579	1	max	0.013	13	0.453	13	NC		NC		NC		NC	
1241			min	0	98	0.004	98	NC		NC		NC		NC	
1242		2	max	0.013	13	0.453	13	NC		NC		NC		NC	
1243			min	0	98	0.004	98	NC		NC		NC		NC	
1244		3	max	0.013	13	0.453	13	NC		NC		NC		NC	
1245			min	0	98	0.004	98	NC		NC		NC		NC	
1246		4	max	0.013	13	0.453	13	NC		NC		NC		NC	
1247			min	0	98	0.004	98	NC		NC		NC		NC	
1248		5	max	0.013	13	0.453	13	NC		NC		NC		NC	
1249			min	0	98	0.004	98	NC		NC		NC		NC	
1250	M580	1	max	0.006	92	0.221	92	NC		NC		NC		NC	
1251			min	-0.005	68	-0.165	68	NC		NC		NC		NC	
1252		2	max	0.006	92	0.221	92	NC		NC		NC		NC	
1253			min	-0.005	68	-0.165	68	NC		NC		NC		NC	
1254		3	max	0.006	92	0.221	92	NC		NC		NC		NC	
1255			min	-0.005	68	-0.165	68	NC		NC		NC		NC	
1256		4	max	0.006	92	0.221	92	NC		NC		NC		NC	
1257			min	-0.005	68	-0.165	68	NC		NC		NC		NC	
1258		5	max	0.006	92	0.221	92	NC		NC		NC		NC	
1259			min	-0.005	68	-0.165	68	NC		NC		NC		NC	
1260	M581	1	max	0.002	94	0.085	94	NC		NC		NC		NC	
1261			min	-0.002	96	-0.06	96	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1262		2	max	0.002	94	0.085	94	NC		NC		NC		NC	
1263			min	-0.002	96	-0.06	96	NC		NC		NC		NC	
1264		3	max	0.002	94	0.085	94	NC		NC		NC		NC	
1265			min	-0.002	96	-0.06	96	NC		NC		NC		NC	
1266		4	max	0.002	94	0.085	94	NC		NC		NC		NC	
1267			min	-0.002	96	-0.06	96	NC		NC		NC		NC	
1268		5	max	0.002	94	0.085	94	NC		NC		NC		NC	
1269			min	-0.002	96	-0.06	96	NC		NC		NC		NC	
1270	M582	1	max	0.001	102	0.044	102	NC		NC		NC		NC	
1271			min	-0.001	100	-0.039	100	NC		NC		NC		NC	
1272		2	max	0.001	102	0.044	102	NC		NC		NC		NC	
1273			min	-0.001	100	-0.039	100	NC		NC		NC		NC	
1274		3	max	0.001	102	0.044	102	NC		NC		NC		NC	
1275			min	-0.001	100	-0.039	100	NC		NC		NC		NC	
1276		4	max	0.001	102	0.044	102	NC		NC		NC		NC	
1277			min	-0.001	100	-0.039	100	NC		NC		NC		NC	
1278		5	max	0.001	102	0.044	102	NC		NC		NC		NC	
1279			min	-0.001	100	-0.039	100	NC		NC		NC		NC	
1280	M583	1	max	0.001	100	0.054	100	NC		NC		NC		NC	
1281			min	-0.001	102	-0.058	102	NC		NC		NC		NC	
1282		2	max	0.001	100	0.054	100	NC		NC		NC		NC	
1283			min	-0.001	102	-0.058	102	NC		NC		NC		NC	
1284		3	max	0.001	100	0.054	100	NC		NC		NC		NC	
1285			min	-0.001	102	-0.058	102	NC		NC		NC		NC	
1286		4	max	0.001	100	0.054	100	NC		NC		NC		NC	
1287			min	-0.001	102	-0.058	102	NC		NC		NC		NC	
1288		5	max	0.001	100	0.054	100	NC		NC		NC		NC	
1289			min	-0.001	102	-0.058	102	NC		NC		NC		NC	
1290	M584	1	max	0.002	96	0.056	96	NC		NC		NC		NC	
1291			min	-0.002	94	-0.079	94	NC		NC		NC		NC	
1292		2	max	0.002	96	0.056	96	NC		NC		NC		NC	
1293			min	-0.002	94	-0.079	94	NC		NC		NC		NC	
1294		3	max	0.002	96	0.056	96	NC		NC		NC		NC	
1295			min	-0.002	94	-0.079	94	NC		NC		NC		NC	
1296		4	max	0.002	96	0.056	96	NC		NC		NC		NC	
1297			min	-0.002	94	-0.079	94	NC		NC		NC		NC	
1298		5	max	0.002	96	0.056	96	NC		NC		NC		NC	
1299			min	-0.002	94	-0.079	94	NC		NC		NC		NC	
1300	M585	1	max	0.007	106	0.633	106	NC		NC		NC		NC	
1301			min	-0.01	13	-0.913	13	NC		NC		NC		NC	
1302		2	max	0.007	106	0.633	106	NC		NC		NC		NC	
1303			min	-0.01	13	-0.913	13	NC		NC		NC		NC	
1304		3	max	0.007	106	0.633	106	NC		NC		NC		NC	
1305			min	-0.01	13	-0.913	13	NC		NC		NC		NC	
1306		4	max	0.007	106	0.633	106	NC		NC		NC		NC	
1307			min	-0.01	13	-0.913	13	NC		NC		NC		NC	
1308		5	max	0.007	106	0.633	106	NC		NC		NC		NC	
1309			min	-0.01	13	-0.913	13	NC		NC		NC		NC	
1310	M586	1	max	0.007	76	0.689	76	NC		NC		NC		NC	
1311			min	-0.013	13	-1.218	13	NC		NC		NC		NC	
1312		2	max	0.007	76	0.689	76	NC		NC		NC		NC	
1313			min	-0.013	13	-1.218	13	NC		NC		NC		NC	
1314		3	max	0.007	76	0.689	76	NC		NC		NC		NC	
1315			min	-0.013	13	-1.218	13	NC		NC		NC		NC	
1316		4	max	0.007	76	0.689	76	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1317			min	-0.013	13	-1.218	13	NC		NC		NC		NC	
1318		5	max	0.007	76	0.689	76	NC		NC		NC		NC	
1319			min	-0.013	13	-1.218	13	NC		NC		NC		NC	
1320	M587	1	max	0.008	104	0.72	104	NC		NC		NC		NC	
1321			min	-0.011	15	-1.056	15	NC		NC		NC		NC	
1322		2	max	0.008	104	0.72	104	NC		NC		NC		NC	
1323			min	-0.011	15	-1.056	15	NC		NC		NC		NC	
1324		3	max	0.008	104	0.72	104	NC		NC		NC		NC	
1325			min	-0.011	15	-1.056	15	NC		NC		NC		NC	
1326		4	max	0.008	104	0.72	104	NC		NC		NC		NC	
1327			min	-0.011	15	-1.056	15	NC		NC		NC		NC	
1328		5	max	0.008	104	0.72	104	NC		NC		NC		NC	
1329			min	-0.011	15	-1.056	15	NC		NC		NC		NC	
1330	M588	1	max	0.007	74	0.653	74	NC		NC		NC		NC	
1331			min	-0.013	15	-1.279	15	NC		NC		NC		NC	
1332		2	max	0.007	74	0.653	74	NC		NC		NC		NC	
1333			min	-0.013	15	-1.279	15	NC		NC		NC		NC	
1334		3	max	0.007	74	0.653	74	NC		NC		NC		NC	
1335			min	-0.013	15	-1.279	15	NC		NC		NC		NC	
1336		4	max	0.007	74	0.653	74	NC		NC		NC		NC	
1337			min	-0.013	15	-1.279	15	NC		NC		NC		NC	
1338		5	max	0.007	74	0.653	74	NC		NC		NC		NC	
1339			min	-0.013	15	-1.279	15	NC		NC		NC		NC	
1340	M589	1	max	0.01	106	0.365	106	NC		NC		NC		NC	
1341			min	-0.014	70	-0.501	70	NC		NC		NC		NC	
1342		2	max	0.01	106	0.365	106	NC		NC		NC		NC	
1343			min	-0.014	70	-0.501	70	NC		NC		NC		NC	
1344		3	max	0.01	106	0.365	106	NC		NC		NC		NC	
1345			min	-0.014	70	-0.501	70	NC		NC		NC		NC	
1346		4	max	0.01	106	0.365	106	NC		NC		NC		NC	
1347			min	-0.014	70	-0.501	70	NC		NC		NC		NC	
1348		5	max	0.01	106	0.365	106	NC		NC		NC		NC	
1349			min	-0.014	70	-0.501	70	NC		NC		NC		NC	
1350	M590	1	max	0.013	70	0.442	70	NC		NC		NC		NC	
1351			min	-0.007	106	-0.256	106	NC		NC		NC		NC	
1352		2	max	0.013	70	0.442	70	NC		NC		NC		NC	
1353			min	-0.007	106	-0.256	106	NC		NC		NC		NC	
1354		3	max	0.013	70	0.442	70	NC		NC		NC		NC	
1355			min	-0.007	106	-0.256	106	NC		NC		NC		NC	
1356		4	max	0.013	70	0.442	70	NC		NC		NC		NC	
1357			min	-0.007	106	-0.256	106	NC		NC		NC		NC	
1358		5	max	0.013	70	0.442	70	NC		NC		NC		NC	
1359			min	-0.007	106	-0.256	106	NC		NC		NC		NC	
1360	M591	1	max	0.007	77	0.662	77	NC		NC		NC		NC	
1361			min	-0.016	13	-1.531	13	NC		NC		NC		NC	
1362		2	max	0.007	77	0.662	77	NC		NC		NC		NC	
1363			min	-0.016	13	-1.531	13	NC		NC		NC		NC	
1364		3	max	0.007	77	0.662	77	NC		NC		NC		NC	
1365			min	-0.016	13	-1.531	13	NC		NC		NC		NC	
1366		4	max	0.007	77	0.662	77	NC		NC		NC		NC	
1367			min	-0.016	13	-1.531	13	NC		NC		NC		NC	
1368		5	max	0.007	77	0.662	77	NC		NC		NC		NC	
1369			min	-0.016	13	-1.531	13	NC		NC		NC		NC	
1370	M592	1	max	0.011	75	1.087	75	NC		NC		NC		NC	
1371			min	-0.012	73	-1.145	73	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1372		2	max	0.011	75	1.087	75	NC		NC		NC		NC	
1373			min	-0.012	73	-1.145	73	NC		NC		NC		NC	
1374		3	max	0.011	75	1.087	75	NC		NC		NC		NC	
1375			min	-0.012	73	-1.145	73	NC		NC		NC		NC	
1376		4	max	0.011	75	1.087	75	NC		NC		NC		NC	
1377			min	-0.012	73	-1.145	73	NC		NC		NC		NC	
1378		5	max	0.011	75	1.087	75	NC		NC		NC		NC	
1379			min	-0.012	73	-1.145	73	NC		NC		NC		NC	
1380	M593	1	max	0.002	104	0.145	104	NC		NC		NC		NC	
1381			min	-0.018	15	-1.687	15	NC		NC		NC		NC	
1382		2	max	0.002	104	0.145	104	NC		NC		NC		NC	
1383			min	-0.018	15	-1.687	15	NC		NC		NC		NC	
1384		3	max	0.002	104	0.145	104	NC		NC		NC		NC	
1385			min	-0.018	15	-1.687	15	NC		NC		NC		NC	
1386		4	max	0.002	104	0.145	104	NC		NC		NC		NC	
1387			min	-0.018	15	-1.687	15	NC		NC		NC		NC	
1388		5	max	0.002	104	0.145	104	NC		NC		NC		NC	
1389			min	-0.018	15	-1.687	15	NC		NC		NC		NC	
1390	M594	1	max	0.005	70	0.484	70	NC		NC		NC		NC	
1391			min	-0.004	106	-0.397	106	NC		NC		NC		NC	
1392		2	max	0.005	70	0.484	70	NC		NC		NC		NC	
1393			min	-0.004	106	-0.397	106	NC		NC		NC		NC	
1394		3	max	0.005	70	0.484	70	NC		NC		NC		NC	
1395			min	-0.004	106	-0.397	106	NC		NC		NC		NC	
1396		4	max	0.005	70	0.484	70	NC		NC		NC		NC	
1397			min	-0.004	106	-0.397	106	NC		NC		NC		NC	
1398		5	max	0.005	70	0.484	70	NC		NC		NC		NC	
1399			min	-0.004	106	-0.397	106	NC		NC		NC		NC	
1400	M595	1	max	0.003	76	0.247	76	NC		NC		NC		NC	
1401			min	-0.018	13	-1.764	13	NC		NC		NC		NC	
1402		2	max	0.003	76	0.247	76	NC		NC		NC		NC	
1403			min	-0.018	13	-1.764	13	NC		NC		NC		NC	
1404		3	max	0.003	76	0.247	76	NC		NC		NC		NC	
1405			min	-0.018	13	-1.764	13	NC		NC		NC		NC	
1406		4	max	0.003	76	0.247	76	NC		NC		NC		NC	
1407			min	-0.018	13	-1.764	13	NC		NC		NC		NC	
1408		5	max	0.003	76	0.247	76	NC		NC		NC		NC	
1409			min	-0.018	13	-1.764	13	NC		NC		NC		NC	
1410	M596	1	max	0.003	68	0.255	68	NC		NC		NC		NC	
1411			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
1412		2	max	0.003	68	0.255	68	NC		NC		NC		NC	
1413			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
1414		3	max	0.003	68	0.255	68	NC		NC		NC		NC	
1415			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
1416		4	max	0.003	68	0.255	68	NC		NC		NC		NC	
1417			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
1418		5	max	0.003	68	0.255	68	NC		NC		NC		NC	
1419			min	-0.014	13	-1.31	13	NC		NC		NC		NC	
1420	M597	1	max	0.003	104	0.273	104	NC		NC		NC		NC	
1421			min	-0.02	15	-1.917	15	NC		NC		NC		NC	
1422		2	max	0.003	104	0.273	104	NC		NC		NC		NC	
1423			min	-0.02	15	-1.917	15	NC		NC		NC		NC	
1424		3	max	0.003	104	0.273	104	NC		NC		NC		NC	
1425			min	-0.02	15	-1.917	15	NC		NC		NC		NC	
1426		4	max	0.003	104	0.273	104	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1427			min	-0.02	15	-1.917	15	NC		NC		NC		NC	
1428		5	max	0.003	104	0.273	104	NC		NC		NC		NC	
1429			min	-0.02	15	-1.917	15	NC		NC		NC		NC	
1430	M598	1	max	0.003	96	0.282	96	NC		NC		NC		NC	
1431			min	-0.012	15	-1.143	15	NC		NC		NC		NC	
1432		2	max	0.003	96	0.282	96	NC		NC		NC		NC	
1433			min	-0.012	15	-1.143	15	NC		NC		NC		NC	
1434		3	max	0.003	96	0.282	96	NC		NC		NC		NC	
1435			min	-0.012	15	-1.143	15	NC		NC		NC		NC	
1436		4	max	0.003	96	0.282	96	NC		NC		NC		NC	
1437			min	-0.012	15	-1.143	15	NC		NC		NC		NC	
1438		5	max	0.003	96	0.282	96	NC		NC		NC		NC	
1439			min	-0.012	15	-1.143	15	NC		NC		NC		NC	
1440	M599	1	max	0.009	102	0.846	102	NC		NC		NC		NC	
1441			min	-0.007	74	-0.703	74	NC		NC		NC		NC	
1442		2	max	0.009	102	0.846	102	NC		NC		NC		NC	
1443			min	-0.007	74	-0.703	74	NC		NC		NC		NC	
1444		3	max	0.009	102	0.846	102	NC		NC		NC		NC	
1445			min	-0.007	74	-0.703	74	NC		NC		NC		NC	
1446		4	max	0.009	102	0.846	102	NC		NC		NC		NC	
1447			min	-0.007	74	-0.703	74	NC		NC		NC		NC	
1448		5	max	0.009	102	0.846	102	NC		NC		NC		NC	
1449			min	-0.007	74	-0.703	74	NC		NC		NC		NC	
1450	M600	1	max	0.009	102	0.876	102	NC		NC		NC		NC	
1451			min	-0.008	74	-0.747	74	NC		NC		NC		NC	
1452		2	max	0.009	102	0.876	102	NC		NC		NC		NC	
1453			min	-0.008	74	-0.747	74	NC		NC		NC		NC	
1454		3	max	0.009	102	0.876	102	NC		NC		NC		NC	
1455			min	-0.008	74	-0.747	74	NC		NC		NC		NC	
1456		4	max	0.009	102	0.876	102	NC		NC		NC		NC	
1457			min	-0.008	74	-0.747	74	NC		NC		NC		NC	
1458		5	max	0.009	102	0.876	102	NC		NC		NC		NC	
1459			min	-0.008	74	-0.747	74	NC		NC		NC		NC	
1460	M601	1	max	0.008	74	0.738	74	NC		NC		NC		NC	
1461			min	-0.009	102	-0.817	102	NC		NC		NC		NC	
1462		2	max	0.008	74	0.738	74	NC		NC		NC		NC	
1463			min	-0.009	102	-0.817	102	NC		NC		NC		NC	
1464		3	max	0.008	74	0.738	74	NC		NC		NC		NC	
1465			min	-0.009	102	-0.817	102	NC		NC		NC		NC	
1466		4	max	0.008	74	0.738	74	NC		NC		NC		NC	
1467			min	-0.009	102	-0.817	102	NC		NC		NC		NC	
1468		5	max	0.008	74	0.738	74	NC		NC		NC		NC	
1469			min	-0.009	102	-0.817	102	NC		NC		NC		NC	
1470	M602	1	max	0.008	104	0.769	104	NC		NC		NC		NC	
1471			min	-0.009	72	-0.837	72	NC		NC		NC		NC	
1472		2	max	0.008	104	0.769	104	NC		NC		NC		NC	
1473			min	-0.009	72	-0.837	72	NC		NC		NC		NC	
1474		3	max	0.008	104	0.769	104	NC		NC		NC		NC	
1475			min	-0.009	72	-0.837	72	NC		NC		NC		NC	
1476		4	max	0.008	104	0.769	104	NC		NC		NC		NC	
1477			min	-0.009	72	-0.837	72	NC		NC		NC		NC	
1478		5	max	0.008	104	0.769	104	NC		NC		NC		NC	
1479			min	-0.009	72	-0.837	72	NC		NC		NC		NC	
1480	M618	1	max	0.695	71	21.456	71	NC		NC		NC		NC	
1481			min	-0.695	103	-21.455	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1482		2	max	0.695	71	21.456	71	NC		NC		NC		NC	
1483			min	-0.695	103	-21.455	103	NC		NC		NC		NC	
1484		3	max	0.695	103	21.465	103	NC		NC		NC		NC	
1485			min	-0.695	71	-21.467	71	NC		NC		NC		NC	
1486		4	max	0.695	103	21.465	103	NC		NC		NC		NC	
1487			min	-0.695	71	-21.467	71	NC		NC		NC		NC	
1488		5	max	0.695	103	21.465	103	NC		NC		NC		NC	
1489			min	-0.695	71	-21.467	71	NC		NC		NC		NC	
1490	M619	1	max	0.738	71	22.802	71	NC		NC		NC		NC	
1491			min	-0.738	103	-22.789	103	NC		NC		NC		NC	
1492		2	max	0.738	71	22.802	71	NC		NC		NC		NC	
1493			min	-0.738	103	-22.789	103	NC		NC		NC		NC	
1494		3	max	0.738	103	22.802	103	NC		NC		NC		NC	
1495			min	-0.077	92	-2.376	92	NC		NC		NC		NC	
1496		4	max	0.738	103	22.802	103	NC		NC		NC		NC	
1497			min	-0.737	71	-22.774	71	NC		NC		NC		NC	
1498		5	max	0.738	103	22.802	103	NC		NC		NC		NC	
1499			min	-0.737	71	-22.774	71	NC		NC		NC		NC	
1500	M620	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1501			min	0	12	0	12	0	12	0	12	0	12	0	12
1502		2	max	0	107	0	107	0	107	0	107	0	107	0	107
1503			min	0	12	0	12	0	12	0	12	0	12	0	12
1504		3	max	0	102	0	102	0	107	0	102	0	107	0	107
1505			min	0	74	0	74	0	12	0	74	0	12	0	12
1506		4	max	0	102	0	102	0	107	0	102	0	74	0	74
1507			min	0	74	0	74	0	12	0	74	-0.001	102	-0.001	102
1508		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1509			min	0	12	0	12	0	12	0	12	0	12	0	12
1510	M621	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1511			min	0	12	0	12	0	12	0	12	0	12	0	12
1512		2	max	0	107	0	107	0	107	0	107	0	107	0	107
1513			min	0	12	0	12	0	12	0	12	0	12	0	12
1514		3	max	0	74	0	74	0	107	0	74	0	107	0	107
1515			min	0	102	0	102	0	12	0	102	0	12	0	12
1516		4	max	0	74	0	74	0	107	0	74	0.001	102	0.001	102
1517			min	0	102	0	102	0	12	0	102	0	74	0	74
1518		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1519			min	0	12	0	12	0	12	0	12	0	12	0	12
1520	M622	1	max	0.372	103	0	107	0	107	0.343	103	8.05	103	8.05	103
1521			min	-0.372	105	0	12	0	12	-0.343	105	-8.05	105	-8.05	105
1522		2	max	0.372	103	2.009	103	0	107	0.21	103	3.283	103	3.283	103
1523			min	-0.372	105	-2.009	105	0	12	-0.21	105	-3.283	105	-3.283	105
1524		3	max	0.372	103	2.591	103	0	107	0.171	103	0	107	0	107
1525			min	-0.372	105	-2.591	105	0	12	-0.171	105	0	12	0	12
1526		4	max	0.22	103	1.186	103	0	107	0.124	103	1.939	105	1.939	105
1527			min	-0.22	71	-1.186	71	0	12	-0.124	71	-1.939	103	-1.939	103
1528		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1529			min	0	12	0	12	0	12	0	12	0	12	0	12
1530	M623	1	max	0.02	77	0	107	0	107	0.019	77	0.44	77	0.44	77
1531			min	-0.02	105	0	12	0	12	-0.019	105	-0.441	105	-0.441	105
1532		2	max	0.02	107	0.11	107	0	107	0.011	107	0.18	107	0.18	107
1533			min	-0.02	105	-0.11	105	0	12	-0.011	105	-0.18	105	-0.18	105
1534		3	max	0.019	107	0.134	107	0	107	0.009	107	0	107	0	107
1535			min	-0.019	71	-0.134	71	0	12	-0.009	71	0	12	0	12
1536		4	max	0.179	73	0.968	73	0	107	0.101	73	1.581	105	1.581	105

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1537			min	-0.179	105	-0.967	105	0	12	-0.101	105	-1.581	73	-1.581	73
1538		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1539			min	0	12	0	12	0	12	0	12	0	12	0	12
1540	M624	1	max	0.02	107	0	107	0	107	0.019	107	0.441	107	0.441	107
1541			min	-0.02	75	0	12	0	12	-0.019	75	-0.44	75	-0.44	75
1542		2	max	0.02	107	0.11	107	0	107	0.011	107	0.18	107	0.18	107
1543			min	-0.02	105	-0.11	105	0	12	-0.011	105	-0.18	105	-0.18	105
1544		3	max	0.019	73	0.134	73	0	107	0.009	73	0	107	0	107
1545			min	-0.019	105	-0.134	105	0	12	-0.009	105	0	12	0	12
1546		4	max	0.179	107	0.967	107	0	107	0.101	107	1.581	71	1.581	71
1547			min	-0.179	71	-0.968	71	0	12	-0.101	71	-1.581	107	-1.581	107
1548		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1549			min	0	12	0	12	0	12	0	12	0	12	0	12
1550	M625	1	max	0.372	103	0	107	0	107	0.343	103	8.05	103	8.05	103
1551			min	-0.372	105	0	12	0	12	-0.343	105	-8.05	105	-8.05	105
1552		2	max	0.372	103	2.009	103	0	107	0.21	103	3.283	103	3.283	103
1553			min	-0.372	105	-2.009	105	0	12	-0.21	105	-3.283	105	-3.283	105
1554		3	max	0.372	103	2.591	103	0	107	0.171	103	0	107	0	107
1555			min	-0.372	75	-2.591	75	0	12	-0.171	75	0	12	0	12
1556		4	max	0.22	103	1.186	103	0	107	0.124	103	1.939	105	1.939	105
1557			min	-0.22	45	-1.186	45	0	12	-0.124	45	-1.939	43	-1.939	43
1558		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1559			min	0	12	0	12	0	12	0	12	0	12	0	12
1560	M628	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1561			min	0	12	0	12	0	12	0	12	0	12	0	12
1562		2	max	0	106	0	106	0	107	0	106	0.002	106	0.002	106
1563			min	0	70	-0.001	70	0	12	0	70	-0.002	70	-0.002	70
1564		3	max	0	106	0.001	106	0	107	0	106	0	107	0	107
1565			min	0	70	-0.001	70	0	12	0	70	0	12	0	12
1566		4	max	0	106	0	106	0	107	0	106	0.002	70	0.002	70
1567			min	0	70	-0.001	70	0	12	0	70	-0.002	106	-0.002	106
1568		5	max	0	106	0	107	0	107	0	106	0.004	70	0.004	70
1569			min	0	70	0	12	0	12	0	70	-0.004	106	-0.004	106
1570	M629	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1571			min	0	12	0	12	0	12	0	12	0	12	0	12
1572		2	max	0	70	0.001	70	0	107	0	70	0.002	70	0.002	70
1573			min	0	106	0	106	0	12	0	106	-0.002	106	-0.002	106
1574		3	max	0	70	0.001	70	0	107	0	70	0	107	0	107
1575			min	0	106	-0.001	106	0	12	0	106	0	12	0	12
1576		4	max	0	70	0.001	70	0	107	0	70	0.002	106	0.002	106
1577			min	0	106	0	106	0	12	0	106	-0.002	70	-0.002	70
1578		5	max	0	70	0	107	0	107	0	70	0.004	106	0.004	106
1579			min	0	106	0	12	0	12	0	106	-0.004	70	-0.004	70
1580	M631	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1581			min	0	12	0	12	0	12	0	12	0	12	0	12
1582		2	max	0	107	0	107	0	107	0	107	0	107	0	107
1583			min	0	12	0	12	0	12	0	12	0	12	0	12
1584		3	max	0	65	0	65	0	107	0	65	0	107	0	107
1585			min	0	63	0	63	0	12	0	63	0	12	0	12
1586		4	max	0	107	0	107	0	107	0	107	0	107	0	107
1587			min	0	12	0	12	0	12	0	12	0	12	0	12
1588		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1589			min	0	12	0	12	0	12	0	12	0	12	0	12
1590	M632	1	max	0.004	103	0	107	0	107	0.005	103	0.125	103	0.125	103
1591			min	-0.004	75	0	12	0	12	-0.005	75	-0.124	75	-0.124	75

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1592		2	max	0.004	103	0.026	103	0	107	0.003	103	0.054	103	0.054	103
1593			min	-0.004	75	-0.026	75	0	12	-0.003	75	-0.053	75	-0.053	75
1594		3	max	0.004	103	0.034	103	0	107	0.003	103	0	107	0	107
1595			min	-0.004	75	-0.034	75	0	12	-0.003	75	0	12	0	12
1596		4	max	0.004	103	0.026	103	0	107	0.003	103	0.053	75	0.053	75
1597			min	-0.004	75	-0.026	75	0	12	-0.003	75	-0.054	103	-0.054	103
1598		5	max	0.004	103	0	107	0	107	0.005	103	0.124	75	0.124	75
1599			min	-0.004	75	0	12	0	12	-0.005	75	-0.125	103	-0.125	103
1600	M633	1	max	0.004	77	0	107	0	107	0.005	77	0.124	77	0.124	77
1601			min	-0.004	101	0	12	0	12	-0.005	101	-0.125	101	-0.125	101
1602		2	max	0.004	77	0.026	77	0	107	0.003	77	0.053	77	0.053	77
1603			min	-0.004	101	-0.026	101	0	12	-0.003	101	-0.054	101	-0.054	101
1604		3	max	0.004	77	0.034	77	0	107	0.003	77	0	107	0	107
1605			min	-0.004	101	-0.034	101	0	12	-0.003	101	0	12	0	12
1606		4	max	0.004	77	0.026	77	0	107	0.003	77	0.054	101	0.054	101
1607			min	-0.004	101	-0.026	101	0	12	-0.003	101	-0.053	77	-0.053	77
1608		5	max	0.004	77	0	107	0	107	0.005	77	0.125	101	0.125	101
1609			min	-0.004	101	0	12	0	12	-0.005	101	-0.124	77	-0.124	77
1610	M638	1	max	0	102	0.015	102	NC		NC		NC		NC	
1611			min	0	74	-0.006	74	NC		NC		NC		NC	
1612		2	max	0	102	0.015	102	NC		NC		NC		NC	
1613			min	0	74	-0.006	74	NC		NC		NC		NC	
1614		3	max	0	102	0.015	102	NC		NC		NC		NC	
1615			min	0	74	-0.006	74	NC		NC		NC		NC	
1616		4	max	0	102	0.015	102	NC		NC		NC		NC	
1617			min	0	74	-0.006	74	NC		NC		NC		NC	
1618		5	max	0	102	0.015	102	NC		NC		NC		NC	
1619			min	0	74	-0.006	74	NC		NC		NC		NC	
1620	M639	1	max	0	74	0.006	74	NC		NC		NC		NC	
1621			min	0	102	-0.015	102	NC		NC		NC		NC	
1622		2	max	0	74	0.006	74	NC		NC		NC		NC	
1623			min	0	102	-0.015	102	NC		NC		NC		NC	
1624		3	max	0	74	0.006	74	NC		NC		NC		NC	
1625			min	0	102	-0.015	102	NC		NC		NC		NC	
1626		4	max	0	74	0.006	74	NC		NC		NC		NC	
1627			min	0	102	-0.015	102	NC		NC		NC		NC	
1628		5	max	0	74	0.006	74	NC		NC		NC		NC	
1629			min	0	102	-0.015	102	NC		NC		NC		NC	
1630	M640	1	max	0.002	75	0.039	75	NC		NC		NC		NC	
1631			min	-0.002	103	-0.044	103	NC		NC		NC		NC	
1632		2	max	0.002	75	0.039	75	NC		NC		NC		NC	
1633			min	-0.002	103	-0.044	103	NC		NC		NC		NC	
1634		3	max	0.002	75	0.04	75	NC		NC		NC		NC	
1635			min	-0.002	103	-0.045	103	NC		NC		NC		NC	
1636		4	max	0.002	105	0.046	105	NC		NC		NC		NC	
1637			min	-0.002	73	-0.052	73	NC		NC		NC		NC	
1638		5	max	0.002	105	0.046	105	NC		NC		NC		NC	
1639			min	-0.002	73	-0.052	73	NC		NC		NC		NC	
1640	M642	1	max	0.002	101	0.044	101	NC		NC		NC		NC	
1641			min	-0.002	77	-0.039	77	NC		NC		NC		NC	
1642		2	max	0.002	101	0.044	101	NC		NC		NC		NC	
1643			min	-0.002	77	-0.039	77	NC		NC		NC		NC	
1644		3	max	0.002	101	0.045	101	NC		NC		NC		NC	
1645			min	-0.002	77	-0.04	77	NC		NC		NC		NC	
1646		4	max	0.002	71	0.052	71	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1647			min	-0.002	107	-0.046	107	NC		NC		NC		NC	
1648		5	max	0.002	71	0.052	71	NC		NC		NC		NC	
1649			min	-0.002	107	-0.046	107	NC		NC		NC		NC	
1650	M644	1	max	0	67	0.008	67	NC		NC		NC		NC	
1651			min	0	95	-0.01	95	NC		NC		NC		NC	
1652		2	max	0	67	0.008	67	NC		NC		NC		NC	
1653			min	0	95	-0.01	95	NC		NC		NC		NC	
1654		3	max	0	67	0.008	67	NC		NC		NC		NC	
1655			min	0	95	-0.01	95	NC		NC		NC		NC	
1656		4	max	0	67	0.008	67	NC		NC		NC		NC	
1657			min	0	95	-0.01	95	NC		NC		NC		NC	
1658		5	max	0	67	0.008	67	NC		NC		NC		NC	
1659			min	0	95	-0.01	95	NC		NC		NC		NC	
1660	M645	1	max	0	70	0.046	70	NC		NC		NC		NC	
1661			min	0	106	-0.04	106	NC		NC		NC		NC	
1662		2	max	0	70	0.046	70	NC		NC		NC		NC	
1663			min	0	106	-0.04	106	NC		NC		NC		NC	
1664		3	max	0	70	0.046	70	NC		NC		NC		NC	
1665			min	0	106	-0.04	106	NC		NC		NC		NC	
1666		4	max	0	70	0.046	70	NC		NC		NC		NC	
1667			min	0	106	-0.04	106	NC		NC		NC		NC	
1668		5	max	0	70	0.046	70	NC		NC		NC		NC	
1669			min	0	106	-0.04	106	NC		NC		NC		NC	
1670	M646	1	max	0	93	0.01	93	NC		NC		NC		NC	
1671			min	0	69	-0.008	69	NC		NC		NC		NC	
1672		2	max	0	93	0.01	93	NC		NC		NC		NC	
1673			min	0	69	-0.008	69	NC		NC		NC		NC	
1674		3	max	0	93	0.01	93	NC		NC		NC		NC	
1675			min	0	69	-0.008	69	NC		NC		NC		NC	
1676		4	max	0	93	0.01	93	NC		NC		NC		NC	
1677			min	0	69	-0.008	69	NC		NC		NC		NC	
1678		5	max	0	93	0.01	93	NC		NC		NC		NC	
1679			min	0	69	-0.008	69	NC		NC		NC		NC	
1680	M647	1	max	0	106	0.04	106	NC		NC		NC		NC	
1681			min	0	70	-0.046	70	NC		NC		NC		NC	
1682		2	max	0	106	0.04	106	NC		NC		NC		NC	
1683			min	0	70	-0.046	70	NC		NC		NC		NC	
1684		3	max	0	106	0.04	106	NC		NC		NC		NC	
1685			min	0	70	-0.046	70	NC		NC		NC		NC	
1686		4	max	0	106	0.04	106	NC		NC		NC		NC	
1687			min	0	70	-0.046	70	NC		NC		NC		NC	
1688		5	max	0	106	0.04	106	NC		NC		NC		NC	
1689			min	0	70	-0.046	70	NC		NC		NC		NC	
1690	M648	1	max	0	105	0	105	NC		NC		NC		NC	
1691			min	0	107	0	107	NC		NC		NC		NC	
1692		2	max	0	105	0	105	NC		NC		NC		NC	
1693			min	0	107	0	107	NC		NC		NC		NC	
1694		3	max	0	105	0	105	NC		NC		NC		NC	
1695			min	0	107	0	107	NC		NC		NC		NC	
1696		4	max	0	105	0	105	NC		NC		NC		NC	
1697			min	0	107	0	107	NC		NC		NC		NC	
1698		5	max	0	105	0	105	NC		NC		NC		NC	
1699			min	0	107	0	107	NC		NC		NC		NC	
1700	M649	1	max	0	107	0	107	NC		NC		NC		NC	
1701			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1702		2	max	0	107	0	107	NC		NC		NC		NC	
1703			min	0	12	0	12	NC		NC		NC		NC	
1704		3	max	0	107	0	107	NC		NC		NC		NC	
1705			min	0	12	0	12	NC		NC		NC		NC	
1706		4	max	0	107	0	107	NC		NC		NC		NC	
1707			min	0	12	0	12	NC		NC		NC		NC	
1708		5	max	0	107	0	107	NC		NC		NC		NC	
1709			min	0	12	0	12	NC		NC		NC		NC	
1710	M650	1	max	0	107	0	107	NC		NC		NC		NC	
1711			min	0	12	0	12	NC		NC		NC		NC	
1712		2	max	0	107	0	107	NC		NC		NC		NC	
1713			min	0	12	0	12	NC		NC		NC		NC	
1714		3	max	0	107	0	107	NC		NC		NC		NC	
1715			min	0	12	0	12	NC		NC		NC		NC	
1716		4	max	0	107	0	107	NC		NC		NC		NC	
1717			min	0	12	0	12	NC		NC		NC		NC	
1718		5	max	0	107	0	107	NC		NC		NC		NC	
1719			min	0	12	0	12	NC		NC		NC		NC	
1720	M651	1	max	0	107	0	107	NC		NC		NC		NC	
1721			min	0	12	0	12	NC		NC		NC		NC	
1722		2	max	0	107	0	107	NC		NC		NC		NC	
1723			min	0	12	0	12	NC		NC		NC		NC	
1724		3	max	0	107	0	107	NC		NC		NC		NC	
1725			min	0	12	0	12	NC		NC		NC		NC	
1726		4	max	0	107	0	107	NC		NC		NC		NC	
1727			min	0	12	0	12	NC		NC		NC		NC	
1728		5	max	0	107	0	107	NC		NC		NC		NC	
1729			min	0	12	0	12	NC		NC		NC		NC	
1730	M652	1	max	0	107	0	107	NC		NC		NC		NC	
1731			min	0	12	0	12	NC		NC		NC		NC	
1732		2	max	0	107	0	107	NC		NC		NC		NC	
1733			min	0	12	0	12	NC		NC		NC		NC	
1734		3	max	0	107	0	107	NC		NC		NC		NC	
1735			min	0	12	0	12	NC		NC		NC		NC	
1736		4	max	0	107	0	107	NC		NC		NC		NC	
1737			min	0	12	0	12	NC		NC		NC		NC	
1738		5	max	0	107	0	107	NC		NC		NC		NC	
1739			min	0	12	0	12	NC		NC		NC		NC	
1740	M653	1	max	0	107	0	107	NC		NC		NC		NC	
1741			min	0	12	0	12	NC		NC		NC		NC	
1742		2	max	0	107	0	107	NC		NC		NC		NC	
1743			min	0	12	0	12	NC		NC		NC		NC	
1744		3	max	0	107	0	107	NC		NC		NC		NC	
1745			min	0	12	0	12	NC		NC		NC		NC	
1746		4	max	0	107	0	107	NC		NC		NC		NC	
1747			min	0	12	0	12	NC		NC		NC		NC	
1748		5	max	0	107	0	107	NC		NC		NC		NC	
1749			min	0	12	0	12	NC		NC		NC		NC	
1750	M654	1	max	0	107	0	107	NC		NC		NC		NC	
1751			min	0	12	0	12	NC		NC		NC		NC	
1752		2	max	0	107	0	107	NC		NC		NC		NC	
1753			min	0	12	0	12	NC		NC		NC		NC	
1754		3	max	0	107	0	107	NC		NC		NC		NC	
1755			min	0	12	0	12	NC		NC		NC		NC	
1756		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1757			min	0	12	0	12	NC		NC		NC		NC	
1758		5	max	0	107	0	107	NC		NC		NC		NC	
1759			min	0	12	0	12	NC		NC		NC		NC	
1760	M655	1	max	0	107	0	107	NC		NC		NC		NC	
1761			min	0	12	0	12	NC		NC		NC		NC	
1762		2	max	0	107	0	107	NC		NC		NC		NC	
1763			min	0	12	0	12	NC		NC		NC		NC	
1764		3	max	0	107	0	107	NC		NC		NC		NC	
1765			min	0	12	0	12	NC		NC		NC		NC	
1766		4	max	0	107	0	107	NC		NC		NC		NC	
1767			min	0	12	0	12	NC		NC		NC		NC	
1768		5	max	0	107	0	107	NC		NC		NC		NC	
1769			min	0	12	0	12	NC		NC		NC		NC	
1770	M656	1	max	0	107	0	107	NC		NC		NC		NC	
1771			min	0	12	0	12	NC		NC		NC		NC	
1772		2	max	0	107	0	107	NC		NC		NC		NC	
1773			min	0	12	0	12	NC		NC		NC		NC	
1774		3	max	0	107	0	107	NC		NC		NC		NC	
1775			min	0	12	0	12	NC		NC		NC		NC	
1776		4	max	0	107	0	107	NC		NC		NC		NC	
1777			min	0	12	0	12	NC		NC		NC		NC	
1778		5	max	0	107	0	107	NC		NC		NC		NC	
1779			min	0	12	0	12	NC		NC		NC		NC	
1780	M657	1	max	0	107	0	107	NC		NC		NC		NC	
1781			min	0	12	0	12	NC		NC		NC		NC	
1782		2	max	0	107	0	107	NC		NC		NC		NC	
1783			min	0	12	0	12	NC		NC		NC		NC	
1784		3	max	0	107	0	107	NC		NC		NC		NC	
1785			min	0	12	0	12	NC		NC		NC		NC	
1786		4	max	0	107	0	107	NC		NC		NC		NC	
1787			min	0	12	0	12	NC		NC		NC		NC	
1788		5	max	0	107	0	107	NC		NC		NC		NC	
1789			min	0	12	0	12	NC		NC		NC		NC	
1790	M658	1	max	0	107	0	107	NC		NC		NC		NC	
1791			min	0	12	0	12	NC		NC		NC		NC	
1792		2	max	0	107	0	107	NC		NC		NC		NC	
1793			min	0	12	0	12	NC		NC		NC		NC	
1794		3	max	0	107	0	107	NC		NC		NC		NC	
1795			min	0	12	0	12	NC		NC		NC		NC	
1796		4	max	0	107	0	107	NC		NC		NC		NC	
1797			min	0	12	0	12	NC		NC		NC		NC	
1798		5	max	0	107	0	107	NC		NC		NC		NC	
1799			min	0	12	0	12	NC		NC		NC		NC	
1800	M659	1	max	0	107	0	107	NC		NC		NC		NC	
1801			min	0	12	0	12	NC		NC		NC		NC	
1802		2	max	0	107	0	107	NC		NC		NC		NC	
1803			min	0	12	0	12	NC		NC		NC		NC	
1804		3	max	0	107	0	107	NC		NC		NC		NC	
1805			min	0	12	0	12	NC		NC		NC		NC	
1806		4	max	0	107	0	107	NC		NC		NC		NC	
1807			min	0	12	0	12	NC		NC		NC		NC	
1808		5	max	0	107	0	107	NC		NC		NC		NC	
1809			min	0	12	0	12	NC		NC		NC		NC	
1810	M660	1	max	0	107	0	107	NC		NC		NC		NC	
1811			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1812		2	max	0	107	0	107	NC		NC		NC		NC	
1813			min	0	12	0	12	NC		NC		NC		NC	
1814		3	max	0	107	0	107	NC		NC		NC		NC	
1815			min	0	12	0	12	NC		NC		NC		NC	
1816		4	max	0	107	0	107	NC		NC		NC		NC	
1817			min	0	12	0	12	NC		NC		NC		NC	
1818		5	max	0	107	0	107	NC		NC		NC		NC	
1819			min	0	12	0	12	NC		NC		NC		NC	
1820	M407	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1821			min	0	12	0	12	0	12	0	12	0	12	0	12
1822		2	max	0	42	0.001	42	0	107	0	42	0.002	42	0.002	42
1823			min	0	44	-0.001	44	0	12	0	44	-0.001	44	-0.001	44
1824		3	max	0	42	0.001	42	0	107	0	42	0	107	0	107
1825			min	0	44	-0.001	44	0	12	0	44	0	12	0	12
1826		4	max	0	42	0.001	42	0	107	0	42	0.001	44	0.001	44
1827			min	0	44	-0.001	44	0	12	0	44	-0.002	42	-0.002	42
1828		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1829			min	0	12	0	12	0	12	0	12	0	12	0	12
1830	M408	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1831			min	0	12	0	12	0	12	0	12	0	12	0	12
1832		2	max	0	106	0.001	106	0	107	0	106	0.001	106	0.001	106
1833			min	0	40	-0.001	40	0	12	0	40	-0.002	40	-0.002	40
1834		3	max	0	106	0.001	106	0	107	0	106	0	107	0	107
1835			min	0	40	-0.001	40	0	12	0	40	0	12	0	12
1836		4	max	0	106	0.001	106	0	107	0	106	0.002	100	0.002	100
1837			min	0	40	-0.001	40	0	12	0	40	-0.001	46	-0.001	46
1838		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1839			min	0	12	0	12	0	12	0	12	0	12	0	12
1840	M417	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1841			min	0	12	0	12	0	12	0	12	0	12	0	12
1842		2	max	0	100	0.001	100	0	107	0	100	0.002	100	0.002	100
1843			min	0	46	-0.001	46	0	12	0	46	-0.001	46	-0.001	46
1844		3	max	0	100	0.001	100	0	107	0	100	0	107	0	107
1845			min	0	46	-0.001	46	0	12	0	46	0	12	0	12
1846		4	max	0	100	0.001	100	0	107	0	100	0.001	106	0.001	106
1847			min	0	46	-0.001	46	0	12	0	46	-0.002	40	-0.002	40
1848		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1849			min	0	12	0	12	0	12	0	12	0	12	0	12
1850	M418	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1851			min	0	12	0	12	0	12	0	12	0	12	0	12
1852		2	max	0	44	0.001	44	0	107	0	44	0.001	44	0.001	44
1853			min	0	42	-0.001	42	0	12	0	42	-0.002	42	-0.002	42
1854		3	max	0	44	0.001	44	0	107	0	44	0	107	0	107
1855			min	0	42	-0.001	42	0	12	0	42	0	12	0	12
1856		4	max	0	44	0.001	44	0	107	0	44	0.002	42	0.002	42
1857			min	0	42	-0.001	42	0	12	0	42	-0.001	44	-0.001	44
1858		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1859			min	0	12	0	12	0	12	0	12	0	12	0	12
1860	M419	1	max	0	101	0	101	NC		NC		NC		NC	
1861			min	0	43	0	43	NC		NC		NC		NC	
1862		2	max	0	101	0	101	NC		NC		NC		NC	
1863			min	0	43	0	43	NC		NC		NC		NC	
1864		3	max	0	101	0	101	NC		NC		NC		NC	
1865			min	0	43	0	43	NC		NC		NC		NC	
1866		4	max	0	101	0	101	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1867			min	0	43	0	43	NC		NC		NC		NC	
1868		5	max	0	101	0	101	NC		NC		NC		NC	
1869			min	0	43	0	43	NC		NC		NC		NC	
1870	M420	1	max	0	42	0	107	0	107	0	42	0.006	42	0.006	42
1871			min	0	40	0	12	0	12	0	40	-0.006	40	-0.006	40
1872		2	max	0	42	0.001	42	0	107	0	42	0.003	42	0.003	42
1873			min	0	40	-0.001	40	0	12	0	40	-0.003	40	-0.003	40
1874		3	max	0	42	0.002	42	0	107	0	42	0	107	0	107
1875			min	0	40	-0.002	40	0	12	0	40	0	12	0	12
1876		4	max	0	42	0.001	42	0	107	0	42	0.003	100	0.003	100
1877			min	0	40	-0.001	40	0	12	0	40	-0.003	42	-0.003	42
1878		5	max	0	42	0	107	0	107	0	42	0.006	100	0.006	100
1879			min	0	40	0	12	0	12	0	40	-0.006	42	-0.006	42
1880	M421	1	max	0	103	0	103	NC		NC		NC		NC	
1881			min	0	41	0	41	NC		NC		NC		NC	
1882		2	max	0	103	0	103	NC		NC		NC		NC	
1883			min	0	41	0	41	NC		NC		NC		NC	
1884		3	max	0	103	0	103	NC		NC		NC		NC	
1885			min	0	41	0	41	NC		NC		NC		NC	
1886		4	max	0	103	0	103	NC		NC		NC		NC	
1887			min	0	41	0	41	NC		NC		NC		NC	
1888		5	max	0	103	0	103	NC		NC		NC		NC	
1889			min	0	41	0	41	NC		NC		NC		NC	
1890	M422	1	max	0	100	0	107	0	107	0	100	0.006	100	0.006	100
1891			min	0	42	0	12	0	12	0	42	-0.006	42	-0.006	42
1892		2	max	0	100	0.001	100	0	107	0	100	0.003	100	0.003	100
1893			min	0	42	-0.001	42	0	12	0	42	-0.003	42	-0.003	42
1894		3	max	0	100	0.002	100	0	107	0	100	0	107	0	107
1895			min	0	42	-0.002	42	0	12	0	42	0	12	0	12
1896		4	max	0	100	0.001	100	0	107	0	100	0.003	42	0.003	42
1897			min	0	42	-0.001	42	0	12	0	42	-0.003	40	-0.003	40
1898		5	max	0	100	0	107	0	107	0	100	0.006	42	0.006	42
1899			min	0	42	0	12	0	12	0	42	-0.006	40	-0.006	40
1900	M423	1	max	0	42	0.026	42	NC		NC		NC		NC	
1901			min	0	44	-0.02	44	NC		NC		NC		NC	
1902		2	max	0	42	0.026	42	NC		NC		NC		NC	
1903			min	0	44	-0.02	44	NC		NC		NC		NC	
1904		3	max	0	42	0.026	42	NC		NC		NC		NC	
1905			min	0	44	-0.02	44	NC		NC		NC		NC	
1906		4	max	0	42	0.026	42	NC		NC		NC		NC	
1907			min	0	44	-0.02	44	NC		NC		NC		NC	
1908		5	max	0	42	0.026	42	NC		NC		NC		NC	
1909			min	0	44	-0.02	44	NC		NC		NC		NC	
1910	M424	1	max	0	44	0.02	44	NC		NC		NC		NC	
1911			min	0	42	-0.026	42	NC		NC		NC		NC	
1912		2	max	0	44	0.02	44	NC		NC		NC		NC	
1913			min	0	42	-0.026	42	NC		NC		NC		NC	
1914		3	max	0	44	0.02	44	NC		NC		NC		NC	
1915			min	0	42	-0.026	42	NC		NC		NC		NC	
1916		4	max	0	44	0.02	44	NC		NC		NC		NC	
1917			min	0	42	-0.026	42	NC		NC		NC		NC	
1918		5	max	0	44	0.02	44	NC		NC		NC		NC	
1919			min	0	42	-0.026	42	NC		NC		NC		NC	
1920	M425	1	max	0	106	0.02	106	NC		NC		NC		NC	
1921			min	0	40	-0.026	40	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1922		2	max	0	106	0.02	106	NC		NC		NC		NC	
1923			min	0	40	-0.026	40	NC		NC		NC		NC	
1924		3	max	0	106	0.02	106	NC		NC		NC		NC	
1925			min	0	40	-0.026	40	NC		NC		NC		NC	
1926		4	max	0	106	0.02	106	NC		NC		NC		NC	
1927			min	0	40	-0.026	40	NC		NC		NC		NC	
1928		5	max	0	106	0.02	106	NC		NC		NC		NC	
1929			min	0	40	-0.026	40	NC		NC		NC		NC	
1930	M426	1	max	0	100	0.026	100	NC		NC		NC		NC	
1931			min	0	46	-0.02	46	NC		NC		NC		NC	
1932		2	max	0	100	0.026	100	NC		NC		NC		NC	
1933			min	0	46	-0.02	46	NC		NC		NC		NC	
1934		3	max	0	100	0.026	100	NC		NC		NC		NC	
1935			min	0	46	-0.02	46	NC		NC		NC		NC	
1936		4	max	0	100	0.026	100	NC		NC		NC		NC	
1937			min	0	46	-0.02	46	NC		NC		NC		NC	
1938		5	max	0	100	0.026	100	NC		NC		NC		NC	
1939			min	0	46	-0.02	46	NC		NC		NC		NC	
1940	M427	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1941			min	0	12	0	12	0	12	0	12	0	12	0	12
1942		2	max	0.001	107	0.004	107	0	107	0.001	107	0.009	107	0.009	107
1943			min	-0.001	41	-0.005	41	0	12	-0.001	41	-0.01	41	-0.01	41
1944		3	max	0.001	107	0.006	107	0	107	0.001	107	0	107	0	107
1945			min	-0.001	41	-0.006	41	0	12	-0.001	41	0	12	0	12
1946		4	max	0.001	107	0.004	107	0	107	0.001	107	0.01	101	0.01	101
1947			min	-0.001	41	-0.005	41	0	12	-0.001	41	-0.009	77	-0.009	77
1948		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1949			min	0	12	0	12	0	12	0	12	0	12	0	12
1950	M428	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1951			min	0	12	0	12	0	12	0	12	0	12	0	12
1952		2	max	0.001	101	0.005	101	0	107	0.001	101	0.01	101	0.01	101
1953			min	-0.001	77	-0.004	77	0	12	-0.001	77	-0.009	77	-0.009	77
1954		3	max	0.001	101	0.006	101	0	107	0.001	101	0	107	0	107
1955			min	-0.001	77	-0.006	77	0	12	-0.001	77	0	12	0	12
1956		4	max	0.001	101	0.005	101	0	107	0.001	101	0.009	107	0.009	107
1957			min	-0.001	77	-0.004	77	0	12	-0.001	77	-0.01	41	-0.01	41
1958		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1959			min	0	12	0	12	0	12	0	12	0	12	0	12
1960	M429	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1961			min	0	12	0	12	0	12	0	12	0	12	0	12
1962		2	max	0.001	75	0.004	75	0	107	0.001	75	0.009	75	0.009	75
1963			min	-0.001	73	-0.005	73	0	12	-0.001	73	-0.01	73	-0.01	73
1964		3	max	0.001	75	0.006	75	0	107	0.001	75	0	107	0	107
1965			min	-0.001	73	-0.006	73	0	12	-0.001	73	0	12	0	12
1966		4	max	0.001	75	0.004	75	0	107	0.001	75	0.01	73	0.01	73
1967			min	-0.001	73	-0.005	73	0	12	-0.001	73	-0.009	75	-0.009	75
1968		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1969			min	0	12	0	12	0	12	0	12	0	12	0	12
1970	M430	1	max	0	107	0	107	0	107	0	107	0	107	0	107
1971			min	0	12	0	12	0	12	0	12	0	12	0	12
1972		2	max	0.001	73	0.005	73	0	107	0.001	73	0.01	73	0.01	73
1973			min	-0.001	75	-0.004	75	0	12	-0.001	75	-0.009	75	-0.009	75
1974		3	max	0.001	73	0.006	73	0	107	0.001	73	0	107	0	107
1975			min	-0.001	75	-0.006	75	0	12	-0.001	75	0	12	0	12
1976		4	max	0.001	73	0.005	73	0	107	0.001	73	0.009	75	0.009	75

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
1977			min	-0.001	75	-0.004	75	0	12	-0.001	75	-0.01	73	-0.01	73
1978		5	max	0	107	0	107	0	107	0	107	0	107	0	107
1979			min	0	12	0	12	0	12	0	12	0	12	0	12
1980	M431	1	max	0	101	0	107	0	107	0	101	0.003	101	0.003	101
1981			min	0	73	0	12	0	12	0	73	-0.003	73	-0.003	73
1982		2	max	0	101	0.001	101	0	107	0	101	0.001	101	0.001	101
1983			min	0	73	-0.001	73	0	12	0	73	-0.001	73	-0.001	73
1984		3	max	0	101	0.001	101	0	107	0	101	0	107	0	107
1985			min	0	73	-0.001	73	0	12	0	73	0	12	0	12
1986		4	max	0	101	0.001	101	0	107	0	101	0.001	73	0.001	73
1987			min	0	73	-0.001	73	0	12	0	73	-0.001	41	-0.001	41
1988		5	max	0	101	0	107	0	107	0	101	0.003	73	0.003	73
1989			min	0	73	0	12	0	12	0	73	-0.003	41	-0.003	41
1990	M432	1	max	0	42	0	42	NC		NC		NC		NC	
1991			min	0	40	0	40	NC		NC		NC		NC	
1992		2	max	0	42	0	42	NC		NC		NC		NC	
1993			min	0	40	0	40	NC		NC		NC		NC	
1994		3	max	0	42	0	42	NC		NC		NC		NC	
1995			min	0	40	0	40	NC		NC		NC		NC	
1996		4	max	0	42	0	42	NC		NC		NC		NC	
1997			min	0	40	0	40	NC		NC		NC		NC	
1998		5	max	0	42	0	42	NC		NC		NC		NC	
1999			min	0	40	0	40	NC		NC		NC		NC	
2000	M433	1	max	0	73	0	107	0	107	0	73	0.003	73	0.003	73
2001			min	0	41	0	12	0	12	0	41	-0.003	41	-0.003	41
2002		2	max	0	73	0.001	73	0	107	0	73	0.001	73	0.001	73
2003			min	0	41	-0.001	41	0	12	0	41	-0.001	41	-0.001	41
2004		3	max	0	73	0.001	73	0	107	0	73	0	107	0	107
2005			min	0	41	-0.001	41	0	12	0	41	0	12	0	12
2006		4	max	0	73	0.001	73	0	107	0	73	0.001	101	0.001	101
2007			min	0	41	-0.001	41	0	12	0	41	-0.001	73	-0.001	73
2008		5	max	0	73	0	107	0	107	0	73	0.003	101	0.003	101
2009			min	0	41	0	12	0	12	0	41	-0.003	73	-0.003	73
2010	M434	1	max	0	100	0	100	NC		NC		NC		NC	
2011			min	0	42	0	42	NC		NC		NC		NC	
2012		2	max	0	100	0	100	NC		NC		NC		NC	
2013			min	0	42	0	42	NC		NC		NC		NC	
2014		3	max	0	100	0	100	NC		NC		NC		NC	
2015			min	0	42	0	42	NC		NC		NC		NC	
2016		4	max	0	100	0	100	NC		NC		NC		NC	
2017			min	0	42	0	42	NC		NC		NC		NC	
2018		5	max	0	100	0	100	NC		NC		NC		NC	
2019			min	0	42	0	42	NC		NC		NC		NC	
2020	M439	1	max	0.512	107	0	107	0	107	0.471	107	11.064	107	11.064	107
2021			min	-0.512	41	0	12	0	12	-0.471	41	-11.065	41	-11.065	41
2022		2	max	0.512	107	2.761	107	0	107	0.288	107	4.512	107	4.512	107
2023			min	-0.512	41	-2.761	41	0	12	-0.288	41	-4.513	41	-4.513	41
2024		3	max	0.511	107	3.553	107	0	107	0.234	107	0	107	0	107
2025			min	-0.511	41	-3.553	41	0	12	-0.234	41	0	12	0	12
2026		4	max	0.298	107	1.606	107	0	107	0.168	107	2.625	101	2.625	101
2027			min	-0.298	41	-1.606	41	0	12	-0.168	41	-2.625	77	-2.625	77
2028		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2029			min	0	12	0	12	0	12	0	12	0	12	0	12
2030	M440	1	max	0	107	0	107	NC		NC		NC		NC	
2031			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2032		2	max	0	107	0	107	NC		NC		NC		NC	
2033			min	0	12	0	12	NC		NC		NC		NC	
2034		3	max	0	107	0	107	NC		NC		NC		NC	
2035			min	0	12	0	12	NC		NC		NC		NC	
2036		4	max	0	107	0	107	NC		NC		NC		NC	
2037			min	0	12	0	12	NC		NC		NC		NC	
2038		5	max	0	107	0	107	NC		NC		NC		NC	
2039			min	0	12	0	12	NC		NC		NC		NC	
2040	M441	1	max	0	107	0	107	NC		NC		NC		NC	
2041			min	0	12	0	12	NC		NC		NC		NC	
2042		2	max	0	107	0	107	NC		NC		NC		NC	
2043			min	0	12	0	12	NC		NC		NC		NC	
2044		3	max	0	107	0	107	NC		NC		NC		NC	
2045			min	0	12	0	12	NC		NC		NC		NC	
2046		4	max	0	107	0	107	NC		NC		NC		NC	
2047			min	0	12	0	12	NC		NC		NC		NC	
2048		5	max	0	107	0	107	NC		NC		NC		NC	
2049			min	0	12	0	12	NC		NC		NC		NC	
2050	M442	1	max	0	107	0	107	NC		NC		NC		NC	
2051			min	0	12	0	12	NC		NC		NC		NC	
2052		2	max	0	107	0	107	NC		NC		NC		NC	
2053			min	0	12	0	12	NC		NC		NC		NC	
2054		3	max	0	107	0	107	NC		NC		NC		NC	
2055			min	0	12	0	12	NC		NC		NC		NC	
2056		4	max	0	107	0	107	NC		NC		NC		NC	
2057			min	0	12	0	12	NC		NC		NC		NC	
2058		5	max	0	107	0	107	NC		NC		NC		NC	
2059			min	0	12	0	12	NC		NC		NC		NC	
2060	M443	1	max	0.512	103	0	107	0	107	0.471	103	11.065	103	11.065	103
2061			min	-0.512	45	0	12	0	12	-0.471	45	-11.064	45	-11.064	45
2062		2	max	0.512	103	2.761	103	0	107	0.288	103	4.513	103	4.513	103
2063			min	-0.512	45	-2.761	45	0	12	-0.288	45	-4.512	45	-4.512	45
2064		3	max	0.511	103	3.553	103	0	107	0.234	103	0	107	0	107
2065			min	-0.511	45	-3.553	45	0	12	-0.234	45	0	12	0	12
2066		4	max	0.298	103	1.606	103	0	107	0.168	103	2.625	105	2.625	105
2067			min	-0.298	45	-1.606	45	0	12	-0.168	45	-2.625	43	-2.625	43
2068		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2069			min	0	12	0	12	0	12	0	12	0	12	0	12
2070	M444	1	max	0	107	0	107	NC		NC		NC		NC	
2071			min	0	12	0	12	NC		NC		NC		NC	
2072		2	max	0	107	0	107	NC		NC		NC		NC	
2073			min	0	12	0	12	NC		NC		NC		NC	
2074		3	max	0	107	0	107	NC		NC		NC		NC	
2075			min	0	12	0	12	NC		NC		NC		NC	
2076		4	max	0	107	0	107	NC		NC		NC		NC	
2077			min	0	12	0	12	NC		NC		NC		NC	
2078		5	max	0	107	0	107	NC		NC		NC		NC	
2079			min	0	12	0	12	NC		NC		NC		NC	
2080	M445	1	max	0	107	0	107	NC		NC		NC		NC	
2081			min	0	12	0	12	NC		NC		NC		NC	
2082		2	max	0	107	0	107	NC		NC		NC		NC	
2083			min	0	12	0	12	NC		NC		NC		NC	
2084		3	max	0	107	0	107	NC		NC		NC		NC	
2085			min	0	12	0	12	NC		NC		NC		NC	
2086		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2087			min	0	12	0	12	NC		NC		NC		NC	
2088		5	max	0	107	0	107	NC		NC		NC		NC	
2089			min	0	12	0	12	NC		NC		NC		NC	
2090	M446	1	max	0	107	0	107	NC		NC		NC		NC	
2091			min	0	12	0	12	NC		NC		NC		NC	
2092		2	max	0	107	0	107	NC		NC		NC		NC	
2093			min	0	12	0	12	NC		NC		NC		NC	
2094		3	max	0	107	0	107	NC		NC		NC		NC	
2095			min	0	12	0	12	NC		NC		NC		NC	
2096		4	max	0	107	0	107	NC		NC		NC		NC	
2097			min	0	12	0	12	NC		NC		NC		NC	
2098		5	max	0	107	0	107	NC		NC		NC		NC	
2099			min	0	12	0	12	NC		NC		NC		NC	
2100	M447	1	max	0.003	103	0.242	73	NC		NC		NC		NC	
2101			min	-0.002	45	-0.237	45	NC		NC		NC		NC	
2102		2	max	0.003	103	0.242	73	NC		NC		NC		NC	
2103			min	-0.002	45	-0.237	45	NC		NC		NC		NC	
2104		3	max	0.003	103	0.242	73	NC		NC		NC		NC	
2105			min	-0.002	45	-0.237	45	NC		NC		NC		NC	
2106		4	max	0.003	103	0.242	73	NC		NC		NC		NC	
2107			min	-0.002	45	-0.237	45	NC		NC		NC		NC	
2108		5	max	0.003	103	0.242	73	NC		NC		NC		NC	
2109			min	-0.002	45	-0.237	45	NC		NC		NC		NC	
2110	M448	1	max	0.002	47	0.237	47	NC		NC		NC		NC	
2111			min	-0.003	41	-0.242	41	NC		NC		NC		NC	
2112		2	max	0.002	47	0.237	47	NC		NC		NC		NC	
2113			min	-0.003	41	-0.242	41	NC		NC		NC		NC	
2114		3	max	0.002	47	0.237	47	NC		NC		NC		NC	
2115			min	-0.003	41	-0.242	41	NC		NC		NC		NC	
2116		4	max	0.002	47	0.237	47	NC		NC		NC		NC	
2117			min	-0.003	41	-0.242	41	NC		NC		NC		NC	
2118		5	max	0.002	47	0.237	47	NC		NC		NC		NC	
2119			min	-0.003	41	-0.242	41	NC		NC		NC		NC	
2120	M449	1	max	0.479	47	0	107	0	107	0.441	47	10.346	47	10.346	47
2121			min	-0.479	41	0	12	0	12	-0.441	41	-10.348	41	-10.348	41
2122		2	max	0.479	47	2.582	47	0	107	0.269	47	4.22	107	4.22	107
2123			min	-0.479	41	-2.582	41	0	12	-0.269	41	-4.22	41	-4.22	41
2124		3	max	0.477	107	3.315	107	0	107	0.219	107	0	107	0	107
2125			min	-0.477	41	-3.315	41	0	12	-0.219	41	0	12	0	12
2126		4	max	0.277	107	1.494	107	0	107	0.156	107	2.443	101	2.443	101
2127			min	-0.277	41	-1.495	41	0	12	-0.156	41	-2.443	47	-2.443	47
2128		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2129			min	0	12	0	12	0	12	0	12	0	12	0	12
2130	M450	1	max	0	107	0	107	NC		NC		NC		NC	
2131			min	0	12	0	12	NC		NC		NC		NC	
2132		2	max	0	107	0	107	NC		NC		NC		NC	
2133			min	0	12	0	12	NC		NC		NC		NC	
2134		3	max	0	107	0	107	NC		NC		NC		NC	
2135			min	0	12	0	12	NC		NC		NC		NC	
2136		4	max	0	107	0	107	NC		NC		NC		NC	
2137			min	0	12	0	12	NC		NC		NC		NC	
2138		5	max	0	107	0	107	NC		NC		NC		NC	
2139			min	0	12	0	12	NC		NC		NC		NC	
2140	M451	1	max	0	107	0	107	NC		NC		NC		NC	
2141			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2142		2	max	0	107	0	107	NC		NC		NC		NC	
2143			min	0	12	0	12	NC		NC		NC		NC	
2144		3	max	0	107	0	107	NC		NC		NC		NC	
2145			min	0	12	0	12	NC		NC		NC		NC	
2146		4	max	0	107	0	107	NC		NC		NC		NC	
2147			min	0	12	0	12	NC		NC		NC		NC	
2148		5	max	0	107	0	107	NC		NC		NC		NC	
2149			min	0	12	0	12	NC		NC		NC		NC	
2150	M452	1	max	0	107	0	107	NC		NC		NC		NC	
2151			min	0	12	0	12	NC		NC		NC		NC	
2152		2	max	0	107	0	107	NC		NC		NC		NC	
2153			min	0	12	0	12	NC		NC		NC		NC	
2154		3	max	0	107	0	107	NC		NC		NC		NC	
2155			min	0	12	0	12	NC		NC		NC		NC	
2156		4	max	0	107	0	107	NC		NC		NC		NC	
2157			min	0	12	0	12	NC		NC		NC		NC	
2158		5	max	0	107	0	107	NC		NC		NC		NC	
2159			min	0	12	0	12	NC		NC		NC		NC	
2160	M453	1	max	0.479	103	0	107	0	107	0.441	103	10.348	103	10.348	103
2161			min	-0.479	45	0	12	0	12	-0.441	45	-10.346	45	-10.346	45
2162		2	max	0.479	103	2.582	103	0	107	0.269	103	4.22	103	4.22	103
2163			min	-0.479	45	-2.582	45	0	12	-0.269	45	-4.22	45	-4.22	45
2164		3	max	0.477	103	3.315	103	0	107	0.219	103	0	107	0	107
2165			min	-0.477	75	-3.315	75	0	12	-0.219	75	0	12	0	12
2166		4	max	0.277	103	1.495	103	0	107	0.156	103	2.443	105	2.443	105
2167			min	-0.277	45	-1.494	45	0	12	-0.156	45	-2.443	43	-2.443	43
2168		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2169			min	0	12	0	12	0	12	0	12	0	12	0	12
2170	M454	1	max	0	107	0	107	NC		NC		NC		NC	
2171			min	0	12	0	12	NC		NC		NC		NC	
2172		2	max	0	107	0	107	NC		NC		NC		NC	
2173			min	0	12	0	12	NC		NC		NC		NC	
2174		3	max	0	107	0	107	NC		NC		NC		NC	
2175			min	0	12	0	12	NC		NC		NC		NC	
2176		4	max	0	107	0	107	NC		NC		NC		NC	
2177			min	0	12	0	12	NC		NC		NC		NC	
2178		5	max	0	107	0	107	NC		NC		NC		NC	
2179			min	0	12	0	12	NC		NC		NC		NC	
2180	M455	1	max	0	107	0	107	NC		NC		NC		NC	
2181			min	0	12	0	12	NC		NC		NC		NC	
2182		2	max	0	107	0	107	NC		NC		NC		NC	
2183			min	0	12	0	12	NC		NC		NC		NC	
2184		3	max	0	107	0	107	NC		NC		NC		NC	
2185			min	0	12	0	12	NC		NC		NC		NC	
2186		4	max	0	107	0	107	NC		NC		NC		NC	
2187			min	0	12	0	12	NC		NC		NC		NC	
2188		5	max	0	107	0	107	NC		NC		NC		NC	
2189			min	0	12	0	12	NC		NC		NC		NC	
2190	M456	1	max	0	107	0	107	NC		NC		NC		NC	
2191			min	0	12	0	12	NC		NC		NC		NC	
2192		2	max	0	107	0	107	NC		NC		NC		NC	
2193			min	0	12	0	12	NC		NC		NC		NC	
2194		3	max	0	107	0	107	NC		NC		NC		NC	
2195			min	0	12	0	12	NC		NC		NC		NC	
2196		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2197			min	0	12	0	12	NC		NC		NC		NC	
2198		5	max	0	107	0	107	NC		NC		NC		NC	
2199			min	0	12	0	12	NC		NC		NC		NC	
2200	M457	1	max	0.004	73	0.35	73	NC		NC		NC		NC	
2201			min	-0.004	45	-0.345	45	NC		NC		NC		NC	
2202		2	max	0.004	73	0.35	73	NC		NC		NC		NC	
2203			min	-0.004	45	-0.345	45	NC		NC		NC		NC	
2204		3	max	0.004	73	0.35	73	NC		NC		NC		NC	
2205			min	-0.004	45	-0.345	45	NC		NC		NC		NC	
2206		4	max	0.004	73	0.35	73	NC		NC		NC		NC	
2207			min	-0.004	45	-0.345	45	NC		NC		NC		NC	
2208		5	max	0.004	73	0.35	73	NC		NC		NC		NC	
2209			min	-0.004	45	-0.345	45	NC		NC		NC		NC	
2210	M458	1	max	0.004	47	0.345	47	NC		NC		NC		NC	
2211			min	-0.004	41	-0.35	41	NC		NC		NC		NC	
2212		2	max	0.004	47	0.345	47	NC		NC		NC		NC	
2213			min	-0.004	41	-0.35	41	NC		NC		NC		NC	
2214		3	max	0.004	47	0.345	47	NC		NC		NC		NC	
2215			min	-0.004	41	-0.35	41	NC		NC		NC		NC	
2216		4	max	0.004	47	0.345	47	NC		NC		NC		NC	
2217			min	-0.004	41	-0.35	41	NC		NC		NC		NC	
2218		5	max	0.004	47	0.345	47	NC		NC		NC		NC	
2219			min	-0.004	41	-0.35	41	NC		NC		NC		NC	
2220	M463	1	max	0	107	0	107	NC		NC		NC		NC	
2221			min	0	12	0	12	NC		NC		NC		NC	
2222		2	max	0	107	0	107	NC		NC		NC		NC	
2223			min	0	12	0	12	NC		NC		NC		NC	
2224		3	max	0	107	0	107	NC		NC		NC		NC	
2225			min	0	12	0	12	NC		NC		NC		NC	
2226		4	max	0	107	0	107	NC		NC		NC		NC	
2227			min	0	12	0	12	NC		NC		NC		NC	
2228		5	max	0	107	0	107	NC		NC		NC		NC	
2229			min	0	12	0	12	NC		NC		NC		NC	
2230	M464	1	max	0	107	0	107	NC		NC		NC		NC	
2231			min	0	12	0	12	NC		NC		NC		NC	
2232		2	max	0	107	0	107	NC		NC		NC		NC	
2233			min	0	12	0	12	NC		NC		NC		NC	
2234		3	max	0	107	0	107	NC		NC		NC		NC	
2235			min	0	12	0	12	NC		NC		NC		NC	
2236		4	max	0	107	0	107	NC		NC		NC		NC	
2237			min	0	12	0	12	NC		NC		NC		NC	
2238		5	max	0	107	0	107	NC		NC		NC		NC	
2239			min	0	12	0	12	NC		NC		NC		NC	
2240	M465	1	max	0	107	0	107	NC		NC		NC		NC	
2241			min	0	12	0	12	NC		NC		NC		NC	
2242		2	max	0	107	0	107	NC		NC		NC		NC	
2243			min	0	12	0	12	NC		NC		NC		NC	
2244		3	max	0	107	0	107	NC		NC		NC		NC	
2245			min	0	12	0	12	NC		NC		NC		NC	
2246		4	max	0	107	0	107	NC		NC		NC		NC	
2247			min	0	12	0	12	NC		NC		NC		NC	
2248		5	max	0	107	0	107	NC		NC		NC		NC	
2249			min	0	12	0	12	NC		NC		NC		NC	
2250	M466	1	max	0	107	0	107	NC		NC		NC		NC	
2251			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2252		2	max	0	107	0	107	NC		NC		NC		NC	
2253			min	0	12	0	12	NC		NC		NC		NC	
2254		3	max	0	107	0	107	NC		NC		NC		NC	
2255			min	0	12	0	12	NC		NC		NC		NC	
2256		4	max	0	107	0	107	NC		NC		NC		NC	
2257			min	0	12	0	12	NC		NC		NC		NC	
2258		5	max	0	107	0	107	NC		NC		NC		NC	
2259			min	0	12	0	12	NC		NC		NC		NC	
2260	M467	1	max	0	107	0	107	NC		NC		NC		NC	
2261			min	0	12	0	12	NC		NC		NC		NC	
2262		2	max	0	107	0	107	NC		NC		NC		NC	
2263			min	0	12	0	12	NC		NC		NC		NC	
2264		3	max	0	107	0	107	NC		NC		NC		NC	
2265			min	0	12	0	12	NC		NC		NC		NC	
2266		4	max	0	107	0	107	NC		NC		NC		NC	
2267			min	0	12	0	12	NC		NC		NC		NC	
2268		5	max	0	107	0	107	NC		NC		NC		NC	
2269			min	0	12	0	12	NC		NC		NC		NC	
2270	M472	1	max	0	107	0	107	NC		NC		NC		NC	
2271			min	0	12	0	12	NC		NC		NC		NC	
2272		2	max	0	107	0	107	NC		NC		NC		NC	
2273			min	0	12	0	12	NC		NC		NC		NC	
2274		3	max	0	107	0	107	NC		NC		NC		NC	
2275			min	0	12	0	12	NC		NC		NC		NC	
2276		4	max	0	107	0	107	NC		NC		NC		NC	
2277			min	0	12	0	12	NC		NC		NC		NC	
2278		5	max	0	107	0	107	NC		NC		NC		NC	
2279			min	0	12	0	12	NC		NC		NC		NC	
2280	M486	1	max	0	107	0	107	NC		NC		NC		NC	
2281			min	0	12	0	12	NC		NC		NC		NC	
2282		2	max	0	107	0	107	NC		NC		NC		NC	
2283			min	0	12	0	12	NC		NC		NC		NC	
2284		3	max	0	107	0	107	NC		NC		NC		NC	
2285			min	0	12	0	12	NC		NC		NC		NC	
2286		4	max	0	107	0	107	NC		NC		NC		NC	
2287			min	0	12	0	12	NC		NC		NC		NC	
2288		5	max	0	107	0	107	NC		NC		NC		NC	
2289			min	0	12	0	12	NC		NC		NC		NC	
2290	M487	1	max	0	107	0	107	NC		NC		NC		NC	
2291			min	0	12	0	12	NC		NC		NC		NC	
2292		2	max	0	107	0	107	NC		NC		NC		NC	
2293			min	0	12	0	12	NC		NC		NC		NC	
2294		3	max	0	107	0	107	NC		NC		NC		NC	
2295			min	0	12	0	12	NC		NC		NC		NC	
2296		4	max	0	107	0	107	NC		NC		NC		NC	
2297			min	0	12	0	12	NC		NC		NC		NC	
2298		5	max	0	107	0	107	NC		NC		NC		NC	
2299			min	0	12	0	12	NC		NC		NC		NC	
2300	M488	1	max	0	107	0	107	NC		NC		NC		NC	
2301			min	0	12	0	12	NC		NC		NC		NC	
2302		2	max	0	107	0	107	NC		NC		NC		NC	
2303			min	0	12	0	12	NC		NC		NC		NC	
2304		3	max	0	107	0	107	NC		NC		NC		NC	
2305			min	0	12	0	12	NC		NC		NC		NC	
2306		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2307			min	0	12	0	12	NC		NC		NC		NC	
2308		5	max	0	107	0	107	NC		NC		NC		NC	
2309			min	0	12	0	12	NC		NC		NC		NC	
2310	M489	1	max	0	107	0	107	NC		NC		NC		NC	
2311			min	0	12	0	12	NC		NC		NC		NC	
2312		2	max	0	107	0	107	NC		NC		NC		NC	
2313			min	0	12	0	12	NC		NC		NC		NC	
2314		3	max	0	107	0	107	NC		NC		NC		NC	
2315			min	0	12	0	12	NC		NC		NC		NC	
2316		4	max	0	107	0	107	NC		NC		NC		NC	
2317			min	0	12	0	12	NC		NC		NC		NC	
2318		5	max	0	107	0	107	NC		NC		NC		NC	
2319			min	0	12	0	12	NC		NC		NC		NC	
2320	M490	1	max	0	107	0	107	NC		NC		NC		NC	
2321			min	0	12	0	12	NC		NC		NC		NC	
2322		2	max	0	107	0	107	NC		NC		NC		NC	
2323			min	0	12	0	12	NC		NC		NC		NC	
2324		3	max	0	107	0	107	NC		NC		NC		NC	
2325			min	0	12	0	12	NC		NC		NC		NC	
2326		4	max	0	107	0	107	NC		NC		NC		NC	
2327			min	0	12	0	12	NC		NC		NC		NC	
2328		5	max	0	107	0	107	NC		NC		NC		NC	
2329			min	0	12	0	12	NC		NC		NC		NC	
2330	M491	1	max	0	107	0	107	NC		NC		NC		NC	
2331			min	0	12	0	12	NC		NC		NC		NC	
2332		2	max	0	107	0	107	NC		NC		NC		NC	
2333			min	0	12	0	12	NC		NC		NC		NC	
2334		3	max	0	107	0	107	NC		NC		NC		NC	
2335			min	0	12	0	12	NC		NC		NC		NC	
2336		4	max	0	107	0	107	NC		NC		NC		NC	
2337			min	0	12	0	12	NC		NC		NC		NC	
2338		5	max	0	107	0	107	NC		NC		NC		NC	
2339			min	0	12	0	12	NC		NC		NC		NC	
2340	M492	1	max	0	107	0	107	NC		NC		NC		NC	
2341			min	0	12	0	12	NC		NC		NC		NC	
2342		2	max	0	107	0	107	NC		NC		NC		NC	
2343			min	0	12	0	12	NC		NC		NC		NC	
2344		3	max	0	107	0	107	NC		NC		NC		NC	
2345			min	0	12	0	12	NC		NC		NC		NC	
2346		4	max	0	107	0	107	NC		NC		NC		NC	
2347			min	0	12	0	12	NC		NC		NC		NC	
2348		5	max	0	107	0	107	NC		NC		NC		NC	
2349			min	0	12	0	12	NC		NC		NC		NC	
2350	M493	1	max	0	107	0	107	NC		NC		NC		NC	
2351			min	0	12	0	12	NC		NC		NC		NC	
2352		2	max	0	107	0	107	NC		NC		NC		NC	
2353			min	0	12	0	12	NC		NC		NC		NC	
2354		3	max	0	107	0	107	NC		NC		NC		NC	
2355			min	0	12	0	12	NC		NC		NC		NC	
2356		4	max	0	107	0	107	NC		NC		NC		NC	
2357			min	0	12	0	12	NC		NC		NC		NC	
2358		5	max	0	107	0	107	NC		NC		NC		NC	
2359			min	0	12	0	12	NC		NC		NC		NC	
2360	M494	1	max	0	107	0	107	NC		NC		NC		NC	
2361			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2362		2	max	0	107	0	107	NC		NC		NC		NC	
2363			min	0	12	0	12	NC		NC		NC		NC	
2364		3	max	0	107	0	107	NC		NC		NC		NC	
2365			min	0	12	0	12	NC		NC		NC		NC	
2366		4	max	0	107	0	107	NC		NC		NC		NC	
2367			min	0	12	0	12	NC		NC		NC		NC	
2368		5	max	0	107	0	107	NC		NC		NC		NC	
2369			min	0	12	0	12	NC		NC		NC		NC	
2370	M495	1	max	0	107	0	107	NC		NC		NC		NC	
2371			min	0	12	0	12	NC		NC		NC		NC	
2372		2	max	0	107	0	107	NC		NC		NC		NC	
2373			min	0	12	0	12	NC		NC		NC		NC	
2374		3	max	0	107	0	107	NC		NC		NC		NC	
2375			min	0	12	0	12	NC		NC		NC		NC	
2376		4	max	0	107	0	107	NC		NC		NC		NC	
2377			min	0	12	0	12	NC		NC		NC		NC	
2378		5	max	0	107	0	107	NC		NC		NC		NC	
2379			min	0	12	0	12	NC		NC		NC		NC	
2380	M496	1	max	0	107	0	107	NC		NC		NC		NC	
2381			min	0	12	0	12	NC		NC		NC		NC	
2382		2	max	0	107	0	107	NC		NC		NC		NC	
2383			min	0	12	0	12	NC		NC		NC		NC	
2384		3	max	0	107	0	107	NC		NC		NC		NC	
2385			min	0	12	0	12	NC		NC		NC		NC	
2386		4	max	0	107	0	107	NC		NC		NC		NC	
2387			min	0	12	0	12	NC		NC		NC		NC	
2388		5	max	0	107	0	107	NC		NC		NC		NC	
2389			min	0	12	0	12	NC		NC		NC		NC	
2390	M499	1	max	0	107	0	107	NC		NC		NC		NC	
2391			min	0	12	0	12	NC		NC		NC		NC	
2392		2	max	0	107	0	107	NC		NC		NC		NC	
2393			min	0	12	0	12	NC		NC		NC		NC	
2394		3	max	0	107	0	107	NC		NC		NC		NC	
2395			min	0	12	0	12	NC		NC		NC		NC	
2396		4	max	0	107	0	107	NC		NC		NC		NC	
2397			min	0	12	0	12	NC		NC		NC		NC	
2398		5	max	0	107	0	107	NC		NC		NC		NC	
2399			min	0	12	0	12	NC		NC		NC		NC	
2400	M500	1	max	0	107	0	107	NC		NC		NC		NC	
2401			min	0	12	0	12	NC		NC		NC		NC	
2402		2	max	0	107	0	107	NC		NC		NC		NC	
2403			min	0	12	0	12	NC		NC		NC		NC	
2404		3	max	0	107	0	107	NC		NC		NC		NC	
2405			min	0	12	0	12	NC		NC		NC		NC	
2406		4	max	0	107	0	107	NC		NC		NC		NC	
2407			min	0	12	0	12	NC		NC		NC		NC	
2408		5	max	0	107	0	107	NC		NC		NC		NC	
2409			min	0	12	0	12	NC		NC		NC		NC	
2410	M501	1	max	0	107	0	107	NC		NC		NC		NC	
2411			min	0	12	0	12	NC		NC		NC		NC	
2412		2	max	0	107	0	107	NC		NC		NC		NC	
2413			min	0	12	0	12	NC		NC		NC		NC	
2414		3	max	0	107	0	107	NC		NC		NC		NC	
2415			min	0	12	0	12	NC		NC		NC		NC	
2416		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2417			min	0	12	0	12	NC		NC		NC		NC	
2418		5	max	0	107	0	107	NC		NC		NC		NC	
2419			min	0	12	0	12	NC		NC		NC		NC	
2420	M502	1	max	0	107	0	107	NC		NC		NC		NC	
2421			min	0	12	0	12	NC		NC		NC		NC	
2422		2	max	0	107	0	107	NC		NC		NC		NC	
2423			min	0	12	0	12	NC		NC		NC		NC	
2424		3	max	0	107	0	107	NC		NC		NC		NC	
2425			min	0	12	0	12	NC		NC		NC		NC	
2426		4	max	0	107	0	107	NC		NC		NC		NC	
2427			min	0	12	0	12	NC		NC		NC		NC	
2428		5	max	0	107	0	107	NC		NC		NC		NC	
2429			min	0	12	0	12	NC		NC		NC		NC	
2430	M503	1	max	0	107	0	107	NC		NC		NC		NC	
2431			min	0	12	0	12	NC		NC		NC		NC	
2432		2	max	0	107	0	107	NC		NC		NC		NC	
2433			min	0	12	0	12	NC		NC		NC		NC	
2434		3	max	0	107	0	107	NC		NC		NC		NC	
2435			min	0	12	0	12	NC		NC		NC		NC	
2436		4	max	0	107	0	107	NC		NC		NC		NC	
2437			min	0	12	0	12	NC		NC		NC		NC	
2438		5	max	0	107	0	107	NC		NC		NC		NC	
2439			min	0	12	0	12	NC		NC		NC		NC	
2440	M504	1	max	0	107	0	107	NC		NC		NC		NC	
2441			min	0	12	0	12	NC		NC		NC		NC	
2442		2	max	0	107	0	107	NC		NC		NC		NC	
2443			min	0	12	0	12	NC		NC		NC		NC	
2444		3	max	0	107	0	107	NC		NC		NC		NC	
2445			min	0	12	0	12	NC		NC		NC		NC	
2446		4	max	0	107	0	107	NC		NC		NC		NC	
2447			min	0	12	0	12	NC		NC		NC		NC	
2448		5	max	0	107	0	107	NC		NC		NC		NC	
2449			min	0	12	0	12	NC		NC		NC		NC	
2450	M505	1	max	0	107	0	107	NC		NC		NC		NC	
2451			min	0	12	0	12	NC		NC		NC		NC	
2452		2	max	0	107	0	107	NC		NC		NC		NC	
2453			min	0	12	0	12	NC		NC		NC		NC	
2454		3	max	0	107	0	107	NC		NC		NC		NC	
2455			min	0	12	0	12	NC		NC		NC		NC	
2456		4	max	0	107	0	107	NC		NC		NC		NC	
2457			min	0	12	0	12	NC		NC		NC		NC	
2458		5	max	0	107	0	107	NC		NC		NC		NC	
2459			min	0	12	0	12	NC		NC		NC		NC	
2460	M391	1	max	0	107	0	107	0	107	0	107	0	107	0	107
2461			min	0	12	0	12	0	12	0	12	0	12	0	12
2462		2	max	0	107	0	107	0	107	0	107	0	107	0	107
2463			min	0	12	0	12	0	12	0	12	0	12	0	12
2464		3	max	0	107	0	107	0	107	0	107	0	107	0	107
2465			min	0	12	0	12	0	12	0	12	0	12	0	12
2466		4	max	0.117	77	0.139	77	0	107	0.056	77	0.667	71	0.667	71
2467			min	-0.148	71	-0.178	71	0	12	-0.072	71	-0.524	77	-0.524	77
2468		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2469			min	0	12	0	12	0	12	0	12	0	12	0	12
2470	M393	1	max	0	107	0	107	0	107	0	107	0	107	0	107
2471			min	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2472		2	max	0	107	0	107	0	107	0	107	0	107	0	107
2473			min	0	12	0	12	0	12	0	12	0	12	0	12
2474		3	max	0	107	0	107	0	107	0	107	0	107	0	107
2475			min	0	12	0	12	0	12	0	12	0	12	0	12
2476		4	max	0.137	71	0.164	71	0	107	0.066	71	0.482	77	0.482	77
2477			min	-0.107	77	-0.128	77	0	12	-0.052	77	-0.617	71	-0.617	71
2478		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2479			min	0	12	0	12	0	12	0	12	0	12	0	12
2480	M395	1	max	0	107	0	107	0	107	0	107	0	107	0	107
2481			min	0	12	0	12	0	12	0	12	0	12	0	12
2482		2	max	0	107	0	107	0	107	0	107	0	107	0	107
2483			min	0	12	0	12	0	12	0	12	0	12	0	12
2484		3	max	0.253	103	0.4	103	0	107	0.116	103	0	107	0	107
2485			min	-0.253	71	-0.4	71	0	12	-0.116	71	0	12	0	12
2486		4	max	0.12	103	0.144	103	0	107	0.058	103	0.635	101	0.635	101
2487			min	-0.141	101	-0.169	101	0	12	-0.068	101	-0.539	103	-0.539	103
2488		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2489			min	0	12	0	12	0	12	0	12	0	12	0	12
2490	M459	1	max	0	107	0	107	0	107	0	107	0	107	0	107
2491			min	0	12	0	12	0	12	0	12	0	12	0	12
2492		2	max	0	107	0	107	0	107	0	107	0	107	0	107
2493			min	0	12	0	12	0	12	0	12	0	12	0	12
2494		3	max	0	107	0	107	0	107	0	107	0	107	0	107
2495			min	0	12	0	12	0	12	0	12	0	12	0	12
2496		4	max	0.099	77	0.119	77	0	107	0.048	77	0.585	71	0.585	71
2497			min	-0.13	71	-0.156	71	0	12	-0.063	71	-0.446	77	-0.446	77
2498		5	max	0	107	0	107	0	107	0	107	0	107	0	107
2499			min	0	12	0	12	0	12	0	12	0	12	0	12
2500	M461	1	max	0	76	0.013	76	NC		NC		NC		NC	
2501			min	0	13	-0.027	13	NC		NC		NC		NC	
2502		2	max	0	76	0.013	76	NC		NC		NC		NC	
2503			min	0	13	-0.027	13	NC		NC		NC		NC	
2504		3	max	0	76	0.013	76	NC		NC		NC		NC	
2505			min	0	13	-0.027	13	NC		NC		NC		NC	
2506		4	max	0	76	0.013	76	NC		NC		NC		NC	
2507			min	0	13	-0.027	13	NC		NC		NC		NC	
2508		5	max	0	76	0.013	76	NC		NC		NC		NC	
2509			min	0	13	-0.027	13	NC		NC		NC		NC	
2510	M462	1	max	0.001	104	0.036	104	NC		NC		NC		NC	
2511			min	-0.072	15	-2.456	15	NC		NC		NC		NC	
2512		2	max	0.019	13	0.647	13	NC		NC		NC		NC	
2513			min	-0.009	76	-0.315	76	NC		NC		NC		NC	
2514		3	max	0.061	13	2.101	13	NC		NC		NC		NC	
2515			min	0.006	107	0.201	107	NC		NC		NC		NC	
2516		4	max	0.03	15	1.043	15	NC		NC		NC		NC	
2517			min	-0.008	104	-0.274	104	NC		NC		NC		NC	
2518		5	max	0.002	76	0.067	76	NC		NC		NC		NC	
2519			min	-0.065	13	-2.227	13	NC		NC		NC		NC	
2520	M470	1	max	0.017	70	0.567	70	NC		NC		NC		NC	
2521			min	-0.013	106	-0.455	106	NC		NC		NC		NC	
2522		2	max	0.019	70	0.665	70	NC		NC		NC		NC	
2523			min	-0.015	106	-0.521	106	NC		NC		NC		NC	
2524		3	max	0.056	13	1.924	13	NC		NC		NC		NC	
2525			min	0.005	107	0.162	107	NC		NC		NC		NC	
2526		4	max	0.015	106	0.529	106	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2527			min	-0.018	70	-0.611	70	NC		NC		NC		NC	
2528		5	max	0.013	106	0.457	106	NC		NC		NC		NC	
2529			min	-0.015	70	-0.528	70	NC		NC		NC		NC	
2530	M474	1	max	0.028	15	1.947	15	NC		NC		NC		NC	
2531			min	0	74	-0.03	74	NC		NC		NC		NC	
2532		2	max	0.028	15	1.947	15	NC		NC		NC		NC	
2533			min	0	74	-0.03	74	NC		NC		NC		NC	
2534		3	max	0.028	15	1.947	15	NC		NC		NC		NC	
2535			min	0	74	-0.03	74	NC		NC		NC		NC	
2536		4	max	0.028	15	1.947	15	NC		NC		NC		NC	
2537			min	0	74	-0.03	74	NC		NC		NC		NC	
2538		5	max	0.028	15	1.947	15	NC		NC		NC		NC	
2539			min	0	74	-0.03	74	NC		NC		NC		NC	
2540	M475	1	max	0.016	13	1.128	13	NC		NC		NC		NC	
2541			min	-0.002	76	-0.139	76	NC		NC		NC		NC	
2542		2	max	0.016	13	1.128	13	NC		NC		NC		NC	
2543			min	-0.002	76	-0.139	76	NC		NC		NC		NC	
2544		3	max	0.016	13	1.128	13	NC		NC		NC		NC	
2545			min	-0.002	76	-0.139	76	NC		NC		NC		NC	
2546		4	max	0.016	13	1.128	13	NC		NC		NC		NC	
2547			min	-0.002	76	-0.139	76	NC		NC		NC		NC	
2548		5	max	0.016	13	1.128	13	NC		NC		NC		NC	
2549			min	-0.002	76	-0.139	76	NC		NC		NC		NC	
2550	M476	1	max	0.017	15	0.597	15	NC		NC		NC		NC	
2551			min	-0.005	74	-0.157	74	NC		NC		NC		NC	
2552		2	max	0.017	15	0.597	15	NC		NC		NC		NC	
2553			min	-0.005	74	-0.157	74	NC		NC		NC		NC	
2554		3	max	0.017	15	0.597	15	NC		NC		NC		NC	
2555			min	-0.005	74	-0.157	74	NC		NC		NC		NC	
2556		4	max	0.017	15	0.597	15	NC		NC		NC		NC	
2557			min	-0.005	74	-0.157	74	NC		NC		NC		NC	
2558		5	max	0.017	15	0.597	15	NC		NC		NC		NC	
2559			min	-0.005	74	-0.157	74	NC		NC		NC		NC	
2560	M477	1	max	0.005	68	0.18	68	NC		NC		NC		NC	
2561			min	-0.015	13	-0.53	13	NC		NC		NC		NC	
2562		2	max	0.006	68	0.215	68	NC		NC		NC		NC	
2563			min	-0.008	92	-0.259	92	NC		NC		NC		NC	
2564		3	max	0.024	15	0.829	15	NC		NC		NC		NC	
2565			min	-0.007	73	-0.236	73	NC		NC		NC		NC	
2566		4	max	0.009	100	0.3	100	NC		NC		NC		NC	
2567			min	-0.005	68	-0.181	68	NC		NC		NC		NC	
2568		5	max	0.006	92	0.222	92	NC		NC		NC		NC	
2569			min	-0.007	68	-0.242	68	NC		NC		NC		NC	
2570	M478	1	max	0.01	98	0.336	98	NC		NC		NC		NC	
2571			min	-0.01	62	-0.357	62	NC		NC		NC		NC	
2572		2	max	0.013	15	0.445	15	NC		NC		NC		NC	
2573			min	-0.004	74	-0.144	74	NC		NC		NC		NC	
2574		3	max	0.021	15	0.706	15	NC		NC		NC		NC	
2575			min	-0.006	73	-0.218	73	NC		NC		NC		NC	
2576		4	max	0.006	74	0.191	74	NC		NC		NC		NC	
2577			min	-0.006	106	-0.194	106	NC		NC		NC		NC	
2578		5	max	0.008	66	0.276	66	NC		NC		NC		NC	
2579			min	-0.021	15	-0.73	15	NC		NC		NC		NC	
2580	M479	1	max	0.062	71	4.268	71	NC		NC		NC		NC	
2581			min	-0.062	103	-4.226	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2582		2	max	0.062	71	4.268	71	NC		NC		NC		NC	
2583			min	-0.062	103	-4.226	103	NC		NC		NC		NC	
2584		3	max	0.009	71	0.636	71	NC		NC		NC		NC	
2585			min	-0.009	103	-0.64	103	NC		NC		NC		NC	
2586		4	max	0.075	103	5.117	103	NC		NC		NC		NC	
2587			min	-0.076	71	-5.172	71	NC		NC		NC		NC	
2588		5	max	0.075	103	5.117	103	NC		NC		NC		NC	
2589			min	-0.076	71	-5.172	71	NC		NC		NC		NC	
2590	M480	1	max	0.062	71	4.266	71	NC		NC		NC		NC	
2591			min	-0.062	103	-4.226	103	NC		NC		NC		NC	
2592		2	max	0.062	71	4.266	71	NC		NC		NC		NC	
2593			min	-0.062	103	-4.226	103	NC		NC		NC		NC	
2594		3	max	0.012	71	0.8	71	NC		NC		NC		NC	
2595			min	-0.011	103	-0.764	103	NC		NC		NC		NC	
2596		4	max	0.069	103	4.757	103	NC		NC		NC		NC	
2597			min	-0.069	71	-4.724	71	NC		NC		NC		NC	
2598		5	max	0.069	103	4.757	103	NC		NC		NC		NC	
2599			min	-0.069	71	-4.724	71	NC		NC		NC		NC	
2600	M481	1	max	0.108	71	0	107	0	107	0.218	71	3.808	71	3.808	71
2601			min	-0.089	77	0	12	0	12	-0.18	77	-3.144	77	-3.144	77
2602		2	max	0.108	71	0.43	71	0	107	0.19	71	2.106	71	2.106	71
2603			min	-0.089	77	-0.355	77	0	12	-0.157	77	-1.739	77	-1.739	77
2604		3	max	0.02	71	0.113	71	0	107	0.032	71	0.104	71	0.104	71
2605			min	-0.016	107	-0.091	107	0	12	-0.026	107	-0.084	107	-0.084	107
2606		4	max	0.103	77	0.572	77	0	107	0.17	77	0.998	71	0.998	71
2607			min	-0.119	71	-0.658	71	0	12	-0.196	71	-0.868	77	-0.868	77
2608		5	max	0.103	77	0.338	77	0	107	0.186	77	2.706	71	2.706	71
2609			min	-0.119	71	-0.388	71	0	12	-0.214	71	-2.352	77	-2.352	77
2610	M482	1	max	0.103	75	0	107	0	107	0.207	75	3.61	75	3.61	75
2611			min	-0.094	103	0	12	0	12	-0.19	103	-3.314	103	-3.314	103
2612		2	max	0.103	75	0.408	75	0	107	0.18	75	1.996	75	1.996	75
2613			min	-0.094	103	-0.374	103	0	12	-0.165	103	-1.833	103	-1.833	103
2614		3	max	0.017	75	0.096	75	0	107	0.027	75	0.088	75	0.088	75
2615			min	-0.021	103	-0.122	103	0	12	-0.035	103	-0.112	103	-0.112	103
2616		4	max	0.1	107	0.553	107	0	107	0.165	107	1.027	71	1.027	71
2617			min	-0.122	71	-0.677	71	0	12	-0.202	71	-0.839	107	-0.839	107
2618		5	max	0.1	107	0.326	107	0	107	0.18	107	2.784	71	2.784	71
2619			min	-0.122	71	-0.399	71	0	12	-0.22	71	-2.275	107	-2.275	107
2620	M483	1	max	0.06	71	4.114	71	NC		NC		NC		NC	
2621			min	-0.059	103	-4.044	103	NC		NC		NC		NC	
2622		2	max	0.06	71	4.114	71	NC		NC		NC		NC	
2623			min	-0.059	103	-4.044	103	NC		NC		NC		NC	
2624		3	max	0.008	71	0.579	71	NC		NC		NC		NC	
2625			min	-0.008	107	-0.578	107	NC		NC		NC		NC	
2626		4	max	0.072	103	4.95	103	NC		NC		NC		NC	
2627			min	-0.073	71	-5.024	71	NC		NC		NC		NC	
2628		5	max	0.072	103	4.95	103	NC		NC		NC		NC	
2629			min	-0.073	71	-5.024	71	NC		NC		NC		NC	
2630	M484	1	max	0.124	77	3.826	77	NC		NC		NC		NC	
2631			min	-0.124	71	-3.831	71	NC		NC		NC		NC	
2632		2	max	0.062	77	1.911	77	NC		NC		NC		NC	
2633			min	-0.062	101	-1.917	101	NC		NC		NC		NC	
2634		3	max	0	76	-0.001	76	NC		NC		NC		NC	
2635			min	0	15	-0.008	15	NC		NC		NC		NC	
2636		4	max	0.062	75	1.913	75	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2637			min	-0.062	103	-1.92	103	NC		NC		NC		NC	
2638		5	max	0.124	75	3.827	75	NC		NC		NC		NC	
2639			min	-0.124	73	-3.834	73	NC		NC		NC		NC	
2640	M519	1	max	0.118	107	3.63	107	NC		NC		NC		NC	
2641			min	-0.118	71	-3.645	71	NC		NC		NC		NC	
2642		2	max	0.059	107	1.816	107	NC		NC		NC		NC	
2643			min	-0.059	71	-1.83	71	NC		NC		NC		NC	
2644		3	max	0.002	96	0.047	96	NC		NC		NC		NC	
2645			min	-0.002	72	-0.058	72	NC		NC		NC		NC	
2646		4	max	0.058	105	1.804	105	NC		NC		NC		NC	
2647			min	-0.059	73	-1.816	73	NC		NC		NC		NC	
2648		5	max	0.117	105	3.618	105	NC		NC		NC		NC	
2649			min	-0.118	73	-3.631	73	NC		NC		NC		NC	
2650	M520	1	max	0.076	103	0	107	0	107	0.152	103	2.656	103	2.656	103
2651			min	-0.071	101	0	12	0	12	-0.144	101	-2.509	101	-2.509	101
2652		2	max	0.035	103	0.14	103	0	107	0.062	103	0.684	103	0.684	103
2653			min	-0.032	105	-0.129	105	0	12	-0.057	105	-0.629	105	-0.629	105
2654		3	max	0.008	64	0.048	64	0	107	0.014	64	0.044	64	0.044	64
2655			min	-0.006	96	-0.035	96	0	12	-0.01	96	-0.032	96	-0.032	96
2656		4	max	0.037	101	0.204	101	0	107	0.061	101	0.286	107	0.286	107
2657			min	-0.034	107	-0.188	107	0	12	-0.056	107	-0.309	101	-0.309	101
2658		5	max	0.076	101	0.25	101	0	107	0.138	101	1.683	103	1.683	103
2659			min	-0.074	103	-0.241	103	0	12	-0.133	103	-1.744	101	-1.744	101
2660	M521	1	max	0.066	107	0	107	0	107	0.134	107	2.331	107	2.331	107
2661			min	-0.073	101	0	12	0	12	-0.148	101	-2.582	101	-2.582	101
2662		2	max	0.03	107	0.117	107	0	107	0.052	107	0.574	107	0.574	107
2663			min	-0.036	101	-0.144	101	0	12	-0.063	101	-0.703	101	-0.703	101
2664		3	max	0.014	106	0.083	106	0	107	0.023	106	0.076	106	0.076	106
2665			min	-0.019	100	-0.112	100	0	12	-0.032	100	-0.103	100	-0.103	100
2666		4	max	0.034	75	0.189	75	0	107	0.056	75	0.342	73	0.342	73
2667			min	-0.041	73	-0.225	73	0	12	-0.067	73	-0.287	75	-0.287	75
2668		5	max	0.072	105	0.236	105	0	107	0.13	105	1.821	103	1.821	103
2669			min	-0.08	103	-0.261	103	0	12	-0.144	103	-1.645	105	-1.645	105
2670	M522	1	max	0.118	73	3.638	73	NC		NC		NC		NC	
2671			min	-0.117	75	-3.618	75	NC		NC		NC		NC	
2672		2	max	0.059	73	1.823	73	NC		NC		NC		NC	
2673			min	-0.058	75	-1.804	75	NC		NC		NC		NC	
2674		3	max	0.002	72	0.063	72	NC		NC		NC		NC	
2675			min	-0.001	96	-0.046	96	NC		NC		NC		NC	
2676		4	max	0.059	71	1.826	71	NC		NC		NC		NC	
2677			min	-0.059	77	-1.811	77	NC		NC		NC		NC	
2678		5	max	0.118	71	3.64	71	NC		NC		NC		NC	
2679			min	-0.117	77	-3.626	77	NC		NC		NC		NC	
2680	M523	1	max	0.368	71	17.035	71	NC		NC		NC		NC	
2681			min	-0.366	103	-16.942	103	NC		NC		NC		NC	
2682		2	max	0.368	71	17.035	71	NC		NC		NC		NC	
2683			min	-0.366	103	-16.942	103	NC		NC		NC		NC	
2684		3	max	0.024	71	1.093	71	NC		NC		NC		NC	
2685			min	-0.023	107	-1.054	107	NC		NC		NC		NC	
2686		4	max	0.181	103	8.381	103	NC		NC		NC		NC	
2687			min	-0.18	71	-8.336	71	NC		NC		NC		NC	
2688		5	max	0.337	103	15.6	103	NC		NC		NC		NC	
2689			min	-0.337	71	-15.603	71	NC		NC		NC		NC	
2690	M524	1	max	0.017	103	0.764	103	NC		NC		NC		NC	
2691			min	-0.017	71	-0.775	71	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2692		2	max	0.017	103	0.764	103	NC		NC		NC		NC	
2693			min	-0.017	71	-0.775	71	NC		NC		NC		NC	
2694		3	max	0.017	103	0.764	103	NC		NC		NC		NC	
2695			min	-0.017	71	-0.775	71	NC		NC		NC		NC	
2696		4	max	0.045	71	2.07	71	NC		NC		NC		NC	
2697			min	-0.042	103	-1.958	103	NC		NC		NC		NC	
2698		5	max	0.045	71	2.07	71	NC		NC		NC		NC	
2699			min	-0.042	103	-1.958	103	NC		NC		NC		NC	
2700	M525	1	max	0.017	103	0.769	103	NC		NC		NC		NC	
2701			min	-0.016	71	-0.751	71	NC		NC		NC		NC	
2702		2	max	0.017	103	0.769	103	NC		NC		NC		NC	
2703			min	-0.016	71	-0.751	71	NC		NC		NC		NC	
2704		3	max	0.017	103	0.769	103	NC		NC		NC		NC	
2705			min	-0.016	71	-0.751	71	NC		NC		NC		NC	
2706		4	max	0.044	71	2.023	71	NC		NC		NC		NC	
2707			min	-0.043	103	-2.003	103	NC		NC		NC		NC	
2708		5	max	0.044	71	2.023	71	NC		NC		NC		NC	
2709			min	-0.043	103	-2.003	103	NC		NC		NC		NC	
2710	M526	1	max	0.002	98	0.08	98	NC		NC		NC		NC	
2711			min	-0.003	62	-0.121	62	NC		NC		NC		NC	
2712		2	max	0.002	98	0.08	98	NC		NC		NC		NC	
2713			min	-0.003	62	-0.121	62	NC		NC		NC		NC	
2714		3	max	0.002	98	0.08	98	NC		NC		NC		NC	
2715			min	-0.003	62	-0.121	62	NC		NC		NC		NC	
2716		4	max	0.014	74	0.661	74	NC		NC		NC		NC	
2717			min	-0.015	102	-0.681	102	NC		NC		NC		NC	
2718		5	max	0.014	74	0.661	74	NC		NC		NC		NC	
2719			min	-0.015	102	-0.681	102	NC		NC		NC		NC	
2720	M527	1	max	0.499	71	23.115	71	NC		NC		NC		NC	
2721			min	-0.499	103	-23.097	103	NC		NC		NC		NC	
2722		2	max	0.499	71	23.115	71	NC		NC		NC		NC	
2723			min	-0.499	103	-23.097	103	NC		NC		NC		NC	
2724		3	max	0.025	71	1.171	71	NC		NC		NC		NC	
2725			min	-0.025	107	-1.158	107	NC		NC		NC		NC	
2726		4	max	0.236	103	10.937	103	NC		NC		NC		NC	
2727			min	-0.236	71	-10.92	71	NC		NC		NC		NC	
2728		5	max	0.447	103	20.683	103	NC		NC		NC		NC	
2729			min	-0.446	71	-20.669	71	NC		NC		NC		NC	
2730	M528	1	max	0.476	71	22.042	71	NC		NC		NC		NC	
2731			min	-0.478	103	-22.135	103	NC		NC		NC		NC	
2732		2	max	0.476	71	22.042	71	NC		NC		NC		NC	
2733			min	-0.478	103	-22.135	103	NC		NC		NC		NC	
2734		3	max	0.026	75	1.191	75	NC		NC		NC		NC	
2735			min	-0.026	103	-1.221	103	NC		NC		NC		NC	
2736		4	max	0.225	103	10.418	103	NC		NC		NC		NC	
2737			min	-0.226	71	-10.452	71	NC		NC		NC		NC	
2738		5	max	0.43	103	19.904	103	NC		NC		NC		NC	
2739			min	-0.429	71	-19.884	71	NC		NC		NC		NC	
2740	M529	1	max	0.231	71	14.272	71	NC		NC		NC		NC	
2741			min	-0.23	103	-14.215	103	NC		NC		NC		NC	
2742		2	max	0.231	71	14.272	71	NC		NC		NC		NC	
2743			min	-0.23	103	-14.215	103	NC		NC		NC		NC	
2744		3	max	0.007	71	0.411	71	NC		NC		NC		NC	
2745			min	-0.006	107	-0.386	107	NC		NC		NC		NC	
2746		4	max	0.095	73	5.86	73	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2747			min	-0.094	101	-5.824	101	NC		NC		NC		NC	
2748		5	max	0.196	73	12.145	73	NC		NC		NC		NC	
2749			min	-0.196	101	-12.122	101	NC		NC		NC		NC	
2750	M603	1	max	0.003	76	0.208	76	NC		NC		NC		NC	
2751			min	-0.003	104	-0.196	104	NC		NC		NC		NC	
2752		2	max	0.003	76	0.208	76	NC		NC		NC		NC	
2753			min	-0.003	104	-0.196	104	NC		NC		NC		NC	
2754		3	max	0.003	76	0.208	76	NC		NC		NC		NC	
2755			min	-0.003	104	-0.196	104	NC		NC		NC		NC	
2756		4	max	0.003	76	0.208	76	NC		NC		NC		NC	
2757			min	-0.003	104	-0.196	104	NC		NC		NC		NC	
2758		5	max	0.003	76	0.208	76	NC		NC		NC		NC	
2759			min	-0.003	104	-0.196	104	NC		NC		NC		NC	
2760	M604	1	max	0.003	104	0.182	104	NC		NC		NC		NC	
2761			min	-0.003	72	-0.206	72	NC		NC		NC		NC	
2762		2	max	0.003	104	0.182	104	NC		NC		NC		NC	
2763			min	-0.003	72	-0.206	72	NC		NC		NC		NC	
2764		3	max	0.003	104	0.182	104	NC		NC		NC		NC	
2765			min	-0.003	72	-0.206	72	NC		NC		NC		NC	
2766		4	max	0.003	104	0.182	104	NC		NC		NC		NC	
2767			min	-0.003	72	-0.206	72	NC		NC		NC		NC	
2768		5	max	0.003	104	0.182	104	NC		NC		NC		NC	
2769			min	-0.003	72	-0.206	72	NC		NC		NC		NC	
2770	M605	1	max	0.003	104	0.17	104	NC		NC		NC		NC	
2771			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
2772		2	max	0.003	104	0.17	104	NC		NC		NC		NC	
2773			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
2774		3	max	0.003	104	0.17	104	NC		NC		NC		NC	
2775			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
2776		4	max	0.003	104	0.17	104	NC		NC		NC		NC	
2777			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
2778		5	max	0.003	104	0.17	104	NC		NC		NC		NC	
2779			min	-0.003	72	-0.209	72	NC		NC		NC		NC	
2780	M606	1	max	0.003	15	0.102	15	NC		NC		NC		NC	
2781			min	-0.001	106	-0.035	106	NC		NC		NC		NC	
2782		2	max	0.003	15	0.102	15	NC		NC		NC		NC	
2783			min	-0.001	106	-0.035	106	NC		NC		NC		NC	
2784		3	max	0.003	15	0.102	15	NC		NC		NC		NC	
2785			min	-0.001	106	-0.035	106	NC		NC		NC		NC	
2786		4	max	0.003	15	0.102	15	NC		NC		NC		NC	
2787			min	-0.001	106	-0.035	106	NC		NC		NC		NC	
2788		5	max	0.003	15	0.102	15	NC		NC		NC		NC	
2789			min	-0.001	106	-0.035	106	NC		NC		NC		NC	
2790	M607	1	max	0.003	76	0.088	76	NC		NC		NC		NC	
2791			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
2792		2	max	0.003	76	0.088	76	NC		NC		NC		NC	
2793			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
2794		3	max	0.003	76	0.088	76	NC		NC		NC		NC	
2795			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
2796		4	max	0.003	76	0.088	76	NC		NC		NC		NC	
2797			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
2798		5	max	0.003	76	0.088	76	NC		NC		NC		NC	
2799			min	-0.004	100	-0.143	100	NC		NC		NC		NC	
2800	M608	1	max	0	96	0.026	96	NC		NC		NC		NC	
2801			min	0	64	-0.026	64	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2802		2	max	0	96	0.026	96	NC		NC		NC		NC	
2803			min	0	64	-0.026	64	NC		NC		NC		NC	
2804		3	max	0	96	0.026	96	NC		NC		NC		NC	
2805			min	0	64	-0.026	64	NC		NC		NC		NC	
2806		4	max	0	96	0.026	96	NC		NC		NC		NC	
2807			min	0	64	-0.026	64	NC		NC		NC		NC	
2808		5	max	0	96	0.026	96	NC		NC		NC		NC	
2809			min	0	64	-0.026	64	NC		NC		NC		NC	
2810	M609	1	max	0.007	13	0.495	13	NC		NC		NC		NC	
2811			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
2812		2	max	0.007	13	0.495	13	NC		NC		NC		NC	
2813			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
2814		3	max	0.007	13	0.495	13	NC		NC		NC		NC	
2815			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
2816		4	max	0.007	13	0.495	13	NC		NC		NC		NC	
2817			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
2818		5	max	0.007	13	0.495	13	NC		NC		NC		NC	
2819			min	-0.001	106	-0.09	106	NC		NC		NC		NC	
2820	M610	1	max	0.001	72	0.052	72	NC		NC		NC		NC	
2821			min	-0.001	104	-0.037	104	NC		NC		NC		NC	
2822		2	max	0.001	72	0.052	72	NC		NC		NC		NC	
2823			min	-0.001	104	-0.037	104	NC		NC		NC		NC	
2824		3	max	0.001	72	0.052	72	NC		NC		NC		NC	
2825			min	-0.001	104	-0.037	104	NC		NC		NC		NC	
2826		4	max	0.001	72	0.052	72	NC		NC		NC		NC	
2827			min	-0.001	104	-0.037	104	NC		NC		NC		NC	
2828		5	max	0.001	72	0.052	72	NC		NC		NC		NC	
2829			min	-0.001	104	-0.037	104	NC		NC		NC		NC	
2830	M611	1	max	0.004	72	0.265	72	NC		NC		NC		NC	
2831			min	-0.004	104	-0.244	104	NC		NC		NC		NC	
2832		2	max	0.004	72	0.265	72	NC		NC		NC		NC	
2833			min	-0.004	104	-0.244	104	NC		NC		NC		NC	
2834		3	max	0.004	72	0.265	72	NC		NC		NC		NC	
2835			min	-0.004	104	-0.244	104	NC		NC		NC		NC	
2836		4	max	0.004	72	0.265	72	NC		NC		NC		NC	
2837			min	-0.004	104	-0.244	104	NC		NC		NC		NC	
2838		5	max	0.004	72	0.265	72	NC		NC		NC		NC	
2839			min	-0.004	104	-0.244	104	NC		NC		NC		NC	
2840	M612	1	max	0.005	70	0.188	70	NC		NC		NC		NC	
2841			min	-0.005	106	-0.179	106	NC		NC		NC		NC	
2842		2	max	0.005	70	0.188	70	NC		NC		NC		NC	
2843			min	-0.005	106	-0.179	106	NC		NC		NC		NC	
2844		3	max	0.005	70	0.188	70	NC		NC		NC		NC	
2845			min	-0.005	106	-0.179	106	NC		NC		NC		NC	
2846		4	max	0.005	70	0.188	70	NC		NC		NC		NC	
2847			min	-0.005	106	-0.179	106	NC		NC		NC		NC	
2848		5	max	0.005	70	0.188	70	NC		NC		NC		NC	
2849			min	-0.005	106	-0.179	106	NC		NC		NC		NC	
2850	M613	1	max	0.001	13	0.091	13	NC		NC		NC		NC	
2851			min	0	68	0.001	68	NC		NC		NC		NC	
2852		2	max	0.001	13	0.091	13	NC		NC		NC		NC	
2853			min	0	68	0.001	68	NC		NC		NC		NC	
2854		3	max	0.001	13	0.091	13	NC		NC		NC		NC	
2855			min	0	68	0.001	68	NC		NC		NC		NC	
2856		4	max	0.001	13	0.091	13	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2857			min	0	68	0.001	68	NC		NC		NC		NC	
2858		5	max	0.001	13	0.091	13	NC		NC		NC		NC	
2859			min	0	68	0.001	68	NC		NC		NC		NC	
2860	M614	1	max	0	74	0.01	74	NC		NC		NC		NC	
2861			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
2862		2	max	0	74	0.01	74	NC		NC		NC		NC	
2863			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
2864		3	max	0	74	0.01	74	NC		NC		NC		NC	
2865			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
2866		4	max	0	74	0.01	74	NC		NC		NC		NC	
2867			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
2868		5	max	0	74	0.01	74	NC		NC		NC		NC	
2869			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
2870	M615	1	max	0.002	13	0.1	13	NC		NC		NC		NC	
2871			min	0	68	0.002	68	NC		NC		NC		NC	
2872		2	max	0.002	13	0.1	13	NC		NC		NC		NC	
2873			min	0	68	0.002	68	NC		NC		NC		NC	
2874		3	max	0.002	13	0.1	13	NC		NC		NC		NC	
2875			min	0	68	0.002	68	NC		NC		NC		NC	
2876		4	max	0.002	13	0.1	13	NC		NC		NC		NC	
2877			min	0	68	0.002	68	NC		NC		NC		NC	
2878		5	max	0.002	13	0.1	13	NC		NC		NC		NC	
2879			min	0	68	0.002	68	NC		NC		NC		NC	
2880	M616	1	max	0	74	0.015	74	NC		NC		NC		NC	
2881			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
2882		2	max	0	74	0.015	74	NC		NC		NC		NC	
2883			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
2884		3	max	0	74	0.015	74	NC		NC		NC		NC	
2885			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
2886		4	max	0	74	0.015	74	NC		NC		NC		NC	
2887			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
2888		5	max	0	74	0.015	74	NC		NC		NC		NC	
2889			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
2890	M617	1	max	0.002	100	0.12	100	NC		NC		NC		NC	
2891			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
2892		2	max	0.002	100	0.12	100	NC		NC		NC		NC	
2893			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
2894		3	max	0.002	100	0.12	100	NC		NC		NC		NC	
2895			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
2896		4	max	0.002	100	0.12	100	NC		NC		NC		NC	
2897			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
2898		5	max	0.002	100	0.12	100	NC		NC		NC		NC	
2899			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
2900	M661	1	max	0	68	0.005	68	NC		NC		NC		NC	
2901			min	-0.007	13	-0.474	13	NC		NC		NC		NC	
2902		2	max	0	68	0.005	68	NC		NC		NC		NC	
2903			min	-0.007	13	-0.474	13	NC		NC		NC		NC	
2904		3	max	0	68	0.005	68	NC		NC		NC		NC	
2905			min	-0.007	13	-0.474	13	NC		NC		NC		NC	
2906		4	max	0	68	0.005	68	NC		NC		NC		NC	
2907			min	-0.007	13	-0.474	13	NC		NC		NC		NC	
2908		5	max	0	68	0.005	68	NC		NC		NC		NC	
2909			min	-0.007	13	-0.474	13	NC		NC		NC		NC	
2910	M662	1	max	0	94	0.003	94	NC		NC		NC		NC	
2911			min	-0.012	13	-0.416	13	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2912		2	max	0	94	0.003	94	NC		NC		NC		NC	
2913			min	-0.012	13	-0.416	13	NC		NC		NC		NC	
2914		3	max	0	94	0.003	94	NC		NC		NC		NC	
2915			min	-0.012	13	-0.416	13	NC		NC		NC		NC	
2916		4	max	0	94	0.003	94	NC		NC		NC		NC	
2917			min	-0.012	13	-0.416	13	NC		NC		NC		NC	
2918		5	max	0	94	0.003	94	NC		NC		NC		NC	
2919			min	-0.012	13	-0.416	13	NC		NC		NC		NC	
2920	M663	1	max	0.003	68	0.108	68	NC		NC		NC		NC	
2921			min	-0.016	13	-0.566	13	NC		NC		NC		NC	
2922		2	max	0.003	68	0.108	68	NC		NC		NC		NC	
2923			min	-0.016	13	-0.566	13	NC		NC		NC		NC	
2924		3	max	0.003	68	0.108	68	NC		NC		NC		NC	
2925			min	-0.016	13	-0.566	13	NC		NC		NC		NC	
2926		4	max	0.003	68	0.108	68	NC		NC		NC		NC	
2927			min	-0.016	13	-0.566	13	NC		NC		NC		NC	
2928		5	max	0.003	68	0.108	68	NC		NC		NC		NC	
2929			min	-0.016	13	-0.566	13	NC		NC		NC		NC	
2930	M664	1	max	0.006	19	0.407	19	NC		NC		NC		NC	
2931			min	-0.001	70	-0.094	70	NC		NC		NC		NC	
2932		2	max	0.006	19	0.407	19	NC		NC		NC		NC	
2933			min	-0.001	70	-0.094	70	NC		NC		NC		NC	
2934		3	max	0.006	19	0.407	19	NC		NC		NC		NC	
2935			min	-0.001	70	-0.094	70	NC		NC		NC		NC	
2936		4	max	0.006	19	0.407	19	NC		NC		NC		NC	
2937			min	-0.001	70	-0.094	70	NC		NC		NC		NC	
2938		5	max	0.006	19	0.407	19	NC		NC		NC		NC	
2939			min	-0.001	70	-0.094	70	NC		NC		NC		NC	
2940	M665	1	max	0.011	13	0.76	13	NC		NC		NC		NC	
2941			min	0	68	0.029	68	NC		NC		NC		NC	
2942		2	max	0.011	13	0.76	13	NC		NC		NC		NC	
2943			min	0	68	0.029	68	NC		NC		NC		NC	
2944		3	max	0.011	13	0.76	13	NC		NC		NC		NC	
2945			min	0	68	0.029	68	NC		NC		NC		NC	
2946		4	max	0.011	13	0.76	13	NC		NC		NC		NC	
2947			min	0	68	0.029	68	NC		NC		NC		NC	
2948		5	max	0.011	13	0.76	13	NC		NC		NC		NC	
2949			min	0	68	0.029	68	NC		NC		NC		NC	
2950	M666	1	max	0.013	13	0.463	13	NC		NC		NC		NC	
2951			min	0	98	0	98	NC		NC		NC		NC	
2952		2	max	0.013	13	0.463	13	NC		NC		NC		NC	
2953			min	0	98	0	98	NC		NC		NC		NC	
2954		3	max	0.013	13	0.463	13	NC		NC		NC		NC	
2955			min	0	98	0	98	NC		NC		NC		NC	
2956		4	max	0.013	13	0.463	13	NC		NC		NC		NC	
2957			min	0	98	0	98	NC		NC		NC		NC	
2958		5	max	0.013	13	0.463	13	NC		NC		NC		NC	
2959			min	0	98	0	98	NC		NC		NC		NC	
2960	M667	1	max	0.006	92	0.214	92	NC		NC		NC		NC	
2961			min	-0.005	68	-0.159	68	NC		NC		NC		NC	
2962		2	max	0.006	92	0.214	92	NC		NC		NC		NC	
2963			min	-0.005	68	-0.159	68	NC		NC		NC		NC	
2964		3	max	0.006	92	0.214	92	NC		NC		NC		NC	
2965			min	-0.005	68	-0.159	68	NC		NC		NC		NC	
2966		4	max	0.006	92	0.214	92	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
2967			min	-0.005	68	-0.159	68	NC		NC		NC		NC	
2968		5	max	0.006	92	0.214	92	NC		NC		NC		NC	
2969			min	-0.005	68	-0.159	68	NC		NC		NC		NC	
2970	M668	1	max	0.003	64	0.091	64	NC		NC		NC		NC	
2971			min	-0.002	96	-0.062	96	NC		NC		NC		NC	
2972		2	max	0.003	64	0.091	64	NC		NC		NC		NC	
2973			min	-0.002	96	-0.062	96	NC		NC		NC		NC	
2974		3	max	0.003	64	0.091	64	NC		NC		NC		NC	
2975			min	-0.002	96	-0.062	96	NC		NC		NC		NC	
2976		4	max	0.003	64	0.091	64	NC		NC		NC		NC	
2977			min	-0.002	96	-0.062	96	NC		NC		NC		NC	
2978		5	max	0.003	64	0.091	64	NC		NC		NC		NC	
2979			min	-0.002	96	-0.062	96	NC		NC		NC		NC	
2980	M669	1	max	0.001	102	0.067	102	NC		NC		NC		NC	
2981			min	-0.001	104	-0.052	104	NC		NC		NC		NC	
2982		2	max	0.001	102	0.067	102	NC		NC		NC		NC	
2983			min	-0.001	104	-0.052	104	NC		NC		NC		NC	
2984		3	max	0.001	102	0.067	102	NC		NC		NC		NC	
2985			min	-0.001	104	-0.052	104	NC		NC		NC		NC	
2986		4	max	0.001	102	0.067	102	NC		NC		NC		NC	
2987			min	-0.001	104	-0.052	104	NC		NC		NC		NC	
2988		5	max	0.001	102	0.067	102	NC		NC		NC		NC	
2989			min	-0.001	104	-0.052	104	NC		NC		NC		NC	
2990	M670	1	max	0.001	100	0.044	100	NC		NC		NC		NC	
2991			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
2992		2	max	0.001	100	0.044	100	NC		NC		NC		NC	
2993			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
2994		3	max	0.001	100	0.044	100	NC		NC		NC		NC	
2995			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
2996		4	max	0.001	100	0.044	100	NC		NC		NC		NC	
2997			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
2998		5	max	0.001	100	0.044	100	NC		NC		NC		NC	
2999			min	-0.001	72	-0.049	72	NC		NC		NC		NC	
3000	M671	1	max	0.002	96	0.059	96	NC		NC		NC		NC	
3001			min	-0.003	15	-0.106	15	NC		NC		NC		NC	
3002		2	max	0.002	96	0.059	96	NC		NC		NC		NC	
3003			min	-0.003	15	-0.106	15	NC		NC		NC		NC	
3004		3	max	0.002	96	0.059	96	NC		NC		NC		NC	
3005			min	-0.003	15	-0.106	15	NC		NC		NC		NC	
3006		4	max	0.002	96	0.059	96	NC		NC		NC		NC	
3007			min	-0.003	15	-0.106	15	NC		NC		NC		NC	
3008		5	max	0.002	96	0.059	96	NC		NC		NC		NC	
3009			min	-0.003	15	-0.106	15	NC		NC		NC		NC	
3010	M672	1	max	0.007	106	0.646	106	NC		NC		NC		NC	
3011			min	-0.01	13	-0.917	13	NC		NC		NC		NC	
3012		2	max	0.007	106	0.646	106	NC		NC		NC		NC	
3013			min	-0.01	13	-0.917	13	NC		NC		NC		NC	
3014		3	max	0.007	106	0.646	106	NC		NC		NC		NC	
3015			min	-0.01	13	-0.917	13	NC		NC		NC		NC	
3016		4	max	0.007	106	0.646	106	NC		NC		NC		NC	
3017			min	-0.01	13	-0.917	13	NC		NC		NC		NC	
3018		5	max	0.007	106	0.646	106	NC		NC		NC		NC	
3019			min	-0.01	13	-0.917	13	NC		NC		NC		NC	
3020	M673	1	max	0.007	76	0.668	76	NC		NC		NC		NC	
3021			min	-0.013	13	-1.22	13	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3022		2	max	0.007	76	0.668	76	NC		NC		NC		NC	
3023			min	-0.013	13	-1.22	13	NC		NC		NC		NC	
3024		3	max	0.007	76	0.668	76	NC		NC		NC		NC	
3025			min	-0.013	13	-1.22	13	NC		NC		NC		NC	
3026		4	max	0.007	76	0.668	76	NC		NC		NC		NC	
3027			min	-0.013	13	-1.22	13	NC		NC		NC		NC	
3028		5	max	0.007	76	0.668	76	NC		NC		NC		NC	
3029			min	-0.013	13	-1.22	13	NC		NC		NC		NC	
3030	M674	1	max	0.008	74	0.739	74	NC		NC		NC		NC	
3031			min	-0.011	15	-1.064	15	NC		NC		NC		NC	
3032		2	max	0.008	74	0.739	74	NC		NC		NC		NC	
3033			min	-0.011	15	-1.064	15	NC		NC		NC		NC	
3034		3	max	0.008	74	0.739	74	NC		NC		NC		NC	
3035			min	-0.011	15	-1.064	15	NC		NC		NC		NC	
3036		4	max	0.008	74	0.739	74	NC		NC		NC		NC	
3037			min	-0.011	15	-1.064	15	NC		NC		NC		NC	
3038		5	max	0.008	74	0.739	74	NC		NC		NC		NC	
3039			min	-0.011	15	-1.064	15	NC		NC		NC		NC	
3040	M675	1	max	0.007	74	0.637	74	NC		NC		NC		NC	
3041			min	-0.014	15	-1.298	15	NC		NC		NC		NC	
3042		2	max	0.007	74	0.637	74	NC		NC		NC		NC	
3043			min	-0.014	15	-1.298	15	NC		NC		NC		NC	
3044		3	max	0.007	74	0.637	74	NC		NC		NC		NC	
3045			min	-0.014	15	-1.298	15	NC		NC		NC		NC	
3046		4	max	0.007	74	0.637	74	NC		NC		NC		NC	
3047			min	-0.014	15	-1.298	15	NC		NC		NC		NC	
3048		5	max	0.007	74	0.637	74	NC		NC		NC		NC	
3049			min	-0.014	15	-1.298	15	NC		NC		NC		NC	
3050	M676	1	max	0.009	106	0.297	106	NC		NC		NC		NC	
3051			min	-0.013	70	-0.441	70	NC		NC		NC		NC	
3052		2	max	0.009	106	0.297	106	NC		NC		NC		NC	
3053			min	-0.013	70	-0.441	70	NC		NC		NC		NC	
3054		3	max	0.009	106	0.297	106	NC		NC		NC		NC	
3055			min	-0.013	70	-0.441	70	NC		NC		NC		NC	
3056		4	max	0.009	106	0.297	106	NC		NC		NC		NC	
3057			min	-0.013	70	-0.441	70	NC		NC		NC		NC	
3058		5	max	0.009	106	0.297	106	NC		NC		NC		NC	
3059			min	-0.013	70	-0.441	70	NC		NC		NC		NC	
3060	M677	1	max	0.015	70	0.506	70	NC		NC		NC		NC	
3061			min	-0.009	106	-0.327	106	NC		NC		NC		NC	
3062		2	max	0.015	70	0.506	70	NC		NC		NC		NC	
3063			min	-0.009	106	-0.327	106	NC		NC		NC		NC	
3064		3	max	0.015	70	0.506	70	NC		NC		NC		NC	
3065			min	-0.009	106	-0.327	106	NC		NC		NC		NC	
3066		4	max	0.015	70	0.506	70	NC		NC		NC		NC	
3067			min	-0.009	106	-0.327	106	NC		NC		NC		NC	
3068		5	max	0.015	70	0.506	70	NC		NC		NC		NC	
3069			min	-0.009	106	-0.327	106	NC		NC		NC		NC	
3070	M678	1	max	0.002	106	0.166	106	NC		NC		NC		NC	
3071			min	-0.016	13	-1.547	13	NC		NC		NC		NC	
3072		2	max	0.002	106	0.166	106	NC		NC		NC		NC	
3073			min	-0.016	13	-1.547	13	NC		NC		NC		NC	
3074		3	max	0.002	106	0.166	106	NC		NC		NC		NC	
3075			min	-0.016	13	-1.547	13	NC		NC		NC		NC	
3076		4	max	0.002	106	0.166	106	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3077			min	-0.016	13	-1.547	13	NC		NC		NC		NC	
3078		5	max	0.002	106	0.166	106	NC		NC		NC		NC	
3079			min	-0.016	13	-1.547	13	NC		NC		NC		NC	
3080	M679	1	max	0.004	106	0.405	106	NC		NC		NC		NC	
3081			min	-0.005	70	-0.452	70	NC		NC		NC		NC	
3082		2	max	0.004	106	0.405	106	NC		NC		NC		NC	
3083			min	-0.005	70	-0.452	70	NC		NC		NC		NC	
3084		3	max	0.004	106	0.405	106	NC		NC		NC		NC	
3085			min	-0.005	70	-0.452	70	NC		NC		NC		NC	
3086		4	max	0.004	106	0.405	106	NC		NC		NC		NC	
3087			min	-0.005	70	-0.452	70	NC		NC		NC		NC	
3088		5	max	0.004	106	0.405	106	NC		NC		NC		NC	
3089			min	-0.005	70	-0.452	70	NC		NC		NC		NC	
3090	M680	1	max	0.002	104	0.152	104	NC		NC		NC		NC	
3091			min	-0.018	15	-1.695	15	NC		NC		NC		NC	
3092		2	max	0.002	104	0.152	104	NC		NC		NC		NC	
3093			min	-0.018	15	-1.695	15	NC		NC		NC		NC	
3094		3	max	0.002	104	0.152	104	NC		NC		NC		NC	
3095			min	-0.018	15	-1.695	15	NC		NC		NC		NC	
3096		4	max	0.002	104	0.152	104	NC		NC		NC		NC	
3097			min	-0.018	15	-1.695	15	NC		NC		NC		NC	
3098		5	max	0.002	104	0.152	104	NC		NC		NC		NC	
3099			min	-0.018	15	-1.695	15	NC		NC		NC		NC	
3100	M681	1	max	0.005	70	0.513	70	NC		NC		NC		NC	
3101			min	-0.005	106	-0.435	106	NC		NC		NC		NC	
3102		2	max	0.005	70	0.513	70	NC		NC		NC		NC	
3103			min	-0.005	106	-0.435	106	NC		NC		NC		NC	
3104		3	max	0.005	70	0.513	70	NC		NC		NC		NC	
3105			min	-0.005	106	-0.435	106	NC		NC		NC		NC	
3106		4	max	0.005	70	0.513	70	NC		NC		NC		NC	
3107			min	-0.005	106	-0.435	106	NC		NC		NC		NC	
3108		5	max	0.005	70	0.513	70	NC		NC		NC		NC	
3109			min	-0.005	106	-0.435	106	NC		NC		NC		NC	
3110	M682	1	max	0.002	76	0.227	76	NC		NC		NC		NC	
3111			min	-0.018	13	-1.736	13	NC		NC		NC		NC	
3112		2	max	0.002	76	0.227	76	NC		NC		NC		NC	
3113			min	-0.018	13	-1.736	13	NC		NC		NC		NC	
3114		3	max	0.002	76	0.227	76	NC		NC		NC		NC	
3115			min	-0.018	13	-1.736	13	NC		NC		NC		NC	
3116		4	max	0.002	76	0.227	76	NC		NC		NC		NC	
3117			min	-0.018	13	-1.736	13	NC		NC		NC		NC	
3118		5	max	0.002	76	0.227	76	NC		NC		NC		NC	
3119			min	-0.018	13	-1.736	13	NC		NC		NC		NC	
3120	M683	1	max	0.003	68	0.253	68	NC		NC		NC		NC	
3121			min	-0.014	13	-1.305	13	NC		NC		NC		NC	
3122		2	max	0.003	68	0.253	68	NC		NC		NC		NC	
3123			min	-0.014	13	-1.305	13	NC		NC		NC		NC	
3124		3	max	0.003	68	0.253	68	NC		NC		NC		NC	
3125			min	-0.014	13	-1.305	13	NC		NC		NC		NC	
3126		4	max	0.003	68	0.253	68	NC		NC		NC		NC	
3127			min	-0.014	13	-1.305	13	NC		NC		NC		NC	
3128		5	max	0.003	68	0.253	68	NC		NC		NC		NC	
3129			min	-0.014	13	-1.305	13	NC		NC		NC		NC	
3130	M684	1	max	0.003	104	0.299	104	NC		NC		NC		NC	
3131			min	-0.02	15	-1.88	15	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3132		2	max	0.003	104	0.299	104	NC		NC		NC		NC	
3133			min	-0.02	15	-1.88	15	NC		NC		NC		NC	
3134		3	max	0.003	104	0.299	104	NC		NC		NC		NC	
3135			min	-0.02	15	-1.88	15	NC		NC		NC		NC	
3136		4	max	0.003	104	0.299	104	NC		NC		NC		NC	
3137			min	-0.02	15	-1.88	15	NC		NC		NC		NC	
3138		5	max	0.003	104	0.299	104	NC		NC		NC		NC	
3139			min	-0.02	15	-1.88	15	NC		NC		NC		NC	
3140	M685	1	max	0.003	96	0.275	96	NC		NC		NC		NC	
3141			min	-0.012	15	-1.112	15	NC		NC		NC		NC	
3142		2	max	0.003	96	0.275	96	NC		NC		NC		NC	
3143			min	-0.012	15	-1.112	15	NC		NC		NC		NC	
3144		3	max	0.003	96	0.275	96	NC		NC		NC		NC	
3145			min	-0.012	15	-1.112	15	NC		NC		NC		NC	
3146		4	max	0.003	96	0.275	96	NC		NC		NC		NC	
3147			min	-0.012	15	-1.112	15	NC		NC		NC		NC	
3148		5	max	0.003	96	0.275	96	NC		NC		NC		NC	
3149			min	-0.012	15	-1.112	15	NC		NC		NC		NC	
3150	M686	1	max	0.009	102	0.834	102	NC		NC		NC		NC	
3151			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
3152		2	max	0.009	102	0.834	102	NC		NC		NC		NC	
3153			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
3154		3	max	0.009	102	0.834	102	NC		NC		NC		NC	
3155			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
3156		4	max	0.009	102	0.834	102	NC		NC		NC		NC	
3157			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
3158		5	max	0.009	102	0.834	102	NC		NC		NC		NC	
3159			min	-0.007	74	-0.695	74	NC		NC		NC		NC	
3160	M687	1	max	0.009	72	0.868	72	NC		NC		NC		NC	
3161			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
3162		2	max	0.009	72	0.868	72	NC		NC		NC		NC	
3163			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
3164		3	max	0.009	72	0.868	72	NC		NC		NC		NC	
3165			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
3166		4	max	0.009	72	0.868	72	NC		NC		NC		NC	
3167			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
3168		5	max	0.009	72	0.868	72	NC		NC		NC		NC	
3169			min	-0.008	104	-0.741	104	NC		NC		NC		NC	
3170	M688	1	max	0.008	104	0.733	104	NC		NC		NC		NC	
3171			min	-0.008	72	-0.808	72	NC		NC		NC		NC	
3172		2	max	0.008	104	0.733	104	NC		NC		NC		NC	
3173			min	-0.008	72	-0.808	72	NC		NC		NC		NC	
3174		3	max	0.008	104	0.733	104	NC		NC		NC		NC	
3175			min	-0.008	72	-0.808	72	NC		NC		NC		NC	
3176		4	max	0.008	104	0.733	104	NC		NC		NC		NC	
3177			min	-0.008	72	-0.808	72	NC		NC		NC		NC	
3178		5	max	0.008	104	0.733	104	NC		NC		NC		NC	
3179			min	-0.008	72	-0.808	72	NC		NC		NC		NC	
3180	M689	1	max	0.008	104	0.767	104	NC		NC		NC		NC	
3181			min	-0.009	72	-0.834	72	NC		NC		NC		NC	
3182		2	max	0.008	104	0.767	104	NC		NC		NC		NC	
3183			min	-0.009	72	-0.834	72	NC		NC		NC		NC	
3184		3	max	0.008	104	0.767	104	NC		NC		NC		NC	
3185			min	-0.009	72	-0.834	72	NC		NC		NC		NC	
3186		4	max	0.008	104	0.767	104	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3187			min	-0.009	72	-0.834	72	NC		NC		NC		NC	
3188		5	max	0.008	104	0.767	104	NC		NC		NC		NC	
3189			min	-0.009	72	-0.834	72	NC		NC		NC		NC	
3190	M690	1	max	0.738	71	22.784	71	NC		NC		NC		NC	
3191			min	-0.738	103	-22.805	103	NC		NC		NC		NC	
3192		2	max	0.738	71	22.784	71	NC		NC		NC		NC	
3193			min	-0.738	103	-22.805	103	NC		NC		NC		NC	
3194		3	max	0.077	62	2.376	62	NC		NC		NC		NC	
3195			min	-0.739	71	-22.815	71	NC		NC		NC		NC	
3196		4	max	0.738	103	22.79	103	NC		NC		NC		NC	
3197			min	-0.739	71	-22.815	71	NC		NC		NC		NC	
3198		5	max	0.738	103	22.79	103	NC		NC		NC		NC	
3199			min	-0.739	71	-22.815	71	NC		NC		NC		NC	
3200	M691	1	max	0.716	71	22.124	71	NC		NC		NC		NC	
3201			min	-0.716	103	-22.106	103	NC		NC		NC		NC	
3202		2	max	0.716	71	22.124	71	NC		NC		NC		NC	
3203			min	-0.716	103	-22.106	103	NC		NC		NC		NC	
3204		3	max	0.716	71	22.124	71	NC		NC		NC		NC	
3205			min	-0.077	92	-2.38	92	NC		NC		NC		NC	
3206		4	max	0.716	103	22.122	103	NC		NC		NC		NC	
3207			min	-0.715	71	-22.093	71	NC		NC		NC		NC	
3208		5	max	0.716	103	22.122	103	NC		NC		NC		NC	
3209			min	-0.715	71	-22.093	71	NC		NC		NC		NC	
3210	M692	1	max	0	107	0	107	NC		NC		NC		NC	
3211			min	0	12	0	12	NC		NC		NC		NC	
3212		2	max	0	107	0	107	NC		NC		NC		NC	
3213			min	0	12	0	12	NC		NC		NC		NC	
3214		3	max	0	107	0	107	NC		NC		NC		NC	
3215			min	0	12	0	12	NC		NC		NC		NC	
3216		4	max	0	107	0	107	NC		NC		NC		NC	
3217			min	0	12	0	12	NC		NC		NC		NC	
3218		5	max	0	107	0	107	NC		NC		NC		NC	
3219			min	0	12	0	12	NC		NC		NC		NC	
3220	M693	1	max	0	107	0	107	NC		NC		NC		NC	
3221			min	0	12	0	12	NC		NC		NC		NC	
3222		2	max	0	107	0	107	NC		NC		NC		NC	
3223			min	0	12	0	12	NC		NC		NC		NC	
3224		3	max	0	107	0	107	NC		NC		NC		NC	
3225			min	0	12	0	12	NC		NC		NC		NC	
3226		4	max	0	107	0	107	NC		NC		NC		NC	
3227			min	0	12	0	12	NC		NC		NC		NC	
3228		5	max	0	107	0	107	NC		NC		NC		NC	
3229			min	0	12	0	12	NC		NC		NC		NC	
3230	M694	1	max	0	107	0	107	NC		NC		NC		NC	
3231			min	0	12	0	12	NC		NC		NC		NC	
3232		2	max	0	107	0	107	NC		NC		NC		NC	
3233			min	0	12	0	12	NC		NC		NC		NC	
3234		3	max	0	107	0	107	NC		NC		NC		NC	
3235			min	0	12	0	12	NC		NC		NC		NC	
3236		4	max	0	107	0	107	NC		NC		NC		NC	
3237			min	0	12	0	12	NC		NC		NC		NC	
3238		5	max	0	107	0	107	NC		NC		NC		NC	
3239			min	0	12	0	12	NC		NC		NC		NC	
3240	M695	1	max	0	107	0	107	NC		NC		NC		NC	
3241			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3242		2	max	0	107	0	107	NC		NC		NC		NC	
3243			min	0	12	0	12	NC		NC		NC		NC	
3244		3	max	0	107	0	107	NC		NC		NC		NC	
3245			min	0	12	0	12	NC		NC		NC		NC	
3246		4	max	0	107	0	107	NC		NC		NC		NC	
3247			min	0	12	0	12	NC		NC		NC		NC	
3248		5	max	0	107	0	107	NC		NC		NC		NC	
3249			min	0	12	0	12	NC		NC		NC		NC	
3250	M696	1	max	0	107	0	107	NC		NC		NC		NC	
3251			min	0	12	0	12	NC		NC		NC		NC	
3252		2	max	0	107	0	107	NC		NC		NC		NC	
3253			min	0	12	0	12	NC		NC		NC		NC	
3254		3	max	0	107	0	107	NC		NC		NC		NC	
3255			min	0	12	0	12	NC		NC		NC		NC	
3256		4	max	0	107	0	107	NC		NC		NC		NC	
3257			min	0	12	0	12	NC		NC		NC		NC	
3258		5	max	0	107	0	107	NC		NC		NC		NC	
3259			min	0	12	0	12	NC		NC		NC		NC	
3260	M697	1	max	0	107	0	107	NC		NC		NC		NC	
3261			min	0	12	0	12	NC		NC		NC		NC	
3262		2	max	0	107	0	107	NC		NC		NC		NC	
3263			min	0	12	0	12	NC		NC		NC		NC	
3264		3	max	0	107	0	107	NC		NC		NC		NC	
3265			min	0	12	0	12	NC		NC		NC		NC	
3266		4	max	0	107	0	107	NC		NC		NC		NC	
3267			min	0	12	0	12	NC		NC		NC		NC	
3268		5	max	0	107	0	107	NC		NC		NC		NC	
3269			min	0	12	0	12	NC		NC		NC		NC	
3270	M701	1	max	0	107	0	107	NC		NC		NC		NC	
3271			min	0	12	0	12	NC		NC		NC		NC	
3272		2	max	0	107	0	107	NC		NC		NC		NC	
3273			min	0	12	0	12	NC		NC		NC		NC	
3274		3	max	0	107	0	107	NC		NC		NC		NC	
3275			min	0	12	0	12	NC		NC		NC		NC	
3276		4	max	0	107	0	107	NC		NC		NC		NC	
3277			min	0	12	0	12	NC		NC		NC		NC	
3278		5	max	0	107	0	107	NC		NC		NC		NC	
3279			min	0	12	0	12	NC		NC		NC		NC	
3280	M702	1	max	0	107	0	107	NC		NC		NC		NC	
3281			min	0	12	0	12	NC		NC		NC		NC	
3282		2	max	0	107	0	107	NC		NC		NC		NC	
3283			min	0	12	0	12	NC		NC		NC		NC	
3284		3	max	0	107	0	107	NC		NC		NC		NC	
3285			min	0	12	0	12	NC		NC		NC		NC	
3286		4	max	0	107	0	107	NC		NC		NC		NC	
3287			min	0	12	0	12	NC		NC		NC		NC	
3288		5	max	0	107	0	107	NC		NC		NC		NC	
3289			min	0	12	0	12	NC		NC		NC		NC	
3290	M703	1	max	0	107	0	107	NC		NC		NC		NC	
3291			min	0	12	0	12	NC		NC		NC		NC	
3292		2	max	0	107	0	107	NC		NC		NC		NC	
3293			min	0	12	0	12	NC		NC		NC		NC	
3294		3	max	0	107	0	107	NC		NC		NC		NC	
3295			min	0	12	0	12	NC		NC		NC		NC	
3296		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3297			min	0	12	0	12	NC		NC		NC		NC	
3298		5	max	0	107	0	107	NC		NC		NC		NC	
3299			min	0	12	0	12	NC		NC		NC		NC	
3300	M704	1	max	0	107	0	107	NC		NC		NC		NC	
3301			min	0	12	0	12	NC		NC		NC		NC	
3302		2	max	0	107	0	107	NC		NC		NC		NC	
3303			min	0	12	0	12	NC		NC		NC		NC	
3304		3	max	0	107	0	107	NC		NC		NC		NC	
3305			min	0	12	0	12	NC		NC		NC		NC	
3306		4	max	0	107	0	107	NC		NC		NC		NC	
3307			min	0	12	0	12	NC		NC		NC		NC	
3308		5	max	0	107	0	107	NC		NC		NC		NC	
3309			min	0	12	0	12	NC		NC		NC		NC	
3310	M705	1	max	0	107	0	107	NC		NC		NC		NC	
3311			min	0	12	0	12	NC		NC		NC		NC	
3312		2	max	0	107	0	107	NC		NC		NC		NC	
3313			min	0	12	0	12	NC		NC		NC		NC	
3314		3	max	0	107	0	107	NC		NC		NC		NC	
3315			min	0	12	0	12	NC		NC		NC		NC	
3316		4	max	0	107	0	107	NC		NC		NC		NC	
3317			min	0	12	0	12	NC		NC		NC		NC	
3318		5	max	0	107	0	107	NC		NC		NC		NC	
3319			min	0	12	0	12	NC		NC		NC		NC	
3320	M706	1	max	0	107	0	107	NC		NC		NC		NC	
3321			min	0	12	0	12	NC		NC		NC		NC	
3322		2	max	0	107	0	107	NC		NC		NC		NC	
3323			min	0	12	0	12	NC		NC		NC		NC	
3324		3	max	0	107	0	107	NC		NC		NC		NC	
3325			min	0	12	0	12	NC		NC		NC		NC	
3326		4	max	0	107	0	107	NC		NC		NC		NC	
3327			min	0	12	0	12	NC		NC		NC		NC	
3328		5	max	0	107	0	107	NC		NC		NC		NC	
3329			min	0	12	0	12	NC		NC		NC		NC	
3330	M460	1	max	0	107	0	107	0	107	0	107	0	107	0	107
3331			min	0	12	0	12	0	12	0	12	0	12	0	12
3332		2	max	0	107	0	107	0	107	0	107	0	107	0	107
3333			min	0	12	0	12	0	12	0	12	0	12	0	12
3334		3	max	0	107	0	107	0	107	0	107	0	107	0	107
3335			min	0	12	0	12	0	12	0	12	0	12	0	12
3336		4	max	1.043	77	1.248	77	0	107	0.504	77	5.101	71	5.101	71
3337			min	-1.135	71	-1.358	71	0	12	-0.549	71	-4.69	77	-4.69	77
3338		5	max	0	107	0	107	0	107	0	107	0	107	0	107
3339			min	0	12	0	12	0	12	0	12	0	12	0	12
3340	M471	1	max	0	107	0	107	0	107	0	107	0	107	0	107
3341			min	0	12	0	12	0	12	0	12	0	12	0	12
3342		2	max	0	107	0	107	0	107	0	107	0	107	0	107
3343			min	0	12	0	12	0	12	0	12	0	12	0	12
3344		3	max	0	107	0	107	0	107	0	107	0	107	0	107
3345			min	0	12	0	12	0	12	0	12	0	12	0	12
3346		4	max	1.073	71	1.284	71	0	107	0.519	71	4.446	77	4.446	77
3347			min	-0.989	77	-1.183	77	0	12	-0.478	77	-4.822	71	-4.822	71
3348		5	max	0	107	0	107	0	107	0	107	0	107	0	107
3349			min	0	12	0	12	0	12	0	12	0	12	0	12
3350	M473	1	max	0	107	0	107	0	107	0	107	0	107	0	107
3351			min	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3352		2	max	0	107	0	107	0	107	0	107	0	107	0	107
3353			min	0	12	0	12	0	12	0	12	0	12	0	12
3354		3	max	0	107	0	107	0	107	0	107	0	107	0	107
3355			min	0	12	0	12	0	12	0	12	0	12	0	12
3356		4	max	0.14	71	0.167	71	0	107	0.068	71	0.476	77	0.476	77
3357			min	-0.106	77	-0.127	77	0	12	-0.051	77	-0.629	71	-0.629	71
3358		5	max	0	107	0	107	0	107	0	107	0	107	0	107
3359			min	0	12	0	12	0	12	0	12	0	12	0	12
3360	M507	1	max	0	107	0	107	0	107	0	107	0	107	0	107
3361			min	0	12	0	12	0	12	0	12	0	12	0	12
3362		2	max	0	107	0	107	0	107	0	107	0	107	0	107
3363			min	0	12	0	12	0	12	0	12	0	12	0	12
3364		3	max	0	107	0	107	0	107	0	107	0	107	0	107
3365			min	0	12	0	12	0	12	0	12	0	12	0	12
3366		4	max	0.117	77	0.14	77	0	107	0.057	77	0.665	71	0.665	71
3367			min	-0.148	71	-0.177	71	0	12	-0.072	71	-0.526	77	-0.526	77
3368		5	max	0	107	0	107	0	107	0	107	0	107	0	107
3369			min	0	12	0	12	0	12	0	12	0	12	0	12
3370	M508	1	max	0	74	0.015	74	NC		NC		NC		NC	
3371			min	0	102	-0.021	102	NC		NC		NC		NC	
3372		2	max	0	74	0.015	74	NC		NC		NC		NC	
3373			min	0	102	-0.021	102	NC		NC		NC		NC	
3374		3	max	0	74	0.015	74	NC		NC		NC		NC	
3375			min	0	102	-0.021	102	NC		NC		NC		NC	
3376		4	max	0	74	0.015	74	NC		NC		NC		NC	
3377			min	0	102	-0.021	102	NC		NC		NC		NC	
3378		5	max	0	74	0.015	74	NC		NC		NC		NC	
3379			min	0	102	-0.021	102	NC		NC		NC		NC	
3380	M509	1	max	0.001	104	0.024	104	NC		NC		NC		NC	
3381			min	-0.071	15	-2.443	15	NC		NC		NC		NC	
3382		2	max	0.02	13	0.674	13	NC		NC		NC		NC	
3383			min	-0.011	76	-0.37	76	NC		NC		NC		NC	
3384		3	max	0.061	13	2.098	13	NC		NC		NC		NC	
3385			min	0.004	105	0.123	105	NC		NC		NC		NC	
3386		4	max	0.031	15	1.058	15	NC		NC		NC		NC	
3387			min	-0.006	104	-0.201	104	NC		NC		NC		NC	
3388		5	max	0.003	76	0.093	76	NC		NC		NC		NC	
3389			min	-0.064	13	-2.203	13	NC		NC		NC		NC	
3390	M510	1	max	0.016	70	0.534	70	NC		NC		NC		NC	
3391			min	-0.012	106	-0.413	106	NC		NC		NC		NC	
3392		2	max	0.019	70	0.655	70	NC		NC		NC		NC	
3393			min	-0.015	106	-0.511	106	NC		NC		NC		NC	
3394		3	max	0.056	13	1.926	13	NC		NC		NC		NC	
3395			min	0.006	75	0.206	75	NC		NC		NC		NC	
3396		4	max	0.015	106	0.529	106	NC		NC		NC		NC	
3397			min	-0.018	70	-0.617	70	NC		NC		NC		NC	
3398		5	max	0.015	106	0.498	106	NC		NC		NC		NC	
3399			min	-0.016	70	-0.559	70	NC		NC		NC		NC	
3400	M511	1	max	0.028	15	1.947	15	NC		NC		NC		NC	
3401			min	0	74	-0.029	74	NC		NC		NC		NC	
3402		2	max	0.028	15	1.947	15	NC		NC		NC		NC	
3403			min	0	74	-0.029	74	NC		NC		NC		NC	
3404		3	max	0.028	15	1.947	15	NC		NC		NC		NC	
3405			min	0	74	-0.029	74	NC		NC		NC		NC	
3406		4	max	0.028	15	1.947	15	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3407			min	0	74	-0.029	74	NC		NC		NC		NC	
3408		5	max	0.028	15	1.947	15	NC		NC		NC		NC	
3409			min	0	74	-0.029	74	NC		NC		NC		NC	
3410	M512	1	max	0.017	13	1.146	13	NC		NC		NC		NC	
3411			min	-0.002	76	-0.152	76	NC		NC		NC		NC	
3412		2	max	0.017	13	1.146	13	NC		NC		NC		NC	
3413			min	-0.002	76	-0.152	76	NC		NC		NC		NC	
3414		3	max	0.017	13	1.146	13	NC		NC		NC		NC	
3415			min	-0.002	76	-0.152	76	NC		NC		NC		NC	
3416		4	max	0.017	13	1.146	13	NC		NC		NC		NC	
3417			min	-0.002	76	-0.152	76	NC		NC		NC		NC	
3418		5	max	0.017	13	1.146	13	NC		NC		NC		NC	
3419			min	-0.002	76	-0.152	76	NC		NC		NC		NC	
3420	M513	1	max	0.017	15	0.58	15	NC		NC		NC		NC	
3421			min	-0.004	74	-0.141	74	NC		NC		NC		NC	
3422		2	max	0.017	15	0.58	15	NC		NC		NC		NC	
3423			min	-0.004	74	-0.141	74	NC		NC		NC		NC	
3424		3	max	0.017	15	0.58	15	NC		NC		NC		NC	
3425			min	-0.004	74	-0.141	74	NC		NC		NC		NC	
3426		4	max	0.017	15	0.58	15	NC		NC		NC		NC	
3427			min	-0.004	74	-0.141	74	NC		NC		NC		NC	
3428		5	max	0.017	15	0.58	15	NC		NC		NC		NC	
3429			min	-0.004	74	-0.141	74	NC		NC		NC		NC	
3430	M514	1	max	0.005	68	0.177	68	NC		NC		NC		NC	
3431			min	-0.015	13	-0.528	13	NC		NC		NC		NC	
3432		2	max	0.006	68	0.214	68	NC		NC		NC		NC	
3433			min	-0.007	92	-0.256	92	NC		NC		NC		NC	
3434		3	max	0.024	15	0.827	15	NC		NC		NC		NC	
3435			min	-0.007	103	-0.256	103	NC		NC		NC		NC	
3436		4	max	0.009	100	0.303	100	NC		NC		NC		NC	
3437			min	-0.005	68	-0.182	68	NC		NC		NC		NC	
3438		5	max	0.007	92	0.223	92	NC		NC		NC		NC	
3439			min	-0.007	68	-0.242	68	NC		NC		NC		NC	
3440	M515	1	max	0.01	98	0.336	98	NC		NC		NC		NC	
3441			min	-0.01	62	-0.356	62	NC		NC		NC		NC	
3442		2	max	0.013	15	0.447	15	NC		NC		NC		NC	
3443			min	-0.004	74	-0.148	74	NC		NC		NC		NC	
3444		3	max	0.021	15	0.704	15	NC		NC		NC		NC	
3445			min	-0.007	103	-0.24	103	NC		NC		NC		NC	
3446		4	max	0.005	74	0.185	74	NC		NC		NC		NC	
3447			min	-0.005	102	-0.188	102	NC		NC		NC		NC	
3448		5	max	0.008	66	0.279	66	NC		NC		NC		NC	
3449			min	-0.021	15	-0.726	15	NC		NC		NC		NC	
3450	M516	1	max	0.062	71	4.266	71	NC		NC		NC		NC	
3451			min	-0.062	103	-4.227	103	NC		NC		NC		NC	
3452		2	max	0.062	71	4.266	71	NC		NC		NC		NC	
3453			min	-0.062	103	-4.227	103	NC		NC		NC		NC	
3454		3	max	0.009	71	0.636	71	NC		NC		NC		NC	
3455			min	-0.009	103	-0.64	103	NC		NC		NC		NC	
3456		4	max	0.075	103	5.119	103	NC		NC		NC		NC	
3457			min	-0.075	71	-5.17	71	NC		NC		NC		NC	
3458		5	max	0.075	103	5.119	103	NC		NC		NC		NC	
3459			min	-0.075	71	-5.17	71	NC		NC		NC		NC	
3460	M517	1	max	0.062	71	4.245	71	NC		NC		NC		NC	
3461			min	-0.061	103	-4.207	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3462		2	max	0.062	71	4.245	71	NC		NC		NC		NC	
3463			min	-0.061	103	-4.207	103	NC		NC		NC		NC	
3464		3	max	0.011	71	0.78	71	NC		NC		NC		NC	
3465			min	-0.011	103	-0.744	103	NC		NC		NC		NC	
3466		4	max	0.07	103	4.777	103	NC		NC		NC		NC	
3467			min	-0.069	71	-4.745	71	NC		NC		NC		NC	
3468		5	max	0.07	103	4.777	103	NC		NC		NC		NC	
3469			min	-0.069	71	-4.745	71	NC		NC		NC		NC	
3470	M518	1	max	0.598	71	0	107	0	107	1.205	71	21.033	71	21.033	71
3471			min	-0.553	77	0	12	0	12	-1.113	77	-19.435	77	-19.435	77
3472		2	max	0.598	71	2.377	71	0	107	1.05	71	11.632	71	11.632	71
3473			min	-0.553	77	-2.196	77	0	12	-0.97	77	-10.748	77	-10.748	77
3474		3	max	0.101	71	0.584	71	0	107	0.166	71	0.536	71	0.536	71
3475			min	-0.093	107	-0.538	107	0	12	-0.153	107	-0.494	107	-0.494	107
3476		4	max	0.634	77	3.517	77	0	107	1.048	77	5.77	71	5.77	71
3477			min	-0.685	71	-3.802	71	0	12	-1.133	71	-5.338	77	-5.338	77
3478		5	max	0.634	77	2.076	77	0	107	1.142	77	15.641	71	15.641	71
3479			min	-0.685	71	-2.245	71	0	12	-1.235	71	-14.467	77	-14.467	77
3480	M707	1	max	0.103	75	0	107	0	107	0.208	75	3.638	75	3.638	75
3481			min	-0.093	73	0	12	0	12	-0.188	73	-3.282	73	-3.282	73
3482		2	max	0.103	75	0.411	75	0	107	0.182	75	2.012	75	2.012	75
3483			min	-0.093	73	-0.371	73	0	12	-0.164	73	-1.815	73	-1.815	73
3484		3	max	0.015	75	0.089	75	0	107	0.025	75	0.082	75	0.082	75
3485			min	-0.02	103	-0.117	103	0	12	-0.033	103	-0.107	103	-0.107	103
3486		4	max	0.1	77	0.555	77	0	107	0.165	77	1.046	71	1.046	71
3487			min	-0.124	71	-0.689	71	0	12	-0.205	71	-0.842	77	-0.842	77
3488		5	max	0.1	77	0.328	77	0	107	0.18	77	2.835	71	2.835	71
3489			min	-0.124	71	-0.407	71	0	12	-0.224	71	-2.282	77	-2.282	77
3490	M708	1	max	0.06	71	4.116	71	NC		NC		NC		NC	
3491			min	-0.059	103	-4.04	103	NC		NC		NC		NC	
3492		2	max	0.06	71	4.116	71	NC		NC		NC		NC	
3493			min	-0.059	103	-4.04	103	NC		NC		NC		NC	
3494		3	max	0.008	71	0.577	71	NC		NC		NC		NC	
3495			min	-0.008	107	-0.578	107	NC		NC		NC		NC	
3496		4	max	0.072	103	4.945	103	NC		NC		NC		NC	
3497			min	-0.073	71	-5.03	71	NC		NC		NC		NC	
3498		5	max	0.072	103	4.945	103	NC		NC		NC		NC	
3499			min	-0.073	71	-5.03	71	NC		NC		NC		NC	
3500	M709	1	max	0.124	77	3.827	77	NC		NC		NC		NC	
3501			min	-0.124	71	-3.83	71	NC		NC		NC		NC	
3502		2	max	0.062	77	1.912	77	NC		NC		NC		NC	
3503			min	-0.062	101	-1.916	101	NC		NC		NC		NC	
3504		3	max	0	75	-0.001	75	NC		NC		NC		NC	
3505			min	0	16	-0.005	16	NC		NC		NC		NC	
3506		4	max	0.062	75	1.913	75	NC		NC		NC		NC	
3507			min	-0.062	103	-1.918	103	NC		NC		NC		NC	
3508		5	max	0.124	75	3.828	75	NC		NC		NC		NC	
3509			min	-0.124	73	-3.833	73	NC		NC		NC		NC	
3510	M710	1	max	0.118	107	3.63	107	NC		NC		NC		NC	
3511			min	-0.118	71	-3.642	71	NC		NC		NC		NC	
3512		2	max	0.059	107	1.816	107	NC		NC		NC		NC	
3513			min	-0.059	71	-1.827	71	NC		NC		NC		NC	
3514		3	max	0.001	96	0.046	96	NC		NC		NC		NC	
3515			min	-0.002	102	-0.056	102	NC		NC		NC		NC	
3516		4	max	0.058	105	1.806	105	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3517			min	-0.059	73	-1.815	73	NC		NC		NC		NC	
3518		5	max	0.117	105	3.62	105	NC		NC		NC		NC	
3519			min	-0.117	73	-3.63	73	NC		NC		NC		NC	
3520	M711	1	max	0.088	103	0	107	0	107	0.178	103	3.101	103	3.101	103
3521			min	-0.083	101	0	12	0	12	-0.167	101	-2.911	101	-2.911	101
3522		2	max	0.036	103	0.142	103	0	107	0.063	103	0.697	103	0.697	103
3523			min	-0.033	105	-0.132	105	0	12	-0.058	105	-0.644	105	-0.644	105
3524		3	max	0.017	74	0.1	74	0	107	0.028	74	0.091	74	0.091	74
3525			min	-0.015	76	-0.088	76	0	12	-0.025	76	-0.081	76	-0.081	76
3526		4	max	0.036	101	0.202	101	0	107	0.06	101	0.283	107	0.283	107
3527			min	-0.034	107	-0.187	107	0	12	-0.056	107	-0.307	101	-0.307	101
3528		5	max	0.087	101	0.285	101	0	107	0.157	101	1.963	103	1.963	103
3529			min	-0.086	103	-0.282	103	0	12	-0.155	103	-1.989	101	-1.989	101
3530	M712	1	max	0.07	103	0	107	0	107	0.142	103	2.475	103	2.475	103
3531			min	-0.077	101	0	12	0	12	-0.155	101	-2.71	101	-2.71	101
3532		2	max	0.031	107	0.125	107	0	107	0.055	107	0.611	107	0.611	107
3533			min	-0.037	101	-0.147	101	0	12	-0.065	101	-0.72	101	-0.72	101
3534		3	max	0.005	96	0.028	96	0	107	0.008	96	0.026	96	0.026	96
3535			min	-0.014	15	-0.08	15	0	12	-0.023	15	-0.074	15	-0.074	15
3536		4	max	0.033	105	0.182	105	0	107	0.054	105	0.323	103	0.323	103
3537			min	-0.038	103	-0.213	103	0	12	-0.063	103	-0.276	105	-0.276	105
3538		5	max	0.072	105	0.235	105	0	107	0.129	105	1.796	103	1.796	103
3539			min	-0.079	103	-0.258	103	0	12	-0.142	103	-1.635	105	-1.635	105
3540	M713	1	max	0.118	73	3.641	73	NC		NC		NC		NC	
3541			min	-0.117	75	-3.618	75	NC		NC		NC		NC	
3542		2	max	0.059	73	1.826	73	NC		NC		NC		NC	
3543			min	-0.058	75	-1.805	75	NC		NC		NC		NC	
3544		3	max	0.002	102	0.06	102	NC		NC		NC		NC	
3545			min	-0.001	96	-0.044	96	NC		NC		NC		NC	
3546		4	max	0.059	71	1.827	71	NC		NC		NC		NC	
3547			min	-0.059	77	-1.809	77	NC		NC		NC		NC	
3548		5	max	0.118	71	3.641	71	NC		NC		NC		NC	
3549			min	-0.117	77	-3.623	77	NC		NC		NC		NC	
3550	M714	1	max	0.368	71	17.059	71	NC		NC		NC		NC	
3551			min	-0.366	103	-16.955	103	NC		NC		NC		NC	
3552		2	max	0.368	71	17.059	71	NC		NC		NC		NC	
3553			min	-0.366	103	-16.955	103	NC		NC		NC		NC	
3554		3	max	0.024	71	1.11	71	NC		NC		NC		NC	
3555			min	-0.023	107	-1.07	107	NC		NC		NC		NC	
3556		4	max	0.181	103	8.367	103	NC		NC		NC		NC	
3557			min	-0.18	71	-8.324	71	NC		NC		NC		NC	
3558		5	max	0.336	103	15.583	103	NC		NC		NC		NC	
3559			min	-0.337	71	-15.599	71	NC		NC		NC		NC	
3560	M715	1	max	0.016	103	0.741	103	NC		NC		NC		NC	
3561			min	-0.016	71	-0.757	71	NC		NC		NC		NC	
3562		2	max	0.016	103	0.741	103	NC		NC		NC		NC	
3563			min	-0.016	71	-0.757	71	NC		NC		NC		NC	
3564		3	max	0.016	103	0.741	103	NC		NC		NC		NC	
3565			min	-0.016	71	-0.757	71	NC		NC		NC		NC	
3566		4	max	0.045	71	2.096	71	NC		NC		NC		NC	
3567			min	-0.043	103	-1.969	103	NC		NC		NC		NC	
3568		5	max	0.045	71	2.096	71	NC		NC		NC		NC	
3569			min	-0.043	103	-1.969	103	NC		NC		NC		NC	
3570	M716	1	max	0.017	103	0.768	103	NC		NC		NC		NC	
3571			min	-0.016	71	-0.752	71	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3572		2	max	0.017	103	0.768	103	NC		NC		NC		NC	
3573			min	-0.016	71	-0.752	71	NC		NC		NC		NC	
3574		3	max	0.017	103	0.768	103	NC		NC		NC		NC	
3575			min	-0.016	71	-0.752	71	NC		NC		NC		NC	
3576		4	max	0.044	71	2.02	71	NC		NC		NC		NC	
3577			min	-0.043	103	-2.006	103	NC		NC		NC		NC	
3578		5	max	0.044	71	2.02	71	NC		NC		NC		NC	
3579			min	-0.043	103	-2.006	103	NC		NC		NC		NC	
3580	M717	1	max	0.002	98	0.071	98	NC		NC		NC		NC	
3581			min	-0.002	62	-0.107	62	NC		NC		NC		NC	
3582		2	max	0.002	98	0.071	98	NC		NC		NC		NC	
3583			min	-0.002	62	-0.107	62	NC		NC		NC		NC	
3584		3	max	0.002	98	0.071	98	NC		NC		NC		NC	
3585			min	-0.002	62	-0.107	62	NC		NC		NC		NC	
3586		4	max	0.014	74	0.635	74	NC		NC		NC		NC	
3587			min	-0.014	102	-0.654	102	NC		NC		NC		NC	
3588		5	max	0.014	74	0.635	74	NC		NC		NC		NC	
3589			min	-0.014	102	-0.654	102	NC		NC		NC		NC	
3590	M718	1	max	0.499	71	23.113	71	NC		NC		NC		NC	
3591			min	-0.499	103	-23.099	103	NC		NC		NC		NC	
3592		2	max	0.499	71	23.113	71	NC		NC		NC		NC	
3593			min	-0.499	103	-23.099	103	NC		NC		NC		NC	
3594		3	max	0.025	71	1.17	71	NC		NC		NC		NC	
3595			min	-0.025	107	-1.158	107	NC		NC		NC		NC	
3596		4	max	0.236	103	10.936	103	NC		NC		NC		NC	
3597			min	-0.236	71	-10.921	71	NC		NC		NC		NC	
3598		5	max	0.447	103	20.684	103	NC		NC		NC		NC	
3599			min	-0.446	71	-20.669	71	NC		NC		NC		NC	
3600	M719	1	max	0.366	71	16.94	71	NC		NC		NC		NC	
3601			min	-0.368	103	-17.03	103	NC		NC		NC		NC	
3602		2	max	0.366	71	16.94	71	NC		NC		NC		NC	
3603			min	-0.368	103	-17.03	103	NC		NC		NC		NC	
3604		3	max	0.023	75	1.051	75	NC		NC		NC		NC	
3605			min	-0.023	103	-1.081	103	NC		NC		NC		NC	
3606		4	max	0.18	103	8.351	103	NC		NC		NC		NC	
3607			min	-0.181	71	-8.381	71	NC		NC		NC		NC	
3608		5	max	0.337	103	15.626	103	NC		NC		NC		NC	
3609			min	-0.337	71	-15.599	71	NC		NC		NC		NC	
3610	M720	1	max	0.003	72	0.198	72	NC		NC		NC		NC	
3611			min	-0.003	104	-0.172	104	NC		NC		NC		NC	
3612		2	max	0.003	72	0.198	72	NC		NC		NC		NC	
3613			min	-0.003	104	-0.172	104	NC		NC		NC		NC	
3614		3	max	0.003	72	0.198	72	NC		NC		NC		NC	
3615			min	-0.003	104	-0.172	104	NC		NC		NC		NC	
3616		4	max	0.003	72	0.198	72	NC		NC		NC		NC	
3617			min	-0.003	104	-0.172	104	NC		NC		NC		NC	
3618		5	max	0.003	72	0.198	72	NC		NC		NC		NC	
3619			min	-0.003	104	-0.172	104	NC		NC		NC		NC	
3620	M721	1	max	0.003	76	0.195	76	NC		NC		NC		NC	
3621			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
3622		2	max	0.003	76	0.195	76	NC		NC		NC		NC	
3623			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
3624		3	max	0.003	76	0.195	76	NC		NC		NC		NC	
3625			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
3626		4	max	0.003	76	0.195	76	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3627			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
3628		5	max	0.003	76	0.195	76	NC		NC		NC		NC	
3629			min	-0.003	104	-0.184	104	NC		NC		NC		NC	
3630	M722	1	max	0.003	104	0.196	104	NC		NC		NC		NC	
3631			min	-0.004	72	-0.218	72	NC		NC		NC		NC	
3632		2	max	0.003	104	0.196	104	NC		NC		NC		NC	
3633			min	-0.004	72	-0.218	72	NC		NC		NC		NC	
3634		3	max	0.003	104	0.196	104	NC		NC		NC		NC	
3635			min	-0.004	72	-0.218	72	NC		NC		NC		NC	
3636		4	max	0.003	104	0.196	104	NC		NC		NC		NC	
3637			min	-0.004	72	-0.218	72	NC		NC		NC		NC	
3638		5	max	0.003	104	0.196	104	NC		NC		NC		NC	
3639			min	-0.004	72	-0.218	72	NC		NC		NC		NC	
3640	M723	1	max	0.221	101	13.682	101	NC		NC		NC		NC	
3641			min	-0.222	73	-13.754	73	NC		NC		NC		NC	
3642		2	max	0.221	101	13.682	101	NC		NC		NC		NC	
3643			min	-0.222	73	-13.754	73	NC		NC		NC		NC	
3644		3	max	0.006	105	0.357	105	NC		NC		NC		NC	
3645			min	-0.006	73	-0.392	73	NC		NC		NC		NC	
3646		4	max	0.091	107	5.604	107	NC		NC		NC		NC	
3647			min	-0.091	71	-5.652	71	NC		NC		NC		NC	
3648		5	max	0.188	103	11.661	103	NC		NC		NC		NC	
3649			min	-0.189	71	-11.693	71	NC		NC		NC		NC	
3650	M724	1	max	0.004	70	0.129	70	NC		NC		NC		NC	
3651			min	-0.003	76	-0.093	76	NC		NC		NC		NC	
3652		2	max	0.004	70	0.129	70	NC		NC		NC		NC	
3653			min	-0.003	76	-0.093	76	NC		NC		NC		NC	
3654		3	max	0.004	70	0.129	70	NC		NC		NC		NC	
3655			min	-0.003	76	-0.093	76	NC		NC		NC		NC	
3656		4	max	0.004	70	0.129	70	NC		NC		NC		NC	
3657			min	-0.003	76	-0.093	76	NC		NC		NC		NC	
3658		5	max	0.004	70	0.129	70	NC		NC		NC		NC	
3659			min	-0.003	76	-0.093	76	NC		NC		NC		NC	
3660	M725	1	max	0.001	76	0.033	76	NC		NC		NC		NC	
3661			min	-0.003	15	-0.121	15	NC		NC		NC		NC	
3662		2	max	0.001	76	0.033	76	NC		NC		NC		NC	
3663			min	-0.003	15	-0.121	15	NC		NC		NC		NC	
3664		3	max	0.001	76	0.033	76	NC		NC		NC		NC	
3665			min	-0.003	15	-0.121	15	NC		NC		NC		NC	
3666		4	max	0.001	76	0.033	76	NC		NC		NC		NC	
3667			min	-0.003	15	-0.121	15	NC		NC		NC		NC	
3668		5	max	0.001	76	0.033	76	NC		NC		NC		NC	
3669			min	-0.003	15	-0.121	15	NC		NC		NC		NC	
3670	M726	1	max	0.001	100	0.042	100	NC		NC		NC		NC	
3671			min	-0.001	72	-0.042	72	NC		NC		NC		NC	
3672		2	max	0.001	100	0.042	100	NC		NC		NC		NC	
3673			min	-0.001	72	-0.042	72	NC		NC		NC		NC	
3674		3	max	0.001	100	0.042	100	NC		NC		NC		NC	
3675			min	-0.001	72	-0.042	72	NC		NC		NC		NC	
3676		4	max	0.001	100	0.042	100	NC		NC		NC		NC	
3677			min	-0.001	72	-0.042	72	NC		NC		NC		NC	
3678		5	max	0.001	100	0.042	100	NC		NC		NC		NC	
3679			min	-0.001	72	-0.042	72	NC		NC		NC		NC	
3680	M727	1	max	0.007	13	0.496	13	NC		NC		NC		NC	
3681			min	-0.001	76	-0.089	76	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3682		2	max	0.007	13	0.496	13	NC		NC		NC		NC	
3683			min	-0.001	76	-0.089	76	NC		NC		NC		NC	
3684		3	max	0.007	13	0.496	13	NC		NC		NC		NC	
3685			min	-0.001	76	-0.089	76	NC		NC		NC		NC	
3686		4	max	0.007	13	0.496	13	NC		NC		NC		NC	
3687			min	-0.001	76	-0.089	76	NC		NC		NC		NC	
3688		5	max	0.007	13	0.496	13	NC		NC		NC		NC	
3689			min	-0.001	76	-0.089	76	NC		NC		NC		NC	
3690	M728	1	max	0.001	15	0.035	15	NC		NC		NC		NC	
3691			min	0	96	-0.021	96	NC		NC		NC		NC	
3692		2	max	0.001	15	0.035	15	NC		NC		NC		NC	
3693			min	0	96	-0.021	96	NC		NC		NC		NC	
3694		3	max	0.001	15	0.035	15	NC		NC		NC		NC	
3695			min	0	96	-0.021	96	NC		NC		NC		NC	
3696		4	max	0.001	15	0.035	15	NC		NC		NC		NC	
3697			min	0	96	-0.021	96	NC		NC		NC		NC	
3698		5	max	0.001	15	0.035	15	NC		NC		NC		NC	
3699			min	0	96	-0.021	96	NC		NC		NC		NC	
3700	M729	1	max	0.004	72	0.246	72	NC		NC		NC		NC	
3701			min	-0.003	104	-0.217	104	NC		NC		NC		NC	
3702		2	max	0.004	72	0.246	72	NC		NC		NC		NC	
3703			min	-0.003	104	-0.217	104	NC		NC		NC		NC	
3704		3	max	0.004	72	0.246	72	NC		NC		NC		NC	
3705			min	-0.003	104	-0.217	104	NC		NC		NC		NC	
3706		4	max	0.004	72	0.246	72	NC		NC		NC		NC	
3707			min	-0.003	104	-0.217	104	NC		NC		NC		NC	
3708		5	max	0.004	72	0.246	72	NC		NC		NC		NC	
3709			min	-0.003	104	-0.217	104	NC		NC		NC		NC	
3710	M730	1	max	0.006	74	0.199	74	NC		NC		NC		NC	
3711			min	-0.006	106	-0.2	106	NC		NC		NC		NC	
3712		2	max	0.006	74	0.199	74	NC		NC		NC		NC	
3713			min	-0.006	106	-0.2	106	NC		NC		NC		NC	
3714		3	max	0.006	74	0.199	74	NC		NC		NC		NC	
3715			min	-0.006	106	-0.2	106	NC		NC		NC		NC	
3716		4	max	0.006	74	0.199	74	NC		NC		NC		NC	
3717			min	-0.006	106	-0.2	106	NC		NC		NC		NC	
3718		5	max	0.006	74	0.199	74	NC		NC		NC		NC	
3719			min	-0.006	106	-0.2	106	NC		NC		NC		NC	
3720	M731	1	max	0.001	13	0.087	13	NC		NC		NC		NC	
3721			min	0	104	-0.008	104	NC		NC		NC		NC	
3722		2	max	0.001	13	0.087	13	NC		NC		NC		NC	
3723			min	0	104	-0.008	104	NC		NC		NC		NC	
3724		3	max	0.001	13	0.087	13	NC		NC		NC		NC	
3725			min	0	104	-0.008	104	NC		NC		NC		NC	
3726		4	max	0.001	13	0.087	13	NC		NC		NC		NC	
3727			min	0	104	-0.008	104	NC		NC		NC		NC	
3728		5	max	0.001	13	0.087	13	NC		NC		NC		NC	
3729			min	0	104	-0.008	104	NC		NC		NC		NC	
3730	M732	1	max	0	107	0.005	107	NC		NC		NC		NC	
3731			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
3732		2	max	0	107	0.005	107	NC		NC		NC		NC	
3733			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
3734		3	max	0	107	0.005	107	NC		NC		NC		NC	
3735			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
3736		4	max	0	107	0.005	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3737			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
3738		5	max	0	107	0.005	107	NC		NC		NC		NC	
3739			min	-0.001	13	-0.038	13	NC		NC		NC		NC	
3740	M733	1	max	0.002	13	0.097	13	NC		NC		NC		NC	
3741			min	0	104	-0.013	104	NC		NC		NC		NC	
3742		2	max	0.002	13	0.097	13	NC		NC		NC		NC	
3743			min	0	104	-0.013	104	NC		NC		NC		NC	
3744		3	max	0.002	13	0.097	13	NC		NC		NC		NC	
3745			min	0	104	-0.013	104	NC		NC		NC		NC	
3746		4	max	0.002	13	0.097	13	NC		NC		NC		NC	
3747			min	0	104	-0.013	104	NC		NC		NC		NC	
3748		5	max	0.002	13	0.097	13	NC		NC		NC		NC	
3749			min	0	104	-0.013	104	NC		NC		NC		NC	
3750	M734	1	max	0	107	0.005	107	NC		NC		NC		NC	
3751			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
3752		2	max	0	107	0.005	107	NC		NC		NC		NC	
3753			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
3754		3	max	0	107	0.005	107	NC		NC		NC		NC	
3755			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
3756		4	max	0	107	0.005	107	NC		NC		NC		NC	
3757			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
3758		5	max	0	107	0.005	107	NC		NC		NC		NC	
3759			min	-0.001	13	-0.043	13	NC		NC		NC		NC	
3760	M735	1	max	0.002	100	0.126	100	NC		NC		NC		NC	
3761			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
3762		2	max	0.002	100	0.126	100	NC		NC		NC		NC	
3763			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
3764		3	max	0.002	100	0.126	100	NC		NC		NC		NC	
3765			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
3766		4	max	0.002	100	0.126	100	NC		NC		NC		NC	
3767			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
3768		5	max	0.002	100	0.126	100	NC		NC		NC		NC	
3769			min	-0.003	19	-0.213	19	NC		NC		NC		NC	
3770	M736	1	max	0	68	0.004	68	NC		NC		NC		NC	
3771			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
3772		2	max	0	68	0.004	68	NC		NC		NC		NC	
3773			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
3774		3	max	0	68	0.004	68	NC		NC		NC		NC	
3775			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
3776		4	max	0	68	0.004	68	NC		NC		NC		NC	
3777			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
3778		5	max	0	68	0.004	68	NC		NC		NC		NC	
3779			min	-0.007	13	-0.471	13	NC		NC		NC		NC	
3780	M737	1	max	0	98	0.005	98	NC		NC		NC		NC	
3781			min	-0.012	13	-0.42	13	NC		NC		NC		NC	
3782		2	max	0	98	0.005	98	NC		NC		NC		NC	
3783			min	-0.012	13	-0.42	13	NC		NC		NC		NC	
3784		3	max	0	98	0.005	98	NC		NC		NC		NC	
3785			min	-0.012	13	-0.42	13	NC		NC		NC		NC	
3786		4	max	0	98	0.005	98	NC		NC		NC		NC	
3787			min	-0.012	13	-0.42	13	NC		NC		NC		NC	
3788		5	max	0	98	0.005	98	NC		NC		NC		NC	
3789			min	-0.012	13	-0.42	13	NC		NC		NC		NC	
3790	M738	1	max	0.003	68	0.106	68	NC		NC		NC		NC	
3791			min	-0.016	13	-0.559	13	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3792		2	max	0.003	68	0.106	68	NC		NC		NC		NC	
3793			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
3794		3	max	0.003	68	0.106	68	NC		NC		NC		NC	
3795			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
3796		4	max	0.003	68	0.106	68	NC		NC		NC		NC	
3797			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
3798		5	max	0.003	68	0.106	68	NC		NC		NC		NC	
3799			min	-0.016	13	-0.559	13	NC		NC		NC		NC	
3800	M739	1	max	0.006	19	0.409	19	NC		NC		NC		NC	
3801			min	-0.001	74	-0.088	74	NC		NC		NC		NC	
3802		2	max	0.006	19	0.409	19	NC		NC		NC		NC	
3803			min	-0.001	74	-0.088	74	NC		NC		NC		NC	
3804		3	max	0.006	19	0.409	19	NC		NC		NC		NC	
3805			min	-0.001	74	-0.088	74	NC		NC		NC		NC	
3806		4	max	0.006	19	0.409	19	NC		NC		NC		NC	
3807			min	-0.001	74	-0.088	74	NC		NC		NC		NC	
3808		5	max	0.006	19	0.409	19	NC		NC		NC		NC	
3809			min	-0.001	74	-0.088	74	NC		NC		NC		NC	
3810	M740	1	max	0.011	13	0.761	13	NC		NC		NC		NC	
3811			min	0	68	0.028	68	NC		NC		NC		NC	
3812		2	max	0.011	13	0.761	13	NC		NC		NC		NC	
3813			min	0	68	0.028	68	NC		NC		NC		NC	
3814		3	max	0.011	13	0.761	13	NC		NC		NC		NC	
3815			min	0	68	0.028	68	NC		NC		NC		NC	
3816		4	max	0.011	13	0.761	13	NC		NC		NC		NC	
3817			min	0	68	0.028	68	NC		NC		NC		NC	
3818		5	max	0.011	13	0.761	13	NC		NC		NC		NC	
3819			min	0	68	0.028	68	NC		NC		NC		NC	
3820	M741	1	max	0.013	13	0.461	13	NC		NC		NC		NC	
3821			min	0	98	0.001	98	NC		NC		NC		NC	
3822		2	max	0.013	13	0.461	13	NC		NC		NC		NC	
3823			min	0	98	0.001	98	NC		NC		NC		NC	
3824		3	max	0.013	13	0.461	13	NC		NC		NC		NC	
3825			min	0	98	0.001	98	NC		NC		NC		NC	
3826		4	max	0.013	13	0.461	13	NC		NC		NC		NC	
3827			min	0	98	0.001	98	NC		NC		NC		NC	
3828		5	max	0.013	13	0.461	13	NC		NC		NC		NC	
3829			min	0	98	0.001	98	NC		NC		NC		NC	
3830	M742	1	max	0.006	92	0.219	92	NC		NC		NC		NC	
3831			min	-0.005	68	-0.163	68	NC		NC		NC		NC	
3832		2	max	0.006	92	0.219	92	NC		NC		NC		NC	
3833			min	-0.005	68	-0.163	68	NC		NC		NC		NC	
3834		3	max	0.006	92	0.219	92	NC		NC		NC		NC	
3835			min	-0.005	68	-0.163	68	NC		NC		NC		NC	
3836		4	max	0.006	92	0.219	92	NC		NC		NC		NC	
3837			min	-0.005	68	-0.163	68	NC		NC		NC		NC	
3838		5	max	0.006	92	0.219	92	NC		NC		NC		NC	
3839			min	-0.005	68	-0.163	68	NC		NC		NC		NC	
3840	M743	1	max	0.003	94	0.09	94	NC		NC		NC		NC	
3841			min	-0.002	96	-0.061	96	NC		NC		NC		NC	
3842		2	max	0.003	94	0.09	94	NC		NC		NC		NC	
3843			min	-0.002	96	-0.061	96	NC		NC		NC		NC	
3844		3	max	0.003	94	0.09	94	NC		NC		NC		NC	
3845			min	-0.002	96	-0.061	96	NC		NC		NC		NC	
3846		4	max	0.003	94	0.09	94	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3847			min	-0.002	96	-0.061	96	NC		NC		NC		NC	
3848		5	max	0.003	94	0.09	94	NC		NC		NC		NC	
3849			min	-0.002	96	-0.061	96	NC		NC		NC		NC	
3850	M744	1	max	0.001	102	0.054	102	NC		NC		NC		NC	
3851			min	-0.001	104	-0.036	104	NC		NC		NC		NC	
3852		2	max	0.001	102	0.054	102	NC		NC		NC		NC	
3853			min	-0.001	104	-0.036	104	NC		NC		NC		NC	
3854		3	max	0.001	102	0.054	102	NC		NC		NC		NC	
3855			min	-0.001	104	-0.036	104	NC		NC		NC		NC	
3856		4	max	0.001	102	0.054	102	NC		NC		NC		NC	
3857			min	-0.001	104	-0.036	104	NC		NC		NC		NC	
3858		5	max	0.001	102	0.054	102	NC		NC		NC		NC	
3859			min	-0.001	104	-0.036	104	NC		NC		NC		NC	
3860	M745	1	max	0.001	100	0.056	100	NC		NC		NC		NC	
3861			min	-0.001	72	-0.058	72	NC		NC		NC		NC	
3862		2	max	0.001	100	0.056	100	NC		NC		NC		NC	
3863			min	-0.001	72	-0.058	72	NC		NC		NC		NC	
3864		3	max	0.001	100	0.056	100	NC		NC		NC		NC	
3865			min	-0.001	72	-0.058	72	NC		NC		NC		NC	
3866		4	max	0.001	100	0.056	100	NC		NC		NC		NC	
3867			min	-0.001	72	-0.058	72	NC		NC		NC		NC	
3868		5	max	0.001	100	0.056	100	NC		NC		NC		NC	
3869			min	-0.001	72	-0.058	72	NC		NC		NC		NC	
3870	M746	1	max	0.002	96	0.058	96	NC		NC		NC		NC	
3871			min	-0.003	15	-0.103	15	NC		NC		NC		NC	
3872		2	max	0.002	96	0.058	96	NC		NC		NC		NC	
3873			min	-0.003	15	-0.103	15	NC		NC		NC		NC	
3874		3	max	0.002	96	0.058	96	NC		NC		NC		NC	
3875			min	-0.003	15	-0.103	15	NC		NC		NC		NC	
3876		4	max	0.002	96	0.058	96	NC		NC		NC		NC	
3877			min	-0.003	15	-0.103	15	NC		NC		NC		NC	
3878		5	max	0.002	96	0.058	96	NC		NC		NC		NC	
3879			min	-0.003	15	-0.103	15	NC		NC		NC		NC	
3880	M747	1	max	0.007	106	0.634	106	NC		NC		NC		NC	
3881			min	-0.01	13	-0.915	13	NC		NC		NC		NC	
3882		2	max	0.007	106	0.634	106	NC		NC		NC		NC	
3883			min	-0.01	13	-0.915	13	NC		NC		NC		NC	
3884		3	max	0.007	106	0.634	106	NC		NC		NC		NC	
3885			min	-0.01	13	-0.915	13	NC		NC		NC		NC	
3886		4	max	0.007	106	0.634	106	NC		NC		NC		NC	
3887			min	-0.01	13	-0.915	13	NC		NC		NC		NC	
3888		5	max	0.007	106	0.634	106	NC		NC		NC		NC	
3889			min	-0.01	13	-0.915	13	NC		NC		NC		NC	
3890	M748	1	max	0.007	76	0.692	76	NC		NC		NC		NC	
3891			min	-0.013	13	-1.222	13	NC		NC		NC		NC	
3892		2	max	0.007	76	0.692	76	NC		NC		NC		NC	
3893			min	-0.013	13	-1.222	13	NC		NC		NC		NC	
3894		3	max	0.007	76	0.692	76	NC		NC		NC		NC	
3895			min	-0.013	13	-1.222	13	NC		NC		NC		NC	
3896		4	max	0.007	76	0.692	76	NC		NC		NC		NC	
3897			min	-0.013	13	-1.222	13	NC		NC		NC		NC	
3898		5	max	0.007	76	0.692	76	NC		NC		NC		NC	
3899			min	-0.013	13	-1.222	13	NC		NC		NC		NC	
3900	M749	1	max	0.007	104	0.717	104	NC		NC		NC		NC	
3901			min	-0.011	15	-1.065	15	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3902		2	max	0.007	104	0.717	104	NC		NC		NC		NC	
3903			min	-0.011	15	-1.065	15	NC		NC		NC		NC	
3904		3	max	0.007	104	0.717	104	NC		NC		NC		NC	
3905			min	-0.011	15	-1.065	15	NC		NC		NC		NC	
3906		4	max	0.007	104	0.717	104	NC		NC		NC		NC	
3907			min	-0.011	15	-1.065	15	NC		NC		NC		NC	
3908		5	max	0.007	104	0.717	104	NC		NC		NC		NC	
3909			min	-0.011	15	-1.065	15	NC		NC		NC		NC	
3910	M750	1	max	0.007	74	0.647	74	NC		NC		NC		NC	
3911			min	-0.014	15	-1.295	15	NC		NC		NC		NC	
3912		2	max	0.007	74	0.647	74	NC		NC		NC		NC	
3913			min	-0.014	15	-1.295	15	NC		NC		NC		NC	
3914		3	max	0.007	74	0.647	74	NC		NC		NC		NC	
3915			min	-0.014	15	-1.295	15	NC		NC		NC		NC	
3916		4	max	0.007	74	0.647	74	NC		NC		NC		NC	
3917			min	-0.014	15	-1.295	15	NC		NC		NC		NC	
3918		5	max	0.007	74	0.647	74	NC		NC		NC		NC	
3919			min	-0.014	15	-1.295	15	NC		NC		NC		NC	
3920	M751	1	max	0.011	106	0.372	106	NC		NC		NC		NC	
3921			min	-0.015	70	-0.511	70	NC		NC		NC		NC	
3922		2	max	0.011	106	0.372	106	NC		NC		NC		NC	
3923			min	-0.015	70	-0.511	70	NC		NC		NC		NC	
3924		3	max	0.011	106	0.372	106	NC		NC		NC		NC	
3925			min	-0.015	70	-0.511	70	NC		NC		NC		NC	
3926		4	max	0.011	106	0.372	106	NC		NC		NC		NC	
3927			min	-0.015	70	-0.511	70	NC		NC		NC		NC	
3928		5	max	0.011	106	0.372	106	NC		NC		NC		NC	
3929			min	-0.015	70	-0.511	70	NC		NC		NC		NC	
3930	M752	1	max	0.013	70	0.443	70	NC		NC		NC		NC	
3931			min	-0.008	106	-0.261	106	NC		NC		NC		NC	
3932		2	max	0.013	70	0.443	70	NC		NC		NC		NC	
3933			min	-0.008	106	-0.261	106	NC		NC		NC		NC	
3934		3	max	0.013	70	0.443	70	NC		NC		NC		NC	
3935			min	-0.008	106	-0.261	106	NC		NC		NC		NC	
3936		4	max	0.013	70	0.443	70	NC		NC		NC		NC	
3937			min	-0.008	106	-0.261	106	NC		NC		NC		NC	
3938		5	max	0.013	70	0.443	70	NC		NC		NC		NC	
3939			min	-0.008	106	-0.261	106	NC		NC		NC		NC	
3940	M753	1	max	0.01	77	0.969	77	NC		NC		NC		NC	
3941			min	-0.016	13	-1.533	13	NC		NC		NC		NC	
3942		2	max	0.01	77	0.969	77	NC		NC		NC		NC	
3943			min	-0.016	13	-1.533	13	NC		NC		NC		NC	
3944		3	max	0.01	77	0.969	77	NC		NC		NC		NC	
3945			min	-0.016	13	-1.533	13	NC		NC		NC		NC	
3946		4	max	0.01	77	0.969	77	NC		NC		NC		NC	
3947			min	-0.016	13	-1.533	13	NC		NC		NC		NC	
3948		5	max	0.01	77	0.969	77	NC		NC		NC		NC	
3949			min	-0.016	13	-1.533	13	NC		NC		NC		NC	
3950	M754	1	max	0.013	75	1.275	75	NC		NC		NC		NC	
3951			min	-0.013	73	-1.276	73	NC		NC		NC		NC	
3952		2	max	0.013	75	1.275	75	NC		NC		NC		NC	
3953			min	-0.013	73	-1.276	73	NC		NC		NC		NC	
3954		3	max	0.013	75	1.275	75	NC		NC		NC		NC	
3955			min	-0.013	73	-1.276	73	NC		NC		NC		NC	
3956		4	max	0.013	75	1.275	75	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
3957			min	-0.013	73	-1.276	73	NC		NC		NC		NC	
3958		5	max	0.013	75	1.275	75	NC		NC		NC		NC	
3959			min	-0.013	73	-1.276	73	NC		NC		NC		NC	
3960	M755	1	max	0.001	104	0.143	104	NC		NC		NC		NC	
3961			min	-0.018	15	-1.684	15	NC		NC		NC		NC	
3962		2	max	0.001	104	0.143	104	NC		NC		NC		NC	
3963			min	-0.018	15	-1.684	15	NC		NC		NC		NC	
3964		3	max	0.001	104	0.143	104	NC		NC		NC		NC	
3965			min	-0.018	15	-1.684	15	NC		NC		NC		NC	
3966		4	max	0.001	104	0.143	104	NC		NC		NC		NC	
3967			min	-0.018	15	-1.684	15	NC		NC		NC		NC	
3968		5	max	0.001	104	0.143	104	NC		NC		NC		NC	
3969			min	-0.018	15	-1.684	15	NC		NC		NC		NC	
3970	M756	1	max	0.005	70	0.49	70	NC		NC		NC		NC	
3971			min	-0.004	106	-0.405	106	NC		NC		NC		NC	
3972		2	max	0.005	70	0.49	70	NC		NC		NC		NC	
3973			min	-0.004	106	-0.405	106	NC		NC		NC		NC	
3974		3	max	0.005	70	0.49	70	NC		NC		NC		NC	
3975			min	-0.004	106	-0.405	106	NC		NC		NC		NC	
3976		4	max	0.005	70	0.49	70	NC		NC		NC		NC	
3977			min	-0.004	106	-0.405	106	NC		NC		NC		NC	
3978		5	max	0.005	70	0.49	70	NC		NC		NC		NC	
3979			min	-0.004	106	-0.405	106	NC		NC		NC		NC	
3980	M757	1	max	0.003	76	0.258	76	NC		NC		NC		NC	
3981			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
3982		2	max	0.003	76	0.258	76	NC		NC		NC		NC	
3983			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
3984		3	max	0.003	76	0.258	76	NC		NC		NC		NC	
3985			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
3986		4	max	0.003	76	0.258	76	NC		NC		NC		NC	
3987			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
3988		5	max	0.003	76	0.258	76	NC		NC		NC		NC	
3989			min	-0.018	13	-1.749	13	NC		NC		NC		NC	
3990	M758	1	max	0.003	68	0.26	68	NC		NC		NC		NC	
3991			min	-0.014	13	-1.306	13	NC		NC		NC		NC	
3992		2	max	0.003	68	0.26	68	NC		NC		NC		NC	
3993			min	-0.014	13	-1.306	13	NC		NC		NC		NC	
3994		3	max	0.003	68	0.26	68	NC		NC		NC		NC	
3995			min	-0.014	13	-1.306	13	NC		NC		NC		NC	
3996		4	max	0.003	68	0.26	68	NC		NC		NC		NC	
3997			min	-0.014	13	-1.306	13	NC		NC		NC		NC	
3998		5	max	0.003	68	0.26	68	NC		NC		NC		NC	
3999			min	-0.014	13	-1.306	13	NC		NC		NC		NC	
4000	M759	1	max	0.003	104	0.264	104	NC		NC		NC		NC	
4001			min	-0.02	15	-1.898	15	NC		NC		NC		NC	
4002		2	max	0.003	104	0.264	104	NC		NC		NC		NC	
4003			min	-0.02	15	-1.898	15	NC		NC		NC		NC	
4004		3	max	0.003	104	0.264	104	NC		NC		NC		NC	
4005			min	-0.02	15	-1.898	15	NC		NC		NC		NC	
4006		4	max	0.003	104	0.264	104	NC		NC		NC		NC	
4007			min	-0.02	15	-1.898	15	NC		NC		NC		NC	
4008		5	max	0.003	104	0.264	104	NC		NC		NC		NC	
4009			min	-0.02	15	-1.898	15	NC		NC		NC		NC	
4010	M760	1	max	0.003	96	0.272	96	NC		NC		NC		NC	
4011			min	-0.012	15	-1.118	15	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4012		2	max	0.003	96	0.272	96	NC		NC		NC		NC	
4013			min	-0.012	15	-1.118	15	NC		NC		NC		NC	
4014		3	max	0.003	96	0.272	96	NC		NC		NC		NC	
4015			min	-0.012	15	-1.118	15	NC		NC		NC		NC	
4016		4	max	0.003	96	0.272	96	NC		NC		NC		NC	
4017			min	-0.012	15	-1.118	15	NC		NC		NC		NC	
4018		5	max	0.003	96	0.272	96	NC		NC		NC		NC	
4019			min	-0.012	15	-1.118	15	NC		NC		NC		NC	
4020	M761	1	max	0.009	102	0.838	102	NC		NC		NC		NC	
4021			min	-0.007	74	-0.698	74	NC		NC		NC		NC	
4022		2	max	0.009	102	0.838	102	NC		NC		NC		NC	
4023			min	-0.007	74	-0.698	74	NC		NC		NC		NC	
4024		3	max	0.009	102	0.838	102	NC		NC		NC		NC	
4025			min	-0.007	74	-0.698	74	NC		NC		NC		NC	
4026		4	max	0.009	102	0.838	102	NC		NC		NC		NC	
4027			min	-0.007	74	-0.698	74	NC		NC		NC		NC	
4028		5	max	0.009	102	0.838	102	NC		NC		NC		NC	
4029			min	-0.007	74	-0.698	74	NC		NC		NC		NC	
4030	M762	1	max	0.009	102	0.869	102	NC		NC		NC		NC	
4031			min	-0.008	74	-0.742	74	NC		NC		NC		NC	
4032		2	max	0.009	102	0.869	102	NC		NC		NC		NC	
4033			min	-0.008	74	-0.742	74	NC		NC		NC		NC	
4034		3	max	0.009	102	0.869	102	NC		NC		NC		NC	
4035			min	-0.008	74	-0.742	74	NC		NC		NC		NC	
4036		4	max	0.009	102	0.869	102	NC		NC		NC		NC	
4037			min	-0.008	74	-0.742	74	NC		NC		NC		NC	
4038		5	max	0.009	102	0.869	102	NC		NC		NC		NC	
4039			min	-0.008	74	-0.742	74	NC		NC		NC		NC	
4040	M763	1	max	0.008	74	0.731	74	NC		NC		NC		NC	
4041			min	-0.008	102	-0.806	102	NC		NC		NC		NC	
4042		2	max	0.008	74	0.731	74	NC		NC		NC		NC	
4043			min	-0.008	102	-0.806	102	NC		NC		NC		NC	
4044		3	max	0.008	74	0.731	74	NC		NC		NC		NC	
4045			min	-0.008	102	-0.806	102	NC		NC		NC		NC	
4046		4	max	0.008	74	0.731	74	NC		NC		NC		NC	
4047			min	-0.008	102	-0.806	102	NC		NC		NC		NC	
4048		5	max	0.008	74	0.731	74	NC		NC		NC		NC	
4049			min	-0.008	102	-0.806	102	NC		NC		NC		NC	
4050	M764	1	max	0.008	104	0.764	104	NC		NC		NC		NC	
4051			min	-0.009	72	-0.831	72	NC		NC		NC		NC	
4052		2	max	0.008	104	0.764	104	NC		NC		NC		NC	
4053			min	-0.009	72	-0.831	72	NC		NC		NC		NC	
4054		3	max	0.008	104	0.764	104	NC		NC		NC		NC	
4055			min	-0.009	72	-0.831	72	NC		NC		NC		NC	
4056		4	max	0.008	104	0.764	104	NC		NC		NC		NC	
4057			min	-0.009	72	-0.831	72	NC		NC		NC		NC	
4058		5	max	0.008	104	0.764	104	NC		NC		NC		NC	
4059			min	-0.009	72	-0.831	72	NC		NC		NC		NC	
4060	M765	1	max	0.716	71	22.106	71	NC		NC		NC		NC	
4061			min	-0.716	103	-22.119	103	NC		NC		NC		NC	
4062		2	max	0.716	71	22.106	71	NC		NC		NC		NC	
4063			min	-0.716	103	-22.119	103	NC		NC		NC		NC	
4064		3	max	0.077	62	2.383	62	NC		NC		NC		NC	
4065			min	-0.716	71	-22.129	71	NC		NC		NC		NC	
4066		4	max	0.716	103	22.111	103	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4067			min	-0.716	71	-22.129	71	NC		NC		NC		NC	
4068		5	max	0.716	103	22.111	103	NC		NC		NC		NC	
4069			min	-0.716	71	-22.129	71	NC		NC		NC		NC	
4070	M766	1	max	0.738	71	22.806	71	NC		NC		NC		NC	
4071			min	-0.738	103	-22.784	103	NC		NC		NC		NC	
4072		2	max	0.738	71	22.806	71	NC		NC		NC		NC	
4073			min	-0.738	103	-22.784	103	NC		NC		NC		NC	
4074		3	max	0.738	103	22.807	103	NC		NC		NC		NC	
4075			min	-0.077	92	-2.373	92	NC		NC		NC		NC	
4076		4	max	0.738	103	22.807	103	NC		NC		NC		NC	
4077			min	-0.737	71	-22.771	71	NC		NC		NC		NC	
4078		5	max	0.738	103	22.807	103	NC		NC		NC		NC	
4079			min	-0.737	71	-22.771	71	NC		NC		NC		NC	
4080	M768	1	max	0	107	0	107	NC		NC		NC		NC	
4081			min	0	12	0	12	NC		NC		NC		NC	
4082		2	max	0	107	0	107	NC		NC		NC		NC	
4083			min	0	12	0	12	NC		NC		NC		NC	
4084		3	max	0	107	0	107	NC		NC		NC		NC	
4085			min	0	12	0	12	NC		NC		NC		NC	
4086		4	max	0	107	0	107	NC		NC		NC		NC	
4087			min	0	12	0	12	NC		NC		NC		NC	
4088		5	max	0	107	0	107	NC		NC		NC		NC	
4089			min	0	12	0	12	NC		NC		NC		NC	
4090	M769	1	max	0	107	0	107	NC		NC		NC		NC	
4091			min	0	12	0	12	NC		NC		NC		NC	
4092		2	max	0	107	0	107	NC		NC		NC		NC	
4093			min	0	12	0	12	NC		NC		NC		NC	
4094		3	max	0	107	0	107	NC		NC		NC		NC	
4095			min	0	12	0	12	NC		NC		NC		NC	
4096		4	max	0	107	0	107	NC		NC		NC		NC	
4097			min	0	12	0	12	NC		NC		NC		NC	
4098		5	max	0	107	0	107	NC		NC		NC		NC	
4099			min	0	12	0	12	NC		NC		NC		NC	
4100	M771	1	max	0	107	0	107	NC		NC		NC		NC	
4101			min	0	12	0	12	NC		NC		NC		NC	
4102		2	max	0	107	0	107	NC		NC		NC		NC	
4103			min	0	12	0	12	NC		NC		NC		NC	
4104		3	max	0	107	0	107	NC		NC		NC		NC	
4105			min	0	12	0	12	NC		NC		NC		NC	
4106		4	max	0	107	0	107	NC		NC		NC		NC	
4107			min	0	12	0	12	NC		NC		NC		NC	
4108		5	max	0	107	0	107	NC		NC		NC		NC	
4109			min	0	12	0	12	NC		NC		NC		NC	
4110	M776	1	max	0	107	0	107	NC		NC		NC		NC	
4111			min	0	12	0	12	NC		NC		NC		NC	
4112		2	max	0	107	0	107	NC		NC		NC		NC	
4113			min	0	12	0	12	NC		NC		NC		NC	
4114		3	max	0	107	0	107	NC		NC		NC		NC	
4115			min	0	12	0	12	NC		NC		NC		NC	
4116		4	max	0	107	0	107	NC		NC		NC		NC	
4117			min	0	12	0	12	NC		NC		NC		NC	
4118		5	max	0	107	0	107	NC		NC		NC		NC	
4119			min	0	12	0	12	NC		NC		NC		NC	
4120	M777	1	max	0	107	0	107	NC		NC		NC		NC	
4121			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4122		2	max	0	107	0	107	NC		NC		NC		NC	
4123			min	0	12	0	12	NC		NC		NC		NC	
4124		3	max	0	107	0	107	NC		NC		NC		NC	
4125			min	0	12	0	12	NC		NC		NC		NC	
4126		4	max	0	107	0	107	NC		NC		NC		NC	
4127			min	0	12	0	12	NC		NC		NC		NC	
4128		5	max	0	107	0	107	NC		NC		NC		NC	
4129			min	0	12	0	12	NC		NC		NC		NC	
4130	M778	1	max	0	107	0	107	NC		NC		NC		NC	
4131			min	0	12	0	12	NC		NC		NC		NC	
4132		2	max	0	107	0	107	NC		NC		NC		NC	
4133			min	0	12	0	12	NC		NC		NC		NC	
4134		3	max	0	107	0	107	NC		NC		NC		NC	
4135			min	0	12	0	12	NC		NC		NC		NC	
4136		4	max	0	107	0	107	NC		NC		NC		NC	
4137			min	0	12	0	12	NC		NC		NC		NC	
4138		5	max	0	107	0	107	NC		NC		NC		NC	
4139			min	0	12	0	12	NC		NC		NC		NC	
4140	M779	1	max	0	107	0	107	NC		NC		NC		NC	
4141			min	0	12	0	12	NC		NC		NC		NC	
4142		2	max	0	107	0	107	NC		NC		NC		NC	
4143			min	0	12	0	12	NC		NC		NC		NC	
4144		3	max	0	107	0	107	NC		NC		NC		NC	
4145			min	0	12	0	12	NC		NC		NC		NC	
4146		4	max	0	107	0	107	NC		NC		NC		NC	
4147			min	0	12	0	12	NC		NC		NC		NC	
4148		5	max	0	107	0	107	NC		NC		NC		NC	
4149			min	0	12	0	12	NC		NC		NC		NC	
4150	M780	1	max	0	107	0	107	NC		NC		NC		NC	
4151			min	0	12	0	12	NC		NC		NC		NC	
4152		2	max	0	107	0	107	NC		NC		NC		NC	
4153			min	0	12	0	12	NC		NC		NC		NC	
4154		3	max	0	107	0	107	NC		NC		NC		NC	
4155			min	0	12	0	12	NC		NC		NC		NC	
4156		4	max	0	107	0	107	NC		NC		NC		NC	
4157			min	0	12	0	12	NC		NC		NC		NC	
4158		5	max	0	107	0	107	NC		NC		NC		NC	
4159			min	0	12	0	12	NC		NC		NC		NC	
4160	M781	1	max	0	107	0	107	NC		NC		NC		NC	
4161			min	0	12	0	12	NC		NC		NC		NC	
4162		2	max	0	107	0	107	NC		NC		NC		NC	
4163			min	0	12	0	12	NC		NC		NC		NC	
4164		3	max	0	107	0	107	NC		NC		NC		NC	
4165			min	0	12	0	12	NC		NC		NC		NC	
4166		4	max	0	107	0	107	NC		NC		NC		NC	
4167			min	0	12	0	12	NC		NC		NC		NC	
4168		5	max	0	107	0	107	NC		NC		NC		NC	
4169			min	0	12	0	12	NC		NC		NC		NC	
4170	M782	1	max	0.001	101	0.135	101	NC		NC		NC		NC	
4171			min	-0.001	77	-0.12	77	NC		NC		NC		NC	
4172		2	max	0.001	101	0.135	101	NC		NC		NC		NC	
4173			min	-0.001	77	-0.12	77	NC		NC		NC		NC	
4174		3	max	0.001	101	0.135	101	NC		NC		NC		NC	
4175			min	-0.001	77	-0.12	77	NC		NC		NC		NC	
4176		4	max	0.001	101	0.135	101	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4177			min	-0.001	77	-0.12	77	NC		NC		NC		NC	
4178		5	max	0.001	101	0.135	101	NC		NC		NC		NC	
4179			min	-0.001	77	-0.12	77	NC		NC		NC		NC	
4180	M783	1	max	0.001	107	0.12	107	NC		NC		NC		NC	
4181			min	-0.001	41	-0.135	41	NC		NC		NC		NC	
4182		2	max	0.001	107	0.12	107	NC		NC		NC		NC	
4183			min	-0.001	41	-0.135	41	NC		NC		NC		NC	
4184		3	max	0.001	107	0.12	107	NC		NC		NC		NC	
4185			min	-0.001	41	-0.135	41	NC		NC		NC		NC	
4186		4	max	0.001	107	0.12	107	NC		NC		NC		NC	
4187			min	-0.001	41	-0.135	41	NC		NC		NC		NC	
4188		5	max	0.001	107	0.12	107	NC		NC		NC		NC	
4189			min	-0.001	41	-0.135	41	NC		NC		NC		NC	
4190	M784	1	max	0.001	75	0.12	75	NC		NC		NC		NC	
4191			min	-0.001	73	-0.135	73	NC		NC		NC		NC	
4192		2	max	0.001	75	0.12	75	NC		NC		NC		NC	
4193			min	-0.001	73	-0.135	73	NC		NC		NC		NC	
4194		3	max	0.001	75	0.12	75	NC		NC		NC		NC	
4195			min	-0.001	73	-0.135	73	NC		NC		NC		NC	
4196		4	max	0.001	75	0.12	75	NC		NC		NC		NC	
4197			min	-0.001	73	-0.135	73	NC		NC		NC		NC	
4198		5	max	0.001	75	0.12	75	NC		NC		NC		NC	
4199			min	-0.001	73	-0.135	73	NC		NC		NC		NC	
4200	M785	1	max	0.001	73	0.135	73	NC		NC		NC		NC	
4201			min	-0.001	75	-0.12	75	NC		NC		NC		NC	
4202		2	max	0.001	73	0.135	73	NC		NC		NC		NC	
4203			min	-0.001	75	-0.12	75	NC		NC		NC		NC	
4204		3	max	0.001	73	0.135	73	NC		NC		NC		NC	
4205			min	-0.001	75	-0.12	75	NC		NC		NC		NC	
4206		4	max	0.001	73	0.135	73	NC		NC		NC		NC	
4207			min	-0.001	75	-0.12	75	NC		NC		NC		NC	
4208		5	max	0.001	73	0.135	73	NC		NC		NC		NC	
4209			min	-0.001	75	-0.12	75	NC		NC		NC		NC	
4210	M485	1	max	0	107	0	107	NC		NC		NC		NC	
4211			min	0	12	0	12	NC		NC		NC		NC	
4212		2	max	0	107	0	107	NC		NC		NC		NC	
4213			min	0	12	0	12	NC		NC		NC		NC	
4214		3	max	0	107	0	107	NC		NC		NC		NC	
4215			min	0	12	0	12	NC		NC		NC		NC	
4216		4	max	0	107	0	107	NC		NC		NC		NC	
4217			min	0	12	0	12	NC		NC		NC		NC	
4218		5	max	0	107	0	107	NC		NC		NC		NC	
4219			min	0	12	0	12	NC		NC		NC		NC	
4220	M497	1	max	0	107	0	107	NC		NC		NC		NC	
4221			min	0	12	0	12	NC		NC		NC		NC	
4222		2	max	0	107	0	107	NC		NC		NC		NC	
4223			min	0	12	0	12	NC		NC		NC		NC	
4224		3	max	0	107	0	107	NC		NC		NC		NC	
4225			min	0	12	0	12	NC		NC		NC		NC	
4226		4	max	0	107	0	107	NC		NC		NC		NC	
4227			min	0	12	0	12	NC		NC		NC		NC	
4228		5	max	0	107	0	107	NC		NC		NC		NC	
4229			min	0	12	0	12	NC		NC		NC		NC	
4230	M498	1	max	0	107	0	107	NC		NC		NC		NC	
4231			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4232		2	max	0	107	0	107	NC		NC		NC		NC	
4233			min	0	12	0	12	NC		NC		NC		NC	
4234		3	max	0	107	0	107	NC		NC		NC		NC	
4235			min	0	12	0	12	NC		NC		NC		NC	
4236		4	max	0	107	0	107	NC		NC		NC		NC	
4237			min	0	12	0	12	NC		NC		NC		NC	
4238		5	max	0	107	0	107	NC		NC		NC		NC	
4239			min	0	12	0	12	NC		NC		NC		NC	
4240	M786	1	max	0	107	0	107	NC		NC		NC		NC	
4241			min	0	12	0	12	NC		NC		NC		NC	
4242		2	max	0	107	0	107	NC		NC		NC		NC	
4243			min	0	12	0	12	NC		NC		NC		NC	
4244		3	max	0	107	0	107	NC		NC		NC		NC	
4245			min	0	12	0	12	NC		NC		NC		NC	
4246		4	max	0	107	0	107	NC		NC		NC		NC	
4247			min	0	12	0	12	NC		NC		NC		NC	
4248		5	max	0	107	0	107	NC		NC		NC		NC	
4249			min	0	12	0	12	NC		NC		NC		NC	
4250	M787	1	max	0	107	0	107	NC		NC		NC		NC	
4251			min	0	12	0	12	NC		NC		NC		NC	
4252		2	max	0	107	0	107	NC		NC		NC		NC	
4253			min	0	12	0	12	NC		NC		NC		NC	
4254		3	max	0	107	0	107	NC		NC		NC		NC	
4255			min	0	12	0	12	NC		NC		NC		NC	
4256		4	max	0	107	0	107	NC		NC		NC		NC	
4257			min	0	12	0	12	NC		NC		NC		NC	
4258		5	max	0	107	0	107	NC		NC		NC		NC	
4259			min	0	12	0	12	NC		NC		NC		NC	
4260	M788	1	max	0	107	0	107	NC		NC		NC		NC	
4261			min	0	12	0	12	NC		NC		NC		NC	
4262		2	max	0	107	0	107	NC		NC		NC		NC	
4263			min	0	12	0	12	NC		NC		NC		NC	
4264		3	max	0	107	0	107	NC		NC		NC		NC	
4265			min	0	12	0	12	NC		NC		NC		NC	
4266		4	max	0	107	0	107	NC		NC		NC		NC	
4267			min	0	12	0	12	NC		NC		NC		NC	
4268		5	max	0	107	0	107	NC		NC		NC		NC	
4269			min	0	12	0	12	NC		NC		NC		NC	
4270	M698	1	max	0	107	0	107	NC		NC		NC		NC	
4271			min	0	12	0	12	NC		NC		NC		NC	
4272		2	max	0	107	0	107	NC		NC		NC		NC	
4273			min	0	12	0	12	NC		NC		NC		NC	
4274		3	max	0	107	0	107	NC		NC		NC		NC	
4275			min	0	12	0	12	NC		NC		NC		NC	
4276		4	max	0	107	0	107	NC		NC		NC		NC	
4277			min	0	12	0	12	NC		NC		NC		NC	
4278		5	max	0	107	0	107	NC		NC		NC		NC	
4279			min	0	12	0	12	NC		NC		NC		NC	
4280	M699	1	max	0	107	0	107	NC		NC		NC		NC	
4281			min	0	12	0	12	NC		NC		NC		NC	
4282		2	max	0	107	0	107	NC		NC		NC		NC	
4283			min	0	12	0	12	NC		NC		NC		NC	
4284		3	max	0	107	0	107	NC		NC		NC		NC	
4285			min	0	12	0	12	NC		NC		NC		NC	
4286		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4287			min	0	12	0	12	NC		NC		NC		NC	
4288		5	max	0	107	0	107	NC		NC		NC		NC	
4289			min	0	12	0	12	NC		NC		NC		NC	
4290	M700	1	max	0	107	0	107	NC		NC		NC		NC	
4291			min	0	12	0	12	NC		NC		NC		NC	
4292		2	max	0	107	0	107	NC		NC		NC		NC	
4293			min	0	12	0	12	NC		NC		NC		NC	
4294		3	max	0	107	0	107	NC		NC		NC		NC	
4295			min	0	12	0	12	NC		NC		NC		NC	
4296		4	max	0	107	0	107	NC		NC		NC		NC	
4297			min	0	12	0	12	NC		NC		NC		NC	
4298		5	max	0	107	0	107	NC		NC		NC		NC	
4299			min	0	12	0	12	NC		NC		NC		NC	
4300	M468	1	max	0	107	0	107	NC		NC		NC		NC	
4301			min	0	12	0	12	NC		NC		NC		NC	
4302		2	max	0	107	0	107	NC		NC		NC		NC	
4303			min	0	12	0	12	NC		NC		NC		NC	
4304		3	max	0	107	0	107	NC		NC		NC		NC	
4305			min	0	12	0	12	NC		NC		NC		NC	
4306		4	max	0	107	0	107	NC		NC		NC		NC	
4307			min	0	12	0	12	NC		NC		NC		NC	
4308		5	max	0	107	0	107	NC		NC		NC		NC	
4309			min	0	12	0	12	NC		NC		NC		NC	
4310	M469	1	max	0	107	0	107	NC		NC		NC		NC	
4311			min	0	12	0	12	NC		NC		NC		NC	
4312		2	max	0	107	0	107	NC		NC		NC		NC	
4313			min	0	12	0	12	NC		NC		NC		NC	
4314		3	max	0	107	0	107	NC		NC		NC		NC	
4315			min	0	12	0	12	NC		NC		NC		NC	
4316		4	max	0	107	0	107	NC		NC		NC		NC	
4317			min	0	12	0	12	NC		NC		NC		NC	
4318		5	max	0	107	0	107	NC		NC		NC		NC	
4319			min	0	12	0	12	NC		NC		NC		NC	
4320	M506	1	max	0	107	0	107	NC		NC		NC		NC	
4321			min	0	12	0	12	NC		NC		NC		NC	
4322		2	max	0	107	0	107	NC		NC		NC		NC	
4323			min	0	12	0	12	NC		NC		NC		NC	
4324		3	max	0	107	0	107	NC		NC		NC		NC	
4325			min	0	12	0	12	NC		NC		NC		NC	
4326		4	max	0	107	0	107	NC		NC		NC		NC	
4327			min	0	12	0	12	NC		NC		NC		NC	
4328		5	max	0	107	0	107	NC		NC		NC		NC	
4329			min	0	12	0	12	NC		NC		NC		NC	
4330	M767	1	max	0	107	0	107	NC		NC		NC		NC	
4331			min	0	12	0	12	NC		NC		NC		NC	
4332		2	max	0	107	0	107	NC		NC		NC		NC	
4333			min	0	12	0	12	NC		NC		NC		NC	
4334		3	max	0	107	0	107	NC		NC		NC		NC	
4335			min	0	12	0	12	NC		NC		NC		NC	
4336		4	max	0	107	0	107	NC		NC		NC		NC	
4337			min	0	12	0	12	NC		NC		NC		NC	
4338		5	max	0	107	0	107	NC		NC		NC		NC	
4339			min	0	12	0	12	NC		NC		NC		NC	
4340	M770	1	max	0	107	0	107	NC		NC		NC		NC	
4341			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4342		2	max	0	107	0	107	NC		NC		NC		NC	
4343			min	0	12	0	12	NC		NC		NC		NC	
4344		3	max	0	107	0	107	NC		NC		NC		NC	
4345			min	0	12	0	12	NC		NC		NC		NC	
4346		4	max	0	107	0	107	NC		NC		NC		NC	
4347			min	0	12	0	12	NC		NC		NC		NC	
4348		5	max	0	107	0	107	NC		NC		NC		NC	
4349			min	0	12	0	12	NC		NC		NC		NC	
4350	M772	1	max	0	107	0	107	NC		NC		NC		NC	
4351			min	0	12	0	12	NC		NC		NC		NC	
4352		2	max	0	107	0	107	NC		NC		NC		NC	
4353			min	0	12	0	12	NC		NC		NC		NC	
4354		3	max	0	107	0	107	NC		NC		NC		NC	
4355			min	0	12	0	12	NC		NC		NC		NC	
4356		4	max	0	107	0	107	NC		NC		NC		NC	
4357			min	0	12	0	12	NC		NC		NC		NC	
4358		5	max	0	107	0	107	NC		NC		NC		NC	
4359			min	0	12	0	12	NC		NC		NC		NC	
4360	M773	1	max	0	107	0	107	NC		NC		NC		NC	
4361			min	0	12	0	12	NC		NC		NC		NC	
4362		2	max	0	107	0	107	NC		NC		NC		NC	
4363			min	0	12	0	12	NC		NC		NC		NC	
4364		3	max	0	107	0	107	NC		NC		NC		NC	
4365			min	0	12	0	12	NC		NC		NC		NC	
4366		4	max	0	107	0	107	NC		NC		NC		NC	
4367			min	0	12	0	12	NC		NC		NC		NC	
4368		5	max	0	107	0	107	NC		NC		NC		NC	
4369			min	0	12	0	12	NC		NC		NC		NC	
4370	M774	1	max	0	107	0	107	NC		NC		NC		NC	
4371			min	0	12	0	12	NC		NC		NC		NC	
4372		2	max	0	107	0	107	NC		NC		NC		NC	
4373			min	0	12	0	12	NC		NC		NC		NC	
4374		3	max	0	107	0	107	NC		NC		NC		NC	
4375			min	0	12	0	12	NC		NC		NC		NC	
4376		4	max	0	107	0	107	NC		NC		NC		NC	
4377			min	0	12	0	12	NC		NC		NC		NC	
4378		5	max	0	107	0	107	NC		NC		NC		NC	
4379			min	0	12	0	12	NC		NC		NC		NC	
4380	M775	1	max	0	107	0	107	NC		NC		NC		NC	
4381			min	0	12	0	12	NC		NC		NC		NC	
4382		2	max	0	107	0	107	NC		NC		NC		NC	
4383			min	0	12	0	12	NC		NC		NC		NC	
4384		3	max	0	107	0	107	NC		NC		NC		NC	
4385			min	0	12	0	12	NC		NC		NC		NC	
4386		4	max	0	107	0	107	NC		NC		NC		NC	
4387			min	0	12	0	12	NC		NC		NC		NC	
4388		5	max	0	107	0	107	NC		NC		NC		NC	
4389			min	0	12	0	12	NC		NC		NC		NC	
4390	M636	1	max	0.001	74	0.033	74	NC		NC		NC		NC	
4391			min	-0.002	102	-0.041	102	NC		NC		NC		NC	
4392		2	max	0.001	74	0.033	74	NC		NC		NC		NC	
4393			min	-0.002	102	-0.041	102	NC		NC		NC		NC	
4394		3	max	0.001	74	0.033	74	NC		NC		NC		NC	
4395			min	-0.002	102	-0.041	102	NC		NC		NC		NC	
4396		4	max	0.001	74	0.033	74	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4397			min	-0.002	102	-0.041	102	NC		NC		NC		NC	
4398		5	max	0.001	74	0.033	74	NC		NC		NC		NC	
4399			min	-0.002	102	-0.041	102	NC		NC		NC		NC	
4400	M637	1	max	0.002	102	0.041	102	NC		NC		NC		NC	
4401			min	-0.001	74	-0.033	74	NC		NC		NC		NC	
4402		2	max	0.002	102	0.041	102	NC		NC		NC		NC	
4403			min	-0.001	74	-0.033	74	NC		NC		NC		NC	
4404		3	max	0.002	102	0.041	102	NC		NC		NC		NC	
4405			min	-0.001	74	-0.033	74	NC		NC		NC		NC	
4406		4	max	0.002	102	0.041	102	NC		NC		NC		NC	
4407			min	-0.001	74	-0.033	74	NC		NC		NC		NC	
4408		5	max	0.002	102	0.041	102	NC		NC		NC		NC	
4409			min	-0.001	74	-0.033	74	NC		NC		NC		NC	
4410	M789	1	max	0	101	0	101	NC		NC		NC		NC	
4411			min	0	103	0	103	NC		NC		NC		NC	
4412		2	max	0	101	0	101	NC		NC		NC		NC	
4413			min	0	103	0	103	NC		NC		NC		NC	
4414		3	max	0	101	0	101	NC		NC		NC		NC	
4415			min	0	103	0	103	NC		NC		NC		NC	
4416		4	max	0	101	0	101	NC		NC		NC		NC	
4417			min	0	103	0	103	NC		NC		NC		NC	
4418		5	max	0	101	0	101	NC		NC		NC		NC	
4419			min	0	103	0	103	NC		NC		NC		NC	
4420	M626	1	max	0	107	0	107	NC		NC		NC		NC	
4421			min	0	12	0	12	NC		NC		NC		NC	
4422		2	max	0	107	0	107	NC		NC		NC		NC	
4423			min	0	12	0	12	NC		NC		NC		NC	
4424		3	max	0	107	0	107	NC		NC		NC		NC	
4425			min	0	12	0	12	NC		NC		NC		NC	
4426		4	max	0	107	0	107	NC		NC		NC		NC	
4427			min	0	12	0	12	NC		NC		NC		NC	
4428		5	max	0	107	0	107	NC		NC		NC		NC	
4429			min	0	12	0	12	NC		NC		NC		NC	
4430	M627	1	max	0	107	0	107	NC		NC		NC		NC	
4431			min	0	12	0	12	NC		NC		NC		NC	
4432		2	max	0	107	0	107	NC		NC		NC		NC	
4433			min	0	12	0	12	NC		NC		NC		NC	
4434		3	max	0	107	0	107	NC		NC		NC		NC	
4435			min	0	12	0	12	NC		NC		NC		NC	
4436		4	max	0	107	0	107	NC		NC		NC		NC	
4437			min	0	12	0	12	NC		NC		NC		NC	
4438		5	max	0	107	0	107	NC		NC		NC		NC	
4439			min	0	12	0	12	NC		NC		NC		NC	
4440	M630	1	max	0	107	0	107	NC		NC		NC		NC	
4441			min	0	12	0	12	NC		NC		NC		NC	
4442		2	max	0	107	0	107	NC		NC		NC		NC	
4443			min	0	12	0	12	NC		NC		NC		NC	
4444		3	max	0	107	0	107	NC		NC		NC		NC	
4445			min	0	12	0	12	NC		NC		NC		NC	
4446		4	max	0	107	0	107	NC		NC		NC		NC	
4447			min	0	12	0	12	NC		NC		NC		NC	
4448		5	max	0	107	0	107	NC		NC		NC		NC	
4449			min	0	12	0	12	NC		NC		NC		NC	
4450	M641	1	max	0	107	0	107	NC		NC		NC		NC	
4451			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4452		2	max	0	107	0	107	NC		NC		NC		NC	
4453			min	0	12	0	12	NC		NC		NC		NC	
4454		3	max	0	107	0	107	NC		NC		NC		NC	
4455			min	0	12	0	12	NC		NC		NC		NC	
4456		4	max	0	107	0	107	NC		NC		NC		NC	
4457			min	0	12	0	12	NC		NC		NC		NC	
4458		5	max	0	107	0	107	NC		NC		NC		NC	
4459			min	0	12	0	12	NC		NC		NC		NC	
4460	M643	1	max	0	107	0	107	NC		NC		NC		NC	
4461			min	0	12	0	12	NC		NC		NC		NC	
4462		2	max	0	107	0	107	NC		NC		NC		NC	
4463			min	0	12	0	12	NC		NC		NC		NC	
4464		3	max	0	107	0	107	NC		NC		NC		NC	
4465			min	0	12	0	12	NC		NC		NC		NC	
4466		4	max	0	107	0	107	NC		NC		NC		NC	
4467			min	0	12	0	12	NC		NC		NC		NC	
4468		5	max	0	107	0	107	NC		NC		NC		NC	
4469			min	0	12	0	12	NC		NC		NC		NC	
4470	M790	1	max	0	107	0	107	NC		NC		NC		NC	
4471			min	0	12	0	12	NC		NC		NC		NC	
4472		2	max	0	107	0	107	NC		NC		NC		NC	
4473			min	0	12	0	12	NC		NC		NC		NC	
4474		3	max	0	107	0	107	NC		NC		NC		NC	
4475			min	0	12	0	12	NC		NC		NC		NC	
4476		4	max	0	107	0	107	NC		NC		NC		NC	
4477			min	0	12	0	12	NC		NC		NC		NC	
4478		5	max	0	107	0	107	NC		NC		NC		NC	
4479			min	0	12	0	12	NC		NC		NC		NC	
4480	M791	1	max	0	107	0	107	NC		NC		NC		NC	
4481			min	0	12	0	12	NC		NC		NC		NC	
4482		2	max	0	107	0	107	NC		NC		NC		NC	
4483			min	0	12	0	12	NC		NC		NC		NC	
4484		3	max	0	107	0	107	NC		NC		NC		NC	
4485			min	0	12	0	12	NC		NC		NC		NC	
4486		4	max	0	107	0	107	NC		NC		NC		NC	
4487			min	0	12	0	12	NC		NC		NC		NC	
4488		5	max	0	107	0	107	NC		NC		NC		NC	
4489			min	0	12	0	12	NC		NC		NC		NC	
4490	M792	1	max	0	107	0	107	NC		NC		NC		NC	
4491			min	0	12	0	12	NC		NC		NC		NC	
4492		2	max	0	107	0	107	NC		NC		NC		NC	
4493			min	0	12	0	12	NC		NC		NC		NC	
4494		3	max	0	107	0	107	NC		NC		NC		NC	
4495			min	0	12	0	12	NC		NC		NC		NC	
4496		4	max	0	107	0	107	NC		NC		NC		NC	
4497			min	0	12	0	12	NC		NC		NC		NC	
4498		5	max	0	107	0	107	NC		NC		NC		NC	
4499			min	0	12	0	12	NC		NC		NC		NC	
4500	M793	1	max	0	107	0	107	NC		NC		NC		NC	
4501			min	0	12	0	12	NC		NC		NC		NC	
4502		2	max	0	107	0	107	NC		NC		NC		NC	
4503			min	0	12	0	12	NC		NC		NC		NC	
4504		3	max	0	107	0	107	NC		NC		NC		NC	
4505			min	0	12	0	12	NC		NC		NC		NC	
4506		4	max	0	107	0	107	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4507			min	0	12	0	12	NC		NC		NC		NC	
4508		5	max	0	107	0	107	NC		NC		NC		NC	
4509			min	0	12	0	12	NC		NC		NC		NC	
4510	M794	1	max	0	107	0	107	NC		NC		NC		NC	
4511			min	0	12	0	12	NC		NC		NC		NC	
4512		2	max	0	107	0	107	NC		NC		NC		NC	
4513			min	0	12	0	12	NC		NC		NC		NC	
4514		3	max	0	107	0	107	NC		NC		NC		NC	
4515			min	0	12	0	12	NC		NC		NC		NC	
4516		4	max	0	107	0	107	NC		NC		NC		NC	
4517			min	0	12	0	12	NC		NC		NC		NC	
4518		5	max	0	107	0	107	NC		NC		NC		NC	
4519			min	0	12	0	12	NC		NC		NC		NC	
4520	M795	1	max	0	107	0	107	NC		NC		NC		NC	
4521			min	0	12	0	12	NC		NC		NC		NC	
4522		2	max	0	107	0	107	NC		NC		NC		NC	
4523			min	0	12	0	12	NC		NC		NC		NC	
4524		3	max	0	107	0	107	NC		NC		NC		NC	
4525			min	0	12	0	12	NC		NC		NC		NC	
4526		4	max	0	107	0	107	NC		NC		NC		NC	
4527			min	0	12	0	12	NC		NC		NC		NC	
4528		5	max	0	107	0	107	NC		NC		NC		NC	
4529			min	0	12	0	12	NC		NC		NC		NC	
4530	M796	1	max	0	107	0	107	NC		NC		NC		NC	
4531			min	0	12	0	12	NC		NC		NC		NC	
4532		2	max	0	107	0	107	NC		NC		NC		NC	
4533			min	0	12	0	12	NC		NC		NC		NC	
4534		3	max	0	107	0	107	NC		NC		NC		NC	
4535			min	0	12	0	12	NC		NC		NC		NC	
4536		4	max	0	107	0	107	NC		NC		NC		NC	
4537			min	0	12	0	12	NC		NC		NC		NC	
4538		5	max	0	107	0	107	NC		NC		NC		NC	
4539			min	0	12	0	12	NC		NC		NC		NC	
4540	M797	1	max	0	107	0	107	NC		NC		NC		NC	
4541			min	0	12	0	12	NC		NC		NC		NC	
4542		2	max	0	107	0	107	NC		NC		NC		NC	
4543			min	0	12	0	12	NC		NC		NC		NC	
4544		3	max	0	107	0	107	NC		NC		NC		NC	
4545			min	0	12	0	12	NC		NC		NC		NC	
4546		4	max	0	107	0	107	NC		NC		NC		NC	
4547			min	0	12	0	12	NC		NC		NC		NC	
4548		5	max	0	107	0	107	NC		NC		NC		NC	
4549			min	0	12	0	12	NC		NC		NC		NC	
4550	M798	1	max	0	107	0	107	NC		NC		NC		NC	
4551			min	0	12	0	12	NC		NC		NC		NC	
4552		2	max	0	107	0	107	NC		NC		NC		NC	
4553			min	0	12	0	12	NC		NC		NC		NC	
4554		3	max	0	107	0	107	NC		NC		NC		NC	
4555			min	0	12	0	12	NC		NC		NC		NC	
4556		4	max	0	107	0	107	NC		NC		NC		NC	
4557			min	0	12	0	12	NC		NC		NC		NC	
4558		5	max	0	107	0	107	NC		NC		NC		NC	
4559			min	0	12	0	12	NC		NC		NC		NC	
4560	M799	1	max	0	107	0	107	NC		NC		NC		NC	
4561			min	0	12	0	12	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4562		2	max	0	107	0	107	NC		NC		NC		NC	
4563			min	0	12	0	12	NC		NC		NC		NC	
4564		3	max	0	107	0	107	NC		NC		NC		NC	
4565			min	0	12	0	12	NC		NC		NC		NC	
4566		4	max	0	107	0	107	NC		NC		NC		NC	
4567			min	0	12	0	12	NC		NC		NC		NC	
4568		5	max	0	107	0	107	NC		NC		NC		NC	
4569			min	0	12	0	12	NC		NC		NC		NC	
4570	M800	1	max	0	107	0	107	NC		NC		NC		NC	
4571			min	0	12	0	12	NC		NC		NC		NC	
4572		2	max	0	107	0	107	NC		NC		NC		NC	
4573			min	0	12	0	12	NC		NC		NC		NC	
4574		3	max	0	107	0	107	NC		NC		NC		NC	
4575			min	0	12	0	12	NC		NC		NC		NC	
4576		4	max	0	107	0	107	NC		NC		NC		NC	
4577			min	0	12	0	12	NC		NC		NC		NC	
4578		5	max	0	107	0	107	NC		NC		NC		NC	
4579			min	0	12	0	12	NC		NC		NC		NC	
4580	M801	1	max	0	107	0	107	NC		NC		NC		NC	
4581			min	0	12	0	12	NC		NC		NC		NC	
4582		2	max	0	107	0	107	NC		NC		NC		NC	
4583			min	0	12	0	12	NC		NC		NC		NC	
4584		3	max	0	107	0	107	NC		NC		NC		NC	
4585			min	0	12	0	12	NC		NC		NC		NC	
4586		4	max	0	107	0	107	NC		NC		NC		NC	
4587			min	0	12	0	12	NC		NC		NC		NC	
4588		5	max	0	107	0	107	NC		NC		NC		NC	
4589			min	0	12	0	12	NC		NC		NC		NC	
4590	M802	1	max	14.389	70	0	107	NC		NC		NC		NC	
4591			min	-14.389	72	0	12	NC		NC		NC		NC	
4592		2	max	14.389	70	0	107	NC		NC		NC		NC	
4593			min	-14.389	72	0	12	NC		NC		NC		NC	
4594		3	max	14.389	70	0	107	NC		NC		NC		NC	
4595			min	-14.389	72	0	12	NC		NC		NC		NC	
4596		4	max	14.389	70	0	107	NC		NC		NC		NC	
4597			min	-14.389	72	0	12	NC		NC		NC		NC	
4598		5	max	14.389	70	0	107	NC		NC		NC		NC	
4599			min	-14.389	72	0	12	NC		NC		NC		NC	
4600	M803	1	max	0.002	107	0.154	107	NC		NC		NC		NC	
4601			min	-0.002	71	-0.16	71	NC		NC		NC		NC	
4602		2	max	0.002	107	0.154	107	NC		NC		NC		NC	
4603			min	-0.002	71	-0.16	71	NC		NC		NC		NC	
4604		3	max	0.002	107	0.154	107	NC		NC		NC		NC	
4605			min	-0.002	71	-0.16	71	NC		NC		NC		NC	
4606		4	max	0.002	107	0.154	107	NC		NC		NC		NC	
4607			min	-0.002	71	-0.16	71	NC		NC		NC		NC	
4608		5	max	0.002	107	0.154	107	NC		NC		NC		NC	
4609			min	-0.002	71	-0.16	71	NC		NC		NC		NC	
4610	M804	1	max	0.002	73	0.16	73	NC		NC		NC		NC	
4611			min	-0.002	105	-0.154	105	NC		NC		NC		NC	
4612		2	max	0.002	73	0.16	73	NC		NC		NC		NC	
4613			min	-0.002	105	-0.154	105	NC		NC		NC		NC	
4614		3	max	0.002	73	0.16	73	NC		NC		NC		NC	
4615			min	-0.002	105	-0.154	105	NC		NC		NC		NC	
4616		4	max	0.002	73	0.16	73	NC		NC		NC		NC	

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
4617			min	-0.002	105	-0.154	105	NC		NC		NC		NC	
4618		5	max	0.002	73	0.16	73	NC		NC		NC		NC	
4619			min	-0.002	105	-0.154	105	NC		NC		NC		NC	

Member Suggested Designs

	Section Set/Member	Current Shape	Suggested Shape	Controlling Member	Controlling Criteria	Use Suggested?
0	Bent Columns	W10X33	W5X19	M471	Strength	Yes
1	Top Chord	LL4X4X4X6	LL3.5X4X4X0	M477	Strength	Yes
2	Bottom Chord	LL4X4X4X6	LL3X3X4X3	M509	Strength	Yes
3	Post	WT3X7.5	WT4X5	M370	Strength	Yes
4	Heavy Post	WT4X9	C4X7.25	M361	Strength	Yes
5	VB	L3X3X4	L2.5X2.5X3	M447	Strength	Yes
6	Heavy VB	L3X3X4	L2.5X2.5X3	M405	Strength	Yes
7	Fire Beam	W6X15	W6X8.5	M547	Strength	Yes
8	20" Suction	W6X15	W10X15	M690	Strength	Yes
9	Fueling	L4X4X4	L4X3X4	M708	Strength	Yes
10	MC End	W6X15	W6X8.5	M482	Strength	Yes
11	Bottom HB	L4X4X4	L3X2.5X4	M729	Strength	Yes
12	Top HB	L4X4X4	L3X3X3	M740	Strength	Yes
13	Top HB Heavy	L5X5X5	L4X3X4	M385	Strength	Yes
14	CT Support	L3X3X4	L3X2.5X3	M771	Strength	Yes
15	Top MC	W6X15	W6X8.5	M521	Strength	Yes
16	W8x24	W8X24	W6X12	M443	Strength	Yes
17	W8x18	W8X18	W6X8.5	M431	Strength	Yes
18	W8x10	W8X10	W6X8.5	M789	Strength	Yes
19	LINESTOPS	CRECT27X27	No Shapes Found	M767	Strength	Yes
20	PEDESTAL	CRECT24X24	No Shapes Found	M626	Strength	Yes
21	PS-10	CRECT70X24	No Shapes Found	M795	Strength	Yes
22	M628	W8X24	W6X8.5		Strength	Yes
23	M629	W8X24	W6X8.5		Strength	Yes
24	M631	W8X24	W6X8.5		Strength	Yes

AISC 15TH (360-16): LRFD Member Steel Code Checks

No Data to Print...

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
0	M273	W10X33	0.167	4.25	102	0.056	0	y	100	264.856	436.95	52.5	145.5	1.606	H1-1b
1	M313	W10X33	0.202	4.25	70	0.137	0	y	102	264.856	436.95	52.5	145.5	1.446	H1-1b
2	M314	W10X33	0.31	0.93	103	0.142	0	y	102	264.856	436.95	52.5	145.5	1.492	H1-1b
3	M336	W10X33	0.293	0.93	71	0.089	0	z	71	264.856	436.95	52.5	145.5	1.491	H1-1b
4	M337	L4X4X4	0.081	5	72	0.007	5	z	13	48.179	86.85	3.865	7.485	1.014	H2-1
5	M340	LL4X4X4X6	0.614	13.656	13	0.082	6.531	y	15	94.443	173.7	19.337	4.604	1	H1-1a
6	M342	LL4X4X4X6	0.544	43.344	15	0.079	43.938	y	15	94.443	173.7	19.337	4.604	1	H1-1a
7	M343	L4X4X4	0.207	4.507	15	0.071	9.014	z	15	22.847	86.85	4.358	6.603	1.303	H2-1
8	M346	L4X4X4	0.335	9.014	104	0.046	9.014	z	13	22.847	86.85	3.865	5.854	1.016	H2-1
9	M347	L5X5X5	0.728	8.4	104	0.025	8.4	z	15	64.277	138.15	7.872	13.319	1.004	H2-1
10	M349	LL4X4X4X6	0.943	13.656	15	0.033	6.531	y	13	94.443	173.7	19.337	4.604	1	H1-1a
11	M350	LL4X4X4X6	0.854	31.469	13	0.037	50.469	y	15	94.443	173.7	19.337	4.604	1	H1-1a
12	M351	L4X4X4	0.583	2.906	15	0.192	4.5	z	71	50.078	86.85	4.358	8.037	1.167	H2-1
13	M352	L4X4X4	0.567	2.906	13	0.179	4.5	z	103	50.078	86.85	4.358	8.036	1.166	H2-1
14	M353	W6X15	0.346	0	70	0.157	1.396	y	70	182.589	199.35	16.283	38.122	2.302	H1-1b
15	M354	W6X15	0.338	0	100	0.154	1.396	y	100	182.589	199.35	16.283	38.122	2.225	H1-1b

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
16	M355	L4X4X4	0.596	2.906	15	0.186	4.5	z	71	50.078	86.85	4.358	8.027	1.162	H2-1
17	M356	W6X15	0.094	2.5	101	0.155	5	y	103	175.905	199.35	16.283	38.122	1.133	H1-1b
18	M357	W6X15	0.089	2.5	103	0.148	0	y	71	175.905	199.35	16.283	38.122	1.138	H1-1b
19	M358	W6X15	0.268	0	70	0.124	0.567	y	70	182.589	199.35	16.283	38.122	2.281	H1-1b
20	M359	W6X15	0.278	0	100	0.124	0.567	y	70	182.589	199.35	16.283	38.122	2.254	H1-1b
21	M360	W6X15	0.092	2.5	71	0.148	0	y	103	175.905	199.35	16.283	38.122	1.13	H1-1b
22	M361	WT4X9	0.442	1.166	15	0.697	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
23	M362	WT4X9	0.261	3.264	102	0.078	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
24	M363	WT4X9	0.25	3.264	106	0.076	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
25	M364	WT4X9	0.211	3.218	103	0.024	4.477	y	71	94.243	118.35	8.738	6.317	1	H1-1b
26	M365	WT4X9	0.358	1.166	15	0.727	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
27	M366	WT4X9	0.36	3.264	104	0.538	0	z	103	94.243	118.35	8.738	3.952	1	H1-1b
28	M367	WT3X7.5	0.526	0	15	0.008	4.477	y	72	71.445	99.45	8.888	3.464	1	H1-1a
29	M368	WT3X7.5	0.458	0	13	0.007	0	y	76	71.445	99.45	8.888	3.464	1	H1-1a
30	M369	WT3X7.5	0.438	0	13	0.007	0	y	72	71.445	99.45	8.888	3.464	1	H1-1a
31	M370	WT3X7.5	0.735	1.166	15	0.432	1.166	y	73	71.445	99.45	8.888	3.464	1	H1-1a
32	M371	L5X5X5	0.378	5	102	0.007	5	z	15	83.053	138.15	7.872	15.793	1.003	H2-1
33	M372	L5X5X5	0.436	5	72	0.009	5	z	15	83.053	138.15	7.872	15.792	1.002	H2-1
34	M373	L4X4X4	0.127	0	72	0.006	5	z	15	48.179	86.85	3.865	7.473	1.009	H2-1
35	M374	L4X4X4	0.183	4.507	15	0.026	9.014	z	13	22.847	86.85	4.358	6.231	1.147	H2-1
36	M375	L4X4X4	0.058	0	102	0.007	5	z	15	48.179	86.85	3.865	7.497	1.019	H2-1
37	M376	L4X4X4	0.197	4.789	74	0.014	9.014	z	13	22.847	86.85	3.865	5.896	1.029	H2-1
38	M377	L5X5X5	0.641	4.55	74	0.013	8.4	z	15	64.277	138.15	7.872	13.327	1.006	H2-1
39	M378	WT3X7.5	0.107	0	13	0.003	4.477	y	13	71.445	99.45	8.888	3.464	1	H1-1b
40	M379	WT3X7.5	0.088	0	16	0.003	4.477	y	62	71.445	99.45	8.888	3.464	1	H1-1b
41	M380	WT3X7.5	0.114	0	15	0.003	0	y	13	71.445	99.45	8.888	3.464	1	H1-1b
42	M381	WT3X7.5	0.129	0	15	0.002	0	y	62	71.445	99.45	8.888	3.464	1	H1-1b
43	M382	L4X4X4	0.237	4.507	13	0.017	9.014	y	15	22.847	86.85	3.865	6.151	1.117	H2-1
44	M383	L4X4X4	0.266	4.507	13	0.025	9.014	y	13	22.847	86.85	3.865	6.122	1.107	H2-1
45	M384	L5X5X5	0.236	8.4	106	0.021	8.4	y	13	64.277	138.15	8.865	13.307	1.002	H2-1
46	M385	L5X5X5	0.267	8.4	106	0.025	8.4	y	13	64.277	138.15	8.865	13.306	1.002	H2-1
47	M386	L4X4X4	0.207	4.507	15	0.023	9.014	y	15	22.847	86.85	3.865	6.243	1.152	H2-1
48	M387	L4X4X4	0.209	4.507	13	0.034	9.014	y	13	22.847	86.85	3.865	6.184	1.13	H2-1
49	M388	L5X5X5	0.214	8.4	76	0.022	8.4	y	13	64.277	138.15	8.865	14.08	1.161	H2-1
50	M389	L5X5X5	0.24	8.4	76	0.01	8.4	y	13	64.277	138.15	8.865	13.993	1.141	H2-1
51	M390	L5X5X5	0.127	0	100	0.007	5	y	15	83.053	138.15	8.865	16.034	1.063	H2-1
52	M392	L4X4X4	0.063	2.5	15	0.007	5	y	15	48.179	86.85	3.865	7.726	1.125	H2-1
53	M394	L4X4X4	0.09	0	70	0.006	5	y	15	48.179	86.85	4.358	7.72	1.122	H2-1
54	M396	L5X5X5	0.141	0	70	0.008	5	y	15	83.053	138.15	8.865	16.009	1.056	H2-1
55	M397	L3X3X4	0.203	8.577	15	0.038	0	y	13	10.511	64.8	2.345	3.875	1.465	H2-1*
56	M398	L3X3X4	0.187	8.577	13	0.047	0	y	13	10.511	64.8	2.345	3.355	1.042	H2-1*
57	M399	L3X3X4	0.165	8.577	16	0.042	0	y	15	10.511	64.8	2.345	3.908	1.5	H2-1*
58	M400	L3X3X4	0.225	8.577	16	0.05	8.577	y	15	10.511	64.8	2.345	3.496	1.136	H2-1*
59	M401	L5X5X5	0.721	0	74	0.019	8.4	z	13	64.277	138.15	7.872	13.319	1.004	H2-1
60	M402	L5X5X5	0.825	3.85	104	0.021	8.4	z	13	64.277	138.15	7.872	13.321	1.004	H2-1
61	M403	L3X3X4	0.572	7.955	15	0.056	0	y	13	12.217	64.8	2.345	3.569	1.104	H2-1*
62	M404	L3X3X4	0.497	7.955	13	0.016	7.955	y	13	12.217	64.8	2.345	3.438	1.016	H2-1*
63	M405	L3X3X4	0.609	7.955	15	0.061	7.955	y	15	12.217	64.8	2.345	3.433	1.014	H2-1*
64	M406	L3X3X4	0.482	7.955	13	0.017	7.955	z	70	12.217	64.8	2.345	3.599	1.126	H2-1*
65	M409	L3X3X4	0.487	7.955	15	0.063	0	y	13	12.217	64.8	2.345	3.597	1.124	H2-1*
66	M410	L3X3X4	0.414	7.955	13	0.049	0	y	13	12.217	64.8	2.345	3.442	1.019	H2-1*
67	M411	L3X3X4	0.491	7.955	15	0.067	0	y	15	12.217	64.8	2.345	3.438	1.017	H2-1*
68	M412	L3X3X4	0.398	7.955	16	0.043	0	y	15	12.217	64.8	2.345	3.641	1.157	H2-1*
69	M413	L3X3X4	0.107	8.577	15	0.027	8.577	z	102	10.511	64.8	2.345	3.908	1.5	H2-1*
70	M414	L3X3X4	0.095	8.577	13	0.028	0	z	72	10.511	64.8	2.345	3.389	1.063	H2-1*

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
71	M415	L3X3X4	0.122	8.577	16	0.026	8.577	z	102	10.511	64.8	2.345	3.376	1.055	H2-1*
72	M416	L3X3X4	0.074	8.577	15	0.027	0	z	72	10.511	64.8	2.345	3.908	1.5	H2-1*
73	M95	W6X15	0.661	2.5	71	0.881	5	z	71	175.905	199.35	16.283	38.122	1.31	H1-1b
74	M96	W6X15	0.64	2.5	103	0.854	0	z	71	175.905	199.35	16.283	38.122	1.31	H1-1b
75	M530	W10X33	0.311	0.93	71	0.095	4.316	z	71	264.856	436.95	52.5	145.5	1.516	H1-1b
76	M531	W10X33	0.326	0.93	71	0.155	0	y	102	264.856	436.95	52.5	145.5	1.576	H1-1b
77	M532	W10X33	0.181	4.25	70	0.126	0	y	102	264.856	436.95	52.5	145.5	1.435	H1-1b
78	M533	W10X33	0.178	4.25	72	0.061	0	y	100	264.856	436.95	52.5	145.5	1.583	H1-1b
79	M534	L4X4X4	0.071	5	72	0.007	5	z	15	48.179	86.85	3.865	7.489	1.016	H2-1
80	M535	LL4X4X4X6	0.593	43.344	13	0.083	6.531	y	15	94.443	173.7	19.337	4.604	1	H1-1a
81	M536	LL4X4X4X6	0.552	57	71	0.079	43.938	y	15	94.443	173.7	19.337	4.604	1	H1-1a
82	M537	L4X4X4	0.211	4.507	15	0.07	9.014	z	15	22.847	86.85	4.358	6.988	1.5	H2-1
83	M538	L4X4X4	0.205	4.507	15	0.047	9.014	z	13	22.847	86.85	4.358	6.54	1.274	H2-1
84	M539	L5X5X5	0.612	8.4	104	0.025	8.4	z	13	64.277	138.15	7.872	13.323	1.005	H2-1
85	M540	LL4X4X4X6	0.902	26.719	15	0.032	6.531	y	13	94.443	173.7	19.337	4.604	1	H1-1a
86	M541	LL4X4X4X6	0.838	25.531	13	0.037	50.469	y	15	94.443	173.7	19.337	4.604	1	H1-1a
87	M542	L4X4X4	0.583	2.906	15	0.193	4.5	z	71	50.078	86.85	4.358	8.037	1.167	H2-1
88	M543	L4X4X4	0.568	2.906	13	0.181	4.5	z	103	50.078	86.85	4.358	8.035	1.166	H2-1
89	M544	W6X15	0.395	0	70	0.207	2.793	z	71	182.589	199.35	16.283	38.122	2.309	H1-1b
90	M545	W6X15	0.305	0	100	0.139	1.396	y	100	182.589	199.35	16.283	38.122	2.223	H1-1b
91	M546	L4X4X4	0.595	2.906	15	0.186	4.5	z	71	50.078	86.85	4.358	8.028	1.162	H2-1
92	M547	W6X15	0.094	2.5	101	0.155	5	y	73	175.905	199.35	16.283	38.122	1.134	H1-1b
93	M548	W6X15	0.089	2.5	103	0.147	0	y	71	175.905	199.35	16.283	38.122	1.139	H1-1b
94	M549	W6X15	0.314	0	100	0.14	0.567	y	70	182.589	199.35	16.283	38.122	2.255	H1-1b
95	M550	W6X15	0.246	0	100	0.112	0.567	y	70	182.589	199.35	16.283	38.122	2.25	H1-1b
96	M551	W6X15	0.092	2.5	101	0.147	0	y	73	175.905	199.35	16.283	38.122	1.129	H1-1b
97	M552	WT4X9	0.429	1.166	15	0.697	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
98	M553	WT4X9	0.249	3.264	102	0.079	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
99	M554	WT4X9	0.232	3.264	106	0.076	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
100	M555	WT4X9	0.212	3.218	103	0.025	4.477	y	71	94.243	118.35	8.738	6.317	1	H1-1b
101	M556	WT4X9	0.302	1.166	15	0.556	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
102	M557	WT4X9	0.298	3.264	104	0.066	4.477	z	103	94.243	118.35	8.738	3.952	1	H1-1b
103	M558	WT3X7.5	0.511	0	15	0.007	4.477	y	72	71.445	99.45	8.888	3.464	1	H1-1a
104	M559	WT3X7.5	0.456	0	13	0.007	0	y	72	71.445	99.45	8.888	3.464	1	H1-1a
105	M560	WT3X7.5	0.439	0	13	0.008	0	y	72	71.445	99.45	8.888	3.464	1	H1-1a
106	M561	WT3X7.5	0.676	1.166	15	0.447	1.166	y	73	71.445	99.45	8.888	3.464	1	H1-1a
107	M562	L5X5X5	0.419	5	72	0.007	5	z	15	83.053	138.15	7.872	15.792	1.002	H2-1
108	M563	L5X5X5	0.368	5	72	0.007	5	z	15	83.053	138.15	7.872	15.794	1.003	H2-1
109	M564	L4X4X4	0.068	5	15	0.006	5	z	15	48.179	86.85	3.865	7.602	1.066	H2-1
110	M565	L4X4X4	0.19	4.507	13	0.026	9.014	z	13	22.847	86.85	4.358	6.162	1.121	H2-1
111	M566	L4X4X4	0.105	0	106	0.006	5	z	15	48.179	86.85	3.865	7.469	1.007	H2-1
112	M567	L4X4X4	0.342	4.789	74	0.013	9.014	z	13	22.847	86.85	3.865	5.86	1.018	H2-1
113	M568	L5X5X5	0.732	4.55	104	0.014	8.4	z	15	64.277	138.15	7.872	13.324	1.005	H2-1
114	M569	WT3X7.5	0.104	0	14	0.003	4.477	y	13	71.445	99.45	8.888	3.464	1	H1-1b
115	M570	WT3X7.5	0.092	0	13	0.003	4.477	y	62	71.445	99.45	8.888	3.464	1	H1-1b
116	M571	WT3X7.5	0.1	0	15	0.003	0	y	13	71.445	99.45	8.888	3.464	1	H1-1b
117	M572	WT3X7.5	0.131	0	15	0.003	0	y	62	71.445	99.45	8.888	3.464	1	H1-1b
118	M573	L4X4X4	0.233	4.507	13	0.017	9.014	y	15	22.847	86.85	3.865	6.155	1.119	H2-1
119	M574	L4X4X4	0.261	4.507	13	0.025	9.014	y	13	22.847	86.85	3.865	6.127	1.109	H2-1
120	M575	L5X5X5	0.203	8.4	106	0.021	8.4	y	13	64.277	138.15	8.865	13.308	1.002	H2-1
121	M576	L5X5X5	0.234	8.4	76	0.024	8.4	y	13	64.277	138.15	8.865	13.307	1.002	H2-1
122	M577	L4X4X4	0.209	4.507	15	0.024	9.014	y	15	22.847	86.85	3.865	6.253	1.156	H2-1
123	M578	L4X4X4	0.243	9.014	76	0.034	9.014	y	13	22.847	86.85	4.358	6.674	1.336	H2-1
124	M579	L5X5X5	0.234	8.4	106	0.022	8.4	y	13	64.277	138.15	8.865	14.012	1.146	H2-1
125	M580	L5X5X5	0.259	8.4	76	0.009	8.4	y	13	64.277	138.15	8.865	13.941	1.13	H2-1

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
126	M581	L5X5X5	0.135	0	70	0.007	5	y	15	83.053	138.15	8.865	16.019	1.059	H2-1
127	M582	L4X4X4	0.074	0	74	0.006	5	y	15	48.179	86.85	4.358	7.651	1.089	H2-1
128	M583	L4X4X4	0.069	0	70	0.006	5	y	15	48.179	86.85	4.358	7.805	1.165	H2-1
129	M584	L5X5X5	0.118	0	70	0.006	5	y	15	83.053	138.15	8.865	16.054	1.068	H2-1
130	M585	L3X3X4	0.184	8.577	14	0.038	0	y	13	10.511	64.8	2.345	3.908	1.5	H2-1*
131	M586	L3X3X4	0.182	8.577	14	0.047	0	y	13	10.511	64.8	2.345	3.356	1.042	H2-1*
132	M587	L3X3X4	0.17	8.577	13	0.042	0	y	15	10.511	64.8	2.345	3.908	1.5	H2-1*
133	M588	L3X3X4	0.227	8.577	15	0.049	8.577	y	15	10.511	64.8	2.345	3.496	1.136	H2-1*
134	M589	L5X5X5	0.813	0	74	0.019	8.4	z	13	64.277	138.15	7.872	13.317	1.004	H2-1
135	M590	L5X5X5	0.708	3.85	74	0.02	8.4	z	13	64.277	138.15	7.872	13.325	1.005	H2-1
136	M591	L3X3X4	0.557	7.955	15	0.056	0	y	13	12.217	64.8	2.345	3.573	1.107	H2-1*
137	M592	L3X3X4	0.496	7.955	13	0.036	7.955	y	73	12.217	64.8	2.345	3.438	1.016	H2-1*
138	M593	L3X3X4	0.56	7.955	15	0.061	7.955	y	15	12.217	64.8	2.345	3.435	1.015	H2-1*
139	M594	L3X3X4	0.482	7.955	13	0.016	0	y	13	12.217	64.8	2.345	3.599	1.126	H2-1*
140	M595	L3X3X4	0.472	7.955	15	0.063	0	y	13	12.217	64.8	2.345	3.603	1.129	H2-1*
141	M596	L3X3X4	0.413	7.955	14	0.049	0	y	13	12.217	64.8	2.345	3.442	1.019	H2-1*
142	M597	L3X3X4	0.442	7.955	15	0.068	0	y	15	12.217	64.8	2.345	3.441	1.018	H2-1*
143	M598	L3X3X4	0.4	7.955	13	0.044	0	y	15	12.217	64.8	2.345	3.639	1.156	H2-1*
144	M599	L3X3X4	0.089	8.577	14	0.027	8.577	z	102	10.511	64.8	2.345	3.908	1.5	H2-1*
145	M600	L3X3X4	0.091	8.577	14	0.028	0	z	102	10.511	64.8	2.345	3.392	1.065	H2-1*
146	M601	L3X3X4	0.126	8.577	15	0.026	8.577	z	102	10.511	64.8	2.345	3.374	1.054	H2-1*
147	M602	L3X3X4	0.079	8.577	13	0.027	0	z	72	10.511	64.8	2.345	3.908	1.5	H2-1*
148	M618	W6X15	0.626	2.5	71	0.829	5	z	71	175.905	199.35	16.283	38.122	1.311	H1-1b
149	M619	W6X15	0.66	2.5	103	0.88	5	z	103	175.905	199.35	16.283	38.122	1.311	H1-1b
150	M620	W8X24	0.061	2.578	101	0.009	0	y	102	262.802	318.6	32.138	86.625	1.546	H1-1b
151	M621	W8X24	0.061	2.578	103	0.009	0	y	102	262.802	318.6	32.138	86.625	1.546	H1-1b
152	M622	W8X24	0.233	0	101	0.105	4.854	z	101	217.023	318.6	32.138	86.625	1.204	H1-1b
153	M623	W8X24	0.191	0	71	0.086	6.27	z	73	217.023	318.6	32.138	86.625	1.814	H1-1b
154	M624	W8X24	0.191	0	73	0.086	6.27	z	71	217.023	318.6	32.138	86.625	1.814	H1-1b
155	M625	W8X24	0.233	0	103	0.105	4.854	z	103	217.023	318.6	32.138	86.625	1.204	H1-1b
156	M628	W8X24	0.071	4.292	65	0.025	0	y	65	295.571	318.6	32.138	86.625	1.654	H1-1b
157	M629	W8X24	0.071	4.292	63	0.025	0	y	63	295.571	318.6	32.138	86.625	1.654	H1-1b
158	M631	W8X24	0.068	8.618	65	0.035	8.618	y	65	174.33	318.6	32.138	86.625	3	H1-1b
159	M632	W8X18	0.082	3.789	73	0.03	0	y	15	150.319	236.7	17.475	63.75	1.384	H1-1b
160	M633	W8X18	0.082	3.789	71	0.03	0	y	15	150.319	236.7	17.475	63.75	1.384	H1-1b
161	M638	L3X3X4	0.111	3.259	16	0.007	6.384	y	15	18.969	64.8	2.345	3.933	1.136	H2-1
162	M639	L3X3X4	0.109	3.126	14	0.007	6.384	y	15	18.969	64.8	2.345	3.933	1.136	H2-1
163	M640	W8X18	0.039	3.333	74	0.018	3.444	y	102	107.359	236.7	17.475	63.75	1.729	H1-1b
164	M642	W8X18	0.039	3.333	74	0.018	3.444	y	102	107.359	236.7	17.475	63.75	1.729	H1-1b
165	M644	L3X3X4	0.079	2.366	15	0.005	4.832	y	16	31.595	64.8	2.345	4.289	1.136	H2-1
166	M645	L3X3X4	0.076	2.466	13	0.005	4.832	y	16	31.595	64.8	2.345	4.289	1.136	H2-1
167	M646	L3X3X4	0.079	2.366	15	0.005	4.832	y	14	31.595	64.8	2.345	4.289	1.136	H2-1
168	M647	L3X3X4	0.076	2.466	13	0.005	4.832	y	14	31.595	64.8	2.345	4.289	1.136	H2-1
169	M648	W8X18	0.006	2.583	13	0.005	5.167	y	16	196.625	236.7	17.475	63.75	1.136	H1-1b
170	M649	L3X3X4	0.181	0	14	0.017	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
171	M650	L3X3X4	0.155	0	14	0.014	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
172	M651	L3X3X4	0.155	0	14	0.014	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
173	M652	L3X3X4	0.181	0	14	0.017	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
174	M653	L3X3X4	0.155	0	14	0.014	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
175	M654	L3X3X4	0.155	0	14	0.014	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
176	M655	L3X3X4	0.181	0	14	0.017	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
177	M656	L3X3X4	0.181	0	14	0.017	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
178	M657	L3X3X4	0.201	0	14	0.021	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
179	M658	L3X3X4	0.201	0	14	0.021	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
180	M659	L3X3X4	0.218	0	14	0.023	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
181	M660	L3X3X4	0.218	0	14	0.023	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
182	M407	W8X24	0.065	7.866	42	0.014	0	y	42	242.131	318.6	32.138	86.625	1.549	H1-1b
183	M408	W8X24	0.065	7.866	100	0.014	0	y	100	242.131	318.6	32.138	86.625	1.549	H1-1b
184	M417	W8X24	0.065	7.866	100	0.014	0	y	100	242.131	318.6	32.138	86.625	1.549	H1-1b
185	M418	W8X24	0.065	7.866	42	0.014	0	y	42	242.131	318.6	32.138	86.625	1.549	H1-1b
186	M419	W8X18	0.012	3.75	15	0.007	7.5	y	16	160.12	236.7	17.475	63.119	1.136	H1-1b
187	M420	W8X18	0.084	7.5	100	0.034	7.5	y	100	160.12	236.7	17.475	63.75	2.122	H1-1b
188	M421	W8X18	0.012	3.75	13	0.007	7.5	y	16	160.12	236.7	17.475	63.119	1.136	H1-1b
189	M422	W8X18	0.084	7.5	42	0.034	7.5	y	42	160.12	236.7	17.475	63.75	2.122	H1-1b
190	M423	L3X3X4	0.315	5.463	16	0.011	10.489	y	15	7.027	64.8	2.345	3.159	1.136	H2-1
191	M424	L3X3X4	0.315	5.463	14	0.011	10.489	y	15	7.027	64.8	2.345	3.159	1.136	H2-1
192	M425	L3X3X4	0.315	5.463	16	0.011	10.489	y	13	7.027	64.8	2.345	3.159	1.136	H2-1
193	M426	L3X3X4	0.315	5.463	14	0.011	10.489	y	13	7.027	64.8	2.345	3.159	1.136	H2-1
194	M427	W8X24	0.205	7.866	101	0.016	0	y	42	242.131	318.6	32.138	86.625	1.628	H1-1b
195	M428	W8X24	0.205	7.866	101	0.016	0	y	100	242.131	318.6	32.138	86.625	1.628	H1-1b
196	M429	W8X24	0.205	7.866	73	0.016	0	y	100	242.131	318.6	32.138	86.625	1.628	H1-1b
197	M430	W8X24	0.205	7.866	73	0.016	0	y	42	242.131	318.6	32.138	86.625	1.628	H1-1b
198	M431	W8X18	0.105	3.375	100	0.051	6.75	y	73	172.464	236.7	17.475	63.75	1.201	H1-1b
199	M432	W8X18	0.007	2.875	16	0.005	5.75	y	13	188.114	236.7	17.475	63.75	1.136	H1-1b
200	M433	W8X18	0.105	3.375	42	0.051	0	y	73	172.464	236.7	17.475	63.75	1.201	H1-1b
201	M434	W8X18	0.007	2.875	14	0.005	5.75	y	15	188.114	236.7	17.475	63.75	1.136	H1-1b
202	M439	W8X24	0.235	0	73	0.143	4.146	z	101	217.023	318.6	32.138	85.66	1.113	H1-1b
203	M440	L3X3X4	0.235	0	13	0.021	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
204	M441	L3X3X4	0.235	0	13	0.021	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
205	M442	L3X3X4	0.291	0	13	0.031	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
206	M443	W8X24	0.235	0	101	0.143	4.146	z	103	217.023	318.6	32.138	85.66	1.113	H1-1b
207	M444	L3X3X4	0.235	0	13	0.021	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
208	M445	L3X3X4	0.235	0	13	0.021	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
209	M446	L3X3X4	0.291	0	13	0.031	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
210	M447	L3X3X4	0.379	5.48	14	0.013	10.735	y	16	6.708	64.8	2.345	3.118	1.136	H2-1
211	M448	L3X3X4	0.379	5.48	16	0.013	10.735	y	14	6.708	64.8	2.345	3.118	1.136	H2-1
212	M449	W8X24	0.221	0	73	0.134	4.146	z	101	217.023	318.6	32.138	85.731	1.114	H1-1b
213	M450	L3X3X4	0.223	0	14	0.02	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
214	M451	L3X3X4	0.223	0	14	0.02	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
215	M452	L3X3X4	0.275	0	14	0.029	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
216	M453	W8X24	0.221	0	101	0.134	4.146	z	103	217.023	318.6	32.138	85.731	1.114	H1-1b
217	M454	L3X3X4	0.223	0	14	0.02	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
218	M455	L3X3X4	0.223	0	14	0.02	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
219	M456	L3X3X4	0.275	0	14	0.029	0	y	13	55.406	64.8	2.345	5.216	1.5	H2-1
220	M457	L3X3X4	0.214	4.48	14	0.013	8.602	y	73	10.448	64.8	2.345	3.491	1.136	H2-1
221	M458	L3X3X4	0.214	4.48	16	0.013	8.602	y	101	10.448	64.8	2.345	3.491	1.136	H2-1
222	M463	L3X3X4	0.574	0	15	0.053	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
223	M464	L3X3X4	0.285	0	14	0.027	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
224	M465	L3X3X4	0.546	0	15	0.05	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
225	M466	L3X3X4	0.275	0	15	0.032	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
226	M467	L3X3X4	0.425	0	15	0.039	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
227	M472	L3X3X4	0.172	0	14	0.016	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
228	M486	L3X3X4	0.219	0	15	0.026	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
229	M487	L3X3X4	0.091	0	14	0.011	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
230	M488	L3X3X4	0.442	0	15	0.041	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
231	M489	L3X3X4	0.09	0	14	0.011	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
232	M490	L3X3X4	0.34	0	14	0.032	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
233	M491	L3X3X4	0.169	0	15	0.02	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
234	M492	L3X3X4	0.17	0	15	0.02	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
235	M493	L3X3X4	0.546	0	15	0.05	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
236	M494	L3X3X4	0.275	0	15	0.032	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
237	M495	L3X3X4	0.275	0	15	0.032	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
238	M496	L3X3X4	0.22	0	15	0.026	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
239	M499	L3X3X4	0.214	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
240	M500	L3X3X4	0.144	0	15	0.017	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
241	M501	L3X3X4	0.145	0	15	0.017	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
242	M502	L3X3X4	0.275	0	15	0.032	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
243	M503	L3X3X4	0.284	0	15	0.033	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
244	M504	L3X3X4	0.285	0	15	0.033	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
245	M505	L3X3X4	0.215	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
246	M391	W10X33	0.181	4.25	72	0.061	0	y	72	264.856	436.95	52.5	145.5	1.583	H1-1b
247	M393	W10X33	0.182	4.25	70	0.129	0	y	102	264.856	436.95	52.5	145.5	1.436	H1-1b
248	M395	W10X33	0.313	0.93	103	0.144	0	y	102	264.856	436.95	52.5	145.5	1.526	H1-1b
249	M459	W10X33	0.293	0.93	71	0.089	0	z	71	264.856	436.95	52.5	145.5	1.484	H1-1b
250	M461	L4X4X4	0.081	5	72	0.007	5	z	13	48.179	86.85	3.865	7.485	1.014	H2-1
251	M462	LL4X4X4X6	0.63	13.656	13	0.082	6.531	y	15	94.443	173.7	19.337	4.604	1	H1-1a
252	M470	LL4X4X4X6	0.544	43.344	15	0.078	43.938	y	15	94.443	173.7	19.337	4.604	1	H1-1a
253	M474	L4X4X4	0.208	4.507	15	0.071	9.014	z	15	22.847	86.85	4.358	6.616	1.309	H2-1
254	M475	L4X4X4	0.335	9.014	104	0.046	9.014	z	13	22.847	86.85	3.865	5.854	1.016	H2-1
255	M476	L5X5X5	0.732	8.4	104	0.026	8.4	z	15	64.277	138.15	7.872	13.319	1.004	H2-1
256	M477	LL4X4X4X6	0.948	13.656	15	0.033	6.531	y	13	94.443	173.7	19.337	4.604	1	H1-1a
257	M478	LL4X4X4X6	0.854	31.469	13	0.038	50.469	y	15	94.443	173.7	19.337	4.604	1	H1-1a
258	M479	L4X4X4	0.583	2.906	15	0.192	4.5	z	71	50.078	86.85	4.358	8.037	1.167	H2-1
259	M480	L4X4X4	0.567	2.906	13	0.178	4.5	z	103	50.078	86.85	4.358	8.036	1.166	H2-1
260	M481	W6X15	0.313	0	70	0.141	1.396	y	70	182.589	199.35	16.283	38.122	2.293	H1-1b
261	M482	W6X15	0.346	0	100	0.157	1.396	y	100	182.589	199.35	16.283	38.122	2.227	H1-1b
262	M483	L4X4X4	0.597	2.906	15	0.187	4.5	z	71	50.078	86.85	4.358	8.027	1.161	H2-1
263	M484	W6X15	0.094	2.5	101	0.155	5	y	73	175.905	199.35	16.283	38.122	1.133	H1-1b
264	M519	W6X15	0.089	2.5	103	0.148	0	y	71	175.905	199.35	16.283	38.122	1.139	H1-1b
265	M520	W6X15	0.249	0	100	0.113	0.567	y	70	182.589	199.35	16.283	38.122	2.251	H1-1b
266	M521	W6X15	0.282	0	100	0.126	0.567	y	70	182.589	199.35	16.283	38.122	2.253	H1-1b
267	M522	W6X15	0.092	2.5	101	0.148	5	y	71	175.905	199.35	16.283	38.122	1.129	H1-1b
268	M523	WT4X9	0.387	1.166	15	0.538	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
269	M524	WT4X9	0.246	0	15	0.078	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
270	M525	WT4X9	0.25	3.264	106	0.076	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
271	M526	WT4X9	0.211	3.218	103	0.025	4.477	z	102	94.243	118.35	8.738	6.317	1	H1-1b
272	M527	WT4X9	0.358	1.166	15	0.727	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
273	M528	WT4X9	0.382	3.264	104	0.697	0	z	103	94.243	118.35	8.738	3.952	1	H1-1b
274	M529	WT3X7.5	0.709	1.166	15	0.448	1.166	y	71	71.445	99.45	8.888	3.464	1	H1-1a
275	M603	WT3X7.5	0.458	0	13	0.007	0	y	76	71.445	99.45	8.888	3.464	1	H1-1a
276	M604	WT3X7.5	0.438	0	13	0.007	0	y	72	71.445	99.45	8.888	3.464	1	H1-1a
277	M605	WT3X7.5	0.55	0	15	0.008	4.477	y	72	71.445	99.45	8.888	3.464	1	H1-1a
278	M606	L5X5X5	0.386	5	72	0.008	5	z	15	83.053	138.15	7.872	15.793	1.003	H2-1
279	M607	L5X5X5	0.428	5	72	0.008	5	z	15	83.053	138.15	7.872	15.792	1.002	H2-1
280	M608	L4X4X4	0.127	0	72	0.006	5	z	15	48.179	86.85	3.865	7.473	1.009	H2-1
281	M609	L4X4X4	0.183	4.507	15	0.026	9.014	z	13	22.847	86.85	4.358	6.228	1.146	H2-1
282	M610	L4X4X4	0.055	0	102	0.007	5	z	15	48.179	86.85	3.865	7.499	1.02	H2-1
283	M611	L4X4X4	0.192	4.789	104	0.014	9.014	z	13	22.847	86.85	3.865	5.898	1.03	H2-1
284	M612	L5X5X5	0.636	4.55	104	0.013	8.4	z	15	64.277	138.15	7.872	13.328	1.006	H2-1
285	M613	WT3X7.5	0.107	0	13	0.003	4.477	y	13	71.445	99.45	8.888	3.464	1	H1-1b
286	M614	WT3X7.5	0.088	0	16	0.002	4.477	y	92	71.445	99.45	8.888	3.464	1	H1-1b
287	M615	WT3X7.5	0.113	0	15	0.003	0	y	13	71.445	99.45	8.888	3.464	1	H1-1b
288	M616	WT3X7.5	0.131	0	15	0.002	0	y	92	71.445	99.45	8.888	3.464	1	H1-1b
289	M617	L4X4X4	0.237	4.507	13	0.017	9.014	y	15	22.847	86.85	3.865	6.151	1.117	H2-1
290	M661	L4X4X4	0.266	4.507	13	0.025	9.014	y	13	22.847	86.85	3.865	6.122	1.107	H2-1

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
291	M662	L5X5X5	0.237	8.4	106	0.021	8.4	y	13	64.277	138.15	8.865	13.307	1.002	H2-1
292	M663	L5X5X5	0.263	8.4	76	0.025	8.4	y	13	64.277	138.15	8.865	13.306	1.002	H2-1
293	M664	L4X4X4	0.207	4.507	15	0.023	9.014	y	15	22.847	86.85	3.865	6.244	1.152	H2-1
294	M665	L4X4X4	0.209	4.507	13	0.034	9.014	y	13	22.847	86.85	3.865	6.185	1.13	H2-1
295	M666	L5X5X5	0.211	8.4	106	0.022	8.4	y	13	64.277	138.15	8.865	14.09	1.164	H2-1
296	M667	L5X5X5	0.243	8.4	76	0.009	8.4	y	13	64.277	138.15	8.865	13.985	1.14	H2-1
297	M668	L5X5X5	0.124	0	70	0.007	5	y	15	83.053	138.15	8.865	16.041	1.064	H2-1
298	M669	L4X4X4	0.063	2.5	15	0.007	5	y	15	48.179	86.85	3.865	7.724	1.124	H2-1
299	M670	L4X4X4	0.088	0	70	0.006	5	y	15	48.179	86.85	4.358	7.725	1.124	H2-1
300	M671	L5X5X5	0.144	0	70	0.008	5	y	15	83.053	138.15	8.865	16.005	1.055	H2-1
301	M672	L3X3X4	0.201	8.577	15	0.038	0	y	13	10.511	64.8	2.345	3.882	1.472	H2-1*
302	M673	L3X3X4	0.186	8.577	13	0.047	0	y	13	10.511	64.8	2.345	3.355	1.042	H2-1*
303	M674	L3X3X4	0.165	8.577	16	0.042	0	y	15	10.511	64.8	2.345	3.908	1.5	H2-1*
304	M675	L3X3X4	0.227	8.577	16	0.05	8.577	y	15	10.511	64.8	2.345	3.496	1.136	H2-1*
305	M676	L5X5X5	0.724	0	74	0.02	8.4	z	13	64.277	138.15	7.872	13.319	1.004	H2-1
306	M677	L5X5X5	0.82	3.85	74	0.02	8.4	z	13	64.277	138.15	7.872	13.321	1.004	H2-1
307	M678	L3X3X4	0.591	7.955	15	0.056	0	y	13	12.217	64.8	2.345	3.564	1.1	H2-1*
308	M679	L3X3X4	0.497	7.955	13	0.016	7.955	y	13	12.217	64.8	2.345	3.438	1.016	H2-1*
309	M680	L3X3X4	0.591	7.955	15	0.061	7.955	y	15	12.217	64.8	2.345	3.434	1.014	H2-1*
310	M681	L3X3X4	0.482	7.955	13	0.017	7.955	z	70	12.217	64.8	2.345	3.599	1.126	H2-1*
311	M682	L3X3X4	0.473	7.955	15	0.062	0	y	13	12.217	64.8	2.345	3.603	1.128	H2-1*
312	M683	L3X3X4	0.414	7.955	13	0.049	0	y	13	12.217	64.8	2.345	3.442	1.019	H2-1*
313	M684	L3X3X4	0.505	7.955	15	0.067	0	y	15	12.217	64.8	2.345	3.437	1.016	H2-1*
314	M685	L3X3X4	0.398	7.955	16	0.043	0	y	15	12.217	64.8	2.345	3.64	1.157	H2-1*
315	M686	L3X3X4	0.106	8.577	15	0.027	8.577	z	102	10.511	64.8	2.345	3.908	1.5	H2-1*
316	M687	L3X3X4	0.095	8.577	13	0.028	0	z	72	10.511	64.8	2.345	3.389	1.064	H2-1*
317	M688	L3X3X4	0.124	8.577	16	0.026	8.577	z	72	10.511	64.8	2.345	3.375	1.055	H2-1*
318	M689	L3X3X4	0.074	8.577	16	0.027	0	z	72	10.511	64.8	2.345	3.908	1.5	H2-1*
319	M690	W6X15	0.661	2.5	71	0.881	5	z	71	175.905	199.35	16.283	38.122	1.31	H1-1b
320	M691	W6X15	0.64	2.5	103	0.854	0	z	71	175.905	199.35	16.283	38.122	1.311	H1-1b
321	M692	L3X3X4	0.34	0	14	0.032	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
322	M693	L3X3X4	0.546	0	15	0.05	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
323	M694	L3X3X4	0.284	0	15	0.033	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
324	M695	L3X3X4	0.17	0	15	0.02	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
325	M696	L3X3X4	0.574	0	15	0.053	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
326	M697	L3X3X4	0.169	0	15	0.02	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
327	M701	L3X3X4	0.425	0	15	0.039	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
328	M702	L3X3X4	0.214	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
329	M703	L3X3X4	0.215	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
330	M704	L3X3X4	0.285	0	15	0.033	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
331	M705	L3X3X4	0.275	0	15	0.032	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
332	M706	L3X3X4	0.275	0	15	0.032	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
333	M460	W10X33	0.316	0.93	103	0.106	4.316	z	71	264.856	436.95	52.5	145.5	1.504	H1-1b
334	M471	W10X33	0.333	0.93	71	0.139	0	y	70	264.856	436.95	52.5	145.5	1.557	H1-1b
335	M473	W10X33	0.185	4.25	70	0.129	0	y	102	264.856	436.95	52.5	145.5	1.439	H1-1b
336	M507	W10X33	0.179	4.25	72	0.062	0	y	100	264.856	436.95	52.5	145.5	1.583	H1-1b
337	M508	L4X4X4	0.081	5	72	0.006	5	z	15	48.179	86.85	3.865	7.485	1.014	H2-1
338	M509	LL4X4X4X6	0.616	13.656	13	0.082	6.531	y	15	94.443	173.7	19.337	4.604	1	H1-1a
339	M510	LL4X4X4X6	0.559	57	71	0.079	43.938	y	15	94.443	173.7	19.337	4.604	1	H1-1a
340	M511	L4X4X4	0.209	4.507	15	0.071	9.014	z	15	22.847	86.85	4.358	6.954	1.481	H2-1
341	M512	L4X4X4	0.205	4.507	15	0.046	9.014	z	13	22.847	86.85	4.358	6.542	1.275	H2-1
342	M513	L5X5X5	0.63	8.4	104	0.025	8.4	z	15	64.277	138.15	7.872	13.323	1.005	H2-1
343	M514	LL4X4X4X6	0.936	13.656	15	0.033	6.531	y	13	94.443	173.7	19.337	4.604	1	H1-1a
344	M515	LL4X4X4X6	0.849	31.469	13	0.037	50.469	y	15	94.443	173.7	19.337	4.604	1	H1-1a
345	M516	L4X4X4	0.583	2.906	15	0.192	4.5	z	71	50.078	86.85	4.358	8.037	1.167	H2-1

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
346	M517	L4X4X4	0.567	2.906	13	0.179	4.5	z	103	50.078	86.85	4.358	8.036	1.166	H2-1
347	M518	W6X15	0.36	0	71	0.223	2.793	z	71	182.589	199.35	16.283	38.122	2.911	H1-1b
348	M707	W6X15	0.311	0	100	0.142	1.396	y	100	182.589	199.35	16.283	38.122	2.223	H1-1b
349	M708	L4X4X4	0.597	2.906	15	0.187	4.5	z	71	50.078	86.85	4.358	8.027	1.161	H2-1
350	M709	W6X15	0.094	2.5	101	0.155	5	y	73	175.905	199.35	16.283	38.122	1.134	H1-1b
351	M710	W6X15	0.089	2.5	103	0.148	0	y	71	175.905	199.35	16.283	38.122	1.139	H1-1b
352	M711	W6X15	0.271	0	100	0.12	0.567	y	100	182.589	199.35	16.283	38.122	2.252	H1-1b
353	M712	W6X15	0.252	0	100	0.114	0.567	y	70	182.589	199.35	16.283	38.122	2.252	H1-1b
354	M713	W6X15	0.091	2.5	101	0.148	0	y	73	175.905	199.35	16.283	38.122	1.13	H1-1b
355	M714	WT4X9	0.392	1.166	15	0.539	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
356	M715	WT4X9	0.242	0	15	0.079	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
357	M716	WT4X9	0.25	3.264	106	0.076	4.477	z	71	94.243	118.35	8.738	3.952	1	H1-1b
358	M717	WT4X9	0.213	3.218	103	0.025	4.477	y	71	94.243	118.35	8.738	6.317	1	H1-1b
359	M718	WT4X9	0.359	1.166	15	0.727	0	z	71	94.243	118.35	8.738	3.952	1	H1-1b
360	M719	WT4X9	0.368	3.264	104	0.538	0	z	103	94.243	118.35	8.738	3.952	1	H1-1b
361	M720	WT3X7.5	0.52	0	15	0.007	4.477	y	72	71.445	99.45	8.888	3.464	1	H1-1a
362	M721	WT3X7.5	0.456	0	13	0.007	0	y	76	71.445	99.45	8.888	3.464	1	H1-1a
363	M722	WT3X7.5	0.44	0	13	0.008	0	y	72	71.445	99.45	8.888	3.464	1	H1-1a
364	M723	WT3X7.5	0.725	1.166	15	0.431	1.166	y	73	71.445	99.45	8.888	3.464	1	H1-1a
365	M724	L5X5X5	0.42	5	72	0.007	5	z	15	83.053	138.15	7.872	15.792	1.002	H2-1
366	M725	L5X5X5	0.388	5	72	0.008	5	z	15	83.053	138.15	7.872	15.793	1.002	H2-1
367	M726	L4X4X4	0.067	5	15	0.006	5	z	15	48.179	86.85	3.865	7.604	1.067	H2-1
368	M727	L4X4X4	0.19	4.789	74	0.026	9.014	z	13	22.847	86.85	3.865	5.899	1.03	H2-1
369	M728	L4X4X4	0.115	0	102	0.007	5	z	15	48.179	86.85	3.865	7.475	1.01	H2-1
370	M729	L4X4X4	0.354	4.789	74	0.014	9.014	z	13	22.847	86.85	3.865	5.859	1.018	H2-1
371	M730	L5X5X5	0.732	4.55	104	0.013	8.4	z	15	64.277	138.15	7.872	13.324	1.005	H2-1
372	M731	WT3X7.5	0.104	0	14	0.003	4.477	y	13	71.445	99.45	8.888	3.464	1	H1-1b
373	M732	WT3X7.5	0.092	0	13	0.003	4.477	y	62	71.445	99.45	8.888	3.464	1	H1-1b
374	M733	WT3X7.5	0.117	0	15	0.003	0	y	13	71.445	99.45	8.888	3.464	1	H1-1b
375	M734	WT3X7.5	0.126	0	15	0.003	0	y	62	71.445	99.45	8.888	3.464	1	H1-1b
376	M735	L4X4X4	0.228	4.507	13	0.017	9.014	y	15	22.847	86.85	3.865	6.161	1.121	H2-1
377	M736	L4X4X4	0.257	4.507	13	0.025	9.014	y	13	22.847	86.85	3.865	6.13	1.11	H2-1
378	M737	L5X5X5	0.207	8.4	106	0.021	8.4	y	13	64.277	138.15	8.865	13.308	1.002	H2-1
379	M738	L5X5X5	0.239	8.4	76	0.025	8.4	y	13	64.277	138.15	8.865	13.307	1.002	H2-1
380	M739	L4X4X4	0.205	9.014	102	0.023	9.014	y	15	22.847	86.85	4.358	6.988	1.5	H2-1
381	M740	L4X4X4	0.26	9.014	76	0.034	9.014	y	13	22.847	86.85	4.358	6.613	1.308	H2-1
382	M741	L5X5X5	0.238	8.4	106	0.022	8.4	y	13	64.277	138.15	8.865	13.998	1.142	H2-1
383	M742	L5X5X5	0.263	8.4	76	0.01	8.4	y	13	64.277	138.15	8.865	13.93	1.127	H2-1
384	M743	L5X5X5	0.139	0	70	0.007	5	y	15	83.053	138.15	8.865	16.013	1.057	H2-1
385	M744	L4X4X4	0.085	0	70	0.007	5	y	15	48.179	86.85	4.358	7.736	1.13	H2-1
386	M745	L4X4X4	0.064	0	70	0.006	5	y	15	48.179	86.85	4.358	7.833	1.18	H2-1
387	M746	L5X5X5	0.126	0	70	0.008	5	y	15	83.053	138.15	8.865	16.037	1.064	H2-1
388	M747	L3X3X4	0.208	8.577	14	0.038	0	y	13	10.511	64.8	2.345	3.861	1.451	H2-1*
389	M748	L3X3X4	0.182	8.577	14	0.047	0	y	13	10.511	64.8	2.345	3.356	1.042	H2-1*
390	M749	L3X3X4	0.17	8.577	13	0.043	0	y	15	10.511	64.8	2.345	3.908	1.5	H2-1*
391	M750	L3X3X4	0.22	8.577	15	0.05	8.577	y	15	10.511	64.8	2.345	3.496	1.136	H2-1*
392	M751	L5X5X5	0.813	0	74	0.019	8.4	z	13	64.277	138.15	7.872	13.317	1.004	H2-1
393	M752	L5X5X5	0.727	3.85	74	0.02	8.4	z	13	64.277	138.15	7.872	13.324	1.005	H2-1
394	M753	L3X3X4	0.566	7.955	15	0.056	0	y	13	12.217	64.8	2.345	3.571	1.105	H2-1*
395	M754	L3X3X4	0.496	7.955	13	0.041	7.955	y	71	12.217	64.8	2.345	3.438	1.016	H2-1*
396	M755	L3X3X4	0.602	7.955	15	0.061	7.955	y	15	12.217	64.8	2.345	3.434	1.014	H2-1*
397	M756	L3X3X4	0.483	7.955	13	0.016	0	y	13	12.217	64.8	2.345	3.599	1.126	H2-1*
398	M757	L3X3X4	0.481	7.955	15	0.063	0	y	13	12.217	64.8	2.345	3.599	1.126	H2-1*
399	M758	L3X3X4	0.413	7.955	14	0.049	0	y	13	12.217	64.8	2.345	3.442	1.019	H2-1*
400	M759	L3X3X4	0.482	7.955	15	0.067	0	y	15	12.217	64.8	2.345	3.438	1.017	H2-1*

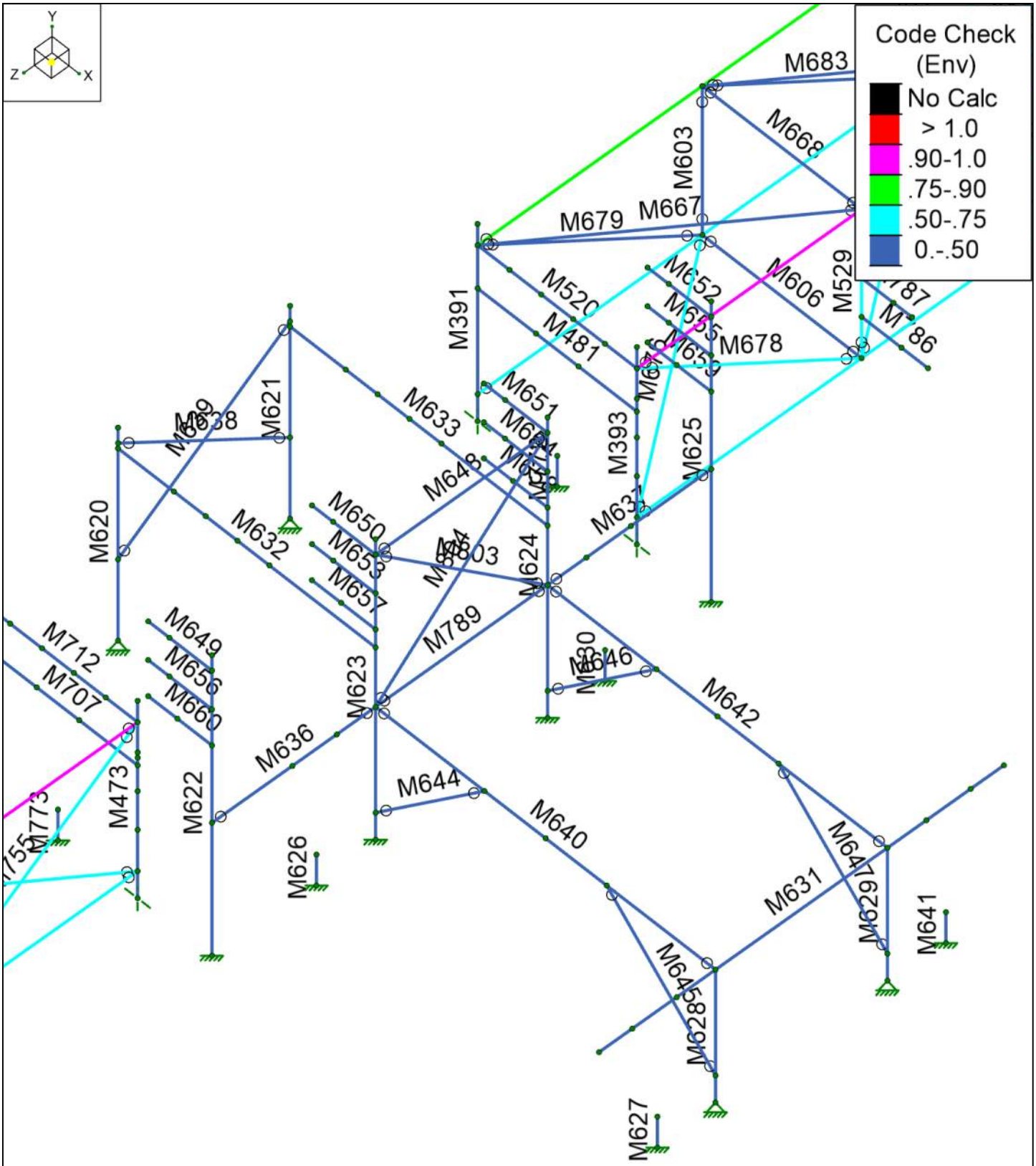
Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
401	M760	L3X3X4	0.4	7.955	13	0.043	0	y	15	12.217	64.8	2.345	3.639	1.156	H2-1*
402	M761	L3X3X4	0.112	8.577	14	0.027	8.577	z	102	10.511	64.8	2.345	3.908	1.5	H2-1*
403	M762	L3X3X4	0.091	8.577	14	0.028	0	z	102	10.511	64.8	2.345	3.392	1.065	H2-1*
404	M763	L3X3X4	0.117	8.577	15	0.026	8.577	z	102	10.511	64.8	2.345	3.378	1.056	H2-1*
405	M764	L3X3X4	0.079	8.577	13	0.027	0	z	72	10.511	64.8	2.345	3.908	1.5	H2-1*
406	M765	W6X15	0.641	2.5	71	0.854	5	z	71	175.905	199.35	16.283	38.122	1.309	H1-1b
407	M766	W6X15	0.66	2.5	103	0.88	5	z	103	175.905	199.35	16.283	38.122	1.311	H1-1b
408	M768	L3X3X4	0.425	0	15	0.039	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
409	M769	L3X3X4	0.284	0	15	0.033	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
410	M771	L3X3X4	0.574	0	15	0.053	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
411	M776	L3X3X4	0.425	0	15	0.039	0	z	15	55.075	64.8	2.345	5.216	1.5	H2-1
412	M777	L3X3X4	0.214	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
413	M778	L3X3X4	0.215	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
414	M779	L3X3X4	0.285	0	15	0.033	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
415	M780	L3X3X4	0.214	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
416	M781	L3X3X4	0.215	0	15	0.025	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
417	M782	L3X3X4	0.228	4.368	15	0.008	9.319	y	14	8.903	64.8	2.345	3.361	1.136	H2-1
418	M783	L3X3X4	0.228	4.368	13	0.008	9.319	y	14	8.903	64.8	2.345	3.361	1.136	H2-1
419	M784	L3X3X4	0.228	4.368	15	0.008	9.319	y	16	8.903	64.8	2.345	3.361	1.136	H2-1
420	M785	L3X3X4	0.228	4.368	13	0.008	9.319	y	16	8.903	64.8	2.345	3.361	1.136	H2-1
421	M485	L3X3X4	0.294	0	14	0.027	0	z	13	55.075	64.8	2.345	5.216	1.5	H2-1
422	M497	L3X3X4	0.15	0	15	0.018	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
423	M498	L3X3X4	0.149	0	15	0.018	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
424	M786	L3X3X4	0.294	0	14	0.027	0	z	13	55.075	64.8	2.345	5.216	1.5	H2-1
425	M787	L3X3X4	0.149	0	15	0.018	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
426	M788	L3X3X4	0.15	0	15	0.018	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
427	M698	L3X3X4	0.285	0	14	0.027	0	z	13	55.075	64.8	2.345	5.216	1.5	H2-1
428	M699	L3X3X4	0.144	0	15	0.017	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
429	M700	L3X3X4	0.145	0	15	0.017	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
430	M468	L3X3X4	0.285	0	14	0.027	0	z	13	55.075	64.8	2.345	5.216	1.5	H2-1
431	M469	L3X3X4	0.144	0	15	0.017	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
432	M506	L3X3X4	0.145	0	15	0.017	0	z	15	56.858	64.8	2.345	5.216	1.5	H2-1
433	M636	W8X18	0.055	2.458	70	0.019	4.917	y	15	200.1	236.7	17.475	63.75	1.152	H1-1b
434	M637	W8X18	0.055	2.458	70	0.019	0	y	15	200.1	236.7	17.475	63.75	1.152	H1-1b
435	M789	W8X10	0.013	2.583	62	0.006	5.167	y	16	89.46	133.2	6.119	32.094	1.136	H1-1b
436	M803	L3X3X4	0.098	4.903	73	0.006	7.132	y	71	15.199	64.8	2.345	3.776	1.136	H2-1
437	M804	L3X3X4	0.098	2.229	71	0.006	7.132	y	73	15.199	64.8	2.345	3.776	1.136	H2-1

Frequencies and Participation

No Data to Print...

Expansion Loop Steel



Envelope Only Solution

RISA	BURNS & MCDONNELL	PDX - Utility Support System	SK-9
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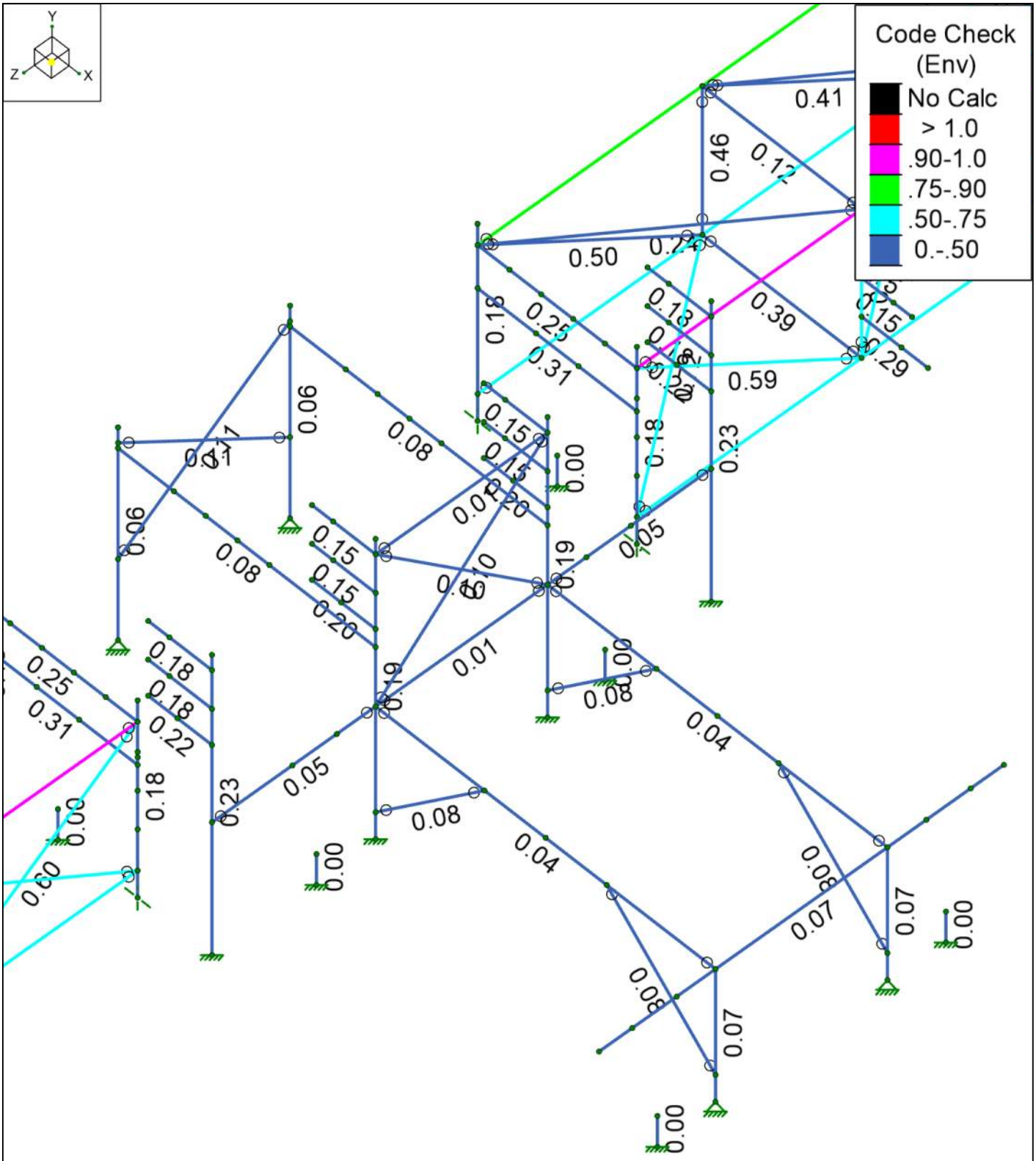

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-8
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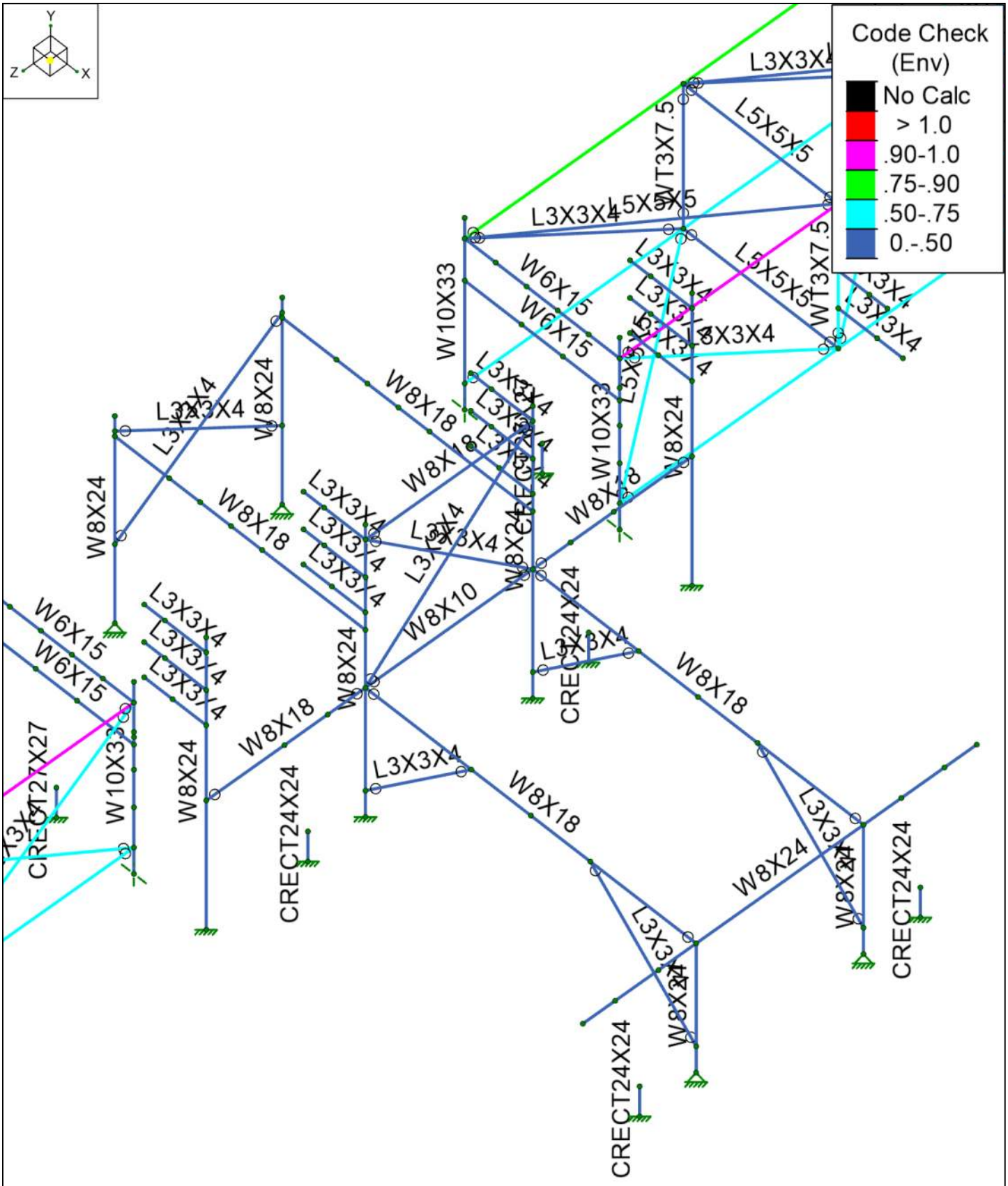

IRISA	BURNS & MCDONNELL	PDX - Utility Support System	SK-7
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	153929		Combined Pile Cap Model.r3d

Fire Rack Support Steel

FIRELOOP® INSTALLATION INSTRUCTIONS FOR SEISMIC APPLICATIONS

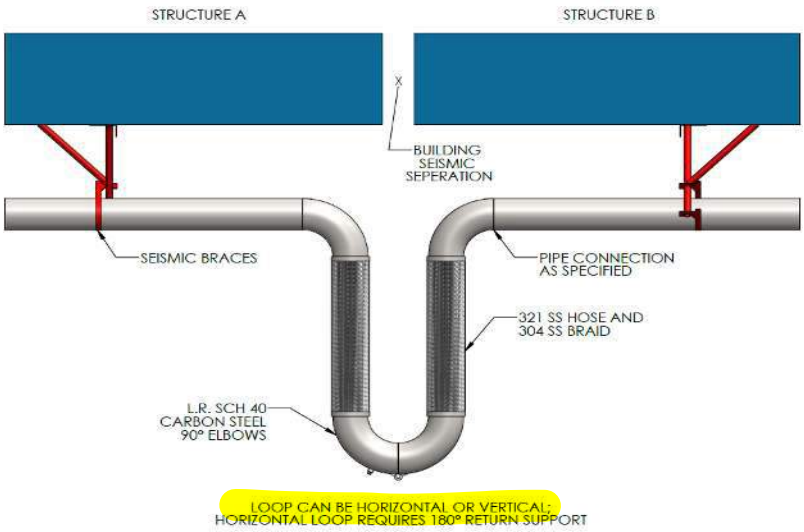
GENERAL: For structures that are designed to withstand a seismic event, there are two ways to design the building. The most common method is to install seismic separations in the building that will separate in a seismic event, leaving the sections of the building intact. The other method utilizes base isolation systems, where the whole building moves as one.

The installation instructions below are for products designed to protect piping crossing seismic separations.

The installation guidelines for seismic joints in NFPA 13 must be followed.

1. Inspect Fireloop for shipping damage, ensure that the shipping bar is intact.
2. During installation, make sure that the sections of flexible hose and braid are protected from damage and overextension.

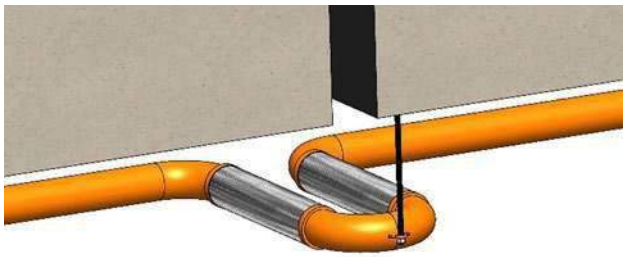
INSTALLATION: NFPA 13 calls out that the seismic device (Fireloop) be installed within 2 feet of the seismic separation, and the bracing be installed within 6 feet of the seismic separation. If this is not possible, consult with Metraflex.



SUPPORTING THE FIRELOOP 180°
RETURN: The Metraloop 180° return is self-supporting in 2 ½" and down with 4" movement.

HANGING DOWN: In the detail above, the Fireloop is hanging down. In this configuration, the Fireloop does not require any additional support.

HORIZONTAL INSTALLATION: For horizontal installation of a Fireloop larger than 2 ½", the 180° return fitting will need to be supported with a hanger rod or cable. The length of the hanger rod shall be a minimum of 12" plus half the nominal pipe size or 2 times the amount of movement, whichever is greater. If the hanger rod or cable does not meet the minimum length, a Seismic BreakAway Hanger from Metraflex is to be installed.



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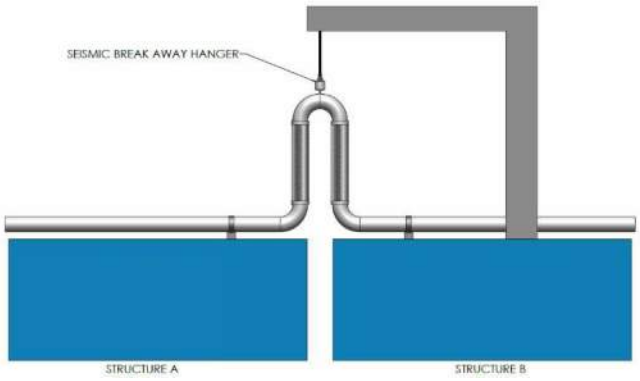
VERTICAL INSTALLATION: For vertical installations of a Fireloop larger than 2” with movement less than or equal to 4”, the 180° return fitting will need to be supported and a Seismic BreakAway Hanger from Metraflex installed in the cable / rod.

Seismic BreakAway Hanger

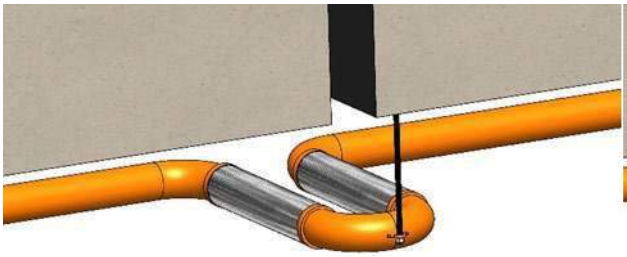


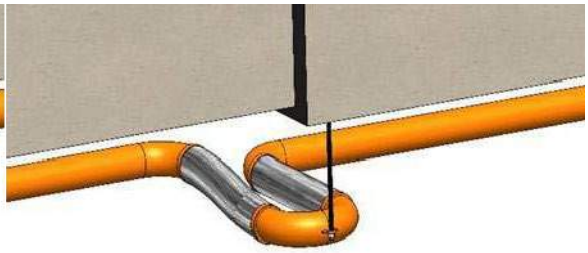
Clearance Around Fireloops: Fireloops must have unobstructed clearance that is equal to the rated seismic movement to be able to move.

INSTALLATION NOTES

SHIPPING BARS: Fireloops are shipped with a shipping bar to ensure a neutral face to face installation. This shipping bar must remain in place during installation, but then must be removed prior to testing.

Note: Although not all installation cases require a Seismic BreakAway Hanger, we recommend that they be used whenever any seismic loop is installed. It is often overlooked that with the standard seismic installation, the loop is hung from one of the structures. The result is that in a seismic event, one side of the loop does all the work while the other side does not move. Using a Seismic BreakAway Hanger, that will release in a seismic event will allow both sides of the loop to flex. See drawings below.





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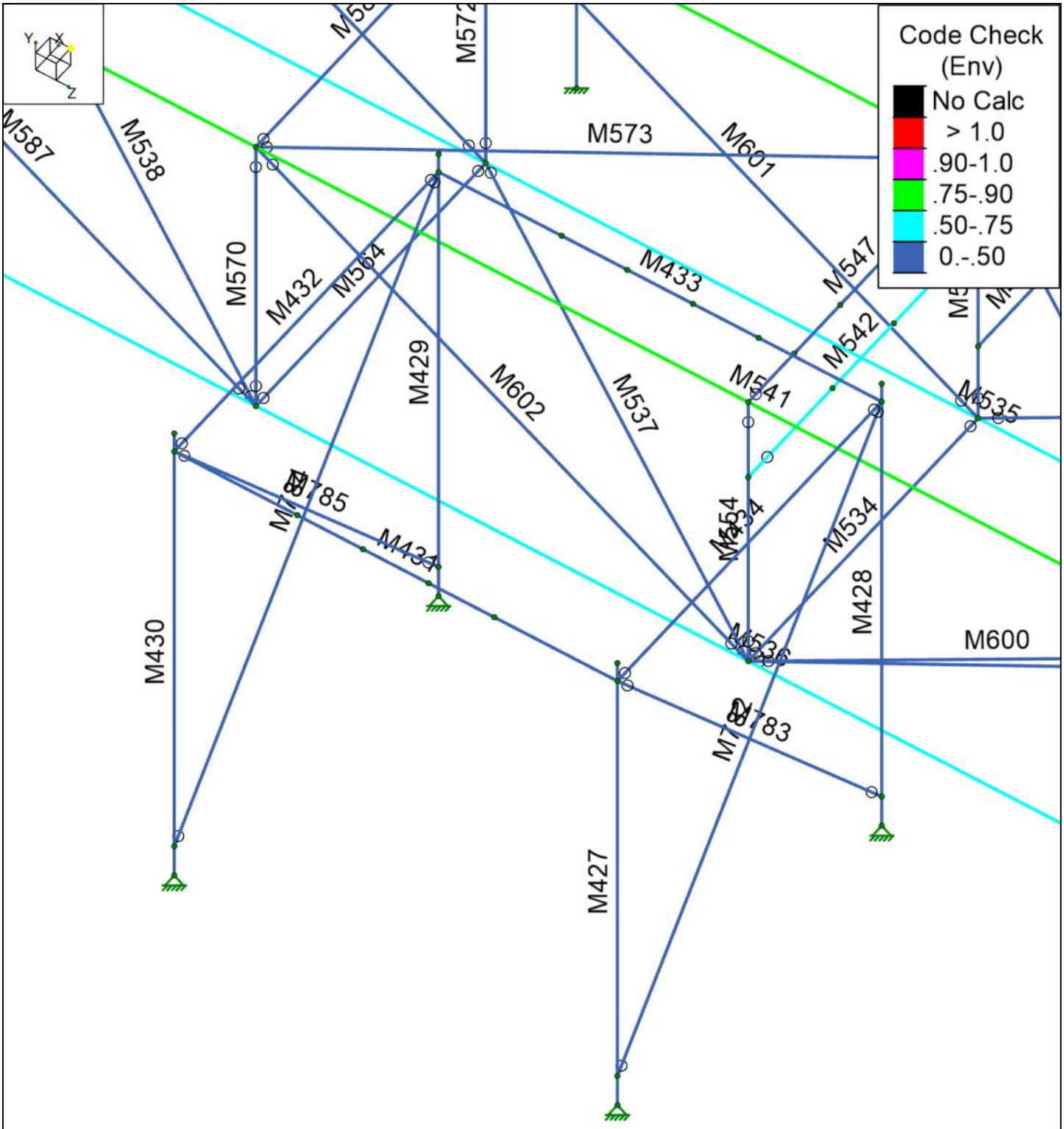
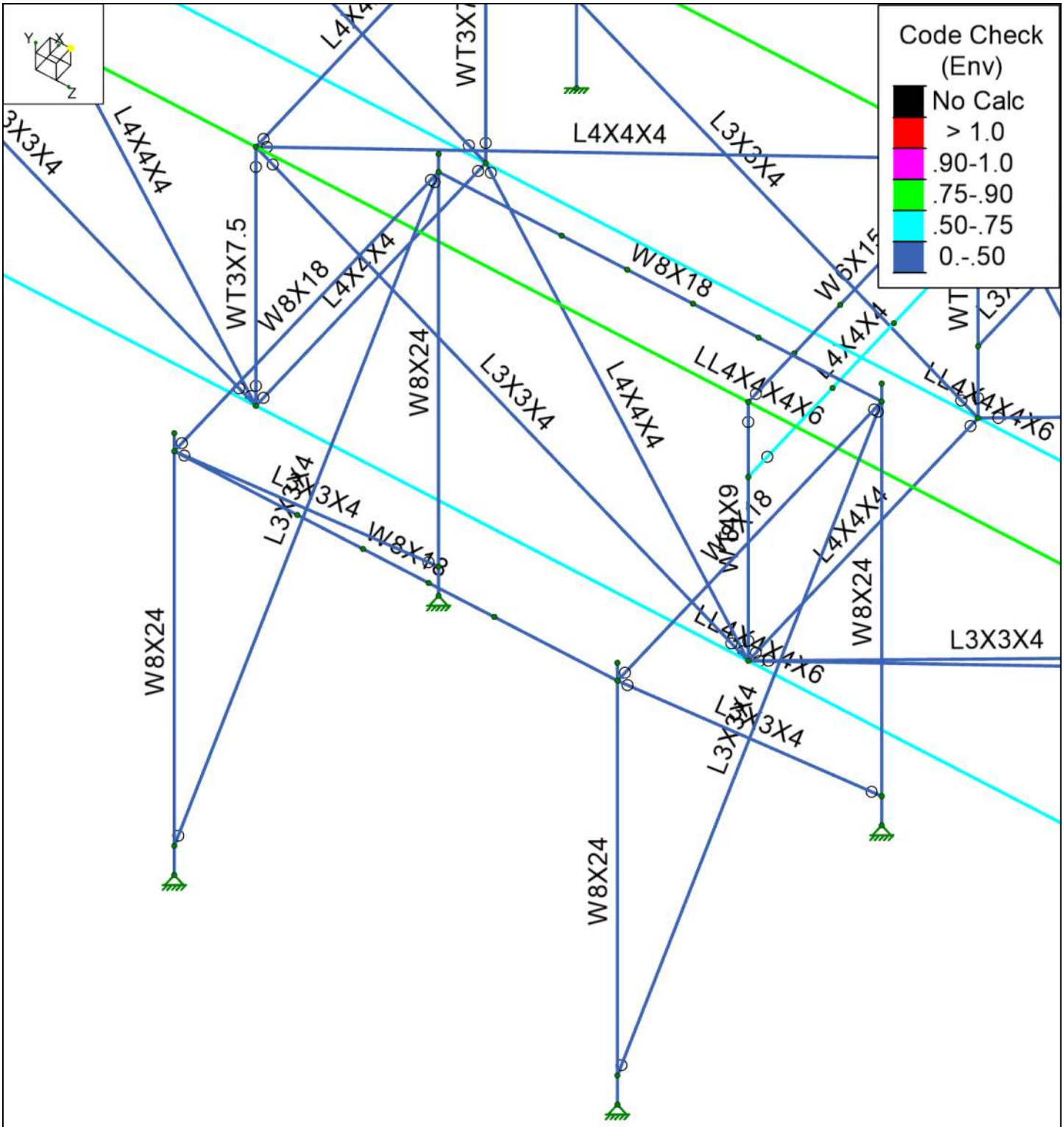


Envelope Only Solution

IRISA	BURNS & MCDONNELL	PDX - Utility Support System	SK-4
	A. Kral		Dec 14, 2023 at 08:08 AM
	153929		Combined Pile Cap Model.r3d



Envelope Only Solution

RISA	BURNS & MCDONNELL	PDX - Utility Support System	SK-6
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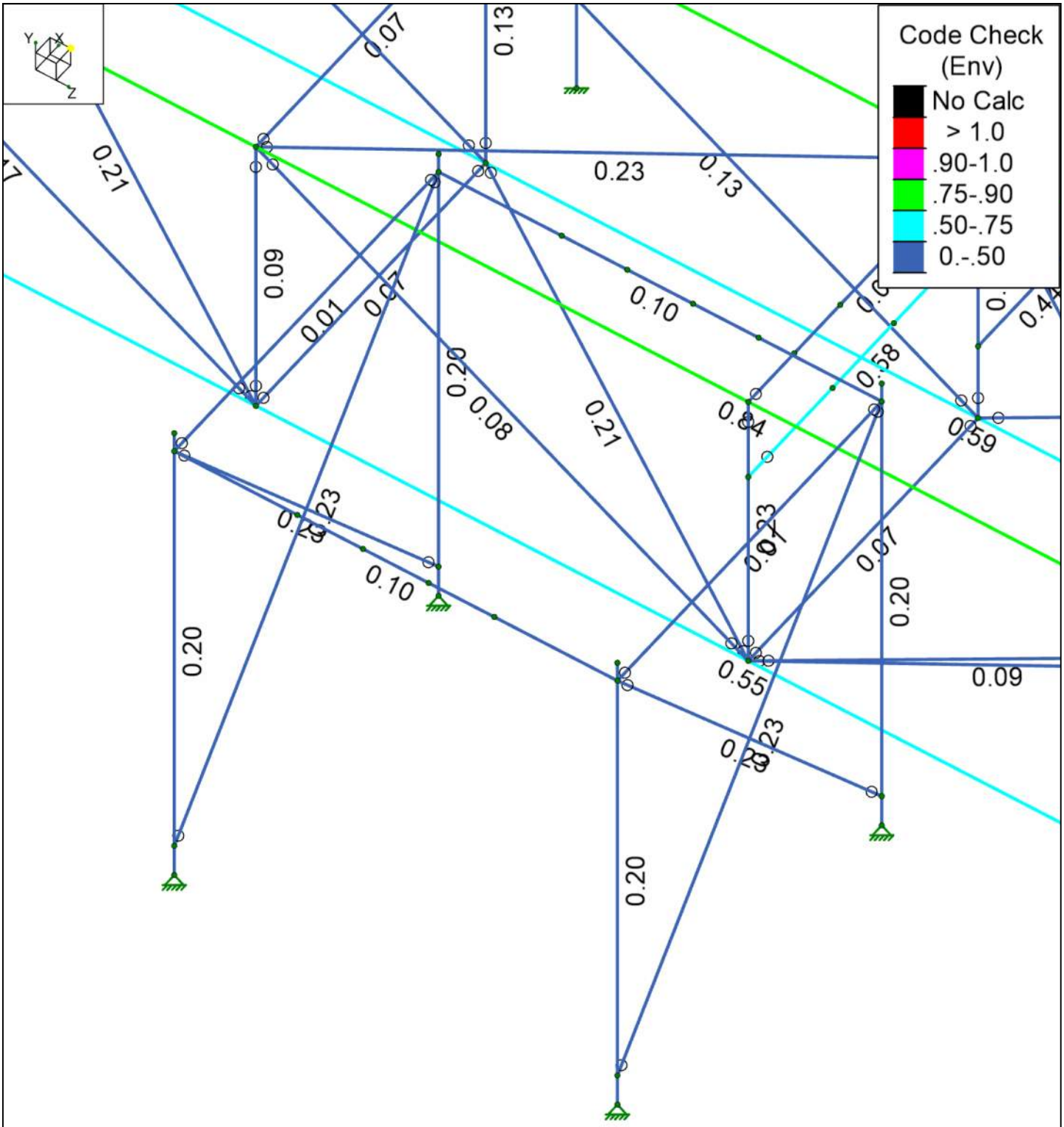

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

IRISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-5
	A. Kral		Dec 14, 2023 at 08:09 AM
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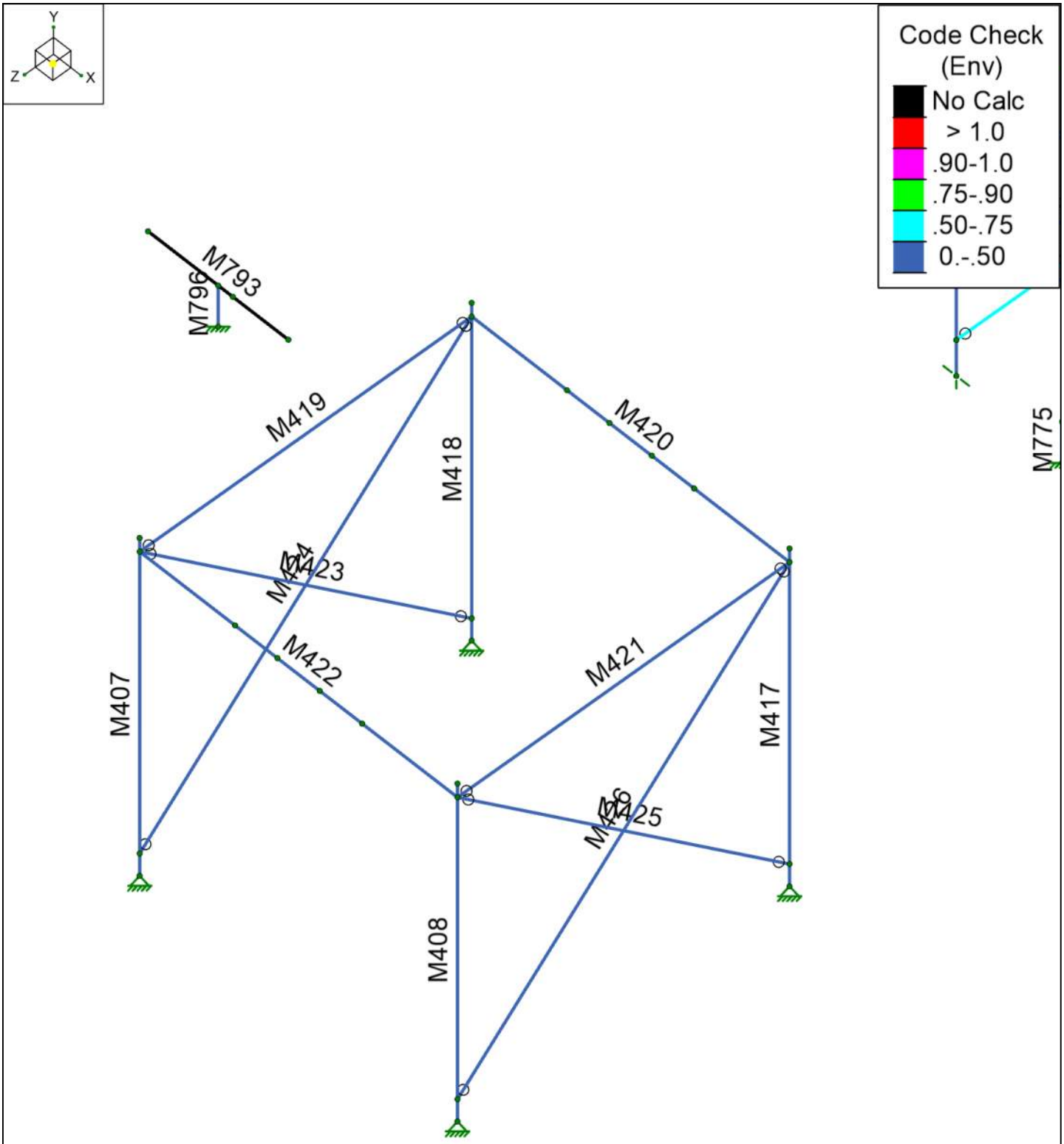

Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-3
	A. Kral		Dec 14, 2023 at 08:07 AM
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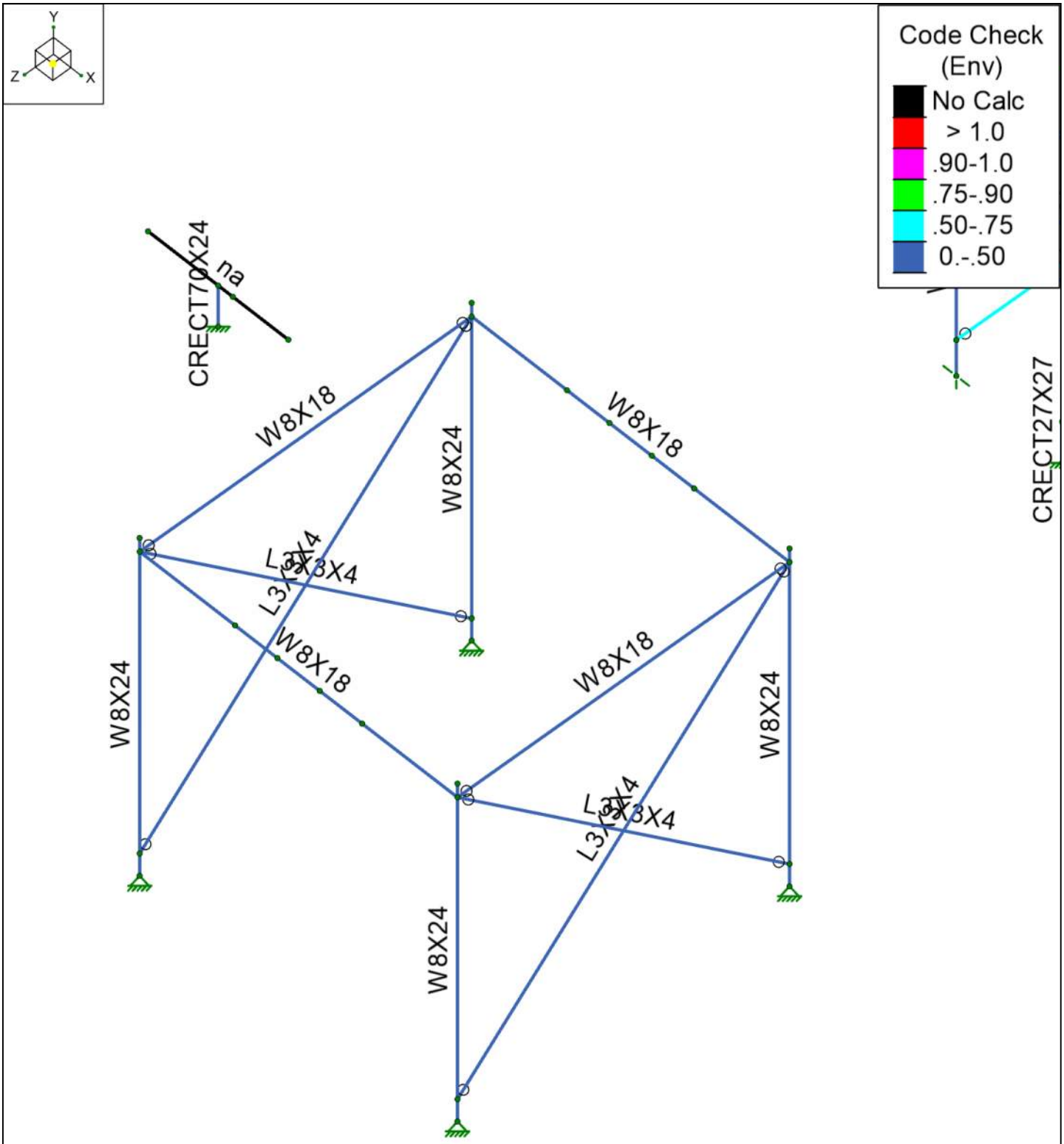

Envelope Only Solution

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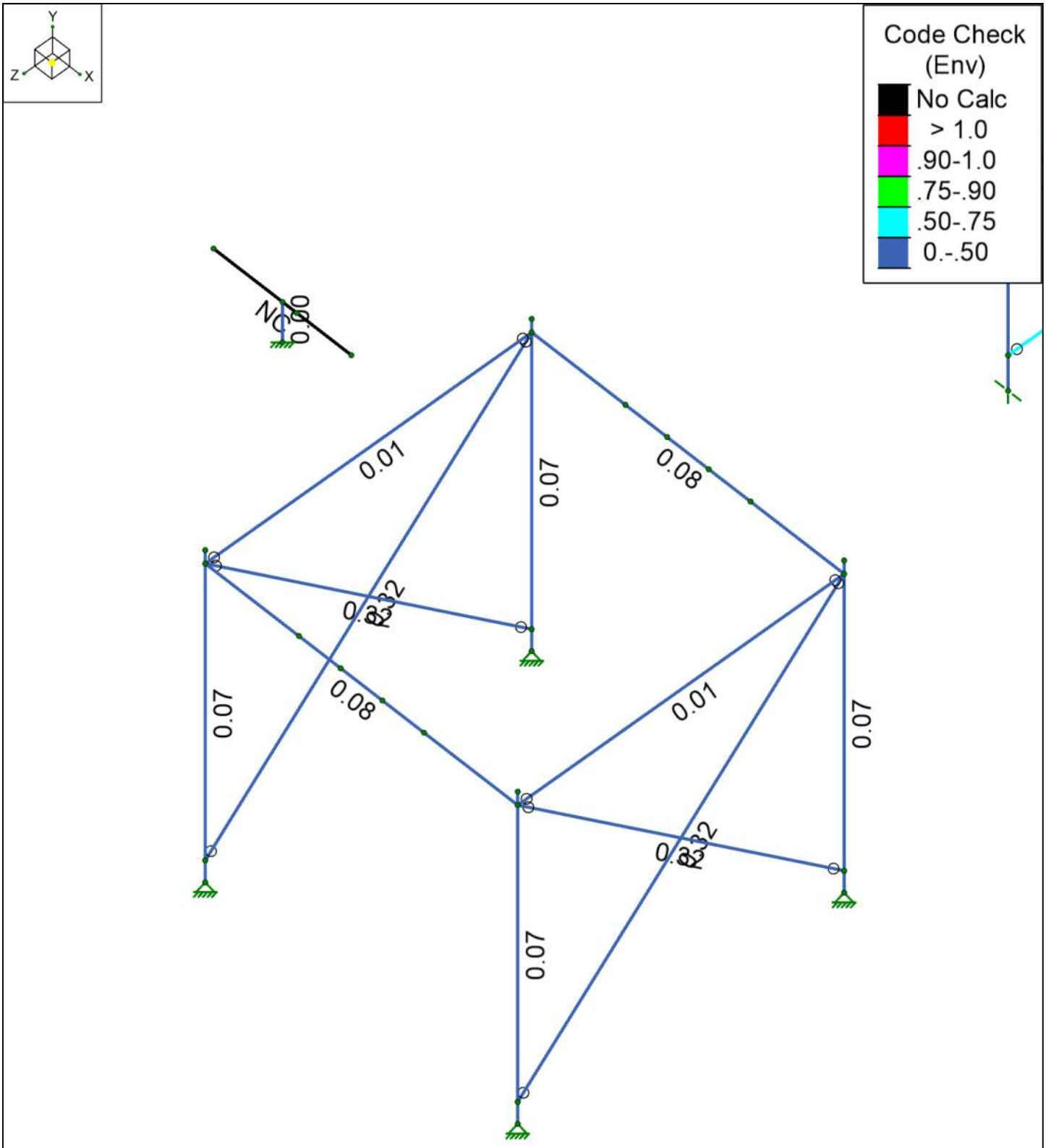
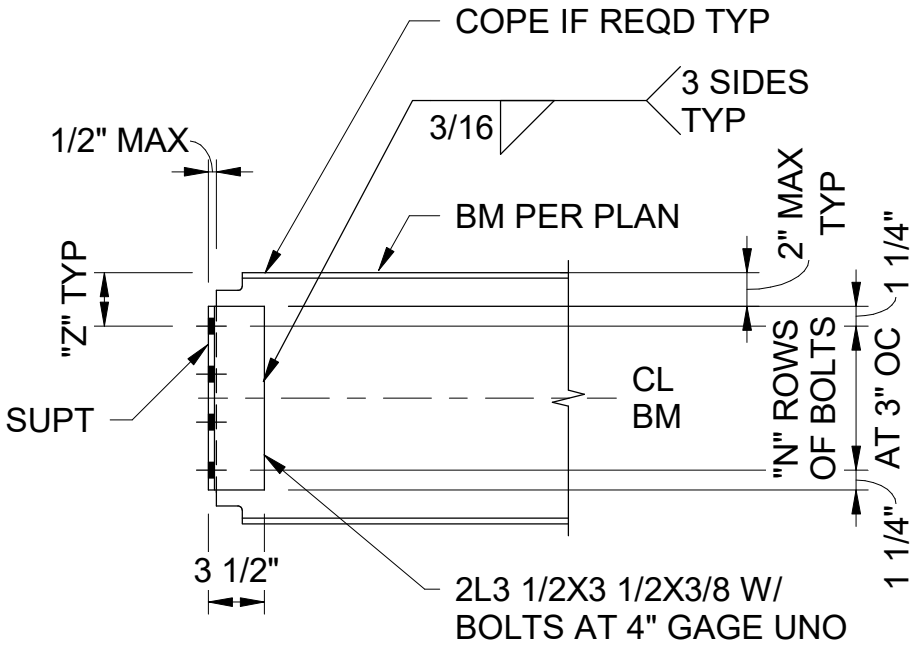


Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Utility Support System	SK-1
	A. Kral		Dec 14, 2023 at 08:05 AM
	153929		Combined Pile Cap Model.r3d

Misc Connection Checks



MEMBER SIZE	"N" UNO
W33, W30	7
W27, W24	6
W21	5
W18, W16	4
W14, W12, C12	3
W10, W8	2

NOTES:

1. PROVIDE WHERE CONNECTION IS NOT OTHERWISE INDICATED ON PLANS, NOTES, ELEVATIONS, SECTIONS, OR DETAILS.
2. WITH STANDARD HOLES, "Z" IS 2" MINIMUM FOR W12 AND LARGER BEAMS OR 1 1/4" MINIMUM FOR W10 AND SMALLER BEAMS.
3. WITH OVERSIZE AND SHORT-SLOT HOLES, "Z" IS 2 1/4" MINIMUM FOR W12 AND LARGER BEAMS OR 1 3/8" MINIMUM FOR W10 AND SMALLER BEAMS.

DETAIL **6**

STANDARD DOUBLE ANGLE BEAM CONNECTION

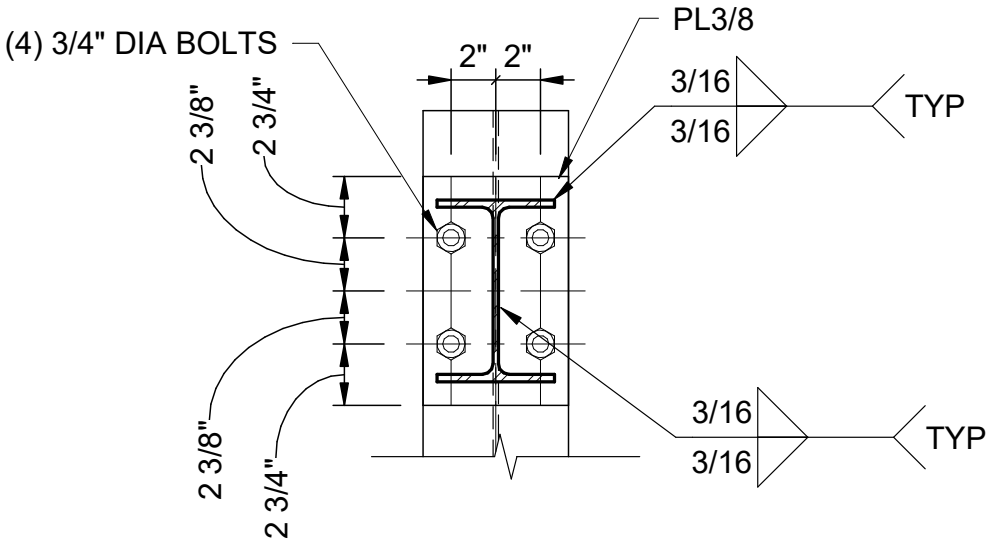
NOT TO SCALE

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M636	I	max	0.223	97	0.679	16	0.329	102	0.001	74	0	107	0	107
2			min	-0.223	99	0.162	97	-0.329	70	-0.002	102	0	12	0	12
3		J	max	0.943	73	-0.271	97	0.586	70	0.001	74	0	107	0	107
4			min	-0.942	71	-1.052	16	-0.586	102	-0.002	102	0	12	0	12
5	M637	I	max	0.943	71	1.052	14	0.586	102	0.002	102	0	107	0	107
6			min	-0.942	73	0.271	99	-0.586	70	-0.001	74	0	12	0	12
7		J	max	0.223	99	-0.162	99	0.329	70	0.002	102	0	107	0	107
8			min	-0.223	97	-0.679	14	-0.329	102	-0.001	74	0	12	0	12
9	M640	I	max	1.436	74	0.641	70	0.124	103	0.002	75	0	107	0	107
10			min	-1.494	102	-0.589	106	-0.124	101	-0.002	103	0	12	0	12
11		J	max	1.326	106	0.463	74	0.124	101	0.002	105	0	107	0	107
12			min	-1.363	70	-0.524	102	-0.124	103	-0.002	73	0	12	0	12
13	M642	I	max	1.436	74	0.641	70	0.124	103	0.002	101	0	107	0	107
14			min	-1.494	102	-0.589	106	-0.124	101	-0.002	77	0	12	0	12
15		J	max	1.326	106	0.463	74	0.124	101	0.002	71	0	107	0	107
16			min	-1.363	70	-0.524	102	-0.124	103	-0.002	107	0	12	0	12
17	M419	I	max	0.05	105	0.382	16	0.082	98	0	101	0	107	0	107
18			min	-0.124	15	0.054	44	-0.082	32	0	43	0	12	0	12
19		J	max	0.05	107	-0.054	107	0.082	96	0	101	0	107	0	107
20			min	-0.124	15	-0.382	13	-0.082	34	0	43	0	12	0	12
21	M421	I	max	0.05	107	0.382	16	0.082	96	0	103	0	107	0	107
22			min	-0.124	13	0.054	44	-0.082	34	0	41	0	12	0	12
23		J	max	0.05	75	-0.054	107	0.082	98	0	103	0	107	0	107
24			min	-0.124	13	-0.382	13	-0.082	32	0	41	0	12	0	12
25	M432	I	max	0.064	75	0.293	16	0.062	99	0	42	0	107	0	107
26			min	-0.209	73	0.041	44	-0.062	33	0	40	0	12	0	12
27		J	max	0.064	75	-0.041	107	0.062	97	0	42	0	107	0	107
28			min	-0.209	73	-0.293	13	-0.062	35	0	40	0	12	0	12
29	M434	I	max	0.064	107	0.293	16	0.062	97	0	100	0	107	0	107
30			min	-0.209	41	0.041	46	-0.062	35	0	42	0	12	0	12
31		J	max	0.064	107	-0.041	104	0.062	99	0	100	0	107	0	107
32			min	-0.209	41	-0.293	13	-0.062	33	0	42	0	12	0	12
33	M648	I	max	0.033	105	0.266	16	0.057	98	0	105	0	107	0	107
34			min	-0.101	13	0.037	45	-0.057	32	0	107	0	12	0	12
35		J	max	0.033	107	-0.037	107	0.057	96	0	105	0	107	0	107
36			min	-0.101	13	-0.266	13	-0.057	34	0	107	0	12	0	12

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M431	I	max	0.586	101	2.878	101	0.541	102	0	101	0.002	107	6.394	101
2			min	-0.517	77	-1.09	77	-0.541	40	0	73	-0.002	41	-5.647	77
3		J	max	0.586	103	1.09	75	0.541	100	0	101	0.002	75	6.394	73
4			min	-0.517	75	-2.878	73	-0.541	72	0	73	-0.002	73	-5.647	75
5	M433	I	max	0.586	103	2.878	73	0.541	100	0	73	0.002	75	6.394	73
6			min	-0.517	75	-1.09	75	-0.541	42	0	41	-0.002	73	-5.647	75
7		J	max	0.586	101	1.09	107	0.541	42	0	73	0.002	107	6.394	101
8			min	-0.517	77	-2.878	41	-0.541	40	0	41	-0.002	41	-5.647	77
9	M420	I	max	0.441	102	1.893	42	0.35	103	0	42	0	44	5.288	42
10			min	-0.299	44	-0.816	44	-0.35	41	0	40	0	42	-4.135	44
11		J	max	0.441	100	0.816	106	0.35	101	0	42	0	106	5.288	100
12			min	-0.299	46	-1.893	40	-0.35	43	0	40	0	40	-4.135	46
13	M422	I	max	0.441	100	1.893	100	0.35	101	0	100	0	106	5.288	100
14			min	-0.299	46	-0.816	46	-0.35	43	0	42	0	40	-4.135	46
15		J	max	0.441	102	0.816	44	0.35	103	0	100	0	44	5.288	42
16			min	-0.299	44	-1.893	42	-0.35	41	0	42	0	42	-4.135	44
17	M632	I	max	0.327	15	1.666	15	0.447	103	0.004	103	0	102	2.523	102
18			min	-0.023	66	0.035	66	-0.447	101	-0.004	75	0	74	-0.864	74
19		J	max	0.78	100	0.154	106	0.266	101	0.004	103	0.299	73	2.755	70
20			min	-0.513	76	-1.019	13	-0.266	103	-0.004	75	-0.299	105	-1.872	106
21	M633	I	max	0.327	15	1.666	15	0.447	103	0.004	77	0	74	2.523	102
22			min	-0.023	66	0.035	66	-0.447	101	-0.004	101	0	102	-0.864	74
23		J	max	0.78	100	0.154	106	0.266	101	0.004	77	0.299	107	2.755	70
24			min	-0.513	76	-1.019	13	-0.266	103	-0.004	101	-0.299	71	-1.872	106

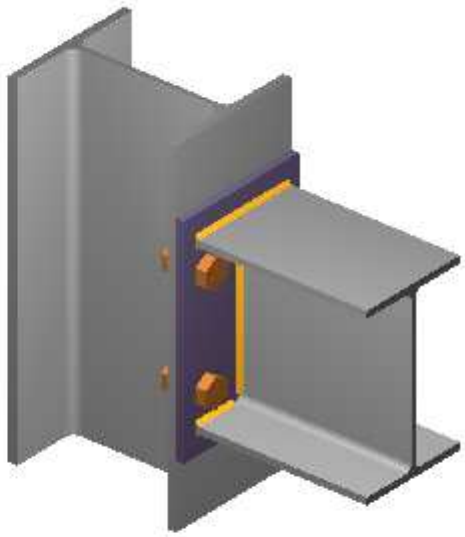


DETAIL 9

TYPICAL BEAM MOMENT CONNECTION

0 1/2' 1' 1 1/2'

SCALE IN FEET



RAM Connection
CONNECT Edition

Burns and McDonnell

Current Date: 12/13/2023 10:12 PM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

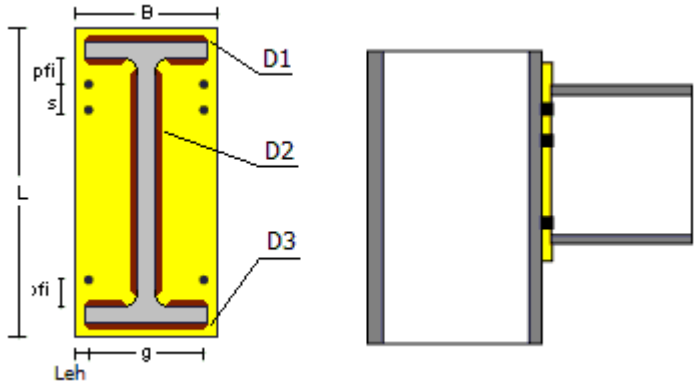
Steel Connections
Data

Connection: 2 - MEP_BCF_DG16_F_3/8PL_2B_2B1/2

Family: Beam - Column flange (BCF)
Type: Moment end plate

General information

Connector



Members

Configuration
Exists opposite connection : No

Beam

General
Beam type : Prismatic member
Beam section : W 8X18
Beam material : A992 Gr50
Horizontal angle (deg) : 0
Vertical angle (deg) : 0

Column

General
Support section : W 8X24
Support material : A992 Gr50
Column end : No

Moment end plate

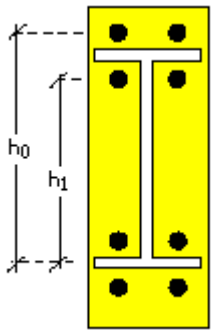
Connector

Plate extension	:	Flush
B: Width	:	6.5 in
L: Length	:	10.14 in
tp: Plate thickness	:	0.375 in
Plate material	:	A572 Gr50
Fy	:	50 kip/in2
Fu	:	65 kip/in2
Hole type on plate	:	Standard (STD)
Flush extension length	:	1 in

Beam side

Top flange weld type	:	Fillet
Top beam flange weld	:	E70XX
D1: Weld size to top beam flange (1/16in)	:	3
Bottom flange weld type	:	Fillet
Bottom beam flange weld	:	E70XX
D3: Weld size to bottom beam flange (1/16in)	:	3
Welding electrode to beam web	:	E70XX
D2: Weld size to beam web (1/16in)	:	3

Support side



Bolts	:	3/4" A325 N
Bolt columns	:	2
g: Bolt gage between column groups	:	4 in
Lev: Vertical edge distance	:	1.25 in
Leh: Horizontal edge distance	:	1.25 in
Hole type on support	:	Standard (STD)

Bolt group (top flange)

Bolts rows number	:	1
pfi t: Distance from bolt rows to flange	:	1.25 in

Bolt group (bottom flange)

Bolts rows number	:	1
pfi b: Distance from bolt rows to flange	:	1.25 in

Stiffeners

Transverse stiffeners

Position	:	None

Web panel stiffeners

Stiffener type	:	Without stiffener

Current Date: 12/13/2023 10:11 PM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

Steel Connections Results

Connection: 2 - MEP_BCF_DG16_F_3/8PL_2B_2B1/2

Family: Beam - Column flange (BCF)
Type: Moment end plate

Design code: AISC 360-16 LRFD

Demands

Description	Beam			Right beam		Left beam		Column	Panel	Load type
	Ru [kip]	Pu [kip]	Mu [kip*ft]	PufTop [kip]	PufBot [kip]	PufTop [kip]	PufBot [kip]	Pu [kip]	Vu [kip]	
DL	6.00	1.00	8.00	-11.79	12.79	0.00	0.00	0.00	12.79	Design

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Extended end plate						
Vertical edge distance	[in]	1.25	1.00	4.50	✔	Sec. J3.5
Horizontal edge distance	[in]	1.25	1.00	4.50	✔	Sec. J3.5
Horizontal center-to-center spacing (gage)	[in]	4.00	2.63	5.25	✔	DG4 Sec. 2.1, 2.4, DG16 Sec. 2.5
Inner bolt distance (external flange)	[in]	1.25	1.25	--	✔	DG4 Sec. 2.1
Inner bolt distance (internal flange)	[in]	1.25	1.25	--	✔	DG4 Sec. 2.1
Bolt diameter	[in]	0.75	--	1.50	✔	DG4 Sec. 1.1
Beam						
Weld size (external flange)	[1/16in]	3	3	--	✔	table J2.4
Weld size (internal flange)	[1/16in]	3	3	--	✔	table J2.4
Web	[1/16in]	3	2	--	✔	table J2.4
Support						
Horizontal edge distance	[in]	1.25	1.00	4.80	✔	Sec. J3.5

Plate / Column Behavior

End plate behavior (external flange)
Thin plate behavior controlled by plate yielding

End plate behavior (internal flange)
Thin plate behavior controlled by plate yielding

Column flange behavior (external flange)
Thin plate behavior controlled by plate yielding

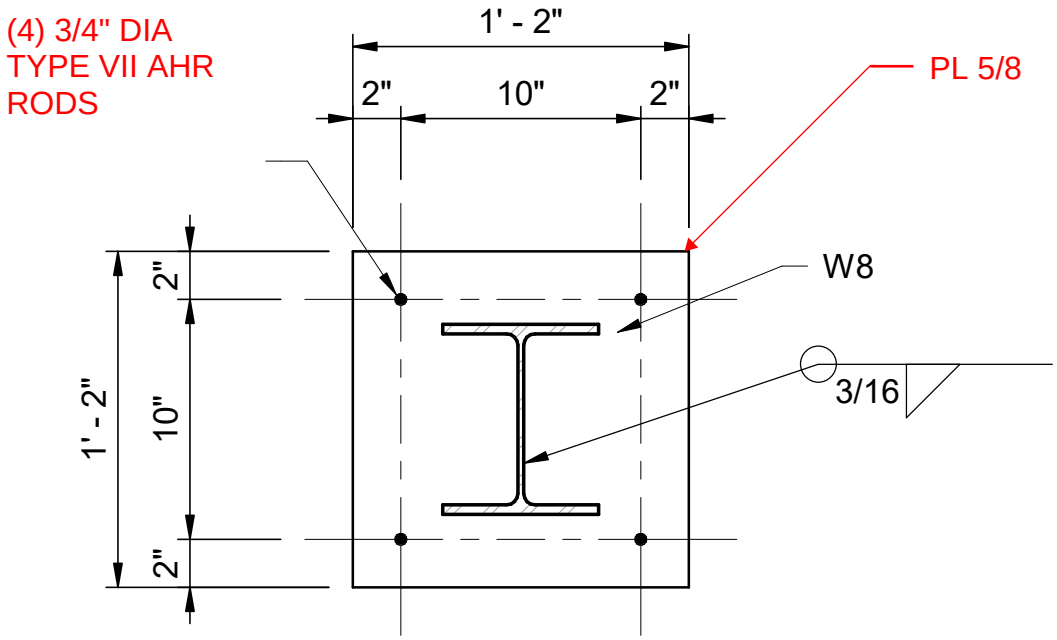
Column flange behavior (internal flange)
Thin plate behavior controlled by plate yielding

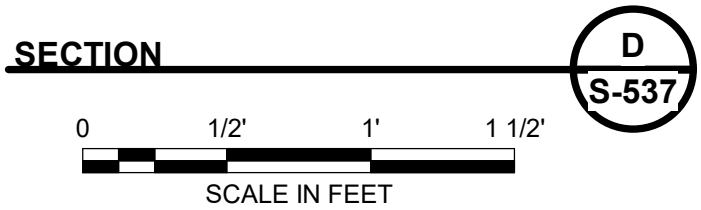
Design Check

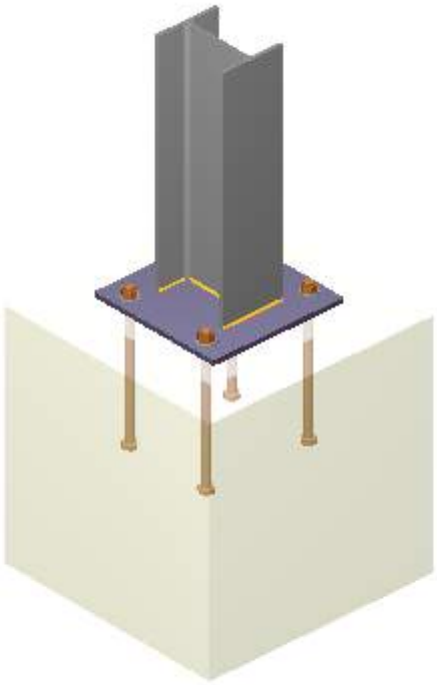
Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Moment end plate (external flange)						
Flexural yielding	[Kip*ft]	15.57	0.00	DL	**0.00**	DG16 Sec 2.5
No prying bolt moment strength	[Kip*ft]	31.80	0.00	DL	**0.00**	DG16 Sec 2.5
Bolt rupture with prying moment strength	[Kip*ft]	23.76	0.00	DL	**0.00**	DG16 Sec 2.5
Bolts shear	[Kip]	35.80	6.00	DL	**0.17**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	37.02	0.00	DL	**0.00**	Eq. J3-6
Shear yielding	[Kip]	65.81	5.90	DL	**0.09**	DG4 Eq. 3.12
Moment end plate (internal flange)						
Flexural yielding	[Kip*ft]	15.57	8.33	DL	**0.53**	DG16 Sec 2.5
No prying bolt moment strength	[Kip*ft]	31.80	8.33	DL	**0.26**	DG16 Sec 2.5
Bolt rupture with prying moment strength	[Kip*ft]	23.76	8.33	DL	**0.35**	DG16 Sec 2.5
Bolts shear	[Kip]	35.80	0.00	DL	**0.00**	Tables (7-1..14)
Bolt bearing under shear load	[Kip]	37.02	6.00	DL	**0.16**	Eq. J3-6
Shear yielding	[Kip]	65.81	6.40	DL	**0.10**	DG4 Eq. 3.12
Beam						
Web weld shear strength	[Kip]	28.73	6.00	DL	**0.21**	Eq. J2-4
Web weld strength to reach yield stress	[Kip/ft]	150.35	124.20	DL	**0.83**	Eq. J4-1
Shear yielding	[Kip]	56.17	6.00	DL	**0.11**	Eq. J4-3
Flange weld capacity (internal flange)	[Kip]	64.34	12.79	DL	**0.20**	Eq. J2-4
Support						
Flexural yielding (external flange)	[Kip*ft]	20.07	0.00	DL	**0.00**	DG4 Eq. 3.21
Bolt rupture with prying moment strength	[Kip*ft]	24.17	0.00	DL	**0.00**	DG16 Sec 2.5
Support bolt bearing (external flange)	[Kip]	70.20	0.00	DL	**0.00**	Eq. J3-6
Flexural yielding (internal flange)	[Kip*ft]	20.07	8.33	DL	**0.41**	DG4 Eq. 3.21
Bolt rupture with prying moment strength	[Kip*ft]	24.17	8.33	DL	**0.34**	DG16 Sec 2.5
Support bolt bearing (internal flange)	[Kip]	70.20	6.00	DL	**0.09**	Eq. J3-6
Panel web shear	[Kip]	52.46	12.79	DL	**0.24**	Eq. J10-9
Support - right side						
Local web yielding	[Kip]	76.18	12.79	DL	**0.17**	DG4 eq. 3.24
Top web bearing	[Kip]	62.50	11.79	DL	**0.19**	Eq. J10-4
Global critical strength ratio	**0.83**					

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N632	max	1.94	106	5.576	16	2.004	73	5.545	103	0.02	107	3.683	70
2		min	-2.083	70	-0.702	75	-2.012	71	-5.548	101	-0.02	75	-3.401	106
3	N633	max	1.94	106	5.576	14	2.012	73	5.548	103	0.02	77	3.683	70
4		min	-2.083	70	-0.702	77	-2.004	71	-5.545	101	-0.02	105	-3.401	106
5	N638	max	0.91	102	2.887	14	0.514	107	3.457	103	0.372	103	4.885	74
6		min	-0.91	70	0.459	99	-0.514	105	-3.456	101	-0.372	105	-5.573	102
7	N639	max	0.91	102	2.887	16	0.514	107	3.456	103	0.372	103	4.885	74
8		min	-0.91	70	0.459	97	-0.514	105	-3.457	101	-0.372	45	-5.573	102
9	N715	max	0.757	106	3.161	16	0.757	103	2.042	73	0.512	107	4.681	104
10		min	-0.757	44	-0.11	45	-0.757	75	-2.04	41	-0.512	41	-5.618	42
11	N739	max	0.757	102	3.161	14	0.757	107	2.04	73	0.512	103	4.681	44
12		min	-0.757	40	-0.11	47	-0.757	41	-2.042	41	-0.512	45	-5.618	72
13	N748	max	0.718	106	2.969	16	0.717	103	1.931	73	0.479	107	4.411	104
14		min	-0.718	44	-0.309	45	-0.718	105	-1.928	41	-0.479	41	-5.287	42
15	N757	max	0.718	42	2.969	14	0.718	107	1.928	73	0.479	103	4.411	44
16		min	-0.718	40	-0.309	47	-0.717	41	-1.931	41	-0.479	45	-5.287	72







Current Date: 12/13/2023 10:03 PM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

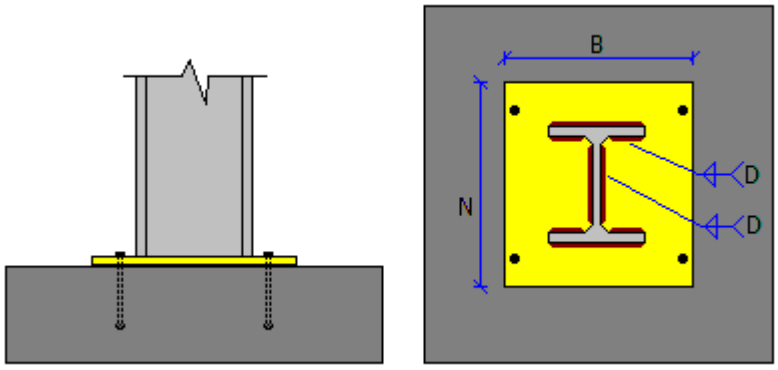
Steel Connections Data

Connection: 4 - Fixed biaxial BP

Family: Column - Base (CB)
Type: Base plate
Description: PS-5 Baseplate

General information

Connector



Members

Column

Column type	:	Prismatic member
Section	:	W 8x24
Material	:	A992 Gr50
Longitudinal offset	:	0 in
Transversal offset	:	0 in

Base plate

Base plate

Plate shape	:	Rectangular
Connection type	:	Unstiffened
Position on the support	:	Center
N: Longitudinal dimension	:	14 in
B: Transversal dimension	:	14 in
Thickness	:	0.625 in
Material	:	A572 Gr50
Column weld	:	E70XX
Outer welds flanges only	:	No
D: Column weld size (1/16 in)	:	3
Override A2/A1 ratio	:	No
Include shear lug	:	No

Support

With pedestal	:	No
Longitudinal dimension	:	24 in
Transversal dimension	:	24 in
Thickness	:	24 in
Material	:	C 6-60
Include grouting	:	Yes
Grout thickness	:	1 in

Anchor

Anchor position	:	Longitudinal position
Rows number per side	:	1
Anchors per row	:	2
Longitudinal edge distance on the plate	:	2.5 in
Transverse edge distance on the plate	:	1.5 in
Anchor type	:	Headed
Head type	:	Hexagonal
Include lock nut	:	No
Anchor	:	3/4"
Effective embedment depth	:	12 in
Total length	:	14.615 in
Material	:	F1554 Gr36
Fy	:	36 kip/in2
Fu	:	58 kip/in2
Cracked concrete	:	No
Brittle steel	:	No
Anchors welded to base plate	:	No

Anchor reinforcement

Type of reinforcement	:	Primary
Tension reinforcement	:	No
Shear reinforcement	:	No

Current Date: 12/13/2023 10:03 PM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

Steel Connections Results

Connection: 4 - Fixed biaxial BP

Family: Column - Base (CB)
Type: Base plate
Description: PS-5 Baseplate

Design code: AISC 360-16 LRFD, ACI 318-19

Demands

Description	Pu [kip]	Mu22 [kip*ft]	Mu33 [kip*ft]	Vu2 [kip]	Vu3 [kip]	Load type
DL	1.00	6.00	6.00	3.00	3.00	Design

Design calculations

Design for major axis
Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	2	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	5.68	0.56	DL	**0.10**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	4.39	4.16	DL	**0.95**	DG1 Sec 3.1.2
Flexural yielding (tension interface)	[Kip*ft/ft]	4.39	2.81	DL	**0.64**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	13.56	DL	**0.18**	DG1 p. 35
Elastic method weld shear capacity	[Kip/ft]	50.12	2.84	DL	**0.06**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	9.44	DL	**0.13**	Sec. J2.4

Ratio	0.95

Anchors

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	9.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	6.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	23.51	✔	

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	5.23	DL	**0.36**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	24.83	5.23	DL	**0.21**	Sec. 17.5.2
Breakout of group of anchors in tension	[Kip]	29.80	10.02	DL	**0.34**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	30.77	5.23	DL	**0.17**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	1.06	DL	**0.18**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of anchor in shear	[Kip]	9.67	0.75	DL	**0.08**	Sec. 17.5.2
Breakout of group of anchors in shear	[Kip]	17.08	3.00	DL	**0.18**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	49.66	0.75	DL	**0.02**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	89.39	3.00	DL	**0.03**	Sec. 17.5.2
Interaction of tensile and shear forces	[Kip]	1.20	0.00	DL	**0.00**	Sec. 17.8.1
Ratio	**0.36**					

Design for minor axis

Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	2	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	5.68	0.56	DL	**0.10**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	4.39	2.29	DL	**0.52**	DG1 Sec 3.1.2
Flexural yielding (tension interface)	[Kip*ft/ft]	4.39	2.81	DL	**0.64**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	13.56	DL	**0.18**	DG1 p. 35
Elastic method weld shear capacity	[Kip/ft]	50.12	1.52	DL	**0.03**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	31.20	DL	**0.41**	Sec. J2.4

Ratio	0.64

Anchors

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	9.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	6.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	23.51	✔	

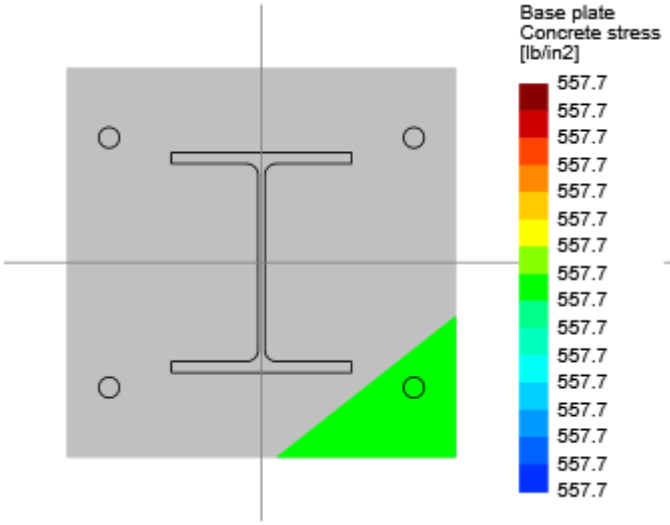
Design Check

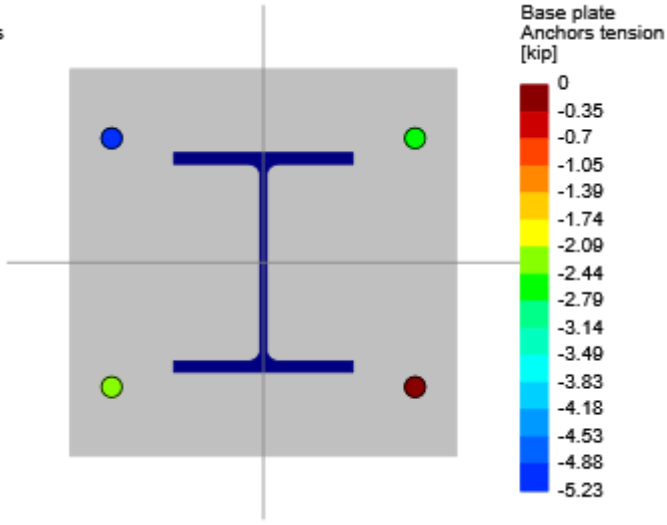
Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	5.23	DL	**0.36**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	24.83	5.23	DL	**0.21**	Sec. 17.5.2
Breakout of group of anchors in tension	[Kip]	29.80	10.02	DL	**0.34**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	30.77	5.23	DL	**0.17**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	1.06	DL	**0.18**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of anchor in shear	[Kip]	9.32	0.75	DL	**0.08**	Sec. 17.5.2
Breakout of group of anchors in shear	[Kip]	17.35	3.00	DL	**0.17**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	49.66	0.75	DL	**0.02**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	89.39	3.00	DL	**0.03**	Sec. 17.5.2
Interaction of tensile and shear forces	[Kip]	1.20	0.00	DL	**0.00**	Sec. 17.8.1
Ratio	**0.36**					

Global critical strength ratio	**0.95**

Biaxial

Maximum compression and tension (DL)





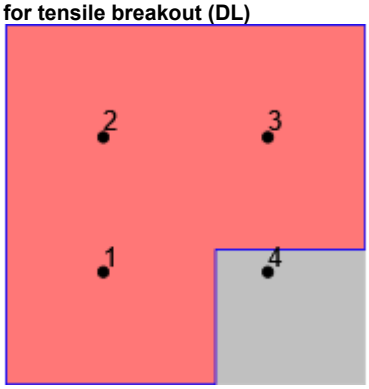
Maximum bearing pressure	557.70	[lb/in2]
Minimum bearing pressure	557.70	[lb/in2]
Maximum anchor tension	5.23	[kip]
Minimum anchor tension	0.00	[kip]
Neutral axis angle	-141.81	[deg]
Neutral axis location	3.96	[in]
Bearing length	3.96	[in]

Anchors tensions

Anchor	Transverse [in]	Longitudinal [in]	Shear [kip]	Tension [kip]
1	-5.50	-4.50	0.75	2.34
2	-5.50	4.50	0.75	5.23
3	5.50	4.50	0.75	2.45
4	5.50	-4.50	0.75	0.00

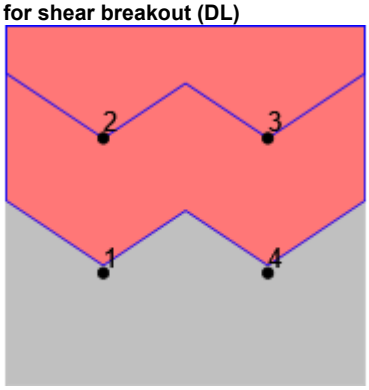
Major axis

Results for tensile breakout (DL)



Group	Area [in2]	Tension [kip]	Anchors
1	486.00	10.02	1, 2, 3

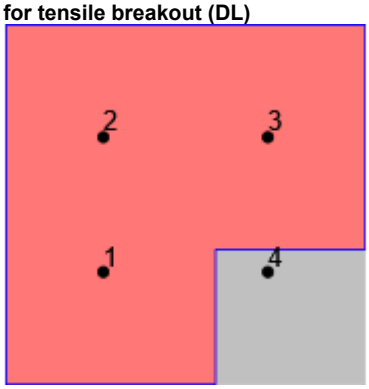
Results for shear breakout (DL)



Group	Area [in2]	Shear [kip]	Anchors
1	576.00	3.00	1, 2, 3, 4
2	270.00	1.50	2, 3

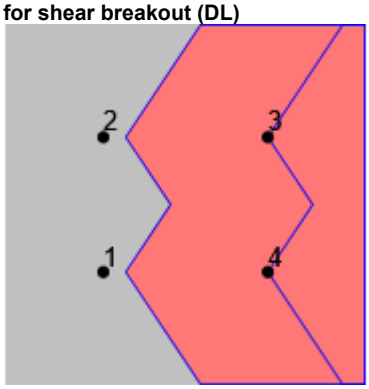
Minor axis

Results for tensile breakout (DL)



Group	Area [in2]	Tension [kip]	Anchors
1	486.00	10.02	1, 2, 3

Results for shear breakout (DL)



Group	Area [in2]	Shear [kip]	Anchors
1	576.00	3.00	1, 2, 3, 4
2	234.00	1.50	3, 4

Company:		Page:	1
Address:		Specifier:	
Phone I Fax:	|	E-Mail:	
Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

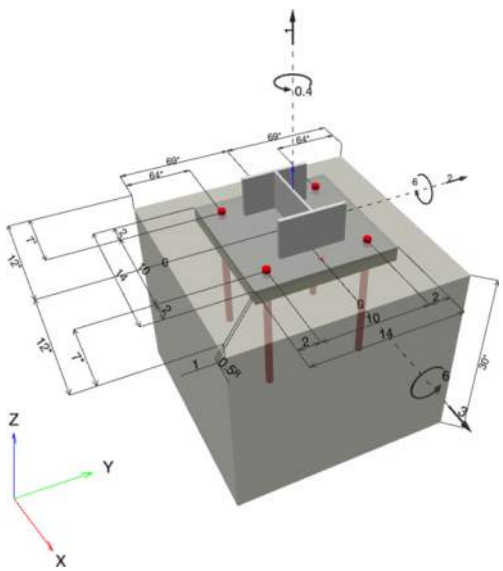
Specifier's comments: W8x24 Fixed Anchorage

1 Input data

Anchor type and diameter:	**Heavy Hex Head ASTM F 1554 GR. 36 3/4**
Item number:	not available
Effective embedment depth:	h_{ef} = 12.000 in.
Material:	ASTM F 1554
Evaluation Service Report:	Hilti Technical Data
Issued I Valid:	- | -
Proof:	Design Method ACI 318-19 / CIP
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; e_b = 1.000 in.; t = 0.500 in.
	Hilti Grout: CB-G EG, epoxy, $f_{c,Grout}$ = 14,939 psi
Anchor plate[R] :	l_x x l_y x t = 14.000 in. x 14.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	W shape (AISC), W8X24; (L x W x T x FT) = 7.930 in. x 6.500 in. x 0.245 in. x 0.400 in.
Base material:	cracked concrete, 6000, f_c' = 6,000 psi; h = 30.000 in.
Reinforcement:	tension: not present, shear: not present;
	edge reinforcement: > No. 4 bar with stirrups
Seismic loads (cat. C, D, E, or F)	Tension load: yes (17.10.5.3 (d))
	Shear load: yes (17.10.6.3 (c))

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



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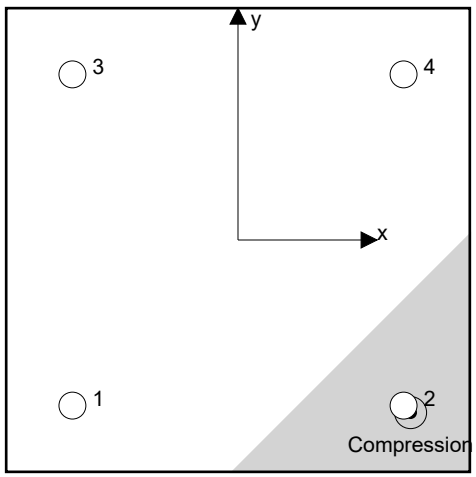
Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

1.1 Design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Envelope	N = 1.000; V_x = 3.000; V_y = 2.000; M_x = 6.00000; M_y = 6.00000; M_z = 0.40000;	yes	90

2 Load case/Resulting anchor forces



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	2.172	0.949	0.870	0.380
2	0.000	1.068	0.870	0.620
3	5.344	0.736	0.630	0.380
4	2.172	0.884	0.630	0.620

max. concrete compressive strain:	0.23 [‰]
max. concrete compressive stress:	1,019 [psi]
resulting tension force in (x/y)=(0.000/0.000):	0.000 [kip]
resulting compression force in (x/y)=(12.212/1.788):	8.688 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	5.344	14.529	37	OK
Pullout Strength*	5.344	22.957	24	OK
Concrete Breakout Failure**	9.688	25.309	39	OK
Concrete Side-Face Blowout, direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

3.1 Steel Strength

$N_{sa} = A_{se,N} f_{uta}$ ACI 318-19 Eq. (17.6.1.2)
$\phi N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.33	58,000

Calculations

N_{sa} [kip]
19.372

Results

N_{sa} [kip]	ϕ_{steel}	ϕN_{sa} [kip]	N_{ua} [kip]
19.372	0.750	14.529	5.344

3.2 Pullout Strength

$N_{pN} = \psi_{c,p} N_p$ ACI 318-19 Eq. (17.6.3.1)
$N_p = 8 A_{brg} f'_c$ ACI 318-19 Eq. (17.6.3.2.2a)
$\phi N_{pN} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$\psi_{c,p}$	A_{brg} [in.^{2}]	λ_a	f'_c [psi]
1.000	0.91	1.000	6,000

Calculations

N_p [kip]
43.728

Results

N_{pn} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕN_{pn} [kip]	N_{ua} [kip]
43.728	0.700	0.750	1.000	22.957	5.344

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N}\ \psi_{ed,N}\ \psi_{c,N}\ \psi_{cp,N}\ N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi\ N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9\ h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2\ e'_N}{3\ h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3\left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = 16\ \lambda_a\ \sqrt{f'_c}\ h_{ef}^{5/3}$ — ACI 318-19 Eq. (17.6.2.2.3)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
12.000	1.091	1.091	7.000	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
-	16	1.000	6,000

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
1,104.00	1,296.00	0.943	0.943	0.817	1.000	77.953

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	$\phi\ N_{cbg}$ [kip]	N_{ua} [kip]
48.207	0.700	0.750	1.000	25.309	9.688

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Address:		Specifier:	
Phone I Fax:	|	E-Mail:	
Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	1.068	6.044	18	OK
Steel failure (with lever arm)*	0.736	0.913	81	OK
Pryout Strength**	3.606	68.702	6	OK
Concrete edge failure in direction x+**	3.606	17.565	21	OK

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

$V_{sa} = 0.6\ A_{se,V}\ f_{uta}$ ACI 318-19 Eq. (17.7.1.2b)
$\phi\ V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.33	58,000

Calculations

V_{sa} [kip]
11.623

Results

V_{sa} [kip]	ϕ_{steel}	ϕ_{eb}	$\phi\ V_{sa,eq}$ [kip]	V_{ua} [kip]
11.623	0.650	0.800	6.044	1.068

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Company:		Page:	6
Address:		Specifier:	
Phone I Fax:	|	E-Mail:	
Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

4.2 Steel failure (with lever arm)

V_s^M	$= \frac{\alpha_M \cdot M_s}{L_b}$	bending equation for stand-off
M_s	$= M_s^0 \left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	resultant flexural resistance of anchor
M_s^0	$= (1.2)\ (S)\ (f_{u,min})$	characteristic flexural resistance of anchor
$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$		reduction for tensile force acting simultaneously with a shear force on the anchor
S	$= \frac{\pi (d)^3}{32}$	elastic section modulus of anchor bolt at concrete surface
L_b	$= z + (n)(d_0)$	internal lever arm adjusted for spalling of the surface concrete
ϕV_s^M	$\geq V_{ua}$	ACI 318-19 Table 17.5.2

Variables

α_M	$f_{u,min}$ [psi]	N_{ua} [kip]	ϕN_{sa} [kip]	z [in.]	n	d_0 [in.]
2.00	58,000	5.344	14.529	1.250	0.500	0.750

Calculations

M_s^0 [ft.kip]	$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	M_s [ft.kip]	L_b [in.]
0.15046	0.632	0.09512	1.625

Results

V_s^M [kip]	ϕ_{steel}	ϕV_s^M [kip]	V_{ua} [kip]
1.405	0.650	0.913	0.736

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.3 Pryout Strength

$V_{cpg} = k_{cp} \left[\left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ec,N} \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e'_N}{3 h_{ef}}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = 16 \lambda_a \sqrt{f'_c} h_{ef}^{5/3}$ ACI 318-19 Eq. (17.6.2.2.3)

Variables

k_{cp}	h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]
2	12.000	0.738	1.108	7.000

$\psi_{c,N}$	c_{ac} [in.]	k_c	λ_a	f'_c [psi]
1.000	∞	16	1.000	6,000

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
1,104.00	1,296.00	0.961	0.942	0.817	1.000	77.953

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕV_{cpg} [kip]	V_{ua} [kip]
98.146	0.700	1.000	1.000	68.702	3.606

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.4 Concrete edge failure in direction x+

$V_{cbg} = \left(\frac{A_{Vc}}{A_{Vc0}}\right) \psi_{ec,V} \psi_{ed,V} \psi_{c,V} \psi_{h,V} \psi_{parallel,V} V_b$ ACI 318-19 Eq. (17.7.2.1b)

$\phi V_{cbg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Vc} see ACI 318-19, Section 17.7.2.1, Fig. R 17.7.2.1(b)

$A_{Vc0} = 4.5 c_{a1}^2$ ACI 318-19 Eq. (17.7.2.1.3)

$\psi_{ec,V} = \left(\frac{1}{1 + \frac{e'_v}{1.5c_{a1}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.7.2.3.1)

$\psi_{ed,V} = 0.7 + 0.3\left(\frac{c_{a2}}{1.5c_{a1}}\right) \leq 1.0$ ACI 318-19 Eq. (17.7.2.4.1b)

$\psi_{h,V} = \sqrt{\frac{1.5c_{a1}}{h_a}} \geq 1.0$ ACI 318-19 Eq. (17.7.2.6.1)

$V_b = 9 \lambda_a \sqrt{f'_c} c_{a1}^{1.5}$ ACI 318-19 Eq. (17.7.2.2.1b)

Variables

c_{a1} [in.]	c_{a2} [in.]	e_{cV} [in.]	$\psi_{c,V}$	h_a [in.]
7.000	64.000	0.666	1.400	30.000

l_e [in.]	λ_a	d_a [in.]	f'_c [psi]	$\psi_{parallel,V}$
6.000	1.000	0.750	6,000	1.000

Calculations

A_{Vc} [in.^{2}]	A_{Vc0} [in.^{2}]	$\psi_{ec,V}$	$\psi_{ed,V}$	$\psi_{h,V}$	V_b [kip]
325.50	220.50	0.940	1.000	1.000	12.911

Results

V_{cbg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕV_{cbg} [kip]	V_{ua} [kip]
25.092	0.700	1.000	1.000	17.565	3.606

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.383	0.806	5/3	90	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

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6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- ACI 318 does not specifically address anchor bending when a stand-off condition exists. PROFIS Engineering calculates a shear load corresponding to anchor bending when stand-off exists and includes the results as a shear Design Strength!
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- "An anchor design approach for structures assigned to Seismic Design Category C, D, E or F is given in ACI 318-19, Chapter 17, Section 17.10.5.3 (a) that requires the governing design strength of an anchor or group of anchors be limited by ductile steel failure. If this is NOT the case, the connection design (tension) shall satisfy the provisions of Section 17.10.5.3 (b), Section 17.10.5.3 (c), or Section 17.10.5.3 (d). The connection design (shear) shall satisfy the provisions of Section 17.10.6.3 (a), Section 17.10.6.3 (b), or Section 17.10.6.3 (c)."
- Section 17.10.5.3 (b) / Section 17.10.6.3 (a) require the attachment the anchors are connecting to the structure be designed to undergo ductile yielding at a load level corresponding to anchor forces no greater than the controlling design strength. Section 17.10.5.3 (c) / Section 17.10.6.3 (b) waive the ductility requirements and require the anchors to be designed for the maximum tension / shear that can be transmitted to the anchors by a non-yielding attachment. Section 17.10.5.3 (d) / Section 17.10.6.3 (c) waive the ductility requirements and require the design strength of the anchors to equal or exceed the maximum tension / shear obtained from design load combinations that include E, with E increased by ω_0.

Fastening meets the design criteria!

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Company:		Page:	10
Address:		Specifier:	
Phone I Fax:	|	E-Mail:	
Design:	Utility Corridor - W8x24 - Fixed Base	Date:	12/14/2023
Fastening point:			

7 Installation data

Profile: W shape (AISC), W8X24; (L x W x T x FT) = 7.930 in. x 6.500 in. x 0.245 in. x 0.400 in.

Hole diameter in the fixture: d_f = 0.812 in.

Plate thickness (input): 0.500 in.

Recommended plate thickness: not calculated

Anchor type and diameter: Heavy Hex Head ASTM F 1554 GR. 36 3/4

Item number: not available

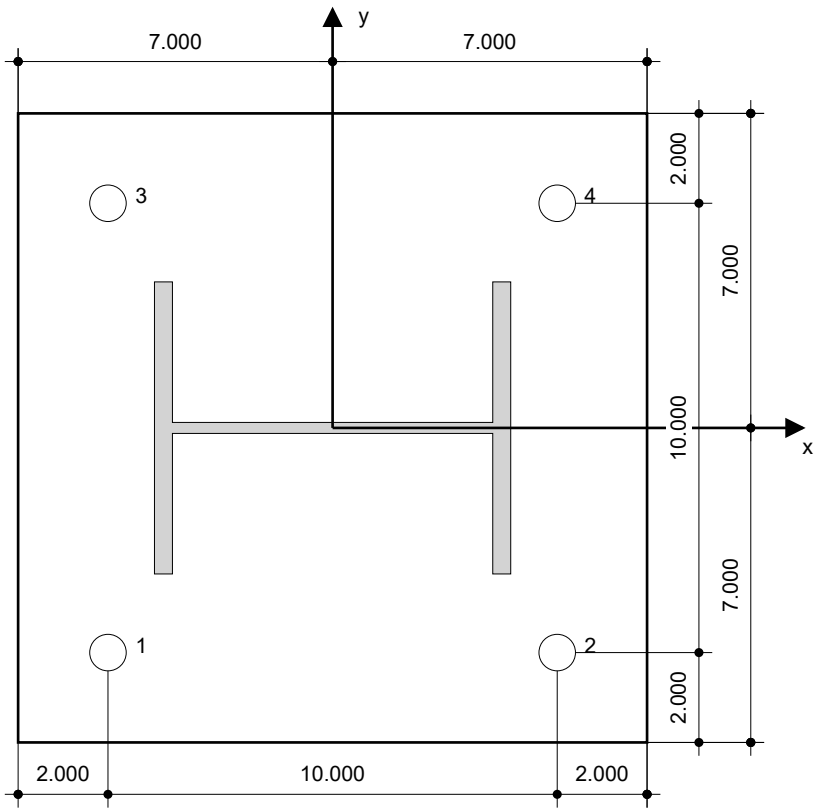
Maximum installation torque: -

Hole diameter in the base material: - in.

Hole depth in the base material: 12.000 in.

Minimum thickness of the base material: 13.000 in.

Hilti Heavy Hex Head headed stud anchor with 12 in embedment, 3/4, Steel galvanized, installation per instruction for use



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	-5.000	-5.000	7.000	17.000	64.000	74.000
2	5.000	-5.000	17.000	7.000	64.000	74.000
3	-5.000	5.000	7.000	17.000	74.000	64.000
4	5.000	5.000	17.000	7.000	74.000	64.000

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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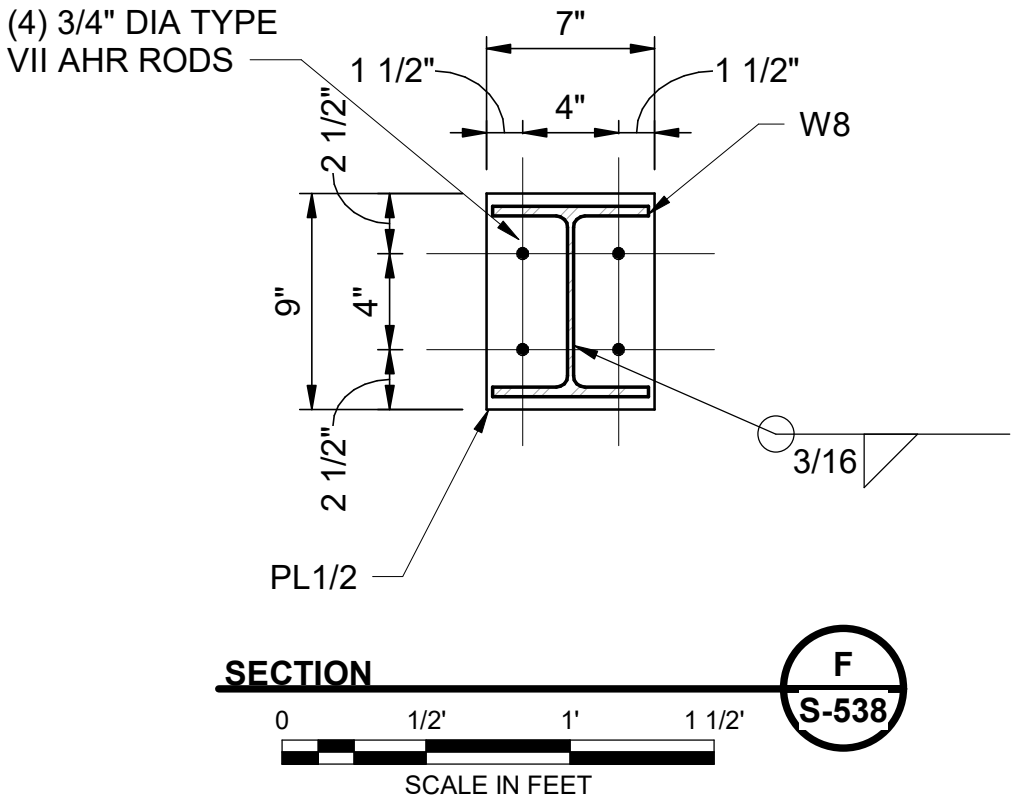
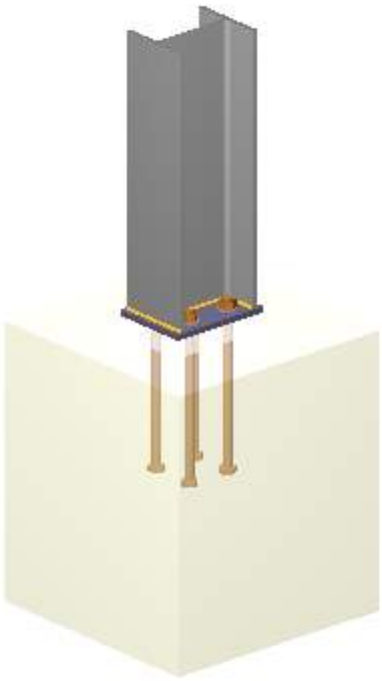
Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N717	max	0.959	102	3.757	15	0.926	103	0	107	0	107	0	107
2		min	-0.834	44	-1.148	44	-0.856	75	0	12	0	12	0	12
3	N716	max	0.834	106	3.757	13	0.856	107	0	107	0	107	0	107
4		min	-0.959	40	-1.148	46	-0.926	41	0	12	0	12	0	12
5	N718	max	0.959	102	3.757	15	0.856	107	0	107	0	107	0	107
6		min	-0.834	74	-1.148	74	-0.926	41	0	12	0	12	0	12
7	N714	max	0.834	106	3.757	13	0.926	103	0	107	0	107	0	107
8		min	-0.959	40	-1.148	46	-0.856	75	0	12	0	12	0	12
9	N636	max	1.185	106	3.306	16	1.134	99	0	107	0	107	0	107
10		min	-1.315	70	-1.316	97	-1.448	93	0	12	0	12	0	12
11	N637	max	1.185	106	3.306	14	1.448	95	0	107	0	107	0	107
12		min	-1.315	70	-1.316	99	-1.134	97	0	12	0	12	0	12
13	N700	max	0.804	102	3.223	15	0.755	103	0	107	0	107	0	107
14		min	-0.663	44	-0.564	44	-0.69	75	0	12	0	12	0	12
15	N701	max	0.804	102	3.223	15	0.69	107	0	107	0	107	0	107
16		min	-0.663	44	-0.564	44	-0.755	41	0	12	0	12	0	12
17	N698	max	0.663	106	3.223	13	0.755	103	0	107	0	107	0	107
18		min	-0.804	40	-0.564	46	-0.69	75	0	12	0	12	0	12
19	N699	max	0.663	106	3.223	13	0.69	107	0	107	0	107	0	107
20		min	-0.804	40	-0.564	46	-0.755	41	0	12	0	12	0	12
21	N630	max	0.501	102	2.775	16	0.672	77	0	107	0	107	0	107
22		min	-0.234	74	-0.731	75	-0.674	75	0	12	0	12	0	12
23	N631	max	0.501	102	2.775	14	0.674	77	0	107	0	107	0	107
24		min	-0.234	74	-0.731	77	-0.672	75	0	12	0	12	0	12



RAM Connection Standalone CE
Units system: s
Current Date: s



Current Date: 12/8/2023 11:00 AM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

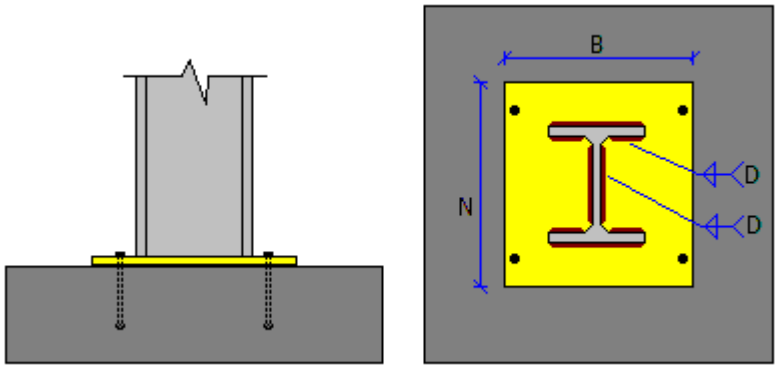
Steel Connections Data

Connection: 3 - Fixed biaxial BP

Family: Column - Base (CB)
Type: Base plate
Description: PS-5 Baseplate

General information

Connector



Members

Column

Column type	:	Prismatic member
Section	:	W 8x24
Material	:	A992 Gr50
Longitudinal offset	:	0 in
Transversal offset	:	0 in

Base plate

Base plate

Plate shape	:	Rectangular
Connection type	:	Unstiffened
Position on the support	:	Center
N: Longitudinal dimension	:	9 in
B: Transversal dimension	:	7 in
Thickness	:	0.5 in
Material	:	A572 Gr50
Column weld	:	E70XX
Outer welds flanges only	:	No
D: Column weld size (1/16 in)	:	3
Override A2/A1 ratio	:	No
Include shear lug	:	No

Support

With pedestal	:	No
Longitudinal dimension	:	21 in
Transversal dimension	:	21 in
Thickness	:	24 in
Material	:	C 6-60
Include grouting	:	Yes
Grout thickness	:	1 in

Anchor

Anchor position	:	Longitudinal position
Rows number per side	:	1
Anchors per row	:	2
Longitudinal edge distance on the plate	:	2.5 in
Transverse edge distance on the plate	:	1.5 in
Anchor type	:	Headed
Head type	:	Hexagonal
Include lock nut	:	No
Anchor	:	3/4"
Effective embedment depth	:	12 in
Total length	:	14.49 in
Material	:	F1554 Gr36
Fy	:	36 kip/in2
Fu	:	58 kip/in2
Cracked concrete	:	No
Brittle steel	:	No
Anchors welded to base plate	:	No

Anchor reinforcement

Type of reinforcement	:	Primary
Tension reinforcement	:	No
Shear reinforcement	:	No

Current Date: 12/8/2023 11:00 AM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

Steel Connections Results

Connection: 3 - Fixed biaxial BP

Family: Column - Base (CB)
Type: Base plate
Description: PS-5 Baseplate

Design code: AISC 360-16 LRFD, ACI 318-19

Demands

Description	Pu [kip]	Mu22 [kip*ft]	Mu33 [kip*ft]	Vu2 [kip]	Vu3 [kip]	Load type
DL	4.00	0.00	0.00	3.00	3.00	Design

Design calculations

Design for major axis
Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	2	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	6.63	0.00	DL	**0.00**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	2.81	0.00	DL	**0.00**	DG1 Eq. 3.3.13
Flexural yielding (tension interface)	[Kip*ft/ft]	2.81	0.51	DL	**0.18**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	3.83	DL	**0.05**	DG1 p. 35
Elastic method weld shear capacity	[Kip/ft]	50.12	2.84	DL	**0.06**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	2.02	DL	**0.03**	Sec. J2.4

Ratio	0.18

Anchors

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	4.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	8.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	23.51	✔	

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	1.00	DL	**0.07**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	24.96	1.00	DL	**0.04**	Sec. 17.5.2
Breakout of group of anchors in tension	[Kip]	33.48	4.00	DL	**0.12**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	30.77	1.00	DL	**0.03**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	1.06	DL	**0.18**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of anchor in shear	[Kip]	12.55	0.75	DL	**0.06**	Sec. 17.5.2
Breakout of group of anchors in shear	[Kip]	12.55	3.00	DL	**0.24**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	49.92	0.75	DL	**0.02**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	66.97	3.00	DL	**0.04**	Sec. 17.5.2
Interaction of tensile and shear forces	[Kip]	1.20	0.00	DL	**0.00**	Sec. 17.8.1
Ratio	**0.24**					

Design for minor axis

Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	2	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	6.63	0.00	DL	**0.00**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	2.81	0.00	DL	**0.00**	DG1 Eq. 3.3.13
Flexural yielding (tension interface)	[Kip*ft/ft]	2.81	0.51	DL	**0.18**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	3.83	DL	**0.05**	DG1 p. 35
Elastic method weld shear capacity	[Kip/ft]	50.12	1.52	DL	**0.03**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	2.02	DL	**0.03**	Sec. J2.4

Ratio	0.18

Anchors

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	4.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	8.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	23.51	✔	

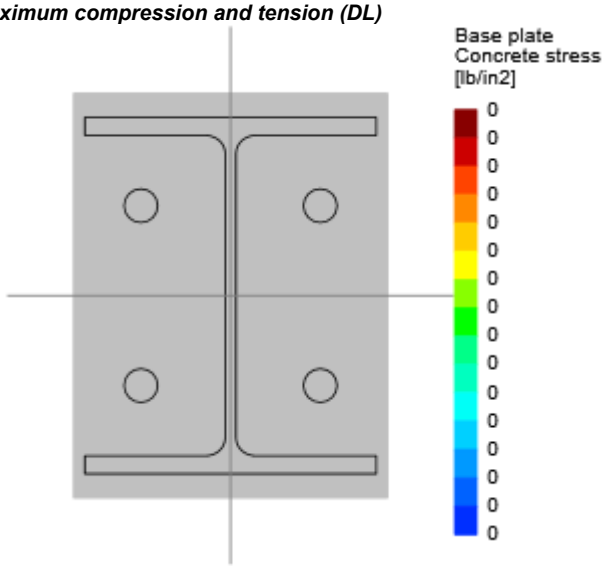
Design Check

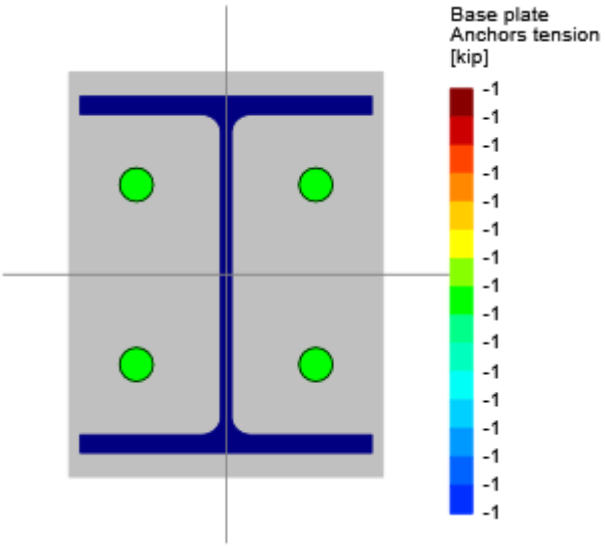
Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	1.00	DL	**0.07**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	24.96	1.00	DL	**0.04**	Sec. 17.5.2
Breakout of group of anchors in tension	[Kip]	33.48	4.00	DL	**0.12**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	30.77	1.00	DL	**0.03**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	1.06	DL	**0.18**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of anchor in shear	[Kip]	12.55	0.75	DL	**0.06**	Sec. 17.5.2
Breakout of group of anchors in shear	[Kip]	12.55	3.00	DL	**0.24**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	49.92	0.75	DL	**0.02**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	66.97	3.00	DL	**0.04**	Sec. 17.5.2
Interaction of tensile and shear forces	[Kip]	1.20	0.00	DL	**0.00**	Sec. 17.8.1
Ratio	**0.24**					

Global critical strength ratio	**0.24**

Biaxial

Maximum compression and tension (DL)





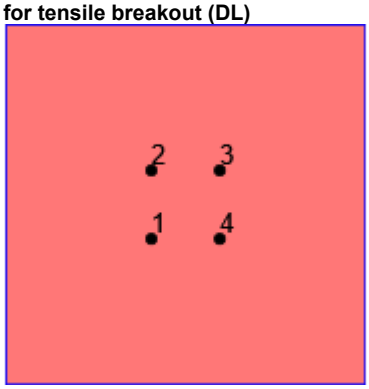
Maximum bearing pressure	0.00	[lb/in2]
Minimum bearing pressure	0.00	[lb/in2]
Maximum anchor tension	1.00	[kip]
Minimum anchor tension	1.00	[kip]
Neutral axis angle	0.00	[deg]
Neutral axis location	-1.2E31	[in]
Bearing length	0.00	[in]

Anchors tensions

Anchor	Transverse [in]	Longitudinal [in]	Shear [kip]	Tension [kip]
1	-2.00	-2.00	0.75	1.00
2	-2.00	2.00	0.75	1.00
3	2.00	2.00	0.75	1.00
4	2.00	-2.00	0.75	1.00

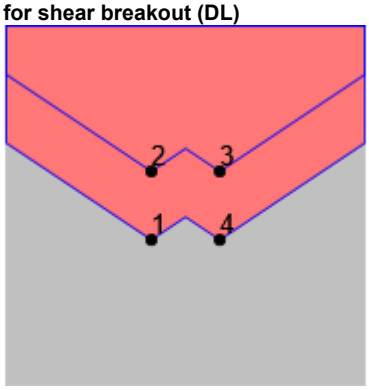
Major axis

Results for tensile breakout (DL)



Group	Area [in2]	Tension [kip]	Anchors
1	441.00	4.00	1, 2, 3, 4

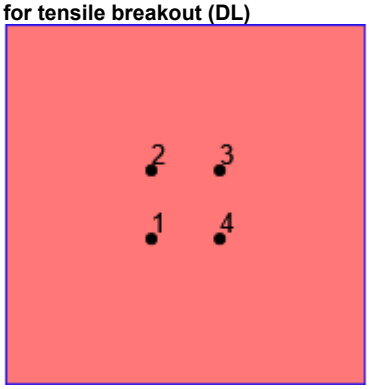
Results for shear breakout (DL)



Group	Area [in2]	Shear [kip]	Anchors
1	393.75	3.00	1, 2, 3, 4
2	267.75	1.50	2, 3

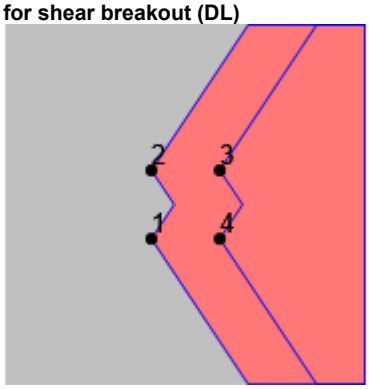
Minor axis

Results for tensile breakout (DL)



Group	Area [in2]	Tension [kip]	Anchors
1	441.00	4.00	1, 2, 3, 4

Results for shear breakout (DL)



Group	Area [in2]	Shear [kip]	Anchors
1	393.75	3.00	1, 2, 3, 4
2	267.75	1.50	3, 4

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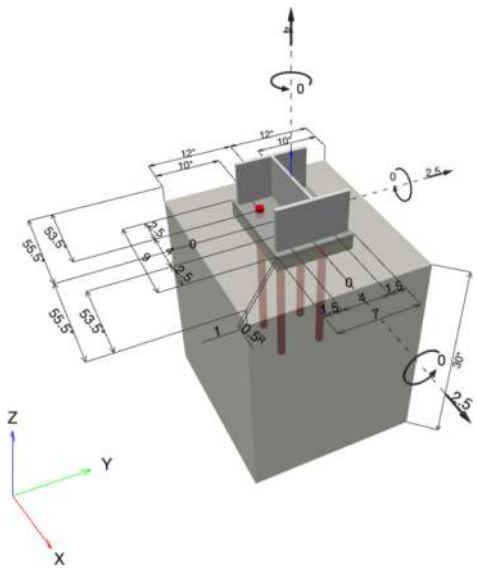
Specifier's comments: W8x24 Pinned Condition - Utility Corridor

1 Input data

Anchor type and diameter:	**Heavy Hex Head ASTM F 1554 GR. 36 3/4**
Item number:	not available
Effective embedment depth:	h_{ef} = 12.000 in.
Material:	ASTM F 1554
Evaluation Service Report:	Hilti Technical Data
Issued I Valid:	- | -
Proof:	Design Method ACI 318-19 / CIP
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; e_b = 1.000 in.; t = 0.500 in.
	Hilti Grout: CB-G EG, epoxy, $f_{c,Grout}$ = 14,939 psi
Anchor plate[R] :	l_x x l_y x t = 9.000 in. x 7.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	W shape (AISC), W8X24; (L x W x T x FT) = 7.930 in. x 6.500 in. x 0.245 in. x 0.400 in.
Base material:	cracked concrete, 6000, f_c' = 6,000 psi; h = 30.000 in.
Reinforcement:	tension: not present, shear: not present;
	edge reinforcement: > No. 4 bar with stirrups
Seismic loads (cat. C, D, E, or F)	Tension load: yes (17.10.5.3 (d))
	Shear load: yes (17.10.6.3 (c))

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



Input data and results must be checked for conformity with the existing conditions and for plausibility!
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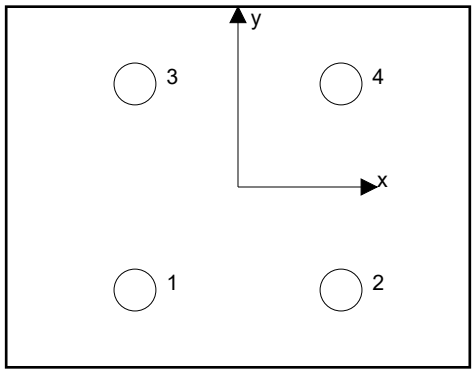
1.1 Design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Envelope	N = 4.000; V_x = 2.500; V_y = 2.500; M_x = 0.00000; M_y = 0.00000; M_z = 0.00000;	yes	66

2 Load case/Resulting anchor forces

Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	1.000	0.884	0.625	0.625
2	1.000	0.884	0.625	0.625
3	1.000	0.884	0.625	0.625
4	1.000	0.884	0.625	0.625



max. concrete compressive strain: - [‰]
max. concrete compressive stress: - [psi]
resulting tension force in (x/y)=(0.000/0.000): 0.000 [kip]
resulting compression force in (x/y)=(0.000/0.000): 0.000 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	1.000	14.529	7	OK
Pullout Strength*	1.000	22.957	5	OK
Concrete Breakout Failure**	4.000	26.273	16	OK
Concrete Side-Face Blowout, direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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3.1 Steel Strength

$N_{sa} = A_{se,N} f_{uta}$ ACI 318-19 Eq. (17.6.1.2)
$\phi N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.33	58,000

Calculations

N_{sa} [kip]
19.372

Results

N_{sa} [kip]	ϕ_{steel}	ϕN_{sa} [kip]	N_{ua} [kip]
19.372	0.750	14.529	1.000

3.2 Pullout Strength

$N_{pN} = \psi_{c,p} N_p$ ACI 318-19 Eq. (17.6.3.1)
$N_p = 8 A_{brg} f'_c$ ACI 318-19 Eq. (17.6.3.2.2a)
$\phi N_{pN} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$\psi_{c,p}$	A_{brg} [in.^{2}]	λ_a	f'_c [psi]
1.000	0.91	1.000	6,000

Calculations

N_p [kip]
43.728

Results

N_{pn} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕN_{pn} [kip]	N_{ua} [kip]
43.728	0.700	0.750	1.000	22.957	1.000

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N} \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e'_N}{3 h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = 16 \lambda_a \sqrt{f'_c} h_{ef}^{5/3}$ — ACI 318-19 Eq. (17.6.2.2.3)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
12.000	0.000	0.000	10.000	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
-	16	1.000	6,000

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
960.00	1,296.00	1.000	1.000	0.867	1.000	77.953

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕN_{cbg} [kip]	N_{ua} [kip]
50.044	0.700	0.750	1.000	26.273	4.000

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	0.884	6.044	15	OK
Steel failure (with lever arm)*	0.884	1.345	66	OK
Pryout Strength**	3.536	70.061	6	OK
Concrete edge failure in direction x+**	3.536	19.554	19	OK

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

$V_{sa} = 0.6\ A_{se,V}\ f_{uta}$ ACI 318-19 Eq. (17.7.1.2b)

$\phi\ V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.33	58,000

Calculations

V_{sa} [kip]
11.623

Results

V_{sa} [kip]	ϕ_{steel}	ϕ_{eb}	$\phi\ V_{sa,eq}$ [kip]	V_{ua} [kip]
11.623	0.650	0.800	6.044	0.884

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.2 Steel failure (with lever arm)

V_s^M	$= \frac{\alpha_M \cdot M_s}{L_b}$	bending equation for stand-off
M_s	$= M_s^0 \left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	resultant flexural resistance of anchor
M_s^0	$= (1.2)\ (S)\ (f_{u,min})$	characteristic flexural resistance of anchor
$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$		reduction for tensile force acting simultaneously with a shear force on the anchor
S	$= \frac{\pi (d)^3}{32}$	elastic section modulus of anchor bolt at concrete surface
L_b	$= z + (n)(d_0)$	internal lever arm adjusted for spalling of the surface concrete
ϕV_s^M	$\geq V_{ua}$	ACI 318-19 Table 17.5.2

Variables

α_M	$f_{u,min}$ [psi]	N_{ua} [kip]	ϕN_{sa} [kip]	z [in.]	n	d_0 [in.]
2.00	58,000	1.000	14.529	1.250	0.500	0.750

Calculations

M_s^0 [ft.kip]	$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	M_s [ft.kip]	L_b [in.]
0.15046	0.931	0.14011	1.625

Results

V_s^M [kip]	ϕ_{steel}	ϕV_s^M [kip]	V_{ua} [kip]
2.069	0.650	1.345	0.884

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.3 Pryout Strength

$V_{cpg} = k_{cp} \left[\left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ec,N} \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e'_N}{3 h_{ef}}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = 16 \lambda_a \sqrt{f'_c} h_{ef}^{5/3}$ ACI 318-19 Eq. (17.6.2.2.3)

Variables

k_{cp}	h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]
2	12.000	0.000	0.000	10.000

$\psi_{c,N}$	c_{ac} [in.]	k_c	λ_a	f'_c [psi]
1.000	∞	16	1.000	6,000

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
960.00	1,296.00	1.000	1.000	0.867	1.000	77.953

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕV_{cpg} [kip]	V_{ua} [kip]
100.087	0.700	1.000	1.000	70.061	3.536

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.4 Concrete edge failure in direction x+

$V_{cbg} = \left(\frac{A_{Vc}}{A_{Vc0}}\right) \psi_{ec,V}\ \psi_{ed,V}\ \psi_{c,V}\ \psi_{h,V}\ \psi_{parallel,V}\ V_b$ — ACI 318-19 Eq. (17.7.2.1b)

$\phi\ V_{cbg} \geq V_{ua}$ — ACI 318-19 Table 17.5.2

A_{Vc} see ACI 318-19, Section 17.7.2.1, Fig. R 17.7.2.1(b)

$A_{Vc0} = 4.5\ c_{a1}^2$ — ACI 318-19 Eq. (17.7.2.1.3)

$\psi_{ec,V} = \left(\frac{1}{1 + \frac{e'_v}{1.5c_{a1}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.7.2.3.1)

$\psi_{ed,V} = 0.7 + 0.3\left(\frac{c_{a2}}{1.5c_{a1}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.7.2.4.1b)

$\psi_{h,V} = \sqrt{\frac{1.5c_{a1}}{h_a}} \geq 1.0$ — ACI 318-19 Eq. (17.7.2.6.1)

$V_b = 9\ \lambda_a\ \sqrt{f'_c}\ c_{a1}^{1.5}$ — ACI 318-19 Eq. (17.7.2.2.1b)

Variables

c_{a1} [in.]	c_{a2} [in.]	e_{cV} [in.]	$\psi_{c,V}$	h_a [in.]
20.000	10.000	0.000	1.400	30.000

l_e [in.]	λ_a	d_a [in.]	f'_c [psi]	$\psi_{parallel,V}$
6.000	1.000	0.750	6,000	1.000

Calculations

A_{Vc} [in.^{2}]	A_{Vc0} [in.^{2}]	$\psi_{ec,V}$	$\psi_{ed,V}$	$\psi_{h,V}$	V_b [kip]
720.00	1,800.00	1.000	0.800	1.000	62.354

Results

V_{cbg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	$\phi\ V_{cbg}$ [kip]	V_{ua} [kip]
27.935	0.700	1.000	1.000	19.554	3.536

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.152	0.657	5/3	55	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- ACI 318 does not specifically address anchor bending when a stand-off condition exists. PROFIS Engineering calculates a shear load corresponding to anchor bending when stand-off exists and includes the results as a shear Design Strength!
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- "An anchor design approach for structures assigned to Seismic Design Category C, D, E or F is given in ACI 318-19, Chapter 17, Section 17.10.5.3 (a) that requires the governing design strength of an anchor or group of anchors be limited by ductile steel failure. If this is NOT the case, the connection design (tension) shall satisfy the provisions of Section 17.10.5.3 (b), Section 17.10.5.3 (c), or Section 17.10.5.3 (d). The connection design (shear) shall satisfy the provisions of Section 17.10.6.3 (a), Section 17.10.6.3 (b), or Section 17.10.6.3 (c)."
- Section 17.10.5.3 (b) / Section 17.10.6.3 (a) require the attachment the anchors are connecting to the structure be designed to undergo ductile yielding at a load level corresponding to anchor forces no greater than the controlling design strength. Section 17.10.5.3 (c) / Section 17.10.6.3 (b) waive the ductility requirements and require the anchors to be designed for the maximum tension / shear that can be transmitted to the anchors by a non-yielding attachment. Section 17.10.5.3 (d) / Section 17.10.6.3 (c) waive the ductility requirements and require the design strength of the anchors to equal or exceed the maximum tension / shear obtained from design load combinations that include E, with E increased by ω_0.

Fastening meets the design criteria!

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7 Installation data

Profile: W shape (AISC), W8X24; (L x W x T x FT) = 7.930 in. x 6.500 in. x 0.245 in. x 0.400 in.

Hole diameter in the fixture: d_f = 0.812 in.

Plate thickness (input): 0.500 in.

Recommended plate thickness: not calculated

Anchor type and diameter: Heavy Hex Head ASTM F 1554 GR. 36 3/4

Item number: not available

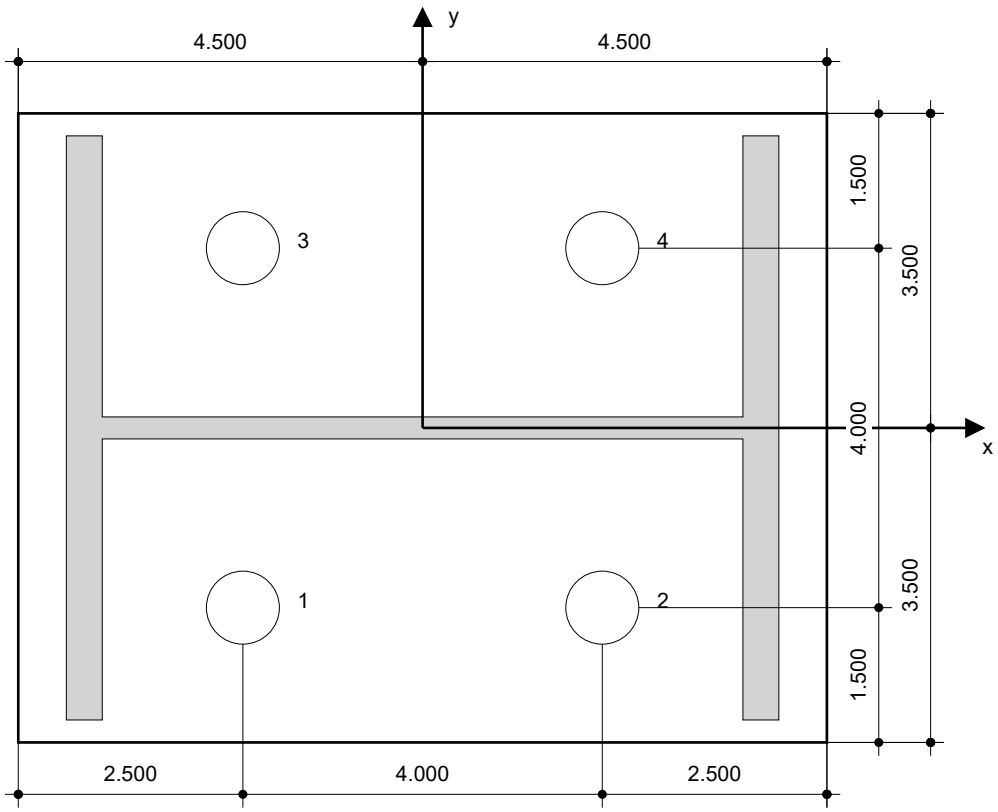
Maximum installation torque: -

Hole diameter in the base material: - in.

Hole depth in the base material: 12.000 in.

Minimum thickness of the base material: 13.000 in.

Hilti Heavy Hex Head headed stud anchor with 12 in embedment, 3/4, Steel galvanized, installation per instruction for use



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	-2.000	-2.000	53.500	57.500	10.000	14.000
2	2.000	-2.000	57.500	53.500	10.000	14.000
3	-2.000	2.000	53.500	57.500	14.000	10.000
4	2.000	2.000	57.500	53.500	14.000	10.000

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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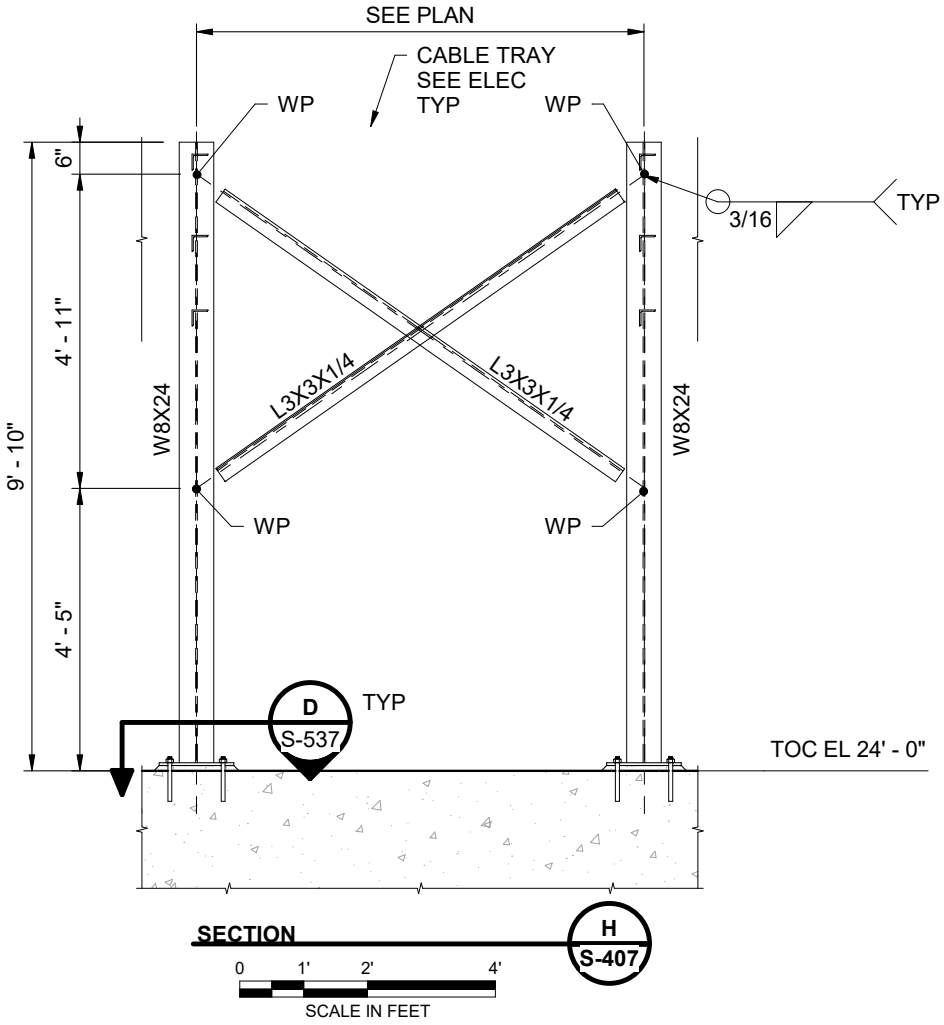
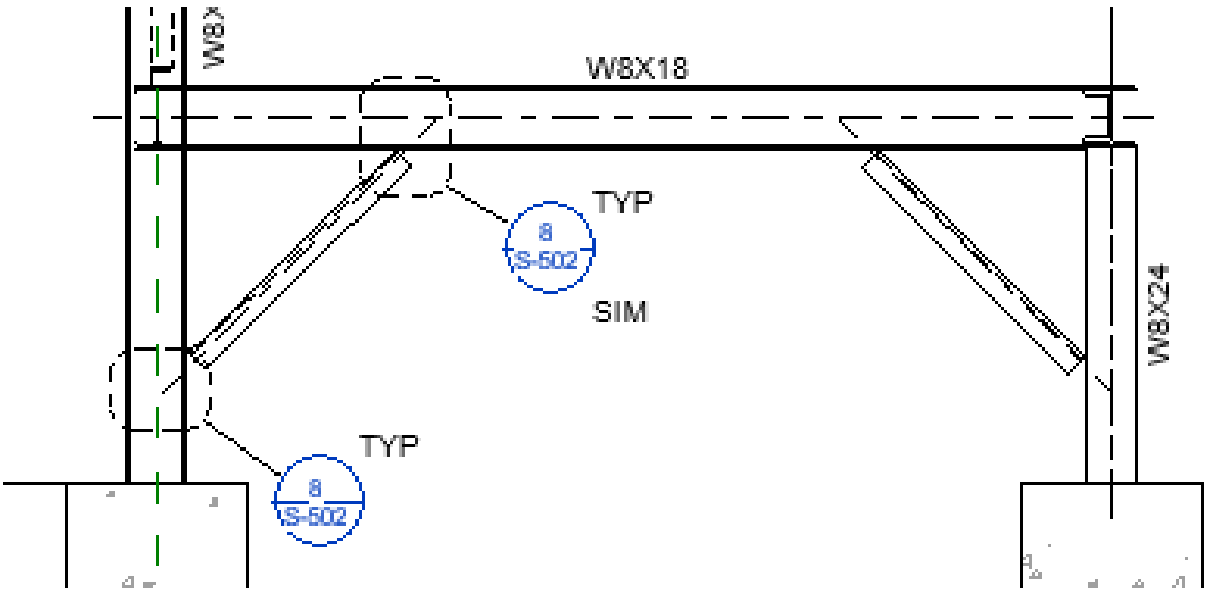

SEE PLAN
CABLE TRAY
SEE ELEC
TYP
WP
WP
6"
4' - 11"
9' - 10"
4' - 5"
W8X24
W8X24
L3X3X1/4
L3X3X1/4
3/16
TYP
WP
WP
D
S-537
TYP
TOC EL 24' - 0"
SECTION
H
S-407
0
1'
2'
4'
SCALE IN FEET


W8X18
TYP
8
S-502
SIM
TYP
8
S-502
W8X24

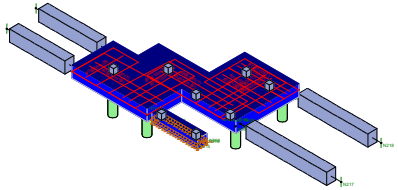
Envelope Member End Reactions

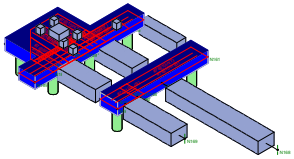
	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M646	I	max	2.428	102	0.092	16	0.014	73	0	93	0	107	0	107
2			min	-2.143	74	-0.003	46	-0.014	105	0	69	0	12	0	12
3		J	max	2.386	102	0.003	106	0.014	71	0	93	0	107	0	107
4			min	-2.137	74	-0.092	14	-0.014	47	0	69	0	12	0	12
5	M644	I	max	2.428	102	0.092	15	0.014	47	0	67	0	107	0	107
6			min	-2.143	74	-0.003	46	-0.014	45	0	95	0	12	0	12
7		J	max	2.386	102	0.003	106	0.014	71	0	67	0	107	0	107
8			min	-2.137	74	-0.092	16	-0.014	107	0	95	0	12	0	12
9	M647	I	max	2.192	70	0.094	16	0.014	73	0	106	0	107	0	107
10			min	-1.977	106	-0.003	44	-0.014	45	0	70	0	12	0	12
11		J	max	2.233	70	0.003	104	0.014	101	0	106	0	107	0	107
12			min	-1.983	106	-0.094	13	-0.014	43	0	70	0	12	0	12
13	M645	I	max	2.192	70	0.094	16	0.014	107	0	70	0	107	0	107
14			min	-1.977	106	-0.003	44	-0.014	45	0	106	0	12	0	12
15		J	max	2.233	70	0.003	104	0.014	71	0	70	0	107	0	107
16			min	-1.983	106	-0.094	13	-0.014	43	0	106	0	12	0	12
17	M803	I	max	1.417	73	0.031	101	0.02	42	0.002	107	0	107	0	107
18			min	-1.367	105	-0.004	77	-0.02	40	-0.002	71	0	12	0	12
19		J	max	1.479	73	0.004	107	0.02	100	0.002	107	0	107	0	107
20			min	-1.377	105	-0.031	41	-0.02	42	-0.002	71	0	12	0	12
21	M804	I	max	1.479	71	0.031	73	0.02	102	0.002	73	0	107	0	107
22			min	-1.377	107	-0.004	45	-0.02	40	-0.002	105	0	12	0	12
23		J	max	1.417	71	0.004	75	0.02	100	0.002	73	0	107	0	107
24			min	-1.367	107	-0.031	103	-0.02	42	-0.002	105	0	12	0	12
25	M785	I	max	1.477	100	0.155	13	0.026	75	0.001	73	0	107	0	107
26			min	-1.221	46	-0.009	44	-0.026	73	-0.001	75	0	12	0	12
27		J	max	1.397	100	0.009	104	0.026	103	0.001	73	0	107	0	107
28			min	-1.217	46	-0.155	15	-0.026	45	-0.001	75	0	12	0	12
29	M783	I	max	1.477	100	0.155	16	0.026	101	0.001	107	0	107	0	107
30			min	-1.221	46	-0.009	74	-0.026	73	-0.001	41	0	12	0	12
31		J	max	1.397	100	0.009	104	0.026	107	0.001	107	0	107	0	107
32			min	-1.217	46	-0.155	13	-0.026	41	-0.001	41	0	12	0	12
33	M782	I	max	1.477	102	0.155	14	0.026	47	0.001	101	0	107	0	107
34			min	-1.221	74	-0.009	46	-0.026	75	-0.001	77	0	12	0	12
35		J	max	1.397	102	0.009	106	0.026	105	0.001	101	0	107	0	107
36			min	-1.217	74	-0.155	13	-0.026	73	-0.001	77	0	12	0	12
37	M784	I	max	1.477	102	0.155	14	0.026	107	0.001	75	0	107	0	107
38			min	-1.221	44	-0.009	46	-0.026	41	-0.001	73	0	12	0	12
39		J	max	1.397	102	0.009	106	0.026	105	0.001	75	0	107	0	107
40			min	-1.217	44	-0.155	15	-0.026	73	-0.001	73	0	12	0	12
41	M639	I	max	1.211	101	0.139	16	0.018	76	0	74	0	107	0	107
42			min	-1.193	107	0	45	-0.018	44	0	102	0	12	0	12
43		J	max	1.162	105	0	105	0.018	104	0	74	0	107	0	107
44			min	-1.184	103	-0.139	14	-0.018	42	0	102	0	12	0	12
45	M425	I	max	0.883	103	0.21	16	0.03	106	0	106	0	107	0	107
46			min	-0.825	75	-0.006	77	-0.03	40	0	40	0	12	0	12
47		J	max	0.974	103	0.006	47	0.03	104	0	106	0	107	0	107
48			min	-0.838	75	-0.21	16	-0.03	42	0	40	0	12	0	12
49	M426	I	max	0.883	101	0.21	15	0.03	104	0	100	0	107	0	107
50			min	-0.825	77	-0.006	105	-0.03	42	0	46	0	12	0	12
51		J	max	0.974	101	0.006	45	0.03	106	0	100	0	107	0	107
52			min	-0.838	77	-0.21	13	-0.03	40	0	46	0	12	0	12
53	M423	I	max	0.883	103	0.21	14	0.03	42	0	42	0	107	0	107
54			min	-0.825	75	-0.006	77	-0.03	40	0	44	0	12	0	12
55		J	max	0.974	103	0.006	47	0.03	104	0	42	0	107	0	107
56			min	-0.838	75	-0.21	15	-0.03	46	0	44	0	12	0	12
57	M424	I	max	0.883	101	0.21	16	0.03	104	0	44	0	107	0	107

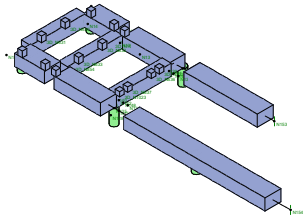
Envelope Member End Reactions (Continued)

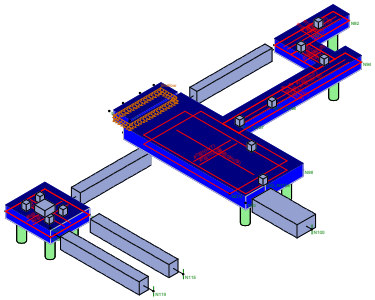
	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
58			min	-0.825	77	-0.006	75	-0.03	42	0	42	0	12	0	12
59		J	max	0.974	101	0.006	45	0.03	106	0	44	0	107	0	107
60			min	-0.838	77	-0.21	15	-0.03	40	0	42	0	12	0	12
61	M457	I	max	0.66	45	0.196	15	0.024	104	0.004	73	0	107	0	107
62			min	-0.687	43	0	75	-0.024	46	-0.004	45	0	12	0	12
63		J	max	0.726	101	0	45	0.024	102	0.004	73	0	107	0	107
64			min	-0.7	77	-0.196	16	-0.024	44	-0.004	45	0	12	0	12
65	M458	I	max	0.66	47	0.196	16	0.024	106	0.004	47	0	107	0	107
66			min	-0.687	41	0	77	-0.024	44	-0.004	41	0	12	0	12
67		J	max	0.726	73	0	47	0.024	100	0.004	47	0	107	0	107
68			min	-0.7	75	-0.196	13	-0.024	46	-0.004	41	0	12	0	12

Pile Cap Finite Element Analysis



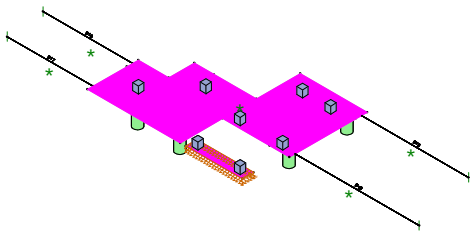


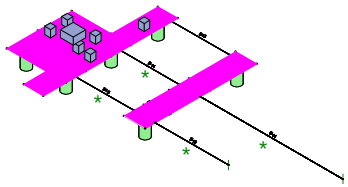


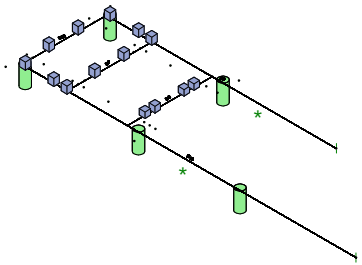


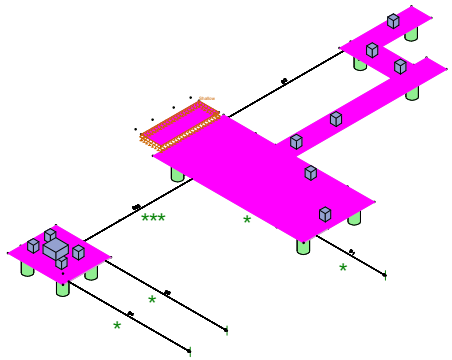
Results for LC 1, ASCE Strength 1

BURNS & MCDONNELL	PDX - Combined Pile Cap Check	SK - 1
A. Kral		Dec 14, 2023 at 8:24 AM
153929		Combined Pile Cap Model.r3d









*LATERAL TIE BACK TO TANK FDTN

***LATERAL TIE BETWEEN TRUSS PILE CAP

BURNS & MCDONNELL	PDX - Combined Pile Cap Check	SK - 1
A. Kral		Dec 20, 2023 at 2:31 PM
153929		Combined Pile Cap Model.r3d

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	100
Mesh Size (in)	12
Max Iterations	10
Merge Tolerance (in)	0.12
Solver	Sparse Accelerated
Coefficient of Friction	0.4
No. of Shear Regions	4
Shear Region Spacing Increment (in)	4
Min 1 Bar Dia Spacing for Beams?	No
Optimize footings for OTM / Sliding?	Yes
Parme Beta Factor	0.65
Pile Safety Factor	3
Min % Steel for Pedestal	Auto
Concrete Stress Block	Rectangular
Concrete Rebar Set	ASTM A615
Include WWR	No
Concrete Code	ACI 318-19
HR Steel Pile Code	AISC 14th (360-10): ASD
Wood Pile Code	AWC NDS-15 / SDPWS-15 ASD
Mat Slab Design Option	Construction (Design per Integer No. of Bars)

Project Grid Lines

Label	Start Z [ft]	End Z [ft]	Start X [ft]	End X [ft]	Start Bubble	End Bubble
No Data to Print ...						

Project Grid Arcs

Label	Center Z [ft]	Center X [ft]	Radius [ft]	Start Angle [d...	Sweep Angle ...	Start Bubble	End Bubble
No Data to Print ...							

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density...	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc4000NW	3644	1584	0.15	0.6	0.145	4	1	60	60
2	Conc5000NW	4074	1771.304	0.15	0.6	0.145	5	1	60	60
3	Conc 6000NW - TIE	4463.15	1940.5	0.15	0.6	0.145	6	1	60	60
4	Conc 6000NW	4463.15	1940.5	0.15	0.6	0.145	6	1	60	60

General Properties

	Label	Min Steel ...	Max Steel...	Material	Design Ru...	Equal Bar Spacing	Group Design	Concrete Bearing	Force Top Bar
1	TYPE1	0.002	0.007	Conc4000...	Typical	Yes		Yes	
2	TYPE2	0.002	0.007	Conc4000...	Typical	Yes		Yes	

Footing Geometry

	Label	Max Length[...	Min Length[ft]	Max Width[ft]	Min Width[ft]	L/W Increm...	Max Thickn...	Min Thickne...	Thick Incre...	Force Sq...
1	TYPE1	7	3	7	3	0.5	30	24	1	Yes
2	TYPE2	12	3	7	3	0.5	30	24	1	

Pedestal Properties

	Label	Type	Shape	Height[in]	e/BL	ex[in]	ez[in]	BLx[ft]	BLz[ft]
1	TYPE1	Post	CRECT12X12	0	Use ex,ez	0	0	0	0
2	TYPE2	Pedestal	CRECT30X30	0	Use ex,ez	21	0	0	0

Soil Properties

	Label	Overburden[ksf]	Passive[k]	Friction Coefficient	Gross/Net
1	TYPE1	0.06	0	0.35	Gross
2	TYPE2	0.06	0	0.35	Gross

Soil Definitions

	Label	Subgrade Modulus[k/ft^3]	Allowable Bearing[ksf]	Depth Properties	Default?
1	Default	0	3	None	Yes
2	Shallow	172.8	1.5	None	

All Support Types

	Point Label	Support[k/in]	Footings/Piles/Pile Caps	Support Angle(deg)
1	N23	Pile 1	Pile 1	N/A
2	N41	Pile 1	Pile 1	N/A
3	N50	Pile 1	Pile 1	N/A
4	N60	Pile 1	Pile 1	N/A
5	N91	Pile 1	Pile 1	N/A
6	N100	Reaction		N/A
7	N111	Pile 1	Pile 1	N/A
8	N112	Pile 1	Pile 1	N/A
9	N113	Pile 1	Pile 1	N/A
10	N114	Pile 1	Pile 1	N/A
11	N115	Reaction		N/A
12	R3D_S5	Pile 1	Pile 1	N/A
13	N124	Pile 1	Pile 1	N/A
14	R3D_S3	Pile 1	Pile 1	N/A
15	N153	Reaction		N/A
16	N154	Reaction		N/A
17	N119	Reaction		N/A
18	N155	Pile 1	Pile 1	N/A
19	N156	Pile 1	Pile 1	N/A
20	N157	Pile 1	Pile 1	N/A
21	N158	Pile 1	Pile 1	N/A
22	N169	Reaction		N/A
23	N168	Reaction		N/A
24	N188	Pile 1	Pile 1	N/A
25	N190	Pile 1	Pile 1	N/A
26	N191	Pile 1	Pile 1	N/A
27	N192	Pile 1	Pile 1	N/A
28	N193	Pile 1	Pile 1	N/A
29	N194			N/A
30	N210	Reaction		N/A
31	N218	Reaction		N/A
32	N217	Reaction		N/A
33	N228	Pile 1	Pile 1	N/A
34	N229	Pile 1	Pile 1	N/A
35	R3D_N717	S0		N/A
36	R3D_N718			N/A
37	N212	Reaction		N/A
38	N276	Pile 1	Pile 1	N/A
39	N277	Pile 1	Pile 1	N/A
40	N278	Pile 1	Pile 1	N/A
41	N279	Pile 1	Pile 1	N/A
42	N125	Pile 1	Pile 1	N/A
43	N283	Pile 1	Pile 1	N/A

Point Loads and Moments (Cat 1 : DL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_S8	X	0.005
2	R3D_S8	Y	4.598
3	R3D_S7	X	-0.005
4	R3D_S7	Y	4.244
5	R3D_S6	X	0.002
6	R3D_S6	Y	4.609
7	R3D_S5	X	-0.013
8	R3D_S5	Y	4.297
9	R3D_S4	X	-0.001
10	R3D_S4	Y	4.662
11	R3D_S3	Y	4.233
12	R3D_S2	X	-0.002
13	R3D_S2	Y	4.656
14	R3D_S1	X	-0.009
15	R3D_S1	Y	4.289
16	R3D_N1157	Y	6.175
17	R3D_N1157	MX	-3.992
18	R3D_N1155	Y	16.104
19	R3D_N1155	MX	-15.059
20	R3D_N1154	Y	16.062
21	R3D_N1154	MX	-14.903
22	R3D_N1153	Y	2.147
23	R3D_N1153	MZ	0.409
24	R3D_N1152	Y	2.098
25	R3D_N1152	MZ	0.372
26	R3D_N1147	Y	2.546
27	R3D_N1147	MZ	-0.695
28	R3D_N1145	Y	13.053
29	R3D_N1145	MX	-11.993
30	R3D_N1054	Y	1.546
31	R3D_N1044	Y	2.339
32	R3D_N1041	Y	0.749
33	R3D_N1025	Y	3.092
34	R3D_N1024	Y	1.708
35	R3D_N1023	Y	3.092
36	R3D_N1022	Y	1.708
37	R3D_N857	Y	2.223
38	R3D_N855	Y	3.049
39	R3D_N854	Y	2.13
40	R3D_N757	Y	0.392
41	R3D_N757	MX	0.000359
42	R3D_N757	MZ	0.13
43	R3D_N748	Y	0.392
44	R3D_N748	MX	-0.000359
45	R3D_N748	MZ	0.13
46	R3D_N739	Y	0.408
47	R3D_N739	MX	0.000279
48	R3D_N739	MZ	0.137
49	R3D_N718	X	-0.038
50	R3D_N718	Y	0.772
51	R3D_N718	Z	0.024
52	R3D_N717	X	-0.038
53	R3D_N717	Y	0.772
54	R3D_N717	Z	-0.024
55	R3D_N716	X	0.038
56	R3D_N716	Y	0.772
57	R3D_N716	Z	0.024

Point Loads and Moments (Cat 1 : DL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
58	R3D_N715	Y	0.408
59	R3D_N715	MX	-0.000279
60	R3D_N715	MZ	0.137
61	R3D_N714	X	0.038
62	R3D_N714	Y	0.772
63	R3D_N714	Z	-0.024
64	R3D_N701	X	-0.041
65	R3D_N701	Y	0.629
66	R3D_N701	Z	0.022
67	R3D_N700	X	-0.041
68	R3D_N700	Y	0.629
69	R3D_N700	Z	-0.022
70	R3D_N699	X	0.041
71	R3D_N699	Y	0.629
72	R3D_N699	Z	0.022
73	R3D_N698	X	0.041
74	R3D_N698	Y	0.629
75	R3D_N698	Z	-0.022
76	R3D_N639	Y	0.51
77	R3D_N639	MX	0.000298
78	R3D_N639	MZ	0.106
79	R3D_N638	Y	0.51
80	R3D_N638	MX	-0.000298
81	R3D_N638	MZ	0.106
82	R3D_N637	X	0.064
83	R3D_N637	Y	0.767
84	R3D_N637	Z	-0.109
85	R3D_N636	X	0.064
86	R3D_N636	Y	0.767
87	R3D_N636	Z	0.109
88	R3D_N633	X	0.008
89	R3D_N633	Y	1.098
90	R3D_N633	MX	0.000425
91	R3D_N633	MZ	-0.065
92	R3D_N632	X	0.008
93	R3D_N632	Y	1.098
94	R3D_N632	MX	-0.000425
95	R3D_N632	MZ	-0.065
96	R3D_N631	X	-0.071
97	R3D_N631	Y	0.578
98	R3D_N630	X	-0.071
99	R3D_N630	Y	0.578
100	R3D_F8	X	0.009
101	R3D_F8	Y	4.641
102	R3D_F8	Z	-0.005
103	R3D_F7	X	-0.009
104	R3D_F7	Y	4.299
105	R3D_F7	Z	0.005
106	R3D_F6	X	0.002
107	R3D_F6	Y	4.772
108	R3D_F6	Z	-0.119
109	R3D_F5	X	0.009
110	R3D_F5	Y	4.221
111	R3D_F5	Z	0.119
112	R3D_F4	X	0.018
113	R3D_F4	Y	4.534
114	R3D_F4	Z	0.022

Point Loads and Moments (Cat 1 : DL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
115	R3D_F3	X	-0.016
116	R3D_F3	Y	4.317
117	R3D_F3	Z	-0.022
118	R3D_F2	X	0.007
119	R3D_F2	Y	4.702
120	R3D_F2	Z	-0.123
121	R3D_F1	X	0.003
122	R3D_F1	Y	4.233
123	R3D_F1	Z	0.123

Point Loads and Moments (Cat 8 : TL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_S8	X	0.152
2	R3D_S8	Y	0.244
3	R3D_S7	X	-0.133
4	R3D_S7	Y	-0.298
5	R3D_S6	X	0.201
6	R3D_S6	Y	-0.27
7	R3D_S5	X	-0.245
8	R3D_S5	Y	0.326
9	R3D_S4	X	0.151
10	R3D_S4	Y	0.238
11	R3D_S3	X	-0.133
12	R3D_S3	Y	-0.303
13	R3D_S2	X	0.766
14	R3D_S2	Y	0.652
15	R3D_S1	X	0.311
16	R3D_S1	Y	-0.596
17	R3D_N1157	Z	0.67
18	R3D_N1157	MX	0.67
19	R3D_N1145	Z	1.921
20	R3D_N1145	MX	1.921
21	R3D_N1054	X	7.127
22	R3D_N1054	MZ	-7.127
23	R3D_N1041	Z	0.594
24	R3D_N1041	MX	0.594
25	R3D_N857	Z	0.794
26	R3D_N857	MX	0.794
27	R3D_N639	X	0.014
28	R3D_N639	MZ	-0.058
29	R3D_N638	X	0.014
30	R3D_N638	MZ	-0.058
31	R3D_N637	X	0.02
32	R3D_N637	Y	0.017
33	R3D_N636	X	0.02
34	R3D_N636	Y	0.017
35	R3D_N633	X	0.042
36	R3D_N633	Y	-0.013
37	R3D_N633	MZ	-0.069
38	R3D_N632	X	0.042
39	R3D_N632	Y	-0.013
40	R3D_N632	MZ	-0.069
41	R3D_N631	X	0.002
42	R3D_N631	Y	-0.004
43	R3D_N630	X	0.002
44	R3D_N630	Y	-0.004

Point Loads and Moments (Cat 8 : TL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
45	R3D_F8	X	0.219
46	R3D_F8	Y	-0.244
47	R3D_F8	Z	0.542
48	R3D_F7	X	-0.238
49	R3D_F7	Y	0.298
50	R3D_F7	Z	1.012
51	R3D_F6	X	0.17
52	R3D_F6	Y	0.27
53	R3D_F6	Z	0.349
54	R3D_F5	X	-0.127
55	R3D_F5	Y	-0.326
56	R3D_F5	Z	1.374
57	R3D_F4	X	0.219
58	R3D_F4	Y	-0.238
59	R3D_F4	Z	0.691
60	R3D_F3	X	-0.238
61	R3D_F3	Y	0.303
62	R3D_F3	Z	1.154
63	R3D_F2	X	0.167
64	R3D_F2	Y	0.315
65	R3D_F2	Z	0.283
66	R3D_F1	X	-0.118
67	R3D_F1	Y	-0.371
68	R3D_F1	Z	1.44

Point Loads and Moments (Cat 11 : FL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N857	Z	8
2	R3D_N1041	Z	8
3	R3D_S8	X	-0.034
4	R3D_S8	Y	3.363
5	R3D_S7	X	0.026
6	R3D_S7	Y	2.582
7	R3D_S6	X	-0.054
8	R3D_S6	Y	3.582
9	R3D_S5	X	0.035
10	R3D_S5	Y	2.572
11	R3D_S4	X	-0.053
12	R3D_S4	Y	3.577
13	R3D_S3	X	0.039
14	R3D_S3	Y	2.542
15	R3D_S2	X	-0.067
16	R3D_S2	Y	3.701
17	R3D_S1	X	0.046
18	R3D_S1	Y	2.552
19	R3D_N757	Y	0.238
20	R3D_N757	MX	0.000332
21	R3D_N757	MZ	0.287
22	R3D_N748	Y	0.238
23	R3D_N748	MX	-0.000332
24	R3D_N748	MZ	0.287
25	R3D_N739	Y	0.256
26	R3D_N739	MX	0.000263
27	R3D_N739	MZ	0.308
28	R3D_N718	X	-0.022
29	R3D_N718	Y	0.376

Point Loads and Moments (Cat 11 : FL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
30	R3D_N718	Z	0.02
31	R3D_N717	X	-0.022
32	R3D_N717	Y	0.376
33	R3D_N717	Z	-0.02
34	R3D_N716	X	0.022
35	R3D_N716	Y	0.376
36	R3D_N716	Z	0.02
37	R3D_N715	Y	0.256
38	R3D_N715	MX	-0.000263
39	R3D_N715	MZ	0.308
40	R3D_N714	X	0.022
41	R3D_N714	Y	0.376
42	R3D_N714	Z	-0.02
43	R3D_N701	X	-0.029
44	R3D_N701	Y	0.206
45	R3D_N701	Z	0.009
46	R3D_N700	X	-0.029
47	R3D_N700	Y	0.206
48	R3D_N700	Z	-0.009
49	R3D_N699	X	0.029
50	R3D_N699	Y	0.206
51	R3D_N699	Z	0.009
52	R3D_N698	X	0.029
53	R3D_N698	Y	0.206
54	R3D_N698	Z	-0.009
55	R3D_N639	Y	0.276
56	R3D_N639	MX	0.000161
57	R3D_N639	MZ	0.218
58	R3D_N638	Y	0.276
59	R3D_N638	MX	-0.000161
60	R3D_N638	MZ	0.218
61	R3D_N637	X	-0.002
62	R3D_N637	Y	0.279
63	R3D_N637	Z	-0.067
64	R3D_N636	X	-0.002
65	R3D_N636	Y	0.279
66	R3D_N636	Z	0.067
67	R3D_N633	X	0.058
68	R3D_N633	Y	0.484
69	R3D_N633	MX	0.000228
70	R3D_N633	MZ	-0.065
71	R3D_N632	X	0.058
72	R3D_N632	Y	0.484
73	R3D_N632	MX	-0.000228
74	R3D_N632	MZ	-0.065
75	R3D_N631	X	-0.056
76	R3D_N631	Y	0.273
77	R3D_N630	X	-0.056
78	R3D_N630	Y	0.273
79	R3D_F8	X	-0.039
80	R3D_F8	Y	3.653
81	R3D_F8	Z	0.094
82	R3D_F7	X	0.048
83	R3D_F7	Y	2.56
84	R3D_F7	Z	-0.094
85	R3D_F6	X	-0.048
86	R3D_F6	Y	3.861

Point Loads and Moments (Cat 11 : FL) (Continued)

	Label	Direction	Magnitude[k,k-ft]
87	R3D_F6	Z	-0.222
88	R3D_F5	X	0.067
89	R3D_F5	Y	2.492
90	R3D_F5	Z	0.222
91	R3D_F4	X	-0.013
92	R3D_F4	Y	3.401
93	R3D_F4	Z	0.157
94	R3D_F3	X	0.027
95	R3D_F3	Y	2.607
96	R3D_F3	Z	-0.157
97	R3D_F2	X	-0.03
98	R3D_F2	Y	3.671
99	R3D_F2	Z	-0.232
100	R3D_F1	X	0.05
101	R3D_F1	Y	2.524
102	R3D_F1	Z	0.232

Point Loads and Moments (Cat 16 : ELX)

	Label	Direction	Magnitude[k,k-ft]
1	N224	X	4.451
2	N225	X	1.864
3	N226	X	12.007
4	N227	X	33.255
5	N230	X	8.269
6	N237	X	7.388
7	N238	X	8.292
8	N239	X	1.72
9	N240	X	8.03
10	N242	X	16.23
11	N243	X	13.715
12	N244	X	4.863
13	R3D_S8	X	7.718
14	R3D_S8	Y	6.432
15	R3D_S7	X	3.396
16	R3D_S7	Y	-6.432
17	R3D_S6	X	7.9
18	R3D_S6	Y	6.504
19	R3D_S5	X	3.437
20	R3D_S5	Y	-6.504
21	R3D_S4	X	7.875
22	R3D_S4	Y	6.473
23	R3D_S3	X	3.424
24	R3D_S3	Y	-6.473
25	R3D_S2	X	7.967
26	R3D_S2	Y	6.563
27	R3D_S1	X	3.492
28	R3D_S1	Y	-6.563
29	R3D_N1157	X	8.125
30	R3D_N1157	Y	3.678
31	R3D_N1157	MX	-6.142
32	R3D_N1157	MY	-11.069
33	R3D_N1157	MZ	-7.377
34	R3D_N1155	X	1.497
35	R3D_N1155	MZ	-0.749
36	R3D_N1154	X	1.497
37	R3D_N1154	MZ	-0.749

Point Loads and Moments (Cat 16 : ELX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
38	R3D_N1153	X	1.497
39	R3D_N1153	MZ	-0.749
40	R3D_N1152	X	1.497
41	R3D_N1152	MZ	-0.749
42	R3D_N1147	X	1.497
43	R3D_N1147	MZ	-0.749
44	R3D_N1145	X	1.497
45	R3D_N1145	MZ	-0.749
46	R3D_N1054	X	0.65
47	R3D_N1054	MZ	-0.325
48	R3D_N1044	X	0.513
49	R3D_N1044	MZ	-0.257
50	R3D_N1041	X	2.95
51	R3D_N1041	MZ	-2.625
52	R3D_N1025	X	0.513
53	R3D_N1025	MZ	-0.257
54	R3D_N1024	X	0.65
55	R3D_N1024	MZ	-0.325
56	R3D_N1023	X	0.513
57	R3D_N1023	MZ	-0.257
58	R3D_N1022	X	0.65
59	R3D_N1022	MZ	-0.325
60	R3D_N857	X	5.289
61	R3D_N857	MZ	-4.964
62	R3D_N855	X	0.65
63	R3D_N855	MZ	-0.325
64	R3D_N854	X	0.513
65	R3D_N854	MZ	-0.257
66	R3D_N757	X	0.552
67	R3D_N757	MZ	-3.641
68	R3D_N748	X	0.552
69	R3D_N748	MZ	-3.641
70	R3D_N739	X	0.582
71	R3D_N739	MZ	-3.866
72	R3D_N718	X	0.677
73	R3D_N718	Y	-1.574
74	R3D_N717	X	0.677
75	R3D_N717	Y	-1.574
76	R3D_N716	X	0.677
77	R3D_N716	Y	1.574
78	R3D_N715	X	0.582
79	R3D_N715	MZ	-3.866
80	R3D_N714	X	0.677
81	R3D_N714	Y	1.574
82	R3D_N701	X	0.55
83	R3D_N701	Y	-0.934
84	R3D_N701	Z	-0.041
85	R3D_N700	X	0.55
86	R3D_N700	Y	-0.934
87	R3D_N700	Z	0.041
88	R3D_N699	X	0.55
89	R3D_N699	Y	0.934
90	R3D_N699	Z	0.041
91	R3D_N698	X	0.55
92	R3D_N698	Y	0.934
93	R3D_N698	Z	-0.041
94	R3D_N639	X	0.69

Point Loads and Moments (Cat 16 : ELX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
95	R3D_N639	MX	0.000138
96	R3D_N639	MZ	-3.91
97	R3D_N638	X	0.69
98	R3D_N638	MX	-0.000138
99	R3D_N638	MZ	-3.91
100	R3D_N637	X	0.934
101	R3D_N637	Y	0.738
102	R3D_N636	X	0.934
103	R3D_N636	Y	0.738
104	R3D_N633	X	1.503
105	R3D_N633	Y	-0.39
106	R3D_N633	MX	0.00022
107	R3D_N633	MZ	-2.647
108	R3D_N632	X	1.503
109	R3D_N632	Y	-0.39
110	R3D_N632	MX	-0.00022
111	R3D_N632	MZ	-2.647
112	R3D_N631	X	0.255
113	R3D_N631	Y	-0.348
114	R3D_N630	X	0.255
115	R3D_N630	Y	-0.348
116	R3D_F8	X	9.598
117	R3D_F8	Y	9.065
118	R3D_F8	Z	5.955
119	R3D_F7	X	4.583
120	R3D_F7	Y	-9.065
121	R3D_F7	Z	-5.955
122	R3D_F6	X	8.869
123	R3D_F6	Y	7.798
124	R3D_F6	Z	-6.144
125	R3D_F5	X	3.8
126	R3D_F5	Y	-7.798
127	R3D_F5	Z	6.144
128	R3D_F4	X	8.63
129	R3D_F4	Y	7.592
130	R3D_F4	Z	6.119
131	R3D_F3	X	3.68
132	R3D_F3	Y	-7.592
133	R3D_F3	Z	-6.119
134	R3D_F2	X	8.76
135	R3D_F2	Y	7.696
136	R3D_F2	Z	-6.177
137	R3D_F1	X	3.721
138	R3D_F1	Y	-7.696
139	R3D_F1	Z	6.177

Point Loads and Moments (Cat 18 : ELZ)

	Label	Direction	Magnitude[k,k-ft]
1	N224	Z	4.451
2	N225	Z	1.864
3	N226	Z	12.007
4	N227	Z	33.255
5	N230	Z	8.269
6	N237	Z	7.388
7	N238	Z	8.292
8	N239	Z	1.72

Point Loads and Moments (Cat 18 : ELZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
9	N240	Z	8.03
10	N242	Z	16.23
11	N243	Z	13.715
12	N244	Z	4.863
13	R3D_S8	X	0.022
14	R3D_S8	Y	-0.609
15	R3D_S7	X	0.035
16	R3D_S7	Y	-0.815
17	R3D_S6	X	-0.052
18	R3D_S6	Y	0.481
19	R3D_S5	X	-0.052
20	R3D_S5	Y	0.773
21	R3D_S4	X	0.027
22	R3D_S4	Y	-0.614
23	R3D_S3	X	0.038
24	R3D_S3	Y	-0.836
25	R3D_S2	X	-0.048
26	R3D_S2	Y	0.486
27	R3D_S1	X	-0.049
28	R3D_S1	Y	0.764
29	R3D_N1157	Y	3.678
30	R3D_N1157	Z	14.495
31	R3D_N1157	MX	7.604
32	R3D_N1155	Z	1.497
33	R3D_N1155	MX	0.749
34	R3D_N1154	Z	5.269
35	R3D_N1154	MX	4.521
36	R3D_N1153	Z	1.497
37	R3D_N1153	MX	0.749
38	R3D_N1152	Z	1.497
39	R3D_N1152	MX	0.749
40	R3D_N1147	Z	1.497
41	R3D_N1147	MX	0.749
42	R3D_N1145	Z	1.497
43	R3D_N1145	MX	0.749
44	R3D_N1054	Z	0.65
45	R3D_N1054	MX	0.325
46	R3D_N1044	Z	0.513
47	R3D_N1044	MX	0.257
48	R3D_N1041	Z	9.516
49	R3D_N1041	MX	9.191
50	R3D_N1025	Z	0.513
51	R3D_N1025	MX	0.257
52	R3D_N1024	Z	0.65
53	R3D_N1024	MX	0.325
54	R3D_N1023	Z	0.513
55	R3D_N1023	MX	0.257
56	R3D_N1022	Z	0.65
57	R3D_N1022	MX	0.325
58	R3D_N857	Z	5.957
59	R3D_N857	MX	5.632
60	R3D_N855	Z	0.65
61	R3D_N855	MX	0.325
62	R3D_N854	Z	0.513
63	R3D_N854	MX	0.257
64	R3D_N757	Y	0.617
65	R3D_N757	Z	0.552

Point Loads and Moments (Cat 18 : ELZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
66	R3D_N757	MX	1.483
67	R3D_N757	MY	0.368
68	R3D_N757	MZ	-0.005
69	R3D_N748	Y	-0.617
70	R3D_N748	Z	0.552
71	R3D_N748	MX	1.483
72	R3D_N748	MY	0.368
73	R3D_N748	MZ	0.005
74	R3D_N739	Y	0.484
75	R3D_N739	Z	0.582
76	R3D_N739	MX	1.569
77	R3D_N739	MY	0.394
78	R3D_N739	MZ	-0.003
79	R3D_N718	X	-0.078
80	R3D_N718	Y	1.339
81	R3D_N718	Z	0.676
82	R3D_N717	X	0.078
83	R3D_N717	Y	-1.339
84	R3D_N717	Z	0.676
85	R3D_N716	X	0.078
86	R3D_N716	Y	1.339
87	R3D_N716	Z	0.676
88	R3D_N715	Y	-0.484
89	R3D_N715	Z	0.582
90	R3D_N715	MX	1.569
91	R3D_N715	MY	0.394
92	R3D_N715	MZ	0.003
93	R3D_N714	X	-0.078
94	R3D_N714	Y	-1.339
95	R3D_N714	Z	0.676
96	R3D_N701	Y	0.933
97	R3D_N701	Z	0.549
98	R3D_N700	Y	-0.933
99	R3D_N700	Z	0.549
100	R3D_N699	Y	0.933
101	R3D_N699	Z	0.549
102	R3D_N698	Y	-0.933
103	R3D_N698	Z	0.549
104	R3D_N639	Z	0.396
105	R3D_N639	MX	2.652
106	R3D_N639	MY	0.286
107	R3D_N638	Z	0.396
108	R3D_N638	MX	2.652
109	R3D_N638	MY	0.286
110	R3D_N637	X	0.007
111	R3D_N637	Y	1.443
112	R3D_N637	Z	0.922
113	R3D_N636	X	-0.007
114	R3D_N636	Y	-1.443
115	R3D_N636	Z	0.922
116	R3D_N633	X	-0.006
117	R3D_N633	Y	1.48
118	R3D_N633	Z	1.543
119	R3D_N633	MX	4.255
120	R3D_N633	MY	0.016
121	R3D_N633	MZ	0.000842
122	R3D_N632	X	0.006

Point Loads and Moments (Cat 18 : ELZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
123	R3D_N632	Y	-1.48
124	R3D_N632	Z	1.543
125	R3D_N632	MX	4.255
126	R3D_N632	MY	0.016
127	R3D_N632	MZ	-0.000842
128	R3D_N631	Y	1.071
129	R3D_N631	Z	0.518
130	R3D_N630	Y	-1.071
131	R3D_N630	Z	0.518
132	R3D_F8	X	-0.02
133	R3D_F8	Y	0.609
134	R3D_F8	Z	13.367
135	R3D_F7	X	-0.037
136	R3D_F7	Y	0.815
137	R3D_F7	Z	12.789
138	R3D_F6	X	0.049
139	R3D_F6	Y	-0.481
140	R3D_F6	Z	12.25
141	R3D_F5	X	0.055
142	R3D_F5	Y	-0.773
143	R3D_F5	Z	11.75
144	R3D_F4	X	-0.025
145	R3D_F4	Y	0.614
146	R3D_F4	Z	13.517
147	R3D_F3	X	-0.039
148	R3D_F3	Y	0.836
149	R3D_F3	Z	12.972
150	R3D_F2	X	0.044
151	R3D_F2	Y	-0.486
152	R3D_F2	Z	12.247
153	R3D_F1	X	0.053
154	R3D_F1	Y	-0.764
155	R3D_F1	Z	11.686

Point Loads and Moments (Cat 19 : WLX)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_S8	X	4.197
2	R3D_S8	Y	4.965
3	R3D_S7	X	2.465
4	R3D_S7	Y	-4.965
5	R3D_S6	X	4.441
6	R3D_S6	Y	5.187
7	R3D_S5	X	2.554
8	R3D_S5	Y	-5.187
9	R3D_S4	X	4.403
10	R3D_S4	Y	5.131
11	R3D_S3	X	2.532
12	R3D_S3	Y	-5.131
13	R3D_S2	X	4.525
14	R3D_S2	Y	5.271
15	R3D_S1	X	2.628
16	R3D_S1	Y	-5.271
17	R3D_N1157	X	0.189
18	R3D_N1157	MZ	-0.095
19	R3D_N1155	X	0.189
20	R3D_N1155	MZ	-0.095

Point Loads and Moments (Cat 19 : WLX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
21	R3D_N1154	X	0.189
22	R3D_N1154	MZ	-0.095
23	R3D_N1153	X	0.065
24	R3D_N1153	MZ	-0.032
25	R3D_N1152	X	0.065
26	R3D_N1152	MZ	-0.032
27	R3D_N1147	X	0.065
28	R3D_N1147	MZ	-0.032
29	R3D_N1145	X	0.189
30	R3D_N1145	MZ	-0.095
31	R3D_N1054	X	0.073
32	R3D_N1054	MZ	-0.036
33	R3D_N1044	X	0.065
34	R3D_N1044	MZ	-0.032
35	R3D_N1041	X	0.073
36	R3D_N1041	MZ	-0.036
37	R3D_N1025	X	0.065
38	R3D_N1025	MZ	-0.032
39	R3D_N1024	X	0.073
40	R3D_N1024	MZ	-0.036
41	R3D_N1023	X	0.065
42	R3D_N1023	MZ	-0.032
43	R3D_N1022	X	0.073
44	R3D_N1022	MZ	-0.036
45	R3D_N857	X	0.073
46	R3D_N857	MZ	-0.036
47	R3D_N855	X	0.073
48	R3D_N855	MZ	-0.036
49	R3D_N854	X	0.065
50	R3D_N854	MZ	-0.032
51	R3D_N757	X	0.554
52	R3D_N757	MZ	-3.891
53	R3D_N748	X	0.554
54	R3D_N748	MZ	-3.891
55	R3D_N739	X	0.582
56	R3D_N739	MZ	-4.115
57	R3D_N718	X	0.672
58	R3D_N718	Y	-1.652
59	R3D_N717	X	0.672
60	R3D_N717	Y	-1.652
61	R3D_N716	X	0.672
62	R3D_N716	Y	1.652
63	R3D_N715	X	0.582
64	R3D_N715	MZ	-4.115
65	R3D_N714	X	0.672
66	R3D_N714	Y	1.652
67	R3D_N701	X	0.475
68	R3D_N701	Y	-0.853
69	R3D_N701	Z	-0.037
70	R3D_N700	X	0.475
71	R3D_N700	Y	-0.853
72	R3D_N700	Z	0.037
73	R3D_N699	X	0.475
74	R3D_N699	Y	0.853
75	R3D_N699	Z	0.037
76	R3D_N698	X	0.475
77	R3D_N698	Y	0.853

Point Loads and Moments (Cat 19 : WLX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
78	R3D_N698	Z	-0.037
79	R3D_N639	X	0.621
80	R3D_N639	MX	0.000119
81	R3D_N639	MZ	-3.848
82	R3D_N638	X	0.621
83	R3D_N638	MX	-0.000119
84	R3D_N638	MZ	-3.848
85	R3D_N637	X	0.685
86	R3D_N637	Y	0.537
87	R3D_N636	X	0.685
88	R3D_N636	Y	0.537
89	R3D_N633	X	0.993
90	R3D_N633	Y	-0.236
91	R3D_N633	MX	0.000185
92	R3D_N633	MZ	-1.825
93	R3D_N632	X	0.993
94	R3D_N632	Y	-0.236
95	R3D_N632	MX	-0.000185
96	R3D_N632	MZ	-1.825
97	R3D_N631	X	0.206
98	R3D_N631	Y	-0.301
99	R3D_N630	X	0.206
100	R3D_N630	Y	-0.301
101	R3D_F8	X	4.715
102	R3D_F8	Y	5.578
103	R3D_F8	Z	2.08
104	R3D_F7	X	2.685
105	R3D_F7	Y	-5.578
106	R3D_F7	Z	-2.08
107	R3D_F6	X	4.867
108	R3D_F6	Y	5.744
109	R3D_F6	Z	-2.182
110	R3D_F5	X	2.758
111	R3D_F5	Y	-5.744
112	R3D_F5	Z	2.182
113	R3D_F4	X	4.532
114	R3D_F4	Y	5.382
115	R3D_F4	Z	2.158
116	R3D_F3	X	2.548
117	R3D_F3	Y	-5.382
118	R3D_F3	Z	-2.158
119	R3D_F2	X	4.731
120	R3D_F2	Y	5.599
121	R3D_F2	Z	-2.221
122	R3D_F1	X	2.65
123	R3D_F1	Y	-5.599
124	R3D_F1	Z	2.221

Point Loads and Moments (Cat 21 : WLZ)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_S8	X	0.005
2	R3D_S8	Y	-0.059
3	R3D_S7	X	0.005
4	R3D_S7	Y	-0.085
5	R3D_S6	X	-0.005
6	R3D_S6	Y	0.059

Point Loads and Moments (Cat 21 : WLZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
7	R3D_S5	X	-0.005
8	R3D_S5	Y	0.085
9	R3D_S4	X	0.004
10	R3D_S4	Y	-0.06
11	R3D_S3	X	0.004
12	R3D_S3	Y	-0.081
13	R3D_S2	X	-0.005
14	R3D_S2	Y	0.06
15	R3D_S1	X	-0.004
16	R3D_S1	Y	0.084
17	R3D_N1157	Z	0.064
18	R3D_N1157	MX	0.032
19	R3D_N1155	Z	0.064
20	R3D_N1155	MX	0.032
21	R3D_N1154	Z	0.064
22	R3D_N1154	MX	0.032
23	R3D_N1153	Z	0.187
24	R3D_N1153	MX	0.093
25	R3D_N1152	Z	0.187
26	R3D_N1152	MX	0.093
27	R3D_N1147	Z	0.187
28	R3D_N1147	MX	0.093
29	R3D_N1145	Z	0.064
30	R3D_N1145	MX	0.032
31	R3D_N1054	Z	0.072
32	R3D_N1054	MX	0.036
33	R3D_N1044	Z	0.064
34	R3D_N1044	MX	0.032
35	R3D_N1041	Z	0.072
36	R3D_N1041	MX	0.036
37	R3D_N1025	Z	0.064
38	R3D_N1025	MX	0.032
39	R3D_N1024	Z	0.072
40	R3D_N1024	MX	0.036
41	R3D_N1023	Z	0.064
42	R3D_N1023	MX	0.032
43	R3D_N1022	Z	0.072
44	R3D_N1022	MX	0.036
45	R3D_N857	Z	0.072
46	R3D_N857	MX	0.036
47	R3D_N855	Z	0.072
48	R3D_N855	MX	0.036
49	R3D_N854	Z	0.064
50	R3D_N854	MX	0.032
51	R3D_N757	Y	0.217
52	R3D_N757	Z	0.253
53	R3D_N757	MX	0.619
54	R3D_N757	MY	0.048
55	R3D_N757	MZ	-0.000616
56	R3D_N748	Y	-0.217
57	R3D_N748	Z	0.253
58	R3D_N748	MX	0.619
59	R3D_N748	MY	0.048
60	R3D_N748	MZ	0.000616
61	R3D_N739	Y	0.16
62	R3D_N739	Z	0.253
63	R3D_N739	MX	0.619

Point Loads and Moments (Cat 21 : WLZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
64	R3D_N739	MY	0.048
65	R3D_N739	MZ	-0.000431
66	R3D_N718	X	-0.021
67	R3D_N718	Y	0.357
68	R3D_N718	Z	0.236
69	R3D_N717	X	0.021
70	R3D_N717	Y	-0.357
71	R3D_N717	Z	0.236
72	R3D_N716	X	0.021
73	R3D_N716	Y	0.357
74	R3D_N716	Z	0.236
75	R3D_N715	Y	-0.16
76	R3D_N715	Z	0.253
77	R3D_N715	MX	0.619
78	R3D_N715	MY	0.048
79	R3D_N715	MZ	0.000431
80	R3D_N714	X	-0.021
81	R3D_N714	Y	-0.357
82	R3D_N714	Z	0.236
83	R3D_N701	Y	0.361
84	R3D_N701	Z	0.255
85	R3D_N700	Y	-0.361
86	R3D_N700	Z	0.255
87	R3D_N699	Y	0.361
88	R3D_N699	Z	0.255
89	R3D_N698	Y	-0.361
90	R3D_N698	Z	0.255
91	R3D_N639	Z	0.477
92	R3D_N639	MX	2.34
93	R3D_N639	MY	0.048
94	R3D_N638	Z	0.477
95	R3D_N638	MX	2.34
96	R3D_N638	MY	0.048
97	R3D_N637	X	0.007
98	R3D_N637	Y	1.99
99	R3D_N637	Z	1.234
100	R3D_N636	X	-0.007
101	R3D_N636	Y	-1.99
102	R3D_N636	Z	1.234
103	R3D_N633	X	-0.006
104	R3D_N633	Y	0.944
105	R3D_N633	Z	1.271
106	R3D_N633	MX	3.455
107	R3D_N633	MY	-0.002
108	R3D_N633	MZ	0.004
109	R3D_N632	X	0.006
110	R3D_N632	Y	-0.944
111	R3D_N632	Z	1.271
112	R3D_N632	MX	3.455
113	R3D_N632	MY	-0.002
114	R3D_N632	MZ	-0.004
115	R3D_N631	Y	0.421
116	R3D_N631	Z	0.239
117	R3D_N630	Y	-0.421
118	R3D_N630	Z	0.239
119	R3D_F8	X	-0.005
120	R3D_F8	Y	0.059

Point Loads and Moments (Cat 21 : WLZ) (Continued)

	Label	Direction	Magnitude[k,k-ft]
121	R3D_F8	Z	1.16
122	R3D_F7	X	-0.005
123	R3D_F7	Y	0.085
124	R3D_F7	Z	1.114
125	R3D_F6	X	0.005
126	R3D_F6	Y	-0.059
127	R3D_F6	Z	1.159
128	R3D_F5	X	0.005
129	R3D_F5	Y	-0.085
130	R3D_F5	Z	1.116
131	R3D_F4	X	-0.004
132	R3D_F4	Y	0.06
133	R3D_F4	Z	1.139
134	R3D_F3	X	-0.004
135	R3D_F3	Y	0.081
136	R3D_F3	Z	1.094
137	R3D_F2	X	0.005
138	R3D_F2	Y	-0.06
139	R3D_F2	Z	1.164
140	R3D_F1	X	0.005
141	R3D_F1	Y	-0.084
142	R3D_F1	Z	1.111

Point Loads and Moments (Cat 67 : OL1)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_S8	X	-0.204
2	R3D_S8	Y	15.725
3	R3D_S7	X	0.165
4	R3D_S7	Y	12.279
5	R3D_S6	X	-0.248
6	R3D_S6	Y	16.087
7	R3D_S5	X	0.148
8	R3D_S5	Y	12.459
9	R3D_S4	X	-0.259
10	R3D_S4	Y	16.267
11	R3D_S3	X	0.2
12	R3D_S3	Y	12.182
13	R3D_S2	X	-0.287
14	R3D_S2	Y	16.503
15	R3D_S1	X	0.184
16	R3D_S1	Y	12.396
17	R3D_N757	Y	2.196
18	R3D_N757	MX	0.002
19	R3D_N757	MZ	1.146
20	R3D_N748	Y	2.196
21	R3D_N748	MX	-0.002
22	R3D_N748	MZ	1.146
23	R3D_N739	Y	2.352
24	R3D_N739	MX	0.002
25	R3D_N739	MZ	1.205
26	R3D_N718	X	-0.099
27	R3D_N718	Y	2.251
28	R3D_N718	Z	0.045
29	R3D_N717	X	-0.099
30	R3D_N717	Y	2.251
31	R3D_N717	Z	-0.045

Point Loads and Moments (Cat 67 : OL1) (Continued)

	Label	Direction	Magnitude[k,k-ft]
32	R3D_N716	X	0.099
33	R3D_N716	Y	2.251
34	R3D_N716	Z	0.045
35	R3D_N715	Y	2.352
36	R3D_N715	MX	-0.002
37	R3D_N715	MZ	1.205
38	R3D_N714	X	0.099
39	R3D_N714	Y	2.251
40	R3D_N714	Z	-0.045
41	R3D_N701	X	-0.083
42	R3D_N701	Y	2.155
43	R3D_N701	Z	0.068
44	R3D_N700	X	-0.083
45	R3D_N700	Y	2.155
46	R3D_N700	Z	-0.068
47	R3D_N699	X	0.083
48	R3D_N699	Y	2.155
49	R3D_N699	Z	0.068
50	R3D_N698	X	0.083
51	R3D_N698	Y	2.155
52	R3D_N698	Z	-0.068
53	R3D_N639	Y	1.945
54	R3D_N639	MX	0.001
55	R3D_N639	MZ	0.937
56	R3D_N638	Y	1.945
57	R3D_N638	MX	-0.001
58	R3D_N638	MZ	0.937
59	R3D_N637	X	0.294
60	R3D_N637	Y	1.897
61	R3D_N637	Z	-0.152
62	R3D_N636	X	0.294
63	R3D_N636	Y	1.897
64	R3D_N636	Z	0.152
65	R3D_N633	X	-0.126
66	R3D_N633	Y	3.605
67	R3D_N633	MX	0.002
68	R3D_N633	MZ	-0.108
69	R3D_N632	X	-0.126
70	R3D_N632	Y	3.605
71	R3D_N632	MX	-0.002
72	R3D_N632	MZ	-0.108
73	R3D_N631	X	-0.168
74	R3D_N631	Y	1.721
75	R3D_N630	X	-0.168
76	R3D_N630	Y	1.721
77	R3D_F8	X	-0.161
78	R3D_F8	Y	16.298
79	R3D_F8	Z	0.445
80	R3D_F7	X	0.2
81	R3D_F7	Y	12.297
82	R3D_F7	Z	-0.445
83	R3D_F6	X	-0.199
84	R3D_F6	Y	17.168
85	R3D_F6	Z	-1.134
86	R3D_F5	X	0.299
87	R3D_F5	Y	11.894
88	R3D_F5	Z	1.134

Point Loads and Moments (Cat 67 : OL1) (Continued)

	Label	Direction	Magnitude[k,k-ft]
89	R3D_F4	X	-0.072
90	R3D_F4	Y	15.352
91	R3D_F4	Z	0.681
92	R3D_F3	X	0.132
93	R3D_F3	Y	12.459
94	R3D_F3	Z	-0.681
95	R3D_F2	X	-0.146
96	R3D_F2	Y	16.555
97	R3D_F2	Z	-1.173
98	R3D_F1	X	0.249
99	R3D_F1	Y	11.993
100	R3D_F1	Z	1.173

Line Loads and Moments (Cat 16 : ELX)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N109	N108	X	0.1	0.1
2	N100	N101	X	0.399	0.399
3	N115	N117	X	0.199	0.199
4	N119	N118	X	0.199	0.199
5	N218	N201	X	0.199	0.199
6	N217	N198	X	0.199	0.199
7	N143	N144	X	0.199	0.199
8	N173	N172	X	0.199	0.199
9	N153	N124	X	0.349	0.349
10	N154	N125	X	0.349	0.349
11	N168	N163	X	0.349	0.349
12	N169	N164	X	0.349	0.349
13	N179	N178	X	0.349	0.349
14	N181	N180	X	0.349	0.349
15	N207	N210	X	0.199	0.199
16	N211	N212	X	0.199	0.199
17	N124	N233	X	0.349	0.349
18	N125	N234	X	0.349	0.349
19	N139	N140	X	0.199	0.199
20	N129	N131	X	0.199	0.199
21	N280	N281	X	0.199	0.199

Line Loads and Moments (Cat 18 : ELZ)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
1	N109	N108	Z	0.1	0.1
2	N100	N101	Z	0.399	0.399
3	N218	N201	Z	0.199	0.199
4	N217	N198	Z	0.199	0.199
5	N143	N144	Z	0.199	0.199
6	N173	N172	Z	0.199	0.199
7	N115	N117	Z	0.199	0.199
8	N119	N118	Z	0.199	0.199
9	N153	N151	Z	0.349	0.349
10	N154	N152	Z	0.349	0.349
11	N168	N163	Z	0.349	0.349
12	N169	N164	Z	0.349	0.349
13	N179	N178	Z	0.349	0.349
14	N181	N180	Z	0.349	0.349
15	N207	N210	Z	0.199	0.199
16	N211	N212	Z	0.199	0.199
17	N139	N140	Z	0.199	0.199

Line Loads and Moments (Cat 18 : ELZ) (Continued)

	Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
18	N129	N131	Z	0.199	0.199
19	N151	N233	Z	0.349	0.349
20	N152	N234	Z	0.349	0.349
21	N280	N281	Z	0.199	0.199

Area Loads (Cat 2 : LL)

	Label	Base Mag[ksf]	Peak Mag[ksf]
1	AL1	0.1	0.1
2	AL2	0.1	0.1
3	AL3	0.1	0.1
4	AL4	0.1	0.1
5	AL5	0.1	0.1

Slabs

	Label	Thickness ...	Material	Local Axis ...	Analysis Offset [in]	Passive Pr...	Soil Overb...	Icr Factor
1	S6	30	Conc 6000NW	0	0	0	0	0.25
2	S7	30	Conc 6000NW	0	0	0	0	0.25
3	S9	30	Conc 6000NW	0	0	0	0	0.25
4	S11	24	Conc4000NW	0	0	0	0	0.25
5	S12	30	Conc 6000NW	0	0	0	0	0.25
6	S10	30	Conc 6000NW	0	0	0	0	0.25
7	S8	24	Conc4000NW	0	0	0	0	0.25

Load Combinations

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
1	ASCE Strengt...	Yes				DL	1.4															FL	1.4		
2	ASCE Strengt...	Yes				DL	1.2	LL	1.6	LLS	1.6	HL	1.6	RLL	0.5							FL	1.2		
3	ASCE Strengt...	Yes				DL	1.2	LL	1.6	LLS	1.6	HL	1.6	SL	0.5	SLN	0.5					FL	1.2		
4	ASCE Strengt...	Yes				DL	1.2	LL	1.6	LLS	1.6	HL	1.6	RL	0.5							FL	1.2		
5	ASCE Strengt...	Yes				DL	1.2	RLL	1.6	HL	1.6	LL	0.5	LLS	1							FL	1.2		
6	ASCE Strengt...	Yes				DL	1.2	RLL	1.6	HL	1.6	WLX	0.5									FL	1.2		
7	ASCE Strengt...	Yes				DL	1.2	RLL	1.6	HL	1.6	WLZ	0.5									FL	1.2		
8	ASCE Strengt...	Yes				DL	1.2	RLL	1.6	HL	1.6	WLX	-0.5									FL	1.2		
9	ASCE Strengt...	Yes				DL	1.2	RLL	1.6	HL	1.6	WLZ	-0.5									FL	1.2		
10	ASCE Strengt...	Yes				DL	1.2	SL	1.6	SLN	1.6	HL	1.6	LL	0.5	LLS	1					FL	1.2		
11	ASCE Strengt...	Yes				DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLX	0.5							FL	1.2		
12	ASCE Strengt...	Yes				DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLZ	0.5							FL	1.2		
13	ASCE Strengt...	Yes				DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLX	-0.5							FL	1.2		
14	ASCE Strengt...	Yes				DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLZ	-0.5							FL	1.2		
15	ASCE Strengt...	Yes				DL	1.2	RL	1.6	HL	1.6	LL	0.5	LLS	1							FL	1.2		
16	ASCE Strengt...	Yes				DL	1.2	RL	1.6	HL	1.6	WLX	0.5									FL	1.2		
17	ASCE Strengt...	Yes				DL	1.2	RL	1.6	HL	1.6	WLZ	0.5									FL	1.2		
18	ASCE Strengt...	Yes				DL	1.2	RL	1.6	HL	1.6	WLX	-0.5									FL	1.2		
19	ASCE Strengt...	Yes				DL	1.2	RL	1.6	HL	1.6	WLZ	-0.5									FL	1.2		
20	ASCE Strengt...	Yes				DL	1.2	WLX	1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
21	ASCE Strengt...	Yes				DL	1.2	WLZ	1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
22	ASCE Strengt...	Yes				DL	1.2	WLX	-1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
23	ASCE Strengt...	Yes				DL	1.2	WLZ	-1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
24	ASCE Strengt...	Yes				DL	1.2	WLX	1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
25	ASCE Strengt...	Yes				DL	1.2	WLZ	1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
26	ASCE Strengt...	Yes				DL	1.2	WLX	-1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
27	ASCE Strengt...	Yes				DL	1.2	WLZ	-1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
28	ASCE Strengt...	Yes				DL	1.2	WLX	1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
29	ASCE Strengt...	Yes				DL	1.2	WLZ	1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
30	ASCE Strengt...	Yes				DL	1.2	WLX	-1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
31	ASCE Strengt...	Yes				DL	1.2	WLZ	-1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
32	ASCE Strengt...	Yes				DL	0.9	WLX	1	HL	1.6														
33	ASCE Strengt...	Yes				DL	0.9	WLZ	1	HL	1.6														
34	ASCE Strengt...	Yes				DL	0.9	WLX	-1	HL	1.6														
35	ASCE Strengt...	Yes				DL	0.9	WLZ	-1	HL	1.6														
36	ASCE Strengt...	Yes				DL	0.9	WLX	1	HL	0.9														
37	ASCE Strengt...	Yes				DL	0.9	WLZ	1	HL	0.9														
38	ASCE Strengt...	Yes				DL	0.9	WLX	-1	HL	0.9														
39	ASCE Strengt...	Yes				DL	0.9	WLZ	-1	HL	0.9														
40	ASCE Strengt...	Yes				DL	1.2	Sds*...	0.2	Rh...	1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
41	ASCE Strengt...	Yes				DL	1.2	Sds*...	0.2	Rh...	1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
42	ASCE Strengt...	Yes				DL	1.2	Sds*...	0.2	Rh...	-1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
43	ASCE Strengt...	Yes				DL	1.2	Sds*...	0.2	Rh...	-1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
44	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	1	HL	1.6									FL	0.9	FL	-0....
45	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	1	HL	1.6									FL	0.9	FL	-0....
46	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	-1	HL	1.6									FL	0.9	FL	-0....
47	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	-1	HL	1.6									FL	0.9	FL	-0....
48	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	1	HL	0.9									FL	0.9	FL	-0....
49	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	1	HL	0.9									FL	0.9	FL	-0....
50	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	-1	HL	0.9									FL	0.9	FL	-0....
51	ASCE Strengt...	Yes				DL	0.9	Sds*...	-0.2	Rh...	-1	HL	0.9									FL	0.9	FL	-0....
52	ASCE 1	Yes	Yes		1.5	DL	1											FL	1						
53	ASCE 2	Yes	Yes		1.5	DL	1	HL	1	LL	1	LLS	1					FL	1						
54	ASCE 3 (a)	Yes	Yes		1.5	DL	1	HL	1	RLL	1							FL	1						
55	ASCE 3 (b)	Yes	Yes		1.5	DL	1	HL	1	SL	1							FL	1						
56	ASCE 3 (c)	Yes	Yes		1.5	DL	1	HL	1	RL	1							FL	1						
57	ASCE 4 (a)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RLL	0.75			FL	1						
58	ASCE 4 (b)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75	FL	1						
59	ASCE 4 (c)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RL	0.75			FL	1						
60	ASCE 5 (a) (a)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	0.6														
61	ASCE 5 (a) (b)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	0.6														
62	ASCE 5 (a) (c)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	-0.6														
63	ASCE 5 (a) (d)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	-0.6														
64	ASCE 6 (a) (a)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
65	ASCE 6 (a) (b)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
66	ASCE 6 (a) (c)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
67	ASCE 6 (a) (d)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
68	ASCE 6 (b) (a)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1						
69	ASCE 6 (b) (b)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1						
70	ASCE 6 (b) (c)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1						
71	ASCE 6 (b) (d)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1						
72	ASCE 6 (c) (a)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1						
73	ASCE 6 (c) (b)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1						
74	ASCE 6 (c) (c)	Yes	Yes	1...	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1						
75	ASCE 6 (c) (d)	Yes	Yes	1...	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1						
76	ASCE 7 (a) (a)	Yes	Yes	1...		DL	0.6	HL	1	WLX	0.6														
77	ASCE 7 (a) (b)	Yes	Yes	1...		DL	0.6	HL	1	WLZ	0.6														
78	ASCE 7 (a) (c)	Yes	Yes	1...		DL	0.6	HL	1	WLX	-0.6														
79	ASCE 7 (a) (d)	Yes	Yes	1...		DL	0.6	HL	1	WLZ	-0.6														
80	ASCE 7 (b) (a)	Yes	Yes	1...		DL	0.6	HL	0.6	WLX	0.6														
81	ASCE 7 (b) (b)	Yes	Yes	1...		DL	0.6	HL	0.6	WLZ	0.6														
82	ASCE 7 (b) (c)	Yes	Yes	1...		DL	0.6	HL	0.6	WLX	-0.6														
83	ASCE 7 (b) (d)	Yes	Yes	1...		DL	0.6	HL	0.6	WLZ	-0.6														
84	ASCE 8 (a)	Yes	Yes	1...	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...				
85	ASCE 8 (b)	Yes	Yes	1...	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...				
86	ASCE 8 (c)	Yes	Yes	1...	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...				
87	ASCE 8 (d)	Yes	Yes	1...	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...				

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
88	ASCE 9 (a)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
89	ASCE 9 (b)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
90	ASCE 9 (c)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
91	ASCE 9 (d)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
92	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....				
93	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....				
94	ASCE 10 (a) (c)	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....				
95	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....				
96	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....				
97	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....				
98	ASCE 10 (b) (c)	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....				
99	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....				
100																									
101	DL + 0.7Di	Yes	Yes	1....		DL	1	OL1	0.7																
102	DL + LL + 0.7Di	Yes	Yes	1....		DL	1	LL	1	OL1	0.7														
103	DL +0.7Di + 0...	Yes	Yes	1....		DL	1	OL1	0.7	WLX	0.0...	SL	1												
104	DL +0.7Di + 0...	Yes	Yes	1....		DL	1	OL1	0.7	WLZ	0.0...	SL	1												
105	DL +0.7Di - 0....	Yes	Yes	1....		DL	1	OL1	0.7	WLX	-0....	SL	1												
106	DL +0.7Di - 0....	Yes	Yes	1....		DL	1	OL1	0.7	WLZ	-0....	SL	1												
107	0.6D + 0.7Di ...	Yes	Yes	1....		DL	0.6	OL1	0.7	WLX	0.0...														
108	0.6D + 0.7Di ...	Yes	Yes	1....		DL	0.6	OL1	0.7	WLZ	0.0...														
109	0.6D + 0.7Di -...	Yes	Yes	1....		DL	0.6	OL1	0.7	WLX	-0....														
110	0.6D + 0.7Di -...	Yes	Yes	1....		DL	0.6	OL1	0.7	WLZ	-0....														
111	ASCE 1	Yes	Yes		1.5	DL	1											FL	1			TL	1		
112	ASCE 2	Yes	Yes		1.5	DL	1	HL	1	LL	1	LLS	1					FL	1			TL	1		
113	ASCE 3 (a)	Yes	Yes		1.5	DL	1	HL	1	RLL	1							FL	1			TL	1		
114	ASCE 3 (b)	Yes	Yes		1.5	DL	1	HL	1	SL	1							FL	1			TL	1		
115	ASCE 3 (c)	Yes	Yes		1.5	DL	1	HL	1	RL	1							FL	1			TL	1		
116	ASCE 4 (a)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RLL	0.75			FL	1			TL	1		
117	ASCE 4 (b)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75	FL	1			TL	1		
118	ASCE 4 (c)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RL	0.75			FL	1			TL	1		
119	ASCE 5 (a) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.6											TL	1		
120	ASCE 5 (a) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.6											TL	1		
121	ASCE 5 (a) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0.6											TL	1		
122	ASCE 5 (a) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0.6											TL	1		
123	ASCE 6 (a) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	1		
124	ASCE 6 (a) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	1		
125	ASCE 6 (a) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	1		
126	ASCE 6 (a) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	1		
127	ASCE 6 (b) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	1		
128	ASCE 6 (b) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	1		
129	ASCE 6 (b) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	1		
130	ASCE 6 (b) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	1		
131	ASCE 6 (c) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	1		
132	ASCE 6 (c) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	1		
133	ASCE 6 (c) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	1		
134	ASCE 6 (c) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	1		
135	ASCE 7 (a) (a)	Yes	Yes	1....		DL	0.6	HL	1	WLX	0.6											TL	0.6		
136	ASCE 7 (a) (b)	Yes	Yes	1....		DL	0.6	HL	1	WLZ	0.6											TL	0.6		
137	ASCE 7 (a) (c)	Yes	Yes	1....		DL	0.6	HL	1	WLX	-0.6											TL	0.6		
138	ASCE 7 (a) (d)	Yes	Yes	1....		DL	0.6	HL	1	WLZ	-0.6											TL	0.6		
139	ASCE 7 (b) (a)	Yes	Yes	1....		DL	0.6	HL	0.6	WLX	0.6											TL	0.6		
140	ASCE 7 (b) (b)	Yes	Yes	1....		DL	0.6	HL	0.6	WLZ	0.6											TL	0.6		
141	ASCE 7 (b) (c)	Yes	Yes	1....		DL	0.6	HL	0.6	WLX	-0.6											TL	0.6		
142	ASCE 7 (b) (d)	Yes	Yes	1....		DL	0.6	HL	0.6	WLZ	-0.6											TL	0.6		
143	ASCE 8 (a)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...	TL	1		
144	ASCE 8 (b)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...	TL	1		

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
145	ASCE 8 (c)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...	TL	1		
146	ASCE 8 (d)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...	TL	1		
147	ASCE 9 (a)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	1		
148	ASCE 9 (b)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	1		
149	ASCE 9 (c)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	1		
150	ASCE 9 (d)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	1		
151	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....	TL	0.6		
152	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....	TL	0.6		
153	ASCE 10 (a) (c)	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....	TL	0.6		
154	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....	TL	0.6		
155	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....	TL	0.6		
156	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....	TL	0.6		
157	ASCE 10 (b) (c)	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....	TL	0.6		
158	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....	TL	0.6		
159																									
160	ASCE 1	Yes	Yes		1.5	DL	1											FL	1			TL	-1		
161	ASCE 2	Yes	Yes		1.5	DL	1	HL	1	LL	1	LLS	1					FL	1			TL	-1		
162	ASCE 3 (a)	Yes	Yes		1.5	DL	1	HL	1	RLL	1							FL	1			TL	-1		
163	ASCE 3 (b)	Yes	Yes		1.5	DL	1	HL	1	SL	1							FL	1			TL	-1		
164	ASCE 3 (c)	Yes	Yes		1.5	DL	1	HL	1	RL	1							FL	1			TL	-1		
165	ASCE 4 (a)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RLL	0.75			FL	1			TL	-1		
166	ASCE 4 (b)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75	FL	1			TL	-1		
167	ASCE 4 (c)	Yes	Yes		1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RL	0.75			FL	1			TL	-1		
168	ASCE 5 (a) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.6											TL	-1		
169	ASCE 5 (a) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.6											TL	-1		
170	ASCE 5 (a) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0.6											TL	-1		
171	ASCE 5 (a) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0.6											TL	-1		
172	ASCE 6 (a) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	-1		
173	ASCE 6 (a) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	-1		
174	ASCE 6 (a) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	-1		
175	ASCE 6 (a) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1			TL	-1		
176	ASCE 6 (b) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	-1		
177	ASCE 6 (b) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	-1		
178	ASCE 6 (b) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	-1		
179	ASCE 6 (b) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1			TL	-1		
180	ASCE 6 (c) (a)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	-1		
181	ASCE 6 (c) (b)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	-1		
182	ASCE 6 (c) (c)	Yes	Yes	1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	-1		
183	ASCE 6 (c) (d)	Yes	Yes	1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1			TL	-1		
184	ASCE 7 (a) (a)	Yes	Yes	1....		DL	0.6	HL	1	WLX	0.6											TL	-0.6		
185	ASCE 7 (a) (b)	Yes	Yes	1....		DL	0.6	HL	1	WLZ	0.6											TL	-0.6		
186	ASCE 7 (a) (c)	Yes	Yes	1....		DL	0.6	HL	1	WLX	-0.6											TL	-0.6		
187	ASCE 7 (a) (d)	Yes	Yes	1....		DL	0.6	HL	1	WLZ	-0.6											TL	-0.6		
188	ASCE 7 (b) (a)	Yes	Yes	1....		DL	0.6	HL	0.6	WLX	0.6											TL	-0.6		
189	ASCE 7 (b) (b)	Yes	Yes	1....		DL	0.6	HL	0.6	WLZ	0.6											TL	-0.6		
190	ASCE 7 (b) (c)	Yes	Yes	1....		DL	0.6	HL	0.6	WLX	-0.6											TL	-0.6		
191	ASCE 7 (b) (d)	Yes	Yes	1....		DL	0.6	HL	0.6	WLZ	-0.6											TL	-0.6		
192	ASCE 8 (a)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...	TL	-1		
193	ASCE 8 (b)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...	TL	-1		
194	ASCE 8 (c)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...	TL	-1		
195	ASCE 8 (d)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...	TL	-1		
196	ASCE 9 (a)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	-1		
197	ASCE 9 (b)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	-1		
198	ASCE 9 (c)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	-1		
199	ASCE 9 (d)	Yes	Yes	1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...	TL	-1		
200	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....	TL	-0.6		
201	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....	TL	-0.6		

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
202	ASCE 10 (a) (c)	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....	TL	-0.6		
203	ASCE 10 (a) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....	TL	-0.6		
204	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....	TL	-0.6		
205	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....	TL	-0.6		
206	ASCE 10 (b) (c)	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....	TL	-0.6		
207	ASCE 10 (b) (...	Yes	Yes	1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....	TL	-0.6		

Design Cuts

Label	Design Rule
No Data to Print ...	

Design Strips

	Label	Rebar Angle from Pl...	No. of Design Cuts	Design Rule
1	DS3	0	50	#7 Pile Cap
2	DS4	90	50	#7 Pile Cap
3	DS5	90	50	#7 Pile Cap
4	DS6	0	50	#7 Pile Cap
5	DS7	0	50	#7 Pile Cap
6	DS8	90	50	#7 Pile Cap
7	DS9	0	50	#7 Pile Cap
8	DS10	90	50	#7 Pile Cap
9	DS11	0	50	#7 Pile Cap
10	DS12	0	50	#7 Pile Cap
11	DS13	90	50	#7 Pile Cap
12	DS14	90	50	#7 Pile Cap
13	DS15	90	50	#7 Pile Cap
14	DS16	0	50	#7 Pile Cap
15	DS19	90	50	#7 Pile Cap
16	DS21	90	50	#7 Pile Cap
17	DS22	0	50	#7 Pile Cap
18	DS23	0	50	#7 Pile Cap
19	DS24	0	50	#7 Pile Cap
20	DS25	90	50	#7 Pile Cap
21	DS26	0	50	#7 Pile Cap
22	DS27	90	50	#9 Pile Cap
23	DS29	90	50	#9 Pile Cap
24	DS30	0	50	#9 Pile Cap
25	DS28	90	50	#9 Pile Cap

Pedestals/Posts

	Label	Type	Shape	Material	Design Rules	Angle(deg)	Height[in]	Pedestal Layout	Shear Layout
1	R3D_S8	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
2	R3D_S7	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
3	R3D_F8	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
4	R3D_F7	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
5	R3D_F6	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
6	R3D_F5	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
7	R3D_S6	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
8	R3D_S5	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
9	R3D_N857	Pedestal	CRECT27X27	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
10	R3D_N630	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
11	R3D_N631	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
12	R3D_N633	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
13	R3D_N632	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
14	R3D_N639	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule

Pedestals/Posts (Continued)

	Label	Type	Shape	Material	Design Rules	Angle(deg)	Height[in]	Pedestal Layout	Shear Layout
15	R3D_S4	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
16	R3D_S3	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
17	R3D_N638	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
18	R3D_N715	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
19	R3D_N739	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
20	R3D_F2	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
21	R3D_F4	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
22	R3D_F3	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
23	R3D_F1	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
24	R3D_S2	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
25	R3D_S1	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
26	R3D_N698	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
27	R3D_N700	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
28	R3D_N699	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
29	R3D_N701	Pedestal	CRECT12X12	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
30	R3D_N1041	Pedestal	CRECT27X27	Conc4000NW	Typical	0	15	Use Design Rule	Use Design Rule
31	R3D_N1157	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
32	R3D_N748	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
33	R3D_N757	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
34	R3D_N1153	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
35	R3D_N1154	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
36	R3D_N1147	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
37	R3D_N1145	Pedestal	CRECT12X12	Conc 6000N...	Typical	0	15	Use Design Rule	Use Design Rule
38	R3D_N636	Pedestal	CRECT12X12	Conc4000NW	Typical	0	12	Use Design Rule	Use Design Rule
39	R3D_N637	Pedestal	CRECT12X12	Conc4000NW	Typical	0	12	Use Design Rule	Use Design Rule
40	R3D_N1023	Pedestal	CRECT12X12	Conc4000NW	Typical	0	12	Use Design Rule	Use Design Rule
41	R3D_N1025	Pedestal	CRECT12X12	Conc4000NW	Typical	0	12	Use Design Rule	Use Design Rule

Stem Walls

Label	Start Point	End Point	Width[in]	Height[in]	Material Density[k/ft^3]
No Data to Print ...					

Load Categories

	Category	Point Loads	Line Loads	Area Loads
1	DL	123		
2	LL			5
3	TL	68		
4	FL	102		
5	ELX	139	21	
6	ELZ	155	21	
7	WLX	124		
8	WLZ	142		
9	OL1	100		

Design Cut Results

Label	UC Top	LC	UC Bot	LC	Shear UC	LC	Phi*Mnz ...	Phi*Mnz ...	Phi*Vny[k]	Top Flex ...	Bot/Mid F...
No Data to Print ...											

Strip Reinforcing

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
1	DS3	0.108	2	#7@10in	DS3-X9	0.457	2	#7@10in	DS3-X33	0.388	41	DS3-X9
2	DS4	0.002	46	#7@10in	DS4-X26	0.032	40	#7@10in	DS4-X2	0.077	40	DS4-X15
3	DS5	0.032	42	#7@10in	DS5-X26	0.033	40	#7@10in	DS5-X49	0.152	42	DS5-X26
4	DS6	0.117	47	#7@10in	DS6-X18	0.225	41	#7@10in	DS6-X18	0.318	43	DS6-X44
5	DS7	0.016	43	#7@10in	DS7-X14	0.009	46	#7@10in	DS7-X25	0.074	42	DS7-X25

Strip Reinforcing (Continued)

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
6	DS8	0	N/A		NA	0.183	40	#7@10in	DS8-X26	0.192	42	DS8-X9
7	DS28	0	N/A		NA	0.648	2	#9@18in	DS28-X24	0.39	2	DS28-X1

Pedestals/Posts Design Values

	Label	UC	Gov LC	Shear UC	Gov LC	Dir	Phi Used	Vertical Reinf	Shear Reinf
1	R3D_S8	0.264	42	0.187	42	x	0.9	4#6	#4@12 in
2	R3D_S7	0.117	40	0.082	40	x	0.9	4#6	#4@12 in
3	R3D_N1157	0.988	43	0.248	41	z	0.9	4#6	#4@4 in
4	R3D_N748	0.13	22	0.024	41	z	0.9	4#6	#4@12 in
5	R3D_N757	0.13	22	0.024	41	z	0.9	4#6	#4@12 in
6	R3D_N1153	0.081	42	0.051	41	z	0.9	4#6	#4@12 in
7	R3D_N1154	0.684	43	0.144	41	z	0.9	4#6	#4@12 in

Pedestals/Posts Punching Shear Values

	Label	UC	Gov LC	Location	Vuy[k]	Muz[k-ft]	Mux[k-ft]	Total Stress[...	Phi*Vny[ksi]
1	R3D_S8	0.053	40	INTERIOR	20.91	-19.202	0	0.01	0.185
2	R3D_S7	0.042	42	INTERIOR	19.405	8.42	0	0.008	0.185
3	R3D_N1157	0.107	41	EDGE	16.697	0	51.734	0.02	0.185
4	R3D_N748	0.014	43	INTERIOR	5.658	0.543	-3.723	0.003	0.185
5	R3D_N757	0.014	41	INTERIOR	5.658	0.543	3.723	0.003	0.185
6	R3D_N1153	0.03	43	EDGE	7.304	0.539	-5.839	0.006	0.185
7	R3D_N1154	0.083	43	EDGE	26.753	0	-42.643	0.014	0.172

Pedestals/Posts Punching Shear Geometries

	Label	Shape	Location	Effective De...	L1[in]	L2[in]	Polar Mome...	Polar Mome...	Gamma-x	Gamma-z
1	R3D_S8	CRECT12X12	INTERI...	21.563	33.563	33.563	599542.994	599542.994	0.4	0.4
2	R3D_S7	CRECT12X12	INTERI...	21.563	33.563	33.563	599542.994	599542.994	0.4	0.4
3	R3D_N1157	CRECT12X12	EDGE	21.563	33.563	31.78	481921.293	288027.344	0.407	0.393
4	R3D_N748	CRECT12X12	INTERI...	21.563	33.563	33.563	599542.994	599542.994	0.4	0.4
5	R3D_N757	CRECT12X12	INTERI...	21.563	33.563	33.563	599542.994	599542.994	0.4	0.4
6	R3D_N1153	CRECT12X12	EDGE	21.436	37.718	33.436	430254.194	546169.448	0.415	0.386
7	R3D_N1154	CRECT12X12	EDGE	26.625	38.625	41.309	1.00904e+6	741711.937	0.392	0.408

Pile Punching Shear Geometries

	Label	Pile	Shape	Location	Effective Depth[in]	L1[in]	L2[in]
1	N60	Pile 1	Round	EDGE	21.563	35.7	38.846
2	N91	Pile 1	Round	CORNER	21.563	38.85	38.85
3	N111	Pile 1	Round	EDGE	20.625	38.381	34.762
4	N112	Pile 1	Round	EDGE	20.625	38.381	34.762
5	N228	Pile 1	Round	CORNER	20.625	38.381	38.379
6	N229	Pile 1	Round	CORNER	20.625	38.381	38.38
7	N283	Pile 1	Round	CORNER	21.563	41.85	38.846

Pile Punching Shear Values

	Label	Pile	UC	Gov LC	Location	Vuy[k]	Phi*Vny[k]
1	N60	Pile 1	0.128	40	EDGE	57.718	452.278
2	N91	Pile 1	0.046	1	CORNER	14.322	309.916
3	N111	Pile 1	0.143	2	EDGE	61.96	431.954
4	N112	Pile 1	0.167	2	EDGE	72.329	431.954
5	N228	Pile 1	0.207	2	CORNER	61.62	297.302
6	N229	Pile 1	0.233	2	CORNER	69.4	297.308
7	N283	Pile 1	0.14	42	CORNER	45.097	321.871

Pile Design Checks

	Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Co...	Pile Co...	Comp[k]	Comp LC	Soil Ten...	Pile Ten...	Tens[k]	Tens LC
1	N60	Pile 1	0.623	14.332	144	NC	0.195	48.712	102	NC	0	0	NC
2	N91	Pile 1	0.619	14.227	144	NC	0.049	12.231	195	NC	0	0	NC
3	N111	Pile 1	0.623	14.336	144	NC	0.204	50.974	199	NC	0	0	NC
4	N112	Pile 1	0.623	14.329	144	NC	0.24	60.07	102	NC	0	0	NC
5	N228	Pile 1	0.62	14.267	144	NC	0.2	50.038	199	NC	0	0	NC
6	N229	Pile 1	0.62	14.262	144	NC	0.225	56.224	102	NC	0	0	NC
7	N283	Pile 1	0.619	14.231	144	NC	0.148	37.039	102	NC	0	0	NC

Concrete Pile Rebar

Label	Phi Used	Vertical Reinf	Shear Reinf
No Data to Print ...			

Slab Overturning Safety Factors

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
1	52	S6	0	0	6966.36	0	3665.222	9.99+	9.99+
2	53	S6	0	0	8469.073	0	4257.103	9.99+	9.99+
3	54	S6	0	0	6966.36	0	3665.222	9.99+	9.99+
4	55	S6	0	0	6966.36	0	3665.222	9.99+	9.99+
5	56	S6	0	0	6966.36	0	3665.222	9.99+	9.99+
6	57	S6	0	0	8093.394	0	4109.132	9.99+	9.99+
7	58	S6	0	0	8093.394	0	4109.132	9.99+	9.99+
8	59	S6	0	0	8093.394	0	4109.132	9.99+	9.99+
9	60	S6	0	0	6936.345	0	3527.019	9.99+	9.99+
10	61	S6	0	8.904	3670.411	1.817	3520.75	9.99+	9.99+
11	62	S6	0	76.087	6860.258	46.603	2617.343	9.99+	9.99+
12	63	S6	0	4.952	6860.258	0	3522.567	9.99+	9.99+
13	64	S6	0	0	8150.459	0	4113.834	9.99+	9.99+
14	65	S6	0	6.678	4230.399	1.363	4109.132	9.99+	9.99+
15	66	S6	0	57.065	8093.394	34.952	3074.133	9.99+	9.99+
16	67	S6	0	3.714	8093.394	0	4110.495	9.99+	9.99+
17	68	S6	0	0	8150.459	0	4113.834	9.99+	9.99+
18	69	S6	0	6.678	4230.399	1.363	4109.132	9.99+	9.99+
19	70	S6	0	57.065	8093.394	34.952	3074.133	9.99+	9.99+
20	71	S6	0	3.714	8093.394	0	4110.495	9.99+	9.99+
21	72	S6	0	0	8150.459	0	4113.834	9.99+	9.99+
22	73	S6	0	6.678	4230.399	1.363	4109.132	9.99+	9.99+
23	74	S6	0	57.065	8093.394	34.952	3074.133	9.99+	9.99+
24	75	S6	0	3.714	8093.394	0	4110.495	9.99+	9.99+
25	76	S6	0	0	4192.242	0	2118.719	9.99+	9.99+
26	77	S6	0	8.904	2202.247	1.817	2112.45	9.99+	9.99+
27	78	S6	0	76.087	4116.155	46.603	1570.406	9.99+	9.99+
28	79	S6	0	4.952	4116.155	0	2114.267	9.99+	9.99+
29	80	S6	0	0	4192.242	0	2118.719	9.99+	9.99+
30	81	S6	0	8.904	2202.247	1.817	2112.45	9.99+	9.99+
31	82	S6	0	76.087	4116.155	46.603	1570.406	9.99+	9.99+
32	83	S6	0	4.952	4116.155	0	2114.267	9.99+	9.99+
33	84	S6	0	0	7637.235	75.44	3973.083	9.99+	9.99+
34	85	S6	0	136.838	4221.856	3.361	2885.869	9.99+	9.99+
35	86	S6	0	126.908	4221.856	202.861	2885.869	9.99+	9.99+
36	87	S6	0	230.671	7545.537	58.054	3973.083	9.99+	9.99+
37	88	S6	0	0	8593.734	56.58	4336.193	9.99+	9.99+
38	89	S6	0	102.628	4471.537	2.52	3239.177	9.99+	9.99+
39	90	S6	0	95.181	4471.537	152.146	3239.177	9.99+	9.99+
40	91	S6	0	173.003	8524.96	43.54	4336.193	9.99+	9.99+
41	92	S6	0	0	3692.336	75.44	1891.271	9.99+	9.99+
42	93	S6	0	136.838	2006.106	3.361	1376.775	9.99+	9.99+

Slab Overturning Safety Factors (Continued)

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
43	94	S6	0	126.908	2006.106	202.861	1376.775	9.99+	6.787
44	95	S6	0	230.671	3600.638	58.054	1891.271	9.99+	9.99+
45	96	S6	0	0	3692.336	75.44	1891.271	9.99+	9.99+
46	97	S6	0	136.838	2006.106	3.361	1376.775	9.99+	9.99+
47	98	S6	0	126.908	2006.106	202.861	1376.775	9.99+	6.787
48	99	S6	0	230.671	3600.638	58.054	1891.271	9.99+	9.99+
49	101	S6	0	0	7278.014	0	4036.381	9.99+	9.99+
50	102	S6	0	0	8780.727	0	4628.262	9.99+	9.99+
51	103	S6	0	0	7284.849	0	4036.944	9.99+	9.99+
52	104	S6	0	0.8	4434.312	0.163	4036.381	9.99+	9.99+
53	105	S6	0	6.848	7278.014	4.194	2790.474	9.99+	9.99+
54	106	S6	0	0.446	7278.014	0	4036.545	9.99+	9.99+
55	107	S6	0	0	4540.746	0	2628.644	9.99+	9.99+
56	108	S6	0	0.8	2966.147	0.163	2628.081	9.99+	9.99+
57	109	S6	0	6.848	4533.911	4.194	1743.536	9.99+	9.99+
58	110	S6	0	0.446	4533.911	0	2628.245	9.99+	9.99+
59	111	S6	0	5.056	3892.476	2.513	3665.222	9.99+	9.99+
60	112	S6	0	5.056	4343.039	2.513	4257.103	9.99+	9.99+
61	113	S6	0	5.056	3892.476	2.513	3665.222	9.99+	9.99+
62	114	S6	0	5.056	3892.476	2.513	3665.222	9.99+	9.99+
63	115	S6	0	5.056	3892.476	2.513	3665.222	9.99+	9.99+
64	116	S6	0	5.056	4230.399	2.513	4109.132	9.99+	9.99+
65	117	S6	0	5.056	4230.399	2.513	4109.132	9.99+	9.99+
66	118	S6	0	5.056	4230.399	2.513	4109.132	9.99+	9.99+
67	119	S6	0	5.056	3685.034	2.513	3527.019	9.99+	9.99+
68	120	S6	0	13.96	3670.411	4.33	3520.75	9.99+	9.99+
69	121	S6	0	76.087	6862.866	46.603	2618.43	9.99+	9.99+
70	122	S6	0	5.056	3679.315	2.513	3522.567	9.99+	9.99+
71	123	S6	0	5.056	4241.365	2.513	4113.834	9.99+	9.99+
72	124	S6	0	11.734	4230.399	3.876	4109.132	9.99+	9.99+
73	125	S6	0	57.065	8096.002	34.952	3075.219	9.99+	9.99+
74	126	S6	0	5.056	4237.077	2.513	4110.495	9.99+	9.99+
75	127	S6	0	5.056	4241.365	2.513	4113.834	9.99+	9.99+
76	128	S6	0	11.734	4230.399	3.876	4109.132	9.99+	9.99+
77	129	S6	0	57.065	8096.002	34.952	3075.219	9.99+	9.99+
78	130	S6	0	5.056	4237.077	2.513	4110.495	9.99+	9.99+
79	131	S6	0	5.056	4241.365	2.513	4113.834	9.99+	9.99+
80	132	S6	0	11.734	4230.399	3.876	4109.132	9.99+	9.99+
81	133	S6	0	57.065	8096.002	34.952	3075.219	9.99+	9.99+
82	134	S6	0	5.056	4237.077	2.513	4110.495	9.99+	9.99+
83	135	S6	0	3.033	2216.869	1.508	2118.719	9.99+	9.99+
84	136	S6	0	11.937	2202.247	3.325	2112.45	9.99+	9.99+
85	137	S6	0	76.087	4117.72	46.603	1571.058	9.99+	9.99+
86	138	S6	0	3.033	2211.151	1.508	2114.267	9.99+	9.99+
87	139	S6	0	3.033	2216.869	1.508	2118.719	9.99+	9.99+
88	140	S6	0	11.937	2202.247	3.325	2112.45	9.99+	9.99+
89	141	S6	0	76.087	4117.72	46.603	1571.058	9.99+	9.99+
90	142	S6	0	3.033	2211.151	1.508	2114.267	9.99+	9.99+
91	143	S6	0	5.056	4348.764	77.953	3973.083	9.99+	9.99+
92	144	S6	0	141.894	4221.856	3.361	2886.955	9.99+	9.99+
93	145	S6	0	131.964	4221.856	202.861	2886.955	9.99+	9.99+
94	146	S6	0	230.671	7548.145	60.567	3973.083	9.99+	9.99+
95	147	S6	0	5.056	4566.73	59.093	4336.2	9.99+	9.99+
96	148	S6	0	107.684	4471.549	2.52	3240.266	9.99+	9.99+
97	149	S6	0	100.237	4471.549	152.146	3240.266	9.99+	9.99+
98	150	S6	0	173.003	8527.573	46.054	4336.2	9.99+	9.99+
99	151	S6	0	3.033	2133.014	76.948	1891.271	9.99+	9.99+

Slab Overturning Safety Factors (Continued)

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
100	152	S6	0	139.871	2006.106	3.361	1377.427	9.99+	9.99+
101	153	S6	0	129.942	2006.106	202.861	1377.427	9.99+	6.79
102	154	S6	0	230.671	3602.203	59.562	1891.271	9.99+	9.99+
103	155	S6	0	3.033	2133.014	76.948	1891.271	9.99+	9.99+
104	156	S6	0	139.871	2006.106	3.361	1377.427	9.99+	9.99+
105	157	S6	0	129.942	2006.106	202.861	1377.427	9.99+	6.79
106	158	S6	0	230.671	3602.203	59.562	1891.271	9.99+	9.99+
107	160	S6	0	2.608	6966.36	1.086	2664.153	9.99+	9.99+
108	161	S6	0	2.608	8469.073	1.086	3210.793	9.99+	9.99+
109	162	S6	0	2.608	6966.36	1.086	2664.153	9.99+	9.99+
110	163	S6	0	2.608	6966.36	1.086	2664.153	9.99+	9.99+
111	164	S6	0	2.608	6966.36	1.086	2664.153	9.99+	9.99+
112	165	S6	0	2.608	8093.394	1.086	3074.133	9.99+	9.99+
113	166	S6	0	2.608	8093.394	1.086	3074.133	9.99+	9.99+
114	167	S6	0	2.608	8093.394	1.086	3074.133	9.99+	9.99+
115	168	S6	0	2.608	6936.345	1.086	2663.947	9.99+	9.99+
116	169	S6	0	8.904	3675.467	1.574	2617.343	9.99+	9.99+
117	170	S6	0	78.694	6860.258	47.69	2617.343	9.99+	9.99+
118	171	S6	0	7.559	6860.258	1.086	2617.831	9.99+	9.99+
119	172	S6	0	2.608	8150.459	1.086	3109.085	9.99+	9.99+
120	173	S6	0	6.678	4235.454	1.452	3074.133	9.99+	9.99+
121	174	S6	0	59.673	8093.394	36.039	3074.133	9.99+	9.99+
122	175	S6	0	6.321	8093.394	1.086	3074.498	9.99+	9.99+
123	176	S6	0	2.608	8150.459	1.086	3109.085	9.99+	9.99+
124	177	S6	0	6.678	4235.454	1.452	3074.133	9.99+	9.99+
125	178	S6	0	59.673	8093.394	36.039	3074.133	9.99+	9.99+
126	179	S6	0	6.321	8093.394	1.086	3074.498	9.99+	9.99+
127	180	S6	0	2.608	8150.459	1.086	3109.085	9.99+	9.99+
128	181	S6	0	6.678	4235.454	1.452	3074.133	9.99+	9.99+
129	182	S6	0	59.673	8093.394	36.039	3074.133	9.99+	9.99+
130	183	S6	0	6.321	8093.394	1.086	3074.498	9.99+	9.99+
131	184	S6	0	1.565	4192.242	0.652	1617.009	9.99+	9.99+
132	185	S6	0	8.904	2205.28	1.817	2113.958	9.99+	9.99+
133	186	S6	0	77.651	4116.155	47.255	1570.406	9.99+	9.99+
134	187	S6	0	6.516	4116.155	0.652	1570.893	9.99+	9.99+
135	188	S6	0	1.565	4192.242	0.652	1617.009	9.99+	9.99+
136	189	S6	0	8.904	2205.28	1.817	2113.958	9.99+	9.99+
137	190	S6	0	77.651	4116.155	47.255	1570.406	9.99+	9.99+
138	191	S6	0	6.516	4116.155	0.652	1570.893	9.99+	9.99+
139	192	S6	0	2.608	7637.235	75.44	3975.597	9.99+	9.99+
140	193	S6	0	136.838	4226.911	4.447	2885.869	9.99+	9.99+
141	194	S6	0	126.908	4226.911	203.947	2885.869	9.99+	9.99+
142	195	S6	0	233.279	7545.537	58.054	3975.597	9.99+	9.99+
143	196	S6	0	2.608	8593.739	56.58	4338.713	9.99+	9.99+
144	197	S6	0	102.628	4476.604	3.607	3239.18	9.99+	9.99+
145	198	S6	0	95.181	4476.604	153.232	3239.18	9.99+	9.99+
146	199	S6	0	175.611	8524.966	43.54	4338.713	9.99+	9.99+
147	200	S6	0	1.565	3692.336	75.44	1892.779	9.99+	9.99+
148	201	S6	0	136.838	2009.139	4.013	1376.775	9.99+	9.99+
149	202	S6	0	126.908	2009.139	203.513	1376.775	9.99+	6.765
150	203	S6	0	232.236	3600.638	58.054	1892.779	9.99+	9.99+
151	204	S6	0	1.565	3692.336	75.44	1892.779	9.99+	9.99+
152	205	S6	0	136.838	2009.139	4.013	1376.775	9.99+	9.99+
153	206	S6	0	126.908	2009.139	203.513	1376.775	9.99+	6.765
154	207	S6	0	232.236	3600.638	58.054	1892.779	9.99+	9.99+

Slab Sliding Safety Factors

	LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz
1	52	S6	0	0.111	94.941	0	94.941	9.99+	9.99+
2	53	S6	0	0.111	112.018	0	112.018	9.99+	9.99+
3	54	S6	0	0.111	94.941	0	94.941	9.99+	9.99+
4	55	S6	0	0.111	94.941	0	94.941	9.99+	9.99+
5	56	S6	0	0.111	94.941	0	94.941	9.99+	9.99+
6	57	S6	0	0.111	107.749	0	107.749	9.99+	9.99+
7	58	S6	0	0.111	107.749	0	107.749	9.99+	9.99+
8	59	S6	0	0.111	107.749	0	107.749	9.99+	9.99+
9	60	S6	0	5.854	92.865	0	92.865	9.99+	9.99+
10	61	S6	0	0.082	92.037	0.819	92.037	9.99+	9.99+
11	62	S6	0	5.702	91.278	0	91.278	9.99+	9.99+
12	63	S6	0	0.07	92.106	0.819	92.106	9.99+	9.99+
13	64	S6	0	4.445	108.344	0	108.344	9.99+	9.99+
14	65	S6	0	0.116	107.723	0.614	107.723	9.99+	9.99+
15	66	S6	0	4.222	107.154	0	107.154	9.99+	9.99+
16	67	S6	0	0.107	107.775	0.614	107.775	9.99+	9.99+
17	68	S6	0	4.445	108.344	0	108.344	9.99+	9.99+
18	69	S6	0	0.116	107.723	0.614	107.723	9.99+	9.99+
19	70	S6	0	4.222	107.154	0	107.154	9.99+	9.99+
20	71	S6	0	0.107	107.775	0.614	107.775	9.99+	9.99+
21	72	S6	0	4.445	108.344	0	108.344	9.99+	9.99+
22	73	S6	0	0.116	107.723	0.614	107.723	9.99+	9.99+
23	74	S6	0	4.222	107.154	0	107.154	9.99+	9.99+
24	75	S6	0	0.107	107.775	0.614	107.775	9.99+	9.99+
25	76	S6	0	5.824	56.036	0	56.036	9.622	9.99+
26	77	S6	0	0.051	55.208	0.819	55.208	9.99+	9.99+
27	78	S6	0	5.733	54.45	0	54.45	9.498	9.99+
28	79	S6	0	0.04	55.277	0.819	55.277	9.99+	9.99+
29	80	S6	0	5.824	56.036	0	56.036	9.622	9.99+
30	81	S6	0	0.051	55.208	0.819	55.208	9.99+	9.99+
31	82	S6	0	5.733	54.45	0	54.45	9.498	9.99+
32	83	S6	0	0.04	55.277	0.819	55.277	9.99+	9.99+
33	84	S6	0	55.4	104.796	0	104.796	1.892	9.99+
34	85	S6	0	0.174	103.705	70.976	103.705	9.99+	1.461
35	86	S6	0	55.156	100.973	0	100.973	1.831	9.99+
36	87	S6	0	0.07	102.064	70.976	102.064	9.99+	1.438
37	88	S6	0	41.577	115.064	0	115.064	2.768	9.99+
38	89	S6	0	0.157	114.246	53.232	114.246	9.99+	2.146
39	90	S6	0	41.34	112.197	0	112.197	2.714	9.99+
40	91	S6	0	0.08	113.015	53.232	113.015	9.99+	2.123
41	92	S6	0	55.334	50.932	0	50.932	0.92	9.99+
42	93	S6	0	0.108	49.841	70.976	49.841	9.99+	0.702
43	94	S6	0	55.222	47.109	0	47.109	0.853	9.99+
44	95	S6	0	0.005	48.2	70.976	48.2	9.99+	0.679
45	96	S6	0	55.334	50.932	0	50.932	0.92	9.99+
46	97	S6	0	0.108	49.841	70.976	49.841	9.99+	0.702
47	98	S6	0	55.222	47.109	0	47.109	0.853	9.99+
48	99	S6	0	0.005	48.2	70.976	48.2	9.99+	0.679
49	101	S6	0	0.187	102.403	0	102.403	9.99+	9.99+
50	102	S6	0	0.187	119.481	0	119.481	9.99+	9.99+
51	103	S6	0	0.706	102.474	0	102.474	9.99+	9.99+
52	104	S6	0	0.187	102.4	0.074	102.4	9.99+	9.99+
53	105	S6	0	0.333	102.331	0	102.331	9.99+	9.99+
54	106	S6	0	0.186	102.406	0.074	102.406	9.99+	9.99+
55	107	S6	0	0.675	65.646	0	65.646	9.99+	9.99+
56	108	S6	0	0.157	65.571	0.074	65.571	9.99+	9.99+
57	109	S6	0	0.364	65.503	0	65.503	9.99+	9.99+

Slab Sliding Safety Factors (Continued)

	LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz
58	110	S6	0	0.156	65.577	0.074	65.577	9.99+	9.99+
59	111	S6	0	0.13	94.919	0.67	94.919	9.99+	9.99+
60	112	S6	0	0.13	111.997	0.67	111.997	9.99+	9.99+
61	113	S6	0	0.13	94.919	0.67	94.919	9.99+	9.99+
62	114	S6	0	0.13	94.919	0.67	94.919	9.99+	9.99+
63	115	S6	0	0.13	94.919	0.67	94.919	9.99+	9.99+
64	116	S6	0	0.13	107.728	0.67	107.728	9.99+	9.99+
65	117	S6	0	0.13	107.728	0.67	107.728	9.99+	9.99+
66	118	S6	0	0.13	107.728	0.67	107.728	9.99+	9.99+
67	119	S6	0	5.873	92.843	0.67	92.843	9.99+	9.99+
68	120	S6	0	0.101	92.015	1.489	92.015	9.99+	9.99+
69	121	S6	0	5.683	91.257	0.67	91.257	9.99+	9.99+
70	122	S6	0	0.089	92.085	0.149	92.085	9.99+	9.99+
71	123	S6	0	4.464	108.322	0.67	108.322	9.99+	9.99+
72	124	S6	0	0.135	107.702	1.284	107.702	9.99+	9.99+
73	125	S6	0	4.203	107.133	0.67	107.133	9.99+	9.99+
74	126	S6	0	0.126	107.754	0.056	107.754	9.99+	9.99+
75	127	S6	0	4.464	108.322	0.67	108.322	9.99+	9.99+
76	128	S6	0	0.135	107.702	1.284	107.702	9.99+	9.99+
77	129	S6	0	4.203	107.133	0.67	107.133	9.99+	9.99+
78	130	S6	0	0.126	107.754	0.056	107.754	9.99+	9.99+
79	131	S6	0	4.464	108.322	0.67	108.322	9.99+	9.99+
80	132	S6	0	0.135	107.702	1.284	107.702	9.99+	9.99+
81	133	S6	0	4.203	107.133	0.67	107.133	9.99+	9.99+
82	134	S6	0	0.126	107.754	0.056	107.754	9.99+	9.99+
83	135	S6	0	5.835	56.023	0.402	56.023	9.601	9.99+
84	136	S6	0	0.063	55.195	1.221	55.195	9.99+	9.99+
85	137	S6	0	5.721	54.437	0.402	54.437	9.515	9.99+
86	138	S6	0	0.051	55.265	0.417	55.265	9.99+	9.99+
87	139	S6	0	5.835	56.023	0.402	56.023	9.601	9.99+
88	140	S6	0	0.063	55.195	1.221	55.195	9.99+	9.99+
89	141	S6	0	5.721	54.437	0.402	54.437	9.515	9.99+
90	142	S6	0	0.051	55.265	0.417	55.265	9.99+	9.99+
91	143	S6	0	55.419	104.774	0.67	104.774	1.891	9.99+
92	144	S6	0	0.193	103.683	71.646	103.683	9.99+	1.447
93	145	S6	0	55.137	100.952	0.67	100.952	1.831	9.99+
94	146	S6	0	0.089	102.043	70.306	102.043	9.99+	1.451
95	147	S6	0	41.596	115.043	0.67	115.043	2.766	9.99+
96	148	S6	0	0.176	114.225	53.902	114.225	9.99+	2.119
97	149	S6	0	41.321	112.176	0.67	112.176	2.715	9.99+
98	150	S6	0	0.099	112.994	52.562	112.994	9.99+	2.15
99	151	S6	0	55.346	50.919	0.402	50.919	0.92	9.99+
100	152	S6	0	0.119	49.828	71.378	49.828	9.99+	0.698
101	153	S6	0	55.21	47.097	0.402	47.097	0.853	9.99+
102	154	S6	0	0.016	48.187	70.574	48.187	9.99+	0.683
103	155	S6	0	55.346	50.919	0.402	50.919	0.92	9.99+
104	156	S6	0	0.119	49.828	71.378	49.828	9.99+	0.698
105	157	S6	0	55.21	47.097	0.402	47.097	0.853	9.99+
106	158	S6	0	0.016	48.187	70.574	48.187	9.99+	0.683
107	160	S6	0	0.092	94.962	0.67	94.962	9.99+	9.99+
108	161	S6	0	0.092	112.04	0.67	112.04	9.99+	9.99+
109	162	S6	0	0.092	94.962	0.67	94.962	9.99+	9.99+
110	163	S6	0	0.092	94.962	0.67	94.962	9.99+	9.99+
111	164	S6	0	0.092	94.962	0.67	94.962	9.99+	9.99+
112	165	S6	0	0.092	107.77	0.67	107.77	9.99+	9.99+
113	166	S6	0	0.092	107.77	0.67	107.77	9.99+	9.99+
114	167	S6	0	0.092	107.77	0.67	107.77	9.99+	9.99+

Slab Sliding Safety Factors (Continued)

	LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz
115	168	S6	0	5.835	92.886	0.67	92.886	9.99+	9.99+
116	169	S6	0	0.063	92.058	0.149	92.058	9.99+	9.99+
117	170	S6	0	5.721	91.3	0.67	91.3	9.99+	9.99+
118	171	S6	0	0.051	92.127	1.489	92.127	9.99+	9.99+
119	172	S6	0	4.426	108.365	0.67	108.365	9.99+	9.99+
120	173	S6	0	0.097	107.744	0.056	107.744	9.99+	9.99+
121	174	S6	0	4.241	107.176	0.67	107.176	9.99+	9.99+
122	175	S6	0	0.088	107.796	1.284	107.796	9.99+	9.99+
123	176	S6	0	4.426	108.365	0.67	108.365	9.99+	9.99+
124	177	S6	0	0.097	107.744	0.056	107.744	9.99+	9.99+
125	178	S6	0	4.241	107.176	0.67	107.176	9.99+	9.99+
126	179	S6	0	0.088	107.796	1.284	107.796	9.99+	9.99+
127	180	S6	0	4.426	108.365	0.67	108.365	9.99+	9.99+
128	181	S6	0	0.097	107.744	0.056	107.744	9.99+	9.99+
129	182	S6	0	4.241	107.176	0.67	107.176	9.99+	9.99+
130	183	S6	0	0.088	107.796	1.284	107.796	9.99+	9.99+
131	184	S6	0	5.812	56.049	0.402	56.049	9.643	9.99+
132	185	S6	0	0.04	55.221	0.417	55.221	9.99+	9.99+
133	186	S6	0	5.744	54.463	0.402	54.463	9.482	9.99+
134	187	S6	0	0.028	55.29	1.221	55.29	9.99+	9.99+
135	188	S6	0	5.812	56.049	0.402	56.049	9.643	9.99+
136	189	S6	0	0.04	55.221	0.417	55.221	9.99+	9.99+
137	190	S6	0	5.744	54.463	0.402	54.463	9.482	9.99+
138	191	S6	0	0.028	55.29	1.221	55.29	9.99+	9.99+
139	192	S6	0	55.381	104.817	0.67	104.817	1.893	9.99+
140	193	S6	0	0.155	103.726	70.306	103.726	9.99+	1.475
141	194	S6	0	55.175	100.994	0.67	100.994	1.83	9.99+
142	195	S6	0	0.051	102.085	71.646	102.085	9.99+	1.425
143	196	S6	0	41.558	115.086	0.67	115.086	2.769	9.99+
144	197	S6	0	0.138	114.267	52.562	114.267	9.99+	2.174
145	198	S6	0	41.359	112.219	0.67	112.219	2.713	9.99+
146	199	S6	0	0.061	113.037	53.902	113.037	9.99+	2.097
147	200	S6	0	55.323	50.945	0.402	50.945	0.921	9.99+
148	201	S6	0	0.097	49.854	70.574	49.854	9.99+	0.706
149	202	S6	0	55.233	47.122	0.402	47.122	0.853	9.99+
150	203	S6	0	0.007	48.213	71.378	48.213	9.99+	0.675
151	204	S6	0	55.323	50.945	0.402	50.945	0.921	9.99+
152	205	S6	0	0.097	49.854	70.574	49.854	9.99+	0.706
153	206	S6	0	55.233	47.122	0.402	47.122	0.853	9.99+
154	207	S6	0	0.007	48.213	71.378	48.213	9.99+	0.675

Slab Overturning by Category

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
1	52	S6	DL	0	6860.258	0	3520.75
2	52	S6	FL	0	106.101	0	144.472
3	53	S6	DL	0	6860.258	0	3520.75
4	53	S6	LL	0	1502.713	0	591.881
5	53	S6	FL	0	106.101	0	144.472
6	54	S6	DL	0	6860.258	0	3520.75
7	54	S6	FL	0	106.101	0	144.472
8	55	S6	DL	0	6860.258	0	3520.75
9	55	S6	FL	0	106.101	0	144.472
10	56	S6	DL	0	6860.258	0	3520.75
11	56	S6	FL	0	106.101	0	144.472
12	57	S6	DL	0	6860.258	0	3520.75
13	57	S6	LL	0	1127.035	0	443.911

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
14	57	S6	FL	0	106.101	0	144.472
15	58	S6	DL	0	6860.258	0	3520.75
16	58	S6	LL	0	1127.035	0	443.911
17	58	S6	FL	0	106.101	0	144.472
18	59	S6	DL	0	6860.258	0	3520.75
19	59	S6	LL	0	1127.035	0	443.911
20	59	S6	FL	0	106.101	0	144.472
21	60	S6	DL	0	6860.258	0	3520.75
22	60	S6	WLX	0	76.087	0	6.269
23	61	S6	DL	0	-3670.411	0	3520.75
24	61	S6	WLZ	8.904	0	1.817	0
25	62	S6	DL	0	6860.258	0	-2617.343
26	62	S6	WLX	76.087	0	46.603	0
27	63	S6	DL	0	6860.258	0	3520.75
28	63	S6	WLZ	4.952	0	0	1.817
29	64	S6	DL	0	6860.258	0	3520.75
30	64	S6	LL	0	1127.035	0	443.911
31	64	S6	FL	0	106.101	0	144.472
32	64	S6	WLX	0	57.065	0	4.702
33	65	S6	DL	0	-3670.411	0	3520.75
34	65	S6	LL	0	-337.923	0	443.911
35	65	S6	FL	0	-222.065	0	144.472
36	65	S6	WLZ	6.678	0	1.363	0
37	66	S6	DL	0	6860.258	0	-2617.343
38	66	S6	LL	0	1127.035	0	-409.98
39	66	S6	FL	0	106.101	0	-46.809
40	66	S6	WLX	57.065	0	34.952	0
41	67	S6	DL	0	6860.258	0	3520.75
42	67	S6	LL	0	1127.035	0	443.911
43	67	S6	FL	0	106.101	0	144.472
44	67	S6	WLZ	3.714	0	0	1.363
45	68	S6	DL	0	6860.258	0	3520.75
46	68	S6	LL	0	1127.035	0	443.911
47	68	S6	FL	0	106.101	0	144.472
48	68	S6	WLX	0	57.065	0	4.702
49	69	S6	DL	0	-3670.411	0	3520.75
50	69	S6	LL	0	-337.923	0	443.911
51	69	S6	FL	0	-222.065	0	144.472
52	69	S6	WLZ	6.678	0	1.363	0
53	70	S6	DL	0	6860.258	0	-2617.343
54	70	S6	LL	0	1127.035	0	-409.98
55	70	S6	FL	0	106.101	0	-46.809
56	70	S6	WLX	57.065	0	34.952	0
57	71	S6	DL	0	6860.258	0	3520.75
58	71	S6	LL	0	1127.035	0	443.911
59	71	S6	FL	0	106.101	0	144.472
60	71	S6	WLZ	3.714	0	0	1.363
61	72	S6	DL	0	6860.258	0	3520.75
62	72	S6	LL	0	1127.035	0	443.911
63	72	S6	FL	0	106.101	0	144.472
64	72	S6	WLX	0	57.065	0	4.702
65	73	S6	DL	0	-3670.411	0	3520.75
66	73	S6	LL	0	-337.923	0	443.911
67	73	S6	FL	0	-222.065	0	144.472
68	73	S6	WLZ	6.678	0	1.363	0
69	74	S6	DL	0	6860.258	0	-2617.343
70	74	S6	LL	0	1127.035	0	-409.98

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
71	74	S6	FL	0	106.101	0	-46.809
72	74	S6	WLX	57.065	0	34.952	0
73	75	S6	DL	0	6860.258	0	3520.75
74	75	S6	LL	0	1127.035	0	443.911
75	75	S6	FL	0	106.101	0	144.472
76	75	S6	WLZ	3.714	0	0	1.363
77	76	S6	DL	0	4116.155	0	2112.45
78	76	S6	WLX	0	76.087	0	6.269
79	77	S6	DL	0	-2202.247	0	2112.45
80	77	S6	WLZ	8.904	0	1.817	0
81	78	S6	DL	0	4116.155	0	-1570.406
82	78	S6	WLX	76.087	0	46.603	0
83	79	S6	DL	0	4116.155	0	2112.45
84	79	S6	WLZ	4.952	0	0	1.817
85	80	S6	DL	0	4116.155	0	2112.45
86	80	S6	WLX	0	76.087	0	6.269
87	81	S6	DL	0	-2202.247	0	2112.45
88	81	S6	WLZ	8.904	0	1.817	0
89	82	S6	DL	0	4116.155	0	-1570.406
90	82	S6	WLX	76.087	0	46.603	0
91	83	S6	DL	0	4116.155	0	2112.45
92	83	S6	WLZ	4.952	0	0	1.817
93	84	S6	DL	0	7426.916	0	3811.564
94	84	S6	FL	0	118.621	0	161.519
95	84	S6	ELX	0	91.698	75.44	0
96	85	S6	DL	0	-3973.587	0	-2833.536
97	85	S6	FL	0	-248.269	0	-52.333
98	85	S6	ELZ	136.838	0	3.361	0
99	86	S6	DL	0	-3973.587	0	-2833.536
100	86	S6	FL	0	-248.269	0	-52.333
101	86	S6	ELX	126.908	0	202.861	0
102	87	S6	DL	0	7426.916	0	3811.564
103	87	S6	FL	0	118.621	0	161.519
104	87	S6	ELZ	230.671	0	58.054	0
105	88	S6	DL	0	7285.251	0	3738.861
106	88	S6	LL	0	1127.035	0	443.911
107	88	S6	FL	0	112.674	0	153.422
108	88	S6	ELX	0	68.773	56.58	0
109	89	S6	DL	0	-3897.793	0	-2779.488
110	89	S6	LL	0	-337.923	0	-409.98
111	89	S6	FL	0	-235.822	0	-49.709
112	89	S6	ELZ	102.628	0	2.52	0
113	90	S6	DL	0	-3897.793	0	-2779.488
114	90	S6	LL	0	-337.923	0	-409.98
115	90	S6	FL	0	-235.822	0	-49.709
116	90	S6	ELX	95.181	0	152.146	0
117	91	S6	DL	0	7285.251	0	3738.861
118	91	S6	LL	0	1127.035	0	443.911
119	91	S6	FL	0	112.674	0	153.422
120	91	S6	ELZ	173.003	0	43.54	0
121	92	S6	DL	0	3549.498	0	1821.636
122	92	S6	FL	0	51.141	0	69.635
123	92	S6	ELX	0	91.698	75.44	0
124	93	S6	DL	0	-1899.071	0	-1354.213
125	93	S6	FL	0	-107.035	0	-22.562
126	93	S6	ELZ	136.838	0	3.361	0
127	94	S6	DL	0	-1899.071	0	-1354.213

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
128	94	S6	FL	0	-107.035	0	-22.562
129	94	S6	ELX	126.908	0	202.861	0
130	95	S6	DL	0	3549.498	0	1821.636
131	95	S6	FL	0	51.141	0	69.635
132	95	S6	ELZ	230.671	0	58.054	0
133	96	S6	DL	0	3549.498	0	1821.636
134	96	S6	FL	0	51.141	0	69.635
135	96	S6	ELX	0	91.698	75.44	0
136	97	S6	DL	0	-1899.071	0	-1354.213
137	97	S6	FL	0	-107.035	0	-22.562
138	97	S6	ELZ	136.838	0	3.361	0
139	98	S6	DL	0	-1899.071	0	-1354.213
140	98	S6	FL	0	-107.035	0	-22.562
141	98	S6	ELX	126.908	0	202.861	0
142	99	S6	DL	0	3549.498	0	1821.636
143	99	S6	FL	0	51.141	0	69.635
144	99	S6	ELZ	230.671	0	58.054	0
145	101	S6	DL	0	6860.258	0	3520.75
146	101	S6	OL1	0	417.756	0	515.631
147	102	S6	DL	0	6860.258	0	3520.75
148	102	S6	LL	0	1502.713	0	591.881
149	102	S6	OL1	0	417.756	0	515.631
150	103	S6	DL	0	6860.258	0	3520.75
151	103	S6	WLX	0	6.835	0	0.563
152	103	S6	OL1	0	417.756	0	515.631
153	104	S6	DL	0	-3670.411	0	3520.75
154	104	S6	WLZ	0.8	0	0.163	0
155	104	S6	OL1	0	-763.901	0	515.631
156	105	S6	DL	0	6860.258	0	-2617.343
157	105	S6	WLX	6.848	0	4.194	0
158	105	S6	OL1	0	417.756	0	-173.13
159	106	S6	DL	0	6860.258	0	3520.75
160	106	S6	WLZ	0.446	0	0	0.164
161	106	S6	OL1	0	417.756	0	515.631
162	107	S6	DL	0	4116.155	0	2112.45
163	107	S6	WLX	0	6.835	0	0.563
164	107	S6	OL1	0	417.756	0	515.631
165	108	S6	DL	0	-2202.247	0	2112.45
166	108	S6	WLZ	0.8	0	0.163	0
167	108	S6	OL1	0	-763.901	0	515.631
168	109	S6	DL	0	4116.155	0	-1570.406
169	109	S6	WLX	6.848	0	4.194	0
170	109	S6	OL1	0	417.756	0	-173.13
171	110	S6	DL	0	4116.155	0	2112.45
172	110	S6	WLZ	0.446	0	0	0.164
173	110	S6	OL1	0	417.756	0	515.631
174	111	S6	DL	0	-3670.411	0	3520.75
175	111	S6	TL	5.056	0	2.513	0
176	111	S6	FL	0	-222.065	0	144.472
177	112	S6	DL	0	-3670.411	0	3520.75
178	112	S6	LL	0	-450.563	0	591.881
179	112	S6	TL	5.056	0	2.513	0
180	112	S6	FL	0	-222.065	0	144.472
181	113	S6	DL	0	-3670.411	0	3520.75
182	113	S6	TL	5.056	0	2.513	0
183	113	S6	FL	0	-222.065	0	144.472
184	114	S6	DL	0	-3670.411	0	3520.75

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
185	114	S6	TL	5.056	0	2.513	0
186	114	S6	FL	0	-222.065	0	144.472
187	115	S6	DL	0	-3670.411	0	3520.75
188	115	S6	TL	5.056	0	2.513	0
189	115	S6	FL	0	-222.065	0	144.472
190	116	S6	DL	0	-3670.411	0	3520.75
191	116	S6	LL	0	-337.923	0	443.911
192	116	S6	TL	5.056	0	2.513	0
193	116	S6	FL	0	-222.065	0	144.472
194	117	S6	DL	0	-3670.411	0	3520.75
195	117	S6	LL	0	-337.923	0	443.911
196	117	S6	TL	5.056	0	2.513	0
197	117	S6	FL	0	-222.065	0	144.472
198	118	S6	DL	0	-3670.411	0	3520.75
199	118	S6	LL	0	-337.923	0	443.911
200	118	S6	TL	5.056	0	2.513	0
201	118	S6	FL	0	-222.065	0	144.472
202	119	S6	DL	0	-3670.411	0	3520.75
203	119	S6	TL	5.056	0	2.513	0
204	119	S6	WLX	0	-14.622	0	6.269
205	120	S6	DL	0	-3670.411	0	3520.75
206	120	S6	TL	5.056	0	2.513	0
207	120	S6	WLZ	8.904	0	1.817	0
208	121	S6	DL	0	6860.258	0	-2617.343
209	121	S6	TL	0	2.608	0	-1.086
210	121	S6	WLX	76.087	0	46.603	0
211	122	S6	DL	0	-3670.411	0	3520.75
212	122	S6	TL	5.056	0	2.513	0
213	122	S6	WLZ	0	-8.904	0	1.817
214	123	S6	DL	0	-3670.411	0	3520.75
215	123	S6	LL	0	-337.923	0	443.911
216	123	S6	TL	5.056	0	2.513	0
217	123	S6	FL	0	-222.065	0	144.472
218	123	S6	WLX	0	-10.967	0	4.702
219	124	S6	DL	0	-3670.411	0	3520.75
220	124	S6	LL	0	-337.923	0	443.911
221	124	S6	TL	5.056	0	2.513	0
222	124	S6	FL	0	-222.065	0	144.472
223	124	S6	WLZ	6.678	0	1.363	0
224	125	S6	DL	0	6860.258	0	-2617.343
225	125	S6	LL	0	1127.035	0	-409.98
226	125	S6	TL	0	2.608	0	-1.086
227	125	S6	FL	0	106.101	0	-46.809
228	125	S6	WLX	57.065	0	34.952	0
229	126	S6	DL	0	-3670.411	0	3520.75
230	126	S6	LL	0	-337.923	0	443.911
231	126	S6	TL	5.056	0	2.513	0
232	126	S6	FL	0	-222.065	0	144.472
233	126	S6	WLZ	0	-6.678	0	1.363
234	127	S6	DL	0	-3670.411	0	3520.75
235	127	S6	LL	0	-337.923	0	443.911
236	127	S6	TL	5.056	0	2.513	0
237	127	S6	FL	0	-222.065	0	144.472
238	127	S6	WLX	0	-10.967	0	4.702
239	128	S6	DL	0	-3670.411	0	3520.75
240	128	S6	LL	0	-337.923	0	443.911
241	128	S6	TL	5.056	0	2.513	0

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
242	128	S6	FL	0	-222.065	0	144.472
243	128	S6	WLZ	6.678	0	1.363	0
244	129	S6	DL	0	6860.258	0	-2617.343
245	129	S6	LL	0	1127.035	0	-409.98
246	129	S6	TL	0	2.608	0	-1.086
247	129	S6	FL	0	106.101	0	-46.809
248	129	S6	WLX	57.065	0	34.952	0
249	130	S6	DL	0	-3670.411	0	3520.75
250	130	S6	LL	0	-337.923	0	443.911
251	130	S6	TL	5.056	0	2.513	0
252	130	S6	FL	0	-222.065	0	144.472
253	130	S6	WLZ	0	-6.678	0	1.363
254	131	S6	DL	0	-3670.411	0	3520.75
255	131	S6	LL	0	-337.923	0	443.911
256	131	S6	TL	5.056	0	2.513	0
257	131	S6	FL	0	-222.065	0	144.472
258	131	S6	WLX	0	-10.967	0	4.702
259	132	S6	DL	0	-3670.411	0	3520.75
260	132	S6	LL	0	-337.923	0	443.911
261	132	S6	TL	5.056	0	2.513	0
262	132	S6	FL	0	-222.065	0	144.472
263	132	S6	WLZ	6.678	0	1.363	0
264	133	S6	DL	0	6860.258	0	-2617.343
265	133	S6	LL	0	1127.035	0	-409.98
266	133	S6	TL	0	2.608	0	-1.086
267	133	S6	FL	0	106.101	0	-46.809
268	133	S6	WLX	57.065	0	34.952	0
269	134	S6	DL	0	-3670.411	0	3520.75
270	134	S6	LL	0	-337.923	0	443.911
271	134	S6	TL	5.056	0	2.513	0
272	134	S6	FL	0	-222.065	0	144.472
273	134	S6	WLZ	0	-6.678	0	1.363
274	135	S6	DL	0	-2202.247	0	2112.45
275	135	S6	TL	3.033	0	1.508	0
276	135	S6	WLX	0	-14.622	0	6.269
277	136	S6	DL	0	-2202.247	0	2112.45
278	136	S6	TL	3.033	0	1.508	0
279	136	S6	WLZ	8.904	0	1.817	0
280	137	S6	DL	0	4116.155	0	-1570.406
281	137	S6	TL	0	1.565	0	-0.652
282	137	S6	WLX	76.087	0	46.603	0
283	138	S6	DL	0	-2202.247	0	2112.45
284	138	S6	TL	3.033	0	1.508	0
285	138	S6	WLZ	0	-8.904	0	1.817
286	139	S6	DL	0	-2202.247	0	2112.45
287	139	S6	TL	3.033	0	1.508	0
288	139	S6	WLX	0	-14.622	0	6.269
289	140	S6	DL	0	-2202.247	0	2112.45
290	140	S6	TL	3.033	0	1.508	0
291	140	S6	WLZ	8.904	0	1.817	0
292	141	S6	DL	0	4116.155	0	-1570.406
293	141	S6	TL	0	1.565	0	-0.652
294	141	S6	WLX	76.087	0	46.603	0
295	142	S6	DL	0	-2202.247	0	2112.45
296	142	S6	TL	3.033	0	1.508	0
297	142	S6	WLZ	0	-8.904	0	1.817
298	143	S6	DL	0	-3973.587	0	3811.564

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
299	143	S6	TL	5.056	0	2.513	0
300	143	S6	FL	0	-248.269	0	161.519
301	143	S6	ELX	0	-126.908	75.44	0
302	144	S6	DL	0	-3973.587	0	-2833.536
303	144	S6	TL	5.056	0	0	-1.086
304	144	S6	FL	0	-248.269	0	-52.333
305	144	S6	ELZ	136.838	0	3.361	0
306	145	S6	DL	0	-3973.587	0	-2833.536
307	145	S6	TL	5.056	0	0	-1.086
308	145	S6	FL	0	-248.269	0	-52.333
309	145	S6	ELX	126.908	0	202.861	0
310	146	S6	DL	0	7426.916	0	3811.564
311	146	S6	TL	0	2.608	2.513	0
312	146	S6	FL	0	118.621	0	161.519
313	146	S6	ELZ	230.671	0	58.054	0
314	147	S6	DL	0	-3897.793	0	3738.861
315	147	S6	LL	0	-337.923	0	443.911
316	147	S6	TL	5.056	0	2.513	0
317	147	S6	FL	0	-235.833	0	153.429
318	147	S6	ELX	0	-95.181	56.58	0
319	148	S6	DL	0	-3897.793	0	-2779.488
320	148	S6	LL	0	-337.923	0	-409.98
321	148	S6	TL	5.056	0	0	-1.086
322	148	S6	FL	0	-235.833	0	-49.711
323	148	S6	ELZ	102.628	0	2.52	0
324	149	S6	DL	0	-3897.793	0	-2779.488
325	149	S6	LL	0	-337.923	0	-409.98
326	149	S6	TL	5.056	0	0	-1.086
327	149	S6	FL	0	-235.833	0	-49.711
328	149	S6	ELX	95.181	0	152.146	0
329	150	S6	DL	0	7285.251	0	3738.861
330	150	S6	LL	0	1127.035	0	443.911
331	150	S6	TL	0	2.608	2.513	0
332	150	S6	FL	0	112.68	0	153.429
333	150	S6	ELZ	173.003	0	43.54	0
334	151	S6	DL	0	-1899.071	0	1821.636
335	151	S6	TL	3.033	0	1.508	0
336	151	S6	FL	0	-107.035	0	69.635
337	151	S6	ELX	0	-126.908	75.44	0
338	152	S6	DL	0	-1899.071	0	-1354.213
339	152	S6	TL	3.033	0	0	-0.652
340	152	S6	FL	0	-107.035	0	-22.562
341	152	S6	ELZ	136.838	0	3.361	0
342	153	S6	DL	0	-1899.071	0	-1354.213
343	153	S6	TL	3.033	0	0	-0.652
344	153	S6	FL	0	-107.035	0	-22.562
345	153	S6	ELX	126.908	0	202.861	0
346	154	S6	DL	0	3549.498	0	1821.636
347	154	S6	TL	0	1.565	1.508	0
348	154	S6	FL	0	51.141	0	69.635
349	154	S6	ELZ	230.671	0	58.054	0
350	155	S6	DL	0	-1899.071	0	1821.636
351	155	S6	TL	3.033	0	1.508	0
352	155	S6	FL	0	-107.035	0	69.635
353	155	S6	ELX	0	-126.908	75.44	0
354	156	S6	DL	0	-1899.071	0	-1354.213
355	156	S6	TL	3.033	0	0	-0.652

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
356	156	S6	FL	0	-107.035	0	-22.562
357	156	S6	ELZ	136.838	0	3.361	0
358	157	S6	DL	0	-1899.071	0	-1354.213
359	157	S6	TL	3.033	0	0	-0.652
360	157	S6	FL	0	-107.035	0	-22.562
361	157	S6	ELX	126.908	0	202.861	0
362	158	S6	DL	0	3549.498	0	1821.636
363	158	S6	TL	0	1.565	1.508	0
364	158	S6	FL	0	51.141	0	69.635
365	158	S6	ELZ	230.671	0	58.054	0
366	160	S6	DL	0	6860.258	0	-2617.343
367	160	S6	TL	2.608	0	1.086	0
368	160	S6	FL	0	106.101	0	-46.809
369	161	S6	DL	0	6860.258	0	-2617.343
370	161	S6	LL	0	1502.713	0	-546.641
371	161	S6	TL	2.608	0	1.086	0
372	161	S6	FL	0	106.101	0	-46.809
373	162	S6	DL	0	6860.258	0	-2617.343
374	162	S6	TL	2.608	0	1.086	0
375	162	S6	FL	0	106.101	0	-46.809
376	163	S6	DL	0	6860.258	0	-2617.343
377	163	S6	TL	2.608	0	1.086	0
378	163	S6	FL	0	106.101	0	-46.809
379	164	S6	DL	0	6860.258	0	-2617.343
380	164	S6	TL	2.608	0	1.086	0
381	164	S6	FL	0	106.101	0	-46.809
382	165	S6	DL	0	6860.258	0	-2617.343
383	165	S6	LL	0	1127.035	0	-409.98
384	165	S6	TL	2.608	0	1.086	0
385	165	S6	FL	0	106.101	0	-46.809
386	166	S6	DL	0	6860.258	0	-2617.343
387	166	S6	LL	0	1127.035	0	-409.98
388	166	S6	TL	2.608	0	1.086	0
389	166	S6	FL	0	106.101	0	-46.809
390	167	S6	DL	0	6860.258	0	-2617.343
391	167	S6	LL	0	1127.035	0	-409.98
392	167	S6	TL	2.608	0	1.086	0
393	167	S6	FL	0	106.101	0	-46.809
394	168	S6	DL	0	6860.258	0	-2617.343
395	168	S6	TL	2.608	0	1.086	0
396	168	S6	WLX	0	76.087	0	-46.603
397	169	S6	DL	0	-3670.411	0	-2617.343
398	169	S6	TL	0	-5.056	1.086	0
399	169	S6	WLZ	8.904	0	0.487	0
400	170	S6	DL	0	6860.258	0	-2617.343
401	170	S6	TL	2.608	0	1.086	0
402	170	S6	WLX	76.087	0	46.603	0
403	171	S6	DL	0	6860.258	0	-2617.343
404	171	S6	TL	2.608	0	1.086	0
405	171	S6	WLZ	4.952	0	0	-0.487
406	172	S6	DL	0	6860.258	0	-2617.343
407	172	S6	LL	0	1127.035	0	-409.98
408	172	S6	TL	2.608	0	1.086	0
409	172	S6	FL	0	106.101	0	-46.809
410	172	S6	WLX	0	57.065	0	-34.952
411	173	S6	DL	0	-3670.411	0	-2617.343
412	173	S6	LL	0	-337.923	0	-409.98

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
413	173	S6	TL	0	-5.056	1.086	0
414	173	S6	FL	0	-222.065	0	-46.809
415	173	S6	WLZ	6.678	0	0.365	0
416	174	S6	DL	0	6860.258	0	-2617.343
417	174	S6	LL	0	1127.035	0	-409.98
418	174	S6	TL	2.608	0	1.086	0
419	174	S6	FL	0	106.101	0	-46.809
420	174	S6	WLX	57.065	0	34.952	0
421	175	S6	DL	0	6860.258	0	-2617.343
422	175	S6	LL	0	1127.035	0	-409.98
423	175	S6	TL	2.608	0	1.086	0
424	175	S6	FL	0	106.101	0	-46.809
425	175	S6	WLZ	3.714	0	0	-0.365
426	176	S6	DL	0	6860.258	0	-2617.343
427	176	S6	LL	0	1127.035	0	-409.98
428	176	S6	TL	2.608	0	1.086	0
429	176	S6	FL	0	106.101	0	-46.809
430	176	S6	WLX	0	57.065	0	-34.952
431	177	S6	DL	0	-3670.411	0	-2617.343
432	177	S6	LL	0	-337.923	0	-409.98
433	177	S6	TL	0	-5.056	1.086	0
434	177	S6	FL	0	-222.065	0	-46.809
435	177	S6	WLZ	6.678	0	0.365	0
436	178	S6	DL	0	6860.258	0	-2617.343
437	178	S6	LL	0	1127.035	0	-409.98
438	178	S6	TL	2.608	0	1.086	0
439	178	S6	FL	0	106.101	0	-46.809
440	178	S6	WLX	57.065	0	34.952	0
441	179	S6	DL	0	6860.258	0	-2617.343
442	179	S6	LL	0	1127.035	0	-409.98
443	179	S6	TL	2.608	0	1.086	0
444	179	S6	FL	0	106.101	0	-46.809
445	179	S6	WLZ	3.714	0	0	-0.365
446	180	S6	DL	0	6860.258	0	-2617.343
447	180	S6	LL	0	1127.035	0	-409.98
448	180	S6	TL	2.608	0	1.086	0
449	180	S6	FL	0	106.101	0	-46.809
450	180	S6	WLX	0	57.065	0	-34.952
451	181	S6	DL	0	-3670.411	0	-2617.343
452	181	S6	LL	0	-337.923	0	-409.98
453	181	S6	TL	0	-5.056	1.086	0
454	181	S6	FL	0	-222.065	0	-46.809
455	181	S6	WLZ	6.678	0	0.365	0
456	182	S6	DL	0	6860.258	0	-2617.343
457	182	S6	LL	0	1127.035	0	-409.98
458	182	S6	TL	2.608	0	1.086	0
459	182	S6	FL	0	106.101	0	-46.809
460	182	S6	WLX	57.065	0	34.952	0
461	183	S6	DL	0	6860.258	0	-2617.343
462	183	S6	LL	0	1127.035	0	-409.98
463	183	S6	TL	2.608	0	1.086	0
464	183	S6	FL	0	106.101	0	-46.809
465	183	S6	WLZ	3.714	0	0	-0.365
466	184	S6	DL	0	4116.155	0	-1570.406
467	184	S6	TL	1.565	0	0.652	0
468	184	S6	WLX	0	76.087	0	-46.603
469	185	S6	DL	0	-2202.247	0	2112.45

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
470	185	S6	TL	0	-3.033	0	1.508
471	185	S6	WLZ	8.904	0	1.817	0
472	186	S6	DL	0	4116.155	0	-1570.406
473	186	S6	TL	1.565	0	0.652	0
474	186	S6	WLX	76.087	0	46.603	0
475	187	S6	DL	0	4116.155	0	-1570.406
476	187	S6	TL	1.565	0	0.652	0
477	187	S6	WLZ	4.952	0	0	-0.487
478	188	S6	DL	0	4116.155	0	-1570.406
479	188	S6	TL	1.565	0	0.652	0
480	188	S6	WLX	0	76.087	0	-46.603
481	189	S6	DL	0	-2202.247	0	2112.45
482	189	S6	TL	0	-3.033	0	1.508
483	189	S6	WLZ	8.904	0	1.817	0
484	190	S6	DL	0	4116.155	0	-1570.406
485	190	S6	TL	1.565	0	0.652	0
486	190	S6	WLX	76.087	0	46.603	0
487	191	S6	DL	0	4116.155	0	-1570.406
488	191	S6	TL	1.565	0	0.652	0
489	191	S6	WLZ	4.952	0	0	-0.487
490	192	S6	DL	0	7426.916	0	3811.564
491	192	S6	TL	2.608	0	0	2.513
492	192	S6	FL	0	118.621	0	161.519
493	192	S6	ELX	0	91.698	75.44	0
494	193	S6	DL	0	-3973.587	0	-2833.536
495	193	S6	TL	0	-5.056	1.086	0
496	193	S6	FL	0	-248.269	0	-52.333
497	193	S6	ELZ	136.838	0	3.361	0
498	194	S6	DL	0	-3973.587	0	-2833.536
499	194	S6	TL	0	-5.056	1.086	0
500	194	S6	FL	0	-248.269	0	-52.333
501	194	S6	ELX	126.908	0	202.861	0
502	195	S6	DL	0	7426.916	0	3811.564
503	195	S6	TL	2.608	0	0	2.513
504	195	S6	FL	0	118.621	0	161.519
505	195	S6	ELZ	230.671	0	58.054	0
506	196	S6	DL	0	7285.251	0	3738.861
507	196	S6	LL	0	1127.035	0	443.911
508	196	S6	TL	2.608	0	0	2.513
509	196	S6	FL	0	112.68	0	153.429
510	196	S6	ELX	0	68.773	56.58	0
511	197	S6	DL	0	-3897.793	0	-2779.488
512	197	S6	LL	0	-337.923	0	-409.98
513	197	S6	TL	0	-5.056	1.086	0
514	197	S6	FL	0	-235.833	0	-49.711
515	197	S6	ELZ	102.628	0	2.52	0
516	198	S6	DL	0	-3897.793	0	-2779.488
517	198	S6	LL	0	-337.923	0	-409.98
518	198	S6	TL	0	-5.056	1.086	0
519	198	S6	FL	0	-235.833	0	-49.711
520	198	S6	ELX	95.181	0	152.146	0
521	199	S6	DL	0	7285.251	0	3738.861
522	199	S6	LL	0	1127.035	0	443.911
523	199	S6	TL	2.608	0	0	2.513
524	199	S6	FL	0	112.68	0	153.429
525	199	S6	ELZ	173.003	0	43.54	0
526	200	S6	DL	0	3549.498	0	1821.636

Slab Overturning by Category (Continued)

	LC	Slab	Category Descri...	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]
527	200	S6	TL	1.565	0	0	1.508
528	200	S6	FL	0	51.141	0	69.635
529	200	S6	ELX	0	91.698	75.44	0
530	201	S6	DL	0	-1899.071	0	-1354.213
531	201	S6	TL	0	-3.033	0.652	0
532	201	S6	FL	0	-107.035	0	-22.562
533	201	S6	ELZ	136.838	0	3.361	0
534	202	S6	DL	0	-1899.071	0	-1354.213
535	202	S6	TL	0	-3.033	0.652	0
536	202	S6	FL	0	-107.035	0	-22.562
537	202	S6	ELX	126.908	0	202.861	0
538	203	S6	DL	0	3549.498	0	1821.636
539	203	S6	TL	1.565	0	0	1.508
540	203	S6	FL	0	51.141	0	69.635
541	203	S6	ELZ	230.671	0	58.054	0
542	204	S6	DL	0	3549.498	0	1821.636
543	204	S6	TL	1.565	0	0	1.508
544	204	S6	FL	0	51.141	0	69.635
545	204	S6	ELX	0	91.698	75.44	0
546	205	S6	DL	0	-1899.071	0	-1354.213
547	205	S6	TL	0	-3.033	0.652	0
548	205	S6	FL	0	-107.035	0	-22.562
549	205	S6	ELZ	136.838	0	3.361	0
550	206	S6	DL	0	-1899.071	0	-1354.213
551	206	S6	TL	0	-3.033	0.652	0
552	206	S6	FL	0	-107.035	0	-22.562
553	206	S6	ELX	126.908	0	202.861	0
554	207	S6	DL	0	3549.498	0	1821.636
555	207	S6	TL	1.565	0	0	1.508
556	207	S6	FL	0	51.141	0	69.635
557	207	S6	ELZ	230.671	0	58.054	0

Slab Sliding by Category

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
1	52	S6	DL	0.076	92.071	0	92.071
2	52	S6	FL	0.036	2.869	0	2.869
3	53	S6	DL	0.076	92.071	0	92.071
4	53	S6	LL	0	17.078	0	17.078
5	53	S6	FL	0.036	2.869	0	2.869
6	54	S6	DL	0.076	92.071	0	92.071
7	54	S6	FL	0.036	2.869	0	2.869
8	55	S6	DL	0.076	92.071	0	92.071
9	55	S6	FL	0.036	2.869	0	2.869
10	56	S6	DL	0.076	92.071	0	92.071
11	56	S6	FL	0.036	2.869	0	2.869
12	57	S6	DL	0.076	92.071	0	92.071
13	57	S6	LL	0	12.808	0	12.808
14	57	S6	FL	0.036	2.869	0	2.869
15	58	S6	DL	0.076	92.071	0	92.071
16	58	S6	LL	0	12.808	0	12.808
17	58	S6	FL	0.036	2.869	0	2.869
18	59	S6	DL	0.076	92.071	0	92.071
19	59	S6	LL	0	12.808	0	12.808
20	59	S6	FL	0.036	2.869	0	2.869
21	60	S6	DL	0.076	92.071	0	92.071
22	60	S6	WLX	5.778	0.793	0	0.793

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
23	61	S6	DL	0.076	92.071	0	92.071
24	61	S6	WLZ	-0.029	0	0.785	0
25	62	S6	DL	0.076	92.071	0	92.071
26	62	S6	WLX	-6.571	0	-0.793	0
27	63	S6	DL	0.076	92.071	0	92.071
28	63	S6	WLZ	-0.006	0.035	-0.819	0.035
29	64	S6	DL	0.076	92.071	0	92.071
30	64	S6	LL	0	12.808	0	12.808
31	64	S6	FL	0.036	2.869	0	2.869
32	64	S6	WLX	4.334	0.595	0	0.595
33	65	S6	DL	0.076	92.071	0	92.071
34	65	S6	LL	0	12.808	0	12.808
35	65	S6	FL	0.036	2.869	0	2.869
36	65	S6	WLZ	-0.021	0	0.588	0
37	66	S6	DL	0.076	92.071	0	92.071
38	66	S6	LL	0	12.808	0	12.808
39	66	S6	FL	0.036	2.869	0	2.869
40	66	S6	WLX	-4.928	0	-0.595	0
41	67	S6	DL	0.076	92.071	0	92.071
42	67	S6	LL	0	12.808	0	12.808
43	67	S6	FL	0.036	2.869	0	2.869
44	67	S6	WLZ	-0.004	0.026	-0.614	0.026
45	68	S6	DL	0.076	92.071	0	92.071
46	68	S6	LL	0	12.808	0	12.808
47	68	S6	FL	0.036	2.869	0	2.869
48	68	S6	WLX	4.334	0.595	0	0.595
49	69	S6	DL	0.076	92.071	0	92.071
50	69	S6	LL	0	12.808	0	12.808
51	69	S6	FL	0.036	2.869	0	2.869
52	69	S6	WLZ	-0.021	0	0.588	0
53	70	S6	DL	0.076	92.071	0	92.071
54	70	S6	LL	0	12.808	0	12.808
55	70	S6	FL	0.036	2.869	0	2.869
56	70	S6	WLX	-4.928	0	-0.595	0
57	71	S6	DL	0.076	92.071	0	92.071
58	71	S6	LL	0	12.808	0	12.808
59	71	S6	FL	0.036	2.869	0	2.869
60	71	S6	WLZ	-0.004	0.026	-0.614	0.026
61	72	S6	DL	0.076	92.071	0	92.071
62	72	S6	LL	0	12.808	0	12.808
63	72	S6	FL	0.036	2.869	0	2.869
64	72	S6	WLX	4.334	0.595	0	0.595
65	73	S6	DL	0.076	92.071	0	92.071
66	73	S6	LL	0	12.808	0	12.808
67	73	S6	FL	0.036	2.869	0	2.869
68	73	S6	WLZ	-0.021	0	0.588	0
69	74	S6	DL	0.076	92.071	0	92.071
70	74	S6	LL	0	12.808	0	12.808
71	74	S6	FL	0.036	2.869	0	2.869
72	74	S6	WLX	-4.928	0	-0.595	0
73	75	S6	DL	0.076	92.071	0	92.071
74	75	S6	LL	0	12.808	0	12.808
75	75	S6	FL	0.036	2.869	0	2.869
76	75	S6	WLZ	-0.004	0.026	-0.614	0.026
77	76	S6	DL	0.045	55.243	0	55.243
78	76	S6	WLX	5.778	0.793	0	0.793
79	77	S6	DL	0.045	55.243	0	55.243

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
80	77	S6	WLZ	-0.029	0	0.785	0
81	78	S6	DL	0.045	55.243	0	55.243
82	78	S6	WLX	-6.571	0	-0.793	0
83	79	S6	DL	0.045	55.243	0	55.243
84	79	S6	WLZ	-0.006	0.035	-0.819	0.035
85	80	S6	DL	0.045	55.243	0	55.243
86	80	S6	WLX	5.778	0.793	0	0.793
87	81	S6	DL	0.045	55.243	0	55.243
88	81	S6	WLZ	-0.029	0	0.785	0
89	82	S6	DL	0.045	55.243	0	55.243
90	82	S6	WLX	-6.571	0	-0.793	0
91	83	S6	DL	0.045	55.243	0	55.243
92	83	S6	WLZ	-0.006	0.035	-0.819	0.035
93	84	S6	DL	0.082	99.677	0	99.677
94	84	S6	FL	0.04	3.208	0	3.208
95	84	S6	ELX	55.278	1.911	0	1.911
96	85	S6	DL	0.082	99.677	0	99.677
97	85	S6	FL	0.04	3.208	0	3.208
98	85	S6	ELZ	0.052	0.82	70.976	0.82
99	86	S6	DL	0.082	99.677	0	99.677
100	86	S6	FL	0.04	3.208	0	3.208
101	86	S6	ELX	-57.189	0	-1.911	0
102	87	S6	DL	0.082	99.677	0	99.677
103	87	S6	FL	0.04	3.208	0	3.208
104	87	S6	ELZ	-0.872	0	-71.797	0
105	88	S6	DL	0.08	97.775	0	97.775
106	88	S6	LL	0	12.808	0	12.808
107	88	S6	FL	0.038	3.047	0	3.047
108	88	S6	ELX	41.458	1.433	0	1.433
109	89	S6	DL	0.08	97.775	0	97.775
110	89	S6	LL	0	12.808	0	12.808
111	89	S6	FL	0.038	3.047	0	3.047
112	89	S6	ELZ	0.039	0.615	53.232	0.615
113	90	S6	DL	0.08	97.775	0	97.775
114	90	S6	LL	0	12.808	0	12.808
115	90	S6	FL	0.038	3.047	0	3.047
116	90	S6	ELX	-42.892	0	-1.433	0
117	91	S6	DL	0.08	97.775	0	97.775
118	91	S6	LL	0	12.808	0	12.808
119	91	S6	FL	0.038	3.047	0	3.047
120	91	S6	ELZ	-0.654	0	-53.847	0
121	92	S6	DL	0.039	47.638	0	47.638
122	92	S6	FL	0.017	1.383	0	1.383
123	92	S6	ELX	55.278	1.911	0	1.911
124	93	S6	DL	0.039	47.638	0	47.638
125	93	S6	FL	0.017	1.383	0	1.383
126	93	S6	ELZ	0.052	0.82	70.976	0.82
127	94	S6	DL	0.039	47.638	0	47.638
128	94	S6	FL	0.017	1.383	0	1.383
129	94	S6	ELX	-57.189	0	-1.911	0
130	95	S6	DL	0.039	47.638	0	47.638
131	95	S6	FL	0.017	1.383	0	1.383
132	95	S6	ELZ	-0.872	0	-71.797	0
133	96	S6	DL	0.039	47.638	0	47.638
134	96	S6	FL	0.017	1.383	0	1.383
135	96	S6	ELX	55.278	1.911	0	1.911
136	97	S6	DL	0.039	47.638	0	47.638

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
137	97	S6	FL	0.017	1.383	0	1.383
138	97	S6	ELZ	0.052	0.82	70.976	0.82
139	98	S6	DL	0.039	47.638	0	47.638
140	98	S6	FL	0.017	1.383	0	1.383
141	98	S6	ELX	-57.189	0	-1.911	0
142	99	S6	DL	0.039	47.638	0	47.638
143	99	S6	FL	0.017	1.383	0	1.383
144	99	S6	ELZ	-0.872	0	-71.797	0
145	101	S6	DL	0.076	92.071	0	92.071
146	101	S6	OL1	0.111	10.331	0	10.331
147	102	S6	DL	0.076	92.071	0	92.071
148	102	S6	LL	0	17.078	0	17.078
149	102	S6	OL1	0.111	10.331	0	10.331
150	103	S6	DL	0.076	92.071	0	92.071
151	103	S6	WLX	0.519	0.071	0	0.071
152	103	S6	OL1	0.111	10.331	0	10.331
153	104	S6	DL	0.076	92.071	0	92.071
154	104	S6	WLZ	-0.003	0	0.07	0
155	104	S6	OL1	0.111	10.331	0	10.331
156	105	S6	DL	0.076	92.071	0	92.071
157	105	S6	WLX	-0.591	0	-0.071	0
158	105	S6	OL1	0.111	10.331	0	10.331
159	106	S6	DL	0.076	92.071	0	92.071
160	106	S6	WLZ	-0.001	0.003	-0.074	0.003
161	106	S6	OL1	0.111	10.331	0	10.331
162	107	S6	DL	0.045	55.243	0	55.243
163	107	S6	WLX	0.519	0.071	0	0.071
164	107	S6	OL1	0.111	10.331	0	10.331
165	108	S6	DL	0.045	55.243	0	55.243
166	108	S6	WLZ	-0.003	0	0.07	0
167	108	S6	OL1	0.111	10.331	0	10.331
168	109	S6	DL	0.045	55.243	0	55.243
169	109	S6	WLX	-0.591	0	-0.071	0
170	109	S6	OL1	0.111	10.331	0	10.331
171	110	S6	DL	0.045	55.243	0	55.243
172	110	S6	WLZ	-0.001	0.003	-0.074	0.003
173	110	S6	OL1	0.111	10.331	0	10.331
174	111	S6	DL	0.076	92.071	0	92.071
175	111	S6	TL	-0.002	0	0.649	0
176	111	S6	FL	0.036	2.869	0	2.869
177	112	S6	DL	0.076	92.071	0	92.071
178	112	S6	LL	0	17.078	0	17.078
179	112	S6	TL	-0.002	0	0.649	0
180	112	S6	FL	0.036	2.869	0	2.869
181	113	S6	DL	0.076	92.071	0	92.071
182	113	S6	TL	-0.002	0	0.649	0
183	113	S6	FL	0.036	2.869	0	2.869
184	114	S6	DL	0.076	92.071	0	92.071
185	114	S6	TL	-0.002	0	0.649	0
186	114	S6	FL	0.036	2.869	0	2.869
187	115	S6	DL	0.076	92.071	0	92.071
188	115	S6	TL	-0.002	0	0.649	0
189	115	S6	FL	0.036	2.869	0	2.869
190	116	S6	DL	0.076	92.071	0	92.071
191	116	S6	LL	0	12.808	0	12.808
192	116	S6	TL	-0.002	0	0.649	0
193	116	S6	FL	0.036	2.869	0	2.869

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
194	117	S6	DL	0.076	92.071	0	92.071
195	117	S6	LL	0	12.808	0	12.808
196	117	S6	TL	-0.002	0	0.649	0
197	117	S6	FL	0.036	2.869	0	2.869
198	118	S6	DL	0.076	92.071	0	92.071
199	118	S6	LL	0	12.808	0	12.808
200	118	S6	TL	-0.002	0	0.649	0
201	118	S6	FL	0.036	2.869	0	2.869
202	119	S6	DL	0.076	92.071	0	92.071
203	119	S6	TL	-0.002	0	0.649	0
204	119	S6	WLX	5.778	0.793	0	0.793
205	120	S6	DL	0.076	92.071	0	92.071
206	120	S6	TL	-0.002	0	0.649	0
207	120	S6	WLZ	-0.029	0	0.785	0
208	121	S6	DL	0.076	92.071	0	92.071
209	121	S6	TL	-0.002	0	0.649	0
210	121	S6	WLX	-6.571	0	-0.793	0
211	122	S6	DL	0.076	92.071	0	92.071
212	122	S6	TL	-0.002	0	0.649	0
213	122	S6	WLZ	-0.006	0.035	-0.819	0.035
214	123	S6	DL	0.076	92.071	0	92.071
215	123	S6	LL	0	12.808	0	12.808
216	123	S6	TL	-0.002	0	0.649	0
217	123	S6	FL	0.036	2.869	0	2.869
218	123	S6	WLX	4.334	0.595	0	0.595
219	124	S6	DL	0.076	92.071	0	92.071
220	124	S6	LL	0	12.808	0	12.808
221	124	S6	TL	-0.002	0	0.649	0
222	124	S6	FL	0.036	2.869	0	2.869
223	124	S6	WLZ	-0.021	0	0.588	0
224	125	S6	DL	0.076	92.071	0	92.071
225	125	S6	LL	0	12.808	0	12.808
226	125	S6	TL	-0.002	0	0.649	0
227	125	S6	FL	0.036	2.869	0	2.869
228	125	S6	WLX	-4.928	0	-0.595	0
229	126	S6	DL	0.076	92.071	0	92.071
230	126	S6	LL	0	12.808	0	12.808
231	126	S6	TL	-0.002	0	0.649	0
232	126	S6	FL	0.036	2.869	0	2.869
233	126	S6	WLZ	-0.004	0.026	-0.614	0.026
234	127	S6	DL	0.076	92.071	0	92.071
235	127	S6	LL	0	12.808	0	12.808
236	127	S6	TL	-0.002	0	0.649	0
237	127	S6	FL	0.036	2.869	0	2.869
238	127	S6	WLX	4.334	0.595	0	0.595
239	128	S6	DL	0.076	92.071	0	92.071
240	128	S6	LL	0	12.808	0	12.808
241	128	S6	TL	-0.002	0	0.649	0
242	128	S6	FL	0.036	2.869	0	2.869
243	128	S6	WLZ	-0.021	0	0.588	0
244	129	S6	DL	0.076	92.071	0	92.071
245	129	S6	LL	0	12.808	0	12.808
246	129	S6	TL	-0.002	0	0.649	0
247	129	S6	FL	0.036	2.869	0	2.869
248	129	S6	WLX	-4.928	0	-0.595	0
249	130	S6	DL	0.076	92.071	0	92.071
250	130	S6	LL	0	12.808	0	12.808

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
251	130	S6	TL	-0.002	0	0.649	0
252	130	S6	FL	0.036	2.869	0	2.869
253	130	S6	WLZ	-0.004	0.026	-0.614	0.026
254	131	S6	DL	0.076	92.071	0	92.071
255	131	S6	LL	0	12.808	0	12.808
256	131	S6	TL	-0.002	0	0.649	0
257	131	S6	FL	0.036	2.869	0	2.869
258	131	S6	WLX	4.334	0.595	0	0.595
259	132	S6	DL	0.076	92.071	0	92.071
260	132	S6	LL	0	12.808	0	12.808
261	132	S6	TL	-0.002	0	0.649	0
262	132	S6	FL	0.036	2.869	0	2.869
263	132	S6	WLZ	-0.021	0	0.588	0
264	133	S6	DL	0.076	92.071	0	92.071
265	133	S6	LL	0	12.808	0	12.808
266	133	S6	TL	-0.002	0	0.649	0
267	133	S6	FL	0.036	2.869	0	2.869
268	133	S6	WLX	-4.928	0	-0.595	0
269	134	S6	DL	0.076	92.071	0	92.071
270	134	S6	LL	0	12.808	0	12.808
271	134	S6	TL	-0.002	0	0.649	0
272	134	S6	FL	0.036	2.869	0	2.869
273	134	S6	WLZ	-0.004	0.026	-0.614	0.026
274	135	S6	DL	0.045	55.243	0	55.243
275	135	S6	TL	-0.001	0	0.389	0
276	135	S6	WLX	5.778	0.793	0	0.793
277	136	S6	DL	0.045	55.243	0	55.243
278	136	S6	TL	-0.001	0	0.389	0
279	136	S6	WLZ	-0.029	0	0.785	0
280	137	S6	DL	0.045	55.243	0	55.243
281	137	S6	TL	-0.001	0	0.389	0
282	137	S6	WLX	-6.571	0	-0.793	0
283	138	S6	DL	0.045	55.243	0	55.243
284	138	S6	TL	-0.001	0	0.389	0
285	138	S6	WLZ	-0.006	0.035	-0.819	0.035
286	139	S6	DL	0.045	55.243	0	55.243
287	139	S6	TL	-0.001	0	0.389	0
288	139	S6	WLX	5.778	0.793	0	0.793
289	140	S6	DL	0.045	55.243	0	55.243
290	140	S6	TL	-0.001	0	0.389	0
291	140	S6	WLZ	-0.029	0	0.785	0
292	141	S6	DL	0.045	55.243	0	55.243
293	141	S6	TL	-0.001	0	0.389	0
294	141	S6	WLX	-6.571	0	-0.793	0
295	142	S6	DL	0.045	55.243	0	55.243
296	142	S6	TL	-0.001	0	0.389	0
297	142	S6	WLZ	-0.006	0.035	-0.819	0.035
298	143	S6	DL	0.082	99.677	0	99.677
299	143	S6	TL	-0.002	0	0.649	0
300	143	S6	FL	0.04	3.208	0	3.208
301	143	S6	ELX	55.278	1.911	0	1.911
302	144	S6	DL	0.082	99.677	0	99.677
303	144	S6	TL	-0.002	0	0.649	0
304	144	S6	FL	0.04	3.208	0	3.208
305	144	S6	ELZ	0.052	0.82	70.976	0.82
306	145	S6	DL	0.082	99.677	0	99.677
307	145	S6	TL	-0.002	0	0.649	0

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
308	145	S6	FL	0.04	3.208	0	3.208
309	145	S6	ELX	-57.189	0	-1.911	0
310	146	S6	DL	0.082	99.677	0	99.677
311	146	S6	TL	-0.002	0	0.649	0
312	146	S6	FL	0.04	3.208	0	3.208
313	146	S6	ELZ	-0.872	0	-71.797	0
314	147	S6	DL	0.08	97.775	0	97.775
315	147	S6	LL	0	12.808	0	12.808
316	147	S6	TL	-0.002	0	0.649	0
317	147	S6	FL	0.038	3.047	0	3.047
318	147	S6	ELX	41.458	1.433	0	1.433
319	148	S6	DL	0.08	97.775	0	97.775
320	148	S6	LL	0	12.808	0	12.808
321	148	S6	TL	-0.002	0	0.649	0
322	148	S6	FL	0.038	3.047	0	3.047
323	148	S6	ELZ	0.039	0.615	53.232	0.615
324	149	S6	DL	0.08	97.775	0	97.775
325	149	S6	LL	0	12.808	0	12.808
326	149	S6	TL	-0.002	0	0.649	0
327	149	S6	FL	0.038	3.047	0	3.047
328	149	S6	ELX	-42.892	0	-1.433	0
329	150	S6	DL	0.08	97.775	0	97.775
330	150	S6	LL	0	12.808	0	12.808
331	150	S6	TL	-0.002	0	0.649	0
332	150	S6	FL	0.038	3.047	0	3.047
333	150	S6	ELZ	-0.654	0	-53.847	0
334	151	S6	DL	0.039	47.638	0	47.638
335	151	S6	TL	-0.001	0	0.389	0
336	151	S6	FL	0.017	1.383	0	1.383
337	151	S6	ELX	55.278	1.911	0	1.911
338	152	S6	DL	0.039	47.638	0	47.638
339	152	S6	TL	-0.001	0	0.389	0
340	152	S6	FL	0.017	1.383	0	1.383
341	152	S6	ELZ	0.052	0.82	70.976	0.82
342	153	S6	DL	0.039	47.638	0	47.638
343	153	S6	TL	-0.001	0	0.389	0
344	153	S6	FL	0.017	1.383	0	1.383
345	153	S6	ELX	-57.189	0	-1.911	0
346	154	S6	DL	0.039	47.638	0	47.638
347	154	S6	TL	-0.001	0	0.389	0
348	154	S6	FL	0.017	1.383	0	1.383
349	154	S6	ELZ	-0.872	0	-71.797	0
350	155	S6	DL	0.039	47.638	0	47.638
351	155	S6	TL	-0.001	0	0.389	0
352	155	S6	FL	0.017	1.383	0	1.383
353	155	S6	ELX	55.278	1.911	0	1.911
354	156	S6	DL	0.039	47.638	0	47.638
355	156	S6	TL	-0.001	0	0.389	0
356	156	S6	FL	0.017	1.383	0	1.383
357	156	S6	ELZ	0.052	0.82	70.976	0.82
358	157	S6	DL	0.039	47.638	0	47.638
359	157	S6	TL	-0.001	0	0.389	0
360	157	S6	FL	0.017	1.383	0	1.383
361	157	S6	ELX	-57.189	0	-1.911	0
362	158	S6	DL	0.039	47.638	0	47.638
363	158	S6	TL	-0.001	0	0.389	0
364	158	S6	FL	0.017	1.383	0	1.383

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
365	158	S6	ELZ	-0.872	0	-71.797	0
366	160	S6	DL	0.076	92.071	0	92.071
367	160	S6	TL	-0.019	0.021	-0.67	0.021
368	160	S6	FL	0.036	2.869	0	2.869
369	161	S6	DL	0.076	92.071	0	92.071
370	161	S6	LL	0	17.078	0	17.078
371	161	S6	TL	-0.019	0.021	-0.67	0.021
372	161	S6	FL	0.036	2.869	0	2.869
373	162	S6	DL	0.076	92.071	0	92.071
374	162	S6	TL	-0.019	0.021	-0.67	0.021
375	162	S6	FL	0.036	2.869	0	2.869
376	163	S6	DL	0.076	92.071	0	92.071
377	163	S6	TL	-0.019	0.021	-0.67	0.021
378	163	S6	FL	0.036	2.869	0	2.869
379	164	S6	DL	0.076	92.071	0	92.071
380	164	S6	TL	-0.019	0.021	-0.67	0.021
381	164	S6	FL	0.036	2.869	0	2.869
382	165	S6	DL	0.076	92.071	0	92.071
383	165	S6	LL	0	12.808	0	12.808
384	165	S6	TL	-0.019	0.021	-0.67	0.021
385	165	S6	FL	0.036	2.869	0	2.869
386	166	S6	DL	0.076	92.071	0	92.071
387	166	S6	LL	0	12.808	0	12.808
388	166	S6	TL	-0.019	0.021	-0.67	0.021
389	166	S6	FL	0.036	2.869	0	2.869
390	167	S6	DL	0.076	92.071	0	92.071
391	167	S6	LL	0	12.808	0	12.808
392	167	S6	TL	-0.019	0.021	-0.67	0.021
393	167	S6	FL	0.036	2.869	0	2.869
394	168	S6	DL	0.076	92.071	0	92.071
395	168	S6	TL	-0.019	0.021	-0.67	0.021
396	168	S6	WLX	5.778	0.793	0	0.793
397	169	S6	DL	0.076	92.071	0	92.071
398	169	S6	TL	-0.019	0.021	-0.67	0.021
399	169	S6	WLZ	-0.029	0	0.785	0
400	170	S6	DL	0.076	92.071	0	92.071
401	170	S6	TL	-0.019	0.021	-0.67	0.021
402	170	S6	WLX	-6.571	0	-0.793	0
403	171	S6	DL	0.076	92.071	0	92.071
404	171	S6	TL	-0.019	0.021	-0.67	0.021
405	171	S6	WLZ	-0.006	0.035	-0.819	0.035
406	172	S6	DL	0.076	92.071	0	92.071
407	172	S6	LL	0	12.808	0	12.808
408	172	S6	TL	-0.019	0.021	-0.67	0.021
409	172	S6	FL	0.036	2.869	0	2.869
410	172	S6	WLX	4.334	0.595	0	0.595
411	173	S6	DL	0.076	92.071	0	92.071
412	173	S6	LL	0	12.808	0	12.808
413	173	S6	TL	-0.019	0.021	-0.67	0.021
414	173	S6	FL	0.036	2.869	0	2.869
415	173	S6	WLZ	-0.021	0	0.588	0
416	174	S6	DL	0.076	92.071	0	92.071
417	174	S6	LL	0	12.808	0	12.808
418	174	S6	TL	-0.019	0.021	-0.67	0.021
419	174	S6	FL	0.036	2.869	0	2.869
420	174	S6	WLX	-4.928	0	-0.595	0
421	175	S6	DL	0.076	92.071	0	92.071

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
422	175	S6	LL	0	12.808	0	12.808
423	175	S6	TL	-0.019	0.021	-0.67	0.021
424	175	S6	FL	0.036	2.869	0	2.869
425	175	S6	WLZ	-0.004	0.026	-0.614	0.026
426	176	S6	DL	0.076	92.071	0	92.071
427	176	S6	LL	0	12.808	0	12.808
428	176	S6	TL	-0.019	0.021	-0.67	0.021
429	176	S6	FL	0.036	2.869	0	2.869
430	176	S6	WLX	4.334	0.595	0	0.595
431	177	S6	DL	0.076	92.071	0	92.071
432	177	S6	LL	0	12.808	0	12.808
433	177	S6	TL	-0.019	0.021	-0.67	0.021
434	177	S6	FL	0.036	2.869	0	2.869
435	177	S6	WLZ	-0.021	0	0.588	0
436	178	S6	DL	0.076	92.071	0	92.071
437	178	S6	LL	0	12.808	0	12.808
438	178	S6	TL	-0.019	0.021	-0.67	0.021
439	178	S6	FL	0.036	2.869	0	2.869
440	178	S6	WLX	-4.928	0	-0.595	0
441	179	S6	DL	0.076	92.071	0	92.071
442	179	S6	LL	0	12.808	0	12.808
443	179	S6	TL	-0.019	0.021	-0.67	0.021
444	179	S6	FL	0.036	2.869	0	2.869
445	179	S6	WLZ	-0.004	0.026	-0.614	0.026
446	180	S6	DL	0.076	92.071	0	92.071
447	180	S6	LL	0	12.808	0	12.808
448	180	S6	TL	-0.019	0.021	-0.67	0.021
449	180	S6	FL	0.036	2.869	0	2.869
450	180	S6	WLX	4.334	0.595	0	0.595
451	181	S6	DL	0.076	92.071	0	92.071
452	181	S6	LL	0	12.808	0	12.808
453	181	S6	TL	-0.019	0.021	-0.67	0.021
454	181	S6	FL	0.036	2.869	0	2.869
455	181	S6	WLZ	-0.021	0	0.588	0
456	182	S6	DL	0.076	92.071	0	92.071
457	182	S6	LL	0	12.808	0	12.808
458	182	S6	TL	-0.019	0.021	-0.67	0.021
459	182	S6	FL	0.036	2.869	0	2.869
460	182	S6	WLX	-4.928	0	-0.595	0
461	183	S6	DL	0.076	92.071	0	92.071
462	183	S6	LL	0	12.808	0	12.808
463	183	S6	TL	-0.019	0.021	-0.67	0.021
464	183	S6	FL	0.036	2.869	0	2.869
465	183	S6	WLZ	-0.004	0.026	-0.614	0.026
466	184	S6	DL	0.045	55.243	0	55.243
467	184	S6	TL	-0.011	0.013	-0.402	0.013
468	184	S6	WLX	5.778	0.793	0	0.793
469	185	S6	DL	0.045	55.243	0	55.243
470	185	S6	TL	-0.011	0.013	-0.402	0.013
471	185	S6	WLZ	-0.029	0	0.785	0
472	186	S6	DL	0.045	55.243	0	55.243
473	186	S6	TL	-0.011	0.013	-0.402	0.013
474	186	S6	WLX	-6.571	0	-0.793	0
475	187	S6	DL	0.045	55.243	0	55.243
476	187	S6	TL	-0.011	0.013	-0.402	0.013
477	187	S6	WLZ	-0.006	0.035	-0.819	0.035
478	188	S6	DL	0.045	55.243	0	55.243

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
479	188	S6	TL	-0.011	0.013	-0.402	0.013
480	188	S6	WLX	5.778	0.793	0	0.793
481	189	S6	DL	0.045	55.243	0	55.243
482	189	S6	TL	-0.011	0.013	-0.402	0.013
483	189	S6	WLZ	-0.029	0	0.785	0
484	190	S6	DL	0.045	55.243	0	55.243
485	190	S6	TL	-0.011	0.013	-0.402	0.013
486	190	S6	WLX	-6.571	0	-0.793	0
487	191	S6	DL	0.045	55.243	0	55.243
488	191	S6	TL	-0.011	0.013	-0.402	0.013
489	191	S6	WLZ	-0.006	0.035	-0.819	0.035
490	192	S6	DL	0.082	99.677	0	99.677
491	192	S6	TL	-0.019	0.021	-0.67	0.021
492	192	S6	FL	0.04	3.208	0	3.208
493	192	S6	ELX	55.278	1.911	0	1.911
494	193	S6	DL	0.082	99.677	0	99.677
495	193	S6	TL	-0.019	0.021	-0.67	0.021
496	193	S6	FL	0.04	3.208	0	3.208
497	193	S6	ELZ	0.052	0.82	70.976	0.82
498	194	S6	DL	0.082	99.677	0	99.677
499	194	S6	TL	-0.019	0.021	-0.67	0.021
500	194	S6	FL	0.04	3.208	0	3.208
501	194	S6	ELX	-57.189	0	-1.911	0
502	195	S6	DL	0.082	99.677	0	99.677
503	195	S6	TL	-0.019	0.021	-0.67	0.021
504	195	S6	FL	0.04	3.208	0	3.208
505	195	S6	ELZ	-0.872	0	-71.797	0
506	196	S6	DL	0.08	97.775	0	97.775
507	196	S6	LL	0	12.808	0	12.808
508	196	S6	TL	-0.019	0.021	-0.67	0.021
509	196	S6	FL	0.038	3.047	0	3.047
510	196	S6	ELX	41.458	1.433	0	1.433
511	197	S6	DL	0.08	97.775	0	97.775
512	197	S6	LL	0	12.808	0	12.808
513	197	S6	TL	-0.019	0.021	-0.67	0.021
514	197	S6	FL	0.038	3.047	0	3.047
515	197	S6	ELZ	0.039	0.615	53.232	0.615
516	198	S6	DL	0.08	97.775	0	97.775
517	198	S6	LL	0	12.808	0	12.808
518	198	S6	TL	-0.019	0.021	-0.67	0.021
519	198	S6	FL	0.038	3.047	0	3.047
520	198	S6	ELX	-42.892	0	-1.433	0
521	199	S6	DL	0.08	97.775	0	97.775
522	199	S6	LL	0	12.808	0	12.808
523	199	S6	TL	-0.019	0.021	-0.67	0.021
524	199	S6	FL	0.038	3.047	0	3.047
525	199	S6	ELZ	-0.654	0	-53.847	0
526	200	S6	DL	0.039	47.638	0	47.638
527	200	S6	TL	-0.011	0.013	-0.402	0.013
528	200	S6	FL	0.017	1.383	0	1.383
529	200	S6	ELX	55.278	1.911	0	1.911
530	201	S6	DL	0.039	47.638	0	47.638
531	201	S6	TL	-0.011	0.013	-0.402	0.013
532	201	S6	FL	0.017	1.383	0	1.383
533	201	S6	ELZ	0.052	0.82	70.976	0.82
534	202	S6	DL	0.039	47.638	0	47.638
535	202	S6	TL	-0.011	0.013	-0.402	0.013

Slab Sliding by Category (Continued)

	LC	Slab	Category Descri...	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]
536	202	S6	FL	0.017	1.383	0	1.383
537	202	S6	ELX	-57.189	0	-1.911	0
538	203	S6	DL	0.039	47.638	0	47.638
539	203	S6	TL	-0.011	0.013	-0.402	0.013
540	203	S6	FL	0.017	1.383	0	1.383
541	203	S6	ELZ	-0.872	0	-71.797	0
542	204	S6	DL	0.039	47.638	0	47.638
543	204	S6	TL	-0.011	0.013	-0.402	0.013
544	204	S6	FL	0.017	1.383	0	1.383
545	204	S6	ELX	55.278	1.911	0	1.911
546	205	S6	DL	0.039	47.638	0	47.638
547	205	S6	TL	-0.011	0.013	-0.402	0.013
548	205	S6	FL	0.017	1.383	0	1.383
549	205	S6	ELZ	0.052	0.82	70.976	0.82
550	206	S6	DL	0.039	47.638	0	47.638
551	206	S6	TL	-0.011	0.013	-0.402	0.013
552	206	S6	FL	0.017	1.383	0	1.383
553	206	S6	ELX	-57.189	0	-1.911	0
554	207	S6	DL	0.039	47.638	0	47.638
555	207	S6	TL	-0.011	0.013	-0.402	0.013
556	207	S6	FL	0.017	1.383	0	1.383
557	207	S6	ELZ	-0.872	0	-71.797	0

Envelope Slab Soil Pressures

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]	Point
1	S6	0	52	0	3	R3D_S8

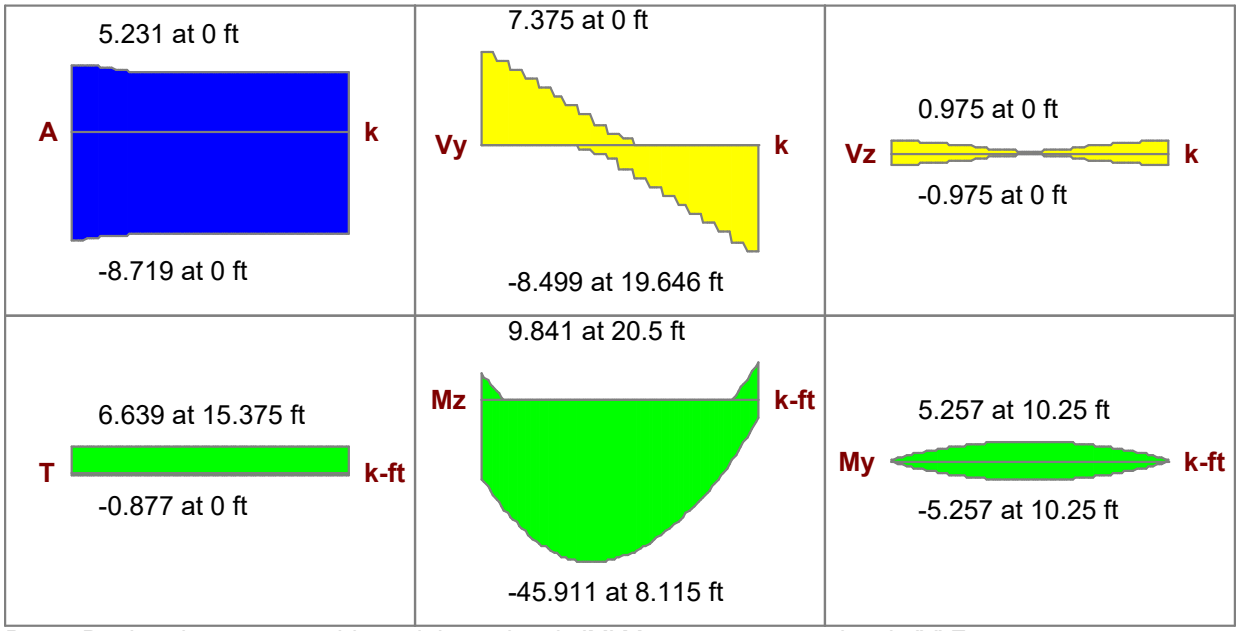
Material Takeoff

	Material	Quantity	Volume[yds^3]	Weight[K]
1	Piles			
2	Pile 1	7	N/A	N/A
3	Total Piles	7	N/A	N/A
4				
5	Slabs			
6	Conc 6000NW	1	45.8	179.2
7				
8	Beams			
9	Conc 6000NW	1	2.8	11.1
10				
11	Pedestals			
12	Conc4000NW	2	0.1	0.4
13	Conc 6000NW	5	0.2	0.9
14				
15	Totals			
16	Conc4000NW		0.1	0.4
17	Conc 6000NW		48.8	191.2
18	Total Concrete		48.9	191.6

18 Inch Wide Concrete Beams

Beam: **B2**
Shape: **CRECT30X18** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **20.5 ft**
Start: **N109**
End: **N108**

Code Check: **0.300 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.064 (LC 46)**	Bot Bending Check	**0.300 (LC 42)**	Shear Check	**0.158 (y) (LC 42)**
Location	**20.5 ft**	Location	**8.115 ft**	Location	**19.646 ft**
Gov Mu Top	**9.841 k-ft**	Gov Mu Bot	**-45.911 k-ft**	Gov Vu	**8.499 k**
phi*Mn Top	**0 k-ft**	phi*Mn Bot	**153.229 k-ft**	phi*Vn	**53.746 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 20.5**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N108**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #6
	Left	B	-
	Mid	T	-
	Mid	B	3 #6
	Right	T	3 #6
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	170.255	0.0039	0.0264	0.0028	1.325	0.059
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	8.1	B	170.255	0.0039	0.0264	0.0028	1.325	0.394
	20.5	T	170.255	0.0039	0.0264	0.0028	1.325	0.084
	20.5	B	0	0	0	0	0	0

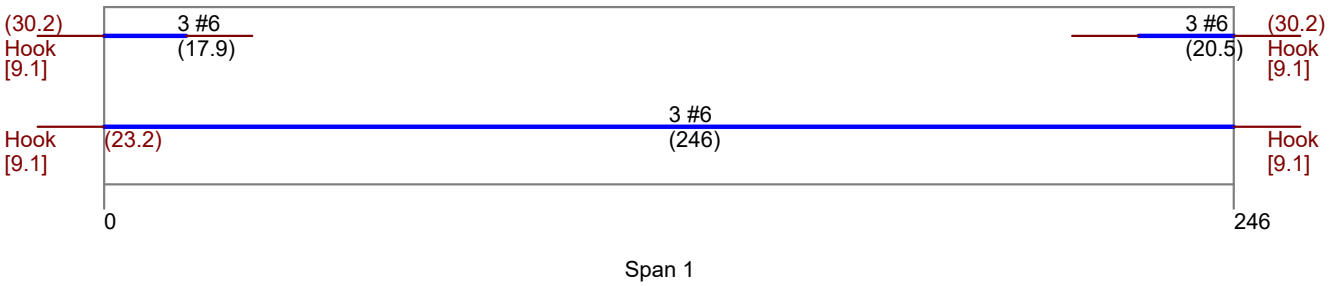
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 5.1	
	5.1 - 10.3	
	10.3 - 15.4	
	15.4 - 20.5	

Shear Span Results

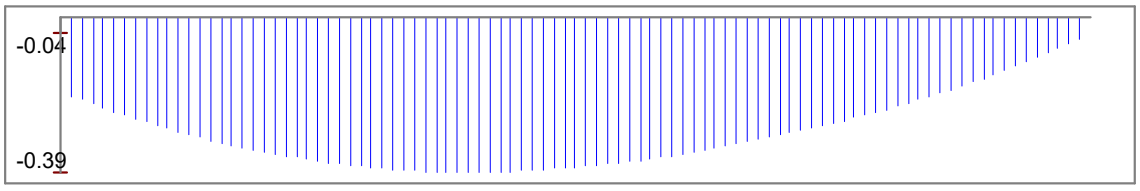
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 5.1	71.661	71.661	0	0	0
	5.1 - 10.3	71.661	71.661	0	0	0
	10.3 - 15.4	71.661	71.661	0	0	0
	15.4 - 20.5	71.661	71.661	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

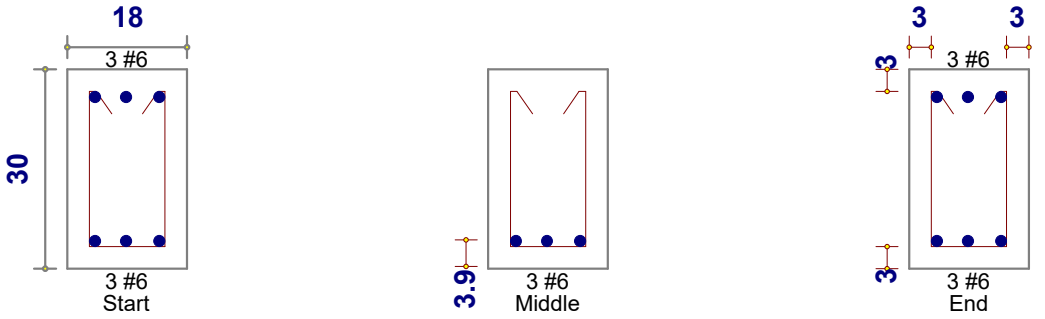


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

BURNS McDONNELL

CONCRETE BEAM SHEAR CHECK

		OK	OK
153929 - PDX Fuel Facility	**Designer:**	**A. Kral**	
Utility Corridor 18" Wide Beam		**12/20/2023**	
One-Way Shear Calc following ACI 318-19			
Max Load From Risa File =	9	kips	
Vu =	9	kips	
h = Beam Depth =	30	in	
Top Reinforcement Cover =	2	in	
Side Reinforcement Cover =	3	in	
Bottom Reinforcement Cover =	3	in	
Quantity of Bars Top =	2.0		
Top Bar Size =	7		
Quantity of Bars Bottom =	2.0		
Top Bar Size =	7		
As provided =	2.405	in^2	
dbtop = Diameter of Bar =	0.88		
dtop = t-top cover - dbtop =	27.13	in	
dbot =	27.00	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Beam Width = bw =	18.00	in	1.50
Ag =	540	in^2	
ϕ =	0.75		ACI 318-19 - Table 21.2.1
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1
Provide Shear Stirrups?	Yes		
λs = √(2/(1+(d/10))≤1	1.000		ACI 318-19 - 22.5.5.1.3
Axial Load Along Member = Nu =	-11	kips	Tension entered as negative
0.05*f'c =	300	psi	ACI 318-19 - 22.5.5.1.2
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2
ρ_w = As / (bw*d) =	0.0049		
dtop = t-top cover - dbtop =	27.125	in	
Nu/(6*Ag) =	-3.395	psi	
$(\rho w)^{1/3}$ =	0.170		
One-Way Shear Calc			
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	74.0	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	49.8	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	49.8	kips	ACI 318-19 - 22.5.5.1 - Vc
Max Vc = 5λ√f'cbwd =	189.1	kips	
Vc =	74.0	kips	
ϕVc =	55.5	kips	
	OK		
dagg = diameter of aggregate =	0.75	in	
Minimum Spacing =	1.0	in	ACI 318-19 - 25.2.1
Required Minimum Vs =	-62.65	kips	
4√fc'bwd =	151.3	kips	
Vs ≤ 4√fc'bwd ?	YES		
Vs > 4√fc'bwd ?	NO		
Maximum Spacing =	24	in	ACI 318-19 - 9.7.6.2.2
Maximum Spacing =	N/A	in	ACI 318-19 - 9.7.6.2.2
Stirrup Bar Size Provided =	4		
# of Legs per Stirrup =	2		
Cross Section =	0.196	in^2	
Av =	0.393	in^2	
s =	9.000	in	
Vs = (Avfytd)/s =	71.0	kips	ACI 318-19 - 22.5.8.5.3
Vn = Vc + Vs =	145.0	kips	
ϕVn =	108.7	kips	
	OK		
Torsion Checks ACI 318-19			
Torsion from RISA =	7	k-ft	
Acp =	540	in^2	
pcp =	96	in	
Tth = Threshold Torsion = λ√f'c*(Acp^2/pcp)=	19.61	k-ft	ACI 318-19 - 22.7.4.1(a)
Tth = Threshold Torsion = λ√f'c*(Acp^2/pcp)*√(1+(Nu/(4*Ag*λ√f'c)) =	18.95	k-ft	ACI 318-19 - 22.7.4.1(c)

Min Tth =	18.95	k-ft	
Torsion Unity Check =	0.49		
	OK		
xo = bw-2*ccside-dtie =	11.5	in	
yo = h - 2*cctop-dtie =	24.5	in	
ph = 2(xo+yo) =	72	in	
Aoh = xo*yo =	281.75	in^2	
Ao = 0.85*Aoh =	239.49	in^2	
4λ√f'c*(Acp2/pcp) =	78.43	k-ft	
Tcr = 4λ√f'c*(Acp2/pcp) * √(1+(Nu/4Agλ√f'c)) =	75.81	k-ft	
ϕTcr =	N/A	k-ft	
fv = Vu / bwd =	0.017	ksi	
fvt = Tuph/(1.7Aoh^2) =	0.045	ksi	
Calculate Limit = ϕ(2√f'c+8√f'c) =	0.581	ksi	ACI 318-19 - 22.7.7.1
√(fv^2+fvt^2) =	0.0481	ksi	
Is Section Large Enough?	OK		
Required Shear Tie / Area Spacing:			
θ =	45	degrees	
Av/ s = (Vu-2ϕλ√f'cbwd)/ϕfyd =	-0.03948	in2/in	
At / s = Tu/(2ϕAofycotθ) =	0.0039	in2/in	ACI 318-19 - 22.7.6.1a
Av/ s + 2(At/s) =	-0.031685493	in2/in	
s =	-12.39	in	
Check minimum transverse reinforcement			
0.75√f'cbw/fyt =	0.017	in2/in	
50(bw/fyt) =	0.015	in2/in	
At min =	0.017	in2/in	
Av/s + 2At/s =	0.087266463		
	N/A		
Calculate Torsional Longitudinal Reinforcement			
Nominal Torsional Moment Strength = Tn = (2AoAlfy/ph)*tanθ =	399		ACI 318-19 - 22.7.6.1b
Determine Al required =	0.281	in^2	ACI 318-19 - 22.7.6.1.2
(5√f'c*Acp/fy) - (At/s)*ph*(fyt/fy) =	3.205	in^2	
(5√f'c*Acp/fy) - (25bw/fyt)*ph*(fyt/fy) =	2.946	in^2	ACI 318-19 - 9.6.4.3
Torsional Longitudinal Reinforcement =	2.946	in^2	ACI 318-19 - 9.6.4.3
Minimum Torsional Longitudinal Reinforcement Needed =	2.946	in^2	
Tie Spacing Must not Exceed the less of ph/8 & 12 inch =	9.00	in	FALSE
Longitudinal Torsional Reinforcement Min Dia = 0.042*transverse spa; min 3/8 =	0.378	in^2	ACI 318-19 - 9.7.5.2
Size Bar =	6		
As bar size provided =	0.442		
Size Adequate?	OK		

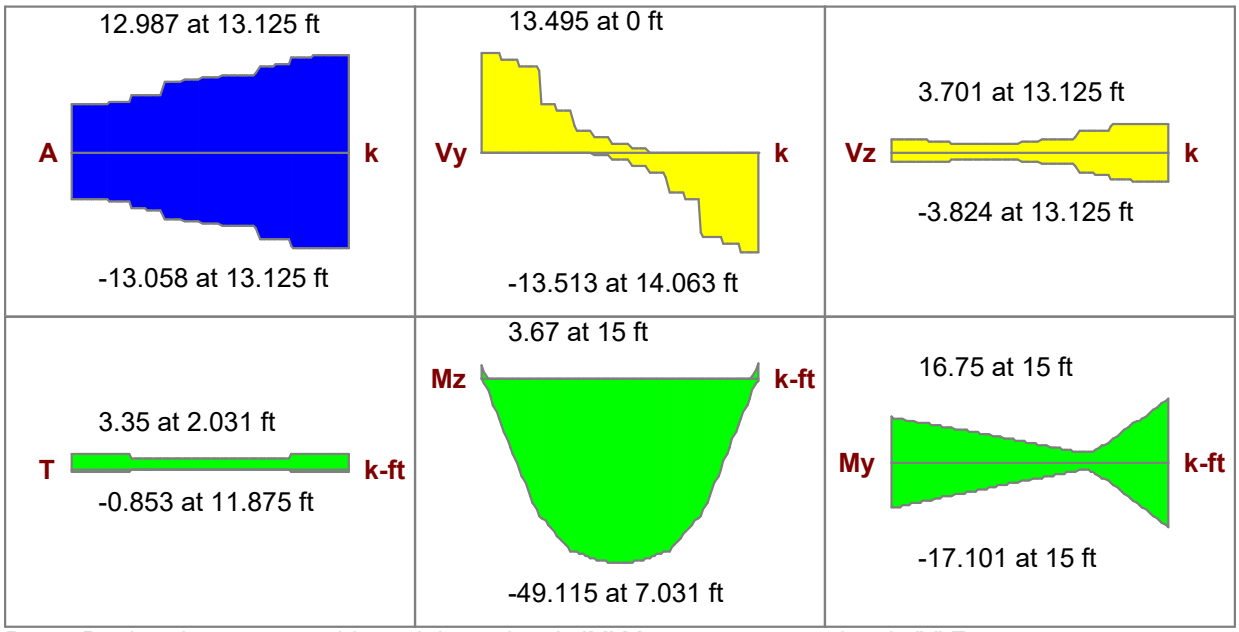
Torsion longitudinal reinforcement, Aℓ, must be distributed around the cross section and the portion of Aℓ that needs to be placed where As is needed is added to As required for flexure. Assume that (2) No. 6 bars will be added at each side face and the remainder will be divided equally between top and bottom of beam.

24 Inch Wide Concrete Beams

Beam: **B6**

Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **15 ft**
Start: **N145**
End: **N146**

Code Check: **0.240 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.018 (LC 40)**	Bot Bending Check	**0.240 (LC 1)**	Shear Check	**0.189 (y) (LC 41)**
Location	**15 ft**	Location	**7.031 ft**	Location	**14.063 ft**
Gov Mu Top	**3.67 k-ft**	Gov Mu Bot	**-49.115 k-ft**	Gov Vu	**13.513 k**
phi*Mn Top	**0 k-ft**	phi*Mn Bot	**204.306 k-ft**	phi*Vn	**71.429 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 15**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N139**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #6
	Left	B	-
	Mid	T	-
	Mid	B	4 #6
	Right	T	4 #6
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	227.006	0.0039	0.0264	0.0028	1.767	0.028
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	7	B	227.006	0.0039	0.0264	0.0028	1.767	0.423
	15	T	227.006	0.0039	0.0264	0.0028	1.767	0.031
	15	B	0	0	0	0	0	0

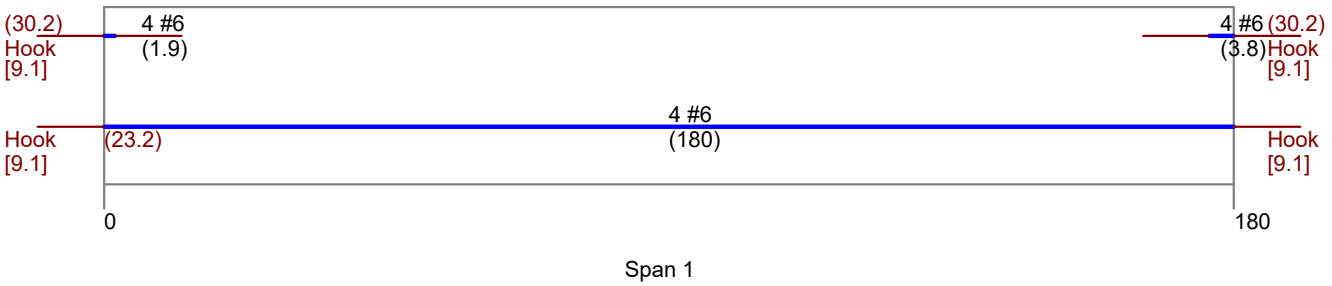
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.8	
	3.8 - 7.5	
	7.5 - 11.3	
	11.3 - 15	

Shear Span Results

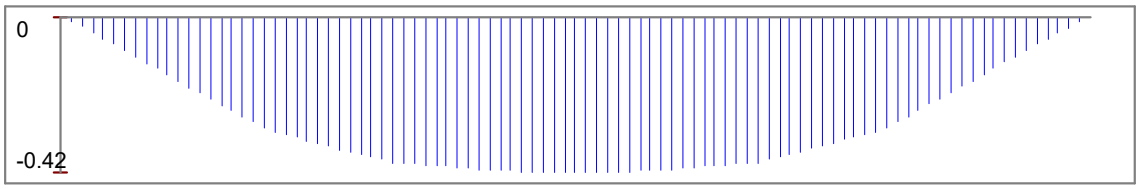
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.8	95.239	95.239	0	0	0
	3.8 - 7.5	95.239	95.239	0	0	0
	7.5 - 11.3	95.239	95.239	0	0	0
	11.3 - 15	95.239	95.239	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

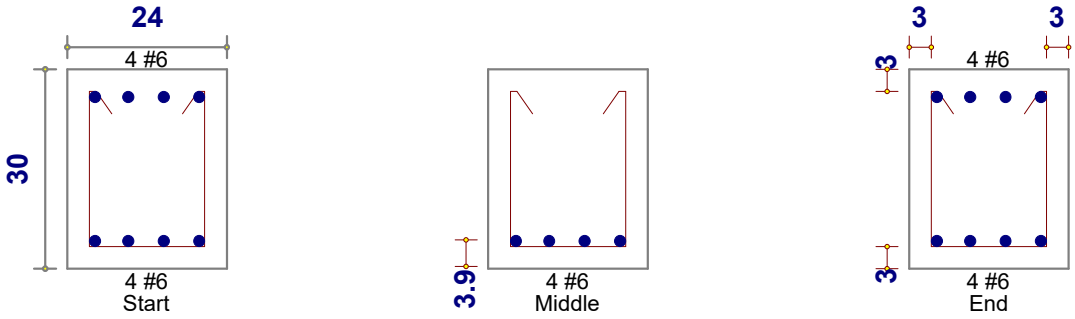


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



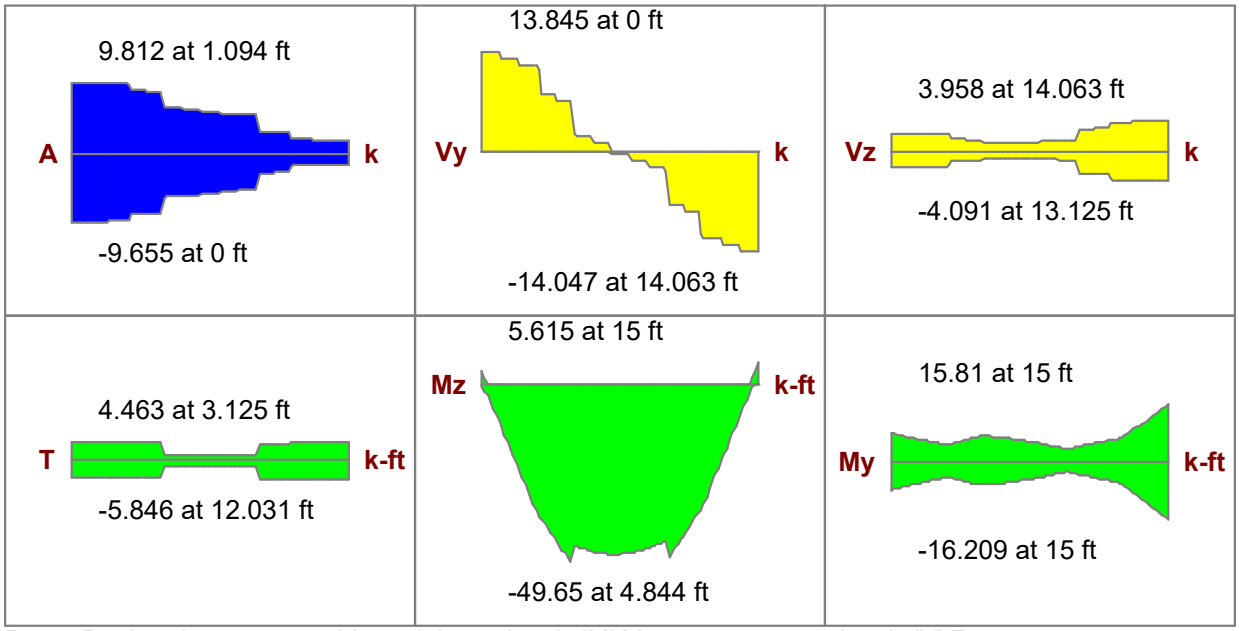
Span 1

Beam: **B7**

Shape: **CRECT30X24**
Material: **Conc 6000NW**
Length: **15 ft**
Start: **R3D_N638**
End: **R3D_N639**

Stress Block: **Rectangular**

Code Check: **0.243 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.027 (LC 41)**	Bot Bending Check	**0.243 (LC 43)**	Shear Check	**0.192 (y) (LC 41)**
Location	**15 ft**	Location	**4.844 ft**	Location	**14.063 ft**
Gov Mu Top	**5.615 k-ft**	Gov Mu Bot	**-49.65 k-ft**	Gov Vu	**14.047 k**
phi*Mn Top	**204.306 k-ft**	phi*Mn Bot	**204.306 k-ft**	phi*Vn	**73.027 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 15**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**R3D_N632**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #6
	Left	B	4 #6
	Mid	T	-
	Mid	B	4 #6
	Right	T	4 #6
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	227.006	0.0039	0.0264	0.0028	1.767	0.026
	-	B	227.006	0.0039	0.0264	0.0028	1.767	0.006
	-	T	0	0	0	0	0	0
	4.8	B	227.006	0.0039	0.0264	0.0028	1.767	0.427
	15	T	227.006	0.0039	0.0264	0.0028	1.767	0.048
	15	B	0	0	0	0	0	0

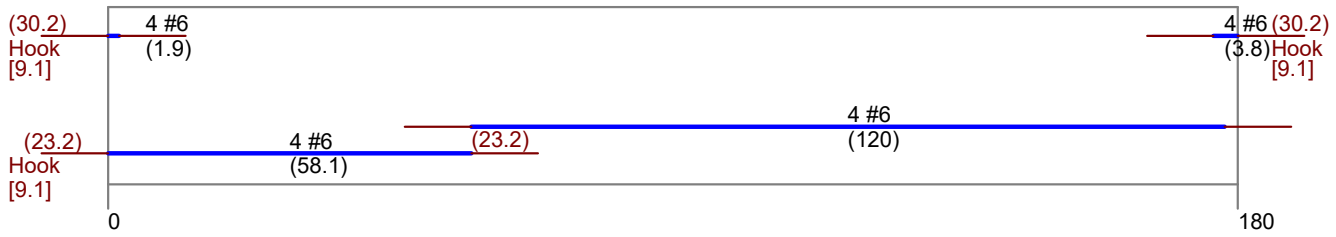
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.8	
	3.8 - 7.5	
	7.5 - 11.3	
	11.3 - 15	

Shear Span Results

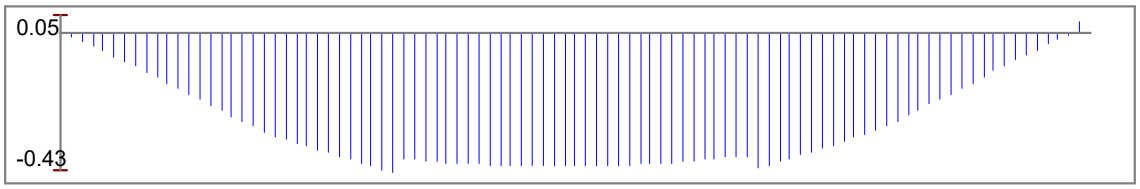
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.8	97.369	97.369	0	0	0
	3.8 - 7.5	97.369	97.369	0	0	0
	7.5 - 11.3	97.369	97.369	0	0	0
	11.3 - 15	97.369	97.369	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

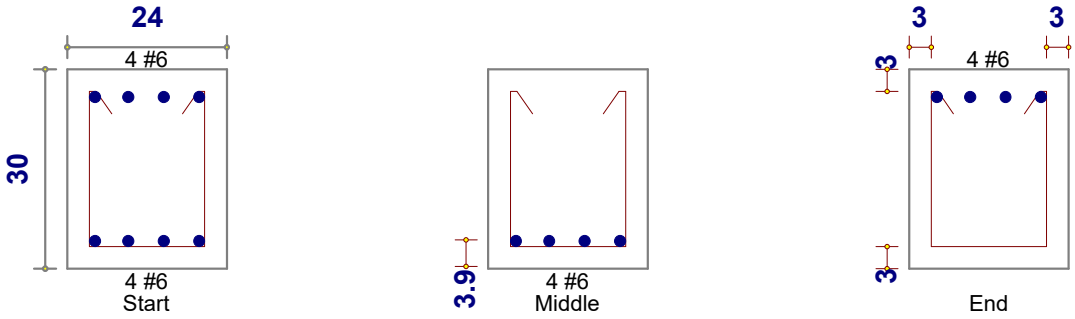


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



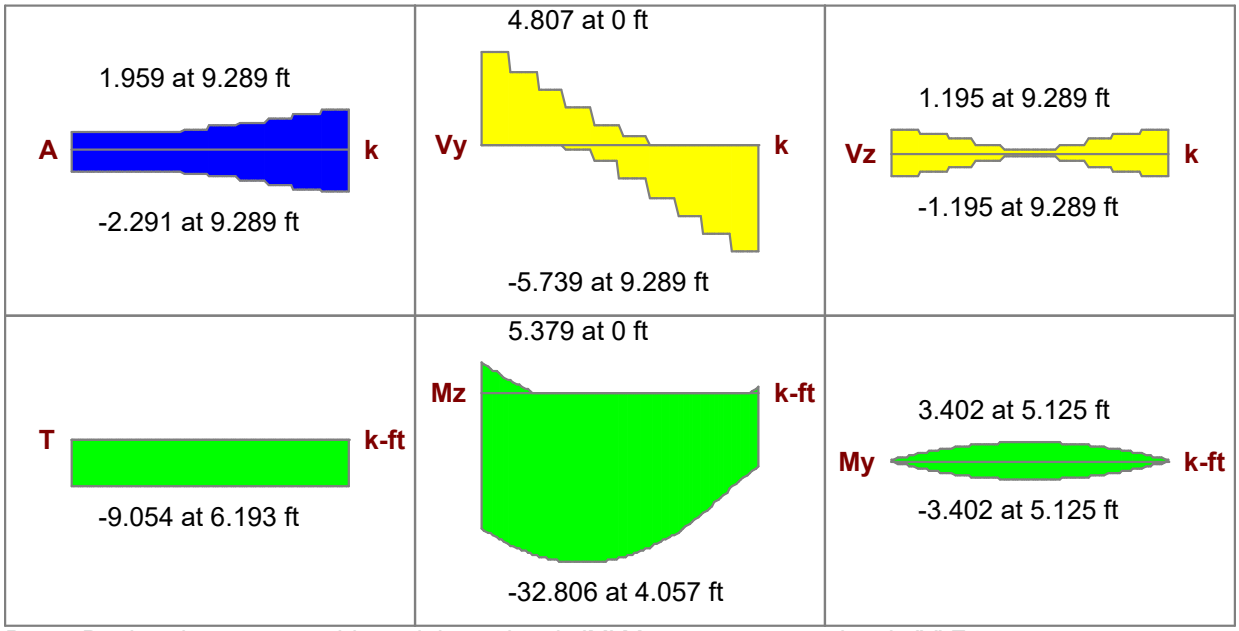
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B13**
Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **10.25 ft**
Start: **N172**
End: **N173**

Code Check: **0.161 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.026 (LC 46)**	Bot Bending Check	**0.161 (LC 40)**	Shear Check	**0.079 (y) (LC 40)**
Location	**0 ft**	Location	**4.057 ft**	Location	**9.289 ft**
Gov Mu Top	**5.379 k-ft**	Gov Mu Bot	**-32.806 k-ft**	Gov Vu	**5.739 k**
phi*Mn Top	**204.306 k-ft**	phi*Mn Bot	**204.306 k-ft**	phi*Vn	**72.601 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 10.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N172**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #6
	Left	B	-
	Mid	T	-
	Mid	B	4 #6
	Right	T	4 #6
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	227.006	0.0039	0.0264	0.0028	1.767	0.046
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	4.1	B	227.006	0.0039	0.0264	0.0028	1.767	0.282
	10.3	T	227.006	0.0039	0.0264	0.0028	1.767	0.007
	10.3	B	0	0	0	0	0	0

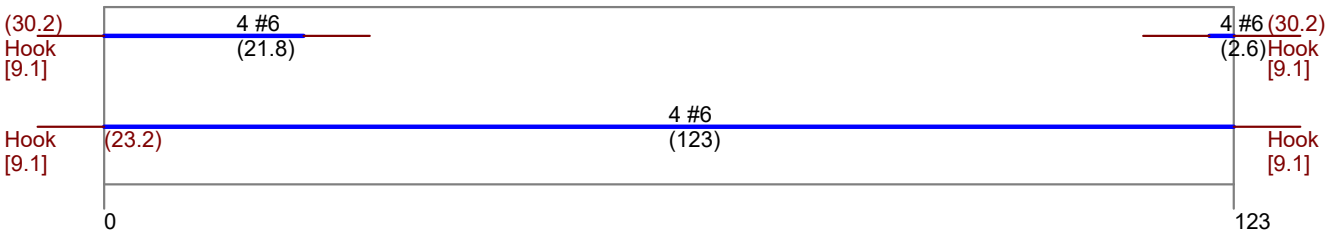
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 2.6	
	2.6 - 5.1	
	5.1 - 7.7	
	7.7 - 10.3	

Shear Span Results

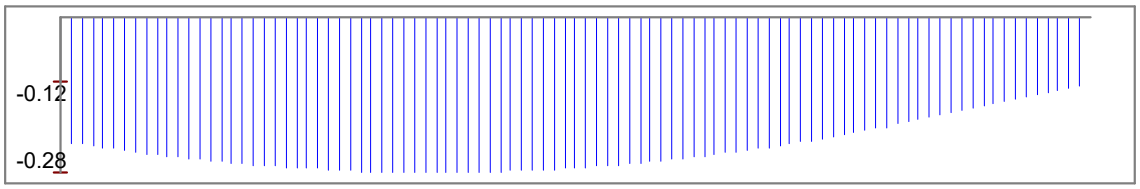
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 2.6	96.802	96.802	0	0	0
	2.6 - 5.1	96.802	96.802	0	0	0
	5.1 - 7.7	96.802	96.802	0	0	0
	7.7 - 10.3	96.802	96.802	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

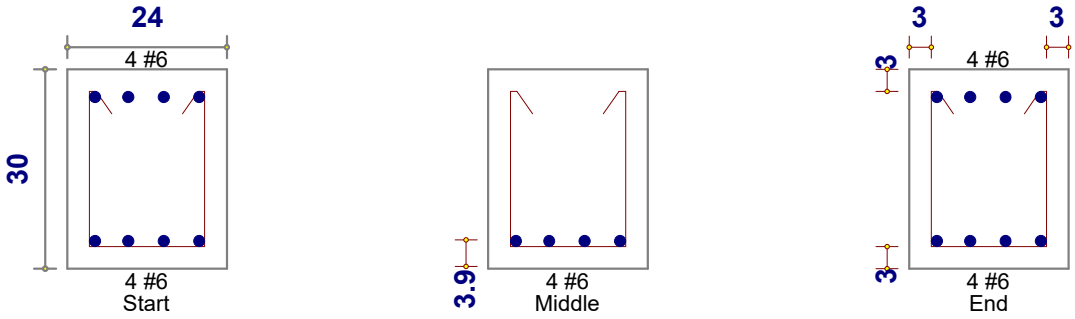


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



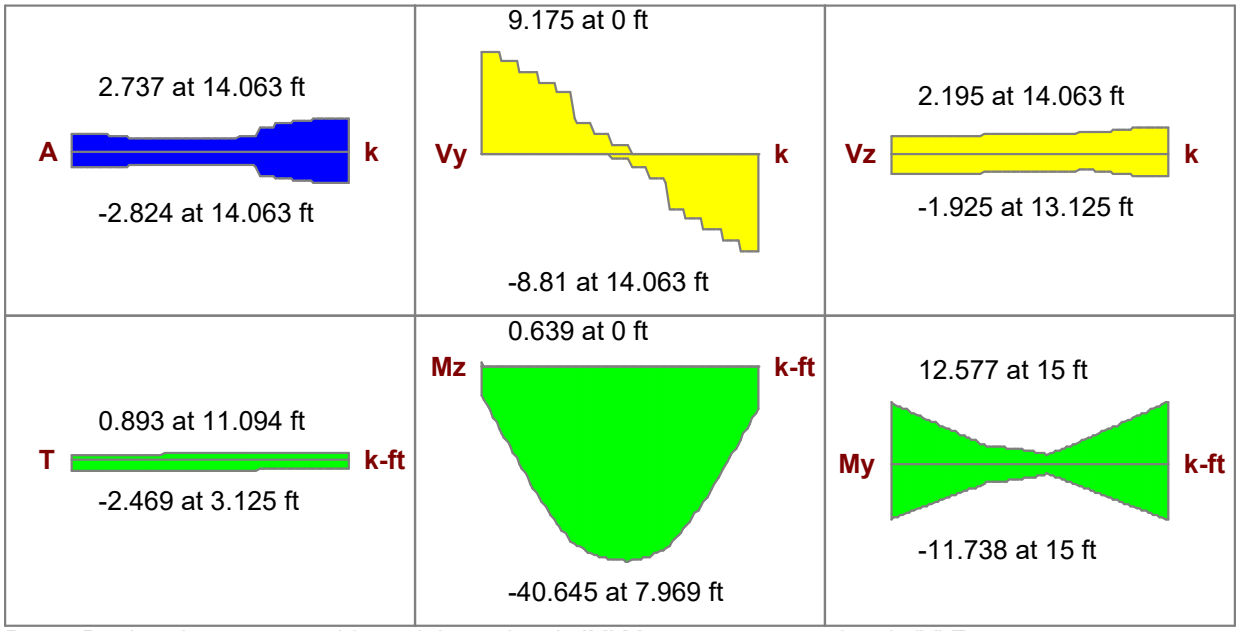
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B20**
Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW**
Length: **15 ft**
Start: **N233**
End: **N234**

Code Check: **0.199 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.003 (LC 47)**	Bot Bending Check	**0.199 (LC 1)**	Shear Check	**0.126 (y) (LC 43)**
Location	**0 ft**	Location	**7.969 ft**	Location	**0 ft**
Gov Mu Top	**0.639 k-ft**	Gov Mu Bot	**-40.645 k-ft**	Gov Vu	**9.175 k**
phi*Mn Top	**204.306 k-ft**	phi*Mn Bot	**204.306 k-ft**	phi*Vn	**72.543 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 15**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**R3D_N630**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #6
	Left	B	-
	Mid	T	-
	Mid	B	4 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	227.006	0.0039	0.0264	0.0028	1.767	0.005
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	8	B	227.006	0.0039	0.0264	0.0028	1.767	0.349
	15	T	0	0	0	0	0	0
	15	B	0	0	0	0	0	0

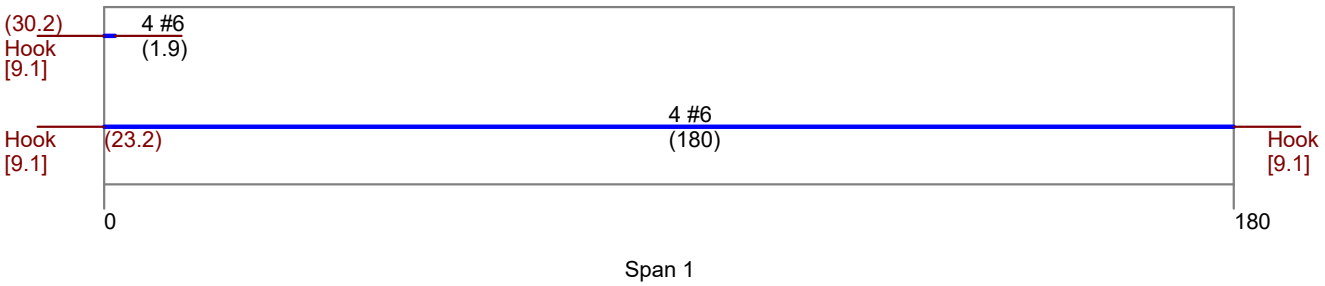
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.8	
	3.8 - 7.5	
	7.5 - 11.3	
	11.3 - 15	

Shear Span Results

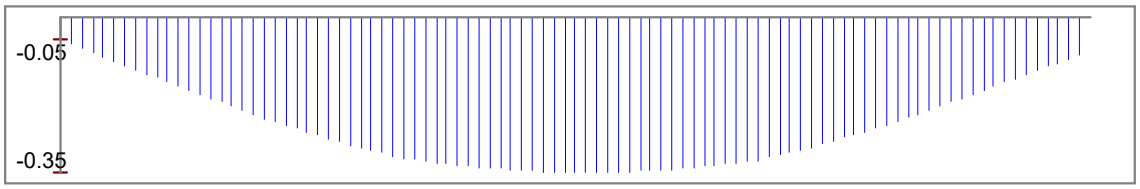
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.8	96.725	96.725	0	0	0
	3.8 - 7.5	96.725	96.725	0	0	0
	7.5 - 11.3	96.725	96.725	0	0	0
	11.3 - 15	96.725	96.725	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

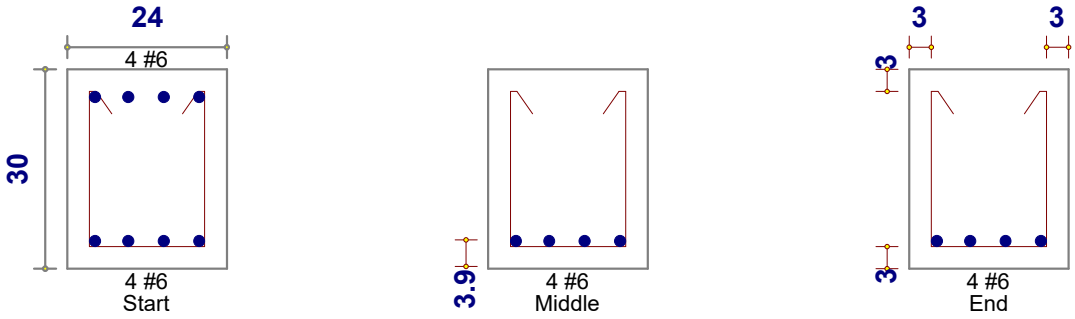


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



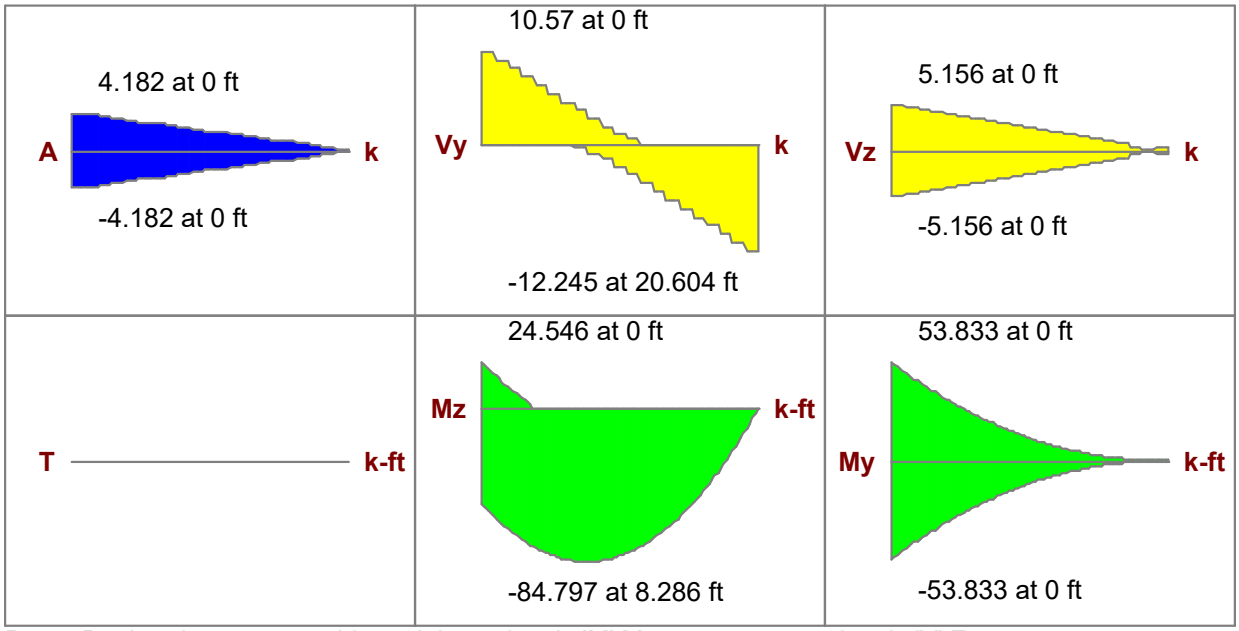
Span 1

24 Inch Wide Concrete Ties

Beam: **B3**

Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **21.5 ft**
Start: **N117**
End: **N115**

Code Check: **0.189 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.055 (LC 46)**	Bot Bending Check	**0.189 (LC 40)**	Shear Check	**0.169 (y) (LC 40)**
Location	**0 ft**	Location	**8.286 ft**	Location	**20.604 ft**
Gov Mu Top	**24.546 k-ft**	Gov Mu Bot	**-84.797 k-ft**	Gov Vu	**12.245 k**
phi*Mn Top	**448.911 k-ft**	phi*Mn Bot	**448.911 k-ft**	phi*Vn	**72.313 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 21.5**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N115**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #9
	Left	B	-
	Mid	T	-
	Mid	B	4 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	498.79	0.0039	0.0264	0.0064	3.997	0.211
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	8.3	B	498.79	0.0039	0.0264	0.0064	3.997	0.732
	21.5	T	0	0	0	0	0	0
	21.5	B	0	0	0	0	0	0

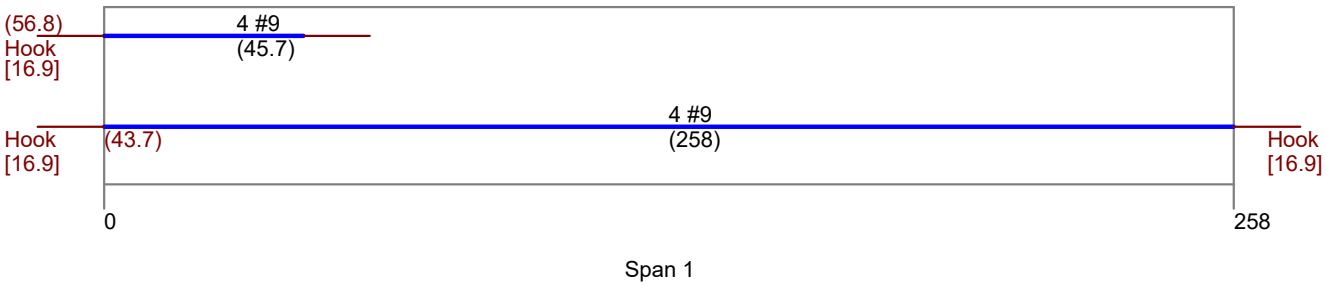
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 5.4	
	5.4 - 10.8	
	10.8 - 16.1	
	16.1 - 21.5	

Shear Span Results

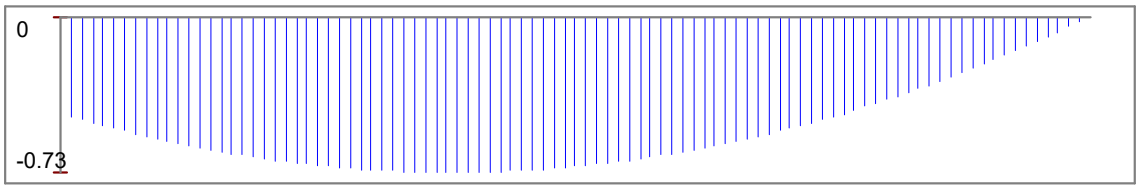
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 5.4	96.417	96.417	0	0	0
	5.4 - 10.8	96.417	96.417	0	0	0
	10.8 - 16.1	96.417	96.417	0	0	0
	16.1 - 21.5	96.417	96.417	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

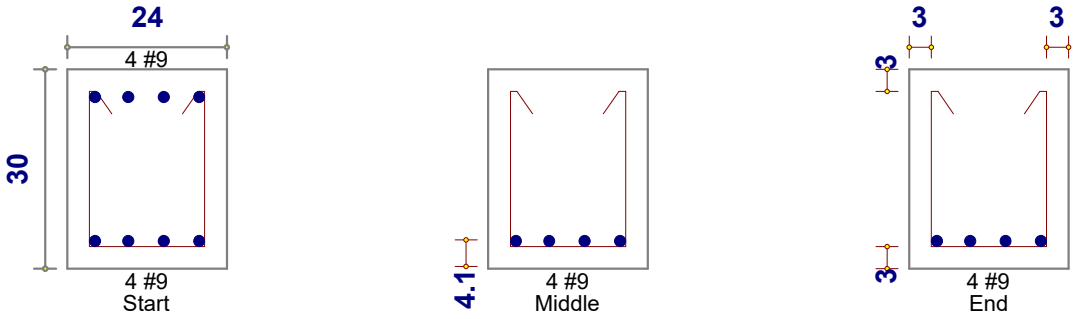


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



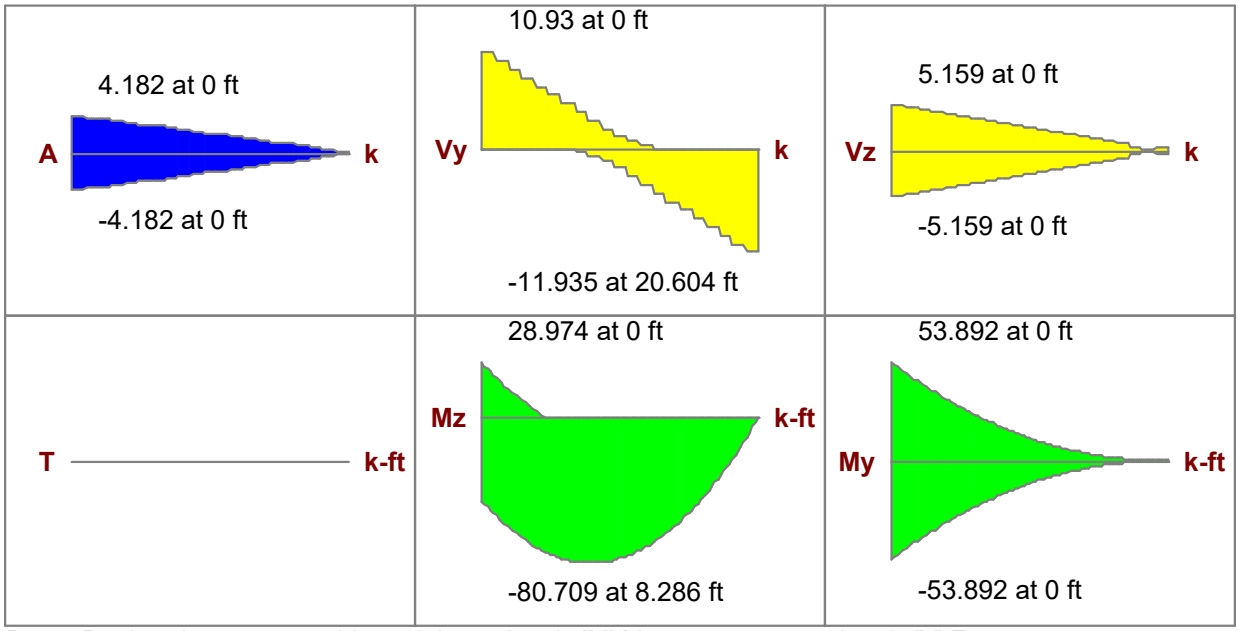
Span 1

Beam: **B4**

Shape: **CRECT30X24**
Material: **Conc 6000NW - TIE**
Length: **21.5 ft**
Start: **N118**
End: **N119**

Stress Block: **Rectangular**

Code Check: **0.180 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.065 (LC 46)**	Bot Bending Check	**0.180 (LC 40)**	Shear Check	**0.165 (y) (LC 40)**
Location	**0 ft**	Location	**8.286 ft**	Location	**20.604 ft**
Gov Mu Top	**28.974 k-ft**	Gov Mu Bot	**-80.709 k-ft**	Gov Vu	**11.935 k**
phi*Mn Top	**448.911 k-ft**	phi*Mn Bot	**448.911 k-ft**	phi*Vn	**72.335 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 21.5**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N118**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #9
	Left	B	-
	Mid	T	-
	Mid	B	4 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	498.79	0.0039	0.0264	0.0064	3.997	0.249
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	8.3	B	498.79	0.0039	0.0264	0.0064	3.997	0.696
	21.5	T	0	0	0	0	0	0
	21.5	B	0	0	0	0	0	0

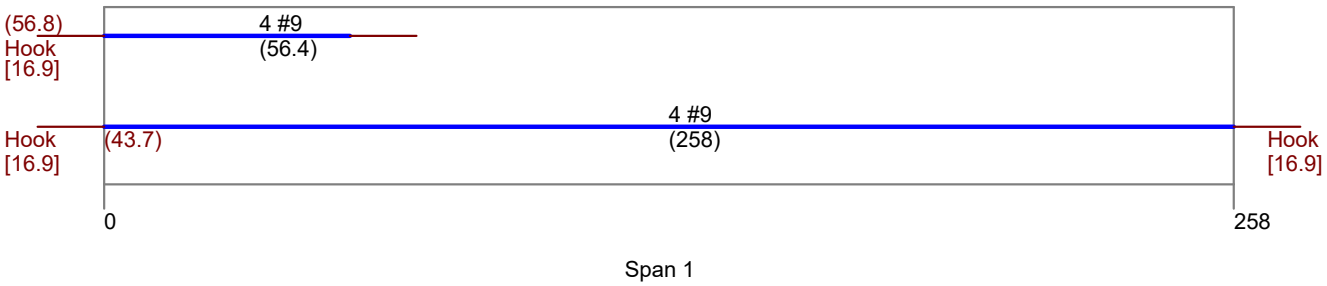
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 5.4	
	5.4 - 10.8	
	10.8 - 16.1	
	16.1 - 21.5	

Shear Span Results

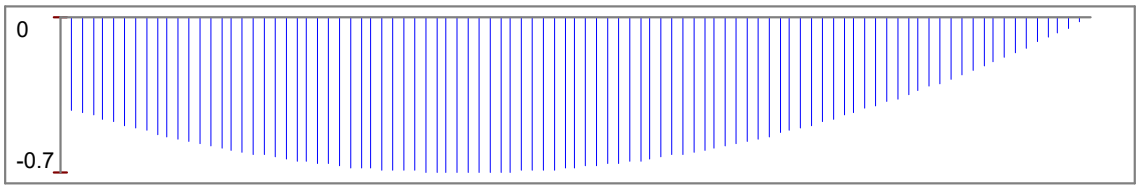
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 5.4	96.446	96.446	0	0	0
	5.4 - 10.8	96.446	96.446	0	0	0
	10.8 - 16.1	96.446	96.446	0	0	0
	16.1 - 21.5	96.446	96.446	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

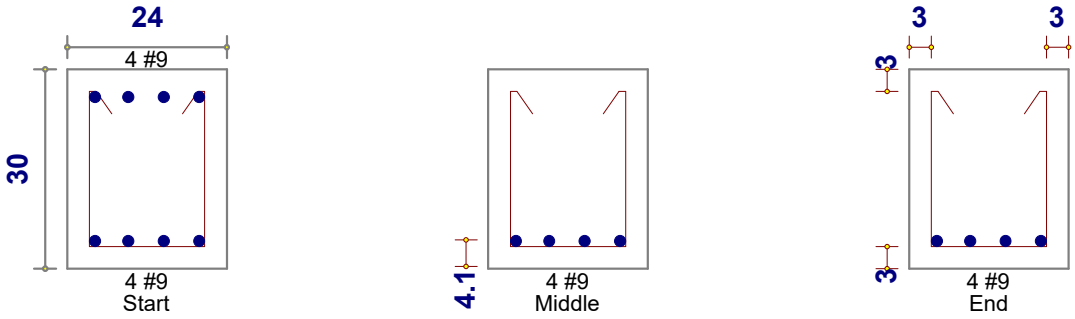


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



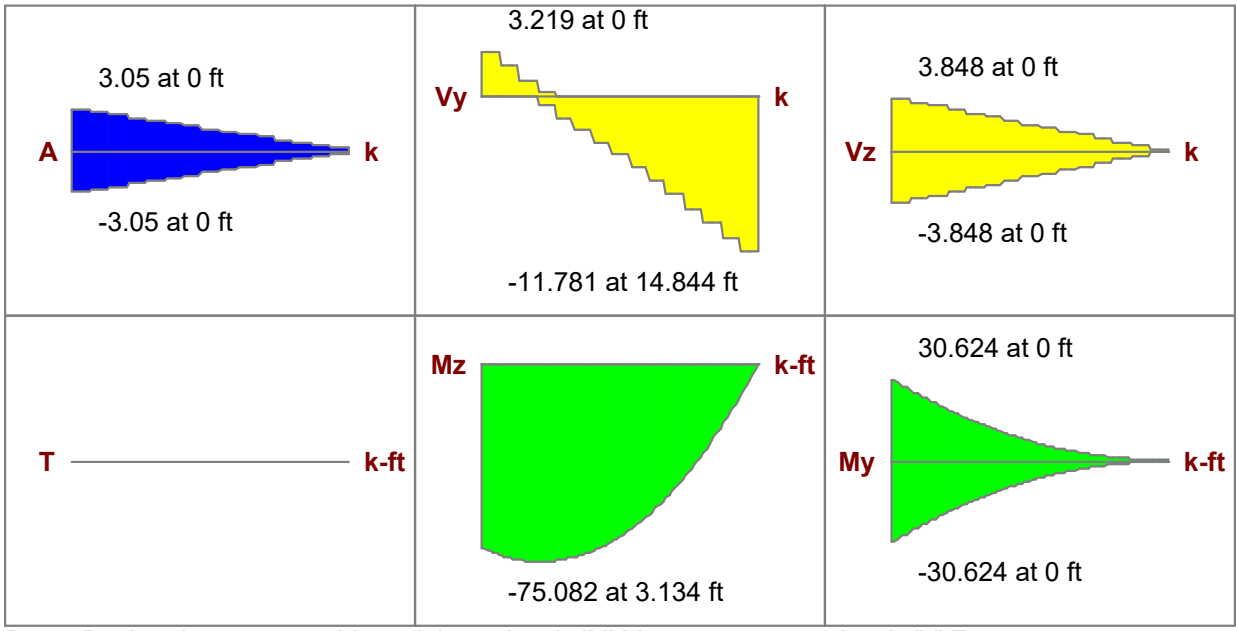
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B16**
Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **15.833 ft**
Start: **N207**
End: **N210**

Code Check: **0.167 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.000 (LC N/A)**	Bot Bending Check	**0.167 (LC 42)**	Shear Check	**0.163 (y) (LC 1)**
Location	**0 ft**	Location	**3.134 ft**	Location	**14.844 ft**
Gov Mu Top	**0 k-ft**	Gov Mu Bot	**-75.082 k-ft**	Gov Vu	**11.781 k**
phi*Mn Top	**0 k-ft**	phi*Mn Bot	**448.911 k-ft**	phi*Vn	**72.335 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 15.8**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N207**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	-
	Mid	B	4 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	3.1	B	498.79	0.0039	0.0264	0.0064	3.997	0.647
	15.8	T	0	0	0	0	0	0
	15.8	B	0	0	0	0	0	0

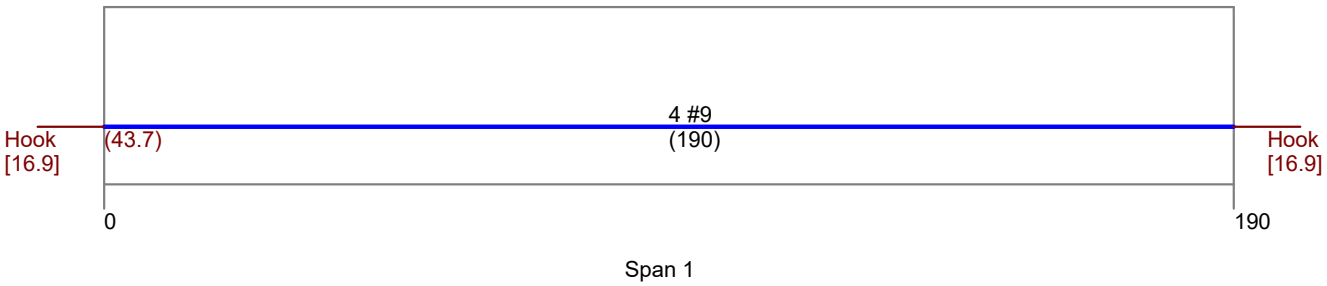
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 4	
	4 - 7.9	
	7.9 - 11.9	
	11.9 - 15.8	

Shear Span Results

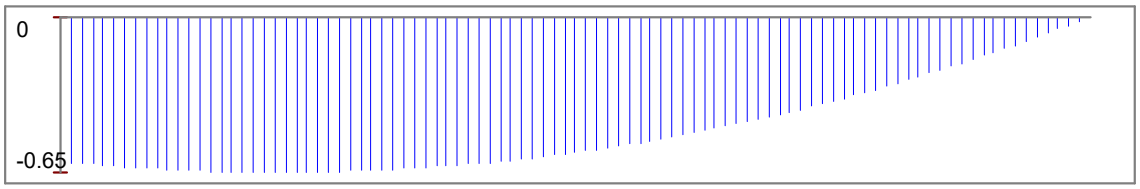
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 4	96.447	96.447	0	0	0
	4 - 7.9	96.447	96.447	0	0	0
	7.9 - 11.9	96.447	96.447	0	0	0
	11.9 - 15.8	96.447	96.447	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

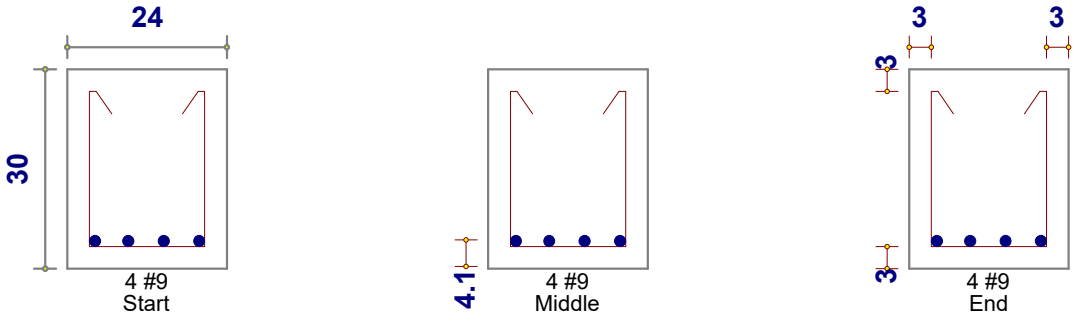


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



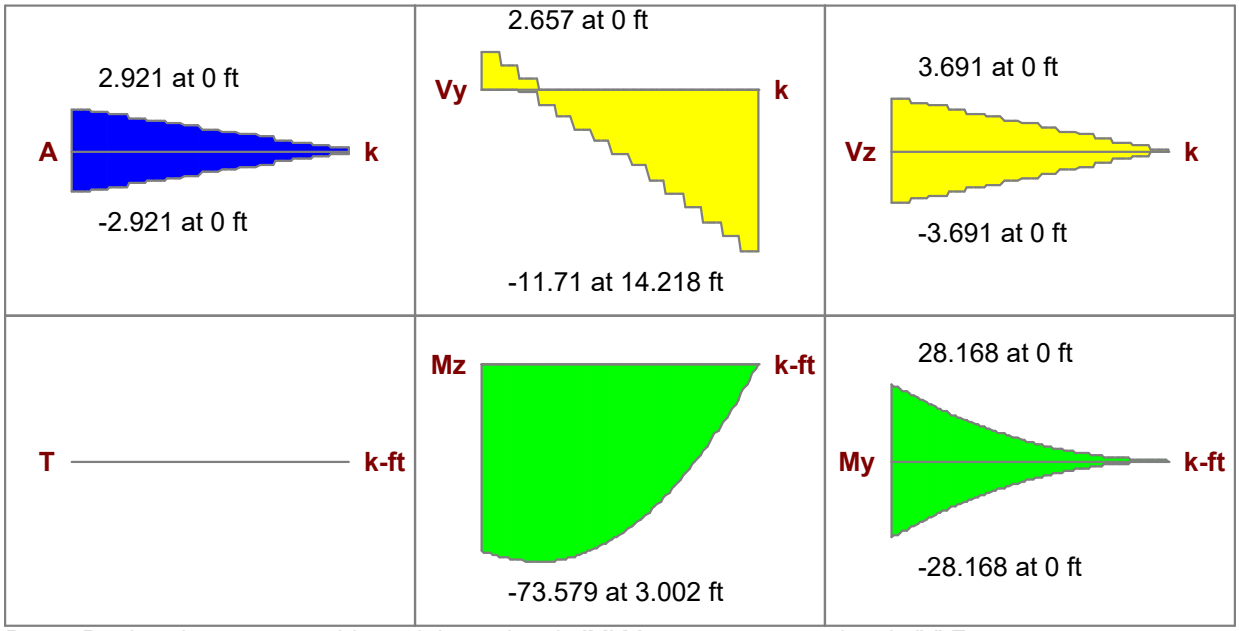
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B17**
Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **15.166 ft**
Start: **N211**
End: **N212**

Code Check: **0.164 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.000 (LC N/A)**	Bot Bending Check	**0.164 (LC 1)**	Shear Check	**0.162 (y) (LC 1)**
Location	**0 ft**	Location	**3.002 ft**	Location	**14.218 ft**
Gov Mu Top	**0 k-ft**	Gov Mu Bot	**-73.579 k-ft**	Gov Vu	**11.71 k**
phi*Mn Top	**0 k-ft**	phi*Mn Bot	**448.911 k-ft**	phi*Vn	**72.313 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 15.2**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N211**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	-
	Mid	B	4 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	3	B	498.79	0.0039	0.0264	0.0064	3.997	0.634
	15.2	T	0	0	0	0	0	0
	15.2	B	0	0	0	0	0	0

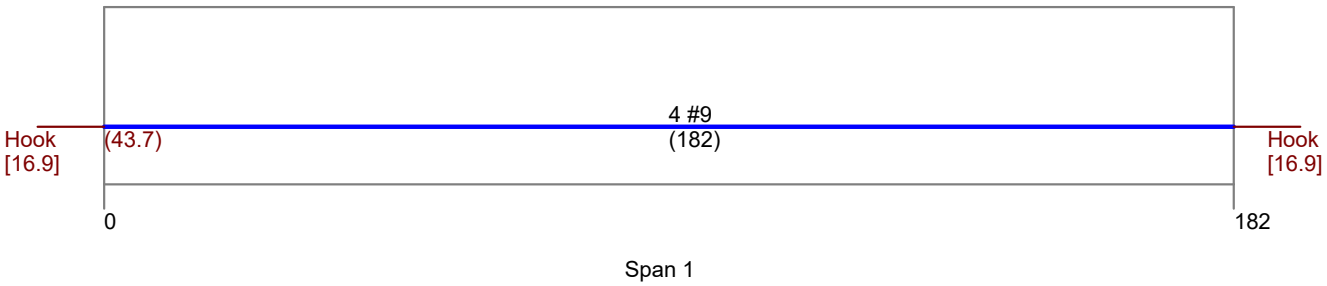
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.8	
	3.8 - 7.6	
	7.6 - 11.4	
	11.4 - 15.2	

Shear Span Results

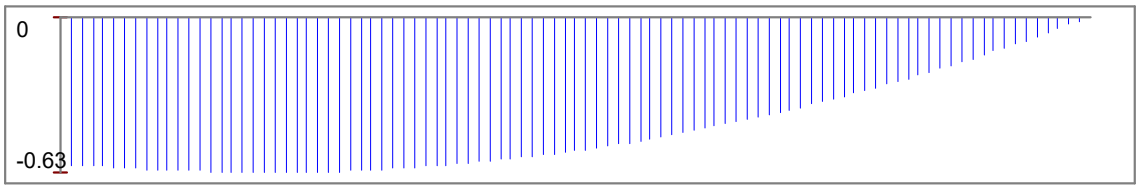
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.8	96.417	96.417	0	0	0
	3.8 - 7.6	96.417	96.417	0	0	0
	7.6 - 11.4	96.417	96.417	0	0	0
	11.4 - 15.2	96.417	96.417	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

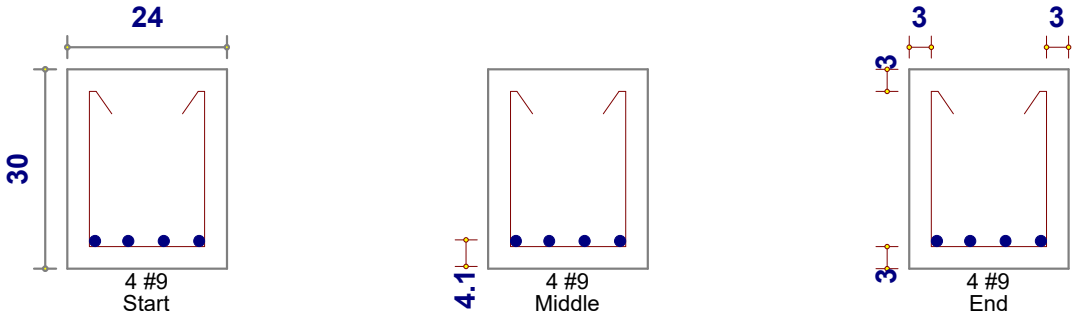


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



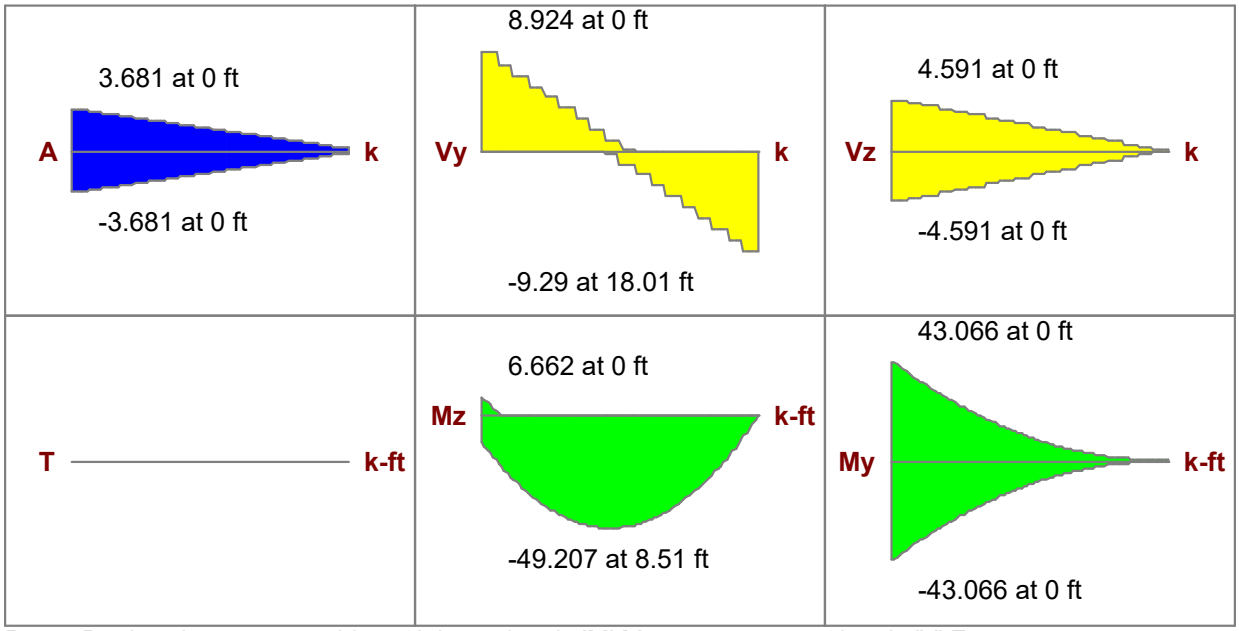
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B18**
Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **19 ft**
Start: **N201**
End: **N218**

Code Check: **0.128 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.015 (LC 46)**	Bot Bending Check	**0.110 (LC 40)**	Shear Check	**0.128 (y) (LC 1)**
Location	**0 ft**	Location	**8.51 ft**	Location	**18.01 ft**
Gov Mu Top	**6.662 k-ft**	Gov Mu Bot	**-49.207 k-ft**	Gov Vu	**9.29 k**
phi*Mn Top	**448.911 k-ft**	phi*Mn Bot	**448.911 k-ft**	phi*Vn	**72.312 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 19**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N201**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #9
	Left	B	-
	Mid	T	-
	Mid	B	4 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	498.79	0.0039	0.0264	0.0064	3.997	0.057
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	8.5	B	498.79	0.0039	0.0264	0.0064	3.997	0.423
	19	T	0	0	0	0	0	0
	19	B	0	0	0	0	0	0

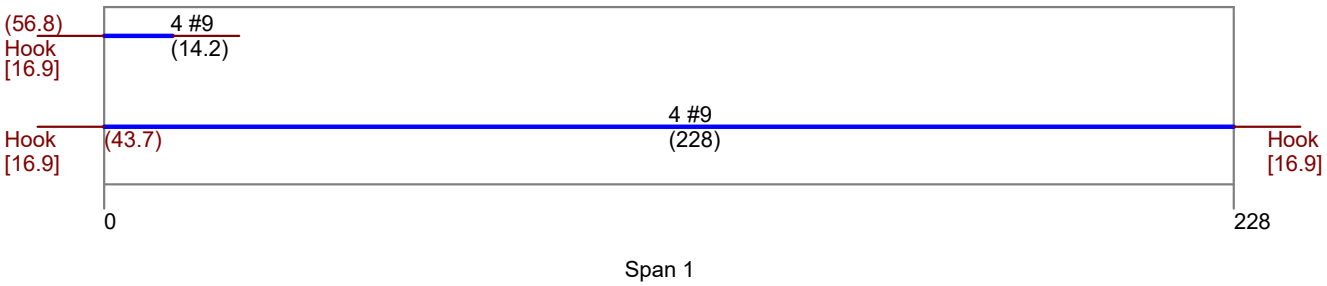
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 4.7	
	4.7 - 9.5	
	9.5 - 14.2	
	14.2 - 19	

Shear Span Results

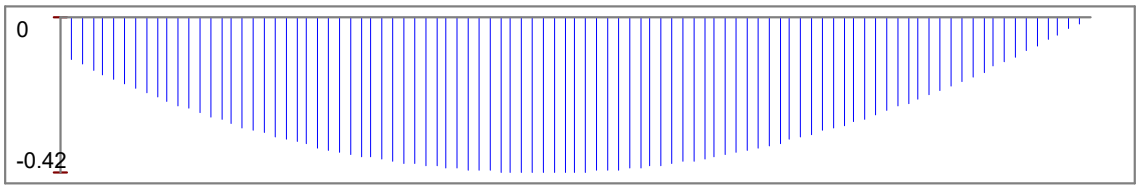
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 4.7	96.417	96.417	0	0	0
	4.7 - 9.5	96.417	96.417	0	0	0
	9.5 - 14.2	96.417	96.417	0	0	0
	14.2 - 19	96.417	96.417	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

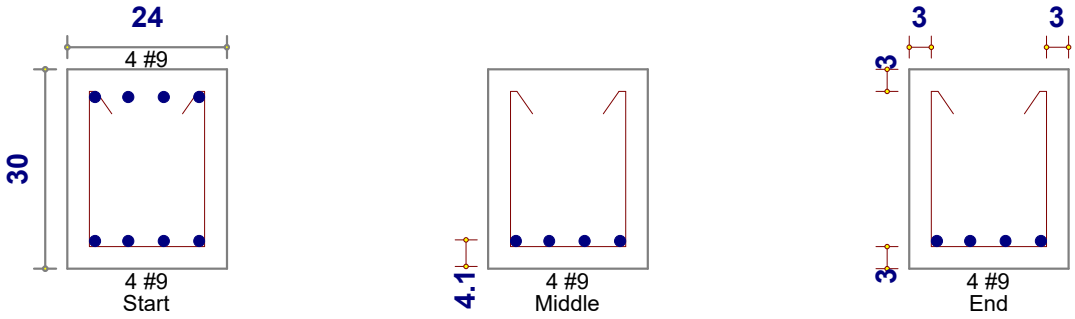


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



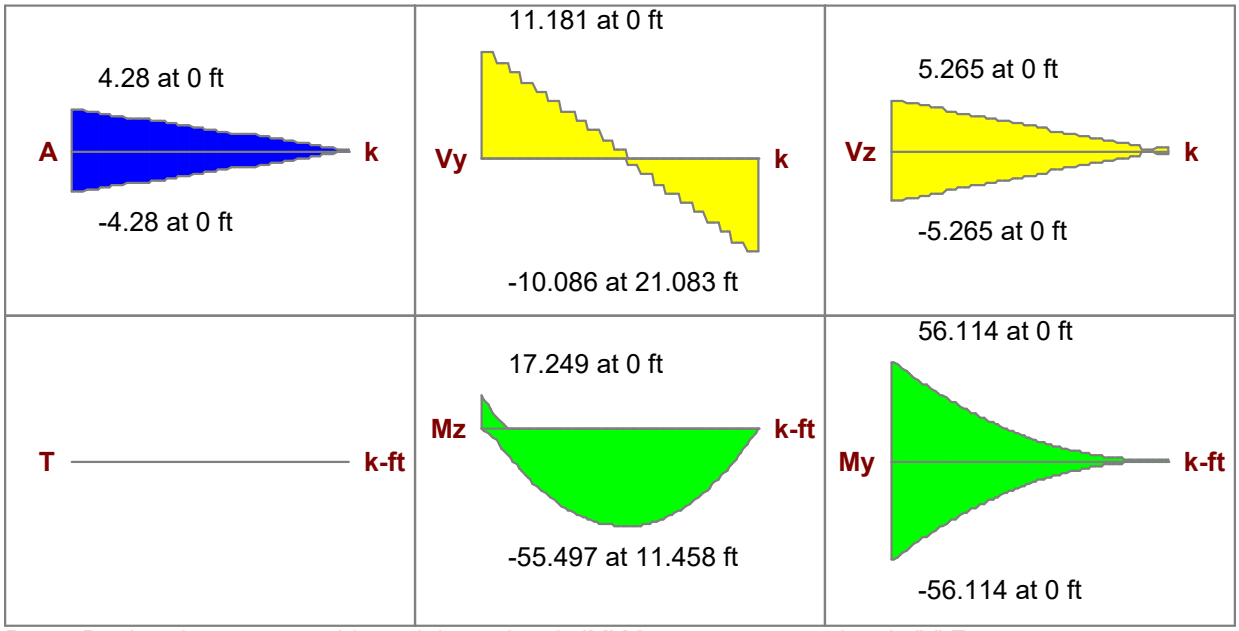
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B19**
Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **22 ft**
Start: **N198**
End: **N217**

Code Check: **0.155 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.038 (LC 42)**	Bot Bending Check	**0.124 (LC 1)**	Shear Check	**0.155 (y) (LC 1)**
Location	**0 ft**	Location	**11.458 ft**	Location	**0 ft**
Gov Mu Top	**17.249 k-ft**	Gov Mu Bot	**-55.497 k-ft**	Gov Vu	**11.181 k**
phi*Mn Top	**448.911 k-ft**	phi*Mn Bot	**448.911 k-ft**	phi*Vn	**72.313 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 22**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N198**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #9
	Left	B	-
	Mid	T	-
	Mid	B	4 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	498.79	0.0039	0.0264	0.0064	3.997	0.148
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	11.5	B	498.79	0.0039	0.0264	0.0064	3.997	0.478
	22	T	0	0	0	0	0	0
	22	B	0	0	0	0	0	0

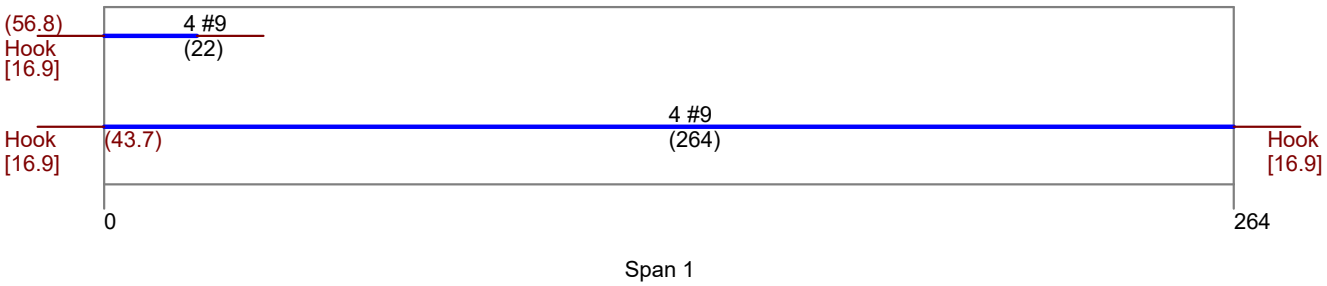
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 5.5	
	5.5 - 11	
	11 - 16.5	
	16.5 - 22	

Shear Span Results

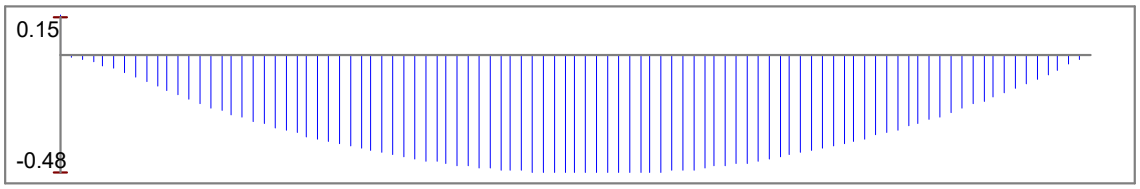
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 5.5	96.417	96.417	0	0	0
	5.5 - 11	96.417	96.417	0	0	0
	11 - 16.5	96.417	96.417	0	0	0
	16.5 - 22	96.417	96.417	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

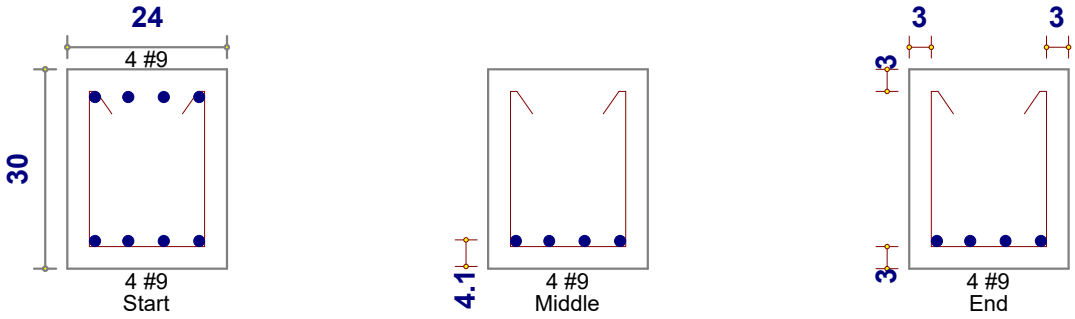


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)

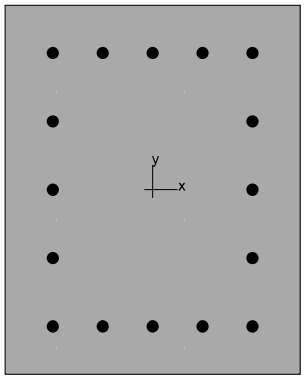


Span 1

BURNS McDONNELL

CONCRETE BEAM SHEAR CHECK

		STIRRUPS REQD	OK
153929 - PDX Fuel Facility	**Designer:**	**A. Kral**	
Utility Corridor 24" Wide Beam		**12/20/2023**	
One-Way Shear Calc following ACI 318-19			
Max Load From Risa File =	13	kips	
Vu =	13	kips	
h = Beam Depth =	30	in	
Top Reinforcement Cover =	2	in	
Side Reinforcement Cover =	3	in	
Bottom Reinforcement Cover =	3	in	
Quantity of Bars Top =	5.0		
Top Bar Size =	8		
Quantity of Bars Bottom =	5.0		
Top Bar Size =	8		
As provided =	7.854	in^2	
dbtop = Diameter of Bar =	1.00		
dtop = t-top cover - dbtop =	27.00	in	
dbot =	27.00	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Beam Width = bw =	24.00	in	2.00
Ag =	720	in^2	
ϕ =	0.75		ACI 318-19 - Table 21.2.1
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1
Provide Shear Stirrups?	Yes		
λs = √(2/(1+(d/10))≤1	1.000		ACI 318-19 - 22.5.5.1.3
Axial Load Along Member = Nu =	-595	kips	Tension entered as negative
0.05*f'c =	300	psi	ACI 318-19 - 22.5.5.1.2
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2
ρ_w = As / (bw*d) =	0.0121		
dtop = t-top cover - dbtop =	27.000	in	
Nu/(6*Ag) =	-137.731	psi	
$(\rho w)^{1/3}$ =	0.230		
One-Way Shear Calc			
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	11.1	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	3.0	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	3.0	kips	ACI 318-19 - 22.5.5.1 - Vc
Max Vc = 5λ√f'cbwd =	251.0	kips	
Vc =	11.1	kips	
ϕVc =	8.4	kips	
	STIRRUPS REQD		
dagg = diameter of aggregate =	0.75	in	
Minimum Spacing =	1.0	in	ACI 318-19 - 25.2.1
Required Minimum Vs =	6.20	kips	
4√fc'bwd =	200.8	kips	
Vs ≤ 4√fc'bwd ?	YES		
Vs > 4√fc'bwd ?	NO		
Maximum Spacing =	24	in	ACI 318-19 - 9.7.6.2.2
Maximum Spacing =	N/A	in	ACI 318-19 - 9.7.6.2.2
Stirrup Bar Size Provided =	4		
# of Legs per Stirrup =	2		
Cross Section =	0.196	in^2	
Av =	0.393	in^2	
s =	24.000	in	
Vs = (Avfytd)/s =	26.5	kips	ACI 318-19 - 22.5.8.5.3
Vn = Vc + Vs =	37.6	kips	
ϕVn =	28.2	kips	
	OK		



24 x 30 in

General Information

Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials

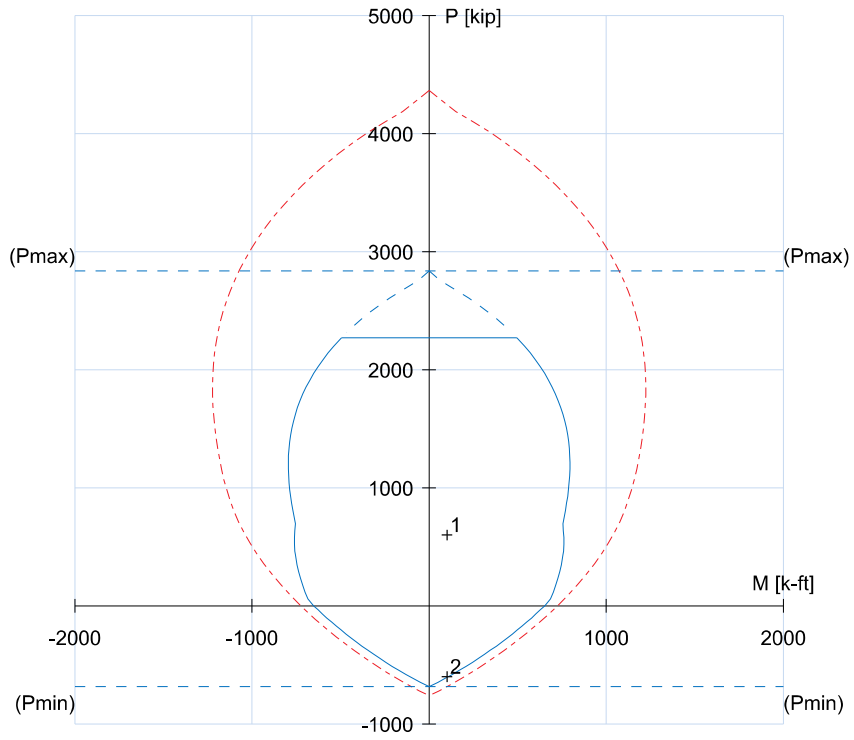
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section

Type	Rectangular
Width	24 in
Depth	30 in
A_g	720 in²
I_x	54000 in⁴
I_y	34560 in⁴

Reinforcement

Pattern	All sides equal
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	3 in
Bars	16 #8
Confinement type	Tied
Total steel area, A_s	12.64 in²
Rho	1.76 %
Min. clear spacing	3.06 in



PM at 32.0 [deg]

No.	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	Capacity
	kip	k-ft	k-ft	kip	k-ft	k-ft	Ratio
2	-600.0	85.0	54.0	-603.19	88.10	55.97	0.99
1	600.0	85.0	54.0	2270.29	85.00	54.00	0.26

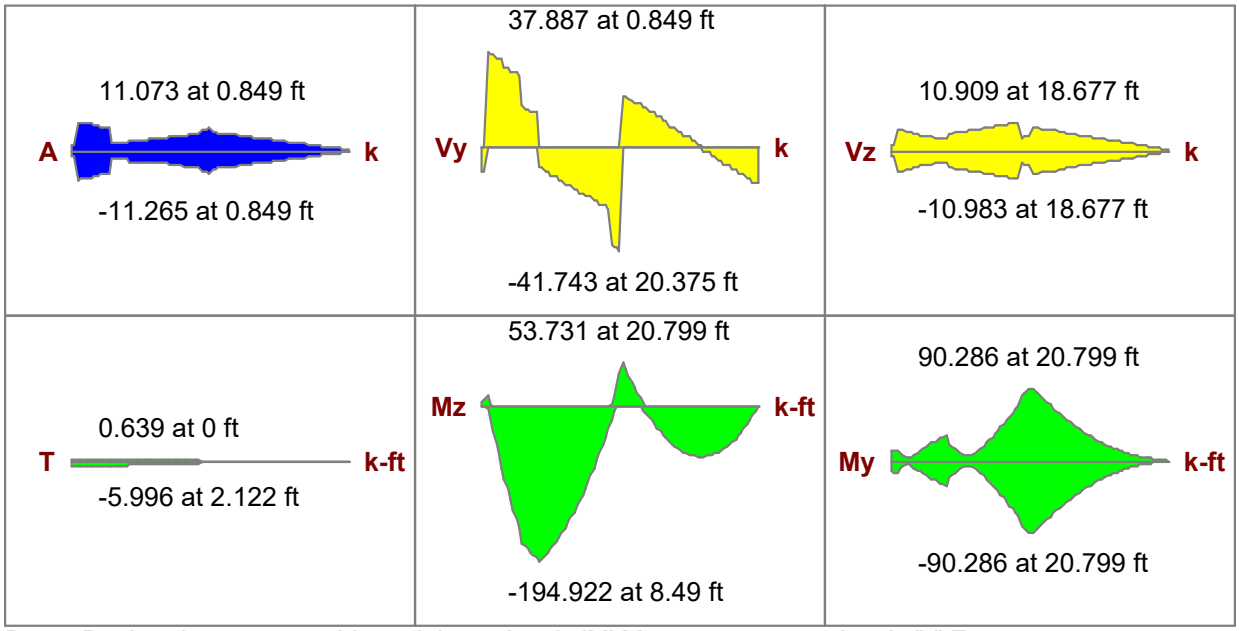
Max. Capacity Ratio: 0.99

42 Inch Wide Concrete Ties

Beam: **B9**

Shape: **CRECT30X42** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **40.75 ft**
Start: **N233**
End: **N153**

Code Check: **0.330 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.068 (LC 1)**	Bot Bending Check	**0.248 (LC 40)**	Shear Check	**0.330 (y) (LC 40)**
Location	**20.799 ft**	Location	**8.49 ft**	Location	**20.375 ft**
Gov Mu Top	**53.731 k-ft**	Gov Mu Bot	**-194.922 k-ft**	Gov Vu	**41.743 k**
phi*Mn Top	**785.594 k-ft**	phi*Mn Bot	**785.594 k-ft**	phi*Vn	**126.547 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 40.8**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**R3D_S6**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	7 #9
	Left	B	7 #9
	Mid	T	7 #9
	Mid	B	7 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	872.882	0.0039	0.0264	0.0064	6.995	0.021
	-	B	872.882	0.0039	0.0264	0.0064	6.995	0.006
	20.8	T	872.882	0.0039	0.0264	0.0064	6.995	0.462
	8.5	B	872.882	0.0039	0.0264	0.0064	6.995	1.685
	40.8	T	0	0	0	0	0	0
	40.8	B	0	0	0	0	0	0

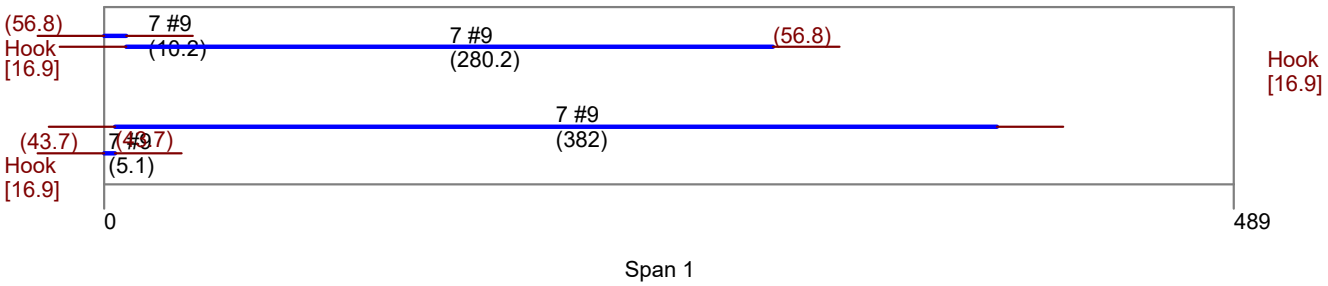
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 10.2	
	10.2 - 20.4	
	20.4 - 30.6	
	30.6 - 40.8	

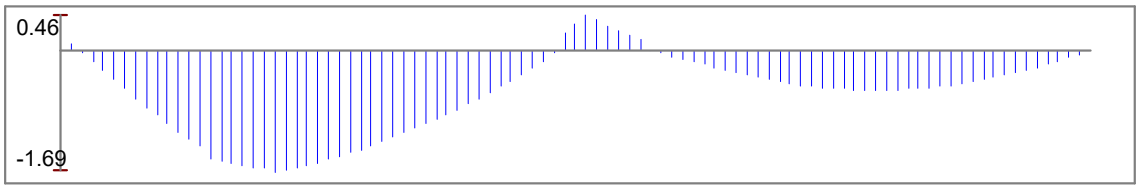
Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 10.2	168.73	168.73	0	0	0
	10.2 - 20.4	168.73	168.73	0	0	0
	20.4 - 30.6	168.73	168.73	0	0	0
	30.6 - 40.8	168.73	168.73	0	0	0

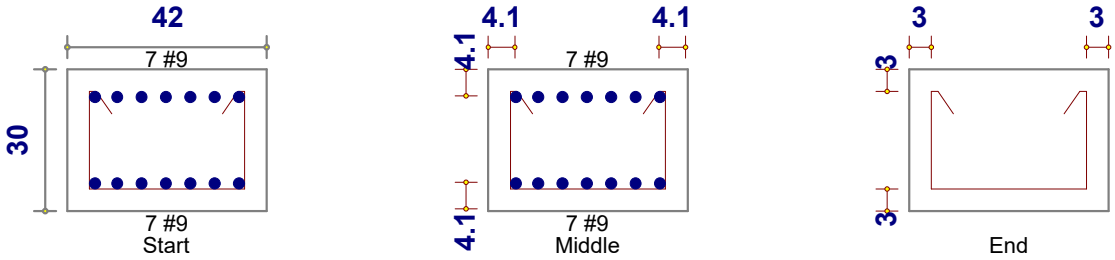
Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)



Graphical Plot of Required Area of Steel(Units: in^2)



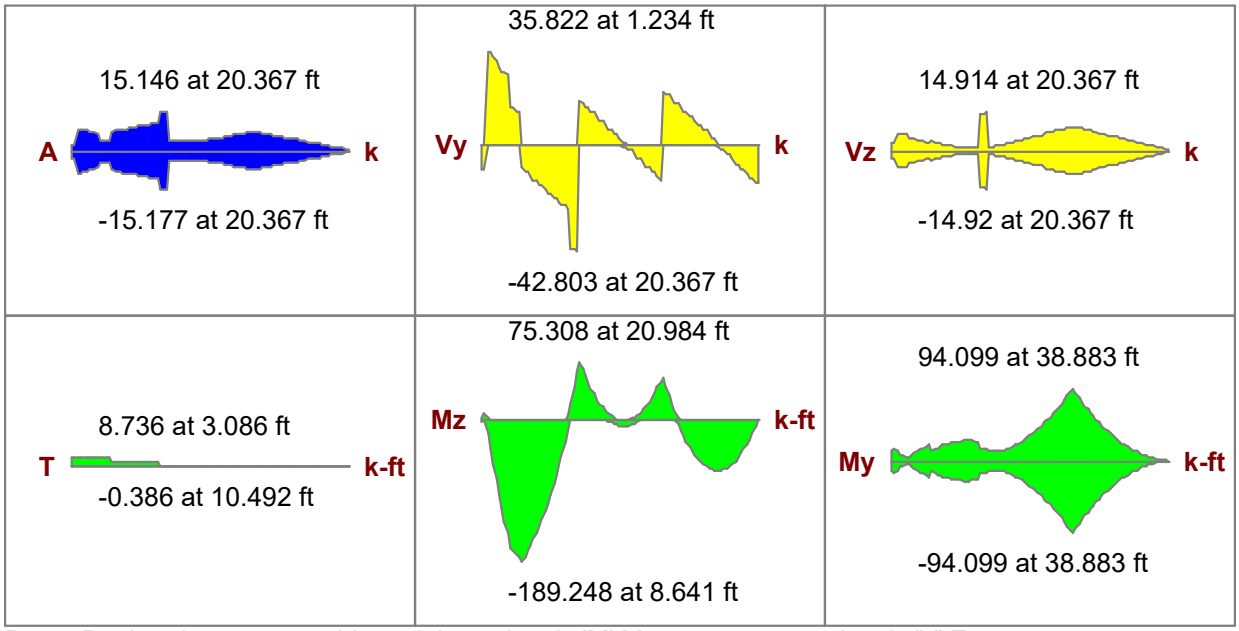
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B10**
Shape: **CRECT30X42** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **59.25 ft**
Start: **N234**
End: **N154**

Code Check: **0.338 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.096 (LC 1)**	Bot Bending Check	**0.241 (LC 40)**	Shear Check	**0.338 (y) (LC 40)**
Location	**20.984 ft**	Location	**8.641 ft**	Location	**20.367 ft**
Gov Mu Top	**75.308 k-ft**	Gov Mu Bot	**-189.248 k-ft**	Gov Vu	**42.803 k**
phi*Mn Top	**785.594 k-ft**	phi*Mn Bot	**785.594 k-ft**	phi*Vn	**126.548 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 59.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**R3D_N639**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	7 #9
	Left	B	7 #9
	Mid	T	7 #9
	Mid	B	7 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	872.882	0.0039	0.0264	0.0064	6.995	0.008
	-	B	872.882	0.0039	0.0264	0.0064	6.995	0.018
	21	T	872.882	0.0039	0.0264	0.0064	6.995	0.648
	8.6	B	872.882	0.0039	0.0264	0.0064	6.995	1.636
	59.3	T	0	0	0	0	0	0
	59.3	B	0	0	0	0	0	0

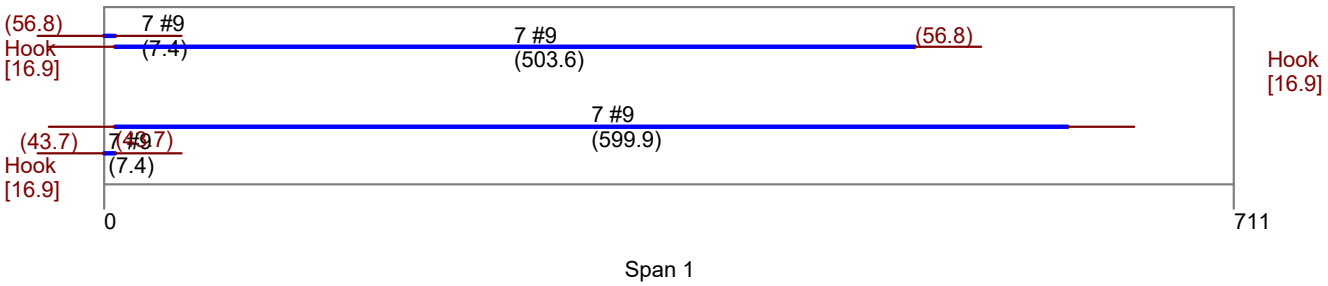
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 14.8	
	14.8 - 29.6	
	29.6 - 44.4	
	44.4 - 59.3	

Shear Span Results

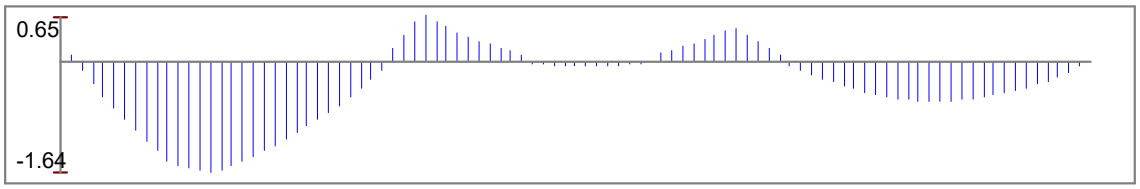
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 14.8	168.73	168.73	0	0	0
	14.8 - 29.6	168.73	168.73	0	0	0
	29.6 - 44.4	168.73	168.73	0	0	0
	44.4 - 59.3	168.73	168.73	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

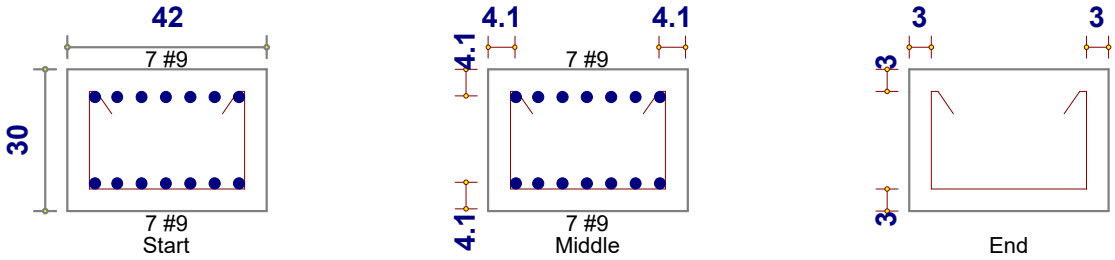


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)

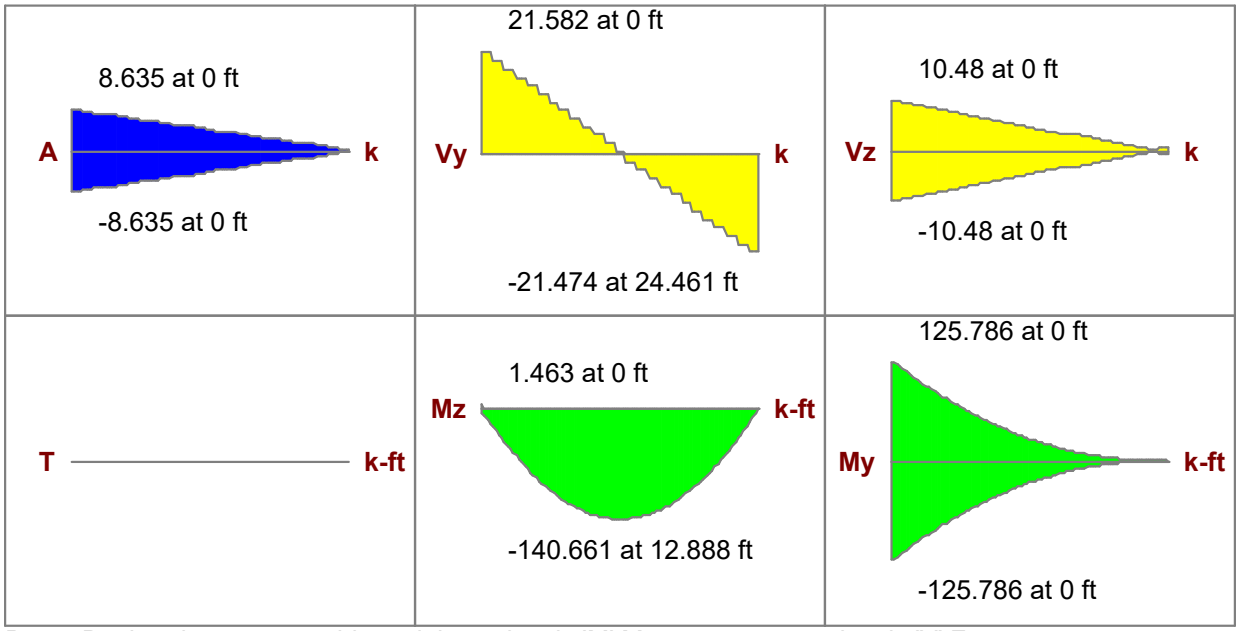


Span 1

Beam: **B11**

Shape: **CRECT30X42** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **25.25 ft**
Start: **N163**
End: **N168**

Code Check: **0.179 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.002 (LC 47)**	Bot Bending Check	**0.179 (LC 1)**	Shear Check	**0.171 (y) (LC 1)**
Location	**0 ft**	Location	**12.888 ft**	Location	**0 ft**
Gov Mu Top	**1.463 k-ft**	Gov Mu Bot	**-140.661 k-ft**	Gov Vu	**21.582 k**
phi*Mn Top	**785.594 k-ft**	phi*Mn Bot	**785.594 k-ft**	phi*Vn	**126.548 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 25.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N163**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	7 #9
	Left	B	-
	Mid	T	-
	Mid	B	7 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	872.882	0.0039	0.0264	0.0064	6.995	0.013
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	12.9	B	872.882	0.0039	0.0264	0.0064	6.995	1.213
	25.3	T	0	0	0	0	0	0
	25.3	B	0	0	0	0	0	0

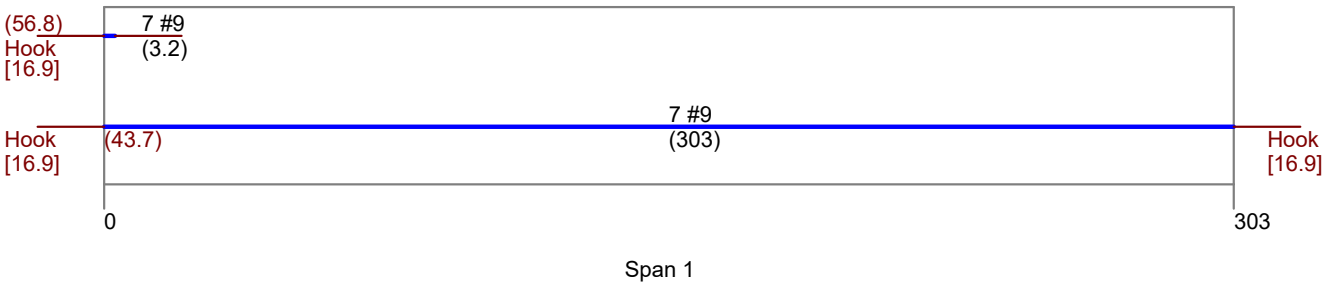
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 6.3	
	6.3 - 12.6	
	12.6 - 18.9	
	18.9 - 25.3	

Shear Span Results

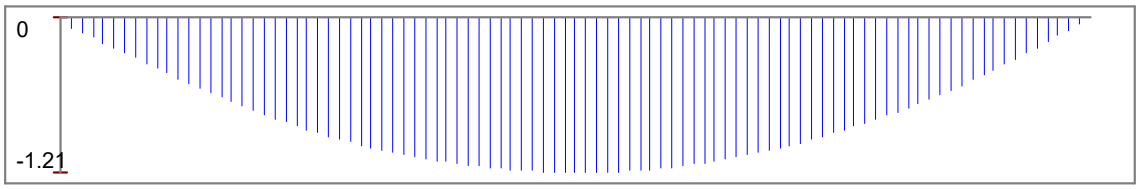
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 6.3	168.73	168.73	0	0	0
	6.3 - 12.6	168.73	168.73	0	0	0
	12.6 - 18.9	168.73	168.73	0	0	0
	18.9 - 25.3	168.73	168.73	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

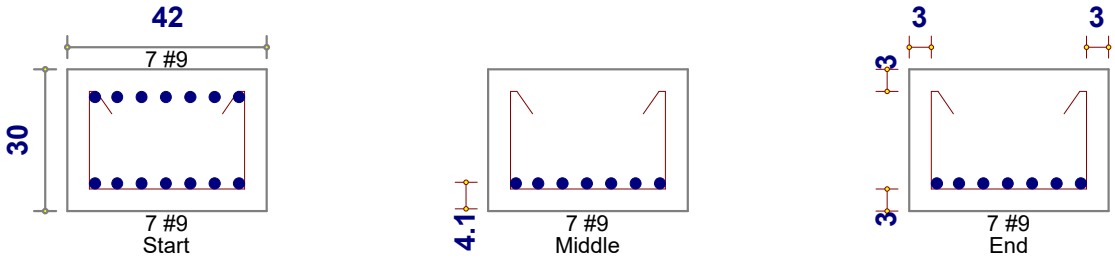


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



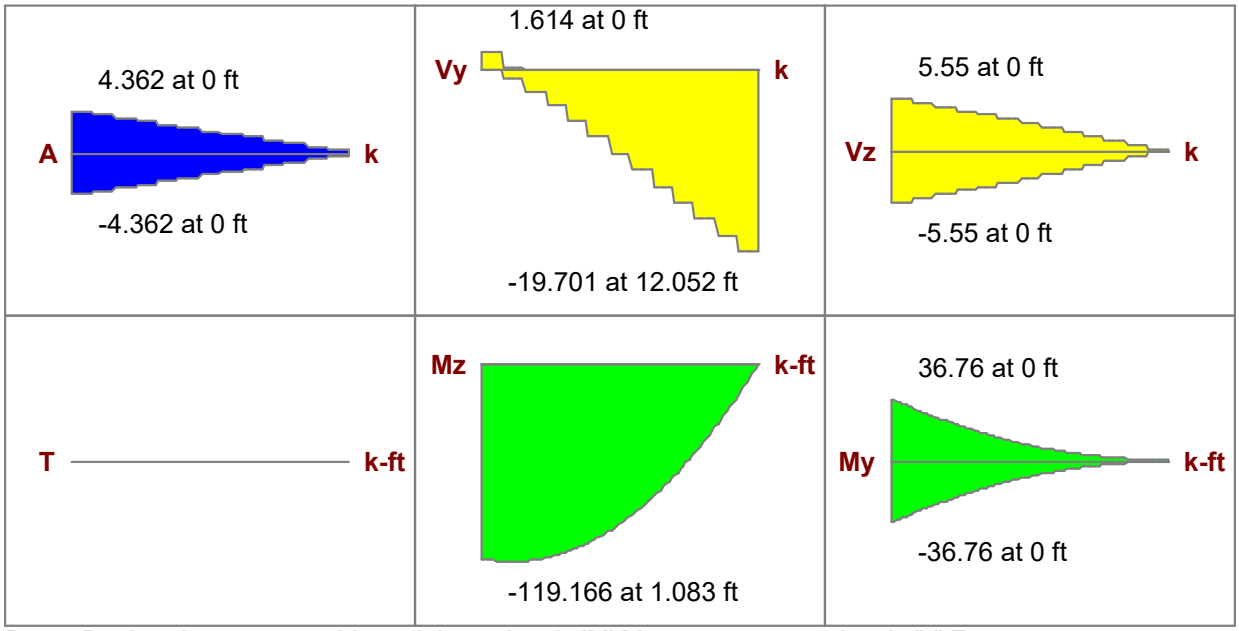
Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Beam: **B12**
Shape: **CRECT30X42** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **13 ft**
Start: **N164**
End: **N169**

Code Check: **0.156 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.000 (LC N/A)**	Bot Bending Check	**0.152 (LC 1)**	Shear Check	**0.156 (y) (LC 1)**
Location	**0 ft**	Location	**1.083 ft**	Location	**12.052 ft**
Gov Mu Top	**0 k-ft**	Gov Mu Bot	**-119.166 k-ft**	Gov Vu	**19.701 k**
phi*Mn Top	**0 k-ft**	phi*Mn Bot	**785.594 k-ft**	phi*Vn	**126.585 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 13**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N164**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	-
	Mid	B	7 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	1.1	B	872.882	0.0039	0.0264	0.0064	6.995	1.027
	13	T	0	0	0	0	0	0
	13	B	0	0	0	0	0	0

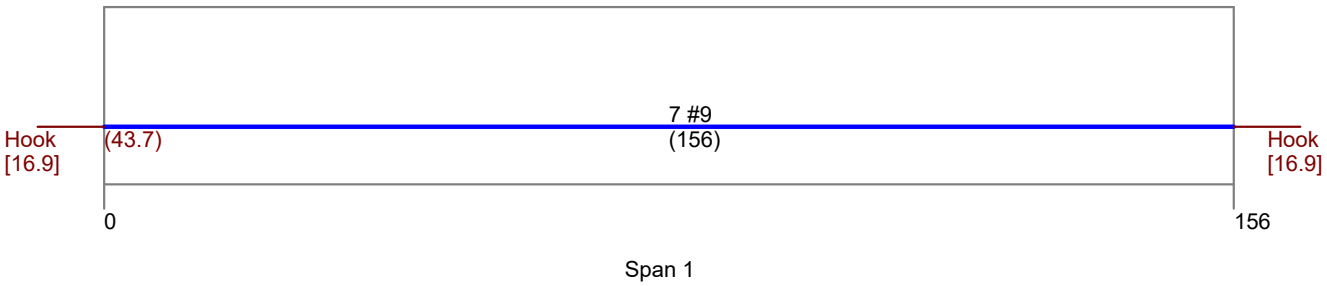
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.3	
	3.3 - 6.5	
	6.5 - 9.8	
	9.8 - 13	

Shear Span Results

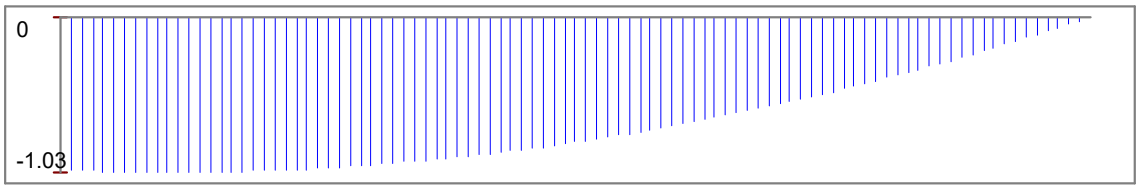
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.3	168.781	168.781	0	0	0
	3.3 - 6.5	168.781	168.781	0	0	0
	6.5 - 9.8	168.781	168.781	0	0	0
	9.8 - 13	168.781	168.781	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

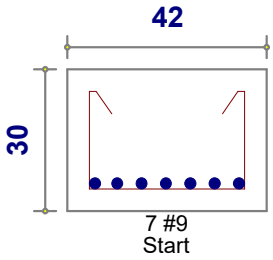


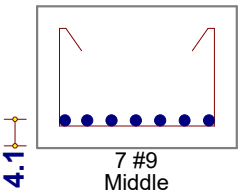
Span 1

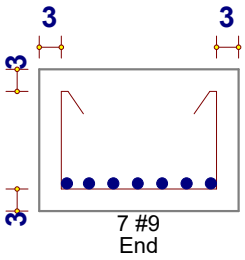
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)







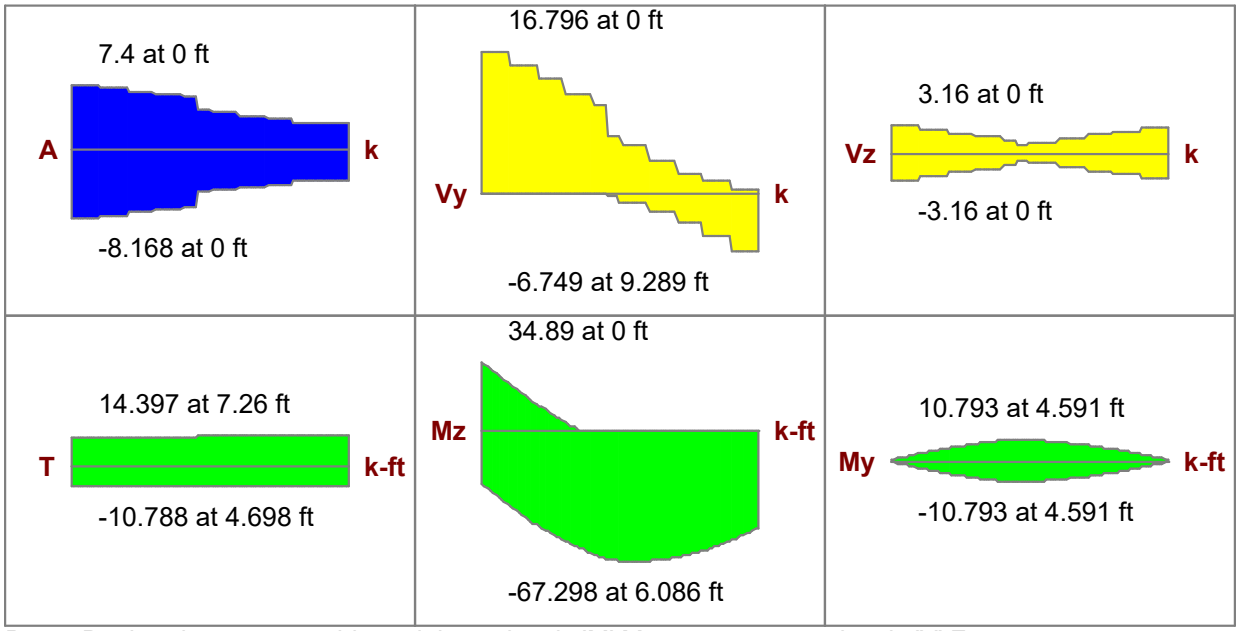
Span 1

Beam: **B14**

Shape: **CRECT30X42**
Material: **Conc 6000NW**
Length: **10.25 ft**
Start: **N178**
End: **N179**

Stress Block: **Rectangular**

Code Check: **0.188 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.098 (LC 42)**	Bot Bending Check	**0.188 (LC 40)**	Shear Check	**0.132 (y) (LC 42)**
Location	**0 ft**	Location	**6.086 ft**	Location	**0 ft**
Gov Mu Top	**34.89 k-ft**	Gov Mu Bot	**-67.298 k-ft**	Gov Vu	**16.796 k**
phi*Mn Top	**357.535 k-ft**	phi*Mn Bot	**357.535 k-ft**	phi*Vn	**127.08 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 10.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N178**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	7 #6
	Left	B	-
	Mid	T	-
	Mid	B	7 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	397.261	0.0039	0.0264	0.0028	3.093	0.299
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	6.1	B	397.261	0.0039	0.0264	0.0028	3.093	0.578
	10.3	T	0	0	0	0	0	0
	10.3	B	0	0	0	0	0	0

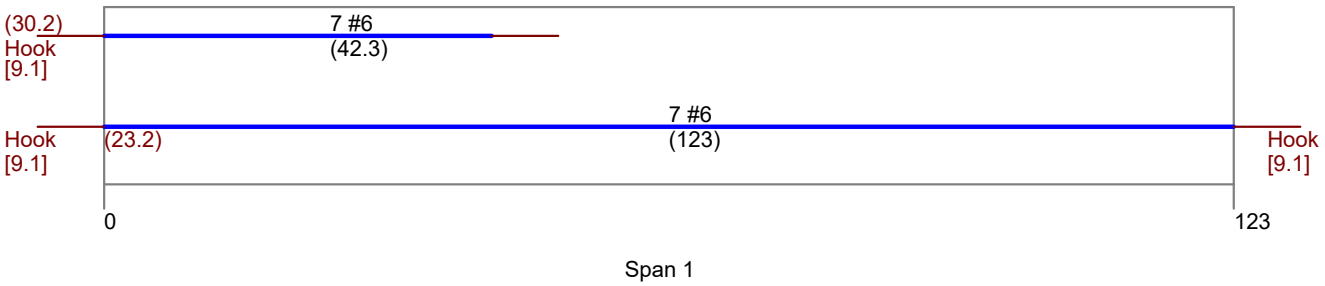
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 2.6	
	2.6 - 5.1	
	5.1 - 7.7	
	7.7 - 10.3	

Shear Span Results

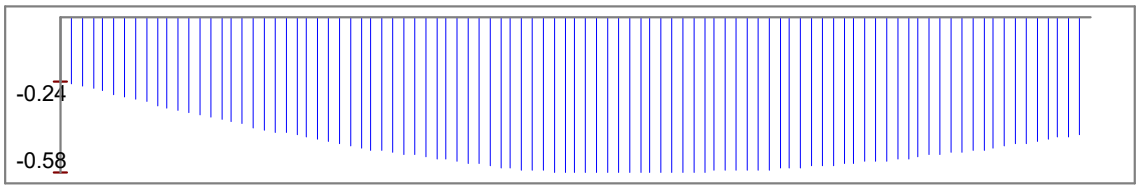
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 2.6	169.44	169.44	0	0	0
	2.6 - 5.1	169.44	169.44	0	0	0
	5.1 - 7.7	169.44	169.44	0	0	0
	7.7 - 10.3	169.44	169.44	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

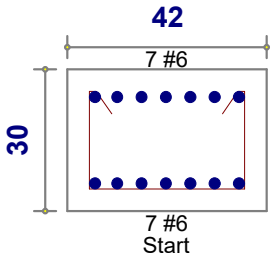


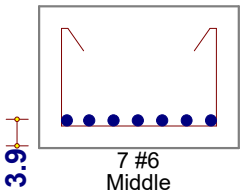
Span 1

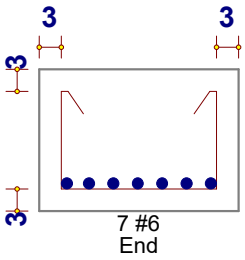
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)







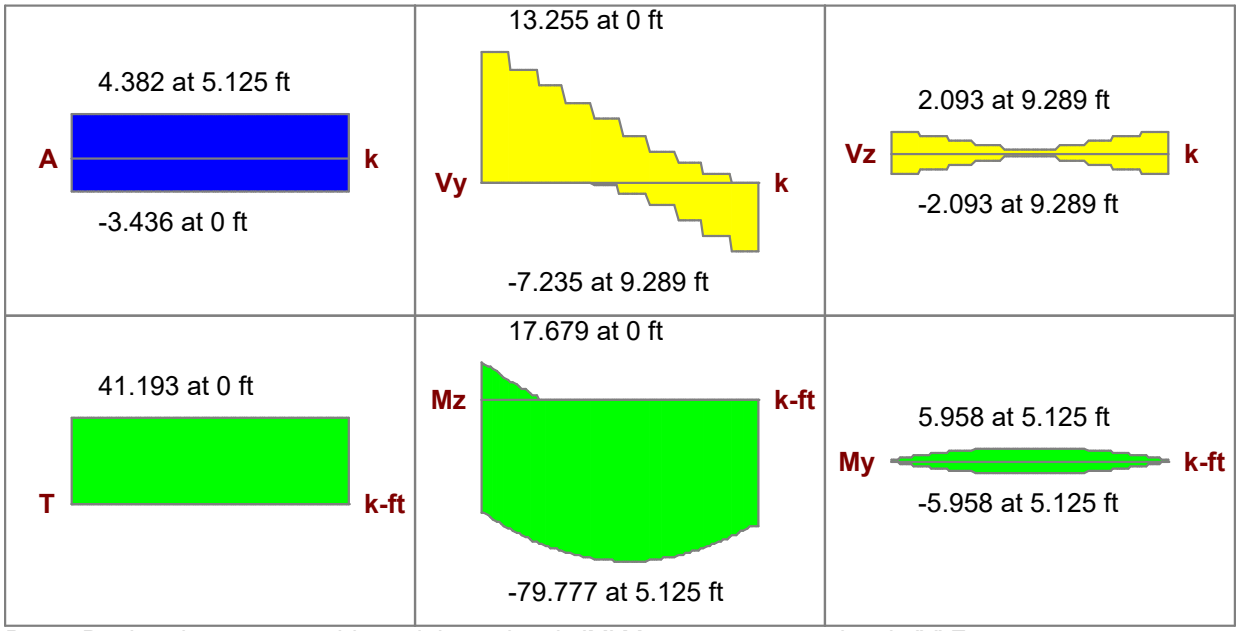
Span 1

Beam: **B15**

Shape: **CRECT30X42**
Material: **Conc 6000NW**
Length: **10.25 ft**
Start: **N180**
End: **N181**

Stress Block: **Rectangular**

Code Check: **0.223 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.049 (LC 46)**	Bot Bending Check	**0.223 (LC 40)**	Shear Check	**0.104 (y) (LC 42)**
Location	**0 ft**	Location	**5.125 ft**	Location	**0 ft**
Gov Mu Top	**17.679 k-ft**	Gov Mu Bot	**-79.777 k-ft**	Gov Vu	**13.255 k**
phi*Mn Top	**357.535 k-ft**	phi*Mn Bot	**357.535 k-ft**	phi*Vn	**127.966 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 10.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N180**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	7 #6
	Left	B	-
	Mid	T	-
	Mid	B	7 #6
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	397.261	0.0039	0.0264	0.0028	3.093	0.152
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	5.1	B	397.261	0.0039	0.0264	0.0028	3.093	0.686
	10.3	T	0	0	0	0	0	0
	10.3	B	0	0	0	0	0	0

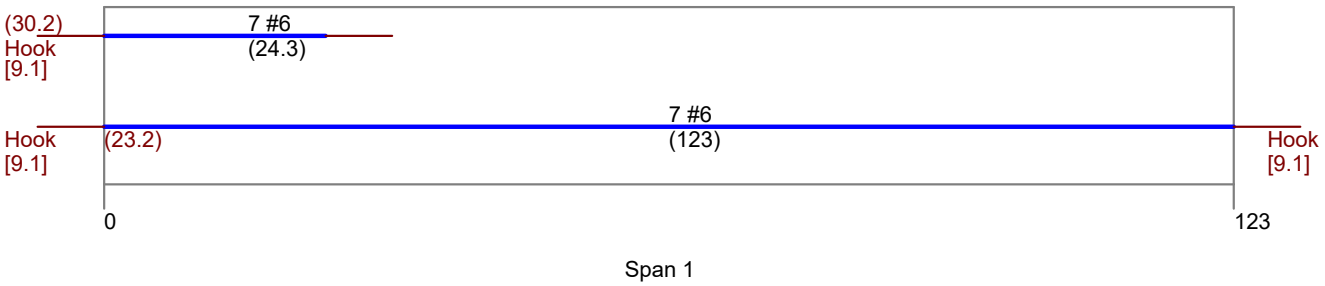
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 2.6	
	2.6 - 5.1	
	5.1 - 7.7	
	7.7 - 10.3	

Shear Span Results

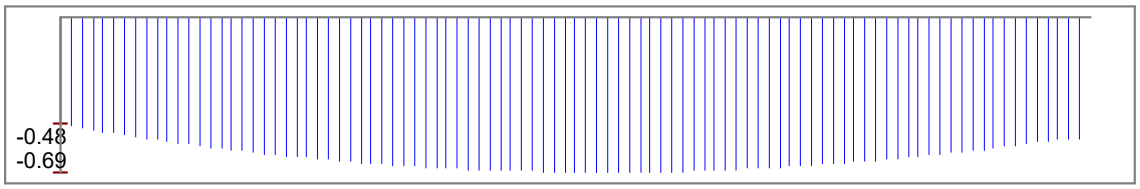
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 2.6	170.621	170.621	0	0	0
	2.6 - 5.1	170.621	170.621	0	0	0
	5.1 - 7.7	170.621	170.621	0	0	0
	7.7 - 10.3	170.621	170.621	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

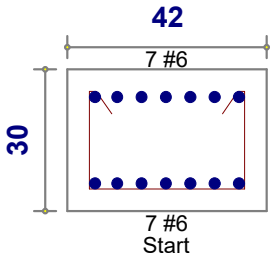


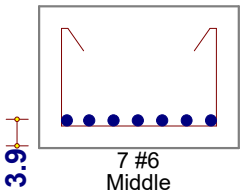
Span 1

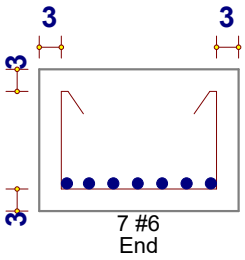
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)





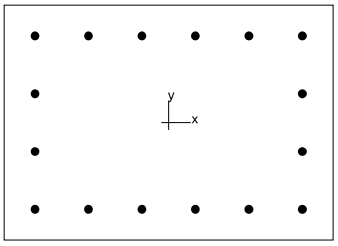


Span 1

BURNS McDONNELL

CONCRETE BEAM SHEAR CHECK

		STIRRUPS REQD	OK
153929 - PDX Fuel Facility	**Designer:**	**A. Kral**	
Utility Corridor 42" Wide Beam		**12/20/2023**	
One-Way Shear Calc following ACI 318-19			
Max Load From Risa File =	42	kips	
Vu =	42	kips	
h = Beam Depth =	30	in	
Top Reinforcement Cover =	2	in	
Side Reinforcement Cover =	3	in	
Bottom Reinforcement Cover =	3	in	
Quantity of Bars Top =	6.0		
Top Bar Size =	9		
Quantity of Bars Bottom =	6.0		
Top Bar Size =	9		
As provided =	11.992	in^2	
dbtop = Diameter of Bar =	1.13		
dtop = t-top cover - dbtop =	26.87	in	
dbot =	27.00	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Beam Width = bw =	24.00	in	2.00
Ag =	720	in^2	
ϕ =	0.75		ACI 318-19 - Table 21.2.1
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1
Provide Shear Stirrups?	Yes		
λs = √(2/(1+(d/10))≤1	1.000		ACI 318-19 - 22.5.5.1.3
Axial Load Along Member = Nu =	-595	kips	Tension entered as negative
0.05*f'c =	300	psi	ACI 318-19 - 22.5.5.1.2
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2
ρ_w = As / (bw*d) =	0.0186		
dtop = t-top cover - dbtop =	26.872	in	
Nu/(6*Ag) =	-137.731	psi	
$(\rho w)^{1/3}$ =	0.265		
One-Way Shear Calc			
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	11.1	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	17.1	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	17.1	kips	ACI 318-19 - 22.5.5.1 - Vc
Max Vc = 5λ√f'cbwd =	249.8	kips	
Vc =	17.1	kips	
ϕVc =	12.8	kips	
	STIRRUPS REQD		
dagg = diameter of aggregate =	0.75	in	
Minimum Spacing =	1.1	in	ACI 318-19 - 25.2.1
Required Minimum Vs =	38.95	kips	
4√fc'bwd =	199.8	kips	
Vs ≤ 4√fc'bwd ?	YES		
Vs > 4√fc'bwd ?	NO		
Maximum Spacing =	24	in	ACI 318-19 - 9.7.6.2.2
Maximum Spacing =	N/A	in	ACI 318-19 - 9.7.6.2.2
Stirrup Bar Size Provided =	4		
# of Legs per Stirrup =	2		
Cross Section =	0.196	in^2	
Av =	0.393	in^2	
s =	15.000	in	
Vs = (Avfytd)/s =	42.2	kips	ACI 318-19 - 22.5.8.5.3
Vn = Vc + Vs =	59.3	kips	
ϕVn =	44.4	kips	
	OK		

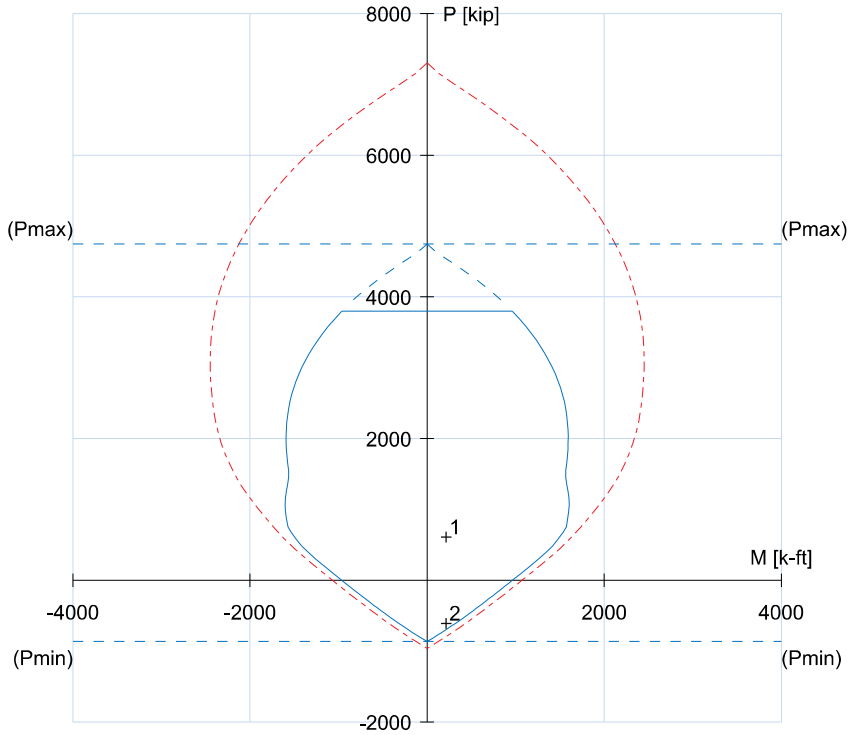


General Information	
Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials	
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section	
Type	Rectangular
Width	42 in
Depth	30 in
A_g	1260 in²
I_x	94500 in⁴
I_y	185220 in⁴

Reinforcement	
Pattern	Equal spacing
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	3 in
Bars	16 #9
Confinement type	Tied
Total steel area, A_s	16.00 in²
Rho	1.27 %
Min. clear spacing	5.70 in



PM at 25.0 [deg]

No.	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	Capacity
	kip	k-ft	k-ft	kip	k-ft	k-ft	Ratio
2	-610.0	195.0	91.0	-635.14	261.23	121.91	0.95
1	610.0	195.0	91.0	0.00	873.25	407.51	0.51

Max. Capacity Ratio: 0.95

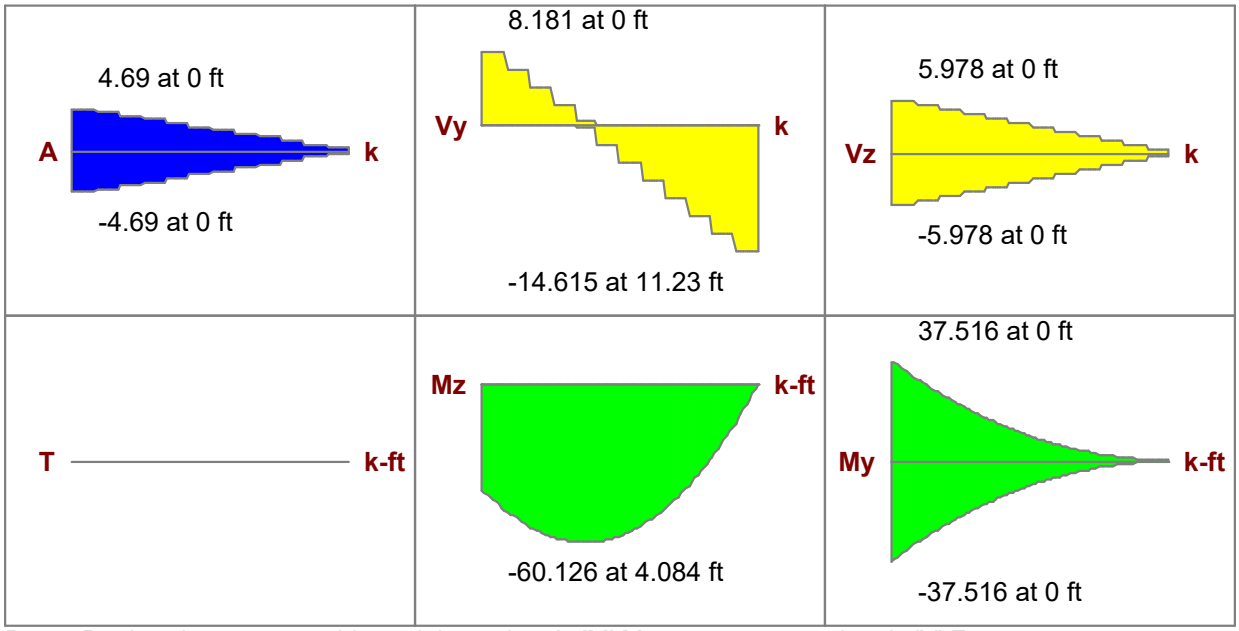
48 Inch Wide Concrete Ties

Beam: **B1**

Shape: **CRECT30X48**
Material: **Conc 6000NW - TIE**
Length: **12.251 ft**
Start: **N101**
End: **N100**

Stress Block: **Rectangular**

Code Check: **0.101 (shear)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.000 (LC N/A)**	Bot Bending Check	**0.067 (LC 1)**	Shear Check	**0.101 (y) (LC 1)**
Location	**0 ft**	Location	**4.084 ft**	Location	**11.23 ft**
Gov Mu Top	**0 k-ft**	Gov Mu Bot	**-60.126 k-ft**	Gov Vu	**14.615 k**
phi*Mn Top	**0 k-ft**	phi*Mn Bot	**897.822 k-ft**	phi*Vn	**144.67 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 12.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N100**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	-
	Left	B	-
	Mid	T	-
	Mid	B	8 #9
	Right	T	-
	Right	B	-

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	0	0	0	0	0	0
	-	B	0	0	0	0	0	0
	-	T	0	0	0	0	0	0
	4.1	B	997.58	0.0039	0.0264	0.0064	7.995	0.516
	12.3	T	0	0	0	0	0	0
	12.3	B	0	0	0	0	0	0

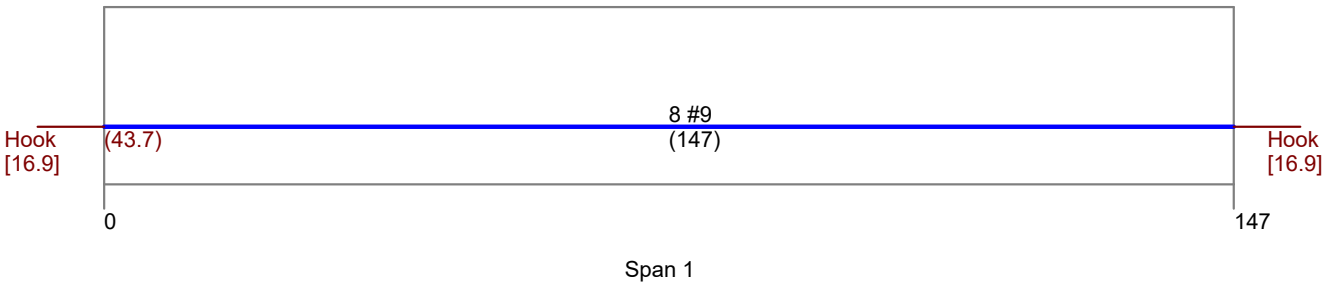
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.1	
	3.1 - 6.1	
	6.1 - 9.2	
	9.2 - 12.3	

Shear Span Results

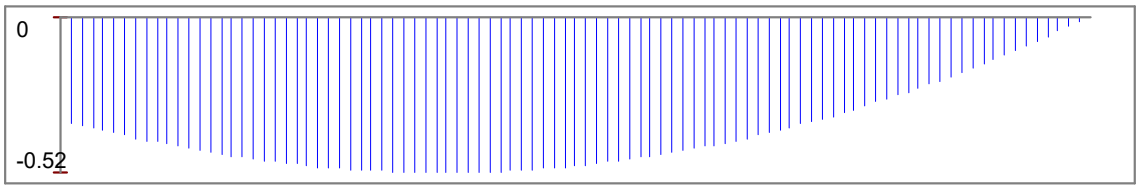
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.1	192.893	192.893	0	0	0
	3.1 - 6.1	192.893	192.893	0	0	0
	6.1 - 9.2	192.893	192.893	0	0	0
	9.2 - 12.3	192.893	192.893	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

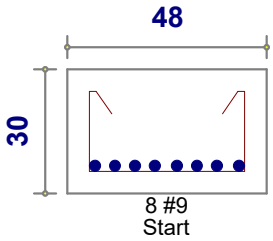


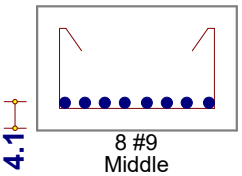
Span 1

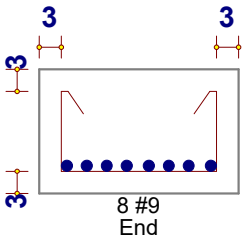
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)





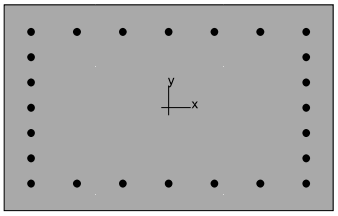


Span 1

BURNS McDONNELL

CONCRETE BEAM SHEAR CHECK

		OK	OK
153929 - PDX Fuel Facility	**Designer:**	**A. Kral**	
Utility Corridor 48" Wide Beam		**12/20/2023**	
One-Way Shear Calc following ACI 318-19			
Max Load From Risa File =	15	kips	
Vu =	15	kips	
h = Beam Depth =	30	in	
Top Reinforcement Cover =	2	in	
Side Reinforcement Cover =	3	in	
Bottom Reinforcement Cover =	3	in	
Quantity of Bars Top =	9.0		
Top Bar Size =	9		
Quantity of Bars Bottom =	6.0		
Top Bar Size =	9		
As provided =	14.990	in^2	
dbtop = Diameter of Bar =	1.13		
dtop = t-top cover - dbtop =	26.87	in	
dbot =	27.00	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Beam Width = bw =	48.00	in	4.00
Ag =	1440	in^2	
ϕ =	0.75		ACI 318-19 - Table 21.2.1
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1
Provide Shear Stirrups?	Yes		
λs = √(2/(1+(d/10))≤1	1.000		ACI 318-19 - 22.5.5.1.3
Axial Load Along Member = Nu =	-1200	kips	Tension entered as negative
0.05*f'c =	300	psi	ACI 318-19 - 22.5.5.1.2
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2
ρ_w = As / (bw*d) =	0.0116		
dtop = t-top cover - dbtop =	26.872	in	
Nu/(6*Ag) =	-138.889	psi	
$(\rho w)^{1/3}$ =	0.227		
One-Way Shear Calc			
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	20.7	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	1.9	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	1.9	kips	ACI 318-19 - 22.5.5.1 - Vc
Max Vc = 5λ√f'cbwd =	499.6	kips	
Vc =	20.7	kips	
ϕVc =	15.5	kips	
	OK		
dagg = diameter of aggregate =	0.75	in	
Minimum Spacing =	1.1	in	ACI 318-19 - 25.2.1
Required Minimum Vs =	-0.68	kips	
4√fc'bwd =	399.6	kips	
Vs ≤ 4√fc'bwd ?	YES		
Vs > 4√fc'bwd ?	NO		
Maximum Spacing =	24	in	ACI 318-19 - 9.7.6.2.2
Maximum Spacing =	N/A	in	ACI 318-19 - 9.7.6.2.2
Stirrup Bar Size Provided =	4		
# of Legs per Stirrup =	2		
Cross Section =	0.196	in^2	
Av =	0.393	in^2	
s =	24.000	in	
Vs = (Avfytd)/s =	26.4	kips	ACI 318-19 - 22.5.8.5.3
Vn = Vc + Vs =	47.1	kips	
ϕVn =	35.3	kips	
	OK		



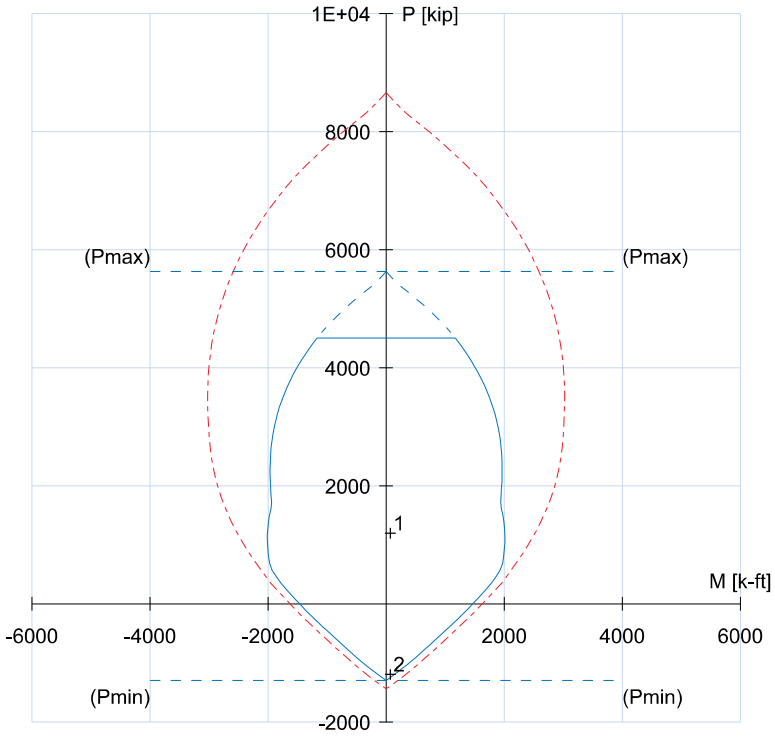
48 x 30 in

General Information	
Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials	
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section	
Type	Rectangular
Width	48 in
Depth	30 in
A_g	1440 in²
I_x	108000 in⁴
I_y	276480 in⁴

Reinforcement	
Pattern	All sides equal
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	3 in
Bars	24 #9
Confinement type	Tied
Total steel area, A_s	24.00 in²
Rho	1.67 %
Min. clear spacing	2.56 in



PM at 32.0 [deg]

No.	P_u kip	M_{ux} k-ft	M_{uy} k-ft	ϕP_n kip	ϕM_{nx} k-ft	ϕM_{ny} k-ft	Capacity Ratio
2	-1196.0	61.0	38.0	-1217.39	93.81	58.44	0.97
1	1196.0	61.0	38.0	4504.03	61.00	38.00	0.27

Max. Capacity Ratio: 0.97

Beams Between Mid and North Pile Cap

Pile Design Checks

	Label	Pile	Shear UC	Shear[k]	Shear LC	Soil Co...	Pile Co...	Comp[k]	Comp LC	Soil Ten...	Pile Ten...	Tens[k]	Tens LC
1	N60	Pile 1	0.623	14.332	144	NC	0.195	48.712	102	NC	0	0	NC
2	N91	Pile 1	0.619	14.227	144	NC	0.049	12.231	195	NC	0	0	NC
3	N111	Pile 1	0.623	14.336	144	NC	0.204	50.974	199	NC	0	0	NC
4	N112	Pile 1	0.623	14.329	144	NC	0.24	60.07	102	NC	0	0	NC
5	N228	Pile 1	0.62	14.267	144	NC	0.2	50.038	199	NC	0	0	NC
6	N229	Pile 1	0.62	14.262	144	NC	0.225	56.224	102	NC	0	0	NC
7	N283	Pile 1	0.619	14.231	144	NC	0.148	37.039	102	NC	0	0	NC

ASCE 7-16 - 12.13.9.3.5 - Foundation Ties requires individual pile caps be interconnected by ties in accordance with Section 12.13.8.2.

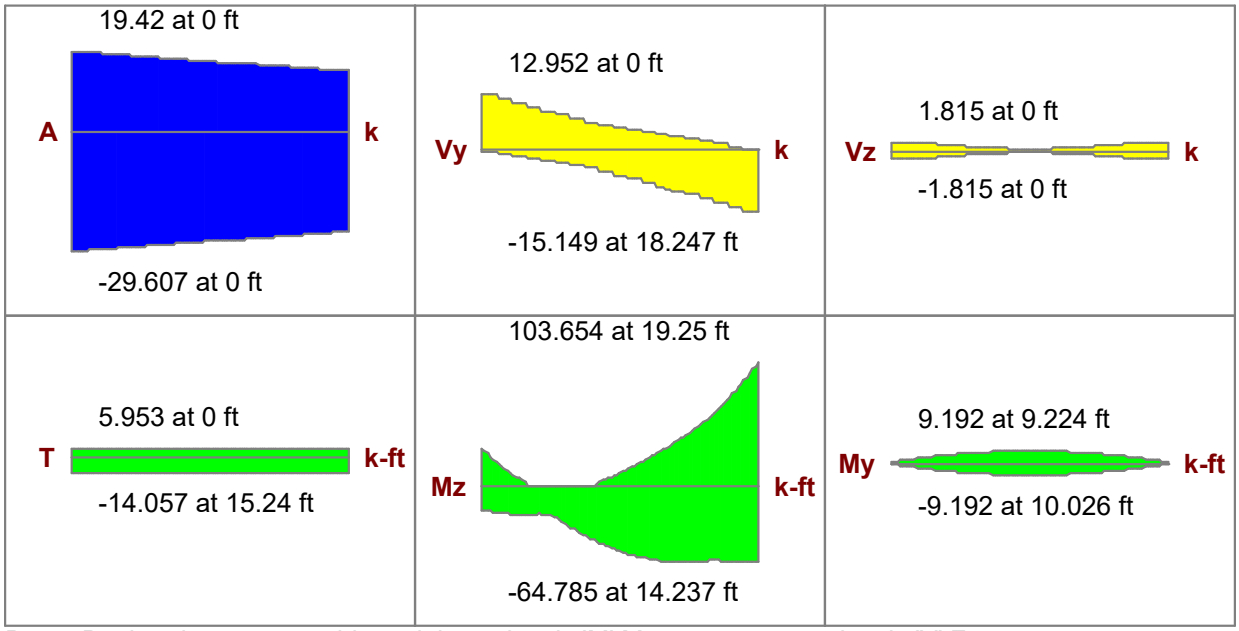
12.13.8.2 - All ties must have a design strength in tension or compression at least equal to a force equal to 10% of SDS times the larger pile cap.

Axial force = 0.1*0.59*(48.712+12.231+50.974+60.07+50.038+56.224+37.039) = 18.60 kips

Beam: **B25**

Shape: **CRECT30X24** Stress Block: **Rectangular**
Material: **Conc 6000NW - TIE**
Length: **19.25 ft**
Start: **N281**
End: **N280**

Code Check: **0.507 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.507 (LC 41)**	Bot Bending Check	**0.317 (LC 43)**	Shear Check	**0.216 (y) (LC 41)**
Location	**19.25 ft**	Location	**14.237 ft**	Location	**18.247 ft**
Gov Mu Top	**103.654 k-ft**	Gov Mu Bot	**-64.785 k-ft**	Gov Vu	**15.149 k**
phi*Mn Top	**204.306 k-ft**	phi*Mn Bot	**204.306 k-ft**	phi*Vn	**70.141 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**6 ksi**	E_Concrete	**4463.15 ksi**	Side Cover	**3 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	**0 - 19.3**	**0**	**0**

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	**0**	**3**	**N280**	**0**

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	4 #6
	Left	B	4 #6
	Mid	T	-
	Mid	B	4 #6
	Right	T	4 #6
	Right	B	4 #6

Bending Span Results

Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	227.006	0.0039	0.0264	0.0028	1.767	0.255
	-	B	227.006	0.0039	0.0264	0.0028	1.767	0.174
	-	T	0	0	0	0	0	0
	14.2	B	227.006	0.0039	0.0264	0.0028	1.767	0.558
	19.3	T	227.006	0.0039	0.0264	0.0028	1.767	0.896
	19.3	B	227.006	0.0039	0.0264	0.0028	1.767	0.55

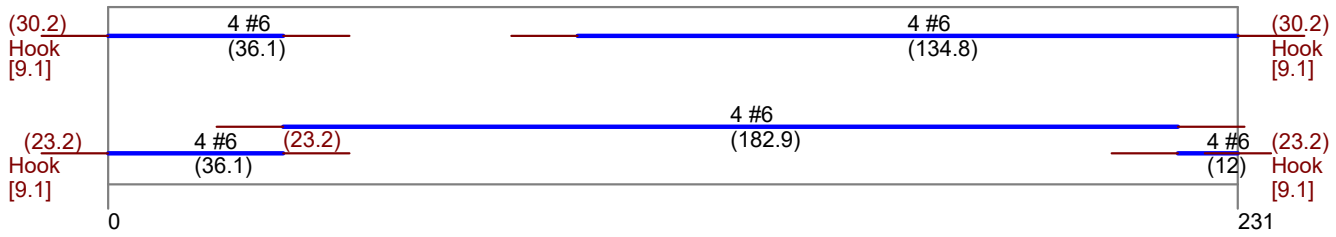
Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 4.8	
	4.8 - 9.6	
	9.6 - 14.4	
	14.4 - 19.3	

Shear Span Results

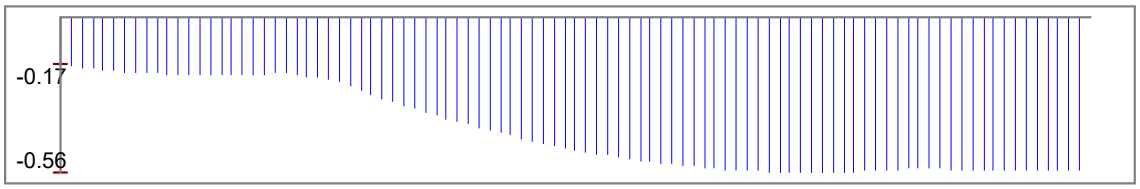
Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 4.8	93.522	93.522	0	0	0
	4.8 - 9.6	93.522	93.522	0	0	0
	9.6 - 14.4	93.522	93.522	0	0	0
	14.4 - 19.3	93.522	93.522	0	0	0

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

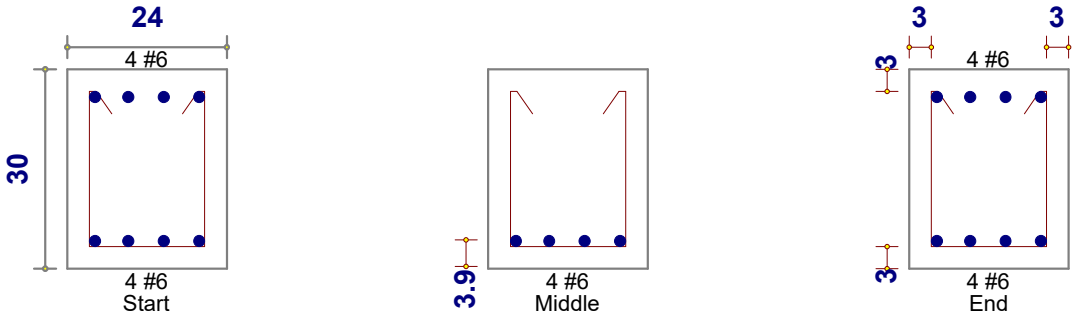


Span 1

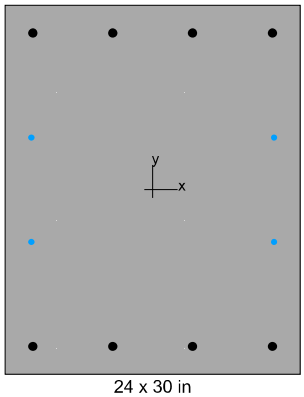
Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1



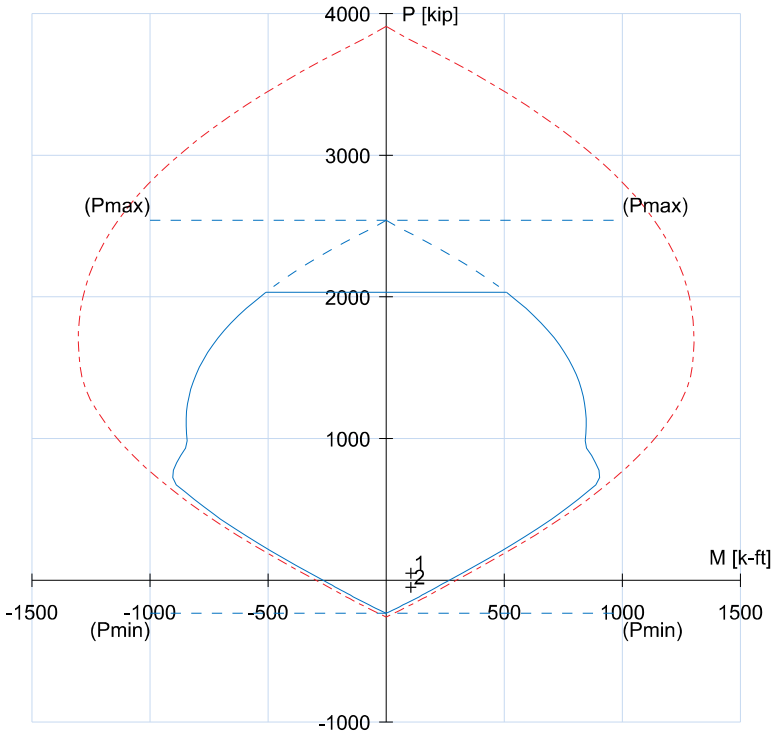
24 x 30 in

General Information	
Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials	
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section	
Type	Rectangular
Width	24 in
Depth	30 in
A_g	720 in²
I_x	54000 in⁴
I_y	34560 in⁴

Reinforcement	
Pattern	Sides different
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	---
Bars	---
Confinement type	Tied
Total steel area, A_s	4.32 in²
Rho	0.60 %
Min. clear spacing	5.75 in



PM at 5.0 [deg]

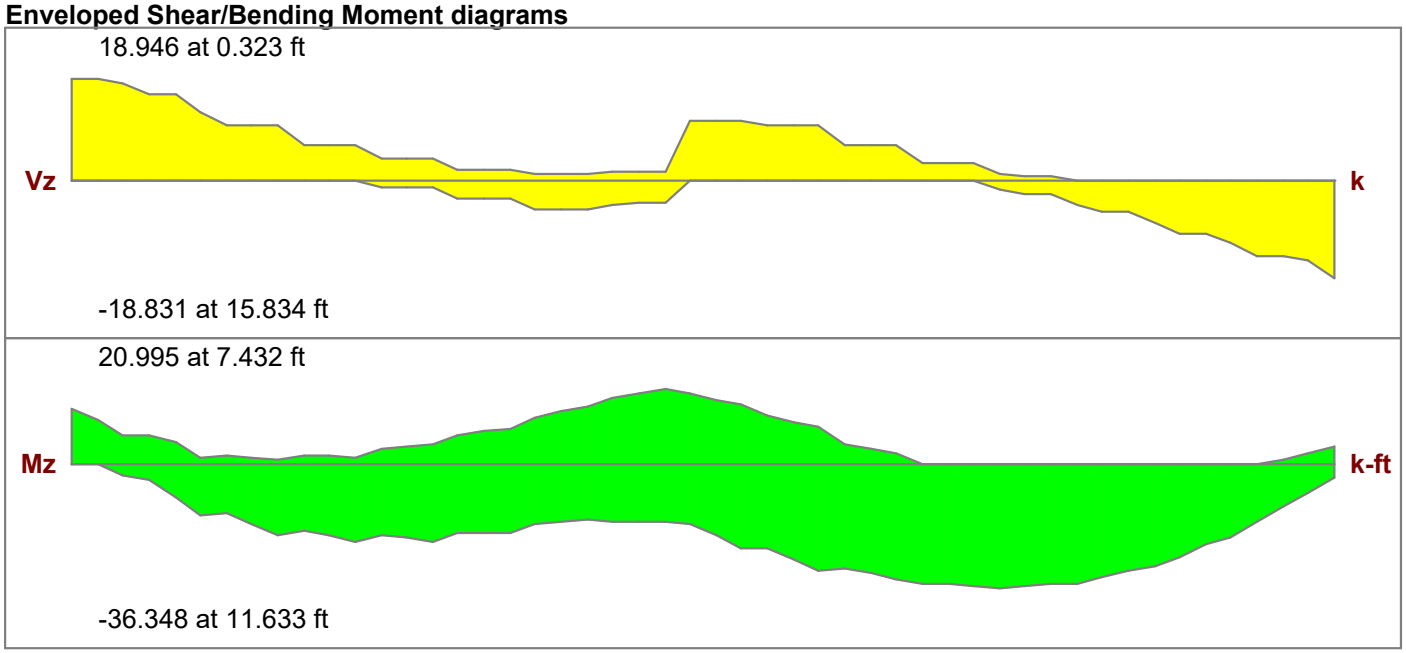
No.	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	Capacity
	kip	k-ft	k-ft	kip	k-ft	k-ft	Ratio
2	-50.0	104.0	10.0	-57.36	203.65	19.58	0.88
1	50.0	104.0	10.0	0.00	266.26	25.60	0.82

Max. Capacity Ratio: 0.88

Misc Section Checks

Strip:	DS27	Max Top bar Spac.:	18 in	Stress Block:	Rectangular
Material:	Conc 6000NW	Min Top bar Spac.:	3 in	Rebar Orientation:	90
Strip Width:	72 in	Max Bot bar Spac.:	18 in	Rebar Spacing Inc:	2 in
Total Cuts:	50	Min Bot bar Spac.:	3 in	Design Rule:	#9 Pile Cap

Enveloped Shear/Bending Moment diagrams



ACI 318-19 Code Check

Top Bending Check	0.035	Bot Bending Check	0.077	1 Way Shear Check	0.179
Gov Mu Top	20.995 k-ft	Gov Mu Bot	-36.348 k-ft	Gov Vu	18.946 k
phi*Mn Top	607.716 k-ft	phi*Mn Bot	472.807 k-ft	phi*Vn	106.114 k
Governing Cut	DS27-X24	Governing Cut	DS27-X37	Governing Cut	DS27-X2
Governing LC	44	Governing LC	2	Governing LC	42
Tension Bar Fy	60 ksi	Concrete Weight	0.145 k/ft^3	Top Cover	2 in
Shear Bar Fy	60 ksi	λ	1	Bottom Cover	8 in
F'c	6 ksi	E_Concrete	4463.15 ksi	Side Cover	0 in
Flex. Rebar Set	ASTM A615	Rho Bot Prvd	0.00324	Rho Top Prvd	0.00253
		Prvd Bot Bar Spac.	#9@18in	Prvd Top Bar Spac.	#9@18in

Bending Steel Reqd/Prvd, Units: in^2)

Cut Label	Top As Reqd	Top As Prvd	Bot As Reqd	Bot As Prvd	Rho Reqd(T/S)	Rho Reqd(Flex)	Rho Prvd(Gross)
DS27-X24	0.17	4.997	0.174	4.997	0.00180	0.00180	0.00463
DS27-X37	NA	4.997	0.377	4.997	0.00180	0.00180	0.00463

BURNS McDONNELL

CONCRETE BEAM SHEAR CHECK

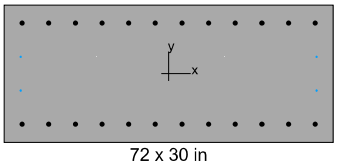
OK

153929 - PDX Fuel Facility | **Designer:** | **A. Kral**

Utility Corridor 72" Wide Beam | **12/20/2023**

One-Way Shear Calc following ACI 318-19

Max Load From Risa File =	18.9	kips	
Vu =	19	kips	
h = Beam Depth =	30	in	
Top Reinforcement Cover =	2	in	
Side Reinforcement Cover =	3	in	
Bottom Reinforcement Cover =	3	in	
Quantity of Bars Top =	12.0		
Top Bar Size =	9		
Quantity of Bars Bottom =	12.0		
Top Bar Size =	9		
As provided =	23.984	in^2	
dbtop = Diameter of Bar =	1.13		
dtop = t-top cover - dbtop =	26.87	in	
dbot =	27.00	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Beam Width = bw =	72.00	in	6.00
Ag =	2160	in^2	
ϕ =	0.75		ACI 318-19 - Table 21.2.1
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1
Provide Shear Stirrups?	No		
λs = √(2/(1+(d/10))≤1	0.736		ACI 318-19 - 22.5.5.1.3
Axial Load Along Member = Nu =	-1200	kips	Tension entered as negative
0.05*f'c =	300	psi	ACI 318-19 - 22.5.5.1.2
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2
ρ_w = As / (bw*d) =	0.0124		
dtop = t-top cover - dbtop =	26.872	in	
Nu/(6*Ag) =	-92.593	psi	
$(\rho w)^{1/3}$ =	0.231		
One-Way Shear Calc			
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	120.6	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	98.3	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	25.2	kips	ACI 318-19 - 22.5.5.1 - Vc
Max Vc = 5λ√f'cbwd =	749.3	kips	
Vc =	25.2	kips	
ϕVc =	18.9	kips	
	OK		
dagg = diameter of aggregate =	0.75	in	
Minimum Spacing =	1.1	in	ACI 318-19 - 25.2.1
Required Minimum Vs =	-0.03	kips	
4√fc'bwd =	599.5	kips	
Vs ≤ 4√fc'bwd ?	YES		
Vs > 4√fc'bwd ?	NO		
Maximum Spacing =	24	in	ACI 318-19 - 9.7.6.2.2
Maximum Spacing =	N/A	in	ACI 318-19 - 9.7.6.2.2
Stirrup Bar Size Provided =	4		
# of Legs per Stirrup =	2		
Cross Section =	0.196	in^2	
Av =	0.393	in^2	
s =	24.000	in	
Vs = (Avfytd)/s =	26.4	kips	ACI 318-19 - 22.5.8.5.3
Vn = Vc + Vs =	51.6	kips	
ϕVn =	N/A	kips	



72 x 30 in

General Information

Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials

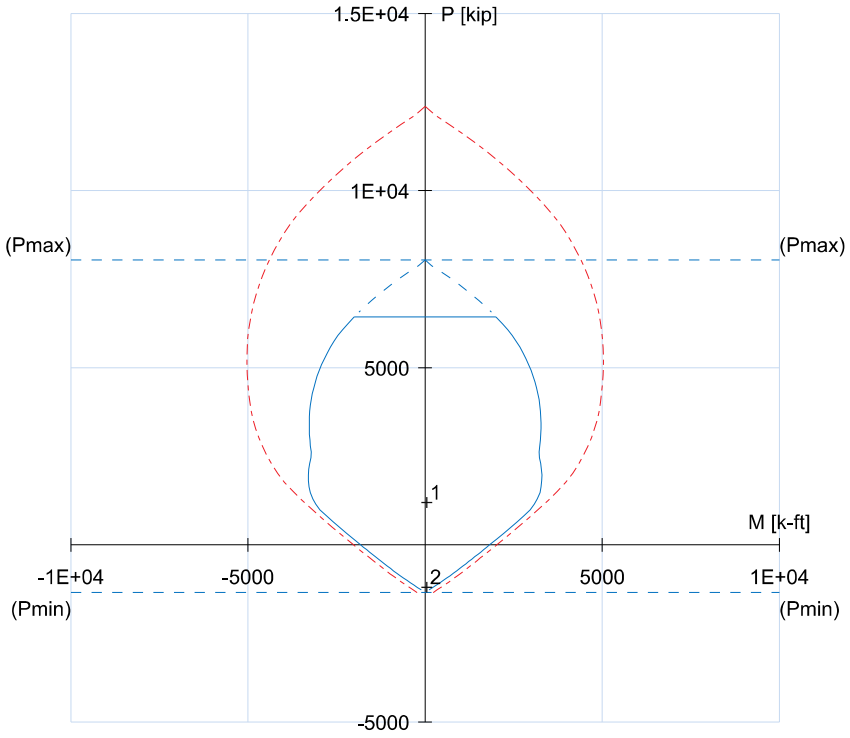
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section

Type	Rectangular
Width	72 in
Depth	30 in
A_g	2160 in²
I_x	162000 in⁴
I_y	933120 in⁴

Reinforcement

Pattern	Sides different
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	---
Bars	---
Confinement type	Tied
Total steel area, A_s	24.80 in²
Rho	1.15 %
Min. clear spacing	4.70 in



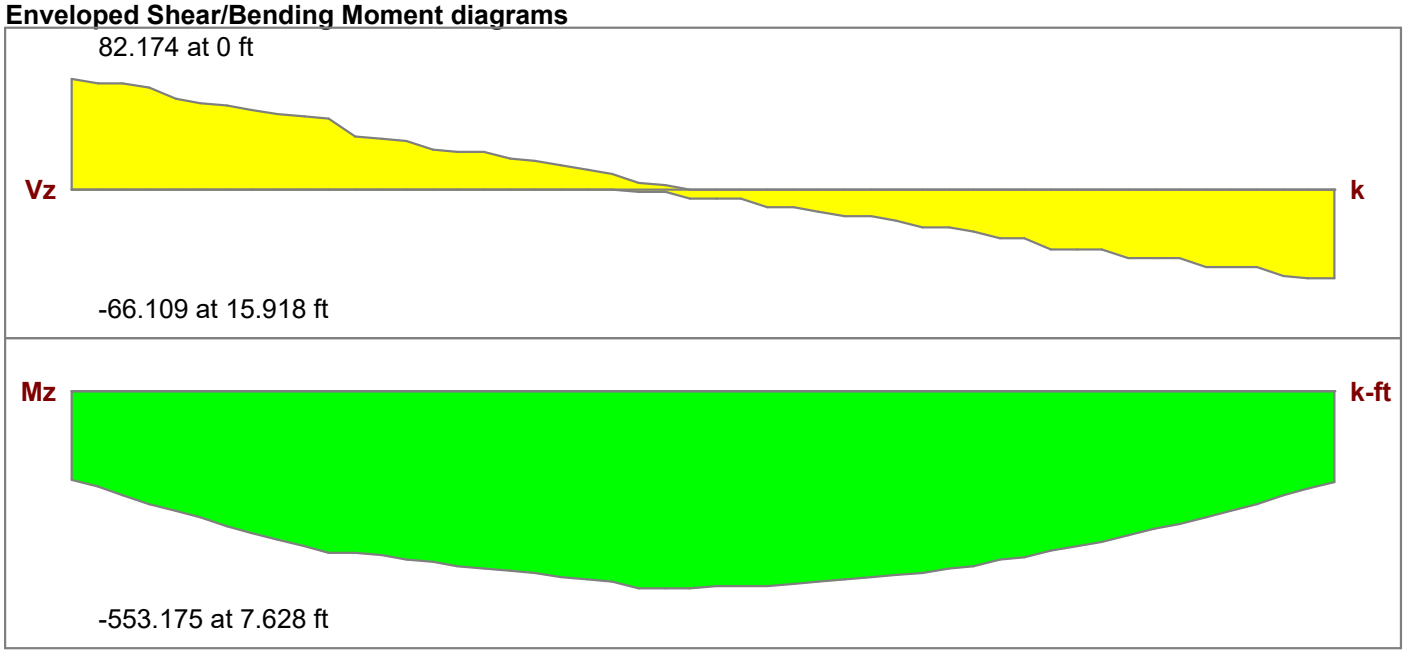
PM at 42.0 [deg]

No.	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	Capacity
	kip	k-ft	k-ft	kip	k-ft	k-ft	Ratio
2	-1196.0	36.0	32.0	-1228.45	131.26	116.67	0.95
1	1196.0	36.0	32.0	0.00	1354.67	1204.15	0.43

Max. Capacity Ratio: 0.95

Strip:	DS28	Max Top bar Spac.:	18 in	Stress Block:	Rectangular
Material:	Conc 6000NW	Min Top bar Spac.:	3 in	Rebar Orientation:	90
Strip Width:	150 in	Max Bot bar Spac.:	18 in	Rebar Spacing Inc:	2 in
Total Cuts:	50	Min Bot bar Spac.:	3 in	Design Rule:	#9 Pile Cap

Enveloped Shear/Bending Moment diagrams



ACI 318-19 Code Check

Top Bending Check	0.000	Bot Bending Check	0.648	1 Way Shear Check	0.390
Gov Mu Top	0 k-ft	Gov Mu Bot	-553.175 k-ft	Gov Vu	82.174 k
phi*Mn Top	0 k-ft	phi*Mn Bot	853.3 k-ft	phi*Vn	210.558 k
Governing Cut	NA	Governing Cut	DS28-X24	Governing Cut	DS28-X1
Governing LC	N/A	Governing LC	2	Governing LC	2
Tension Bar Fy	60 ksi	Concrete Weight	0.145 k/ft^3	Top Cover	2 in
Shear Bar Fy	60 ksi	λ	1	Bottom Cover	8 in
F'c	6 ksi	E_Concrete	4463.15 ksi	Side Cover	0 in
Flex. Rebar Set	ASTM A615	Rho Bot Prvd	0.00280	Rho Top Prvd	0.00000
		Prvd Bot Bar Spac.	#9@18in	Prvd Top Bar Spac.	

Bending Steel Reqd/Prvd, Units: in^2)

Cut Label	Top As Reqd	Top As Prvd	Bot As Reqd	Bot As Prvd	Rho Reqd(T/S)	Rho Reqd(Flex)	Rho Prvd(Gross)
NA	NA	NA	2.661	8.994	0.00180	0.00180	0.00200
DS28-X24	NA	NA	5.796	8.994	0.00180	0.00180	0.00200

BURNS McDONNELL

CONCRETE BEAM SHEAR CHECK

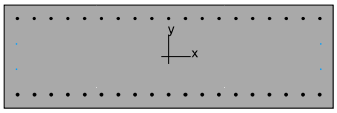
OK

153929 - PDX Fuel Facility | **Designer:** | **A. Kral**

Utility Corridor 150" Wide Beam | **12/20/2023**

One-Way Shear Calc following ACI 318-19

Max Load From Risa File =	82	kips	
Vu =	82	kips	
h = Beam Depth =	30	in	
Top Reinforcement Cover =	2	in	
Side Reinforcement Cover =	3	in	
Bottom Reinforcement Cover =	3	in	
Quantity of Bars Top =	19.0		
Top Bar Size =	9		
Quantity of Bars Bottom =	19.0		
Top Bar Size =	9		
As provided =	37.974	in^2	
dbtop = Diameter of Bar =	1.13		
dtop = t-top cover - dbtop =	26.87	in	
dbot =	27.00	in	
f'c =	6000	psi	
√f'c =	77.46	psi	
fy =	60,000	psi	
Beam Width = bw =	150.00	in	12.50
Ag =	4500	in^2	
ϕ =	0.75		ACI 318-19 - Table 21.2.1
λ =	1		ACI 318-19 - Table 15.4.2.3 - note 1
Provide Shear Stirrups?	No		
λs = √(2/(1+(d/10))≤1	0.736		ACI 318-19 - 22.5.5.1.3
Axial Load Along Member = Nu =	-1190	kips	Tension entered as negative
0.05*f'c =	300	psi	ACI 318-19 - 22.5.5.1.2
Nu/(6*Ag) ≤ 0.05f'c	OK		ACI 318-19 - 22.5.5.1.2
ρ_w = As / (bw*d) =	0.0094		
dtop = t-top cover - dbtop =	26.872	in	
Nu/(6*Ag) =	-44.074	psi	
$(\rho w)^{1/3}$ =	0.211		
One-Way Shear Calc			
Vc = [(2*λ*√(f'c)+(Nu/6*Ag)]*bw*d =	446.8	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	349.9	kips	ACI 318-19 - 22.5.5.1 - Vc
Vc = [(8*λs*λ*$(\rho w)^{1/3}$ *√(f'c)+(Nu/6*Ag)]*bw*d =	210.9	kips	ACI 318-19 - 22.5.5.1 - Vc
Max Vc = 5λ√f'cbwd =	1561.1	kips	
Vc =	210.9	kips	
ϕVc =	158.2	kips	
	OK		
dagg = diameter of aggregate =	0.75	in	
Minimum Spacing =	1.1	in	ACI 318-19 - 25.2.1
Required Minimum Vs =	-101.31	kips	
4√fc'bwd =	1248.9	kips	
Vs ≤ 4√fc'bwd ?	YES		
Vs > 4√fc'bwd ?	NO		
Maximum Spacing =	24	in	ACI 318-19 - 9.7.6.2.2
Maximum Spacing =	N/A	in	ACI 318-19 - 9.7.6.2.2
Stirrup Bar Size Provided =	4		
# of Legs per Stirrup =	2		
Cross Section =	0.196	in^2	
Av =	0.393	in^2	
s =	24.000	in	
Vs = (Avfytd)/s =	26.4	kips	ACI 318-19 - 22.5.8.5.3
Vn = Vc + Vs =	237.3	kips	
ϕVn =	N/A	kips	



96 x 30 in

General Information

Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	X - axis
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials

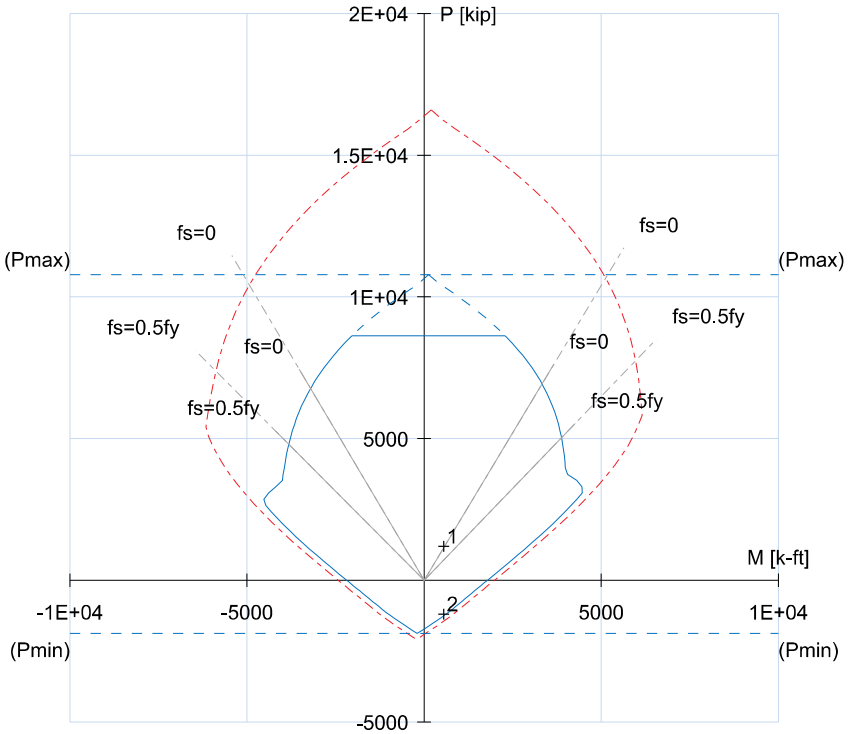
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section

Type	Rectangular
Width	96 in
Depth	30 in
A_g	2880 in²
I_x	216000 in⁴
I_y	2.21184e+006 in⁴

Reinforcement

Pattern	Sides different
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	---
Bars	---
Confinement type	Tied
Total steel area, A_s	34.81 in²
Rho	1.21 %
Min. clear spacing	3.77 in



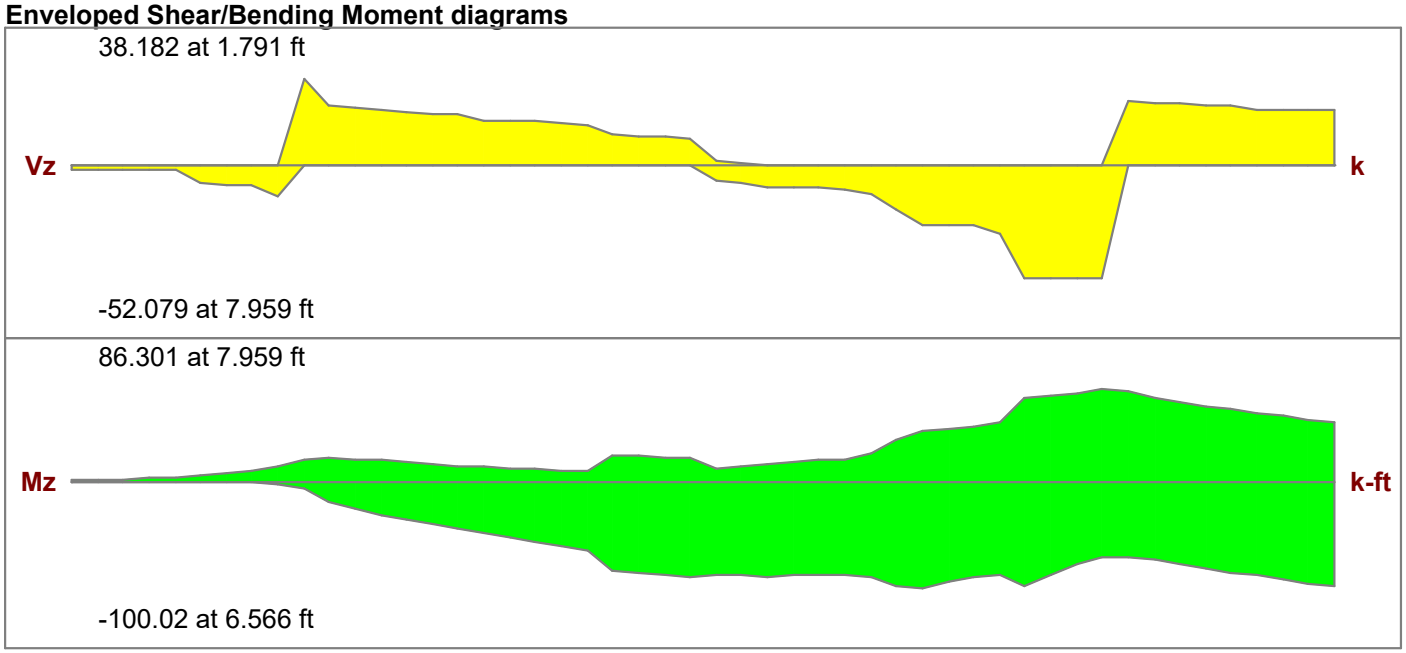
PM at 0.0 [deg]

No.	P_u kip	M_{ux} k-ft	ϕP_n kip	ϕM_{nx} k-ft	Capacity Ratio
2	-1196.0	552.0	-1206.15	604.76	0.99
1	1196.0	552.0	0.00	1786.36	0.69

Max. Capacity Ratio: 0.99

Strip:	DS29	Max Top bar Spac.:	18 in	Stress Block:	Rectangular
Material:	Conc 6000NW	Min Top bar Spac.:	3 in	Rebar Orientation:	90
Strip Width:	102 in	Max Bot bar Spac.:	18 in	Rebar Spacing Inc:	2 in
Total Cuts:	50	Min Bot bar Spac.:	3 in	Design Rule:	#9 Pile Cap

Enveloped Shear/Bending Moment diagrams

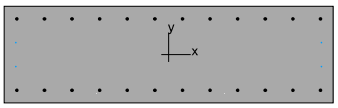


ACI 318-19 Code Check

Top Bending Check	0.118	Bot Bending Check	0.176	1 Way Shear Check	0.366
Gov Mu Top	86.301 k-ft	Gov Mu Bot	-100.02 k-ft	Gov Vu	52.079 k
phi*Mn Top	730.944 k-ft	phi*Mn Bot	569.053 k-ft	phi*Vn	142.234 k
Governing Cut	DS29-X41	Governing Cut	DS29-X34	Governing Cut	DS29-X41
Governing LC	42	Governing LC	40	Governing LC	40
Tension Bar Fy	60 ksi	Concrete Weight	0.145 k/ft^3	Top Cover	2 in
Shear Bar Fy	60 ksi	λ	1	Bottom Cover	8 in
F'c	6 ksi	E_Concrete	4463.15 ksi	Side Cover	0 in
Flex. Rebar Set	ASTM A615	Rho Bot Prvd	0.00274	Rho Top Prvd	0.00214
		Prvd Bot Bar Spac.	#9@18in	Prvd Top Bar Spac.	#9@18in

Bending Steel Reqd/Prvd, Units: in^2)

Cut Label	Top As Reqd	Top As Prvd	Bot As Reqd	Bot As Prvd	Rho Reqd(T/S)	Rho Reqd(Flex)	Rho Prvd(Gross)
DS29-X41	0.7	5.996	0.735	5.996	0.00180	0.00180	0.00392
DS29-X34	0.38	5.996	1.04	5.996	0.00180	0.00180	0.00392



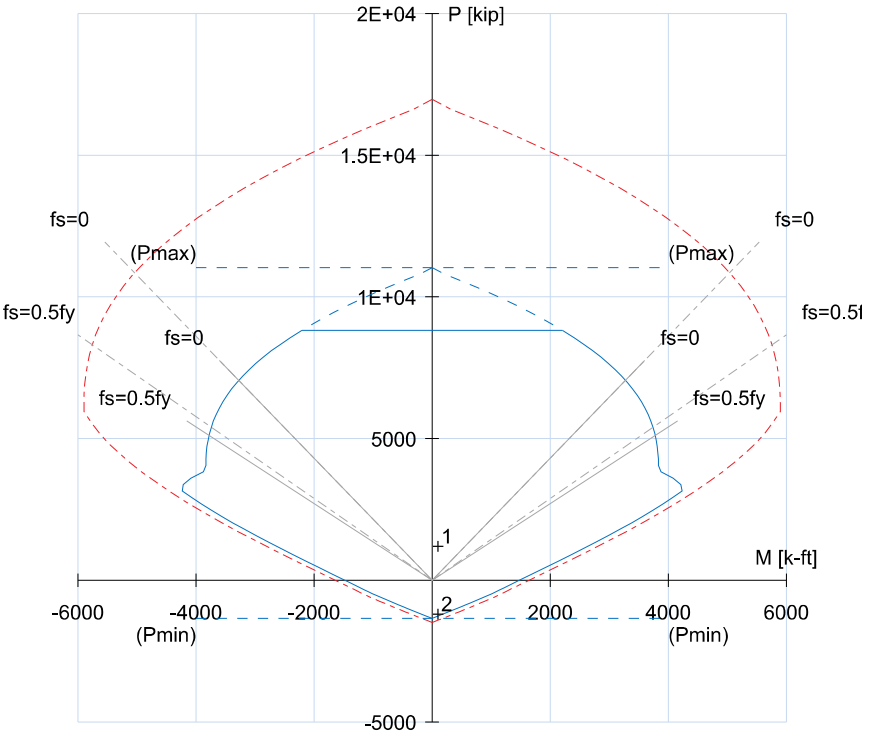
102 x 30 in

General Information	
Project	153929 - PDX Fuel Facility
Column	2 Ft Lateral Tie
Engineer	AJK
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	X - axis
Slenderness	Not Considered
Column Type	Structural
Capacity Method	Critical capacity

Materials	
f'_c	6 ksi
E_c	4415.21 ksi
f_y	60 ksi
E_s	29000 ksi

Section	
Type	Rectangular
Width	102 in
Depth	30 in
A_g	3060 in²
I_x	229500 in⁴
I_y	2.65302e+006 in⁴

Reinforcement	
Pattern	Sides different
Bar layout	Rectangular
Cover to	Transverse bars
Clear cover	---
Bars	---
Confinement type	Tied
Total steel area, A_s	24.80 in²
Rho	0.81 %
Min. clear spacing	6.56 in



PM at 0.0 [deg]

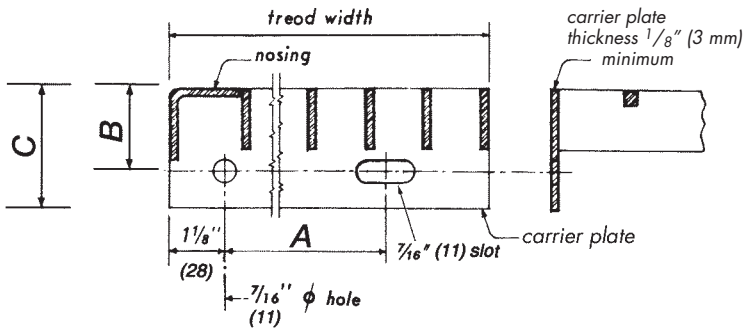
No.	P_u kip	M_{ux} k-ft	ϕP_n kip	ϕM_{nx} k-ft	Capacity Ratio
2	-1196.0	100.0	-1204.19	167.09	0.98
1	1196.0	100.0	0.00	1477.00	0.65

Max. Capacity Ratio: 0.98

Crossover Stairs

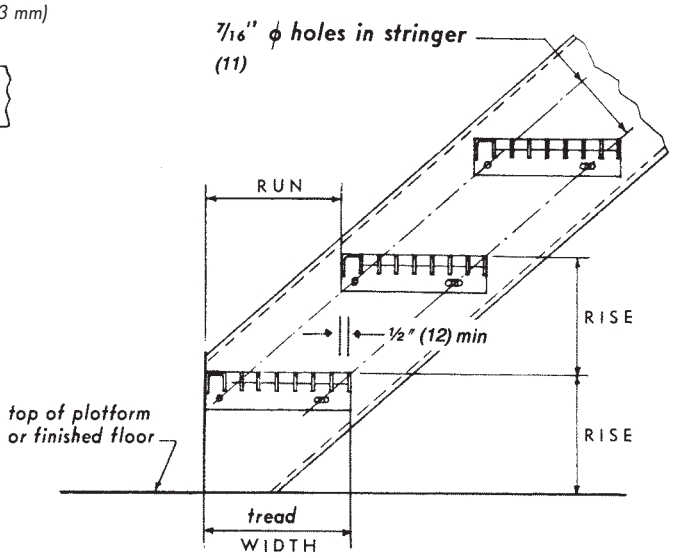
TREAD DIMENSIONS

RECOMMENDED DETAILS



TREAD with carrier plate detail

TREAD with carrier angles available, consult grating manufacturer for details



NOTE: Tread width should always be greater than tread run by 1/2 in. (12mm) minimum.

DIMENSION **A** in TREAD with carrier plate detail in. (mm)

Nominal Tread Width (approximate)** Bearing Bar Centers		Dimension A
1 3/16 (30)	15/16 (24)	
6¼ (159)	6 (152)	2½ (63)
7¼ (184)	7 (178)	4½ (114)
8½ (216)	9 (229)	4½ (114)
9¾ (248)	10 (254)	7 (178)
11 (279)	10¾ (273)	7 (178)
12 (305)	11¾ (298)	7 (178)

**Consult manufacturer for exact dimension.

DIMENSION **B & C** in TREAD with carrier plate detail in. (mm)

Grating Depth	Dimension B	Dimension C
3/4 (19) to 1 1/4 (32)	1 3/4 (44)	2 1/2 (63)
1 1/2 (38) to 1 3/4 (44)	2 1/4 (57)	3 (76)
For aluminum and all treads over 1 3/4 (44) consult with manufacturer.		

RECOMMENDED BEARING BAR SIZES

STEEL TREADS

Bearing Bar Size in. (mm)	Maximum Tread Length*			
	@ 1 3/16 (30) o.c.		@ 15/16 (24) o.c.	
	Plain	Serrated	Plain	Serrated
3/4 x 3/16 (19 x 5)	2'-4" (.71m)	—	2'-8" (.81m)	—
1 x 3/16 (25 x 5)	3'-5" (1.04m)	2'-10" (.86m)	4'-0" (1.22m)	3'-4" (1.02m)
1¼ x 3/16 (32 x 5)	4'-8" (1.42m)	4'-2" (1.27m)	5'-1" (1.55m)	4'-6" (1.37m)
1½ x 3/16 (38 x 5)	5'-6" (1.67m)	5'-3" (1.60m)	5'-6" (1.67m)	5'-6" (1.67m)

Note: When tread length exceeds 5'-6" (1.67m), design tread for 300 lb (1.33kN) concentrated loads at one-third points.

*Maximum tread length based on 300 lb (133 kN) concentrated load on front 5 in. (127 mm) of tread at center of tread length and deflection limitation of 1/240 of length . For maximum length under other loadings, consult the manufacturer.

ALUMINUM TREADS

Rectangular Bars

Bearing Bar Size in. (mm)	Maximum Tread Length*			
	@ 1 3/16 (30) o.c.		@ 15/16 (24) o.c.	
	Plain	Serrated	Plain	Serrated
1 x 3/16 (25 x 5)	2'-4" (.71m)	—	2'-6" (.76m)	—
1¼ x 3/16 (32 x 5)	2'-10" (.86m)	2'-7" (.79m)	3'-1" (.94m)	2'-9" (.84m)
1½ x 3/16 (38 x 5)	3'-6" (1.07m)	3'-2" (.97m)	3'-10" (1.17m)	3'-6" (1.07m)
1¾ x 3/16 (44 x 5)	4'-3" (1.30m)	3'-10" (1.17m)	4'-8" (1.42m)	4'-3" (1.30m)

I Bars

Bearing Bar Size in. (mm)	Maximum Tread Length*	
	@ 1 3/16 (30) o.c.	@ 15/16 (24) o.c.
1 (25) I	2'-4" (.71m)	2'-6" (.76m)
1¼ (32) I	2'-10" (.86m)	3'-1" (.94m)
1½ (38) I	3'-6" (1.07m)	3'-10" (1.17m)
1¾ (44) I	4'-3" (1.30m)	4'-8" (1.42m)

LOAD TABLE FOR STEEL GRATING - TYPE W-19 OR P-19

ASTM A 1011 CS TYPE B
F=18,000psi, E=29,000,000psi

See Appendix A for a graphic depicting table loading

Recommended max. span (in.) for 1/4 in. deflection under uniform load of 100psf

U=uniform load, psf
D=deflection, in.
C=concentrated load at mid-span, lb per foot of grating width

All loads and deflections shown are based on engineering computations using gross sections and nominal sizes of bearing bars. The values listed are for design selection only and are not intended to be "absolute" since actual load capacity will be affected slightly by variations which can be expected due to material and manufacturing tolerances.

Note: The carrying capacity of a piece of grating subjected to a concentrated load over only a portion of its width is determined by the stiffness of both the bearing bars and the cross bars, and therefore differs with the type of grating used. To determine the carrying capacity of gratings subject to such loadings, the manufacturer's engineering department should be consulted.

Conversion Factors:

For gratings with other than 1-3/16" bearing bar spacing, or for different design stresses, proportionate conversion factors apply. Refer to the Metal Bar Grating Engineering Design Manual for the development of such factors.

Note: 1/4" is considered the maximum deflection consistent with pedestrian comfort, but can be exceeded for other loading conditions at the discretion of the engineer.

Bearing Bar Size (in) Nominal Weight (psf)**			Span in Inches 24	30	36	42	48	54	60	66	72	78	84	90	96	102	108
3/4x1/8 [4]	42	U	355	227	158	116	89	70									
		Du	0.099	0.155	0.223	0.304	0.397	0.503									
		C	355	284	237	203	178	158									
		Dc	0.079	0.124	0.179	0.243	0.318	0.402									
3/4x3/16 [6]	46	U	533	341	237	174	133	105									
		Du	0.099	0.155	0.223	0.304	0.397	0.503									
		C	533	426	355	305	266	237									
		Dc	0.079	0.124	0.179	0.243	0.318	0.402									
1x1/8 [6]	51	U	632	404	281	206	158	125	101	84	70						
		Du	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670						
		C	632	505	421	361	316	281	253	230	211						
		Dc	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536						
1x3/16 [8]	57	U	947	606	421	309	237	187	152	125	105						
		Du	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670						
		C	947	758	632	541	474	421	379	344	316						
		Dc	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536						
1-1/4x1/8 [7]	61	U	987	632	439	322	247	195	158	130	110	93	81				
		Du	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730				
		C	987	789	658	564	493	439	395	359	329	304	282				
		Dc	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584				
1-1/4x3/16 [9]	67	U	1480	947	658	483	370	292	237	196	164	140	121				
		Du	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730				
		C	1480	1184	987	846	740	658	592	538	493	455	423				
		Dc	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584				
1-1/2x1/8 [8]	70	U	1421	909	632	464	355	281	227	188	158	135	116	101	89	79	70
		Du	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.698	0.794	0.897	1.006
		C	1421	1137	947	812	711	632	568	517	474	437	406	379	355	334	316
		Dc	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.559	0.636	0.718	0.804
1-1/2x3/16 [11]	77	U	2132	1364	947	696	533	421	341	282	237	202	174	152	133	118	105
		Du	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.6				
		C	2132	1705	1421	1218	1066	947	853	775	711	656	609				
		Dc	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.4				
1-3/4x3/16 [13]	87	U	2901	1857	1289	947	725	573	464	384	322	275	237				
		Du	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.5				
		C	2901	2321	1934	1658	1451	1289	1161	1055	967	893	829				
		Dc				36	0.172	0.213	0.257	0.306	0.360	0.4					
2x3/16 [14]	96	U				7	749	606	501	421	359	309					
		Du	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.524	0.596	0.673	0.754
		C	3789	3032	2526	2165	1895	1684	1516	1378	1263	1166	1083	1011	947	892	842
		Dc	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.419	0.477	0.538	0.603
2-1/4x3/16 [16]	105	U	4796	3069	2132	1566	1199	947	767	634	533	454	392	341	300	266	237
		Du	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.466	0.530	0.598	0.670
		C	4796	3837	3197	2741	2398	2132	1918	1744	1599	1476	1370	1279	1199	1128	1066
		Dc	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.372	0.424	0.478	0.536
2-1/2x3/16 [18]	113	U	5921	3789	2632	1933	1480	1170	947	783	658	561	483	421	370	328	292
		Du	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.419	0.477	0.538	0.603
		C	5921	4737	3947	3383	2961	2632	2368	2153	1974	1822	1698	1579	1480	1393	1316
		Dc	0.024	0.037	0.054	0.073	0.093	0.121	0.148	0.186	0.215	0.252	0.292	0.335	0.381	0.431	0.483

11psf Grating Dead Load

Design based off of 1-1/4"x3/16" grating but serrated increases depth by 1/4"

NOTE: For serrated grating, the depth of grating required for a specified load is 1/4" greater than in the table.

Loads above DO NOT include the dead load of the grating.

**Weights (mass/area) shown are approximate and vary with manufacturers. They are provided for preliminary design computations only and are not intended for any other purpose.

Table 4.3-1 Minimum Uniformly Distributed Live Loads, L_o, and Minimum Concentrated Live Loads

Occupancy or Use	Uniform, L_o psf (kN/m^2)	Live Load Reduction Permitted? (Sec. No.)	Multiple-Story Live Load Reduction Permitted? (Sec. No.)	Concentrated lb (kN)	Also See Section
Apartments (See Residential)					
Access floor systems					
Office use	50 (2.40)	Yes (4.7.2)	Yes (4.7.2)	2,000 (8.90)	
Computer use	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)	2,000 (8.90)	
Armories and drill rooms	150 (7.18)	No (4.7.5)	No (4.7.5)		
Assembly areas					
Fixed seats (fastened to floors)	60 (2.87)	No (4.7.5)	No (4.7.5)		
Lobbies	100 (4.79)	No (4.7.5)	No (4.7.5)		
Movable seats	100 (4.79)	No (4.7.5)	No (4.7.5)		
Platforms (assembly)	100 (4.79)	No (4.7.5)	No (4.7.5)		
Stage floors	150 (7.18)	No (4.7.5)	No (4.7.5)		
Reviewing stands, grandstands, and bleachers	100 (4.79)	No (4.7.5)	No (4.7.5)		4.14
Stadiums and arenas with fixed seats (fastened to the floor)	60 (2.87)	No (4.7.5)	No (4.7.5)		4.14
Other assembly areas	100 (4.79)	No (4.7.5)	No (4.7.5)		
Balconies and decks	1.5 times the live load for the area served. Not required to exceed 100 psf (4.79 kN/m^2)	Yes (4.7.2)	Yes (4.7.2)		
Catwalks for maintenance access	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)	300 (1.33)	
Corridors					
First floor	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)		
Other floors	Same as occupancy served except as indicated				
Dining rooms and restaurants	100 (4.79)	No (4.7.5)	No (4.7.5)		
Dwellings (See Residential)					
Elevator machine room grating (on area of 2 in. by 2 in. (50 mm by 50 mm))		—	—	300 (1.33)	
Finish light floor plate construction (on area of 1 in. by 1 in. (25 mm by 25 mm))		—	—	200 (0.89)	
Fire escapes	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)		
On single-family dwellings only	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)		
Fixed ladders		—	—	See Sec. 4.5.4	
Garages (See Section 4.10)					
Passenger vehicles only	40 (1.92)	No (4.7.4)	Yes (4.7.4)	See Sec. 4.10.1	
Trucks and buses	See Sec. 4.10.2	—	—	See Sec. 4.10.2	
Handrails and Guardrails	See Sec. 4.5.1	—	—	See Sec. 4.5.1	
Grab bars		—	—	See Sec. 4.5.2	
Helipads (See Section 4.11)					
Helicopter takeoff weight 3,000 lb (13.35 kN) or less	40 (1.92)	No (4.11.1)	—	See Sec. 4.11.2	
Helicopter takeoff weight more than 3,000 lb (13.35 kN)	60 (2.87)	No (4.11.1)	—	See Sec. 4.11.2	
Hospitals					
Operating rooms, laboratories	60 (2.87)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Patient rooms	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Corridors above first floor	80 (3.83)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Hotels (See Residential)					
Libraries					
Reading rooms	60 (2.87)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Stack rooms	150 (7.18)	No (4.7.3)	Yes (4.7.3)	1,000 (4.45)	4.13
Corridors above first floor	80 (3.83)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Manufacturing					
Light	125 (6.00)	No (4.7.3)	Yes (4.7.3)	2,000 (8.90)	
Heavy	250 (11.97)	No (4.7.3)	Yes (4.7.3)	3,000 (13.35)	
Office buildings					
File and computer rooms shall be designed for heavier loads based on anticipated occupancy					
Lobbies and first-floor corridors	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)	2,000 (8.90)	
Offices	50 (2.40)	Yes (4.7.2)	Yes (4.7.2)	2,000 (8.90)	
Corridors above first floor	80 (3.83)	Yes (4.7.2)	Yes (4.7.2)	2,000 (8.90)	

continues

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Table 4.3-1. *(Continued)* Minimum Uniformly Distributed Live Loads, L_o, and Minimum Concentrated Live Loads

Occupancy or Use	Uniform, L_o psf (kN/m^2)	Live Load Reduction Permitted? (Sec. No.)	Multiple-Story Live Load Reduction Permitted? (Sec. No.)	Concentrated lb (kN)	Also See Section
Penal institutions					
Cell blocks	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)		
Corridors	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)		
Recreational uses					
Bowling alleys, poolrooms, and similar uses	75 (3.59)	No (4.7.5)	No (4.7.5)		
Dance halls and ballrooms	100 (4.79)	No (4.7.5)	No (4.7.5)		
Gymnasiums	100 (4.79)	No (4.7.5)	No (4.7.5)		
Residential					
One- and two-family dwellings					
Uninhabitable attics without storage	10 (0.48)	Yes (4.7.2)	Yes (4.7.2)		4.12.1
Uninhabitable attics with storage	20 (0.96)	Yes (4.7.2)	Yes (4.7.2)		4.12.2
Habitable attics and sleeping areas	30 (1.44)	Yes (4.7.2)	Yes (4.7.2)		
All other areas except stairs	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)		
All other residential occupancies					
Private rooms and corridors serving them	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)		
Public rooms	100 (4.79)	No (4.7.5)	No (4.7.5)		
Corridors serving public rooms	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)		
Roofs					
Ordinary flat, pitched, and curved roofs	20 (0.96)	Yes (4.8.2)	—		4.8.1
Roof areas used for occupants	Same as occupancy served	Yes (4.8.3)	—		
Roof areas used for assembly purposes	100 (4.70)	Yes (4.8.3)			
Vegetative and landscaped roofs					
Roof areas not intended for occupancy	20 (0.96)	Yes (4.8.2)	—		
Roof areas used for assembly purposes	100 (4.70)	Yes (4.8.3)	—		
Roof areas used for other occupancies	Same as occupancy served	Yes (4.8.3)	—		
Awnings and canopies					
Fabric construction supported by a skeleton structure	5 (0.24)	No (4.8.2)	—		
Screen enclosure support frame	5 (0.24) based on the tributary area of the roof supported by the frame member	No (4.8.2)	—	200 (0.89)	
All other construction	20 (0.96)	Yes (4.8.2)	—		4.8.1
Primary roof members, exposed to a work floor					
Single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs over manufacturing, storage warehouses, and repair garages				2,000 (8.90)	
All other primary roof members		—	—	300 (1.33)	
All roof surfaces subject to maintenance workers		—	—	300 (1.33)	
Schools					
Classrooms	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Corridors above first floor	80 (3.83)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
First-floor corridors	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Scuttles, skylight ribs, and accessible ceilings				200 (0.89)	
Sidewalks, vehicular driveways, and yards subject to trucking	250 (11.97)	No (4.7.3)	Yes (4.7.3)	8,000 (35.60)	4.15
Stairs and exit ways	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)	300 (1.33)	4.16
One- and two-family dwellings only	40 (1.92)	Yes (4.7.2)	Yes (4.7.2)	300 (1.33)	4.16
Storage areas above ceilings	20 (0.96)	Yes (4.7.2)	Yes (4.7.2)		
Storage warehouses (shall be designed for heavier loads if required for anticipated storage)					
Light	125 (6.00)	No (4.7.3)	Yes (4.7.3)		
Heavy	250 (11.97)	No (4.7.3)	Yes (4.7.3)		

continues

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Table 4.3-1. *(Continued)* Minimum Uniformly Distributed Live Loads, L_o, and Minimum Concentrated Live Loads

Occupancy or Use	Uniform, L_o psf (kN/m^2)	Live Load Reduction Permitted? (Sec. No.)	Multiple-Story Live Load Reduction Permitted? (Sec. No.)	Concentrated lb (kN)	Also See Section
Stores					
Retail					
First floor	100 (4.79)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Upper floors	75 (3.59)	Yes (4.7.2)	Yes (4.7.2)	1,000 (4.45)	
Wholesale, all floors	125 (6.00)	No (4.7.3)	Yes (4.7.3)	1,000 (4.45)	
Vehicle barriers				See Sec. 4.5.3	
Walkways and elevated platforms (other than exit ways)	60 (2.87)	Yes (4.7.2)	Yes (4.7.2)		
Yards and terraces, pedestrian	100 (4.79)	No (4.7.5)	No (4.7.5)		

STAIRS WILL BE USED FOR EGRESS ---> 100PSF

4.5.1.2 Guardrail System Component Loads. Balusters, panel fillers, and guardrail infill components, including all rails except the handrail and the top rail, shall be designed to resist a horizontally applied normal load of 50 lb (0.22 kN) on an area not to exceed 12 in. by 12 in. (305 mm by 305 mm), including openings and space between rails and located so as to produce the maximum load effects. Reactions due to this loading are not required to be superimposed with the loads specified in Sections 4.5.1 and 4.5.1.1.

4.5.2 Grab Bar Systems. Grab bar systems shall be designed to resist a single concentrated load of 250 lb (1.11 kN) applied in any direction at any point on the grab bar to produce the maximum load effect.

4.5.3 Vehicle Barrier Systems. Vehicle barrier systems for passenger vehicles shall be designed to resist a single load of 6,000 lb (26.70 kN) applied horizontally in any direction to the barrier system and shall have anchorages or attachments capable of transferring this load to the structure. For design of the system, the load shall be assumed to act at heights between 1 ft 6 in. (460 mm) and 2 ft 3 in. (686 mm) above the floor or ramp surface, located to produce the maximum load effects. The load shall be applied on an area not to exceed 12 in. by 12 in. (305 mm by 305 mm). This load is not required to act concurrently with any handrail or guardrail system loadings specified in Section 4.5.1. Vehicle barrier systems in garages accommodating trucks and buses shall be designed in accordance with *AASHTO LRFD Bridge Design Specifications*.

4.5.4 Fixed Ladders. Fixed ladders with rungs shall be designed to resist a single concentrated load of 300 lb (1.33 kN) applied at any point to produce the maximum load effect on the element being considered. The number and position of additional concentrated live load units shall be a minimum of 1 unit of 300 lb (1.33 kN) for every 10 ft (3.05 m) of ladder height.

Where rails of fixed ladders extend above a floor or platform at the top of the ladder, each side rail extension shall be designed to resist a single concentrated live load of 100 lb (0.445 kN) applied in any direction at any height up to the top of the side rail extension. Ships ladders with treads instead of rungs shall be designed to resist the stair loads given in Table 4.3-1.

4.6 IMPACT LOADS

4.6.1 General. The live loads specified in Sections 4.3 through 4.5 shall be assumed to include adequate allowance for ordinary impact conditions. Provision shall be made in the structural design for uses and loads that involve unusual vibration and impact forces.

4.6.2 Elevators. All elements subject to dynamic loads from elevators shall be designed for impact loads and deflection limits prescribed by ASME A17.

4.6.3 Machinery. For the purpose of design, the weight of machinery and moving loads shall be increased as follows to allow for impact: (1) light machinery, shaft- or motor-driven, 20%; and (2) reciprocating machinery or power-driven units, 50%. All percentages shall be increased where specified by the manufacturer.

4.6.4 Elements Supporting Hoists for Façade Access and Building Maintenance Equipment. Structural elements that support hoists for façade and building maintenance equipment shall be designed for a live load of 2.5 times the rated load of the hoist or the stall load of the hoist, whichever is larger.

4.6.5 Fall Arrest and Lifeline Anchorages. Fall arrest and lifeline anchorages and structural elements that support these anchorages shall be designed for a live load of 3,100 lb (13.8 kN) for each attached lifeline in every direction that a fall arrest load may be applied.

4.7 REDUCTION IN UNIFORM LIVE LOADS

4.7.1 General. Except for roof uniform live loads, all other minimum uniformly distributed live loads, L_o in Table 4.3-1, are permitted to be reduced in accordance with the requirements of Sections 4.7.2 through 4.7.6.

4.7.2 Reduction in Uniform Live Loads. Subject to the limitations of Sections 4.7.3 through 4.7.6, members for which a value of $K_{LL}A_T$ is 400 ft^2 (37.16 m^2) or more are permitted to be designed for a reduced live load in accordance with the following formula:

$$L = L_o\left(0.25 + \frac{15}{\sqrt{K_{LL}A_T}}\right) \quad (4.7\text{-}1)$$

$$L = L_o\left(0.25 + \frac{4.57}{\sqrt{K_{LL}A_T}}\right) \quad (4.7\text{-}1\text{si})$$

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BURNS McDONNELL

010515 Form GCO-29B

Client _____ Page 1 of 1

Project _____ Date _____ Made By MCS

Crossover Stairs Checked By _____

Misc. Loading Preliminary _____ Final _____

Gaurdrail Loading

Applied as line load to stringer

3x Std. Weight 1¼" Pipe - 2 pipe guardrail
1 pipe handrail

2.72 lb/ft from AISC Table 1-14

3x 2.72 lb/ft = 8.16 lb/ft

Client:	PDX Fuel	Date:	24 NOV 2023	Page	of
Project:	153929			Made By:	MCS
Crossover Stair Grating				Checked By:	
A1011, W-19-4, Serrated, 36" Span, 100psf LL				Preliminary	Final X

Rev 09/2023 LPD

Steel Bar Grating Design - Simply Supported Grating Section

Designed in accordance with NAAMM - MBG 534-14.

Type of Grating =	W-19		
Depth of Bar =	1 1/4		
b = Bar Thickness =	3/16		
Serrated =	Yes		
d = Effective Depth =	1.00		
L = Span =	36	in	
Aw = bearing bar spacing =	1.1875	in	
K = number of bearing bars in panel width = 12 / Aw =	10.11		
F = allowable fiber stress =	18,000	psi	ASTM A1011
E =	29,000,000	psi	
Sw = Kbd^2/6 =	0.316	in^3	
Iw = Kbd^3/12 =	0.158	in^4	
Mw = F*Sw =	5684	lb-in	
Load Factor, γ =	1.6		
w_{DL} =	11	psf	per Grating Catalog
Stair Usage	Egress		
w_{LL} =	100	psf	ASCE 7-10 Table 4-1
$w_u = 1.2w_{DL} + 1.6w_{LL}$ =	173.2	psf	

Allowable Midspan Concentrated Load and Deflection

C_u [LRFD] =	1000	lb / ft width	OSHA 1910.25(b)(6)
C = allowable load = 4*Mw / L =	632	lb / ft width	
ϕC = γ*C =	1011	lb / ft width	Concentrated Load OK
Dc = deflection = CL^3 / 48EIw =	0.134	inches	

Allowable Uniform Load and Deflection

U_u [LRFD] = 5*w_{LL} =	500	psf	OSHA 1910.25(b)(6)
U = allowable load = 96*Mw / L^2 =	421	psf	
ϕU = γ*U =	674	psf	Uniform Load OK
Du = deflection = 5UL^4 / 4608EIw =	0.168	inches	

Calculate Deflection and Allowable Span Lengths Based off Uniform LL

LL =	100	psf		
Δ_{LL} =	0.040	inches		
L = (96*Mw / U)^(1/2) =	73.9	in	6.16	ft

Calculate Deflection and Allowable Span Lengths Based off Concentrated Load

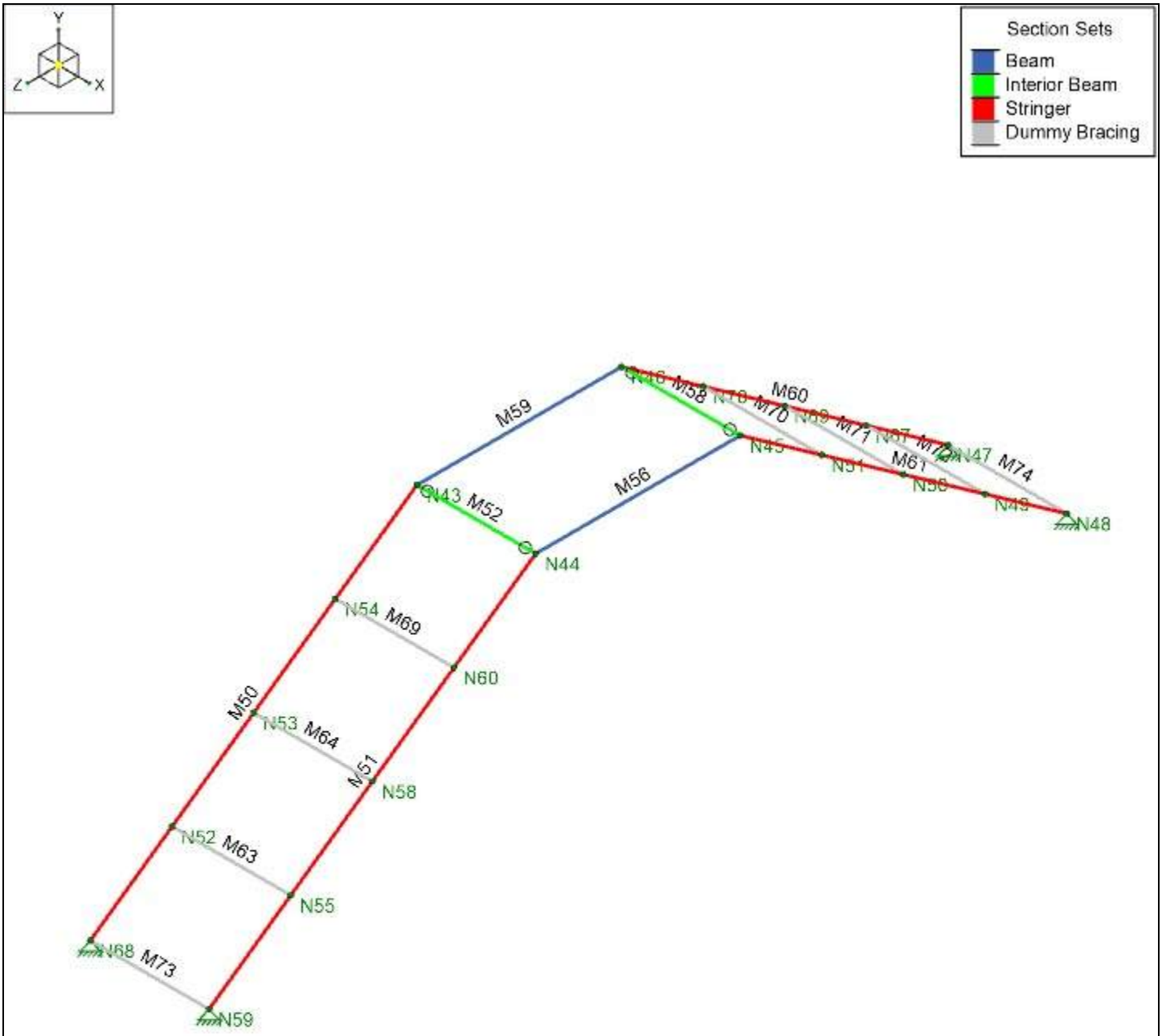
Δ_c =	0.25	inches
C =	1177.71	lb / ft width
L = ((48*Dc*E*Iw)/C))^(1/3) =	36.0	inches

Client	PDX Fuel			Page	of
Project No.	153929	Date	27-Nov-23	Made By	MCS
Stairs				Checked By	
Ice Loads for Various Shapes				Preliminary	Final

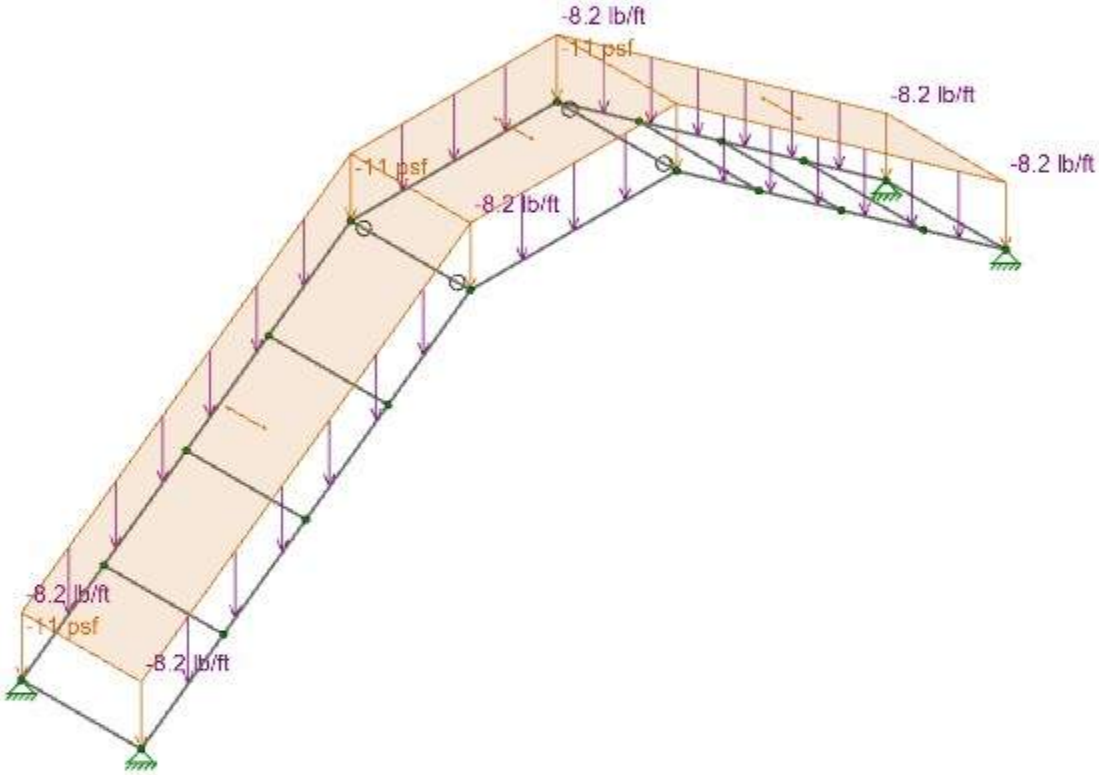
DETERMINE ICE LOADS FOR VARIOUS SHAPES

member shape =	C12x20.7		
d =	12		
b_f =	2.94		
height, z =	5.833333	ft	
$f_z = (z/33)^{0.10}$ =	0.841		*ASCE 7-16 Eq. 10.4-4*
t =	2.00	in	*ASCE 7-16 Figure 10.4-2 through Figure 10.6-2*
K_{zt} =	1.0		*ASCE 7-16 Chapter 26*
I_i =	1.25		*ASCE 7-16 Risk Category 1.5-2*
$t_d = tI_if_z(K_{zt})^{0.35}$ =	2.10		*ASCE 7-16 Eq. 10.4-5*
$D_c = (d^2+b_f^2)^{0.5}$ =	12.35	in	
$A_i = \pi t_d(D_c+t_d)$ =	95.48	in^2	*ASCE 7-16 Eq. 10.4-1*
γ_{ice} =	56	lb/ft^3	
$w_{ice} = A_i\gamma_{ice}$ =	0.037	k/ft	

RISA 3D REPORT

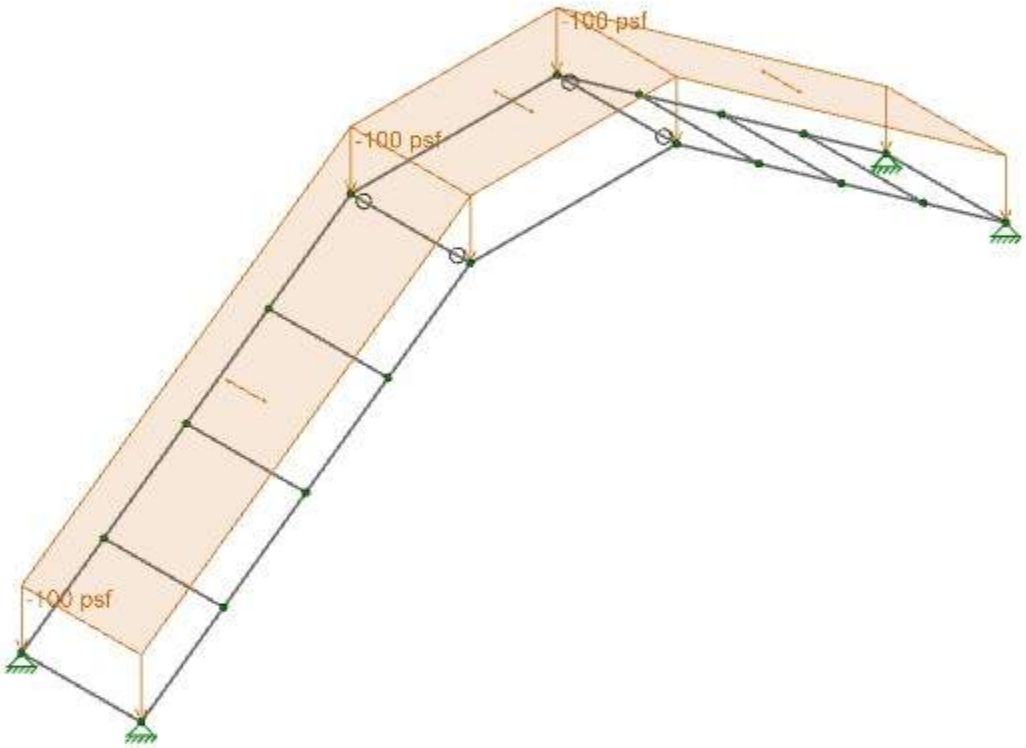


Burns & McDonnell	PDX	SK-10
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d



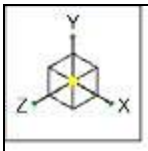
Loads: BLC 1, Dead Load

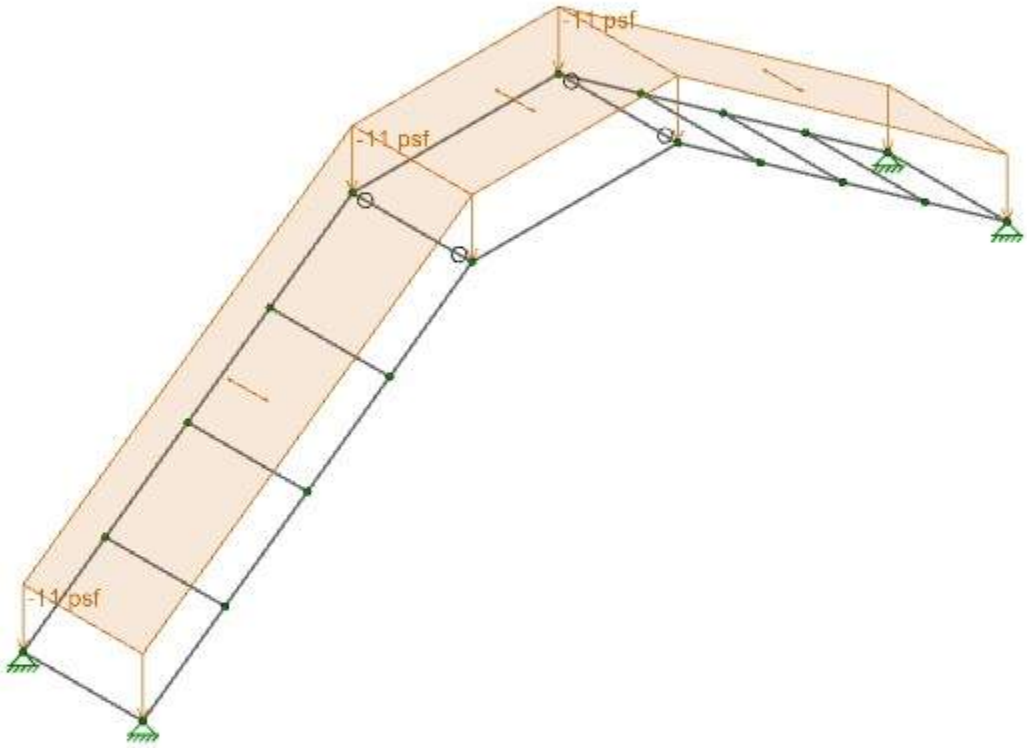
Burns & McDonnell	PDX	SK-1
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d



Loads: BLC 2, Live Load

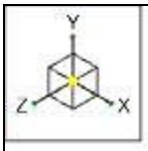
Burns & McDonnell	PDX	SK-2
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d

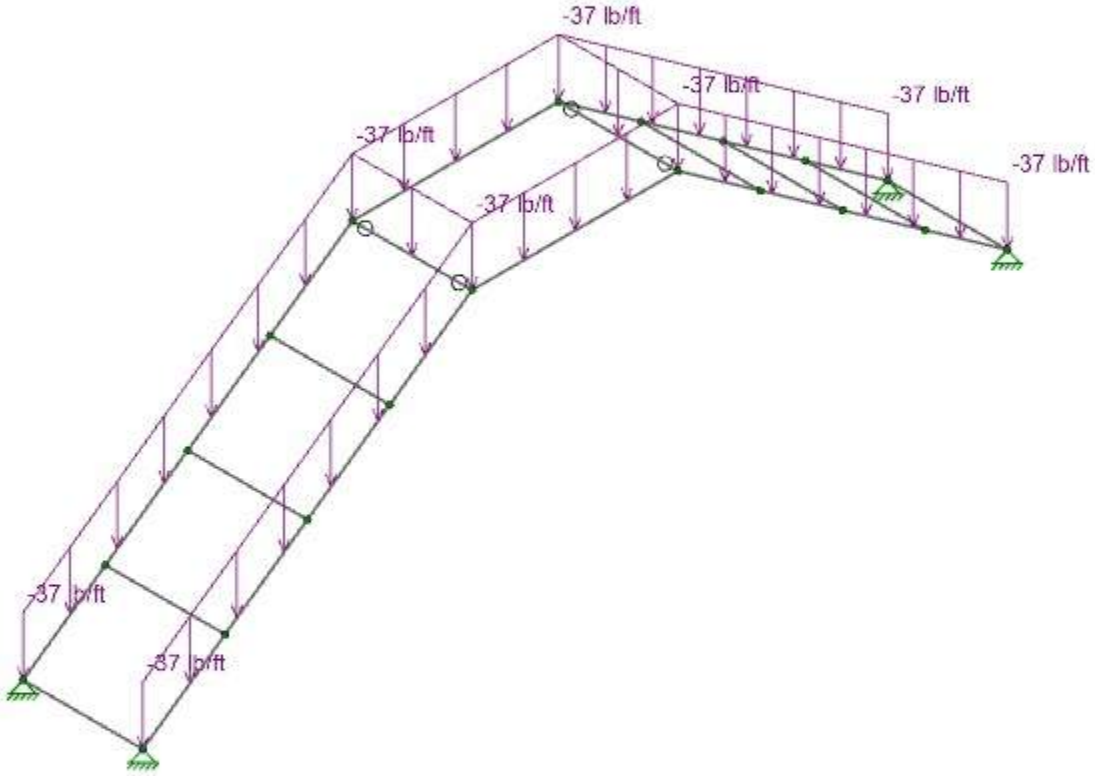




Loads: BLC 7, Snow Load

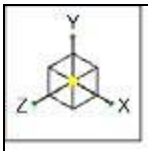
Burns & McDonnell	PDX	SK-8
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d

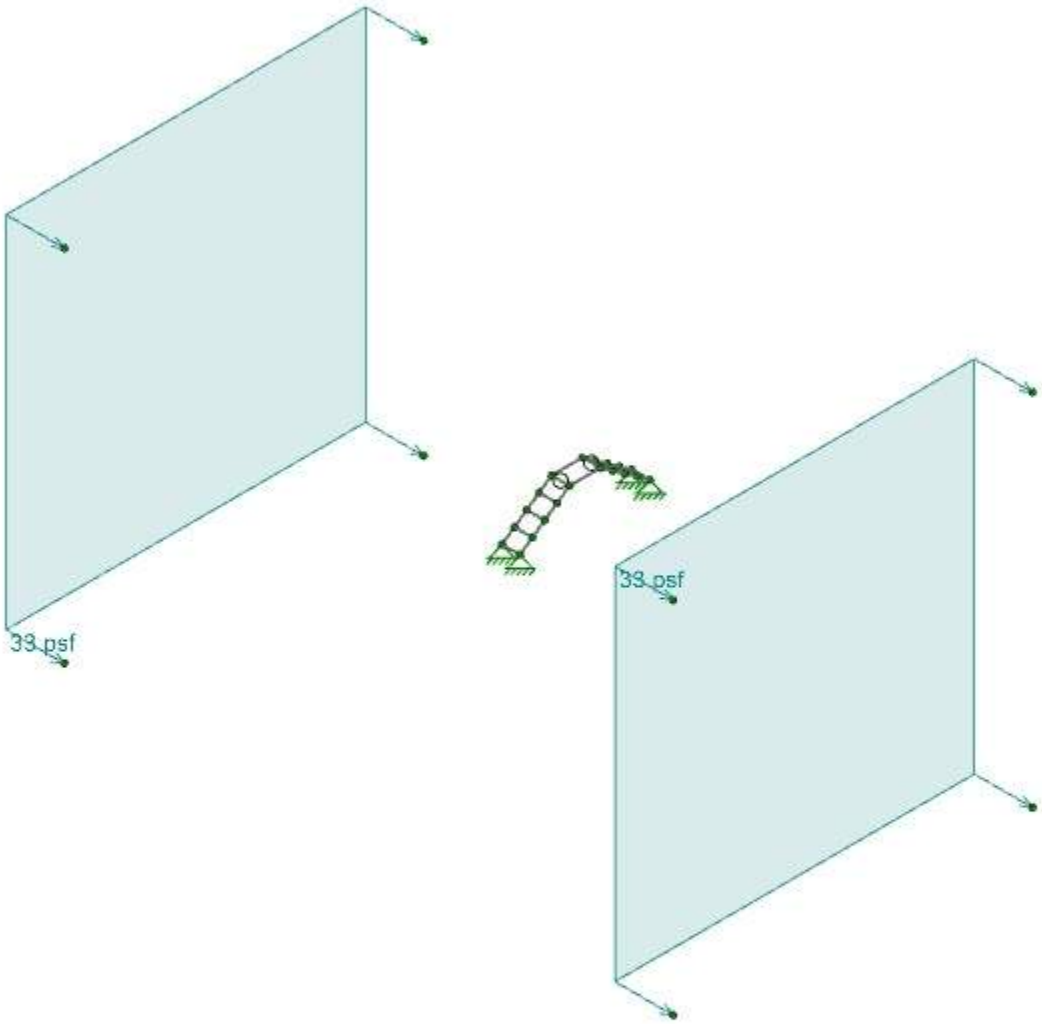




Loads: BLC 8, Ice Load

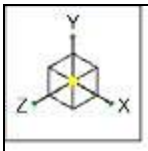
Burns & McDonnell	PDX	SK-9
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d

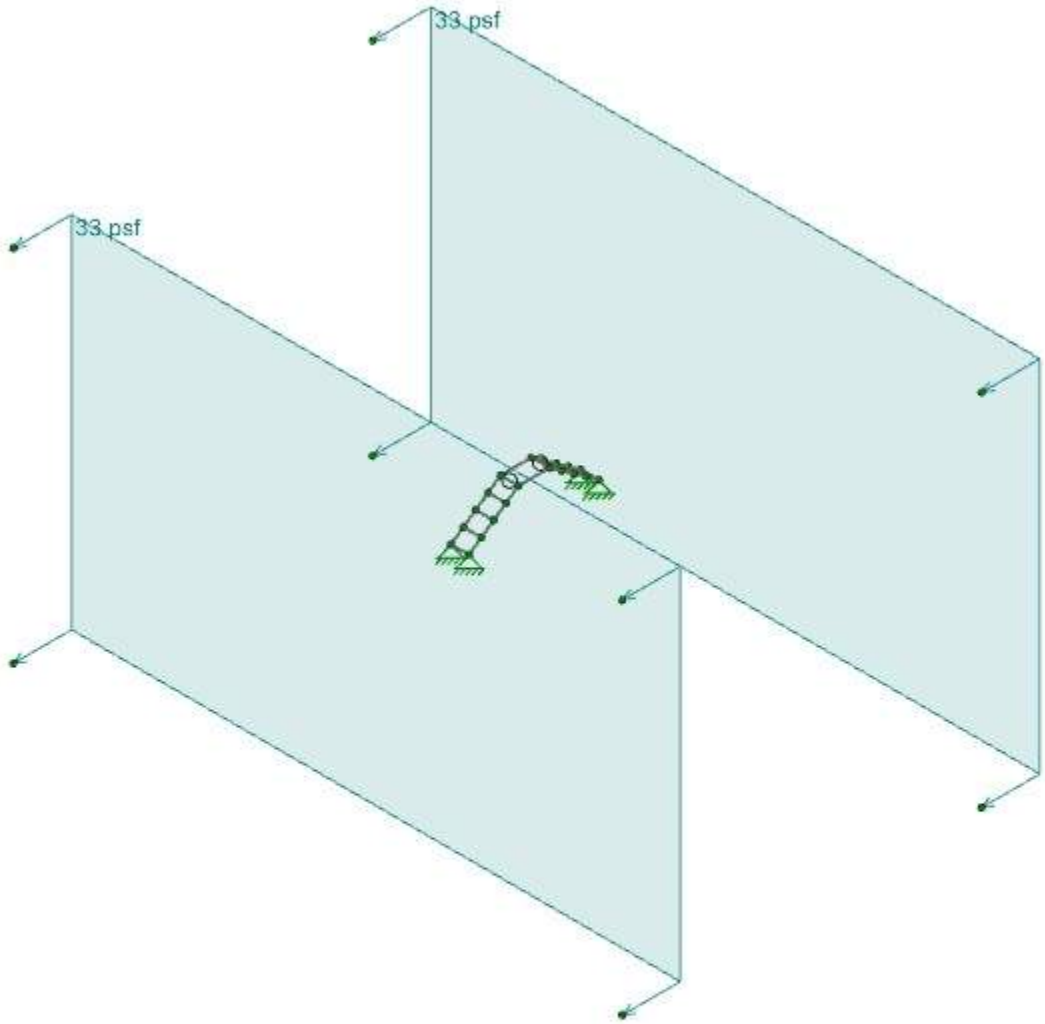




Loads: BLC 3, Wind Load X

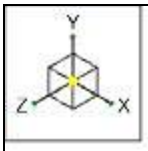
Burns & McDonnell	PDX	SK-3
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d

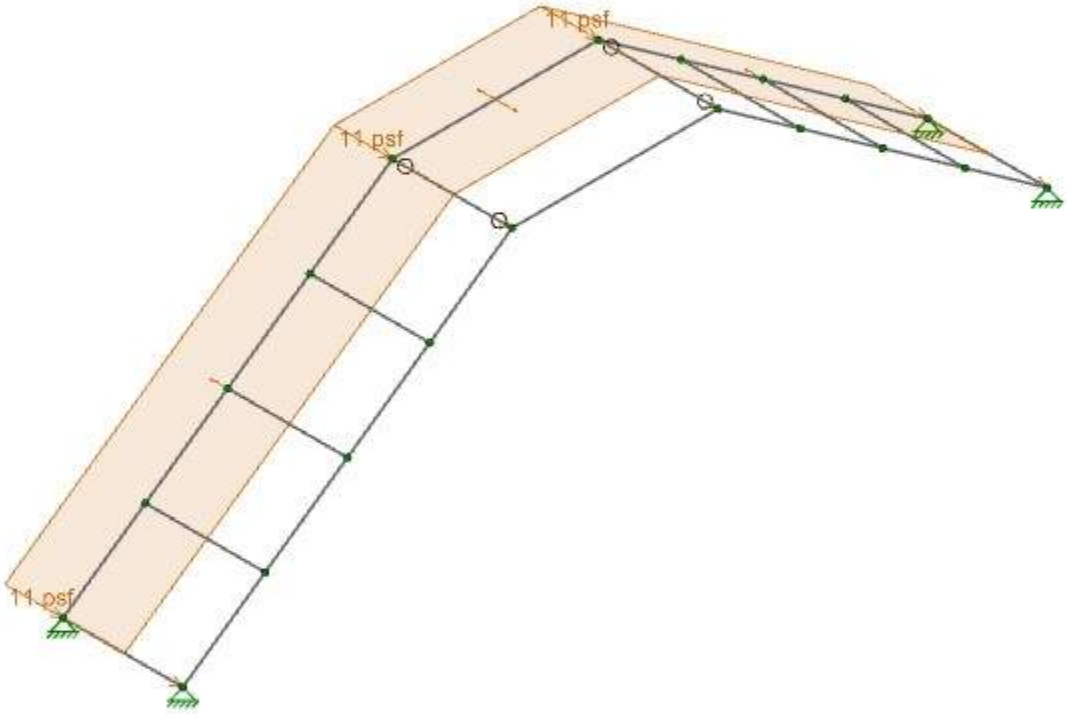




Loads: BLC 4, Wind Load Z

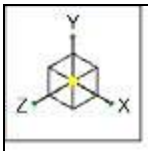
Burns & McDonnell	PDX	SK-4
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d

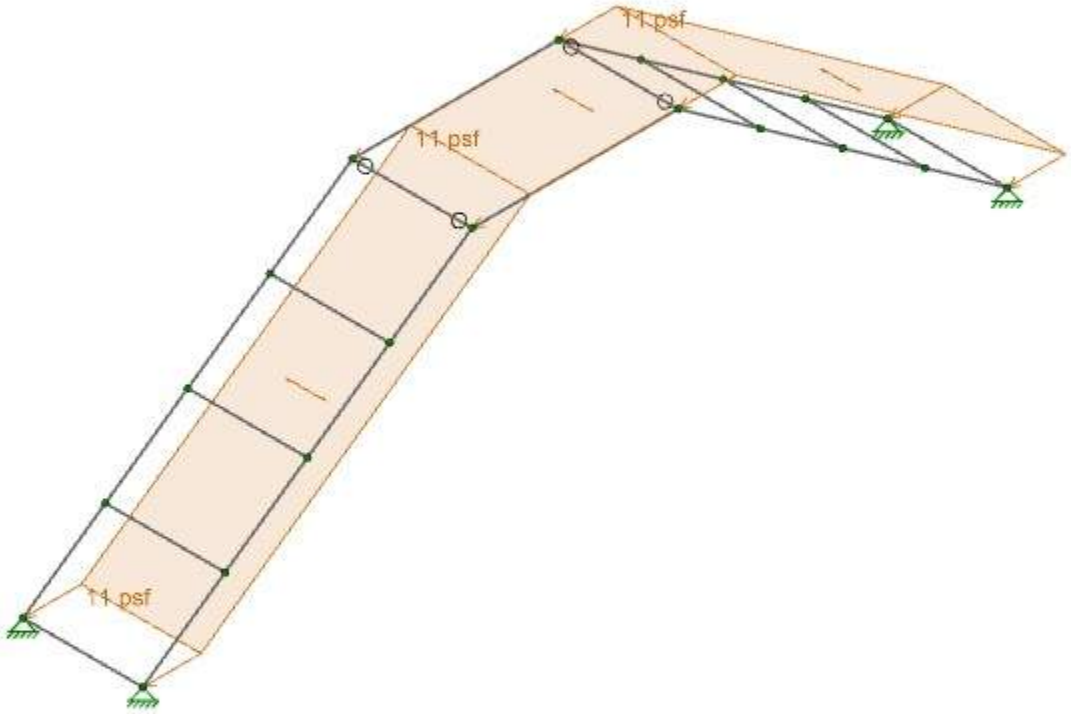




Loads: BLC 5, Seismic X

Burns & McDonnell	PDX	SK-6
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d





Loads: BLC 6, Seismic Z

Burns & McDonnell	PDX	SK-7
MCS		Nov 27, 2023
153929		Crossover Stairs_PDX.r3d

Model Settings

Number of Reported Sections	9
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Global

Hot Rolled Steel	AISC 14th (360-10): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 14th (360-10): ASD
Cold Formed Steel	None
Stiffness Adjustment	Yes (Iterative)
Wood	None
Temperature	< 100F
Concrete	ACI 318-14
Masonry	None
Aluminum	None
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	None
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16

Model Settings (Continued)

Risk Category	IV
Drift Cat	Other
Base Elevation (ft)	
Include the weight of the structure in base shear calcs	No
S_1 (g)	0.376
SD_1 (g)	0.739
SD_S (g)	0.59
T_L (sec)	16
T Z (sec)	
T X (sec)	
C_tZ	0.02
C_tX	0.02
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	1.5
R X	1.5
Ω_0Z	1
Ω_0X	1
C_dZ	1.5
C_dX	1.5
ρ Z	1
ρ X	1

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N1	-500	-360	360	
2	N2	-500	360	360	
3	N3	-500	360	-360	
4	N4	-500	-360	-360	
5	N5	720	-360	-360	
6	N6	720	360	-360	
7	N68	85	-7	68	
8	N59	121	-7	68	
9	N43	85	63	-31	
10	N44	121	63	-31	
11	N45	121	63	-93	
12	N46	85	63	-93	
13	N47	85	-7	-192	
14	N48	121	-7	-192	
15	N49	121	10.5	-167.25	
16	N50	121	28	-142.5	
17	N51	121	45.5	-117.75	
18	N52	85	10.5	43.25	
19	N53	85	28	18.5	
20	N54	85	45.5	-6.25	
21	N55	121	10.5	43.25	
22	N58	121	28	18.5	
23	N60	121	45.5	-6.25	
24	N67	85	10.5	-167.25	
25	N69	85	28	-142.5	
26	N70	85	45.5	-117.75	
27	N27	720	360	360	
28	N28	720	-360	360	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]
1	N68	Reaction	Reaction	Reaction
2	N59	Reaction	Reaction	Reaction
3	N47	Reaction	Reaction	Reaction
4	N48	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [lb/in^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.284	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	0.3	0.65	0.284	50	1.1	65	1.1
3	A992	29000	11154	0.3	0.65	0.284	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.284	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.284	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.284	35	1.6	60	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in^{2}]	Iyy [in^{4}]	Izz [in^{4}]	J [in^{4}]
1	Beam	C12X20.7	Beam	Channel	A36 Gr.36	Typical	6.08	3.86	129	0.369
2	Interior Beam	C8X11.5	Beam	Channel	A36 Gr.36	Typical	3.37	1.31	32.5	0.13
3	H_Brace	L3X3X4	HBrace	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	0.031
4	V_Brace	L3X3X4	VBrace	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	0.031

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
5	Post	L4X4X6	Column	Single Angle	A36 Gr.36	Typical	2.86	4.32	4.32	0.141
6	Stringer	C12X20.7	Beam	Channel	A36 Gr.36	Typical	6.08	3.86	129	0.369
7	Dummy Bracing	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	0.031

Member Primary Data

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1	M50	N68	N43	Stringer	Beam	Channel	A36 Gr.36	Typical
2	M51	N59	N44	Stringer	Beam	Channel	A36 Gr.36	Typical
3	M52	N43	N44	Interior Beam	Beam	Channel	A36 Gr.36	Typical
4	M56	N44	N45	Beam	Beam	Channel	A36 Gr.36	Typical
5	M58	N45	N46	Interior Beam	Beam	Channel	A36 Gr.36	Typical
6	M59	N46	N43	Beam	Beam	Channel	A36 Gr.36	Typical
7	M60	N47	N46	Stringer	Beam	Channel	A36 Gr.36	Typical
8	M61	N48	N45	Stringer	Beam	Channel	A36 Gr.36	Typical
9	M63	N55	N52	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
10	M64	N58	N53	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
11	M69	N60	N54	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
12	M70	N51	N70	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
13	M71	N50	N69	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
14	M72	N49	N67	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
15	M73	N68	N59	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical
16	M74	N47	N48	Dummy Bracing	Beam	Single Angle	A36 Gr.36	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
1	M50	Stringer	121.248	Lbyy	N/A	N/A	Lateral
2	M51	Stringer	121.248	Lbyy	N/A	N/A	Lateral
3	M52	Interior Beam	36	Lbyy	N/A	N/A	Lateral
4	M56	Beam	62	Lbyy	N/A	N/A	Lateral
5	M58	Interior Beam	36	Lbyy	N/A	N/A	Lateral
6	M59	Beam	62	Lbyy	N/A	N/A	Lateral
7	M60	Stringer	121.248	Lbyy	N/A	N/A	Lateral
8	M61	Stringer	121.248	Lbyy	N/A	N/A	Lateral
9	M63	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
10	M64	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
11	M69	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
12	M70	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
13	M71	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
14	M72	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
15	M73	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral
16	M74	Dummy Bracing	36	Lbyy	N/A	N/A	Lateral

Design Size and Code Check Parameters

	Label	Max Axial/Bending Chk	Max Shear Chk
1	Typical	1	1

Member Distributed Loads (BLC 1 : Dead Load)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M51	Y	-8.2	-8.2	0	%100
2	M50	Y	-8.2	-8.2	0	%100

Member Distributed Loads (BLC 1 : Dead Load) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
3	M56	Y	-8.2	-8.2	0	%100
4	M59	Y	-8.2	-8.2	0	%100
5	M61	Y	-8.2	-8.2	0	%100
6	M60	Y	-8.2	-8.2	0	%100

Member Distributed Loads (BLC 8 : Ice Load)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M51	Y	-37	-37	0	%100
2	M56	Y	-37	-37	0	%100
3	M61	Y	-37	-37	0	%100
4	M60	Y	-37	-37	0	%100
5	M59	Y	-37	-37	0	%100
6	M50	Y	-37	-37	0	%100
7	M52	Y	-37	-37	0	%100
8	M58	Y	-37	-37	0	%100

Member Distributed Loads (BLC 9 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M50	Y	-16.5	-16.5	7.994e-15	121.248
2	M51	Y	-16.5	-16.5	7.994e-15	121.248
3	M56	Y	-16.5	-16.5	8.882e-15	62
4	M59	Y	-16.5	-16.5	0	62
5	M60	Y	-16.5	-16.5	7.283e-14	121.248
6	M61	Y	-16.5	-16.5	7.283e-14	121.248

Member Distributed Loads (BLC 10 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M50	Y	-150	-150	7.994e-15	121.248
2	M51	Y	-150	-150	7.994e-15	121.248
3	M56	Y	-150	-150	8.882e-15	62
4	M59	Y	-150	-150	0	62
5	M60	Y	-150	-150	7.283e-14	121.248
6	M61	Y	-150	-150	7.283e-14	121.248

Member Distributed Loads (BLC 11 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M61	X	66	66	0	121.248
2	M50	X	66	66	0	121.248
3	M51	X	66	66	0	121.248
4	M56	X	66	66	0	62
5	M59	X	66	66	0	62
6	M60	X	66	66	0	121.248

Member Distributed Loads (BLC 12 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M52	Z	44	44	0	36
2	M58	Z	44	44	0	36

Member Distributed Loads (BLC 13 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M50	X	16.5	16.5	7.994e-15	121.248
2	M51	X	16.5	16.5	7.994e-15	121.248
3	M56	X	16.5	16.5	8.882e-15	62
4	M59	X	16.5	16.5	0	62
5	M60	X	16.5	16.5	7.283e-14	121.248
6	M61	X	16.5	16.5	7.283e-14	121.248

Member Distributed Loads (BLC 14 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M50	Z	16.5	16.5	7.994e-15	121.248
2	M51	Z	16.5	16.5	7.994e-15	121.248
3	M56	Z	16.5	16.5	8.882e-15	62
4	M59	Z	16.5	16.5	0	62
5	M60	Z	16.5	16.5	7.283e-14	121.248
6	M61	Z	16.5	16.5	7.283e-14	121.248

Member Distributed Loads (BLC 15 : BLC 7 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M50	Y	-16.5	-16.5	7.994e-15	121.248
2	M51	Y	-16.5	-16.5	7.994e-15	121.248
3	M56	Y	-16.5	-16.5	8.882e-15	62
4	M59	Y	-16.5	-16.5	0	62
5	M60	Y	-16.5	-16.5	7.283e-14	121.248
6	M61	Y	-16.5	-16.5	7.283e-14	121.248

Member Area Loads (BLC 1 : Dead Load)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N68	N59	N44	N43	Y	A-B	-11
2	N43	N44	N45	N46	Y	A-B	-11
3	N46	N45	N48	N47	Y	A-B	-11

Member Area Loads (BLC 2 : Live Load)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N68	N59	N44	N43	Y	A-B	-100
2	N43	N44	N45	N46	Y	A-B	-100
3	N46	N45	N48	N47	Y	A-B	-100

Member Area Loads (BLC 3 : Wind Load X)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N1	N2	N3	N4	X	Open Structure	33
2	N27	N6	N5	N28	X	Open Structure	33

Member Area Loads (BLC 4 : Wind Load Z)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N3	N4	N5	N6	Z	Open Structure	33
2	N2	N27	N28	N1	Z	Open Structure	33

Member Area Loads (BLC 5 : Seismic X)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N68	N59	N44	N43	X	A-B	11
2	N43	N44	N45	N46	X	A-B	11
3	N46	N45	N48	N47	X	A-B	11

Member Area Loads (BLC 6 : Seismic Z)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N68	N59	N44	N43	Z	A-B	11
2	N43	N44	N45	N46	Z	A-B	11
3	N46	N45	N48	N47	Z	A-B	11

Member Area Loads (BLC 7 : Snow Load)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N68	N59	N44	N43	Y	A-B	-11
2	N43	N44	N45	N46	Y	A-B	-11
3	N46	N45	N48	N47	Y	A-B	-11

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Distributed	Area(Member)
1	Dead Load	DL		-1.05		6	3
2	Live Load	LL					3
3	Wind Load X	WLX					2
4	Wind Load Z	WLZ					2
5	Seismic X	ELX	0.59				3
6	Seismic Z	ELZ			0.59		3
7	Snow Load	SL					3
8	Ice Load	OL1				8	
9	BLC 1 Transient Area Loads	None				6	
10	BLC 2 Transient Area Loads	None				6	
11	BLC 3 Transient Area Loads	None				6	
12	BLC 4 Transient Area Loads	None				2	
13	BLC 5 Transient Area Loads	None				6	
14	BLC 6 Transient Area Loads	None				6	
15	BLC 7 Transient Area Loads	None				6	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	LRFD Load Combinations												
2	----------												
3	Gravity Combinations												
4	ASCE 7-16 1	Yes	Y	DL	1.4								
5													
6	ASCE 7-16 2(a)	Yes	Y	DL	1.2	LL	1.6						
7	ASCE 7-16 2(b)	Yes	Y	DL	1.2	LL	1.6	SL	0.5				
8	ASCE 7-16 2(c)	Yes	Y	DL	1.2	LL	1.6						
9	ASCE 7-16 2(d) w/ ice	Yes	Y	DL	1.2	LL	1.6	OL1	0.2	SL	0.5		
10													
11	Lateral Combinations												
12	ASCE 7-16 3(a)	Yes	Y	DL	1.2			LL	1				
13	ASCE 7-16 3(b) i	Yes	Y	DL	1.2			WLX	0.5				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
14	ASCE 7-16 3(b) ii	Yes	Y	DL	1.2			WLZ	0.5				
15	ASCE 7-16 3(b) i reversible	Yes	Y	DL	1.2			WLX	-0.5				
16	ASCE 7-16 3(b) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5				
17	ASCE 7-16 3(c)	Yes	Y	DL	1.2	SL	1.6	LL	1				
18	ASCE 7-16 3(c) i	Yes	Y	DL	1.2	SL	1.6	WLX	0.5				
19	ASCE 7-16 3(c) ii	Yes	Y	DL	1.2	SL	1.6	WLZ	0.5				
20	ASCE 7-16 3(c) i reversible	Yes	Y	DL	1.2	SL	1.6	WLX	-0.5				
21	ASCE 7-16 3(c) ii reversible	Yes	Y	DL	1.2	SL	1.6	WLZ	-0.5				
22	ASCE 7-16 3(d)	Yes	Y	DL	1.2			LL	1				
23	ASCE 7-16 3(d) i	Yes	Y	DL	1.2			WLX	0.5				
24	ASCE 7-16 3(d) ii	Yes	Y	DL	1.2			WLZ	0.5				
25	ASCE 7-16 3(d) i reversible	Yes	Y	DL	1.2			WLX	-0.5				
26	ASCE 7-16 3(d) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5				
27													
28	ASCE 7-16 4(a) i	Yes	Y	DL	1.2	WLX	1			LL	1		
29	ASCE 7-16 4(a) ii	Yes	Y	DL	1.2	WLZ	1			LL	1		
30	ASCE 7-16 4(a) i reversible	Yes	Y	DL	1.2	WLX	-1			LL	1		
31	ASCE 7-16 4(a) ii reversible	Yes	Y	DL	1.2	WLZ	-1			LL	1		
32	ASCE 7-16 4(b) i	Yes	Y	DL	1.2	WLX	1			LL	1	SL	0.5
33	ASCE 7-16 4(b) ii	Yes	Y	DL	1.2	WLZ	1			LL	1	SL	0.5
34	ASCE 7-16 4(b) i reversible	Yes	Y	DL	1.2	WLX	-1			LL	1	SL	0.5
35	ASCE 7-16 4(b) ii reversible	Yes	Y	DL	1.2	WLZ	-1			LL	1	SL	0.5
36	ASCE 7-16 4(c) i	Yes	Y	DL	1.2	WLX	1			LL	1		
37	ASCE 7-16 4(c) ii	Yes	Y	DL	1.2	WLZ	1			LL	1		
38	ASCE 7-16 4(c) i reversible	Yes	Y	DL	1.2	WLX	-1			LL	1		
39	ASCE 7-16 4(c) ii reversible	Yes	Y	DL	1.2	WLZ	-1			LL	1		
40	ASCE 7-16 4(d) i w/ ice	Yes	Y	DL	1.2	OL1	1	WLX	0.077			SL	0.5
41	ASCE 7-16 4(d) ii w/ ice	Yes	Y	DL	1.2	OL1	1	WLZ	0.077			SL	0.5
42	ASCE 7-16 4(d) i w/ ice, reversible	Yes	Y	DL	1.2	OL1	1	WLX	-0.077			SL	0.5
43	ASCE 7-16 4(d) ii w/ ice, reversible	Yes	Y	DL	1.2	OL1	1	WLZ	-0.077			SL	0.5
44	ASCE 7-16 4(e) i w/ ice	Yes	Y	DL	1.2	OL1	1						
45	ASCE 7-16 4(e) ii w/ ice	Yes	Y	DL	1.2	OL1	1						
46	ASCE 7-16 4(e) i w/ ice, reversible	Yes	Y	DL	1.2	OL1	1						
47	ASCE 7-16 4(e) ii w/ ice, reversible	Yes	Y	DL	1.2	OL1	1						
48													
49	ASCE 7-16 5 i	Yes	Y	DL	0.9	WLX	1						
50	ASCE 7-16 5 ii	Yes	Y	DL	0.9	WLZ	1						
51	ASCE 7-16 5 i reversible	Yes	Y	DL	0.9	WLX	-1						
52	ASCE 7-16 5 ii reversible	Yes	Y	DL	0.9	WLZ	-1						
53	ASCE 7-16 5 i w/ ice	Yes	Y	DL	0.9	OL1	1	WLX	0.077				
54	ASCE 7-16 5 ii w/ ice	Yes	Y	DL	0.9	OL1	1	WLZ	0.077				
55	ASCE 7-16 5 i w/ ice, reversible	Yes	Y	DL	0.9	OL1	1	WLX	-0.077				
56	ASCE 7-16 5 ii w/ ice, reversible	Yes	Y	DL	0.9	OL1	1	WLZ	-0.077				
57													
58	ASCE 7-16 6 i	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	1	LL	1	SL	0.2
59	ASCE 7-16 6 ii	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	1	LL	1	SL	0.2
60	ASCE 7-16 6 i reversible	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	-1	LL	1	SL	0.2
61	ASCE 7-16 6 ii reversible	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	-1	LL	1	SL	0.2
62													
63	ASCE 7-16 7 i	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	1				
64	ASCE 7-16 7 ii	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	1				
65	ASCE 7-16 7 i reversible	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	-1				
66	ASCE 7-16 7 ii reversible	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	-1				
67													
68	---Overstrength Combos---												

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
69	ASCE 7-16 6 I (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1	LL	1	SL	0.2
70	ASCE 7-16 6 ii (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1	LL	1	SL	0.2
71	ASCE 7-16 6 i reversible (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1	LL	1	SL	0.2
72	ASCE 7-16 6 ii reversible (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1	LL	1	SL	0.2
73													
74	ASCE 7-16 7 I (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1				
75	ASCE 7-16 7 ii (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1				
76	ASCE 7-16 7 i reversible (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1				
77	ASCE 7-16 7 ii reversible (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1				
78													
79	Deflection Combinations												
80	IBC 2021 1 - Live Load	Yes	Y	LL	1								
81	IBC 2021 2 - Snow Load	Yes	Y	SL	1								
82	IBC 2021 2 - Wind Load (X)	Yes	Y	WLX	1								
83	IBC 2021 2 - Wind Load (Z)	Yes	Y	WLZ	1								
84	IBC 2021 3 - Dead + Live Load	Yes	Y	DL	1	LL	1						

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	LRFD Load Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	----------		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Gravity Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	ASCE 7-16 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	ASCE 7-16 2(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	ASCE 7-16 2(b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	ASCE 7-16 2(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	ASCE 7-16 2(d) w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	Lateral Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	ASCE 7-16 3(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	ASCE 7-16 3(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	ASCE 7-16 3(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	ASCE 7-16 3(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	ASCE 7-16 3(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	ASCE 7-16 3(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	ASCE 7-16 3(c) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	ASCE 7-16 3(c) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	ASCE 7-16 3(c) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	ASCE 7-16 3(c) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	ASCE 7-16 3(d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	ASCE 7-16 3(d) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	ASCE 7-16 3(d) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	ASCE 7-16 3(d) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	ASCE 7-16 3(d) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
28	ASCE 7-16 4(a) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	ASCE 7-16 4(a) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	ASCE 7-16 4(a) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	ASCE 7-16 4(a) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	ASCE 7-16 4(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
33	ASCE 7-16 4(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34	ASCE 7-16 4(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	ASCE 7-16 4(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	ASCE 7-16 4(c) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
37	ASCE 7-16 4(c) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38	ASCE 7-16 4(c) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
39	ASCE 7-16 4(c) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40	ASCE 7-16 4(d) i w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41	ASCE 7-16 4(d) ii w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
42	ASCE 7-16 4(d) i w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43	ASCE 7-16 4(d) ii w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	ASCE 7-16 4(e) i w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	ASCE 7-16 4(e) ii w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46	ASCE 7-16 4(e) i w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
47	ASCE 7-16 4(e) ii w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
49	ASCE 7-16 5 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	ASCE 7-16 5 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
51	ASCE 7-16 5 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
52	ASCE 7-16 5 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
53	ASCE 7-16 5 i w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
54	ASCE 7-16 5 ii w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
55	ASCE 7-16 5 i w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
56	ASCE 7-16 5 ii w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
57			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	ASCE 7-16 6 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
59	ASCE 7-16 6 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
60	ASCE 7-16 6 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	ASCE 7-16 6 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	ASCE 7-16 7 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
64	ASCE 7-16 7 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
65	ASCE 7-16 7 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	ASCE 7-16 7 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
68	---Overstrength Combos---		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	ASCE 7-16 6 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	ASCE 7-16 6 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	ASCE 7-16 6 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	ASCE 7-16 6 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	ASCE 7-16 7 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	ASCE 7-16 7 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
76	ASCE 7-16 7 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
77	ASCE 7-16 7 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
78			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
79	Deflection Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
80	IBC 2021 1 - Live Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
81	IBC 2021 2 - Snow Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
82	IBC 2021 2 - Wind Load (X)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
83	IBC 2021 2 - Wind Load (Z)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
84	IBC 2021 3 - Dead + Live Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N68	max	0.756	51	4.431	34	2.213	82	0	84	0	84	0	84
2		min	-0.771	82	-1.601	82	-4.88	34	0	4	0	4	0	4
3	N59	max	0.771	51	4.431	32	1.693	51	0	84	0	84	0	84
4		min	-0.756	49	-1.039	51	-4.88	32	0	4	0	4	0	4

Envelope Node Reactions (Continued)

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
5	N47	max	0.895	38	5.15	34	5.956	34	0	84	0	84	0	84
6		min	-0.929	82	-2.318	82	-3.281	82	0	4	0	4	0	4
7	N48	max	0.928	34	5.15	32	5.956	32	0	84	0	84	0	84
8		min	-0.895	28	-1.756	51	-2.763	51	0	4	0	4	0	4
9	Totals:	max	3.349	51	16.08	9	1.567	61						
10		min	-3.349	82	0	83	-1.567	64						

Envelope Node Reactions - Overstrength or Capacity Limit

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N68	max	0.356	71*	3.561	71*	0.576	74*	0	77*	0	77*	0	77*
2		min	-0.358	74*	-0.255	74*	-3.673	71*	0	69*	0	69*	0	69*
3	N59	max	0.358	76*	3.561	69*	0.576	76*	0	77*	0	77*	0	77*
4		min	-0.356	69*	-0.255	76*	-3.673	69*	0	69*	0	69*	0	69*
5	N47	max	0.425	71*	3.899	71*	4.178	71*	0	77*	0	77*	0	77*
6		min	-0.429	74*	-0.591	74*	-1.078	74*	0	69*	0	69*	0	69*
7	N48	max	0.429	76*	3.899	69*	4.178	69*	0	77*	0	77*	0	77*
8		min	-0.425	69*	-0.591	76*	-1.078	76*	0	69*	0	69*	0	69*
9	Totals:	max	1.567	76*	11.143	72*	1.567	72*						
10		min	-1.567	74*	1.995	75*	-1.567	75*						

Envelope AISC 14TH (360-10): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M50	C12X20.7	0.282	0	34	0.081	90.936	y	34	59.317	196.992	7.438	56.94	1.206	H1-1b
2	M51	C12X20.7	0.282	0	32	0.08	90.936	y	34	59.317	196.992	7.438	56.94	1.206	H1-1b
3	M52	C8X11.5	0.015	18	39	0.002	36	y	40	91.611	109.188	3.353	26.001	1.136	H1-1b
4	M56	C12X20.7	0.122	0	34	0.036	32.938	z	32	143.224	196.992	7.438	69.12	1.606	H1-1b
5	M58	C8X11.5	0.015	18	35	0.002	36	y	40	91.611	109.188	3.353	26.001	1.136	H1-1b
6	M59	C12X20.7	0.122	62	32	0.036	29.063	z	34	143.224	196.992	7.438	69.12	1.606	H1-1b
7	M60	C12X20.7	0.271	30.312	34	0.035	30.312	z	34	59.317	196.992	7.438	57.881	1.226	H1-1b
8	M61	C12X20.7	0.271	30.312	32	0.035	30.312	z	32	59.317	196.992	7.438	57.881	1.226	H1-1b
9	M63	L3X3X4	0.572	0	32	0.035	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1
10	M64	L3X3X4	0.572	0	32	0.034	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1
11	M69	L3X3X4	0.458	36	34	0.026	36	y	34	38.223	46.656	1.688	3.704	1.13	H2-1
12	M70	L3X3X4	0.552	0	32	0.058	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1
13	M71	L3X3X4	0.591	0	32	0.061	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1
14	M72	L3X3X4	0.723	0	32	0.076	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1
15	M73	L3X3X4	0.559	0	34	0.059	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1
16	M74	L3X3X4	0.51	0	34	0.031	36	z	34	38.223	46.656	1.688	3.756	1.5	H2-1

Envelope Beam Deflections

	Member Label	Span		Location [in]	y' [in]	(n) L'/y' Ratio	LC
1	M50	1	max	108.618	-0.001	NC	82
2		1	min	121.248	0.046	5245	9
3	M51	1	max	108.618	0.001	NC	82
4		1	min	121.248	0.046	5245	9
5	M52	1	max	36	0	NC	84
6		1	min	0	0	NC	4
7	M56	1	max	12.917	0.001	NC	32
8		1	min	0	0	NC	4
9	M58	1	max	36	0	NC	84
10		1	min	0	0	NC	4
11	M59	1	max	49.083	0.001	NC	34

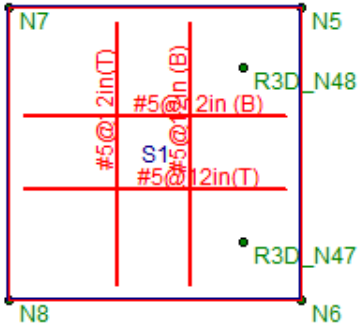
Envelope Beam Deflections (Continued)

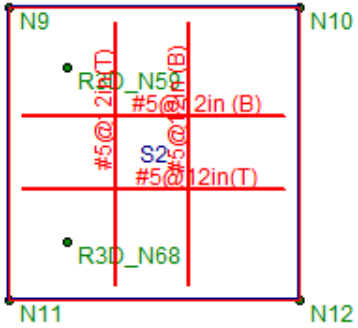
	Member Label	Span		Location [in]	y' [in]	(n) L'/y' Ratio	LC
12		1	min	0	0	NC	4
13	M60	1	max	53.046	0.001	NC	51
14		1	min	121.248	0.046	5245	9
15	M61	1	max	53.046	0.001	NC	49
16		1	min	121.248	0.046	5245	9
17	M63	1	max	5.625	-0.001	NC	55
18		1	min	7.5	-0.013	2767	34
19	M64	1	max	5.25	-0.001	NC	42
20		1	min	7.5	-0.013	2699	34
21	M69	1	max	28.5	-0.001	NC	53
22		1	min	7.5	-0.012	2996	34
23	M70	1	max	3.75	-0.001	NC	65
24		1	min	0	0	NC	4
25	M71	1	max	16.5	-0.001	NC	38
26		1	min	0	0	NC	4
27	M72	1	max	10.125	0.001	NC	23
28		1	min	0	0	NC	4
29	M73	1	max	13.5	-0.001	NC	63
30		1	min	0	0	NC	4
31	M74	1	max	7.875	-0.001	NC	53
32		1	min	7.5	-0.012	3120	32

Warning Log

No Data to Print...

RISA FOUNDATION REPORT





(Global) Model Settings

Display Sections for Member Calcs	9
Max Internal Sections for Member Calcs	100
Mesh Size (in)	24
Max Iterations	10
Merge Tolerance (in)	0.12
Solver	Sparse Accelerated
Coefficient of Friction	0.3
No. of Shear Regions	4
Shear Region Spacing Increment (in)	4
Min 1 Bar Dia Spacing for Beams?	No
Optimize footings for OTM / Sliding?	No
Parme Beta Factor	0.65
Pile Safety Factor	3
Min % Steel for Pedestal	Auto
Concrete Stress Block	Rectangular
Concrete Rebar Set	ASTM A615
Include WWR	No
Concrete Code	ACI 318-19
HR Steel Pile Code	AISC 14th (360-10): LRFD
Wood Pile Code	AWC NDS-12: ASD
Mat Slab Design Option	Construction (Design per Integer No. of Bars)

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[lb/in^3]	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc4500NW	3824		0.15	0.6	0.145	4.5	1	60	60
2	Pedestal	3644	1584	0.15	0.6	0	4	1	60	60

General Design Parameters

	Label	Max Bending Chk	Max Shear Chk	Top Cover[in]	Bottom Cover[in]
1	Typical	1	1	2	3

Slab Rebar Parameters

	Label	Top Bar	Bottom ...	Max Top Bar...	Min Top ...	Max Bot Bar ...	Min Bot Bar ...	Spacing I...	Side Cover[in]	Rebar Options
1	Typical	#5	#5	12	12	12	12	1	3	Force Top and Bottom

Point Coordinates

	Label	Z [in]	X [in]
1	N5	-180	133
2	N6	-180	73
3	N7	-240	133
4	N8	-240	73
5	N9	56	133
6	N10	116	133
7	N11	56	73
8	N12	116	73
9	R3D_N68	68	85
10	R3D_N59	68	121
11	R3D_N47	-192	85
12	R3D_N48	-192	121
13	N13	-210	103
14	N14	-210	133
15	N15	-240	103
16	N16	86	103

Point Coordinates (Continued)

	Label	Z [in]	X [in]
17	N17	86	133
18	N18	56	103
19	N19	-210	73
20	N20	-180	103
21	N21	86	73
22	N22	116	103

Soil Definitions

	Label	Subgrade Modulus[lb/in^3]	Allowable Bearing[psf]	Depth Properties	Default?
1	Hilo Soil	100	1500	None	Yes

Point Loads and Moments (Cat 1 : DL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	Y	0.638
2	R3D_N68	Z	0.595
3	R3D_N59	Y	0.638
4	R3D_N59	Z	0.595
5	R3D_N47	X	-0.001
6	R3D_N47	Y	0.638
7	R3D_N47	Z	-0.595
8	R3D_N48	X	0.001
9	R3D_N48	Y	0.638
10	R3D_N48	Z	-0.595

Point Loads and Moments (Cat 2 : LL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	Y	1.903
2	R3D_N68	Z	1.778
3	R3D_N59	Y	1.903
4	R3D_N59	Z	1.778
5	R3D_N47	Y	1.903
6	R3D_N47	Z	-1.778
7	R3D_N48	Y	1.903
8	R3D_N48	Z	-1.778

Point Loads and Moments (Cat 5 : SL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	Y	0.209
2	R3D_N68	Z	0.196
3	R3D_N59	Y	0.209
4	R3D_N59	Z	0.196
5	R3D_N47	Y	0.209
6	R3D_N47	Z	-0.196
7	R3D_N48	Y	0.209
8	R3D_N48	Z	-0.196

Point Loads and Moments (Cat 16 : ELX)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	X	0.357
2	R3D_N68	Y	-0.749
3	R3D_N68	Z	-1.035
4	R3D_N59	X	0.357
5	R3D_N59	Y	0.749
6	R3D_N59	Z	1.035

Point Loads and Moments (Cat 16 : ELX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
7	R3D_N47	X	0.426
8	R3D_N47	Y	-1.085
9	R3D_N47	Z	1.536
10	R3D_N48	X	0.426
11	R3D_N48	Y	1.085
12	R3D_N48	Z	-1.536

Point Loads and Moments (Cat 18 : ELZ)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	X	-0.001
2	R3D_N68	Y	0.127
3	R3D_N68	Z	0.392
4	R3D_N59	X	0.001
5	R3D_N59	Y	0.127
6	R3D_N59	Z	0.392
7	R3D_N47	X	0.001
8	R3D_N47	Y	-0.127
9	R3D_N47	Z	0.392
10	R3D_N48	X	-0.001
11	R3D_N48	Y	-0.127
12	R3D_N48	Z	0.392

Point Loads and Moments (Cat 19 : WLX)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	X	0.763
2	R3D_N68	Y	-1.601
3	R3D_N68	Z	-2.213
4	R3D_N59	X	0.763
5	R3D_N59	Y	1.601
6	R3D_N59	Z	2.213
7	R3D_N47	X	0.911
8	R3D_N47	Y	-2.318
9	R3D_N47	Z	3.281
10	R3D_N48	X	0.911
11	R3D_N48	Y	2.318
12	R3D_N48	Z	-3.281

Point Loads and Moments (Cat 21 : WLZ)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	X	-0.007
2	R3D_N68	Y	0.081
3	R3D_N68	Z	0.259
4	R3D_N59	X	0.007
5	R3D_N59	Y	0.081
6	R3D_N59	Z	0.259
7	R3D_N47	X	0.006
8	R3D_N47	Y	-0.081
9	R3D_N47	Z	0.259
10	R3D_N48	X	-0.006
11	R3D_N48	Y	-0.081
12	R3D_N48	Z	0.259

Point Loads and Moments (Cat 67 : OL1)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_N68	Y	0.525

Point Loads and Moments (Cat 67 : OL1) (Continued)

	Label	Direction	Magnitude[k,k-ft]
2	R3D_N68	Z	0.516
3	R3D_N59	Y	0.525
4	R3D_N59	Z	0.516
5	R3D_N47	Y	0.525
6	R3D_N47	Z	-0.516
7	R3D_N48	Y	0.525
8	R3D_N48	Z	-0.516

Pedestals/Posts

	Label	Type	Shape	Material	Design Rules	Angle(deg)	Height[in]	Pedestal Layout	Shear Layout
1	R3D_N48	Pedestal	CRECT3X3	Pedestal	Typical	0	12	Use Design Ru...	Use Design Ru...
2	R3D_N47	Pedestal	CRECT3X3	Pedestal	Typical	0	12	Use Design Ru...	Use Design Ru...
3	R3D_N68	Pedestal	CRECT3X3	Pedestal	Typical	0	12	Use Design Ru...	Use Design Ru...
4	R3D_N59	Pedestal	CRECT3X3	Pedestal	Typical	0	12	Use Design Ru...	Use Design Ru...

Slabs

	Label	Thickness [in]	Material	Local Axis A...	Analysis Offset [in]	Passive Pressure [psf]	Soil Overburden ...	Icr Factor
1	S1	24	Conc4500NW	0	0	0	0	0.25
2	S2	24	Conc4500NW	0	0	0	0	0.25

Load Combinations

	Label	S...	Ser...	AB...	SF	Cat...	Fa...	Cate...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...
1	LRFD Load Combin...																								
2	----------...																								
3	Gravity Combinations																								
4	ASCE 7-16 1	Yes				DL	1.4																		
5																									
6	ASCE 7-16 2(a)	Yes				DL	1.2	LL	1.6																
7	ASCE 7-16 2(b)	Yes				DL	1.2	LL	1.6	SL	0.5														
8	ASCE 7-16 2(c)	Yes				DL	1.2	LL	1.6																
9	ASCE 7-16 2(d) w/ i...	Yes				DL	1.2	LL	1.6	OL1	0.2	SL	0.5												
10																									
11	Lateral Combinations																								
12	ASCE 7-16 3(a)	Yes				DL	1.2			LL	1														
13	ASCE 7-16 3(b) i	Yes				DL	1.2			W...	0.5														
14	ASCE 7-16 3(b) ii	Yes				DL	1.2			WLZ	0.5														
15	ASCE 7-16 3(b) i re...	Yes				DL	1.2			W...	-0.5														
16	ASCE 7-16 3(b) ii r...	Yes				DL	1.2			WLZ	-0.5														
17	ASCE 7-16 3(c)	Yes				DL	1.2	SL	1.6	LL	1														
18	ASCE 7-16 3(c) i	Yes				DL	1.2	SL	1.6	W...	0.5														
19	ASCE 7-16 3(c) ii	Yes				DL	1.2	SL	1.6	WLZ	0.5														
20	ASCE 7-16 3(c) i re...	Yes				DL	1.2	SL	1.6	W...	-0.5														
21	ASCE 7-16 3(c) ii re...	Yes				DL	1.2	SL	1.6	WLZ	-0.5														
22	ASCE 7-16 3(d)	Yes				DL	1.2			LL	1														
23	ASCE 7-16 3(d) i	Yes				DL	1.2			W...	0.5														
24	ASCE 7-16 3(d) ii	Yes				DL	1.2			WLZ	0.5														
25	ASCE 7-16 3(d) i re...	Yes				DL	1.2			W...	-0.5														
26	ASCE 7-16 3(d) ii r...	Yes				DL	1.2			WLZ	-0.5														
27																									
28	ASCE 7-16 4(a) i	Yes				DL	1.2	WLX	1			LL	1												
29	ASCE 7-16 4(a) ii	Yes				DL	1.2	WLZ	1			LL	1												
30	ASCE 7-16 4(a) i re...	Yes				DL	1.2	WLX	-1			LL	1												
31	ASCE 7-16 4(a) ii r...	Yes				DL	1.2	WLZ	-1			LL	1												
32	ASCE 7-16 4(b) i	Yes				DL	1.2	WLX	1			LL	1	SL	0.5										
33	ASCE 7-16 4(b) ii	Yes				DL	1.2	WLZ	1			LL	1	SL	0.5										

Load Combinations (Continued)

	Label	S...	Ser...	AB..	SF	Cat...	Fa...	Cate...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...
34	ASCE 7-16 4(b) i re...	Yes				DL	1.2	WLX	-1			LL	1	SL	0.5										
35	ASCE 7-16 4(b) ii r...	Yes				DL	1.2	WLZ	-1			LL	1	SL	0.5										
36	ASCE 7-16 4(c) i	Yes				DL	1.2	WLX	1			LL	1												
37	ASCE 7-16 4(c) ii	Yes				DL	1.2	WLZ	1			LL	1												
38	ASCE 7-16 4(c) i re...	Yes				DL	1.2	WLX	-1			LL	1												
39	ASCE 7-16 4(c) ii re...	Yes				DL	1.2	WLZ	-1			LL	1												
40	ASCE 7-16 4(d) i w/...	Yes				DL	1.2	OL1	1	W...	0.0...			SL	0.5										
41	ASCE 7-16 4(d) ii w...	Yes				DL	1.2	OL1	1	WLZ	0.0...			SL	0.5										
42	ASCE 7-16 4(d) i w/...	Yes				DL	1.2	OL1	1	W...	-0....			SL	0.5										
43	ASCE 7-16 4(d) ii w...	Yes				DL	1.2	OL1	1	WLZ	-0....			SL	0.5										
44	ASCE 7-16 4(e) i w/...	Yes				DL	1.2	OL1	1																
45	ASCE 7-16 4(e) ii w...	Yes				DL	1.2	OL1	1																
46	ASCE 7-16 4(e) i w/...	Yes				DL	1.2	OL1	1																
47	ASCE 7-16 4(e) ii w...	Yes				DL	1.2	OL1	1																
48																									
49	ASCE 7-16 5 i	Yes				DL	0.9	WLX	1																
50	ASCE 7-16 5 ii	Yes				DL	0.9	WLZ	1																
51	ASCE 7-16 5 i rever...	Yes				DL	0.9	WLX	-1																
52	ASCE 7-16 5 ii reve...	Yes				DL	0.9	WLZ	-1																
53	ASCE 7-16 5 i w/ ice	Yes				DL	0.9	OL1	1	W...	0.0...														
54	ASCE 7-16 5 ii w/ ice	Yes				DL	0.9	OL1	1	WLZ	0.0...														
55	ASCE 7-16 5 i w/ ic...	Yes				DL	0.9	OL1	1	W...	-0....														
56	ASCE 7-16 5 ii w/ ic...	Yes				DL	0.9	OL1	1	WLZ	-0....														
57																									
58	ASCE 7-16 6 i	Yes				DL	1.2	Sds*...	0.2	ELX	1	LL	1	SL	0.2										
59	ASCE 7-16 6 ii	Yes				DL	1.2	Sds*...	0.2	ELZ	1	LL	1	SL	0.2										
60	ASCE 7-16 6 i rever...	Yes				DL	1.2	Sds*...	0.2	ELX	-1	LL	1	SL	0.2										
61	ASCE 7-16 6 ii reve...	Yes				DL	1.2	Sds*...	0.2	ELZ	-1	LL	1	SL	0.2										
62																									
63	ASCE 7-16 7 i	Yes				DL	0.9	Sds*...	-0.2	ELX	1														
64	ASCE 7-16 7 ii	Yes				DL	0.9	Sds*...	-0.2	ELZ	1														
65	ASCE 7-16 7 i rever...	Yes				DL	0.9	Sds*...	-0.2	ELX	-1														
66	ASCE 7-16 7 ii reve...	Yes				DL	0.9	Sds*...	-0.2	ELZ	-1														
67																									
68	---Overstrength Co...																								
69	ASCE 7-16 6 I (os)	Yes				DL	1.2	Sds*...	0.2	O...	1	LL	1	SL	0.2										
70	ASCE 7-16 6 ii (os)	Yes				DL	1.2	Sds*...	0.2	O...	1	LL	1	SL	0.2										
71	ASCE 7-16 6 i rever...	Yes				DL	1.2	Sds*...	0.2	O...	-1	LL	1	SL	0.2										
72	ASCE 7-16 6 ii reve...	Yes				DL	1.2	Sds*...	0.2	O...	-1	LL	1	SL	0.2										
73																									
74	ASCE 7-16 7 I (os)	Yes				DL	0.9	Sds*...	-0.2	O...	1														
75	ASCE 7-16 7 ii (os)	Yes				DL	0.9	Sds*...	-0.2	O...	1														
76	ASCE 7-16 7 i rever...	Yes				DL	0.9	Sds*...	-0.2	O...	-1														
77	ASCE 7-16 7 ii reve...	Yes				DL	0.9	Sds*...	-0.2	O...	-1														
78																									
79	ASD Load Combina...																								
80	----------																								
81	Gravity Combinations																								
82	ASCE 7-16 1	Yes	Yes		1.5	DL	1																		
83	ASCE 7-16 1 w/ ice	Yes	Yes		1.5	DL	1	OL1	0.7																
84																									
85	ASCE 7-16 2	Yes	Yes		1.5	DL	1	LL	1																
86	ASCE 7-16 2 w/ ice	Yes	Yes		1.5	DL	1	LL	1	OL1	0.7														
87																									
88	ASCE 7-16 3(a)	Yes	Yes		1.5	DL	1																		
89	ASCE 7-16 3(b)	Yes	Yes		1.5	DL	1	SL	1																
90	ASCE 7-16 3(c)	Yes	Yes		1.5	DL	1																		

Load Combinations (Continued)

	Label	S...	Ser...	AB...	SF	Cat...	Fa...	Cate...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...
91	ASCE 7-16 3(d) i w/...	Yes	Yes	1.33	1.5	DL	1	OL1	0.7	W...	0.0...			SL	1								
92	ASCE 7-16 3(d) ii w...	Yes	Yes	1.33	1.5	DL	1	OL1	0.7	WLZ	0.0...			SL	1								
93	ASCE 7-16 3(d) i w/...	Yes	Yes	1.33	1.5	DL	1	OL1	0.7	W...	-0....			SL	1								
94	ASCE 7-16 3(d) ii w...	Yes	Yes	1.33	1.5	DL	1	OL1	0.7	WLZ	-0....			SL	1								
95																							
96	ASCE 7-16 4(a)	Yes	Yes		1.5	DL	1	LL	0.75														
97	ASCE 7-16 4(b)	Yes	Yes		1.5	DL	1	LL	0.75	SL	0.75												
98	ASCE 7-16 4(c)	Yes	Yes		1.5	DL	1	LL	0.75														
99																							
100	Lateral Combinations																						
101	ASCE 7-16 5 i	Yes	Yes	1.33	1.5	DL	1	WLX	0.6														
102	ASCE 7-16 5 ii	Yes	Yes	1.33	1.5	DL	1	WLZ	0.6														
103	ASCE 7-16 5 i rever...	Yes	Yes	1.33	1.5	DL	1	WLX	-0.6														
104	ASCE 7-16 5 ii reve...	Yes	Yes	1.33	1.5	DL	1	WLZ	-0.6														
105																							
106	ASCE 7-16 6(a) i	Yes	Yes	1.33	1.5	DL	1	LL	0.75	W...	0.45												
107	ASCE 7-16 6(a) ii	Yes	Yes	1.33	1.5	DL	1	LL	0.75	WLZ	0.45												
108	ASCE 7-16 6(a) i re...	Yes	Yes	1.33	1.5	DL	1	LL	0.75	W...	-0....												
109	ASCE 7-16 6(a) ii r...	Yes	Yes	1.33	1.5	DL	1	LL	0.75	WLZ	-0....												
110	ASCE 7-16 6(b) i	Yes	Yes	1.33	1.5	DL	1	LL	0.75	W...	0.45			SL	0.75								
111	ASCE 7-16 6(b) ii	Yes	Yes	1.33	1.5	DL	1	LL	0.75	WLZ	0.45			SL	0.75								
112	ASCE 7-16 6(b) i re...	Yes	Yes	1.33	1.5	DL	1	LL	0.75	W...	-0....			SL	0.75								
113	ASCE 7-16 6(b) ii r...	Yes	Yes	1.33	1.5	DL	1	LL	0.75	WLZ	-0....			SL	0.75								
114	ASCE 7-16 6(c) i	Yes	Yes	1.33	1.5	DL	1	LL	0.75	W...	0.45												
115	ASCE 7-16 6(c) ii	Yes	Yes	1.33	1.5	DL	1	LL	0.75	WLZ	0.45												
116	ASCE 7-16 6(c) i re...	Yes	Yes	1.33	1.5	DL	1	LL	0.75	W...	-0....												
117	ASCE 7-16 6(c) ii re...	Yes	Yes	1.33	1.5	DL	1	LL	0.75	WLZ	-0....												
118																							
119	ASCE 7-16 7 i	Yes	Yes	1.33	1.5	DL	0.6	WLX	0.6														
120	ASCE 7-16 7 ii	Yes	Yes	1.33	1.5	DL	0.6	WLZ	0.6														
121	ASCE 7-16 7 i rever...	Yes	Yes	1.33	1.5	DL	0.6	WLX	-0.6														
122	ASCE 7-16 7 ii reve...	Yes	Yes	1.33	1.5	DL	0.6	WLZ	-0.6														
123	ASCE 7-16 7 i w/ ice	Yes	Yes	1.33	1.5	DL	0.6	OL1	0.7	W...	0.0...												
124	ASCE 7-16 7 ii w/ ice	Yes	Yes	1.33	1.5	DL	0.6	OL1	0.7	WLZ	0.0...												
125	ASCE 7-16 7 i w/ ic...	Yes	Yes	1.33	1.5	DL	0.6	OL1	0.7	W...	-0....												
126	ASCE 7-16 7 ii w/ ic...	Yes	Yes	1.33	1.5	DL	0.6	OL1	0.7	WLZ	-0....												
127																							
128	ASCE 7-16 8 i	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELX	0.7												
129	ASCE 7-16 8 ii	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELZ	0.7												
130	ASCE 7-16 8 i rever...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELX	-0.7												
131	ASCE 7-16 8 ii reve...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELZ	-0.7												
132																							
133	ASCE 7-16 9 i	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	ELX	0.5...	LL	0.75	SL	0.75								
134	ASCE 7-16 9 ii	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	ELZ	0.5...	LL	0.75	SL	0.75								
135	ASCE 7-16 9 i rever...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	ELX	-0....	LL	0.75	SL	0.75								
136	ASCE 7-16 9 ii reve...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	ELZ	-0....	LL	0.75	SL	0.75								
137																							
138	ASCE 7-16 10 i	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELX	0.7												
139	ASCE 7-16 10 ii	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELZ	0.7												
140	ASCE 7-16 10 i rev...	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELX	-0.7												
141	ASCE 7-16 10 ii rev...	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELZ	-0.7												
142																							
143	---Overstrength Co...																						
144	ASCE 7-16 8 I (os)	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	0.7												
145	ASCE 7-16 8 ii (os)	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	0.7												
146	ASCE 7-16 8 i rever...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	-0.7												
147	ASCE 7-16 8 ii reve...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	-0.7												

Load Combinations (Continued)

	Label	S...	Ser...	AB...	SF	Cat...	Fa...	Cate...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...
148																											
149	ASCE 7-16 9 I (os)	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	O...	0.5...	LL	0.75	SL	0.75												
150	ASCE 7-16 9 ii (os)	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	O...	0.5...	LL	0.75	SL	0.75												
151	ASCE 7-16 9 i rever...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	O...	-0....	LL	0.75	SL	0.75												
152	ASCE 7-16 9 ii reve...	Yes	Yes	1.33	1.1	DL	1	Sds*...	0.1...	O...	-0....	LL	0.75	SL	0.75												
153																											
154	ASCE 7-16 10 I (os)	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	0.7																
155	ASCE 7-16 10 ii (os)	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	0.7																
156	ASCE 7-16 10 i rev...	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	-0.7																
157	ASCE 7-16 10 ii rev...	Yes	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	-0.7																

Load Categories

	Category	Point Loads	Line Loads	Area Loads
1	DL	10		
2	LL	8		
3	SL	8		
4	ELX	12		
5	ELZ	12		
6	WLX	12		
7	WLZ	12		
8	OL1	8		

Slab Overturning Safety Factors (By Combination)

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
1	82	S1	0	0	32.855	0	34.51	9.99+	9.99+
2	82	S2	0	0	36.165	0	34.51	9.99+	9.99+
3	83	S1	0	0	33.625	0	36.347	9.99+	9.99+
4	83	S2	0	0	39.069	0	36.347	9.99+	9.99+
5	85	S1	0	0	37.409	0	44.025	9.99+	9.99+
6	85	S2	0	0	50.642	0	44.025	9.99+	9.99+
7	86	S1	0	0	38.179	0	45.862	9.99+	9.99+
8	86	S2	0	0	53.546	0	45.862	9.99+	9.99+
9	88	S1	0	0	32.855	0	34.51	9.99+	9.99+
10	88	S2	0	0	36.165	0	34.51	9.99+	9.99+
11	89	S1	0	0	33.356	0	35.556	9.99+	9.99+
12	89	S2	0	0	37.757	0	35.556	9.99+	9.99+
13	90	S1	0	0	32.855	0	34.51	9.99+	9.99+
14	90	S2	0	0	36.165	0	34.51	9.99+	9.99+
15	91	S1	0	0	34.126	0.671	37.394	9.99+	9.99+
16	91	S2	0	0	40.661	0.507	37.394	9.99+	9.99+
17	92	S1	0	0.093	40.661	0.022	37.394	9.99+	9.99+
18	92	S2	0	0.049	34.126	0	37.415	9.99+	9.99+
19	93	S1	0	0	34.126	0.671	37.394	9.99+	9.99+
20	93	S2	0	0	40.661	0.507	37.394	9.99+	9.99+
21	94	S1	0	0.049	34.126	0	37.415	9.99+	9.99+
22	94	S2	0	0.093	40.661	0.022	37.394	9.99+	9.99+
23	96	S1	0	0	36.27	0	41.646	9.99+	9.99+
24	96	S2	0	0	47.022	0	41.646	9.99+	9.99+
25	97	S1	0	0	36.646	0	42.431	9.99+	9.99+
26	97	S2	0	0	48.217	0	42.431	9.99+	9.99+
27	98	S1	0	0	36.27	0	41.646	9.99+	9.99+
28	98	S2	0	0	47.022	0	41.646	9.99+	9.99+
29	101	S1	0	0	32.855	7.453	34.51	9.99+	4.63
30	101	S2	0	0	36.165	5.631	34.51	9.99+	6.128
31	102	S1	0	1.031	36.165	0.243	34.51	9.99+	9.99+
32	102	S2	0	0.545	32.855	0	34.752	9.99+	9.99+

Slab Overturning Safety Factors (By Combination) (Continued)

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
33	103	S1	0	0	32.855	7.453	34.51	9.99+	4.63
34	103	S2	0	0	36.165	5.631	34.51	9.99+	6.128
35	104	S1	0	0.545	32.855	0	34.752	9.99+	9.99+
36	104	S2	0	1.031	36.165	0.243	34.51	9.99+	9.99+
37	106	S1	0	0	36.27	5.59	41.646	9.99+	7.45
38	106	S2	0	0	47.022	4.223	41.646	9.99+	9.861
39	107	S1	0	0.773	47.022	0.182	41.646	9.99+	9.99+
40	107	S2	0	0.409	36.27	0	41.828	9.99+	9.99+
41	108	S1	0	0	36.27	5.59	41.646	9.99+	7.45
42	108	S2	0	0	47.022	4.223	41.646	9.99+	9.861
43	109	S1	0	0.409	36.27	0	41.828	9.99+	9.99+
44	109	S2	0	0.773	47.022	0.182	41.646	9.99+	9.99+
45	110	S1	0	0	36.646	5.59	42.431	9.99+	7.591
46	110	S2	0	0	48.217	4.223	42.431	9.99+	9.99+
47	111	S1	0	0.773	48.217	0.182	42.431	9.99+	9.99+
48	111	S2	0	0.409	36.646	0	42.613	9.99+	9.99+
49	112	S1	0	0	36.646	5.59	42.431	9.99+	7.591
50	112	S2	0	0	48.217	4.223	42.431	9.99+	9.99+
51	113	S1	0	0.409	36.646	0	42.613	9.99+	9.99+
52	113	S2	0	0.773	48.217	0.182	42.431	9.99+	9.99+
53	114	S1	0	0	36.27	5.59	41.646	9.99+	7.45
54	114	S2	0	0	47.022	4.223	41.646	9.99+	9.861
55	115	S1	0	0.773	47.022	0.182	41.646	9.99+	9.99+
56	115	S2	0	0.409	36.27	0	41.828	9.99+	9.99+
57	116	S1	0	0	36.27	5.59	41.646	9.99+	7.45
58	116	S2	0	0	47.022	4.223	41.646	9.99+	9.861
59	117	S1	0	0.409	36.27	0	41.828	9.99+	9.99+
60	117	S2	0	0.773	47.022	0.182	41.646	9.99+	9.99+
61	119	S1	0	0	19.713	7.453	20.706	9.99+	2.778
62	119	S2	0	0	21.699	5.631	20.706	9.99+	3.677
63	120	S1	0	1.031	21.699	0.243	20.706	9.99+	9.99+
64	120	S2	0	0.545	19.713	0	20.949	9.99+	9.99+
65	121	S1	0	0	19.713	7.453	20.706	9.99+	2.778
66	121	S2	0	0	21.699	5.631	20.706	9.99+	3.677
67	122	S1	0	0.545	19.713	0	20.949	9.99+	9.99+
68	122	S2	0	1.031	21.699	0.243	20.706	9.99+	9.99+
69	123	S1	0	0	20.483	0.671	22.543	9.99+	9.99+
70	123	S2	0	0	24.603	0.507	22.543	9.99+	9.99+
71	124	S1	0	0.093	24.603	0.022	22.543	9.99+	9.99+
72	124	S2	0	0.049	20.483	0	22.565	9.99+	9.99+
73	125	S1	0	0	20.483	0.671	22.543	9.99+	9.99+
74	125	S2	0	0	24.603	0.507	22.543	9.99+	9.99+
75	126	S1	0	0.049	20.483	0	22.565	9.99+	9.99+
76	126	S2	0	0.093	24.603	0.022	22.543	9.99+	9.99+
77	128	S1	0	0	35.568	4.07	37.36	9.99+	9.179
78	128	S2	0	0	39.152	3.072	37.36	9.99+	9.99+
79	129	S1	0	1.823	39.152	0.444	37.36	9.99+	9.99+
80	129	S2	0	0.934	35.568	0	37.805	9.99+	9.99+
81	130	S1	0	0	35.568	4.07	37.36	9.99+	9.179
82	130	S2	0	0	39.152	3.072	37.36	9.99+	9.99+
83	131	S1	0	0.934	35.568	0	37.805	9.99+	9.99+
84	131	S2	0	1.823	39.152	0.444	37.36	9.99+	9.99+
85	133	S1	0	0	38.681	3.053	44.569	9.99+	9.99+
86	133	S2	0	0	50.457	2.304	44.569	9.99+	9.99+
87	134	S1	0	1.367	50.457	0.333	44.569	9.99+	9.99+
88	134	S2	0	0.701	38.681	0	44.902	9.99+	9.99+
89	135	S1	0	0	38.681	3.053	44.569	9.99+	9.99+

Slab Overturning Safety Factors (By Combination) (Continued)

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
90	135	S2	0	0	50.457	2.304	44.569	9.99+	9.99+
91	136	S1	0	0.701	38.681	0	44.902	9.99+	9.99+
92	136	S2	0	1.367	50.457	0.333	44.569	9.99+	9.99+
93	138	S1	0	0	16.999	4.07	17.855	9.99+	4.387
94	138	S2	0	0	18.712	3.072	17.855	9.99+	5.812
95	139	S1	0	1.823	18.712	0.444	17.855	9.99+	9.99+
96	139	S2	0	0.934	16.999	0	18.3	9.99+	9.99+
97	140	S1	0	0	16.999	4.07	17.855	9.99+	4.387
98	140	S2	0	0	18.712	3.072	17.855	9.99+	5.812
99	141	S1	0	0.934	16.999	0	18.3	9.99+	9.99+
100	141	S2	0	1.823	18.712	0.444	17.855	9.99+	9.99+
101	144*	S1	0	0	35.568	4.07	37.36	9.99+	9.179
102	144*	S2	0	0	39.152	3.072	37.36	9.99+	9.99+
103	145*	S1	0	1.823	39.152	0.444	37.36	9.99+	9.99+
104	145*	S2	0	0.934	35.568	0	37.805	9.99+	9.99+
105	146*	S1	0	0	35.568	4.07	37.36	9.99+	9.179
106	146*	S2	0	0	39.152	3.072	37.36	9.99+	9.99+
107	147*	S1	0	0.934	35.568	0	37.805	9.99+	9.99+
108	147*	S2	0	1.823	39.152	0.444	37.36	9.99+	9.99+
109	149*	S1	0	0	38.681	3.053	44.569	9.99+	9.99+
110	149*	S2	0	0	50.457	2.304	44.569	9.99+	9.99+
111	150*	S1	0	1.367	50.457	0.333	44.569	9.99+	9.99+
112	150*	S2	0	0.701	38.681	0	44.902	9.99+	9.99+
113	151*	S1	0	0	38.681	3.053	44.569	9.99+	9.99+
114	151*	S2	0	0	50.457	2.304	44.569	9.99+	9.99+
115	152*	S1	0	0.701	38.681	0	44.902	9.99+	9.99+
116	152*	S2	0	1.367	50.457	0.333	44.569	9.99+	9.99+
117	154*	S1	0	0	16.999	4.07	17.855	9.99+	4.387
118	154*	S2	0	0	18.712	3.072	17.855	9.99+	5.812
119	155*	S1	0	1.823	18.712	0.444	17.855	9.99+	9.99+
120	155*	S2	0	0.934	16.999	0	18.3	9.99+	9.99+
121	156*	S1	0	0	16.999	4.07	17.855	9.99+	4.387
122	156*	S2	0	0	18.712	3.072	17.855	9.99+	5.812
123	157*	S1	0	0.934	16.999	0	18.3	9.99+	9.99+
124	157*	S2	0	1.823	18.712	0.444	17.855	9.99+	9.99+

Slab Sliding Safety Factors

	LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz
1	82	S1	0	0	4.141	1.19	4.141	9.99+	3.481
2	82	S2	0	0	4.141	1.19	4.141	9.99+	3.481
3	83	S1	0	0	4.362	1.913	4.362	9.99+	2.28
4	83	S2	0	0	4.362	1.913	4.362	9.99+	2.28
5	85	S1	0	0	5.283	4.747	5.283	9.99+	1.113
6	85	S2	0	0	5.283	4.747	5.283	9.99+	1.113
7	86	S1	0	0	5.503	5.47	5.503	9.99+	1.006
8	86	S2	0	0	5.503	5.47	5.503	9.99+	1.006
9	88	S1	0	0	4.141	1.19	4.141	9.99+	3.481
10	88	S2	0	0	4.141	1.19	4.141	9.99+	3.481
11	89	S1	0	0	4.267	1.581	4.267	9.99+	2.699
12	89	S2	0	0	4.267	1.581	4.267	9.99+	2.699
13	90	S1	0	0	4.141	1.19	4.141	9.99+	3.481
14	90	S2	0	0	4.141	1.19	4.141	9.99+	3.481
15	91	S1	0	0.098	4.487	2.304	4.487	9.99+	1.948
16	91	S2	0	0.082	4.487	2.304	4.487	9.99+	1.948
17	92	S1	0	0	4.485	2.276	4.485	9.99+	1.97
18	92	S2	0	0	4.49	2.332	4.49	9.99+	1.925

Slab Sliding Safety Factors (Continued)

	LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz
19	93	S1	0	0.098	4.487	2.304	4.487	9.99+	1.948
20	93	S2	0	0.082	4.487	2.304	4.487	9.99+	1.948
21	94	S1	0	0	4.49	2.332	4.49	9.99+	1.925
22	94	S2	0	0	4.485	2.276	4.485	9.99+	1.97
23	96	S1	0	0	4.998	3.857	4.998	9.99+	1.296
24	96	S2	0	0	4.998	3.857	4.998	9.99+	1.296
25	97	S1	0	0	5.092	4.151	5.092	9.99+	1.227
26	97	S2	0	0	5.092	4.151	5.092	9.99+	1.227
27	98	S1	0	0	4.998	3.857	4.998	9.99+	1.296
28	98	S2	0	0	4.998	3.857	4.998	9.99+	1.296
29	101	S1	0	1.094	4.141	1.19	4.141	3.787	3.481
30	101	S2	0	0.916	4.141	1.19	4.141	4.52	3.481
31	102	S1	0	0	4.112	0.878	4.112	9.99+	4.681
32	102	S2	0	0	4.17	1.501	4.17	9.99+	2.779
33	103	S1	0	1.094	4.141	1.19	4.141	3.787	3.481
34	103	S2	0	0.916	4.141	1.19	4.141	4.52	3.481
35	104	S1	0	0	4.17	1.501	4.17	9.99+	2.779
36	104	S2	0	0	4.112	0.878	4.112	9.99+	4.681
37	106	S1	0	0.82	4.998	3.857	4.998	6.093	1.296
38	106	S2	0	0.687	4.998	3.857	4.998	7.273	1.296
39	107	S1	0	0	4.976	3.624	4.976	9.99+	1.373
40	107	S2	0	0	5.019	4.091	5.019	9.99+	1.227
41	108	S1	0	0.82	4.998	3.857	4.998	6.093	1.296
42	108	S2	0	0.687	4.998	3.857	4.998	7.273	1.296
43	109	S1	0	0	5.019	4.091	5.019	9.99+	1.227
44	109	S2	0	0	4.976	3.624	4.976	9.99+	1.373
45	110	S1	0	0.82	5.092	4.151	5.092	6.208	1.227
46	110	S2	0	0.687	5.092	4.151	5.092	7.41	1.227
47	111	S1	0	0	5.07	3.917	5.07	9.99+	1.294
48	111	S2	0	0	5.114	4.384	5.114	9.99+	1.166
49	112	S1	0	0.82	5.092	4.151	5.092	6.208	1.227
50	112	S2	0	0.687	5.092	4.151	5.092	7.41	1.227
51	113	S1	0	0	5.114	4.384	5.114	9.99+	1.166
52	113	S2	0	0	5.07	3.917	5.07	9.99+	1.294
53	114	S1	0	0.82	4.998	3.857	4.998	6.093	1.296
54	114	S2	0	0.687	4.998	3.857	4.998	7.273	1.296
55	115	S1	0	0	4.976	3.624	4.976	9.99+	1.373
56	115	S2	0	0	5.019	4.091	5.019	9.99+	1.227
57	116	S1	0	0.82	4.998	3.857	4.998	6.093	1.296
58	116	S2	0	0.687	4.998	3.857	4.998	7.273	1.296
59	117	S1	0	0	5.019	4.091	5.019	9.99+	1.227
60	117	S2	0	0	4.976	3.624	4.976	9.99+	1.373
61	119	S1	0	1.094	2.485	0.714	2.485	2.272	3.481
62	119	S2	0	0.916	2.485	0.714	2.485	2.712	3.481
63	120	S1	0	0	2.456	0.403	2.456	9.99+	6.1
64	120	S2	0	0	2.514	1.025	2.514	9.99+	2.453
65	121	S1	0	1.094	2.485	0.714	2.485	2.272	3.481
66	121	S2	0	0.916	2.485	0.714	2.485	2.712	3.481
67	122	S1	0	0	2.514	1.025	2.514	9.99+	2.453
68	122	S2	0	0	2.456	0.403	2.456	9.99+	6.1
69	123	S1	0	0.098	2.705	1.437	2.705	9.99+	1.883
70	123	S2	0	0.082	2.705	1.437	2.705	9.99+	1.883
71	124	S1	0	0	2.703	1.409	2.703	9.99+	1.918
72	124	S2	0	0	2.708	1.465	2.708	9.99+	1.849
73	125	S1	0	0.098	2.705	1.437	2.705	9.99+	1.883
74	125	S2	0	0.082	2.705	1.437	2.705	9.99+	1.883
75	126	S1	0	0	2.708	1.465	2.708	9.99+	1.849

Slab Sliding Safety Factors (Continued)

	LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz
76	126	S2	0	0	2.703	1.409	2.703	9.99+	1.918
77	128	S1	0	0.597	4.483	1.288	4.483	7.51	3.481
78	128	S2	0	0.5	4.483	1.288	4.483	8.97	3.481
79	129	S1	0	0	4.43	0.739	4.43	9.99+	5.991
80	129	S2	0	0	4.537	1.836	4.537	9.99+	2.471
81	130	S1	0	0.597	4.483	1.288	4.483	7.51	3.481
82	130	S2	0	0.5	4.483	1.288	4.483	8.97	3.481
83	131	S1	0	0	4.537	1.836	4.537	9.99+	2.471
84	131	S2	0	0	4.43	0.739	4.43	9.99+	5.991
85	133	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266
86	133	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266
87	134	S1	0	0	5.308	3.813	5.308	9.99+	1.392
88	134	S2	0	0	5.388	4.636	5.388	9.99+	1.162
89	135	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266
90	135	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266
91	136	S1	0	0	5.388	4.636	5.388	9.99+	1.162
92	136	S2	0	0	5.308	3.813	5.308	9.99+	1.392
93	138	S1	0	0.597	2.143	0.615	2.143	3.589	3.481
94	138	S2	0	0.5	2.143	0.615	2.143	4.287	3.481
95	139	S1	0	0	2.089	0.067	2.089	9.99+	9.99+
96	139	S2	0	0	2.196	1.164	2.196	9.99+	1.887
97	140	S1	0	0.597	2.143	0.615	2.143	3.589	3.481
98	140	S2	0	0.5	2.143	0.615	2.143	4.287	3.481
99	141	S1	0	0	2.196	1.164	2.196	9.99+	1.887
100	141	S2	0	0	2.089	0.067	2.089	9.99+	9.99+
101	144*	S1	0	0.597	4.483	1.288	4.483	7.51	3.481
102	144*	S2	0	0.5	4.483	1.288	4.483	8.97	3.481
103	145*	S1	0	0	4.43	0.739	4.43	9.99+	5.991
104	145*	S2	0	0	4.537	1.836	4.537	9.99+	2.471
105	146*	S1	0	0.597	4.483	1.288	4.483	7.51	3.481
106	146*	S2	0	0.5	4.483	1.288	4.483	8.97	3.481
107	147*	S1	0	0	4.537	1.836	4.537	9.99+	2.471
108	147*	S2	0	0	4.43	0.739	4.43	9.99+	5.991
109	149*	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266
110	149*	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266
111	150*	S1	0	0	5.308	3.813	5.308	9.99+	1.392
112	150*	S2	0	0	5.388	4.636	5.388	9.99+	1.162
113	151*	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266
114	151*	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266
115	152*	S1	0	0	5.388	4.636	5.388	9.99+	1.162
116	152*	S2	0	0	5.308	3.813	5.308	9.99+	1.392
117	154*	S1	0	0.597	2.143	0.615	2.143	3.589	3.481
118	154*	S2	0	0.5	2.143	0.615	2.143	4.287	3.481
119	155*	S1	0	0	2.089	0.067	2.089	9.99+	9.99+
120	155*	S2	0	0	2.196	1.164	2.196	9.99+	1.887
121	156*	S1	0	0.597	2.143	0.615	2.143	3.589	3.481
122	156*	S2	0	0.5	2.143	0.615	2.143	4.287	3.481
123	157*	S1	0	0	2.196	1.164	2.196	9.99+	1.887
124	157*	S2	0	0	2.089	0.067	2.089	9.99+	9.99+

Design Strips

	Label	Rebar Angle from Pl...	No. of Design Cuts	Design Rule
1	DS1	0	50	Typical
2	DS2	0	50	Typical
3	DS3	90	50	Typical
4	DS4	90	50	Typical

Strip Reinforcing

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
1	DS1	0	64	#5@12in	DS1-X26	0.053	9	#5@12in	DS1-X50	0.06	9	DS1-X50
2	DS2	0	66	#5@12in	DS2-X25	0.053	9	#5@12in	DS2-X1	0.06	9	DS2-X25
3	DS3	0.008	34	#5@12in	DS3-X26	0.006	49	#5@12in	DS3-X1	0.018	32	DS3-X25
4	DS4	0.007	32	#5@12in	DS4-X25	0.005	51	#5@12in	DS4-X50	0.016	32	DS4-X25

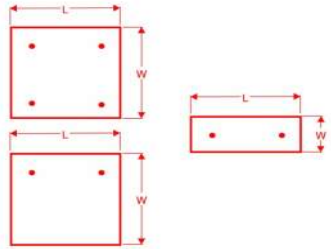
Envelope Slab Soil Pressures (By Combination) BEARING PRESSURE CHECKS

	Label	Max UC	Max LC	Soil Pressure[psf]	Allowable Bearing[psf]	Point
1	S1	0.536	86	803.682	1500	N8
2	S2	0.536	86	803.682	1500	N10

CROSSOVER STAIRS - FOOTINGS SIZES

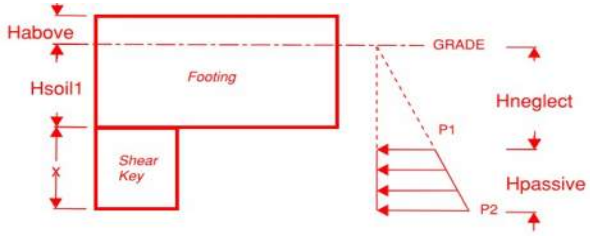
Slab #	# of Supports	Length(ft)	Width (ft)	Thickness (in)	Bar Size	Spacing	Top Cover (in)	Bot Cover (in)	12" Shear Key?	18" Shear Key?	Comments
S1	2	5.00	5.00	24	5	12	2	3	YES	NO	
S2	2	5.00	5.00	24	5	12	2	3	YES	NO	

*for the length column, insert dimension that would be used to resist sliding (length of shear key)



SHEAR KEY DESIGN

Inputs		*Units*	
Kp =	2.27		(Passive Pressure Coefficient)
γ ,moist =	110	PCF	(Moist Soil Density)
Hneglect =	18	IN	(Neglect the Top 18" of Soil)
Habove =	See Table	IN	(Minimum Height of Footing Above Grade)
Hsoil1 =	See Table	IN	(Height of Footing Below grade) Thickness - Habove
P1 =	See Table	PSF	(Soil Pressure at Top of Shear Key) Kp*Ymoist*Hsoil1
Hpassive =	See Table	IN	(Height of soil on shearkey counting towards passive resistance)
P2 =	See Table	PSF	(Soil Pressure at Top of Shear Key) Kp*Ymoist*(Shear Key Height+Hsoil1)
Vn =	See Table	KIP	(Passive Resistance Provided by Shear Key) Length of Shear Key*(Shear Key Height*((P1+P2)/2))



Slab #	Habove (in)	Hsoil1 (in)	P1 (psf)	Hpassive (in) - No Key	Hpassive (in) - 12"	Hpassive (in) - 18"	P2 (psf) - No Key	P2 (psf) - 12"	P2 (psf) - 18"	Vn (Kip) - No Key	Vn (Kip) - 12"	Vn (Kip) - 18"
S1	4	20	375.00	2	14	20	416.67	666.67	791.67	0.33	3.04	4.86
S2	4	20	375.00	2	14	20	416.67	666.67	791.67	0.33	3.04	4.86

*Length of shear key assumed to be equal to length of footing

*these values are used in the Sliding Shear Key Checks

*Make sure Slab #'s are in the same order as top table

OVERTURNING

LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz	SF Design	Check	Additional Resistance Needed X-direction	Additional Resistance Needed Z-direction
82	S1	0	0	34.044	0	34.51	9.99+	9.99+	1.5	Good		
82	S2	0	0	34.975	0	34.51	9.99+	9.99+	1.5	Good		
83	S1	0	0	35.538	0	36.347	9.99+	9.99+	1.5	Good		
83	S2	0	0	37.156	0	36.347	9.99+	9.99+	1.5	Good		
85	S1	0	0	42.155	0	44.025	9.99+	9.99+	1.5	Good		
85	S2	0	0	45.895	0	44.025	9.99+	9.99+	1.5	Good		
86	S1	0	0	43.649	0	45.862	9.99+	9.99+	1.5	Good		
86	S2	0	0	48.076	0	45.862	9.99+	9.99+	1.5	Good		
88	S1	0	0	34.044	0	34.51	9.99+	9.99+	1.5	Good		
88	S2	0	0	34.975	0	34.51	9.99+	9.99+	1.5	Good		
89	S1	0	0	34.936	0	35.556	9.99+	9.99+	1.5	Good		
89	S2	0	0	36.176	0	35.556	9.99+	9.99+	1.5	Good		
90	S1	0	0	34.044	0	34.51	9.99+	9.99+	1.5	Good		
90	S2	0	0	34.975	0	34.51	9.99+	9.99+	1.5	Good		
91	S1	0	0	36.43	0.572	37.394	9.99+	9.99+	1.5	Good		
91	S2	0	0	38.357	0.424	37.394	9.99+	9.99+	1.5	Good		
92	S1	0	0.065	38.357	0.022	37.394	9.99+	9.99+	1.5	Good		
92	S2	0	0.021	36.43	0	37.415	9.99+	9.99+	1.5	Good		
93	S1	0	0	36.43	0.572	37.394	9.99+	9.99+	1.5	Good		
93	S2	0	0	38.357	0.424	37.394	9.99+	9.99+	1.5	Good		
94	S1	0	0.021	36.43	0	37.415	9.99+	9.99+	1.5	Good		
94	S2	0	0.065	38.357	0.022	37.394	9.99+	9.99+	1.5	Good		
96	S1	0	0	40.127	0	41.646	9.99+	9.99+	1.5	Good		
96	S2	0	0	43.165	0	41.646	9.99+	9.99+	1.5	Good		
97	S1	0	0	40.796	0	42.431	9.99+	9.99+	1.5	Good		
97	S2	0	0	44.066	0	42.431	9.99+	9.99+	1.5	Good		
98	S1	0	0	40.127	0	41.646	9.99+	9.99+	1.5	Good		
98	S2	0	0	43.165	0	41.646	9.99+	9.99+	1.5	Good		
101	S1	0	0	34.044	6.359	34.51	9.99+	5.427	1.5	Good		
101	S2	0	0	34.975	4.715	34.51	9.99+	7.319	1.5	Good		
102	S1	0	0.719	34.975	0.243	34.51	9.99+	9.99+	1.5	Good		
102	S2	0	0.234	34.044	0	34.752	9.99+	9.99+	1.5	Good		
103	S1	0	0	34.044	6.359	34.51	9.99+	5.427	1.5	Good		
103	S2	0	0	34.975	4.715	34.51	9.99+	7.319	1.5	Good		
104	S1	0	0.234	34.044	0	34.752	9.99+	9.99+	1.5	Good		
104	S2	0	0.719	34.975	0.243	34.51	9.99+	9.99+	1.5	Good		
106	S1	0	0	40.127	4.77	41.646	9.99+	8.732	1.5	Good		
106	S2	0	0	43.165	3.536	41.646	9.99+	9.99+	1.5	Good		
107	S1	0	0.54	43.165	0.182	41.646	9.99+	9.99+	1.5	Good		
107	S2	0	0.175	40.127	0	41.828	9.99+	9.99+	1.5	Good		
108	S1	0	0	40.127	4.77	41.646	9.99+	8.732	1.5	Good		
108	S2	0	0	43.165	3.536	41.646	9.99+	9.99+	1.5	Good		
109	S1	0	0.175	40.127	0	41.828	9.99+	9.99+	1.5	Good		
109	S2	0	0.54	43.165	0.182	41.646	9.99+	9.99+	1.5	Good		
110	S1	0	0	40.796	4.77	42.431	9.99+	8.896	1.5	Good		
110	S2	0	0	44.066	3.536	42.431	9.99+	9.99+	1.5	Good		
111	S1	0	0.54	44.066	0.182	42.431	9.99+	9.99+	1.5	Good		

111	S2	0	0.175	40.796	0	42.613	9.99+	9.99+	1.5	Good
112	S1	0	0	40.796	4.77	42.431	9.99+	8.896	1.5	Good
112	S2	0	0	44.066	3.536	42.431	9.99+	9.99+	1.5	Good
113	S1	0	0.175	40.796	0	42.613	9.99+	9.99+	1.5	Good
113	S2	0	0.54	44.066	0.182	42.431	9.99+	9.99+	1.5	Good
114	S1	0	0	40.127	4.77	41.646	9.99+	8.732	1.5	Good
114	S2	0	0	43.165	3.536	41.646	9.99+	9.99+	1.5	Good
115	S1	0	0.54	43.165	0.182	41.646	9.99+	9.99+	1.5	Good
115	S2	0	0.175	40.127	0	41.828	9.99+	9.99+	1.5	Good
116	S1	0	0	40.127	4.77	41.646	9.99+	8.732	1.5	Good
116	S2	0	0	43.165	3.536	41.646	9.99+	9.99+	1.5	Good
117	S1	0	0.175	40.127	0	41.828	9.99+	9.99+	1.5	Good
117	S2	0	0.54	43.165	0.182	41.646	9.99+	9.99+	1.5	Good
119	S1	0	0	20.426	6.359	20.706	9.99+	3.256	1.5	Good
119	S2	0	0	20.985	4.715	20.706	9.99+	4.392	1.5	Good
120	S1	0	0.719	20.985	0.243	20.706	9.99+	9.99+	1.5	Good
120	S2	0	0.234	20.426	0	20.949	9.99+	9.99+	1.5	Good
121	S1	0	0	20.426	6.359	20.706	9.99+	3.256	1.5	Good
121	S2	0	0	20.985	4.715	20.706	9.99+	4.392	1.5	Good
122	S1	0	0.234	20.426	0	20.949	9.99+	9.99+	1.5	Good
122	S2	0	0.719	20.985	0.243	20.706	9.99+	9.99+	1.5	Good
123	S1	0	0	21.92	0.572	22.543	9.99+	9.99+	1.5	Good
123	S2	0	0	23.166	0.424	22.543	9.99+	9.99+	1.5	Good
124	S1	0	0.065	23.166	0.022	22.543	9.99+	9.99+	1.5	Good
124	S2	0	0.021	21.92	0	22.565	9.99+	9.99+	1.5	Good
125	S1	0	0	21.92	0.572	22.543	9.99+	9.99+	1.5	Good
125	S2	0	0	23.166	0.424	22.543	9.99+	9.99+	1.5	Good
126	S1	0	0.021	21.92	0	22.565	9.99+	9.99+	1.5	Good
126	S2	0	0.065	23.166	0.022	22.543	9.99+	9.99+	1.5	Good
128	S1	0	0	36.856	3.473	37.36	9.99+	9.99+	1.1	Good
128	S2	0	0	37.864	2.572	37.36	9.99+	9.99+	1.1	Good
129	S1	0	1.275	37.864	0.444	37.36	9.99+	9.99+	1.1	Good
129	S2	0	0.386	36.856	0	37.805	9.99+	9.99+	1.1	Good
130	S1	0	0	36.856	3.473	37.36	9.99+	9.99+	1.1	Good
130	S2	0	0	37.864	2.572	37.36	9.99+	9.99+	1.1	Good
131	S1	0	0.386	36.856	0	37.805	9.99+	9.99+	1.1	Good
131	S2	0	1.275	37.864	0.444	37.36	9.99+	9.99+	1.1	Good
133	S1	0	0	42.906	2.605	44.569	9.99+	9.99+	1.1	Good
133	S2	0	0	46.233	1.929	44.569	9.99+	9.99+	1.1	Good
134	S1	0	0.956	46.233	0.333	44.569	9.99+	9.99+	1.1	Good
134	S2	0	0.289	42.906	0	44.902	9.99+	9.99+	1.1	Good
135	S1	0	0	42.906	2.605	44.569	9.99+	9.99+	1.1	Good
135	S2	0	0	46.233	1.929	44.569	9.99+	9.99+	1.1	Good
136	S1	0	0.289	42.906	0	44.902	9.99+	9.99+	1.1	Good
136	S2	0	0.956	46.233	0.333	44.569	9.99+	9.99+	1.1	Good
138	S1	0	0	17.614	3.473	17.855	9.99+	5.141	1.1	Good
138	S2	0	0	18.096	2.572	17.855	9.99+	6.941	1.1	Good
139	S1	0	1.275	18.096	0.444	17.855	9.99+	9.99+	1.1	Good
139	S2	0	0.386	17.614	0	18.3	9.99+	9.99+	1.1	Good

140	S1	0	0	17.614	3.473	17.855	9.99+	5.141	1.1	Good	
140	S2	0	0	18.096	2.572	17.855	9.99+	6.941	1.1	Good	
141	S1	0	0.386	17.614	0	18.3	9.99+	9.99+	1.1	Good	
141	S2	0	1.275	18.096	0.444	17.855	9.99+	9.99+	1.1	Good	
144*	S1	0	0	36.856	3.473	37.36	9.99+	9.99+	1.1	Good	
144*	S2	0	0	37.864	2.572	37.36	9.99+	9.99+	1.1	Good	
145*	S1	0	1.275	37.864	0.444	37.36	9.99+	9.99+	1.1	Good	
145*	S2	0	0.386	36.856	0	37.805	9.99+	9.99+	1.1	Good	
146*	S1	0	0	36.856	3.473	37.36	9.99+	9.99+	1.1	Good	
146*	S2	0	0	37.864	2.572	37.36	9.99+	9.99+	1.1	Good	
147*	S1	0	0.386	36.856	0	37.805	9.99+	9.99+	1.1	Good	
147*	S2	0	1.275	37.864	0.444	37.36	9.99+	9.99+	1.1	Good	
149*	S1	0	0	42.906	2.605	44.569	9.99+	9.99+	1.1	Good	
149*	S2	0	0	46.233	1.929	44.569	9.99+	9.99+	1.1	Good	
150*	S1	0	0.956	46.233	0.333	44.569	9.99+	9.99+	1.1	Good	
150*	S2	0	0.289	42.906	0	44.902	9.99+	9.99+	1.1	Good	
151*	S1	0	0	42.906	2.605	44.569	9.99+	9.99+	1.1	Good	
151*	S2	0	0	46.233	1.929	44.569	9.99+	9.99+	1.1	Good	
152*	S1	0	0.289	42.906	0	44.902	9.99+	9.99+	1.1	Good	
152*	S2	0	0.956	46.233	0.333	44.569	9.99+	9.99+	1.1	Good	
154*	S1	0	0	17.614	3.473	17.855	9.99+	5.141	1.1	Good	
154*	S2	0	0	18.096	2.572	17.855	9.99+	6.941	1.1	Good	
155*	S1	0	1.275	18.096	0.444	17.855	9.99+	9.99+	1.1	Good	
155*	S2	0	0.386	17.614	0	18.3	9.99+	9.99+	1.1	Good	
156*	S1	0	0	17.614	3.473	17.855	9.99+	5.141	1.1	Good	
156*	S2	0	0	18.096	2.572	17.855	9.99+	6.941	1.1	Good	
157*	S1	0	0.386	17.614	0	18.3	9.99+	9.99+	1.1	Good	
157*	S2	0	1.275	18.096	0.444	17.855	9.99+	9.99+	1.1	Good	

SLIDING

LC	Slab	Angle[deg]	Va-xx[k]	Vr-xx[k]	Va-zz[k]	Vr-zz[k]	SR-xx	SR-zz	SF Design	Check	Additional Resistance Needed X-direction	Additional Resistance Needed Z-direction	No Shear Key Passive Resistance X-direction	No Shear Key Passive Resistance Z-direction	12" Shear Key Passive Resistance X-direction	12" Shear Key Passive Resistance Z-direction	12" Shear Key Needed	18" Shear Key Passive Resistance X-direction	18" Shear Key Passive Resistance Z-direction	18" Shear Key Needed
82	S1	0	0	4.141	1.19	4.141	9.99+	3.481	1.5	OKAY										
82	S2	0	0	4.141	1.19	4.141	9.99+	3.481	1.5	OKAY										
83	S1	0	0	4.362	1.913	4.362	9.99+	2.28	1.5	OKAY										
83	S2	0	0	4.362	1.913	4.362	9.99+	2.28	1.5	OKAY										
85	S1	0	0	5.283	4.747	5.283	9.99+	1.113	1.5	NO GOOD		1.8375		NO GOOD		OKAY	S1			
85	S2	0	0	5.283	4.747	5.283	9.99+	1.113	1.5	NO GOOD		1.8375		NO GOOD		OKAY	S2			
86	S1	0	0	5.503	5.47	5.503	9.99+	1.006	1.5	NO GOOD		2.702		NO GOOD		OKAY	S1			
86	S2	0	0	5.503	5.47	5.503	9.99+	1.006	1.5	NO GOOD		2.702		NO GOOD		OKAY	S2			
88	S1	0	0	4.141	1.19	4.141	9.99+	3.481	1.5	OKAY										
88	S2	0	0	4.141	1.19	4.141	9.99+	3.481	1.5	OKAY										
89	S1	0	0	4.267	1.581	4.267	9.99+	2.699	1.5	OKAY										
89	S2	0	0	4.267	1.581	4.267	9.99+	2.699	1.5	OKAY										
90	S1	0	0	4.141	1.19	4.141	9.99+	3.481	1.5	OKAY										
90	S2	0	0	4.141	1.19	4.141	9.99+	3.481	1.5	OKAY										
91	S1	0	0.098	4.487	2.304	4.487	9.99+	1.948	1.5	OKAY										
91	S2	0	0.082	4.487	2.304	4.487	9.99+	1.948	1.5	OKAY										
92	S1	0	0	4.485	2.276	4.485	9.99+	1.97	1.5	OKAY										
92	S2	0	0	4.49	2.332	4.49	9.99+	1.925	1.5	OKAY										
93	S1	0	0.098	4.487	2.304	4.487	9.99+	1.948	1.5	OKAY										
93	S2	0	0.082	4.487	2.304	4.487	9.99+	1.948	1.5	OKAY										
94	S1	0	0	4.49	2.332	4.49	9.99+	1.925	1.5	OKAY										
94	S2	0	0	4.485	2.276	4.485	9.99+	1.97	1.5	OKAY										
96	S1	0	0	4.998	3.857	4.998	9.99+	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S1			
96	S2	0	0	4.998	3.857	4.998	9.99+	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S2			
97	S1	0	0	5.092	4.151	5.092	9.99+	1.227	1.5	NO GOOD		1.1345		NO GOOD		OKAY	S1			
97	S2	0	0	5.092	4.151	5.092	9.99+	1.227	1.5	NO GOOD		1.1345		NO GOOD		OKAY	S2			
98	S1	0	0	4.998	3.857	4.998	9.99+	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S1			
98	S2	0	0	4.998	3.857	4.998	9.99+	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S2			
101	S1	0	1.094	4.141	1.19	4.141	3.787	3.481	1.5	OKAY										
101	S2	0	0.916	4.141	1.19	4.141	4.52	3.481	1.5	OKAY										
102	S1	0	0	4.112	0.878	4.112	9.99+	4.681	1.5	OKAY										
102	S2	0	0	4.17	1.501	4.17	9.99+	2.779	1.5	OKAY										
103	S1	0	1.094	4.141	1.19	4.141	3.787	3.481	1.5	OKAY										
103	S2	0	0.916	4.141	1.19	4.141	4.52	3.481	1.5	OKAY										
104	S1	0	0	4.17	1.501	4.17	9.99+	2.779	1.5	OKAY										
104	S2	0	0	4.112	0.878	4.112	9.99+	4.681	1.5	OKAY										
106	S1	0	0.82	4.998	3.857	4.998	6.093	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S1			
106	S2	0	0.687	4.998	3.857	4.998	7.273	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S2			
107	S1	0	0	4.976	3.624	4.976	9.99+	1.373	1.5	NO GOOD		0.46		NO GOOD		OKAY	S1			
107	S2	0	0	5.019	4.091	5.019	9.99+	1.227	1.5	NO GOOD		1.1175		NO GOOD		OKAY	S2			
108	S1	0	0.82	4.998	3.857	4.998	6.093	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S1			
108	S2	0	0.687	4.998	3.857	4.998	7.273	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S2			
109	S1	0	0	5.019	4.091	5.019	9.99+	1.227	1.5	NO GOOD		1.1175		NO GOOD		OKAY	S1			
109	S2	0	0	4.976	3.624	4.976	9.99+	1.373	1.5	NO GOOD		0.46		NO GOOD		OKAY	S2			
110	S1	0	0.82	5.092	4.151	5.092	6.208	1.227	1.5	NO GOOD		1.1345		NO GOOD		OKAY	S1			
110	S2	0	0.687	5.092	4.151	5.092	7.41	1.227	1.5	NO GOOD		1.1345		NO GOOD		OKAY	S2			
111	S1	0	0	5.07	3.917	5.07	9.99+	1.294	1.5	NO GOOD		0.8055		NO GOOD		OKAY	S1			
111	S2	0	0	5.114	4.384	5.114	9.99+	1.166	1.5	NO GOOD		1.462		NO GOOD		OKAY	S2			
112	S1	0	0.82	5.092	4.151	5.092	6.208	1.227	1.5	NO GOOD		1.1345		NO GOOD		OKAY	S1			
112	S2	0	0.687	5.092	4.151	5.092	7.41	1.227	1.5	NO GOOD		1.1345		NO GOOD		OKAY	S2			
113	S1	0	0	5.114	4.384	5.114	9.99+	1.166	1.5	NO GOOD		1.462		NO GOOD		OKAY	S1			
113	S2	0	0	5.07	3.917	5.07	9.99+	1.294	1.5	NO GOOD		0.8055		NO GOOD		OKAY	S2			
114	S1	0	0.82	4.998	3.857	4.998	6.093	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S1			
114	S2	0	0.687	4.998	3.857	4.998	7.273	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S2			
115	S1	0	0	4.976	3.624	4.976	9.99+	1.373	1.5	NO GOOD		0.46		NO GOOD		OKAY	S1			
115	S2	0	0	5.019	4.091	5.019	9.99+	1.227	1.5	NO GOOD		1.1175		NO GOOD		OKAY	S2			
116	S1	0	0.82	4.998	3.857	4.998	6.093	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S1			
116	S2	0	0.687	4.998	3.857	4.998	7.273	1.296	1.5	NO GOOD		0.7875		NO GOOD		OKAY	S2			
117	S1	0	0	5.019	4.091	5.019	9.99+	1.227	1.5	NO GOOD		1.1175		NO GOOD		OKAY	S1			
117	S2	0	0	4.976	3.624	4.976	9.99+	1.373	1.5	NO GOOD		0.46		NO GOOD		OKAY	S2			
119	S1	0	1.094	2.485	0.714	2.485	2.272	3.481	1.5	OKAY										
119	S2	0	0.916	2.485	0.714	2.485	2.712	3.481	1.5	OKAY										
120	S1	0	0	2.456	0.403	2.456	9.99+	6.1	1.5	OKAY										
120	S2	0	0	2.514	1.025	2.514	9.99+	2.453	1.5	OKAY										
121	S1	0	1.094	2.485	0.714	2.485	2.272	3.481	1.5	OKAY										
121	S2	0	0.916	2.485	0.714	2.485	2.712	3.481	1.5	OKAY										
122	S1	0	0	2.514	1.025	2.514	9.99+	2.453	1.5	OKAY										
122	S2	0	0	2.456	0.403	2.456	9.99+	6.1	1.5	OKAY										
123	S1	0	0.098	2.705	1.437	2.705	9.99+	1.883	1.5	OKAY										
123	S2	0	0.082	2.705	1.437	2.705	9.99+	1.883	1.5	OKAY										
124	S1	0	0	2.703	1.409	2.703	9.99+	1.918	1.5	OKAY										
124	S2	0	0	2.708	1.465	2.708	9.99+	1.849	1.5	OKAY										
125	S1	0	0.098	2.705	1.437	2.705	9.99+	1.883	1.5	OKAY										
125	S2	0	0.082	2.705	1.437	2.705	9.99+	1.883	1.5	OKAY										
126	S1	0	0	2.708	1.465	2.708	9.99+	1.849	1.5	OKAY										
126	S2	0	0	2.703	1.409	2.703	9.99+	1.918	1.5	OKAY										
128	S1	0	0.597	4.483	1.288	4.483	7.51	3.481	1.1	OKAY										

128	S2	0	0.5	4.483	1.288	4.483	8.97	3.481	1.1	OKAY
129	S1	0	0	4.43	0.739	4.43	9.99+	5.991	1.1	OKAY
129	S2	0	0	4.537	1.836	4.537	9.99+	2.471	1.1	OKAY
130	S1	0	0.597	4.483	1.288	4.483	7.51	3.481	1.1	OKAY
130	S2	0	0.5	4.483	1.288	4.483	8.97	3.481	1.1	OKAY
131	S1	0	0	4.537	1.836	4.537	9.99+	2.471	1.1	OKAY
131	S2	0	0	4.43	0.739	4.43	9.99+	5.991	1.1	OKAY
133	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
133	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
134	S1	0	0	5.308	3.813	5.308	9.99+	1.392	1.1	OKAY
134	S2	0	0	5.388	4.636	5.388	9.99+	1.162	1.1	OKAY
135	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
135	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
136	S1	0	0	5.388	4.636	5.388	9.99+	1.162	1.1	OKAY
136	S2	0	0	5.308	3.813	5.308	9.99+	1.392	1.1	OKAY
138	S1	0	0.597	2.143	0.615	2.143	3.589	3.481	1.1	OKAY
138	S2	0	0.5	2.143	0.615	2.143	4.287	3.481	1.1	OKAY
139	S1	0	0	2.089	0.067	2.089	9.99+	9.99+	1.1	OKAY
139	S2	0	0	2.196	1.164	2.196	9.99+	1.887	1.1	OKAY
140	S1	0	0.597	2.143	0.615	2.143	3.589	3.481	1.1	OKAY
140	S2	0	0.5	2.143	0.615	2.143	4.287	3.481	1.1	OKAY
141	S1	0	0	2.196	1.164	2.196	9.99+	1.887	1.1	OKAY
141	S2	0	0	2.089	0.067	2.089	9.99+	9.99+	1.1	OKAY
144*	S1	0	0.597	4.483	1.288	4.483	7.51	3.481	1.1	OKAY
144*	S2	0	0.5	4.483	1.288	4.483	8.97	3.481	1.1	OKAY
145*	S1	0	0	4.43	0.739	4.43	9.99+	5.991	1.1	OKAY
145*	S2	0	0	4.537	1.836	4.537	9.99+	2.471	1.1	OKAY
146*	S1	0	0.597	4.483	1.288	4.483	7.51	3.481	1.1	OKAY
146*	S2	0	0.5	4.483	1.288	4.483	8.97	3.481	1.1	OKAY
147*	S1	0	0	4.537	1.836	4.537	9.99+	2.471	1.1	OKAY
147*	S2	0	0	4.43	0.739	4.43	9.99+	5.991	1.1	OKAY
149*	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
149*	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
150*	S1	0	0	5.308	3.813	5.308	9.99+	1.392	1.1	OKAY
150*	S2	0	0	5.388	4.636	5.388	9.99+	1.162	1.1	OKAY
151*	S1	0	0.448	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
151*	S2	0	0.375	5.348	4.224	5.348	9.99+	1.266	1.1	OKAY
152*	S1	0	0	5.388	4.636	5.388	9.99+	1.162	1.1	OKAY
152*	S2	0	0	5.308	3.813	5.308	9.99+	1.392	1.1	OKAY
154*	S1	0	0.597	2.143	0.615	2.143	3.589	3.481	1.1	OKAY
154*	S2	0	0.5	2.143	0.615	2.143	4.287	3.481	1.1	OKAY
155*	S1	0	0	2.089	0.067	2.089	9.99+	9.99+	1.1	OKAY
155*	S2	0	0	2.196	1.164	2.196	9.99+	1.887	1.1	OKAY
156*	S1	0	0.597	2.143	0.615	2.143	3.589	3.481	1.1	OKAY
156*	S2	0	0.5	2.143	0.615	2.143	4.287	3.481	1.1	OKAY
157*	S1	0	0	2.196	1.164	2.196	9.99+	1.887	1.1	OKAY
157*	S2	0	0	2.089	0.067	2.089	9.99+	9.99+	1.1	OKAY

Company:	Burns & McDonnell	Page:	1
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Stair Stringer Anchor Design_2 Anchors	Date:	11/29/2023
Fastening point:			

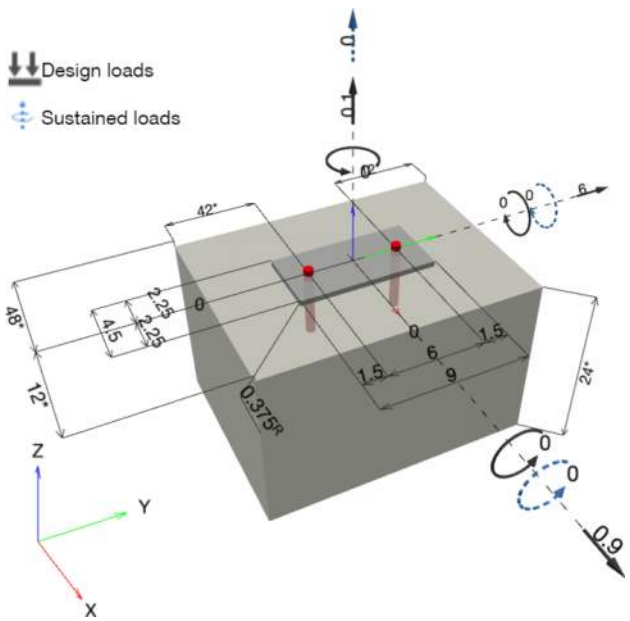
Specifier's comments:

1 Input data

Anchor type and diameter:	**HIT-HY 200 V3 + HAS-R 304/316 SS 5/8**
Item number:	2045007 HAS-R 316 SS 5/8"x7 5/8" (element) / 2334276 HIT-HY 200-R V3 (adhesive)
Effective embedment depth:	$h_{ef,act}$ = 4.000 in. ($h_{ef,limit}$ = - in.)
Material:	ASTM F 593
Evaluation Service Report:	ESR-4868
Issued I Valid:	11/1/2022 | 11/1/2024
Proof:	Design Method ACI 318-19 / Chem
Stand-off installation:	e_b = 0.000 in. (no stand-off); t = 0.375 in.
Anchor plate[R]:	l_x x l_y x t = 4.500 in. x 9.000 in. x 0.375 in.; (Recommended plate thickness: not calculated)
Profile:	no profile
Base material:	cracked concrete, Custom, f_c' = 4,500 psi; h = 24.000 in., Temp. short/long: 32/32 °F
Installation:	**hammer drilled hole, Installation condition: Dry**
Reinforcement:	tension: not present, shear: not present; no supplemental splitting reinforcement present edge reinforcement: none or < No. 4 bar

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, in.kip]



Input data and results must be checked for conformity with the existing conditions and for plausibility!
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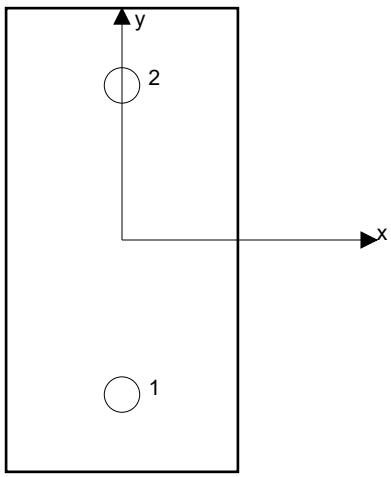
Company:	Burns & McDonnell	Page:	2
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Stair Stringer Anchor Design_2 Anchors	Date:	11/29/2023
Fastening point:			

1.1 Design results

Case	Description	Forces [kip] / Moments [in.kip]	Seismic	Max. Util. Anchor [%]
1	Envelope	N = 0.100; V_x = 0.900; V_y = 6.000; M_x = 0.000000; M_y = 0.000000; M_z = 0.000000;	no	52

2 Load case/Resulting anchor forces



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	0.050	3.034	0.450	3.000
2	0.050	3.034	0.450	3.000

max. concrete compressive strain: - [‰]
max. concrete compressive stress: - [psi]
resulting tension force in (x/y)=(0.000/0.000): 0.000 [kip]
resulting compression force in (x/y)=(0.000/0.000): 0.000 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	0.050	14.690	1	OK
Bond Strength**	0.100	8.422	2	OK
Sustained Tension Load Bond Strength*	N/A	N/A	N/A	N/A
Concrete Breakout Failure**	0.100	8.895	2	OK

* highest loaded anchor **anchor group (anchors in tension)

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Design:	Stair Stringer Anchor Design_2 Anchors	Date:	11/29/2023
Fastening point:			

3.1 Steel Strength

N_{sa} = ESR value refer to ICC-ES ESR-4868
$\phi\ N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.23	100,000

Calculations

N_{sa} [kip]
22.600

Results

N_{sa} [kip]	ϕ_{steel}	$\phi\ N_{sa}$ [kip]	N_{ua} [kip]
22.600	0.650	14.690	0.050

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Stair Stringer Anchor Design_2 Anchors	Date:	11/29/2023
Fastening point:			

3.2 Bond Strength

$N_{ag} = \left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na}\ \psi_{ec2,Na}\ \psi_{ed,Na}\ \psi_{cp,Na}\ N_{ba}$ — ACI 318-19 Eq. (17.6.5.1b)

$\phi\ N_{ag} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2\ c_{Na})^2$ — ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10\ d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ — ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3 \left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ — ACI 318-19 Eq. (17.6.5.2.1)

Variables

$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\alpha_{overhead}$	$\tau_{k,c}$ [psi]
2,354	0.625	4.000	12.000	1.000	1,241

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.000	0.000	6.432	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
9.102	440.65	331.42	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
1.000	1.000	1.000	9.745

Results

N_{ag} [kip]	ϕ_{bond}	$\phi\ N_{ag}$ [kip]	N_{ua} [kip]
12.957	0.650	8.422	0.100

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Stair Stringer Anchor Design_2 Anchors	Date:	11/29/2023
Fastening point:			

3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N}\ \psi_{ed,N}\ \psi_{c,N}\ \psi_{cp,N}\ N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi\ N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9\ h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2\ e'_N}{3\ h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3\left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c\ \lambda_a\ \sqrt{f'_c}\ h_{ef}^{1.5}$ — ACI 318-19 Eq. (17.6.2.2.1)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
4.000	0.000	0.000	12.000	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
6.432	17	1.000	4,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
216.00	144.00	1.000	1.000	1.000	1.000	9.123

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi\ N_{cbg}$ [kip]	N_{ua} [kip]
13.685	0.650	8.895	0.100

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Fastening point:			

4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	3.034	8.136	38	OK
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength (Bond Strength controls)**	6.067	18.140	34	OK
Concrete edge failure in direction y+**	6.067	11.744	52	OK

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

V_{sa} = ESR value refer to ICC-ES ESR-4868
ϕ $V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.23	100,000

Calculations

V_{sa} [kip]
13.560

Results

V_{sa} [kip]	ϕ_{steel}	ϕ V_{sa} [kip]	V_{ua} [kip]
13.560	0.600	8.136	3.034

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

4.2 Pryout Strength (Bond Strength controls)

$V_{cpg} = k_{cp}\left[\left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na}\ \psi_{ec2,Na}\ \psi_{ed,Na}\ \psi_{cp,Na}\ N_{ba}\right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi\ V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2\ c_{Na})^2$ ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10\ d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3\left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = MAX\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ ACI 318-19 Eq. (17.6.5.2.1)

Variables

k_{cp}	$\alpha_{overhead}$	$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\tau_{k,c}$ [psi]
2	1.000	2,354	0.625	4.000	12.000	1,241

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.000	0.000	6.432	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
9.102	440.65	331.42	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
1.000	1.000	1.000	9.745

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi\ V_{cpg}$ [kip]	V_{ua} [kip]
25.915	0.700	18.140	6.067

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Fastening point:			

4.3 Concrete edge failure in direction y+

$V_{cb} = \left(\frac{A_{Vc}}{A_{Vc0}}\right) \psi_{ed,V} \psi_{c,V} \psi_{h,V} \psi_{parallel,V} V_b$ — ACI 318-19 Eq. (17.7.2.1a)

$\phi V_{cb} \geq V_{ua}$ — ACI 318-19 Table 17.5.2

A_{Vc} see ACI 318-19, Section 17.7.2.1, Fig. R 17.7.2.1(b)

$A_{Vc0} = 4.5 c_{a1}^2$ — ACI 318-19 Eq. (17.7.2.1.3)

$\psi_{ed,V} = 0.7 + 0.3\left(\frac{c_{a2}}{1.5c_{a1}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.7.2.4.1b)

$\psi_{h,V} = \sqrt{\frac{1.5c_{a1}}{h_a}} \geq 1.0$ — ACI 318-19 Eq. (17.7.2.6.1)

$V_b = \left(7\left(\frac{l_e}{d_a}\right)^{0.2} \sqrt{d_a}\right) \lambda_a \sqrt{f'_c} c_{a1}^{1.5}$ — ACI 318-19 Eq. (17.7.2.2.1a)

Variables

c_{a1} [in.]	c_{a2} [in.]	$\psi_{c,V}$	h_a [in.]	l_e [in.]
12.000	12.000	1.000	24.000	4.000

λ_a	d_a [in.]	f'_c [psi]	$\psi_{parallel,V}$
1.000	0.625	4,500	1.000

Calculations

A_{Vc} [in.^{2}]	A_{Vc0} [in.^{2}]	$\psi_{ed,V}$	$\psi_{h,V}$	V_b [kip]
540.00	648.00	0.900	1.000	22.369

Results

V_{cb} [kip]	$\phi_{concrete}$	ϕV_{cb} [kip]	V_{ua} [kip]
16.777	0.700	11.744	6.067

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.012	0.517	5/3	34	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

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Fastening point:			

6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- Design Strengths of adhesive anchor systems are influenced by the cleaning method. Refer to the INSTRUCTIONS FOR USE given in the Evaluation Service Report for cleaning and installation instructions.
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- Installation of Hilti adhesive anchor systems shall be performed by personnel trained to install Hilti adhesive anchors. Reference ACI 318-19, Section 26.7.

Fastening meets the design criteria!

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Fastening point:			

7 Installation data

Profile: no profile

Hole diameter in the fixture: d_f = 0.687 in.

Plate thickness (input): 0.375 in.

Recommended plate thickness: not calculated

Drilling method: Hammer drilled

Cleaning: Compressed air cleaning of the drilled hole according to instructions for use is required

Anchor type and diameter: HIT-HY 200 V3 + HAS-R 304/316 SS 5/8

Item number: 2045007 HAS-R 316 SS 5/8"x7 5/8" (element) / 2334276 HIT-HY 200-R V3 (adhesive)

Maximum installation torque: 0.720001 in.kip

Hole diameter in the base material: 0.750 in.

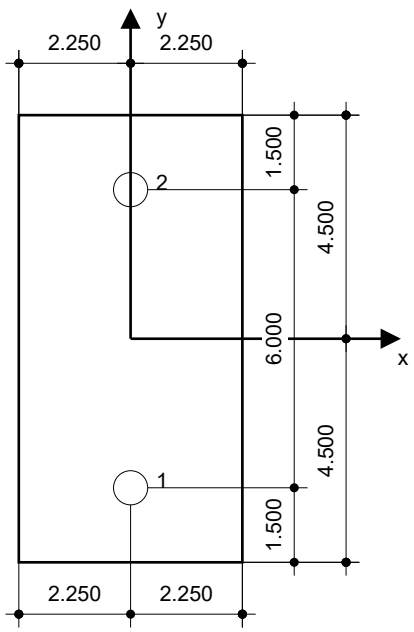
Hole depth in the base material: 4.000 in.

Minimum thickness of the base material: 5.500 in.

5/8 Hilti HAS Stainless steel threaded rod with Hilti HIT-HY 200 V3 Safe Set System

7.1 Recommended accessories

Drilling	Cleaning	Setting
• Suitable Rotary Hammer • Properly sized drill bit	• Compressed air with required accessories to blow from the bottom of the hole • Proper diameter wire brush	• Dispenser including cassette and mixer • Torque wrench



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	0.000	-3.000	48.000	12.000	42.000	18.000
2	0.000	3.000	48.000	12.000	48.000	12.000

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Fastening point:			

8 Remarks; Your Cooperation Duties

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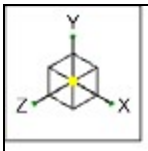
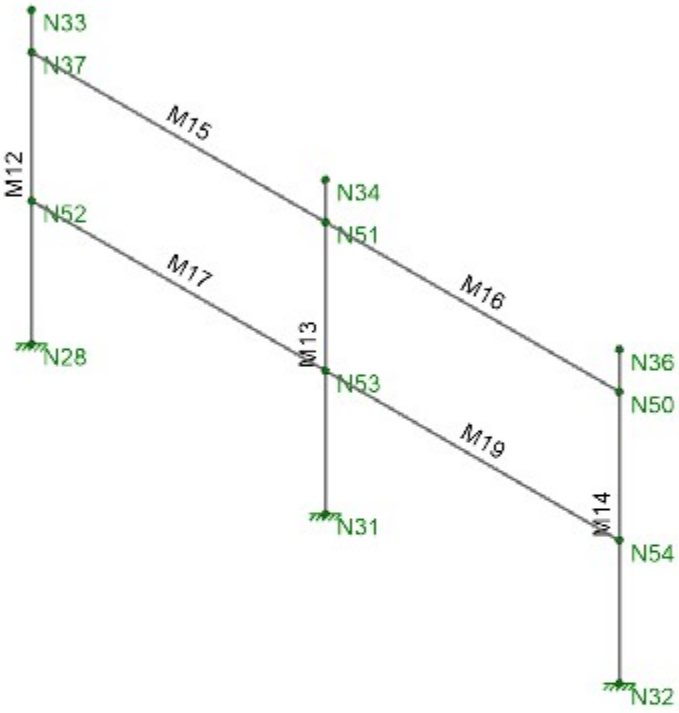
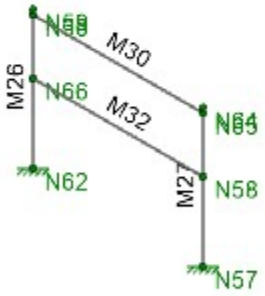
Electrical Rack







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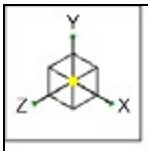
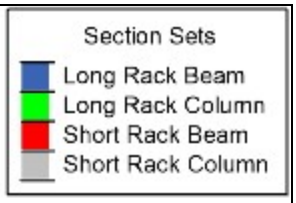
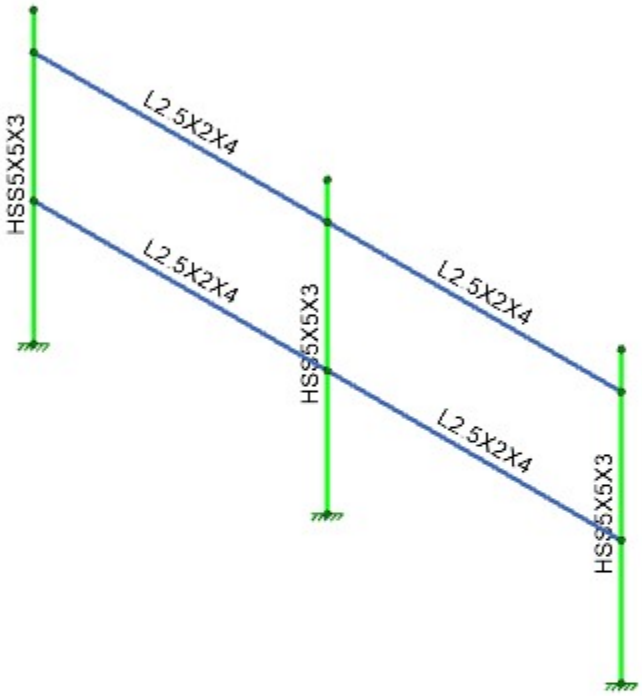
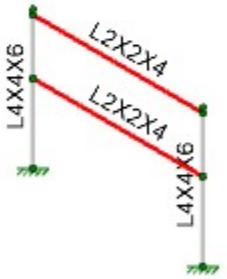
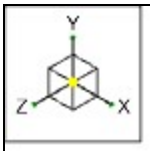


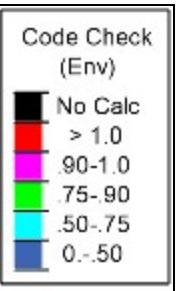


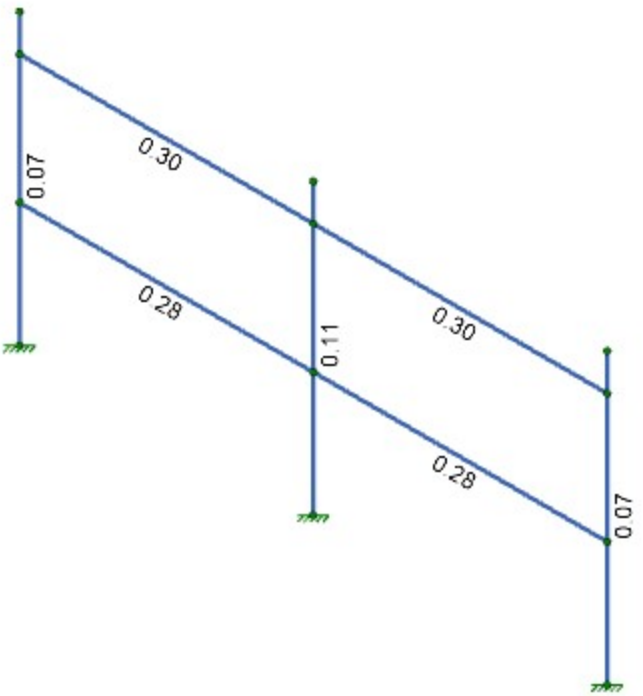


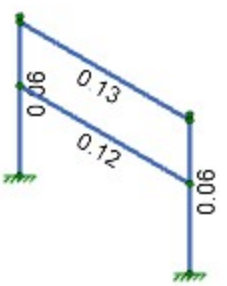


RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Electrical Racks - Long and Short	SK-4
	MCS		Dec 04, 2023 at 08:16 AM
	153929		Electrical Racks_PDX.r3d









Member Code Checks Displayed (Enveloped)

IRISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Electrical Racks - Long and Short	SK-5
	MCS		Dec 04, 2023 at 08:49 AM
	153929		Electrical Racks_PDX.r3d

Model Settings

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Nodal

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI S100-12: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-15 / SDPWS-15 ASD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	ACI 530-13: ASD
Aluminum	AA ADM1-15: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16

Model Settings (Continued)

Risk Category	IV
Drift Cat	Other
Base Elevation (ft)	0
Include the weight of the structure in base shear calcs	Yes
S_1 (g)	0.376
SD_1 (g)	0.739
SD_S (g)	0.59
T_L (sec)	16
T Z (sec)	
T X (sec)	
C_tZ	0.02
C_tX	0.02
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	1.5
R X	1
Ω_0Z	1
Ω_0X	1
C_dZ	1.5
C_dX	1
ρ Z	1
ρ X	1

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N28	0	0	500	
2	N31	64	0	500	
3	N32	128	0	500	
4	N33	0	63	500	
5	N34	64	63	500	
6	N36	128	63	500	
7	N37	0	55	500	
8	N50	128	55	500	
9	N51	64	55	500	
10	N52	0	27	500	
11	N53	64	27	500	
12	N54	128	27	500	
13	N56	200	29	500	
14	N57	237	0	500	
15	N58	237	17	500	
16	N59	200	30	500	
17	N62	200	0	500	
18	N64	237	30	500	
19	N65	237	29	500	
20	N66	200	17	500	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N28	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N31	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N32	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N57	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N62	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	A500 Gr.C Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Long Rack Beam	L2.5X2X4	Beam	Single Angle	A572 Gr.50	Typical	1.07	0.372	0.656	0.024
2	Long Rack Column	HSS5X5X3	Column	Tube	A1085	Typical	3.28	12.6	12.6	19.9
3	Short Rack Beam	L2X2X4	Beam	Single Angle	A572 Gr.50	Typical	0.944	0.346	0.346	0.021
4	Short Rack Column	L4X4X6	Column	Single Angle	A572 Gr.50	Typical	2.86	4.32	4.32	0.141
5	Tall Rack Column	W8X15	Column	Wide Flange	A992	Typical	4.44	3.41	48	0.137
6	Tall Rack Bracing	L3X3X4	VBrace	Single Angle	A572 Gr.50	Typical	1.44	1.23	1.23	0.031

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M12	N28	N33		Long Rack Column	Column	Tube	A1085	Typical
2	M13	N31	N34		Long Rack Column	Column	Tube	A1085	Typical
3	M14	N32	N36		Long Rack Column	Column	Tube	A1085	Typical
4	M15	N37	N51	180	Long Rack Beam	Beam	Single Angle	A572 Gr.50	Typical
5	M16	N51	N50	180	Long Rack Beam	Beam	Single Angle	A572 Gr.50	Typical
6	M17	N52	N53	180	Long Rack Beam	Beam	Single Angle	A572 Gr.50	Typical
7	M19	N53	N54	180	Long Rack Beam	Beam	Single Angle	A572 Gr.50	Typical
8	M26	N62	N59	270	Short Rack Column	Column	Single Angle	A572 Gr.50	Typical
9	M27	N57	N64	180	Short Rack Column	Column	Single Angle	A572 Gr.50	Typical
10	M30	N56	N65	180	Short Rack Beam	Beam	Single Angle	A572 Gr.50	Typical
11	M32	N66	N58	180	Short Rack Beam	Beam	Single Angle	A572 Gr.50	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
1	M12	Long Rack Column	63	Lbyy	N/A	N/A	Lateral
2	M13	Long Rack Column	63	Lbyy	N/A	N/A	Lateral
3	M14	Long Rack Column	63	Lbyy	N/A	N/A	Lateral
4	M15	Long Rack Beam	64	Lbyy	N/A	N/A	Lateral
5	M16	Long Rack Beam	64	Lbyy	N/A	N/A	Lateral
6	M17	Long Rack Beam	64	Lbyy	N/A	N/A	Lateral
7	M19	Long Rack Beam	64	Lbyy	N/A	N/A	Lateral
8	M26	Short Rack Column	30	Lbyy	N/A	N/A	Lateral
9	M27	Short Rack Column	30	Lbyy	N/A	N/A	Lateral
10	M30	Short Rack Beam	37	Lbyy	N/A	N/A	Lateral
11	M32	Short Rack Beam	37	Lbyy	N/A	N/A	Lateral

Design Size and Code Check Parameters

	Label	Max Axial/Bending Chk	Max Shear Chk
1	Typical	1	1
2	Wall Footing	1	1

Deflection Design

	Label	LC	Ratio	LC	Ratio	LC	Ratio
1	Typical	None	N/A	None	N/A	None	N/A
2	Wall Footing	None	N/A	None	N/A	None	N/A

Nodal Loads and Enforced Displacements

No Data to Print...

Member Distributed Loads (BLC 2 : Dead Load)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M15	Y	-0.07	-0.07	0	%100
2	M16	Y	-0.07	-0.07	0	%100
3	M19	Y	-0.07	-0.07	0	%100
4	M17	Y	-0.07	-0.07	0	%100
5	M30	Y	-0.07	-0.07	0	%100
6	M32	Y	-0.07	-0.07	0	%100

Member Distributed Loads (BLC 5 : Seismic X)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M17	X	0.062	0.062	0	%100
2	M15	X	0.062	0.062	0	%100
3	M16	X	0.062	0.062	0	%100
4	M19	X	0.062	0.062	0	%100
5	M32	X	0.062	0.062	0	%100
6	M30	X	0.062	0.062	0	%100

Member Distributed Loads (BLC 6 : Seismic Z)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M15	Z	0.062	0.062	0	%100
2	M17	Z	0.062	0.062	0	%100
3	M16	Z	0.062	0.062	0	%100
4	M19	Z	0.062	0.062	0	%100
5	M30	Z	0.062	0.062	0	%100
6	M32	Z	0.062	0.062	0	%100

Member Distributed Loads (BLC 10 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M15	Z	0.032	0.047	0	12.8
2	M15	Z	0.047	0.061	12.8	25.6
3	M15	Z	0.061	0.06	25.6	38.4
4	M15	Z	0.06	0.046	38.4	51.2
5	M15	Z	0.046	0.032	51.2	64
6	M16	Z	0.032	0.047	0	12.8
7	M16	Z	0.047	0.061	12.8	25.6
8	M16	Z	0.061	0.06	25.6	38.4
9	M16	Z	0.06	0.046	38.4	51.2
10	M16	Z	0.046	0.032	51.2	64
11	M17	Z	0.039	0.033	0	12.8
12	M17	Z	0.033	0.042	12.8	25.6
13	M17	Z	0.042	0.042	25.6	38.4
14	M17	Z	0.042	0.033	38.4	51.2
15	M17	Z	0.033	0.038	51.2	64
16	M19	Z	0.039	0.033	0	12.8
17	M19	Z	0.033	0.042	12.8	25.6
18	M19	Z	0.042	0.042	25.6	38.4
19	M19	Z	0.042	0.033	38.4	51.2
20	M19	Z	0.033	0.038	51.2	64
21	M30	Z	0.015	0.015	0	18.5
22	M30	Z	0.015	0.014	18.5	37
23	M32	Z	0.015	0.015	0	18.5
24	M32	Z	0.015	0.014	18.5	37

Member Area Loads (BLC 4 : Wind Z)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N52	N33	N36	N54	Z	A-B	0.029
2	N56	N66	N58	N65	Z	A-B	0.029

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Distributed	Area(Member)
1	Self Weight	DL		-1			
2	Dead Load	DL				6	
3	Wind X	WLX					
4	Wind Z	WLZ					2
5	Seismic X	ELX	0.885			6	
6	Seismic Z	ELZ			0.885	6	
7	Live Load	LL					
8	Ice Load	OL1					
9	Snow Load	SL					
10	BLC 4 Transient Area Loads	None				24	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
1	LRFD Load Combinations								
2	----------								
3	Gravity Combinations								
4	ASCE 7-16 1	Yes	Y	DL	1.4				
5									
6	ASCE 7-16 2(a)	Yes	Y	DL	1.2				
7	ASCE 7-16 2(b)	Yes	Y	DL	1.2				
8	ASCE 7-16 2(c)	Yes	Y	DL	1.2				
9									
10									
11	Lateral Combinations								
12	ASCE 7-16 3(a)	Yes	Y	DL	1.2				
13	ASCE 7-16 3(b) i	Yes	Y	DL	1.2			WLX	0.5
14	ASCE 7-16 3(b) ii	Yes	Y	DL	1.2			WLZ	0.5
15	ASCE 7-16 3(b) i reversible	Yes	Y	DL	1.2			WLX	-0.5
16	ASCE 7-16 3(b) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5
17	ASCE 7-16 3(c)	Yes	Y	DL	1.2				
18	ASCE 7-16 3(c) i	Yes	Y	DL	1.2			WLX	0.5
19	ASCE 7-16 3(c) ii	Yes	Y	DL	1.2			WLZ	0.5
20	ASCE 7-16 3(c) i reversible	Yes	Y	DL	1.2			WLX	-0.5
21	ASCE 7-16 3(c) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5
22	ASCE 7-16 3(d)	Yes	Y	DL	1.2				
23	ASCE 7-16 3(d) i	Yes	Y	DL	1.2			WLX	0.5
24	ASCE 7-16 3(d) ii	Yes	Y	DL	1.2			WLZ	0.5
25	ASCE 7-16 3(d) i reversible	Yes	Y	DL	1.2			WLX	-0.5
26	ASCE 7-16 3(d) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5
27									
28	ASCE 7-16 4(a) i	Yes	Y	DL	1.2	WLX	1		
29	ASCE 7-16 4(a) ii	Yes	Y	DL	1.2	WLZ	1		
30	ASCE 7-16 4(a) i reversible	Yes	Y	DL	1.2	WLX	-1		
31	ASCE 7-16 4(a) ii reversible	Yes	Y	DL	1.2	WLZ	-1		
32	ASCE 7-16 4(b) i	Yes	Y	DL	1.2	WLX	1		
33	ASCE 7-16 4(b) ii	Yes	Y	DL	1.2	WLZ	1		
34	ASCE 7-16 4(b) i reversible	Yes	Y	DL	1.2	WLX	-1		
35	ASCE 7-16 4(b) ii reversible	Yes	Y	DL	1.2	WLZ	-1		
36	ASCE 7-16 4(c) i	Yes	Y	DL	1.2	WLX	1		
37	ASCE 7-16 4(c) ii	Yes	Y	DL	1.2	WLZ	1		
38	ASCE 7-16 4(c) i reversible	Yes	Y	DL	1.2	WLX	-1		
39	ASCE 7-16 4(c) ii reversible	Yes	Y	DL	1.2	WLZ	-1		
40									
41									

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
42									
43									
44									
45									
46									
47									
48									
49	ASCE 7-16 5 i	Yes	Y	DL	0.9	WLX	1		
50	ASCE 7-16 5 ii	Yes	Y	DL	0.9	WLZ	1		
51	ASCE 7-16 5 i reversible	Yes	Y	DL	0.9	WLX	-1		
52	ASCE 7-16 5 ii reversible	Yes	Y	DL	0.9	WLZ	-1		
53									
54									
55									
56									
57									
58	ASCE 7-16 6 i	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	1
59	ASCE 7-16 6 ii	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	1
60	ASCE 7-16 6 i reversible	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	-1
61	ASCE 7-16 6 ii reversible	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	-1
62									
63	ASCE 7-16 7 i	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	1
64	ASCE 7-16 7 ii	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	1
65	ASCE 7-16 7 i reversible	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	-1
66	ASCE 7-16 7 ii reversible	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	-1
67									
68	---Overstrength Combos---								
69	ASCE 7-16 6 I (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1
70	ASCE 7-16 6 ii (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1
71	ASCE 7-16 6 i reversible (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1
72	ASCE 7-16 6 ii reversible (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1
73									
74	ASCE 7-16 7 I (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1
75	ASCE 7-16 7 ii (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1
76	ASCE 7-16 7 i reversible (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1
77	ASCE 7-16 7 ii reversible (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1
78									
79	ASD Load Combinations								
80	----------								
81	Gravity Combinations								
82	ASCE 7-16 1	Yes	Y	DL	1				
83									
84									
85	ASCE 7-16 2	Yes	Y	DL	1				
86									
87									
88	ASCE 7-16 3(a)	Yes	Y	DL	1				
89	ASCE 7-16 3(b)	Yes	Y	DL	1				
90	ASCE 7-16 3(c)	Yes	Y	DL	1				
91									
92									
93									
94									
95									
96	ASCE 7-16 4(a)	Yes	Y	DL	1				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
97	ASCE 7-16 4(b)	Yes	Y	DL	1				
98	ASCE 7-16 4(c)	Yes	Y	DL	1				
99									
100	Lateral Combinations								
101	ASCE 7-16 5 i	Yes	Y	DL	1	WLX	0.6		
102	ASCE 7-16 5 ii	Yes	Y	DL	1	WLZ	0.6		
103	ASCE 7-16 5 i reversible	Yes	Y	DL	1	WLX	-0.6		
104	ASCE 7-16 5 ii reversible	Yes	Y	DL	1	WLZ	-0.6		
105									
106	ASCE 7-16 6(a) i	Yes	Y	DL	1			WLX	0.45
107	ASCE 7-16 6(a) ii	Yes	Y	DL	1			WLZ	0.45
108	ASCE 7-16 6(a) i reversible	Yes	Y	DL	1			WLX	-0.45
109	ASCE 7-16 6(a) ii reversible	Yes	Y	DL	1			WLZ	-0.45
110	ASCE 7-16 6(b) i	Yes	Y	DL	1			WLX	0.45
111	ASCE 7-16 6(b) ii	Yes	Y	DL	1			WLZ	0.45
112	ASCE 7-16 6(b) i reversible	Yes	Y	DL	1			WLX	-0.45
113	ASCE 7-16 6(b) ii reversible	Yes	Y	DL	1			WLZ	-0.45
114	ASCE 7-16 6(c) i	Yes	Y	DL	1			WLX	0.45
115	ASCE 7-16 6(c) ii	Yes	Y	DL	1			WLZ	0.45
116	ASCE 7-16 6(c) i reversible	Yes	Y	DL	1			WLX	-0.45
117	ASCE 7-16 6(c) ii reversible	Yes	Y	DL	1			WLZ	-0.45
118									
119	ASCE 7-16 7 i	Yes	Y	DL	0.6	WLX	0.6		
120	ASCE 7-16 7 ii	Yes	Y	DL	0.6	WLZ	0.6		
121	ASCE 7-16 7 i reversible	Yes	Y	DL	0.6	WLX	-0.6		
122	ASCE 7-16 7 ii reversible	Yes	Y	DL	0.6	WLZ	-0.6		
123									
124									
125									
126									
127									
128	ASCE 7-16 8 i	Yes	Y	DL	1	Sds*DL	0.14	ELX	0.7
129	ASCE 7-16 8 ii	Yes	Y	DL	1	Sds*DL	0.14	ELZ	0.7
130	ASCE 7-16 8 i reversible	Yes	Y	DL	1	Sds*DL	0.14	ELX	-0.7
131	ASCE 7-16 8 ii reversible	Yes	Y	DL	1	Sds*DL	0.14	ELZ	-0.7
132									
133	ASCE 7-16 9 i	Yes	Y	DL	1	Sds*DL	0.105	ELX	0.525
134	ASCE 7-16 9 ii	Yes	Y	DL	1	Sds*DL	0.105	ELZ	0.525
135	ASCE 7-16 9 i reversible	Yes	Y	DL	1	Sds*DL	0.105	ELX	-0.525
136	ASCE 7-16 9 ii reversible	Yes	Y	DL	1	Sds*DL	0.105	ELZ	-0.525
137									
138	ASCE 7-16 10 i	Yes	Y	DL	0.6	Sds*DL	-0.14	ELX	0.7
139	ASCE 7-16 10 ii	Yes	Y	DL	0.6	Sds*DL	-0.14	ELZ	0.7
140	ASCE 7-16 10 i reversible	Yes	Y	DL	0.6	Sds*DL	-0.14	ELX	-0.7
141	ASCE 7-16 10 ii reversible	Yes	Y	DL	0.6	Sds*DL	-0.14	ELZ	-0.7
142									
143	---Overstrength Combos---								
144	ASCE 7-16 8 I (os)	Yes	Y	DL	1	Sds*DL	0.14	Om*ELX	0.7
145	ASCE 7-16 8 ii (os)	Yes	Y	DL	1	Sds*DL	0.14	Om*ELZ	0.7
146	ASCE 7-16 8 i reversible (os)	Yes	Y	DL	1	Sds*DL	0.14	Om*ELX	-0.7
147	ASCE 7-16 8 ii reversible (os)	Yes	Y	DL	1	Sds*DL	0.14	Om*ELZ	-0.7
148									
149	ASCE 7-16 9 I (os)	Yes	Y	DL	1	Sds*DL	0.105	Om*ELX	0.525
150	ASCE 7-16 9 ii (os)	Yes	Y	DL	1	Sds*DL	0.105	Om*ELZ	0.525
151	ASCE 7-16 9 i reversible (os)	Yes	Y	DL	1	Sds*DL	0.105	Om*ELX	-0.525

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
152	ASCE 7-16 9 ii reversible (os)	Yes	Y	DL	1	Sds*DL	0.105	Om*ELZ	-0.525
153									
154	ASCE 7-16 10 I (os)	Yes	Y	DL	0.6	Sds*DL	-0.14	Om*ELX	0.7
155	ASCE 7-16 10 ii (os)	Yes	Y	DL	0.6	Sds*DL	-0.14	Om*ELZ	0.7
156	ASCE 7-16 10 i reversible (os)	Yes	Y	DL	0.6	Sds*DL	-0.14	Om*ELX	-0.7
157	ASCE 7-16 10 ii reversible (os)	Yes	Y	DL	0.6	Sds*DL	-0.14	Om*ELZ	-0.7
158									
159	Deflection Combinations								
160	IBC 2021 1 - Live Load	Yes	Y						
161	IBC 2021 1 - Roof Live Load	Yes	Y						
162	IBC 2021 2 - Snow Load	Yes	Y						
163	IBC 2021 2 - Wind Load (X)	Yes	Y	WLX	1				
164	IBC 2021 2 - Wind Load (Z)	Yes	Y	WLZ	1				
165	IBC 2021 3 - Dead + Live Load	Yes	Y	DL	1				

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	LRFD Load Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	----------		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Gravity Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	ASCE 7-16 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	ASCE 7-16 2(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	ASCE 7-16 2(b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	ASCE 7-16 2(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	Lateral Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	ASCE 7-16 3(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	ASCE 7-16 3(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	ASCE 7-16 3(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	ASCE 7-16 3(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	ASCE 7-16 3(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	ASCE 7-16 3(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	ASCE 7-16 3(c) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	ASCE 7-16 3(c) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	ASCE 7-16 3(c) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	ASCE 7-16 3(c) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	ASCE 7-16 3(d)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	ASCE 7-16 3(d) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	ASCE 7-16 3(d) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	ASCE 7-16 3(d) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	ASCE 7-16 3(d) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
28	ASCE 7-16 4(a) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	ASCE 7-16 4(a) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	ASCE 7-16 4(a) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	ASCE 7-16 4(a) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	ASCE 7-16 4(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
33	ASCE 7-16 4(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34	ASCE 7-16 4(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	ASCE 7-16 4(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	ASCE 7-16 4(c) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37	ASCE 7-16 4(c) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38	ASCE 7-16 4(c) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
39	ASCE 7-16 4(c) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
42			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
47			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
49	ASCE 7-16 5 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	ASCE 7-16 5 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
51	ASCE 7-16 5 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
52	ASCE 7-16 5 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
53			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
54			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
55			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
56			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
57			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	ASCE 7-16 6 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
59	ASCE 7-16 6 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
60	ASCE 7-16 6 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	ASCE 7-16 6 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	ASCE 7-16 7 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
64	ASCE 7-16 7 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
65	ASCE 7-16 7 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	ASCE 7-16 7 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
68	---Overstrength Combos---		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	ASCE 7-16 6 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	ASCE 7-16 6 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	ASCE 7-16 6 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	ASCE 7-16 6 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	ASCE 7-16 7 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	ASCE 7-16 7 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
76	ASCE 7-16 7 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
77	ASCE 7-16 7 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
78			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
79	ASD Load Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
80	--------		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
81	Gravity Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
82	ASCE 7-16 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
83			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
84			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
85	ASCE 7-16 2		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
86			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
87			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
88	ASCE 7-16 3(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
89	ASCE 7-16 3(b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
90	ASCE 7-16 3(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
91			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
92			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
93			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
94			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
95			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
96	ASCE 7-16 4(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
97	ASCE 7-16 4(b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
98	ASCE 7-16 4(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
99			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
100	Lateral Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
101	ASCE 7-16 5 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
102	ASCE 7-16 5 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
103	ASCE 7-16 5 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
104	ASCE 7-16 5 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
105			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
106	ASCE 7-16 6(a) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
107	ASCE 7-16 6(a) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
108	ASCE 7-16 6(a) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
109	ASCE 7-16 6(a) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
110	ASCE 7-16 6(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
111	ASCE 7-16 6(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
112	ASCE 7-16 6(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
113	ASCE 7-16 6(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
114	ASCE 7-16 6(c) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
115	ASCE 7-16 6(c) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
116	ASCE 7-16 6(c) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
117	ASCE 7-16 6(c) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
118			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
119	ASCE 7-16 7 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
120	ASCE 7-16 7 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
121	ASCE 7-16 7 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
122	ASCE 7-16 7 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
123			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
124			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
125			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
126			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
127			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
128	ASCE 7-16 8 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
129	ASCE 7-16 8 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
130	ASCE 7-16 8 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
131	ASCE 7-16 8 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
132			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
133	ASCE 7-16 9 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
134	ASCE 7-16 9 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
135	ASCE 7-16 9 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
136	ASCE 7-16 9 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
137			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
138	ASCE 7-16 10 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
139	ASCE 7-16 10 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
140	ASCE 7-16 10 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
141	ASCE 7-16 10 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
142			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
143	---Overstrength Combos---		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
144	ASCE 7-16 8 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
145	ASCE 7-16 8 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
146	ASCE 7-16 8 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
147	ASCE 7-16 8 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
148			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
149	ASCE 7-16 9 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
150	ASCE 7-16 9 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
151	ASCE 7-16 9 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
152	ASCE 7-16 9 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
153			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
154	ASCE 7-16 10 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
155	ASCE 7-16 10 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
156	ASCE 7-16 10 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
157	ASCE 7-16 10 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
158			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
159	Deflection Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
160	IBC 2021 1 - Live Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
161	IBC 2021 1 - Roof Live Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
162	IBC 2021 2 - Snow Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
163	IBC 2021 2 - Wind Load (X)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
164	IBC 2021 2 - Wind Load (Z)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
165	IBC 2021 3 - Dead + Live Load	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	N28	max	0.582	60	0.674	60	0.407	61	1.359	61	0.311	64	1.384	63
1		min	-0.457	63	0	160	-0.406	64	-1.354	64	-0.316	61	-1.483	60
2	N31	max	0.54	65	1.186	4	0.734	66	2.452	66	0.143	60	1.456	58
3		min	-0.54	63	-0.007	164	-0.737	59	-2.464	59	-0.143	58	-1.456	60
4	N32	max	0.457	65	0.674	58	0.407	61	1.359	61	0.316	61	1.483	58
5		min	-0.582	58	0	160	-0.406	64	-1.354	64	-0.311	64	-1.384	65
6	N57	max	0.199	65	0.382	58	0.221	66	0.41	61	0.009	61	0.348	58
7		min	-0.259	58	0	160	-0.221	64	-0.41	59	-0.009	64	-0.319	65
8	N62	max	0.259	60	0.382	60	0.221	61	0.41	61	0.009	64	0.319	63
9		min	-0.199	63	0	164	-0.221	59	-0.41	59	-0.009	61	-0.348	60
10	Totals:	max	1.99	60	3.146	4	1.99	66						
11		min	-1.99	58	0	164	-1.99	59						

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
0	M12	HSS5X5X3	0.074	0	60	0.027	0	z	61	136.86	147.6	22.088	22.088	2.392	H1-1b
1	M13	HSS5X5X3	0.116	0	59	0.021	0	y	60	136.86	147.6	22.088	22.088	1	H1-1b
2	M14	HSS5X5X3	0.074	0	58	0.027	0	z	61	136.86	147.6	22.088	22.088	2.392	H1-1b
3	M15	L2.5X2X4	0.302	0	60	0.018	64	y	58	10.56	48.15	1.115	2.291	1.5	H2-1
4	M16	L2.5X2X4	0.302	64	58	0.018	0	y	60	10.56	48.15	1.115	2.291	1.5	H2-1
5	M17	L2.5X2X4	0.279	64	61	0.018	64	y	58	10.56	48.15	1.115	2.291	1.5	H2-1
6	M19	L2.5X2X4	0.279	0	61	0.018	0	y	60	10.56	48.15	1.115	2.291	1.5	H2-1
7	M26	L4X4X6	0.061	0	60	0.015	0	y	61	115.474	128.7	6.109	13.731	1.5	H2-1
8	M27	L4X4X6	0.061	0	58	0.015	0	z	61	115.474	128.7	6.109	13.731	1.5	H2-1
9	M30	L2X2X4	0.133	0	60	0.015	0	y	60	21.773	42.48	0.96	2.118	1.5	H2-1
10	M32	L2X2X4	0.124	0	60	0.014	0	y	60	21.773	42.48	0.96	2.118	1.5	H2-1

Envelope Node Reactions - Overstrength or Capacity Limit

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	N28	max	0.582	71*	0.674	71*	0.407	72*	1.359	72*	0.311	75*	1.384	74*
1		min	-0.457	74*	0.176	154*	-0.406	75*	-1.354	75*	-0.316	72*	-1.483	71*
2	N31	max	0.54	76*	1.126	72*	0.734	77*	2.452	77*	0.143	71*	1.456	69*

Envelope Node Reactions - Overstrength or Capacity Limit (Continued)

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
3		min	-0.54	74*	0.432	155*	-0.737	70*	-2.464	70*	-0.143	69*	-1.456	71*
4	N32	max	0.457	76*	0.674	69*	0.407	72*	1.359	72*	0.316	72*	1.483	69*
5		min	-0.582	69*	0.176	156*	-0.406	75*	-1.354	75*	-0.311	75*	-1.384	76*
6	N57	max	0.199	76*	0.382	69*	0.221	77*	0.41	72*	0.009	72*	0.348	69*
7		min	-0.259	69*	0.093	156*	-0.221	75*	-0.41	70*	-0.009	75*	-0.319	76*
8	N62	max	0.259	71*	0.382	71*	0.221	72*	0.41	72*	0.009	75*	0.319	74*
9		min	-0.199	74*	0.093	154*	-0.221	70*	-0.41	70*	-0.009	72*	-0.348	71*
10	Totals:	max	1.99	71*	2.961	71*	1.99	77*						
11		min	-1.99	69*	1.163	154*	-1.99	70*						

Envelope Beam Deflection Checks

No Data to Print...

Warning Log

No Data to Print...

Company:	Burns & McDonnell	Page:	1
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Anchor Design - Long Electrical Rack	Date:	12/4/2023
Fastening point:			

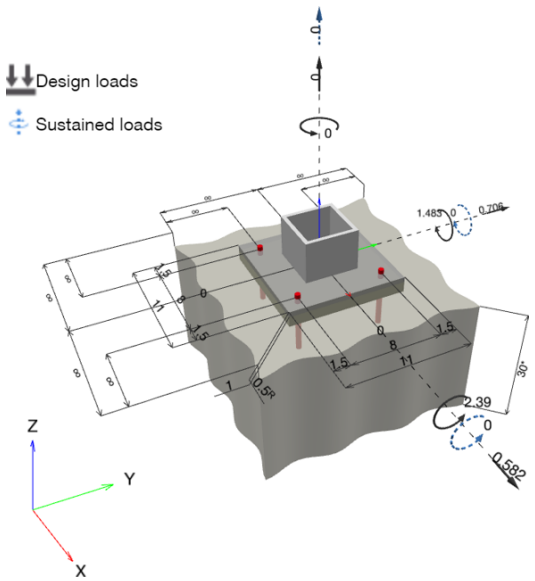
Specifier's comments:

1 Input data

Anchor type and diameter:	**HIT-HY 200 V3 + HAS-R 304/316 SS 1/2**
Item number:	2045003 HAS-R 316 SS 1/2"x6 1/2" (element) / 2334276 HIT-HY 200-R V3 (adhesive)
Effective embedment depth:	$h_{ef,act}$ = 4.000 in. ($h_{ef,limit}$ = - in.)
Material:	ASTM F 593
Evaluation Service Report:	ESR-4868
Issued I Valid:	11/1/2022 | 11/1/2024
Proof:	Design Method ACI 318-19 / Chem
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; e_b = 1.000 in.; t = 0.500 in.
	Hilti Grout: CB-G EG, epoxy, $f_{c,Grout}$ = 14,939 psi
Anchor plate[R]:	l_x x l_y x t = 11.000 in. x 11.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	Square HSS (AISC), HSS5X5X.375; (L x W x T) = 5.000 in. x 5.000 in. x 0.375 in.
Base material:	cracked concrete, Custom, f_c' = 4,500 psi; h = 30.000 in., Temp. short/long: 32/32 °F
Installation:	**hammer drilled hole, Installation condition: Dry**
Reinforcement:	tension: not present, shear: not present; no supplemental splitting reinforcement present
	edge reinforcement: none or < No. 4 bar

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



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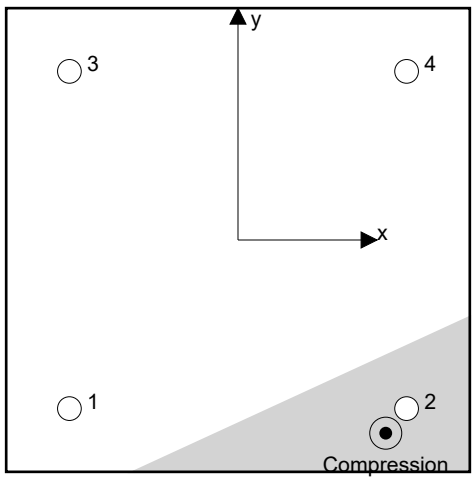
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Anchor Design - Long Electrical Rack	Date:	12/4/2023
Fastening point:			

1.1 Design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Combination 1	N = 0.000; V_x = 0.582; V_y = 0.706; M_x = 2.39000; M_y = 1.48300; M_z = 0.00000;	no	50

2 Load case/Resulting anchor forces



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	0.436	0.229	0.145	0.176
2	0.000	0.229	0.145	0.176
3	2.020	0.229	0.145	0.176
4	1.292	0.229	0.145	0.176

max. concrete compressive strain:	0.18 [‰]
max. concrete compressive stress:	768 [psi]
resulting tension force in (x/y)=(0.000/0.000):	0.000 [kip]
resulting compression force in (x/y)=(9.006/0.917):	3.748 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	2.020	9.223	22	OK
Bond Strength**	3.748	8.228	46	OK
Sustained Tension Load Bond Strength*	N/A	N/A	N/A	N/A
Concrete Breakout Failure**	3.748	10.572	36	OK

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Anchor Design - Long Electrical Rack	Date:	12/4/2023
Fastening point:			

3.1 Steel Strength

N_{sa} = ESR value refer to ICC-ES ESR-4868
$\phi\ N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.14	100,000

Calculations

N_{sa} [kip]
14.190

Results

N_{sa} [kip]	ϕ_{steel}	$\phi\ N_{sa}$ [kip]	N_{ua} [kip]
14.190	0.650	9.223	2.020

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Anchor Design - Long Electrical Rack	Date:	12/4/2023
Fastening point:			

3.2 Bond Strength

$N_{ag} = \left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na} \psi_{ec2,Na} \psi_{ed,Na} \psi_{cp,Na} N_{ba}$ ACI 318-19 Eq. (17.6.5.1b)

$\phi N_{ag} \geq N_{ua}$ ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2 c_{Na})^2$ ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10 d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3 \left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ ACI 318-19 Eq. (17.6.5.2.1)

Variables

$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\alpha_{overhead}$	$\tau_{k,c}$ [psi]
2,354	0.500	4.000	∞	1.000	1,204

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.090	1.736	7.032	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
7.282	445.13	212.11	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
0.988	0.807	1.000	7.563

Results

N_{ag} [kip]	ϕ_{bond}	ϕN_{ag} [kip]	N_{ua} [kip]
12.659	0.650	8.228	3.748

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N}\ \psi_{ed,N}\ \psi_{c,N}\ \psi_{cp,N}\ N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi\ N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9\ h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2\ e'_N}{3\ h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3\left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c\ \lambda_a\ \sqrt{f'_c}\ h_{ef}^{1.5}$ — ACI 318-19 Eq. (17.6.2.2.1)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
4.000	0.090	1.736	∞	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
7.032	17	1.000	4,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
336.00	144.00	0.985	0.776	1.000	1.000	9.123

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi\ N_{cbg}$ [kip]	N_{ua} [kip]
16.264	0.650	10.572	3.748

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	0.229	4.087	6	OK
Steel failure (with lever arm)*	0.229	0.565	41	OK
Pryout Strength (Bond Strength controls)**	0.915	25.416	4	OK
Concrete edge failure in direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

V_{sa} = ESR value refer to ICC-ES ESR-4868
ϕ $V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.14	100,000

Calculations

V_{sa} [kip]
8.515

Results

V_{sa} [kip]	ϕ_{steel}	ϕ_{eb}	ϕ V_{sa} [kip]	V_{ua} [kip]
8.515	0.600	0.800	4.087	0.229

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

4.2 Steel failure (with lever arm)

V_s^M	$= \frac{\alpha_M \cdot M_s}{L_b}$	bending equation for stand-off
M_s	$= M_s^0 \left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	resultant flexural resistance of anchor
M_s^0	$= (1.2)\ (S)\ (f_{u,min})$	characteristic flexural resistance of anchor
$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$		reduction for tensile force acting simultaneously with a shear force on the anchor
S	$= \frac{\pi (d)^3}{32}$	elastic section modulus of anchor bolt at concrete surface
L_b	$= z + (n)(d_0)$	internal lever arm adjusted for spalling of the surface concrete
ϕV_s^M	$\geq V_{ua}$	ACI 318-19 Table 17.5.2

Variables

α_M	$f_{u,min}$ [psi]	N_{ua} [kip]	ϕN_{sa} [kip]	z [in.]	n	d_0 [in.]
2.00	100,000	2.020	9.223	1.250	0.500	0.500

Calculations

M_s^0 [ft.kip]	$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	M_s [ft.kip]	L_b [in.]
0.07538	0.781	0.05887	1.500

Results

V_s^M [kip]	ϕ_{steel}	ϕV_s^M [kip]	V_{ua} [kip]
0.942	0.600	0.565	0.229

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

4.3 Pryout Strength (Bond Strength controls)

$V_{cpg} = k_{cp}\left[\left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na}\ \psi_{ec2,Na}\ \psi_{ed,Na}\ \psi_{cp,Na}\ N_{ba}\right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi\ V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2\ c_{Na})^2$ ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10\ d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3\left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ ACI 318-19 Eq. (17.6.5.2.1)

Variables

k_{cp}	$\alpha_{overhead}$	$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\tau_{k,c}$ [psi]
2	1.000	2,354	0.500	4.000	∞	1,204

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.000	0.000	7.032	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
7.282	509.13	212.11	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
1.000	1.000	1.000	7.563

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi\ V_{cpg}$ [kip]	V_{ua} [kip]
36.308	0.700	25.416	0.915

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.455	0.405	5/3	50	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Anchor Design - Long Electrical Rack	Date:	12/4/2023
Fastening point:			

6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- ACI 318 does not specifically address anchor bending when a stand-off condition exists. PROFIS Engineering calculates a shear load corresponding to anchor bending when stand-off exists and includes the results as a shear Design Strength!
- Design Strengths of adhesive anchor systems are influenced by the cleaning method. Refer to the INSTRUCTIONS FOR USE given in the Evaluation Service Report for cleaning and installation instructions.
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- Installation of Hilti adhesive anchor systems shall be performed by personnel trained to install Hilti adhesive anchors. Reference ACI 318-19, Section 26.7.

Fastening meets the design criteria!

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Fastening point:			

7 Installation data

Profile: Square HSS (AISC), HSS5X5X.375; (L x W x T) = 5.000 in. x 5.000 in. x 0.375 in.

Hole diameter in the fixture: d_f = 0.562 in.

Plate thickness (input): 0.500 in.

Recommended plate thickness: not calculated

Drilling method: Hammer drilled

Cleaning: Compressed air cleaning of the drilled hole according to instructions for use is required

Anchor type and diameter: HIT-HY 200 V3 + HAS-R 304/316 SS 1/2

Item number: 2045003 HAS-R 316 SS 1/2"x6 1/2" (element) / 2334276 HIT-HY 200-R V3 (adhesive)

Maximum installation torque: 0.03000 ft.kip

Hole diameter in the base material: 0.562 in.

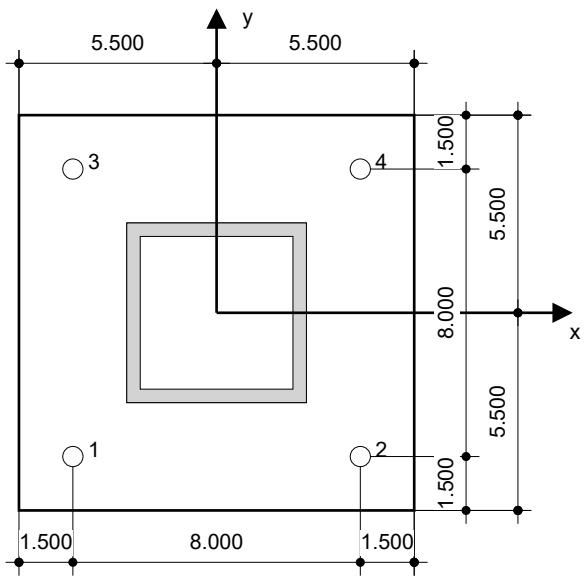
Hole depth in the base material: 4.000 in.

Minimum thickness of the base material: 5.250 in.

1/2 Hilti HAS Stainless steel threaded rod with Hilti HIT-HY 200 V3 Safe Set System

7.1 Recommended accessories

Drilling	Cleaning	Setting
• Suitable Rotary Hammer • Properly sized drill bit	• Compressed air with required accessories to blow from the bottom of the hole • Proper diameter wire brush	• Dispenser including cassette and mixer • Torque wrench



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	-4.000	-4.000	-	-	-	-
2	4.000	-4.000	-	-	-	-
3	-4.000	4.000	-	-	-	-
4	4.000	4.000	-	-	-	-

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

8 Remarks; Your Cooperation Duties

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Design:	Anchor Design - Short Electrical Rack	Date:	12/4/2023
Fastening point:			

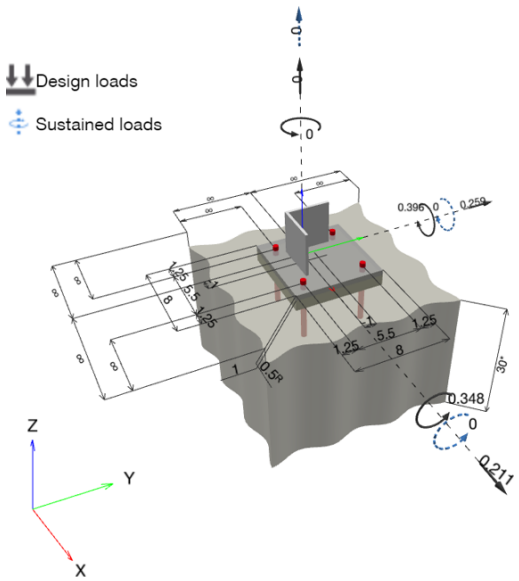
Specifier's comments:

1 Input data

Anchor type and diameter:	**HIT-HY 200 V3 + HAS-R 304/316 SS 1/2**
Item number:	2045003 HAS-R 316 SS 1/2"x6 1/2" (element) / 2334276 HIT-HY 200-R V3 (adhesive)
Effective embedment depth:	$h_{ef,act}$ = 4.000 in. ($h_{ef,limit}$ = - in.)
Material:	ASTM F 593
Evaluation Service Report:	ESR-4868
Issued I Valid:	11/1/2022 | 11/1/2024
Proof:	Design Method ACI 318-19 / Chem
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; e_b = 1.000 in.; t = 0.500 in.
	Hilti Grout: CB-G EG, epoxy, $f_{c,Grout}$ = 14,939 psi
Anchor plate[R]:	l_x x l_y x t = 8.000 in. x 8.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	L profile (AISC 1.4), L4X4X1/4; (L x W x T) = 4.000 in. x 4.000 in. x 0.250 in.
Base material:	cracked concrete, Custom, f_c' = 4,500 psi; h = 30.000 in., Temp. short/long: 32/32 °F
Installation:	**hammer drilled hole, Installation condition: Dry**
Reinforcement:	tension: not present, shear: not present; no supplemental splitting reinforcement present
	edge reinforcement: none or < No. 4 bar

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



Input data and results must be checked for conformity with the existing conditions and for plausibility!
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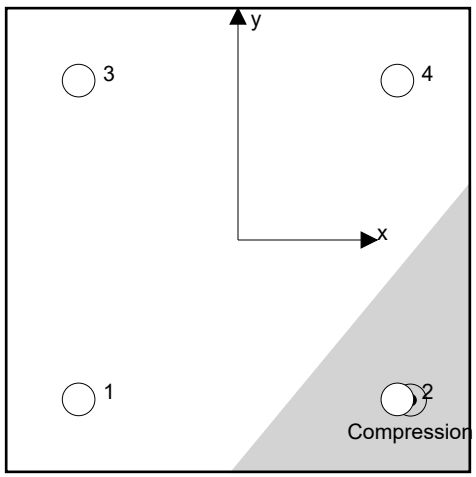
Design:	Anchor Design - Short Electrical Rack	Date:	12/4/2023
Fastening point:			

1.1 Design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Combination 1	N = 0.000; V_x = 0.211; V_y = 0.259; M_x = 0.34800; M_y = 0.39600; M_z = 0.00000;	no	14

2 Load case/Resulting anchor forces



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	0.254	0.084	0.051	0.067
2	0.000	0.080	0.051	0.063
3	0.568	0.087	0.055	0.067
4	0.189	0.083	0.055	0.063

max. concrete compressive strain:	0.07 [‰]
max. concrete compressive stress:	299 [psi]
resulting tension force in (x/y)=(0.000/0.000):	0.000 [kip]
resulting compression force in (x/y)=(6.975/1.238):	1.011 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	0.568	9.223	7	OK
Bond Strength**	1.011	7.316	14	OK
Sustained Tension Load Bond Strength*	N/A	N/A	N/A	N/A
Concrete Breakout Failure**	1.011	9.320	11	OK

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Anchor Design - Short Electrical Rack	Date:	12/4/2023
Fastening point:			

3.1 Steel Strength

N_{sa} = ESR value refer to ICC-ES ESR-4868
$\phi\ N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.14	100,000

Calculations

N_{sa} [kip]
14.190

Results

N_{sa} [kip]	ϕ_{steel}	$\phi\ N_{sa}$ [kip]	N_{ua} [kip]
14.190	0.650	9.223	0.568

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

3.2 Bond Strength

$N_{ag} = \left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na} \psi_{ec2,Na} \psi_{ed,Na} \psi_{cp,Na} N_{ba}$ ACI 318-19 Eq. (17.6.5.1b)

$\phi N_{ag} \geq N_{ua}$ ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2 c_{Na})^2$ ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10 d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3 \left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ ACI 318-19 Eq. (17.6.5.2.1)

Variables

$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\alpha_{overhead}$	$\tau_{k,c}$ [psi]
2,354	0.500	4.000	∞	1.000	1,204

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.806	0.451	7.032	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
7.282	372.31	212.11	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
0.900	0.942	1.000	7.563

Results

N_{ag} [kip]	ϕ_{bond}	ϕN_{ag} [kip]	N_{ua} [kip]
11.256	0.650	7.316	1.011

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Anchor Design - Short Electrical Rack	Date:	12/4/2023
Fastening point:			

3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N}\ \psi_{ed,N}\ \psi_{c,N}\ \psi_{cp,N}\ N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi\ N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9\ h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2\ e'_N}{3\ h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c\ \lambda_a\ \sqrt{f'_c}\ h_{ef}^{1.5}$ — ACI 318-19 Eq. (17.6.2.2.1)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
4.000	0.806	0.451	∞	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
7.032	17	1.000	4,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
276.00	144.00	0.882	0.930	1.000	1.000	9.123

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi\ N_{cbg}$ [kip]	N_{ua} [kip]
14.338	0.650	9.320	1.011

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Fastening point:			

4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	0.087	4.087	3	OK
Steel failure (with lever arm)*	0.087	0.679	13	OK
Pryout Strength (Bond Strength controls)**	0.334	19.549	2	OK
Concrete edge failure in direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

V_{sa} = ESR value refer to ICC-ES ESR-4868
ϕ $V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.14	100,000

Calculations

V_{sa} [kip]
8.515

Results

V_{sa} [kip]	ϕ_{steel}	ϕ_{eb}	ϕ V_{sa} [kip]	V_{ua} [kip]
8.515	0.600	0.800	4.087	0.087

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

4.2 Steel failure (with lever arm)

V_s^M	$= \frac{\alpha_M \cdot M_s}{L_b}$	bending equation for stand-off
M_s	$= M_s^0 \left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	resultant flexural resistance of anchor
M_s^0	$= (1.2)\ (S)\ (f_{u,min})$	characteristic flexural resistance of anchor
$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$		reduction for tensile force acting simultaneously with a shear force on the anchor
S	$= \frac{\pi (d)^3}{32}$	elastic section modulus of anchor bolt at concrete surface
L_b	$= z + (n)(d_0)$	internal lever arm adjusted for spalling of the surface concrete
ϕV_s^M	$\geq V_{ua}$	ACI 318-19 Table 17.5.2

Variables

α_M	$f_{u,min}$ [psi]	N_{ua} [kip]	ϕN_{sa} [kip]	z [in.]	n	d_0 [in.]
2.00	100,000	0.568	9.223	1.250	0.500	0.500

Calculations

M_s^0 [ft.kip]	$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	M_s [ft.kip]	L_b [in.]
0.07538	0.938	0.07074	1.500

Results

V_s^M [kip]	ϕ_{steel}	ϕV_s^M [kip]	V_{ua} [kip]
1.132	0.600	0.679	0.087

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

4.3 Pryout Strength (Bond Strength controls)

$V_{cpg} = k_{cp}\left[\left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na}\ \psi_{ec2,Na}\ \psi_{ed,Na}\ \psi_{cp,Na}\ N_{ba}\right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi\ V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2\ c_{Na})^2$ ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10\ d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3\left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = MAX\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ ACI 318-19 Eq. (17.6.5.2.1)

Variables

k_{cp}	$\alpha_{overhead}$	$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\tau_{k,c}$ [psi]
2	1.000	2,354	0.500	4.000	∞	1,204

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.111	0.091	7.032	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
7.282	402.56	212.11	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
0.985	0.988	1.000	7.563

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi\ V_{cpg}$ [kip]	V_{ua} [kip]
27.928	0.700	19.549	0.334

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.138	0.128	5/3	7	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Fastening point:			

6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- ACI 318 does not specifically address anchor bending when a stand-off condition exists. PROFIS Engineering calculates a shear load corresponding to anchor bending when stand-off exists and includes the results as a shear Design Strength!
- Design Strengths of adhesive anchor systems are influenced by the cleaning method. Refer to the INSTRUCTIONS FOR USE given in the Evaluation Service Report for cleaning and installation instructions.
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- Installation of Hilti adhesive anchor systems shall be performed by personnel trained to install Hilti adhesive anchors. Reference ACI 318-19, Section 26.7.

Fastening meets the design criteria!

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7 Installation data

Profile: L profile (AISC 1.4), L4X4X1/4; (L x W x T) = 4.000 in. x 4.000 in. x 0.250 in.

Hole diameter in the fixture: d_f = 0.562 in.

Plate thickness (input): 0.500 in.

Recommended plate thickness: not calculated

Drilling method: Hammer drilled

Cleaning: Compressed air cleaning of the drilled hole according to instructions for use is required

Anchor type and diameter: HIT-HY 200 V3 + HAS-R 304/316 SS 1/2

Item number: 2045003 HAS-R 316 SS 1/2"x6 1/2" (element) / 2334276 HIT-HY 200-R V3 (adhesive)

Maximum installation torque: 0.03000 ft.kip

Hole diameter in the base material: 0.562 in.

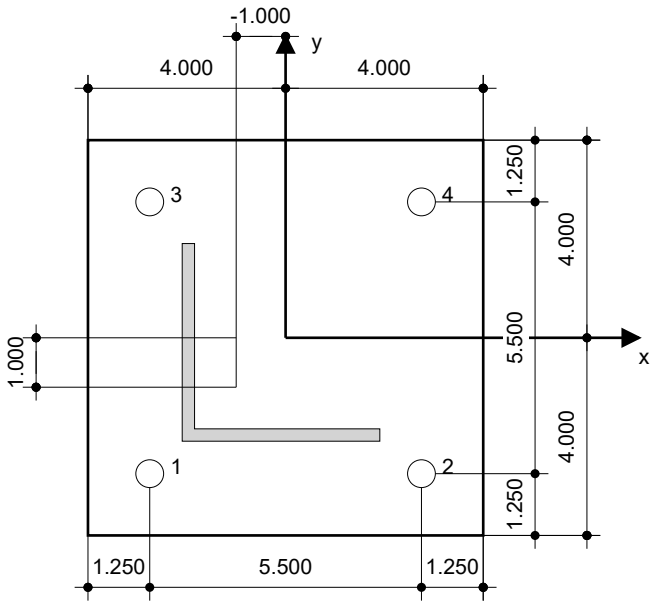
Hole depth in the base material: 4.000 in.

Minimum thickness of the base material: 5.250 in.

1/2 Hilti HAS Stainless steel threaded rod with Hilti HIT-HY 200 V3 Safe Set System

7.1 Recommended accessories

Drilling	Cleaning	Setting
• Suitable Rotary Hammer • Properly sized drill bit	• Compressed air with required accessories to blow from the bottom of the hole • Proper diameter wire brush	• Dispenser including cassette and mixer • Torque wrench



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	-2.750	-2.750	-	-	-	-
2	2.750	-2.750	-	-	-	-
3	-2.750	2.750	-	-	-	-
4	2.750	2.750	-	-	-	-

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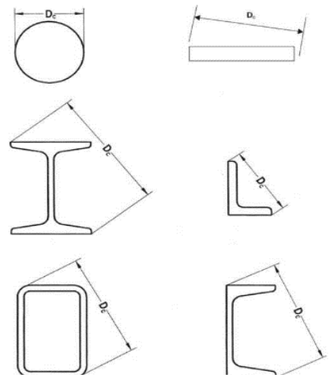
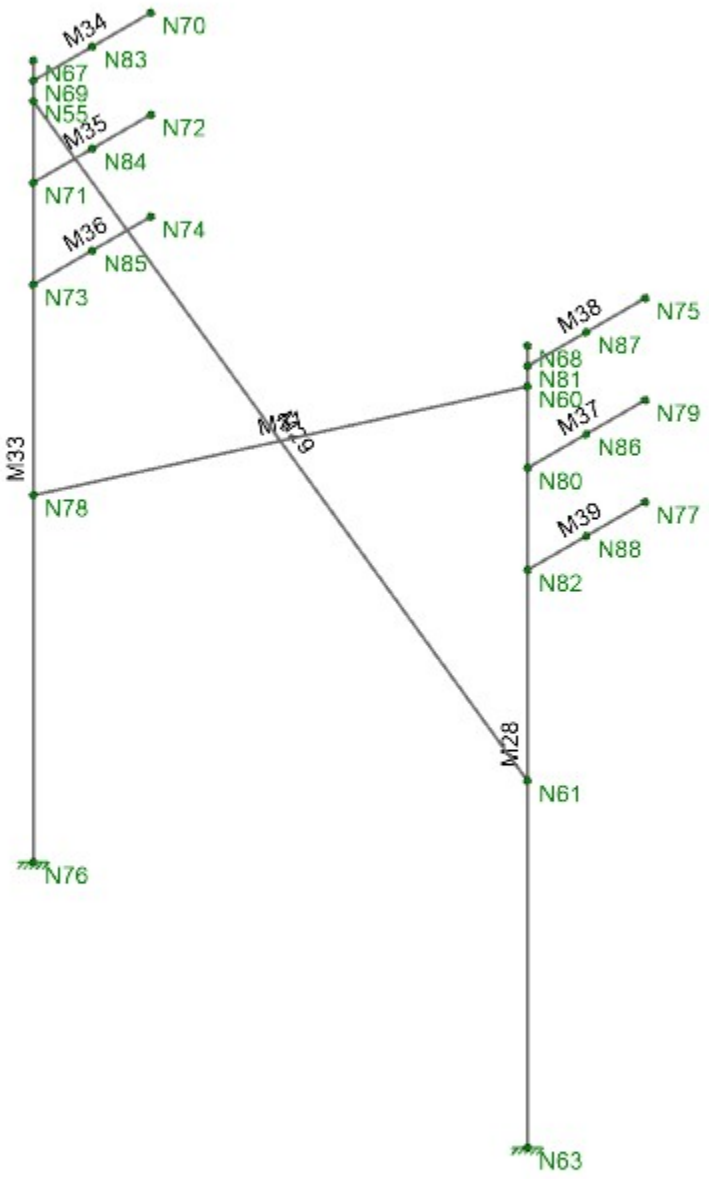
CABLE TRAY SUPPORTS

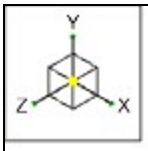
Utility Type	Span #1 (ft)	Span #2 (ft)	Depth of Tray (in)	Width of Tray (in)	Empty Weight (plf)	Weight Full (plf)	Tributary Length (ft)	Empty DL (kips) / Conduit	Total DL (full) (kips)	Cable Load (kips)	Cable Load @ Nodes	$D_c = (d^2+b_t^2)^{0.5}$ = (in)	$A_i = \pi t_d(D_c+t_d)$ = (in^2)	$w_{ice} = A_i\gamma_{ice}$ = (klf)	Ice at Support (kips)	Ground Snow Load (psf)	Snow at Support (kips)	F (kips/ft)	WL @ Support (kips)	E-W Cs Seismic Factor	E-W Seismic Load (kips)	N-S Cs Seismic Factor	N-S Seismic Load (kips)	Cs Vertical Seismic Factor	Vertical Seismic Load @ Support (kips)
6" Cable Tray	8.00	7.00	5	6	3.42	11	7.5	0.026	0.083	0.057	0.057	7.81	69.90	0.0272	0.204	11	0.495	0.011	0.086	0.590	0.049	0.885	0.073	0.118	0.010
12" Cable Tray	8.00	7.00	5	12	3.71	20	7.5	0.028	0.150	0.122	0.122	13.00	106.08	0.0413	0.309	11	0.990	0.011	0.086	0.590	0.089	0.885	0.133	0.118	0.018

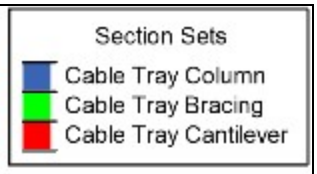
height, z =	10	ft
$f_z = (z/33)^{0.10}$ =	0.887	
t =	2.00	in
K_{zt} =	1.0	
I_i =	1.25	
$t_d = tI_if_z(K_{zt})^{0.35}$ =	2.22	
γ_{ice} =	56	lb/ft^3
Wind Speed =	107	mph
q =	24.78	psf
G =	0.85	
Cf =	1.3	
Kz =	0.85	
N-S Cs =	0.885	
E-W Cs =	0.590	
Vertical Cs =	0.118	

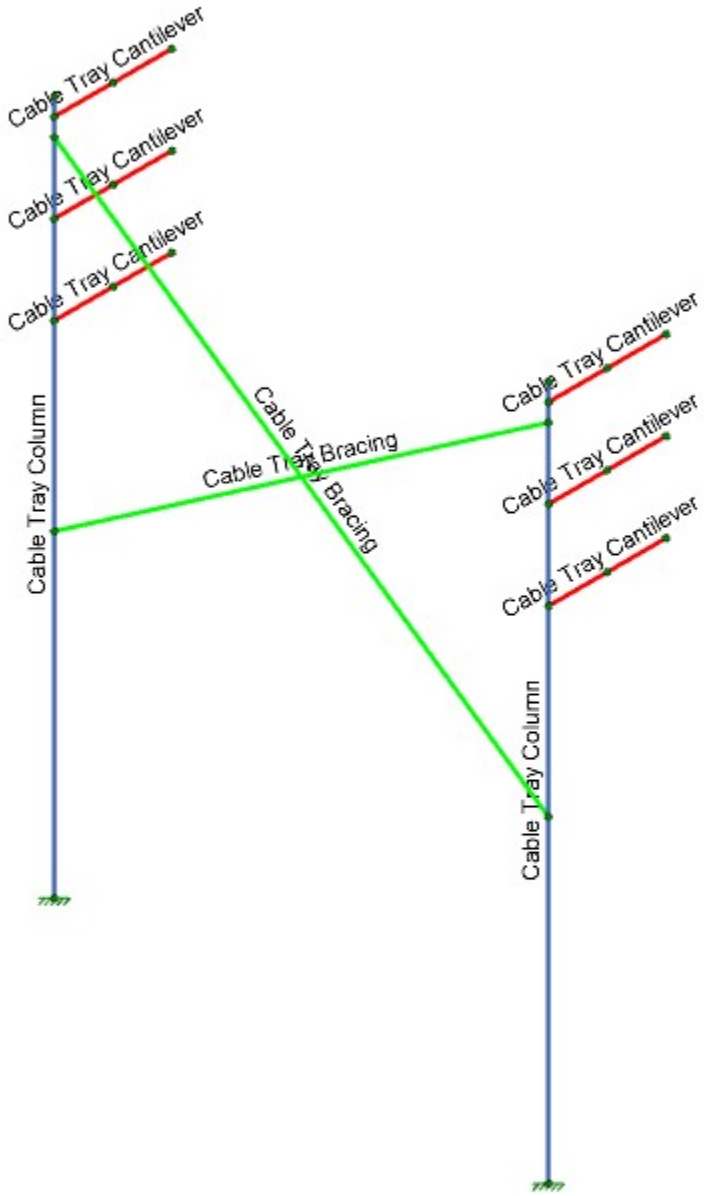




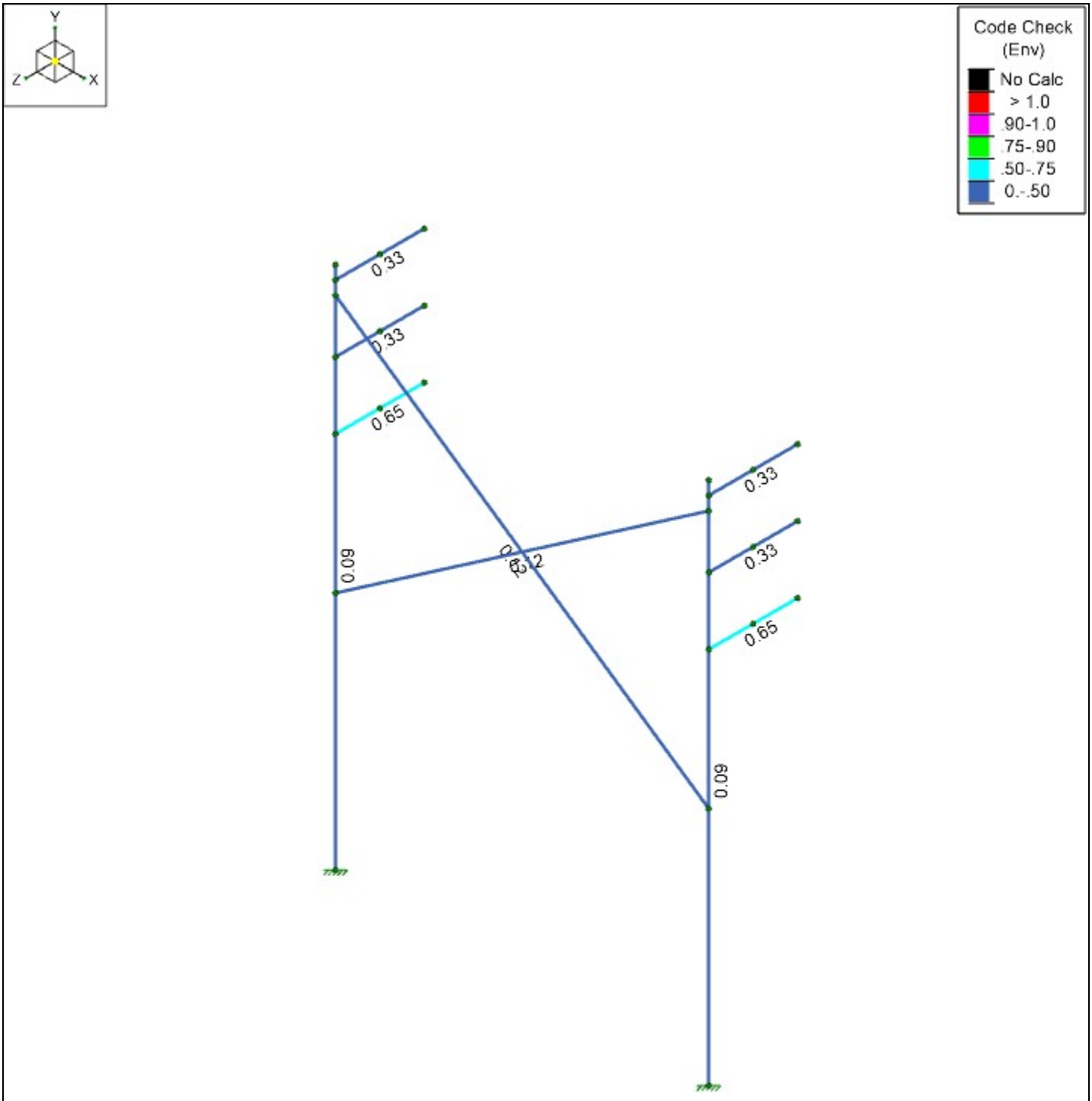
RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Electrical Racks - Long and Short	SK-1
	MCS		Dec 04, 2023 at 07:32 AM
	153929		Cable Tray Support.r3d







IRISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Electrical Racks - Long and Short	SK-2
	MCS		Dec 04, 2023 at 07:34 AM
	153929		Cable Tray Support.r3d



Member Code Checks Displayed (Enveloped)

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Electrical Racks - Long and Short	SK-3
	MCS		Dec 04, 2023 at 07:35 AM
	153929		Cable Tray Support.r3d

Model Settings

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Nodal

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI S100-12: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-15 / SDPWS-15 ASD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	ACI 530-13: ASD
Aluminum	AA ADM1-15: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16

Model Settings (Continued)

Risk Category	IV
Drift Cat	Other
Base Elevation (ft)	0
Include the weight of the structure in base shear calcs	Yes
S_1 (g)	0.376
SD_1 (g)	0.739
SD_S (g)	0.59
T_L (sec)	16
T Z (sec)	
T X (sec)	
C_tZ	0.02
C_tX	0.02
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	1.5
R X	1
Ω_0Z	1
Ω_0X	1
C_dZ	1.5
C_dX	1
ρ Z	1
ρ X	1

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N67	250	118	500	
2	N76	250	0	500	
3	N78	250	54	500	
4	N55	250	112	500	
5	N60	334	112	500	
6	N61	334	54	500	
7	N63	334	0	500	
8	N68	334	118	500	
9	N69	250	115	500	
10	N70	250	115	480	
11	N71	250	100	500	
12	N72	250	100	480	
13	N73	250	85	500	
14	N74	250	85	480	
15	N75	334	115	480	
16	N77	334	85	480	
17	N79	334	100	480	
18	N80	334	100	500	
19	N81	334	115	500	
20	N82	334	85	500	
21	N83	250	115	490	
22	N84	250	100	490	
23	N85	250	85	490	
24	N86	334	100	490	
25	N87	334	115	490	
26	N88	334	85	490	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N76	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N63	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	A500 Gr.C Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Cable Tray Column	W8X31	Column	Wide Flange	A1085	Typical	9.13	37.1	110	0.536
2	Cable Tray Bracing	L3X3X4	VBrace	Single Angle	A572 Gr.50	Typical	1.44	1.23	1.23	0.031
3	Cable Tray Cantilever	L3X3X4	Beam	Single Angle	A572 Gr.50	Typical	1.44	1.23	1.23	0.031

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M33	N76	N67	90	Cable Tray Column	Column	Wide Flange	A1085	Typical
2	M28	N63	N68	90	Cable Tray Column	Column	Wide Flange	A1085	Typical
3	M29	N55	N61	180	Cable Tray Bracing	VBrace	Single Angle	A572 Gr.50	Typical
4	M31	N60	N78	90	Cable Tray Bracing	VBrace	Single Angle	A572 Gr.50	Typical
5	M34	N69	N70		Cable Tray Cantilever	Beam	Single Angle	A572 Gr.50	Typical
6	M35	N71	N72		Cable Tray Cantilever	Beam	Single Angle	A572 Gr.50	Typical
7	M36	N73	N74		Cable Tray Cantilever	Beam	Single Angle	A572 Gr.50	Typical
8	M37	N80	N79		Cable Tray Cantilever	Beam	Single Angle	A572 Gr.50	Typical
9	M38	N81	N75		Cable Tray Cantilever	Beam	Single Angle	A572 Gr.50	Typical
10	M39	N82	N77		Cable Tray Cantilever	Beam	Single Angle	A572 Gr.50	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
1	M33	Cable Tray Column	118	Lbyy	N/A	N/A	Lateral
2	M28	Cable Tray Column	118	Lbyy	N/A	N/A	Lateral
3	M29	Cable Tray Bracing	102.078	Lbyy	N/A	N/A	Lateral
4	M31	Cable Tray Bracing	102.078	Lbyy	N/A	N/A	Lateral
5	M34	Cable Tray Cantilever	20	Lbyy	N/A	N/A	Lateral
6	M35	Cable Tray Cantilever	20	Lbyy	N/A	N/A	Lateral
7	M36	Cable Tray Cantilever	20	Lbyy	N/A	N/A	Lateral
8	M37	Cable Tray Cantilever	20	Lbyy	N/A	N/A	Lateral
9	M38	Cable Tray Cantilever	20	Lbyy	N/A	N/A	Lateral
10	M39	Cable Tray Cantilever	20	Lbyy	N/A	N/A	Lateral

Design Size and Code Check Parameters

	Label	Max Axial/Bending Chk	Max Shear Chk
1	Typical	1	1
2	Wall Footing	1	1

Deflection Design

	Label	LC	Ratio	LC	Ratio	LC	Ratio
1	Typical	73	240	74	240	75	240
2	Wall Footing	None	N/A	None	N/A	None	N/A

Node Loads and Enforced Displacements (BLC 2 : Dead Load)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
1	N85	L	Y	-0.15
2	N88	L	Y	-0.15
3	N84	L	Y	-0.083
4	N83	L	Y	-0.083
5	N86	L	Y	-0.083
6	N87	L	Y	-0.083

Node Loads and Enforced Displacements (BLC 4 : Wind Z)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
1	N83	L	Z	0.086
2	N84	L	Z	0.086
3	N85	L	Z	0.086

Node Loads and Enforced Displacements (BLC 4 : Wind Z) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
4	N87	L	Z	0.086
5	N86	L	Z	0.086
6	N88	L	Z	0.086

Node Loads and Enforced Displacements (BLC 5 : Seismic X)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
1	N86	L	X	0.073
2	N87	L	X	0.073
3	N83	L	X	0.073
4	N84	L	X	0.073
5	N85	L	X	0.133
6	N88	L	X	0.133

Node Loads and Enforced Displacements (BLC 6 : Seismic Z)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
1	N83	L	Z	0.049
2	N87	L	Z	0.049
3	N86	L	Z	0.049
4	N84	L	Z	0.049
5	N85	L	Z	0.089
6	N88	L	Z	0.089

Node Loads and Enforced Displacements (BLC 8 : Ice Load)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
1	N83	L	Y	-0.204
2	N84	L	Y	-0.204
3	N87	L	Y	-0.204
4	N86	L	Y	-0.204
5	N85	L	Y	-0.309
6	N88	L	Y	-0.309

Node Loads and Enforced Displacements (BLC 9 : Snow Load)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/in, k*s²*in)]
1	N83	L	Y	-0.495
2	N84	L	Y	-0.495
3	N87	L	Y	-0.495
4	N86	L	Y	-0.495
5	N85	L	Y	-0.99
6	N88	L	Y	-0.99

Member Distributed Loads

No Data to Print...

Member Area Loads

No Data to Print...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal
1	Self Weight	DL		-1		
2	Dead Load	DL				6
3	Wind X	WLX				
4	Wind Z	WLZ				6
5	Seismic X	ELX	0.59			6
6	Seismic Z	ELZ			0.885	6
7	Live Load	LL				
8	Ice Load	OL1				6
9	Snow Load	SL				6

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	LRFD Load Combinations												
2	----------												
3	Gravity Combinations												
4	ASCE 7-16 1	Yes	Y	DL	1.4								
5													
6	ASCE 7-16 2(a)	Yes	Y	DL	1.2								
7	ASCE 7-16 2(b)	Yes	Y	DL	1.2			SL	0.5				
8	ASCE 7-16 2(d) w/ ice	Yes	Y	DL	1.2			OL1	0.2	SL	0.5		
9													
10	Lateral Combinations												
11	ASCE 7-16 3(b) i	Yes	Y	DL	1.2			WLX	0.5				
12	ASCE 7-16 3(b) ii	Yes	Y	DL	1.2			WLZ	0.5				
13	ASCE 7-16 3(b) i reversible	Yes	Y	DL	1.2			WLX	-0.5				
14	ASCE 7-16 3(b) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5				
15	ASCE 7-16 3(c)	Yes	Y	DL	1.2	SL	1.6						
16	ASCE 7-16 3(c) i	Yes	Y	DL	1.2	SL	1.6	WLX	0.5				
17	ASCE 7-16 3(c) ii	Yes	Y	DL	1.2	SL	1.6	WLZ	0.5				
18	ASCE 7-16 3(c) i reversible	Yes	Y	DL	1.2	SL	1.6	WLX	-0.5				
19	ASCE 7-16 3(c) ii reversible	Yes	Y	DL	1.2	SL	1.6	WLZ	-0.5				
20	ASCE 7-16 3(d) i	Yes	Y	DL	1.2			WLX	0.5				
21	ASCE 7-16 3(d) ii	Yes	Y	DL	1.2			WLZ	0.5				
22	ASCE 7-16 3(d) i reversible	Yes	Y	DL	1.2			WLX	-0.5				
23	ASCE 7-16 3(d) ii reversible	Yes	Y	DL	1.2			WLZ	-0.5				
24													
25	ASCE 7-16 4(a) i	Yes	Y	DL	1.2	WLX	1						
26	ASCE 7-16 4(a) ii	Yes	Y	DL	1.2	WLZ	1						
27	ASCE 7-16 4(a) i reversible	Yes	Y	DL	1.2	WLX	-1						
28	ASCE 7-16 4(a) ii reversible	Yes	Y	DL	1.2	WLZ	-1						
29	ASCE 7-16 4(b) i	Yes	Y	DL	1.2	WLX	1					SL	0.5
30	ASCE 7-16 4(b) ii	Yes	Y	DL	1.2	WLZ	1					SL	0.5
31	ASCE 7-16 4(b) i reversible	Yes	Y	DL	1.2	WLX	-1					SL	0.5
32	ASCE 7-16 4(b) ii reversible	Yes	Y	DL	1.2	WLZ	-1					SL	0.5
33	ASCE 7-16 4(d) i w/ ice	Yes	Y	DL	1.2	OL1	1	WLX	0.077			SL	0.5
34	ASCE 7-16 4(d) ii w/ ice	Yes	Y	DL	1.2	OL1	1	WLZ	0.077			SL	0.5
35	ASCE 7-16 4(d) i w/ ice, reversible	Yes	Y	DL	1.2	OL1	1	WLX	-0.077			SL	0.5
36	ASCE 7-16 4(d) ii w/ ice, reversible	Yes	Y	DL	1.2	OL1	1	WLZ	-0.077			SL	0.5
37	ASCE 7-16 4(e) i w/ ice	Yes	Y	DL	1.2	OL1	1						
38	ASCE 7-16 4(e) ii w/ ice	Yes	Y	DL	1.2	OL1	1						
39	ASCE 7-16 4(e) i w/ ice, reversible	Yes	Y	DL	1.2	OL1	1						
40	ASCE 7-16 4(e) ii w/ ice, reversible	Yes	Y	DL	1.2	OL1	1						
41													
42	ASCE 7-16 5 i	Yes	Y	DL	0.9	WLX	1						

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
43	ASCE 7-16 5 ii	Yes	Y	DL	0.9	WLZ	1						
44	ASCE 7-16 5 i reversible	Yes	Y	DL	0.9	WLX	-1						
45	ASCE 7-16 5 ii reversible	Yes	Y	DL	0.9	WLZ	-1						
46	ASCE 7-16 5 i w/ ice	Yes	Y	DL	0.9	OL1	1	WLX	0.077				
47	ASCE 7-16 5 ii w/ ice	Yes	Y	DL	0.9	OL1	1	WLZ	0.077				
48	ASCE 7-16 5 i w/ ice, reversible	Yes	Y	DL	0.9	OL1	1	WLX	-0.077				
49	ASCE 7-16 5 ii w/ ice, reversible	Yes	Y	DL	0.9	OL1	1	WLZ	-0.077				
50													
51	ASCE 7-16 6 i	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	1			SL	0.2
52	ASCE 7-16 6 ii	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	1			SL	0.2
53	ASCE 7-16 6 i reversible	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	-1			SL	0.2
54	ASCE 7-16 6 ii reversible	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	-1			SL	0.2
55													
56	ASCE 7-16 7 i	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	1				
57	ASCE 7-16 7 ii	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	1				
58	ASCE 7-16 7 i reversible	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	-1				
59	ASCE 7-16 7 ii reversible	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	-1				
60													
61	---Overstrength Combos---												
62	ASCE 7-16 6 I (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1			SL	0.2
63	ASCE 7-16 6 ii (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1			SL	0.2
64	ASCE 7-16 6 i reversible (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1			SL	0.2
65	ASCE 7-16 6 ii reversible (os)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1			SL	0.2
66													
67	ASCE 7-16 7 I (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1				
68	ASCE 7-16 7 ii (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1				
69	ASCE 7-16 7 i reversible (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1				
70	ASCE 7-16 7 ii reversible (os)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1				
71													
72	Deflection Combinations												
73	IBC 2021 2 - Snow Load	Yes	Y	SL	1								
74	IBC 2021 2 - Wind Load (X)	Yes	Y	WLX	1								
75	IBC 2021 2 - Wind Load (Z)	Yes	Y	WLZ	1								
76	IBC 2021 3 - Dead + Live Load	Yes	Y	DL	1								

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	LRFD Load Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	----------		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Gravity Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	ASCE 7-16 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	ASCE 7-16 2(a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	ASCE 7-16 2(b)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	ASCE 7-16 2(d) w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Lateral Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	ASCE 7-16 3(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	ASCE 7-16 3(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	ASCE 7-16 3(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	ASCE 7-16 3(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	ASCE 7-16 3(c)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	ASCE 7-16 3(c) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	ASCE 7-16 3(c) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	ASCE 7-16 3(c) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
19	ASCE 7-16 3(c) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	ASCE 7-16 3(d) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	ASCE 7-16 3(d) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	ASCE 7-16 3(d) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	ASCE 7-16 3(d) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	ASCE 7-16 4(a) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	ASCE 7-16 4(a) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	ASCE 7-16 4(a) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
28	ASCE 7-16 4(a) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	ASCE 7-16 4(b) i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	ASCE 7-16 4(b) ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	ASCE 7-16 4(b) i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	ASCE 7-16 4(b) ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
33	ASCE 7-16 4(d) i w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34	ASCE 7-16 4(d) ii w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	ASCE 7-16 4(d) i w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	ASCE 7-16 4(d) ii w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37	ASCE 7-16 4(e) i w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38	ASCE 7-16 4(e) ii w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
39	ASCE 7-16 4(e) i w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40	ASCE 7-16 4(e) ii w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
42	ASCE 7-16 5 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43	ASCE 7-16 5 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	ASCE 7-16 5 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	ASCE 7-16 5 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46	ASCE 7-16 5 i w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
47	ASCE 7-16 5 ii w/ ice		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48	ASCE 7-16 5 i w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
49	ASCE 7-16 5 ii w/ ice, reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
51	ASCE 7-16 6 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
52	ASCE 7-16 6 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
53	ASCE 7-16 6 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
54	ASCE 7-16 6 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
55			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
56	ASCE 7-16 7 i		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
57	ASCE 7-16 7 ii		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	ASCE 7-16 7 i reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
59	ASCE 7-16 7 ii reversible		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
60			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	---Overstrength Combos---		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62	ASCE 7-16 6 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	ASCE 7-16 6 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
64	ASCE 7-16 6 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
65	ASCE 7-16 6 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67	ASCE 7-16 7 I (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
68	ASCE 7-16 7 ii (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	ASCE 7-16 7 i reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	ASCE 7-16 7 ii reversible (os)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	Deflection Combinations		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73	IBC 2021 2 - Snow Load		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
74	IBC 2021 2 - Wind Load (X)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	IBC 2021 2 - Wind Load (Z)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
76	IBC 2021 3 - Dead + Live Load		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	N76	max	0.511	53	3.993	17	0.516	54	4.081	19	0.017	56	1.39	56
1		min	-0.491	56	-0.039	56	-0.516	52	-3.053	57	-0.018	53	-1.437	53
2	N63	max	0.491	58	3.993	19	0.516	59	4.081	19	0.018	51	1.437	51
3		min	-0.511	51	-0.039	58	-0.516	57	-3.053	57	-0.017	58	-1.39	58
4	Totals:	max	0.997	53	7.986	19	1.032	59						
5		min	-0.997	51	0	75	-1.032	52						

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
0	M33	W8X31	0.044	0	19	0.019	57.771	z	53	319.797	410.85	52.791	113.877	1.271	H1-1b
1	M28	W8X31	0.044	0	19	0.019	57.771	z	51	319.797	410.85	52.791	113.877	1.271	H1-1b
2	M29	L3X3X4	0.113	0	51	0.003	0	y	53	10.684	64.8	2.345	3.92	1.5	H2-1
3	M31	L3X3X4	0.113	0	53	0.003	0	z	51	10.684	64.8	2.345	3.92	1.5	H2-1
4	M34	L3X3X4	0.329	0	17	0.045	0	y	17	56.595	64.8	2.345	5.216	1.5	H2-1
5	M35	L3X3X4	0.329	0	17	0.045	0	y	17	56.595	64.8	2.345	5.216	1.5	H2-1
6	M36	L3X3X4	0.647	0	17	0.088	0	y	17	56.595	64.8	2.345	5.216	1.5	H2-1
7	M37	L3X3X4	0.329	0	17	0.045	0	y	17	56.595	64.8	2.345	5.216	1.5	H2-1
8	M38	L3X3X4	0.329	0	17	0.045	0	y	17	56.595	64.8	2.345	5.216	1.5	H2-1
9	M39	L3X3X4	0.647	0	17	0.088	0	y	17	56.595	64.8	2.345	5.216	1.5	H2-1

Envelope Node Reactions - Overstrength or Capacity Limit

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	N76	max	0.511	64*	1.88	64*	0.516	65*	3.983	65*	0.017	67*	1.39	67*
1		min	-0.491	67*	-0.039	67*	-0.516	63*	-3.053	68*	-0.018	64*	-1.437	64*
2	N63	max	0.491	69*	1.88	62*	0.516	70*	3.983	65*	0.018	62*	1.437	62*
3		min	-0.511	62*	-0.039	69*	-0.516	68*	-3.053	68*	-0.017	69*	-1.39	69*
4	Totals:	max	0.997	64*	2.605	62*	1.032	70*						
5		min	-0.997	62*	1.076	69*	-1.032	63*						

Envelope Beam Deflection Checks

	Beam	Design Rule	Span	Defl [in]	Ratio	LC	Defl [in]	Ratio	LC	Defl [in]	Ratio	LC
0	M34	Typical	1	-0.023	1719	73(SL)	0	NC	74(WLX)	2.104e-6	NC	75(WLZ)
1	M35	Typical	1	-0.023	1719	73(SL)	0	NC	74(WLX)	2.098e-6	NC	75(WLZ)
2	M36	Typical	1	-0.047	859	73(SL)	0	NC	74(WLX)	2.049e-6	NC	75(WLZ)
3	M37	Typical	1	-0.023	1719	73(SL)	0	NC	74(WLX)	2.02e-6	NC	75(WLZ)
4	M38	Typical	1	-0.023	1719	73(SL)	0	NC	74(WLX)	2.045e-6	NC	75(WLZ)
5	M39	Typical	1	-0.047	859	73(SL)	0	NC	74(WLX)	1.946e-6	NC	75(WLZ)

Warning Log

No Data to Print...

Company:	Burns & McDonnell	Page:	1
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

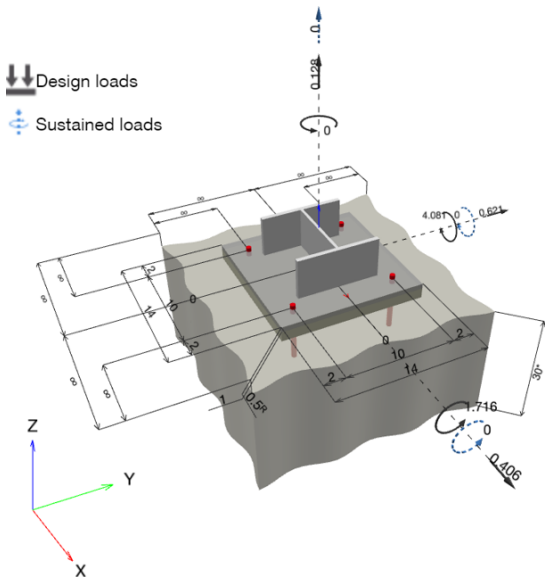
Specifier's comments:

1 Input data

Anchor type and diameter:	**HIT-HY 200 V3 + HAS-R 304/316 SS 1/2**
Item number:	2045003 HAS-R 316 SS 1/2"x6 1/2" (element) / 2334276 HIT-HY 200-R V3 (adhesive)
Effective embedment depth:	$h_{ef,act}$ = 4.000 in. ($h_{ef,limit}$ = - in.)
Material:	ASTM F 593
Evaluation Service Report:	ESR-4868
Issued I Valid:	11/1/2022 | 11/1/2024
Proof:	Design Method ACI 318-19 / Chem
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; e_b = 1.000 in.; t = 0.500 in.
	Hilti Grout: CB-G EG, epoxy, $f_{c,Grout}$ = 14,939 psi
Anchor plate[R]:	l_x x l_y x t = 14.000 in. x 14.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	W shape (AISC), W8X31; (L x W x T x FT) = 8.000 in. x 8.000 in. x 0.285 in. x 0.435 in.
Base material:	cracked concrete, Custom, f_c' = 4,500 psi; h = 30.000 in., Temp. short/long: 32/32 °F
Installation:	**hammer drilled hole, Installation condition: Dry**
Reinforcement:	tension: not present, shear: not present; no supplemental splitting reinforcement present
	edge reinforcement: none or < No. 4 bar

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



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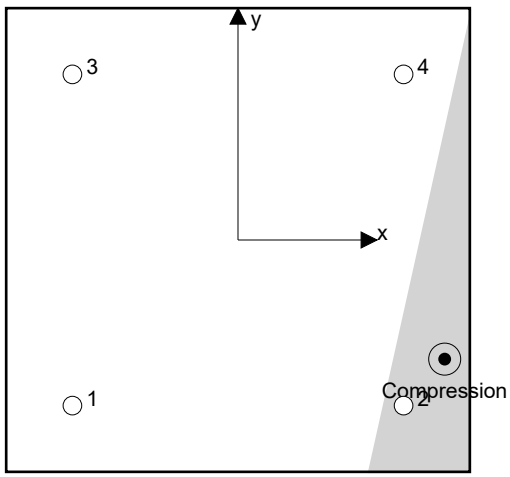
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

1.1 Design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Combination 1	N = 0.128; V_x = 0.406; V_y = 0.621; M_x = 1.71600; M_y = 4.08100; M_z = 0.00000;	no	62

2 Load case/Resulting anchor forces



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	1.962	0.185	0.101	0.155
2	0.000	0.185	0.101	0.155
3	2.427	0.185	0.101	0.155
4	0.342	0.185	0.101	0.155

max. concrete compressive strain:	0.15 [‰]
max. concrete compressive stress:	669 [psi]
resulting tension force in (x/y)=(0.000/0.000):	0.000 [kip]
resulting compression force in (x/y)=(13.241/3.403):	4.604 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	2.427	9.223	27	OK
Bond Strength**	4.732	7.725	62	OK
Sustained Tension Load Bond Strength*	N/A	N/A	N/A	N/A
Concrete Breakout Failure**	4.732	9.703	49	OK

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

3.1 Steel Strength

N_{sa} = ESR value refer to ICC-ES ESR-4868
$\phi\ N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.14	100,000

Calculations

N_{sa} [kip]
14.190

Results

N_{sa} [kip]	ϕ_{steel}	$\phi\ N_{sa}$ [kip]	N_{ua} [kip]
14.190	0.650	9.223	2.427

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

3.2 Bond Strength

$N_{ag} = \left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na}\ \psi_{ec2,Na}\ \psi_{ed,Na}\ \psi_{cp,Na}\ N_{ba}$ — ACI 318-19 Eq. (17.6.5.1b)

$\phi\ N_{ag} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2\ c_{Na})^2$ — ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10\ d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ — ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3 \left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ — ACI 318-19 Eq. (17.6.5.2.1)

Variables

$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\alpha_{overhead}$	$\tau_{k,c}$ [psi]
2,354	0.500	4.000	∞	1.000	1,204

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
2.610	0.814	7.032	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
7.282	503.39	212.11	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
0.736	0.899	1.000	7.563

Results

N_{ag} [kip]	ϕ_{bond}	$\phi\ N_{ag}$ [kip]	N_{ua} [kip]
11.884	0.650	7.725	4.732

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N}\ \psi_{ed,N}\ \psi_{c,N}\ \psi_{cp,N}\ N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi\ N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9\ h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2\ e'_N}{3\ h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3\left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c\ \lambda_a\ \sqrt{f'_c}\ h_{ef}^{1.5}$ — ACI 318-19 Eq. (17.6.2.2.1)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
4.000	2.610	0.814	∞	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
7.032	17	1.000	4,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
384.00	144.00	0.697	0.881	1.000	1.000	9.123

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi\ N_{cbg}$ [kip]	N_{ua} [kip]
14.927	0.650	9.703	4.732

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	0.185	4.087	5	OK
Steel failure (with lever arm)*	0.185	0.533	35	OK
Pryout Strength (Bond Strength controls)**	0.742	30.121	3	OK
Concrete edge failure in direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

V_{sa} = ESR value refer to ICC-ES ESR-4868
ϕ $V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.14	100,000

Calculations

V_{sa} [kip]
8.515

Results

V_{sa} [kip]	ϕ_{steel}	ϕ_{eb}	ϕ V_{sa} [kip]	V_{ua} [kip]
8.515	0.600	0.800	4.087	0.185

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

4.2 Steel failure (with lever arm)

V_s^M	$= \frac{\alpha_M \cdot M_s}{L_b}$	bending equation for stand-off
M_s	$= M_s^0 \left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	resultant flexural resistance of anchor
M_s^0	$= (1.2)\ (S)\ (f_{u,min})$	characteristic flexural resistance of anchor
$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$		reduction for tensile force acting simultaneously with a shear force on the anchor
S	$= \frac{\pi (d)^3}{32}$	elastic section modulus of anchor bolt at concrete surface
L_b	$= z + (n)(d_0)$	internal lever arm adjusted for spalling of the surface concrete
ϕV_s^M	$\geq V_{ua}$	ACI 318-19 Table 17.5.2

Variables

α_M	$f_{u,min}$ [psi]	N_{ua} [kip]	ϕN_{sa} [kip]	z [in.]	n	d_0 [in.]
2.00	100,000	2.427	9.223	1.250	0.500	0.500

Calculations

M_s^0 [ft.kip]	$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	M_s [ft.kip]	L_b [in.]
0.07538	0.737	0.05555	1.500

Results

V_s^M [kip]	ϕ_{steel}	ϕV_s^M [kip]	V_{ua} [kip]
0.889	0.600	0.533	0.185

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

4.3 Pryout Strength (Bond Strength controls)

$V_{cpg} = k_{cp}\left[\left(\frac{A_{Na}}{A_{Na0}}\right) \psi_{ec1,Na}\ \psi_{ec2,Na}\ \psi_{ed,Na}\ \psi_{cp,Na}\ N_{ba}\right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi\ V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Na} see ACI 318-19, Section 17.6.5.1, Fig. R 17.6.5.1(b)

$A_{Na0} = (2\ c_{Na})^2$ ACI 318-19 Eq. (17.6.5.1.2a)

$c_{Na} = 10\ d_a \sqrt{\frac{\tau_{uncr}}{1100}}$ ACI 318-19 Eq. (17.6.5.1.2b)

$\psi_{ec,Na} = \left(\frac{1}{1 + \frac{e'_N}{c_{Na}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.3.1)

$\psi_{ed,Na} = 0.7 + 0.3\left(\frac{c_{a,min}}{c_{Na}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.4.1b)

$\psi_{cp,Na} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{c_{Na}}{c_{ac}}\right) \leq 1.0$ ACI 318-19 Eq. (17.6.5.5.1b)

$N_{ba} = \lambda_a \cdot \tau_{k,c} \cdot \pi \cdot d_a \cdot h_{ef}$ ACI 318-19 Eq. (17.6.5.2.1)

Variables

k_{cp}	$\alpha_{overhead}$	$\tau_{k,c,uncr}$ [psi]	d_a [in.]	h_{ef} [in.]	$c_{a,min}$ [in.]	$\tau_{k,c}$ [psi]
2	1.000	2,354	0.500	4.000	∞	1,204

$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	c_{ac} [in.]	λ_a
0.000	0.000	7.032	1.000

Calculations

c_{Na} [in.]	A_{Na} [in.^{2}]	A_{Na0} [in.^{2}]	$\psi_{ed,Na}$
7.282	603.39	212.11	1.000

$\psi_{ec1,Na}$	$\psi_{ec2,Na}$	$\psi_{cp,Na}$	N_{ba} [kip]
1.000	1.000	1.000	7.563

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi\ V_{cpg}$ [kip]	V_{ua} [kip]
43.030	0.700	30.121	0.742

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.613	0.348	5/3	62	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- ACI 318 does not specifically address anchor bending when a stand-off condition exists. PROFIS Engineering calculates a shear load corresponding to anchor bending when stand-off exists and includes the results as a shear Design Strength!
- Design Strengths of adhesive anchor systems are influenced by the cleaning method. Refer to the INSTRUCTIONS FOR USE given in the Evaluation Service Report for cleaning and installation instructions.
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- Installation of Hilti adhesive anchor systems shall be performed by personnel trained to install Hilti adhesive anchors. Reference ACI 318-19, Section 26.7.

Fastening meets the design criteria!

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Company:	Burns & McDonnell	Page:	10
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

7 Installation data

Profile: W shape (AISC), W8X31; (L x W x T x FT) = 8.000 in. x 8.000 in. x 0.285 in. x 0.435 in.

Hole diameter in the fixture: d_f = 0.562 in.

Plate thickness (input): 0.500 in.

Recommended plate thickness: not calculated

Drilling method: Hammer drilled

Cleaning: Compressed air cleaning of the drilled hole according to instructions for use is required

Anchor type and diameter: HIT-HY 200 V3 + HAS-R 304/316 SS 1/2

Item number: 2045003 HAS-R 316 SS 1/2"x6 1/2" (element) / 2334276 HIT-HY 200-R V3 (adhesive)

Maximum installation torque: 0.03000 ft.kip

Hole diameter in the base material: 0.562 in.

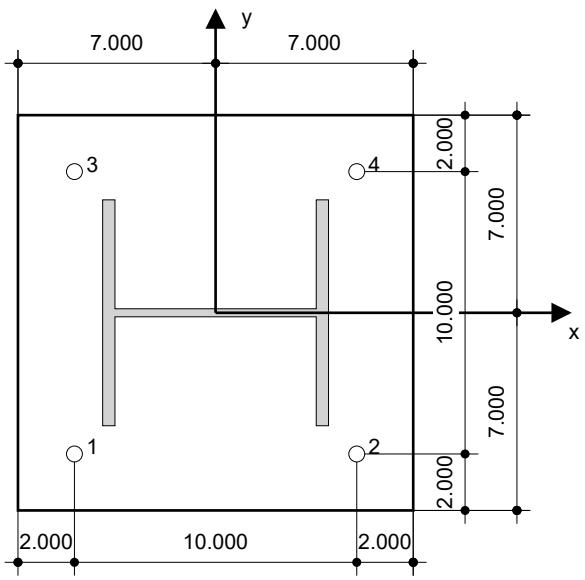
Hole depth in the base material: 4.000 in.

Minimum thickness of the base material: 5.250 in.

1/2 Hilti HAS Stainless steel threaded rod with Hilti HIT-HY 200 V3 Safe Set System

7.1 Recommended accessories

Drilling	Cleaning	Setting
• Suitable Rotary Hammer • Properly sized drill bit	• Compressed air with required accessories to blow from the bottom of the hole • Proper diameter wire brush	• Dispenser including cassette and mixer • Torque wrench



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	-5.000	-5.000	-	-	-	-
2	5.000	-5.000	-	-	-	-
3	-5.000	5.000	-	-	-	-
4	5.000	5.000	-	-	-	-

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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Company:	Burns & McDonnell	Page:	11
Address:	9450 Ward Parkway	Specifier:	Michael Smith
Phone I Fax:	9139480040 |	E-Mail:	mcsmith2@burnsmcd.com
Design:	Cable Tray Anchor Design	Date:	12/4/2023
Fastening point:			

8 Remarks; Your Cooperation Duties

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Light Poles

LIGHT POLE PRODUCT DATA

From: Little, Jacob <jlittle@burnsmcd.com>
Sent: Thursday, November 16, 2023 11:37 AM
To: Renshaw, Timothy <trenshaw@burnsmcd.com>; Kral, Adam <akral@burnsmcd.com>
Cc: Jesberg, Samuel N (Sam) <snjesberg@burnsmcd.com>; Washington, Justin A <jawashington@burnsmcd.com>
Subject: RE: 153929 - PDX Phase 2 - Light Poles

Tim/Adam,

I've been designing the lighting calcs with 30' poles (32'-6" above grade with pole foundation). This is the first time I'm seeing what manufacturer of poles were used for phase 1. See below for light pole and fixture info I've been using so far.

Attached:

WiLL_Steel_Pole.pdf = light pole that I was assuming could be spec'd. I'm flexible though. The light pole used for phase 1 is similar and I don't see any reason why they couldn't use that pole.
A5_GE EVOLVE LED AREA LIGHT.pdf = "normal" area light fixture used for roadway lighting (not a flood light)
A1-A2-X1-X2-X3_Champ FMV Data Sheet.pdf = flood light
A3-X4_Champ VMV Data Sheet.pdf = stanchion mounted light fixture for stair and platform lighting.
V-Spring_Stanchion_Pole.pdf = stanchion pole

Thanks,
Jacob

EPA Loading Guide (Commercial Design Criteria)

Base Model	80mph w/ 1.3 Gust		90mph w/ 1.3 Gust		100mph w/ 1.3 Gust		110mph w/ 1.3 Gust		120mph w/ 1.3 Gust		130mph w/ 1.3 Gust		140mph w/ 1.3 Gust		150mph w/ 1.3 Gust	
	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)
VS-RTSA-20-5931-11-AB-FP	19.3	482	15.1	377	12.2	305	10.5	262	8.8	220	7.4	185	6.3	157	5.5	138
VS-RTSA-20-6537-11-AB-FP	24.2	605	19.3	482	15.6	390	13.5	335	11.2	280	9.5	238	8.1	203	6.9	173
VS-RTSA-25-5924-11-AB-FP	12.5	312	9.9	247	8	200	6.9	173	5.7	143	4.8	119	4.1	103	3.5	88
VS-RTSA-25-7035-11-AB-FP	20.3	507	16.2	405	13.1	327	11.2	280	9.4	235	7.8	194	6.7	168	5.7	143
VS-RTSA-25-7035-07-AB-FP	30.5	760	24	625	19.8	495	16.5	413	13.9	348	11.7	293	10.0	250	8.5	213
VS-RTSA-30-6624-11-AB-FP	11.7	292	9.3	232	7.5	187	6.5	163	5.4	135	4.6	115	3.9	98	3.3	83
VS-RTSA-30-8038-11-AB-FP	18.9	473	14.9	373	12	300	10.0	250	8.4	210	6.8	168	5.7	143	4.7	118
VS-RTSA-30-8038-07-AB-FP	33.5	838	27	675	22	550	18.4	460	15.3	381	13.0	325	11.0	275	9.3	233
VS-RTSA-35-7324-11-AB-FP	11.2	280	8.9	222	7.1	177	6.3	156	5.3	131	4.4	110	3.8	95	3.1	78
VS-RTSA-35-8536-11-AB-FP	18.9	472	15.1	377	12.2	305	10.5	263	8.7	218	7.2	180	5.9	148	4.8	120
VS-RTSA-35-9546-11-AB-FP	23.2	580	18.2	455	14.5	363	12.0	300	9.7	243	7.8	194	6.3	156	5.2	130
VS-RTSA-39-7824-11-AB-FP	10.7	267	8.5	212	6.6	165	5.7	143	4.5	113	3.7	93	2.9	73	2.3	58
VS-RTSA-39-9036-11-AB-FP	17.2	430	13.5	338	10.8	270	9.0	225	7.3	183	5.8	144	4.7	118	3.8	95
VS-RTSA-39-9036-07-AB-FP	28.5	715	23	575	19	475	15.8	394	13.2	330	10.8	269	9.0	225	7.7	193
VS-RTSA-45-1037-11-AB-FP	17.4	435	13.5	338	10.6	265	8.8	219	7.0	175	5.5	138	4.3	108	3.2	80
VS-RTSA-45-1037-07-AB-FP	28.5	715	23	575	19	475	16.0	400	13.3	333	11.0	275	9.0	225	7.4	185
VS-RTSA-45-1147-07-AB-FP	35.7	893	28	700	22.3	558	18.7	468	15.0	375	12.2	305	10.0	250	8.1	203
VS-RTSA-50-1030-11-AB-FP	13.2	330	10.6	265	8.3	208	6.9	173	5.4	135	4.1	103	3.1	78	2.2	55
VS-RTSA-50-1030-07-AB-FP	20.5	512	16.5	412	13.6	340	12.1	303	10.2	255	8.7	218	7.3	183	5.9	148
VS-RTSA-50-1140-07-AB-FP	29.9	748	23.5	588	18.6	465	15.6	390	12.5	313	10.0	250	8.0	200	6.5	163
VS-RTSA-50-1360-03-AB-FP	69.2	1730	55	1375	44.2	1105	26.2	655	21.1	528	17.0	425	14.0	350	11.4	285
VS-RTSA-50-1360-07-AB-FP	50.4	1260	39.7	992	31.4	785	36.0	900	29.8	745	24.6	615	20.4	510	17.0	425
VS-RTSA-55-1136-0711-AB-FP	21.6	540	17.7	442	14.7	367	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-55-1246-0711-AB-FP	32.2	805	25.9	647	21.1	527	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-55-1352-0507-AB-FP	43.8	1095	35	875	28.6	715	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-60-1240-0707-AB-FP	25.9	647	20.7	517	16.8	420	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-60-1345-0507-AB-FP	34	850	27.6	690	22.6	565	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-60-1348-0711-AB-FP	30.1	752	24.5	612	20.2	505	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-65-1343-0507-AB-FP	30.8	770	24.8	620	20.4	510	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-65-1343-0707-AB-FP	27.3	682	22	550	17.9	447	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-70-1336-0507-AB-FP	23.6	590	19.2	480	15.8	395	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VS-RTSA-70-1336-0707-AB-FP	20.6	515	16.7	417	13.7	342	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. The total combined EPA and weight of all fixtures, brackets, and other attachments mounting to a light pole cannot exceed the EPA and weight rating for a specified pole.
2. Standard EPA (Effective Projected Area) and weight values are based around standard commercial criteria (with 1.3 second gust factor) and AASHTO standards. **Specific light pole design standards are available from factory.**
3. Custom products, configurations, options, and accessories available from factory.
4. Satisfactory performance of light poles is dependent upon the structure being properly attached to a supporting foundation of adequate design.

"+" indicates a vibration dampener is standard.

MAX FIXTURE EPA & FIXTURE WEIGHT

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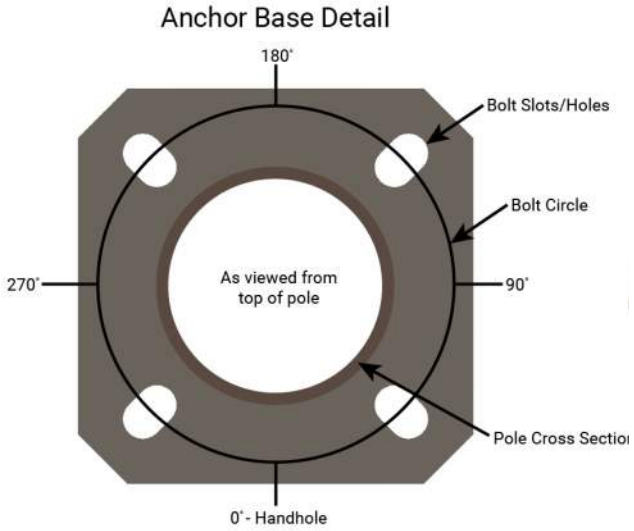
Designation & Dimensional Information

Base Model	Pole Dimensions					Base Plate		Anchor Bolts	
	Nominal Mounting Height	Top OD (in)	Base OD (in)	Wall Thick (ga)	Structural Weight (lb)	Bolt Circle Diameter (in)	Sq (in) x Thick (in)	Dia x Length x Hook (in)	Projection (in)
VS-RTSA-20-5931-11-AB-FP	20'-0"	3.1	5.9	11	140	8.5 - 9.5	10 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-20-6537-11-AB-FP	20'-0"	3.7	6.5	11	160	9.0 - 10.0	10.5 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-25-5924-11-AB-FP	25'-0"	2.4	5.9	11	155	8.5 - 9.5	10 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-25-7035-11-AB-FP	25'-0"	3.5	7	11	200	9.5 - 10.5	10.88 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-25-7035-07-AB-FP	25'-0"	3.5	7	7	280	9.5 - 10.5	10.88 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-RTSA-30-6624-11-AB-FP	30'-0"	2.4	6.6	11	200	9.0 - 10.0	10.5 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-30-8038-11-AB-FP	30'-0"	3.8	8	11	265	10.5 - 11.5	11.5 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-30-8038-07-AB-FP	30'-0"	3.8	8	7	380	10.5 - 11.5	11.5 x 1.25	1.25 x 42.00 x 6.00	4.75 - 5.25
VS-RTSA-35-7324-11-AB-FP	35'-0"	2.4	7.3	11	250	10.0 - 11.0	11.25 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-35-8536-11-AB-FP	35'-0"	3.6	8.5	11	315	11.0 - 12.0	12 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-RTSA-35-9546-11-AB-FP	35'-0"	4.6	9.5	11	370	12.5 - 13.5	13 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-RTSA-39-7824-11-AB-FP	39'-0"	2.4	7.82	11	285	10.5 - 11.5	11.5 x 0.875	1.00 x 36.00 x 4.00	3.88 - 4.38
VS-RTSA-39-9036-11-AB-FP	39'-0"	3.58	9	11	355	12.0 - 13.0	12.38 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-RTSA-39-9036-07-AB-FP	39'-0"	3.58	9	7	515	12.0 - 13.0	12.38 x 1.25	1.25 x 42.00 x 6.00	4.75 - 5.25
VS-RTSA-45-1037-11-AB-FP	45'-0"	3.7	10	11	450	13 - 14	14 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-RTSA-45-1037-07-AB-FP	45'-0"	3.7	10	7	650	13 - 14	14 x 1.25	1.25 x 42.00 x 6.00	4.75 - 5.25
VS-RTSA-45-1147-07-AB-FP	45'-0"	4.7	11	7	780	14.5 - 15.5	16.5 x 1.5	1.25 x 42.00 x 6.00	5 - 5.5
VS-RTSA-50-1030-11-AB-FP	50'-0"	3	10	11	475	13 - 14	14 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-RTSA-50-1030-07-AB-FP	50'-0"	3	10	7	680	13 - 14	14 x 1.25	1.25 x 42.00 x 6.00	4.75 - 5.25
VS-RTSA-50-1140-07-AB-FP	50'-0"	4	11	7	812	14.5 - 15.5	16.5 x 1.5	1.25 x 42.00 x 6.00	5 - 5.5
VS-RTSA-50-1360-03-AB-FP	50'-0"	6	13	3	1335	17.5	18.5 x 1.75	1.75 x 84.00 x 6.00	6.25 - 6.75
VS-RTSA-50-1360-07-AB-FP	50'-0"	6	13	7	1020	17	18 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-55-1136-0711-AB-FP	55'-0"	3.58	11	7 & 11	890	14.5 - 15.5	16.5 x 1.5	1.25 x 42.00 x 6.00	5 - 5.5
VS-RTSA-55-1246-0711-AB-FP	55'-0"	4.55	12	7 & 11	975	16	17 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-55-1352-0507-AB-FP	55'-0"	5.16	12.5	5 & 7	1225	16.5	17.5 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-60-1240-0707-AB-FP	60'-0"	4.01	12	7 & 7	1060	16	17 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-60-1345-0507-AB-FP	60'-0"	4.46	12.5	5 & 7	1275	16.5	17.5 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-60-1348-0711-AB-FP	60'-0"	4.83	13	7 & 11	1075	17	18 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-65-1343-0507-AB-FP	65'-0"	4.25	13	5 & 7	1400	17	18 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-65-1343-0707-AB-FP	65'-0"	4.25	13	7 & 7	1200	17	18 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-70-1336-0507-AB-FP	70'-0"	3.55	13	5 & 7	1440	17	18 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6
VS-RTSA-70-1336-0707-AB-FP	70'-0"	3.55	13	7 & 7	1270	17	18 x 1.5	1.50 x 54.00 x 6.00	5.5 - 6

POLE HEIGHT
POLE DIA
POLE WEIGHT
BOLT CIRCLE
BOLT SIZE

1. The total combined EPA and weight of all fixtures, brackets, and other attachments mounting to a light pole cannot exceed the EPA and weight rating for a specified pole.
2. Custom products, configurations, options, and accessories available from factory.
3. Satisfactory performance of light poles is dependent upon the structure being properly attached to a supporting foundation of adequate design.

"+" indicates a vibration dampener is standard.



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ASCE 72-21: Wind Load Determination

$ExposureCat := \text{“C”}$ Differences from ASCE 7-16

$h_{reveal} := 2.5\ ft$ Height of the foundation above ground surface

$h_{pole} := 30\ ft$ Height of the light pole above top of foundation

$z := h_{reveal} + h_{pole} = 32.5\ ft$

Velocity Pressure (Section 2.7.3)

$K_z := 1.04$ ASCE 7, Table 26.10-1

$K_{zt} := 1.0$ ASCE 7, Section 26.8.2

$K_d := 0.95$ ASCE 72-31, Table 2-1

$V := 107\ mph$ ASCE 7, Section 26.5

$$q_z := 0.00256 \cdot K_z \cdot K_d \cdot K_{zt} \cdot \left(\frac{V}{mph}\right)^2 \cdot psf = 29\ psf$$ ASCE 72-21, Eq. 2-1

Gust Factor

$G := 1.14$ ASCE 72-31, Section 2.7.5.1

Drag Coefficient

$PoleShape := \text{“Round”}$ ASCE 72-31, Table 2-2

$D := 6\ in$ Outside diameter for round cross sections, outside corner to corner width for multisided sections

$$C := \sqrt{K_z \cdot K_{zt}} \cdot V \cdot \frac{D}{mph \cdot ft} = 54.6$$ ASCE 72-31, Table 2-2 footnote

$C_d = 0.712$ Force coefficient from ASCE 72-31, Table 2-2

Design Pressures

$p_{pole} := q_z \cdot G \cdot C_d = 23.5\ psf$ ASCE 72-31, Eq. 2-3 (excluding As)

$p_t := q_z \cdot G = 33\ psf$ ASCE 72-31, Eq. 2-4 (excluding EPA)

Total Lateral Load

$A_s := h_{pole} \cdot D = 15\ ft^2$ Projected area normal to the wind of entire pole

$EPA_F := 15.3\ ft^2$ Effective Projected Area of Light Fixtures - From Cut Sheet

$W_{ASD_lp} := \left(\left(p_{pole} \cdot A_s\right) + \left(p_t \cdot EPA_F\right)\right) = 0.86\ kip$ Total horizontal load on support due to 0.6WL

$$M_{ASD_lp} := \left(\left(p_{pole} \cdot D \cdot \frac{h_{pole}^2}{2}\right) + \left(p_t \cdot EPA_F \cdot h_{pole}\right)\right) = 20.44\ ft \cdot kip$$ Total moment at support due to 0.6WL

LIGHT POLE FOUNDATION

REV 01/22 AHS

1. Design of a foundation for a lightpole.
2. Wind and seismic loads per ASCE 7-16.
3. Incorporates wind loads per ASCE 72-21.

INPUT:

w,wind =	29.50	psf	Lateral wind pressure on pole (LRFD)
c,EQ =	0.590		Seismic lateral force coefficient (1.0 EQ)
Afixture =	15.30	sf	Area of light fixture assembly (See Light Pole Cutsheet)
Dpole =	6.00	in	Diameter of lightpole (Avg of Top OD & Bot OD, See Light Pole Cutsheet)
Wfixture =	381	lbs	Weight of fixture assembly (See Light Pole Cutsheet)
Wpole =	380	lbs	Weight of pole (See Light Pole Cutsheet)
Hpole =	30.00	ft	Height of pole above base plate (See Light Pole Cutsheet)
H, ped =	2.50	ft	Height of foundation above grade
P,lateral =	0	lbs	Unfactored additional horizontal load on pole
Hlateral =	0	lbs	Height of additional horizontal load above base plate
Madd =	0	ft-lbs	Unfactored additional moment load on pole
f'c =	4500	psi	28-day concrete compressive strength

LOADING AT BASE OF POLE - UNFACTORED

Hand Calcs

Tot P,vert =	0.76	k	Total vertical load
EQ = c,EQ.Pvert =	0.45	k	Total horizontal load on support due to seismic
W = w,wind. (Afixture + Dpole.Hpole) =	0.89	k	Total horizontal load on support due to wind
M,EQ =	9.10	ft-k	Total moment at base due to seismic
M,wind =	20.18	ft-k	Total moment at base due to wind

ASCE 72-21 Wind Loads

W =	0.86	k	Total horizontal load on support due to wind
M,wind =	20.44	ft-k	Total moment at base of pole due to wind

RISA Inputs

Dead =	0.76	k	
V.wind =	0.89	k	
M.wind =	20.44	ft-k	
V.seismic =	0.45	k	
M.seismic =	9.10	ft-k	
Overtrength, Ω =	1.50		For steel and concrete poles per ASCE 7 Table 15.4-2

GEOMETRY OF ANCHOR BOLTS:

d, bc =	11.00	in	Bolt circle
Cc =	3.00	in	Clear cover to transverse reinf
d, pier =	24.00	in	Diameter of pier
	4		Size of shear reinforcement
	6		Size of longitudinal reinforcement
s, min =	1.5	in	Min spacing per ACI 318-19 Section 25.2.3
d1 =	7.75	in	Distance from center of pier to inside of long reinf
d2 =	5.5	in	Distance from center of pier to edge of bolt circle
s =	2.25	in	Space between edge of long reinf and edge of bolt circle

ADEQUATE SPACE B/T REINF & ANCHORS

FOUNDATION - SHEAR STRENGTH + MIN REINFORCEMENT

Mu = Mmax/(0.6 OR 0.7) =	34.07	ft-k
Vu = Vmax/(0.6 OR 0.7)=	1.49	kips

Min desired edge distance =	6	in	Center of anchor bolts to edge of pedestal
Min pier diameter =	23.00	in	Assuming circular anchor bolt layout
Dpier =	24.0	in	Trial Pier Diameter
ϕ =	0.85		

Ashear = 0.75 π D_{pier}^2/4 =	339.29	in^2	Assume shear x-sectional area = 0.75 Ag
Vc = 2$(f'c)^{0.5}$ Ashear =	45.52	kips	Concrete shear strength for members subjected to shear and flexure only
Vn = ϕ Vc =	38.69	kips	Nominal concrete shear strength
Vn > Vu?	**CONCRETE SHEAR STRENGTH IS ADEQUATE**		

Assume min total reinf =	0.5	%	ACI 318-19 R10.3.1.2
As,min =	2.26	in^2	
Vert Bar Size =	#6		
Vert Bar Qty =	6		4 bars min for rect/circular ties, 6 bars min for spiral (ACI 318-19 10.7.3.1)
As,vert =	2.65	in^2	= 0.59 %
Rho,prov > Rho,min?	**REINF PROVIDED MEETS MINIMUM REQ**		

SPcolumn ANALYSIS - FLEXURAL STRENGTH:

Per RISA Node Reactions: LRFD LOADS

Tot P,vert =	1.07	k
Tot M,max =	20.56	k

Per SpColumn:

ϕMn =	106.31	ft-k	Nominal pier flexural strength
			Compare to Mu = 20.56 ft-k <== **OK**
Tie Bars =	#4		
Max tie spacing = Smax =	10.38	in	Result per Detailing Requirements Calculations
Shear Reinf Spacing = S =	9	in	
S <= Smax?	**SHEAR SPACING IS ADEQUATE**		

USE 24-INCH DIAMETER PEDESTAL WITH
6 - #6 VERT AND #4 TIES @ 9 INCH MAX

LIGHT POLE RISA ANALYSIS

Model Settings

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Nodal

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI S100-12: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-15: ASD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	ACI 530-13: ASD
Aluminum	AA ADM1-15: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16

Model Settings (Continued)

Risk Category	IV
Drift Cat	Other
Base Elevation (ft)	0
Include the weight of the structure in base shear calcs	Yes
S_1 (g)	0.376
SD_1 (g)	0.739
SD_S (g)	0.59
T_L (sec)	8
T Z (sec)	
T X (sec)	
C_tZ	0.02
C_tX	0.02
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	1.5
R X	1.5
Ω_0Z	1.5
Ω_0X	1.5
C_dZ	1.5
C_dX	1.5
ρ Z	1.3
ρ X	1.3

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	EAST	0	0	0	
2	N15	0	0.125	0	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	EAST	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

General Section Sets

	Label	Shape	Type	Material	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	GEN1A	RE4X4	Beam	gen_Conc3NW	16	21.333	21.333	31.573
2	RIGID		None	RIGID_1	1e+6	1e+6	1e+6	1e+6

Node Loads and Enforced Displacements (BLC 2 : Dead Load)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N15	L	Y	-0.76

Node Loads and Enforced Displacements (BLC 3 : Wind X)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N15	L	X	0.89
2	N15	L	MZ	-20.44

Node Loads and Enforced Displacements (BLC 4 : Wind Z)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N15	L	Z	0.89
2	N15	L	MX	20.44

Node Loads and Enforced Displacements (BLC 5 : Seismic X)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N15	L	X	0.45
2	N15	L	MZ	-9.1

Node Loads and Enforced Displacements (BLC 6 : Seismic Z)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N15	L	Z	0.45
2	N15	L	MX	9.1

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
1	LRFD #1 - 1.4D	Yes	Y	DL	1.4				
2	LRFD #2 - 1.2D	Yes	Y	DL	1.2				
3	LRFD #3 - 1.2D + 0.5W	Yes	Y	DL	1.2	WLX	0.5		
4	LRFD #3 - 1.2D + 0.5W	Yes	Y	DL	1.2	WLZ	0.5		
5	LRFD #3 - 1.2D + 0.5W	Yes	Y	DL	1.2	WLX	-0.5		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
6	LRFD #3 - 1.2D + 0.5W	Yes	Y	DL	1.2	WLZ	-0.5		
7	LRFD #4 - 1.2D + 1.0W	Yes	Y	DL	1.2	WLX	1		
8	LRFD #4 - 1.2D + 1.0W	Yes	Y	DL	1.2	WLZ	1		
9	LRFD #4 - 1.2D + 1.0W	Yes	Y	DL	1.2	WLX	-1		
10	LRFD #4 - 1.2D + 1.0W	Yes	Y	DL	1.2	WLZ	-1		
11	LRFD #5 - 0.9D + 1.0W	Yes	Y	DL	0.9	WLX	1		
12	LRFD #5 - 0.9D + 1.0W	Yes	Y	DL	0.9	WLZ	1		
13	LRFD #5 - 0.9D + 1.0W	Yes	Y	DL	0.9	WLX	-1		
14	LRFD #5 - 0.9D + 1.0W	Yes	Y	DL	0.9	WLZ	-1		
15	LRFD #6 - 1.2D+Ev+Eh	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	1
16	LRFD #6 - 1.2D+Ev+Eh	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	1
17	LRFD #6 - 1.2D+Ev+Eh	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	-1
18	LRFD #6 - 1.2D+Ev+Eh	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	-1
19	LRFD #7 - 0.9D-Ev+Eh	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	1
20	LRFD #7 - 0.9D-Ev+Eh	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	1
21	LRFD #7 - 0.9D-Ev+Eh	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	-1
22	LRFD #7 - 0.9D-Ev+Eh	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	-1
23	LRFD #6 - 1.2D+Ev+Eh (OS)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1
24	LRFD #6 - 1.2D+Ev+Eh (OS)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1
25	LRFD #6 - 1.2D+Ev+Eh (OS)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1
26	LRFD #6 - 1.2D+Ev+Eh (OS)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1
27	LRFD #7 - 0.9D-Ev+Eh (OS)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1
28	LRFD #7 - 0.9D-Ev+Eh (OS)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1
29	LRFD #7 - 0.9D-Ev+Eh (OS)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1
30	LRFD #7 - 0.9D-Ev+Eh (OS)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	EAST	max	0.89	13	1.065	1	0.89	14	20.552	10	0	22	20.552	7
2		min	-0.89	7	0.595	19	-0.89	8	-20.552	8	0	1	-20.552	9
3	Totals:	max	0.89	13	1.065	1	0.89	14						
4		min	-0.89	7	0.595	19	-0.89	8						

Warning Log

No Data to Print...

Envelope Node Reactions - Overstrength or Capacity Limit

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	EAST	max	0.675	29*	1.003	26*	0.675	30*	13.735	26*	0	30*	13.735	23*
2		min	-0.675	23*	0.595	27*	-0.675	24*	-13.735	24*	0	23*	-13.735	25*
3	Totals:	max	0.675	29*	1.003	26*	0.675	30*						
4		min	-0.675	23*	0.595	27*	-0.675	24*						

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	100
Mesh Size (in)	12
Max Iterations	10
Merge Tolerance (in)	0.12
Solver	Sparse Accelerated
Coefficient of Friction	0.5
No. of Shear Regions	4
Shear Region Spacing Increment (in)	4
Min 1 Bar Dia Spacing for Beams?	No
Optimize footings for OTM / Sliding?	Yes
Parme Beta Factor	0.65
Pile Safety Factor	3
Min % Steel for Pedestal	Auto
Concrete Stress Block	Rectangular
Concrete Rebar Set	ASTM A615
Include WWR	No
Concrete Code	ACI 318-14
HR Steel Pile Code	AISC 14th (360-10): ASD
Wood Pile Code	AWC NDS-15: ASD

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[...	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc3000NW	3156	1372	0.15	0.6	0.145	3	1	60	60
2	Conc3500NW	3409	1482	0.15	0.6	0.145	3.5	1	60	60
3	Conc4000NW	3644	1584	0.15	0.6	0.145	4	1	60	60
4	Conc3000LW	2085	907	0.15	0.6	0.11	3	0.75	60	60
5	Conc3500LW	2252	979	0.15	0.6	0.11	3.5	0.75	60	60
6	Conc4000LW	2408	1047	0.15	0.6	0.11	4	0.75	60	60
7	RIGID	1e+6	1584	0.3	0	0	0	1	60	60
8	CONC5000NW	4031	1752	0.15	0.6	0.145	5	1	60	60
9	CONC4500NW	3824		0.15	0.6	0.145	4	1	60	60

General Design Parameters

	Label	Max Bending Chk	Max Shear Chk	Top Cover[in]	Bottom Cover[in]
1	Typical	1	1	3	3

Footing/Pile Cap Rebar Parameters

	Label	Top Bar	Bottom Bar
1	Typical	#5	#5

Pedestal/Pile Rebar Parameters

	Label	Longitudinal Bar	Shear Tie	Bar Cover[in]
1	Typical	#6	#4	3

General Properties

	Label	Min Steel ...	Max Steel...	Material	Design Ru..	Equal Bar Spacing	Group Design	Concrete Bearing	Force Top Bar
1	Light Pole	0.002	0.007	CONC450..	Typical	Yes		Yes	Yes

Footing Geometry

	Label	Max Length[...	Min Length[ft]	Max Width[ft]	Min Width[ft]	L/W Increm...	Max Thickn...	Min Thickne...	Thick Incre...	Force Sq...
1	Light Pole	8	5.5	8	5.5	0.5	24	18	3	Yes

Pedestal Properties

	Label	Type	Shape	Height[in]	e/BL	ex[in]	ez[in]	BLx[ft]	BLz[ft]
1	Light Pole	Pedestal	CRND24	48	Use ex,ez	0	0	0	0

Soil Properties

	Label	Overburden[ksf]	Passive[k]	Friction Coefficient	Gross/Net
1	Light Pole	0.22	0	0.45	Gross

Soil Definitions

	Label	Subgrade Modulus[k/ft^3]	Allowable Bearing[ksf]	Depth Properties	Default?
1	Default	172.8	1.5	None	Yes

Load Combinations

	Label	S...	Ser...	A...	SF	Category	Fa...	Cate...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...
1	LRFD #1	Y...				DL	1.4																		
2	LRFD #2	Y...				DL	1.2																		
3	LRFD #3	Y...				DL	1.2					W...	0.5												
4	LRFD #3	Y...				DL	1.2					W...	0.5												
5	LRFD #3	Y...				DL	1.2					W...	-0.5												
6	LRFD #3	Y...				DL	1.2					W...	-0.5												
7	LRFD #4	Y...				DL	1.2	WLX	1																
8	LRFD #4	Y...				DL	1.2	WLZ	1																
9	LRFD #4	Y...				DL	1.2	WLX	-1																
10	LRFD #4	Y...				DL	1.2	WLZ	-1																
11	LRFD #5	Y...				DL	0.9	WLX	1	ELX	1														
12	LRFD #5	Y...				DL	0.9	WLZ	1	ELZ	1														
13	LRFD #5	Y...				DL	0.9	WLX	-1	ELX	-1														
14	LRFD #5	Y...				DL	0.9	WLZ	-1	ELZ	-1														
15	LRFD #6	Y...				DL	1.2	Sds*...	0.2	ELX	1														
16	LRFD #6	Y...				DL	1.2	Sds*...	0.2	ELZ	1														
17	LRFD #6	Y...				DL	1.2	Sds*...	0.2	ELX	-1														
18	LRFD #6	Y...				DL	1.2	Sds*...	0.2	ELZ	-1														
19	LRFD #7	Y...				DL	0.9	Sds*...	-0.2	ELX	1														
20	LRFD #7	Y...				DL	0.9	Sds*...	-0.2	ELZ	1														
21	LRFD #7	Y...				DL	0.9	Sds*...	-0.2	ELX	-1														
22	LRFD #7	Y...				DL	0.9	Sds*...	-0.2	ELZ	-1														
23	LRFD #6 OS	Y...				DL	1.2	Sds*...	0.2	O...	1														
24	LRFD #6 OS	Y...				DL	1.2	Sds*...	0.2	O...	1														
25	LRFD #6 OS	Y...				DL	1.2	Sds*...	0.2	O...	-1														
26	LRFD #6 OS	Y...				DL	1.2	Sds*...	0.2	O...	-1														
27	LRFD #7 OS	Y...				DL	0.9	Sds*...	-0.2	O...	1														
28	LRFD #7 OS	Y...				DL	0.9	Sds*...	-0.2	O...	1														
29	LRFD #7 OS	Y...				DL	0.9	Sds*...	-0.2	O...	-1														
30	LRFD #7 OS	Y...				DL	0.9	Sds*...	-0.2	O...	-1														
31	----------																								
32	ASD #1	Y...	Yes		1.5	DL	1																		
33	ASD #5	Y...	Yes	1.33	1.5	DL	1			W...	0.6														
34	ASD #5	Y...	Yes	1.33	1.5	DL	1			W...	0.6														
35	ASD #5	Y...	Yes	1.33	1.5	DL	1			W...	-0.6														
36	ASD #5	Y...	Yes	1.33	1.5	DL	1			W...	-0.6														
37	ASD #6	Y...	Yes	1.33	1.5	DL	1			W...	0.45														
38	ASD #6	Y...	Yes	1.33	1.5	DL	1			W...	0.45														
39	ASD #6	Y...	Yes	1.33	1.5	DL	1			W...	-0....														

Load Combinations (Continued)

	Label	S...	Ser...	A...	SF	Category	Fa...	Cate...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...	Ca...	Fa...
40	ASD #6	Y...	Yes	1.33	1.5	DL	1			W...	-0....														
41	ASD #7	Y...	Yes	1.33	1.5	DL	0.6			W...	0.6														
42	ASD #7	Y...	Yes	1.33	1.5	DL	0.6			W...	0.6														
43	ASD #7	Y...	Yes	1.33	1.5	DL	0.6			W...	-0.6														
44	ASD #7	Y...	Yes	1.33	1.5	DL	0.6			W...	-0.6														
45	ASD #8	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELX	0.7														
46	ASD #8	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELZ	0.7														
47	ASD #8	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELX	-0.7														
48	ASD #8	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	ELZ	-0.7														
49	ASD #9	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	ELX	0....														
50	ASD #9	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	ELZ	0....														
51	ASD #9	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	ELX	-0....														
52	ASD #9	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	ELZ	-0....														
53	ASD #10	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELX	0.7														
54	ASD #10	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELZ	0.7														
55	ASD #10	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELX	-0.7														
56	ASD #10	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	ELZ	-0.7														
57	ASD #8 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	0.7														
58	ASD #8 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	0.7														
59	ASD #8 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	-0.7														
60	ASD #8 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0.14	O...	-0.7														
61	ASD #9 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	O...	0....														
62	ASD #9 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	O...	0....														
63	ASD #9 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	O...	-0....														
64	ASD #9 OS	Y...	Yes	1.33	1.1	DL	1	Sds*...	0....	O...	-0....														
65	ASD #10 OS	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	0.7														
66	ASD #10 OS	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	0.7														
67	ASD #10 OS	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	-0.7														
68	ASD #10 OS	Y...	Yes	1.33	1.1	DL	0.6	Sds*...	-0....	O...	-0.7														

Load Categories

	Category	Point Loads	Line Loads	Area Loads
1	DL	1		
2	ELX	2		
3	ELZ	2		
4	WLX	2		
5	WLZ	2		

Footing Geometry Results

	Joint	Footing	Length[ft]	Width[ft]	Thickness[in]	ex[in]	ez[in]	Pedestal Ht[in]	Ped Xdim[in]	Ped Zdim[in]
1	R3D_EAST	Light Pole	5.5	5.5	18	0	0	48	24	24

Footing Steel

	Joint	Footing	Bot x Steel[in^2]	Bot z Steel[in^2]	Top x Steel[in...	Top z Steel[in...	Ped Long	Ped Shear
1	R3D_EAST	Light Pole	2.148	2.148	1.534	1.534	6#6	#4@12 in

Footing Code Check

	Joint	Footing	Bearing Ratio	Bearing Pressure[ksf]	Gov LC	UC Max	Muxx[k-ft]	Gov LC	UC Max	Muzz[k-ft]	Gov LC
1	R3D_EAST	Light Pole	0.528	1.053	33	0.148	20.148	12	0.148	20.148	11

Footing Shear Check

	Joint	Footing	UC Shear	Vux[k]	Gov LC	UC Shear	Vuz[k]	Gov LC
1	R3D_EAST	Light Pole	0.138	12.418	12	0.138	12.418	11

Footing Pedestal Results

	Joint	Footing	UC Bend	UC Bend LC	UC Shear	UC Shear LC	UC Punch	UC Punch LC
1	R3D_EAST	Light Pole	0.311	11	0.018	11	0.013	11

Footing Safety Factors

	Joint	Footing	OSF-xx	LC	OSF-zz	LC	SR-xx	LC	SR-zz	LC
1	R3D_EAST	Light Pole	1.635	42	1.635	41	7.648	41	7.648	42

Envelope Soil Pressures (By Combination)

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]
1	R3D_EAST	0.528	33	1.053	1.995

ACI 318-19 - Column Reinforcement Detailing

Inputs

Tie Spacing: $s := 9\ in$

Max Aggregate Size: $d_{agg} := 1.5\ in$

Tie Bar Size: $d_v := \frac{1}{2}\ in$ (#4 bars)

Longitudinal Bar Size: $d_b := \frac{3}{4}\ in$ (#6 bars)

Column Dimensions: $c_1 := 24\ in$ $c_2 := 0\ in$ (c2=0 if round)

Column Shape: $Shape := \text{“Round”}$

Clear Cover: $c_c := 3\ in$

Longitudinal Reinforcement

10.6.1.1 Min Reinforcement

CODE

10.6—Reinforcement limits

10.6.1 *Minimum and maximum longitudinal reinforcement*

10.6.1.1 For nonprestressed columns and for prestressed columns with average $f_{pe} < 225$ psi, area of longitudinal reinforcement shall be at least $0.01A_g$ but shall not exceed $0.08A_g$.

# of long bars: $n_{bars} := 6$

Reinf Ratio Code Check: $\text{if}\left(n_{bars} \cdot \pi \cdot \left(\frac{d_b}{2}\right)^2 \geq 0.01 \cdot A_g, \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“NOT GOOD”}$

Reinforcement ratio does not have to meet 1% requirement as detailing results in larger cross section than required for strength...OKAY

25.2 Minimum Spacing

25.2—Minimum spacing of reinforcement

25.2.1 For parallel nonprestressed reinforcement in a horizontal layer, clear spacing shall be at least the greatest of 1 in., d_b, and $(4/3)d_{agg}$.

Clear Space b/t bars: $s_{long} := 7.38\ in$ (from SPcolumn)

Min Spacing Code Check: $\text{if}\left(s_{long} \geq \max\left(1\ in, d_b, \frac{4}{3} \cdot d_{agg}\right), \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“OKAY”}$

Transverse Reinforcement

10.7.6.1.2 Transverse Reinf Detailing

10.7.6.1.2 Details of transverse reinforcement shall be in accordance with 25.7.2 for ties, 25.7.3 for spirals, or 25.7.4 for hoops.

10.7.6.2 Spacing near joint

10.7.6.2 *Lateral support of longitudinal bars using ties or hoops*

10.7.6.2.1 In any story, the bottom tie or hoop shall be located not more than one-half the tie or hoop spacing above the top of footing or slab.

1st Tie spacing: $s_1 := 2\ in$

1st Tie Spacing Code Check: $\text{if}\left(s_1 \le \frac{s}{2}, \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“OKAY”}$

10.7.6.5.2 Maximum Spacing

10.7.6.5.2 Maximum spacing of shear reinforcement shall be in accordance with Table 10.7.6.5.2.

Table 10.7.6.5.2—Maximum spacing of shear reinforcement

V_s		Maximum s, in.	
		Nonprestressed column	Prestressed column
$\le 4\sqrt{f'_c}b_w d$	Lesser of:	$d/2$	$3h/4$
		24	
$> 4\sqrt{f'_c}b_w d$	Lesser of:	$d/4$	$3h/8$
		12	

This is included in the "Shear Design" calculations below

25.7.2 Ties

25.7.2.1 Ties shall consist of a closed loop of deformed bar with spacing in accordance with (a) and (b):

(a) Clear spacing of at least $(4/3)d_{agg}$
(b) Center-to-center spacing shall not exceed the least of $16d_b$ of longitudinal bar, $48d_b$ of tie bar, and smallest dimension of member

$s_{min} := \frac{4}{3} \cdot d_{agg} = 2\ in$ $s_{max} := min\left(16 \cdot d_b, 48\ d_v, c_1\right) = 12\ in$

Spacing Code Check: $\text{if}\left(s \geq s_{min} \wedge s \leq s_{max}, \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“OKAY”}$ (Ch 10 S.max table will control)

25.7.2.2 Diameter of tie bar shall be at least (a) or (b):

(a) No. 3 enclosing No. 10 or smaller longitudinal bars
(b) No. 4 enclosing No. 11 or larger longitudinal bars or bundled longitudinal bars

Tie Size Code Check: $\text{if}\left(d_v \geq \frac{3}{8}\ in, \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“OKAY”}$

25.7.2.4.1 Anchorage of individual circular ties shall be in accordance with (a) through (c):

(a) Ends shall overlap by at least 6 in.
(b) Ends shall terminate with standard hooks in accordance with 25.3.2 that engage a longitudinal bar
(c) Overlaps at ends of adjacent circular ties shall be staggered around the perimeter enclosing the longitudinal bars

Overlap: $l_{overlap} := 2 \cdot s_{long} = 14.76\ in$

Circular Ties Code Check: $\text{if}\left(l_{overlap} \geq 6\ in, \text{“OKAY”}, \text{“PROVIDE CORNER TIES”}\right) = \text{“OKAY”}$

"ROTATE HOOK/SPLICE LOCATION @ EVERY TIE BY 180 DEGREES" note added to shear reinf in detail

ASCE 72-21 Detailing

5.3.2 Longitudinal Reinforcement The minimum longitudinal reinforcement ratio shall be 0.005 for drilled shafts and piers supported on mat foundations.

Longitudinal reinforcement in a drilled shaft or a pier supported on a mat foundation used to develop a group of anchor rods shall be fully developed in tension in accordance with ACI 318-19, Chapter 25, on both sides of an assumed potential concrete breakout surface originating at the embedded end of a group of deformed anchor rods or at the bearing surface (head of nut or surface of embedded plate) of a group of headed anchor rods and projecting outward and upward from the anchor rod bolt circle at a 35 degree angle with the horizontal. The center-to-center diameter of the foundation longitudinal reinforcement arrangement (cage diameter) shall not exceed the anchor rod bolt circle by more than the embedment depth of the anchor rods.

See "Anchor Reinforcement" Section that addresses 1st sentence of this paragraph

Reinf Ratio Code Check:

$$\text{if}\left(n_{bars}\cdot\pi\cdot\left(\frac{d_b}{2}\right)^2 \geq 0.005\cdot A_g, \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“OKAY”}$$

Anchor Rod Bolt Circle:

$$d_{b.circle} := 11\ in$$

Cage Diameter:

$$d_{cage} := c_1 - 2\cdot c_c - 2\cdot d_v - d_b = 16.25\ in$$

Anchor Embedment:

$$l_{eh} := 36\ in$$

Reinf Ratio Code Check:

$$\text{if}\left(d_{cage} \leq d_{b.circle} + l_{eh}, \text{“OKAY”}, \text{“NOT GOOD”}\right) = \text{“OKAY”}$$

5.3.3 Transverse Reinforcement Closed stirrups that provide shear strength or lateral support to longitudinal reinforcement under compression in drilled shafts or piers supported on a mat foundation shall be developed in accordance with ACI 318-19, Chapter 25, using staggered laps or staggered hooks. Lap lengths shall not be less than 1.3 times the development length based on the nominal stirrup diameter.

Anchor rods in drilled shafts or piers supported on mat foundations shall be enclosed within the top 5 in. (130 mm) of the foundation with a minimum of two No. 3 (10M) or larger closed stirrups enclosing the longitudinal pier reinforcement, anchored at each end with staggered hooks, in accordance with ACI 318-19, Chapter 25.

Refer to Section 5.10 for additional requirements for sites in high-risk seismic areas.

Development length of tie w/ hook:

$$l_{dh} := 7\ in \qquad l_{overlap} = 14.76\ in$$

Lap Length Code Check:

$$\text{if}\left(l_{overlap} \geq 1.3\cdot l_{dh}, \text{“OKAY”}, \text{“NOT OKAY”}\right) = \text{“OKAY”}$$

Shear Design - ACI 318-19 Chapter 22.5

Pedestal Diameter: $b_w := 24\ in$

Depth to Reinf.: $d := \max\left(b_w - c_c - \frac{d_v}{2}, 0.8\ b_w\right) = 20.75\ in$ (ACI 22.5.2.2)

Concrete Modification Factor: $\lambda := 1.0$ (NWC)

Concrete Compressive Strength: $f'c := 4500\ psi$

Concrete Shear Strength: $V_c := 2 \cdot \lambda \cdot \sqrt{\frac{f'c}{psi}} \cdot psi \cdot b_w \cdot d = 66.81\ kip$ (ACI 19.2.4)

Shear Demand: $V_u := 0.89\ kip$ (From excel calcs)

Phi Factor (Shear): $\phi := 0.75$

Shear strength required by shear reinforcement: $V_s := \max\left(\frac{V_u}{\phi} - V_c, 0\right) = 0\ kip$

Cross Section Check (ACI 22.5.1.2): $\text{if}\left(V_s \le 8 \cdot \lambda \cdot \sqrt{\frac{f'c}{psi}} \cdot psi \cdot b_w \cdot d, \text{“Okay”}, \text{“Increase Cross Section”}\right) = \text{“Okay”}$

Max Spacing of Shear Reinf. (ACI 10.7.6.5.2): $s_{max} := \text{if}\left(V_s \le 4 \cdot \lambda \cdot \sqrt{\frac{f'c}{psi}} \cdot psi \cdot b_w \cdot d, min\left(\frac{d}{2}, 24\ in\right), min\left(\frac{d}{4}, 12\ in\right)\right) = 10.38\ in$

Stirrup Size:

Bar Area: $A_v := 0.2\ in^2$ (#4 bar)

Yield Stress of Shear Reinf.: $f_{yt} := 60\ ksi$

Spacing of Shear Reinf. req: $s_{req} := \text{if}\left(V_s = 0\ kip, s_{max}, A_v \cdot f_{yt} \cdot \frac{d}{V_s}\right) = 10.38\ in$

Spacing of Shear Reinf. used: $s = 9\ in$

Min Shear Reinf: $A_{v.min} := \max\left(\frac{0.75 \cdot \sqrt{\frac{f'c}{psi}} \cdot psi \cdot b_w \cdot s}{f_{yt}}, \frac{50\ psi \cdot b_w \cdot s}{f_{yt}}\right) = 0.18\ in^2$

$\text{if}\left(A_v \ge A_{v.min}, \text{“Okay”}, \text{“Increase Bar Size”}\right) = \text{“Okay”}$

Shear Reinforcement is not required for strength purposes, but circular ties will be provided. 1st tie 2" from top and bottom ends, and the rest of the ties spaced at 9" OC. Overlaps will be staggered.

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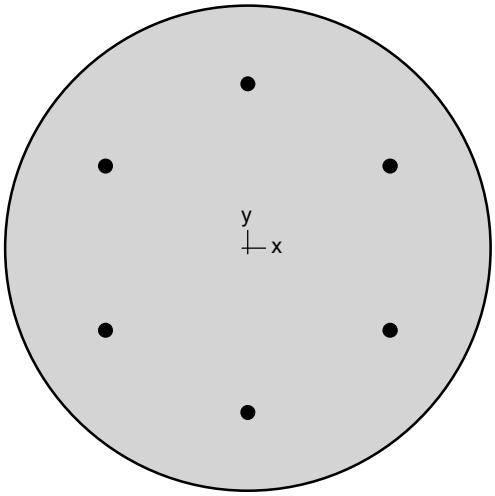

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Figure 1: Column section 4

1. General Information

File Name	\\bmcd\dfs\Clients\AN...\Light Pole Pedestal.colx
Project	---
Column	---
Engineer	---
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Architectural
Capacity Method	Critical capacity

2. Material Properties

2.1. Concrete

Type	Standard	
f'_c	4.5	ksi
E_c	3823.68	ksi
f_c	3.825	ksi
ε_u	0.003	in/in
β_1	0.825	

2.2. Steel

Type	Standard	
f_y	60	ksi
E_s	29000	ksi
ε_{ty}	0.00206897	in/in

3. Section

3.1. Shape and Properties

Type	Circular	
Diameter	24	in
A_g	452.389	in^2
I_x	16286	in^4
I_y	16286	in^4
r_x	6	in
r_y	6	in
X_o	0	in
Y_o	0	in

3.2. Section Figure

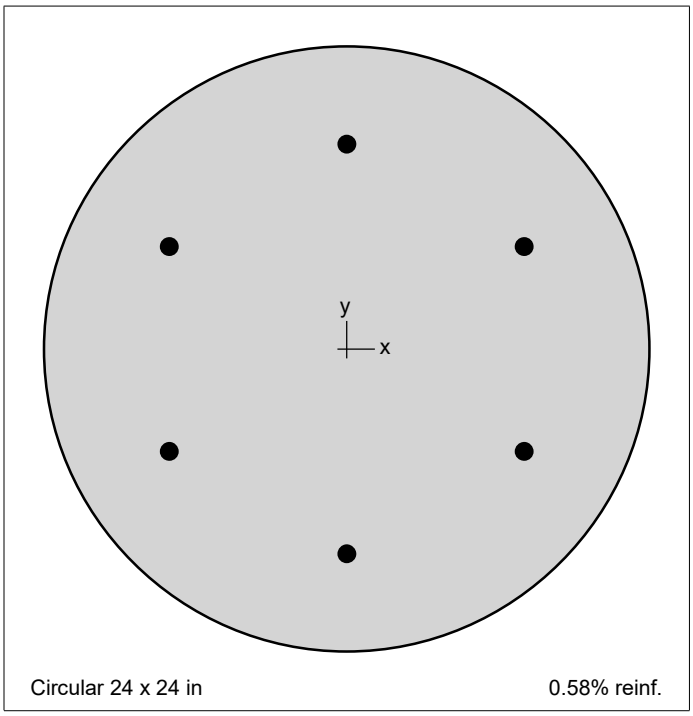


Figure 1: Column section

4. Reinforcement

4.1. Bar Set: ASTM A615

Bar	Diameter in	Area in²	Bar	Diameter in	Area in²	Bar	Diameter in	Area in²
#3	0.38	0.11	#4	0.50	0.20	#5	0.63	0.31
#6	0.75	0.44	#7	0.88	0.60	#8	1.00	0.79
#9	1.13	1.00	#10	1.27	1.27	#11	1.41	1.56
#14	1.69	2.25	#18	2.26	4.00			

4.2. Confinement and Factors

Confinement type	Spiral
For #6 bars or less	#4 ties
For larger bars	#4 ties
Capacity Reduction Factors	
Axial compression, (a)	0.85
Tension controlled ϕ, (b)	0.9
Compression controlled ϕ, (c)	0.75

4.3. Arrangement

Pattern	All sides equal
Bar layout	Circular
Cover to	Transverse bars
Clear cover	3 in
Bars	6 #6

Total steel area, A_s	2.64 in^2
Rho	0.58 %
Minimum clear spacing	7.38 in

(Note: Rho < 1.0%)

5. Control Points

About	Point	P	X-Moment	Y-Moment	NA Depth	d_t Depth	ε_t	ϕ
		kip	k-ft	k-ft	in	in		
X	@ Max compression	871.7	0.00	0.00	64.85	20.13	-0.00207	0.75000
X	@ Allowable comp.	741.0	88.27	0.00	23.90	20.13	-0.00047	0.75000
X	@ f_s = 0.0	618.8	146.98	0.00	20.13	20.13	0.00000	0.75000
X	@ f_s = 0.5 f_y	421.4	189.47	0.00	14.96	20.13	0.00103	0.75000
X	@ Balanced point	286.7	190.94	0.00	11.91	20.13	0.00207	0.75000
X	@ Tension control	124.6	169.82	0.00	7.48	20.13	0.00507	0.90000
X	@ Pure bending	0.0	106.31	0.00	5.03	20.13	0.00901	0.90000
X	@ Max tension	-142.6	0.00	0.00	0.00	20.13	9.99999	0.90000
Y	@ Max compression	871.7	0.00	0.00	61.34	19.04	-0.00207	0.75000
Y	@ Allowable comp.	741.0	0.00	86.75	24.00	19.04	-0.00062	0.75000
Y	@ f_s = 0.0	580.9	0.00	160.03	19.04	19.04	0.00000	0.75000
Y	@ f_s = 0.5 f_y	389.4	0.00	192.53	14.16	19.04	0.00103	0.75000
Y	@ Balanced point	257.2	0.00	189.20	11.27	19.04	0.00207	0.75000
Y	@ Tension control	93.5	0.00	160.03	7.08	19.04	0.00507	0.90000
Y	@ Pure bending	0.0	0.00	104.90	4.78	19.04	0.00894	0.90000
Y	@ Max tension	-142.6	0.00	0.00	0.00	19.04	9.99999	0.90000
-X	@ Max compression	871.7	0.00	0.00	64.85	20.13	-0.00207	0.75000
-X	@ Allowable comp.	741.0	-88.27	0.00	23.90	20.13	-0.00047	0.75000
-X	@ f_s = 0.0	618.8	-146.98	0.00	20.13	20.13	0.00000	0.75000
-X	@ f_s = 0.5 f_y	421.4	-189.47	0.00	14.96	20.13	0.00103	0.75000
-X	@ Balanced point	286.7	-190.94	0.00	11.91	20.13	0.00207	0.75000
-X	@ Tension control	124.6	-169.82	0.00	7.48	20.13	0.00507	0.90000
-X	@ Pure bending	0.0	-106.31	0.00	5.03	20.13	0.00901	0.90000
-X	@ Max tension	-142.6	0.00	0.00	0.00	20.13	9.99999	0.90000
-Y	@ Max compression	871.7	0.00	0.00	61.34	19.04	-0.00207	0.75000
-Y	@ Allowable comp.	741.0	0.00	-86.75	24.00	19.04	-0.00062	0.75000
-Y	@ f_s = 0.0	580.9	0.00	-160.03	19.04	19.04	0.00000	0.75000
-Y	@ f_s = 0.5 f_y	389.4	0.00	-192.53	14.16	19.04	0.00103	0.75000
-Y	@ Balanced point	257.2	0.00	-189.20	11.27	19.04	0.00207	0.75000
-Y	@ Tension control	93.5	0.00	-160.03	7.08	19.04	0.00507	0.90000
-Y	@ Pure bending	0.0	0.00	-104.90	4.78	19.04	0.00894	0.90000
-Y	@ Max tension	-142.6	0.00	0.00	0.00	19.04	9.99999	0.90000

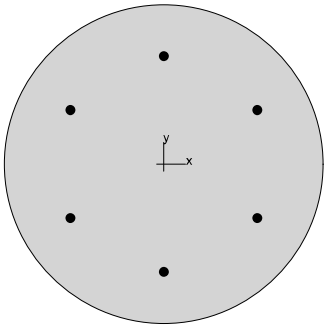
6. Factored Loads and Moments with Corresponding Capacity Ratios

NOTE: Calculations are based on "Critical Capacity" Method.

No.	Demand			Capacity			Parameters at Capacity			Capacity
	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	NA Depth	ε_t	ϕ	Ratio
	kip	k-ft	k-ft	kip	k-ft	k-ft	in			
1	1.07	20.56	0.00	0.00	106.31	0.00	5.03	0.00901	0.900	0.55

7. Diagrams

7.1. PM at θ=0 [deg]

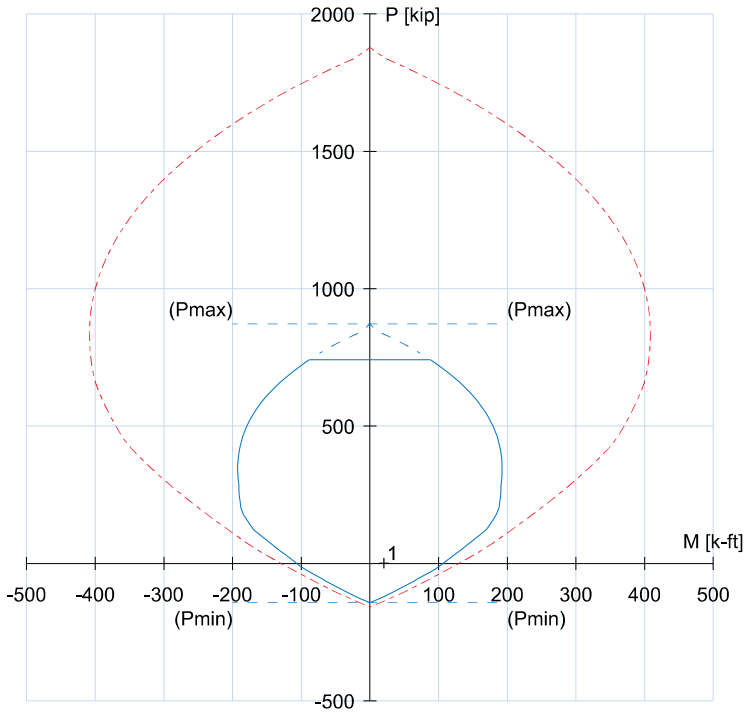


General Information	
Project	---
Column	---
Engineer	---
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Architectural
Capacity Method	Critical capacity

Materials	
f'_c	4.5 ksi
E_c	3823.68 ksi
f_y	60 ksi
E_s	29000 ksi

Section	
Type	Circular
Diameter	24 in
A_g	452.389 in²
I_x	16286 in⁴
I_y	16286 in⁴

Reinforcement	
Pattern	All sides equal
Bar layout	Circular
Cover to	Transverse bars
Clear cover	3 in
Bars	6 #6
Confinement type	Spiral
Total steel area, A_s	2.64 in²
Rho	0.58 %
Min. clear spacing	7.38 in

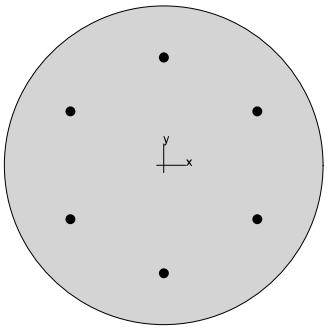


PM at 0.0 [deg]

No.	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	Capacity
	kip	k-ft	k-ft	kip	k-ft	k-ft	Ratio
1	1.1	20.6	0.0	0.00	106.31	0.00	0.55

Max. Capacity Ratio: 0.55

7.2. MM at P=1 [kip]



General Information

Project	---
Column	---
Engineer	---
Code	ACI 318-19
Bar Set	ASTM A615
Units	English
Run Option	Investigation
Run Axis	Biaxial
Slenderness	Not Considered
Column Type	Architectural
Capacity Method	Critical capacity

Materials

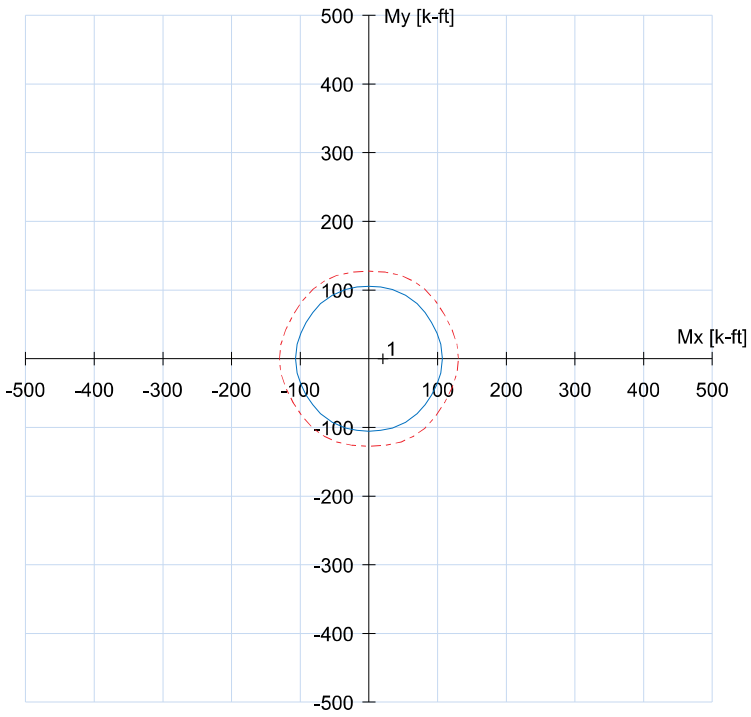
f'_c	4.5 ksi
E_c	3823.68 ksi
f_y	60 ksi
E_s	29000 ksi

Section

Type	Circular
Diameter	24 in
A_g	452.389 in^2
I_x	16286 in^4
I_y	16286 in^4

Reinforcement

Pattern	All sides equal
Bar layout	Circular
Cover to	Transverse bars
Clear cover	3 in
Bars	6 #6
Confinement type	Spiral
Total steel area, A_s	2.64 in^2
Rho	0.58 %
Min. clear spacing	7.38 in



MM at P=1.0 [kip]

No.	P_u	M_{ux}	M_{uy}	ϕP_n	ϕM_{nx}	ϕM_{ny}	Capacity
	kip	k-ft	k-ft	kip	k-ft	k-ft	Ratio
1	1.1	20.6	0.0	0.00	106.31	0.00	0.55

Max. Capacity Ratio: 0.55

Pipe Supports

AUTOPIPE DESIGN CRITERIA

Project Location: PDX Fuel Facility

AutoPIPE version 12
Code: ASME B31.3 – 2020 Process Piping
Vertical Axis: Y

Wind Loads

ASCE 7-16
Wind Speed: 107 mph (LRFD)
Wind Pressure = 15 psf (LRFD)
ASD Factor = 0.6

User Defined Input (ASD Loads Used for ASME B31.3 Design)

- W1 = Global X, Wind Facing
  Pressure = 9 psf
- W2 = Global Z, Wind Facing
  Pressure = 9 psf
- W3 = Inclined (45 degrees)
  DX = 0.707, DY = 0.000, DZ = 0.707
  Pressure = 6.36 psf

Seismic Loads

ASCE 7-16
Ss = 0.848, S1 = 0.376
ASD Factor = 0.7
Lateral Coefficient: 0.295 (LRFD)
Vertical Coefficient: 0.131 (LRFD)

User Defined Input (ASD Loads Used for ASME B31.3 Design)

- E1:
  X = 0.186
  Y (vertical) = 0.083
  Z = 0
- E2:
  X = 0
  Y (vertical) = 0.083
  Z = 0.186
- E3:
  (Multiply by component factors: EX = 0.707, EY = 1.000, EZ = 0.707)
  X = 0.132
  Y (vertical) = 0.083
  Z = 0.132

Temperature Cases

Ambient High = 90 F
Ambient Low = -10 F

- T1 (Installation) = **105 F** (installation of bare uncoated piping during peak summer ambient temperature @ 90 F, plus surface temperature of pipe in sun due to solar heat gain of 15 F ➔ 90 + 15 F)

- T2 (Low temp) = **-10 F** (worst case contraction if installed in summer @ 105 F then cooled to -10 F in winter, ΔT of 115 F ➔ 105 – (-10 F)

- T3 (High temp) = **180 F** (artificially induced worst case expansion if pipe installed at 40 F, then heated during summer months to 115 F, ΔT of 75 F, starting at T1 of 105 F ambient ➔ 105 + 75 F = 180 F))

Pressure Cases

- P1: 150 psi (normal operating)
- P2: 225 psi (max operating)
- P3: 338 psi (hydrostatic test)

Support Gaps:

- Use 1/4" side gaps for guides and linestops
- Use 1/4" longitudinal gaps for linestops

Output (for Structural):

Output file should contain "Support Forces" for the following 13 load cases (named as shown, and in the order shown below). Each support type (guide, linestop, v-stop, anchor) should have its own output file.

Load Cases:

1. GR = Gravity
2. GT1 = Gravity + T1
3. GT2 = Gravity + T2
4. GT3 = Gravity + T3
5. P1 = Normal operating pressure
6. P2 = Max operating pressure
7. P3 = Hydrostatic testing pressure
8. W1 = Wind in global X
9. W2 = Wind in global Z
10. W3 = Wind @ 45 deg angle
11. E1 = Seismic in global X
12. E2 = Seismic in global Z
13. E3 = Seismic @ 45 deg angle

Point	ID	Tag No.	Type	Combination	Nominal	GlobalFX	GlobalFY	GlobalFZ	GlobalFR	GlobalDX	GlobalDY	GlobalDZ	GlobalDR	LocalDir1	Force1	Disp1	Gap1	LocalDir2	Force2	Disp2	Gap2	LocalDir3	Force3	Disp3	Gap3	Stiffness	Friction	ColdLoad	CoordX	CoordY	CoordZ
	7 7 2		CUSTOM BAS V - Stop	GR	20	0	-2489	0	2489	0	-1	0	1 down	2489	0	0 -Z	0	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	GT1	20	37	-1118	106	1124	0.146	-1	0.419	1.094 down	1118	0	0 +Z	106	0.419	0 +X	37	0.146	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	GT2	20	7	-1118	112	1124	0.029	-1	0.467	1.104 down	1118	0	0 +Z	112	0.467	0 +X	7	0.029	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	GT3	20	56	-1118	97	1124	0.221	-1	0.386	1.094 down	1118	0	0 +Z	97	0.386	0 +X	56	0.221	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	W3	20	45	0	26	53	0	0	0	0 down	0	0	0 +Z	26	0	0 +X	45	0	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	E1	20	0	300	0	300	-2.931	-2	-1.285	3.774 up	300	0	100 -Z	0	1.285	0 -X	0	2.931	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	E2	20	0	300	0	300	-2.942	-2	-1.264	3.775 up	300	0	100 -Z	0	1.264	0 -X	0	2.942	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	E3	20	0	300	0	300	-2.94	-2	-1.267	3.775 up	300	0	100 -Z	0	1.267	0 -X	0	2.94	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	P3	20	2	0	-1	2	0.007	0	-0.004	0.008 up	0	0	100 -Z	1	0.004	0 +X	2	0.007	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	P1	20	1	0	0	1	0.004	0	-0.002	0.005 down	0	0	0 -Z	0	0.002	0 +X	1	0.004	0	1E+10	0.1	0	-35.28	26.31	317.48
	7 7 2		CUSTOM BAS V - Stop	P2	20	1	0	0	1	0.005	0	-0.003	0.006 down	0	0	0 -Z	0	0.003	0 +X	1	0.005	0	1E+10	0.1	0	-35.28	26.31	317.48
	10 10 2		CUSTOM BAS V - Stop	GR	20	0	-8487	0	8487	0	-1	0	1 down	8487	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	GT1	20	247	-17221	1704	17307	0.041	-1	0.28	1.039 down	17221	0	0 +Z	1704	0.28	0 +X	247	0.041	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	GT2	20	122	-17221	1718	17307	0.023	-1	0.33	1.053 down	17221	0	0 +Z	1718	0.33	0 +X	122	0.023	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	GT3	20	195	-17221	1711	17307	0.026	-1	0.226	1.025 down	17221	0	0 +Z	1711	0.226	0 +X	195	0.026	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	W3	20	93	0	20	95	0	0	0	0 down	0	0	0 +Z	20	0	0 +X	93	0	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	E1	20	0	-8	0	8	-2.949	-2	-1.296	3.792 down	8	0	0 -Z	0	1.296	0 -X	0	2.949	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	E2	20	0	-8	0	8	-2.934	-2	-1.245	3.763 down	8	0	0 -Z	0	1.245	0 -X	0	2.934	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	E3	20	0	-8	0	8	-2.946	-2	-1.261	3.777 down	8	0	0 -Z	0	1.261	0 -X	0	2.946	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	P1	20	6	0	-1	6	0.001	0	-0.003	0.003 down	0	0	0 -Z	1	0.003	0 +X	6	0.001	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	P2	20	4	0	0	4	0.001	0	-0.002	0.002 down	0	0	0 -Z	0	0.002	0 +X	4	0.001	0	1E+10	0.1	0	-41.07	26.31	327.88
	10 10 2		CUSTOM BAS V - Stop	P3	20	-23	0	3	24	-0.004	0	-0.006	0.007 down	0	0	0 +Z	3	-0.006	0 -X	23	0.004	0	1E+10	0.1	0	-41.07	26.31	327.88
	17 17 2		CUSTOM BAS V - Stop	GR	20	0	0	0	0	0	-0.974	0	0.974 up	0	0.026	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	GT1	20	0	0	0	0	0.011	-0.988	0.276	1.026 up	0	0.012	100 +Z	0	0.276	0 +X	0	0.011	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	GT2	20	0	0	0	0	-0.012	-0.988	0.254	1.02 up	0	0.012	100 +Z	0	0.254	0 +X	0	0.012	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	GT3	20	0	0	0	0	0.053	-0.988	0.219	1.013 up	0	0.012	100 +Z	0	0.219	0 +X	0	0.053	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	W3	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	E1	20	0	0	0	0	-2.906	-1.999	-1.338	3.772 up	0	0.001	100 -Z	0	1.338	0 -X	0	2.906	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	E2	20	0	0	0	0	-2.929	-1.999	-1.243	3.758 up	0	0.001	100 -Z	0	1.243	0 -X	0	2.929	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	E3	20	0	0	0	0	-2.914	-1.999	-1.287	3.761 up	0	0.001	100 -Z	0	1.287	0 -X	0	2.914	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	P1	20	0	0	0	0	0	0	-0.001	0.001 down	0	0	0 -Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	P2	20	0	0	0	0	0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	-36.65	26.31	337.27
	17 17 2		CUSTOM BAS V - Stop	P3	20	0	0	0	0	0.006	0	-0.012	0.013 down	0	0	0 -Z	0	0.012	0 +X	0	0.006	0	1E+10	0.1	0	-36.65	26.31	337.27
	21 21 2		CUSTOM BAS V - Stop	GR	20	0	-8582	0	8582	0	0	0	0 down	8582	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	GT1	20	-374	-8856	803	8900	-0.153	0	0.33	0.363 down	8856	0	0 +Z	803	0.33	0 -X	374	0.153	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	GT2	20	626	-8856	625	8900	0.13	0	0.13	0.184 down	8856	0	0 +Z	625	0.13	0 +X	626	0.13	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	GT3	20	-489	-8856	738	8900	-0.25	0	0.377	0.453 down	8856	0	0 +Z	738	0.377	0 -X	489	0.25	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	W3	20	230	0	-45	234	0	0	0	0 down	0	0	0 -Z	45	0	0 +X	230	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	E1	20	0	406	0	406	-2.711	-2	-1.35	3.63 up	406	0	100 -Z	0	1.35	0 -X	0	2.711	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	E2	20	0	406	0	406	-2.79	-2	-1.245	3.651 up	406	0	100 -Z	0	1.245	0 -X	0	2.79	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	E3	20	0	406	0	406	-2.679	-2	-1.296	3.585 up	406	0	100 -Z	0	1.296	0 -X	0	2.679	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	P1	20	-23	0	-11	25	-0.014	0	0.005	0.015 down	0	0	0 -Z	11	-0.005	0 -X	23	0.014	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	P3	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 2		CUSTOM BAS V - Stop	P2	20	-54	0	48	72	-0.011	0	0.01	0.015 down	0	0	0 +Z	48	0.01	0 -X	54	0.011	0	1E+10	0.1	0	-35.23	26.31	357.2
	42 42 1		V - Stop	P2	20	-2	0	-19	19	-0.005	0	-0.007	0.009 down	0	0	0 -Z	19	0.007	0 -X	2	0.005	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	GR	20	0	-4919	0	4919	0	0	0	0 down	4919	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	GT1	20	452	-4919	-194	4943	0.11	0	-0.047	0.12 down	4919	0	0 -Z	194	0.047	0 +X	452	0.11	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	GT2	20	-490	-4919	33	4943	-0.199	0	0.014	0.2 down	4919	0	0 +Z	33	0.014	0 -X	490	0.199	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	GT3	20	463	-4919	-167	4943	0.236	0	-0.085	0.25 down	4919	0	0 -Z	167	0.085	0 +X	463	0.236	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	W3	20	42	0	14	44	0	0	0	0 down	0	0	0 +Z	14	0	0 +X	42	0	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	E1	20	0	-1836	0	1836	-1.246	-2	-0.431	2.395 down	1836	0	0 -Z	0	0.431	0 -X	0	1.246	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	E2	20	0	-1836	0	1836	-1.245	-2	-0.452	2.399 down	1836	0	0 -Z	0	0.452	0 -X	0	1.245	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	E3	20	0	-1836	0	1836	-1.245	-2	-0.389	2.388 down	1836	0	0 -Z	0	0.389	0 -X	0	1.245	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	P1	20	0	0	2	2	0.013	0	-0.005	0.014 down	0	0	0 +Z	2	-0.005	0 +X	0	0.013	0	1E+10	0.1	0	212.35	26.31	374.81
	42 42 1		V - Stop	P3	20	13	0	40	42	0.029	0	0.015	0.033 down	0	0	0 +Z	40	0.015	0 +X	13	0.029	0	1E+10	0.1	0	212.35	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	P2	20	-1	0	-7	7	0.001	0	-0.009	0.009 down	0	0	0 -Z	7	0.009	0 -X	1	-0.001	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	P1	20	-1	0	-3	3	0.017	0	-0.006	0.018 down	0	0	0 -Z	3	0.006	0 -X	1	-0.017	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	GR	20	0	-2284	0	2284	0	0	0	0 down	2284	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	GT1	20	224	-2300	-51	2311	0.147	0	-0.033	0.151 down	2300	0	0 -Z	51	0.033	0 +X	224	0.147	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	GT2	20	-229	-2300	20	2311	-0.281	0	0.025	0.282 down	2300	0	0 +Z	20	0.025	0 -X	229	0.281	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	GT3	20	229	-2300	-23	2311	0.35	0	-0.036	0.352 down	2300	0	0 -Z	23	0.036	0 +X	229	0.35	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	W3	20	20	0	-13	24	0	0	0	0 down	0	0	0 -Z	13	0	0 +X	20	0	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	E1	20	0	2284	0	2284	-1.246	-1.895	-0.528	2.328 up	2284	0.105	100 -Z	0	0.528	0 -X	0	1.246	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	E2	20	0	2284	0	2284	-1.245	-1.895	-0.524	2.327 up	2284	0.105	100 -Z	0	0.524	0 -X	0	1.245	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	E3	20	0	2284	0	2284	-1.245	-1.895	-0.513	2.324 up	2284	0.105	100 -Z	0	0.513	0 -X	0	1.245	0	1E+10	0.1	0	226.04	26.31	374.81
	43 43 2		CUSTOM BAS V - Stop	P3	20	1	0	14	15	0.038	0	0.021	0.044 down	0	0	0 +Z	14	0.021	0 +X	1	0.038	0	1E+10	0.1	0	226.04	26.31	374.81
A76	A76 1		V - Stop	E1	20	0	3986	0	3986	-2.255	-6.472	-5.103	8.545 up	3986	5.528	100 -Z	0	5.103	0 -X	0	2.255	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1		V - Stop	E2	20	0	3986	0	3986	-2.277	-6.472	-5.084	8.539 up	3986	5.528	100 -Z	0	5.084	0 -X	0	2.277	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1		V - Stop	E3	20	0	3986	0	3986	-2.261	-6.472	-5.095	8.542 up	3986	5.528	100 -Z	0	5.095	0 -X	0	2.261	0	1E+10	0.1	0	225.03	26.31	364
A77	A77 1		V - Stop	E1	20	0	1057	0	1057	-13.255	-12	-7.956	19.57 up	1057	0	100 -Z	0	7.956	0 -X	0	13.255	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1		V - Stop	E2	20	0	1057	0	1057	-13.247	-12	-7.942	19.559 up	1057	0	100 -Z	0	7.942	0 -X	0	13.247	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1		V - Stop	E3	20	0	1057	0	1057	-13.246	-12	-7.946	19.56 up	1057	0	100 -Z	0	7.946	0 -X	0	13.246	0	1E+10	0.1	0	225.02	26.31	355.32
C99	C99 1		V - Stop	E1	8	0	775	0	775	-4.494	-6.94	-7.139	10.924 up	775	5.06	100 -Z	0	7.139	0 -X	0	4.494	0	1E+10	0.1	0	223.01	25.84	365.97
C99	C99 1		V - Stop	E2	8	0	775	0	775	-4.219	-6.883	-6.356	10.275 up	775	5.117	100 -Z	0	6.356	0 -X	0	4.219	0	1E+10	0.1	0	223.01	25.84	365.97
C99	C99 1		V - Stop	E3	8	0	775	0	775	-4.215	-6.919	-6.657	10.486 up	775	5.081	100 -Z	0	6.657	0 -X	0	4.215	0	1E+10	0.1	0	223.01	25.84	365.97
C98	C98 1		V - Stop	E1	8	0	629	0	629	-13.462	-11.834	-6.504	19.068 up	629	0.166	100 -Z	0	6.504	0 -X	0	13.462	0	1E+10	0.1	0	222.97	25.84	353.31
C98	C98 1		V - Stop	E2	8	0	629	0	629	-13.328	-11.838	-6.369	18.93 up	629	0.162	100 -Z	0	6.369	0 -X	0	13.328	0	1E+10	0.1	0	222.97	25.84	353.31
C98	C98 1		V - Stop	E3	8	0	629	0	629	-13.412	-11.836	-6.449	19.015 up	629	0.164	100 -Z	0	6.449	0 -X	0	13.412	0	1E+10	0.1	0	222.97	25.84	353.31
	63 63 2		CUSTOM BAS V - Stop	E1	20	0	523	0	523	-13.478	-12	-6.17	19.072 up	523	0	100 -Z	0	6.17	0 -X	0	13.478	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2		CUSTOM BAS V - Stop	E2	20	0	523	0	523	-13.478	-12	-6.17	19.072 up	523	0	100 -Z	0	6.17	0 -X	0	13.478	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2		CUSTOM BAS V - Stop	E3	20	0	523	0	523	-13.478	-12	-6.17	19.072 up	523	0	100 -Z	0	6.17	0 -X	0	13.478	0	1E+10	0.1	0	234.04	26.31	349.67
D91	D91 1		V - Stop	E1	6	0	458	0	458	-13.925	-11.893	-6.328	19.375 up	458	0.107	100 -Z	0	6.328	0 -X	0	13.925	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1		V - Stop	E2	6	0	458	0	458	-13.722	-11.892	-5.813	19.066 up	458	0.108	100 -Z	0	5.813	0 -X	0	13.722	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1		V - Stop	E3	6	0	458	0	458	-14.007	-11.893	-5.884	19.294 up	458	0.107	100 -Z	0	5.884	0 -X	0	14.007	0	1E+10	0.1	0	221.7	25.75	351.99
C92	C92 2		V - Stop	E1	8	0	434	0	434	-5.523	-11.95	-5.552	14.287 up	434	0.05	100 -Z	0	5.552	0 -X	0	5.523	0	1E+10	0.1	0	214.02	25.84	364.46
C92	C92 2		V - Stop	E2	8	0	434	0	434	-5.254	-11.887	-5.551	14.132 up	434	0.113	100 -Z	0	5.551	0 -X	0	5.254	0	1E+10	0.1	0	214.02	25.84	364.46
C92	C92 2		V - Stop	E3	8	0	434	0	434	-5.263	-11.925	-5.551	14.168 up	434	0.075	100 -Z	0	5.551	0 -X	0	5.263	0	1E+10	0.1	0	214.02	25.84	364.46
D90	D90 1		V - Stop	E1	6	0	427	0	427	-4.069	-6.987	-7.491	11.022 up	427	5.013	100 -Z	0	7.491	0 -X	0	4.069	0	1E+10	0.1	0	221.68	25.75	367.32
D90	D90 1		V - Stop	E2	6	0	427	0	427	-3.74	-6.964	-6.109	9.99 up	427	5.036	100 -Z	0	6.109	0 -X	0	3.74	0	1E+10	0.1	0	221.68	25.75	367.32

D90	D90 1	V - Stop	E3	6	0	427	0	427	-3.825	-6.979	-6.692	10.398 up	427	5.021	100 -Z	0	6.692	0 -X	0	3.825	0	1E+10	0.1	0	221.68	25.75	367.32
	203 203 2	V - Stop	E2	6	0	168	0	168	-4.519	-12	-5.548	13.972 up	168	0	100 -Z	0	5.548	0 -X	0	4.519	0	1E+10	0.1	0	212.69	25.75	366.08
	203 203 2	V - Stop	E3	6	0	164	0	164	-4.624	-12	-5.548	14.006 up	164	0	100 -Z	0	5.548	0 -X	0	4.624	0	1E+10	0.1	0	212.69	25.75	366.08
	66 66 2	CUSTOM BAS V - Stop	P3	20	14	0	-14	20	-0.008	0	-0.013	0.015 down	0	0	0 -Z	14	0.013	0 +X	14	-0.008	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	P2	20	7	0	-13	14	-0.005	0	-0.004	0.006 down	0	0	0 -Z	13	0.004	0 +X	7	-0.005	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	GR	20	0	-5559	0	5559	0	0	0	0 down	5559	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	GT1	20	-405	-5559	-381	5587	-0.026	0	-0.024	0.035 down	5559	0	0 -Z	381	0.024	0 -X	405	0.026	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	GT2	20	492	-5559	259	5587	0.055	0	0.029	0.062 down	5559	0	0 +Z	259	0.029	0 +X	492	0.055	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	GT3	20	-409	-5559	-376	5587	-0.082	0	-0.076	0.112 down	5559	0	0 -Z	376	0.076	0 -X	409	0.082	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	W3	20	65	0	-56	86	0	0	0	0 down	0	0	0 -Z	56	0	0 +X	65	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	E1	20	0	324	0	324	-13.74	-12	-6.13	19.245 up	324	0	100 -Z	0	6.13	0 -X	0	13.74	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	E2	20	0	324	0	324	-13.741	-12	-6.128	19.245 up	324	0	100 -Z	0	6.128	0 -X	0	13.741	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	E3	20	0	324	0	324	-13.74	-12	-6.129	19.245 up	324	0	100 -Z	0	6.129	0 -X	0	13.74	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 2	CUSTOM BAS V - Stop	P1	20	-17	0	18	25	-0.003	0	0	0.003 down	0	0	0 +Z	18	0	0 -X	17	0.003	0	1E+10	0.1	0	238.02	26.31	320.74
	96 96 2	CUSTOM BAS V - Stop	GR	8	0	-1953	0	1953	0	-1	0	1 down	1953	0	0 -Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	GT1	8	-9	-5282	528	5309	-0.007	-1	0.408	1.08 down	5282	0	0 +Z	528	0.408	0 -X	9	0.007	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	GT2	8	-19	-5371	537	5398	-0.016	-1	0.437	1.091 down	5371	0	0 +Z	537	0.437	0 -X	19	0.016	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	GT3	8	-3	-5217	522	5243	-0.002	-1	0.391	1.074 down	5217	0	0 +Z	522	0.391	0 -X	3	0.002	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	W3	8	22	1	6	23	0	0	0	0 up	1	0	100 +Z	6	0	0 +X	22	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	E1	8	0	172	0	172	-2.93	-2	-1.287	3.774 up	172	0	100 -Z	0	1.287	0 -X	0	2.93	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	E2	8	0	164	0	164	-2.928	-2	-1.287	3.772 up	164	0	100 -Z	0	1.287	0 -X	0	2.928	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	E3	8	0	169	0	169	-2.929	-2	-1.286	3.773 up	169	0	100 -Z	0	1.286	0 -X	0	2.929	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	P1	8	0	1	0	1	0	0	0	0 up	1	0	100 -Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	P2	8	0	2	0	2	0	0	-0.001	0.001 up	2	0	100 -Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	96 96 2	CUSTOM BAS V - Stop	P3	8	0	2	0	2	0	0	-0.001	0.001 up	2	0	100 -Z	0	0.001	0 -X	0	0	0	1E+10	0.1	0	-41.32	25.67	318.2
	110 110 2	CUSTOM BAS V - Stop	GR	8	0	0	0	0	0	-0.953	0	0.953 up	0	0.047	100 +Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	GT1	8	0	0	0	0	0.044	-0.959	0.248	0.992 up	0	0.041	100 +Z	0	0.248	0 +X	0	0.044	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	GT2	8	0	0	0	0	-0.011	-0.961	0.244	0.992 up	0	0.039	100 +Z	0	0.244	0 -X	0	0.011	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	GT3	8	0	0	0	0	0.087	-0.958	0.237	0.991 up	0	0.042	100 +Z	0	0.237	0 +X	0	0.087	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	W3	8	0	0	0	0	0	0	0	0 up	0	0	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	E1	8	0	0	0	0	-2.902	-1.997	-1.324	3.763 up	0	0.003	100 -Z	0	1.324	0 -X	0	2.902	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	E2	8	0	0	0	0	-2.935	-1.998	-1.268	3.77 up	0	0.002	100 -Z	0	1.268	0 -X	0	2.935	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	E3	8	0	0	0	0	-2.915	-1.997	-1.298	3.764 up	0	0.003	100 -Z	0	1.298	0 -X	0	2.915	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	0.001	0	0	0.001 up	0	0	100 -Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	0.001	0	0	0.001 up	0	0	100 -Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	-39.54	25.84	340.14
	110 110 2	CUSTOM BAS V - Stop	P3	8	0	0	0	0	0.004	0	-0.003	0.005 up	0	0	100 -Z	0	0.003	0 +X	0	0.004	0	1E+10	0.1	0	-39.54	25.84	340.14
	113 113 2	CUSTOM BAS V - Stop	P3	8	0	-4	0	4	0	0	0.001	0.001 down	4	0	0 +Z	0	0.001	0 -X	0	0	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	GR	8	0	-1656	0	1656	-0.001	0	0	0.001 down	1656	0	0 +Z	0	0	0 -X	0	0.001	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	GT1	8	-36	-1707	167	1716	-0.06	0	0.277	0.284 down	1707	0	0 +Z	167	0.277	0 -X	36	0.06	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	GT2	8	114	-1660	120	1668	0.122	0	0.13	0.179 down	1660	0	0 +Z	120	0.13	0 +X	114	0.122	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	GT3	8	-98	-1723	142	1732	-0.251	0	0.36	0.438 down	1723	0	0 +Z	142	0.36	0 -X	98	0.251	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	W3	8	71	-5	-26	76	0	0	0	0 down	5	0	0 -Z	26	0	0 +X	71	0	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	E1	8	0	34	0	34	-2.738	-2	-1.348	3.649 up	34	0	100 -Z	0	1.348	0 -X	0	2.738	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	E2	8	0	57	0	57	-2.787	-2	-1.268	3.657 up	57	0	100 -Z	0	1.268	0 -X	0	2.787	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	E3	8	0	31	0	31	-2.706	-2	-1.314	3.613 up	31	0	100 -Z	0	1.314	0 -X	0	2.706	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	P1	8	-2	0	0	2	-0.004	0	0.002	0.004 down	0	0	0 -Z	0	-0.002	0 -X	2	0.004	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 2	CUSTOM BAS V - Stop	P2	8	-3	-1	2	4	-0.002	0	0.003	0.004 down	1	0	0 +Z	2	0.003	0 -X	3	0.002	0	1E+10	0.1	0	-37.24	25.84	357.2
	126 126 2	CUSTOM BAS V - Stop	P3	8	-1	1	-1	2	0.004	0	-0.013	0.014 up	1	0	100 -Z	1	0.013	0 -X	1	-0.004	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	GR	8	0	-1061	0	1061	0.056	0	0.091	0.107 down	1061	0	0 +Z	0	0.091	0 +X	0	0.056	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	GT1	8	88	-1061	-60	1066	0.116	0	0.05	0.126 down	1061	0	0 -Z	60	-0.05	0 +X	88	0.116	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	GT2	8	-97	-1103	53	1108	-0.086	0	0.168	0.188 down	1103	0	0 +Z	53	0.168	0 -X	97	0.086	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	GT3	8	63	-1045	-83	1050	0.237	0	-0.148	0.28 down	1045	0	0 -Z	83	0.148	0 +X	63	0.237	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	W3	8	16	9	-9	20	0	0	0	0 up	9	0	100 -Z	9	0	0 +X	16	0	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	E1	8	0	3	0	3	-2.859	-2	-2.07	4.057 up	3	0	100 -Z	0	2.07	0 -X	0	2.859	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	E2	8	0	387	0	387	-2.858	-2	0.306	3.502 up	387	0	100 +Z	0	0.306	0 -X	0	2.858	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	E3	8	0	225	0	225	-2.858	-2	-0.507	3.525 up	225	0	100 -Z	0	0.507	0 -X	0	2.858	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	0.007	0	-0.004	0.008 down	0	0	0 +Z	0	-0.004	0 +X	0	0.007	0	1E+10	0.1	0	50.57	28.84	374.16
	126 126 2	CUSTOM BAS V - Stop	P2	8	-1	-2	1	2	0.01	0	-0.005	0.011 down	2	0	0 +Z	1	-0.005	0 -X	1	-0.01	0	1E+10	0.1	0	50.57	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	P1	8	0	0	-1	1	0.009	0	-0.005	0.01 up	0	0	100 -Z	1	0.005	0 -X	0	-0.009	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	P3	8	0	0	-1	1	0.009	0	-0.012	0.015 down	0	0	0 -Z	1	0.012	0 -X	0	-0.009	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	GR	8	0	-652	0	652	0.056	0	0.106	0.12 down	652	0	0 +Z	0	0.106	0 +X	0	0.056	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	GT1	8	62	-653	-20	656	0.156	0	0.074	0.173 down	653	0	0 -Z	20	-0.074	0 +X	62	0.156	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	GT2	8	-59	-645	26	649	-0.175	0	0.207	0.271 down	645	0	0 +Z	26	0.207	0 -X	59	0.175	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	GT3	8	52	-655	-39	659	0.363	0	-0.124	0.384 down	655	0	0 -Z	39	0.124	0 +X	52	0.363	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	W3	8	9	-1	0	9	0	0	0	0 down	1	0	0 +Z	0	0	0 +X	9	0	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	E1	8	0	65	0	65	-2.859	-2	-3.641	5.043 up	65	0	100 -Z	0	3.641	0 -X	0	2.859	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	E2	8	0	9	0	9	-2.857	-2	3.576	4.995 up	9	0	100 +Z	0	3.576	0 -X	0	2.857	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	E3	8	0	33	0	33	-2.858	-2	0.865	3.594 up	33	0	100 +Z	0	0.865	0 -X	0	2.858	0	1E+10	0.1	0	65.55	28.84	374.16
	127 127 2	CUSTOM BAS V - Stop	P2	8	0	0	0	1	0.013	0	-0.006	0.014 up	0	0	100 +Z	0	-0.006	0 -X	0	-0.013	0	1E+10	0.1	0	65.55	28.84	374.16
	128 128 2	CUSTOM BAS V - Stop	P1	8	0	0	-1	1	0.011	0	-0.005	0.012 up	0	0	100 -Z	1	0.005	0 -X	0	-0.011	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	GR	8	0	-688	0	688	0.056	0	0.126	0.138 down	688	0	0 +Z	0	0.126	0 +X	0	0.056	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	GT1	8	66	-689	-20	692	0.196	0	0.083	0.213 down	689	0	0 -Z	20	-0.083	0 +X	66	0.196	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	GT2	8	-65	-690	24	694	-0.265	0	0.243	0.36 down	690	0	0 +Z	24	0.243	0 -X	65	0.265	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	GT3	8	63	-687	-28	690	0.49	0	-0.067	0.495 down	687	0	0 -Z	28	0.067	0 +X	63	0.49	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	W3	8	10	0	0	10	0	0	0	0 up	0	0	100 +Z	0	0	0 +X	10	0	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	E1	8	0	62	0	62	-2.859	-2	-5.631	6.624 up	62	0	100 -Z	0	5.631	0 -X	0	2.859	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	E2	8	0	62	0	62	-2.857	-2	7.248	8.043 up	62	0	100 +Z	0	7.248	0 -X	0	2.857	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	E3	8	0	58	0	58	-2.857	-2	2.281	4.167 up	58	0	100 +Z	0	2.281	0 -X	0	2.857	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	0.016	0	-0.006	0.017 down	0	0	0 +Z	0	-0.006	0 -X	0	-0.016	0	1E+10	0.1	0	80.57	28.84	374.17
	128 128 2	CUSTOM BAS V - Stop	P3	8	0	0	0	0	0.014	0	-0.008	0.016 up	0	0	100 -Z	0	0.008	0 -X	0	-0.014	0	1E+10	0.1	0	80.57	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	GR	8	0	-526	0	526	0.056	0	0.147	0.157 down	526	0	0 +Z	0	0.147	0 +X	0	0.056	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	GT1	8	51	-521	-11	524	0.232	0	0.108	0.256 down	521	0	0 -Z	11	-0.108	0 +X	51	0.232	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	GT2	8	-52	-523	9	526	-0.346	0	0.214	0.406 down	523	0	0 +Z	9	0.214	0 -X	52	0.346	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	GT3	8	52	-527	-7	530	0.604	0	0.072	0.608 down	527	0	0 -Z	7	-0.072	0 +X	52	0.604	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	W3	8	8	0	3	9	0	0	0	0 down	0	0	0 +Z	3	0	0 +X	8	0	0	1E+10	0.1	0	94	28.84	374.17
	129 129 2	CUSTOM BAS V - Stop	E1	8	0	13	0	13	-2.858	-2	-7.441	8.218 up	13	0	100 -Z	0	7.441	0 -X	0	2.858	0	1E+10	0.1	0	94	28.84	374.17

129 129 2	CUSTOM BAS V - Stop	E2	8	0	70	0	70	-2.856	-2	9.818	10.419 up	70	0	100 +Z	0	9.818	0 -X	0	2.856	0	1E+10	0.1	0	94	28.84	374.17
129 129 2	CUSTOM BAS V - Stop	E3	8	0	60	0	60	-2.857	-2	3.053	4.635 up	60	0	100 +Z	0	3.053	0 -X	0	2.857	0	1E+10	0.1	0	94	28.84	374.17
129 129 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	0.013	0	-0.002	0.013 down	0	0	0 +Z	0	-0.002	0 +X	0	0.013	0	1E+10	0.1	0	94	28.84	374.17
129 129 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	0.019	0	-0.001	0.019 down	0	0	0 +Z	0	-0.001	0 -X	0	-0.019	0	1E+10	0.1	0	94	28.84	374.17
129 129 2	CUSTOM BAS V - Stop	P3	8	0	0	0	1	0.019	0	0	0.019 down	0	0	0 +Z	0	0	0 +X	0	0.019	0	1E+10	0.1	0	94	28.84	374.17
144 144 2	CUSTOM BAS V - Stop	P2	8	0	0	-1	1	0.01	0	-0.001	0.01 down	0	0	0 -Z	1	0.001	0 -X	0	-0.01	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	P3	8	0	-1	0	2	0.014	0	-0.003	0.014 down	1	0	0 +Z	0	-0.003	0 +X	0	0.014	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	0.008	0	-0.002	0.008 up	0	0	100 -Z	0	0.002	0 +X	0	0.008	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	GR	8	0	-1118	0	1118	0.021	0	0.079	0.082 down	1118	0	0 +Z	0	0.079	0 +X	0	0.021	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	GT1	8	108	-1104	-19	1110	0.131	0	0.059	0.144 down	1104	0	0 -Z	19	-0.059	0 +X	108	0.131	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	GT2	8	-113	-1128	-1	1134	-0.238	0	0.077	0.25 down	1128	0	0 -Z	1	-0.077	0 -X	113	0.238	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	GT3	8	105	-1101	-34	1106	0.389	0	-0.04	0.391 down	1101	0	0 -Z	34	0.04	0 +X	105	0.389	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	W3	8	16	5	-5	17	0	0	0	0 up	5	0	100 -Z	5	0	0 +X	16	0	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	E1	8	0	-806	0	806	-1.523	-2	-2.21	3.347 down	806	0	0 -Z	0	2.21	0 -X	0	1.523	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	E2	8	0	-654	0	654	-1.523	-2	-1.844	3.118 down	654	0	0 -Z	0	1.844	0 -X	0	1.523	0	1E+10	0.1	0	212.57	28.84	374.16
144 144 2	CUSTOM BAS V - Stop	E3	8	0	-726	0	726	-1.523	-2	-1.978	3.199 down	726	0	0 -Z	0	1.978	0 -X	0	1.523	0	1E+10	0.1	0	212.57	28.84	374.16
172 172 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	-0.001	0	-0.002	0.002 up	0	0	100 -Z	0	0.002	0 +X	0	-0.001	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	-0.001	0	-0.003	0.003 up	0	0	100 -Z	0	0.003	0 +X	0	-0.001	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	P3	8	0	0	0	0	-0.002	0	-0.005	0.005 up	0	0	100 -Z	0	0.005	0 +X	0	-0.002	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	GR	8	0	-312	0	312	0	0	0	0 down	312	0	0 +Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	GT1	8	-11	-303	-28	304	-0.017	0	-0.042	0.046 down	303	0	0 -Z	28	0.042	0 -X	11	0.017	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	GT2	8	12	-324	30	326	0.038	0	0.092	0.1 down	324	0	0 +Z	30	0.092	0 +X	12	0.038	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	GT3	8	-11	-297	-27	298	-0.054	0	-0.129	0.14 down	297	0	0 -Z	27	0.129	0 -X	11	0.054	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	W3	8	0	0	-8	8	0	0	0	0 down	0	0	0 -Z	8	0	0 -X	0	0	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	E1	8	0	86	0	86	-13.728	-12	-6.099	19.227 up	86	0	100 -Z	0	6.099	0 -X	0	13.728	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	E2	8	0	87	0	87	-13.728	-12	-6.03	19.205 up	87	0	100 -Z	0	6.03	0 -X	0	13.728	0	1E+10	0.1	0	238.14	25.83	261.56
172 172 2	CUSTOM BAS V - Stop	E3	8	0	90	0	90	-13.728	-12	-6.067	19.216 up	90	0	100 -Z	0	6.067	0 -X	0	13.728	0	1E+10	0.1	0	238.14	25.83	261.56
183 183 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.001	0	-0.001	0.001 down	0	0	0 +Z	0	-0.001	0 -X	0	0.001	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.001	0	-0.001	0.001 down	0	0	0 +Z	0	-0.001	0 -X	0	0.001	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	GR	6	0	-207	0	207	0	0	0	0 down	207	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	GT1	6	-10	-207	-18	208	-0.015	0	-0.026	0.03 down	207	0	0 -Z	18	0.026	0 -X	10	0.015	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	GT2	6	13	-207	16	208	0.029	0	0.037	0.047 down	207	0	0 +Z	16	0.037	0 +X	13	0.029	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	GT3	6	-13	-207	-16	208	-0.041	0	-0.048	0.063 down	207	0	0 -Z	16	0.048	0 -X	13	0.041	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	W3	6	5	0	19	20	0.001	0	0.004	0.004 down	0	0	0 +Z	19	0.004	0 +X	5	0.001	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	E1	6	0	24	0	24	-13.722	-12	-6.03	19.2 up	24	0	100 -Z	0	6.03	0 -X	0	13.722	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	E2	6	0	24	0	24	-13.674	-12	-5.795	19.093 up	24	0	100 -Z	0	5.795	0 -X	0	13.674	0	1E+10	0.1	0	238.11	25.75	247.35
183 183 2	CUSTOM BAS V - Stop	E3	6	0	24	0	24	-13.672	-12	-5.795	19.092 up	24	0	100 -Z	0	5.795	0 -X	0	13.672	0	1E+10	0.1	0	238.11	25.75	247.35
186 186 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.001	0	-0.001	0.002 up	0	0	100 -Z	0	0.001	0 -X	0	0.001	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.003	0	-0.005	0.006 up	0	0	100 -Z	0	0.005	0 -X	0	0.003	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.004	0	-0.004	0.006 up	0	0	100 +Z	0	-0.004	0 -X	0	0.004	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	GR	6	0	-356	0	356	0	0	0.001	0.001 down	356	0	0 +Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	GT1	6	-13	-356	-33	358	-0.047	0	-0.119	0.128 down	356	0	0 -Z	33	0.119	0 -X	13	0.047	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	GT2	6	16	-357	32	358	0.094	0	0.181	0.203 down	357	0	0 +Z	32	0.181	0 +X	16	0.094	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	GT3	6	-17	-356	-31	358	-0.131	0	-0.239	0.273 down	356	0	0 -Z	31	0.239	0 -X	17	0.131	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	W3	6	24	0	26	35	0.037	0	0.04	0.055 up	0	0	100 +Z	26	0.04	0 +X	24	0.037	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	E1	6	0	25	0	25	-13.479	-12	-5.829	18.965 up	25	0	100 -Z	0	5.829	0 -X	0	13.479	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	E2	6	0	25	0	25	-13.384	-12	-4.951	18.645 up	25	0	100 -Z	0	4.951	0 -X	0	13.384	0	1E+10	0.1	0	230.68	25.75	249.63
186 186 2	CUSTOM BAS V - Stop	E3	6	0	25	0	25	-13.244	-12	-4.869	18.523 up	25	0	100 -Z	0	4.869	0 -X	0	13.244	0	1E+10	0.1	0	230.68	25.75	249.63
187 187 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.003	0	-0.003	0.004 down	0	0	0 +Z	0	-0.003	0 -X	0	0.003	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	GR	6	0	-466	0	466	0.003	0	0.001	0.003 down	466	0	0 +Z	0	0.001	0 +X	0	0.003	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	GT1	6	-22	-466	-42	469	-0.038	0	-0.079	0.088 down	466	0	0 -Z	42	0.079	0 -X	22	0.038	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	GT2	6	29	-466	37	469	0.073	0	0.091	0.117 down	466	0	0 +Z	37	0.091	0 +X	29	0.073	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	GT3	6	-33	-466	-33	469	-0.11	0	-0.113	0.157 down	466	0	0 -Z	33	0.113	0 -X	33	0.11	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	W3	6	46	0	5	46	0.376	0	0.04	0.378 down	0	0	0 +Z	5	0.04	0 +X	46	0.376	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	E1	6	0	39	0	39	-11.08	-12	-5.83	17.342 up	39	0	100 -Z	0	5.83	0 -X	0	11.08	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	E2	6	0	39	0	39	-11.542	-12	-4.951	17.37 up	39	0	100 -Z	0	4.951	0 -X	0	11.542	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	E3	6	0	39	0	39	-9.975	-12	-4.87	16.347 up	39	0	100 -Z	0	4.87	0 -X	0	9.975	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	P1	6	-1	0	0	1	0	0	0.001	0.001 down	0	0	0 -Z	0	-0.001	0 -X	1	0	0	1E+10	0.1	0	230.68	25.75	264.63
187 187 2	CUSTOM BAS V - Stop	P3	6	-1	0	1	1	-0.005	0	0	0.005 down	0	0	0 +Z	1	0	0 -X	1	0.005	0	1E+10	0.1	0	230.68	25.75	264.63
188 188 2	CUSTOM BAS V - Stop	P1	6	0	0	-1	1	0.001	0	0.003	0.003 down	0	0	0 -Z	1	-0.003	0 -X	0	-0.001	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	GR	6	0	-434	0	434	0.006	0	0.001	0.007 down	434	0	0 +Z	0	0.001	0 +X	0	0.006	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	GT1	6	-9	-434	-43	436	-0.002	0	-0.039	0.039 down	434	0	0 -Z	43	0.039	0 -X	9	0.002	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	GT2	6	25	-434	14	435	0.007	0	0.001	0.007 down	434	0	0 +Z	14	0.001	0 +X	25	0.007	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	GT3	6	-31	-434	26	436	-0.009	0	0.014	0.017 down	434	0	0 +Z	26	0.014	0 -X	31	0.009	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	W3	6	43	0	2	43	0.729	0	0.04	0.73 up	0	0	100 +Z	2	0.04	0 +X	43	0.729	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	E1	6	0	36	0	36	-8.569	-12	-5.831	15.856 up	36	0	100 -Z	0	5.831	0 -X	0	8.569	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	E2	6	0	36	0	36	-10.17	-12	-4.951	16.491 up	36	0	100 -Z	0	4.951	0 -X	0	10.17	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	E3	6	0	36	0	36	-7.067	-12	-4.871	14.753 up	36	0	100 -Z	0	4.871	0 -X	0	7.067	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	P3	6	0	0	2	2	-0.004	0	0.004	0.006 up	0	0	100 +Z	2	0.004	0 +X	0	-0.004	0	1E+10	0.1	0	230.69	25.75	279.63
188 188 2	CUSTOM BAS V - Stop	P2	6	-1	0	4	5	0	0	0	0 up	0	0	100 +Z	4	0	0 -X	1	0	0	1E+10	0.1	0	230.69	25.75	279.63
189 189 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.001	0	0.003	0.003 up	0	0	100 -Z	0	-0.003	0 +X	0	0.001	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0	0	0.009	0.009 up	0	0	100 +Z	0	0.009	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	GR	6	0	-440	0	440	0.011	0	0.001	0.011 down	440	0	0 +Z	0	0.001	0 +X	0	0.011	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	GT1	6	3	-440	29	441	0.011	0	0.002	0.011 down	440	0	0 +Z	29	0.002	0 +X	3	0.011	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	GT2	6	-7	-440	-43	442	-0.004	0	-0.089	0.089 down	440	0	0 -Z	43	0.089	0 -X	7	0.004	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	GT3	6	6	-440	43	442	0.031	0	0.141	0.144 down	440	0	0 +Z	43	0.141	0 +X	6	0.031	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	W3	6	43	0	2	43	0.952	0	0.04	0.953 down	0	0	0 +Z	2	0.04	0 +X	43	0.952	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	E1	6	0	36	0	36	-7.057	-12	-5.831	15.093 up	36	0	100 -Z	0	5.831	0 -X	0	7.057	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	E2	6	0	36	0	36	-9.582	-12	-4.951	16.134 up	36	0	100 -Z	0	4.951	0 -X	0	9.582	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	E3	6	0	36	0	36	-5.525	-12	-4.871	14.08 up	36	0	100 -Z	0	4.871	0 -X	0	5.525	0	1E+10	0.1	0	230.69	25.75	294.63
189 189 2	CUSTOM BAS V - Stop	P1	6	0	0	5	5	0	0	0.005	0.005 up	0	0	100 +Z	5	0.005	0 +X	0	0	0	1E+10	0.1	0	230.69	25.75	294.63
190 190 2	CUSTOM BAS V - Stop	P1	6	0	0	-1	1	0	0	0.007	0.007 down	0	0	0 -Z	1	-0.007	0 +X	0	0	0	1E+10	0.1	0	230.69	25.75	309.63
190 190 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.001	0	0.006	0.006 down	0	0	0 -Z	0	-0.006	0 +X	0	0.001	0	1E+10	0.1	0	230.69	25.75	309.63
190 190 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.002	0	0.013	0.013 down	0	0	0 -Z	0	-0.013	0 +X	0	0.002	0	1E+10	0.1	0	230.69	25.75	309.63
190 190 2	CUSTOM BAS V - Stop	GR	6	0	-448	0	448	0.015	0	0.001	0.015 down	448	0	0 +Z	0	0.001	0 +X	0	0.015	0	1E+10	0.1	0	230.69	25.75	309.63
190 190 2	CUSTOM BAS V - Stop	GT1	6	0	-448	44	450	0.016	0	0.042	0.045 down	448	0	0 +Z	44	0.042	0 +X	0	0.016	0	1E+10	0.1	0	230.69	25.75	309.63
190 190 2	CUSTOM BAS V - Stop	GT2	6	-4	-448	-45	450	-0.001	0	-0.178	0.178 down	448	0	0 -Z	45	0.178	0 -X	4	0.001	0	1E+10	0.1	0	230.69	25.75	309.63

	190 190 2	CUSTOM BAS V - Stop	GT3	6	6	-448	44	450	0.051	0	0.267	0.272 down	448	0	0 +Z	44	0.267	0 +X	6	0.051	0	1E+10	0.1	0	230.69	25.75	309.63
	190 190 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	309.63
	190 190 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	309.63
	190 190 2	CUSTOM BAS V - Stop	W3	6	44	0	2	44	0.965	0	0.04	0.966 up	0	0	100 +Z	2	0.04	0 +X	44	0.965	0	1E+10	0.1	0	230.69	25.75	309.63
	190 190 2	CUSTOM BAS V - Stop	E1	6	0	39	0	39	-7.114	-12	-5.831	15.12 up	39	0	100 -Z	0	5.831	0 -X	0	7.114	0	1E+10	0.1	0	230.69	25.75	309.63
	190 190 2	CUSTOM BAS V - Stop	E2	6	0	39	0	39	-9.878	-12	-4.951	16.312 up	39	0	100 -Z	0	4.951	0 -X	0	9.878	0	1E+10	0.1	0	230.69	25.75	309.63
	190 190 2	CUSTOM BAS V - Stop	E3	6	0	39	0	39	-5.822	-12	-4.871	14.199 up	39	0	100 -Z	0	4.871	0 -X	0	5.822	0	1E+10	0.1	0	230.69	25.75	309.63
	191 191 2	CUSTOM BAS V - Stop	P1	6	0	0	0	1	0.001	0	0.009	0.009 up	0	0	100 -Z	0	-0.009	0 +X	0	0.001	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.002	0	0.009	0.009 up	0	0	100 -Z	0	-0.009	0 +X	0	0.002	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.005	0	0.017	0.018 up	0	0	100 -Z	0	-0.017	0 +X	0	0.005	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	GR	6	0	-410	0	410	0.02	0	0.001	0.021 down	410	0	0 +Z	0	0.001	0 +X	0	0.02	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	GT1	6	3	-410	41	412	0.026	0	0.082	0.086 down	410	0	0 +Z	41	0.082	0 +X	3	0.026	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	GT2	6	-5	-410	-41	412	-0.015	0	-0.268	0.269 down	410	0	0 -Z	41	0.268	0 -X	5	0.015	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	GT3	6	7	-410	40	412	0.089	0	0.394	0.404 down	410	0	0 +Z	40	0.394	0 +X	7	0.089	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	W3	6	40	0	2	40	0.753	0	0.04	0.754 down	0	0	0 +Z	2	0.04	0 +X	40	0.753	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	E1	6	0	27	0	27	-8.78	-12	-5.831	15.972 up	27	0	100 -Z	0	5.831	0 -X	0	8.78	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	E2	6	0	27	0	27	-10.954	-12	-4.951	16.985 up	27	0	100 -Z	0	4.951	0 -X	0	10.954	0	1E+10	0.1	0	230.69	25.75	324.66
	191 191 2	CUSTOM BAS V - Stop	E3	6	0	27	0	27	-7.909	-12	-4.871	15.175 up	27	0	100 -Z	0	4.871	0 -X	0	7.909	0	1E+10	0.1	0	230.69	25.75	324.66
	192 192 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.002	0	0.01	0.01 down	0	0	0 -Z	0	-0.01	0 +X	0	0.002	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.003	0	0.011	0.012 down	0	0	0 -Z	0	-0.011	0 +X	0	0.003	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.006	0	0.021	0.021 down	0	0	0 -Z	0	-0.021	0 +X	0	0.006	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	GR	6	0	-344	0	344	0.025	0	0.001	0.025 down	344	0	0 +Z	0	0.001	0 +X	0	0.025	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	GT1	6	5	-344	34	346	0.042	0	0.116	0.123 down	344	0	0 +Z	34	0.116	0 +X	5	0.042	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	GT2	6	-6	-343	-34	345	-0.041	0	-0.343	0.346 down	343	0	0 -Z	34	0.343	0 -X	6	0.041	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	GT3	6	7	-345	34	347	0.133	0	0.5	0.517 down	345	0	0 +Z	34	0.5	0 +X	7	0.133	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	W3	6	34	0	3	34	0.44	0	0.04	0.441 up	0	0	100 +Z	3	0.04	0 +X	34	0.44	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	E1	6	0	57	0	57	-11.045	-12	-5.831	17.321 up	57	0	100 -Z	0	5.831	0 -X	0	11.045	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	E2	6	0	57	0	57	-12.218	-12	-4.951	17.827 up	57	0	100 -Z	0	4.951	0 -X	0	12.218	0	1E+10	0.1	0	230.7	25.75	337.16
	192 192 2	CUSTOM BAS V - Stop	E3	6	0	57	0	57	-10.6	-12	-4.87	16.735 up	57	0	100 -Z	0	4.87	0 -X	0	10.6	0	1E+10	0.1	0	230.7	25.75	337.16
	203 203 2	V - Stop	E1	6	0	161	0	161	-4.849	-12	-5.548	14.082 up	161	0	100 -Z	0	5.548	0 -X	0	4.849	0	1E+10	0.1	0	212.69	25.75	366.08
C68	C68 1	V - Stop	E3	8	0	4	0	4	-13.458	-12	-6.083	19.03 up	4	0	100 -Z	0	6.083	0 -X	0	13.458	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 1	V - Stop	W3	8	76	3	-2	76	0.001	0	0	0.001 up	3	0	100 -Z	2	0	0 +X	76	0.001	0	1E+10	0.1	0	232.03	25.84	349.99
C98	C98 1	V - Stop	W3	8	-4	3	-4	7	0	0	0	0 up	3	0	100 -Z	4	0	0 -X	4	0	0	1E+10	0.1	0	222.97	25.84	353.31
C99	C99 1	V - Stop	P1	8	0	3	1	3	0.004	0	-0.001	0.004 up	3	0	100 +Z	1	-0.001	0 -X	0	-0.004	0	1E+10	0.1	0	223.01	25.84	365.97
C99	C99 1	V - Stop	P3	8	0	3	1	3	0.013	0	-0.001	0.013 up	3	0	100 +Z	1	-0.001	0 +X	0	0.013	0	1E+10	0.1	0	223.01	25.84	365.97
C68	C68 1	V - Stop	P2	8	0	2	0	2	-0.002	0	0.008	0.009 up	2	0	100 +Z	0	0.008	0 -X	0	0.002	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 1	V - Stop	P3	8	0	2	0	2	-0.003	0	0.013	0.013 up	2	0	100 -Z	0	-0.013	0 -X	0	0.003	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 1	V - Stop	P1	8	-1	2	0	2	-0.001	0	0.005	0.005 up	2	0	100 -Z	0	-0.005	0 -X	1	0.001	0	1E+10	0.1	0	232.03	25.84	349.99
C99	C99 1	V - Stop	P2	8	0	2	1	2	0.008	0	-0.001	0.008 up	2	0	100 +Z	1	-0.001	0 +X	0	0.008	0	1E+10	0.1	0	223.01	25.84	365.97
	203 203 2	V - Stop	W3	6	26	1	-1	26	0.001	0	0	0.001 up	1	0	100 -Z	1	0	0 +X	26	0.001	0	1E+10	0.1	0	212.69	25.75	366.08
C102	C102 1	V - Stop	P1	8	-2	1	2	3	-0.001	0	0.002	0.002 up	1	0	100 +Z	2	0.002	0 -X	2	0.001	0	1E+10	0.1	0	214.05	25.84	354.77
C92	C92 2	V - Stop	W3	8	19	1	0	19	0	0	0	0 up	1	0	100 +Z	0	0	0 +X	19	0	0	1E+10	0.1	0	214.02	25.84	364.46
C98	C98 1	V - Stop	P3	8	0	1	0	1	0	0	0.01	0.01 up	1	0	100 -Z	0	-0.01	0 +X	0	0	0	1E+10	0.1	0	222.97	25.84	353.31
D90	D90 1	V - Stop	P1	6	0	1	0	1	0.001	0	0	0.001 up	1	0	100 -Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	221.68	25.75	367.32
D90	D90 1	V - Stop	P2	6	0	1	0	1	0.006	0	-0.001	0.006 up	1	0	100 +Z	0	-0.001	0 -X	0	-0.006	0	1E+10	0.1	0	221.68	25.75	367.32
D90	D90 1	V - Stop	P3	6	0	1	0	1	0.011	0	-0.003	0.012 up	1	0	100 -Z	0	0.003	0 -X	0	-0.011	0	1E+10	0.1	0	221.68	25.75	367.32
	54 54 1	V - Stop	P3	20	5	0	-15	16	-0.047	0	-0.027	0.054 down	0	0	0 -Z	15	0.027	0 +X	5	-0.047	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	W3	20	26	0	0	26	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	26	0	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	P2	20	-161	0	2	161	-0.005	0	0	0.005 down	0	0	0 +Z	2	0	0 -X	161	0.005	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	P1	20	52	0	15	54	0	0	0	0 down	0	0	0 +Z	15	0	0 +X	52	0	0	1E+10	0.1	0	216.03	26.31	359.66
	63 63 2	CUSTOM BAS V - Stop	P2	20	15	0	-1	15	0.005	0	0.007	0.009 down	0	0	0 -Z	1	-0.007	0 +X	15	0.005	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2	CUSTOM BAS V - Stop	P3	20	-24	0	-1	24	-0.007	0	0	0.007 down	0	0	0 -Z	1	0	0 -X	24	0.007	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2	CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	234.04	26.31	349.67
	212 212 2	CUSTOM BAS V - Stop	P1	6	0	-2	-1	2	0.003	0	-0.003	0.005 down	2	0	0 -Z	1	0.003	0 -X	0	-0.003	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	P2	6	0	-1	0	1	0.009	0	-0.006	0.011 down	1	0	0 +Z	0	-0.006	0 -X	0	-0.009	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	P3	6	0	-1	0	1	0.015	0	-0.011	0.018 down	1	0	0 -Z	0	0.011	0 +X	0	0.015	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	GR	6	0	-462	0	462	0.032	0	0.009	0.033 down	462	0	0 +Z	0	0.009	0 +X	0	0.032	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	GT1	6	46	-501	-21	504	0.109	0	-0.026	0.112 down	501	0	0 -Z	21	0.026	0 +X	46	0.109	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	GT2	6	-33	-403	23	405	-0.171	0	0.147	0.225 down	403	0	0 +Z	23	0.147	0 -X	33	0.171	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	GT3	6	44	-536	-30	539	0.373	0	-0.22	0.434 down	536	0	0 -Z	30	0.22	0 +X	44	0.373	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	W3	6	19	2	0	19	0	0	0	0 up	2	0	100 +Z	0	0	0 +X	19	0	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	E1	6	0	-435	0	435	-3.215	-2	-9.008	9.771 down	435	0	0 -Z	0	9.008	0 -X	0	3.215	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	E2	6	0	-486	0	486	-3.063	-2	-6.149	7.155 down	486	0	0 -Z	0	6.149	0 -X	0	3.063	0	1E+10	0.1	0	230.68	25.75	369.67
	212 212 2	CUSTOM BAS V - Stop	E3	6	0	-460	0	460	-3.117	-2	-7.3	8.185 down	460	0	0 -Z	0	7.3	0 -X	0	3.117	0	1E+10	0.1	0	230.68	25.75	369.67
	217 217 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.011	0	-0.003	0.011 up	0	0	100 -Z	0	0.003	0 +X	0	0.011	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	GR	6	0	-328	0	328	0.029	0	0.016	0.033 down	328	0	0 +Z	0	0.016	0 +X	0	0.029	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	GT1	6	32	-316	1	317	0.181	0	0.02	0.182 down	316	0	0 +Z	1	0.02	0 +X	32	0.181	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	GT2	6	-35	-351	4	353	-0.312	0	0.053	0.317 down	351	0	0 +Z	4	0.053	0 -X	35	0.312	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	GT3	6	29	-299	-7	300	0.51	0	-0.103	0.521 down	299	0	0 -Z	7	0.103	0 +X	29	0.51	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	W3	6	6	-1	-1	6	0	0	0	0 down	1	0	0 -Z	1	0	0 +X	6	0	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	E1	6	0	286	0	286	-1.278	-2	-7.286	7.663 up	286	0	100 -Z	0	7.286	0 -X	0	1.278	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	E2	6	0	280	0	280	-1.528	-2	-4.914	5.521 up	280	0	100 -Z	0	4.914	0 -X	0	1.528	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	E3	6	0	289	0	289	-1.527	-2	-5.915	6.428 up	289	0	100 -Z	0	5.915	0 -X	0	1.527	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	P1	6	0	1	0	1	0.007	0	-0.001	0.007 up	1	0	100 -Z	0	0.001	0 -X	0	-0.007	0	1E+10	0.1	0	226	28.75	375.47
	217 217 2	CUSTOM BAS V - Stop	P3	6	0	1	0	1	0.016	0	-0.007	0.018 up	1	0	100 -Z	0	0.007	0 -X	0	-0.016	0	1E+10	0.1	0	226	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.004	0	-0.002	0.004 up	0	0	100 +Z	0	-0.002	0 +X	0	0.004	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	GR	6	0	-465	0	465	0.029	0	0.027	0.039 down	465	0	0 +Z	0	0.027	0 +X	0	0.029	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	GT1	6	36	-440	-25	442	0.104	0	-0.025	0.108 down	440	0	0 -Z	25	0.025	0 +X	36	0.104	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	GT2	6	-47	-478	8	480	-0.142	0	0.057	0.153 down	478	0	0 +Z	8	0.057	0 -X	47	0.142	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	GT3	6	34	-423	-25	425	0.27	0	-0.145	0.306 down	423	0	0 -Z	25	0.145	0 +X	34	0.27	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	W3	6	8	-5	5	10	0	0	0	0 down	5	0	0 +Z	5	0	0 +X	8	0	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	E1	6	0	129	0	129	-1.277	-2	-0.31	2.393 up	129	0	100 -Z	0	0.31	0 -X	0	1.277	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	E2	6	0	32	0	32	-1.528	-2	-0.932	2.684 up	32	0	100 -Z	0	0.932	0 -X	0	1.528	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	E3	6	0	66	0	66	-1.527	-2	-0.669	2.604 up	66	0	100 -Z	0	0.669	0 -X	0	1.527	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	P2	6	0	1	0	1	0.005	0	-0.003	0.006 up	1	0	100 -Z	0	0.003	0 +X	0	0.005	0	1E+10	0.1	0	197.52	28.75	375.47
	221 221 2	CUSTOM BAS V - Stop	P3	6	0	1	0	1	0.008	0	-0.006	0.01 up	1	0	100 +Z	0	-0.006	0 -X	0	-0.008	0	1E+10	0.1	0	197.52	28.75	375.47
	222 222 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.002	0	-0.001	0.002 down	0	0	0 -Z	0	0.001	0 -X	0	-0.002	0	1E+10	0.1	0	182.56	28.75	375.47
	222 222 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.003	0	-0.001	0.003 down	0	0	0 -Z	0	0.001	0 -X	0	-0.003	0	1E+10	0.1	0	182.56	28.75	375.47
	222 222 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.004	0	-0.003	0.005 down	0	0	0 -Z	0	0.003	0 -X	0	-0.004	0	1E+10	0.1	0	182.56	28.75	375.47
	222 222 2	CUSTOM BAS V - Stop	GR	6	0	-392	0	392	0.029	0	0.031	0.042 down	392	0	0 +Z	0	0.031	0 +X	0	0.029	0	1E+10	0.1	0	182.56	28.75	375.47

222 222 2	CUSTOM BAS V - Stop	GT1	6	35	-396	-18	398	0.064	0	0.013	0.066 down	396	0	0 -Z	18	-0.013	0 +X	35	0.064	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	GT2	6	-38	-389	7	391	-0.052	0	0.045	0.069 down	389	0	0 +Z	7	0.045	0 -X	38	0.052	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	GT3	6	34	-399	-21	401	0.144	0	-0.041	0.149 down	399	0	0 -Z	21	0.041	0 +X	34	0.144	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	W3	6	6	0	0	6	0	0	0	0 up	0	0	100 -Z	0	0	0 +X	6	0	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	E1	6	0	25	0	25	-1.277	-2	0.159	2.378 up	25	0	100 +Z	0	0.159	0 -X	0	1.277	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	E2	6	0	32	0	32	-1.527	-2	-1.192	2.784 up	32	0	100 -Z	0	1.192	0 -X	0	1.527	0	1E+10	0.1	0	182.56	28.75	375.47
222 222 2	CUSTOM BAS V - Stop	E3	6	0	29	0	29	-1.527	-2	-0.508	2.567 up	29	0	100 -Z	0	0.508	0 -X	0	1.527	0	1E+10	0.1	0	182.56	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	P3	6	2	0	-1	2	0	0	0	0 up	0	0	100 -Z	1	0	0 +X	2	0	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	P2	6	0	0	0	1	0	0	0	0 up	0	0	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	GR	6	0	-446	0	446	0.029	0	0.034	0.044 down	446	0	0 +Z	0	0.034	0 +X	0	0.029	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	GT1	6	-28	-445	3	446	0.028	0	0.034	0.044 down	445	0	0 +Z	3	0.034	0 -X	28	-0.028	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	GT2	6	24	-447	1	448	0.029	0	0.034	0.045 down	447	0	0 +Z	1	0.034	0 +X	24	0.029	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	GT3	6	-3	-444	-13	444	0.029	0	0.033	0.044 down	444	0	0 -Z	13	-0.033	0 -X	3	-0.029	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	W3	6	6	0	0	6	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	6	0	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	E1	6	0	39	0	39	-1.276	-2	-0.888	2.533 up	39	0	100 -Z	0	0.888	0 -X	0	1.276	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	E2	6	0	37	0	37	-1.526	-2	-0.388	2.546 up	37	0	100 -Z	0	0.388	0 -X	0	1.526	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	E3	6	0	38	0	38	-1.526	-2	-0.388	2.546 up	38	0	100 -Z	0	0.388	0 -X	0	1.526	0	1E+10	0.1	0	168.94	28.75	375.47
223 223 2	CUSTOM BAS V - Stop	P1	6	-1	0	0	1	0	0	0	0 up	0	0	100 -Z	0	0	0 -X	1	0	0	1E+10	0.1	0	168.94	28.75	375.47
224 224 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.002	0	0	0.002 down	0	0	0 -Z	0	0	0 -X	0	0.002	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.003	0	-0.001	0.003 down	0	0	0 -Z	0	0.001	0 +X	0	-0.003	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.005	0	-0.001	0.005 down	0	0	0 -Z	0	0.001	0 -X	0	0.005	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	GR	6	0	-471	0	471	0.029	0	0.036	0.046 down	471	0	0 +Z	0	0.036	0 +X	0	0.029	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	GT1	6	-47	-471	2	473	-0.016	0	0.037	0.04 down	471	0	0 +Z	2	0.037	0 -X	47	0.016	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	GT2	6	47	-470	4	473	0.127	0	0.044	0.134 down	470	0	0 +Z	4	0.044	0 +X	47	0.127	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	GT3	6	-47	-471	-2	473	-0.109	0	0.03	0.114 down	471	0	0 -Z	2	-0.03	0 -X	47	0.109	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	W3	6	6	0	0	6	0	0	0	0 up	0	0	100 -Z	0	0	0 +X	6	0	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	E1	6	0	39	0	39	-1.276	-2	-3.87	4.539 up	39	0	100 -Z	0	3.87	0 -X	0	1.276	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	E2	6	0	39	0	39	-1.526	-2	4.02	4.742 up	39	0	100 +Z	0	4.02	0 -X	0	1.526	0	1E+10	0.1	0	152.59	28.75	375.48
224 224 2	CUSTOM BAS V - Stop	E3	6	0	39	0	39	-1.526	-2	0.988	2.703 up	39	0	100 +Z	0	0.988	0 -X	0	1.526	0	1E+10	0.1	0	152.59	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.004	0	-0.001	0.004 up	0	0	100 -Z	0	0.001	0 +X	0	-0.004	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.006	0	-0.002	0.006 up	0	0	100 -Z	0	0.002	0 +X	0	-0.006	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.009	0	-0.003	0.009 up	0	0	100 -Z	0	0.003	0 +X	0	-0.009	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	GR	6	0	-434	0	434	0.029	0	0.037	0.047 down	434	0	0 +Z	0	0.037	0 +X	0	0.029	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	GT1	6	-43	-434	-6	436	-0.056	0	0.025	0.061 down	434	0	0 -Z	6	-0.025	0 -X	43	0.056	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	GT2	6	42	-434	11	436	0.217	0	0.085	0.233 down	434	0	0 +Z	11	0.085	0 +X	42	0.217	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	GT3	6	-42	-434	-11	436	-0.237	0	-0.033	0.239 down	434	0	0 -Z	11	0.033	0 -X	42	0.237	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	W3	6	6	0	0	6	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	6	0	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	E1	6	0	36	0	36	-1.276	-2	-7.238	7.617 up	36	0	100 -Z	0	7.238	0 -X	0	1.276	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	E2	6	0	35	0	35	-1.526	-2	9.641	9.963 up	35	0	100 +Z	0	9.641	0 -X	0	1.526	0	1E+10	0.1	0	137.55	28.75	375.48
225 225 2	CUSTOM BAS V - Stop	E3	6	0	35	0	35	-1.526	-2	2.888	3.83 up	35	0	100 +Z	0	2.888	0 -X	0	1.526	0	1E+10	0.1	0	137.55	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.006	0	-0.002	0.006 up	0	0	100 -Z	0	0.002	0 +X	0	-0.006	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.009	0	-0.003	0.009 up	0	0	100 +Z	0	-0.003	0 -X	0	0.009	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.013	0	-0.004	0.014 up	0	0	100 +Z	0	-0.004	0 -X	0	0.013	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	GR	6	0	-433	0	433	0.029	0	0.038	0.048 down	433	0	0 +Z	0	0.038	0 +X	0	0.029	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	GT1	6	-42	-434	-12	436	-0.096	0	0	0.096 down	434	0	0 -Z	12	0	0 -X	42	0.096	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	GT2	6	41	-433	14	436	0.307	0	0.132	0.334 down	433	0	0 +Z	14	0.132	0 +X	41	0.307	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	GT3	6	-41	-433	-14	436	-0.363	0	-0.091	0.374 down	433	0	0 -Z	14	0.091	0 -X	41	0.363	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	W3	6	6	0	-1	7	0	0	0	0 up	0	0	100 -Z	1	0	0 +X	6	0	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	E1	6	0	38	0	38	-1.276	-2	-10.156	10.43 up	38	0	100 -Z	0	10.156	0 -X	0	1.276	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	E2	6	0	39	0	39	-1.526	-2	14.673	14.887 up	39	0	100 +Z	0	14.673	0 -X	0	1.526	0	1E+10	0.1	0	122.58	28.75	375.48
226 226 2	CUSTOM BAS V - Stop	E3	6	0	39	0	39	-1.525	-2	4.672	5.306 up	39	0	100 +Z	0	4.672	0 -X	0	1.525	0	1E+10	0.1	0	122.58	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.008	0	-0.001	0.008 down	0	0	0 +Z	0	-0.001	0 -X	0	0.008	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.011	0	0	0.011 down	0	0	0 +Z	0	0	0 -X	0	0.011	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.017	0	-0.001	0.017 down	0	0	0 +Z	0	-0.001	0 -X	0	0.017	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	GR	6	0	-346	0	346	0.029	0	0.038	0.048 down	346	0	0 +Z	0	0.038	0 +X	0	0.029	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	GT1	6	-34	-346	-8	348	-0.133	0	0.001	0.133 down	346	0	0 -Z	8	-0.001	0 -X	34	0.133	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	GT2	6	34	-346	6	347	0.388	0	0.102	0.401 down	346	0	0 +Z	6	0.102	0 +X	34	0.388	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	GT3	6	-34	-346	-5	348	-0.478	0	-0.031	0.479 down	346	0	0 -Z	5	0.031	0 -X	34	0.478	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	W3	6	6	0	-6	8	0	0	0	0 down	0	0	0 -Z	6	0	0 +X	6	0	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	E1	6	0	16	0	16	-1.276	-2	-11.775	12.011 up	16	0	100 -Z	0	11.775	0 -X	0	1.276	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	E2	6	0	14	0	14	-1.526	-2	17.547	17.727 up	14	0	100 +Z	0	17.547	0 -X	0	1.526	0	1E+10	0.1	0	108.96	28.75	375.48
227 227 2	CUSTOM BAS V - Stop	E3	6	0	15	0	15	-1.525	-2	5.819	6.339 up	15	0	100 +Z	0	5.819	0 -X	0	1.525	0	1E+10	0.1	0	108.96	28.75	375.48
238 238 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.011	0	-0.002	0.011 down	0	0	0 +Z	0	-0.002	0 +X	0	0.011	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.021	0	-0.002	0.021 down	0	0	0 +Z	0	-0.002	0 -X	0	-0.021	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.016	0	-0.001	0.016 down	0	0	0 +Z	0	-0.001	0 +X	0	0.016	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	GR	6	0	-337	0	337	0.033	0	0.037	0.05 down	337	0	0 +Z	0	0.037	0 +X	0	0.033	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	GT1	6	33	-336	-7	338	0.21	0	0.001	0.21 down	336	0	0 -Z	7	-0.001	0 +X	33	0.21	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	GT2	6	-33	-335	6	336	-0.377	0	0.11	0.393 down	335	0	0 +Z	6	0.11	0 -X	33	0.377	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	GT3	6	34	-339	-5	341	0.607	0	-0.053	0.609 down	339	0	0 -Z	5	0.053	0 +X	34	0.607	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	W3	6	7	0	6	9	0	0	0	0 down	0	0	0 +Z	6	0	0 +X	7	0	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	E1	6	0	23	0	23	-2.834	-2	-10.514	11.071 up	23	0	100 -Z	0	10.514	0 -X	0	2.834	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	E2	6	0	37	0	37	-2.838	-2	17.099	17.448 up	37	0	100 +Z	0	17.099	0 -X	0	2.838	0	1E+10	0.1	0	94	28.75	375.49
238 238 2	CUSTOM BAS V - Stop	E3	6	0	34	0	34	-2.836	-2	6.358	7.244 up	34	0	100 +Z	0	6.358	0 -X	0	2.836	0	1E+10	0.1	0	94	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.009	0	-0.003	0.01 up	0	0	100 -Z	0	0.003	0 -X	0	-0.009	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.018	0	-0.007	0.02 down	0	0	0 -Z	0	0.007	0 -X	0	-0.018	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.012	0	-0.007	0.015 up	0	0	100 -Z	0	0.007	0 -X	0	-0.012	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	GR	6	0	-434	0	434	0.033	0	0.035	0.048 down	434	0	0 +Z	0	0.035	0 +X	0	0.033	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	GT1	6	42	-434	-12	436	0.174	0	-0.004	0.174 down	434	0	0 -Z	12	0.004	0 +X	42	0.174	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	GT2	6	-41	-435	15	438	-0.297	0	0.153	0.334 down	435	0	0 +Z	15	0.153	0 -X	41	0.297	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	GT3	6	40	-433	-17	435	0.493	0	-0.162	0.519 down	433	0	0 -Z	17	0.162	0 +X	40	0.493	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	W3	6	8	0	1	8	0	0	0	0 up	0	0	100 +Z	1	0	0 +X	8	0	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	E1	6	0	33	0	33	-2.834	-2	-8.022	8.74 up	33	0	100 -Z	0	8.022	0 -X	0	2.834	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	E2	6	0	43	0	43	-2.837	-2	13.335	13.779 up	43	0	100 +Z	0	13.335	0 -X	0	2.837	0	1E+10	0.1	0	80.56	28.75	375.49
239 239 2	CUSTOM BAS V - Stop	E3	6	0	39	0	39	-2.836	-2	5.163	6.221 up	39	0	100 +Z	0	5.163	0 -X	0	2.836	0	1E+10	0.1	0	80.56	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	P1	6	0	0	-1	1	0.007	0	-0.003	0.008 up	0	0	100 -Z	1	0.003	0 -X	0	-0.007	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.008	0	-0.01	0.013 down	0	0	0 -Z	0	0.01	0 -X	0	-0.008	0	1E+10	0.1	0	65.54	28.75	375.49

240 240 2	CUSTOM BAS V - Stop	GR	6	0	-428	0	428	0.033	0	0.033	0.046 down	428	0	0 +Z	0	0.033	0 +X	0	0.033	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	GT1	6	42	-429	-9	431	0.133	0	0.01	0.134 down	429	0	0 -Z	9	-0.01	0 +X	42	0.133	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	GT2	6	-40	-423	15	426	-0.207	0	0.121	0.239 down	423	0	0 +Z	15	0.121	0 -X	40	0.207	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	GT3	6	36	-431	-23	433	0.366	0	-0.179	0.408 down	431	0	0 -Z	23	0.179	0 +X	36	0.366	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	W3	6	8	-1	1	8	0	0	0	0 down	1	0	0 +Z	1	0	0 +X	8	0	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	E1	6	0	50	0	50	-2.835	-2	-5.124	6.188 up	50	0	100 -Z	0	5.124	0 -X	0	2.835	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	E2	6	0	0	0	0	-2.837	-2	7.478	8.244 up	0	0	100 +Z	0	7.478	0 -X	0	2.837	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	E3	6	0	18	0	18	-2.836	-2	2.771	4.441 up	18	0	100 +Z	0	2.771	0 -X	0	2.836	0	1E+10	0.1	0	65.54	28.75	375.49
240 240 2	CUSTOM BAS V - Stop	P2	6	-1	0	0	1	0.015	0	-0.008	0.017 up	0	0	100 -Z	0	0.008	0 -X	1	-0.015	0	1E+10	0.1	0	65.54	28.75	375.49
241 241 2	CUSTOM BAS V - Stop	P2	6	-1	-1	0	1	0.012	0	-0.006	0.014 down	1	0	0 +Z	0	-0.006	0 -X	1	-0.012	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.005	0	-0.003	0.006 down	0	0	0 -Z	0	0.003	0 -X	0	-0.005	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	GR	6	0	-517	0	517	0.033	0	0.031	0.045 down	517	0	0 +Z	0	0.031	0 +X	0	0.033	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	GT1	6	43	-509	-27	511	0.093	0	-0.006	0.093 down	509	0	0 -Z	27	0.006	0 +X	43	0.093	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	GT2	6	-49	-535	23	538	-0.117	0	0.1	0.154 down	535	0	0 +Z	23	0.1	0 -X	49	0.117	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	GT3	6	33	-503	-38	506	0.24	0	-0.206	0.316 down	503	0	0 -Z	38	0.206	0 +X	33	0.24	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	W3	6	9	5	-5	11	0	0	0	0 up	5	0	100 -Z	5	0	0 +X	9	0	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	E1	6	0	-24	0	24	-2.836	-2	-2.662	4.374 down	24	0	0 -Z	0	2.662	0 -X	0	2.836	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	E2	6	0	211	0	211	-2.836	-2	1.836	3.926 up	211	0	100 +Z	0	1.836	0 -X	0	2.836	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	E3	6	0	124	0	124	-2.836	-2	0.273	3.481 up	124	0	100 +Z	0	0.273	0 -X	0	2.836	0	1E+10	0.1	0	50.56	28.75	375.48
241 241 2	CUSTOM BAS V - Stop	P3	6	-1	0	0	1	0.004	0	-0.011	0.012 up	0	0	100 -Z	0	0.011	0 -X	1	-0.004	0	1E+10	0.1	0	50.56	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	GR	6	0	-510	0	510	0.033	0	0.031	0.045 down	510	0	0 +Z	0	0.031	0 +X	0	0.033	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	GT1	6	19	-480	-44	482	0.057	0	-0.025	0.062 down	480	0	0 -Z	44	0.025	0 +X	19	0.057	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	GT2	6	-42	-526	34	529	-0.036	0	0.087	0.094 down	526	0	0 +Z	34	0.087	0 -X	42	0.036	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	GT3	6	17	-475	-44	477	0.125	0	-0.207	0.242 down	475	0	0 -Z	44	0.207	0 +X	17	0.125	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	P3	6	-1	0	0	1	0	0	-0.011	0.011 down	0	0	0 -Z	0	0.011	0 -X	1	0	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	W3	6	9	-4	4	11	0	0	0	0 down	4	0	0 +Z	4	0	0 +X	9	0	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	E1	6	0	-5	0	5	-2.836	-2	-1.418	3.749 down	5	0	0 -Z	0	1.418	0 -X	0	2.836	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	E2	6	0	92	0	92	-2.836	-2	-1.07	3.632 up	92	0	100 -Z	0	1.07	0 -X	0	2.836	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	E3	6	0	91	0	91	-2.836	-2	-1.07	3.632 up	91	0	100 -Z	0	1.07	0 -X	0	2.836	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	P1	6	1	0	1	2	0.003	0	-0.003	0.005 up	0	0	100 +Z	1	-0.003	0 +X	1	0.003	0	1E+10	0.1	0	36.96	28.75	375.48
245 245 2	CUSTOM BAS V - Stop	P2	6	0	0	3	3	0.01	0	-0.004	0.011 down	0	0	0 +Z	3	-0.004	0 +X	0	0.01	0	1E+10	0.1	0	36.96	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	P2	6	-1	0	-2	2	0.007	0	0	0.007 up	0	0	100 -Z	2	0	0 -X	1	-0.007	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	P1	6	1	0	-1	2	0.001	0	0	0.001 down	0	0	0 -Z	1	0	0 +X	1	0.001	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.005	0	-0.009	0.01 down	0	0	0 +Z	0	-0.009	0 -X	0	0.005	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	GR	6	0	-441	0	441	0.033	0	0.028	0.043 down	441	0	0 +Z	0	0.028	0 +X	0	0.033	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	GT1	6	-33	-443	-29	446	0.013	0	0.011	0.017 down	443	0	0 -Z	29	-0.011	0 -X	33	-0.013	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	GT2	6	38	-436	13	438	0.062	0	0.038	0.073 down	436	0	0 +Z	13	0.038	0 +X	38	0.062	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	GT3	6	-15	-446	-42	448	-0.013	0	-0.099	0.1 down	446	0	0 -Z	42	0.099	0 -X	15	0.013	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	W3	6	8	-1	1	8	0	0	0	0 down	1	0	0 +Z	1	0	0 +X	8	0	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	E1	6	0	53	0	53	-2.836	-2	-1.029	3.62 up	53	0	100 -Z	0	1.029	0 -X	0	2.836	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	E2	6	0	0	0	0	-2.836	-2	-1.784	3.902 down	0	0	0 -Z	0	1.784	0 -X	0	2.836	0	1E+10	0.1	0	20.56	28.75	375.48
246 246 2	CUSTOM BAS V - Stop	E3	6	0	18	0	18	-2.836	-2	-1.403	3.743 up	18	0	100 -Z	0	1.403	0 -X	0	2.836	0	1E+10	0.1	0	20.56	28.75	375.48
247 247 2	CUSTOM BAS V - Stop	P3	6	0	0	-1	1	-0.009	0	-0.007	0.012 up	0	0	100 -Z	1	0.007	0 +X	0	-0.009	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0	0	0	0 up	0	0	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	GR	6	0	-463	0	463	0.033	0	0.023	0.04 down	463	0	0 +Z	0	0.023	0 +X	0	0.033	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	GT1	6	-45	-463	10	465	-0.027	0	0.035	0.045 down	463	0	0 +Z	10	0.035	0 -X	45	0.027	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	GT2	6	44	-464	-10	466	0.152	0	-0.004	0.153 down	464	0	0 -Z	10	0.004	0 +X	44	0.152	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	GT3	6	-43	-459	-16	462	-0.14	0	-0.041	0.146 down	459	0	0 -Z	16	0.041	0 -X	43	0.14	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	W3	6	8	-1	0	8	0	0	0	0 down	1	0	0 -Z	0	0	0 +X	8	0	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	E1	6	0	31	0	31	-2.835	-2	-1.087	3.636 up	31	0	100 -Z	0	1.087	0 -X	0	2.835	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	E2	6	0	48	0	48	-2.836	-2	-1.449	3.761 up	48	0	100 -Z	0	1.449	0 -X	0	2.836	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	E3	6	0	40	0	40	-2.836	-2	-1.244	3.686 up	40	0	100 -Z	0	1.244	0 -X	0	2.836	0	1E+10	0.1	0	5.52	28.75	375.49
247 247 2	CUSTOM BAS V - Stop	P2	6	0	0	1	1	0.004	0	0.001	0.004 down	0	0	0 +Z	1	0.001	0 -X	0	-0.004	0	1E+10	0.1	0	5.52	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	P3	6	0	0	-1	1	-0.013	0	-0.006	0.014 down	0	0	0 -Z	1	0.006	0 -X	0	0.013	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	P1	6	0	0	0	1	-0.002	0	-0.001	0.003 down	0	0	0 -Z	0	0.001	0 -X	0	0.002	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	GR	6	0	-339	0	339	0.033	0	0.014	0.036 down	339	0	0 +Z	0	0.014	0 +X	0	0.033	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	GT1	6	-24	-335	23	337	-0.068	0	0.112	0.131 down	335	0	0 +Z	23	0.112	0 -X	24	0.068	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	GT2	6	31	-341	-12	343	0.242	0	-0.065	0.25 down	341	0	0 -Z	12	0.065	0 +X	31	0.242	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	GT3	6	-35	-348	2	350	-0.266	0	0.027	0.268 down	348	0	0 +Z	2	0.027	0 -X	35	0.266	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	W3	6	6	4	0	8	0	0	0	0 up	4	0	100 -Z	0	0	0 +X	6	0	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	E1	6	0	42	0	42	-2.835	-2	-1.22	3.678 up	42	0	100 -Z	0	1.22	0 -X	0	2.835	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	E2	6	0	29	0	29	-2.836	-2	-1.093	3.638 up	29	0	100 -Z	0	1.093	0 -X	0	2.836	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	E3	6	0	42	0	42	-2.835	-2	-1.091	3.637 up	42	0	100 -Z	0	1.091	0 -X	0	2.835	0	1E+10	0.1	0	-9.42	28.75	375.49
248 248 2	CUSTOM BAS V - Stop	P2	6	0	0	1	1	0.001	0	0.003	0.003 up	0	0	100 +Z	1	0.003	0 -X	0	-0.001	0	1E+10	0.1	0	-9.42	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	P1	6	-1	1	-1	2	-0.004	0	0	0.004 up	1	0	100 -Z	1	0	0 -X	1	0.004	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	P3	6	0	4	-1	4	-0.017	0	0	0.017 up	4	0	100 -Z	1	0	0 -X	0	0.017	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	GR	6	0	-631	0	631	0.033	0	0.003	0.033 down	631	0	0 +Z	0	0.003	0 +X	0	0.033	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	GT1	6	-30	-615	54	618	-0.104	0	0.25	0.271 down	615	0	0 +Z	54	0.25	0 -X	30	0.104	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	GT2	6	59	-643	-24	647	0.324	0	-0.117	0.344 down	643	0	0 -Z	24	0.117	0 +X	59	0.324	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	GT3	6	-46	-540	28	543	-0.381	0	0.25	0.456 down	540	0	0 +Z	28	0.25	0 -X	46	0.381	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	W3	6	13	-3	2	13	0	0	0	0 down	3	0	0 +Z	2	0	0 +X	13	0	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	E1	6	0	60	0	60	-2.835	-2	-1.327	3.715 up	60	0	100 -Z	0	1.327	0 -X	0	2.835	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	E2	6	0	26	0	26	-2.836	-2	-1.042	3.623 up	26	0	100 -Z	0	1.042	0 -X	0	2.836	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	E3	6	0	33	0	33	-2.835	-2	-1.126	3.648 up	33	0	100 -Z	0	1.126	0 -X	0	2.835	0	1E+10	0.1	0	-23.08	28.75	375.49
249 249 2	CUSTOM BAS V - Stop	P2	6	0	1	1	1	-0.002	0	0.006	0.006 up	1	0	100 +Z	1	0.006	0 -X	0	0.002	0	1E+10	0.1	0	-23.08	28.75	375.49
270 270 2	CUSTOM BAS V - Stop	P3	6	0	-1	0	1	-0.002	0	0	0.002 down	1	0	0 -Z	0	0	0 -X	0	0.002	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0	0	-0.001	0.001 down	0	0	0 +Z	0	-0.001	0 -X	0	0	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.001	0	-0.001	0.001 down	0	0	0 +Z	0	-0.001	0 -X	0	0.001	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	GR	6	0	-696	0	696	-0.001	-1	0.001	1 down	696	0	0 +Z	0	0.001	0 -X	0	0.001	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	GT1	6	-7	-345	34	347	-0.068	-1	0.321	1.052 down	345	0	0 +Z	34	0.321	0 -X	7	0.068	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	GT2	6	-4	-334	33	336	-0.042	-1	0.384	1.072 down	334	0	0 +Z	33	0.384	0 -X	4	0.042	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	GT3	6	-10	-352	34	354	-0.083	-1	0.275	1.041 down	352	0	0 +Z	34	0.275	0 -X	10	0.083	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	W3	6	22	-1	4	22	0	0	0	0 down	1	0	0 +Z	4	0	0 +X	22	0	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	E1	6	0	13	0	13	-2.945	-2	-1.278	3.782 up	13	0	100 -Z	0	1.278	0 -X	0	2.945	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	E2	6	0	21	0	21	-2.921	-2	-1.284	3.766 up	21	0	100 -Z	0	1.284	0 -X	0	2.921	0	1E+10	0.1	0	-51.17	25.67	332.94
270 270 2	CUSTOM BAS V - Stop	E3	6	0	15	0	15	-2.932	-2	-1.281	3.773 up	15	0	100 -Z	0	1.281	0 -X	0	2.932	0	1E+10	0.1	0	-51.17	25.67	332.94

273 273 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.001	0	0.001	0.002 up	0	0	100 -Z	0	-0.001	0 -X	0	0.001	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	P2	6	-1	0	0	1	-0.002	0	0.001	0.003 up	0	0	100 -Z	0	-0.001	0 -X	1	0.002	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	P3	6	-1	0	0	1	-0.005	0	0.002	0.005 up	0	0	100 -Z	0	-0.002	0 -X	1	0.005	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	GR	6	0	-355	0	355	-0.001	-1	0	1 down	355	0	0 +Z	0	0	0 -X	0	0.001	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	GT1	6	-32	-1097	105	1102	-0.122	-1	0.395	1.082 down	1097	0	0 +Z	105	0.395	0 -X	32	0.122	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	GT2	6	-7	-1098	110	1103	-0.02	-1	0.324	1.051 down	1098	0	0 +Z	110	0.324	0 -X	7	0.02	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	GT3	6	-43	-1096	101	1101	-0.188	-1	0.442	1.109 down	1096	0	0 +Z	101	0.442	0 -X	43	0.188	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	W3	6	10	0	0	10	0	0	0	0 up	0	0	100 -Z	0	0	0 +X	10	0	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	E1	6	0	36	0	36	-2.943	-2	-1.286	3.783 up	36	0	100 -Z	0	1.286	0 -X	0	2.943	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	E2	6	0	35	0	35	-2.923	-2	-1.289	3.769 up	35	0	100 -Z	0	1.289	0 -X	0	2.923	0	1E+10	0.1	0	-66.54	25.67	335.58
273 273 2	CUSTOM BAS V - Stop	E3	6	0	36	0	36	-2.932	-2	-1.288	3.776 up	36	0	100 -Z	0	1.288	0 -X	0	2.932	0	1E+10	0.1	0	-66.54	25.67	335.58
348 348 1	V - Stop	P1	8	0	0	0	0	0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	P2	8	0	0	0	0	0.001	0	0	0.001 down	0	0	0 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	P3	8	0	0	0	0	0.001	0	0	0.001 down	0	0	0 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	GR	8	0	0	0	0	0	-0.959	0	0.959 up	0	0.041	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	GT1	8	0	0	0	0	0.295	-0.98	0.01	1.023 up	0	0.02	100 +Z	0	0.01	0 +X	0	0.295	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	GT2	8	0	0	0	0	0.213	-0.976	-0.026	0.999 up	0	0.024	100 -Z	0	0.026	0 +X	0	0.213	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	GT3	8	0	0	0	0	0.348	-0.982	0.032	1.042 up	0	0.018	100 +Z	0	0.032	0 +X	0	0.348	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	W3	8	0	0	0	0	0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	E1	8	0	0	0	0	-1.427	-1.996	-0.662	2.541 up	0	0.004	100 -Z	0	0.662	0 -X	0	1.427	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	E2	8	0	0	0	0	-1.382	-1.994	-0.619	2.504 up	0	0.006	100 -Z	0	0.619	0 -X	0	1.382	0	1E+10	0.1	0	194	25.84	408.86
348 348 1	V - Stop	E3	8	0	0	0	0	-1.4	-1.994	-0.638	2.519 up	0	0.006	100 -Z	0	0.638	0 -X	0	1.4	0	1E+10	0.1	0	194	25.84	408.86
357 357 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	-0.002	0	0	0.002 up	0	0	100 -Z	0	0	0 -X	0	0.002	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	-0.003	0	0	0.003 up	0	0	100 -Z	0	0	0 -X	0	0.003	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	P3	8	0	0	0	0	-0.004	0	0	0.004 up	0	0	100 -Z	0	0	0 -X	0	0.004	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	GR	8	0	-561	0	561	0	-1	0	1 down	561	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	GT1	8	0	0	0	0	0.204	-0.948	-0.018	0.97 up	0	0.052	100 -Z	0	0.018	0 +X	0	0.204	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	GT2	8	0	0	0	0	0.346	-0.951	0.01	1.012 up	0	0.049	100 +Z	0	0.01	0 +X	0	0.346	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	GT3	8	0	0	0	0	0.114	-0.947	-0.036	0.955 up	0	0.053	100 -Z	0	0.036	0 +X	0	0.114	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	W3	8	39	-1	-7	40	0.001	0	0	0.001 down	1	0	0 -Z	7	0	0 +X	39	0.001	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	E1	8	0	-52	0	52	-1.312	-2	-0.562	2.457 down	52	0	0 -Z	0	0.562	0 -X	0	1.312	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	E2	8	0	-78	0	78	-1.348	-2	-0.589	2.482 down	78	0	0 -Z	0	0.589	0 -X	0	1.348	0	1E+10	0.1	0	187.74	25.81	417.95
357 357 2	CUSTOM BAS V - Stop	E3	8	0	-67	0	67	-1.327	-2	-0.575	2.468 down	67	0	0 -Z	0	0.575	0 -X	0	1.327	0	1E+10	0.1	0	187.74	25.81	417.95
365 365 1	V - Stop	P2	8	0	-3	1	3	0	0	0.001	0.001 down	3	0	0 +Z	1	0.001	0 +X	0	0	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	P1	8	0	-1	1	2	0	0	0	0 down	1	0	0 +Z	1	0	0 +X	0	0	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	GR	8	0	-703	0	703	0	-1	0	1 down	703	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	GT1	8	1023	-10226	-3	10277	0.418	-1	-0.001	1.084 down	10226	0	0 -Z	3	0.001	0 +X	1023	0.418	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	GT2	8	1010	-10110	-33	10160	0.421	-1	-0.014	1.085 down	10110	0	0 -Z	33	0.014	0 +X	1010	0.421	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	GT3	8	1030	-10301	19	10352	0.416	-1	0.008	1.083 down	10301	0	0 +Z	19	0.008	0 +X	1030	0.416	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	W3	8	12	0	0	12	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	12	0	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	E1	8	0	46	0	46	-1.357	-2	-0.592	2.488 up	46	0	100 -Z	0	0.592	0 -X	0	1.357	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	E2	8	0	42	0	42	-1.367	-2	-0.598	2.495 up	42	0	100 -Z	0	0.598	0 -X	0	1.367	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	E3	8	0	44	0	44	-1.361	-2	-0.595	2.491 up	44	0	100 -Z	0	0.595	0 -X	0	1.361	0	1E+10	0.1	0	193.13	25.66	431.48
365 365 1	V - Stop	P3	8	0	-3	2	4	0	0	0.001	0.001 down	3	0	0 +Z	2	0.001	0 +X	0	0	0	1E+10	0.1	0	193.13	25.66	431.48
372 372 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.002	0	-0.001	0.002 up	0	0	100 -Z	0	0.001	0 -X	0	0.002	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.002	0	-0.002	0.003 up	0	0	100 -Z	0	0.002	0 -X	0	0.002	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	P3	6	-1	0	0	1	-0.004	0	-0.003	0.005 down	0	0	0 -Z	0	0.003	0 -X	1	0.004	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	GR	6	0	-386	0	386	0	-1	0	1 down	386	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	GT1	6	39	-536	-37	539	0.305	-1	-0.284	1.083 down	536	0	0 -Z	37	0.284	0 +X	39	0.305	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	GT2	6	49	-536	-21	539	0.438	-1	-0.19	1.108 down	536	0	0 -Z	21	0.19	0 +X	49	0.438	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	GT3	6	29	-536	-45	539	0.226	-1	-0.343	1.081 down	536	0	0 -Z	45	0.343	0 +X	29	0.226	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	W3	6	18	0	2	18	0	0	0	0 down	0	0	0 +Z	2	0	0 +X	18	0	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	E1	6	0	32	0	32	-1.321	-2	-0.591	2.469 up	32	0	100 -Z	0	0.591	0 -X	0	1.321	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	E2	6	0	32	0	32	-1.366	-2	-0.601	2.495 up	32	0	100 -Z	0	0.601	0 -X	0	1.366	0	1E+10	0.1	0	168.34	25.67	412.55
372 372 2	CUSTOM BAS V - Stop	E3	6	0	32	0	32	-1.346	-2	-0.597	2.483 up	32	0	100 -Z	0	0.597	0 -X	0	1.346	0	1E+10	0.1	0	168.34	25.67	412.55
375 375 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	-0.001	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.001	0	0.001	0.001 up	0	0	100 +Z	0	0.001	0 +X	0	-0.001	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	-0.001	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	GR	6	0	-520	0	520	0	-1	0	1 down	520	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	GT1	6	96	-964	-10	969	0.26	-1	-0.026	1.034 down	964	0	0 -Z	10	0.026	0 +X	96	0.26	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	GT2	6	96	-966	-9	971	0.317	-1	-0.031	1.049 down	966	0	0 -Z	9	0.031	0 +X	96	0.317	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	GT3	6	96	-964	-5	969	0.232	-1	-0.013	1.027 down	964	0	0 -Z	5	0.013	0 +X	96	0.232	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	W3	6	28	-1	-10	30	0.001	0	0	0.001 down	1	0	0 -Z	10	0	0 +X	28	0.001	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	E1	6	0	25	0	25	-1.32	-2	-0.55	2.459 up	25	0	100 -Z	0	0.55	0 -X	0	1.32	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	E2	6	0	6	0	6	-1.364	-2	-0.599	2.494 up	6	0	100 -Z	0	0.599	0 -X	0	1.364	0	1E+10	0.1	0	182.77	25.67	414.96
375 375 2	CUSTOM BAS V - Stop	E3	6	0	12	0	12	-1.344	-2	-0.579	2.478 up	12	0	100 -Z	0	0.579	0 -X	0	1.344	0	1E+10	0.1	0	182.77	25.67	414.96
386 386 2	CUSTOM BAS V - Stop	P2	6	4	0	-2	4	0	0	-0.004	0.004 up	0	0	100 -Z	2	0.004	0 +X	4	0	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	P1	6	0	0	0	1	0.002	0	-0.002	0.002 up	0	0	100 -Z	0	0.002	0 -X	0	-0.002	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.004	0	-0.004	0.006 up	0	0	100 -Z	0	0.004	0 -X	0	-0.004	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	GR	6	0	-1251	0	1251	0.003	0	0.001	0.003 down	1251	0	0 +Z	0	0.001	0 +X	0	0.003	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	GT1	6	105	-1248	-67	1254	0.11	0	-0.067	0.129 down	1248	0	0 -Z	67	0.067	0 +X	105	0.11	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	GT2	6	40	-1264	120	1271	0.014	0	0.035	0.038 down	1264	0	0 +Z	120	0.035	0 +X	40	0.014	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	GT3	6	97	-1240	-77	1246	0.198	0	-0.156	0.252 down	1240	0	0 -Z	77	0.156	0 +X	97	0.198	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	W3	6	53	-1	23	58	0	0	0	0 down	1	0	0 +Z	23	0	0 +X	53	0	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	E1	6	0	102	0	102	-1.125	-2	-0.702	2.4 up	102	0	100 -Z	0	0.702	0 -X	0	1.125	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	E2	6	0	86	0	86	-1.125	-2	-0.571	2.365 up	86	0	100 -Z	0	0.571	0 -X	0	1.125	0	1E+10	0.1	0	195.04	25.67	393.33
386 386 2	CUSTOM BAS V - Stop	E3	6	0	90	0	90	-1.125	-2	-0.618	2.377 up	90	0	100 -Z	0	0.618	0 -X	0	1.125	0	1E+10	0.1	0	195.04	25.67	393.33
389 389 2	CUSTOM BAS V - Stop	P1	6	0	-1	0	1	0.003	0	-0.001	0.003 down	1	0	0 +Z	0	-0.001	0 +X	0	0.003	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	P2	6	0	-1	0	1	0.004	0	-0.002	0.004 down	1	0	0 -Z	0	0.002	0 -X	0	-0.004	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	P3	6	0	-1	0	1	0.009	0	-0.005	0.01 down	1	0	0 -Z	0	0.005	0 +X	0	0.009	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	GR	6	0	-132	0	132	0.005	0	0.003	0.006 down	132	0	0 +Z	0	0.003	0 +X	0	0.005	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	GT1	6	11	-170	-13	171	0.048	0	-0.045	0.066 down	170	0	0 -Z	13	0.045	0 +X	11	0.048	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	GT2	6	-10	-96	0	97	-0.143	0	-0.003	0.143 down	96	0	0 -Z	0	0.003	0 -X	10	0.143	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	GT3	6	17	-203	-11	204	0.214	0	-0.134	0.252 down	203	0	0 -Z	11	0.134	0 +X	17	0.214	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	W3	6	13	1	1	13	0.004	0	0	0.004 up	1	0	100 +Z	1	0	0 +X	13	0.004	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	E1	6	0	132	0	132	-0.603	-1.938	-0.89	2.216 up	132	0.062	100 -Z	0	0.89	0 -X	0	0.603	0	1E+10	0.1	0	201.85	25.67	384.01

389 389 2	CUSTOM BAS V - Stop	E2	6	0	132	0	132	-1.078	-1.922	-0.924	2.39 up	132	0.078	100 -Z	0	0.924	0 -X	0	1.078	0	1E+10	0.1	0	201.85	25.67	384.01
389 389 2	CUSTOM BAS V - Stop	E3	6	0	132	0	132	-0.914	-1.929	-0.938	2.331 up	132	0.071	100 -Z	0	0.938	0 -X	0	0.914	0	1E+10	0.1	0	201.85	25.67	384.01
400 400 2	CUSTOM BAS V - Stop	P1	8	1	0	0	1	0.005	0	-0.002	0.006 down	0	0	0 +Z	0	-0.002	0 +X	1	0.005	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	0.004	0	-0.003	0.005 down	0	0	0 -Z	0	0.003	0 +X	0	0.004	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	P3	8	0	1	0	1	0.003	0	-0.007	0.008 up	1	0	100 +Z	0	-0.007	0 -X	0	-0.003	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	GR	8	0	-34	0	34	0.012	0	0.008	0.015 down	34	0	0 +Z	0	0.008	0 +X	0	0.012	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	GT1	8	1	-82	-8	82	0.02	0	-0.036	0.041 down	82	0	0 -Z	8	0.036	0 +X	1	0.02	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	GT2	8	0	0	0	0	-0.072	0.006	0.037	0.081 up	0	0.006	100 +Z	0	0.037	0 -X	0	0.072	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	GT3	8	5	-91	-7	91	0.118	0	-0.137	0.181 down	91	0	0 -Z	7	0.137	0 +X	5	0.118	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	W3	8	3	2	0	4	0.004	0	0.001	0.005 up	2	0	100 +Z	0	0.001	0 +X	3	0.004	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	E1	8	0	34	0	34	-2.548	-1.946	-1.405	3.5 up	34	0.054	100 -Z	0	1.405	0 -X	0	2.548	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	E2	8	0	-199	0	199	-3.377	-2	-1.011	4.052 down	199	0	0 -Z	0	1.011	0 -X	0	3.377	0	1E+10	0.1	0	37.8	25.84	385.35
400 400 2	CUSTOM BAS V - Stop	E3	8	0	-75	0	75	-3.123	-2	-1.129	3.876 down	75	0	0 -Z	0	1.129	0 -X	0	3.123	0	1E+10	0.1	0	37.8	25.84	385.35
403 403 2	CUSTOM BAS V - Stop	P2	8	14	0	-12	18	0.001	0	-0.002	0.003 up	0	0	100 -Z	12	0.002	0 +X	14	0.001	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	P3	8	-1	0	-1	1	0.004	0	-0.003	0.005 down	0	0	0 -Z	1	0.003	0 -X	1	-0.004	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	P1	8	0	0	1	1	0.004	0	-0.001	0.004 up	0	0	100 +Z	1	-0.001	0 +X	0	0.004	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	GR	8	0	-2304	0	2304	0.006	0	0.001	0.006 down	2304	0	0 +Z	0	0.001	0 +X	0	0.006	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	GT1	8	217	-2311	-79	2323	0.094	0	-0.031	0.099 down	2311	0	0 -Z	79	0.031	0 +X	217	0.094	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	GT2	8	90	-2336	215	2347	0.018	0	0.028	0.033 down	2336	0	0 +Z	215	0.028	0 +X	90	0.018	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	GT3	8	210	-2309	-96	2321	0.183	0	-0.08	0.2 down	2309	0	0 -Z	96	0.08	0 +X	210	0.183	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	W3	8	92	-2	23	95	0	0	0	0 down	2	0	0 +Z	23	0	0 +X	92	0	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	E1	8	0	176	0	176	-2.685	-2	-1.291	3.588 up	176	0	100 -Z	0	1.291	0 -X	0	2.685	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	E2	8	0	122	0	122	-3.185	-2	-1.242	3.96 up	122	0	100 -Z	0	1.242	0 -X	0	3.185	0	1E+10	0.1	0	32.35	25.84	393.37
403 403 2	CUSTOM BAS V - Stop	E3	8	0	97	0	97	-3.079	-2	-1.283	3.89 up	97	0	100 -Z	0	1.283	0 -X	0	3.079	0	1E+10	0.1	0	32.35	25.84	393.37
406 406 2	CUSTOM BAS V - Stop	P1	8	0	0	0	0	0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	P2	8	0	0	0	0	0.001	0	0.001	0.002 down	0	0	0 +Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	P3	8	0	0	0	0	0.002	0	0.001	0.003 up	0	0	100 +Z	0	0.001	0 +X	0	0.002	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	GR	8	0	0	0	0	0	-0.965	0	0.965 up	0	0.035	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	GT1	8	0	0	0	0	0.296	-0.989	0.012	1.033 up	0	0.011	100 +Z	0	0.012	0 +X	0	0.296	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	GT2	8	0	0	0	0	0.21	-0.987	-0.029	1.009 up	0	0.013	100 -Z	0	0.029	0 +X	0	0.21	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	GT3	8	0	0	0	0	0.348	-0.989	0.032	1.049 up	0	0.011	100 +Z	0	0.032	0 +X	0	0.348	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	W3	8	0	0	0	0	0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	E1	8	0	0	0	0	-2.925	-1.996	-1.295	3.771 up	0	0.004	100 -Z	0	1.295	0 -X	0	2.925	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	E2	8	0	0	0	0	-2.895	-1.998	-1.257	3.735 up	0	0.002	100 -Z	0	1.257	0 -X	0	2.895	0	1E+10	0.1	0	29.99	25.84	408.88
406 406 2	CUSTOM BAS V - Stop	E3	8	0	0	0	0	-2.919	-1.997	-1.283	3.762 up	0	0.003	100 -Z	0	1.283	0 -X	0	2.919	0	1E+10	0.1	0	29.99	25.84	408.88
420 420 2	CUSTOM BAS V - Stop	P2	8	0	-2	1	2	0	0	0	0.001 down	2	0	0 +Z	1	0	0 +X	0	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	P1	8	0	-1	1	2	0	0	0	0 down	1	0	0 +Z	1	0	0 +X	0	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	P3	8	0	-3	2	3	0	0	0.001	0.001 down	3	0	0 +Z	2	0.001	0 +X	0	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	GR	8	0	-695	0	695	0	-1	0	1 down	695	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	GT1	8	1025	-10246	-4	10297	0.418	-1	-0.002	1.084 down	10246	0	0 -Z	4	0.002	0 +X	1025	0.418	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	GT2	8	1013	-10138	-32	10188	0.422	-1	-0.013	1.085 down	10138	0	0 -Z	32	0.013	0 +X	1013	0.422	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	GT3	8	1031	-10313	19	10364	0.416	-1	0.008	1.083 down	10313	0	0 +Z	19	0.008	0 +X	1031	0.416	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	W3	8	12	0	0	12	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	12	0	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	E1	8	0	49	0	49	-2.923	-2	-1.288	3.769 up	49	0	100 -Z	0	1.288	0 -X	0	2.923	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	E2	8	0	52	0	52	-2.935	-2	-1.294	3.78 up	52	0	100 -Z	0	1.294	0 -X	0	2.935	0	1E+10	0.1	0	29.12	25.66	431.49
420 420 2	CUSTOM BAS V - Stop	E3	8	0	52	0	52	-2.927	-2	-1.289	3.772 up	52	0	100 -Z	0	1.289	0 -X	0	2.927	0	1E+10	0.1	0	29.12	25.66	431.49
453 453 2	CUSTOM BAS V - Stop	GR	20	0	-3924	0	3924	0	-1	0	1 down	3924	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	GT1	20	992	-9976	-109	10026	0.51	-1	-0.056	1.124 down	9976	0	0 -Z	109	0.056	0 +X	992	0.51	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	GT2	20	976	-9976	-209	10026	0.418	-1	-0.089	1.087 down	9976	0	0 -Z	209	0.089	0 +X	976	0.418	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	GT3	20	996	-9976	-47	10026	0.58	-1	-0.027	1.156 down	9976	0	0 -Z	47	0.027	0 +X	996	0.58	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	W3	20	117	0	18	119	0	0	0	0 down	0	0	0 +Z	18	0	0 +X	117	0	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	E1	20	0	296	0	296	-2.609	-2	-0.975	3.429 up	296	0	100 -Z	0	0.975	0 -X	0	2.609	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	E2	20	0	296	0	296	-2.643	-2	-0.976	3.456 up	296	0	100 -Z	0	0.976	0 -X	0	2.643	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	E3	20	0	296	0	296	-2.635	-2	-0.984	3.451 up	296	0	100 -Z	0	0.984	0 -X	0	2.635	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	P1	20	0	0	4	4	0.003	0	0.002	0.004 down	0	0	0 +Z	4	0.002	0 +X	0	0.003	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	P3	20	0	0	7	7	0.007	0	0.004	0.008 up	0	0	100 +Z	7	0.004	0 +X	0	0.007	0	1E+10	0.1	0	35.25	26.31	432.15
453 453 2	CUSTOM BAS V - Stop	P2	20	2	0	8	9	0.005	0	0.003	0.006 down	0	0	0 +Z	8	0.003	0 +X	2	0.005	0	1E+10	0.1	0	35.25	26.31	432.15
456 456 2	CUSTOM BAS V - Stop	P1	20	0	0	0	0	0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	P2	20	0	0	0	0	0.001	0	0.002	0.002 down	0	0	0 +Z	0	0.002	0 +X	0	0.001	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	P3	20	0	0	0	0	0	0	0.002	0.002 down	0	0	0 +Z	0	0.002	0 +X	0	0	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	GR	20	0	-1118	0	1118	0	-1	0	1 down	1118	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	GT1	20	0	0	0	0	0.333	-0.956	0.006	1.012 up	0	0.044	100 +Z	0	0.006	0 +X	0	0.333	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	GT2	20	0	0	0	0	0.339	-0.956	-0.019	1.014 up	0	0.044	100 -Z	0	0.019	0 +X	0	0.339	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	GT3	20	0	0	0	0	0.345	-0.956	0.029	1.017 up	0	0.044	100 +Z	0	0.029	0 +X	0	0.345	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	W3	20	89	0	2	89	0.001	0	0	0.001 down	0	0	0 +Z	2	0	0 +X	89	0.001	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	E1	20	0	154	0	154	-2.306	-2	-0.975	3.204 up	154	0	100 -Z	0	0.975	0 -X	0	2.306	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	E2	20	0	154	0	154	-2.352	-2	-0.983	3.24 up	154	0	100 -Z	0	0.983	0 -X	0	2.352	0	1E+10	0.1	0	29.52	26.31	420.9
456 456 2	CUSTOM BAS V - Stop	E3	20	0	154	0	154	-2.339	-2	-0.994	3.234 up	154	0	100 -Z	0	0.994	0 -X	0	2.339	0	1E+10	0.1	0	29.52	26.31	420.9
463 463 1	V - Stop	P2	20	0	0	-1	1	0	0	-0.001	0.001 down	0	0	0 -Z	1	0.001	0 -X	0	0	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	P1	20	0	0	0	0	0.001	0	0	0.001 down	0	0	0 -Z	0	0	0 -X	0	-0.001	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	P3	20	0	0	0	0	0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	GR	20	0	-936	0	936	0	-1	0	1 down	936	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	GT1	20	410	-4132	-49	4152	0.253	-1	-0.03	1.032 down	4132	0	0 -Z	49	0.03	0 +X	410	0.253	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	GT2	20	410	-4132	-48	4152	0.215	-1	-0.025	1.023 down	4132	0	0 -Z	48	0.025	0 +X	410	0.215	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	GT3	20	408	-4132	-66	4152	0.273	-1	-0.044	1.038 down	4132	0	0 -Z	66	0.044	0 +X	408	0.273	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	W3	20	83	0	1	83	0.001	0	0	0.001 down	0	0	0 +Z	1	0	0 +X	83	0.001	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	E1	20	0	488	0	488	-2.335	-2	-1.04	3.246 up	488	0	100 -Z	0	1.04	0 -X	0	2.335	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	E2	20	0	488	0	488	-2.346	-2	-1.023	3.248 up	488	0	100 -Z	0	1.023	0 -X	0	2.346	0	1E+10	0.1	0	32.83	26.31	411.71
463 463 1	V - Stop	E3	20	0	488	0	488	-2.29	-2	-1.002	3.202 up	488	0	100 -Z	0	1.002	0 -X	0	2.29	0	1E+10	0.1	0	32.83	26.31	411.71
467 467 2	CUSTOM BAS V - Stop	P2	20	42	0	-12	43	0.001	0	-0.009	0.009 down	0	0	0 -Z	12	0.009	0 +X	42	0.001	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	P3	20	-23	0	-12	26	0	0	-0.012	0.012 down	0	0	0 -Z	12	0.012	0 -X	23	0	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	GR	20	0	-10829	0	10829	0	0	0	0 down	10829	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	GT1	20	587	-10803	-907	10857	0.059	0	-0.091	0.109 down	10803	0	0 -Z	907	0.091	0 +X	587	0.059	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	GT2	20	192	-10803	1062	10857	0.011	0	0.063	0.064 down	10803	0	0 +Z	1062	0.063	0 +X	192	0.011	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	GT3	20	521	-10803	-946	10857	0.115	0	-0.209	0.239 down	10803	0	0 -Z	946	0.209	0 +X	521	0.115	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	W3	20	236	0	22	237	0	0	0	0 down	0	0	0 +Z	22	0	0 +X	236	0	0	1E+10	0.1	0	34.36	26.31	393.35

467 467 2	CUSTOM BAS V - Stop	E1	20	0	426	0	426	-2.679	-2	-1.061	3.507 up	426	0	100 -Z	0	1.061	0 -X	0	2.679	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	E2	20	0	426	0	426	-3.077	-2	-1.041	3.814 up	426	0	100 -Z	0	1.041	0 -X	0	3.077	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	E3	20	0	426	0	426	-2.718	-2	-1.007	3.521 up	426	0	100 -Z	0	1.007	0 -X	0	2.718	0	1E+10	0.1	0	34.36	26.31	393.35
467 467 2	CUSTOM BAS V - Stop	P1	20	10	0	7	12	0.005	0	-0.006	0.008 down	0	0	0 +Z	7	-0.006	0 +X	10	0.005	0	1E+10	0.1	0	34.36	26.31	393.35
470 470 2	CUSTOM BAS V - Stop	P1	20	0	0	0	0	0.008	0	-0.008	0.011 down	0	0	0 -Z	0	0.008	0 +X	0	0.008	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	P2	20	0	0	0	0	0.003	0	-0.01	0.011 down	0	0	0 -Z	0	0.01	0 +X	0	0.003	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	P3	20	0	0	0	0	0.004	0	-0.011	0.012 down	0	0	0 -Z	0	0.011	0 +X	0	0.004	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	GR	20	0	0	0	0	0	0.167	0	0.167 up	0	0.167	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	GT1	20	0	0	0	0	0.029	0.166	-0.098	0.195 up	0	0.166	100 -Z	0	0.098	0 +X	0	0.029	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	GT2	20	0	0	0	0	-0.066	0.166	0.067	0.19 up	0	0.166	100 +Z	0	0.067	0 -X	0	0.066	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	GT3	20	0	0	0	0	0.118	0.166	-0.239	0.314 up	0	0.166	100 -Z	0	0.239	0 +X	0	0.118	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	W3	20	0	0	0	0	0	0	0	0.001 down	0	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	E1	20	0	0	0	0	-2.769	-1.995	-1.128	3.595 up	0	0.005	100 -Z	0	1.128	0 -X	0	2.769	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	E2	20	0	0	0	0	-3.256	-1.995	-1.004	3.948 up	0	0.005	100 -Z	0	1.004	0 -X	0	3.256	0	1E+10	0.1	0	37.8	26.31	387.35
470 470 2	CUSTOM BAS V - Stop	E3	20	0	0	0	0	-2.849	-1.995	-1.021	3.625 up	0	0.005	100 -Z	0	1.021	0 -X	0	2.849	0	1E+10	0.1	0	37.8	26.31	387.35
521 521 1	V - Stop	P1	20	0	0	4	4	0.003	0	0.002	0.004 down	0	0	0 +Z	4	0.002	0 +X	0	0.003	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	P3	20	0	0	6	6	0.007	0	0.003	0.008 down	0	0	0 +Z	6	0.003	0 +X	0	0.007	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	GR	20	0	-4227	0	4227	0	-1	0	1 down	4227	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	GT1	20	1051	-10568	-115	10621	0.517	-1	-0.057	1.127 down	10568	0	0 -Z	115	0.057	0 +X	1051	0.517	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	GT2	20	1036	-10568	-207	10621	0.424	-1	-0.085	1.089 down	10568	0	0 -Z	207	0.085	0 +X	1036	0.424	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	GT3	20	1055	-10568	-60	10621	0.584	-1	-0.033	1.159 down	10568	0	0 -Z	60	0.033	0 +X	1055	0.584	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	W3	20	119	0	18	121	0	0	0	0 down	0	0	0 +Z	18	0	0 +X	119	0	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	E1	20	0	706	0	706	-1.363	-2	-0.609	2.496 up	706	0	100 -Z	0	0.609	0 -X	0	1.363	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	E2	20	0	706	0	706	-1.38	-2	-0.605	2.504 up	706	0	100 -Z	0	0.605	0 -X	0	1.38	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	E3	20	0	706	0	706	-1.371	-2	-0.608	2.5 up	706	0	100 -Z	0	0.608	0 -X	0	1.371	0	1E+10	0.1	0	199.17	26.31	432.21
521 521 1	V - Stop	P2	20	1	0	7	7	0.005	0	0.002	0.005 down	0	0	0 +Z	7	0.002	0 +X	1	0.005	0	1E+10	0.1	0	199.17	26.31	432.21
524 524 1	V - Stop	P1	20	0	0	0	0	0	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	P2	20	0	0	0	0	0	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 -X	0	0	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	P3	20	0	0	0	0	-0.001	0	0.002	0.002 down	0	0	0 +Z	0	0.002	0 -X	0	0.001	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	GR	20	0	-831	0	831	0	-1	0	1 down	831	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	GT1	20	0	0	0	0	0.329	-0.958	0.013	1.013 up	0	0.042	100 +Z	0	0.013	0 +X	0	0.329	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	GT2	20	0	0	0	0	0.346	-0.958	-0.011	1.019 up	0	0.042	100 -Z	0	0.011	0 +X	0	0.346	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	GT3	20	0	0	0	0	0.327	-0.958	0.035	1.013 up	0	0.042	100 +Z	0	0.035	0 +X	0	0.327	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	W3	20	66	0	2	66	0.001	0	0	0.001 down	0	0	0 +Z	2	0	0 +X	66	0.001	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	E1	20	0	-869	0	869	-1.358	-2	-0.612	2.494 down	869	0	0 -Z	0	0.612	0 -X	0	1.358	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	E2	20	0	-869	0	869	-1.377	-2	-0.613	2.504 down	869	0	0 -Z	0	0.613	0 -X	0	1.377	0	1E+10	0.1	0	193.05	26.31	420.43
524 524 1	V - Stop	E3	20	0	-869	0	869	-1.365	-2	-0.616	2.499 down	869	0	0 -Z	0	0.616	0 -X	0	1.365	0	1E+10	0.1	0	193.05	26.31	420.43
531 531 1	V - Stop	P1	20	0	0	0	0	0.001	0	0	0.001 down	0	0	0 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	P2	20	0	0	0	1	0.001	0	0	0.001 down	0	0	0 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	P3	20	0	0	0	0	0.001	0	0	0.001 down	0	0	0 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	GR	20	0	-1634	0	1634	0	-1	0	1 down	1634	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	GT1	20	486	-4896	-62	4921	0.251	-1	-0.032	1.032 down	4896	0	0 -Z	62	0.032	0 +X	486	0.251	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	GT2	20	486	-4896	-61	4921	0.217	-1	-0.027	1.024 down	4896	0	0 -Z	61	0.027	0 +X	486	0.217	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	GT3	20	483	-4896	-81	4921	0.266	-1	-0.044	1.036 down	4896	0	0 -Z	81	0.044	0 +X	483	0.266	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	W3	20	113	0	-4	113	0.001	0	0	0.001 down	0	0	0 -Z	4	0	0 +X	113	0.001	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	E1	20	0	1634	0	1634	-1.331	-1.993	-0.591	2.468 up	1634	0.007	100 -Z	0	0.591	0 -X	0	1.331	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	E2	20	0	1634	0	1634	-1.342	-1.993	-0.587	2.473 up	1634	0.007	100 -Z	0	0.587	0 -X	0	1.342	0	1E+10	0.1	0	196.83	26.31	411.7
531 531 1	V - Stop	E3	20	0	1634	0	1634	-1.322	-1.993	-0.583	2.461 up	1634	0.007	100 -Z	0	0.583	0 -X	0	1.322	0	1E+10	0.1	0	196.83	26.31	411.7
534 534 1	V - Stop	P2	20	-120	0	-30	124	-0.005	0	-0.008	0.009 down	0	0	0 -Z	30	0.008	0 -X	120	0.005	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	P3	20	-9	0	-3	10	0.002	0	-0.012	0.013 down	0	0	0 -Z	3	0.012	0 -X	9	-0.002	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	P1	20	10	0	7	12	0.006	0	-0.005	0.008 down	0	0	0 +Z	7	-0.005	0 +X	10	0.006	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	GR	20	0	-10723	0	10723	0	0	0	0 down	10723	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	GT1	20	634	-10692	-861	10745	0.069	0	-0.094	0.116 down	10692	0	0 -Z	861	0.094	0 +X	634	0.069	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	GT2	20	-208	-10692	1048	10745	-0.012	0	0.06	0.061 down	10692	0	0 +Z	1048	0.06	0 -X	208	0.012	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	GT3	20	311	-10692	-1023	10746	0.064	0	-0.21	0.219 down	10692	0	0 -Z	1023	0.21	0 +X	311	0.064	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	W3	20	233	0	-6	233	0	0	0	0 down	0	0	0 -Z	6	0	0 +X	233	0	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	E1	20	0	1736	0	1736	-1.246	-2	-0.583	2.428 up	1736	0	100 -Z	0	0.583	0 -X	0	1.246	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	E2	20	0	1736	0	1736	-1.291	-2	-0.579	2.45 up	1736	0	100 -Z	0	0.579	0 -X	0	1.291	0	1E+10	0.1	0	198.36	26.31	393.34
534 534 1	V - Stop	E3	20	0	1736	0	1736	-1.235	-2	-0.572	2.419 up	1736	0	100 -Z	0	0.572	0 -X	0	1.235	0	1E+10	0.1	0	198.36	26.31	393.34
32 N 32 N1	V - Stop	GR	20	0	-976	0	976	0	0	0	0 down	976	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	GT1	20	95	-964	-16	969	0.196	0	-0.034	0.199 down	964	0	0 -Z	16	0.034	0 +X	95	0.196	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	GT2	20	-96	-964	8	969	-0.397	0	0.034	0.398 down	964	0	0 +Z	8	0.034	0 -X	96	0.397	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	GT3	20	96	-964	-4	969	0.606	0	-0.025	0.606 down	964	0	0 -Z	4	0.025	0 +X	96	0.606	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	W3	20	9	0	7	12	0	0	0	0 down	0	0	0 +Z	7	0	0 +X	9	0	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	E1	20	0	66	0	66	-2.801	-2	-3.308	4.774 up	66	0	100 -Z	0	3.308	0 -X	0	2.801	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	E2	20	0	66	0	66	-2.801	-2	2.892	4.496 up	66	0	100 +Z	0	2.892	0 -X	0	2.801	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	E3	20	0	66	0	66	-2.8	-2	0.056	3.442 up	66	0	100 +Z	0	0.056	0 -X	0	2.8	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	P3	20	0	0	0	0	0.04	0	0.002	0.04 down	0	0	0 +Z	0	0.002	0 +X	0	0.04	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	P1	20	0	0	1	1	0.026	0	-0.003	0.026 down	0	0	0 +Z	1	-0.003	0 +X	0	0.026	0	1E+10	0.1	0	94.66	26.31	374.83
32 N 32 N1	V - Stop	P2	20	0	0	2	2	0.03	0	0.004	0.031 down	0	0	0 +Z	2	0.004	0 -X	0	-0.03	0	1E+10	0.1	0	94.66	26.31	374.83
A46 A46 1	V - Stop	P2	20	-5	0	-13	14	0	0	-0.012	0.012 down	0	0	0 -Z	13	0.012	0 -X	5	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	P1	20	-2	0	-5	5	0.016	0	-0.01	0.019 down	0	0	0 -Z	5	0.01	0 -X	2	-0.016	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	GR	20	0	-3096	0	3096	0	0	0	0 down	3096	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	GT1	20	282	-3089	-126	3104	0.127	0	-0.057	0.139 down	3089	0	0 -Z	126	0.057	0 +X	282	0.127	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	GT2	20	-289	-3089	110	3104	-0.25	0	0.095	0.268 down	3089	0	0 +Z	110	0.095	0 -X	289	0.25	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	GT3	20	276	-3089	-138	3104	0.25	0	-0.125	0.28 down	3089	0	0 -Z	138	0.125	0 +X	276	0.25	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	W3	20	50	0	-1	50	0	0	0	0 down	0	0	0 -Z	1	0	0 +X	50	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	E1	20	0	-3678	0	3678	-1.623	-2	-0.73	2.677 down	3678	0	0 -Z	0	0.73	0 -X	0	1.623	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	E2	20	0	-3678	0	3678	-1.623	-2	-0.73	2.677 down	3678	0	0 -Z	0	0.73	0 -X	0	1.623	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	E3	20	0	-3678	0	3678	-1.623	-2	-0.73	2.677 down	3678	0	0 -Z	0	0.73	0 -X	0	1.623	0	1E+10	0.1	0	234.02	26.31	370.31
A46 A46 1	V - Stop	P3	20	0	0	0	0	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A48 A48 1	V - Stop	P2	20	-21	0	-51	55	-0.019	0	0	0.019 down	0	0	0 -Z	51	0	0 -X	21	0.019	0	1E+10	0.1	0	182.86	26.31	374.81
A48 A48 1	V - Stop	P3	20	52	0	-5	53	0.009	0	-0.001	0.009 down	0	0	0 -Z	5	0.001	0 +X	52	0.009	0	1E+10	0.1	0	182.86	26.31	374.81
A48 A48 1	V - Stop	GR	20	0	-4150	0	4150	0	0	0	0 down	4150	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.86	26.31	374.81
A48 A48 1	V - Stop	GT1	20	360	-4150	-206	4170	0.031	0	-0.018	0.036 down	4150	0	0 -Z	206	0.018	0 +X	360	0.031	0	1E+10	0.1	0	182.86	26.31	374.81
A48 A48 1	V - Stop	GT2	20	-388	-4150	123	4170	-0.023	0	0.007	0.024 down	4150	0	0 +Z	123	0.007	0 -X	388	0.023	0	1E+10	0.1	0	182.86	26.31	374.81
A48 A48 1	V - Stop	GT3	20	-63	-4150	-406	4170	-0.011	0	-0.071	0.072 down	4150	0	0 -Z	406	0.071	0 -X	63	0.011	0	1E+10	0.1	0	182.86	26.31	374.81
A48 A48 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.86	26.31	374.81

A48	A48 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.86	26.31	374.81
A48	A48 1	V - Stop	W3	20	26	0	7	27	0	0	0	0 down	0	0	0 +Z	7	0	0 +X	26	0	0	1E+10	0.1	0	182.86	26.31	374.81
A48	A48 1	V - Stop	E1	20	0	-396	0	396	-1.247	-2	-0.55	2.42 down	396	0	0 -Z	0	0.55	0 -X	0	1.247	0	1E+10	0.1	0	182.86	26.31	374.81
A48	A48 1	V - Stop	E2	20	0	-396	0	396	-1.247	-2	-0.566	2.424 down	396	0	0 -Z	0	0.566	0 -X	0	1.247	0	1E+10	0.1	0	182.86	26.31	374.81
A48	A48 1	V - Stop	E3	20	0	-396	0	396	-1.247	-2	-0.369	2.386 down	396	0	0 -Z	0	0.369	0 -X	0	1.247	0	1E+10	0.1	0	182.86	26.31	374.81
A48	A48 1	V - Stop	P1	20	0	0	2	2	0.004	0	-0.002	0.005 down	0	0	0 +Z	2	-0.002	0 +X	0	0.004	0	1E+10	0.1	0	182.86	26.31	374.81
A49	A49 2	V - Stop	P1	20	5	0	-14	15	0	0	-0.001	0.001 down	0	0	0 -Z	14	0.001	0 +X	5	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	P3	20	2	0	-4	5	0	0	-0.005	0.005 down	0	0	0 -Z	4	0.005	0 +X	2	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	GR	20	0	-1474	0	1474	0	0	0	0 down	1474	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	GT1	20	-136	-1474	-62	1482	-0.005	0	-0.002	0.005 down	1474	0	0 -Z	62	0.002	0 -X	136	0.005	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	GT2	20	145	-1474	32	1482	0.058	0	0.013	0.06 down	1474	0	0 +Z	32	0.013	0 +X	145	0.058	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	GT3	20	-132	-1474	-64	1482	-0.125	0	-0.061	0.139 down	1474	0	0 -Z	64	0.061	0 -X	132	0.125	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	W3	20	8	0	-2	9	0	0	0	0 down	0	0	0 -Z	2	0	0 +X	8	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	E1	20	0	478	0	478	-1.248	-2	-0.854	2.507 up	478	0	100 -Z	0	0.854	0 -X	0	1.248	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	E2	20	0	478	0	478	-1.248	-2	-0.354	2.384 up	478	0	100 -Z	0	0.354	0 -X	0	1.248	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	E3	20	0	478	0	478	-1.248	-2	-0.354	2.384 up	478	0	100 -Z	0	0.354	0 -X	0	1.248	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 2	V - Stop	P2	20	-5	0	14	15	-0.025	0	-0.002	0.025 down	0	0	0 +Z	14	-0.002	0 -X	5	0.025	0	1E+10	0.1	0	169.24	26.31	374.81
A50	A50 1	V - Stop	P3	20	2	0	-7	7	-0.011	0	-0.008	0.014 down	0	0	0 -Z	7	0.008	0 +X	2	-0.011	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	P1	20	-1	0	-5	5	-0.005	0	-0.001	0.005 down	0	0	0 -Z	5	0.001	0 -X	1	0.005	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	GR	20	0	-4954	0	4954	0	0	0	0 down	4954	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	GT1	20	-496	-4953	-23	4978	-0.048	0	-0.002	0.048 down	4953	0	0 -Z	23	0.002	0 -X	496	0.048	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	GT2	20	485	-4953	106	4978	0.156	0	0.034	0.159 down	4953	0	0 +Z	106	0.034	0 +X	485	0.156	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	GT3	20	-478	-4953	-131	4978	-0.263	0	-0.072	0.272 down	4953	0	0 -Z	131	0.072	0 -X	478	0.263	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	W3	20	27	0	0	27	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	27	0	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	E1	20	0	340	0	340	-1.247	-2	-1.51	2.799 up	340	0	100 -Z	0	1.51	0 -X	0	1.247	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	E2	20	0	340	0	340	-1.248	-2	0.453	2.401 up	340	0	100 +Z	0	0.453	0 -X	0	1.248	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	E3	20	0	340	0	340	-1.248	-2	-0.218	2.367 up	340	0	100 -Z	0	0.218	0 -X	0	1.248	0	1E+10	0.1	0	152.89	26.31	374.82
A50	A50 1	V - Stop	P2	20	-2	0	3	4	-0.033	0	-0.006	0.033 down	0	0	0 +Z	3	-0.006	0 -X	2	0.033	0	1E+10	0.1	0	152.89	26.31	374.82
A52	A52 1	V - Stop	GR	20	0	-4742	0	4742	0	0	0	0 down	4742	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	GT1	20	-466	-4742	-92	4766	-0.129	0	-0.025	0.131 down	4742	0	0 -Z	92	0.025	0 -X	466	0.129	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	GT2	20	466	-4742	91	4766	0.335	0	0.066	0.341 down	4742	0	0 +Z	91	0.066	0 +X	466	0.335	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	GT3	20	-469	-4742	-68	4766	-0.516	0	-0.075	0.521 down	4742	0	0 -Z	68	0.075	0 -X	469	0.516	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	W3	20	29	0	-3	29	0	0	0	0 down	0	0	0 -Z	3	0	0 +X	29	0	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	E1	20	0	504	0	504	-1.247	-2	-3.038	3.845 up	504	0	100 -Z	0	3.038	0 -X	0	1.247	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	E2	20	0	504	0	504	-1.248	-2	2.397	3.362 up	504	0	100 +Z	0	2.397	0 -X	0	1.248	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	E3	20	0	504	0	504	-1.247	-2	0.024	2.357 up	504	0	100 +Z	0	0.024	0 -X	0	1.247	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	P3	20	0	0	0	0	-0.032	0	-0.004	0.032 up	0	0	100 +Z	0	-0.004	0 -X	0	0.032	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	P1	20	-1	0	2	2	-0.014	0	-0.002	0.015 down	0	0	0 +Z	2	-0.002	0 -X	1	0.014	0	1E+10	0.1	0	122.88	26.31	374.83
A52	A52 1	V - Stop	P2	20	-1	0	4	4	-0.047	0	-0.007	0.047 down	0	0	0 +Z	4	-0.007	0 -X	1	0.047	0	1E+10	0.1	0	122.88	26.31	374.83
A53	A53 1	V - Stop	GR	20	0	-958	0	958	0	0	0	0 down	958	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	GT1	20	-94	-954	-14	959	-0.165	0	-0.024	0.167 down	954	0	0 -Z	14	0.024	0 -X	94	0.165	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	GT2	20	95	-954	8	959	0.416	0	0.033	0.418 down	954	0	0 +Z	8	0.033	0 +X	95	0.416	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	GT3	20	-95	-954	-1	959	-0.631	0	-0.004	0.631 down	954	0	0 -Z	1	0.004	0 -X	95	0.631	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	W3	20	7	0	-7	9	0	0	0	0 down	0	0	0 -Z	7	0	0 +X	7	0	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	E1	20	0	-654	0	654	-1.247	-2	-3.678	4.368 down	654	0	0 -Z	0	3.678	0 -X	0	1.247	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	E2	20	0	-654	0	654	-1.249	-2	3.045	3.852 down	654	0	0 +Z	0	3.045	0 -X	0	1.249	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	E3	20	0	-654	0	654	-1.248	-2	0.012	2.357 down	654	0	0 +Z	0	0.012	0 -X	0	1.248	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	P1	20	0	0	1	1	-0.019	0	0	0.019 down	0	0	0 +Z	1	0	0 -X	0	0.019	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	P2	20	0	0	1	1	-0.053	0	0.001	0.053 down	0	0	0 +Z	1	0.001	0 -X	0	0.053	0	1E+10	0.1	0	109.26	26.31	374.82
A53	A53 1	V - Stop	P3	20	0	0	1	1	-0.042	0	0.003	0.042 up	0	0	100 +Z	1	0.003	0 -X	0	0.042	0	1E+10	0.1	0	109.26	26.31	374.82
A56	A56 1	V - Stop	GR	20	0	-4851	0	4851	0	0	0	0 down	4851	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	GT1	20	453	-4853	-173	4877	0.158	0	-0.06	0.17 down	4853	0	0 -Z	173	0.06	0 +X	453	0.158	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	GT2	20	-467	-4853	133	4877	-0.313	0	0.089	0.325 down	4853	0	0 +Z	133	0.089	0 -X	467	0.313	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	GT3	20	458	-4853	-159	4877	0.487	0	-0.169	0.516 down	4853	0	0 -Z	159	0.169	0 +X	458	0.487	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	W3	20	41	0	0	41	0	0	0	0 down	0	0	0 -Z	0	0	0 +X	41	0	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	E1	20	0	381	0	381	-2.802	-2	-2.494	4.251 up	381	0	100 -Z	0	2.494	0 -X	0	2.802	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	E2	20	0	381	0	381	-2.802	-2	1.845	3.906 up	381	0	100 +Z	0	1.845	0 -X	0	2.802	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	E3	20	0	381	0	381	-2.801	-2	-0.203	3.448 up	381	0	100 -Z	0	0.203	0 -X	0	2.801	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	P1	20	0	0	1	1	0.022	0	-0.008	0.023 down	0	0	0 +Z	1	-0.008	0 +X	0	0.022	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	P3	20	0	0	1	1	0.03	0	-0.009	0.031 up	0	0	100 +Z	1	-0.009	0 +X	0	0.03	0	1E+10	0.1	0	80.63	26.31	374.83
A56	A56 1	V - Stop	P2	20	-1	0	3	3	0.024	0	-0.005	0.025 down	0	0	0 +Z	3	-0.005	0 -X	1	-0.024	0	1E+10	0.1	0	80.63	26.31	374.83
A58	A58 1	V - Stop	P2	20	-13	0	-14	19	0.01	0	-0.012	0.016 down	0	0	0 -Z	14	0.012	0 -X	13	-0.01	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	GR	20	0	-6326	0	6326	0	0	0	0 down	6326	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	GT1	20	431	-6330	-463	6361	0.078	0	-0.084	0.115 down	6330	0	0 -Z	463	0.084	0 +X	431	0.078	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	GT2	20	-523	-6330	358	6361	-0.133	0	0.091	0.162 down	6330	0	0 +Z	358	0.091	0 -X	523	0.133	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	GT3	20	409	-6330	-484	6361	0.234	0	-0.277	0.363 down	6330	0	0 -Z	484	0.277	0 +X	409	0.234	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	W3	20	54	0	6	54	0	0	0	0 down	0	0	0 +Z	6	0	0 +X	54	0	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	E1	20	0	631	0	631	-2.803	-2	-1.338	3.694 up	631	0	100 -Z	0	1.338	0 -X	0	2.803	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	E2	20	0	631	0	631	-2.803	-2	-0.502	3.479 up	631	0	100 -Z	0	0.502	0 -X	0	2.803	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	E3	20	0	631	0	631	-2.802	-2	-0.926	3.565 up	631	0	100 -Z	0	0.926	0 -X	0	2.802	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	P3	20	2	0	1	2	0.009	0	-0.009	0.013 down	0	0	0 +Z	1	-0.009	0 +X	2	0.009	0	1E+10	0.1	0	50.62	26.31	374.82
A58	A58 1	V - Stop	P1	20	5	0	5	8	0.013	0	-0.011	0.017 down	0	0	0 +Z	5	-0.011	0 +X	5	0.013	0	1E+10	0.1	0	50.62	26.31	374.82
A59	A59 1	V - Stop	GR	20	0	0	0	0	0	0.007	0	0.007 up	0	0.007	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	GT1	20	0	0	0	0	0.044	0.007	-0.074	0.086 up	0	0.007	100 -Z	0	0.074	0 +X	0	0.044	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	GT2	20	0	0	0	0	-0.056	0.007	0.064	0.085 up	0	0.007	100 +Z	0	0.064	0 -X	0	0.056	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	GT3	20	0	0	0	0	0.125	0.007	-0.25	0.28 up	0	0.007	100 -Z	0	0.25	0 +X	0	0.125	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	W3	20	0	0	0	0	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	E1	20	0	0	0	0	-2.804	-1.998	-1.24	3.659 up	0	0.002	100 -Z	0	1.24	0 -X	0	2.804	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	E2	20	0	0	0	0	-2.804	-1.998	-1.04	3.596 up	0	0.002	100 -Z	0	1.04	0 -X	0	2.804	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	E3	20	0	0	0	0	-2.804	-1.998	-1.04	3.596 up	0	0.002	100 -Z	0	1.04	0 -X	0	2.804	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	P1	20	0	0	0	0	0.009	0	-0.012	0.015 down	0	0	0 -Z	0	0.012	0 +X	0	0.009	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	P2	20	0	0	0	0	0.004	0	-0.01	0.011 down	0	0	0 -Z	0	0.01	0 +X	0	0.004	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 1	V - Stop	P3	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A60	A60 1	V - Stop	P2	20	-8	0	-18	20	-0.003	0	-0.002	0.004 down	0	0	0 -Z	18	0.002	0 -X	8	0.003	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	GR	20	0	-4804	0	4804	0	0	0	0 down	4804	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	GT1	20	-1	-4800	-479	4824	0	0	-0.018	0.018 down	4800	0	0 -Z	479	0.018	0 -X	1	0	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	GT2	20	469	-4800	84	4824	0.042	0	0.008	0.043 down	4800	0	0 +Z	84	0.008	0 +X	469	0.042	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	GT3	20	-39	-4800	-478	4824	-0.012	0	-0.15	0.15 down	4800	0	0 -Z	478	0.15	0 -X	39	0.012	0	1E+10	0.1	0	21.23	26.31	374.82

A60	A60 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	W3	20	38	0	9	39	0	0	0	0 down	0	0	0 +Z	9	0	0 +X	38	0	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	E1	20	0	477	0	477	-2.803	-2	-1.244	3.661 up	477	0	100 -Z	0	1.244	0 -X	0	2.803	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	E2	20	0	477	0	477	-2.804	-2	-1.272	3.671 up	477	0	100 -Z	0	1.272	0 -X	0	2.804	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	E3	20	0	477	0	477	-2.803	-2	-1.073	3.607 up	477	0	100 -Z	0	1.073	0 -X	0	2.803	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	P3	20	-39	0	5	39	-0.011	0	0.007	0.013 down	0	0	0 +Z	5	0.007	0 -X	39	0.011	0	1E+10	0.1	0	21.23	26.31	374.82
A60	A60 1	V - Stop	P1	20	59	0	7	59	0.004	0	-0.012	0.012 down	0	0	0 +Z	7	-0.012	0 +X	59	0.004	0	1E+10	0.1	0	21.23	26.31	374.82
A62	A62 1	V - Stop	P1	20	-24	0	-15	28	-0.005	0	-0.005	0.008 down	0	0	0 -Z	15	0.005	0 -X	24	0.005	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	GR	20	0	-5644	0	5644	0	0	0	0 down	5644	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	GT1	20	-302	-5663	479	5691	-0.08	0	0.127	0.15 down	5663	0	0 +Z	479	0.127	0 -X	302	0.08	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	GT2	20	527	-5663	-204	5691	0.222	0	-0.086	0.238 down	5663	0	0 -Z	204	0.086	0 +X	527	0.222	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	GT3	20	-536	-5663	182	5691	-0.264	0	0.09	0.279 down	5663	0	0 +Z	182	0.09	0 -X	536	0.264	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	P3	20	-3	0	-10	11	-0.032	0	0.005	0.032 up	0	0	100 -Z	10	-0.005	0 -X	3	0.032	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	W3	20	49	0	4	49	0	0	0	0 down	0	0	0 +Z	4	0	0 +X	49	0	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	E1	20	0	366	0	366	-2.802	-2	-1.32	3.687 up	366	0	100 -Z	0	1.32	0 -X	0	2.802	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	E2	20	0	366	0	366	-2.803	-2	-1.222	3.654 up	366	0	100 -Z	0	1.222	0 -X	0	2.803	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	E3	20	0	366	0	366	-2.802	-2	-1.132	3.624 up	366	0	100 -Z	0	1.132	0 -X	0	2.802	0	1E+10	0.1	0	-8.81	26.31	374.83
A62	A62 1	V - Stop	P2	20	7	0	26	27	-0.017	0	0.018	0.025 down	0	0	0 +Z	26	0.018	0 +X	7	-0.017	0	1E+10	0.1	0	-8.81	26.31	374.83
A63	A63 1	V - Stop	GR	20	0	-797	0	797	0	0	0	0 down	797	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	GT1	20	-31	-740	67	744	-0.116	0	0.25	0.276 down	740	0	0 +Z	67	0.25	0 -X	31	0.116	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	GT2	20	70	-740	-24	744	0.303	0	-0.102	0.32 down	740	0	0 -Z	24	0.102	0 +X	70	0.303	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	GT3	20	-62	-740	41	744	-0.378	0	0.25	0.453 down	740	0	0 +Z	41	0.25	0 -X	62	0.378	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	W3	20	8	0	-20	22	0	0	0	0 down	0	0	0 -Z	20	0	0 +X	8	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	E1	20	0	248	0	248	-2.802	-2	-1.356	3.7 up	248	0	100 -Z	0	1.356	0 -X	0	2.802	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	E2	20	0	248	0	248	-2.803	-2	-1.2	3.647 up	248	0	100 -Z	0	1.2	0 -X	0	2.803	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	E3	20	0	248	0	248	-2.802	-2	-1.218	3.652 up	248	0	100 -Z	0	1.218	0 -X	0	2.802	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	P3	20	-2	0	-3	3	-0.041	0	0	0.041 down	0	0	0 -Z	3	0	0 -X	2	0.041	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	P1	20	-2	0	-1	2	-0.01	0	0	0.01 down	0	0	0 -Z	1	0	0 -X	2	0.01	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 1	V - Stop	P2	20	1	0	4	4	-0.024	0	0.026	0.035 down	0	0	0 +Z	4	0.026	0 +X	1	-0.024	0	1E+10	0.1	0	-22.48	26.31	374.84
	63 63 2	CUSTOM BAS V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2	CUSTOM BAS V - Stop	W3	20	275	0	75	285	0.001	0	0	0.001 down	0	0	0 +Z	75	0	0 +X	275	0.001	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2	CUSTOM BAS V - Stop	P1	20	-8	0	1	8	0	0	0.008	0.008 down	0	0	0 +Z	1	0.008	0 -X	8	0	0	1E+10	0.1	0	234.04	26.31	349.67
	193 193 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.002	0	0.012	0.012 up	0	0	100 -Z	0	-0.012	0 -X	0	-0.002	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.004	0	0.014	0.014 up	0	0	100 -Z	0	-0.014	0 +X	0	0.004	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.005	0	0.024	0.025 up	0	0	100 +Z	0	0.024	0 -X	0	-0.005	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	W3	6	40	0	23	46	0.068	0	0.04	0.079 down	0	0	0 +Z	23	0.04	0 +X	40	0.068	0	1E+10	0.1	0	230.7	25.75	349.66
	203 203 2	V - Stop	P2	6	1	0	-1	1	0.005	0	0.005	0.006 down	0	0	0 -Z	1	-0.005	0 +X	1	0.005	0	1E+10	0.1	0	212.69	25.75	366.08
	203 203 2	V - Stop	P3	6	0	0	0	1	0.008	0	0.004	0.009 down	0	0	0 -Z	0	-0.004	0 +X	0	0.008	0	1E+10	0.1	0	212.69	25.75	366.08
	203 203 2	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.69	25.75	366.08
	203 203 2	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.69	25.75	366.08
A76	A76 1	V - Stop	P2	20	-4	0	-23	24	-0.01	0	-0.002	0.01 down	0	0	0 -Z	23	0.002	0 -X	4	0.01	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	P1	20	-7	0	-13	15	0.006	0	-0.005	0.008 down	0	0	0 -Z	13	0.005	0 -X	7	-0.006	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	W3	20	69	0	9	69	0	0	0	0 down	0	0	0 +Z	9	0	0 +X	69	0	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	P3	20	0	0	58	58	-0.075	0	0.017	0.077 down	0	0	0 +Z	58	0.017	0 +X	0	-0.075	0	1E+10	0.1	0	225.03	26.31	364
A77	A77 1	V - Stop	P3	20	-36	0	-17	40	-0.009	0	0.001	0.009 down	0	0	0 -Z	17	-0.001	0 -X	36	0.009	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	P1	20	-12	0	-2	13	-0.001	0	0.003	0.004 down	0	0	0 -Z	2	-0.003	0 -X	12	0.001	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	W3	20	-21	0	-10	24	0	0	0	0 down	0	0	0 -Z	10	0	0 -X	21	0	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	P2	20	47	0	5	47	0.005	0	0.007	0.009 down	0	0	0 +Z	5	0.007	0 +X	47	0.005	0	1E+10	0.1	0	225.02	26.31	355.32
C102	C102 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	214.05	25.84	354.77
A78	A78 1	V - Stop	GR	20	0	0	0	0	0	0.051	0	0.051 up	0	0.051	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	GT1	20	0	0	0	0	-0.155	0.057	0.297	0.34 up	0	0.057	100 +Z	0	0.297	0 -X	0	0.155	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	GT2	20	0	0	0	0	0.147	0.057	0.053	0.167 up	0	0.057	100 +Z	0	0.053	0 +X	0	0.147	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	GT3	20	0	0	0	0	-0.229	0.057	0.285	0.37 up	0	0.057	100 +Z	0	0.285	0 -X	0	0.229	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	W3	20	0	0	0	0	0	0	0	0.001 down	0	0	0 -Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	E1	20	0	0	0	0	-2.677	-1.995	-1.373	3.61 up	0	0.005	100 -Z	0	1.373	0 -X	0	2.677	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	E2	20	0	0	0	0	-2.775	-1.995	-1.227	3.631 up	0	0.005	100 -Z	0	1.227	0 -X	0	2.775	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	E3	20	0	0	0	0	-2.648	-1.995	-1.286	3.556 up	0	0.005	100 -Z	0	1.286	0 -X	0	2.648	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	P1	20	0	0	0	0	-0.014	0	0.002	0.014 down	0	0	0 +Z	0	0.002	0 -X	0	0.014	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	P2	20	0	0	0	0	-0.013	0	0.016	0.02 down	0	0	0 +Z	0	0.016	0 -X	0	0.013	0	1E+10	0.1	0	-30.83	26.31	361.46
A78	A78 1	V - Stop	P3	20	0	0	0	0	0.004	0	-0.007	0.008 down	0	0	0 -Z	0	0.007	0 +X	0	0.004	0	1E+10	0.1	0	-30.83	26.31	361.46
A80	A80 1	V - Stop	GR	20	0	-1526	0	1526	0	0	0	0 down	1526	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	GT1	20	154	-1538	-1	1546	0.134	0	-0.001	0.134 down	1538	0	0 -Z	1	0.001	0 +X	154	0.134	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	GT2	20	-152	-1538	-22	1546	-0.269	0	-0.038	0.272 down	1538	0	0 -Z	22	0.038	0 -X	152	0.269	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	GT3	20	150	-1538	33	1546	0.4	0	0.088	0.41 down	1538	0	0 +Z	33	0.088	0 +X	150	0.4	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	W3	20	53	0	-2	53	0	0	0	0 down	0	0	0 -Z	2	0	0 +X	53	0	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	E1	20	0	155	0	155	-2.32	-2	-3.477	4.634 up	155	0	100 -Z	0	3.477	0 -X	0	2.32	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	E2	20	0	155	0	155	-2.688	-2	2.966	4.475 up	155	0	100 +Z	0	2.966	0 -X	0	2.688	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	E3	20	0	155	0	155	-2.527	-2	0.027	3.223 up	155	0	100 +Z	0	0.027	0 -X	0	2.527	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	P1	20	0	0	2	2	0.018	0	0.002	0.018 down	0	0	0 +Z	2	0.002	0 -X	0	-0.018	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	P3	20	0	0	2	2	0.026	0	0.01	0.028 up	0	0	100 +Z	2	0.01	0 -X	0	-0.026	0	1E+10	0.1	0	97.18	26.31	381.33
A80	A80 1	V - Stop	P2	20	-1	0	5	5	0.019	0	0.01	0.022 down	0	0	0 +Z	5	0.01	0 -X	1	-0.019	0	1E+10	0.1	0	97.18	26.31	381.33
A81	A81 1	V - Stop	GR	20	0	-1743	0	1743	0	0	0	0 down	1743	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	GT1	20	-175	-1747	8	1755	-0.116	0	0.005	0.116 down	1747	0	0 +Z	8	0.005	0 -X	175	0.116	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	GT2	20	173	-1747	-24	1755	0.294	0	-0.041	0.297 down	1747	0	0 -Z	24	0.041	0 +X	173	0.294	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	GT3	20	-170	-1747	40	1755	-0.451	0	0.105	0.463 down	1747	0	0 +Z	40	0.105	0 -X	170	0.451	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	W3	20	56	0	2	56	0	0	0	0 down	0	0	0 +Z	2	0	0 +X	56	0	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	E1	20	0	852	0	852	-1.336	-2	-3.795	4.493 up	852	0	100 -Z	0	3.795	0 -X	0	1.336	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	E2	20	0	852	0	852	-1.513	-2	3.089	3.979 up	852	0	100 +Z	0	3.089	0 -X	0	1.513	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	E3	20	0	852	0	852	-1.439	-2	-0.031	2.464 up	852	0	100 -Z	0	0.031	0 -X	0	1.439	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	P2	20	0	0	2	2	-0.038	0	0.008	0.039 down	0	0	0 +Z	2	0.008	0 -X	0	0.038	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	P3	20	0	0	2	2	-0.03	0	0.012	0.032 down	0	0	0 +Z	2	0.012	0 +X	0	-0.03	0	1E+10	0.1	0	105.85	26.31	381.33
A81	A81 1	V - Stop	P1	20	0	0	3	3	-0.013	0	0.003	0.013 down	0	0	0 +Z	3	0.003	0 +X	0	-0.013	0	1E+10	0.1	0	105.85	26.31	381.33
A82	A82 1	V - Stop	GR	20	0	-2498	0	2498	0	0	0	0 down	2498	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	GT1	20	188	-2498	164	2511	0.027	0	0.024	0.036 down	2498	0	0 +Z	164	0.024	0 +X	188	0.027	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	GT2	20	-116	-2498	-222	2511	-0.049	0	-0.093	0.105 down	2498	0	0 -Z	222	0.093	0 -X	116	0.049	0	1E+10	0.1	0	97.21	26.31	390.33

A82	A82 1	V - Stop	GT3	20	80	-2498	236	2511	0.056	0	0.165	0.175 down	2498	0	0 +Z	236	0.165	0 +X	80	0.056	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	W3	20	110	0	-3	110	0	0	0	0 down	0	0	0 -Z	3	0	0 +X	110	0	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	E1	20	0	55	0	55	-1.649	-2	-3.48	4.339 up	55	0	100 -Z	0	3.48	0 -X	0	1.649	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	E2	20	0	55	0	55	-2.373	-2	2.965	4.292 up	55	0	100 +Z	0	2.965	0 -X	0	2.373	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	E3	20	0	55	0	55	-2.054	-2	0.025	2.867 up	55	0	100 +Z	0	0.025	0 -X	0	2.054	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	P3	20	-4	0	1	4	0.002	0	0.017	0.017 down	0	0	0 +Z	1	0.017	0 -X	4	-0.002	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	P1	20	-2	0	2	3	0.004	0	0.004	0.006 down	0	0	0 +Z	2	0.004	0 -X	2	-0.004	0	1E+10	0.1	0	97.21	26.31	390.33
A82	A82 1	V - Stop	P2	20	-16	0	8	18	0	0	0.015	0.015 down	0	0	0 +Z	8	0.015	0 -X	16	0	0	1E+10	0.1	0	97.21	26.31	390.33
A83	A83 1	V - Stop	P2	20	-6	0	-4	7	-0.013	0	0.012	0.018 down	0	0	0 -Z	4	-0.012	0 -X	6	0.013	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	GR	20	0	-2499	0	2499	0	0	0	0 down	2499	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	GT1	20	-161	-2497	191	2510	-0.024	0	0.029	0.038 down	2497	0	0 +Z	191	0.029	0 -X	161	0.024	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	GT2	20	150	-2497	-200	2510	0.071	0	-0.094	0.117 down	2497	0	0 -Z	200	0.094	0 +X	150	0.071	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	GT3	20	-145	-2497	203	2510	-0.128	0	0.18	0.221 down	2497	0	0 +Z	203	0.18	0 -X	145	0.128	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	W1	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	W2	20	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	W3	20	108	0	2	108	0	0	0	0 down	0	0	0 +Z	2	0	0 +X	108	0	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	E1	20	0	276	0	276	-1.381	-2	-3.795	4.506 up	276	0	100 -Z	0	3.795	0 -X	0	1.381	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	E2	20	0	276	0	276	-2.031	-2	3.09	4.204 up	276	0	100 +Z	0	3.09	0 -X	0	2.031	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	E3	20	0	276	0	276	-1.746	-2	-0.031	2.655 up	276	0	100 -Z	0	0.031	0 -X	0	1.746	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	P3	20	3	0	2	3	-0.009	0	0.018	0.02 down	0	0	0 +Z	2	0.018	0 +X	3	-0.009	0	1E+10	0.1	0	105.88	26.31	390.33
A83	A83 1	V - Stop	P1	20	8	0	6	10	-0.003	0	0.006	0.006 down	0	0	0 +Z	6	0.006	0 +X	8	-0.003	0	1E+10	0.1	0	105.88	26.31	390.33
C102	C102 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	214.05	25.84	354.77
C102	C102 1	V - Stop	P3	8	1	0	2	3	-0.001	0	0.005	0.005 down	0	0	0 +Z	2	0.005	0 +X	1	-0.001	0	1E+10	0.1	0	214.05	25.84	354.77
C102	C102 1	V - Stop	P2	8	0	0	2	2	-0.002	0	0.002	0.003 down	0	0	0 +Z	2	0.002	0 +X	0	-0.002	0	1E+10	0.1	0	214.05	25.84	354.77
C68	C68 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.84	349.99
C92	C92 2	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	214.02	25.84	364.46
C92	C92 2	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	214.02	25.84	364.46
C98	C98 1	V - Stop	P2	8	0	0	0	0	-0.001	0	0.006	0.006 up	0	0	100 +Z	0	0.006	0 +X	0	-0.001	0	1E+10	0.1	0	222.97	25.84	353.31
C98	C98 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	222.97	25.84	353.31
C98	C98 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	222.97	25.84	353.31
C99	C99 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	223.01	25.84	365.97
C99	C99 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	223.01	25.84	365.97
D90	D90 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	221.68	25.75	367.32
C106	C106 1	V - Stop	GR	8	0	-393	0	393	0.043	0	0.153	0.159 down	393	0	0 +Z	0	0.153	0 +X	0	0.043	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	GT1	8	40	-397	-2	399	0.157	0	0.148	0.216 down	397	0	0 -Z	2	-0.148	0 +X	40	0.157	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	GT2	8	-39	-395	-3	397	-0.216	0	0.135	0.255 down	395	0	0 -Z	3	-0.135	0 -X	39	0.216	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	GT3	8	39	-392	6	394	0.394	0	0.207	0.445 down	392	0	0 +Z	6	0.207	0 +X	39	0.394	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	W3	8	31	0	-2	31	0.001	0	0	0.001 up	0	0	100 -Z	2	0	0 +X	31	0.001	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	E1	8	0	58	0	58	-2.073	-2	-7.928	8.435 up	58	0	100 -Z	0	7.928	0 -X	0	2.073	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	E2	8	0	12	0	12	-2.962	-2	10.289	10.892 up	12	0	100 +Z	0	10.289	0 -X	0	2.962	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	E3	8	0	20	0	20	-2.51	-2	3.112	4.471 up	20	0	100 +Z	0	3.112	0 -X	0	2.51	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	P1	8	0	0	0	0	0.008	0	0	0.008 up	0	0	100 +Z	0	0	0 -X	0	-0.008	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	P2	8	0	0	0	0	0.013	0	0.003	0.013 up	0	0	100 +Z	0	0.003	0 -X	0	-0.013	0	1E+10	0.1	0	97.85	28.84	381.29
C106	C106 1	V - Stop	P3	8	0	0	0	1	0.011	0	0.005	0.013 up	0	0	100 +Z	0	0.005	0 -X	0	-0.011	0	1E+10	0.1	0	97.85	28.84	381.29
C107	C107 1	V - Stop	GR	8	0	-378	0	378	0.023	0	0.159	0.16 down	378	0	0 +Z	0	0.159	0 +X	0	0.023	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	GT1	8	-38	-381	-1	382	-0.084	0	0.156	0.177 down	381	0	0 -Z	1	-0.156	0 -X	38	0.084	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	GT2	8	38	-379	-4	381	0.256	0	0.132	0.288 down	379	0	0 -Z	4	-0.132	0 +X	38	0.256	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	GT3	8	-37	-380	7	382	-0.308	0	0.225	0.381 down	380	0	0 +Z	7	0.225	0 -X	37	0.308	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	P1	8	0	0	0	0	-0.005	0	0.001	0.005 up	0	0	100 +Z	0	0.001	0 +X	0	-0.005	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	P2	8	0	0	0	0	-0.008	0	0.004	0.009 down	0	0	0 +Z	0	0.004	0 +X	0	-0.008	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	P3	8	0	0	0	0	-0.013	0	0.006	0.014 up	0	0	100 +Z	0	0.006	0 +X	0	-0.013	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	W3	8	30	0	1	30	0.001	0	0	0.001 up	0	0	100 +Z	1	0	0 +X	30	0.001	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	E1	8	0	72	0	72	-1.421	-2	-8.445	8.794 up	72	0	100 -Z	0	8.445	0 -X	0	1.421	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	E2	8	0	69	0	69	-1.796	-2	10.501	10.84 up	69	0	100 +Z	0	10.501	0 -X	0	1.796	0	1E+10	0.1	0	105.18	28.84	381.28
C107	C107 1	V - Stop	E3	8	0	69	0	69	-1.553	-2	2.923	3.868 up	69	0	100 +Z	0	2.923	0 -X	0	1.553	0	1E+10	0.1	0	105.18	28.84	381.28
C108	C108 1	V - Stop	GR	8	0	-614	0	614	0.029	0	0.153	0.156 down	614	0	0 +Z	0	0.153	0 +X	0	0.029	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	GT1	8	43	-614	44	617	0.048	0	0.173	0.179 down	614	0	0 +Z	44	0.173	0 +X	43	0.048	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	GT2	8	-33	-613	-52	617	-0.017	0	0.08	0.082 down	613	0	0 -Z	52	-0.08	0 -X	33	0.017	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	GT3	8	24	-613	56	616	0.085	0	0.284	0.296 down	613	0	0 +Z	56	0.284	0 +X	24	0.085	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	W3	8	42	0	-2	42	0.001	0	0	0.001 down	0	0	0 -Z	2	0	0 +X	42	0.001	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	E1	8	0	48	0	48	-1.192	-2	-7.931	8.266 up	48	0	100 -Z	0	7.931	0 -X	0	1.192	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	E2	8	0	40	0	40	-2.779	-2	10.289	10.844 up	40	0	100 +Z	0	10.289	0 -X	0	2.779	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	E3	8	0	42	0	42	-1.913	-2	3.111	4.164 up	42	0	100 +Z	0	3.111	0 -X	0	1.913	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	P1	8	0	0	0	0	0.001	0	0.001	0.002 up	0	0	100 -Z	0	-0.001	0 +X	0	0.001	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	P2	8	0	0	0	0	0.003	0	0.005	0.006 up	0	0	100 +Z	0	0.005	0 -X	0	-0.003	0	1E+10	0.1	0	97.87	28.84	390.29
C108	C108 1	V - Stop	P3	8	-1	0	0	1	0.001	0	0.008	0.008 up	0	0	100 +Z	0	0.008	0 -X	1	-0.001	0	1E+10	0.1	0	97.87	28.84	390.29
C109	C109 1	V - Stop	P2	8	1	0	0	1	-0.001	0	0.006	0.006 down	0	0	0 +Z	0	0.006	0 +X	1	-0.001	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	GR	8	0	-608	0	608	0.024	0	0.159	0.16 down	608	0	0 +Z	0	0.159	0 +X	0	0.024	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	GT1	8	-40	-607	46	610	0.006	0	0.179	0.179 down	607	0	0 +Z	46	0.179	0 -X	40	-0.006	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	GT2	8	27	-608	-54	611	0.064	0	0.079	0.101 down	608	0	0 -Z	54	-0.079	0 +X	27	0.064	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	GT3	8	-25	-608	56	611	-0.039	0	0.3	0.302 down	608	0	0 +Z	56	0.3	0 -X	25	0.039	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	P3	8	0	0	0	0	-0.003	0	0.009	0.009 down	0	0	0 +Z	0	0.009	0 +X	0	-0.003	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	W3	8	42	0	2	42	0.001	0	0	0.001 down	0	0	0 +Z	2	0	0 +X	42	0.001	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	E1	8	0	52	0	52	-1.06	-2	-8.447	8.745 up	52	0	100 -Z	0	8.447	0 -X	0	1.06	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	E2	8	0	61	0	61	-2.446	-2	10.504	10.968 up	61	0	100 +Z	0	10.504	0 -X	0	2.446	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	E3	8	0	59	0	59	-1.662	-2	2.924	3.913 up	59	0	100 +Z	0	2.924	0 -X	0	1.662	0	1E+10	0.1	0	105.21	28.84	390.28
C109	C109 1	V - Stop	P1	8	1	0	1	2	-0.001	0	0.002	0.003 down	0	0	0 +Z	1	0.002	0 +X	1	-0.001	0	1E+10	0.1	0	105.21	28.84	390.28
C111	C111 1	V - Stop	P3	8	-3	-1	-1	3	-0.005	0	0.001	0.005 down	1	0	0 -Z	1	-0.001	0 -X	3	0.005	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	GR	8	0	-1206	0	1206	0	-1	0	1 down	1206	0	0 -Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	GT1	8	-62	-2553	248	2566	-0.076	-1	0.307	1.049 down	2553	0	0 +Z	248	0.307	0 -X	62	0.076	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	GT2	8	2	-2547	255	2560	0.003	-1	0.323	1.051 down	2547	0	0 +Z	255	0.323	0 +X	2	0.003	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	GT3	8	-106	-2557	233	2569	-0.135	-1	0.297	1.052 down	2557	0	0 +Z	233	0.297	0 -X	106	0.135	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	W3	8	49	-2	2	49	0	0	0	0 down	2	0	0 +Z	2	0	0 +X	49	0	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	E1	8	0	5	0	5	-2.941	-2	-1.285	3.782 up	5	0	100 -Z	0	1.285	0 -X	0	2.941	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	E2	8	0	16	0	16	-2.924	-2	-1.279	3.766 up	16	0	100 -Z	0	1.279	0 -X	0	2.924	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	E3	8	0	7	0	7	-2.933	-2	-1.28	3.774 up	7	0	100 -Z	0	1.28	0 -X	0	2.933	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	P1	8	-1	0	0	1	-0.001	0	0	0.001 down	0	0	0 -Z	0	0	0 -X	1	0.001	0	1E+10	0.1	0	-46.39	25.81	330.44
C111	C111 1	V - Stop	P2	8	-1	0	0	2	-0.002	0	0	0.002 down	0	0	0 +Z	0	0	0 -X	1	0.002	0	1E+10	0.1	0	-46.39	25.81	330.44
C113	C113 1	V - Stop	P3	8	-1	-9	0	9	-0.004	0	0.001	0.004 down	9	0	0 +Z	0	0.001	0 -X	1	0.004	0	1E+10	0.1	0	-30.75	25.84	363.46

C113	C113 1	V - Stop	P1	8	-1	-3	0	3	-0.004	0	0.001	0.004 down	3	0	0 +Z	0	0.001	0 -X	1	0.004	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	GR	8	0	-323	0	323	0	0	-0.003	0.003 down	323	0	0 -Z	0	0.003	0 -X	0	0	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	GT1	8	-12	-353	33	355	-0.105	0	0.288	0.307 down	353	0	0 +Z	33	0.288	0 -X	12	0.105	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	GT2	8	30	-306	2	307	0.164	0	0.007	0.164 down	306	0	0 +Z	2	0.007	0 +X	30	0.164	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	GT3	8	-36	-507	35	509	-0.351	0	0.339	0.488 down	507	0	0 +Z	35	0.339	0 -X	36	0.351	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	W3	8	23	2	-8	25	0.001	0	0	0.001 up	2	0	100 -Z	8	0	0 +X	23	0.001	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	E1	8	0	38	0	38	-2.701	-2	-1.363	3.627 up	38	0	100 -Z	0	1.363	0 -X	0	2.701	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	E2	8	0	113	0	113	-2.76	-2	-1.175	3.606 up	113	0	100 -Z	0	1.175	0 -X	0	2.76	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	E3	8	0	97	0	97	-2.667	-2	-1.254	3.562 up	97	0	100 -Z	0	1.254	0 -X	0	2.667	0	1E+10	0.1	0	-30.75	25.84	363.46
C113	C113 1	V - Stop	P2	8	0	-1	1	1	-0.004	0	0.006	0.007 down	1	0	0 +Z	1	0.006	0 -X	0	0.004	0	1E+10	0.1	0	-30.75	25.84	363.46
C62	C62 1	V - Stop	P1	8	0	0	0	0	-0.003	0	-0.007	0.008 down	0	0	0 -Z	0	0.007	0 -X	0	0.003	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	P2	8	0	0	0	0	-0.005	0	-0.01	0.011 down	0	0	0 +Z	0	-0.01	0 -X	0	0.005	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	P3	8	0	0	0	0	-0.009	0	-0.015	0.017 down	0	0	0 +Z	0	-0.015	0 -X	0	0.009	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	GR	8	0	-552	0	552	0	0	0	0 down	552	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	GT1	8	-22	-560	-52	563	-0.056	0	-0.134	0.145 down	560	0	0 -Z	52	0.134	0 -X	22	0.056	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	GT2	8	22	-540	49	543	0.133	0	0.292	0.321 down	540	0	0 +Z	49	0.292	0 +X	22	0.133	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	GT3	8	-25	-566	-51	569	-0.199	0	-0.414	0.459 down	566	0	0 -Z	51	0.414	0 -X	25	0.199	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	W3	8	52	0	1	52	0.003	0	0	0.003 up	0	0	100 +Z	1	0	0 +X	52	0.003	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	E1	8	0	-12	0	12	-13.66	-12	-6.185	19.205 down	12	0	0 -Z	0	6.185	0 -X	0	13.66	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	E2	8	0	-13	0	13	-13.687	-12	-5.985	19.161 down	13	0	0 -Z	0	5.985	0 -X	0	13.687	0	1E+10	0.1	0	232.02	25.83	264.64
C62	C62 1	V - Stop	E3	8	0	-16	0	16	-13.641	-12	-6.08	19.158 down	16	0	0 -Z	0	6.08	0 -X	0	13.641	0	1E+10	0.1	0	232.02	25.83	264.64
C63	C63 1	V - Stop	P1	8	0	0	0	1	-0.004	0	-0.005	0.006 up	0	0	100 +Z	0	-0.005	0 -X	0	0.004	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	GR	8	0	-735	0	735	0.002	0	0	0.002 down	735	0	0 +Z	0	0	0 +X	0	0.002	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	GT1	8	-39	-734	-62	738	-0.056	0	-0.094	0.109 down	734	0	0 -Z	62	0.094	0 -X	39	0.056	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	GT2	8	49	-736	55	740	0.183	0	0.203	0.274 down	736	0	0 +Z	55	0.203	0 +X	49	0.183	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	GT3	8	-57	-734	-46	738	-0.354	0	-0.288	0.456 down	734	0	0 -Z	46	0.288	0 -X	57	0.354	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	W3	8	69	0	0	69	0.021	0	0	0.021 down	0	0	0 +Z	0	0	0 +X	69	0.021	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	E1	8	0	70	0	70	-13.017	-12	-6.186	18.754 up	70	0	100 -Z	0	6.186	0 -X	0	13.017	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	E2	8	0	70	0	70	-13.482	-12	-5.985	19.015 up	70	0	100 -Z	0	5.985	0 -X	0	13.482	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	E3	8	0	70	0	70	-12.997	-12	-6.081	18.705 up	70	0	100 -Z	0	6.081	0 -X	0	12.997	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	P2	8	-1	0	1	1	-0.011	0	-0.007	0.013 down	0	0	0 +Z	1	-0.007	0 -X	1	0.011	0	1E+10	0.1	0	232.02	25.83	279.65
C63	C63 1	V - Stop	P3	8	-1	0	1	1	-0.026	0	-0.01	0.028 down	0	0	0 +Z	1	-0.01	0 -X	1	0.026	0	1E+10	0.1	0	232.02	25.83	279.65
C64	C64 1	V - Stop	GR	8	0	-683	0	683	0.003	0	0	0.003 down	683	0	0 +Z	0	0	0 +X	0	0.003	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	GT1	8	-20	-682	-65	685	-0.013	0	-0.054	0.055 down	682	0	0 -Z	65	0.054	0 -X	20	0.013	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	GT2	8	48	-686	48	690	0.116	0	0.114	0.163 down	686	0	0 +Z	48	0.114	0 +X	48	0.116	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	GT3	8	-61	-679	-30	682	-0.33	0	-0.162	0.367 down	679	0	0 -Z	30	0.162	0 -X	61	0.33	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	W3	8	64	0	0	64	0.035	0	0	0.035 up	0	0	100 +Z	0	0	0 +X	64	0.035	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	E1	8	0	55	0	55	-12.436	-12	-6.187	18.356 up	55	0	100 -Z	0	6.187	0 -X	0	12.436	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	E2	8	0	55	0	55	-13.393	-12	-5.985	18.952 up	55	0	100 -Z	0	5.985	0 -X	0	13.393	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	E3	8	0	56	0	56	-12.492	-12	-6.081	18.359 up	56	0	100 -Z	0	6.081	0 -X	0	12.492	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	P1	8	-1	0	0	1	-0.002	0	-0.003	0.003 up	0	0	100 +Z	0	-0.003	0 -X	1	0.002	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	P3	8	-1	0	2	2	-0.036	0	-0.005	0.036 up	0	0	100 +Z	2	-0.005	0 -X	1	0.036	0	1E+10	0.1	0	232.02	25.83	294.65
C64	C64 1	V - Stop	P2	8	-2	0	2	3	-0.013	0	-0.004	0.013 up	0	0	100 +Z	2	-0.004	0 -X	2	0.013	0	1E+10	0.1	0	232.02	25.83	294.65
C65	C65 1	V - Stop	GR	8	0	-720	0	720	0.002	0	0	0.002 down	720	0	0 +Z	0	0	0 +X	0	0.002	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	GT1	8	-12	-727	-72	731	0	0	-0.014	0.014 down	727	0	0 -Z	72	0.014	0 -X	12	0	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	GT2	8	67	-707	16	710	0.104	0	0.025	0.107 down	707	0	0 +Z	16	0.025	0 +X	67	0.104	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	GT3	8	-73	-738	-8	742	-0.328	0	-0.036	0.33 down	738	0	0 -Z	8	0.036	0 -X	73	0.328	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	W3	8	67	0	0	67	0.035	0	0	0.035 down	0	0	0 +Z	0	0	0 +X	67	0.035	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	E1	8	0	58	0	58	-12.3	-12	-6.188	18.264 up	58	0	100 -Z	0	6.188	0 -X	0	12.3	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	E2	8	0	56	0	56	-13.47	-12	-5.985	19.007 up	56	0	100 -Z	0	5.985	0 -X	0	13.47	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	E3	8	0	54	0	54	-12.446	-12	-6.082	18.327 up	54	0	100 -Z	0	6.082	0 -X	0	12.446	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	P3	8	0	-1	1	1	-0.039	0	0	0.039 down	1	0	0 +Z	1	0	0 -X	0	0.039	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	P1	8	-3	0	1	3	-0.001	0	0	0.001 down	0	0	0 +Z	1	0	0 -X	3	0.001	0	1E+10	0.1	0	232.03	25.83	309.65
C65	C65 1	V - Stop	P2	8	-1	0	2	2	-0.014	0	0	0.014 down	0	0	0 +Z	2	0	0 -X	1	0.014	0	1E+10	0.1	0	232.03	25.83	309.65
C66	C66 1	V - Stop	P1	8	-1	2	-1	2	-0.003	0	0.002	0.004 up	2	0	100 -Z	1	-0.002	0 -X	1	0.003	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	P2	8	-1	2	-1	2	-0.015	0	0.003	0.015 up	2	0	100 -Z	1	-0.003	0 -X	1	0.015	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	GR	8	0	-611	0	611	-0.002	0	0	0.002 down	611	0	0 +Z	0	0	0 -X	0	0.002	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	GT1	8	-44	-578	38	581	-0.032	0	0.026	0.041 down	578	0	0 +Z	38	0.026	0 -X	44	0.032	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	GT2	8	63	-675	-23	678	0.178	0	-0.064	0.189 down	675	0	0 -Z	23	0.064	0 +X	63	0.178	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	GT3	8	-51	-526	12	529	-0.38	0	0.089	0.39 down	526	0	0 +Z	12	0.089	0 -X	51	0.38	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	W3	8	57	1	0	57	0.023	0	0	0.023 up	1	0	100 -Z	0	0	0 +X	57	0.023	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	E1	8	0	61	0	61	-12.661	-12	-6.188	18.509 up	61	0	100 -Z	0	6.188	0 -X	0	12.661	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	E2	8	0	70	0	70	-13.634	-12	-5.986	19.123 up	70	0	100 -Z	0	5.986	0 -X	0	13.634	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	E3	8	0	79	0	79	-12.85	-12	-6.082	18.604 up	79	0	100 -Z	0	6.082	0 -X	0	12.85	0	1E+10	0.1	0	232.03	25.83	324.65
C66	C66 1	V - Stop	P3	8	0	2	0	3	-0.034	0	0.005	0.034 up	2	0	100 -Z	0	-0.005	0 +X	0	-0.034	0	1E+10	0.1	0	232.03	25.83	324.65
C67	C67 1	V - Stop	P2	8	0	-8	-1	8	-0.012	0	0.005	0.013 down	8	0	0 -Z	1	-0.005	0 +X	0	-0.012	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	P3	8	-1	-11	0	11	-0.023	0	0.009	0.024 down	11	0	0 -Z	0	-0.009	0 -X	1	0.023	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	P1	8	-1	-7	0	7	-0.005	0	0.004	0.006 down	7	0	0 -Z	0	-0.004	0 -X	1	0.005	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	GR	8	0	-699	0	699	-0.009	0	0	0.009 down	699	0	0 +Z	0	0	0 -X	0	0.009	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	GT1	8	-60	-838	58	842	-0.07	0	0.059	0.091 down	838	0	0 +Z	58	0.059	0 -X	60	0.07	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	GT2	8	36	-428	-23	430	0.207	0	-0.138	0.249 down	428	0	0 -Z	23	0.138	0 +X	36	0.207	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	GT3	8	-92	-1059	51	1064	-0.359	0	0.194	0.408 down	1059	0	0 +Z	51	0.194	0 -X	92	0.359	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	W3	8	65	-4	0	65	0.008	0	0	0.008 down	4	0	0 -Z	0	0	0 +X	65	0.008	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	E1	8	0	13	0	13	-13.15	-12	-6.189	18.847 up	13	0	100 -Z	0	6.189	0 -X	0	13.15	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	E2	8	0	-25	0	25	-13.689	-12	-5.986	19.163 down	25	0	0 -Z	0	5.986	0 -X	0	13.689	0	1E+10	0.1	0	232.03	25.83	337.15
C67	C67 1	V - Stop	E3	8	0	-61	0	61	-13.297	-12	-6.083	18.916 down	61	0	0 -Z	0	6.083	0 -X	0	13.297	0	1E+10	0.1	0	232.03	25.83	337.15
D90	D90 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	221.68	25.75	367.32
D91	D91 1	V - Stop	P1	6	0	0	-1	1	0.001	0	0.006	0.006 down	0	0	0 -Z	1	-0.006	0 +X	0	0.001	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1	V - Stop	P2	6	0	0	0	0	0.003	0	0.008	0.008 down	0	0	0 -Z	0	-0.008	0 +X	0	0.003	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1	V - Stop	P3	6	0	0	0	0	0.002	0	0.012	0.012 down	0	0	0 +Z	0	0.012	0 -X	0	-0.002	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	221.7	25.75	351.99
D91	D91 1	V - Stop	W3	6	12	0	-18	21	0	0	0	0 up	0	0	100 -Z	18	0	0 +X	12	0	0	1E+10	0.1	0	221.7	25.75	351.99
D93	D93 1	V - Stop	P1	6	0	0	0	0	0	0	0	0 up	0	0	100 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	W3	6	31	0	-1	31	0.001	0	0	0.001 down	0	0	0 -Z	1	0	0 +X	31	0.001	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	P3	6	1	0	1	2	0	0	0	0.001 up	0	0	100 +Z	1	0	0 +X	1	0	0	1E+10	0.1	0	212.7	25.75	353.22

D93	D93 1	V - Stop	P2	6	-1	0	1	1	0.002	0	0.002	0.003 up	0	0	100 +Z	1	0.002	0 -X	1	-0.002	0	1E+10	0.1	0	212.7	25.75	353.22
C70	C70 1	V - Stop	P1	8	0	2	-1	2	0.01	0	-0.003	0.011 up	2	0	100 -Z	1	0.003	0 -X	0	-0.01	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	GR	8	0	-665	0	665	0.021	0	0.049	0.054 down	665	0	0 +Z	0	0.049	0 +X	0	0.021	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	GT1	8	61	-617	-4	620	0.167	0	0.04	0.172 down	617	0	0 -Z	4	-0.04	0 +X	61	0.167	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	GT2	8	-75	-762	10	766	-0.319	0	0.096	0.333 down	762	0	0 +Z	10	0.096	0 -X	75	0.319	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	GT3	8	53	-558	-17	561	0.502	0	-0.103	0.513 down	558	0	0 -Z	17	0.103	0 +X	53	0.502	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	W3	8	10	0	-4	10	0	0	0	0 down	0	0	0 -Z	4	0	0 +X	10	0	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	E1	8	0	593	0	593	-1.527	-2	-6.057	6.559 up	593	0	100 -Z	0	6.057	0 -X	0	1.527	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	E2	8	0	659	0	659	-1.527	-2	-4.788	5.409 up	659	0	100 -Z	0	4.788	0 -X	0	1.527	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	E3	8	0	632	0	632	-1.526	-2	-5.265	5.835 up	632	0	100 -Z	0	5.265	0 -X	0	1.526	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	P2	8	0	1	0	1	0.013	0	-0.003	0.013 up	1	0	100 -Z	0	0.003	0 +X	0	0.013	0	1E+10	0.1	0	226.02	28.84	374.14
C70	C70 1	V - Stop	P3	8	0	2	0	2	0.019	0	-0.004	0.019 up	2	0	100 +Z	0	-0.004	0 -X	0	-0.019	0	1E+10	0.1	0	226.02	28.84	374.14
C71	C71 1	V - Stop	P1	8	0	0	0	1	0.006	0	-0.002	0.006 up	0	0	100 +Z	0	-0.002	0 +X	0	0.006	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	GR	8	0	-588	0	588	0.021	0	0.106	0.108 down	588	0	0 +Z	0	0.106	0 +X	0	0.021	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	GT1	8	52	-562	-20	564	0.091	0	0.079	0.12 down	562	0	0 -Z	20	-0.079	0 +X	52	0.091	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	GT2	8	-59	-595	1	598	-0.149	0	0.11	0.185 down	595	0	0 +Z	1	0.11	0 -X	59	0.149	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	GT3	8	51	-547	-20	550	0.262	0	0.012	0.263 down	547	0	0 -Z	20	-0.012	0 +X	51	0.262	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	W3	8	8	-7	8	13	0	0	0	0 down	7	0	0 +Z	8	0	0 +X	8	0	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	E1	8	0	344	0	344	-1.522	-2	-0.451	2.553 up	344	0	100 -Z	0	0.451	0 -X	0	1.522	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	E2	8	0	228	0	228	-1.522	-2	-0.9	2.669 up	228	0	100 -Z	0	0.9	0 -X	0	1.522	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	E3	8	0	273	0	273	-1.521	-2	-0.652	2.596 up	273	0	100 -Z	0	0.652	0 -X	0	1.521	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	P2	8	0	1	0	1	0.006	0	-0.002	0.007 up	1	0	100 -Z	0	0.002	0 +X	0	0.006	0	1E+10	0.1	0	197.63	28.84	374.16
C71	C71 1	V - Stop	P3	8	0	2	0	2	0.009	0	-0.004	0.01 up	2	0	100 +Z	0	-0.004	0 -X	0	-0.009	0	1E+10	0.1	0	197.63	28.84	374.16
C72	C72 1	V - Stop	P3	8	0	-1	0	1	0.004	0	-0.002	0.005 down	1	0	0 -Z	0	0.002	0 +X	0	0.004	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	P1	8	0	0	0	0	0.004	0	-0.001	0.004 down	0	0	0 +Z	0	-0.001	0 +X	0	0.004	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	P2	8	0	0	0	0	0.003	0	0	0.003 down	0	0	0 -Z	0	0	0 -X	0	-0.003	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	GR	8	0	-667	0	667	0.021	0	0.125	0.127 down	667	0	0 +Z	0	0.125	0 +X	0	0.021	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	GT1	8	64	-673	-17	677	0.051	0	0.117	0.127 down	673	0	0 -Z	17	-0.117	0 +X	64	0.051	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	GT2	8	-67	-665	1	669	-0.059	0	0.126	0.139 down	665	0	0 +Z	1	0.126	0 -X	67	0.059	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	GT3	8	65	-677	-18	681	0.136	0	0.093	0.165 down	677	0	0 -Z	18	-0.093	0 +X	65	0.136	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	W3	8	8	2	-1	8	0	0	0	0 up	2	0	100 -Z	1	0	0 +X	8	0	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	E1	8	0	-15	0	15	-1.52	-2	-0.192	2.52 down	15	0	0 -Z	0	0.192	0 -X	0	1.52	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	E2	8	0	11	0	11	-1.52	-2	-0.973	2.694 up	11	0	100 -Z	0	0.973	0 -X	0	1.52	0	1E+10	0.1	0	182.67	28.84	374.15
C72	C72 1	V - Stop	E3	8	0	1	0	1	-1.52	-2	-0.504	2.562 up	1	0	100 -Z	0	0.504	0 -X	0	1.52	0	1E+10	0.1	0	182.67	28.84	374.15
C73	C73 1	V - Stop	P3	8	-5	0	-2	5	0	0	0	0 up	0	0	100 -Z	2	0	0 -X	5	0	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	P2	8	0	0	-1	1	0	0	0	0 up	0	0	100 -Z	1	0	0 -X	0	0	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	P1	8	-3	0	-1	3	0.002	0	0	0.002 up	0	0	100 -Z	1	0	0 -X	3	-0.002	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	GR	8	0	-695	0	695	0.021	0	0.137	0.139 down	695	0	0 +Z	0	0.137	0 +X	0	0.021	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	GT1	8	-76	-693	5	697	0.015	0	0.137	0.138 down	693	0	0 +Z	5	0.137	0 -X	76	-0.015	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	GT2	8	60	-695	1	698	0.022	0	0.137	0.139 down	695	0	0 +Z	1	0.137	0 +X	60	0.022	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	GT3	8	2	-692	-15	692	0.021	0	0.137	0.138 down	692	0	0 -Z	15	-0.137	0 +X	2	0.021	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	W3	8	7	0	0	7	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	7	0	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	E1	8	0	77	0	77	-1.519	-2	-0.991	2.7 up	77	0	100 -Z	0	0.991	0 -X	0	1.519	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	E2	8	0	69	0	69	-1.519	-2	-0.491	2.559 up	69	0	100 -Z	0	0.491	0 -X	0	1.519	0	1E+10	0.1	0	169.05	28.84	374.15
C73	C73 1	V - Stop	E3	8	0	72	0	72	-1.519	-2	-0.491	2.559 up	72	0	100 -Z	0	0.491	0 -X	0	1.519	0	1E+10	0.1	0	169.05	28.84	374.15
C74	C74 1	V - Stop	GR	8	0	-748	0	748	0.021	0	0.146	0.148 down	748	0	0 +Z	0	0.146	0 +X	0	0.021	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	GT1	8	-76	-748	-1	752	-0.029	0	0.146	0.148 down	748	0	0 -Z	1	-0.146	0 -X	76	0.029	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	GT2	8	74	-748	12	752	0.12	0	0.162	0.202 down	748	0	0 +Z	12	0.162	0 +X	74	0.12	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	GT3	8	-74	-749	-11	752	-0.117	0	0.127	0.172 down	749	0	0 -Z	11	-0.127	0 -X	74	0.117	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	P1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 +X	0	0	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	P2	8	0	0	0	0	-0.003	0	-0.001	0.004 down	0	0	0 -Z	0	0.001	0 -X	0	0.003	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	P3	8	0	0	0	0	-0.005	0	-0.001	0.006 down	0	0	0 -Z	0	0.001	0 +X	0	-0.005	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	W3	8	7	0	0	7	0	0	0	0 up	0	0	100 -Z	0	0	0 +X	7	0	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	E1	8	0	59	0	59	-1.519	-2	-2.976	3.894 up	59	0	100 -Z	0	2.976	0 -X	0	1.519	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	E2	8	0	60	0	60	-1.519	-2	2.132	3.294 up	60	0	100 +Z	0	2.132	0 -X	0	1.519	0	1E+10	0.1	0	152.7	28.84	374.16
C74	C74 1	V - Stop	E3	8	0	60	0	60	-1.519	-2	0.24	2.523 up	60	0	100 +Z	0	0.24	0 -X	0	1.519	0	1E+10	0.1	0	152.7	28.84	374.16
C75	C75 1	V - Stop	GR	8	0	-691	0	691	0.021	0	0.152	0.153 down	691	0	0 +Z	0	0.152	0 +X	0	0.021	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	GT1	8	-69	-690	-11	694	-0.069	0	0.137	0.153 down	690	0	0 -Z	11	-0.137	0 -X	69	0.069	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	GT2	8	67	-690	18	694	0.21	0	0.204	0.293 down	690	0	0 +Z	18	0.204	0 +X	67	0.21	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	GT3	8	-66	-690	-19	694	-0.244	0	0.077	0.256 down	690	0	0 -Z	19	-0.077	0 -X	66	0.244	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	P1	8	0	0	0	0	-0.003	0	-0.001	0.003 up	0	0	100 -Z	0	0.001	0 +X	0	-0.003	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	P2	8	0	0	0	0	-0.007	0	-0.002	0.007 up	0	0	100 -Z	0	0.002	0 -X	0	0.007	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	P3	8	0	0	0	0	-0.01	0	-0.003	0.011 up	0	0	100 -Z	0	0.003	0 +X	0	-0.01	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	W3	8	7	0	0	7	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	7	0	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	E1	8	0	55	0	55	-1.518	-2	-5.161	5.739 up	55	0	100 -Z	0	5.161	0 -X	0	1.518	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	E2	8	0	55	0	55	-1.519	-2	5.486	6.033 up	55	0	100 +Z	0	5.486	0 -X	0	1.519	0	1E+10	0.1	0	137.66	28.84	374.16
C75	C75 1	V - Stop	E3	8	0	55	0	55	-1.519	-2	1.285	2.821 up	55	0	100 +Z	0	1.285	0 -X	0	1.519	0	1E+10	0.1	0	137.66	28.84	374.16
C76	C76 1	V - Stop	GR	8	0	-674	0	674	0.021	0	0.155	0.157 down	674	0	0 +Z	0	0.155	0 +X	0	0.021	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	GT1	8	-65	-675	-18	679	-0.109	0	0.118	0.161 down	675	0	0 -Z	18	-0.118	0 -X	65	0.109	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	GT2	8	65	-675	20	678	0.299	0	0.241	0.384 down	675	0	0 +Z	20	0.241	0 +X	65	0.299	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	GT3	8	-65	-675	-19	679	-0.37	0	0.044	0.373 down	675	0	0 -Z	19	-0.044	0 -X	65	0.37	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	P1	8	0	0	0	0	-0.005	0	-0.002	0.005 down	0	0	0 -Z	0	0.002	0 +X	0	-0.005	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	P2	8	0	0	0	0	-0.01	0	-0.003	0.01 down	0	0	0 +Z	0	-0.003	0 -X	0	0.01	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	P3	8	0	0	0	0	-0.015	0	-0.003	0.016 up	0	0	100 +Z	0	-0.003	0 -X	0	0.015	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	W3	8	7	0	0	7	0	0	0	0 up	0	0	100 -Z	0	0	0 +X	7	0	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	E1	8	0	69	0	69	-1.518	-2	-7.09	7.521 up	69	0	100 -Z	0	7.09	0 -X	0	1.518	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	E2	8	0	68	0	68	-1.519	-2	8.504	8.867 up	68	0	100 +Z	0	8.504	0 -X	0	1.519	0	1E+10	0.1	0	122.68	28.84	374.16
C76	C76 1	V - Stop	E3	8	0	68	0	68	-1.518	-2	2.25	3.372 up	68	0	100 +Z	0	2.25	0 -X	0	1.518	0	1E+10	0.1	0	122.68	28.84	374.16
C77	C77 1	V - Stop	GR	8	0	-559	0	559	0.021	0	0.158	0.159 down	559	0	0 +Z	0	0.158	0 +X	0	0.021	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	GT1	8	-55	-556	-12	558	-0.146	0	0.122	0.19 down	556	0	0 -Z	12	-0.122	0 -X	55	0.146	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	GT2	8	55	-558	8	560	0.381	0	0.21	0.435 down	558	0	0 +Z	8	0.21	0 +X	55	0.381	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	GT3	8	-55	-556	-5	559	-0.485	0	0.109	0.497 down	556	0	0 -Z	5	-0.109	0 -X	55	0.485	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	P1	8	0	0	0	0	-0.007	0	-0.001	0.007 up	0	0	100 +Z	0	-0.001	0 -X	0	0.007	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	P2	8	0	0	0	0	-0.013	0	0.001	0.013 up	0	0	100 +Z	0	0.001	0 -X	0	0.013	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	P3	8	0	0	0	0	-0.02	0	0.001	0.02 down	0	0	0 +Z	0	0.001	0 -X	0	0.02	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	W3	8	6	0	-4	7	0	0	0	0 down	0	0	0 -Z	4	0	0 +X	6	0	0	1E+10	0.1	0	109.07	28.84	374.16

C77	C77 1	V - Stop	E1	8	0	-4	0	4	-1.518	-2	-8.264	8.637 down	4	0	0 -Z	0	8.264	0 -X	0	1.518	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	E2	8	0	-2	0	2	-1.52	-2	10.262	10.565 down	2	0	0 +Z	0	10.262	0 -X	0	1.52	0	1E+10	0.1	0	109.07	28.84	374.16
C77	C77 1	V - Stop	E3	8	0	-2	0	2	-1.519	-2	2.833	3.786 down	2	0	0 +Z	0	2.833	0 -X	0	1.519	0	1E+10	0.1	0	109.07	28.84	374.16
C78	C78 1	V - Stop	P3	8	-1	-1	0	2	0	0	-0.011	0.011 down	1	0	0 -Z	0	0.011	0 -X	1	0	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	GR	8	0	-664	0	664	0.056	0	0.082	0.099 down	664	0	0 +Z	0	0.082	0 +X	0	0.056	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	GT1	8	30	-624	-55	628	0.08	0	0.038	0.089 down	624	0	0 -Z	55	-0.038	0 +X	30	0.08	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	GT2	8	-52	-653	40	656	-0.006	0	0.13	0.13 down	653	0	0 +Z	40	0.13	0 -X	52	0.006	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	GT3	8	21	-634	-60	637	0.125	0	-0.118	0.172 down	634	0	0 -Z	60	0.118	0 +X	21	0.125	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	W3	8	10	-9	11	17	0	0	0	0 down	9	0	0 +Z	11	0	0 +X	10	0	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	E1	8	0	72	0	72	-2.859	-2	-1.387	3.755 up	72	0	100 -Z	0	1.387	0 -X	0	2.859	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	E2	8	0	17	0	17	-2.859	-2	-1.122	3.665 up	17	0	100 -Z	0	1.122	0 -X	0	2.859	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	E3	8	0	52	0	52	-2.859	-2	-1.122	3.665 up	52	0	100 -Z	0	1.122	0 -X	0	2.859	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	P2	8	-1	1	1	2	0.007	0	-0.004	0.008 up	1	0	100 +Z	1	-0.004	0 -X	1	-0.007	0	1E+10	0.1	0	37.3	28.84	374.17
C78	C78 1	V - Stop	P1	8	3	0	2	3	0.005	0	-0.003	0.006 up	0	0	100 +Z	2	-0.003	0 +X	3	0.005	0	1E+10	0.1	0	37.3	28.84	374.17
C79	C79 1	V - Stop	P1	8	2	0	-3	4	0.002	0	0	0.002 down	0	0	0 -Z	3	0	0 +X	2	0.002	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	P2	8	-3	0	-3	4	0.003	0	-0.001	0.003 up	0	0	100 -Z	3	0.001	0 -X	3	-0.003	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	GR	8	0	-726	0	726	0.056	0	0.067	0.087 down	726	0	0 +Z	0	0.067	0 +X	0	0.056	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	GT1	8	-59	-730	-43	733	0.037	0	0.053	0.065 down	730	0	0 -Z	43	-0.053	0 -X	59	-0.037	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	GT2	8	72	-725	6	728	0.092	0	0.071	0.116 down	725	0	0 +Z	6	0.071	0 +X	72	0.092	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	GT3	8	-41	-731	-61	735	-0.013	0	-0.035	0.037 down	731	0	0 -Z	61	0.035	0 -X	41	0.013	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	W3	8	10	1	0	10	0	0	0	0 up	1	0	100 +Z	0	0	0 +X	10	0	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	E1	8	0	65	0	65	-2.859	-2	-1.167	3.679 up	65	0	100 -Z	0	1.167	0 -X	0	2.859	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	E2	8	0	44	0	44	-2.859	-2	-1.425	3.769 up	44	0	100 -Z	0	1.425	0 -X	0	2.859	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	E3	8	0	52	0	52	-2.859	-2	-1.232	3.7 up	52	0	100 -Z	0	1.232	0 -X	0	2.859	0	1E+10	0.1	0	20.9	28.84	374.17
C79	C79 1	V - Stop	P3	8	0	0	0	0	-0.005	0	-0.008	0.01 up	0	0	100 +Z	0	-0.008	0 +X	0	-0.005	0	1E+10	0.1	0	20.9	28.84	374.17
C80	C80 1	V - Stop	P3	8	0	0	-1	1	-0.01	0	-0.006	0.012 down	0	0	0 -Z	1	0.006	0 +X	0	-0.01	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	GR	8	0	-696	0	696	0.056	0	0.048	0.074 down	696	0	0 +Z	0	0.048	0 +X	0	0.056	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	GT1	8	-66	-695	23	698	-0.004	0	0.069	0.069 down	695	0	0 +Z	23	0.069	0 -X	66	0.004	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	GT2	8	66	-694	-20	697	0.182	0	0.011	0.182 down	694	0	0 -Z	20	-0.011	0 +X	66	0.182	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	GT3	8	-68	-690	-14	693	-0.14	0	0.009	0.141 down	690	0	0 -Z	14	-0.009	0 -X	68	0.14	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	W3	8	10	-1	0	10	0	0	0	0 down	1	0	0 -Z	0	0	0 +X	10	0	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	E1	8	0	54	0	54	-2.858	-2	-1.197	3.688 up	54	0	100 -Z	0	1.197	0 -X	0	2.858	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	E2	8	0	62	0	62	-2.859	-2	-1.204	3.691 up	62	0	100 -Z	0	1.204	0 -X	0	2.859	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	E3	8	0	55	0	55	-2.858	-2	-1.123	3.665 up	55	0	100 -Z	0	1.123	0 -X	0	2.858	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	P1	8	0	0	0	0	0	0	0	0 up	0	0	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	5.79	28.84	374.17
C80	C80 1	V - Stop	P2	8	-1	0	1	1	0	0	0.002	0.002 down	0	0	0 +Z	1	0.002	0 -X	1	0	0	1E+10	0.1	0	5.79	28.84	374.17
C81	C81 1	V - Stop	P1	8	-1	-1	-1	1	-0.002	0	-0.001	0.002 down	1	0	0 -Z	1	0.001	0 -X	1	0.002	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	P3	8	0	0	-1	1	-0.015	0	-0.004	0.016 up	0	0	100 -Z	1	0.004	0 -X	0	0.015	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	GR	8	0	-681	0	681	0.056	0	0.023	0.06 down	681	0	0 +Z	0	0.023	0 +X	0	0.056	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	GT1	8	-45	-682	51	686	-0.044	0	0.136	0.143 down	682	0	0 +Z	51	0.136	0 -X	45	0.044	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	GT2	8	64	-693	-25	697	0.271	0	-0.062	0.279 down	693	0	0 -Z	25	0.062	0 +X	64	0.271	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	GT3	8	-69	-704	12	707	-0.266	0	0.077	0.277 down	704	0	0 +Z	12	0.077	0 -X	69	0.266	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	W3	8	10	5	0	12	0	0	0	0 up	5	0	100 +Z	0	0	0 +X	10	0	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	E1	8	0	69	0	69	-2.858	-2	-1.266	3.711 up	69	0	100 -Z	0	1.266	0 -X	0	2.858	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	E2	8	0	60	0	60	-2.859	-2	-1.035	3.639 up	60	0	100 -Z	0	1.035	0 -X	0	2.859	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	E3	8	0	78	0	78	-2.858	-2	-1.068	3.648 up	78	0	100 -Z	0	1.068	0 -X	0	2.858	0	1E+10	0.1	0	-9.14	28.84	374.17
C81	C81 1	V - Stop	P2	8	0	0	1	1	-0.003	0	0.005	0.006 up	0	0	100 +Z	1	0.005	0 -X	0	0.003	0	1E+10	0.1	0	-9.14	28.84	374.17
C82	C82 1	V - Stop	P1	8	-1	4	-1	4	-0.004	0	0	0.004 up	4	0	100 -Z	1	0	0 -X	1	0.004	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	P3	8	0	11	-1	11	-0.02	0	0	0.02 up	11	0	100 -Z	1	0	0 +X	0	-0.02	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	GR	8	0	-797	0	797	0.056	0	-0.007	0.056 down	797	0	0 -Z	0	0.007	0 +X	0	0.056	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	GT1	8	-35	-745	66	749	-0.081	0	0.25	0.263 down	745	0	0 +Z	66	0.25	0 -X	35	0.081	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	GT2	8	76	-810	-27	814	0.353	0	-0.113	0.371 down	810	0	0 -Z	27	0.113	0 +X	76	0.353	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	GT3	8	-49	-572	29	575	-0.382	0	0.25	0.456 down	572	0	0 +Z	29	0.25	0 -X	49	0.382	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	W3	8	13	-3	1	14	0	0	0	0 down	3	0	0 +Z	1	0	0 +X	13	0	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	E1	8	0	98	0	98	-2.858	-2	-1.328	3.732 up	98	0	100 -Z	0	1.328	0 -X	0	2.858	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	E2	8	0	17	0	17	-2.859	-2	-1.073	3.65 up	17	0	100 -Z	0	1.073	0 -X	0	2.859	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	E3	8	0	36	0	36	-2.858	-2	-1.147	3.672 up	36	0	100 -Z	0	1.147	0 -X	0	2.858	0	1E+10	0.1	0	-22.82	28.84	374.17
C82	C82 1	V - Stop	P2	8	0	1	2	2	-0.006	0	0.009	0.011 up	1	0	100 +Z	2	0.009	0 -X	0	0.006	0	1E+10	0.1	0	-22.82	28.84	374.17
C90	C90 1	V - Stop	P1	8	0	-4	-1	4	0.007	0	-0.006	0.01 down	4	0	0 -Z	1	0.006	0 -X	0	-0.007	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	P3	8	1	-4	0	4	0.018	0	-0.008	0.02 down	4	0	0 +Z	0	-0.008	0 +X	1	0.018	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	P2	8	0	-2	0	2	0.012	0	-0.006	0.013 down	2	0	0 +Z	0	-0.006	0 -X	0	-0.012	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	GR	8	0	-654	0	654	0.009	0	0.02	0.022 down	654	0	0 +Z	0	0.02	0 +X	0	0.009	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	GT1	8	66	-750	-34	753	0.104	0	-0.029	0.108 down	750	0	0 -Z	34	0.029	0 +X	66	0.104	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	GT2	8	-44	-512	26	514	-0.249	0	0.171	0.302 down	512	0	0 +Z	26	0.171	0 -X	44	0.249	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	GT3	8	69	-824	-45	828	0.414	0	-0.247	0.482 down	824	0	0 -Z	45	0.247	0 +X	69	0.414	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	W3	8	22	2	0	22	0	0	0	0 up	2	0	100 +Z	0	0	0 +X	22	0	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	E1	8	0	-1008	0	1008	-3.186	-2	-8.164	8.989 down	1008	0	0 -Z	0	8.164	0 -X	0	3.186	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	E2	8	0	-1110	0	1110	-3.035	-2	-6.535	7.478 down	1110	0	0 -Z	0	6.535	0 -X	0	3.035	0	1E+10	0.1	0	232.02	25.84	369.41
C90	C90 1	V - Stop	E3	8	0	-1052	0	1052	-3.028	-2	-7.118	7.99 down	1052	0	0 -Z	0	7.118	0 -X	0	3.028	0	1E+10	0.1	0	232.02	25.84	369.41
	203 203 2	V - Stop	P1	6	3	-1	1	3	0	0	0.001	0.001 down	1	0	0 +Z	1	0.001	0 +X	3	0	0	1E+10	0.1	0	212.69	25.75	366.08
C102	C102 1	V - Stop	W3	8	13	-1	0	13	0	0	0	0 down	1	0	0 +Z	0	0	0 +X	13	0	0	1E+10	0.1	0	214.05	25.84	354.77
C92	C92 2	V - Stop	P1	8	5	-1	-2	6	0.002	0	0.003	0.003 down	1	0	0 -Z	2	-0.003	0 +X	5	0.002	0	1E+10	0.1	0	214.02	25.84	364.46
C92	C92 2	V - Stop	P2	8	0	-1	0	1	0.005	0	0.004	0.007 down	1	0	0 -Z	0	-0.004	0 +X	0	0.005	0	1E+10	0.1	0	214.02	25.84	364.46
C92	C92 2	V - Stop	P3	8	0	-1	0	1	0.009	0	0.008	0.012 down	1	0	0 +Z	0	0.008	0 +X	0	0.009	0	1E+10	0.1	0	214.02	25.84	364.46
C98	C98 1	V - Stop	P1	8	0	-1	0	1	-0.001	0	0.004	0.004 down	1	0	0 -Z	0	-0.004	0 +X	0	-0.001	0	1E+10	0.1	0	222.97	25.84	353.31
C99	C99 1	V - Stop	W3	8	17	-1	3	17	0	0	0	0 down	1	0	0 +Z	3	0	0 +X	17	0	0	1E+10	0.1	0	223.01	25.84	365.97
D90	D90 1	V - Stop	W3	6	2	-2	3	4	0	0	0	0 down	2	0	0 +Z	3	0	0 +X	2	0	0	1E+10	0.1	0	221.68	25.75	367.32
C68	C68 1	V - Stop	E2	8	0	-14	0	14	-13.458	-12	-5.986	18.999 down	14	0	0 -Z	0	5.986	0 -X	0	13.458	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 1	V - Stop	E1	8	0	-20	0	20	-13.458	-12	-6.189	19.064 down	20	0	0 -Z	0	6.189	0 -X	0	13.458	0	1E+10	0.1	0	232.03	25.84	349.99
	193 193 2	CUSTOM BAS V - Stop	E2	6	0	-94	0	94	-13.508	-12	-4.95	18.734 down	94	0	0 -Z	0	4.95	0 -X	0	13.508	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	E3	6	0	-94	0	94	-13.508	-12	-4.87	18.713 down	94	0	0 -Z	0	4.87	0 -X	0	13.508	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	CUSTOM BAS V - Stop	E1	6	0	-95	0	95	-13.508	-12	-5.831	18.986 down	95	0	0 -Z	0	5.831	0 -X	0	13.508	0	1E+10	0.1	0	230.7	25.75	349.66
D93	D93 1	V - Stop	E1	6	0	-325	0	325	-13.153	-12	-5.552	18.65 down	325	0	0 -Z	0	5.552	0 -X	0	13.153	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	E2	6	0	-326	0	326	-12.941	-12	-5.552	18.501 down	326	0	0 -Z	0	5.552	0 -X	0	12.941	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	E3	6	0	-326	0	326	-13.21	-12	-5.552	18.69 down	326	0	0 -Z	0	5.552	0 -X	0	13.21	0	1E+10	0.1	0	212.7	25.75	353.22
	203 203 2	V - Stop	GT2	6	-15	-338	-30	340	-0.003	0	-0.063	0.063 down	338	0	0 -Z	30	0.063	0 -X	15	0.003	0	1E+10	0.1	0	212.69	25.75	366.08
D93	D93 1	V - Stop	GT3	6	-22	-339	-12	340	0.028	0	0.005	0.029 down	339	0	0 -Z	12	-0.005	0 -X	22	-0.028	0	1E+10	0.1	0	212.7	25.75	353.22
D93	D93 1	V - Stop	GT1	6	-14	-343	-31	345	0.015	0	-0.027	0.031 down	343	0	0 -Z	31	0.027	0 -X	14	-0.015	0	1E+10	0.1	0	212.7	25.75	353.22
	63 63 2	CUSTOM BAS V - Stop	GR	20	0	-4549	0	4549	0	0	0	0 down	4549	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	234.04	26.31	349.67
D93	D93 1	V - Stop	GT2	6	24	-354	24	355	0.038	0	0.014	0.041 down	354	0	0 +Z	24	0.014	0 +X	24	0.038	0	1E+10	0.1	0	212.7	25.75	353.22

A77	A77 1	V - Stop	GR	20	0	-4003	0	4003	0	0	0	0 down	4003	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	225.02	26.31	355.32
D90	D90 1	V - Stop	GT3	6	36	-369	-9	371	0.233	0	-0.04	0.237 down	369	0	0 -Z	9	0.04	0 +X	36	0.233	0	1E+10	0.1	0	221.68	25.75	367.32
	203 203 2	V - Stop	GT1	6	-13	-375	27	376	0.032	0	0.007	0.033 down	375	0	0 +Z	27	0.007	0 -X	13	-0.032	0	1E+10	0.1	0	212.69	25.75	366.08
C92	C92 2	V - Stop	GT2	8	-25	-381	-29	383	-0.056	0	-0.039	0.068 down	381	0	0 -Z	29	0.039	0 -X	25	0.056	0	1E+10	0.1	0	214.02	25.84	364.46
	203 203 2	V - Stop	GT3	6	29	-389	26	391	0.153	0	0.114	0.191 down	389	0	0 +Z	26	0.114	0 +X	29	0.153	0	1E+10	0.1	0	212.69	25.75	366.08
D90	D90 1	V - Stop	GT1	6	38	-396	-11	398	0.054	0	0.002	0.054 down	396	0	0 -Z	11	-0.002	0 +X	38	0.054	0	1E+10	0.1	0	221.68	25.75	367.32
A76	A76 1	V - Stop	GR	20	0	-3986	0	3986	0	0	0	0 down	3986	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	225.03	26.31	364
	54 54 1	V - Stop	GR	20	0	-2074	0	2074	0	0	0	0 down	2074	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	216.03	26.31	359.66
D91	D91 1	V - Stop	GT2	6	-8	-452	-45	454	-0.007	0	-0.196	0.196 down	452	0	0 -Z	45	0.196	0 -X	8	0.007	0	1E+10	0.1	0	221.7	25.75	351.99
C68	C68 1	V - Stop	GR	8	0	-1212	0	1212	-0.02	0	0	0.02 down	1212	0	0 +Z	0	0	0 -X	0	0.02	0	1E+10	0.1	0	232.03	25.84	349.99
D91	D91 1	V - Stop	GT1	6	4	-462	46	464	0.034	0	0.054	0.064 down	462	0	0 +Z	46	0.054	0 +X	4	0.034	0	1E+10	0.1	0	221.7	25.75	351.99
	193 193 2	V - Stop	GT3	6	9	-463	45	465	0.155	0	0.605	0.625 down	463	0	0 +Z	45	0.605	0 +X	9	0.155	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 2	V - Stop	GT1	6	8	-464	46	466	0.055	0	0.149	0.159 down	464	0	0 +Z	46	0.149	0 +X	8	0.055	0	1E+10	0.1	0	230.7	25.75	349.66
D91	D91 1	V - Stop	GT3	6	9	-465	46	467	0.086	0	0.296	0.308 down	465	0	0 +Z	46	0.296	0 +X	9	0.086	0	1E+10	0.1	0	221.7	25.75	351.99
C99	C99 1	V - Stop	GR	8	0	-775	0	775	0.007	0	0.024	0.025 down	775	0	0 +Z	0	0.024	0 +X	0	0.007	0	1E+10	0.1	0	223.01	25.84	365.97
	193 193 2	V - Stop	GT2	6	-9	-468	-46	471	-0.056	0	-0.418	0.422 down	468	0	0 -Z	46	0.418	0 -X	9	0.056	0	1E+10	0.1	0	230.7	25.75	349.66
D90	D90 1	V - Stop	GT2	6	-46	-473	9	475	-0.055	0	0.024	0.06 down	473	0	0 +Z	9	0.024	0 -X	46	0.055	0	1E+10	0.1	0	221.68	25.75	367.32
C92	C92 2	V - Stop	GT1	8	10	-474	45	476	0.005	0	0.036	0.037 down	474	0	0 +Z	45	0.036	0 +X	10	0.005	0	1E+10	0.1	0	214.02	25.84	364.46
D100	D100 1	V - Stop	P3	6	0	0	0	0	-0.003	0	0.005	0.006 down	0	0	0 +Z	0	0.005	0 +X	0	-0.003	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	GR	6	0	-559	0	559	0.029	0	0.039	0.048 down	559	0	0 +Z	0	0.039	0 +X	0	0.029	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	GT1	6	-48	-559	29	561	0.01	0	0.05	0.051 down	559	0	0 +Z	29	0.05	0 -X	48	-0.01	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	GT2	6	41	-558	-38	561	0.082	0	-0.011	0.083 down	558	0	0 -Z	38	0.011	0 +X	41	0.082	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	GT3	6	-37	-559	42	561	-0.052	0	0.13	0.14 down	559	0	0 +Z	42	0.13	0 -X	37	0.052	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	W3	6	43	0	6	44	0.001	0	0	0.001 up	0	0	100 +Z	6	0	0 +X	43	0.001	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	E1	6	0	46	0	46	-0.631	-2	-11.912	12.096 up	46	0	100 -Z	0	11.912	0 -X	0	0.631	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	E2	6	0	48	0	48	-2.248	-2	17.81	18.063 up	48	0	100 +Z	0	17.81	0 -X	0	2.248	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	E3	6	0	47	0	47	-1.32	-2	5.954	6.418 up	47	0	100 +Z	0	5.954	0 -X	0	1.32	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	P2	6	1	0	1	1	-0.001	0	0.003	0.004 down	0	0	0 +Z	1	0.003	0 +X	1	-0.001	0	1E+10	0.1	0	106.53	28.75	390.23
D100	D100 1	V - Stop	P1	6	0	0	1	1	-0.001	0	0.001	0.002 down	0	0	0 +Z	1	0.001	0 +X	0	-0.001	0	1E+10	0.1	0	106.53	28.75	390.23
D102	D102 1	V - Stop	P3	6	0	-3	0	3	-0.005	0	0.003	0.006 down	3	0	0 +Z	0	0.003	0 -X	0	0.005	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	P1	6	0	-1	0	1	-0.005	0	0.002	0.005 down	1	0	0 +Z	0	0.002	0 -X	0	0.005	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	GR	6	0	-240	0	240	0.014	0	-0.011	0.018 down	240	0	0 -Z	0	0.011	0 +X	0	0.014	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	GT1	6	-8	-256	24	258	-0.086	0	0.283	0.296 down	256	0	0 +Z	24	0.283	0 -X	8	0.086	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	GT2	6	23	-235	-5	237	0.188	0	-0.048	0.194 down	235	0	0 -Z	5	0.048	0 +X	23	0.188	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	GT3	6	-23	-314	22	316	-0.382	0	0.373	0.534 down	314	0	0 +Z	22	0.373	0 -X	23	0.382	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	W3	6	23	2	-6	23	0.003	0	-0.001	0.003 up	2	0	100 -Z	6	0.001	0 +X	23	0.003	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	E1	6	0	27	0	27	-2.628	-2	-1.394	3.584 up	27	0	100 -Z	0	1.394	0 -X	0	2.628	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	E2	6	0	56	0	56	-2.735	-2	-1.124	3.57 up	56	0	100 -Z	0	1.124	0 -X	0	2.735	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	E3	6	0	49	0	49	-2.619	-2	-1.232	3.518 up	49	0	100 -Z	0	1.232	0 -X	0	2.619	0	1E+10	0.1	0	-30.73	25.76	364.77
D102	D102 1	V - Stop	P2	6	0	0	1	1	-0.001	0	0.005	0.005 down	0	0	0 +Z	1	0.005	0 -X	0	0.001	0	1E+10	0.1	0	-30.73	25.76	364.77
D75	D75 1	V - Stop	P2	6	0	0	0	0	0.008	0	-0.002	0.008 up	0	0	100 -Z	0	0.002	0 +X	0	0.008	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	P3	6	0	0	0	0	0.012	0	-0.007	0.014 up	0	0	100 -Z	0	0.007	0 +X	0	0.012	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	GR	6	0	-578	0	578	0.029	0	0.022	0.036 down	578	0	0 +Z	0	0.022	0 +X	0	0.029	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	GT1	6	55	-559	-10	562	0.144	0	0.001	0.144 down	559	0	0 -Z	10	-0.001	0 +X	55	0.144	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	GT2	6	-60	-604	1	607	-0.231	0	0.025	0.232 down	604	0	0 +Z	1	0.025	0 -X	60	0.231	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	GT3	6	51	-544	-19	547	0.396	0	-0.113	0.412 down	544	0	0 -Z	19	0.113	0 +X	51	0.396	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	W3	6	10	4	-5	12	0	0	0	0 up	4	0	100 -Z	5	0	0 +X	10	0	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	E1	6	0	-434	0	434	-1.278	-2	-2.771	3.649 down	434	0	0 -Z	0	2.771	0 -X	0	1.278	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	E2	6	0	-285	0	285	-1.528	-2	-2.007	3.219 down	285	0	0 -Z	0	2.007	0 -X	0	1.528	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	E3	6	0	-348	0	348	-1.528	-2	-2.395	3.474 down	348	0	0 -Z	0	2.395	0 -X	0	1.528	0	1E+10	0.1	0	212.42	28.75	375.47
D75	D75 1	V - Stop	P1	6	0	1	0	1	0.005	0	-0.001	0.006 up	1	0	100 -Z	0	0.001	0 -X	0	-0.005	0	1E+10	0.1	0	212.42	28.75	375.47
D77	D77 1	V - Stop	P3	6	0	-2	0	2	0	0	0.001	0.001 down	2	0	0 +Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	P1	6	-1	0	0	1	-0.004	0	0.003	0.005 down	0	0	0 -Z	0	-0.003	0 -X	1	0.004	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	GR	6	0	-1016	0	1016	0.008	0	-0.003	0.009 down	1016	0	0 -Z	0	0.003	0 +X	0	0.008	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	GT1	6	-13	-1010	100	1015	-0.027	0	0.271	0.272 down	1010	0	0 +Z	100	0.271	0 -X	13	0.027	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	GT2	6	83	-986	52	991	0.146	0	0.083	0.169 down	986	0	0 +Z	52	0.083	0 +X	83	0.146	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	GT3	6	-55	-1022	86	1027	-0.25	0	0.405	0.476 down	1022	0	0 +Z	86	0.405	0 -X	55	0.25	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	W3	6	53	-4	-20	57	0.001	0	0	0.001 down	4	0	0 -Z	20	0	0 +X	53	0.001	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	E1	6	0	33	0	33	-2.687	-2	-1.378	3.622 up	33	0	100 -Z	0	1.378	0 -X	0	2.687	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	E2	6	0	53	0	53	-2.786	-2	-1.261	3.654 up	53	0	100 -Z	0	1.261	0 -X	0	2.786	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	E3	6	0	38	0	38	-2.687	-2	-1.323	3.601 up	38	0	100 -Z	0	1.323	0 -X	0	2.687	0	1E+10	0.1	0	-38.56	25.76	356.76
D77	D77 1	V - Stop	P2	6	-1	0	2	2	-0.001	0	0.004	0.004 down	0	0	0 +Z	2	0.004	0 -X	1	0.001	0	1E+10	0.1	0	-38.56	25.76	356.76
D88	D88 1	V - Stop	P1	6	0	0	0	0	0	0	0.001	0.001 up	0	0	100 +Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	P2	6	0	0	0	0	0	0	0.001	0.001 up	0	0	100 +Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	P3	6	0	0	0	0	0.003	0	-0.002	0.003 up	0	0	100 -Z	0	0.002	0 +X	0	0.003	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	GR	6	0	0	0	0	0.001	-0.917	-0.001	0.917 up	0	0.083	100 -Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	GT1	6	0	0	0	0	0.05	-0.903	0.247	0.938 up	0	0.097	100 +Z	0	0.247	0 +X	0	0.05	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	GT2	6	0	0	0	0	0.029	-0.907	0.201	0.929 up	0	0.093	100 +Z	0	0.201	0 +X	0	0.029	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	GT3	6	0	0	0	0	0.059	-0.901	0.28	0.945 up	0	0.099	100 +Z	0	0.28	0 +X	0	0.059	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	W3	6	0	0	0	0	0	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	E1	6	0	0	0	0	-2.883	-1.994	-1.341	3.753 up	0	0.006	100 -Z	0	1.341	0 -X	0	2.883	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	E2	6	0	0	0	0	-2.943	-1.997	-1.263	3.775 up	0	0.003	100 -Z	0	1.263	0 -X	0	2.943	0	1E+10	0.1	0	-40.95	25.74	341.59
D88	D88 1	V - Stop	E3	6	0	0	0	0	-2.911	-1.995	-1.302	3.762 up	0	0.005	100 -Z	0	1.302	0 -X	0	2.911	0	1E+10	0.1	0	-40.95	25.74	341.59
C102	C102 1	V - Stop	GT3	8	-43	-496	24	499	-0.081	0	0.065	0.104 down	496	0	0 +Z	24	0.065	0 -X	43	0.081	0	1E+10	0.1	0	214.05	25.84	354.77
C102	C102 1	V - Stop	GT1	8	-37	-498	-33	501	-0.042	0	0.01	0.043 down	498	0	0 -Z	33	-0.01	0 -X	37	0.042	0	1E+10	0.1	0	214.05	25.84	354.77
C92	C92 2	V - Stop	GT3	8	39	-500	31	503	0.147	0	0.147	0.208 down	500	0	0 +Z	31	0.147	0 +X	39	0.147	0	1E+10	0.1	0	214.02	25.84	364.46
C98	C98 1	V - Stop	GR	8	0	-629	0	629	-0.023	0	0.013	0.026 down	629	0	0 +Z	0	0.013	0 -X	0	0.023	0	1E+10	0.1	0	222.97	25.84	353.31
C102	C102 1	V - Stop	GT2	8	53	-536	-12	539	0.031	0	0.019	0.036 down	536	0	0 -Z	12	-0.019	0 +X	53	0.031	0	1E+10	0.1	0	214.05	25.84	354.77
C98	C98 1	V - Stop	GT2	8	9	-604	-60	607	-0.003	0	-0.113	0.113 down	604	0	0 -Z	60	0.113	0 +X	9	-0.003	0	1E+10	0.1	0	222.97	25.84	353.31
C102	C102 1	V - Stop	E2	8	0	-627	0	627	-12.289	-12	-5.57	18.057 down	627	0	0 -Z	0	5.57	0 -X	0	12.289	0	1E+10	0.1	0	214.05	25.84	354.77
C102	C102 1	V - Stop	GR	8	0	-517	0	517	-0.019	0	0.03	0.036 down	517	0	0 +Z	0	0.03	0 -X	0	0.019	0	1E+10	0.1	0	214.05	25.84	354.77
C102	C102 1	V - Stop	E3	8	0	-633	0	633	-12.362	-12	-5.571	18.107 down	633	0	0 -Z	0	5.571	0 -X	0	12.362	0	1E+10	0.1	0	214.05	25.84	354.77
C102	C102 1	V - Stop	E1	8	0	-635	0	635	-12.44	-12	-5.571	18.16 down	635	0	0 -Z	0	5.571	0 -X	0	12.44	0	1E+10	0.1	0	214.05	25.84	354.77
C99	C99 1	V - Stop	GT3	8	61	-646	-19	649	0.249	0	-0.052	0.254 down	646	0	0 -Z	19	0.052	0 +X	61	0.249	0	1E+10	0.1	0	223.01	25.84	365.97
C98	C98 1	V - Stop	GT3	8	-9	-656	65	659	-0.049	0	0.195	0.202 down	656	0	0 +Z	65	0.195	0 -X	9	0.049	0	1E+10	0.1	0	222.97	25.84	353.31
C98	C98 1	V - Stop	GT1	8	-10	-658	65	661	-0.029	0	0.052	0.06 down	658	0	0 +Z	65	0.052	0 -X	10	0.029	0	1E+10	0.1	0	222.97	25.84	353.31
	54 54 1	V - Stop	E1	20	0	-696	0	696	-7.734	-12	-5.538	15.313 down	696	0	0 -Z	0	5.538	0 -X	0	7.734	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	E2	20	0	-696	0	696	-7.741	-12	-5.538	15.317 down	696	0	0 -Z	0	5.538	0 -X	0	7.741	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	E3	20	0	-696	0	696	-7.733	-12	-5.538	15.312 down	696	0	0 -Z	0	5.538	0 -X	0	7.733	0	1E+10	0.1	0	216.03	26.31	359.66
C99	C99 1	V - Stop	GT1	8	63	-699	-29	702	0.033	0	0.012	0.035 down	699	0	0 -Z	29	-0.012	0 +X	63	0.033	0	1E+10	0.1	0	223.01	25.84	365.97
	193 193 2	V - Stop	GR	6	0	-466	0	466	0.029	0	0.001	0.03 down	466	0	0 +Z	0	0.001	0 +X	0	0.029	0	1E+10	0.1	0	230.7	25.75	349.66
C99	C99 1	V - Stop	GT2	8	-84	-877	22	881	-0.116	0	0.056	0.129 down	877	0	0 +Z	22	0.056	0 -X	84	0.116	0	1E+10	0.1	0	223.01	25.84	365.97

C68	C68 1	V - Stop	GT3	8	-23	-1109	108	1114	-0.085	0	0.302	0.314 down	1109	0	0 +Z	108	0.302	0 -X	23	0.085	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 1	V - Stop	GT1	8	-14	-1164	116	1169	-0.031	0	0.093	0.098 down	1164	0	0 +Z	116	0.093	0 -X	14	0.031	0	1E+10	0.1	0	232.03	25.84	349.99
D91	D91 1	V - Stop	GR	6	0	-458	0	458	0.03	0	0.004	0.031 down	458	0	0 +Z	0	0.004	0 +X	0	0.03	0	1E+10	0.1	0	221.7	25.75	351.99
C68	C68 1	V - Stop	GT2	8	26	-1292	-127	1299	0.024	0	-0.215	0.216 down	1292	0	0 -Z	127	0.215	0 +X	26	0.024	0	1E+10	0.1	0	232.03	25.84	349.99
C92	C92 2	V - Stop	GR	8	0	-434	0	434	0.004	0	0.031	0.031 down	434	0	0 +Z	0	0.031	0 +X	0	0.004	0	1E+10	0.1	0	214.02	25.84	364.46
	54 54 1	V - Stop	GT1	20	-190	-2075	-62	2084	-0.001	0	0	0.001 down	2075	0	0 -Z	62	0	0 -X	190	0.001	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	GT2	20	188	-2075	-1	2083	0.005	0	0	0.005 down	2075	0	0 -Z	1	0	0 +X	188	0.005	0	1E+10	0.1	0	216.03	26.31	359.66
	54 54 1	V - Stop	GT3	20	-199	-2075	-59	2085	-0.111	0	-0.033	0.115 down	2075	0	0 -Z	59	0.033	0 -X	199	0.111	0	1E+10	0.1	0	216.03	26.31	359.66
A76	A76 1	V - Stop	GT1	20	363	-3984	-164	4004	0.035	0	-0.016	0.038 down	3984	0	0 -Z	164	0.016	0 +X	363	0.035	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	GT2	20	-373	-3984	152	4004	-0.076	0	0.031	0.082 down	3984	0	0 +Z	152	0.031	0 -X	373	0.076	0	1E+10	0.1	0	225.03	26.31	364
A76	A76 1	V - Stop	GT3	20	-398	-3984	-26	4004	-0.077	0	-0.005	0.077 down	3984	0	0 -Z	26	0.005	0 -X	398	0.077	0	1E+10	0.1	0	225.03	26.31	364
D90	D90 1	V - Stop	GR	6	0	-427	0	427	0.032	0	0.008	0.033 down	427	0	0 +Z	0	0.008	0 +X	0	0.032	0	1E+10	0.1	0	221.68	25.75	367.32
	203 203 2	V - Stop	GR	6	0	-361	0	361	0.032	0	0.007	0.033 down	361	0	0 +Z	0	0.007	0 +X	0	0.032	0	1E+10	0.1	0	212.69	25.75	366.08
A77	A77 1	V - Stop	GT1	20	-58	-4003	396	4023	-0.002	0	0.013	0.014 down	4003	0	0 +Z	396	0.013	0 -X	58	0.002	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	GT2	20	32	-4003	-398	4022	0.004	0	-0.054	0.054 down	4003	0	0 -Z	398	0.054	0 +X	32	0.004	0	1E+10	0.1	0	225.02	26.31	355.32
A77	A77 1	V - Stop	GT3	20	-148	-4003	372	4023	-0.027	0	0.069	0.074 down	4003	0	0 +Z	372	0.069	0 -X	148	0.027	0	1E+10	0.1	0	225.02	26.31	355.32
D93	D93 1	V - Stop	GR	6	0	-347	0	347	0.031	0	0.007	0.031 down	347	0	0 +Z	0	0.007	0 +X	0	0.031	0	1E+10	0.1	0	212.7	25.75	353.22
	63 63 2	CUSTOM BAS V - Stop	GT1	20	67	-4550	450	4572	0.006	0	0.039	0.039 down	4550	0	0 +Z	450	0.039	0 +X	67	0.006	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2	CUSTOM BAS V - Stop	GT2	20	-56	-4550	-452	4572	-0.015	0	-0.125	0.126 down	4550	0	0 -Z	452	0.125	0 -X	56	0.015	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 2	CUSTOM BAS V - Stop	GT3	20	-4	-4550	455	4572	-0.001	0	0.125	0.125 down	4550	0	0 +Z	455	0.125	0 -X	4	0.001	0	1E+10	0.1	0	234.04	26.31	349.67
D94	D94 1	V - Stop	P1	6	0	0	0	0	0.008	0	0	0.008 up	0	0	100 +Z	0	0	0 -X	0	-0.008	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	P2	6	0	0	0	0	0.015	0	0.001	0.015 up	0	0	100 +Z	0	0.001	0 -X	0	-0.015	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	P3	6	0	0	0	0	0.011	0	0.002	0.012 up	0	0	100 +Z	0	0.002	0 -X	0	-0.011	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	GR	6	0	-74	0	74	0.032	0	0.038	0.049 down	74	0	0 +Z	0	0.038	0 +X	0	0.032	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	GT1	6	7	-75	-1	75	0.157	0	0.027	0.159 down	75	0	0 -Z	1	-0.027	0 +X	7	0.157	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	GT2	6	-8	-76	0	76	-0.261	0	0.047	0.266 down	76	0	0 +Z	0	0.047	0 -X	8	0.261	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	GT3	6	7	-72	0	73	0.44	0	0.042	0.442 down	72	0	0 +Z	0	0.042	0 +X	7	0.44	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	W3	6	7	0	0	7	0.002	0	0	0.002 up	0	0	100 -Z	0	0	0 +X	7	0.002	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	E1	6	0	11	0	11	-1.98	-2	-10.938	11.294 up	11	0	100 -Z	0	10.938	0 -X	0	1.98	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	E2	6	0	-2	0	2	-3.061	-2	17.522	17.899 down	2	0	0 +Z	0	17.522	0 -X	0	3.061	0	1E+10	0.1	0	96.5	28.75	381.24
D94	D94 1	V - Stop	E3	6	0	0	0	0	-2.521	-2	6.414	7.176 up	0	0	100 +Z	0	6.414	0 -X	0	2.521	0	1E+10	0.1	0	96.5	28.75	381.24
D98	D98 1	V - Stop	P1	6	0	0	0	0	-0.005	0	0	0.005 up	0	0	100 +Z	0	0	0 -X	0	0.005	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	P2	6	0	0	0	0	-0.008	0	0.002	0.008 up	0	0	100 +Z	0	0.002	0 -X	0	0.008	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	P3	6	0	0	0	0	-0.012	0	0.002	0.013 up	0	0	100 +Z	0	0.002	0 +X	0	-0.012	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	GR	6	0	-68	0	68	0.029	0	0.039	0.048 down	68	0	0 +Z	0	0.039	0 +X	0	0.029	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	GT1	6	-7	-68	-1	69	-0.084	0	0.026	0.088 down	68	0	0 -Z	1	-0.026	0 -X	7	0.084	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	GT2	6	7	-68	0	69	0.285	0	0.042	0.288 down	68	0	0 +Z	0	0.042	0 +X	7	0.285	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	GT3	6	-7	-68	0	68	-0.333	0	0.055	0.338 down	68	0	0 +Z	0	0.055	0 -X	7	0.333	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	W3	6	6	0	0	6	0.002	0	0	0.002 up	0	0	100 +Z	0	0	0 +X	6	0.002	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	E1	6	0	17	0	17	-1.171	-2	-11.91	12.134 up	17	0	100 -Z	0	11.91	0 -X	0	1.171	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	E2	6	0	19	0	19	-1.599	-2	17.808	17.991 up	19	0	100 +Z	0	17.808	0 -X	0	1.599	0	1E+10	0.1	0	106.5	28.75	381.23
D98	D98 1	V - Stop	E3	6	0	18	0	18	-1.393	-2	5.954	6.434 up	18	0	100 +Z	0	5.954	0 -X	0	1.393	0	1E+10	0.1	0	106.5	28.75	381.23
D99	D99 1	V - Stop	P1	6	0	0	0	0	0.002	0	0.001	0.003 up	0	0	100 +Z	0	0.001	0 -X	0	-0.002	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	P2	6	0	0	0	0	0.005	0	0.003	0.005 up	0	0	100 -Z	0	-0.003	0 -X	0	-0.005	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	GR	6	0	-558	0	558	0.03	0	0.038	0.048 down	558	0	0 +Z	0	0.038	0 +X	0	0.03	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	GT1	6	50	-558	24	561	0.059	0	0.052	0.079 down	558	0	0 +Z	24	0.052	0 +X	50	0.059	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	GT2	6	-47	-558	-31	561	-0.041	0	-0.008	0.042 down	558	0	0 -Z	31	0.008	0 -X	47	0.041	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	GT3	6	43	-558	36	561	0.126	0	0.12	0.174 down	558	0	0 +Z	36	0.12	0 +X	43	0.126	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	W3	6	43	0	-6	44	0.001	0	0	0.001 down	0	0	0 -Z	6	0	0 +X	43	0.001	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	E1	6	0	46	0	46	-0.809	-2	-10.943	11.153 up	46	0	100 -Z	0	10.943	0 -X	0	0.809	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	E2	6	0	44	0	44	-2.844	-2	17.521	17.862 up	44	0	100 +Z	0	17.521	0 -X	0	2.844	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	E3	6	0	45	0	45	-1.726	-2	6.411	6.934 up	45	0	100 +Z	0	6.411	0 -X	0	1.726	0	1E+10	0.1	0	96.53	28.75	390.24
D99	D99 1	V - Stop	P3	6	-1	0	1	1	0.002	0	0.004	0.005 up	0	0	100 +Z	1	0.004	0 -X	1	-0.002	0	1E+10	0.1	0	96.53	28.75	390.24
E04	E04 2	CUSTOM BAS V - Stop	P1	6	1	0	0	1	0.003	0	-0.002	0.004 down	0	0	0 +Z	0	-0.002	0 +X	1	0.003	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.01	0	-0.003	0.01 up	0	0	100 +Z	0	-0.003	0 -X	0	-0.01	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.001	0	-0.008	0.008 down	0	0	0 -Z	0	0.008	0 -X	0	-0.001	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	GR	6	0	-135	0	135	0.003	0	0.003	0.004 down	135	0	0 +Z	0	0.003	0 +X	0	0.003	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	GT1	6	2	-174	-17	175	0.008	0	-0.049	0.049 down	174	0	0 -Z	17	0.049	0 +X	2	0.008	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	GT2	6	-10	-100	3	100	-0.071	0	0.028	0.076 down	100	0	0 +Z	3	0.028	0 -X	10	0.071	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	GT3	6	8	-186	-17	187	0.093	0	-0.187	0.209 down	186	0	0 -Z	17	0.187	0 +X	8	0.093	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	W3	6	13	1	0	13	0.004	0	0	0.004 up	1	0	100 +Z	0	0	0 +X	13	0.004	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	E1	6	0	131	0	131	-2.45	-2	-1.495	3.498 up	131	0	100 -Z	0	1.495	0 -X	0	2.45	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	E2	6	0	-125	0	125	-3.588	-2	-0.849	4.195 down	125	0	0 -Z	0	0.849	0 -X	0	3.588	0	1E+10	0.1	0	37.8	25.67	384.02
E04	E04 2	CUSTOM BAS V - Stop	E3	6	0	-72	0	72	-3.246	-2	-1.005	3.943 down	72	0	0 -Z	0	1.005	0 -X	0	3.246	0	1E+10	0.1	0	37.8	25.67	384.02
E06	E06 2	CUSTOM BAS V - Stop	P2	6	4	0	-10	11	0.006	0	-0.001	0.006 up	0	0	100 -Z	10	0.001	0 +X	4	0.006	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	P3	6	-1	0	-1	1	0.001	0	-0.005	0.005 up	0	0	100 -Z	1	0.005	0 -X	1	-0.001	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	P1	6	0	0	0	1	0.002	0	-0.002	0.003 up	0	0	100 -Z	0	0.002	0 -X	0	-0.002	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	GR	6	0	-1228	0	1228	0.001	0	0	0.001 down	1228	0	0 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	GT1	6	99	-1226	-72	1232	0.092	0	-0.066	0.113 down	1226	0	0 -Z	72	0.066	0 +X	99	0.092	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	GT2	6	85	-1239	83	1245	0.039	0	0.037	0.054 down	1239	0	0 +Z	83	0.037	0 +X	85	0.039	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	GT3	6	81	-1223	-91	1229	0.145	0	-0.161	0.216 down	1223	0	0 -Z	91	0.161	0 +X	81	0.145	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	W3	6	53	-1	22	58	0	0	0	0 down	1	0	0 +Z	22	0	0 +X	53	0	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	E1	6	0	40	0	40	-2.68	-2	-1.305	3.589 up	40	0	100 -Z	0	1.305	0 -X	0	2.68	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	E2	6	0	37	0	37	-3.18	-2	-1.183	3.939 up	37	0	100 -Z	0	1.183	0 -X	0	3.18	0	1E+10	0.1	0	31.04	25.67	393.36
E06	E06 2	CUSTOM BAS V - Stop	E3	6	0	49	0	49	-3.134	-2	-1.275	3.931 up	49	0	100 -Z	0	1.275	0 -X	0	3.134	0	1E+10	0.1	0	31.04	25.67	393.36
E08	E08 1	CUSTOM BAS V - Stop	P1	6	0	0	0	0	0.001	0	0	0.001 down	0	0	0 -Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	P2	6	0	0	0	0	0.002	0	0.001	0.002 up	0	0	100 +Z	0	0.001	0 +X	0	0.002	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	P3	6	0	0	0	0	0.001	0	-0.001	0.001 up	0	0	100 -Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	GR	6	0	0	0	0	0	-0.914	0	0.914 up	0	0.086	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	GT1	6	0	0	0	0	0.295	-0.921	-0.012	0.967 up	0	0.079	100 -Z	0	0.012	0 +X	0	0.295	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	GT2	6	0	0	0	0	0.222	-0.921	-0.008	0.947 up	0	0.079	100 -Z	0	0.008	0 +X	0	0.222	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	GT3	6	0	0	0	0	0.328	-0.921	-0.032	0.978 up	0	0.079	100 -Z	0	0.032	0 +X	0	0.328	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	W3	6	0	0	0	0	0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	E1	6	0	0	0	0	-2.939	-1.997	-1.308	3.787 up	0	0.003	100 -Z	0	1.308	0 -X	0	2.939	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	E2	6	0	0	0	0	-2.854	-1.993	-1.216	3.688 up	0	0.007	100 -Z	0	1.216	0 -X	0	2.854	0	1E+10	0.1	0	28.23	25.67	407.11
E08	E08 1	CUSTOM BAS V - Stop	E3	6	0	0	0	0	-2.91	-1.996	-1.274	3.752 up	0	0.004	100 -Z	0	1.274	0 -X	0	2.91	0	1E+10	0.1	0	28.23	25.67	407.11
E13	E13 2	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	-0.001	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.001	0	0	0.002 down	0	0	0 -Z	0	0	0 +X	0	-0.001	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	P3	6	0	0	0	0	-0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	-0.001	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	GR	6	0	-521	0	521	0	-1	0	1 down	521	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	18.77	25.67	414.97

E13	E13 2	CUSTOM BAS V - Stop	GT1	6	97	-971	-11	976	0.258	-1	-0.029	1.033 down	971	0	0 -Z	11	0.029	0 +X	97	0.258	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	GT2	6	97	-971	-10	976	0.315	-1	-0.032	1.049 down	971	0	0 -Z	10	0.032	0 +X	97	0.315	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	GT3	6	97	-973	-6	978	0.232	-1	-0.015	1.027 down	973	0	0 -Z	6	0.015	0 +X	97	0.232	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	W3	6	28	-1	-10	30	0.001	0	0	0.001 down	1	0	0 -Z	10	0	0 +X	28	0.001	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	E1	6	0	17	0	17	-2.904	-2	-1.271	3.748 up	17	0	100 -Z	0	1.271	0 -X	0	2.904	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	E2	6	0	0	0	0	-2.965	-2	-1.331	3.816 down	0	0	0 -Z	0	1.331	0 -X	0	2.965	0	1E+10	0.1	0	18.77	25.67	414.97
E13	E13 2	CUSTOM BAS V - Stop	E3	6	0	10	0	10	-2.929	-2	-1.292	3.774 up	10	0	100 -Z	0	1.292	0 -X	0	2.929	0	1E+10	0.1	0	18.77	25.67	414.97
E15	E15 1	CUSTOM BAS V - Stop	P1	6	0	0	0	0	-0.002	0	-0.001	0.002 up	0	0	100 -Z	0	0.001	0 -X	0	0.002	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	P2	6	0	0	0	0	-0.003	0	-0.002	0.004 down	0	0	0 -Z	0	0.002	0 -X	0	0.003	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	P3	6	0	0	0	1	-0.004	0	-0.003	0.005 down	0	0	0 -Z	0	0.003	0 -X	0	0.004	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	GR	6	0	-389	0	389	0	-1	0	1 down	389	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	GT1	6	39	-539	-37	542	0.303	-1	-0.284	1.083 down	539	0	0 -Z	37	0.284	0 +X	39	0.303	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	GT2	6	49	-539	-22	542	0.436	-1	-0.19	1.107 down	539	0	0 -Z	22	0.19	0 +X	49	0.436	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	GT3	6	30	-539	-45	542	0.226	-1	-0.344	1.081 down	539	0	0 -Z	45	0.344	0 +X	30	0.226	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	W3	6	18	0	2	18	0	0	0	0 down	0	0	0 +Z	2	0	0 +X	18	0	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	E1	6	0	32	0	32	-2.906	-2	-1.284	3.754 up	32	0	100 -Z	0	1.284	0 -X	0	2.906	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	E2	6	0	32	0	32	-2.965	-2	-1.299	3.805 up	32	0	100 -Z	0	1.299	0 -X	0	2.965	0	1E+10	0.1	0	4.34	25.67	412.56
E15	E15 1	CUSTOM BAS V - Stop	E3	6	0	32	0	32	-2.929	-2	-1.289	3.774 up	32	0	100 -Z	0	1.289	0 -X	0	2.929	0	1E+10	0.1	0	4.34	25.67	412.56
H18	H18 1	V - Stop	P2	8	0	-2	0	2	0.004	0	-0.002	0.004 down	2	0	0 -Z	0	0.002	0 -X	0	-0.004	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	P3	8	0	-2	0	2	0.004	0	-0.004	0.005 down	2	0	0 -Z	0	0.004	0 +X	0	0.004	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	P1	8	1	-1	1	2	0.006	0	-0.001	0.006 down	1	0	0 +Z	1	-0.001	0 +X	1	0.006	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	GR	8	0	-129	0	129	0.005	0	0.001	0.005 down	129	0	0 +Z	0	0.001	0 +X	0	0.005	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	GT1	8	13	-173	-12	174	0.047	0	-0.036	0.059 down	173	0	0 -Z	12	0.036	0 +X	13	0.047	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	GT2	8	-8	-77	0	78	-0.14	0	0.001	0.14 down	77	0	0 +Z	0	0.001	0 -X	8	0.14	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	GT3	8	20	-219	-8	220	0.24	0	-0.095	0.258 down	219	0	0 -Z	8	0.095	0 +X	20	0.24	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	W3	8	13	1	2	13	0.004	0	0.001	0.004 up	1	0	100 +Z	2	0.001	0 +X	13	0.004	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	E1	8	0	129	0	129	-0.752	-1.862	-1.006	2.246 up	129	0.138	100 -Z	0	1.006	0 -X	0	0.752	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	E2	8	0	129	0	129	-0.942	-1.872	-0.917	2.288 up	129	0.128	100 -Z	0	0.917	0 -X	0	0.942	0	1E+10	0.1	0	202.48	25.84	385.35
H18	H18 1	V - Stop	E3	8	0	129	0	129	-0.848	-1.869	-0.942	2.259 up	129	0.131	100 -Z	0	0.942	0 -X	0	0.848	0	1E+10	0.1	0	202.48	25.84	385.35
H20	H20 1	V - Stop	P3	8	-1	1	-3	4	0	0	-0.004	0.004 up	1	0	100 -Z	3	0.004	0 -X	1	0	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	P2	8	9	1	0	9	0.001	0	-0.003	0.003 up	1	0	100 -Z	0	0.003	0 +X	9	0.001	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	P1	8	0	1	0	1	0.004	0	-0.001	0.004 up	1	0	100 +Z	0	-0.001	0 +X	0	0.004	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	GR	8	0	-2299	0	2299	0.003	0	0	0.003 down	2299	0	0 +Z	0	0	0 +X	0	0.003	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	GT1	8	221	-2300	-63	2312	0.116	0	-0.032	0.12 down	2300	0	0 -Z	63	0.032	0 +X	221	0.116	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	GT2	8	-8	-2348	234	2360	0.002	0	0.028	0.028 down	2348	0	0 +Z	234	0.028	0 -X	8	-0.002	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	GT3	8	218	-2278	-65	2289	0.25	0	-0.073	0.261 down	2278	0	0 -Z	65	0.073	0 +X	218	0.25	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	W3	8	84	-1	24	87	0	0	0	0 down	1	0	0 +Z	24	0	0 +X	84	0	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	E1	8	0	285	0	285	-1.126	-2	-0.692	2.397 up	285	0	100 -Z	0	0.692	0 -X	0	1.126	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	E2	8	0	239	0	239	-1.126	-2	-0.619	2.377 up	239	0	100 -Z	0	0.619	0 -X	0	1.126	0	1E+10	0.1	0	196.36	25.84	393.92
H20	H20 1	V - Stop	E3	8	0	255	0	255	-1.126	-2	-0.652	2.386 up	255	0	100 -Z	0	0.652	0 -X	0	1.126	0	1E+10	0.1	0	196.36	25.84	393.92
H25	H25 1	V - Stop	P1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	P2	8	0	0	0	0	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	P3	8	0	0	0	0	0.001	0	0.001	0.001 down	0	0	0 +Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	GR	8	0	-587	0	587	0	-1	0	1 down	587	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	GT1	8	0	0	0	0	0.291	-0.985	-0.063	1.029 up	0	0.015	100 -Z	0	0.063	0 +X	0	0.291	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	GT2	8	0	0	0	0	0.306	-0.983	-0.047	1.031 up	0	0.017	100 -Z	0	0.047	0 +X	0	0.306	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	GT3	8	0	0	0	0	0.283	-0.986	-0.07	1.028 up	0	0.014	100 -Z	0	0.07	0 +X	0	0.283	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	W3	8	27	0	7	28	0	0	0	0 up	0	0	100 +Z	7	0	0 +X	27	0	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	E1	8	0	66	0	66	-1.312	-2	-0.562	2.457 up	66	0	100 -Z	0	0.562	0 -X	0	1.312	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	E2	8	0	75	0	75	-1.35	-2	-0.586	2.483 up	75	0	100 -Z	0	0.586	0 -X	0	1.35	0	1E+10	0.1	0	195.79	25.68	425.98
H25	H25 1	V - Stop	E3	8	0	71	0	71	-1.329	-2	-0.573	2.469 up	71	0	100 -Z	0	0.573	0 -X	0	1.329	0	1E+10	0.1	0	195.79	25.68	425.98
I17	I17 1	V - Stop	P1	6	0	0	0	0	0.001	0	0	0.001 down	0	0	0 -Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	P2	6	0	0	0	0	0	0	-0.001	0.001 down	0	0	0 -Z	0	0.001	0 +X	0	0	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	P3	6	0	0	0	0	0.001	0	-0.001	0.002 down	0	0	0 -Z	0	0.001	0 +X	0	0.001	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	GR	6	0	0	0	0	0	-0.908	0	0.908 up	0	0.092	100 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	GT1	6	0	0	0	0	0.293	-0.916	-0.016	0.961 up	0	0.084	100 -Z	0	0.016	0 +X	0	0.293	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	GT2	6	0	0	0	0	0.217	-0.915	-0.011	0.94 up	0	0.085	100 -Z	0	0.011	0 +X	0	0.217	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	GT3	6	0	0	0	0	0.33	-0.916	-0.033	0.974 up	0	0.084	100 -Z	0	0.033	0 +X	0	0.33	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	W1	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	W2	6	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	W3	6	0	0	0	0	0.001	0	0	0.001 up	0	0	100 +Z	0	0	0 +X	0	0.001	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	E1	6	0	0	0	0	-1.44	-1.999	-0.677	2.555 up	0	0.001	100 -Z	0	0.677	0 -X	0	1.44	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	E2	6	0	0	0	0	-1.354	-1.995	-0.592	2.483 up	0	0.005	100 -Z	0	0.592	0 -X	0	1.354	0	1E+10	0.1	0	192.56	25.67	406.77
I17	I17 1	V - Stop	E3	6	0	0	0	0	-1.383	-1.996	-0.622	2.507 up	0	0.004	100 -Z	0	0.622	0 -X	0	1.383	0	1E+10	0.1	0	192.56	25.67	406.77
J23	J23 1	V - Stop	P1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	P2	8	0	0	0	0	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	P3	8	0	0	0	0	0	0	0	0 down	0	0	0 +Z	0	0	0 +X	0	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	GR	8	0	-599	0	599	0	-1	0	1 down	599	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	GT1	8	0	0	0	0	0.289	-0.986	-0.064	1.029 up	0	0.014	100 -Z	0	0.064	0 +X	0	0.289	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	GT2	8	0	0	0	0	0.307	-0.984	-0.046	1.032 up	0	0.016	100 -Z	0	0.046	0 +X	0	0.307	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	GT3	8	0	0	0	0	0.283	-0.987	-0.07	1.029 up	0	0.013	100 -Z	0	0.07	0 +X	0	0.283	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	W3	8	29	0	7	30	0	0	0	0 up	0	0	100 +Z	7	0	0 +X	29	0	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	E1	8	0	64	0	64	-2.911	-2	-1.28	3.757 up	64	0	100 -Z	0	1.28	0 -X	0	2.911	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	E2	8	0	61	0	61	-2.952	-2	-1.306	3.797 up	61	0	100 -Z	0	1.306	0 -X	0	2.952	0	1E+10	0.1	0	31.78	25.68	425.99
J23	J23 1	V - Stop	E3	8	0	60	0	60	-2.923	-2	-1.287	3.769 up	60	0	100 -Z	0	1.287	0 -X	0	2.923	0	1E+10	0.1	0	31.78	25.68	425.99
J24	J24 1	V - Stop	P1	8	0	0	0	0	-0.002	0	0	0.002 up	0	0	100 -Z	0	0	0 -X	0	0.002	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	P2	8	0	0	0	0	-0.003	0	0	0.003 up	0	0	100 -Z	0	0	0 -X	0	0.003	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	P3	8	0	0	0	0	-0.004	0	-0.001	0.004 down	0	0	0 -Z	0	0.001	0 -X	0	0.004	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	GR	8	0	-502	0	502	0	-1	0	1 down	502	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	GT1	8	0	0	0	0	0.203	-0.943	-0.019	0.965 up	0	0.057	100 -Z	0	0.019	0 +X	0	0.203	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	GT2	8	0	0	0	0	0.347	-0.945	0.011	1.006 up	0	0.055	100 +Z	0	0.011	0 +X	0	0.347	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	GT3	8	0	0	0	0	0.114	-0.943	-0.036	0.95 up	0	0.057	100 -Z	0	0.036	0 +X	0	0.114	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	W1	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	W2	8	0	0	0	0	0	0	0	0 down	0	0	0 -Z	0	0	0 -X	0	0	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	W3	8	37	-1	-7	37	0.001	0	0	0.001 down	1	0	0 -Z	7	0	0 +X	37	0.001	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	E1	8	0	-30	0	30	-2.909	-2	-1.283	3.756 down	30	0	0 -Z	0	1.283	0 -X	0	2.909	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	E2	8	0	-3	0	3	-2.951	-2	-1.308	3.797 down	3	0	0 -Z	0	1.308	0 -X	0	2.951	0	1E+10	0.1	0	23.74	25.82	417.96
J24	J24 1	V - Stop	E3	8	0	-4	0	4	-2.922	-2	-1.289	3.768 down	4	0	0 -Z	0	1.289	0 -X	0	2.922	0	1E+10	0.1	0	23.74	25.82	417.96
O19	O19 1	V - Stop	P1	20	0	0	0	0	0.01	0	-0.004	0.011 down	0	0	0 -Z	0	0.004	0 +X	0	0.01	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	P2	20	0	0	0	0	-0.004	0	-0.006	0.007 down	0	0	0 -Z	0	0.006	0 -X	0	0.004	0	1E+10	0.1	0	204.73	26.31	387.34

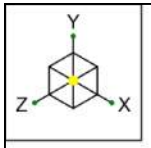
O19	O19 1	V - Stop	P3		20	0	0	0	0	0.011	0	0.002	0.011 down	0	0	0 +Z		0	0.002	0 +X		0	0.011	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	GR		20	0	0	0	0	0	0.056	0	0.056 up	0	0.056	100 -Z		0	0	0 -X		0	0	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	GT1		20	0	0	0	0	0.055	0.055	-0.068	0.103 up	0	0.055	100 -Z		0	0.068	0 +X		0	0.055	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	GT2		20	0	0	0	0	-0.122	0.055	0.012	0.135 up	0	0.055	100 +Z		0	0.012	0 -X		0	0.122	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	GT3		20	0	0	0	0	0.097	0.055	-0.13	0.171 up	0	0.055	100 -Z		0	0.13	0 +X		0	0.097	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	W1		20	0	0	0	0	0	0	0	0 down	0	0	0 -Z		0	0	0 -X		0	0	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	W2		20	0	0	0	0	0	0	0	0 down	0	0	0 -Z		0	0	0 -X		0	0	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	W3		20	0	0	0	0	0.001	0	0	0.001 down	0	0	0 +Z		0	0	0 +X		0	0.001	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	E1		20	0	0	0	0	-1.208	-1.868	-0.499	2.28 up	0	0.132	100 -Z		0	0.499	0 -X		0	1.208	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	E2		20	0	0	0	0	-1.266	-1.868	-0.514	2.314 up	0	0.132	100 -Z		0	0.514	0 -X		0	1.266	0	1E+10	0.1	0	204.73	26.31	387.34
O19	O19 1	V - Stop	E3		20	0	0	0	0	-1.194	-1.868	-0.471	2.266 up	0	0.132	100 -Z		0	0.471	0 -X		0	1.194	0	1E+10	0.1	0	204.73	26.31	387.34
				in	lbf	lbf	lbf	lbf	in	in	in	in	lbf	in	in	lbf	in	in	lbf	in	in	lb/in	lbf	ft	ft	ft					

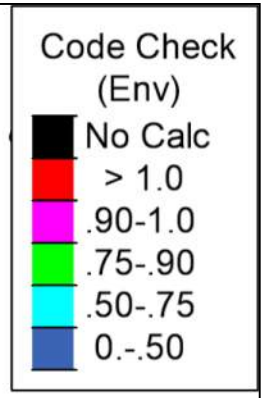
Point	ID	Tag No.	Type	Combination	Nominal	GlobalFX	GlobalFY	GlobalFZ	GlobalFR	GlobalDX	GlobalDY	GlobalDZ	GlobalDR	LocalDir1	Force1	Disp1	Gap1	LocalDir2	Force2	Disp2	Gap2	LocalDir3	Force3	Disp3	Gap3	Stiffness	Friction	ColdLoad	CoordX	CoordY	CoordZ
C112	C112 1		Guide	GT3	8	5055	-88	6135	7950	0.022	-1.045	0.333	1.097 down		97	0.048		100 left	7910	0.25	0.25 forw		785	0.208	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	GT1	8	3648	-60	4428	5738	0.005	-1.046	0.35	1.103 down		67	0.049		100 left	5709	0.25	0.25 forw		567	0.233	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	GT2	8	1446	-21	1756	2275	-0.026	-1.048	0.381	1.115 down		24	0.051		100 left	2264	0.25	0.25 forw		225	0.277	0	1E+10	0.1	0	-39.18	25.69	323.19
A63	A63 2		Guide	P3	20	-65	0	652	655	-0.041	0	0	0.041 down		0	0		100 rght	652	0	0.25 back		65	0.041	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	P1	20	-19	0	192	193	-0.01	0	0	0.01 down		0	0		100 rght	192	0	0.25 back		19	0.01	0	1E+10	0.1	0	-22.48	26.31	374.84
C112	C112 1		Guide	P3	8	51	-1	61	80	0	0	0	0 down		1	0		100 left	79	0	0.25 forw		8	0	0	1E+10	0.1	0	-39.18	25.69	323.19
	21 21 1	CUSTOM BAS	Guide	GR	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	GT1	20	0	0	0	0	-0.153	0	0.33	0.363 down		0	0		100 rght	0	0.153	0.25 forw		0	0.33	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	GT2	20	0	0	0	0	0.13	0	0.13	0.184 down		0	0		100 left	0	0.13	0.25 forw		0	0.13	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	GT3	20	-1801	179	179	1810	-0.25	0	0.377	0.453 down		0	0		100 rght	1801	0.25	0.25 forw		180	0.377	0	1E+10	0.1	0	-35.23	26.31	357.2
C112	C112 1		Guide	P2	8	43	-1	52	67	0.001	0	-0.001	0.001 down		1	0		100 left	67	0	0.25 forw		7	-0.001	0	1E+10	0.1	0	-39.18	25.69	323.19
C82	C82 2		Guide	P3	8	-4	0	43	43	-0.02	0	0	0.02 down		0	0		100 rght	43	0	0.25 back		4	0.02	0	1E+10	0.1	0	-22.82	28.84	374.17
C112	C112 1		Guide	P1	8	28	-1	34	44	0.001	0	-0.001	0.001 down		1	0		100 left	44	0	0.25 forw		4	-0.001	0	1E+10	0.1	0	-39.18	25.69	323.19
	21 21 1	CUSTOM BAS	Guide	W1	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	W2	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	W3	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	E1	20	0	0	0	0	-2.711	-2	-1.35	3.63 down		0	0		100 left	0	0.217	0.25 back		0	1.348	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	E2	20	0	0	0	0	-2.79	-2	-1.245	3.651 down		0	0		100 left	0	0.139	0.25 back		0	1.243	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	E3	20	0	0	0	0	-2.679	-2	-1.296	3.585 down		0	0		100 left	57	0.25	0.25 back		0	1.294	0	1E+10	0.1	0	-35.23	26.31	357.2
A63	A63 2		Guide	GR	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	GT1	20	-165	0	1657	1665	-0.116	0	0.25	0.276 up		0	0		0.25 right	1656	0.25	0.25 back		166	0.117	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	GT2	20	0	0	0	0	0.303	0	-0.102	0.32 down		0	0		100 left	0	0.102	0.25 forw		0	0.304	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	GT3	20	-640	0	6440	6472	-0.378	0	0.25	0.453 up		0	0		0.25 right	6440	0.25	0.25 back		644	0.378	0	1E+10	0.1	0	-22.48	26.31	374.84
	21 21 1	CUSTOM BAS	Guide	P3	20	-345	0	34	347	0	0	0	0 down		0	0		100 rght	345	0	0.25 forw		34	0	0	1E+10	0.1	0	-35.23	26.31	357.2
	249 249 1	CUSTOM BAS	Guide	P3	6	-2	0	17	17	-0.017	0	0	0.017 down		0	0		100 left	17	0	0.25 forw		2	0.017	0	1E+10	0.1	0	-23.08	28.75	375.49
C82	C82 2		Guide	P1	8	-1	0	14	14	-0.004	0	0	0.004 down		0	0		100 rght	14	0	0.25 back		1	0.004	0	1E+10	0.1	0	-22.82	28.84	374.17
A63	A63 2		Guide	W1	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	W2	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	W3	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	E1	20	0	0	0	0	-2.802	-2	-1.356	3.7 down		0	0		100 left	0	0.066	0.25 back		0	2.801	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	E2	20	0	0	0	0	-2.803	-2	-1.2	3.647 down		0	0		100 left	0	0.109	0.25 back		0	2.803	0	1E+10	0.1	0	-22.48	26.31	374.84
A63	A63 2		Guide	E3	20	0	0	0	0	-2.802	-2	-1.218	3.652 down		0	0		100 rght	0	0.071	0.25 back		0	2.801	0	1E+10	0.1	0	-22.48	26.31	374.84
A59	A59 3		Guide	GR	20	0	0	0	0	0	0.007	0	0.007 up		0	0.007		0.25 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	GT1	20	0	0	0	0	0.044	0.007	-0.074	0.086 up		0	0.007		0.25 left	0	0.217	0.25 forw		0	0.044	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	GT2	20	0	0	0	0	-0.056	0.007	0.064	0.085 up		0	0.007		0.25 right	0	0.064	0.25 back		0	0.056	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	GT3	20	23	0	-229	230	0.125	0.007	-0.25	0.28 up		0	0.007		0.25 left	229	0.25	0.25 forw		23	0.125	0	1E+10	0.1	0	37.63	26.31	374.82
	249 249 1	CUSTOM BAS	Guide	P1	6	-1	0	6	6	-0.004	0	0	0.004 down		0	0		100 left	6	0	0.25 forw		1	0.004	0	1E+10	0.1	0	-23.08	28.75	375.49
	113 113 1	CUSTOM BAS	Guide	P3	8	-30	0	3	30	0	0	0.001	0.001 down		0	0		100 rght	30	0	0.25 forw		3	0.001	0	1E+10	0.1	0	-37.24	25.84	357.2
D77	D77 2		Guide	P3	6	-13	0	1	13	0	0	0.001	0.001 down		0	0		100 left	13	0	0.25 back		1	0.001	0	1E+10	0.1	0	-38.56	25.76	356.76
A59	A59 3		Guide	W1	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	W2	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	W3	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 forw		0	0	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	E1	20	0	0	0	0	-2.804	-1.998	-1.24	3.659 up		0	0.002		0.25 right	0	0.05	0.25 back		0	2.804	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	E2	20	0	0	2300	2300	-2.804	-1.998	-1.04	3.596 up		0	0.002		0.25 right	2300	1.25	0.25 back		0	2.804	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	E3	20	0	0	822	822	-2.804	-1.998	-1.04	3.596 up		0	0.002		0.25 right	822	0.25	0.25 back		0	2.804	0	1E+10	0.1	0	37.63	26.31	374.82
A49	A49 3		Guide	GR	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	GT1	20	0	0	0	0	-0.005	0	-0.002	0.005 down		0	0		100 left	0	0.002	0.25 back		0	0.005	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	GT2	20	0	0	0	0	0.058	0	0.013	0.06 down		0	0		100 rght	0	0.013	0.25 forw		0	0.058	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	GT3	20	0	0	0	0	-0.125	0	-0.061	0.139 down		0	0		100 left	0	0.061	0.25 back		0	0.125	0	1E+10	0.1	0	169.24	26.31	374.81
	21 21 1	CUSTOM BAS	Guide	P1	20	0	0	0	0	-0.014	0	0.005	0.015 down		0	0		100 rght	0	0.014	0.25 forw		0	0.005	0	1E+10	0.1	0	-35.23	26.31	357.2
	21 21 1	CUSTOM BAS	Guide	P2	20	0	0	0	0	-0.011	0	0.01	0.015 down		0	0		100 rght	0	0.011	0.25 forw		0	0.01	0	1E+10	0.1	0	-35.23	26.31	357.2
A63	A63 2		Guide	P2	20	0	0	0	0	-0.024	0	0.026	0.035 down		0	0		100 rght	0	0.026	0.25 back		0	0.024	0	1E+10	0.1	0	-22.48	26.31	374.84
A49	A49 3		Guide	W1	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	W2	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	W3	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 forw		0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	E1	20	0	0	-1679	1679	-1.248	-2	-0.854	2.507 down		0	0		100 left	1679	0.25	0.25 back		0	1.248	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	E2	20	0	0	4639	4639	-1.248	-2	-0.354	2.384 down		0	0		100 rght	4639	0.25	0.25 back		0	1.248	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	E3	20	0	0	1616	1616	-1.248	-2	-0.354	2.384 down		0	0		100 rght	1616	0.25	0.25 back		0	1.248	0	1E+10	0.1	0	169.24	26.31	374.81
A46	A46 3		Guide	GR	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	GT1	20	0	0	0	0	0.127	0	-0.057	0.139 down		0	0		100 rght	0	0.127	0.25 forw		0	0.057	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	GT2	20	-382	0	37	384	-0.25	0	0.095	0.268 down		0	0		100 left	382	0.25	0.25 back		38	0.096	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	GT3	20	5505	0	-544	5532	0.25	0	-0.125	0.28 up		0	0		0.25 right	5505	0.25	0.25 forw		551	0.125	0	1E+10	0.1	0	234.02	26.31	370.31
A59	A59 3		Guide	P1	20	0	0	0	0	0.009	0	-0.012	0.015 down		0	0		100 left	0	0.012	0.25 forw		0	0.009	0	1E+10	0.1	0	37.63	26.31	374.82
A59	A59 3		Guide	P2	20	0	0	0	0	0.004	0	-0.01	0.011 down		0	0		100 left	0	0.01	0.25 forw		0	0.004	0	1E+10	0.1	0	37.63	26.31	374.82
A49	A49 3		Guide	P1	20	0	0	0	0	0	0	-0.001	0.001 down		0	0		100 left	0	0.001	0.25 back		0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A46	A46 3		Guide	W1	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	W2	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	W3	20	0	0	0	0	0	0	0	0 down		0	0		100 rght	0	0	0.25 forw		0	0	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	E1	20	-9444	0	-11	9444	-1.623	-2	-0.73	2.677 down		0	0		100 left	9444	0.25	0.25 forw		0	0.728	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	E2	20	-12998	0	-16	12998	-1.623	-2	-0.73	2.677 down		0	0		100 left	12998	0.25	0.25 forw		0	0.728	0	1E+10	0.1	0	234.02	26.31	370.31
A46	A46 3		Guide	E3	20	-10649	0	-13	10649	-1.623	-2	-0.73	2.677 down		0	0		100 left	10649	0.25	0.25 forw		0	0.728	0	1E+10	0.1	0	234.02	26.31	370.31
	63 63 1	CUSTOM BAS	Guide	E3	20	14581	0	-8	14581	-13.478	-12	-6.17	19.072 down		0	0		100 rght	14581	0.25	0.25 forw		0	6.177	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 1	CUSTOM BAS	Guide	E1	20	14306	0	-7	14306	-13.478	-12	-6.17	19.072 down		0	0		100 rght	14306	0.25	0.25 forw		0	6.177	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 1	CUSTOM BAS	Guide	E2	20	13689	0	-7	13689	-13.478	-12	-6.17	19.072 down		0	0		100 rght	13689	0.25	0.25 forw		0	6.177	0	1E+10	0.1	0	234.04	26.31	349.67
	193 193 1	CUSTOM BAS	Guide	P3	6	941	0	0	941	-13.508	-12	-4.87	18.713 down		0	0		100 left	941	0.221	0.25 back		0	4.868	0	1E+10	0.1	0	230.7	25.75	349.66
A49	A49 3		Guide	P2	20	0	0	0	0	-0.025	0	-0.002	0.025 down		0	0		100 left	0	0.002	0.25 back		0	0.025	0	1E+10	0.1	0	169.24	26.31	374.81
A49	A49 3		Guide	P3	20	0	0	0	0	0	0	-0.005	0.005 down		0	0		100 left	0	0.005	0.25 back		0	0	0	1E+10	0.1	0	169.24	26.31	374.81
A46	A46 3		Guide	P1	20	0	0	0	0	0.016	0	-0.01	0.019 down		0	0		100 rght	0	0.016	0.25 forw		0	0.01	0	1E+10	0.1	0	234.02	26.31	370.31
C68	C68 2		Guide	E1	8	939	0	0	939	-13.458	-12	-6.083	19.03 up		0	0.25		0.25 right	939	0.27	0.25 forw		0	6.089	0	1E+10	0.1	0	232.03	25.84	349.99
C68	C68 2		Guide	E1	8	847	0	0	847	-13.458	-12	-6.189	19.064 up		0	0		0.25 right	847	0.27	0.25 forw		0	6.195	0	1E+10	0.1	0	232.03	25.84	349.99
	193 193 1	CUSTOM BAS	Guide	E1	6	846	0	0	846	-13.508	-12	-5.831	18.986 down		0	0		100 left	846	0.221	0.25 back		0	5.83	0	1E+10	0.1	0	230.7	25.75	349.66
	193 193 1	CUSTOM BAS	Guide	E2	6	724	0	0	724	-13.508	-12	-4.95	18.734 down		0	0		100 left	724	0.221	0.25 back		0	4.949	0	1E+10	0.1	0	230.7	25.75	349.66
C68	C68 2		Guide	E2	8	720	0	0	720	-13.458	-12	-5.986	18.999 down		0	0		100 rght	720	0.27	0.25 forw		0	5.992	0	1E+10	0.1	0	232.03	25.84	349.99
	63 63 1	CUSTOM BAS	Guide	GR	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	234.04	26.31	349.67
	66 66 1	CUSTOM BAS	Guide	GR	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	GT1	20	0	0	0	0	-0.026	0	-0.024	0.035 down		0	0		100 left	0	0.024	0.25 back		0	0.026	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	GT2	20	0	0	0	0	0.055	0	0.029	0.062 down		0	0		100 rght	0	0.029	0.25 forw		0	0.055	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	GT3	20	0	0	0	0	-0.082	0	-0.076	0.112 down		0	0		100 left	0	0.076	0.25 back		0	0.082	0	1E+10	0.1	0	238.02	26.31	320.74
	63 63 1	CUSTOM BAS	Guide	GT1	20	0	0	0	0	0.006	0	0.039	0.039 up		0	0		100 rght	0	0.039	0.25 back		0	0.039	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 1	CUSTOM BAS	Guide	GT2	20	0	0	0	0	-0.015	0	-0.125	0.126 down		0	0		100 left	0	0.015	0.25 forw		0	0.125	0	1E+10	0.1	0	234.04	26.31	349.67
	63 63 1	CUSTOM BAS	Guide	GT3	20	0	0	0	0	-0.001	0	0.125	0.125 down		0	0		100 left	0	0.001	0.25 back		0	0.125	0	1E+10	0.1	0	234.04	26.31	349.67
	66 66 1	CUSTOM BAS	Guide	W1	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	W2	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	W3	20	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 forw		0	0	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	E1	20	0	0	0	0	-13.74	-12	-6.13	19.245 down		0	0		100 left	0	0.085	0.25 back		0	13.74	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	E2	20	0	0	0	0	-13.741	-12	-6.128	19.245 down		0	0		100 left	0	0.085	0.25 back		0	13.74	0	1E+10	0.1	0	238.02	26.31	320.74
	66 66 1	CUSTOM BAS	Guide	E3	20	0	0	0	0	-13.74	-12	-6.129	19.245 down		0	0		100 left	0	0.084	0.25 back		0	13.74	0	1E+10	0.1	0	238.02	26.31	320.74
C112	C112 1		Guide	GR	8	0	0	0	0	0	0	-1.021	0	1.021 down		0	0.021		100 left	0	0	0.25 back		0	0.012	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	W3	8	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	W2	8	0	0	0	0	0	0	0	0 down		0	0		100 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	W3	8	0	0	0	0	0	0	0	0 up		0	0		0.25 left	0	0	0.25 back		0	0	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	E1	8	0	0	0	0	-2.937	-1.998	-1.282	3.777 up		0	0.002		0.25 right	0	0.001	0.25 forw		0	1.139	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	E2	8	0	0	0	0	-2.928	-1.998	-1.284	3.771 up		0	0.002		0.25 left	0	0.002	0.25 forw		0	1.131	0	1E+10	0.1	0	-39.18	25.69	323.19
C112	C112 1		Guide	E3	8	0	0	0	0	-2.934	-1.998	-1.281	3.774 up		0	0.002		0.25 left	0	0.002	0.25 forw		0	1.137	0	1E+10	0.1	0	-39.18	25.69	323.19
	113 113 1	CUSTOM BAS	Guide	GR	8	0	0	0	0	-0.001	0	0	0.001 down		0	0		100 rght	0	0.001	0.25 forw		0	0	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 1	CUSTOM BAS	Guide	GT1	8	0	0	0	0	-0.06	0	0.277	0.284 down		0	0		100 rght	0	0.06	0.25 forw		0	0.277	0	1E+10	0.1	0	-37.24	25.84	357.2
	113 113 1	CUSTOM BAS	Guide	GT2	8	0	0	0	0	0.122	0	0.13	0.

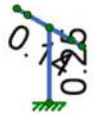
| | | |

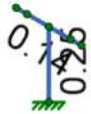
Point	ID	Tag No.	Type	Combination	Nominal	GlobalFX	GlobalFY	GlobalFZ	GlobalFR	GlobalDX	GlobalDY	GlobalDZ	GlobalDR	LocalDir1	Force1	Disp1	Gap1	LocalDir2	Force2	Disp2	Gap2	LocalDir3	Force3	Disp3	Gap3	Stiffness	Friction	ColdLoad	CoordX	CoordY	CoordZ
					in	lbf	lbf	lbf	lbf	in	in	in	in		lbf	in	in		lbf	in	in		lbf	in	in	lb/in		lbf	ft	ft	ft
	54 54 2		Line Stp	E2	20	-11	0	9405	9405	-7.741	-12	-5.538	15.317	back	9405	0.5	0.5	down	0	12	0	left	0	7.748	0	1E+10	0	0	216.03	26.31	359.66
	54 54 2		Line Stp	E3	20	-10	0	8810	8810	-7.733	-12	-5.538	15.312	back	8810	0.5	0.5	down	0	12	0	left	0	7.739	0	1E+10	0	0	216.03	26.31	359.66
	54 54 2		Line Stp	E1	20	-9	0	7946	7946	-7.734	-12	-5.538	15.313	back	7946	0.5	0.5	down	0	12	0	left	0	7.741	0	1E+10	0	0	216.03	26.31	359.66
	245 245 1	CUSTOM BAS	Line Stp	E3	6	1369	0	0	1369	-2.836	-2	-1.07	3.632	back	1369	0.092	0.125	down	0	2	0	rght	0	1.071	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	E2	6	1349	0	0	1349	-2.836	-2	-1.07	3.632	back	1349	0.092	0.125	down	0	2	0	rght	0	1.071	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	E1	6	635	0	0	635	-2.836	-2	-1.418	3.749	back	635	0.092	0.125	down	0	2	0	rght	0	1.419	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	GT3	6	162	0	0	162	0.125	0	-0.207	0.242	back	162	0.125	0.125	down	0	0	0	rght	0	0.207	0	1E+10	0	0	36.96	28.75	375.48
	63 63 3	CUSTOM BAS	Line Stp	GT3	20	0	0	744	744	-0.001	0	0.125	0.125	back	744	0.125	0.125	down	0	0	0	left	0	0.001	0	1E+10	0	0	234.04	26.31	349.67
	245 245 1	CUSTOM BAS	Line Stp	P3	6	16	0	0	16	0	0	-0.011	0.011	back	16	0	0.125	down	0	0	0	rght	0	0.011	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	GR	6	0	0	0	0	0.033	0	0.031	0.045	back	0	0.033	0.125	down	0	0	0	left	0	0.031	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	GT1	6	0	0	0	0	0.057	0	-0.025	0.062	back	0	0.057	0.125	down	0	0	0	rght	0	0.025	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	GT2	6	0	0	0	0	-0.036	0	0.087	0.094	forw	0	0.036	0.125	down	0	0	0	left	0	0.087	0	1E+10	0	0	36.96	28.75	375.48
	63 63 3		Line Stp	P3	20	0	0	186	186	-0.007	0	0	0.007	back	186	0	0.125	down	0	0	0	left	0	0.007	0	1E+10	0	0	234.04	26.31	349.67
A49	A49 1		Line Stp	E1	20	5307	0	1	5307	-1.248	-2	-0.854	2.507	forw	5307	0.125	0.125	down	0	2	0	left	0	0.854	0	1E+10	0	0	169.24	26.31	374.81
	63 63 3	CUSTOM BAS	Line Stp	P2	20	0	0	71	71	0.005	0	0.007	0.009	back	71	0.007	0.125	down	0	0	0	rght	0	0.005	0	1E+10	0	0	234.04	26.31	349.67
	223 223 1	CUSTOM BAS	Line Stp	E1	6	102	0	0	102	-1.276	-2	-0.888	2.533	back	102	0.096	0.125	down	0	2	0	rght	0	0.888	0	1E+10	0	0	168.94	28.75	375.47
C73	C73 2		Line Stp	E1	8	-1017	0	0	1017	-1.519	-2	-0.991	2.7	back	1017	0.146	0.125	down	0	2	0	left	0	0.991	0	1E+10	0	0	169.05	28.84	374.15
	245 245 1	CUSTOM BAS	Line Stp	P1	6	0	0	0	0	0.003	0	-0.003	0.005	back	0	0.003	0.125	down	0	0	0	rght	0	0.003	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	P2	6	0	0	0	0	0.01	0	-0.004	0.011	back	0	0.01	0.125	down	0	0	0	rght	0	0.004	0	1E+10	0	0	36.96	28.75	375.48
A49	A49 1		Line Stp	E2	20	2116	0	0	2116	-1.248	-2	-0.354	2.384	forw	2116	0.125	0.125	down	0	2	0	left	0	0.354	0	1E+10	0	0	169.24	26.31	374.81
	245 245 1	CUSTOM BAS	Line Stp	W1	6	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	36.96	28.75	375.48
	245 245 1	CUSTOM BAS	Line Stp	W2	6	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	36.96	28.75	375.48
D93	D93 2		Line Stp	E2	6	1	0	801	801	-12.941	-12	-5.552	18.501	forw	801	0.493	0.5	down	0	12	0	rght	0	12.936	0	1E+10	0	0	212.7	25.75	353.22
	245 245 1	CUSTOM BAS	Line Stp	W3	6	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	36.96	28.75	375.48
D93	D93 2		Line Stp	E3	6	0	0	605	605	-13.21	-12	-5.552	18.69	forw	605	0.493	0.5	down	0	12	0	rght	0	13.206	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	E1	6	0	0	343	343	-13.153	-12	-5.552	18.65	forw	343	0.493	0.5	down	0	12	0	rght	0	13.148	0	1E+10	0	0	212.7	25.75	353.22
C102	C102 2		Line Stp	E1	8	0	0	149	149	-12.44	-12	-5.571	18.16	back	149	0.469	0.5	down	0	12	0	left	0	12.458	0	1E+10	0	0	214.05	25.84	354.77
C92	C92 1		Line Stp	GR	8	0	0	0	0	0.004	0	0.031	0.031	back	0	0.031	0.5	down	0	0	0	rght	0	0.004	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	GT1	8	0	0	0	0	0.005	0	0.036	0.037	back	0	0.036	0.5	down	0	0	0	rght	0	0.005	0	1E+10	0	0	214.02	25.84	364.46
A59	A59 2		Line Stp	E3	20	8866	0	-1	8866	-2.804	-1.998	-1.04	3.596	forw	8866	0.125	0.125	down	0	1.998	0	left	0	1.04	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	E2	20	6887	0	-1	6887	-2.804	-1.998	-1.04	3.596	forw	6887	0.125	0.125	down	0	1.998	0	left	0	1.04	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	E1	20	3004	0	0	3004	-2.804	-1.998	-1.24	3.659	forw	3004	0.125	0.125	down	0	1.998	0	left	0	1.24	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	GT3	20	2970	0	0	2970	0.125	0.007	-0.25	0.28	forw	2970	0.125	0.125	up	0	0.007	0	left	0	0.25	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	P3	20	525	0	0	525	0	0	0	0	forw	525	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	GR	20	0	0	0	0	0	0.007	0	0.007	back	0	0	0.125	up	0	0.007	0	left	0	0	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	GT1	20	0	0	0	0	0.044	0.007	-0.074	0.086	forw	0	0.044	0.125	up	0	0.007	0	left	0	0.074	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	GT2	20	0	0	0	0	-0.056	0.007	0.064	0.085	back	0	0.056	0.125	up	0	0.007	0	rght	0	0.064	0	1E+10	0	0	37.63	26.31	374.82
	223 223 1	CUSTOM BAS	Line Stp	E2	6	-762	0	0	762	-1.526	-2	-0.388	2.546	forw	762	0.154	0.125	down	0	2	0	rght	0	0.388	0	1E+10	0	0	168.94	28.75	375.47
C73	C73 2		Line Stp	E2	8	-2401	0	0	2401	-1.519	-2	-0.491	2.559	back	2401	0.146	0.125	down	0	2	0	left	0	0.491	0	1E+10	0	0	169.05	28.84	374.15
A49	A49 1		Line Stp	E3	20	5225	0	1	5225	-1.248	-2	-0.354	2.384	forw	5225	0.125	0.125	down	0	2	0	left	0	0.354	0	1E+10	0	0	169.24	26.31	374.81
	223 223 1	CUSTOM BAS	Line Stp	E3	6	-36	0	0	36	-1.526	-2	-0.388	2.546	forw	36	0.154	0.125	down	0	2	0	rght	0	0.388	0	1E+10	0	0	168.94	28.75	375.47
C73	C73 2		Line Stp	E3	8	-1288	0	0	1288	-1.519	-2	-0.491	2.559	back	1288	0.146	0.125	down	0	2	0	left	0	0.491	0	1E+10	0	0	169.05	28.84	374.15
A49	A49 1		Line Stp	GR	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	GR	8	0	0	0	0	0.021	0	0.137	0.139	forw	0	0.021	0.125	down	0	0	0	rght	0	0.137	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	GR	6	0	0	0	0	0.029	0	0.034	0.044	back	0	0.029	0.125	down	0	0	0	left	0	0.034	0	1E+10	0	0	168.94	28.75	375.47
A46	A46 2		Line Stp	GR	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	GT1	20	0	0	0	0	0.127	0	-0.057	0.139	forw	0	0.057	0.125	down	0	0	0	rght	0	0.127	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	GT2	20	0	0	0	0	-0.25	0	0.095	0.268	back	0	0.096	0.125	down	0	0	0	left	0	0.25	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	P1	20	0	0	0	0	0.016	0	-0.01	0.019	forw	0	0.01	0.125	down	0	0	0	rght	0	0.016	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	P2	20	0	0	0	0	0	0	-0.012	0.012	forw	0	0.012	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	W1	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	W2	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	W3	20	0	0	0	0	0	0	0	0	forw	0	0	0.125	down	0	0	0	rght	0	0	0	1E+10	0	0	234.02	26.31	370.31
	54 54 2		Line Stp	GR	20	0	0	0	0	0	0	0	0	back	0	0	0	down	0	0	0	left	0	0	0	1E+10	0	0	216.03	26.31	359.66
	63 63 3	CUSTOM BAS	Line Stp	GR	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	234.04	26.31	349.67
	54 54 2		Line Stp	GT1	20	0	0	0	0	-0.001	0	0	0.001	forw	0	0	0.5	down	0	0	0	left	0	0.001	0	1E+10	0	0	216.03	26.31	359.66
	63 63 3	CUSTOM BAS	Line Stp	GT1	20	0	0	0	0	0.006	0	0.039	0.039	back	0	0.039	0.125	down	0	0	0	rght	0	0.006	0	1E+10	0	0	234.04	26.31	349.67
	54 54 2		Line Stp	GT2	20	0	0	0	0	0.005	0	0	0.005	forw	0	0	0.5	down	0	0	0	rght	0	0.005	0	1E+10	0	0	216.03	26.31	359.66
	63 63 3	CUSTOM BAS	Line Stp	P1	20	0	0	0	0	0	0	0.008	0.008	back	0	0.008	0.125	down	0	0	0	rght	0	0	0	1E+10	0	0	234.04	26.31	349.67
	63 63 3	CUSTOM BAS	Line Stp	W1	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	234.04	26.31	349.67
	54 54 2		Line Stp	GT3	20	0	0	0	0	-0.111	0	-0.033	0.115	forw	0	0.033	0.5	down	0	0	0	left	0	0.111	0	1E+10	0	0	216.03	26.31	359.66
	54 54 2		Line Stp	P1	20	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	rght	0	0	0	1E+10	0	0	216.03	26.31	359.66
C92	C92 1		Line Stp	GT2	8	0	0	0	0	-0.056	0	-0.039	0.068	forw	0	0.039	0.5	down	0	0	0	left	0	0.056	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	GT3	8	0	0	0	0	0.147	0	0.147	0.208	back	0	0.147	0.5	down	0	0	0	rght	0	0.148	0	1E+10	0	0	214.02	25.84	364.46
	54 54 2		Line Stp	P2	20	0	0	0	0	-0.005	0	0	0.005	back	0	0	0.5	down	0	0	0	left	0	0.005	0	1E+10	0	0	216.03	26.31	359.66
A59	A59 2		Line Stp	P1	20	0	0	0	0	0.009	0	-0.012	0.015	forw	0	0.009	0.125	down	0	0	0	left	0	0.012	0	1E+10	0	0	37.63	26.31	374.82
	54 54 2		Line Stp	P3	20	0	0	0	0	-0.047	0	-0.027	0.054	forw	0	0.027	0.5	down	0	0	0	left	0	0.047	0	1E+10	0	0	216.03	26.31	359.66
	54 54 2		Line Stp	W1	20	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	left	0	0	0	1E+10	0	0	216.03	26.31	359.66
A59	A59 2		Line Stp	P2	20	0	0	0	0	0.004	0	-0.01	0.011	forw	0	0.004	0.125	down	0	0	0	left	0	0.01	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	W1	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	W2	20	0	0	0	0	0	0	0	0	back	0	0	0.125	down	0	0	0	left	0	0	0	1E+10	0	0	37.63	26.31	374.82
A59	A59 2		Line Stp	W3	20	0	0	0	0	0	0	0	0	forw	0	0	0.125	down	0	0	0	rght	0	0	0	1E+10	0	0	37.63	26.31	374.82
C78	C78 2		Line Stp	E3	8	2186	0	-2	2186	-2.859	-2	-1.122	3.665	forw	2186	0.069	0.125	down	0	2	0	left	0	1.125	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	E2	8	2127	0	-2	2127	-2.859	-2	-1.122	3.665	forw	2127	0.069	0.125	down	0	2	0	left	0	1.125	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	E1	8	1036	0	-1	1036	-2.859	-2	-1.387	3.755	forw	1036	0.069	0.125	down	0	2	0	left	0	1.39	0	1E+10	0	0	37.3	28.84	374.17
A49	A49 1		Line Stp	GT1	20	0	0	0	0	-0.005	0	-0.002	0.005	back	0	0.005	0.125	down	0	0	0	left	0	0.002	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	GT1	8	0	0	0	0	0.015	0	0.137	0.138	forw	0	0.015	0.125	down	0	0	0	rght	0	0.137	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	GT1	6	0	0	0	0	0.028	0	0.034	0.044	back	0	0.028	0.125	down	0	0	0	left	0	0.034	0	1E+10	0	0	168.94	28.75	375.47
A49	A49 1		Line Stp	GT2	20	0	0	0	0	0.058	0	0.013	0.06	forw	0	0.058	0.125	down	0	0	0	rght	0	0.013	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	GT2	8	0	0	0	0	0.022	0	0.137	0.139	forw	0	0.022	0.125	down	0	0	0	rght	0	0.137	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	GT2	6	0	0	0	0	0.029	0	0.034	0.045	back	0	0.029	0.125	down	0	0	0	left	0	0.034	0	1E+10	0	0	168.94	28.75	375.47
C73	C73 2		Line Stp	GT3	8	0	0	0	0	0.021	0	0.137	0.138	forw	0	0.021	0.125	down	0	0	0	rght	0	0.137	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	GT3	6	0	0	0	0	0.029	0	0.033	0.044	back	0	0.029	0.125	down	0	0	0	left	0	0.033	0	1E+10	0	0	168.94	28.75	375.47
A49	A49 1		Line Stp	GT3	20	-2875	0	0	2875	-0.125	0	-0.061	0.139	back	2875	0.125	0.125	down	0	0	0	left	0	0.061	0	1E+10	0	0	169.24	26.31	374.81
A49	A49 1		Line Stp	P1	20	0	0	0	0	0	0	-0.001	0.001	back	0	0	0.125	down	0	0	0	left	0	0.001	0	1E+10	0	0	169.24	26.31	374.81
C92	C92 1		Line Stp	P1	8	0	0	0	0	0.002	0	0.003	0.003	back	0	0.003	0.5	down	0	0	0	rght	0	0.002	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	P2	8	0	0	0	0	0.005	0	0.004	0.007	back	0	0.004	0.5	down	0	0	0	rght	0	0.005	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	P3	8	0	0	0	0	0.009	0	0.008	0.012	back	0	0.008	0.5	down	0	0	0	rght	0	0.009	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	W1	8	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	left	0	0	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	W2	8	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	left	0	0	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	W3	8	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	rght	0	0	0	1E+10	0	0	214.02	25.84	364.46
C102	C102 2		Line Stp	GR	8	0	0	0	0	-0.019	0	0.03	0.036	back	0	0.031	0.5	down	0	0	0	left	0	0.019	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	GT1	8	0	0	0	0	-0.042	0	0.01	0.043	back	0	0.01	0.5	down	0	0	0	left	0	0.042	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	GT2	8	0	0	0	0	0.031	0	0.019	0.036	back	0	0.019	0.5	down	0	0	0	rght	0	0.031	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	GT3	8	0	0	0	0	-0.081	0	0.065	0.104	back	0	0.065	0.5	down	0	0	0	left	0	0.081	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	P1	8	0	0	0	0	-0.001	0	0.002	0.002	back	0	0.002	0.5	down	0	0	0	left	0	0.001	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	P2	8	0	0	0	0	-0.002	0	0.002	0.003	back	0	0.002	0.5	down	0	0	0	left	0	0.002	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	P3	8	0	0	0	0	-0.001	0	0.005	0.005	back	0	0.005	0.5	down	0	0	0	left	0	0.001	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	W1	8	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	left	0	0	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	W2	8	0	0	0	0	0	0	0	0	back	0	0	0.5	down	0	0	0	left	0	0	0	1E+10	0	0	214.05	25.84	354.77

C102	C102 2		Line Stp	W3	8	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 rght	0	0	0	1E+10	0	0	214.05	25.84	354.77
D93	D93 2		Line Stp	GR	6	0	0	0	0	0.031	0	0.007	0.031 forw	0	0.007	0.5 down	0	0	0 left	0	0.031	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	GT1	6	0	0	0	0	0.015	0	-0.027	0.031 back	0	0.027	0.5 down	0	0	0 left	0	0.015	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	GT2	6	0	0	0	0	0.038	0	0.014	0.041 forw	0	0.014	0.5 down	0	0	0 left	0	0.038	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	GT3	6	0	0	0	0	0.028	0	0.005	0.029 forw	0	0.005	0.5 down	0	0	0 left	0	0.028	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	P1	6	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 rght	0	0	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	P2	6	0	0	0	0	0.002	0	0.002	0.003 forw	0	0.002	0.5 down	0	0	0 left	0	0.002	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	P3	6	0	0	0	0	0	0	0	0.001 forw	0	0	0.5 down	0	0	0 left	0	0	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	W1	6	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 left	0	0	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	W2	6	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 left	0	0	0	1E+10	0	0	212.7	25.75	353.22
D93	D93 2		Line Stp	W3	6	0	0	0	0	0.001	0	0	0.001 back	0	0	0.5 down	0	0	0 left	0	0.001	0	1E+10	0	0	212.7	25.75	353.22
	203 203 1		Line Stp	GR	6	0	0	0	0	0.032	0	0.007	0.033 forw	0	0.007	0.5 down	0	0	0 left	0	0.032	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	GT1	6	0	0	0	0	0.032	0	0.007	0.033 forw	0	0.007	0.5 down	0	0	0 left	0	0.032	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	GT2	6	0	0	0	0	-0.003	0	-0.063	0.063 back	0	0.063	0.5 down	0	0	0 rght	0	0.003	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	GT3	6	0	0	0	0	0.153	0	0.114	0.191 forw	0	0.114	0.5 down	0	0	0 left	0	0.153	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	P1	6	0	0	0	0	0	0	0.001	0.001 forw	0	0.001	0.5 down	0	0	0 rght	0	0	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	P2	6	0	0	0	0	0.005	0	0.005	0.006 forw	0	0.005	0.5 down	0	0	0 left	0	0.005	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	P3	6	0	0	0	0	0.008	0	0.004	0.009 forw	0	0.004	0.5 down	0	0	0 left	0	0.008	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	W1	6	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 left	0	0	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	W2	6	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 left	0	0	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	W3	6	0	0	0	0	0.001	0	0	0.001 back	0	0	0.5 down	0	0	0 left	0	0.001	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	E1	6	0	0	0	0	-4.849	-12	-5.548	14.082 forw	0	0.488	0.5 down	0	12	0 rght	0	4.855	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	E2	6	0	0	0	0	-4.519	-12	-5.548	13.972 forw	0	0.488	0.5 down	0	12	0 rght	0	4.525	0	1E+10	0	0	212.69	25.75	366.08
	203 203 1		Line Stp	E3	6	0	0	0	0	-4.624	-12	-5.548	14.006 forw	0	0.488	0.5 down	0	12	0 rght	0	4.629	0	1E+10	0	0	212.69	25.75	366.08
C73	C73 2		Line Stp	P1	8	0	0	0	0	0.002	0	0	0.002 forw	0	0.002	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	P1	6	0	0	0	0	0	0	0	0 forw	0	0	0.125 down	0	0	0 rght	0	0	0	1E+10	0	0	168.94	28.75	375.47
	63 63 3	CUSTOM BAS	Line Stp	W2	20	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	234.04	26.31	349.67
	63 63 3	CUSTOM BAS	Line Stp	W3	20	0	0	0	0	0.001	0	0	0.001 back	0	0	0.125 down	0	0	0 right	0	0.001	0	1E+10	0	0	234.04	26.31	349.67
	54 54 2		Line Stp	W2	20	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 left	0	0	0	1E+10	0	0	216.03	26.31	359.66
	54 54 2		Line Stp	W3	20	0	0	0	0	0	0	0	0 back	0	0	0.5 down	0	0	0 right	0	0	0	1E+10	0	0	216.03	26.31	359.66
A49	A49 1		Line Stp	P2	20	0	0	0	0	-0.025	0	-0.002	0.025 back	0	0.025	0.125 down	0	0	0 left	0	0.002	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	P2	8	0	0	0	0	0	0	0	0 forw	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	P2	6	0	0	0	0	0	0	0	0 forw	0	0	0.125 down	0	0	0 rght	0	0	0	1E+10	0	0	168.94	28.75	375.47
C73	C73 2		Line Stp	P3	8	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	P3	6	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 rght	0	0	0	1E+10	0	0	168.94	28.75	375.47
A49	A49 1		Line Stp	P3	20	-1093	0	0	1093	0	0	-0.005	0.005 back	1093	0	0.125 down	0	0	0 left	0	0.005	0	1E+10	0	0	169.24	26.31	374.81
A49	A49 1		Line Stp	W1	20	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	W1	8	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.05	28.84	374.15
C78	C78 2		Line Stp	GT3	8	450	0	0	450	0.125	0	-0.118	0.172 forw	450	0.125	0.125 down	0	0	0 left	0	0.118	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	P3	8	39	0	0	39	0	0	-0.011	0.011 forw	39	0	0.125 down	0	0	0 left	0	0.011	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	GR	8	0	0	0	0	0.056	0	0.082	0.099 forw	0	0.056	0.125 down	0	0	0 rght	0	0.082	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	GT1	8	0	0	0	0	0.08	0	0.038	0.089 forw	0	0.08	0.125 down	0	0	0 rght	0	0.038	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	GT2	8	0	0	0	0	-0.006	0	0.13	0.13 back	0	0.007	0.125 down	0	0	0 rght	0	0.13	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	P1	8	0	0	0	0	0.005	0	-0.003	0.006 forw	0	0.005	0.125 down	0	0	0 left	0	0.003	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	P2	8	0	0	0	0	0.007	0	-0.004	0.008 forw	0	0.007	0.125 down	0	0	0 left	0	0.004	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	W1	8	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	37.3	28.84	374.17
C102	C102 2		Line Stp	E2	8	-1	0	282	282	-12.289	-12	-5.57	18.057 back	282	0.469	0.5 down	0	12	0 left	0	12.307	0	1E+10	0	0	214.05	25.84	354.77
C102	C102 2		Line Stp	E3	8	-1	0	253	253	-12.362	-12	-5.571	18.107 back	253	0.469	0.5 down	0	12	0 left	0	12.38	0	1E+10	0	0	214.05	25.84	354.77
C92	C92 1		Line Stp	E1	8	-3	0	974	974	-5.523	-11.95	-5.552	14.287 back	974	0.469	0.5 down	0	11.95	0 left	0	5.539	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	E2	8	-4	0	1447	1447	-5.254	-11.887	-5.551	14.132 back	1447	0.469	0.5 down	0	11.887	0 left	0	5.27	0	1E+10	0	0	214.02	25.84	364.46
C92	C92 1		Line Stp	E3	8	-4	0	1234	1234	-5.263	-11.925	-5.551	14.168 back	1234	0.469	0.5 down	0	11.925	0 left	0	5.279	0	1E+10	0	0	214.02	25.84	364.46
	223 223 1	CUSTOM BAS	Line Stp	W1	6	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	168.94	28.75	375.47
A49	A49 1		Line Stp	W2	20	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	W2	8	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	W2	6	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	168.94	28.75	375.47
C78	C78 2		Line Stp	W2	8	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	37.3	28.84	374.17
C78	C78 2		Line Stp	W3	8	0	0	0	0	0	0	0	0 forw	0	0	0.125 down	0	0	0 rght	0	0	0	1E+10	0	0	37.3	28.84	374.17
A49	A49 1		Line Stp	W3	20	0	0	0	0	0	0	0	0 forw	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	169.24	26.31	374.81
C73	C73 2		Line Stp	W3	8	0	0	0	0	0	0	0	0 forw	0	0	0.125 down	0	0	0 rght	0	0	0	1E+10	0	0	169.05	28.84	374.15
	223 223 1	CUSTOM BAS	Line Stp	W3	6	0	0	0	0	0	0	0	0 back	0	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	168.94	28.75	375.47
	63 63 3	CUSTOM BAS	Line Stp	GT2	20	0	0	-71	71	-0.015	0	-0.125	0.126 forw	71	0.125	0.125 down	0	0	0 left	0	0.015	0	1E+10	0	0	234.04	26.31	349.67
A46	A46 2		Line Stp	P3	20	0	0	-154	154	0	0	0	0 forw	154	0	0.125 down	0	0	0 left	0	0	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	GT3	20	1	0	-480	480	0.25	0	-0.125	0.28 forw	480	0.125	0.125 down	0	0	0 rght	0	0.25	0	1E+10	0	0	234.02	26.31	370.31
	63 63 3	CUSTOM BAS	Line Stp	E2	20	-1	0	-1044	1044	-13.478	-12	-6.17	19.072 forw	1044	0.125	0.125 down	0	12	0 left	0	13.475	0	1E+10	0	0	234.04	26.31	349.67
	63 63 3	CUSTOM BAS	Line Stp	E3	20	-1	0	-1966	1966	-13.478	-12	-6.17	19.072 forw	1966	0.125	0.125 down	0	12	0 left	0	13.475	0	1E+10	0	0	234.04	26.31	349.67
	63 63 3	CUSTOM BAS	Line Stp	E1	20	-2	0	-3363	3363	-13.478	-12	-6.17	19.072 forw	3363	0.125	0.125 down	0	12	0 left	0	13.475	0	1E+10	0	0	234.04	26.31	349.67
A46	A46 2		Line Stp	E2	20	5	0	-4527	4527	-1.623	-2	-0.73	2.677 forw	4527	0.125	0.125 down	0	2	0 left	0	1.624	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	E3	20	7	0	-5557	5557	-1.623	-2	-0.73	2.677 forw	5557	0.125	0.125 down	0	2	0 left	0	1.624	0	1E+10	0	0	234.02	26.31	370.31
A46	A46 2		Line Stp	E1	20	8	0	-6628	6628	-1.623	-2	-0.73	2.677 forw	6628	0.125	0.125 down	0	2	0 left	0	1.624	0	1E+10	0	0	234.02	26.31	370.31









Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA A NEMETSCHEK COMPANY	BURNS & MCDONNELL	PDX - Isolated Pipe Supports	SK-1
	A. Kral		Nov 29, 2023 at 10:27 AM
	153929		Isolated Pipe Support Footings.r3d

Model Settings

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Nodal

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI S100-12: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-15 / SDPWS-15 ASD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	ACI 530-13: ASD
Aluminum	AA ADM1-15: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16

Model Settings (Continued)

Risk Category	IV
Drift Cat	Other
Base Elevation (ft)	0
Include the weight of the structure in base shear calcs	Yes
S_1 (g)	0.376
SD_1 (g)	0.739
SD_S (g)	0.59
T_L (sec)	16
T Z (sec)	
T X (sec)	
C_tZ	0.02
C_tX	0.02
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	1
R X	1
Ω_0Z	1
Ω_0X	1
C_dZ	1
C_dX	1
ρ Z	1
ρ X	1

Project Grid Lines

No Data to Print...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	A500 Gr.C Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in^{2}]	Iyy [in^{4}]	Izz [in^{4}]	J [in^{4}]
1	Post	W6X15	Column	Wide Flange	A992	Typical	4.43	9.32	29.1	0.101
2	Outriggers	L3X3X4	Beam	Single Angle	A572 Gr.50	Typical	1.44	1.23	1.23	0.031
3	VB	L3X3X4	VBrace	Single Angle	A572 Gr.50	Typical	1.44	1.23	1.23	0.031
4	Beam	W8X18	Beam	Wide Flange	A992	Typical	5.26	7.97	61.9	0.172
5	Long Span	W10X22	Beam	Wide Flange	A992	Typical	6.49	11.4	118	0.239
6	Framing Post	W8X24	Column	Wide Flange	A992	Typical	7.08	18.3	82.7	0.346
7	Moment Post	HSS4X4X4	Column	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
8	Moment End Post	W10X33	Column	Wide Flange	A992	Typical	9.71	36.6	171	0.583

Design Size and Code Check Parameters

	Label	Max Axial/Bending Chk	Max Shear Chk
1	Typical	1	1

Concrete Rebar Parameters

	Label	Optimize Rebar ?	Min Flex Bar	Max Flex Bar	Shear Bar	Legs per Stirrup	Top (Column) Cover [in]	Bottom Cover [in]	Side Cover [in]	Top/Bottom Bars	Add'l Side Bars	Shear Bar Spacing [in]
1	Typical	Optimize	#5	#6	#4	2	3	3	1.5	2	1	12

Deflection Design

	Label	LC	Ratio	LC	Ratio	LC	Ratio
1	Typical	None	N/A	None	N/A	None	N/A

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N6	30	23	280	
2	N7	30	38	280	
3	N8	30	23	200	
4	N9	30	38	200	
5	N10	-10	38	200	
6	N11	-10	23	200	
7	N23	30	43	280	
8	N24	30	43	200	
9	N25	-10	43	200	
10	N39	0	25	215.75	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
11	N41	-1	25	215.75	
12	SHALLOW SUPPORT	0	23	215.75	
13	8INCH	0.66666	25	215.75	
14	6INCH	-0.66666	25	215.75	
15	N16	1	25	215.75	
16	N17	0	25	230.75	
17	N18	-1	25	230.75	
18	N19	0	23	230.75	
19	N20	0.66666	25	230.75	
20	N21	-0.66666	25	230.75	
21	N22	1	25	230.75	
22	N26	0	25	245.75	
23	N27	-1	25	245.75	
24	N28	0	23	245.75	
25	N29	0.66666	25	245.75	
26	N30	-0.66666	25	245.75	
27	N31	1	25	245.75	
28	N32	0	25	260.75	
29	N33	-1	25	260.75	
30	N34	0	23	260.75	
31	N35	0.66666	25	260.75	
32	N36	-0.66666	25	260.75	
33	N37	1	25	260.75	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	SHALLOW SUPPORT	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N19	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N28	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N34	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Drift Definitions

No Data to Print...

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M11	SHALLOW SUPPORT	N39		W4X13	Column	Wide Flange	A992	Typical
2	M12	N16	N41	90	C9X13.4	Beam	Channel	A572 Gr.50	Typical
3	M3	N19	N17		W4X13	Column	Wide Flange	A992	Typical
4	M4	N22	N18	90	C9X13.4	Beam	Channel	A572 Gr.50	Typical
5	M5	N28	N26		W4X13	Column	Wide Flange	A992	Typical
6	M6	N31	N27	90	C9X13.4	Beam	Channel	A572 Gr.50	Typical
7	M7	N34	N32		W4X13	Column	Wide Flange	A992	Typical
8	M8	N37	N33	90	C9X13.4	Beam	Channel	A572 Gr.50	Typical

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Seismic DR
1	M11	Yes	** NA **	None
2	M12	Yes	Default	None
3	M3	Yes	** NA **	None
4	M4	Yes	Default	None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Seismic DR
5	M5	Yes	** NA **	None
6	M6	Yes	Default	None
7	M7	Yes	** NA **	None
8	M8	Yes	Default	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	K z-z	Channel Conn.	a [ft]	Function
1	M11	W4X13	2	Lbyy	2.1	N/A	N/A	Lateral
2	M12	C9X13.4	2	Lbyy		N/A	N/A	Lateral
3	M3	W4X13	2	Lbyy	2.1	N/A	N/A	Lateral
4	M4	C9X13.4	2	Lbyy		N/A	N/A	Lateral
5	M5	W4X13	2	Lbyy	2.1	N/A	N/A	Lateral
6	M6	C9X13.4	2	Lbyy		N/A	N/A	Lateral
7	M7	W4X13	2	Lbyy	2.1	N/A	N/A	Lateral
8	M8	C9X13.4	2	Lbyy		N/A	N/A	Lateral

Member Detailing Data

	Label	I Cardinal Point	Ix Offset [in]	Iy Offset [in]	Iz Offset [in]	J Cardinal Point	Jx Offset [in]	Jy Offset [in]	Jz Offset [in]
1	M11	10	0	0	0	10	0	0	0
2	M12	10	0	0	0	10	0	0	0
3	M3	10	0	0	0	10	0	0	0
4	M4	10	0	0	0	10	0	0	0
5	M5	10	0	0	0	10	0	0	0
6	M6	10	0	0	0	10	0	0	0
7	M7	10	0	0	0	10	0	0	0
8	M8	10	0	0	0	10	0	0	0

Member Point Loads

No Data to Print...

Member Distributed Loads (BLC 7 : Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M11	Y	-0.06	-0.06	0	%100
2	M3	Y	-0.06	-0.06	0	%100
3	M5	Y	-0.06	-0.06	0	%100
4	M7	Y	-0.06	-0.06	0	%100

Member Distributed Loads (BLC 11 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M11	X	0.011	0.011	0	2
2	M3	X	0.011	0.011	0	2
3	M5	X	0.011	0.011	0	2
4	M7	X	0.011	0.011	0	2

Member Area Loads (BLC 3 : Wind X)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N9	N8	N6	N7	X	Open Structure	0.032
2	N24	N9	N7	N23	X	Open Structure	0.034

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Distributed	Area(Member)
1	Self Weight	DL		-1				
2	Dead Load	DL				8		
3	Wind X	WLX				8		2
4	Wind Z	WLZ						
5	Seismic X	ELX	0.885			8		
6	Seismic Z	ELZ			0.885	8		
7	Ice	OL1				8	4	
8	Fluid Load	FL				8		
9	Cable Tray	DL						
10	Cables	FL						
11	BLC 3 Transient Area Loads	None					4	
12	Temperature	TL						

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DL		Y	DL	1														
2	Fluid Load		Y	FL	1														
3	Wind X		Y	WLX	1														
4	Wind Z		Y	WLZ	1														
5	ELX		Y	ELX	1														
6	ELZ		Y	ELZ	1														
7	Ice Load		Y	OL1	1														
8	Servicability Wind Speed Drift Check		Y	DL	1	LL	0.5	WLX	0.71										
9	Servicability Wind Speed Drift Check		Y	DL	1	LL	0.5	WLZ	0.71										
10																			
11	Atmospheric Ice Load Combinations																		
12	1.2D + 1.6L + 0.2Di + 0.5S	Yes	Y	DL	1.2	LL	1.6	OL1	0.2	SL	0.5			FL	1.2				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
13	1.2D + Di + WiX + 0.5S	Yes	Y	DL	1.2	OL1	1	WLX	0.077	SL	0.5			FL	1.2		
14	1.2D + Di + WiZ + 0.5S	Yes	Y	DL	1.2	OL1	1	WLZ	0.077	SL	0.5			FL	1.2		
15	1.2D + Di + WiX + 0.5S	Yes	Y	DL	1.2	OL1	1	WLX	-0.077	SL	0.5			FL	1.2		
16	1.2D + Di + Wi + 0.5S	Yes	Y	DL	1.2	OL1	1	WLZ	-0.077	SL	0.5			FL	1.2		
17	0.9D + Di + WiX	Yes	Y	DL	0.9	OL1	1	WLX	0.077					FL	0.9		
18	0.9D + Di + WiZ	Yes	Y	DL	0.9	OL1	1	WLZ	0.077					FL	0.9		
19	0.9D + Di - WiX	Yes	Y	DL	0.9	OL1	1	WLX	-0.077					FL	0.9		
20	0.9D + Di - WiZ	Yes	Y	DL	0.9	OL1	1	WLZ	-0.077					FL	0.9		
21																	
22																	
23	Deflection 1		Y	DL	1									FL	1		
24	Deflection 2		Y	LL	1									FL	1		
25	Deflection 3		Y	DL	1	LL	1							FL	1		
26	ASCE Strength 1	Yes	Y	DL	1.4									FL	1.4		
27	ASCE Strength 2 (a)	Yes	Y	DL	1.2	LL	1.6	LLS	1.6					FL	1.2		
28	ASCE Strength 3 (b) (a)	Yes	Y	DL	1.2	WLX	0.5							FL	1.2		
29	ASCE Strength 3 (b) (b)	Yes	Y	DL	1.2	WLZ	0.5							FL	1.2		
30	ASCE Strength 3 (b) (c)	Yes	Y	DL	1.2	WLX	-0.5							FL	1.2		
31	ASCE Strength 3 (b) (d)	Yes	Y	DL	1.2	WLZ	-0.5							FL	1.2		
32	ASCE Strength 4 (a) (a)	Yes	Y	DL	1.2	WLX	1	LL	0.5	LLS	1			FL	1.2		
33	ASCE Strength 4 (a) (b)	Yes	Y	DL	1.2	WLZ	1	LL	0.5	LLS	1			FL	1.2		
34	ASCE Strength 4 (a) (c)	Yes	Y	DL	1.2	WLX	-1	LL	0.5	LLS	1			FL	1.2		
35	ASCE Strength 4 (a) (d)	Yes	Y	DL	1.2	WLZ	-1	LL	0.5	LLS	1			FL	1.2		
36	ASCE Strength 5 (a)	Yes	Y	DL	0.9	WLX	1										
37	ASCE Strength 5 (b)	Yes	Y	DL	0.9	WLZ	1										
38	ASCE Strength 5 (c)	Yes	Y	DL	0.9	WLX	-1										
39	ASCE Strength 5 (d)	Yes	Y	DL	0.9	WLZ	-1										
40	ASCE Strength 6 (a)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118
41	ASCE Strength 6 (b)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118
42	ASCE Strength 6 (c)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118
43	ASCE Strength 6 (d)	Yes	Y	DL	1.2	Sds*DL	0.2	Rho*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118
44	ASCE Strength 7 (a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	1					FL	0.9	FL	-0.118
45	ASCE Strength 7 (b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	1					FL	0.9	FL	-0.118
46	ASCE Strength 7 (c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELX	-1					FL	0.9	FL	-0.118
47	ASCE Strength 7 (d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Rho*ELZ	-1					FL	0.9	FL	-0.118
48	ASCE Strength 6 (os-a)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	1	LL	0.5	LLS	1	FL	1.2	FL	0.118
49	ASCE Strength 6 (os-b)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	1	LL	0.5	LLS	1	FL	1.2	FL	0.118
50	ASCE Strength 6 (os-c)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELX	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118
51	ASCE Strength 6 (os-d)	Yes	Y	DL	1.2	Sds*DL	0.2	Om*ELZ	-1	LL	0.5	LLS	1	FL	1.2	FL	0.118
52	ASCE Strength 7 (os-a)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	1					FL	0.9	FL	-0.118
53	ASCE Strength 7 (os-b)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	1					FL	0.9	FL	-0.118
54	ASCE Strength 7 (os-c)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELX	-1					FL	0.9	FL	-0.118
55	ASCE Strength 7 (os-d)	Yes	Y	DL	0.9	Sds*DL	-0.2	Om*ELZ	-1					FL	0.9	FL	-0.118

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	DL		Yes	Yes		Yes	Yes	Yes	Yes	Yes
2	Fluid Load		Yes	Yes		Yes	Yes	Yes	Yes	Yes
3	Wind X		Yes	Yes		Yes	Yes	Yes	Yes	Yes
4	Wind Z		Yes	Yes		Yes	Yes	Yes	Yes	Yes
5	ELX		Yes	Yes		Yes	Yes	Yes	Yes	Yes
6	ELZ		Yes	Yes		Yes	Yes	Yes	Yes	Yes
7	Ice Load		Yes	Yes		Yes	Yes	Yes	Yes	Yes
8	Servicability Wind Speed Drift Check		Yes	Yes		Yes	Yes	Yes	Yes	Yes
9	Servicability Wind Speed Drift Check		Yes	Yes		Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
10			Yes	Yes		Yes	Yes	Yes	Yes	Yes
11	Atmospheric Ice Load Combinations		Yes	Yes		Yes	Yes	Yes	Yes	Yes
12	1.2D + 1.6L + 0.2Di + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	1.2D + Di + WiX + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	1.2D + Di + WiZ + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	1.2D + Di + WiX + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	1.2D + Di + Wi + 0.5S		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	0.9D + Di + WiX		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	0.9D + Di + WiZ		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	0.9D + Di - WiX		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	0.9D + Di - WiZ		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Deflection 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	Deflection 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	Deflection 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	ASCE Strength 1		Yes	Yes		Yes	Yes	Yes	Yes	Yes
27	ASCE Strength 2 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
28	ASCE Strength 3 (b) (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
29	ASCE Strength 3 (b) (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
30	ASCE Strength 3 (b) (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
31	ASCE Strength 3 (b) (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
32	ASCE Strength 4 (a) (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
33	ASCE Strength 4 (a) (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
34	ASCE Strength 4 (a) (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
35	ASCE Strength 4 (a) (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
36	ASCE Strength 5 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
37	ASCE Strength 5 (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
38	ASCE Strength 5 (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
39	ASCE Strength 5 (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
40	ASCE Strength 6 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
41	ASCE Strength 6 (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
42	ASCE Strength 6 (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
43	ASCE Strength 6 (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
44	ASCE Strength 7 (a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
45	ASCE Strength 7 (b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
46	ASCE Strength 7 (c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
47	ASCE Strength 7 (d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
48	ASCE Strength 6 (os-a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
49	ASCE Strength 6 (os-b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
50	ASCE Strength 6 (os-c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
51	ASCE Strength 6 (os-d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
52	ASCE Strength 7 (os-a)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
53	ASCE Strength 7 (os-b)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
54	ASCE Strength 7 (os-c)		Yes	Yes		Yes	Yes	Yes	Yes	Yes
55	ASCE Strength 7 (os-d)		Yes	Yes		Yes	Yes	Yes	Yes	Yes

Spectra Scaling Factor

Seismic Code:	ASCE 7-16				
C_tZ:	0.02	T Z (sec):	Not Entered	R Z:	1
C_tX:	0.02	T X (sec):	Not Entered	R X:	1
C_tExp. Z:	0.75	C_tExp. X:	0.75	Seismic Weight LC:	0
Risk Category:	IV	T_L(sec):	16		
SD_1(g):	0.739	SD_s(g):	0.59	S_1(g):	0.376

T Z Used (sec):	0	T Z Method A:	0	T Z Upper Limit:	0
T X Used (sec):	0	T X Method A:	0	T X Upper Limit:	0
Importance Fac.:	0	Design Cat:			
V Z (k):	-1	Gov. Eqn.:			
V X (k):	-1	Gov. Eqn.:			

Weight (k):	0				

Static Base Shear Z (k):	-1	Unscaled Base Shear Z (k):	-1	Multiplier Z:	1
Static Base Shear X (k):	-1	Unscaled Base Shear X (k):	-1	Multiplier X:	1

Scaling Factor Z:	1	Scaling Factor X:	1		

Dynamic Data

Number Of Modes	0
Load Combination Number	DL
Acceleration of Gravity	32.2 (ft/sec^2)
Convergence Tolerance	0.0001

Node Reactions

No Data to Print...

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	SHALLOW SUPPORT	max	1.033	46	2.279	16	1.033	47	2.049	43	0.103	45	2.199	40
1		min	-1.033	40	0.408	37	-1.033	41	-2.049	41	-0.103	43	-1.953	46
2	N19	max	1.033	46	2.279	16	1.033	43	2.049	43	0.103	45	2.199	40
3		min	-1.033	40	0.408	37	-1.033	41	-2.049	41	-0.103	43	-1.953	46
4	N28	max	1.033	46	2.279	16	1.033	43	2.049	43	0.103	45	2.199	40
5		min	-1.033	40	0.408	37	-1.033	41	-2.049	41	-0.103	43	-1.953	46
6	N34	max	1.033	46	2.279	16	1.033	43	2.049	43	0.103	45	2.199	40
7		min	-1.033	40	0.408	37	-1.033	41	-2.049	41	-0.103	43	-1.953	46
8	Totals:	max	4.131	46	9.116	16	4.131	43						
9		min	-4.131	40	1.634	37	-4.131	41						

Node Reactions - Overstrength or Capacity Limit

No Data to Print...

Envelope Node Reactions - Overstrength or Capacity Limit

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	SHALLOW SUPPORT	max	1.033	54*	1.537	51*	1.033	55*	2.049	51*	0.103	53*	2.199	48*
1		min	-1.033	48*	0.912	53*	-1.033	49*	-2.049	49*	-0.103	51*	-1.953	54*
2	N19	max	1.033	54*	1.537	51*	1.033	51*	2.049	51*	0.103	53*	2.199	48*
3		min	-1.033	48*	0.912	52*	-1.033	49*	-2.049	49*	-0.103	51*	-1.953	54*
4	N28	max	1.033	54*	1.537	51*	1.033	51*	2.049	51*	0.103	53*	2.199	48*
5		min	-1.033	48*	0.912	52*	-1.033	49*	-2.049	49*	-0.103	51*	-1.953	54*
6	N34	max	1.033	54*	1.537	51*	1.033	51*	2.049	51*	0.103	53*	2.199	48*
7		min	-1.033	48*	0.912	52*	-1.033	49*	-2.049	49*	-0.103	51*	-1.953	54*
8	Totals:	max	4.131	54*	6.147	51*	4.131	51*						
9		min	-4.131	48*	3.647	53*	-4.131	49*						

Node Displacements

No Data to Print...

Envelope Node Displacements

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
0	N6	max	0	47	0	47	0	47	0	47	0	47	0	47
1		min	0	12	0	12	0	12	0	12	0	12	0	12
2	N7	max	0	47	0	47	0	47	0	47	0	47	0	47
3		min	0	12	0	12	0	12	0	12	0	12	0	12
4	N8	max	0	47	0	47	0	47	0	47	0	47	0	47
5		min	0	12	0	12	0	12	0	12	0	12	0	12
6	N9	max	0	47	0	47	0	47	0	47	0	47	0	47
7		min	0	12	0	12	0	12	0	12	0	12	0	12
8	N10	max	0	47	0	47	0	47	0	47	0	47	0	47
9		min	0	12	0	12	0	12	0	12	0	12	0	12
10	N11	max	0	47	0	47	0	47	0	47	0	47	0	47
11		min	0	12	0	12	0	12	0	12	0	12	0	12
12	N23	max	0	47	0	47	0	47	0	47	0	47	0	47
13		min	0	12	0	12	0	12	0	12	0	12	0	12
14	N24	max	0	47	0	47	0	47	0	47	0	47	0	47
15		min	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
16	N25	max	0	47	0	47	0	47	0	47	0	47	0	47
17		min	0	12	0	12	0	12	0	12	0	12	0	12
18	N39	max	0.022	40	0	39	0.053	41	3.283e-3	41	2.823e-3	47	1.018e-3	46
19		min	-0.019	46	-0.001	13	-0.053	43	-3.283e-3	43	-2.823e-3	41	-1.288e-3	40
20	N41	max	0.022	40	0.011	44	0.02	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
21		min	-0.019	46	-0.017	42	-0.02	43	-3.283e-3	43	-2.811e-3	41	-9.236e-4	44
22	SHALLOW SUPPORT	max	0	40	0	39	0	45	0	41	0	47	0	46
23		min	0	46	0	13	0	43	0	43	0	41	0	40
24	8INCH	max	0.022	40	0.006	46	0.076	41	3.283e-3	41	2.84e-3	47	6.156e-4	46
25		min	-0.019	46	-0.015	40	-0.076	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
26	6INCH	max	0.022	40	0.008	44	0.031	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
27		min	-0.019	46	-0.011	42	-0.031	43	-3.283e-3	43	-2.811e-3	41	-9.238e-4	44
28	N16	max	0.022	40	0.008	46	0.088	41	3.283e-3	41	2.84e-3	47	6.154e-4	46
29		min	-0.019	46	-0.023	40	-0.088	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
30	N17	max	0.022	40	0	39	0.053	41	3.283e-3	41	2.823e-3	47	1.018e-3	46
31		min	-0.019	46	-0.001	13	-0.053	43	-3.283e-3	43	-2.823e-3	41	-1.288e-3	40
32	N18	max	0.022	40	0.011	44	0.02	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
33		min	-0.019	46	-0.017	42	-0.02	43	-3.283e-3	43	-2.811e-3	41	-9.236e-4	44
34	N19	max	0	40	0	39	0	41	0	41	0	47	0	46
35		min	0	46	0	13	0	43	0	43	0	41	0	40
36	N20	max	0.022	40	0.006	46	0.076	41	3.283e-3	41	2.84e-3	47	6.156e-4	46
37		min	-0.019	46	-0.015	40	-0.076	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
38	N21	max	0.022	40	0.008	44	0.031	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
39		min	-0.019	46	-0.011	42	-0.031	43	-3.283e-3	43	-2.811e-3	41	-9.238e-4	44
40	N22	max	0.022	40	0.008	46	0.088	41	3.283e-3	41	2.84e-3	47	6.154e-4	46
41		min	-0.019	46	-0.023	40	-0.088	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
42	N26	max	0.022	40	0	39	0.053	41	3.283e-3	41	2.823e-3	47	1.018e-3	46
43		min	-0.019	46	-0.001	13	-0.053	43	-3.283e-3	43	-2.823e-3	41	-1.288e-3	40
44	N27	max	0.022	40	0.011	44	0.02	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
45		min	-0.019	46	-0.017	42	-0.02	43	-3.283e-3	43	-2.811e-3	41	-9.236e-4	44
46	N28	max	0	40	0	39	0	41	0	41	0	47	0	46
47		min	0	46	0	13	0	43	0	43	0	41	0	40
48	N29	max	0.022	40	0.006	46	0.076	41	3.283e-3	41	2.84e-3	47	6.156e-4	46
49		min	-0.019	46	-0.015	40	-0.076	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
50	N30	max	0.022	40	0.008	44	0.031	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
51		min	-0.019	46	-0.011	42	-0.031	43	-3.283e-3	43	-2.811e-3	41	-9.238e-4	44
52	N31	max	0.022	40	0.008	46	0.088	41	3.283e-3	41	2.84e-3	47	6.154e-4	46
53		min	-0.019	46	-0.023	40	-0.088	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
54	N32	max	0.022	40	0	39	0.053	41	3.283e-3	41	2.823e-3	47	1.018e-3	46
55		min	-0.019	46	-0.001	13	-0.053	43	-3.283e-3	43	-2.823e-3	41	-1.288e-3	40
56	N33	max	0.022	40	0.011	44	0.02	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
57		min	-0.019	46	-0.017	42	-0.02	43	-3.283e-3	43	-2.811e-3	41	-9.236e-4	44
58	N34	max	0	40	0	39	0	41	0	41	0	47	0	46
59		min	0	46	0	13	0	43	0	43	0	41	0	40
60	N35	max	0.022	40	0.006	46	0.076	41	3.283e-3	41	2.84e-3	47	6.156e-4	46
61		min	-0.019	46	-0.015	40	-0.076	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40
62	N36	max	0.022	40	0.008	44	0.031	41	3.283e-3	41	2.811e-3	47	1.447e-3	42
63		min	-0.019	46	-0.011	42	-0.031	43	-3.283e-3	43	-2.811e-3	41	-9.238e-4	44
64	N37	max	0.022	40	0.008	46	0.088	41	3.283e-3	41	2.84e-3	47	6.154e-4	46
65		min	-0.019	46	-0.023	40	-0.088	43	-3.283e-3	43	-2.84e-3	41	-1.966e-3	40

X-Direction Story Drift - Service

No Data to Print...

Envelope X-Direction Story Drift - Service

No Data to Print...

X-Direction Story Drift - Strength

No Data to Print...

Envelope X-Direction Story Drift - Strength

No Data to Print...

Z-Direction Story Drift - Service

No Data to Print...

Envelope Z-Direction Story Drift - Service

No Data to Print...

Z-Direction Story Drift - Strength

No Data to Print...

Envelope Z-Direction Story Drift - Strength

No Data to Print...

Member Section Forces

No Data to Print...

Envelope Member Section Forces

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
0	M11	1	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
1			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
2		2	max	2.241	16	1.028	40	1.03	43	0.103	45	1.533	41	1.683	40
3			min	0.403	37	-1.028	42	-1.03	41	-0.103	43	-1.533	43	-1.437	46
4		3	max	2.203	16	1.023	40	1.025	43	0.103	45	1.019	41	1.17	40
5			min	0.397	37	-1.022	42	-1.025	41	-0.103	43	-1.019	43	-0.925	46
6		4	max	2.166	16	1.017	40	1.019	43	0.103	45	0.508	41	0.66	40
7			min	0.391	37	-1.017	42	-1.019	41	-0.103	43	-0.508	43	-0.415	46
8		5	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
9			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
10	M12	1	max	0	47	0	47	0	47	0	47	0	47	0	47
11			min	0	12	0	12	0	40	0	12	0	12	0	12
12		2	max	0.576	46	0.576	43	1.2	15	0	47	0.201	15	0.096	41
13			min	-0.576	40	-0.576	41	0.2	36	0	12	0.034	36	-0.096	43
14		3	max	0.582	46	0.582	43	1.208	15	0	47	0.803	15	0.386	41
15			min	-0.582	40	-0.582	41	0.206	36	0	12	0.136	36	-0.386	43
16		4	max	0.422	40	0.422	45	-0.173	38	0	47	0.153	13	0.071	45
17			min	-0.422	42	-0.422	43	-0.912	13	0	12	0.029	38	-0.071	43
18		5	max	0	47	0	47	0	42	0	47	0	47	0	47
19			min	0	12	0	12	0	12	0	12	0	12	0	12
20	M3	1	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
21			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
22		2	max	2.241	16	1.028	40	1.03	43	0.103	45	1.533	41	1.683	40
23			min	0.403	37	-1.028	42	-1.03	41	-0.103	43	-1.533	43	-1.437	46
24		3	max	2.203	16	1.023	40	1.025	43	0.103	45	1.019	41	1.17	40
25			min	0.397	37	-1.022	42	-1.025	41	-0.103	43	-1.019	43	-0.925	46
26		4	max	2.166	16	1.017	40	1.019	43	0.103	45	0.508	41	0.66	40

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
27			min	0.391	37	-1.017	42	-1.019	41	-0.103	43	-0.508	43	-0.415	46
28		5	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
29			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
30	M4	1	max	0	47	0	47	0	47	0	47	0	47	0	47
31			min	0	12	0	12	0	40	0	12	0	12	0	12
32		2	max	0.576	46	0.576	47	1.2	15	0	47	0.201	15	0.096	41
33			min	-0.576	40	-0.576	45	0.2	36	0	12	0.034	36	-0.096	43
34		3	max	0.582	46	0.582	47	1.208	15	0	47	0.803	15	0.386	45
35			min	-0.582	40	-0.582	45	0.206	36	0	12	0.136	36	-0.386	47
36		4	max	0.422	40	0.422	41	-0.173	38	0	47	0.153	13	0.071	45
37			min	-0.422	42	-0.422	43	-0.912	13	0	12	0.029	38	-0.071	47
38		5	max	0	47	0	47	0	42	0	47	0	47	0	47
39			min	0	12	0	12	0	12	0	12	0	12	0	12
40	M5	1	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
41			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
42		2	max	2.241	16	1.028	40	1.03	43	0.103	45	1.533	41	1.683	40
43			min	0.403	37	-1.028	42	-1.03	41	-0.103	43	-1.533	43	-1.437	46
44		3	max	2.203	16	1.023	40	1.025	43	0.103	45	1.019	41	1.17	40
45			min	0.397	37	-1.022	42	-1.025	41	-0.103	43	-1.019	43	-0.925	46
46		4	max	2.166	16	1.017	40	1.019	43	0.103	45	0.508	41	0.66	40
47			min	0.391	37	-1.017	42	-1.019	41	-0.103	43	-0.508	43	-0.415	46
48		5	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
49			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
50	M6	1	max	0	47	0	47	0	47	0	47	0	47	0	47
51			min	0	12	0	12	0	40	0	12	0	12	0	12
52		2	max	0.576	46	0.576	47	1.2	15	0	47	0.201	15	0.096	41
53			min	-0.576	40	-0.576	45	0.2	36	0	12	0.034	36	-0.096	43
54		3	max	0.582	46	0.582	47	1.208	15	0	47	0.803	15	0.386	45
55			min	-0.582	40	-0.582	45	0.206	36	0	12	0.136	36	-0.386	47
56		4	max	0.422	40	0.422	41	-0.173	38	0	47	0.153	13	0.071	45
57			min	-0.422	42	-0.422	43	-0.912	13	0	12	0.029	38	-0.071	47
58		5	max	0	47	0	47	0	42	0	47	0	47	0	47
59			min	0	12	0	12	0	12	0	12	0	12	0	12
60	M7	1	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
61			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
62		2	max	2.241	16	1.028	40	1.03	43	0.103	45	1.533	41	1.683	40
63			min	0.403	37	-1.028	42	-1.03	41	-0.103	43	-1.533	43	-1.437	46
64		3	max	2.203	16	1.023	40	1.025	43	0.103	45	1.019	41	1.17	40
65			min	0.397	37	-1.022	42	-1.025	41	-0.103	43	-1.019	43	-0.925	46
66		4	max	2.166	16	1.017	40	1.019	43	0.103	45	0.508	41	0.66	40
67			min	0.391	37	-1.017	42	-1.019	41	-0.103	43	-0.508	43	-0.415	46
68		5	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
69			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
70	M8	1	max	0	47	0	47	0	47	0	47	0	47	0	47
71			min	0	12	0	12	0	40	0	12	0	12	0	12
72		2	max	0.576	46	0.576	47	1.2	15	0	47	0.201	15	0.096	41
73			min	-0.576	40	-0.576	45	0.2	36	0	12	0.034	36	-0.096	43
74		3	max	0.582	46	0.582	47	1.208	15	0	47	0.803	15	0.386	45
75			min	-0.582	40	-0.582	45	0.206	36	0	12	0.136	36	-0.386	47
76		4	max	0.422	40	0.422	41	-0.173	38	0	47	0.153	13	0.071	45
77			min	-0.422	42	-0.422	43	-0.912	13	0	12	0.029	38	-0.071	47
78		5	max	0	47	0	47	0	42	0	47	0	47	0	47
79			min	0	12	0	12	0	12	0	12	0	12	0	12

Maximum Member Section Forces

No Data to Print...

Envelope Maximum Member Section Forces

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
0	M11	max	2.279	0	16	1.034	0	40	1.036	0	43	0.103	2	45	2.049	0	41	2.199	0	40
1		min	0.385	2	37	-1.034	0	42	-1.036	0	41	-0.103	0	43	-2.049	0	43	-1.953	0	46
2	M12	max	0.582	1	46	0.582	1	43	1.208	1	15	0	2	47	0.803	1	15	0.386	1	41
3		min	-0.582	1	40	-0.582	1	41	-0.92	1.021	13	0	0	12	0	0	12	-0.386	1	43
4	M3	max	2.279	0	16	1.034	0	40	1.036	0	43	0.103	2	45	2.049	0	41	2.199	0	40
5		min	0.385	2	37	-1.034	0	42	-1.036	0	41	-0.103	0	43	-2.049	0	43	-1.953	0	46
6	M4	max	0.582	1	46	0.582	1	47	1.208	1	15	0	2	47	0.803	1	15	0.386	1	45
7		min	-0.582	1	40	-0.582	1	45	-0.92	1.021	13	0	0	12	0	0	12	-0.386	1	47
8	M5	max	2.279	0	16	1.034	0	40	1.036	0	43	0.103	2	45	2.049	0	41	2.199	0	40
9		min	0.385	2	37	-1.034	0	42	-1.036	0	41	-0.103	0	43	-2.049	0	43	-1.953	0	46
10	M6	max	0.582	1	46	0.582	1	47	1.208	1	15	0	2	47	0.803	1	15	0.386	1	45
11		min	-0.582	1	40	-0.582	1	45	-0.92	1.021	13	0	0	12	0	0	12	-0.386	1	47
12	M7	max	2.279	0	16	1.034	0	40	1.036	0	43	0.103	2	45	2.049	0	41	2.199	0	40
13		min	0.385	2	37	-1.034	0	42	-1.036	0	41	-0.103	0	43	-2.049	0	43	-1.953	0	46
14	M8	max	0.582	1	46	0.582	1	47	1.208	1	15	0	2	47	0.803	1	15	0.386	1	45
15		min	-0.582	1	40	-0.582	1	45	-0.92	1.021	13	0	0	12	0	0	12	-0.386	1	47

Member End Reactions

No Data to Print...

Envelope Member End Reactions

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
0	M11	I	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
1			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
2		J	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
3			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
4	M12	I	max	0	47	0	47	0	47	0	47	0	47	0	47
5			min	0	12	0	12	0	40	0	12	0	12	0	12
6		J	max	0	47	0	47	0	42	0	47	0	47	0	47
7			min	0	12	0	12	0	12	0	12	0	12	0	12
8	M3	I	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
9			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
10		J	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
11			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
12	M4	I	max	0	47	0	47	0	47	0	47	0	47	0	47
13			min	0	12	0	12	0	40	0	12	0	12	0	12
14		J	max	0	47	0	47	0	42	0	47	0	47	0	47
15			min	0	12	0	12	0	12	0	12	0	12	0	12
16	M5	I	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
17			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
18		J	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
19			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36
20	M6	I	max	0	47	0	47	0	47	0	47	0	47	0	47
21			min	0	12	0	12	0	40	0	12	0	12	0	12
22		J	max	0	47	0	47	0	42	0	47	0	47	0	47
23			min	0	12	0	12	0	12	0	12	0	12	0	12
24	M7	I	max	2.279	16	1.034	40	1.036	43	0.103	45	2.049	41	2.199	40
25			min	0.408	37	-1.034	42	-1.036	41	-0.103	43	-2.049	43	-1.953	46
26		J	max	2.128	16	1.011	40	1.013	43	0.103	45	0	47	0.192	15
27			min	0.385	37	-1.011	42	-1.013	41	-0.103	43	0	12	0.019	36

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
28	M8	I	max	0	47	0	47	0	47	0	47	0	47	0	47
29			min	0	12	0	12	0	40	0	12	0	12	0	12
30		J	max	0	47	0	47	0	42	0	47	0	47	0	47
31			min	0	12	0	12	0	12	0	12	0	12	0	12

Member 2nd/1st Moment Ratios

No Data to Print...

Envelope Member 2nd/1st Moment Ratios

	Member		y-y Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC	z-z Moment [k-ft]	2nd/1st Ratio	Loc [ft]	LC
0	M11	max	2.049	1.003	0	49*	0.192	1.002	0	16
1		min	-2.047	1.002	0	47	0.192	1	2	15
2	M12	max	0.523	1	1	34	0.386	1	1	49*
3		min	0.34	0.998	1	44	-0.386	1	1	47
4	M3	max	2.049	1.003	0	49*	0.192	1.002	0	16
5		min	-2.047	1.002	0	47	0.192	1	2	15
6	M4	max	0.523	1	1	34	0.386	1	1	53*
7		min	0.34	0.998	1	44	-0.386	1	1	43
8	M5	max	2.049	1.003	0	49*	0.192	1.002	0	16
9		min	-2.047	1.002	0	47	0.192	1	2	15
10	M6	max	0.523	1	1	34	0.386	1	1	53*
11		min	0.34	0.998	1	44	-0.386	1	1	43
12	M7	max	2.049	1.003	0	49*	0.192	1.002	0	16
13		min	-2.047	1.002	0	47	0.192	1	2	15
14	M8	max	0.523	1	1	34	0.386	1	1	53*
15		min	0.34	0.998	1	44	-0.386	1	1	43

Member Section Stresses

No Data to Print...

Envelope Member Section Stresses

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
0	M11	1	max	0.595	16	0.888	40	0.37	43	4.313	46	4.857	40	12.933	41	12.933	43
1			min	0.107	37	-0.888	42	-0.37	41	-4.857	40	-4.313	46	-12.933	43	-12.933	41
2		2	max	0.585	16	0.883	40	0.368	43	3.175	46	3.718	40	9.672	41	9.672	43
3			min	0.105	37	-0.883	42	-0.368	41	-3.718	40	-3.175	46	-9.672	43	-9.672	41
4		3	max	0.575	16	0.878	40	0.366	43	2.043	46	2.585	40	6.43	41	6.43	43
5			min	0.104	37	-0.878	42	-0.366	41	-2.585	40	-2.043	46	-6.43	43	-6.43	41
6		4	max	0.565	16	0.873	40	0.364	43	0.917	46	1.459	40	3.206	41	3.206	43
7			min	0.102	37	-0.873	42	-0.364	41	-1.459	40	-0.917	46	-3.206	43	-3.206	41
8		5	max	0.556	16	0.868	40	0.362	43	-0.041	36	0.424	15	0	47	0	47
9			min	0.101	37	-0.868	42	-0.362	41	-0.424	15	0.041	36	0	12	0	12
10	M12	1	max	0	47	0	47	0	47	0	47	0	47	0	47	0	47
11			min	0	12	0	12	0	40	0	12	0	12	0	12	0	12
12		2	max	0.146	46	0.275	43	0.598	15	0.109	43	0.109	41	2.516	15	-0.14	36
13			min	-0.146	40	-0.275	41	0.1	36	-0.109	41	-0.109	43	0.425	36	-0.827	15
14		3	max	0.148	46	0.277	43	0.602	15	0.436	43	0.436	41	10.066	15	-0.559	36
15			min	-0.148	40	-0.277	41	0.103	36	-0.436	41	-0.436	43	1.701	36	-3.308	15
16		4	max	0.107	40	0.201	45	-0.086	38	0.08	47	0.08	45	1.914	13	-0.121	38
17			min	-0.107	42	-0.201	43	-0.454	13	-0.08	41	-0.08	43	0.367	38	-0.629	13
18		5	max	0	47	0	47	0	42	0	47	0	47	0	47	0	47
19			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
20	M3	1	max	0.595	16	0.888	40	0.37	43	4.313	46	4.857	40	12.933	41	12.933	43
21			min	0.107	37	-0.888	42	-0.37	41	-4.857	40	-4.313	46	-12.933	43	-12.933	41
22		2	max	0.585	16	0.883	40	0.368	43	3.175	46	3.718	40	9.672	41	9.672	43
23			min	0.105	37	-0.883	42	-0.368	41	-3.718	40	-3.175	46	-9.672	43	-9.672	41
24		3	max	0.575	16	0.878	40	0.366	43	2.043	46	2.585	40	6.43	41	6.43	43
25			min	0.104	37	-0.878	42	-0.366	41	-2.585	40	-2.043	46	-6.43	43	-6.43	41
26		4	max	0.565	16	0.873	40	0.364	43	0.917	46	1.459	40	3.206	41	3.206	43
27			min	0.102	37	-0.873	42	-0.364	41	-1.459	40	-0.917	46	-3.206	43	-3.206	41
28		5	max	0.556	16	0.868	40	0.362	43	-0.041	36	0.424	15	0	47	0	47
29			min	0.101	37	-0.868	42	-0.362	41	-0.424	15	0.041	36	0	12	0	12
30	M4	1	max	0	47	0	47	0	47	0	47	0	47	0	47	0	47
31			min	0	12	0	12	0	40	0	12	0	12	0	12	0	12
32		2	max	0.146	46	0.275	47	0.598	15	0.109	43	0.109	41	2.516	15	-0.14	36
33			min	-0.146	40	-0.275	45	0.1	36	-0.109	41	-0.109	43	0.425	36	-0.827	15
34		3	max	0.148	46	0.277	47	0.602	15	0.436	47	0.436	45	10.066	15	-0.559	36
35			min	-0.148	40	-0.277	45	0.103	36	-0.436	45	-0.436	47	1.701	36	-3.308	15
36		4	max	0.107	40	0.201	41	-0.086	38	0.08	47	0.08	45	1.914	13	-0.121	38
37			min	-0.107	42	-0.201	43	-0.454	13	-0.08	45	-0.08	47	0.367	38	-0.629	13
38		5	max	0	47	0	47	0	42	0	47	0	47	0	47	0	47
39			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
40	M5	1	max	0.595	16	0.888	40	0.37	43	4.313	46	4.857	40	12.933	41	12.933	43
41			min	0.107	37	-0.888	42	-0.37	41	-4.857	40	-4.313	46	-12.933	43	-12.933	41
42		2	max	0.585	16	0.883	40	0.368	43	3.175	46	3.718	40	9.672	41	9.672	43
43			min	0.105	37	-0.883	42	-0.368	41	-3.718	40	-3.175	46	-9.672	43	-9.672	41
44		3	max	0.575	16	0.878	40	0.366	43	2.043	46	2.585	40	6.43	41	6.43	43
45			min	0.104	37	-0.878	42	-0.366	41	-2.585	40	-2.043	46	-6.43	43	-6.43	41
46		4	max	0.565	16	0.873	40	0.364	43	0.917	46	1.459	40	3.206	41	3.206	43
47			min	0.102	37	-0.873	42	-0.364	41	-1.459	40	-0.917	46	-3.206	43	-3.206	41
48		5	max	0.556	16	0.868	40	0.362	43	-0.041	36	0.424	15	0	47	0	47
49			min	0.101	37	-0.868	42	-0.362	41	-0.424	15	0.041	36	0	12	0	12
50	M6	1	max	0	47	0	47	0	47	0	47	0	47	0	47	0	47
51			min	0	12	0	12	0	40	0	12	0	12	0	12	0	12
52		2	max	0.146	46	0.275	47	0.598	15	0.109	43	0.109	41	2.516	15	-0.14	36
53			min	-0.146	40	-0.275	45	0.1	36	-0.109	41	-0.109	43	0.425	36	-0.827	15
54		3	max	0.148	46	0.277	47	0.602	15	0.436	47	0.436	45	10.066	15	-0.559	36
55			min	-0.148	40	-0.277	45	0.103	36	-0.436	45	-0.436	47	1.701	36	-3.308	15
56		4	max	0.107	40	0.201	41	-0.086	38	0.08	47	0.08	45	1.914	13	-0.121	38
57			min	-0.107	42	-0.201	43	-0.454	13	-0.08	45	-0.08	47	0.367	38	-0.629	13
58		5	max	0	47	0	47	0	42	0	47	0	47	0	47	0	47
59			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12
60	M7	1	max	0.595	16	0.888	40	0.37	43	4.313	46	4.857	40	12.933	41	12.933	43
61			min	0.107	37	-0.888	42	-0.37	41	-4.857	40	-4.313	46	-12.933	43	-12.933	41
62		2	max	0.585	16	0.883	40	0.368	43	3.175	46	3.718	40	9.672	41	9.672	43
63			min	0.105	37	-0.883	42	-0.368	41	-3.718	40	-3.175	46	-9.672	43	-9.672	41
64		3	max	0.575	16	0.878	40	0.366	43	2.043	46	2.585	40	6.43	41	6.43	43
65			min	0.104	37	-0.878	42	-0.366	41	-2.585	40	-2.043	46	-6.43	43	-6.43	41
66		4	max	0.565	16	0.873	40	0.364	43	0.917	46	1.459	40	3.206	41	3.206	43
67			min	0.102	37	-0.873	42	-0.364	41	-1.459	40	-0.917	46	-3.206	43	-3.206	41
68		5	max	0.556	16	0.868	40	0.362	43	-0.041	36	0.424	15	0	47	0	47
69			min	0.101	37	-0.868	42	-0.362	41	-0.424	15	0.041	36	0	12	0	12
70	M8	1	max	0	47	0	47	0	47	0	47	0	47	0	47	0	47
71			min	0	12	0	12	0	40	0	12	0	12	0	12	0	12
72		2	max	0.146	46	0.275	47	0.598	15	0.109	43	0.109	41	2.516	15	-0.14	36
73			min	-0.146	40	-0.275	45	0.1	36	-0.109	41	-0.109	43	0.425	36	-0.827	15
74		3	max	0.148	46	0.277	47	0.602	15	0.436	47	0.436	45	10.066	15	-0.559	36

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[ksi]	LC	y Shear[ksi]	LC	z Shear[ksi]	LC	y-Top[ksi]	LC	y-Bot[ksi]	LC	z-Top[ksi]	LC	z-Bot[ksi]	LC
75			min	-0.148	40	-0.277	45	0.103	36	-0.436	45	-0.436	47	1.701	36	-3.308	15
76		4	max	0.107	40	0.201	41	-0.086	38	0.08	47	0.08	45	1.914	13	-0.121	38
77			min	-0.107	42	-0.201	43	-0.454	13	-0.08	45	-0.08	47	0.367	38	-0.629	13
78		5	max	0	47	0	47	0	42	0	47	0	47	0	47	0	47
79			min	0	12	0	12	0	12	0	12	0	12	0	12	0	12

Member Section Deflections - Service

No Data to Print...

Envelope Member Section Deflections - Service

No Data to Print...

Member Section Deflections - Strength

No Data to Print...

Envelope Member Section Deflections - Strength

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
0	M11	1	max	0	47	0	47	0	47	0	47	NC	47	NC	47
1			min	0	12	0	12	0	12	0	12	NC	12	NC	12
2		2	max	0	39	0.002	46	0.005	41	0.001	47	NC	47	NC	46
3			min	0	13	-0.002	40	-0.005	43	-0.001	41	NC	12	5080.789	41
4		3	max	0	39	0.006	46	0.017	41	0.001	47	NC	47	NC	46
5			min	0	13	-0.007	40	-0.017	43	-0.001	41	3298.21	40	1425.011	41
6		4	max	0	39	0.012	46	0.034	41	0.002	47	NC	47	NC	46
7			min	0	13	-0.014	40	-0.034	43	-0.002	41	1686.498	40	708.455	41
8		5	max	0	39	0.019	46	0.053	41	0.003	47	NC	47	NC	46
9			min	-0.001	13	-0.022	40	-0.053	43	-0.003	41	1077.527	40	449.752	41
10	M12	1	max	0.019	46	0.088	43	0.023	40	0.003	43	NC	46	NC	46
11			min	-0.022	40	-0.088	41	-0.008	46	-0.003	41	353.686	41	734.048	40
12		2	max	0.019	46	0.071	43	0.011	40	0.003	43	NC	46	NC	47
13			min	-0.022	40	-0.071	41	-0.004	46	-0.003	41	472.819	41	1151.939	40
14		3	max	0.019	46	0.053	43	0.001	16	0.003	43	NC	46	NC	47
15			min	-0.022	40	-0.053	41	0	37	-0.003	41	714.555	41	2049.402	44
16		4	max	0.019	46	0.037	43	0.008	42	0.003	43	NC	46	NC	47
17			min	-0.022	40	-0.037	41	-0.006	44	-0.003	41	1426.764	41	1551.917	46
18		5	max	0.019	46	0.02	43	0.017	42	0.003	43	NC	47	NC	47
19			min	-0.022	40	-0.02	41	-0.011	44	-0.003	41	NC	12	1026.949	46
20	M3	1	max	0	47	0	47	0	47	0	47	NC	47	NC	47
21			min	0	12	0	12	0	12	0	12	NC	12	NC	12
22		2	max	0	39	0.002	46	0.005	41	0.001	47	NC	47	NC	46
23			min	0	13	-0.002	40	-0.005	43	-0.001	41	NC	12	5080.789	41
24		3	max	0	39	0.006	46	0.017	41	0.001	47	NC	47	NC	46
25			min	0	13	-0.007	40	-0.017	43	-0.001	41	3298.21	40	1425.011	41
26		4	max	0	39	0.012	46	0.034	41	0.002	47	NC	47	NC	46
27			min	0	13	-0.014	40	-0.034	43	-0.002	41	1686.498	40	708.455	41
28		5	max	0	39	0.019	46	0.053	41	0.003	47	NC	47	NC	46
29			min	-0.001	13	-0.022	40	-0.053	43	-0.003	41	1077.527	40	449.752	41
30	M4	1	max	0.019	46	0.088	43	0.023	40	0.003	43	NC	46	NC	46
31			min	-0.022	40	-0.088	41	-0.008	46	-0.003	41	353.686	45	734.048	40
32		2	max	0.019	46	0.071	43	0.011	40	0.003	43	NC	46	NC	47
33			min	-0.022	40	-0.071	41	-0.004	46	-0.003	41	472.819	45	1151.939	40
34		3	max	0.019	46	0.053	43	0.001	16	0.003	43	NC	46	NC	47
35			min	-0.022	40	-0.053	41	0	37	-0.003	41	714.555	41	2049.402	44

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
36		4	max	0.019	46	0.037	43	0.008	42	0.003	43	NC	46	NC	47
37			min	-0.022	40	-0.037	41	-0.006	44	-0.003	41	1426.764	41	1551.917	46
38		5	max	0.019	46	0.02	43	0.017	42	0.003	43	NC	47	NC	47
39			min	-0.022	40	-0.02	41	-0.011	44	-0.003	41	NC	12	1026.949	46
40	M5	1	max	0	47	0	47	0	47	0	47	NC	47	NC	47
41			min	0	12	0	12	0	12	0	12	NC	12	NC	12
42		2	max	0	39	0.002	46	0.005	41	0.001	47	NC	47	NC	46
43			min	0	13	-0.002	40	-0.005	43	-0.001	41	NC	12	5080.789	41
44		3	max	0	39	0.006	46	0.017	41	0.001	47	NC	47	NC	46
45			min	0	13	-0.007	40	-0.017	43	-0.001	41	3298.21	40	1425.011	41
46		4	max	0	39	0.012	46	0.034	41	0.002	47	NC	47	NC	46
47			min	0	13	-0.014	40	-0.034	43	-0.002	41	1686.498	40	708.455	41
48		5	max	0	39	0.019	46	0.053	41	0.003	47	NC	47	NC	46
49			min	-0.001	13	-0.022	40	-0.053	43	-0.003	41	1077.527	40	449.752	41
50	M6	1	max	0.019	46	0.088	43	0.023	40	0.003	43	NC	46	NC	46
51			min	-0.022	40	-0.088	41	-0.008	46	-0.003	41	353.686	45	734.048	40
52		2	max	0.019	46	0.071	43	0.011	40	0.003	43	NC	46	NC	47
53			min	-0.022	40	-0.071	41	-0.004	46	-0.003	41	472.819	45	1151.939	40
54		3	max	0.019	46	0.053	43	0.001	16	0.003	43	NC	46	NC	47
55			min	-0.022	40	-0.053	41	0	37	-0.003	41	714.555	41	2049.402	44
56		4	max	0.019	46	0.037	43	0.008	42	0.003	43	NC	46	NC	47
57			min	-0.022	40	-0.037	41	-0.006	44	-0.003	41	1426.764	41	1551.917	46
58		5	max	0.019	46	0.02	43	0.017	42	0.003	43	NC	47	NC	47
59			min	-0.022	40	-0.02	41	-0.011	44	-0.003	41	NC	12	1026.949	46
60	M7	1	max	0	47	0	47	0	47	0	47	NC	47	NC	47
61			min	0	12	0	12	0	12	0	12	NC	12	NC	12
62		2	max	0	39	0.002	46	0.005	41	0.001	47	NC	47	NC	46
63			min	0	13	-0.002	40	-0.005	43	-0.001	41	NC	12	5080.789	41
64		3	max	0	39	0.006	46	0.017	41	0.001	47	NC	47	NC	46
65			min	0	13	-0.007	40	-0.017	43	-0.001	41	3298.21	40	1425.011	41
66		4	max	0	39	0.012	46	0.034	41	0.002	47	NC	47	NC	46
67			min	0	13	-0.014	40	-0.034	43	-0.002	41	1686.498	40	708.455	41
68		5	max	0	39	0.019	46	0.053	41	0.003	47	NC	47	NC	46
69			min	-0.001	13	-0.022	40	-0.053	43	-0.003	41	1077.527	40	449.752	41
70	M8	1	max	0.019	46	0.088	43	0.023	40	0.003	43	NC	46	NC	46
71			min	-0.022	40	-0.088	41	-0.008	46	-0.003	41	353.686	45	734.048	40
72		2	max	0.019	46	0.071	43	0.011	40	0.003	43	NC	46	NC	47
73			min	-0.022	40	-0.071	41	-0.004	46	-0.003	41	472.819	45	1151.939	40
74		3	max	0.019	46	0.053	43	0.001	16	0.003	43	NC	46	NC	47
75			min	-0.022	40	-0.053	41	0	37	-0.003	41	714.555	41	2049.402	44
76		4	max	0.019	46	0.037	43	0.008	42	0.003	43	NC	46	NC	47
77			min	-0.022	40	-0.037	41	-0.006	44	-0.003	41	1426.764	41	1551.917	46
78		5	max	0.019	46	0.02	43	0.017	42	0.003	43	NC	47	NC	47
79			min	-0.022	40	-0.02	41	-0.011	44	-0.003	41	NC	12	1026.949	46

Beam Deflections

No Data to Print...

Envelope Beam Deflections

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
0	M12	1	max	1	0	NC	47
1		1	min	0	0	NC	12
2		2	max	2	0	NC	47
3		2	min	1.021	0	NC	12

Envelope Beam Deflections (Continued)

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
4	M4	1	max	1	0	NC	47
5		1	min	0	0	NC	12
6		2	max	2	0	NC	47
7		2	min	1.021	0	NC	12
8	M6	1	max	1	0	NC	47
9		1	min	0	0	NC	12
10		2	max	2	0	NC	47
11		2	min	1.021	0	NC	12
12	M8	1	max	1	0	NC	47
13		1	min	0	0	NC	12
14		2	max	2	0	NC	47
15		2	min	1.021	0	NC	12

Beam Deflection Checks

No Data to Print...

Envelope Beam Deflection Checks

No Data to Print...

Member Torsion Stresses

No Data to Print...

Envelope Member Torsion Stresses

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
0	M11	1	max	0.103	45	0	47	0	47	0.347	45	3.43	45	3.43	45
1			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	43	-3.43	43
2		2	max	0.103	45	0.51	45	0	47	0.284	45	1.594	45	1.594	45
3			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	43	-1.594	43
4		3	max	0.103	45	0.672	45	0	47	0.264	45	0	47	0	47
5			min	-0.103	43	-0.672	43	0	12	-0.264	43	0	12	0	12
6		4	max	0.103	45	0.51	45	0	47	0.284	45	1.594	47	1.594	47
7			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	41	-1.594	41
8		5	max	0.103	45	0	47	0	47	0.347	45	3.43	47	3.43	47
9			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	41	-3.43	41
10	M12	1	max	0	47	0	47	0	47	0	47	0	47	0	47
11			min	0	12	0	12	0	12	0	12	0	12	0	12
12		2	max	0	47	0	47	0	47	0	47	0	47	0	47
13			min	0	12	0	12	0	12	0	12	0	12	0	12
14		3	max	0	47	0	47	0	47	0	47	0	47	0	47
15			min	0	12	0	12	0	12	0	12	0	12	0	12
16		4	max	0	47	0	47	0	47	0	47	0	47	0	47
17			min	0	12	0	12	0	12	0	12	0	12	0	12
18		5	max	0	47	0	47	0	47	0	47	0	47	0	47
19			min	0	12	0	12	0	12	0	12	0	12	0	12
20	M3	1	max	0.103	45	0	47	0	47	0.347	45	3.43	45	3.43	45
21			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	43	-3.43	43
22		2	max	0.103	45	0.51	45	0	47	0.284	45	1.594	45	1.594	45
23			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	43	-1.594	43
24		3	max	0.103	45	0.672	45	0	47	0.264	45	0	47	0	47
25			min	-0.103	43	-0.672	43	0	12	-0.264	43	0	12	0	12
26		4	max	0.103	45	0.51	45	0	47	0.284	45	1.594	47	1.594	47
27			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	41	-1.594	41
28		5	max	0.103	45	0	47	0	47	0.347	45	3.43	47	3.43	47

Envelope Member Torsion Stresses (Continued)

	Member	Sec		Torque[k-ft]	LC	Torsion Shear[ksi]	LC	y-y Warp Shear[ksi]	LC	z-z Warp Shear[ksi]	LC	z-Top Warp Bend[ksi]	LC	z-Bot Warp Bend[ksi]	LC
29			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	41	-3.43	41
30	M4	1	max	0	47	0	47	0	47	0	47	0	47	0	47
31			min	0	12	0	12	0	12	0	12	0	12	0	12
32		2	max	0	47	0	47	0	47	0	47	0	47	0	47
33			min	0	12	0	12	0	12	0	12	0	12	0	12
34		3	max	0	47	0	47	0	47	0	47	0	47	0	47
35			min	0	12	0	12	0	12	0	12	0	12	0	12
36		4	max	0	47	0	47	0	47	0	47	0	47	0	47
37			min	0	12	0	12	0	12	0	12	0	12	0	12
38		5	max	0	47	0	47	0	47	0	47	0	47	0	47
39			min	0	12	0	12	0	12	0	12	0	12	0	12
40	M5	1	max	0.103	45	0	47	0	47	0.347	45	3.43	45	3.43	45
41			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	43	-3.43	43
42		2	max	0.103	45	0.51	45	0	47	0.284	45	1.594	45	1.594	45
43			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	43	-1.594	43
44		3	max	0.103	45	0.672	45	0	47	0.264	45	0	47	0	47
45			min	-0.103	43	-0.672	43	0	12	-0.264	43	0	12	0	12
46		4	max	0.103	45	0.51	45	0	47	0.284	45	1.594	47	1.594	47
47			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	41	-1.594	41
48		5	max	0.103	45	0	47	0	47	0.347	45	3.43	47	3.43	47
49			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	41	-3.43	41
50	M6	1	max	0	47	0	47	0	47	0	47	0	47	0	47
51			min	0	12	0	12	0	12	0	12	0	12	0	12
52		2	max	0	47	0	47	0	47	0	47	0	47	0	47
53			min	0	12	0	12	0	12	0	12	0	12	0	12
54		3	max	0	47	0	47	0	47	0	47	0	47	0	47
55			min	0	12	0	12	0	12	0	12	0	12	0	12
56		4	max	0	47	0	47	0	47	0	47	0	47	0	47
57			min	0	12	0	12	0	12	0	12	0	12	0	12
58		5	max	0	47	0	47	0	47	0	47	0	47	0	47
59			min	0	12	0	12	0	12	0	12	0	12	0	12
60	M7	1	max	0.103	45	0	47	0	47	0.347	45	3.43	45	3.43	45
61			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	43	-3.43	43
62		2	max	0.103	45	0.51	45	0	47	0.284	45	1.594	45	1.594	45
63			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	43	-1.594	43
64		3	max	0.103	45	0.672	45	0	47	0.264	45	0	47	0	47
65			min	-0.103	43	-0.672	43	0	12	-0.264	43	0	12	0	12
66		4	max	0.103	45	0.51	45	0	47	0.284	45	1.594	47	1.594	47
67			min	-0.103	43	-0.51	43	0	12	-0.284	43	-1.594	41	-1.594	41
68		5	max	0.103	45	0	47	0	47	0.347	45	3.43	47	3.43	47
69			min	-0.103	43	0	12	0	12	-0.347	43	-3.43	41	-3.43	41
70	M8	1	max	0	47	0	47	0	47	0	47	0	47	0	47
71			min	0	12	0	12	0	12	0	12	0	12	0	12
72		2	max	0	47	0	47	0	47	0	47	0	47	0	47
73			min	0	12	0	12	0	12	0	12	0	12	0	12
74		3	max	0	47	0	47	0	47	0	47	0	47	0	47
75			min	0	12	0	12	0	12	0	12	0	12	0	12
76		4	max	0	47	0	47	0	47	0	47	0	47	0	47
77			min	0	12	0	12	0	12	0	12	0	12	0	12
78		5	max	0	47	0	47	0	47	0	47	0	47	0	47
79			min	0	12	0	12	0	12	0	12	0	12	0	12

Member Suggested Designs

	Section Set/Member	Current Shape	Suggested Shape	Controlling Criteria	Use Suggested?
0	M11	W4X13	W6X8.5	Strength	Yes
1	M12	C9X13.4	C3X3.5	Strength	Yes
2	M3	W4X13	W6X8.5	Strength	Yes
3	M4	C9X13.4	C3X3.5	Strength	Yes
4	M5	W4X13	W6X8.5	Strength	Yes
5	M6	C9X13.4	C3X3.5	Strength	Yes
6	M7	W4X13	W6X8.5	Strength	Yes
7	M8	C9X13.4	C3X3.5	Strength	Yes

AISC 15TH (360-16): LRFD Member Steel Code Checks

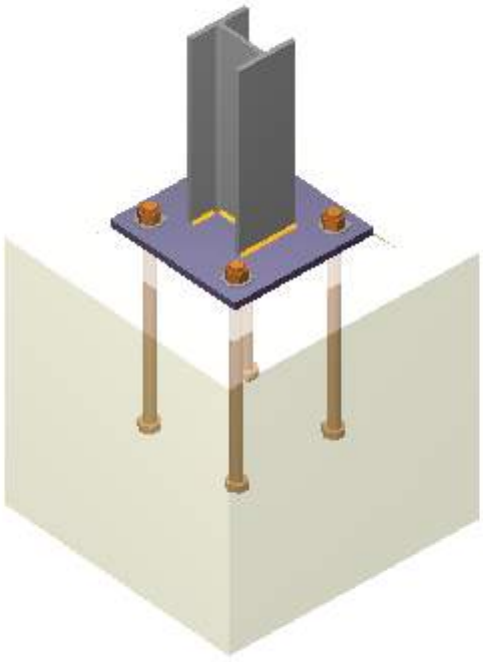
No Data to Print...

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
0	M11	W4X13	0.248	0	43	0.048	1	z	43	161.835	172.35	10.95	23.55	1.001	H1-1b
1	M12	C9X13.4	0.14	1	15	0.022	1	z	15	161.261	177.3	5.741	47.25	1	H1-1b
2	M3	W4X13	0.248	0	43	0.048	1	z	43	161.835	172.35	10.95	23.55	1.001	H1-1b
3	M4	C9X13.4	0.14	1	15	0.022	1	z	15	161.261	177.3	5.741	47.25	1	H1-1b
4	M5	W4X13	0.248	0	43	0.048	1	z	43	161.835	172.35	10.95	23.55	1.001	H1-1b
5	M6	C9X13.4	0.14	1	15	0.022	1	z	15	161.261	177.3	5.741	47.25	1	H1-1b
6	M7	W4X13	0.248	0	43	0.048	1	z	43	161.835	172.35	10.95	23.55	1.001	H1-1b
7	M8	C9X13.4	0.14	1	15	0.022	1	z	15	161.261	177.3	5.741	47.25	1	H1-1b

Frequencies and Participation

No Data to Print...



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Steel Connections Results

Connection: 1 - Fixed biaxial BP

Family: Column - Base (CB)
Type: Base plate
Description: PS-5 Baseplate

Design code: AISC 360-16 LRFD, ACI 318-19

Demands

Description	Pu [kip]	Mu22 [kip*ft]	Mu33 [kip*ft]	Vu2 [kip]	Vu3 [kip]	Load type
DL	0.00	3.50	3.00	1.50	1.75	Design

Design calculations

Design for major axis
Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	3	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	3.98	0.53	DL	**0.13**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	2.81	2.33	DL	**0.83**	DG1 Sec 3.1.2
Flexural yielding (tension interface)	[Kip*ft/ft]	2.81	2.33	DL	**0.83**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	12.31	DL	**0.16**	DG1 p. 35
Elastic method weld shear capacity	[Kip/ft]	50.12	3.03	DL	**0.06**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	15.51	DL	**0.21**	Sec. J2.4

Ratio	0.83

Anchors

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	7.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	5.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	17.51	✔	

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	4.19	DL	**0.29**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	13.78	4.19	DL	**0.30**	Sec. 17.5.2
Breakout of group of anchors in tension	[Kip]	16.31	7.56	DL	**0.46**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	20.51	4.19	DL	**0.20**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	0.58	DL	**0.10**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of anchor in shear	[Kip]	5.40	0.38	DL	**0.07**	Sec. 17.5.2
Breakout of group of anchors in shear	[Kip]	9.18	1.50	DL	**0.16**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	27.56	0.38	DL	**0.01**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	49.94	1.50	DL	**0.03**	Sec. 17.5.2
Interaction of tensile and shear forces	[Kip]	1.20	0.00	DL	**0.00**	Sec. 17.8.1
Ratio	**0.46**					

Design for minor axis

Base plate (AISC 360-16 LRFD)

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Base plate						
Distance from anchor to edge	[in]	1.12	0.25	--	✔	
Weld size	[1/16in]	3	3	--	✔	table J2.4

Design Check

Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Concrete base						
Axial bearing	[Kip/in2]	3.98	0.53	DL	**0.13**	DG1 3.1.1
Base plate						
Flexural yielding (bearing interface)	[Kip*ft/ft]	2.81	2.02	DL	**0.72**	DG1 Sec 3.1.2
Flexural yielding (tension interface)	[Kip*ft/ft]	2.81	2.33	DL	**0.83**	DG1 Eq. 3.3.13
Column						
Weld capacity	[Kip/ft]	75.17	12.31	DL	**0.16**	DG1 p. 35
Elastic method weld shear capacity	[Kip/ft]	50.12	1.47	DL	**0.03**	Sec. J2.4
Elastic method weld axial capacity	[Kip/ft]	75.17	45.97	DL	**0.61**	Sec. J2.4

Ratio	0.83

Anchors

Geometric Considerations

Dimensions	Unit	Value	Min.	Max.	Sta.	References
Anchors						
Anchor spacing	[in]	7.00	3.00	--	✔	Sec. 17.9.2
Concrete cover	[in]	5.12	3.00	--	✔	Sec. 20.5.1.3.1
Effective length	[in]	12.49	--	17.51	✔	

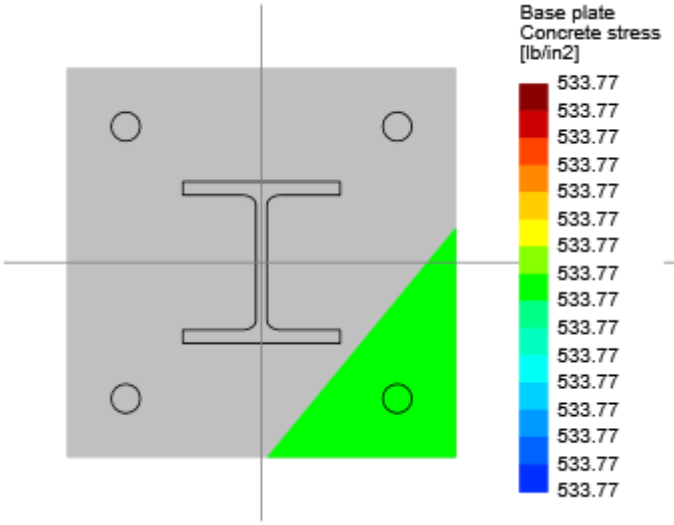
Design Check

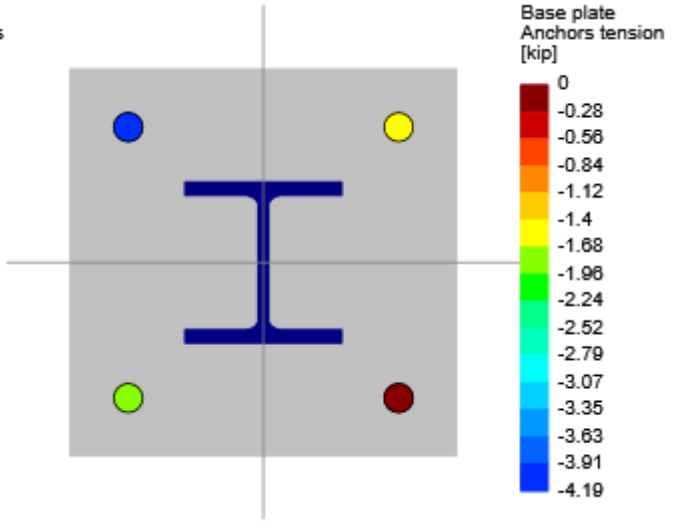
Verification	Unit	Capacity	Demand	Ctrl EQ	Ratio	References
Anchor tension	[Kip]	14.55	4.19	DL	**0.29**	Eq. 17.6.1.2
Breakout of anchor in tension	[Kip]	13.78	4.19	DL	**0.30**	Sec. 17.5.2
Breakout of group of anchors in tension	[Kip]	16.31	7.56	DL	**0.46**	Sec. 17.5.2
Pullout of anchor in tension	[Kip]	20.51	4.19	DL	**0.20**	Sec. 17.5.2
Anchor shear	[Kip]	6.05	0.58	DL	**0.10**	Eq. 17.7.1.2b, Sec. 17.7.1.2.1
Breakout of anchor in shear	[Kip]	5.40	0.44	DL	**0.08**	Sec. 17.5.2
Breakout of group of anchors in shear	[Kip]	9.18	1.75	DL	**0.19**	Sec. 17.5.2
Pryout of anchor in shear	[Kip]	27.56	0.44	DL	**0.02**	Sec. 17.5.2
Pryout of group of anchors in shear	[Kip]	49.94	1.75	DL	**0.04**	Sec. 17.5.2
Interaction of tensile and shear forces	[Kip]	1.20	0.00	DL	**0.00**	Sec. 17.8.1
Ratio	**0.46**					

Global critical strength ratio	**0.83**

Biaxial

Maximum compression and tension (DL)





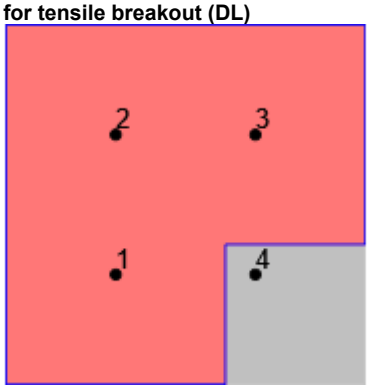
Maximum bearing pressure	533.77	[lb/in2]
Minimum bearing pressure	533.77	[lb/in2]
Maximum anchor tension	4.19	[kip]
Minimum anchor tension	0.00	[kip]
Neutral axis angle	-129.48	[deg]
Neutral axis location	3.73	[in]
Bearing length	3.73	[in]

Anchors tensions

Anchor	Transverse [in]	Longitudinal [in]	Shear [kip]	Tension [kip]
1	-3.50	-3.50	0.38	1.93
2	-3.50	3.50	0.38	4.19
3	3.50	3.50	0.38	1.44
4	3.50	-3.50	0.38	0.00

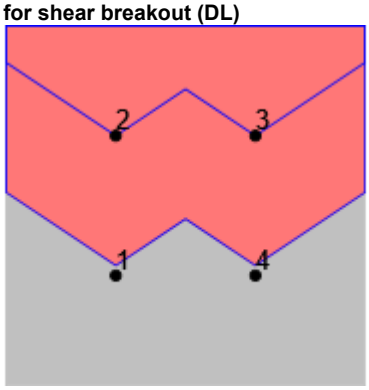
Major axis

Results for tensile breakout (DL)



Group	Area [in2]	Tension [kip]	Anchors
1	275.00	7.56	1, 2, 3

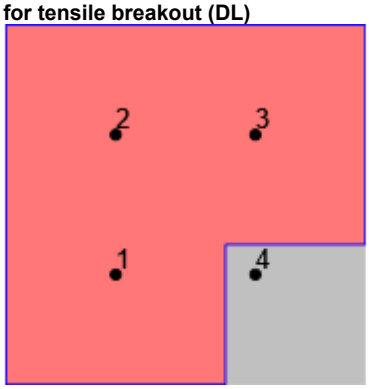
Results for shear breakout (DL)



Group	Area [in2]	Shear [kip]	Anchors
1	324.00	1.50	1, 2, 3, 4
2	148.50	0.75	2, 3

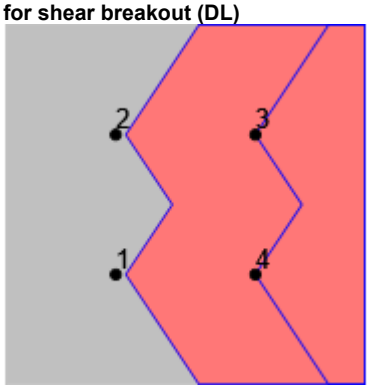
Minor axis

Results for tensile breakout (DL)



Group	Area [in2]	Tension [kip]	Anchors
1	275.00	7.56	1, 2, 3

Results for shear breakout (DL)



Group	Area [in2]	Shear [kip]	Anchors
1	324.00	1.75	1, 2, 3, 4
2	148.50	0.88	3, 4

Current Date: 11/29/2023 8:56 AM
Units system: English
File name: \\bmcd\dfs\Clients\ANF\PortlandPort\PDX\153929_FACILITYIMPRV\Design\Struc\Dsgn\05 Pipe Supports\Miscellaneous Connections.rcnx

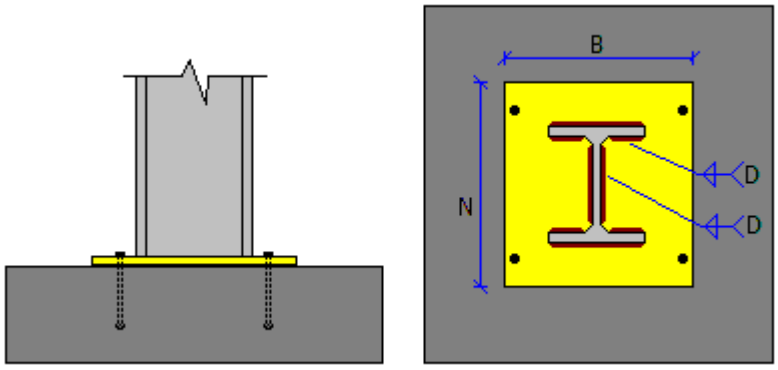
Steel Connections Data

Connection: 1 - Fixed biaxial BP

Family: Column - Base (CB)
Type: Base plate
Description: PS-5 Baseplate

General information

Connector



Members

Column

Column type	:	Prismatic member
Section	:	W 4X13
Material	:	A992 Gr50
Longitudinal offset	:	0 in
Transversal offset	:	0 in

Base plate

Base plate

Plate shape	:	Rectangular
Connection type	:	Unstiffened
Position on the support	:	Center
N: Longitudinal dimension	:	10 in
B: Transversal dimension	:	10 in
Thickness	:	0.5 in
Material	:	A572 Gr50
Column weld	:	E70XX
Outer welds flanges only	:	No
D: Column weld size (1/16 in)	:	3
Override A2/A1 ratio	:	No
Include shear lug	:	No

Support

With pedestal	:	No
Longitudinal dimension	:	18 in
Transversal dimension	:	18 in
Thickness	:	18 in
Material	:	C 4-60
Include grouting	:	Yes
Grout thickness	:	1 in

Anchor

Anchor position	:	Longitudinal position
Rows number per side	:	1
Anchors per row	:	2
Longitudinal edge distance on the plate	:	1.5 in
Transverse edge distance on the plate	:	1.5 in
Anchor type	:	Headed
Head type	:	Hexagonal
Include lock nut	:	No
Anchor	:	3/4"
Effective embedment depth	:	12 in
Total length	:	14.49 in
Material	:	F1554 Gr36
Fy	:	36 kip/in2
Fu	:	58 kip/in2
Cracked concrete	:	No
Brittle steel	:	No
Anchors welded to base plate	:	No

Anchor reinforcement

Type of reinforcement	:	Primary
Tension reinforcement	:	No
Shear reinforcement	:	No

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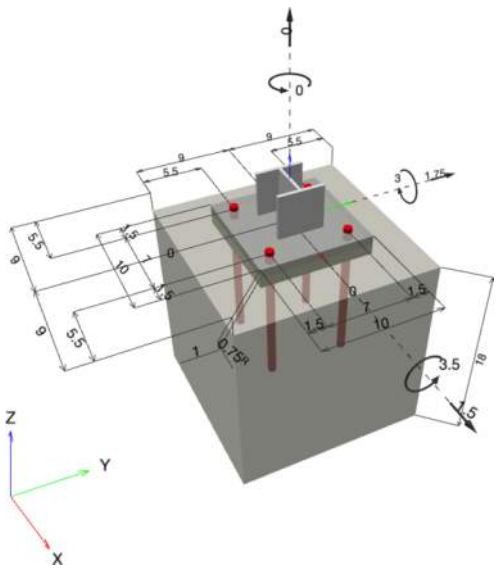
Specifier's comments: W4 Anchorage - PS-5

1 Input data

Anchor type and diameter:	**Heavy Hex Head ASTM F 1554 GR. 36 3/4**
Item number:	not available
Effective embedment depth:	h_{ef} = 11.000 in.
Material:	ASTM F 1554
Evaluation Service Report:	Hilti Technical Data
Issued I Valid:	- | -
Proof:	Design Method ACI 318-19 / CIP
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; e_b = 1.000 in.; t = 0.750 in.
	Hilti Grout: CB-G EG, epoxy, $f_{c,Grout}$ = 14,939 psi
Anchor plate[R] :	l_x x l_y x t = 10.000 in. x 10.000 in. x 0.750 in.; (Recommended plate thickness: not calculated)
Profile:	W shape (AISC), W4X13; (L x W x T x FT) = 4.160 in. x 4.060 in. x 0.280 in. x 0.345 in.
Base material:	cracked concrete, Custom, f_c' = 4,500 psi; h = 18.000 in.
Reinforcement:	tension: not present, shear: not present;
	edge reinforcement: > No. 4 bar with stirrups
Seismic loads (cat. C, D, E, or F)	Tension load: yes (17.10.5.3 (d))
	Shear load: yes (17.10.6.3 (c))

[R] - The anchor calculation is based on a rigid anchor plate assumption.

Geometry [in.] & Loading [kip, ft.kip]



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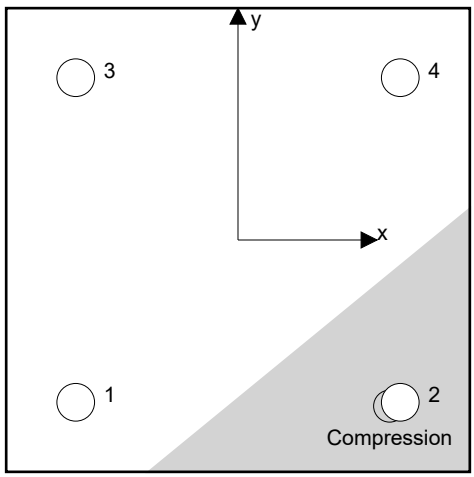
1.1 Design results

Case	Description	Forces [kip] / Moments [ft.kip]	Seismic	Max. Util. Anchor [%]
1	Seismic	N = 0.000; V_x = 1.500; V_y = 1.750; M_x = 3.50000; M_y = 3.00000; M_z = 0.00000;	yes	100

2 Load case/Resulting anchor forces



Anchor reactions [kip]
Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	1.194	0.576	0.375	0.438
2	0.000	0.576	0.375	0.438
3	4.183	0.576	0.375	0.438
4	1.733	0.576	0.375	0.438

max. concrete compressive strain: 0.25 [‰]
max. concrete compressive stress: 1,087 [psi]
resulting tension force in (x/y)=(0.000/0.000): 0.000 [kip]
resulting compression force in (x/y)=(8.270/1.417): 7.110 [kip]

Anchor forces are calculated based on the assumption of a rigid anchor plate.

3 Tension load

	Load N_{ua} [kip]	Capacity ϕ N_n [kip]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	4.183	14.529	29	OK
Pullout Strength*	4.183	17.218	25	OK
Concrete Breakout Failure**	7.110	10.002	72	OK
Concrete Side-Face Blowout, direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (anchors in tension)

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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3.1 Steel Strength

$N_{sa} = A_{se,N} f_{uta}$ ACI 318-19 Eq. (17.6.1.2)
$\phi N_{sa} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.33	58,000

Calculations

N_{sa} [kip]
19.372

Results

N_{sa} [kip]	ϕ_{steel}	ϕN_{sa} [kip]	N_{ua} [kip]
19.372	0.750	14.529	4.183

3.2 Pullout Strength

$N_{pN} = \psi_{c,p} N_p$ ACI 318-19 Eq. (17.6.3.1)
$N_p = 8 A_{brg} f'_c$ ACI 318-19 Eq. (17.6.3.2.2a)
$\phi N_{pN} \geq N_{ua}$ ACI 318-19 Table 17.5.2

Variables

$\psi_{c,p}$	A_{brg} [in.^{2}]	λ_a	f'_c [psi]
1.000	0.91	1.000	4,500

Calculations

N_p [kip]
32.796

Results

N_{pn} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕN_{pn} [kip]	N_{ua} [kip]
32.796	0.700	0.750	1.000	17.218	4.183

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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3.3 Concrete Breakout Failure

$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ec,N} \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b$ — ACI 318-19 Eq. (17.6.2.1b)

$\phi N_{cbg} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e'_N}{3 h_{ef}}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c \lambda_a \sqrt{f'_c} h_{ef}^{1.5}$ — ACI 318-19 Eq. (17.6.2.2.1)

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
3.667	0.627	1.158	5.500	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
-	24	1.000	4,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
275.00	121.00	0.898	0.826	1.000	1.000	11.304

Results

N_{cbg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕN_{cbg} [kip]	N_{ua} [kip]
19.051	0.700	0.750	1.000	10.002	7.110

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4 Shear load

	Load V_{ua} [kip]	Capacity ϕ V_n [kip]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	0.576	6.044	10	OK
Steel failure (with lever arm)*	0.576	0.955	61	OK
Pryout Strength**	2.305	42.375	6	OK
Concrete edge failure in direction y+**	2.305	7.493	31	OK

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

$V_{sa} = 0.6\ A_{se,V}\ f_{uta}$ ACI 318-19 Eq. (17.7.1.2b)
$\phi\ V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.33	58,000

Calculations

V_{sa} [kip]
11.623

Results

V_{sa} [kip]	ϕ_{steel}	ϕ_{eb}	$\phi\ V_{sa,eq}$ [kip]	V_{ua} [kip]
11.623	0.650	0.800	6.044	0.576

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.2 Steel failure (with lever arm)

V_s^M	$= \frac{\alpha_M \cdot M_s}{L_b}$	bending equation for stand-off
M_s	$= M_s^0 \left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	resultant flexural resistance of anchor
M_s^0	$= (1.2)\ (S)\ (f_{u,min})$	characteristic flexural resistance of anchor
$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$		reduction for tensile force acting simultaneously with a shear force on the anchor
S	$= \frac{\pi (d)^3}{32}$	elastic section modulus of anchor bolt at concrete surface
L_b	$= z + (n)(d_0)$	internal lever arm adjusted for spalling of the surface concrete
ϕV_s^M	$\geq V_{ua}$	ACI 318-19 Table 17.5.2

Variables

α_M	$f_{u,min}$ [psi]	N_{ua} [kip]	ϕN_{sa} [kip]	z [in.]	n	d_0 [in.]
2.00	58,000	4.183	14.529	1.375	0.500	0.750

Calculations

M_s^0 [ft.kip]	$\left(1 - \frac{N_{ua}}{\phi N_{sa}}\right)$	M_s [ft.kip]	L_b [in.]
0.15046	0.712	0.10715	1.750

Results

V_s^M [kip]	ϕ_{steel}	ϕV_s^M [kip]	V_{ua} [kip]
1.469	0.650	0.955	0.576

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.3 Pryout Strength

$V_{cpg} = k_{cp} \left[\left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ec,N} \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \right]$ ACI 318-19 Eq. (17.7.3.1b)

$\phi V_{cpg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e'_N}{3 h_{ef}}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.3.1)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = \text{MAX}\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c \lambda_a \sqrt{f'_c} h_{ef}^{1.5}$ ACI 318-19 Eq. (17.6.2.2.1)

Variables

k_{cp}	h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$c_{a,min}$ [in.]
2	3.667	0.000	0.000	5.500

$\psi_{c,N}$	c_{ac} [in.]	k_c	λ_a	f'_c [psi]
1.000	∞	24	1.000	4,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [kip]
324.00	121.00	1.000	1.000	1.000	1.000	11.304

Results

V_{cpg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕV_{cpg} [kip]	V_{ua} [kip]
60.536	0.700	1.000	1.000	42.375	2.305

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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4.4 Concrete edge failure in direction y+

$V_{cbg} = \left(\frac{A_{Vc}}{A_{Vc0}}\right) \Psi_{ec,V} \Psi_{ed,V} \Psi_{c,V} \Psi_{h,V} \Psi_{parallel,V} V_b$ ACI 318-19 Eq. (17.7.2.1b)

$\phi V_{cbg} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Vc} see ACI 318-19, Section 17.7.2.1, Fig. R 17.7.2.1(b)

$A_{Vc0} = 4.5 c_{a1}^2$ ACI 318-19 Eq. (17.7.2.1.3)

$\Psi_{ec,V} = \left(\frac{1}{1 + \frac{e'_v}{1.5c_{a1}}}\right) \leq 1.0$ ACI 318-19 Eq. (17.7.2.3.1)

$\Psi_{ed,V} = 0.7 + 0.3\left(\frac{c_{a2}}{1.5c_{a1}}\right) \leq 1.0$ ACI 318-19 Eq. (17.7.2.4.1b)

$\Psi_{h,V} = \sqrt{\frac{1.5c_{a1}}{h_a}} \geq 1.0$ ACI 318-19 Eq. (17.7.2.6.1)

$V_b = 9 \lambda_a \sqrt{f'_c} c_{a1}^{1.5}$ ACI 318-19 Eq. (17.7.2.2.1b)

Variables

c_{a1} [in.]	c_{a2} [in.]	e_{cV} [in.]	$\Psi_{c,V}$	h_a [in.]
5.500	5.500	0.000	1.400	18.000

l_e [in.]	λ_a	d_a [in.]	f'_c [psi]	$\Psi_{parallel,V}$
6.000	1.000	0.750	4,500	1.000

Calculations

A_{Vc} [in.^{2}]	A_{Vc0} [in.^{2}]	$\Psi_{ec,V}$	$\Psi_{ed,V}$	$\Psi_{h,V}$	V_b [kip]
148.50	136.12	1.000	0.900	1.000	7.787

Results

V_{cbg} [kip]	$\phi_{concrete}$	$\phi_{seismic}$	$\phi_{nonductile}$	ϕV_{cbg} [kip]	V_{ua} [kip]
10.704	0.700	1.000	1.000	7.493	2.305

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.711	0.603	5/3	100	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- ACI 318 does not specifically address anchor bending when a stand-off condition exists. PROFIS Engineering calculates a shear load corresponding to anchor bending when stand-off exists and includes the results as a shear Design Strength!
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- "An anchor design approach for structures assigned to Seismic Design Category C, D, E or F is given in ACI 318-19, Chapter 17, Section 17.10.5.3 (a) that requires the governing design strength of an anchor or group of anchors be limited by ductile steel failure. If this is NOT the case, the connection design (tension) shall satisfy the provisions of Section 17.10.5.3 (b), Section 17.10.5.3 (c), or Section 17.10.5.3 (d). The connection design (shear) shall satisfy the provisions of Section 17.10.6.3 (a), Section 17.10.6.3 (b), or Section 17.10.6.3 (c)."
- Section 17.10.5.3 (b) / Section 17.10.6.3 (a) require the attachment the anchors are connecting to the structure be designed to undergo ductile yielding at a load level corresponding to anchor forces no greater than the controlling design strength. Section 17.10.5.3 (c) / Section 17.10.6.3 (b) waive the ductility requirements and require the anchors to be designed for the maximum tension / shear that can be transmitted to the anchors by a non-yielding attachment. Section 17.10.5.3 (d) / Section 17.10.6.3 (c) waive the ductility requirements and require the design strength of the anchors to equal or exceed the maximum tension / shear obtained from design load combinations that include E, with E increased by ω_0.

Fastening meets the design criteria!

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Company:		Page:	10
Address:		Specifier:	
Phone I Fax:	|	E-Mail:	
Design:	PS-5	Date:	11/29/2023
Fastening point:			

7 Installation data

Profile: W shape (AISC), W4X13; (L x W x T x FT) = 4.160 in. x 4.060 in. x 0.280 in. x 0.345 in.

Hole diameter in the fixture: d_f = 0.812 in.

Plate thickness (input): 0.750 in.

Recommended plate thickness: not calculated

Anchor type and diameter: Heavy Hex Head ASTM F 1554 GR. 36 3/4

Item number: not available

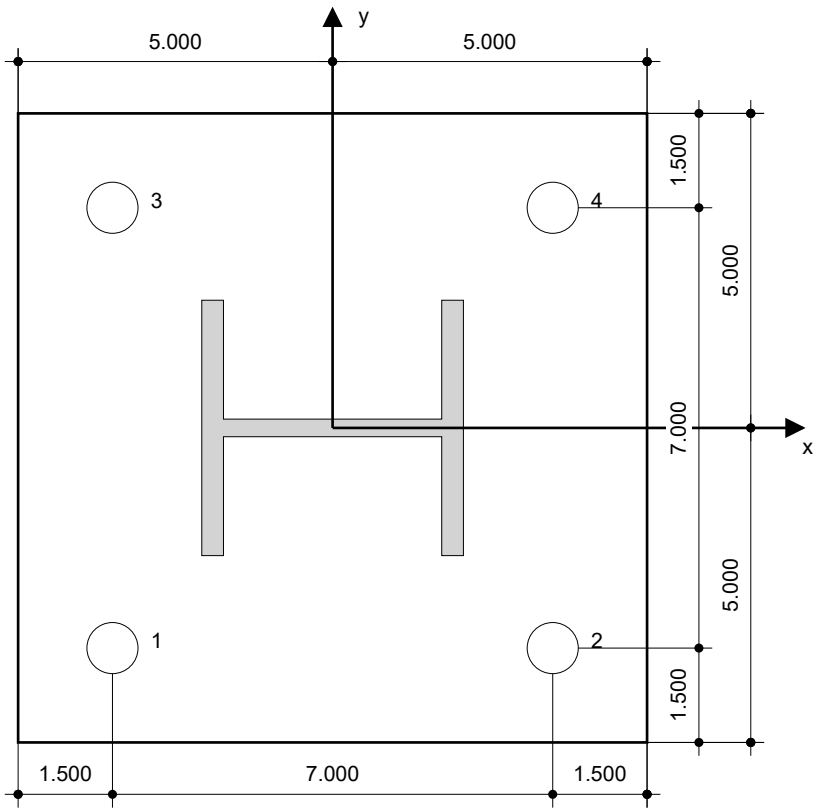
Maximum installation torque: -

Hole diameter in the base material: - in.

Hole depth in the base material: 11.000 in.

Minimum thickness of the base material: 12.000 in.

Hilti Heavy Hex Head headed stud anchor with 11 in embedment, 3/4, Steel galvanized, installation per instruction for use



Coordinates Anchor [in.]

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	-3.500	-3.500	5.500	12.500	5.500	12.500
2	3.500	-3.500	12.500	5.500	5.500	12.500
3	-3.500	3.500	5.500	12.500	12.500	5.500
4	3.500	3.500	12.500	5.500	12.500	5.500

Input data and results must be checked for conformity with the existing conditions and for plausibility!
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8 Remarks; Your Cooperation Duties

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Input data and results must be checked for conformity with the existing conditions and for plausibility!
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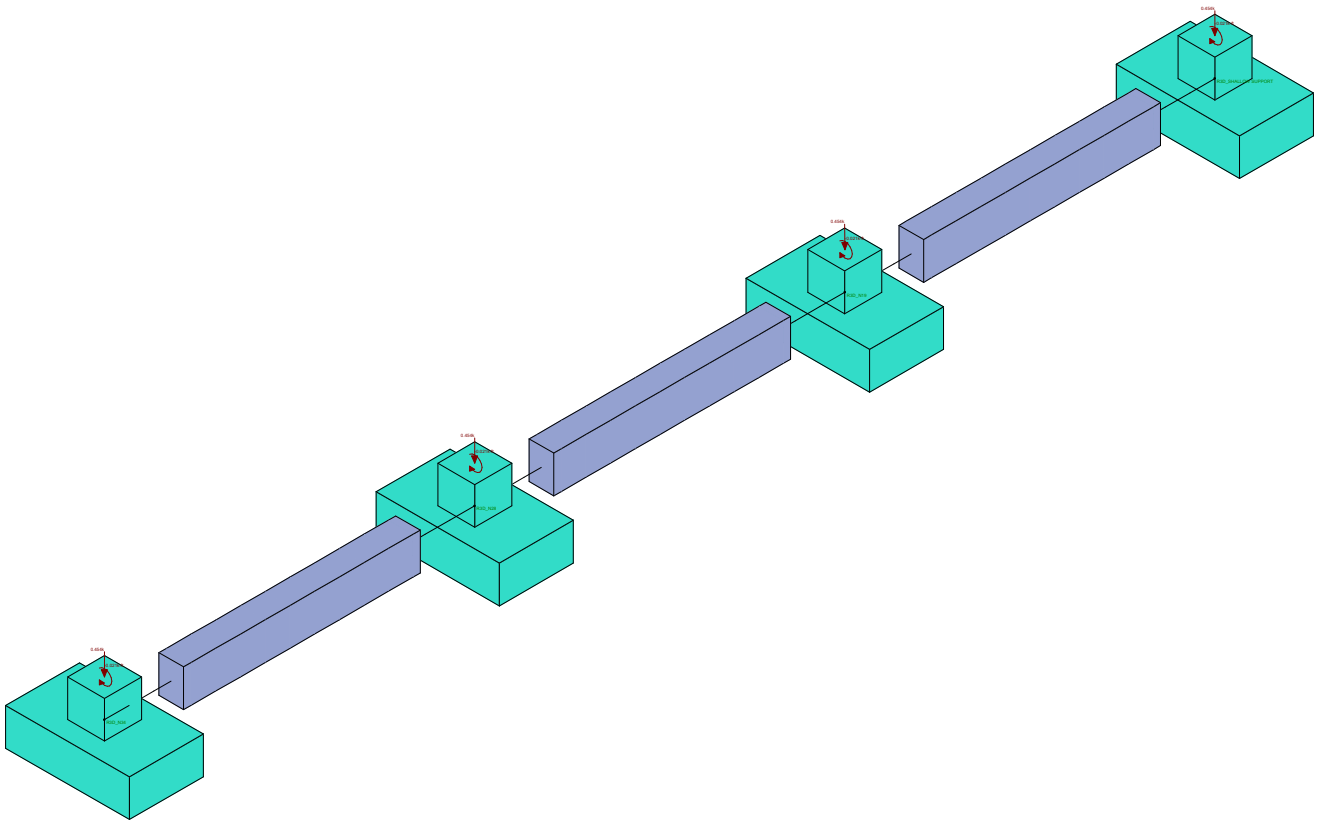


Loads: DL - Dead Load
Results for LC 1, ASCE Strength 1

BURNS & MCDONNELL	Isolated Pipe Supports	SK - 1
A. Kral		Nov 29, 2023 at 10:21 AM
153929		Isolated Pipe Support Footings.r3d

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density[...	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc3000NW	3156	1372	0.15	0.6	0.145	3	1	60	60
2	Conc3500NW	3409	1482	0.15	0.6	0.145	3.5	1	60	60
3	Conc4000NW	3644	1584	0.15	0.6	0.145	4	1	60	60
4	Conc3000LW	2085	907	0.15	0.6	0.11	3	0.75	60	60
5	Conc3500LW	2252	979	0.15	0.6	0.11	3.5	0.75	60	60
6	Conc4000LW	2408	1047	0.15	0.6	0.11	4	0.75	60	60
7	RIGID	1e+6	1584	0.3	0	0	0	1	60	60
8	Conc5000NW	4074	1771.304	0.15	0.6	0.145	5	1	60	60

General Design Parameters

	Label	Max Bending Chk	Max Shear Chk	Top Cover[in]	Bottom Cover[in]
1	Typical	1	1	3	3

Beam Rebar Parameters

	Label	Optimize Reb...	Min Flex Bar	Max Flex Bar	Shear Bar	Legs per Stirr...	Side Cover[in]	Top/Bottom ...	Shear Bar Spacin...
1	Typical	Optimize	#5	#6	#4	2	1.5	2	12

Slab Rebar Parameters

	Label	Top Bar	Bottom ...	Max Top Bar Spacing[...	Min Top Bar...	Max Bot Bar...	Min Bot Bar ...	Spacing I...	Side Cov...	Rebar Options
1	Typical	#6	#6	12	3	12	3	1	2	Optimize

Footing/Pile Cap Rebar Parameters

	Label	Top Bar	Bottom Bar
1	Typical	#5	#5

Pedestal/Pile Rebar Parameters

	Label	Longitudinal Bar	Shear Tie	Bar Cover[in]
1	Typical	#5	#4	3

General Properties

	Label	Min Steel ...	Max Steel...	Material	Design Ru...	Equal Bar Spacing	Group Design	Concrete Bearing	Force Top Bar
1	TYPE1	0.002	0.007	Conc5000...	Typical	Yes	Yes	Yes	

Footing Geometry

	Label	Max Length[...	Min Length[ft]	Max Width[ft]	Min Width[ft]	L/W Increm...	Max Thickn...	Min Thickne...	Thick Incre...	Force Sq...
1	TYPE1	8	2.5	8	2.5	0.5	30	18	1	

Pedestal Properties

	Label	Type	Shape	Height[in]	e/BL	ex[in]	ez[in]	BLx[ft]	BLz[ft]
1	TYPE1	Pedestal	CRECT18X18	18	Use ex,ez	0	0	0	0

Soil Properties

	Label	Overburden[ksf]	Passive[k]	Friction Coefficient	Gross/Net
1	TYPE1	0.1	0	0.35	Gross

Soil Definitions

	Label	Subgrade Modulus[k/ft^3]	Allowable Bearing[ksf]	Depth Properties	Default?
1	Default	172.8	1.5	Custom	Yes

Beams

	Label	Start ...	End ...	Shape	Material	Design ...	Start Re...	End Rel...	Flexural La...	Shear L...	Analysis Offset...	Icr Fa...
1	B1	R3D_...	R3D_...	CRECT18X12	Conc50...	Typical	Fixed	Fixed	Use Design...	Use Des...	0	
2	B2	R3D_...	R3D_...	CRECT18X12	Conc50...	Typical	Fixed	Fixed	Use Design...	Use Des...	0	
3	B3	R3D_...	R3D_...	CRECT18X12	Conc50...	Typical	Fixed	Fixed	Use Design...	Use Des...	0	

Point Loads and Moments (Cat 1 : DL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_SHALLOW SUPPORT	Y	0.454
2	R3D_SHALLOW SUPPORT	MZ	-0.021
3	R3D_N19	Y	0.454
4	R3D_N19	MZ	-0.021
5	R3D_N28	Y	0.454
6	R3D_N28	MZ	-0.021
7	R3D_N34	Y	0.454
8	R3D_N34	MZ	-0.021

Point Loads and Moments (Cat 11 : FL)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_SHALLOW SUPPORT	Y	0.712
2	R3D_SHALLOW SUPPORT	MZ	-0.096
3	R3D_N19	Y	0.712
4	R3D_N19	MZ	-0.096
5	R3D_N28	Y	0.712
6	R3D_N28	MZ	-0.096
7	R3D_N34	Y	0.712
8	R3D_N34	MZ	-0.096

Point Loads and Moments (Cat 16 : ELX)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_SHALLOW SUPPORT	X	1.033
2	R3D_SHALLOW SUPPORT	MZ	-2.043
3	R3D_N19	X	1.033
4	R3D_N19	MZ	-2.043
5	R3D_N28	X	1.033
6	R3D_N28	MZ	-2.043
7	R3D_N34	X	1.033
8	R3D_N34	MZ	-2.043

Point Loads and Moments (Cat 18 : ELZ)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_SHALLOW SUPPORT	Z	1.033
2	R3D_SHALLOW SUPPORT	MX	2.043
3	R3D_SHALLOW SUPPORT	MY	-0.103
4	R3D_N19	Z	1.033
5	R3D_N19	MX	2.043
6	R3D_N19	MY	-0.103
7	R3D_N28	Z	1.033
8	R3D_N28	MX	2.043
9	R3D_N28	MY	-0.103
10	R3D_N34	Z	1.033
11	R3D_N34	MX	2.043
12	R3D_N34	MY	-0.103

Point Loads and Moments (Cat 19 : WLX)

	Label	Direction	Magnitude[k,k-ft]

Point Loads and Moments (Cat 19 : WLX) (Continued)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_SHALLOW SUPPORT	X	0.181
2	R3D_SHALLOW SUPPORT	MZ	-0.34
3	R3D_N19	X	0.181
4	R3D_N19	MZ	-0.34
5	R3D_N28	X	0.181
6	R3D_N28	MZ	-0.34
7	R3D_N34	X	0.181
8	R3D_N34	MZ	-0.34

Point Loads and Moments (Cat 67 : OL1)

	Label	Direction	Magnitude[k,k-ft]
1	R3D_SHALLOW SUPPORT	Y	0.88
2	R3D_SHALLOW SUPPORT	MZ	-0.052
3	R3D_N19	Y	0.88
4	R3D_N19	MZ	-0.052
5	R3D_N28	Y	0.88
6	R3D_N28	MZ	-0.052
7	R3D_N34	Y	0.88
8	R3D_N34	MZ	-0.052

Line Loads and Moments

Start Point	End Point	Direction	Start Magnitude[k/ft,k-ft/ft]	End Magnitude[k/ft,k-ft/ft]
No Data to Print ...				

Area Loads

Label	Base Mag[ksf]	Peak Mag[ksf]
No Data to Print ...		

Slabs

Label	Thickness [in]	Material	Local Axis An...	Analysis Offs...	Passive Pres...	Soil Overburd...	Icr Factor
No Data to Print ...							

Load Combinations

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
1	ASCE Strengt..	Yes	Yes			DL	1.4																	FL	1.4		
2	ASCE Strengt..	Yes	Yes			DL	1.2	LL	1.6	LLS	1.6	HL	1.6	RLL	0.5									FL	1.2		
3	ASCE Strengt..	Yes	Yes			DL	1.2	LL	1.6	LLS	1.6	HL	1.6	SL	0.5	SLN	0.5							FL	1.2		
4	ASCE Strengt..	Yes	Yes			DL	1.2	LL	1.6	LLS	1.6	HL	1.6	RL	0.5									FL	1.2		
5	ASCE Strengt..	Yes	Yes			DL	1.2	RLL	1.6	HL	1.6	LL	0.5	LLS	1									FL	1.2		
6	ASCE Strengt..	Yes	Yes			DL	1.2	RLL	1.6	HL	1.6	WLX	0.5											FL	1.2		
7	ASCE Strengt..	Yes	Yes			DL	1.2	RLL	1.6	HL	1.6	WLZ	0.5											FL	1.2		
8	ASCE Strengt..	Yes	Yes			DL	1.2	RLL	1.6	HL	1.6	WLX	-0.5											FL	1.2		
9	ASCE Strengt..	Yes	Yes			DL	1.2	RLL	1.6	HL	1.6	WLZ	-0.5											FL	1.2		
10	ASCE Strengt..	Yes	Yes			DL	1.2	SL	1.6	SLN	1.6	HL	1.6	LL	0.5	LLS	1							FL	1.2		
11	ASCE Strengt..	Yes	Yes			DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLX	0.5									FL	1.2		
12	ASCE Strengt..	Yes	Yes			DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLZ	0.5									FL	1.2		
13	ASCE Strengt..	Yes	Yes			DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLX	-0.5									FL	1.2		
14	ASCE Strengt..	Yes	Yes			DL	1.2	SL	1.6	SLN	1.6	HL	1.6	WLZ	-0.5									FL	1.2		
15	ASCE Strengt..	Yes	Yes			DL	1.2	RL	1.6	HL	1.6	LL	0.5	LLS	1									FL	1.2		
16	ASCE Strengt..	Yes	Yes			DL	1.2	RL	1.6	HL	1.6	WLX	0.5											FL	1.2		
17	ASCE Strengt..	Yes	Yes			DL	1.2	RL	1.6	HL	1.6	WLZ	0.5											FL	1.2		
18	ASCE Strengt..	Yes	Yes			DL	1.2	RL	1.6	HL	1.6	WLX	-0.5											FL	1.2		
19	ASCE Strengt..	Yes	Yes			DL	1.2	RL	1.6	HL	1.6	WLZ	-0.5											FL	1.2		
20	ASCE Strengt..	Yes	Yes			DL	1.2	WLX	1	LL	0.5	LLS	1	HL	1.6	RLL	0.5							FL	1.2		

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
21	ASCE Strengt..	Yes	Yes			DL	1.2	WLZ	1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
22	ASCE Strengt..	Yes	Yes			DL	1.2	WLX	-1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
23	ASCE Strengt..	Yes	Yes			DL	1.2	WLZ	-1	LL	0.5	LLS	1	HL	1.6	RLL	0.5					FL	1.2		
24	ASCE Strengt..	Yes	Yes			DL	1.2	WLX	1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
25	ASCE Strengt..	Yes	Yes			DL	1.2	WLZ	1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
26	ASCE Strengt..	Yes	Yes			DL	1.2	WLX	-1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
27	ASCE Strengt..	Yes	Yes			DL	1.2	WLZ	-1	LL	0.5	LLS	1	HL	1.6	SL	0.5	SLN	0.5			FL	1.2		
28	ASCE Strengt..	Yes	Yes			DL	1.2	WLX	1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
29	ASCE Strengt..	Yes	Yes			DL	1.2	WLZ	1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
30	ASCE Strengt..	Yes	Yes			DL	1.2	WLX	-1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
31	ASCE Strengt..	Yes	Yes			DL	1.2	WLZ	-1	LL	0.5	LLS	1	HL	1.6	RL	0.5					FL	1.2		
32	ASCE Strengt..	Yes	Yes			DL	0.9	WLX	1	HL	1.6														
33	ASCE Strengt..	Yes	Yes			DL	0.9	WLZ	1	HL	1.6														
34	ASCE Strengt..	Yes	Yes			DL	0.9	WLX	-1	HL	1.6														
35	ASCE Strengt..	Yes	Yes			DL	0.9	WLZ	-1	HL	1.6														
36	ASCE Strengt..	Yes	Yes			DL	0.9	WLX	1	HL	0.9														
37	ASCE Strengt..	Yes	Yes			DL	0.9	WLZ	1	HL	0.9														
38	ASCE Strengt..	Yes	Yes			DL	0.9	WLX	-1	HL	0.9														
39	ASCE Strengt..	Yes	Yes			DL	0.9	WLZ	-1	HL	0.9														
40	ASCE Strengt..	Yes	Yes			DL	1.2	Sds*...	0.2	Rh...	1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
41	ASCE Strengt..	Yes	Yes			DL	1.2	Sds*...	0.2	Rh...	1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
42	ASCE Strengt..	Yes	Yes			DL	1.2	Sds*...	0.2	Rh...	-1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
43	ASCE Strengt..	Yes	Yes			DL	1.2	Sds*...	0.2	Rh...	-1	LL	0.5	LLS	1	HL	1.6	SL	0.2	SLN	0.7	FL	1.2	FL	0.1...
44	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	1	HL	1.6									FL	0.9	FL	-0....
45	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	1	HL	1.6									FL	0.9	FL	-0....
46	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	-1	HL	1.6									FL	0.9	FL	-0....
47	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	-1	HL	1.6									FL	0.9	FL	-0....
48	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	1	HL	0.9									FL	0.9	FL	-0....
49	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	1	HL	0.9									FL	0.9	FL	-0....
50	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	-1	HL	0.9									FL	0.9	FL	-0....
51	ASCE Strengt..	Yes	Yes			DL	0.9	Sds*...	-0.2	Rh...	-1	HL	0.9									FL	0.9	FL	-0....
52	ASCE 1	Yes			1.5	DL	1											FL	1						
53	ASCE 2	Yes			1.5	DL	1	HL	1	LL	1	LLS	1					FL	1						
54	ASCE 3 (a)	Yes			1.5	DL	1	HL	1	RLL	1							FL	1						
55	ASCE 3 (b)	Yes			1.5	DL	1	HL	1	SL	1							FL	1						
56	ASCE 3 (c)	Yes			1.5	DL	1	HL	1	RL	1							FL	1						
57	ASCE 4 (a)	Yes			1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RLL	0.75			FL	1						
58	ASCE 4 (b)	Yes			1.5	DL	1	HL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75	FL	1						
59	ASCE 4 (c)	Yes			1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RL	0.75			FL	1						
60	ASCE 5 (a) (a)	Yes		1....	1.5	DL	1	HL	1	WLX	0.6														
61	ASCE 5 (a) (b)	Yes		1....	1.5	DL	1	HL	1	WLZ	0.6														
62	ASCE 5 (a) (c)	Yes		1....	1.5	DL	1	HL	1	WLX	-0.6														
63	ASCE 5 (a) (d)	Yes		1....	1.5	DL	1	HL	1	WLZ	-0.6														
64	ASCE 6 (a) (a)	Yes		1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
65	ASCE 6 (a) (b)	Yes		1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
66	ASCE 6 (a) (c)	Yes		1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
67	ASCE 6 (a) (d)	Yes		1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RLL	0.75	FL	1						
68	ASCE 6 (b) (a)	Yes		1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1						
69	ASCE 6 (b) (b)	Yes		1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	SL	0.75	FL	1						
70	ASCE 6 (b) (c)	Yes		1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1						
71	ASCE 6 (b) (d)	Yes		1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	SL	0.75	FL	1						
72	ASCE 6 (c) (a)	Yes		1....	1.5	DL	1	HL	1	WLX	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1						
73	ASCE 6 (c) (b)	Yes		1....	1.5	DL	1	HL	1	WLZ	0.45	LL	0.75	LLS	0.75	RL	0.75	FL	1						
74	ASCE 6 (c) (c)	Yes		1....	1.5	DL	1	HL	1	WLX	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1						
75	ASCE 6 (c) (d)	Yes		1....	1.5	DL	1	HL	1	WLZ	-0....	LL	0.75	LLS	0.75	RL	0.75	FL	1						
76	ASCE 7 (a) (a)	Yes		1....		DL	0.6	HL	1	WLX	0.6														
77	ASCE 7 (a) (b)	Yes		1....		DL	0.6	HL	1	WLZ	0.6														

Load Combinations (Continued)

	Label	Solve	S...	A...	SF	Cat..	Fa...	Categ..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...	Cat..	Fa...
78	ASCE 7 (a) (c)	Yes		1....		DL	0.6	HL	1	WLX	-0.6														
79	ASCE 7 (a) (d)	Yes		1....		DL	0.6	HL	1	WLZ	-0.6														
80	ASCE 7 (b) (a)	Yes		1....		DL	0.6	HL	0.6	WLX	0.6														
81	ASCE 7 (b) (b)	Yes		1....		DL	0.6	HL	0.6	WLZ	0.6														
82	ASCE 7 (b) (c)	Yes		1....		DL	0.6	HL	0.6	WLX	-0.6														
83	ASCE 7 (b) (d)	Yes		1....		DL	0.6	HL	0.6	WLZ	-0.6														
84	ASCE 8 (a)	Yes		1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...				
85	ASCE 8 (b)	Yes		1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	0.7					FL	1	FL	0.1...				
86	ASCE 8 (c)	Yes		1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...				
87	ASCE 8 (d)	Yes		1....	1.5	DL	1	Sds*...	0.14	HL	1	Rh...	-0.7					FL	1	FL	0.1...				
88	ASCE 9 (a)	Yes		1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
89	ASCE 9 (b)	Yes		1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	0.5...	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
90	ASCE 9 (c)	Yes		1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
91	ASCE 9 (d)	Yes		1....	1.5	DL	1	Sds*...	0.1...	HL	1	Rh...	-0....	LL	0.75	LLS	0.75	FL	1	FL	0.0...				
92	ASCE 10 (a) (...	Yes		1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....				
93	ASCE 10 (a) (...	Yes		1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	0.7					FL	0.6	FL	-0....				
94	ASCE 10 (a) (c)	Yes		1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....				
95	ASCE 10 (a) (...	Yes		1....		DL	0.6	Sds*...	-0....	HL	1	Rh...	-0.7					FL	0.6	FL	-0....				
96	ASCE 10 (b) (...	Yes		1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....				
97	ASCE 10 (b) (...	Yes		1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	0.7					FL	0.6	FL	-0....				
98	ASCE 10 (b) (c)	Yes		1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....				
99	ASCE 10 (b) (...	Yes		1....		DL	0.6	Sds*...	-0....	HL	0.6	Rh...	-0.7					FL	0.6	FL	-0....				
100																									
101	DL + 0.7Di	Yes				DL	1	OL1	0.7																
102	DL + LL + 0.7Di	Yes				DL	1	LL	1	OL1	0.7														
103	DL +0.7Di + 0...	Yes		1....		DL	1	OL1	0.7	WLX	0.0...	SL	1												
104	DL +0.7Di + 0...	Yes		1....		DL	1	OL1	0.7	WLZ	0.0...	SL	1												
105	DL +0.7Di - 0...	Yes		1....		DL	1	OL1	0.7	WLX	-0....	SL	1												
106	DL +0.7Di - 0...	Yes		1....		DL	1	OL1	0.7	WLZ	-0....	SL	1												
107	0.6D + 0.7Di ...	Yes		1....		DL	0.6	OL1	0.7	WLX	0.0...														
108	0.6D + 0.7Di ...	Yes		1....		DL	0.6	OL1	0.7	WLZ	0.0...														
109	0.6D + 0.7Di -...	Yes		1....		DL	0.6	OL1	0.7	WLX	-0....														
110	0.6D + 0.7Di -...	Yes		1....		DL	0.6	OL1	0.7	WLZ	-0....														

Pedestals/Posts

Label	Type	Shape	Material	Design Rules	Angle(deg)	Height[in]	Pedestal Layout	Shear Layout
No Data to Print ...								

Envelope Soil Pressures

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]
1	R3D_N28	0.795	40	1.192	1.5
2	R3D_SHALLOW S...	0.804	40	1.206	1.5
3	R3D_N19	0.795	40	1.192	1.5
4	R3D_N34	0.804	40	1.206	1.5
5	N5	0.08	41	0.12	1.5
6	N6	0.089	43	0.133	1.5
7	N7	0.102	43	0.154	1.5
8	N8	0.113	43	0.169	1.5
9	N9	0.12	43	0.18	1.5
10	N10	0.124	43	0.186	1.5
11	N11	0.125	43	0.188	1.5
12	N12	0.124	43	0.186	1.5
13	N13	0.121	43	0.182	1.5
14	N14	0.117	43	0.176	1.5
15	N15	0.113	43	0.169	1.5
16	N16	0.11	41	0.165	1.5

Envelope Soil Pressures (Continued)

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]
17	N17	0.107	41	0.161	1.5
18	N18	0.103	41	0.154	1.5
19	N19	0.107	43	0.161	1.5
20	N20	0.111	43	0.166	1.5
21	N21	0.114	43	0.171	1.5
22	N22	0.116	43	0.174	1.5
23	N23	0.117	43	0.175	1.5
24	N24	0.116	43	0.175	1.5
25	N25	0.115	43	0.172	1.5
26	N26	0.115	41	0.172	1.5
27	N27	0.116	41	0.175	1.5
28	N28	0.117	41	0.175	1.5
29	N29	0.116	41	0.174	1.5
30	N30	0.114	41	0.171	1.5
31	N31	0.111	41	0.166	1.5
32	N32	0.107	41	0.161	1.5
33	N33	0.103	43	0.154	1.5
34	N34	0.107	43	0.161	1.5
35	N35	0.11	43	0.165	1.5
36	N36	0.113	41	0.169	1.5
37	N37	0.117	41	0.176	1.5
38	N38	0.121	41	0.182	1.5
39	N39	0.124	41	0.186	1.5
40	N40	0.125	41	0.188	1.5
41	N41	0.124	41	0.186	1.5
42	N42	0.12	41	0.18	1.5
43	N43	0.113	41	0.169	1.5
44	N44	0.102	41	0.154	1.5
45	N45	0.089	41	0.133	1.5
46	N46	0.08	43	0.12	1.5

Envelope Slab Soil Pressures

Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]	Point
No Data to Print ...					

Envelope Footing Soil Pressures

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]	Point
1	TYPE1 - R3D_...	0.795	40	1.192	1.5	B
2	TYPE1 - R3D_...	0.804	40	1.206	1.5	B
3	TYPE1 - R3D_...	0.795	40	1.192	1.5	A
4	TYPE1 - R3D_...	0.804	40	1.206	1.5	A

Envelope Beam Soil Pressures

	Label	Max UC	Max LC	Soil Pressure[ksf]	Allowable Bearing[ksf]	Point
1	B1	0.125	43	0.188	1.5	N11
2	B2	0.117	43	0.175	1.5	N23
3	B3	0.125	41	0.188	1.5	N40

Footing Geometry Results

	Joint	Footing	Length[ft]	Width[ft]	Thickness[in]	ex[in]	ez[in]	Pedestal Ht[in]	Ped Xdim[in]	Ped Zdim[in]
1	R3D_N28	TYPE1	3	5	18	0	0	18	18	18
2	R3D_SHAL...	TYPE1	3	5	18	0	0	18	18	18
3	R3D_N19	TYPE1	3	5	18	0	0	18	18	18
4	R3D_N34	TYPE1	3	5	18	0	0	18	18	18

Footing Steel

	Joint	Footing	Bot x Steel[in^2]	Bot z Steel[in^2]	Top x Steel[in...	Top z Steel[in...	Ped Long	Ped Shear
1	R3D_N28	TYPE1	1.227	2.148	0	0	8#5	#4@10 in
2	R3D_SHALL...	TYPE1	1.227	2.148	0	0	8#5	#4@10 in
3	R3D_N19	TYPE1	1.227	2.148	0	0	8#5	#4@10 in
4	R3D_N34	TYPE1	1.227	2.148	0	0	8#5	#4@10 in

Footing Code Check

	Joint	Footing	Bearing Ra...	Bearing Pr...	Gov LC	UC Max	Muxx[k-ft]	Gov LC	UC Max	Muzz[k-ft]	Gov LC
1	R3D_N28	TYPE1	0.795	1.192	40	0.003	0.465	87	0.028	2.187	84
2	R3D_SHAL...	TYPE1	0.804	1.206	40	0.004	0.51	85	0.024	1.837	84
3	R3D_N19	TYPE1	0.795	1.192	40	0.003	0.465	85	0.028	2.187	84
4	R3D_N34	TYPE1	0.804	1.206	40	0.004	0.51	87	0.024	1.837	84

Footing Shear Check

	Joint	Footing	UC Shear	Vux[k]	Gov LC	UC Shear	Vuz[k]	Gov LC
1	R3D_N28	TYPE1	0	0.003	85	0.029	0.849	84
2	R3D_SHALLO...	TYPE1	0	0.003	85	0.025	0.723	84
3	R3D_N19	TYPE1	0	0.003	87	0.029	0.849	84
4	R3D_N34	TYPE1	0	0.003	87	0.025	0.723	84

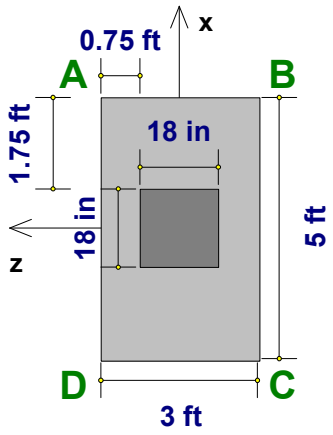
Footing Pedestal Results

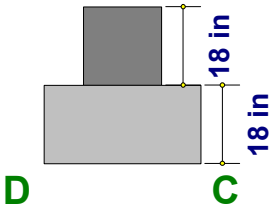
	Joint	Footing	UC Bend	UC Bend LC	UC Shear	UC Shear LC	UC Punch	UC Punch LC
1	R3D_N28	TYPE1	0.029	92	0.018	85	NA	NC
2	R3D_SHAL...	TYPE1	0.004	84	0.018	85	NA	NC
3	R3D_N19	TYPE1	0.029	92	0.018	85	NA	NC
4	R3D_N34	TYPE1	0.004	84	0.018	85	NA	NC

Footing Safety Factors

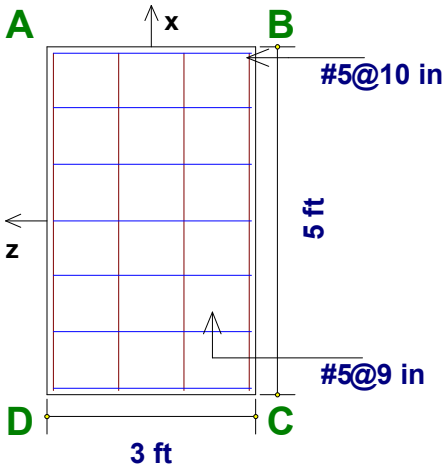
	Joint	Footing	OSF-xx	LC	OSF-zz	LC	SR-xx	LC	SR-zz	LC
1	R3D_N28	TYPE1	2.499	45	2.521	44	1.787	44	1.345	45
2	R3D_SHALLO...	TYPE1	1.729	45	2.225	44	1.577	44	1.061	45
3	R3D_N19	TYPE1	2.582	47	2.521	44	1.787	44	1.345	47
4	R3D_N34	TYPE1	1.749	47	2.225	44	1.577	44	1.061	47

Sketch



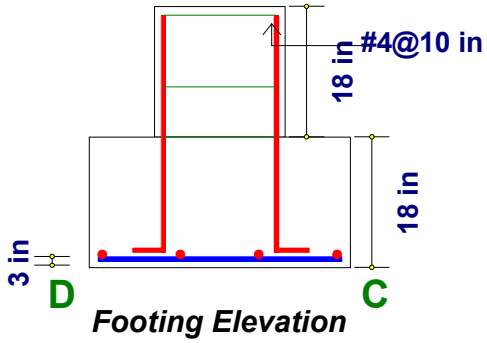


Details

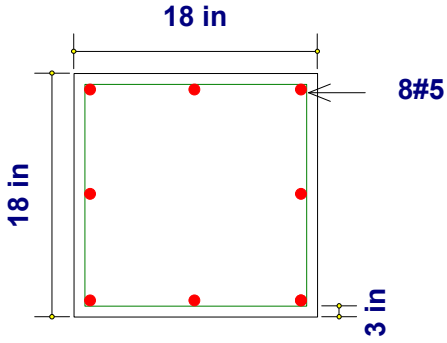


x Dir. Steel: 1.23 in^2 (4 #5)
z Dir. Steel: 2.15 in^2 (7 #5)

Bottom Rebar Plan



Footing Elevation



Pedestal Rebar Plan

Geometry, Materials and Criteria

Length:	3 ft	eX:	0 in	Gross Allow. Bearing:	1.5 ksf (gross)	Steel fy:	60 ksi
Width:	5 ft	eZ:	0 in	Concrete Weight:	0.145 k/ft^3	Minimum Steel:	.0018
Thickness:	18 in	pX:	18 in	Concrete f'c:	5 ksi	Maximum Steel:	.0075
Height:	18 in	pZ:	18 in	Design Code:	ACI 318-19		
Rot. Angle:	0 deg						

Footing Top Bar Cover:	3 in	Overturning / Sliding SF:	1	Φ for Flexure:	0.9
Footing Bottom Bar Cover:	3 in	Coefficient of Friction:	0.35	Φ for Shear:	0.75
Pedestal Longitudinal Bar Cover:	3 in	Passive Resistance of Soil:	0 k	Φ for Bearing:	0.65

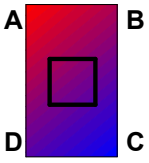
Loads

	P (k)	Vx (k)	Vz (k)	Mx (k-ft)	Mz (k-ft)	Overburden (ksf)
DL	2.45			-0.04	0.021	0.1
FL	0.474				0.096	
ELX		1.033			2.043	
ELZ	0.081		-1.033	-2.283		
WLX		0.181			0.34	
OL1	0.586				0.052	

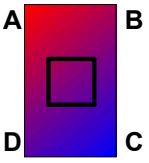
Soil Bearing

Description	Categories and Factors	Gross Allow.(ksf)	Max Bearing (ksf)	Max/Allowable Ratio
ASCE Strength..	1.4DL+1.4FL	1.5	0.762 (A)	0.508
ASCE Strength..	1.2DL+1.6LL+1.6LLS+1.6..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6LL+1.6LLS+1.6..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6LL+1.6LLS+1.6..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6RLL+1.6HL+0.5..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6RLL+1.6HL+0.5..	1.5	0.688 (A)	0.459
ASCE Strength..	1.2DL+1.6RLL+1.6HL+0.5..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6RLL+1.6HL+-0...	1.5	0.666 (D)	0.444
ASCE Strength..	1.2DL+1.6RLL+1.6HL+-0...	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6SL+1.6SLN+1.6..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6SL+1.6SLN+1.6..	1.5	0.688 (A)	0.459
ASCE Strength..	1.2DL+1.6SL+1.6SLN+1.6..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6SL+1.6SLN+1.6..	1.5	0.666 (D)	0.444
ASCE Strength..	1.2DL+1.6SL+1.6SLN+1.6..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6RL+1.6HL+0.5L..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6RL+1.6HL+0.5W..	1.5	0.688 (A)	0.459
ASCE Strength..	1.2DL+1.6RL+1.6HL+0.5W..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1.6RL+1.6HL+-0.5..	1.5	0.666 (D)	0.444
ASCE Strength..	1.2DL+1.6RL+1.6HL+-0.5..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1WLX+0.5LL+1LLS+..	1.5	0.723 (A)	0.482
ASCE Strength..	1.2DL+1WLZ+0.5LL+1LLS+..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+-1WLX+0.5LL+1LLS..	1.5	0.701 (D)	0.467
ASCE Strength..	1.2DL+-1WLZ+0.5LL+1LLS..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1WLX+0.5LL+1LLS+..	1.5	0.723 (A)	0.482
ASCE Strength..	1.2DL+1WLZ+0.5LL+1LLS+..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+-1WLX+0.5LL+1LLS..	1.5	0.701 (D)	0.467
ASCE Strength..	1.2DL+-1WLZ+0.5LL+1LLS..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+1WLX+0.5LL+1LLS+..	1.5	0.723 (A)	0.482
ASCE Strength..	1.2DL+1WLZ+0.5LL+1LLS+..	1.5	0.653 (A)	0.435
ASCE Strength..	1.2DL+-1WLX+0.5LL+1LLS..	1.5	0.701 (D)	0.467
ASCE Strength..	1.2DL+-1WLZ+0.5LL+1LLS..	1.5	0.653 (A)	0.435
ASCE Strength..	0.9DL+1WLX+1.6HL	1.5	0.526 (A)	0.35
ASCE Strength..	0.9DL+1WLZ+1.6HL	1.5	0.455 (A)	0.303
ASCE Strength..	0.9DL+-1WLX+1.6HL	1.5	0.523 (D)	0.348
ASCE Strength..	0.9DL+-1WLZ+1.6HL	1.5	0.455 (A)	0.303
ASCE Strength..	0.9DL+1WLX+0.9HL	1.5	0.526 (A)	0.35
ASCE Strength..	0.9DL+1WLZ+0.9HL	1.5	0.455 (A)	0.303
ASCE Strength..	0.9DL+-1WLX+0.9HL	1.5	0.523 (D)	0.348
ASCE Strength..	0.9DL+-1WLZ+0.9HL	1.5	0.455 (A)	0.303
ASCE Strength..	1.2DL+0.2Sds*DL+1Rho*E..	1.5	1.192 (A)	0.795
ASCE Strength..	1.2DL+0.2Sds*DL+1Rho*E..	1.5	0.917 (B)	0.611
ASCE Strength..	1.2DL+0.2Sds*DL+-1Rho*..	1.5	1.167 (D)	0.778
ASCE Strength..	1.2DL+0.2Sds*DL+-1Rho*..	1.5	0.915 (A)	0.61
ASCE Strength..	0.9DL+-0.2Sds*DL+1Rho*..	1.5	0.78 (A)	0.52
ASCE Strength..	0.9DL+-0.2Sds*DL+1Rho*..	1.5	0.505 (B)	0.337
ASCE Strength..	0.9DL+-0.2Sds*DL+-1Rho..	1.5	0.763 (D)	0.509

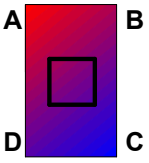
ASCE Strength..	**0.9DL+-0.2Sds*DL+-1Rho..**	**1.5**	**0.496 (A)**	**0.331**
ASCE Strength..	**0.9DL+-0.2Sds*DL+1Rho*..**	**1.5**	**0.78 (A)**	**0.52**
ASCE Strength..	**0.9DL+-0.2Sds*DL+1Rho*..**	**1.5**	**0.505 (B)**	**0.337**
ASCE Strength..	**0.9DL+-0.2Sds*DL+-1Rho..**	**1.5**	**0.763 (D)**	**0.509**
ASCE Strength..	**0.9DL+-0.2Sds*DL+-1Rho..**	**1.5**	**0.496 (A)**	**0.331**



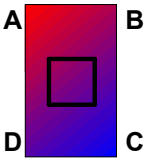
1.4DL+1.4FL
QA: 0.762 ksf
QB: 0.749 ksf
QC: 0.723 ksf
QD: 0.735 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



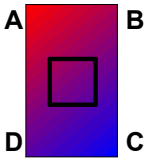
1.2DL+1.6LL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



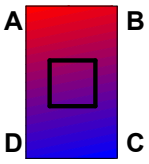
1.2DL+1.6LL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



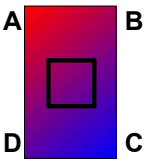
1.2DL+1.6LL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



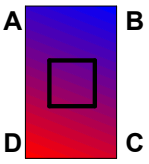
1.2DL+1.6RLL+..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



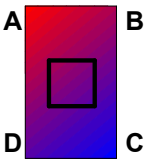
1.2DL+1.6RLL+..
QA: 0.688 ksf
QB: 0.677 ksf
QC: 0.584 ksf
QD: 0.595 ksf
NAZ: 2240.921 in
NAX: 443.867 in



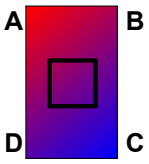
1.2DL+1.6RLL+..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



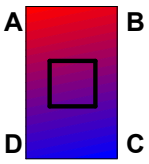
1.2DL+1.6RLL+..
QA: 0.617 ksf
QB: 0.606 ksf
QC: 0.655 ksf
QD: 0.666 ksf
NAZ: 2167.973 in
NAX: 828.407 in



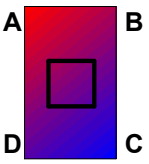
1.2DL+1.6RLL+..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



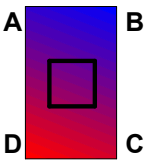
1.2DL+1.6SL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



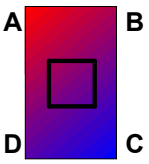
1.2DL+1.6SL+1..
QA: 0.688 ksf
QB: 0.677 ksf
QC: 0.584 ksf
QD: 0.595 ksf
NAZ: 2240.921 in
NAX: 443.867 in



1.2DL+1.6SL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



1.2DL+1.6SL+1..
QA: 0.617 ksf
QB: 0.606 ksf
QC: 0.655 ksf
QD: 0.666 ksf
NAZ: 2167.973 in
NAX: 828.407 in



1.2DL+1.6SL+1..
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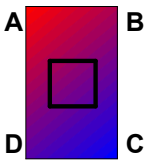
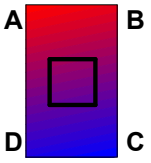
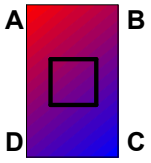
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



1.2DL+1.6RL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



1.2DL+1.6RL+1..
QA: 0.688 ksf
QB: 0.677 ksf
QC: 0.584 ksf
QD: 0.595 ksf
NAZ: 2240.921 in
NAX: 443.867 in



1.2DL+1.6RL+1..
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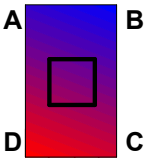
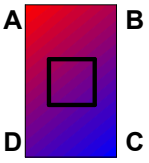
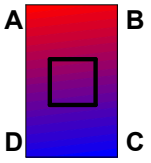
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



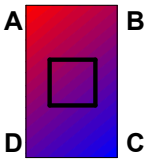
1.2DL+1.6RL+1..
QA: 0.617 ksf
QB: 0.606 ksf
QC: 0.655 ksf
QD: 0.666 ksf
NAZ: 2167.973 in
NAX: 828.407 in



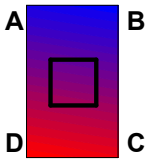
1.2DL+1.6RL+1..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



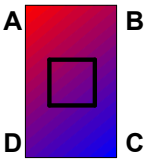
1.2DL+1WLX+0...
QA: 0.723 ksf
QB: 0.712 ksf
QC: 0.549 ksf
QD: 0.56 ksf
NAZ: 2355.906 in
NAX: 265.261 in



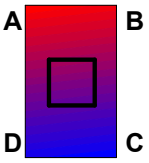
1.2DL+1WLZ+0...
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



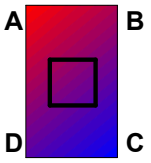
1.2DL+-1WLX+0..
QA: 0.582 ksf
QB: 0.571 ksf
QC: 0.69 ksf
QD: 0.701 ksf
NAZ: 2282.958 in
NAX: 353.954 in



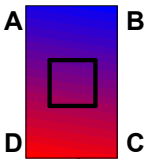
1.2DL+-1WLZ+0..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



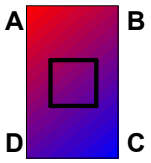
1.2DL+1WLX+0...
QA: 0.723 ksf
QB: 0.712 ksf
QC: 0.549 ksf
QD: 0.56 ksf
NAZ: 2355.906 in
NAX: 265.261 in



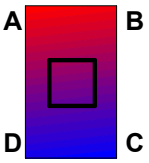
1.2DL+1WLZ+0...
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



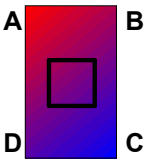
1.2DL+-1WLX+0..
QA: 0.582 ksf
QB: 0.571 ksf
QC: 0.69 ksf
QD: 0.701 ksf
NAZ: 2282.958 in
NAX: 353.954 in



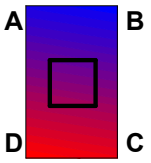
1.2DL+-1WLZ+0..
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



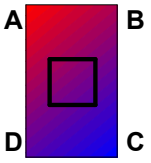
1.2DL+1WLX+0...
QA: 0.723 ksf
QB: 0.712 ksf
QC: 0.549 ksf
QD: 0.56 ksf
NAZ: 2355.906 in
NAX: 265.261 in



1.2DL+1WLZ+0...
QA: 0.653 ksf
QB: 0.642 ksf
QC: 0.619 ksf
QD: 0.63 ksf
NAZ: 2125.935 in
NAX: 1748.595 in



1.2DL+-1WLX+0..
QA: 0.582 ksf
QB: 0.571 ksf
QC: 0.69 ksf
QD: 0.701 ksf
NAZ: 2282.958 in
NAX: 353.954 in



1.2DL+-1WLZ+0..
QA: 0.653 ksf
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QC: 0.619 ksf
QD: 0.63 ksf
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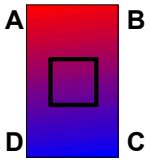

0.9DL+1WLX+1...
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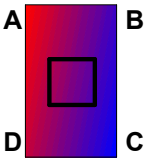
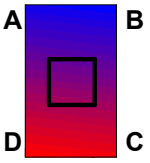
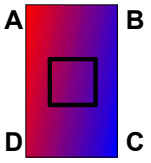
QB: 0.516 ksf
QC: 0.372 ksf
QD: 0.381 ksf
NAZ: 1949.08 in
NAX: 218.665 in



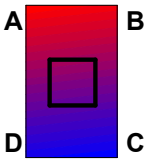
0.9DL+1WLZ+1...
QA: 0.455 ksf
QB: 0.445 ksf
QC: 0.442 ksf
QD: 0.452 ksf
NAZ: 1687.193 in
NAX: 9172.408 in



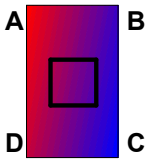
0.9DL+-1WLX+1..
QA: 0.384 ksf
QB: 0.375 ksf
QC: 0.513 ksf
QD: 0.523 ksf
NAZ: 1938.044 in
NAX: 226.787 in



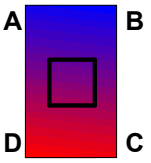
0.9DL+-1WLZ+1..
QA: 0.455 ksf
QB: 0.445 ksf
QC: 0.442 ksf
QD: 0.452 ksf
NAZ: 1687.193 in
NAX: 9172.408 in



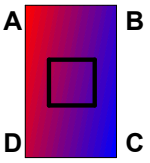
0.9DL+1WLX+0...
QA: 0.526 ksf
QB: 0.516 ksf
QC: 0.372 ksf
QD: 0.381 ksf
NAZ: 1949.08 in
NAX: 218.665 in



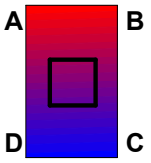
0.9DL+1WLZ+0...
QA: 0.455 ksf
QB: 0.445 ksf
QC: 0.442 ksf
QD: 0.452 ksf
NAZ: 1687.193 in
NAX: 9172.408 in



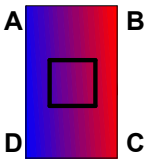
0.9DL+-1WLX+0..
QA: 0.384 ksf
QB: 0.375 ksf
QC: 0.513 ksf
QD: 0.523 ksf
NAZ: 1938.044 in
NAX: 226.787 in



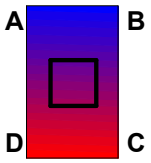
0.9DL+-1WLZ+0..
QA: 0.455 ksf
QB: 0.445 ksf
QC: 0.442 ksf
QD: 0.452 ksf
NAZ: 1687.193 in
NAX: 9172.408 in



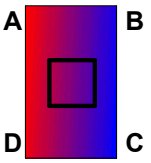
1.2DL+0.2Sds*..
QA: 1.192 ksf
QB: 1.179 ksf
QC: 0.331 ksf
QD: 0.345 ksf
NAZ: 3177.997 in
NAX: 84.394 in



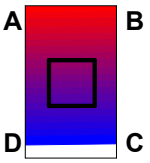
1.2DL+0.2Sds*..
QA: 0.646 ksf
QB: 0.917 ksf
QC: 0.892 ksf
QD: 0.621 ksf
NAZ: 121.916 in
NAX: 2199.393 in



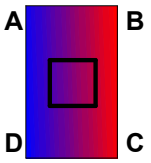
1.2DL+0.2Sds*..
QA: 0.37 ksf
QB: 0.356 ksf
QC: 1.154 ksf
QD: 1.167 ksf
NAZ: 3111.3 in
NAX: 87.807 in



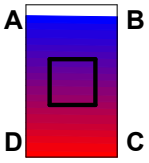
1.2DL+0.2Sds*..
QA: 0.915 ksf
QB: 0.618 ksf
QC: 0.593 ksf
QD: 0.89 ksf
NAZ: 110.652 in
NAX: 2195.267 in



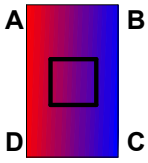
0.9DL+-0.2Sds..
QA: 0.78 ksf
QB: 0.774 ksf
QC: 0 ksf
QD: 0 ksf
NAZ: 4351.274 in
NAX: 54.519 in



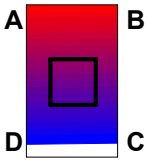
0.9DL+-0.2Sds..
QA: 0.227 ksf
QB: 0.505 ksf
QC: 0.491 ksf
QD: 0.213 ksf
NAZ: 65.339 in
NAX: 2138.842 in



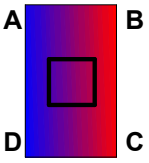
0.9DL+-0.2Sds..
QA: 0 ksf
QB: 0 ksf
QC: 0.757 ksf
QD: 0.763 ksf
NAZ: 4351.274 in
NAX: 55.734 in



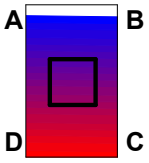
0.9DL+-0.2Sds..
QA: 0.496 ksf
QB: 0.206 ksf
QC: 0.192 ksf
QD: 0.482 ksf
NAZ: 61.545 in
NAX: 2099.13 in



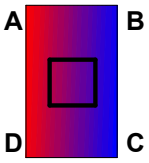
0.9DL+-0.2Sds..
QA: 0.78 ksf
QB: 0.774 ksf
QC: 0 ksf
QD: 0 ksf
NAZ: 4351.274 in
NAX: 54.519 in



0.9DL+-0.2Sds..
QA: 0.227 ksf
QB: 0.505 ksf
QC: 0.491 ksf
QD: 0.213 ksf
NAZ: 65.339 in
NAX: 2138.842 in



0.9DL+-0.2Sds..
QA: 0 ksf
QB: 0 ksf
QC: 0.757 ksf
QD: 0.763 ksf
NAZ: 4351.274 in
NAX: 55.734 in



0.9DL+-0.2Sds..
QA: 0.496 ksf
QB: 0.206 ksf
QC: 0.192 ksf
QD: 0.482 ksf
NAZ: 61.545 in
NAX: 2099.13 in

Footing Flexure Design (Bottom Bars)

As-min x-dir (Top Flexure): **0 in^2**
As-min z-dir (Top Flexure): **0 in^2**
As-min x-dir (Bot Flexure): **1.166 in^2**
As-min z-dir (Bot Flexure): **1.944 in^2**
As-min x-dir (T & S): **1.166 in^2**
As-min z-dir (T & S): **1.944 in^2**

Description	Categories and Factors	Mu-xx UC Max	Mu-xx (k-ft)	z-Dir As Required (in^2)	z-Dir As Provided (in^2)	Mu-zz UC Max	Mu-zz (k-ft)	x-Dir As Required (in^2)	x-Dir As Provided (in^2)
ASCE 1	1DL+1FL	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 2	1DL+1HL+1LL+1LLS..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 3 (a)	1DL+1HL+1RLL+1FL	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 3 (b)	1DL+1HL+1SL+1FL	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 3 (c)	1DL+1HL+1RL+1FL	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 4 (a)	1DL+1HL+0.75LL+0..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 4 (b)	1DL+1HL+0.75LL+0..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 4 (c)	1DL+1HL+0.75LL+0..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 5 (a) ..	1DL+1HL+0.6WLX	0.00191	0.26	0.004	2.148	0.01264	0.99	0.015	1.227
ASCE 5 (a) ..	1DL+1HL+0.6WLZ	0.00191	0.26	0.004	2.148	0.01072	0.84	0.013	1.227
ASCE 5 (a) ..	1DL+1HL+-0.6WLX	0.00191	0.26	0.004	2.148	0.01249	0.97	0.015	1.227
ASCE 5 (a) ..	1DL+1HL+-0.6WLZ	0.00191	0.26	0.004	2.148	0.01072	0.84	0.013	1.227
ASCE 6 (a) ..	1DL+1HL+0.45WLX+..	0.00223	0.3	0.005	2.148	0.01436	1.12	0.017	1.227
ASCE 6 (a) ..	1DL+1HL+0.45WLZ+..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 6 (a) ..	1DL+1HL+-0.45WLX..	0.00223	0.3	0.005	2.148	0.01352	1.06	0.016	1.227
ASCE 6 (a) ..	1DL+1HL+-0.45WLZ..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 6 (b) ..	1DL+1HL+0.45WLX+..	0.00223	0.3	0.005	2.148	0.01436	1.12	0.017	1.227
ASCE 6 (b) ..	1DL+1HL+0.45WLZ+..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 6 (b) ..	1DL+1HL+-0.45WLX..	0.00223	0.3	0.005	2.148	0.01352	1.06	0.016	1.227
ASCE 6 (b) ..	1DL+1HL+-0.45WLZ..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 6 (c) ..	1DL+1HL+0.45WLX+..	0.00223	0.3	0.005	2.148	0.01436	1.12	0.017	1.227
ASCE 6 (c) ..	1DL+1HL+0.45WLZ+..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 6 (c) ..	1DL+1HL+-0.45WLX..	0.00223	0.3	0.005	2.148	0.01352	1.06	0.016	1.227
ASCE 6 (c) ..	1DL+1HL+-0.45WLZ..	0.00223	0.3	0.005	2.148	0.01293	1.01	0.016	1.227
ASCE 7 (a) ..	0.6DL+1HL+0.6WLX	0.00115	0.16	0.002	2.148	0.00835	0.65	0.01	1.227
ASCE 7 (a) ..	0.6DL+1HL+0.6WLZ	0.00115	0.16	0.002	2.148	0.00643	0.5	0.008	1.227
ASCE 7 (a) ..	0.6DL+1HL+-0.6WLX	0.00115	0.16	0.002	2.148	0.00826	0.64	0.01	1.227
ASCE 7 (a) ..	0.6DL+1HL+-0.6WLZ	0.00115	0.16	0.002	2.148	0.00643	0.5	0.008	1.227
ASCE 7 (b) ..	0.6DL+0.6HL+0.6WLX	0.00115	0.16	0.002	2.148	0.00835	0.65	0.01	1.227
ASCE 7 (b) ..	0.6DL+0.6HL+0.6WLZ	0.00115	0.16	0.002	2.148	0.00643	0.5	0.008	1.227
ASCE 7 (b) ..	0.6DL+0.6HL+-0.6..	0.00115	0.16	0.002	2.148	0.00826	0.64	0.01	1.227
ASCE 7 (b) ..	0.6DL+0.6HL+-0.6..	0.00115	0.16	0.002	2.148	0.00643	0.5	0.008	1.227
ASCE 8 (a)	1DL+0.14Sds*DL+1..	0.00259	0.35	0.005	2.148	0.02802	2.19	0.034	1.227
ASCE 8 (b)	1DL+0.14Sds*DL+1..	0.00341	0.47	0.007	2.148	0.01534	1.2	0.019	1.227
ASCE 8 (c)	1DL+0.14Sds*DL+1..	0.00259	0.35	0.005	2.148	0.02707	2.11	0.033	1.227
ASCE 8 (d)	1DL+0.14Sds*DL+1..	0.00339	0.46	0.007	2.148	0.01471	1.15	0.018	1.227
ASCE 9 (a)	1DL+0.105Sds*DL+..	0.00249	0.34	0.005	2.148	0.02419	1.89	0.029	1.227
ASCE 9 (b)	1DL+0.105Sds*DL+..	0.00309	0.42	0.007	2.148	0.01468	1.15	0.018	1.227
ASCE 9 (c)	1DL+0.105Sds*DL+..	0.00249	0.34	0.005	2.148	0.02328	1.82	0.028	1.227
ASCE 9 (d)	1DL+0.105Sds*DL+..	0.00309	0.42	0.007	2.148	0.01421	1.11	0.017	1.227

ASCE 10 (a)..	0.6DL+-0.14Sds*D..	0.00097	0.13	0.002	2.148	0.01903	1.49	0.023	1.227
ASCE 10 (a)..	0.6DL+-0.14Sds*D..	0.00185	0.25	0.004	2.148	0.00598	0.47	0.007	1.227
ASCE 10 (a)..	0.6DL+-0.14Sds*D..	0.00097	0.13	0.002	2.148	0.01853	1.45	0.022	1.227
ASCE 10 (a)..	0.6DL+-0.14Sds*D..	0.00177	0.24	0.004	2.148	0.00535	0.42	0.006	1.227
ASCE 10 (b)..	0.6DL+-0.14Sds*D..	0.00097	0.13	0.002	2.148	0.01903	1.49	0.023	1.227
ASCE 10 (b)..	0.6DL+-0.14Sds*D..	0.00185	0.25	0.004	2.148	0.00598	0.47	0.007	1.227
ASCE 10 (b)..	0.6DL+-0.14Sds*D..	0.00097	0.13	0.002	2.148	0.01853	1.45	0.022	1.227
ASCE 10 (b)..	0.6DL+-0.14Sds*D..	0.00177	0.24	0.004	2.148	0.00535	0.42	0.006	1.227
DL + 0.7Di	1DL+0.7OL1	0.00219	0.3	0.005	2.148	0.01246	0.97	0.015	1.227
DL + LL + 0..	1DL+1LL+0.7OL1	0.00219	0.3	0.005	2.148	0.01246	0.97	0.015	1.227
DL +0.7Di +..	1DL+0.7OL1+0.053..	0.00219	0.3	0.005	2.148	0.01264	0.99	0.015	1.227
DL +0.7Di +..	1DL+0.7OL1+0.053..	0.00219	0.3	0.005	2.148	0.01246	0.97	0.015	1.227
DL +0.7Di -..	1DL+0.7OL1+-0.05..	0.00219	0.3	0.005	2.148	0.01229	0.96	0.015	1.227
DL +0.7Di -..	1DL+0.7OL1+-0.05..	0.00219	0.3	0.005	2.148	0.01246	0.97	0.015	1.227
0.6D + 0.7D..	0.6DL+0.7OL1+0.0..	0.00142	0.19	0.003	2.148	0.00835	0.65	0.01	1.227
0.6D + 0.7D..	0.6DL+0.7OL1+0.0..	0.00142	0.19	0.003	2.148	0.00818	0.64	0.01	1.227
0.6D + 0.7D..	0.6DL+0.7OL1+-0...	0.00142	0.19	0.003	2.148	0.008	0.62	0.01	1.227
0.6D + 0.7D..	0.6DL+0.7OL1+-0...	0.00142	0.19	0.003	2.148	0.00818	0.64	0.01	1.227

Footing Flexure Design (Top Bars)

Description	Categories and Factors	Mu-xx (k-ft)	z Dir As (in^2)	Mu-zz (k-ft)	x Dir As (in^2)
SW+OB	**1SW+1OB-(ASCE 10 ..,ASCE 10 ..)**	**0.251**	**0**	**1.385**	**0**

Moment Capacity of Plain Concrete Section Along xx and zz= 45.255k-ft,27.153k-ft Per Chapter 22 of ACI 318.

Footing Shear Check

Two Way (Punching) Vc: **NA** One Way (x Dir. Cut) Vc: **66.13 k** One Way (z Dir. Cut) Vc: **39.038 k**

		Punching		x Dir. Cut		z Dir. Cut	
Description	Categories and Factors	Vu(k)	Vu/(ϕVc)	Vu(k)	Vu/(ϕVc)	Vu(k)	Vu/(ϕVc)
ASCE 1	1DL+1FL	NA	NA	0.002	0	0.366	0.012
ASCE 2	1DL+1HL+1LL+1LLS+1FL	NA	NA	0.002	0	0.366	0.012
ASCE 3 (a)	1DL+1HL+1RLL+1FL	NA	NA	0.002	0	0.366	0.012
ASCE 3 (b)	1DL+1HL+1SL+1FL	NA	NA	0.002	0	0.366	0.012
ASCE 3 (c)	1DL+1HL+1RL+1FL	NA	NA	0.002	0	0.366	0.012
ASCE 4 (a)	1DL+1HL+0.75LL+0.75LLS..	NA	NA	0.002	0	0.366	0.012
ASCE 4 (b)	1DL+1HL+0.75LL+0.75LLS..	NA	NA	0.002	0	0.366	0.012
ASCE 4 (c)	1DL+1HL+0.75LL+0.75LLS..	NA	NA	0.002	0	0.366	0.012
ASCE 5 (a) (a..	1DL+1HL+0.6WLX	NA	NA	0.001	0	0.365	0.012
ASCE 5 (a) (b..	1DL+1HL+0.6WLZ	NA	NA	0.001	0	0.302	0.01
ASCE 5 (a) (c..	1DL+1HL+-0.6WLX	NA	NA	0.001	0	0.36	0.012
ASCE 5 (a) (d..	1DL+1HL+-0.6WLZ	NA	NA	0.001	0	0.302	0.01
ASCE 6 (a) (a..	1DL+1HL+0.45WLX+0.75LL..	NA	NA	0.002	0	0.413	0.014
ASCE 6 (a) (b..	1DL+1HL+0.45WLZ+0.75LL..	NA	NA	0.002	0	0.366	0.012
ASCE 6 (a) (c..	1DL+1HL+-0.45WLX+0.75L..	NA	NA	0.002	0	0.385	0.013
ASCE 6 (a) (d..	1DL+1HL+-0.45WLZ+0.75L..	NA	NA	0.002	0	0.366	0.012
ASCE 6 (b) (a..	1DL+1HL+0.45WLX+0.75LL..	NA	NA	0.002	0	0.413	0.014
ASCE 6 (b) (b..	1DL+1HL+0.45WLZ+0.75LL..	NA	NA	0.002	0	0.366	0.012
ASCE 6 (b) (c..	1DL+1HL+-0.45WLX+0.75L..	NA	NA	0.002	0	0.385	0.013
ASCE 6 (b) (d..	1DL+1HL+-0.45WLZ+0.75L..	NA	NA	0.002	0	0.366	0.012
ASCE 6 (c) (a..	1DL+1HL+0.45WLX+0.75LL..	NA	NA	0.002	0	0.413	0.014
ASCE 6 (c) (b..	1DL+1HL+0.45WLZ+0.75LL..	NA	NA	0.002	0	0.366	0.012
ASCE 6 (c) (c..	1DL+1HL+-0.45WLX+0.75L..	NA	NA	0.002	0	0.385	0.013
ASCE 6 (c) (d..	1DL+1HL+-0.45WLZ+0.75L..	NA	NA	0.002	0	0.366	0.012
ASCE 7 (a) (a..	0.6DL+1HL+0.6WLX	NA	NA	0.0008385	0	0.244	0.008
ASCE 7 (a) (b..	0.6DL+1HL+0.6WLZ	NA	NA	0.0008385	0	0.181	0.006
ASCE 7 (a) (c..	0.6DL+1HL+-0.6WLX	NA	NA	0.0008385	0	0.241	0.008
ASCE 7 (a) (d..	0.6DL+1HL+-0.6WLZ	NA	NA	0.0008385	0	0.181	0.006
ASCE 7 (b) (a..	0.6DL+0.6HL+0.6WLX	NA	NA	0.0008385	0	0.244	0.008
ASCE 7 (b) (b..	0.6DL+0.6HL+0.6WLZ	NA	NA	0.0008385	0	0.181	0.006
ASCE 7 (b) (c..	0.6DL+0.6HL+-0.6WLX	NA	NA	0.0008385	0	0.241	0.008
ASCE 7 (b) (d..	0.6DL+0.6HL+-0.6WLZ	NA	NA	0.0008385	0	0.181	0.006
ASCE 8 (a)	1DL+0.14Sds*DL+1HL+0.7..	NA	NA	0.002	0	0.849	0.029
ASCE 8 (b)	1DL+0.14Sds*DL+1HL+0.7..	NA	NA	0.003	0	0.434	0.015
ASCE 8 (c)	1DL+0.14Sds*DL+1HL+-0...	NA	NA	0.002	0	0.818	0.028
ASCE 8 (d)	1DL+0.14Sds*DL+1HL+-0...	NA	NA	0.003	0	0.416	0.014
ASCE 9 (a)	1DL+0.105Sds*DL+1HL+0...	NA	NA	0.002	0	0.727	0.025
ASCE 9 (b)	1DL+0.105Sds*DL+1HL+0...	NA	NA	0.002	0	0.415	0.014
ASCE 9 (c)	1DL+0.105Sds*DL+1HL+-0..	NA	NA	0.002	0	0.697	0.024
ASCE 9 (d)	1DL+0.105Sds*DL+1HL+-0..	NA	NA	0.002	0	0.402	0.014
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	NA	NA	0.0007109	0	0.598	0.02
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	NA	NA	0.001	0	0.169	0.006
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	NA	NA	0.0007109	0	0.582	0.02

ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	NA	NA	0.001	0	0.151	0.005
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	NA	NA	0.0007109	0	0.598	0.02
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	NA	NA	0.001	0	0.169	0.006
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	NA	NA	0.0007109	0	0.582	0.02
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	NA	NA	0.001	0	0.151	0.005
DL + 0.7Di	1DL+0.7OL1	NA	NA	0.002	0	0.352	0.012
DL + LL + 0.7..	1DL+1LL+0.7OL1	NA	NA	0.002	0	0.352	0.012
DL +0.7Di + 0..	1DL+0.7OL1+0.0539WLX+1SL	NA	NA	0.002	0	0.357	0.012
DL +0.7Di + 0..	1DL+0.7OL1+0.0539WLZ+1SL	NA	NA	0.002	0	0.352	0.012
DL +0.7Di - 0..	1DL+0.7OL1+-0.054WLX+1SL	NA	NA	0.002	0	0.346	0.012
DL +0.7Di - 0..	1DL+0.7OL1+-0.054WLZ+1SL	NA	NA	0.002	0	0.352	0.012
0.6D + 0.7Di ..	0.6DL+0.7OL1+0.0539WLX	NA	NA	0.001	0	0.236	0.008
0.6D + 0.7Di ..	0.6DL+0.7OL1+0.0539WLZ	NA	NA	0.001	0	0.231	0.008
0.6D + 0.7Di ..	0.6DL+0.7OL1+-0.054WLX	NA	NA	0.001	0	0.225	0.008
0.6D + 0.7Di ..	0.6DL+0.7OL1+-0.054WLZ	NA	NA	0.001	0	0.231	0.008

Pedestal Design

Shear Check Results (Envelope):

	Vc (k)	Vs (k)	Vu (k)	Vu/Φ*Vn	Φ	Gov LC
Shear Along x Direction:	**36.362**	**33.429**	**0**	**0**	**0.75**	**95**
Shear Along z Direction:	**36.362**	**33.429**	**0.94**	**0.018**	**0.75**	**95**

Pedestal Ties : **#4 @ 10 in**

Bending Check Results (Envelope): PCA Load Contour Method (for biaxial)

Unity Check:	**0.029**	Φ	: **0.9**	Parme β	: **0.65**
Pu	: **0 k**	Mux	: **0 k-ft**	Muz	: **2.569 k-ft**
Pn	: **0 k**	Mnx	: **NC**	Mnz	: **97.923 k-ft**
Governing LC	: **92**	Mnox	: **NC**	Mnoz	: **NC**
Pedestal Bars	: **8 #5**	% Steel	: **0.7575**		

Concrete Bearing Check (Vertical Loads Only)

Bearing Bc : **2754 k**

Description	Categories and Factors	Bearing Bu (k)	Bearing Bu/∅Bc
ASCE 1	1DL+1FL	3.413	0.002
ASCE 2	1DL+1HL+1LL+1LLS+1FL	3.413	0.002
ASCE 3 (a)	1DL+1HL+1RLL+1FL	3.413	0.002
ASCE 3 (b)	1DL+1HL+1SL+1FL	3.413	0.002
ASCE 3 (c)	1DL+1HL+1RL+1FL	3.413	0.002
ASCE 4 (a)	1DL+1HL+0.75LL+0.75LLS..	3.413	0.002
ASCE 4 (b)	1DL+1HL+0.75LL+0.75LLS..	3.413	0.002
ASCE 4 (c)	1DL+1HL+0.75LL+0.75LLS..	3.413	0.002
ASCE 5 (a) (a..	1DL+1HL+0.6WLX	2.939	0.002
ASCE 5 (a) (b..	1DL+1HL+0.6WLZ	2.939	0.002
ASCE 5 (a) (c..	1DL+1HL+-0.6WLX	2.939	0.002
ASCE 5 (a) (d..	1DL+1HL+-0.6WLZ	2.939	0.002
ASCE 6 (a) (a..	1DL+1HL+0.45WLX+0.75LL..	3.413	0.002
ASCE 6 (a) (b..	1DL+1HL+0.45WLZ+0.75LL..	3.413	0.002
ASCE 6 (a) (c..	1DL+1HL+-0.45WLX+0.75L..	3.413	0.002
ASCE 6 (a) (d..	1DL+1HL+-0.45WLZ+0.75L..	3.413	0.002
ASCE 6 (b) (a..	1DL+1HL+0.45WLX+0.75LL..	3.413	0.002
ASCE 6 (b) (b..	1DL+1HL+0.45WLZ+0.75LL..	3.413	0.002
ASCE 6 (b) (c..	1DL+1HL+-0.45WLX+0.75L..	3.413	0.002
ASCE 6 (b) (d..	1DL+1HL+-0.45WLZ+0.75L..	3.413	0.002
ASCE 6 (c) (a..	1DL+1HL+0.45WLX+0.75LL..	3.413	0.002
ASCE 6 (c) (b..	1DL+1HL+0.45WLZ+0.75LL..	3.413	0.002
ASCE 6 (c) (c..	1DL+1HL+-0.45WLX+0.75L..	3.413	0.002
ASCE 6 (c) (d..	1DL+1HL+-0.45WLZ+0.75L..	3.413	0.002
ASCE 7 (a) (a..	0.6DL+1HL+0.6WLX	1.763	0
ASCE 7 (a) (b..	0.6DL+1HL+0.6WLZ	1.763	0
ASCE 7 (a) (c..	0.6DL+1HL+-0.6WLX	1.763	0
ASCE 7 (a) (d..	0.6DL+1HL+-0.6WLZ	1.763	0
ASCE 7 (b) (a..	0.6DL+0.6HL+0.6WLX	1.763	0
ASCE 7 (b) (b..	0.6DL+0.6HL+0.6WLZ	1.763	0
ASCE 7 (b) (c..	0.6DL+0.6HL+-0.6WLX	1.763	0
ASCE 7 (b) (d..	0.6DL+0.6HL+-0.6WLZ	1.763	0
ASCE 8 (a)	1DL+0.14Sds*DL+1HL+0.7..	3.972	0.002
ASCE 8 (b)	1DL+0.14Sds*DL+1HL+0.7..	4.052	0.002
ASCE 8 (c)	1DL+0.14Sds*DL+1HL+-0...	3.972	0.002
ASCE 8 (d)	1DL+0.14Sds*DL+1HL+-0...	3.892	0.002
ASCE 9 (a)	1DL+0.105Sds*DL+1HL+0...	3.82	0.002
ASCE 9 (b)	1DL+0.105Sds*DL+1HL+0...	3.88	0.002
ASCE 9 (c)	1DL+0.105Sds*DL+1HL+-0..	3.82	0.002
ASCE 9 (d)	1DL+0.105Sds*DL+1HL+-0..	3.76	0.002
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	1.489	0
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	1.569	0
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	1.489	0
ASCE 10 (a) (..	0.6DL+-0.14Sds*DL+1HL+..	1.409	0

ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	1.489	0
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	1.569	0
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	1.489	0
ASCE 10 (b) (..	0.6DL+-0.14Sds*DL+0.6H..	1.409	0
DL + 0.7Di	1DL+0.7OL1	3.349	0.002
DL + LL + 0.7..	1DL+1LL+0.7OL1	3.349	0.002
DL +0.7Di + 0..	1DL+0.7OL1+0.0539WLX+1SL	3.349	0.002
DL +0.7Di + 0..	1DL+0.7OL1+0.0539WLZ+1SL	3.349	0.002
DL +0.7Di - 0..	1DL+0.7OL1+-0.054WLX+1SL	3.349	0.002
DL +0.7Di - 0..	1DL+0.7OL1+-0.054WLZ+1SL	3.349	0.002
0.6D + 0.7Di ..	0.6DL+0.7OL1+0.0539WLX	2.174	0.001
0.6D + 0.7Di ..	0.6DL+0.7OL1+0.0539WLZ	2.174	0.001
0.6D + 0.7Di ..	0.6DL+0.7OL1+-0.054WLX	2.174	0.001
0.6D + 0.7Di ..	0.6DL+0.7OL1+-0.054WLZ	2.174	0.001

Overturning Check (Service)

Description	Categories and Factors	Mo-xx (k-ft)	Ms-xx (k-ft)	Mo-zz (k-ft)	Ms-zz (k-ft)	OSF-xx	OSF-zz
ASCE Strength..	1.4DL+1.4FL	0.057	16.697	0.163	27.828	294.87	170.379
ASCE Strength..	1.2DL+1.6LL+1.6L..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6LL+1.6L..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6LL+1.6L..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.049	14.312	0.581	23.853	294.87	41.03
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.049	14.312	0.441	23.993	294.87	54.362
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.049	14.312	0.581	23.853	294.87	41.03
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.049	14.312	0.441	23.993	294.87	54.362
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.049	14.312	0.581	23.853	294.87	41.03
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.049	14.312	0.441	23.993	294.87	54.362
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1WLX+0.5LL..	0.049	14.312	1.023	23.853	294.87	23.323
ASCE Strength..	1.2DL+1WLZ+0.5LL..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+-1WLX+0.5L..	0.049	14.312	0.883	23.993	294.87	27.181
ASCE Strength..	1.2DL+-1WLZ+0.5L..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1WLX+0.5LL..	0.049	14.312	1.023	23.853	294.87	23.323
ASCE Strength..	1.2DL+1WLZ+0.5LL..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+-1WLX+0.5L..	0.049	14.312	0.883	23.993	294.87	27.181
ASCE Strength..	1.2DL+-1WLZ+0.5L..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+1WLX+0.5LL..	0.049	14.312	1.023	23.853	294.87	23.323
ASCE Strength..	1.2DL+1WLZ+0.5LL..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	1.2DL+-1WLX+0.5L..	0.049	14.312	0.883	23.993	294.87	27.181
ASCE Strength..	1.2DL+-1WLZ+0.5L..	0.049	14.312	0.14	23.853	294.87	170.379
ASCE Strength..	0.9DL+1WLX+1.6HL	0.036	10.093	0.901	16.822	277.279	18.665
ASCE Strength..	0.9DL+1WLZ+1.6HL	0.036	10.093	0.019	16.822	277.279	904.455
ASCE Strength..	0.9DL+-1WLX+1.6HL	0.036	10.093	0.883	16.841	277.279	19.079
ASCE Strength..	0.9DL+-1WLZ+1.6HL	0.036	10.093	0.019	16.822	277.279	904.455
ASCE Strength..	0.9DL+1WLX+0.9HL	0.036	10.093	0.901	16.822	277.279	18.665
ASCE Strength..	0.9DL+1WLZ+0.9HL	0.036	10.093	0.019	16.822	277.279	904.455
ASCE Strength..	0.9DL+-1WLX+0.9HL	0.036	10.093	0.883	16.841	277.279	19.079
ASCE Strength..	0.9DL+-1WLZ+0.9HL	0.036	10.093	0.019	16.822	277.279	904.455
ASCE Strength..	1.2DL+0.2Sds*DL+..	0.058	17.136	5.297	28.561	293.33	5.392
ASCE Strength..	1.2DL+0.2Sds*DL+..	4.028	20.321	0.156	28.824	5.045	184.323
ASCE Strength..	1.2DL+0.2Sds*DL+..	0.058	17.136	5.141	28.717	293.33	5.586
ASCE Strength..	1.2DL+0.2Sds*DL+..	4.244	20.105	0.419	28.561	4.737	68.102
ASCE Strength..	0.9DL+-0.2Sds*DL..	0.027	7.909	5.23	13.181	298.261	2.521
ASCE Strength..	0.9DL+-0.2Sds*DL..	4.028	11.062	0.089	13.444	2.746	151.709
ASCE Strength..	0.9DL+-0.2Sds*DL..	0.027	7.909	5.141	13.27	298.261	2.581

ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**4.212**	**10.877**	**0.352**	**13.181**	**2.582**	**37.487**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**0.027**	**7.909**	**5.23**	**13.181**	**298.261**	**2.521**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**4.028**	**11.062**	**0.089**	**13.444**	**2.746**	**151.709**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**0.027**	**7.909**	**5.141**	**13.27**	**298.261**	**2.581**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**4.212**	**10.877**	**0.352**	**13.181**	**2.582**	**37.487**

Mo-xx: Governing Overturning Moment about AD or BC

Ms-xx: Governing Stablizing Moment about AD or BC

OSF-xx: Ratio of Ms-xx to Mo-xx

Sliding Check (Service)

Description	Categories and Factors	Va-xx (k)	Vr-xx (k)	Va-zz (k)	Vr-zz (k)	SR-xx	SR-zz
ASCE Strength..	1.4DL+1.4FL	0	3.896	0	3.896	NA	NA
ASCE Strength..	1.2DL+1.6LL+1.6L..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6LL+1.6L..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6LL+1.6L..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6RLL+1.6..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.09	3.339	0	3.339	36.915	NA
ASCE Strength..	1.2DL+1.6RLL+1.6..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6RLL+1.6..	0.09	3.339	0	3.339	36.915	NA
ASCE Strength..	1.2DL+1.6RLL+1.6..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6SL+1.6S..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.09	3.339	0	3.339	36.915	NA
ASCE Strength..	1.2DL+1.6SL+1.6S..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6SL+1.6S..	0.09	3.339	0	3.339	36.915	NA
ASCE Strength..	1.2DL+1.6SL+1.6S..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6RL+1.6H..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.09	3.339	0	3.339	36.915	NA
ASCE Strength..	1.2DL+1.6RL+1.6H..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1.6RL+1.6H..	0.09	3.339	0	3.339	36.915	NA
ASCE Strength..	1.2DL+1.6RL+1.6H..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1WLX+0.5LL..	0.181	3.339	0	3.339	18.457	NA
ASCE Strength..	1.2DL+1WLZ+0.5LL..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+-1WLX+0.5L..	0.181	3.339	0	3.339	18.457	NA
ASCE Strength..	1.2DL+-1WLZ+0.5L..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1WLX+0.5LL..	0.181	3.339	0	3.339	18.457	NA
ASCE Strength..	1.2DL+1WLZ+0.5LL..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+-1WLX+0.5L..	0.181	3.339	0	3.339	18.457	NA
ASCE Strength..	1.2DL+-1WLZ+0.5L..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+1WLX+0.5LL..	0.181	3.339	0	3.339	18.457	NA
ASCE Strength..	1.2DL+1WLZ+0.5LL..	0	3.339	0	3.339	NA	NA
ASCE Strength..	1.2DL+-1WLX+0.5L..	0.181	3.339	0	3.339	18.457	NA
ASCE Strength..	1.2DL+-1WLZ+0.5L..	0	3.339	0	3.339	NA	NA
ASCE Strength..	0.9DL+1WLX+1.6HL	0.181	2.355	0	2.355	13.017	NA
ASCE Strength..	0.9DL+1WLZ+1.6HL	0	2.355	0	2.355	NA	NA
ASCE Strength..	0.9DL+-1WLX+1.6HL	0.181	2.355	0	2.355	13.017	NA
ASCE Strength..	0.9DL+-1WLZ+1.6HL	0	2.355	0	2.355	NA	NA
ASCE Strength..	0.9DL+1WLX+0.9HL	0.181	2.355	0	2.355	13.017	NA
ASCE Strength..	0.9DL+1WLZ+0.9HL	0	2.355	0	2.355	NA	NA
ASCE Strength..	0.9DL+-1WLX+0.9HL	0.181	2.355	0	2.355	13.017	NA
ASCE Strength..	0.9DL+-1WLZ+0.9HL	0	2.355	0	2.355	NA	NA
ASCE Strength..	1.2DL+0.2Sds*DL+..	1.033	3.999	0	3.999	3.872	NA
ASCE Strength..	1.2DL+0.2Sds*DL+..	0	4.038	1.343	4.038	NA	3.008
ASCE Strength..	1.2DL+0.2Sds*DL+..	1.033	3.999	0	3.999	3.872	NA
ASCE Strength..	1.2DL+0.2Sds*DL+..	0	3.959	1.343	3.959	NA	2.948
ASCE Strength..	0.9DL+-0.2Sds*DL..	1.033	1.845	0	1.845	1.787	NA
ASCE Strength..	0.9DL+-0.2Sds*DL..	0	1.885	1.343	1.885	NA	1.404
ASCE Strength..	0.9DL+-0.2Sds*DL..	1.033	1.845	0	1.845	1.787	NA

ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**0**	**1.805**	**1.343**	**1.805**	**NA**	**1.345**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**1.033**	**1.845**	**0**	**1.845**	**1.787**	**NA**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**0**	**1.885**	**1.343**	**1.885**	**NA**	**1.404**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**1.033**	**1.845**	**0**	**1.845**	**1.787**	**NA**
ASCE Strength..	**0.9DL+-0.2Sds*DL..**	**0**	**1.805**	**1.343**	**1.805**	**NA**	**1.345**

Va-xx: Applied Lateral Force to Cause Sliding Along xx Axis

Vr-xx: Resisting Lateral Force Against Sliding Along xx Axis

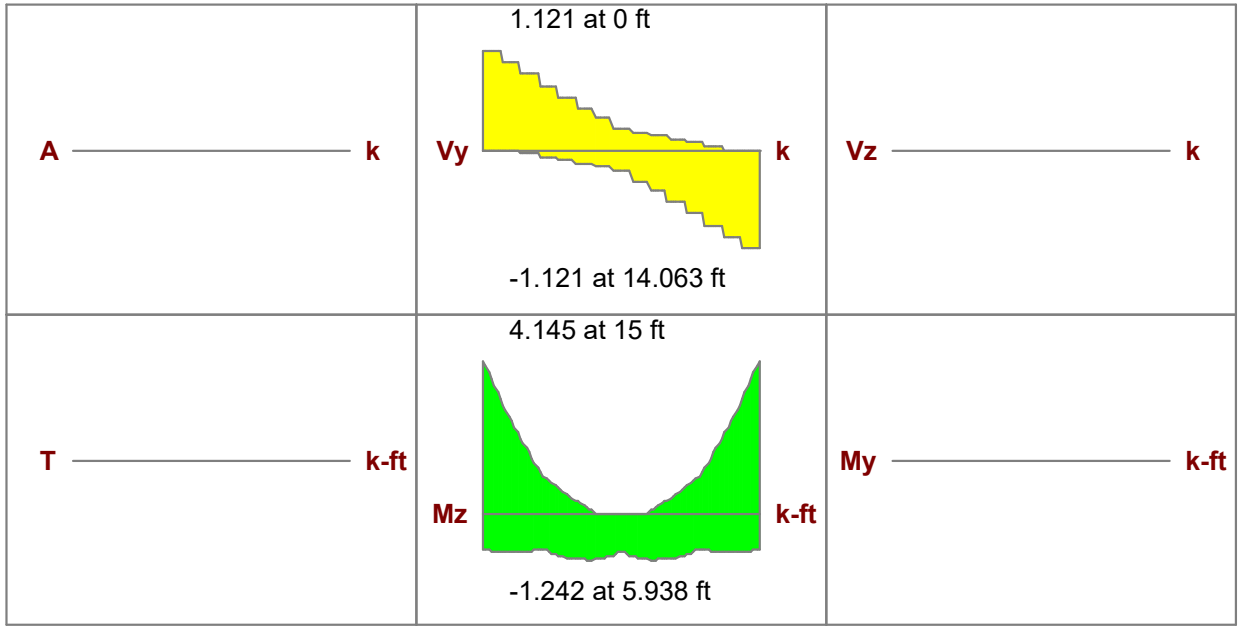
SR-xx: Ratio of Vr-xx to Va-xx

Beam: **B2**

Shape: **CRECT18X12**
Material: **Conc5000NW**
Length: **15 ft**
Start: **R3D_N28**
End: **R3D_N19**

Stress Block: **Rectangular**

Code Check: **0.073 (bending)**
Report Based On 97 Sections



Beam Design does not consider axial, weak axis 'M' Moments, nor weak axis 'V' Forces.

ACI 318-19 Code Check

Top Bending Check	**0.073 (LC 87)**	Bot Bending Check	**0.022 (LC 87)**	Shear Check	**0.062 (y) (LC 87)**
Location	**15 ft**	Location	**5.938 ft**	Location	**14.063 ft**
Gov Mu Top	**4.145 k-ft**	Gov Mu Bot	**-1.242 k-ft**	Gov Vu	**1.121 k**
phi*Mn Top	**56.519 k-ft**	phi*Mn Bot	**56.519 k-ft**	phi*Vn	**18.058 k**
Tension Bar Fy	**60 ksi**	Concrete Weight	**0.145 k/ft^3**	Top Cover	**3 in**
Shear Bar Fy	**60 ksi**	λ	**1**	Bottom Cover	**3 in**
F'c	**5 ksi**	E_Concrete	**4074 ksi**	Side Cover	**1.5 in**
Flex. Rebar Set	**ASTM A615**	Min 1 Bar Dia Spac.	**No**	Legs/Stirrup	**2**
Shear Rebar Set	**ASTM A615**				

Span Information

Span	Span Length (ft)	I-Face Dist. (in)	J-Face Dist. (in)
1	0 - 15	0	0

Soil Bearing

Span	Pressure (ksf)	Allowable (ksf)	Point	UC
1	0.175	1.5	N23	0.117

Bending Steel

Span	Loc	Top/Bot	Bars Provided
1	Left	T	3 #5
	Left	B	3 #5
	Mid	T	-
	Mid	B	3 #5
	Right	T	3 #5
	Right	B	3 #5

Bending Span Results

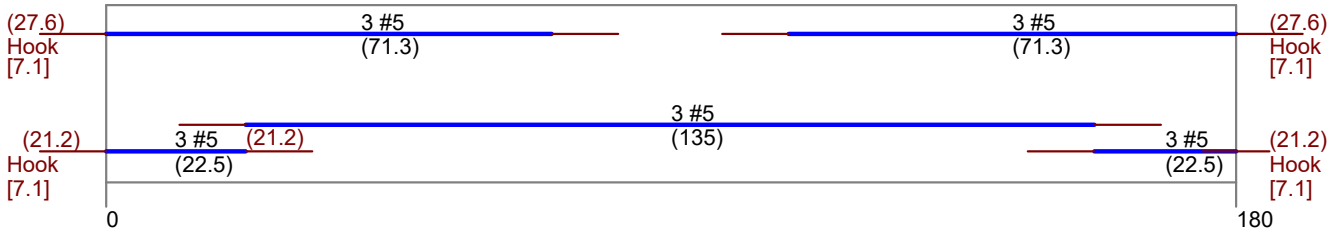
Span	Loc (ft)	Top/Bot	Mnz (k-ft)	Rho Min	Rho Max	Rho	As Prvd (in^2)	As Reqd (in^2)
1	-	T	62.799	0.0035	0.0235	0.0054	0.92	0.065
	-	B	62.799	0.0035	0.0235	0.0054	0.92	0.015
	-	T	0	0	0	0	0	0
	5.9	B	62.799	0.0035	0.0235	0.0054	0.92	0.02
	15	T	62.799	0.0035	0.0235	0.0054	0.92	0.065
	15	B	62.799	0.0035	0.0235	0.0054	0.92	0.015

Shear Steel

Span	Region (ft)	Bars Provided
1	0 - 3.8	
	3.8 - 7.5	
	7.5 - 11.3	
	11.3 - 15	

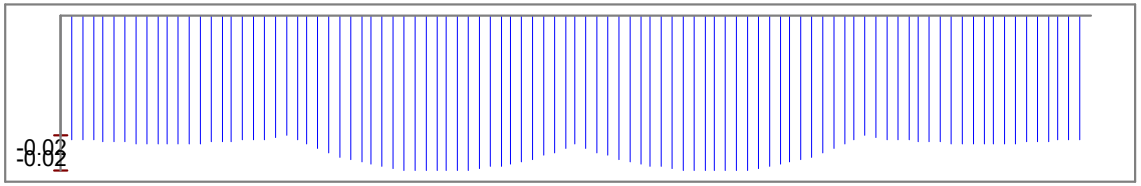
Shear Span Results

Span	Region (ft)	Vn (k)	Vc (k)	Vs (k)	As Reqd (in^2/ft)	As Prvd (in^2/ft)
1	0 - 3.8	24.077	24.077	0	0	0
	3.8 - 7.5	24.077	24.077	0	0	0
	7.5 - 11.3	24.077	24.077	0	0	0
	11.3 - 15	24.077	24.077	0	0	0

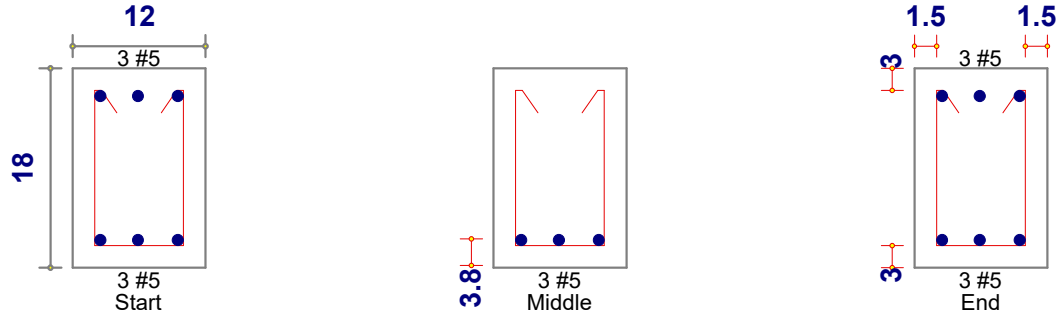


Span 1

Graphical Plot of Required Area of Steel(Units: in^2)



Cross Section Detailing(All Bars Equally Spaced, Units: in)



Span 1

Rebar Detailing, Face of Support to Face of Support of Each Span(Units: in)

END OF CALCULATIONS