Robinson+Cole

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Also admitted in Massachusetts

October 6, 2015

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
751 Higgins Road, Cheshire, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the top of the existing 250-foot tower at 751 Higgins Road in Cheshire, Connecticut (the "Property"). The tower and underlying property are owned by AT&T. The Council approved Cellco's use of this tower in 1993. Cellco now intends to modify its facility by replacing eight (8) of its existing antennas with three (3) model SBNHH-1D65B, 700/2100 MHz antennas; two (2) model LPA-80080-6CF, 850 MHz antennas; and three (3) model SBNHH-1D65B, 1900 MHz antennas, all at the same level on the tower. Cellco also intends to install nine (9) remote radio heads ("RRHs") behind its replacement antennas and two (2) HYBRIFLEX™ antenna cables. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cables.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Michael A. Milone, Cheshire's Town Manager. A copy of this letter is also being sent to AT&T, the owner of the Property and the tower.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. The replacement antennas and RRHs will be located at the top of the 250-foot tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 2.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The tower and its foundation can support Cellco's proposed modifications. (*See* Structural Analysis Report included in Attachment 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Michael A. Milone, Cheshire Town Manager
Nicholas J. Carkin, AT&T
Tim Parks

ATTACHMENT 1

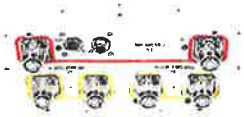
Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

SBNHH-1D65B

Andrew® Tri-band Antenna, 698–896 and 2x 1695–2360 MHz, 65° horizontal beamwidth, internal RET. Both high bands share the same electrical tilt.



- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	14.7	17.7	18.2	18.6	18.6
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS, dB	14	13	15	15	15	13
Front-to-Back Ratio at 180°, dB	27	29	28	28	28	27
CPR at Boresight, dB	20	23	20	20	17	21
CPR at Sector, dB	14	10	12	10	9	1
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.3	17.4	17.9	18.2	18.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.8	±0.4	±0.3	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.6	0 ° | 14.5	0 ° | 17.4	0 ° | 17.8	0 ° | 18.1	0 ° | 18.2
	7 ° | 14.6	7 ° | 14.4	3 ° | 17.5	3 ° | 17.9	3 ° | 18.3	3 ° | 18.4
	14 ° | 14.2	14 ° | 13.6	7 ° | 17.4	7 ° | 17.9	7 ° | 18.2	7 ° | 18.4
Beamwidth, Horizontal Tolerance, degrees	±2.2	±3.4	±2	±4.6	±5.7	±4.3
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.3	±0.2	±0.3	±0.2
USLS, dB	16	14	16	16	16	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	27	26	26	26
CPR at Boresight, dB	22	23	21	20	20	22
CPR at Sector, dB	13	11	16	12	11	4

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol® multiband with internal RET
Band	Multiband
Brand	DualPol® | Teletilt®
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz
Performance Note	Outdoor usage

Product Specifications

SBNHH-1D65B

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Aluminum | Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	6
Wind Loading, maximum	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Speed, maximum	241.4 km/h | 150.0 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	1851.0 mm | 72.9 in
Width	301.0 mm | 11.9 in
Net Weight	18.4 kg | 40.6 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Multi-RET)
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
RET System	Teletilt®

Packed Dimensions

Depth	299.0 mm | 11.8 in
Length	1970.0 mm | 77.6 in
Width	409.0 mm | 16.1 in
Shipping Weight	31.0 kg | 68.3 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

Vertically Polarized, Log-Periodic 80° / 14 dBd
806-960 MHz

Mechanical specifications

Length	1800	mm	70.9	in
Width	140	mm	5.5	in
Depth	335	mm	13.2	in
Depth with z-bracket	375	mm	14.8	in
Weight [4]	9.5	kg	21.0	lbs
Wind Area Fore/Aft [6]	0.25	m^2	2.7	ft^2
Wind Area Side [6]	0.61	m^2	6.6	ft^2
Max Wind Survivability [6]	>201	km/hr	>125	mph
Wind Load @ 100 mph (161 km/hr) [6]				
Fore/Aft	415	N	93	lbf
Side	878	N	198	lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a gray, UV safe fiberglass radome. RoHS compliant.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-102 mm; Ø2.0-4.0 in. If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in).

Mechanical downtilt angle 0-22°
Mounting & Downtilt Bracket Kit 21700000

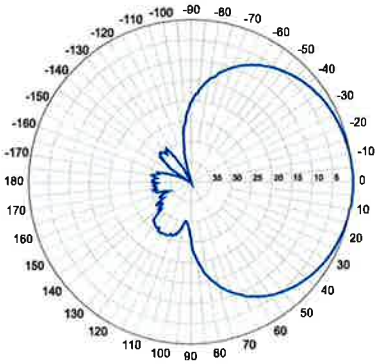
Electrical specifications

Frequency Range	806-960 MHz
Impedance	50Ω
Connector [3]	NE or E-DIN Female 1 port / Center
VSWR [1]	≤ 1.4:1
Polarization	Vertical
Gain [1]	14 dBd
Power Rating [2]	500 W
Half Power Angle [1]	
Horizontal Beamwidth	80°
Vertical Beamwidth	10°
Electrical downtilt [5]	0°
Null fill [1]	10%
Lightning protection	Direct ground

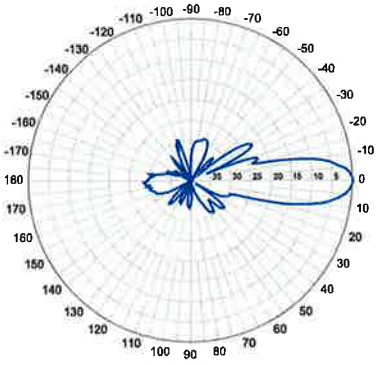
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.
4) Antenna weight does not include brackets.
5) Add'l downtilts may be available. Check website for details.
6) Values reflect installation with all three brackets utilized.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1]



Horizontal



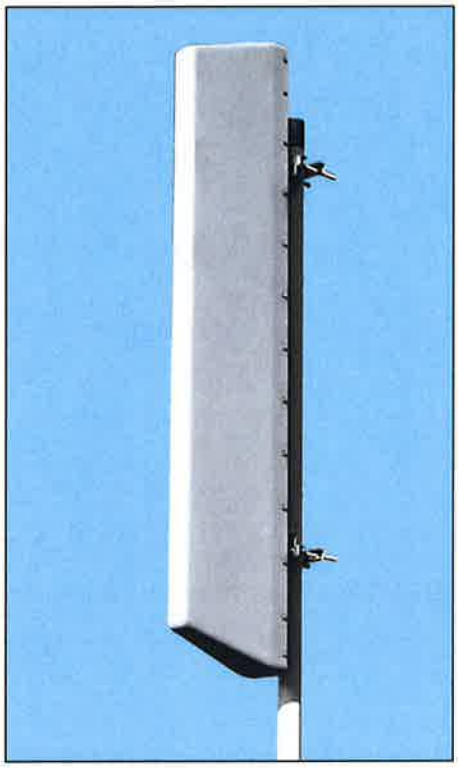
Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the front-to-back ratio.

LPA-80080/6CF __

When ordering replace "__" with connector type.



Featuring our Exclusive 3T Technology™ Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:
This antenna is under a five-year limited warranty for repair or replacement.

Revision Date: 08/18/08

806-960 MHz

815.399.0001 • antel@antelinc.com • www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

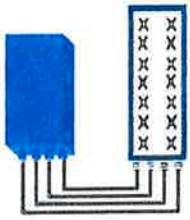
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

Alcatel·Lucent

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.) Volume in L Weight in kg (lb) (w/o mounting HW)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield) 38 (with solar shield) 26 (57.2) (with solar shield)
DC voltage range DC power consumption	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 550W typical @100% RF load (in 2Tx or 4TX mode)
Environmental conditions Wind load (@150km/h or 93mph)	-40°C (-40°F) /+55°C (+131°F) IP65 Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

PCS RF MODULES

RRH1900 2X60 - HW CHARACTERISTICS

LA6.0.1/13.3

	RRH2x60
RF Output Power	2x60W
Instantaneous Bandwidth	20MHz
Transmitter	2 TX
Receiver 1900 HW version 1900A HW version	2 Branch RX – LA6.0.1 4 Branch RX – LR13.3
Features	AISG 2.0 for RET/TMA
	Internal Smart Bias-T
Power	-48VDC
CPRI Ports	2 CPRI Rate 3 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (top mounted)

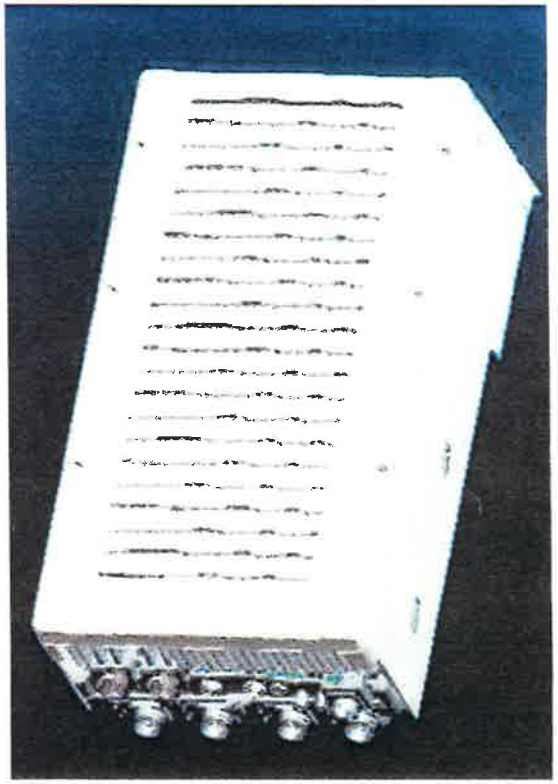
** Not a Verizon Wireless deployed product

NEW PCS RF MODULES FOR VZW

RRH2X60 - HW CHARACTERISTICS

LR14.3

	RRH2x60
RF Output Power	2x60W (4x30W HW Ready)
Instantaneous Bandwidth	60MHz
Target Reliability (Annual Return Rate)	<2%
Receiver	4 Branch Rx
Features	AISG 2.0 for RET/TMA
Power	-48VDC
	Internal Smart Bias-T
CPRI Ports	2 CPRI Rate 5 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX, RX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (downward facing)
Dimensions	22"(h) x 12"(w)x 9.4" (d)**
Weight	55lb**



**- Includes solar shield but not mounting brackets (8 lbs.)

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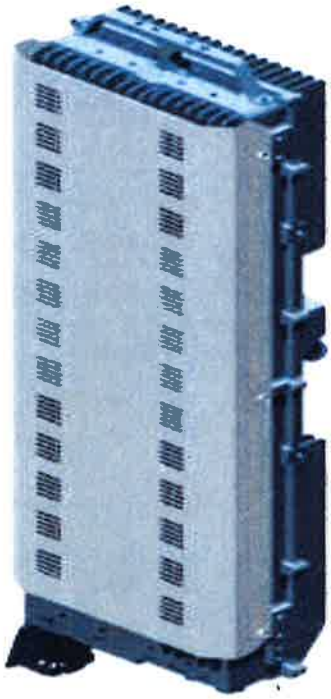
ALCATEL-LUCENT
WIRELESS PRODUCT DATASHEET
RRH2X60-AWS FOR BAND 4 APPLICATIONS

The Alcatel-Lucent RRH2x60-AWS is a high power, small form factor Remote Radio Head operating in the AWS frequency band (3GPP Band 4) for LTE technology. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.



A distributed Node B expands the deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent RRH2x60-AWS is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information.

SUPERIOR RF PERFORMANCE

The Alcatel-Lucent RRH2x60-AWS integrates all the latest technologies. This allows to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

It supports multiple discontinuous LTE carriers within an instantaneous bandwidth of 45 MHz corresponding to the entire AWS B4 spectrum.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

OPTIMIZED TCO

The Alcatel-Lucent RRH2x60-AWS is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

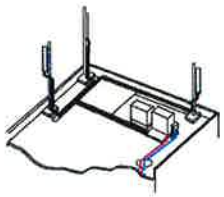
EASY INSTALLATION

The RRH2x60-AWS includes a reversible mounting bracket which allows for ease of installation behind an antenna, or on a rooftop knee wall while providing easy access to the mid body RF connectors.

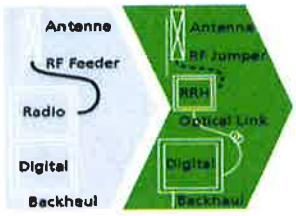
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent RRH2x60-AWS is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

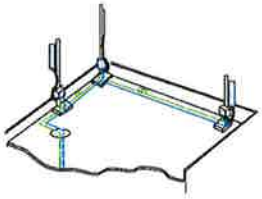
Installation can easily be done by a single person as the Alcatel–Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

FEATURES

- RRH2x60-AWS integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- RRH2x60-AWS is optimized for LTE operation
- RRH2x60-AWS is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

BENEFITS

- MIMO LTE operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses in RF cables and thus reducing power consumption by 50% compared to conventional solutions
- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and silent solutions, with minimum impact on the neighborhood, which ease the deployment
- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

TECHNICAL SPECIFICATIONS

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

Dimensions and weights

- HxWxD : 510x285x186mm (27 l with solar shield)
- Weight : 20 kg (44 lbs)

Electrical Data

- Power Supply : -48V DC (-40.5 to -57V)
- Power Consumption (ETSI average traffic load reference) : 250W @2x60W

RF Characteristics

- Frequency band: 1710-1755, UL / 2110-2155 MHz, DL (3GPP band 4)
- Output power: 2x60W at antenna connectors
- Technology supported: LTE
- Instantaneous bandwidth: 45 MHz
- Rx diversity: 2-way and 4-way uplink reception
- Typical sensitivity without Rx diversity: -105 dBm for LTE

Connectivity

- Two CPRI optical ports for daisychaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 500m using MM fiber, up to 20km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Six external alarms
- Surge protection for all external ports (DC and RF)

Environmental specifications

- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%
- Environmental Conditions : ETS 300 019-1-4 class 4.1E
- Ingress Protection : IEC 60529 IP65
- Acoustic Noise : Noiseless (natural convection cooling)

Safety and Regulatory Data

- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089, GR 3108, OET-65
- Safety : IEC60950-1, EN 60825-1, UL, ANSI/NFPA 70, CAN/CSA-C22.2
- Regulatory : FCC Part 15 Class B, CE Mark – European Directive : 2002/95/EC (ROHS); 2002/96/EC (WEEE); 1999/5/EC (R&TTE)
- Health : EN 50385

Alcatel·Lucent

AT THE SPEED OF IDEAS™

Product Data Sheet HB158-1-08U8-S8J18

HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

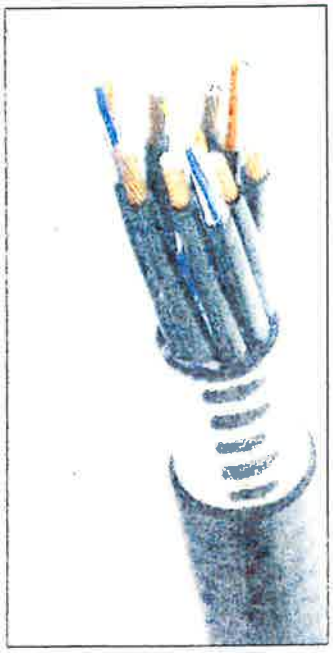


Figure 1: HYBRIFLEX Series

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics – minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket – Ensures long-lasting cable protection

Technical Specifications

Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Mechanical properties			
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
Electrical properties			
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	068 (0.205)
DC-Resistance Power Cable, 8.4mm²(8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Fiber optic properties			
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[µm]	50/125
Primary Coating (Acrylate)		[µm]	245
Buffer Diameter, Nominal		[µm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL94-V0, UL1666 RoHS Compliant
DC Power, this Type			
Size (Power)		[mm² (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm² (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, ICEA S-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Temperature			
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

* This data is provisional and subject to change

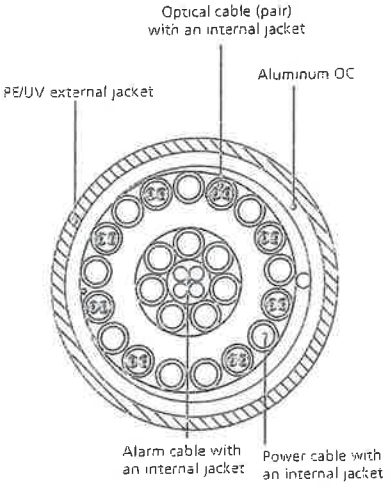


Figure 2: Construction Detail

ATTACHMENT 2

	General	Power	Density					
Site Name: Cheshire								
Tower Height: 250Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T UMTS	2	500	255	0.0058	880	0.5867	0.10%	
*AT&T UMTS	1	500	255	0.0029	1900	1.0000	0.03%	
*AT&T LTE	1	500	255	0.0029	2300	1.0000	0.03%	
*AT&T LTE	1	500	255	0.0029	1900	1.0000	0.03%	
*AT&T LTE	1	500	255	0.0029	700	0.4667	0.06%	
*T-Mobile GSM	8	107	212	0.0073	1945	1.0000	0.07%	
*T-Mobile UMTS	2	605	212	0.0103	2100	1.0000	0.10%	
*Nextel	9	100	215	0.0074	851	0.5673	0.13%	
*VoiceStream	1	100	217	0.0008	2400	1.0000	0.01%	
*Sprint CDMA/LTE	3	693	225.6	0.0155	1900	1.0000	0.16%	
*Sprint CDMA/LTE	1	390	225.6	0.0029	850	0.5667	0.05%	
Verizon PCS	**7**	**261**	**252**	**0.0103**	**1970**	**1.0000**	**1.03%**	
Verizon Cellular	**9**	**326**	**252**	**0.0166**	**869**	**0.5793**	**2.87%**	
Verizon AWS	**1**	**2118**	**252**	**0.0120**	**2145**	**1.0000**	**1.20%**	
Verizon 700	**1**	**1050**	**252**	**0.0059**	**746**	**0.4973**	**1.20%**	
								7.06%
* Source: Siting Council								

ATTACHMENT 3

AT&T Towers
2300 Northlake Center Dr Ste 405
Tucker, GA 30084-4032
(404) 532-5855

GPD Engineering and Architecture
Professional Corporation
Chris Scheks
520 South Main Street, Suite 2531
Akron, OH 44311
(614) 588-8973
cscheks@gpdgroup.com

GPD #: 2015723.01.TAG0053.06
July 27, 2015

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**TAG0053**
	Site FA:	**10136365**
	Site Name:	**CHESHIRE**
	AT&T Project:	**4_Verizon Mod Pre-NTP 4-23-13**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F, 2003 IBC, & 2005 CT State Building Code** **85 mph fastest-mile with 0" ice** **38 mph fastest-mile with 3/4" ice**
SITE DATA:		**751 Higgins Road, Cheshire, CT 06410, New Haven County** **Latitude 41° 29' 15" N, Longitude 72° 55' 47" W** **Market: NEW ENGLAND** **250' Radio Relay Towers Self Support Tower**

Ms. Deborah Krenc,

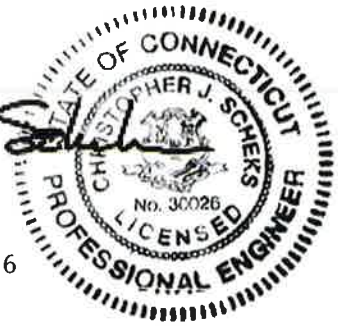
GPD is pleased to submit this Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	97.8%	Pass
Building Pedestal Ratio with Proposed Equipment:	Adequate	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T Towers. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,



Christopher J Scheks, P.E.
Connecticut #: PEN. 0030026

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by Verizon to AT&T Towers. This report was commissioned by Ms. Deborah Krenc of AT&T Towers.

This analysis is limited to the above grade tower structure. A detailed analysis of the below grade building structure is beyond the scope of this report; however, based on a comparison of the existing base reactions and the base reactions from the existing, proposed, and reserved loading case the below grade building structure will see a loading increase less than 5% in capacity. Therefore the below grade building structure will be sufficient to support the proposed loading per section 3403.2 of the 2003 IBC.

Modifications designed by GPD (Project #: 2012856.05, dated 7/25/12) have been installed and were considered in this analysis.

The proposed coax shall be stacked in a single row next to the existing 1-5/8" Fiber Cable supplying the loading at 252' on Tower Face D in order for the results of this analysis to be valid. See Appendix C for more details.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Legs	71.4%	Pass
Leg Bolts	97.8%	Pass
Diagonals	58.7%	Pass
Horizontals	52.1%	Pass
Redundant Members	64.7%	Pass
Inner Bracing	73.5%	Pass
Member Bolts	96.9%	Pass
Anchor Rods	33.0%	Pass
Building Pedestals	Adequate	Pass

ANALYSIS METHOD

RISA-3D (Version 12.0.0) and tnxTower (Version 6.1.4.1), commercially available software programs, were used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a recent GPD site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
Notice of Colocation Form	Verizon Co-location document, uploaded 5/6/2015	Siterra
Site Lease Application	Verizon Application, dated 6/22/2015	Siterra
Original Building Drawings	AT&T Co. L-4 Junction Building, Cheshire, CT, dated 12/1/1965	Siterra
Foundation Exploration	FDH Project #: 11-12049E-N1, dated 12/20/11	Siterra
Geotechnical Report	Not Provided	N/A
Previous Structural Analysis	GPD Project #: 2013723.01.TAG0053.04 Rev. 1, dated 8/15/2014	Siterra
Tower Mapping	Tower Engineering Professionals Project #: 111343, dated 4/8/2011	Siterra
Tower Mapping	Hudson Design Group, Site Name: CHESHIRE, dated 2/4/2013	Siterra
Modification Drawings	GPD Project #: 2012856.05, dated 7/25/2012	Siterra
Ground Mapping	GPD Project #: 2013723.01.TAG0053.01, dated 6/14/2013	Siterra
Tower Mapping	GPD Project #: 2013723.01.TAG0053.03, dated 1/17/2014	Siterra

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
11. All existing loading was obtained from the previous structural analysis by GPD (GPD Project #: 2013723.01.TAG0053.04 Rev. 1, dated 8/15/14), the tower mapping by GPD (Project #: 2013723.01.TAG0053.03, dated 1/17/14), site photos, and the provided Site Lease Application (dated 6/22/2015) and is assumed to be accurate.
12. The proposed coax shall be stacked in a single row next to the existing 1-5/8" Fiber Cable supplying the loading at 252' on Tower Face D in order for the results of this analysis to be valid.
13. This analysis is limited to the above grade tower structure. A detailed analysis of the below grade building structure is beyond the scope of this report; however, based on a comparison of the existing base reactions and the base reactions from the existing, proposed, and reserved loading case the below grade building structure will see a loading increase less than 5% in capacity. Therefore the below grade building structure will be sufficient to support the proposed loading per section 3403.2 of the 2003 IBC.
14. The existing Verizon loading found in the provided Site Lease Application (dated 4/13/2015) was found to vary from the loading found in the previous structural analysis by GPD (GPD Project #: 2013723.01.TAG0053.04 Rev. 1, dated 8/15/14). The existing/reserved loading has been modeled based on the loading reflected in the provided Site Lease Application.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD has not performed a recent site visit to the tower to verify the antenna/coax loading or the member sizes. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

GPD does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the capability of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connection to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

GPD makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	CHESHIRE
Site Number	TAG0053
FA Number	10136365
Date of Analysis	7-27-2015
Company Performing Analysis	GPD Group

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	SST	
Tower Height (top of steel AGL)	250'	
Tower Manufacturer	Radio Relay Towers	
Tower Model	Type "J"	
Tower Design	AT&T Co. Drawing #: NA4J03-902 Rev 3	6/5/1967
Original Building Drawings	AT&T Co, L-4 Junction Building, Cheshire, CT	12/1/1965
Geotech Report	n-a	
Tower Mapping	Tower Engineering Professionals Project #: 111343	4/8/2011
Tower Mapping	Hudson Design Group, Site Name: CHESHIRE	2/4/2013
Tower Mapping	GPD Project #: 2013723.01,TAG0053.03	1/17/2014
Previous Structural Analysis	GPD Project #: 2013723.01,TAG0053.02	10/3/2013
Modification Design	GPD Project #: 2012856.05	7/25/2012
Ground Mapping	GPD Project #: 2013723.01,TAG0053.01	6/14/2013
Foundation Mapping	FDH Project #: 11-120498-N1	12/20/2011

Design Parameters

Design Code Used	TIA/EIA-222-F, 2003 IBC 2005 CT BC
Location of Tower (County, State)	New Haven, CT
Basic Wind Speed (mph)	85 (Fastest Mile)
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Modifications designed by GPD (Project #: 2012856.05, dated 7/25/12) have been installed and were considered in this analysis.

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	97.8%
Tower Base (%)	33.0%
Foundation (%)	Adequate
Foundation Adequate?	Yes

Steel Yield Strength (ksi)

Legs	36
Bracing Members	36
Connection Bolts	A307
Anchor Rods	C1015

Note: Material grades are assumed based on experience with similar towers.

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
Unknown	252	265	1	Lightning Rod	Unknown	4' Lightning Rod		1	Unknown	Top Platform	1	Unknown	5/8"	Face D
Unknown	252	263	1	Beacon	Unknown	Flash Beacon		1	Unknown	12' I Beam				
AT&T Mobility	252	255	4	Panel	KMW	AM-X-CD-16-65-00T-RET	154/270			On the same mount	6	Unknown	1-5/8"	Face D
AT&T Mobility	252	255	2	Panel	Andrew	SBNH-1D6565C	5/15			On the same mount				
AT&T Mobility	252	255	3	TMA	CCI	DTMABP7819VG12A				On the same mount	2	DC Power	.645"	Face D
AT&T Mobility	252	255	6	RRU	Ericsson	RRUS-11				On the same mount	1	Fiber	1.34"	Face D
AT&T Mobility	252	255	3	Surge Arrestor	Raycap	DC2-48-60-0-8E				On the same mount				
AT&T Mobility	252	255	1	Surge Arrestor	Raycap	FC12-PC6-10E				On the same mount				
Verizon	252	252	3	Panel	Antel	BXA 70063/6CF	30/140/260	4	Unknown	4' Standoff on platform	12	Unknown	1-5/8"	Face D
Verizon	252	252	6	Panel	Antel	LPA 80063/6CF	30/140/260			On the same mount	1	Fiber	1-5/8"	Face D
Verizon	252	252	3	Panel	Antel	BXA 171063/12BF	30/140/260			On the same mount				
Verizon	252	252	1	GPS	Lucen	GPS				On the same mount				
Unknown	239.5							1	Unknown	Platform				
Sprint	225	225.6	6	Panel	Decibel	DB980H65E-M	30/130/210	6	Unknown	20' Pipe Mount	6	Unknown	1-5/8"	Face D
Nextel	210	212	6	Panel	Decibel	DB844H90E-XY	30/255	4	Unknown	14' T-Frame	6	Unknown	1-5/8"	Face D
T-Mobile (Omnipoint)	210	212	4	Panel	EMS	RR90-17-02DP	60/140			On same mounts	8	Unknown	1-5/8"	Face A
T-Mobile (Omnipoint)	210	212	2	Panel	RFS	APX16DWV-16DWVS	60/140			On same mounts	4	Unknown	1-5/8"	Face B
T-Mobile (Omnipoint)	210	212	4	TMA	Ericsson	ddTMA 1.9 GHz				On same mounts	1	RET Cable	1/4"	Face B
T-Mobile (Omnipoint)	210	212	2	TMA	RFS	ATMAA1412D-1A20				On same mounts				
Unknown	210	212	4	RET	RFS	ACU-A20-N				On same mounts				
Unknown	210	207	1	Panel	Unknown	26"x26"x2" FP	160			On same mounts	1	Unknown	1/2"	Face D
Nextel	198	200	3	Panel	Andrew/Decibel	DB844H90E-XY	135	1	Unknown	14' T-Frame	3	Unknown	1-5/8"	Face D
SGI	190	196	2	Omni	Unknown	PG1-NOF-0091		2	Unknown	5' Standoff	2	Unknown	7/8"	Face D
SGI	171	177	1	Omni	Unknown	PG1-DOF-0093		1	Unknown	5' Standoff	1	Unknown	7/8"	Face D
Unknown	139.5							2	Unknown	Platforms w/ Rails				
AT&T Internet Services	95	98	1	Yagi	Wade	WL 7-13-S		3	Unknown	Standoffs	3	Unknown	5/8"	Face D
AT&T Internet Services	95	95	1	Yagi	Wade	WL 14-69-S				on the same mounts				
AT&T Internet Services	95	94	1	Yagi	Wade	WL 14-69-S				on the same mounts				
AT&T Internet Services	95	93	1	Yagi	Wade	WL 14-69-S				on the same mounts				
AT&T Internet Services	95	91	1	Yagi	Wade	WL 14-69-S				on the same mounts				
T-Mobile	40	40	1	BTS	Nortel	s8000		4	Unknown	Catwalk w/ Rails	4	Rigid Conduit	1"	Face A
T-Mobile	40	40	1	BTS	Ericsson	RBS 3106				On same mount	1	PVC	1"	Face A
T-Mobile	40	40	4	RRU	Ericsson	RRU 22 20W				On same mount				
T-Mobile	40	40	2	Power System	Ericsson	PBC02 MU				On same mount				
T-Mobile	40	41	1	Omni	Unknown	14" Omni				On same mount	1	Unknown	3/16"	Cabinet
T-Mobile	40	42	1	GPS	Unknown	GPS Antenna				On same mount	1	Unknown	3/16"	Cabinet
Unknown	37	37	1	Camera	Vicon Environmental	Camera - V8300H		1	Unknown	2.5' Box Mount	1	Rigid Conduit	1"	Face A
Unknown	36.5	36.5	1	GPS	Lucent	407517689		1	Unknown	3' Side Arm	1	Unknown	1/2"	Face D
Unknown	21	21	2	Box	Unknown	Junction Box		1	Unknown	Platform	5	Conduit	1"	Face A
Unknown	21	21	1	RRU	Unknown	28" x 15.5" x 10" RRU				on the same mount				
T-Mobile	4	4	1	Cabinet	Purcell	RAC35				Leg Mounted				

Note: Verizon's existing BXA 70063/6CF, BXA 171063/12BF, & (2) LPA 80063/6CF antennas at 252' shall be removed prior to the installation of the proposed configuration and have not been considered in this analysis. All other existing reserved equipment shall be reused.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
Verizon	252	252	6	Panel	Andrew	SBNHH-1D65B	30/140/260			on the existing mount	2	Fiber	1-5/8"	Face D
Verizon	252	252	2	Panel	Antel	LPA 80080/6CF	260			on the existing mount				
Verizon	252	252	6	Diplexers	RFS	FD9R6004-2C-3L				on the existing mount				
Verizon	252	252	3	RRH	Alcatel Lucent	RRH 2X60AWS				on the existing mount				
Verizon	252	252	3	RRH	Alcatel Lucent	RRH 2X60 PCS				on the existing mount				
Verizon	252	252	3	RRH	Alcatel Lucent	RRH 2X60AWS LTE				on the existing mount				
Verizon	252	252	3	Distribution Box	RFS	DB-T1-6Z-8AB-0Z				on the existing mount				

Note: The proposed equipment shall be installed in addition to the remaining existing/reserved loading at the same elevation. The proposed coax shall be stacked in a single row next to the existing 1-5/8" Fiber Cable supplying the loading at 252' on Tower Face D in order for the results of this analysis to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face

APPENDIX B

Software Output Files and Calculations

Tower Input Data

The main tower is a 4x free standing tower with an overall height of 250.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 33.50 ft at the top and 37.00 ft at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A (1-5/8 FOAM)	B	Yes	Ar (CfAe)	210.00 - 37.00	0.0000	0.45	4	4	1.0000	1.9800		0.82
1" Rigid Conduit	C	Yes	Ar (CfAe)	20.00 - 8.00	0.0000	-0.45	6	6	1.0000	1.0000		0.50
1" Rigid Conduit	C	Yes	Ar (CfAe)	30.00 - 20.00	0.0000	-0.45	11	11	1.0000	1.0000		0.50
1" Rigid Conduit	C	Yes	Ar (CfAe)	37.00 - 30.00	0.0000	-0.45	5	5	1.0000	1.0000		0.50
LDF4RN-50A (1/2 FOAM)	C	Yes	Ar (CfAe)	210.00 - 8.00	0.0000	-0.35	1	1	0.6300	0.6300		0.15
LDF7-50A (1-5/8 FOAM)	C	Yes	Ar (CfAe)	210.00 - 37.00	2.0000	-0.45	8	8	1.0000	1.9800		0.82
RET Cable	B	Yes	Ar (CfAe)	210.00 - 37.00	0.0000	0.45	1	1	0.4400	0.4400		0.08
Power Cable (1/2")	C	Yes	Ar (CfAe)	250.00 - 8.00	0.0000	0.35	1	1	0.6300	0.0000		0.15
2-1/4" Conduit	C	Yes	Ar (CfAe)	250.00 - 8.00	0.0000	0.35	1	1	2.2500	2.2500		0.32
2.5" Rigid Conduit	C	Yes	Ar (CfAe)	40.00 - 8.00	0.0000	-0.3	1	1	2.5000	2.5000		3.00
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	171.00 - 8.00	8.0000	0	3	3	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	190.00 - 171.00	8.0000	0	2	2	1.0900	1.0900		0.33
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	198.00 - 8.00	0.0000	0.45	9	9	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	210.00 - 198.00	0.0000	0.45	6	6	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	225.00 - 8.00	0.0000	0.05	3	1	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	225.00 - 8.00	0.0000	-0.05	3	1	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	250.00 - 8.00	0.0000	0.02	18	6	1.0000	1.9800		0.82
LDF4.5-50 (5/8 FOAM)	D	Yes	Ar (CfAe)	85.00 - 8.00	6.0000	0	7	4	0.8700	0.0000		0.15
LDF4-50A (1/2 FOAM)	D	Yes	Ar (CfAe)	100.00 - 8.00	0.0000	0.055	1	1	0.6300	0.6300		0.15
Feedline Ladder Af	B	Yes	Af (CfAe)	209.00 - 8.00	0.0000	0.45	1	1	2.5000	2.5000	10.0000	7.00
Feedline Ladder Af	C	Yes	Af (CfAe)	212.00 - 8.00	2.0000	-0.42	1	1	2.5000	2.5000	10.0000	7.00
Feedline Ladder Af	D	Yes	Af (CfAe)	250.00 - 8.00	0.0000	0	1	1	2.5000	2.5000	10.0000	7.00
Feedline Ladder Af	D	No	Af (CfAe)	209.00 - 8.00	0.0000	0.43	1	1	2.5000	2.5000	10.0000	7.00
1.34" Fiber Cable	D	Yes	Ar (CfAe)	250.00 - 8.00	5.0000	0.02	1	1	1.3400	0.0000		0.82
0.645" DC Cable	D	Yes	Ar (CfAe)	250.00 - 8.00	5.0000	0.02	2	2	0.6450	0.0000		0.31
1-5/8" Fiber Cable	D	No	Ar (CfAe)	250.00 - 8.00	0.0000	0.02	3	3	1.9800	0.0000		0.82

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#		C_AA_A ft^2/ft	Weight plf
Climbing Ladder	C	No	CaAa (Out Of Face)	250.00 - 8.00	-24.0000	0	1	No Ice	0.29	7.90
								1/2" Ice	0.55	10.60
								1" Ice	0.81	13.30
								2" Ice	1.33	18.70
								4" Ice	2.37	29.50
Safety Line 3/8	C	No	CaAa (Out Of Face)	250.00 - 8.00	-24.0000	0	1	No Ice	0.04	0.22
								1/2" Ice	0.14	0.75
								1" Ice	0.24	1.28
								2" Ice	0.44	2.34
								4" Ice	0.84	4.46

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Tower Top Platform	C	None		0.0000	252.00	No Ice	85.00	85.00	4425.00
						1/2" Ice	97.00	97.00	5752.50
						1" Ice	110.00	110.00	7080.00
						2" Ice	135.00	135.00	9735.00
						4" Ice	183.00	183.00	15045.00
(2) AM-X-CD-16-65-00T-RET w/ 6' Mount Pipe	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice	8.26	6.37	83.24
						1/2" Ice	8.81	7.18	148.46
						1" Ice	9.36	8.00	222.18
						2" Ice	10.50	9.70	393.50
						4" Ice	12.88	13.33	871.17
AM-X-CD-16-65-00T-RET w/ 6' Mount Pipe	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice	8.26	6.37	83.24
						1/2" Ice	8.81	7.18	148.46
						1" Ice	9.36	8.00	222.18
						2" Ice	10.50	9.70	393.50
						4" Ice	12.88	13.33	871.17
AM-X-CD-16-65-00T-RET w/ 6' Mount Pipe	B	From Face	2.00 0.00 3.00	-10.0000	252.00	No Ice	8.26	6.37	83.24
						1/2" Ice	8.81	7.18	148.46
						1" Ice	9.36	8.00	222.18
						2" Ice	10.50	9.70	393.50
						4" Ice	12.88	13.33	871.17
SBNH-1D6565C w/ Mount Pipe	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice	11.45	9.36	86.35
						1/2" Ice	12.06	10.68	170.71
						1" Ice	12.69	11.71	264.63
						2" Ice	14.03	13.82	484.75
						4" Ice	17.05	18.22	1088.19
SBNH-1D6565C w/ Mount Pipe	B	From Face	2.00 0.00 3.00	0.0000	252.00	No Ice	11.45	9.36	86.35
						1/2" Ice	12.06	10.68	170.71
						1" Ice	12.69	11.71	264.63
						2" Ice	14.03	13.82	484.75
						4" Ice	17.05	18.22	1088.19
(2) RRUS-11	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice	3.25	1.37	47.62
						1/2" Ice	3.49	1.55	68.42
						1" Ice	3.74	1.74	92.25
						2" Ice	4.27	2.14	149.81
						4" Ice	5.43	3.04	309.89

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(2) RRUS-11	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	47.62 68.42 92.25 149.81 309.89
(2) RRUS-11	B	From Face	2.00 0.00 3.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	47.62 68.42 92.25 149.81 309.89
DTMABP7819VG12A	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.44 0.56 0.69 0.97 1.63	19.00 26.12 35.11 59.49 139.29
DTMABP7819VG12A	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.44 0.56 0.69 0.97 1.63	19.00 26.12 35.11 59.49 139.29
DTMABP7819VG12A	B	From Face	2.00 0.00 3.00	-10.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.44 0.56 0.69 0.97 1.63	19.00 26.12 35.11 59.49 139.29
DC2-48-60-0-9E	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.66 0.77 0.90 1.17 1.82	16.00 24.84 35.66 63.99 152.85
DC2-48-60-0-9E	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.66 0.77 0.90 1.17 1.82	16.00 24.84 35.66 63.99 152.85
DC2-48-60-0-9E	B	From Face	2.00 0.00 3.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.66 0.77 0.90 1.17 1.82	16.00 24.84 35.66 63.99 152.85
FC12-PC6-10E	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.45 2.66 2.88 3.34 4.37	1.00 1.15 1.31 1.64 2.43	20.35 36.62 55.57 102.30 236.51
GPS	A	From Face	2.00 0.00 2.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.17 0.24 0.32 0.51 1.02	0.17 0.24 0.32 0.51 1.02	0.87 3.85 7.85 19.56 62.07
SBNHH-1D65B w/ Mount Pipe	B	From Face	2.00 -2.00 2.00	15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.40 8.95 9.51 10.66 13.06	6.31 7.01 7.72 9.19 12.68	62.20 124.72 195.15 359.14 808.31
SBNHH-1D65B w/ Mount Pipe	B	From Face	2.00 -8.00	15.0000	252.00	No Ice 1/2" Ice	8.40 8.95	6.31 7.01	62.20 124.72

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			2.00			1" Ice	9.51	7.72	195.15
						2" Ice	10.66	9.19	359.14
						4" Ice	13.06	12.68	808.31
4' Standoff	C	From Face	2.00	0.0000	252.00	No Ice	3.41	3.41	80.00
			2.00			1/2" Ice	4.47	4.47	104.00
			2.00			1" Ice	5.50	5.50	128.00
						2" Ice	7.49	7.49	176.00
						4" Ice	11.08	11.08	272.00
SBNHH-1D65B w/ Mount Pipe	C	From Face	4.00	35.0000	252.00	No Ice	8.40	6.31	62.20
			2.00			1/2" Ice	8.95	7.01	124.72
			2.00			1" Ice	9.51	7.72	195.15
						2" Ice	10.66	9.19	359.14
						4" Ice	13.06	12.68	808.31
4' Standoff	C	From Face	2.00	0.0000	252.00	No Ice	3.41	3.41	80.00
			10.00			1/2" Ice	4.47	4.47	104.00
			2.00			1" Ice	5.50	5.50	128.00
						2" Ice	7.49	7.49	176.00
						4" Ice	11.08	11.08	272.00
SBNHH-1D65B w/ Mount Pipe	C	From Face	4.00	35.0000	252.00	No Ice	8.40	6.31	62.20
			10.00			1/2" Ice	8.95	7.01	124.72
			2.00			1" Ice	9.51	7.72	195.15
						2" Ice	10.66	9.19	359.14
						4" Ice	13.06	12.68	808.31
SBNHH-1D65B w/ Mount Pipe	A	From Face	2.00	-25.0000	252.00	No Ice	8.40	6.31	62.20
			-10.00			1/2" Ice	8.95	7.01	124.72
			2.00			1" Ice	9.51	7.72	195.15
						2" Ice	10.66	9.19	359.14
						4" Ice	13.06	12.68	808.31
SBNHH-1D65B w/ Mount Pipe	A	From Face	2.00	-25.0000	252.00	No Ice	8.40	6.31	62.20
			0.00			1/2" Ice	8.95	7.01	124.72
			2.00			1" Ice	9.51	7.72	195.15
						2" Ice	10.66	9.19	359.14
						4" Ice	13.06	12.68	808.31
LPA-80063/6CF w/ Mount Pipe	B	From Face	2.00	15.0000	252.00	No Ice	10.58	10.67	52.22
			10.00			1/2" Ice	11.24	11.93	144.64
			2.00			1" Ice	11.87	12.91	245.54
						2" Ice	13.16	14.92	476.36
						4" Ice	15.87	19.16	1087.76
LPA-80063/6CF w/ Mount Pipe	B	From Face	2.00	15.0000	252.00	No Ice	10.58	10.67	52.22
			15.00			1/2" Ice	11.24	11.93	144.64
			2.00			1" Ice	11.87	12.91	245.54
						2" Ice	13.16	14.92	476.36
						4" Ice	15.87	19.16	1087.76
4' Standoff	D	From Face	2.00	0.0000	252.00	No Ice	3.41	3.41	80.00
			-15.00			1/2" Ice	4.47	4.47	104.00
			2.00			1" Ice	5.50	5.50	128.00
						2" Ice	7.49	7.49	176.00
						4" Ice	11.08	11.08	272.00
LPA-80063/6CF w/ Mount Pipe	D	From Face	4.00	-55.0000	252.00	No Ice	10.58	10.67	52.22
			-15.00			1/2" Ice	11.24	11.93	144.64
			2.00			1" Ice	11.87	12.91	245.54
						2" Ice	13.16	14.92	476.36
						4" Ice	15.87	19.16	1087.76
4' Standoff	D	From Face	2.00	0.0000	252.00	No Ice	3.41	3.41	80.00
			8.00			1/2" Ice	4.47	4.47	104.00
			2.00			1" Ice	5.50	5.50	128.00
						2" Ice	7.49	7.49	176.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						4" Ice	11.08	11.08	272.00
LPA-80063/6CF w/ Mount Pipe	D	From Face	4.00 8.00 2.00	-55.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	10.58 11.24 11.87 13.16 15.87	10.67 11.93 12.91 14.92 19.16	52.22 144.64 245.54 476.36 1087.76
LPA-80080/6CF w/ Mount Pipe	A	From Face	2.00 8.00 2.00	-25.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.35 4.79 5.25 6.17 8.11	10.51 11.56 12.49 14.40 18.43	42.90 107.03 178.83 348.74 824.37
LPA-80080/6CF w/ Mount Pipe	A	From Face	2.00 10.00 2.00	-25.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.35 4.79 5.25 6.17 8.11	10.51 11.56 12.49 14.40 18.43	42.90 107.03 178.83 348.74 824.37
RRH2X60-AWS	B	From Face	2.00 0.00 2.00	15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.19 2.40 2.61 3.07 4.09	1.43 1.61 1.80 2.21 3.13	44.00 60.01 78.72 125.00 258.50
RRH2X60-AWS	C	From Face	2.00 0.00 2.00	35.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.19 2.40 2.61 3.07 4.09	1.43 1.61 1.80 2.21 3.13	44.00 60.01 78.72 125.00 258.50
RRH2X60-AWS	A	From Face	2.00 0.00 2.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.19 2.40 2.61 3.07 4.09	1.43 1.61 1.80 2.21 3.13	44.00 60.01 78.72 125.00 258.50
RRH2X60-PCS	B	From Face	2.00 0.00 2.00	15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.57 2.79 3.02 3.52 4.61	2.01 2.22 2.43 2.89 3.92	55.00 75.35 98.71 155.23 312.91
RRH2X60-PCS	C	From Face	2.00 0.00 2.00	35.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.57 2.79 3.02 3.52 4.61	2.01 2.22 2.43 2.89 3.92	55.00 75.35 98.71 155.23 312.91
RRH2X60-PCS	A	From Face	2.00 0.00 2.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.57 2.79 3.02 3.52 4.61	2.01 2.22 2.43 2.89 3.92	55.00 75.35 98.71 155.23 312.91
RRH 2X60AWS LTE	B	From Face	2.00 0.00 2.00	15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.18 2.38 2.60 3.06 4.07	1.46 1.64 1.83 2.24 3.16	44.00 60.13 78.96 125.51 259.60
RRH 2X60AWS LTE	C	From Face	2.00 0.00 2.00	35.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.18 2.38 2.60 3.06 4.07	1.46 1.64 1.83 2.24 3.16	44.00 60.13 78.96 125.51 259.60
RRH 2X60AWS LTE	A	From Face	2.00	-15.0000	252.00	No Ice	2.18	1.46	44.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1/2" Ice	2.38	1.64	60.13
			2.00			1" Ice	2.60	1.83	78.96
						2" Ice	3.06	2.24	125.51
						4" Ice	4.07	3.16	259.60
DB-T1-6Z-8AB-0Z	B	From Face	2.00	15.0000	252.00	No Ice	5.60	2.33	44.00
			0.00			1/2" Ice	5.92	2.56	80.13
			2.00			1" Ice	6.24	2.79	120.22
						2" Ice	6.91	3.28	213.04
						4" Ice	8.37	4.37	454.67
DB-T1-6Z-8AB-0Z	C	From Face	2.00	35.0000	252.00	No Ice	5.60	2.33	44.00
			0.00			1/2" Ice	5.92	2.56	80.13
			2.00			1" Ice	6.24	2.79	120.22
						2" Ice	6.91	3.28	213.04
						4" Ice	8.37	4.37	454.67
DB-T1-6Z-8AB-0Z	A	From Face	2.00	-15.0000	252.00	No Ice	5.60	2.33	44.00
			0.00			1/2" Ice	5.92	2.56	80.13
			2.00			1" Ice	6.24	2.79	120.22
						2" Ice	6.91	3.28	213.04
						4" Ice	8.37	4.37	454.67
DB980H65E-M w/ 20' Mount Pipe	B	From Face	1.00	0.0000	225.60	No Ice	8.11	7.94	124.30
			-15.00			1/2" Ice	10.01	10.34	199.77
			0.00			1" Ice	11.94	12.76	291.06
						2" Ice	15.84	17.66	513.32
						4" Ice	23.43	26.85	1159.44
(2) DB980H65E-M w/ 20' Mount Pipe	B	From Face	1.00	0.0000	225.60	No Ice	8.11	7.94	124.30
			15.00			1/2" Ice	10.01	10.34	199.77
			0.60			1" Ice	11.94	12.76	291.06
						2" Ice	15.84	17.66	513.32
						4" Ice	23.43	26.85	1159.44
(2) DB980H65E-M w/ 20' Mount Pipe	C	From Face	1.00	0.0000	225.60	No Ice	8.11	7.94	124.30
			-15.00			1/2" Ice	10.01	10.34	199.77
			0.60			1" Ice	11.94	12.76	291.06
						2" Ice	15.84	17.66	513.32
						4" Ice	23.43	26.85	1159.44
(2) DB980H65E-M w/ 10' Mount Pipe	D	From Face	1.00	0.0000	225.60	No Ice	5.24	5.07	66.40
			10.00			1/2" Ice	6.13	6.46	114.34
			0.60			1" Ice	7.04	7.88	172.79
						2" Ice	8.45	9.87	317.93
						4" Ice	11.64	14.05	747.19
10' x 2.5" Pipe	B	From Face	1.00	0.0000	225.60	No Ice	2.50	2.50	50.00
			-10.00			1/2" Ice	3.53	3.53	68.64
			0.00			1" Ice	4.58	4.58	93.79
						2" Ice	5.98	5.98	164.26
						4" Ice	8.54	8.54	390.10
10' x 2.5" Pipe	D	From Face	1.00	0.0000	225.60	No Ice	2.50	2.50	50.00
			-15.00			1/2" Ice	3.53	3.53	68.64
			0.00			1" Ice	4.58	4.58	93.79
						2" Ice	5.98	5.98	164.26
						4" Ice	8.54	8.54	390.10
(3) DB844H90E-XY w/Mount Pipe	A	From Leg	1.00	60.0000	210.00	No Ice	3.58	5.40	35.55
			0.00			1/2" Ice	4.20	6.49	79.42
			2.00			1" Ice	4.73	7.30	129.38
						2" Ice	5.86	8.96	251.21
						4" Ice	8.27	12.49	616.53
(3) DB844H90E-XY w/Mount Pipe	D	From Leg	1.00	15.0000	210.00	No Ice	3.58	5.40	35.55
			0.00			1/2" Ice	4.20	6.49	79.42
			2.00			1" Ice	4.73	7.30	129.38

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	5.86	8.96	251.21
						4" Ice	8.27	12.49	616.53
14' T-Frame	A	From Leg	0.50 0.00 0.00	60.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98
14' T-Frame	D	From Leg	0.50 0.00 0.00	15.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98
(2) RR90-17-02DP w/Mount Pipe	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.91 5.57 6.14 7.32 9.81	3.64 4.70 5.48 7.08 10.47	43.55 84.46 131.77 249.23 609.50
(2) RR90-17-02DP w/Mount Pipe	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.91 5.57 6.14 7.32 9.81	3.64 4.70 5.48 7.08 10.47	43.55 84.46 131.77 249.23 609.50
APX16DWV-16DWVS-C w/Mount Pipe	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.78 8.48 9.09 10.33 12.96	3.81 4.88 5.66 7.26 10.65	66.25 118.28 177.07 318.57 731.30
APX16DWV-16DWVS-C w/Mount Pipe	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.78 8.48 9.09 10.33 12.96	3.81 4.88 5.66 7.26 10.65	66.25 118.28 177.07 318.57 731.30
(2) ddTMA 1.9 GHz	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.64 0.76 0.88 1.15 1.80	0.43 0.53 0.64 0.89 1.48	15.40 20.46 27.07 45.73 110.29
(2) ddTMA 1.9 GHz	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.64 0.76 0.88 1.15 1.80	0.43 0.53 0.64 0.89 1.48	15.40 20.46 27.07 45.73 110.29
ATMAA1412D-1A20	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.17 1.31 1.47 1.81 2.58	0.47 0.57 0.69 0.95 1.57	13.00 20.62 30.11 55.52 137.44
ATMAA1412D-1A20	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.17 1.31 1.47 1.81 2.58	0.47 0.57 0.69 0.95 1.57	13.00 20.62 30.11 55.52 137.44
14' T-Frame	B	From Leg	0.50 0.00 0.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
14' T-Frame	C	From Leg	0.50 0.00 0.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98
(2) ACU-A20-N	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.08 0.12 0.17 0.30 0.67	0.14 0.19 0.25 0.40 0.80	1.04 2.32 4.41 11.80 44.85
(2) ACU-A20-N	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.08 0.12 0.17 0.30 0.67	0.14 0.19 0.25 0.40 0.80	1.04 2.32 4.41 11.80 44.85
26"x 26" Flat Panel	C	From Leg	1.00 0.00 -3.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.60 5.92 6.24 6.91 8.37	0.52 0.67 0.83 1.21 2.09	15.00 38.43 65.30 130.11 309.52
(3) DB844H90E-XY w/Mount Pipe	C	From Leg	1.00 0.00 2.00	-15.0000	198.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.58 4.20 4.73 5.86 8.27	5.40 6.49 7.30 8.96 12.49	35.55 79.42 129.38 251.21 616.53
14' T-Frame	C	From Leg	0.50 0.00 0.00	-15.0000	198.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98
PG1-NOF-0091	A	From Leg	3.50 -3.50 6.00	-45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.40 2.23 3.07 4.13 6.22	1.40 2.23 3.07 4.13 6.22	7.50 18.71 35.15 84.32 252.12
5' Standoff	A	From Leg	1.75 -1.75 0.00	-45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.72 4.11 5.50 8.28 13.84	12.93 17.82 22.71 32.49 52.05	145.70 223.26 300.83 455.95 766.20
PG1-NOF-0091	B	From Leg	3.50 3.50 6.00	45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.40 2.23 3.07 4.13 6.22	1.40 2.23 3.07 4.13 6.22	7.50 18.71 35.15 84.32 252.12
5' Standoff	B	From Leg	1.75 1.75 0.00	45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.72 4.11 5.50 8.28 13.84	12.93 17.82 22.71 32.49 52.05	145.70 223.26 300.83 455.95 766.20
PG1-DOF-0093	B	From Leg	3.50 3.50 0.00	45.0000	171.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.40 2.23 3.07 4.13 6.22	1.40 2.23 3.07 4.13 6.22	7.50 18.71 35.15 84.32 252.12
5' Standoff	B	From Leg	1.75 1.75	45.0000	171.00	No Ice 1/2" Ice	2.72 4.11	12.93 17.82	145.70 223.26

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1" Ice	5.50	22.71	300.83
						2" Ice	8.28	32.49	455.95
						4" Ice	13.84	52.05	766.20
WL14-69/S	B	From Leg	1.00 0.00 -4.00	-28.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL14-69/S	B	From Leg	1.00 0.00 0.00	-28.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL14-69/S	C	From Leg	1.00 0.00 -2.00	-39.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL14-69/S	D	From Leg	1.00 0.00 -1.00	-32.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL7-13	D	From Leg	1.00 0.00 3.00	-32.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.73 4.59 6.29 9.71	2.88 3.73 4.59 6.29 9.71	25.00 32.50 40.00 55.00 85.00
s8000	C	None		0.0000	40.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	13.22 13.73 14.25 15.33 17.57	32.52 33.28 34.05 35.60 38.82	970.00 1179.36 1398.09 1864.48 2918.35
RBS 3106	C	None		0.0000	40.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	17.85 18.42 19.00 20.17 22.64	12.60 13.07 13.55 14.54 16.61	1875.00 2040.02 2213.20 2584.85 3434.70
Purcell RAC35	C	None		0.0000	4.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.17 8.55 8.95 9.77 11.50	6.81 7.17 7.54 8.30 9.93	120.00 188.06 261.43 424.89 824.15
(4) RRU 22 20W	C	None		0.0000	40.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.57 1.74 1.92 2.31 3.18	2.58 2.80 3.03 3.51 4.57	35.00 57.07 82.20 142.40 308.00
(2) PBC02 MU	C	None		0.0000	40.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.45 1.62 1.80 2.19 3.07	3.76 4.02 4.29 4.85 6.09	45.00 70.25 98.83 166.74 351.04
14" Omni	C	None		0.0000	41.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.13 0.22 0.31 0.53	0.13 0.22 0.31 0.53	5.00 6.76 9.48 18.44

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						4" Ice	1.11	1.11	54.68
GPS	C	None		0.0000	42.00	No Ice	0.17	0.17	0.87
						1/2" Ice	0.24	0.24	3.85
						1" Ice	0.32	0.32	7.85
						2" Ice	0.51	0.51	19.56
						4" Ice	1.02	1.02	62.07
Camera	B	From Leg	1.50 0.00 0.00	0.0000	37.00	No Ice	0.13	0.06	2.00
						1/2" Ice	0.18	0.09	3.30
						1" Ice	0.25	0.14	5.42
						2" Ice	0.40	0.25	12.91
						4" Ice	0.80	0.59	46.33
2.5' Box Mount	B	From Leg	1.50 0.00 0.00	0.0000	37.00	No Ice	1.36	1.36	20.00
						1/2" Ice	2.45	2.45	40.00
						1" Ice	3.50	3.50	64.00
						2" Ice	5.74	5.74	103.00
						4" Ice	10.12	10.12	181.00
GPS	D	From Face	3.00 0.00 0.00	0.0000	36.50	No Ice	0.17	0.17	0.87
						1/2" Ice	0.24	0.24	3.85
						1" Ice	0.32	0.32	7.85
						2" Ice	0.51	0.51	19.56
						4" Ice	1.02	1.02	62.07
3' Side Arm	D	From Face	1.50 0.00 0.00	0.0000	36.50	No Ice	0.93	0.93	44.94
						1/2" Ice	1.13	1.13	54.87
						1" Ice	1.37	1.37	67.25
						2" Ice	1.89	1.89	99.94
						4" Ice	3.06	3.06	201.37
Platform	B	From Face	0.00 10.00 0.00	0.0000	21.00	No Ice	5.61	2.70	100.00
						1/2" Ice	7.01	3.38	125.00
						1" Ice	8.42	4.05	150.00
						2" Ice	11.22	5.40	200.00
						4" Ice	16.83	8.10	300.00
(2) Junction Box (40"x14"x9")	B	From Face	0.00 10.00 0.00	0.0000	21.00	No Ice	3.88	2.50	50.00
						1/2" Ice	3.88	2.50	50.00
						1" Ice	3.88	2.50	50.00
						2" Ice	3.88	2.50	50.00
						4" Ice	3.88	2.50	50.00
Platform	C	None		0.0000	239.50	No Ice	75.38	75.38	10500.00
						1/2" Ice	94.22	94.22	13000.00
						1" Ice	113.06	113.06	15500.00
						2" Ice	150.75	150.75	20500.00
						4" Ice	226.13	226.13	30500.00
Catwalk	B	From Face	0.00 0.00 0.00	0.0000	139.50	No Ice	75.38	4.08	1250.00
						1/2" Ice	94.22	5.09	1600.00
						1" Ice	113.06	6.11	1950.00
						2" Ice	150.75	8.15	2650.00
						4" Ice	226.13	12.23	4050.00

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36	29000	11200	.295	.65	.49	36	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	TWR_LEG_T1	L6x6x1/2	Column	Single Angle	A36	Typical	5.75	19.9	19.9	.501
2	TWR_LEG_OUTER_T1	2L2 1/2x2 1/2x1/4x3/8	Column	Single Angle	A36	Typical	2.38	3.347	1.41	.049
3	TWR_TOP_GIRT_T1	2L3x4x5/16x3/8	Beam	Wide Flange	A36	Typical	4.18	15.508	3.29	.136
4	TWR_DIAG_T1	2L3x4x5/16x3/8	Column	None	A36	Typical	4.18	15.508	3.29	.136
5	TWR_DIAG_OUTER_T1	2L3 1/2x4x5/16x3/8	Column	None	A36	Typical	4.49	15.551	5.1	.146
6	TWR_RED_HORZ_T1	L2 1/2x2 1/2x3/16	Beam	None	A36	Typical	.902	.547	.547	.011
7	TWR_RED_HORZ_2_T1	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
8	TWR_HORZ_OUTER_...	W12x26	Beam	None	A36	Typical	7.65	17.3	204	.3
9	TWR_RED_HORZ_3_T1	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
10	TWR_RED_HORZ_4_T1	L2 1/2x2 1/2x3/16	Beam	None	A36	Typical	.902	.547	.547	.011
11	TWR_RED_DIAG_T1	L2 1/2x2 1/2x3/16	Column	Single Angle	A36	Typical	.902	.547	.547	.011
12	TWR_LEG_T2	W6x20	Column	Wide Flange	A36	Typical	5.87	13.3	41.4	.24
13	TWR_DIAG_T2	2L3x2 1/2x3/8x3/8	Column	None	A36	Typical	3.84	5.153	3.31	.18
14	TWR_RED_HORZ_T2	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
15	TWR_RED_HORZ_2_T2	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
16	TWR_RED_DIAG_T2	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
17	TWR_RED_HORZ_3_T2	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
18	TWR_RED_DIAG_2_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
19	TWR_RED_DIAG_3_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
20	TWR_RED_HIP_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
21	TWR_RED_HIP_2_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
22	TWR_RED_HIPDIA_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
23	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
24	TWR_INNER_SUPP_T2	W10x30	Beam	Wide Flange	A36	Typical	8.84	16.7	170	.622
25	TWR_INNER_SQ_T2	W8x13	Beam	Wide Flange	A36	Typical	3.84	2.73	39.6	.087
26	TWR_INNER_CORNE...	W8x13	Beam	Wide Flange	A36	Typical	3.84	2.73	39.6	.087
27	TWR_LEG_T3	W6x20	Column	Wide Flange	A36	Typical	5.87	13.3	41.4	.24
28	TWR_HORZ_T3	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
29	TWR_DIAG_T3	2L3x2 1/2x3/8x3/8	Column	None	A36	Typical	3.84	5.153	3.31	.18
30	TWR_RED_HORZ_T3	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
31	TWR_RED_HORZ_2_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
32	TWR_RED_DIAG_T3	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
33	TWR_RED_HORZ_3_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
34	TWR_RED_DIAG_2_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
35	TWR_RED_DIAG_3_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
36	TWR_RED_HIP_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
37	TWR_RED_HIP_2_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
38	TWR_RED_HIPDIA_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
39	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
40	TWR_INNER_SUPP_T3	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
41	TWR_INNER_SQ_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
42	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
43	TWR_INNER_TRI_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
44	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
45	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
46	TWR_LEG_T4	W6x25	Column	Wide Flange	A36	Typical	7.34	17.1	53.4	.461
47	TWR_HORZ_T4	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
48	TWR_DIAG_T4	2L3x2-1/2x1/2x3/8	Column	None	A36	Typical	5	6.999	4.167	.417
49	TWR_RED_HORZ_T4	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
50	TWR_RED_HORZ_2_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
51	TWR_RED_DIAG_T4	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
52	TWR_RED_HORZ_3_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
53	TWR_RED_DIAG_2_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
54	TWR_RED_DIAG_3_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
55	TWR_RED_HIP_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
56	TWR_RED_HIP_2_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
57	TWR_RED_HIPDIA_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
58	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
59	TWR_INNER_SUPP_T4	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
60	TWR_INNER_SQ_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
61	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
62	TWR_INNER_TRI_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
63	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
64	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
65	TWR_LEG_T5	W8x31	Column	Wide Flange	A36	Typical	9.13	37.1	110	.536
66	TWR_HORZ_T5	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
67	TWR_DIAG_T5	2L3x2-1/2x1/2x3/8	Column	None	A36	Typical	5	6.999	4.167	.417
68	TWR_RED_HORZ_T5	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
69	TWR_RED_HORZ_2_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
70	TWR_RED_DIAG_T5	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
71	TWR_RED_HORZ_3_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
72	TWR_RED_DIAG_2_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
73	TWR_RED_DIAG_3_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
74	TWR_RED_HIP_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
75	TWR_RED_HIP_2_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
76	TWR_RED_HIPDIA_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
77	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
78	TWR_INNER_SUPP_T5	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
79	TWR_INNER_SQ_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
80	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
81	TWR_INNER_TRI_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
82	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
83	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
84	TWR_LEG_T6	W8x40	Column	Wide Flange	A36	Typical	11.7	49.1	146	1.12
85	TWR_HORZ_T6	2L3x2 1/2x5/16x3/8	Beam	None	A36	Typical	3.242	4.255	2.845	.106
86	TWR_DIAG_T6	2L4x3x3/8x3/8	Column	None	A36	Typical	4.97	8.508	7.93	.233
87	TWR_RED_HORZ_T6	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
88	TWR_RED_HORZ_2_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
89	TWR_RED_DIAG_T6	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
90	TWR_RED_HORZ_3_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
91	TWR_RED_DIAG_2_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
92	TWR_RED_DIAG_3_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
93	TWR_RED_HIP_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
94	TWR_RED_HIP_2_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
95	TWR_RED_HIPDIA_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
96	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
97	TWR_INNER_SUPP_T6	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
98	TWR_INNER_SQ_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
99	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
100	TWR_INNER_TRI_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
101	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
102	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
103	TWR_LEG_T7	W10x54	Column	Wide Flange	A36	Typical	15.8	103	303	1.82
104	TWR_HORZ_T7	2L3x2 1/2x3/8x3/8	Beam	None	A36	Typical	3.84	5.153	3.31	.18
105	TWR_DIAG_T7	2L4x3x3/8x3/8	Column	None	A36	Typical	4.97	8.508	7.93	.233
106	TWR_RED_HORZ_T7	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
107	TWR_RED_HORZ_2_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
108	TWR_RED_DIAG_T7	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
109	TWR_RED_HORZ_3_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
110	TWR_RED_DIAG_2_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
111	TWR_RED_DIAG_3_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
112	TWR_RED_HIP_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
113	TWR_RED_HIP_2_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
114	TWR_RED_HIPDIA_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
115	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
116	TWR_INNER_SUPP_T7	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
117	TWR_INNER_SQ_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
118	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
119	TWR_INNER_TRI_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
120	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
121	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
122	TWR_LEG_T8	W10x60	Column	Wide Flange	A36	Typical	17.7	116	341	2.48
123	TWR_HORZ_T8	2L3x2 1/2x3/8x3/8	Beam	None	A36	Typical	3.84	5.153	3.31	.18
124	TWR_DIAG_T8	2L4x3x1/2x3/8	Column	None	A36	Typical	6.5	11.536	10.1	.542
125	TWR_RED_HORZ_T8	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
126	TWR_RED_HORZ_2_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
127	TWR_RED_DIAG_T8	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
128	TWR_RED_HORZ_3_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
129	TWR_RED_DIAG_2_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
130	TWR_RED_DIAG_3_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
131	TWR_RED_HIP_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
132	TWR_RED_HIP_2_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
133	TWR_RED_HIPDIA_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
134	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
135	TWR_INNER_SUPP_T8	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
136	TWR_INNER_SQ_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
137	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
138	TWR_INNER_TRI_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
139	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
140	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
141	TWR_LEG_T9	W10x68	Column	Wide Flange	A36	Typical	19.9	134	394	3.56
142	TWR_HORZ_T9	2L3x2 1/2x3/8x3/8	Beam	None	A36	Typical	3.84	5.153	3.31	.18
143	TWR_DIAG_T9	2L4x3x1/2x3/8	Column	None	A36	Typical	6.5	11.536	10.1	.542
144	TWR_RED_HORZ_T9	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
145	TWR_RED_HORZ_2_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
146	TWR_RED_DIAG_T9	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
147	TWR_RED_HORZ_3_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
148	TWR_RED_DIAG_2_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
149	TWR_RED_DIAG_3_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
150	TWR_RED_HIP_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
151	TWR_RED_HIP_2_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
152	TWR_RED_HIPDIA_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
153	TWR_REDHIPDIA_2_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
154	TWR_INNER_SUPP_T9	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
155	TWR_INNER_SQ_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
156	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
157	TWR_INNER_TRI_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
158	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
159	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
160	TWR_LEG_T10	W12x79	Column	Wide Flange	A36	Typical	23.2	216	662	3.84
161	TWR_HORZ_T10	2L4x3x1/2x3/8	Beam	None	A36	Typical	6.5	11.536	10.1	.542
162	TWR_DIAG_T10	2L4x4x1/2x3/8	Column	None	A36	Typical	7.5	25.217	11.1	.625
163	TWR_RED_HORZ_T10	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
164	TWR_RED_HORZ_2_T...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
165	TWR_RED_DIAG_T10	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
166	TWR_RED_HORZ_3_T..	2L2 1/2x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.38	3.347	1.41	.049
167	TWR_RED_DIAG_2_T10	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
168	TWR_RED_HORZ_4_T..	2L3x3x1/4x3/8	Beam	None	A36	Typical	2.88	5.535	2.49	.06
169	TWR_RED_DIAG_3_T10	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
170	TWR_RED_DIAG_4_T10	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
171	TWR_RED_DIAG_0_T10	L2.5x2.5x8	Column	None	A36	Typical	2.26	1.22	1.22	.188
172	TWR_RED_HORZ_0_T..	L2.5x2.5x3	Column	None	A36	Typical	.901	.535	.535	.011
173	TWR_RED_HIP_1_T10	LL4x4x8x3	Column	None	A36	Typical	7.5	25.1	11	.644
174	TWR_RED_HIP_3_T10	LL3x3x3x3	Column	None	A36	Typical	2.18	4.09	1.9	.027
175	TWR_RED_HIPDIA_1_...	LL3x3x3x3	Column	None	A36	Typical	2.18	4.09	1.9	.027
176	TWR_RED_HIPDIA_3_...	LL3x3x3x3	Column	None	A36	Typical	2.18	4.09	1.9	.027
177	TWR_INNER_GIRT_T10	C4x7.2	Column	None	A36	Typical	2.13	.425	4.58	.082

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	TWR_INNER_SUPP_T1	2C12x20.7x0.375	Beam	A36_Gen	12.18	17.311	258	.74
2	TWR_HORZ_T2	2C10x20x0.375	Beam	A36_Gen	11.76	13.025	157.8	.74
3	TWR_INNER_SUPP_T2	2C12x20.7x0.375	Beam	A36_Gen	12.18	17.311	258	.74
4	TWR_INNER_SUPP_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
5	TWR_INNER_SQ_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
6	TWR_INNER_CORNER_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
7	TWR_INNER_LADDER_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
8	TWR_INNER_TRI_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
9	TWR_INNER_BRACE_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface(Plate/Wall)
1	Dead	None		-1		40	376	40		
2	No Ice Wind 0 deg	None				40	966	120		
3	No Ice Wind 45 deg	None				80	990	160		
4	No Ice Wind 90 deg	None				40	994	120		
5	No Ice Wind 135 deg	None				80	966	160		
6	No Ice Wind 180 deg	None				40	966	120		
7	No Ice Wind 225 deg	None				80	990	160		
8	No Ice Wind 270 deg	None				40	994	120		
9	No Ice Wind 315 deg	None				80	966	160		
10	Ice	None				40	376	822		
11	Temperature Drop	None						1309		
12	Ice Wind 0 deg	None				40	952	120		
13	Ice Wind 45 deg	None				80	958	160		
14	Ice Wind 90 deg	None				40	980	120		
15	Ice Wind 135 deg	None				80	934	160		
16	Ice Wind 180 deg	None				40	952	120		
17	Ice Wind 225 deg	None				80	958	160		
18	Ice Wind 270 deg	None				40	980	120		
19	Ice Wind 315 deg	None				80	934	160		
20	Service Wind 0 deg	None				40	942	120		
21	Service Wind 45 deg	None				80	954	160		
22	Service Wind 90 deg	None				40	972	120		
23	Service Wind 135 deg	None				80	934	160		
24	Service Wind 180 deg	None				40	942	120		
25	Service Wind 225 deg	None				80	954	160		
26	Service Wind 270 deg	None				40	972	120		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface(Plate/Wall)
27	Service Wind 315 deg	None				80	934	160		

Load Combinations

	Description	Solve	PD...	SRSS	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	Dead Only	Yes			1	1	28	1	29	1	0		0		0		0	
2	Dead+Wind 0 deg - No Ice	Yes			1	1	2	1	28	1	29	1	0		0		0	
3	Dead+Wind 45 deg - No Ice	Yes			1	1	3	1	28	1	29	1	0		0		0	
4	Dead+Wind 90 deg - No Ice	Yes			1	1	4	1	28	1	29	1	0		0		0	
5	Dead+Wind 135 deg - No Ice	Yes			1	1	5	1	28	1	29	1	0		0		0	
6	Dead+Wind 180 deg - No Ice	Yes			1	1	6	1	28	1	29	1	0		0		0	
7	Dead+Wind 225 deg - No Ice	Yes			1	1	7	1	28	1	29	1	0		0		0	
8	Dead+Wind 270 deg - No Ice	Yes			1	1	8	1	28	1	29	1	0		0		0	
9	Dead+Wind 315 deg - No Ice	Yes			1	1	9	1	28	1	29	1	0		0		0	
10	Dead+Ice+Temp	Yes			1	1	10	1	11	1	28	1	29	1	0		0	
11	Dead+Wind 0 deg+Ice+Temp	Yes			1	1	12	1	10	1	11	1	28	1	29	1	0	
12	Dead+Wind 45 deg+Ice+Temp	Yes			1	1	13	1	10	1	11	1	28	1	29	1	0	
13	Dead+Wind 90 deg+Ice+Temp	Yes			1	1	14	1	10	1	11	1	28	1	29	1	0	
14	Dead+Wind 135 deg+Ice+Temp	Yes			1	1	15	1	10	1	11	1	28	1	29	1	0	
15	Dead+Wind 180 deg+Ice+Temp	Yes			1	1	16	1	10	1	11	1	28	1	29	1	0	
16	Dead+Wind 225 deg+Ice+Temp	Yes			1	1	17	1	10	1	11	1	28	1	29	1	0	
17	Dead+Wind 270 deg+Ice+Temp	Yes			1	1	18	1	10	1	11	1	28	1	29	1	0	
18	Dead+Wind 315 deg+Ice+Temp	Yes			1	1	19	1	10	1	11	1	28	1	29	1	0	
19	Dead+Wind 0 deg - Service	Yes			1	1	20	1	28	1	29	1	0		0		0	
20	Dead+Wind 45 deg - Service	Yes			1	1	21	1	28	1	29	1	0		0		0	
21	Dead+Wind 90 deg - Service	Yes			1	1	22	1	28	1	29	1	0		0		0	
22	Dead+Wind 135 deg - Service	Yes			1	1	23	1	28	1	29	1	0		0		0	
23	Dead+Wind 180 deg - Service	Yes			1	1	24	1	28	1	29	1	0		0		0	
24	Dead+Wind 225 deg - Service	Yes			1	1	25	1	28	1	29	1	0		0		0	
25	Dead+Wind 270 deg - Service	Yes			1	1	26	1	28	1	29	1	0		0		0	
26	Dead+Wind 315 deg - Service	Yes			1	1	27	1	28	1	29	1	0		0		0	

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N441	max	41.695	7	474.709	7	32.306	2	0	1	.187	9	0	1
2		min	-34.662	3	-354.023	3	-36.535	6	0	1	-.145	5	0	1
3	N442	max	33.559	9	478.504	5	33.772	2	0	1	.152	7	0	1
4		min	-40.582	5	-352.838	9	-38.093	6	0	1	-.192	3	0	1
5	N443	max	32.02	7	473.273	3	38.062	2	0	1	.186	5	0	1
6		min	-38.786	3	-354.017	7	-33.735	6	0	1	-.143	9	0	1
7	N444	max	40.105	9	472.939	9	36.561	2	0	1	.136	3	0	1
8		min	-33.343	5	-358.781	5	-32.338	6	0	1	-.174	7	0	1
9	N842	max	NC		NC		NC		NC		LOCKED		NC	
10		min	NC		NC		NC		NC		LOCKED		NC	
11	N843	max	NC		NC		NC		NC		LOCKED		LOCKED	
12		min	NC		NC		NC		NC		LOCKED		LOCKED	
13	N841	max	NC		NC		NC		LOCKED		LOCKED		NC	
14		min	NC		NC		NC		LOCKED		LOCKED		NC	
15	N840	max	NC		NC		NC		NC		LOCKED		LOCKED	
16		min	NC		NC		NC		NC		LOCKED		LOCKED	
17	N847	max	NC		NC		NC		LOCKED		NC		NC	
18		min	NC		NC		NC		LOCKED		NC		NC	
19	Totals:	max	137.463	8	384.812	14	140.701	2						
20		min	-137.463	4	239.603	6	-140.701	6						

Envelope AISC 13th(360-05): ASD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1	M1274	2L3 1/2x4x5/16x3/8	.082	9.019	4	.002	9.019	y	2	16.359	96.79	10.674	3.569	1	H1-...
2	M1275	2L3 1/2x4x5/16x3/8	.084	9.019	6	.002	9.019	y	8	16.359	96.79	10.674	3.569	1	H1-...
3	M1276	2L3 1/2x4x5/16x3/8	.082	9.019	8	.002	9.019	y	2	16.359	96.79	10.674	3.569	1	H1-...
4	M1277	2L3 1/2x4x5/16x3/8	.084	9.019	6	.002	9.019	y	4	16.359	96.79	10.674	3.569	1	H1-...
5	M1278	2L3 1/2x4x5/16x3/8	.084	9.019	2	.002	9.019	y	4	16.359	96.79	10.674	3.569	1	H1-...
6	M1279	2L3 1/2x4x5/16x3/8	.082	9.019	8	.002	9.019	y	6	16.359	96.79	10.674	3.569	1	H1-...
7	M1280	2L3 1/2x4x5/16x3/8	.083	9.019	4	.002	9.019	y	6	16.359	96.79	10.674	3.569	1	H1-...
8	M1281	2L3 1/2x4x5/16x3/8	.084	9.019	2	.002	9.019	y	8	16.359	96.79	10.674	3.569	1	H1-...
9	M1282	2L3 1/2x4x5/16x3/8	.064	7.784	6	.001	7.784	y	6	21.962	96.79	10.674	3.569	1	H1-...
10	M1283	2L3 1/2x4x5/16x3/8	.064	7.784	2	.001	7.784	y	2	21.962	96.79	10.674	3.569	1	H1-...
11	M1284	2L3 1/2x4x5/16x3/8	.063	7.784	8	.001	7.784	y	8	21.962	96.79	10.674	3.569	1	H1-...
12	M1285	2L3 1/2x4x5/16x3/8	.063	7.784	4	.001	7.784	y	4	21.962	96.79	10.674	3.569	1	H1-...
13	M1286	2L3 1/2x4x5/16x3/8	.064	7.784	2	.001	7.784	y	2	21.962	96.79	10.674	3.569	1	H1-...
14	M1287	2L3 1/2x4x5/16x3/8	.064	7.784	6	.001	7.784	y	6	21.962	96.79	10.674	3.569	1	H1-...
15	M1288	2L3 1/2x4x5/16x3/8	.063	7.784	4	.001	7.784	y	4	21.962	96.79	10.674	3.569	1	H1-...
16	M1289	2L3 1/2x4x5/16x3/8	.063	7.784	8	.001	7.784	y	8	21.962	96.79	10.674	3.569	1	H1-...
17	M15	2L3x4x5/16x3/8	.553	9.149	4	.003	9.149	y	13	10.257	90.108	10.644	2.637	1	H1-...
18	M18	2L3x4x5/16x3/8	.552	9.149	8	.003	9.149	y	17	10.257	90.108	10.644	2.637	1	H1-...
19	M22	2L3x4x5/16x3/8	.527	9.149	2	.003	9.149	y	11	10.257	90.108	10.644	2.637	1	H1-...
20	M25	2L3x4x5/16x3/8	.522	9.149	6	.003	9.149	y	15	10.257	90.108	10.644	2.637	1	H1-...
21	M29	2L3x4x5/16x3/8	.547	9.149	8	.003	9.149	y	17	10.257	90.108	10.644	2.637	1	H1-...
22	M32	2L3x4x5/16x3/8	.543	9.149	4	.003	9.149	y	13	10.257	90.108	10.644	2.637	1	H1-...
23	M36	2L3x4x5/16x3/8	.534	9.149	6	.003	9.149	y	15	10.257	90.108	10.644	2.637	1	H1-...
24	M39	2L3x4x5/16x3/8	.544	9.149	2	.003	9.149	y	11	10.257	90.108	10.644	2.637	1	H1-...
25	M51	2L3x2 1/2x3/8x3/8	.355	15.0...	8	.003	22.569	y	12	41.212	82.778	5.511	2.91	1	H1-...
26	M59	2L3x2 1/2x3/8x3/8	.355	15.0...	4	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
27	M67	2L3x2 1/2x3/8x3/8	.360	15.0...	6	.003	22.569	y	18	41.212	82.778	5.511	2.91	1	H1-...
28	M75	2L3x2 1/2x3/8x3/8	.361	15.0...	2	.003	22.569	y	15	41.212	82.778	5.511	2.91	1	H1-...
29	M83	2L3x2 1/2x3/8x3/8	.353	15.0...	4	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
30	M91	2L3x2 1/2x3/8x3/8	.354	15.0...	8	.003	22.569	y	14	41.212	82.778	5.511	2.91	1	H1-...
31	M99	2L3x2 1/2x3/8x3/8	.354	15.0...	2	.003	22.569	y	14	41.212	82.778	5.511	2.91	1	H1-...
32	M107	2L3x2 1/2x3/8x3/8	.354	15.0...	6	.003	22.569	y	12	41.212	82.778	5.511	2.91	1	H1-...
33	M124	2L3x2 1/2x3/8x3/8	.502	7.523	8	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
34	M132	2L3x2 1/2x3/8x3/8	.502	7.523	4	.003	22.569	y	13	41.212	82.778	5.511	2.91	1	H1-...
35	M141	2L3x2 1/2x3/8x3/8	.500	7.523	6	.003	22.569	y	15	41.212	82.778	5.511	2.91	1	H1-...
36	M149	2L3x2 1/2x3/8x3/8	.499	7.523	2	.003	22.569	y	11	41.212	82.778	5.511	2.91	1	H1-...
37	M158	2L3x2 1/2x3/8x3/8	.479	7.523	4	.003	22.569	y	13	41.212	82.778	5.511	2.91	1	H1-...
38	M166	2L3x2 1/2x3/8x3/8	.479	7.523	8	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
39	M175	2L3x2 1/2x3/8x3/8	.485	7.523	2	.003	22.569	y	11	41.212	82.778	5.511	2.91	1	H1-...
40	M183	2L3x2 1/2x3/8x3/8	.485	7.523	6	.003	22.569	y	15	41.212	82.778	5.511	2.91	1	H1-...
41	M205	2L3x2-1/2x1/2x3/8	.489	7.523	8	.002	22.569	y	17	55.096	107.784	7.485	3.743	1	H1-...
42	M213	2L3x2-1/2x1/2x3/8	.490	4.075	4	.002	22.569	y	13	55.096	107.784	7.485	5.988	1	H1-...
43	M222	2L3x2-1/2x1/2x3/8	.498	7.523	6	.002	22.569	y	15	55.096	107.784	7.485	3.743	1	H1-...
44	M230	2L3x2-1/2x1/2x3/8	.498	7.523	2	.002	22.569	y	11	55.096	107.784	7.485	3.743	1	H1-...
45	M239	2L3x2-1/2x1/2x3/8	.468	4.075	4	.002	22.569	y	13	55.096	107.784	7.485	5.988	1	H1-...
46	M247	2L3x2-1/2x1/2x3/8	.467	4.075	8	.002	22.569	y	17	55.096	107.784	7.485	5.988	1	H1-...
47	M256	2L3x2-1/2x1/2x3/8	.475	7.523	2	.002	22.569	y	11	55.096	107.784	7.485	3.743	1	H1-...
48	M264	2L3x2-1/2x1/2x3/8	.476	4.075	6	.002	22.569	y	15	55.096	107.784	7.485	5.988	1	H1-...
49	M286	2L3x2-1/2x1/2x3/8	.606	4.388	8	.003	22.569	y	8	55.096	107.784	7.485	5.988	1	H1-...
50	M294	2L3x2-1/2x1/2x3/8	.608	4.388	4	.003	22.569	y	4	55.096	107.784	7.485	5.988	1	H1-...
51	M303	2L3x2-1/2x1/2x3/8	.619	4.388	6	.003	22.569	y	6	55.096	107.784	7.485	5.988	1	H1-...
52	M311	2L3x2-1/2x1/2x3/8	.618	7.523	2	.003	22.569	y	2	55.096	107.784	7.485	3.743	1	H1-...
53	M320	2L3x2-1/2x1/2x3/8	.578	4.388	4	.003	22.569	y	4	55.096	107.784	7.485	5.988	1	H1-...
54	M328	2L3x2-1/2x1/2x3/8	.577	4.388	8	.003	22.569	y	8	55.096	107.784	7.485	5.988	1	H1-...
55	M337	2L3x2-1/2x1/2x3/8	.589	4.388	2	.003	22.569	y	2	55.096	107.784	7.485	5.988	1	H1-...
56	M345	2L3x2-1/2x1/2x3/8	.590	4.388	6	.003	22.569	y	6	55.096	107.784	7.485	5.988	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
57	M367	2L4x3x3/8x3/8	.657	5.642	8	.003	22.569	y	7	60.338	107.138	7.672	8.384	1	H1-...
58	M375	2L4x3x3/8x3/8	.659	5.642	4	.003	22.569	y	5	60.338	107.138	7.672	8.384	1	H1-...
59	M384	2L4x3x3/8x3/8	.680	5.642	6	.003	22.569	y	5	60.338	107.138	7.672	8.384	1	H1-...
60	M392	2L4x3x3/8x3/8	.678	5.642	2	.003	22.569	y	2	60.338	107.138	7.672	8.384	1	H1-...
61	M401	2L4x3x3/8x3/8	.625	5.642	4	.003	22.569	y	4	60.338	107.138	7.672	8.384	1	H1-...
62	M409	2L4x3x3/8x3/8	.624	5.642	8	.003	22.569	y	9	60.338	107.138	7.672	8.384	1	H1-...
63	M418	2L4x3x3/8x3/8	.647	5.642	2	.003	22.569	y	2	60.338	107.138	7.672	8.384	1	H1-...
64	M426	2L4x3x3/8x3/8	.649	5.642	6	.003	22.569	y	6	60.338	107.138	7.672	8.384	1	H1-...
65	M448	2L4x3x3/8x3/8	.748	7.523	8	.003	22.569	y	7	60.338	107.138	7.672	5.24	1	H1-...
66	M456	2L4x3x3/8x3/8	.750	5.329	4	.003	22.569	y	5	60.338	107.138	7.672	8.384	1	H1-...
67	M465	2L4x3x3/8x3/8	.770	5.329	6	.003	22.569	y	5	60.338	107.138	7.672	8.384	1	H1-...
68	M473	2L4x3x3/8x3/8	.769	7.523	2	.003	22.569	y	3	60.338	107.138	7.672	5.24	1	H1-...
69	M482	2L4x3x3/8x3/8	.711	5.015	4	.003	22.569	y	4	60.338	107.138	7.672	8.384	1	H1-...
70	M490	2L4x3x3/8x3/8	.709	5.015	8	.003	22.569	y	9	60.338	107.138	7.672	8.384	1	H1-...
71	M499	2L4x3x3/8x3/8	.734	5.015	2	.003	22.569	y	9	60.338	107.138	7.672	8.384	1	H1-...
72	M507	2L4x3x3/8x3/8	.735	5.329	6	.003	22.569	y	6	60.338	107.138	7.672	8.384	1	H1-...
73	M529	2L4x3x1/2x3/8	.644	5.956	8	.003	22.569	y	7	82.457	140.12	10.402	10.86	1	H1-...
74	M537	2L4x3x1/2x3/8	.646	5.956	4	.003	22.569	y	5	82.457	140.12	10.402	10.86	1	H1-...
75	M546	2L4x3x1/2x3/8	.661	5.956	6	.003	22.569	y	5	82.457	140.12	10.402	10.86	1	H1-...
76	M554	2L4x3x1/2x3/8	.659	5.956	2	.003	22.569	y	3	82.457	140.12	10.402	10.86	1	H1-...
77	M563	2L4x3x1/2x3/8	.612	5.956	4	.003	22.569	y	3	82.457	140.12	10.402	10.86	1	H1-...
78	M571	2L4x3x1/2x3/8	.611	5.956	8	.003	22.569	y	9	82.457	140.12	10.402	10.86	1	H1-...
79	M580	2L4x3x1/2x3/8	.630	5.956	2	.003	22.569	y	9	82.457	140.12	10.402	10.86	1	H1-...
80	M588	2L4x3x1/2x3/8	.632	5.956	6	.003	22.569	y	7	82.457	140.12	10.402	10.86	1	H1-...
81	M610	2L4x3x1/2x3/8	.715	6.269	8	.004	22.569	y	7	82.457	140.12	10.402	10.86	1	H1-...
82	M618	2L4x3x1/2x3/8	.718	6.269	4	.031	20.062	y	3	82.457	140.12	10.402	10.86	1	H1-...
83	M627	2L4x3x1/2x3/8	.735	6.269	6	.004	22.569	y	5	82.457	140.12	10.402	10.86	1	H1-...
84	M635	2L4x3x1/2x3/8	.733	6.269	2	.032	15.046	y	5	82.457	140.12	10.402	10.86	1	H1-...
85	M644	2L4x3x1/2x3/8	.678	6.269	4	.004	22.569	y	3	82.457	140.12	10.402	10.86	1	H1-...
86	M652	2L4x3x1/2x3/8	.678	6.269	8	.029	20.062	y	7	82.457	140.12	10.402	10.86	1	H1-...
87	M661	2L4x3x1/2x3/8	.702	6.269	2	.004	22.569	y	9	82.457	140.12	10.402	10.86	1	H1-...
88	M669	2L4x3x1/2x3/8	.703	6.269	6	.032	15.046	y	9	82.457	140.12	10.402	10.86	1	H1-...
89	M691	2L4x4x1/2x3/8	.667	6.964	8	.002	0	y	7	100.149	161.677	17.309	11.327	1	H1-...
90	M701	2L4x4x1/2x3/8	.667	6.964	4	.004	6.964	y	2	100.149	161.677	17.309	11.327	1	H1-...
91	M712	2L4x4x1/2x3/8	.782	6.909	6	.004	13.817	y	5	100.862	161.677	17.309	11.327	1	H1-...
92	M722	2L4x4x1/2x3/8	.782	6.909	2	.005	0	y	3	100.862	161.677	17.309	11.327	1	H1-...
93	M733	2L4x4x1/2x3/8	.622	6.964	4	.003	13.929	y	3	100.149	161.677	17.309	11.327	1	H1-...
94	M743	2L4x4x1/2x3/8	.623	6.964	8	.008	0	y	9	100.149	161.677	17.309	11.327	1	H1-...
95	M754	2L4x4x1/2x3/8	.747	6.909	2	.003	13.817	y	9	100.862	161.677	17.309	11.327	1	H1-...
96	M764	2L4x4x1/2x3/8	.747	6.909	6	.006	0	y	7	100.862	161.677	17.309	11.327	1	H1-...
97	M1270	W12x26	.218	20.75	5	.011	0	y	4	126.627	164.91	14.677	34.995	1	H1-...
98	M1271	W12x26	.218	20.75	5	.011	0	y	6	126.627	164.91	14.677	34.995	1	H1-...
99	M1272	W12x26	.218	20.75	9	.011	0	y	8	126.627	164.91	14.677	34.995	1	H1-...
100	M1273	W12x26	.218	20.75	9	.011	0	y	2	126.627	164.91	14.677	34.995	1	H1-...
101	M123	2L3x2 1/2x1/4x3/8	.309	25.1...	8	.008	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
102	M140	2L3x2 1/2x1/4x3/8	.307	8.375	2	.008	8.375	y	15	31.268	56.695	3.608	2.019	1	H1-...
103	M157	2L3x2 1/2x1/4x3/8	.279	17.0...	4	.004	25.125	y	16	31.268	56.695	3.608	2.019	1	H1-...
104	M174	2L3x2 1/2x1/4x3/8	.282	16.4...	6	.004	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
105	M204	2L3x2 1/2x1/4x3/8	.451	25.1...	8	.008	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
106	M221	2L3x2 1/2x1/4x3/8	.455	8.375	2	.008	8.375	y	15	31.268	56.695	3.608	2.019	1	H1-...
107	M238	2L3x2 1/2x1/4x3/8	.434	16.75	8	.005	25.125	y	16	31.268	56.695	3.608	2.019	1	H1-...
108	M255	2L3x2 1/2x1/4x3/8	.441	16.75	2	.005	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
109	M285	2L3x2 1/2x1/4x3/8	.553	27.9...	8	.008	25.125	y	14	31.268	56.695	3.608	3.23	1	H1-...
110	M302	2L3x2 1/2x1/4x3/8	.560	5.583	2	.008	8.375	y	15	31.268	56.695	3.608	3.23	1	H1-...
111	M319	2L3x2 1/2x1/4x3/8	.530	16.75	8	.005	25.125	y	16	31.268	56.695	3.608	2.019	1	H1-...
112	M336	2L3x2 1/2x1/4x3/8	.539	16.75	2	.005	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
113	M366	2L3x2 1/2x5/16x3/8	.547	27.9...	8	.006	25.125	y	14	38.13	69.891	4.55	3.957	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
114	M383	2L3x2 1/2x5/16x3/8	.569	5.583	2	.006	8.375	y	15	38.13	69.891	4.55	3.957	1	H1-...
115	M400	2L3x2 1/2x5/16x3/8	.519	16.75	8	.004	25.125	y	16	38.13	69.891	4.55	2.473	1	H1-...
116	M417	2L3x2 1/2x5/16x3/8	.541	16.75	2	.004	25.125	y	14	38.13	69.891	4.55	2.473	1	H1-...
117	M447	2L3x2 1/2x3/8x3/8	.545	28.2...	8	.006	25.125	y	14	44.67	82.778	5.511	4.656	1	H1-...
118	M464	2L3x2 1/2x3/8x3/8	.562	5.234	2	.006	8.375	y	15	44.67	82.778	5.511	4.656	1	H1-...
119	M481	2L3x2 1/2x3/8x3/8	.513	16.75	8	.004	25.125	y	16	44.67	82.778	5.511	2.91	1	H1-...
120	M498	2L3x2 1/2x3/8x3/8	.531	16.75	2	.004	25.125	y	14	44.67	82.778	5.511	2.91	1	H1-...
121	M528	2L3x2 1/2x3/8x3/8	.623	28.2...	8	.006	25.125	y	14	44.67	82.778	5.511	4.656	1	H1-...
122	M545	2L3x2 1/2x3/8x3/8	.640	5.234	2	.006	8.375	y	15	44.67	82.778	5.511	4.656	1	H1-...
123	M562	2L3x2 1/2x3/8x3/8	.584	16.75	8	.004	25.125	y	16	44.67	82.778	5.511	2.91	1	H1-...
124	M579	2L3x2 1/2x3/8x3/8	.604	16.75	2	.004	25.125	y	14	44.67	82.778	5.511	2.91	1	H1-...
125	M609	2L3x2 1/2x3/8x3/8	.679	27.9...	8	.006	25.125	y	14	44.67	82.778	5.511	4.656	1	H1-...
126	M626	2L3x2 1/2x3/8x3/8	.694	5.583	2	.006	8.375	y	15	44.67	82.778	5.511	4.656	1	H1-...
127	M643	2L3x2 1/2x3/8x3/8	.638	16.75	8	.004	25.125	y	18	44.67	82.778	5.511	2.91	1	H1-...
128	M660	2L3x2 1/2x3/8x3/8	.662	16.75	2	.004	25.125	y	16	44.67	82.778	5.511	2.91	1	H1-...
129	M690	2L4x3x1/2x3/8	.379	16.75	7	.005	25.125	y	12	93.096	140.12	10.402	6.788	1	H1-...
130	M711	2L4x3x1/2x3/8	.362	16.75	3	.005	8.375	y	15	93.096	140.12	10.402	6.788	1	H1-...
131	M732	2L4x3x1/2x3/8	.367	16.75	9	.003	16.75	y	3	93.096	140.12	10.402	6.788	1	H1-...
132	M753	2L4x3x1/2x3/8	.356	16.75	9	.003	16.75	y	9	93.096	140.12	10.402	6.788	1	H1-...
133	M1221	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
134	M1222	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
135	M1223	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
136	M1224	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
137	M1225	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
138	M1226	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
139	M1169	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
140	M1170	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
141	M1171	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
142	M1172	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
143	M1173	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
144	M1174	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
145	M1117	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
146	M1118	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
147	M1119	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
148	M1120	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
149	M1121	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
150	M1122	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
151	M1065	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
152	M1066	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
153	M1067	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
154	M1068	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
155	M1069	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
156	M1070	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
157	M1013	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
158	M1014	2L2 1/2x2 1/2x3/16x...	.031	4.188	3	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
159	M1015	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
160	M1016	2L2 1/2x2 1/2x3/16x...	.031	4.188	5	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
161	M1017	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
162	M1018	2L2 1/2x2 1/2x3/16x...	.031	4.188	7	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
163	M961	2L2 1/2x2 1/2x3/16x...	.032	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
164	M962	2L2 1/2x2 1/2x3/16x...	.032	4.188	3	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
165	M963	2L2 1/2x2 1/2x3/16x...	.032	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
166	M964	2L2 1/2x2 1/2x3/16x...	.032	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
167	M965	2L2 1/2x2 1/2x3/16x...	.032	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
168	M966	2L2 1/2x2 1/2x3/16x...	.032	4.188	7	.002	0	y	3	16.09	38.802	2.672	1.737	1	H1-...
169	M909	2L2 1/2x2 1/2x3/16x...	.032	4.188	3	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
170	M910	2L2 1/2x2 1/2x3/16x...	.032	4.188	3	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
171	M911	2L2 1/2x2 1/2x3/16x...	.032	4.188	5	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
172	M912	2L2 1/2x2 1/2x3/16x...	.032	4.188	5	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
173	M913	2L2 1/2x2 1/2x3/16x...	.032	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
174	M914	2L2 1/2x2 1/2x3/16x...	.032	4.188	7	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
175	M1258	W8x13	.008	0	16	.003	0	y	7	20.313	82.778	3.862	13.884	1.1...	H1-...
176	M1259	W8x13	.008	0	18	.003	11.844	y	9	20.313	82.778	3.862	13.884	1.1...	H1-...
177	M1260	W8x13	.007	0	12	.003	11.844	y	3	20.313	82.778	3.862	13.884	1.1...	H1-...
178	M1261	W8x13	.008	0	14	.003	0	y	5	20.313	82.778	3.862	13.884	1.1...	H1-...
179	M1206	2L2 1/2x2 1/2x3/16x...	.084	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
180	M1207	2L2 1/2x2 1/2x3/16x...	.088	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
181	M1208	2L2 1/2x2 1/2x3/16x...	.084	0	3	.003	0	y	24	8.11	38.802	2.672	1.737	1	H1-...
182	M1154	2L2 1/2x2 1/2x3/16x...	.083	0	7	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
183	M1155	2L2 1/2x2 1/2x3/16x...	.090	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
184	M1156	2L2 1/2x2 1/2x3/16x...	.083	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
185	M1102	2L2 1/2x2 1/2x3/16x...	.103	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
186	M1103	2L2 1/2x2 1/2x3/16x...	.111	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
187	M1104	2L2 1/2x2 1/2x3/16x...	.103	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
188	M1050	2L2 1/2x2 1/2x3/16x...	.106	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
189	M1051	2L2 1/2x2 1/2x3/16x...	.113	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
190	M1052	2L2 1/2x2 1/2x3/16x...	.107	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
191	M998	2L2 1/2x2 1/2x3/16x...	.108	0	7	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
192	M999	2L2 1/2x2 1/2x3/16x...	.114	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
193	M1000	2L2 1/2x2 1/2x3/16x...	.108	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
194	M946	2L2 1/2x2 1/2x3/16x...	.123	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
195	M947	2L2 1/2x2 1/2x3/16x...	.130	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
196	M948	2L2 1/2x2 1/2x3/16x...	.123	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
197	M894	2L2 1/2x2 1/2x3/16x...	.134	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
198	M895	2L2 1/2x2 1/2x3/16x...	.142	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
199	M896	2L2 1/2x2 1/2x3/16x...	.134	0	7	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
200	M845	C4x7.2	.048	2.094	7	.001	0	y	7	23.581	45.916	.969	4.717	1	H1-...
201	M846	C4x7.2	.048	2.094	7	.001	0	y	3	23.581	45.916	.969	4.717	1	H1-...
202	M847	C4x7.2	.049	2.094	5	.001	0	y	5	23.581	45.916	.969	4.717	1	H1-...
203	M848	C4x7.2	.049	2.094	5	.001	0	y	9	23.581	45.916	.969	4.717	1	H1-...
204	M849	C4x7.2	.049	2.094	3	.001	0	y	3	23.581	45.916	.969	4.717	1	H1-...
205	M850	C4x7.2	.048	2.094	3	.001	0	y	7	23.581	45.916	.969	4.717	1	H1-...
206	M851	C4x7.2	.051	2.688	9	.001	5.375	y	5	15.355	45.916	.969	4.521	1	H1-...
207	M852	C4x7.2	.051	2.688	9	.001	0	y	5	15.355	45.916	.969	4.521	1	H1-...
208	M859	C4x7.2	.048	2.094	3	.001	4.188	y	7	23.581	45.916	.969	4.717	1	H1-...
209	M860	C4x7.2	.049	2.094	5	.001	4.188	y	5	23.581	45.916	.969	4.717	1	H1-...
210	M861	C4x7.2	.049	2.094	5	.001	4.188	y	9	23.581	45.916	.969	4.717	1	H1-...
211	M862	C4x7.2	.048	2.094	3	.001	4.188	y	3	23.581	45.916	.969	4.717	1	H1-...
212	M863	C4x7.2	.048	2.094	7	.001	4.188	y	7	23.581	45.916	.969	4.717	1	H1-...
213	M864	C4x7.2	.048	2.094	7	.001	4.188	y	3	23.581	45.916	.969	4.717	1	H1-...
214	M865	C4x7.2	.036	2.121	9	.001	0	y	3	23.169	45.916	.969	4.708	1	H1-...
215	M1227	2L3x2 1/2x1/4x3/8	.059	4.243	5	.002	0	y	7	30.78	56.695	3.608	3.23	1	H1-...
216	M1228	2L3x2 1/2x1/4x3/8	.040	4.353	5	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
217	M1229	2L3x2 1/2x1/4x3/8	.040	4.353	5	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
218	M1175	2L3x2 1/2x1/4x3/8	.051	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
219	M1176	2L3x2 1/2x1/4x3/8	.051	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
220	M1177	2L3x2 1/2x1/4x3/8	.058	4.243	6	.002	0	y	7	30.78	56.695	3.608	3.23	1	H1-...
221	M1123	2L3x2 1/2x1/4x3/8	.066	4.243	6	.002	0	y	6	30.78	56.695	3.608	3.23	1	H1-...
222	M1124	2L3x2 1/2x1/4x3/8	.057	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
223	M1125	2L3x2 1/2x1/4x3/8	.057	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
224	M1071	2L3x2 1/2x1/4x3/8	.058	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
225	M1072	2L3x2 1/2x1/4x3/8	.058	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
226	M1073	2L3x2 1/2x1/4x3/8	.067	4.243	6	.002	0	y	6	30.78	56.695	3.608	3.23	1	H1-...
227	M1019	2L3x2 1/2x1/4x3/8	.067	4.243	6	.002	0	y	3	30.78	56.695	3.608	3.23	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
228	M1020	2L3x2 1/2x1/4x3/8	.058	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
229	M1021	2L3x2 1/2x1/4x3/8	.058	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
230	M967	2L3x2 1/2x1/4x3/8	.072	4.243	6	.002	0	y	2	30.78	56.695	3.608	3.23	1	H1-...
231	M968	2L3x2 1/2x1/4x3/8	.063	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
232	M969	2L3x2 1/2x1/4x3/8	.063	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
233	M915	2L3x2 1/2x1/4x3/8	.077	4.243	6	.002	0	y	2	30.78	56.695	3.608	3.23	1	H1-...
234	M916	2L3x2 1/2x1/4x3/8	.067	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
235	M917	2L3x2 1/2x1/4x3/8	.067	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
236	M1254	W8x13	.063	8.375	2	.004	16.75	y	4	39.183	82.778	3.862	7.792	1	H1-...
237	M1255	W8x13	.063	8.375	4	.004	0	y	2	39.183	82.778	3.862	7.792	1	H1-...
238	M1256	W8x13	.063	8.375	6	.004	0	y	4	39.183	82.778	3.862	7.792	1	H1-...
239	M1257	W8x13	.063	8.375	8	.004	16.75	y	2	39.183	82.778	3.862	7.792	1	H1-...
240	M1202	2L2 1/2x2 1/2x3/16x...	.495	8.375	2	.006	16.75	y	7	4.055	38.802	2.672	1.737	1	H1-...
241	M1203	2L2 1/2x2 1/2x3/16x...	.494	8.375	8	.006	16.75	y	14	4.055	38.802	2.672	1.737	1	H1-...
242	M1204	2L2 1/2x2 1/2x3/16x...	.451	8.375	6	.006	0	y	7	4.055	38.802	2.672	1.737	1	H1-...
243	M1205	2L2 1/2x2 1/2x3/16x...	.451	8.375	4	.006	16.75	y	2	4.055	38.802	2.672	1.737	1	H1-...
244	M1150	2L2 1/2x2 1/2x3/16x...	.455	8.375	4	.006	0	y	2	4.055	38.802	2.672	1.737	1	H1-...
245	M1151	2L2 1/2x2 1/2x3/16x...	.458	8.375	6	.006	16.75	y	7	4.055	38.802	2.672	1.737	1	H1-...
246	M1152	2L2 1/2x2 1/2x3/16x...	.666	8.375	9	.006	16.75	y	9	4.055	38.802	2.672	1.737	1	H1-...
247	M1153	2L2 1/2x2 1/2x3/16x...	.673	8.375	9	.006	16.75	y	5	4.055	38.802	2.672	1.737	1	H1-...
248	M1098	2L2 1/2x2 1/2x3/16x...	.793	8.375	9	.006	0	y	7	4.055	38.802	2.672	1.737	1	H1-...
249	M1099	2L2 1/2x2 1/2x3/16x...	.506	8.375	4	.006	0	y	3	4.055	38.802	2.672	1.737	1	H1-...
250	M1100	2L2 1/2x2 1/2x3/16x...	.510	8.375	6	.006	0	y	5	4.055	38.802	2.672	1.737	1	H1-...
251	M1101	2L2 1/2x2 1/2x3/16x...	.782	8.375	9	.006	0	y	7	4.055	38.802	2.672	1.737	1	H1-...
252	M1046	2L2 1/2x2 1/2x3/16x...	.508	8.375	4	.006	0	y	3	4.055	38.802	2.672	1.737	1	H1-...
253	M1047	2L2 1/2x2 1/2x3/16x...	.519	8.375	6	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
254	M1048	2L2 1/2x2 1/2x3/16x...	.790	8.375	9	.006	0	y	6	4.055	38.802	2.672	1.737	1	H1-...
255	M1049	2L2 1/2x2 1/2x3/16x...	.819	8.375	9	.006	16.75	y	3	4.055	38.802	2.672	1.737	1	H1-...
256	M994	2L2 1/2x2 1/2x3/16x...	.821	8.375	9	.006	0	y	17	4.055	38.802	2.672	1.737	1	H1-...
257	M995	2L2 1/2x2 1/2x3/16x...	.510	8.375	4	.006	0	y	2	4.055	38.802	2.672	1.737	1	H1-...
258	M996	2L2 1/2x2 1/2x3/16x...	.520	8.375	6	.006	16.75	y	8	4.055	38.802	2.672	1.737	1	H1-...
259	M997	2L2 1/2x2 1/2x3/16x...	.797	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
260	M942	2L2 1/2x2 1/2x3/16x...	.548	8.375	4	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
261	M943	2L2 1/2x2 1/2x3/16x...	.558	8.375	6	.006	0	y	3	4.055	38.802	2.672	1.737	1	H1-...
262	M944	2L2 1/2x2 1/2x3/16x...	.890	8.375	9	.006	16.75	y	2	4.055	38.802	2.672	1.737	1	H1-...
263	M945	2L2 1/2x2 1/2x3/16x...	.914	8.375	9	.006	0	y	8	4.055	38.802	2.672	1.737	1	H1-...
264	M890	2L2 1/2x2 1/2x3/16x...	.951	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
265	M891	2L2 1/2x2 1/2x3/16x...	.588	8.375	6	.006	0	y	15	4.055	38.802	2.672	1.737	1	H1-...
266	M892	2L2 1/2x2 1/2x3/16x...	.576	8.375	4	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
267	M893	2L2 1/2x2 1/2x3/16x...	.980	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
268	M42	W10x30	.021	11.8...	5	.008	11.844	y	14	165.546	190.563	15.88	55.688	1	H1-...
269	M43	W10x30	.021	11.8...	3	.008	11.844	y	12	165.546	190.563	15.88	55.688	1	H1-...
270	M44	W10x30	.022	11.8...	9	.008	11.844	y	18	165.546	190.563	15.88	55.688	1	H1-...
271	M45	W10x30	.021	11.8...	7	.008	11.844	y	16	165.546	190.563	15.88	55.688	1	H1-...
272	M191	2L3x2 1/2x1/4x3/8	.208	11.8...	16	.008	11.844	y	15	17.486	56.695	3.608	2.019	1	H1-...
273	M192	2L3x2 1/2x1/4x3/8	.208	11.8...	17	.008	11.844	y	13	17.486	56.695	3.608	2.019	1	H1-...
274	M193	2L3x2 1/2x1/4x3/8	.207	11.8...	15	.008	11.844	y	11	17.486	56.695	3.608	2.019	1	H1-...
275	M194	2L3x2 1/2x1/4x3/8	.208	11.8...	11	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
276	M272	2L3x2 1/2x1/4x3/8	.211	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
277	M273	2L3x2 1/2x1/4x3/8	.210	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
278	M274	2L3x2 1/2x1/4x3/8	.209	11.8...	15	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
279	M275	2L3x2 1/2x1/4x3/8	.210	11.8...	11	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
280	M353	2L3x2 1/2x1/4x3/8	.214	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
281	M354	2L3x2 1/2x1/4x3/8	.212	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
282	M355	2L3x2 1/2x1/4x3/8	.211	11.8...	15	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
283	M356	2L3x2 1/2x1/4x3/8	.213	11.8...	11	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
284	M434	2L3x2 1/2x1/4x3/8	.205	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
285	M435	2L3x2 1/2x1/4x3/8	.203	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
286	M436	2L3x2 1/2x1/4x3/8	.202	11.8...	18	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
287	M437	2L3x2 1/2x1/4x3/8	.205	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
288	M515	2L3x2 1/2x1/4x3/8	.205	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
289	M516	2L3x2 1/2x1/4x3/8	.203	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
290	M517	2L3x2 1/2x1/4x3/8	.203	11.8...	18	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
291	M518	2L3x2 1/2x1/4x3/8	.205	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
292	M596	2L3x2 1/2x1/4x3/8	.207	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
293	M597	2L3x2 1/2x1/4x3/8	.207	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
294	M598	2L3x2 1/2x1/4x3/8	.204	11.8...	18	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
295	M599	2L3x2 1/2x1/4x3/8	.208	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
296	M677	2L3x2 1/2x1/4x3/8	.201	11.8...	11	.009	11.844	y	13	17.486	56.695	3.608	2.019	1	H1-...
297	M678	2L3x2 1/2x1/4x3/8	.202	11.8...	18	.009	11.844	y	11	17.486	56.695	3.608	2.019	1	H1-...
298	M679	2L3x2 1/2x1/4x3/8	.198	11.8...	15	.009	11.844	y	17	17.486	56.695	3.608	2.019	1	H1-...
299	M680	2L3x2 1/2x1/4x3/8	.205	11.8...	9	.009	11.844	y	15	17.486	56.695	3.608	2.019	1	H1-...
300	M1209	2L2 1/2x2 1/2x3/16x...	.031	4.188	6	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
301	M1210	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
302	M1211	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
303	M1212	2L2 1/2x2 1/2x3/16x...	.031	4.188	4	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
304	M1213	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
305	M1214	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
306	M1215	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
307	M1216	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
308	M1217	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
309	M1218	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
310	M1219	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	9	24.773	38.802	2.672	1.737	1	H1-...
311	M1220	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
312	M1157	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
313	M1158	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
314	M1159	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
315	M1160	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
316	M1161	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
317	M1162	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
318	M1163	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
319	M1164	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
320	M1165	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
321	M1166	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
322	M1167	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	9	24.773	38.802	2.672	1.737	1	H1-...
323	M1168	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
324	M1105	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
325	M1106	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
326	M1107	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
327	M1108	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
328	M1109	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
329	M1110	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
330	M1111	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	9	24.773	38.802	2.672	1.737	1	H1-...
331	M1112	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
332	M1113	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
333	M1114	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	9	24.773	38.802	2.672	1.737	1	H1-...
334	M1115	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
335	M1116	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
336	M1053	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
337	M1054	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	0	y	2	16.09	38.802	2.672	1.737	1	H1-...
338	M1055	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
339	M1056	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
340	M1057	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
341	M1058	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
342	M1059	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
343	M1060	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
344	M1061	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
345	M1062	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
346	M1063	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
347	M1064	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
348	M1001	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
349	M1002	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
350	M1003	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
351	M1004	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
352	M1005	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
353	M1006	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
354	M1007	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
355	M1008	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
356	M1009	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
357	M1010	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
358	M1011	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
359	M1012	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
360	M949	2L2 1/2x2 1/2x3/16x...	.032	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
361	M950	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
362	M951	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
363	M952	2L2 1/2x2 1/2x3/16x...	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
364	M953	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
365	M954	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
366	M955	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
367	M956	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
368	M957	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
369	M958	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
370	M959	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
371	M960	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
372	M897	2L2 1/2x2 1/2x3/16x...	.032	4.188	9	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
373	M898	2L2 1/2x2 1/2x3/16x...	.031	4.188	8	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
374	M899	2L2 1/2x2 1/2x3/16x...	.031	4.188	2	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
375	M900	2L2 1/2x2 1/2x3/16x...	.032	4.188	9	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
376	M901	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
377	M902	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
378	M903	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
379	M904	2L2 1/2x2 1/2x3/16x...	.016	2.961	3	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
380	M905	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
381	M906	2L2 1/2x2 1/2x3/16x...	.016	2.961	9	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
382	M907	2L2 1/2x2 1/2x3/16x...	.016	2.961	5	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
383	M908	2L2 1/2x2 1/2x3/16x...	.016	2.961	7	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
384	M1266	2L2 1/2x2 1/2x1/4x3/8	.327	6.86	16	.001	6.86	y	7	7.819	51.305	3.58	1.419	1	H1-...
385	M1267	2L2 1/2x2 1/2x1/4x3/8	.329	6.86	14	.001	6.86	y	5	7.819	51.305	3.58	1.419	1	H1-...
386	M1268	2L2 1/2x2 1/2x1/4x3/8	.329	6.86	12	.001	6.86	y	3	7.819	51.305	3.58	1.419	1	H1-...
387	M1269	2L2 1/2x2 1/2x1/4x3/8	.330	6.86	18	.001	6.86	y	9	7.819	51.305	3.58	1.419	1	H1-...
388	M1	L6x6x1/2	.239	1.143	17	.070	13.72	y	3	44.396	123.952	3.534	16.267	1	H2-1
389	M2	L6x6x1/2	.239	1.143	13	.071	13.72	z	9	44.396	123.952	3.534	16.267	1	H2-1
390	M3	L6x6x1/2	.225	1.143	13	.069	13.72	y	7	44.396	123.952	3.534	16.267	1	H2-1
391	M4	L6x6x1/2	.226	1.143	17	.072	13.72	z	5	44.396	123.952	3.534	16.267	1	H2-1
392	M47	W6x20	.131	0	5	.026	12.5	y	3	111.036	126.539	12.072	26.946	1	H1-...
393	M48	W6x20	.133	0	7	.026	12.5	y	9	111.036	126.539	12.072	26.946	1	H1-...
394	M49	W6x20	.119	0	9	.026	12.5	y	7	111.036	126.539	12.072	26.946	1	H1-...
395	M50	W6x20	.127	0	3	.026	12.5	y	5	111.036	126.539	12.072	26.946	1	H1-...
396	M119	W6x20	.336	0	16	.036	25	y	3	111.036	126.539	12.072	26.946	1	H1-...
397	M120	W6x20	.358	0	14	.033	25	y	9	111.036	126.539	12.072	26.946	1	H1-...
398	M121	W6x20	.329	6.25	3	.036	25	y	7	111.036	126.539	12.072	26.946	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
399	M122	W6x20	.326	22.3...	9	.033	25	y	5	111.036	126.539	12.072	26.946	1	H1-...
400	M200	W6x25	.488	0	7	.031	6.25	y	7	139.341	158.228	15.377	33.952	1	H1-...
401	M201	W6x25	.505	0	5	.034	6.25	y	5	139.341	158.228	15.377	33.952	1	H1-...
402	M202	W6x25	.488	0	3	.031	6.25	y	3	139.341	158.228	15.377	33.952	1	H1-...
403	M203	W6x25	.478	0	9	.031	6.25	y	9	139.341	158.228	15.377	33.952	1	H1-...
404	M281	W8x31	.568	0	7	.051	6.25	y	7	182.982	196.814	25.329	54.611	1	H1-...
405	M282	W8x31	.589	0	5	.054	6.25	y	5	182.982	196.814	25.329	54.611	1	H1-...
406	M283	W8x31	.578	0	3	.051	6.25	y	3	182.982	196.814	25.329	54.611	1	H1-...
407	M284	W8x31	.568	0	9	.050	6.25	y	9	182.982	196.814	25.329	54.611	1	H1-...
408	M362	W8x40	.642	0	7	.049	6.25	y	7	235.032	252.216	33.234	71.497	1	H1-...
409	M363	W8x40	.655	0	5	.051	6.25	y	5	235.032	252.216	33.234	71.497	1	H1-...
410	M364	W8x40	.646	0	3	.049	6.25	y	3	235.032	252.216	33.234	71.497	1	H1-...
411	M365	W8x40	.636	0	9	.048	6.25	y	9	235.032	252.216	33.234	71.497	1	H1-...
412	M443	W10x54	.618	6.25	7	.047	6.25	y	7	325.473	340.599	56.228	119.641	1	H1-...
413	M444	W10x54	.626	6.25	5	.049	6.25	y	5	325.473	340.599	56.228	119.641	1	H1-...
414	M445	W10x54	.620	6.25	3	.047	6.25	y	3	325.473	340.599	56.228	119.641	1	H1-...
415	M446	W10x54	.614	6.25	9	.046	6.25	y	9	325.473	340.599	56.228	119.641	1	H1-...
416	M524	W10x60	.735	0	7	.066	6.25	y	7	364.7	381.557	62.874	134.012	1	H1-...
417	M525	W10x60	.747	0	5	.069	6.25	y	5	364.7	381.557	62.874	134.012	1	H1-...
418	M526	W10x60	.737	0	3	.066	6.25	y	3	364.7	381.557	62.874	134.012	1	H1-...
419	M527	W10x60	.731	0	9	.066	6.25	y	9	364.7	381.557	62.874	134.012	1	H1-...
420	M605	W10x68	.845	0	7	.068	6.25	y	7	410.526	428.982	72.036	153.234	1	H1-...
421	M606	W10x68	.860	0	5	.070	6.25	y	5	410.526	428.982	72.036	153.234	1	H1-...
422	M607	W10x68	.851	0	3	.069	6.25	y	3	410.526	428.982	72.036	153.234	1	H1-...
423	M608	W10x68	.844	0	9	.068	6.25	y	9	410.526	428.982	72.036	153.234	1	H1-...
424	M686	W12x79	.946	6.258	7	.070	6.258	y	7	484.425	500.12	97.545	213.772	1	H1-...
425	M687	W12x79	.952	6.258	5	.071	12.515	y	4	484.425	500.12	97.545	213.772	1	H1-...
426	M688	W12x79	.938	6.258	3	.070	6.258	y	3	484.425	500.12	97.545	213.772	1	H1-...
427	M689	W12x79	.938	6.258	9	.069	6.258	y	9	484.425	500.12	97.545	213.772	1	H1-...
428	M882	2L2 1/2x2 1/2x3/16x...	.087	12.14	9	.003	12.14	y	3	7.72	38.802	2.672	1.086	1	H1-...
429	M883	2L2 1/2x2 1/2x3/16x...	.087	12.14	17	.003	0	y	3	7.72	38.802	2.672	1.086	1	H1-...
430	M884	2L2 1/2x2 1/2x3/16x...	.088	0	18	.003	12.14	y	5	7.72	38.802	2.672	1.086	1	H1-...
431	M885	2L2 1/2x2 1/2x3/16x...	.088	12.14	17	.003	0	y	5	7.72	38.802	2.672	1.086	1	H1-...
432	M886	2L2 1/2x2 1/2x3/16x...	.088	12.14	9	.003	12.14	y	7	7.72	38.802	2.672	1.086	1	H1-...
433	M887	2L2 1/2x2 1/2x3/16x...	.087	12.14	11	.003	0	y	7	7.72	38.802	2.672	1.086	1	H1-...
434	M888	2L2 1/2x2 1/2x3/16x...	.087	0	15	.003	0	y	14	7.72	38.802	2.672	1.086	1	H1-...
435	M889	2L2 1/2x2 1/2x3/16x...	.088	12.14	13	.003	12.14	y	16	7.72	38.802	2.672	1.086	1	H1-...
436	M791	L2.5x2.5x8	.651	0	5	.026	0	y	3	11.821	48.719	1.241	2.85	1	H2-1
437	M792	L2.5x2.5x8	.856	6.738	5	.027	0	z	3	12.021	48.719	1.241	2.853	1	H2-1
438	M793	L2.5x2.5x8	.656	6.795	3	.025	0	z	5	11.821	48.719	1.241	2.85	1	H2-1
439	M794	L2.5x2.5x8	.863	6.738	3	.027	6.738	y	5	12.021	48.719	1.241	2.853	1	H2-1
440	M795	L2.5x2.5x8	.853	0	9	.026	0	y	7	12.021	48.719	1.241	2.853	1	H2-1
441	M796	L2.5x2.5x8	.660	0	9	.024	0	z	7	11.821	48.719	1.241	2.85	1	H2-1
442	M797	L2.5x2.5x8	.664	6.795	7	.025	0	z	9	11.821	48.719	1.241	2.85	1	H2-1
443	M798	L2.5x2.5x8	.848	6.738	7	.027	6.738	y	9	12.021	48.719	1.241	2.853	1	H2-1
444	M56	2L2 1/2x2 1/2x3/16x...	.095	5.225	13	.005	0	y	14	11.087	38.802	2.672	1.737	1	H1-...
445	M64	2L2 1/2x2 1/2x3/16x...	.095	5.225	17	.005	10.45	y	13	11.087	38.802	2.672	1.737	1	H1-...
446	M72	2L2 1/2x2 1/2x3/16x...	.096	5.225	11	.005	0	y	12	11.087	38.802	2.672	1.737	1	H1-...
447	M80	2L2 1/2x2 1/2x3/16x...	.096	5.225	15	.005	0	y	13	11.087	38.802	2.672	1.737	1	H1-...
448	M88	2L2 1/2x2 1/2x3/16x...	.095	5.225	17	.005	0	y	18	11.087	38.802	2.672	1.737	1	H1-...
449	M96	2L2 1/2x2 1/2x3/16x...	.095	5.225	13	.005	10.45	y	12	11.087	38.802	2.672	1.737	1	H1-...
450	M104	2L2 1/2x2 1/2x3/16x...	.095	5.225	15	.005	10.45	y	16	11.087	38.802	2.672	1.737	1	H1-...
451	M112	2L2 1/2x2 1/2x3/16x...	.095	5.225	11	.005	0	y	18	11.087	38.802	2.672	1.737	1	H1-...
452	M129	2L2 1/2x2 1/2x3/16x...	.087	5.225	13	.005	10.45	y	18	11.087	38.802	2.672	1.737	1	H1-...
453	M137	2L2 1/2x2 1/2x3/16x...	.087	5.225	17	.005	10.45	y	17	11.087	38.802	2.672	1.737	1	H1-...
454	M146	2L2 1/2x2 1/2x3/16x...	.087	5.225	11	.005	10.45	y	11	11.087	38.802	2.672	1.737	1	H1-...
455	M154	2L2 1/2x2 1/2x3/16x...	.087	5.225	15	.005	0	y	11	11.087	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
456	M163	2L2 1/2x2 1/2x3/16x...	.087	5.225	18	.005	10.45	y	17	11.087	38.802	2.672	1.737	1	H1-...
457	M171	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	0	y	13	11.087	38.802	2.672	1.737	1	H1-...
458	M180	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	0	y	11	11.087	38.802	2.672	1.737	1	H1-...
459	M188	2L2 1/2x2 1/2x3/16x...	.087	5.225	18	.005	0	y	12	11.087	38.802	2.672	1.737	1	H1-...
460	M210	2L2 1/2x2 1/2x3/16x...	.087	5.225	12	.005	0	y	14	11.109	38.802	2.672	1.737	1	H1-...
461	M218	2L2 1/2x2 1/2x3/16x...	.087	5.225	16	.005	0	y	17	11.109	38.802	2.672	1.737	1	H1-...
462	M227	2L2 1/2x2 1/2x3/16x...	.087	5.225	11	.005	10.45	y	12	11.109	38.802	2.672	1.737	1	H1-...
463	M235	2L2 1/2x2 1/2x3/16x...	.088	5.225	15	.005	10.45	y	14	11.109	38.802	2.672	1.737	1	H1-...
464	M244	2L2 1/2x2 1/2x3/16x...	.087	5.225	18	.005	10.45	y	12	11.109	38.802	2.672	1.737	1	H1-...
465	M252	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	0	y	10	11.109	38.802	2.672	1.737	1	H1-...
466	M261	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	10.45	y	16	11.109	38.802	2.672	1.737	1	H1-...
467	M269	2L2 1/2x2 1/2x3/16x...	.087	5.225	11	.005	10.45	y	11	11.109	38.802	2.672	1.737	1	H1-...
468	M291	2L2 1/2x2 1/2x3/16x...	.087	5.225	12	.005	0	y	14	11.309	38.802	2.672	1.737	1	H1-...
469	M299	2L2 1/2x2 1/2x3/16x...	.086	5.225	18	.005	0	y	17	11.309	38.802	2.672	1.737	1	H1-...
470	M308	2L2 1/2x2 1/2x3/16x...	.086	5.225	18	.005	10.45	y	12	11.309	38.802	2.672	1.737	1	H1-...
471	M316	2L2 1/2x2 1/2x3/16x...	.087	5.225	16	.005	0	y	15	11.309	38.802	2.672	1.737	1	H1-...
472	M325	2L2 1/2x2 1/2x3/16x...	.086	5.225	16	.005	10.45	y	18	11.309	38.802	2.672	1.737	1	H1-...
473	M333	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	10.45	y	17	11.309	38.802	2.672	1.737	1	H1-...
474	M342	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	0	y	16	11.309	38.802	2.672	1.737	1	H1-...
475	M350	2L2 1/2x2 1/2x3/16x...	.086	5.225	11	.005	0	y	14	11.309	38.802	2.672	1.737	1	H1-...
476	M372	2L2 1/2x2 1/2x3/16x...	.087	5.225	12	.005	0	y	17	11.332	38.802	2.672	1.737	1	H1-...
477	M380	2L2 1/2x2 1/2x3/16x...	.086	5.225	18	.005	0	y	17	11.332	38.802	2.672	1.737	1	H1-...
478	M389	2L2 1/2x2 1/2x3/16x...	.086	5.225	18	.005	0	y	18	11.332	38.802	2.672	1.737	1	H1-...
479	M397	2L2 1/2x2 1/2x3/16x...	.087	5.225	16	.005	10.45	y	12	11.332	38.802	2.672	1.737	1	H1-...
480	M406	2L2 1/2x2 1/2x3/16x...	.086	5.225	15	.005	0	y	18	11.332	38.802	2.672	1.737	1	H1-...
481	M414	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	0	y	12	11.332	38.802	2.672	1.737	1	H1-...
482	M423	2L2 1/2x2 1/2x3/16x...	.087	5.225	14	.005	10.45	y	17	11.332	38.802	2.672	1.737	1	H1-...
483	M431	2L2 1/2x2 1/2x3/16x...	.086	5.225	12	.005	10.45	y	11	11.332	38.802	2.672	1.737	1	H1-...
484	M453	2L2 1/2x2 1/2x3/16x...	.086	5.225	11	.005	0	y	14	11.538	38.802	2.672	1.737	1	H1-...
485	M461	2L2 1/2x2 1/2x3/16x...	.086	5.225	11	.005	10.45	y	16	11.538	38.802	2.672	1.737	1	H1-...
486	M470	2L2 1/2x2 1/2x3/16x...	.086	5.225	17	.005	0	y	11	11.538	38.802	2.672	1.737	1	H1-...
487	M478	2L2 1/2x2 1/2x3/16x...	.087	5.225	17	.005	10.45	y	11	11.538	38.802	2.672	1.737	1	H1-...
488	M487	2L2 1/2x2 1/2x3/16x...	.087	5.225	15	.005	0	y	18	11.538	38.802	2.672	1.737	1	H1-...
489	M495	2L2 1/2x2 1/2x3/16x...	.087	5.225	15	.005	10.45	y	11	11.538	38.802	2.672	1.737	1	H1-...
490	M504	2L2 1/2x2 1/2x3/16x...	.087	5.225	13	.005	10.45	y	14	11.538	38.802	2.672	1.737	1	H1-...
491	M512	2L2 1/2x2 1/2x3/16x...	.086	5.225	13	.005	10.45	y	13	11.538	38.802	2.672	1.737	1	H1-...
492	M534	2L2 1/2x2 1/2x3/16x...	.081	5.225	12	.004	10.45	y	10	11.562	38.802	2.672	1.737	1	H1-...
493	M542	2L2 1/2x2 1/2x3/16x...	.081	5.116	14	.004	0	y	18	11.562	38.802	2.672	1.737	1	H1-...
494	M551	2L2 1/2x2 1/2x3/16x...	.081	5.116	14	.004	10.45	y	17	11.562	38.802	2.672	1.737	1	H1-...
495	M559	2L2 1/2x2 1/2x3/16x...	.082	5.225	16	.004	10.45	y	14	11.562	38.802	2.672	1.737	1	H1-...
496	M568	2L2 1/2x2 1/2x3/16x...	.081	5.225	16	.004	0	y	12	11.562	38.802	2.672	1.737	1	H1-...
497	M576	2L2 1/2x2 1/2x3/16x...	.082	5.225	14	.004	0	y	14	11.562	38.802	2.672	1.737	1	H1-...
498	M585	2L2 1/2x2 1/2x3/16x...	.082	5.225	14	.004	10.45	y	15	11.562	38.802	2.672	1.737	1	H1-...
499	M593	2L2 1/2x2 1/2x3/16x...	.081	5.225	12	.004	0	y	14	11.562	38.802	2.672	1.737	1	H1-...
500	M615	2L2 1/2x2 1/2x3/16x...	.096	5.116	6	.004	0	y	13	11.585	38.802	2.672	1.737	1	H1-...
501	M623	2L2 1/2x2 1/2x3/16x...	.096	5.116	6	.004	0	y	16	11.585	38.802	2.672	1.737	1	H1-...
502	M632	2L2 1/2x2 1/2x3/16x...	.082	5.225	18	.004	0	y	18	11.585	38.802	2.672	1.737	1	H1-...
503	M640	2L2 1/2x2 1/2x3/16x...	.083	5.225	16	.004	10.45	y	15	11.585	38.802	2.672	1.737	1	H1-...
504	M649	2L2 1/2x2 1/2x3/16x...	.095	5.116	2	.004	10.45	y	12	11.585	38.802	2.672	1.737	1	H1-...
505	M657	2L2 1/2x2 1/2x3/16x...	.096	5.116	2	.004	10.45	y	12	11.585	38.802	2.672	1.737	1	H1-...
506	M666	2L2 1/2x2 1/2x3/16x...	.083	5.225	14	.004	10.45	y	15	11.585	38.802	2.672	1.737	1	H1-...
507	M674	2L2 1/2x2 1/2x3/16x...	.082	5.225	12	.004	10.45	y	18	11.585	38.802	2.672	1.737	1	H1-...
508	M696	2L2 1/2x2 1/2x1/4x3/8	.073	5.115	12	.004	0	y	14	16.516	51.305	3.58	2.271	1	H1-...
509	M706	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	18	.004	0	y	18	16.516	51.305	3.58	2.271	1	H1-...
510	M717	2L2 1/2x2 1/2x1/4x3/8	.073	5.171	18	.004	10.343	y	13	16.127	51.305	3.58	2.271	1	H1-...
511	M727	2L2 1/2x2 1/2x1/4x3/8	.074	5.171	16	.004	10.343	y	12	16.127	51.305	3.58	2.271	1	H1-...
512	M738	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	16	.004	10.23	y	14	16.516	51.305	3.58	2.271	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
513	M748	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	14	.004	0	y	12	16.516	51.305	3.58	2.271	1	H1-...
514	M759	2L2 1/2x2 1/2x1/4x3/8	.074	5.171	14	.004	10.343	y	16	16.127	51.305	3.58	2.271	1	H1-...
515	M769	2L2 1/2x2 1/2x1/4x3/8	.073	5.171	12	.004	10.343	y	12	16.127	51.305	3.58	2.271	1	H1-...
516	M57	2L2 1/2x2 1/2x3/16x...	.117	5.116	14	.005	10.45	y	15	11.087	38.802	2.672	1.737	1	H1-...
517	M58	2L2 1/2x2 1/2x3/16x...	.041	3.683	17	.002	7.523	y	16	20.143	38.802	2.672	1.737	1	H1-...
518	M65	2L2 1/2x2 1/2x3/16x...	.118	5.116	16	.005	10.45	y	14	11.087	38.802	2.672	1.737	1	H1-...
519	M66	2L2 1/2x2 1/2x3/16x...	.041	3.683	13	.002	7.523	y	16	20.143	38.802	2.672	1.737	1	H1-...
520	M73	2L2 1/2x2 1/2x3/16x...	.117	5.116	12	.005	10.45	y	18	11.087	38.802	2.672	1.737	1	H1-...
521	M74	2L2 1/2x2 1/2x3/16x...	.041	3.683	15	.002	7.523	y	11	20.143	38.802	2.672	1.737	1	H1-...
522	M81	2L2 1/2x2 1/2x3/16x...	.117	5.116	14	.005	0	y	14	11.087	38.802	2.672	1.737	1	H1-...
523	M82	2L2 1/2x2 1/2x3/16x...	.041	3.683	11	.002	7.523	y	16	20.143	38.802	2.672	1.737	1	H1-...
524	M89	2L2 1/2x2 1/2x3/16x...	.117	5.116	18	.005	10.45	y	14	11.087	38.802	2.672	1.737	1	H1-...
525	M90	2L2 1/2x2 1/2x3/16x...	.041	3.683	13	.002	7.523	y	14	20.143	38.802	2.672	1.737	1	H1-...
526	M97	2L2 1/2x2 1/2x3/16x...	.116	5.116	12	.005	0	y	18	11.087	38.802	2.672	1.737	1	H1-...
527	M98	2L2 1/2x2 1/2x3/16x...	.041	3.683	17	.002	0	y	12	20.143	38.802	2.672	1.737	1	H1-...
528	M105	2L2 1/2x2 1/2x3/16x...	.116	5.116	17	.005	0	y	16	11.087	38.802	2.672	1.737	1	H1-...
529	M106	2L2 1/2x2 1/2x3/16x...	.040	3.683	11	.002	0	y	16	20.143	38.802	2.672	1.737	1	H1-...
530	M113	2L2 1/2x2 1/2x3/16x...	.116	5.116	18	.005	10.45	y	16	11.087	38.802	2.672	1.737	1	H1-...
531	M114	2L2 1/2x2 1/2x3/16x...	.040	3.683	15	.002	7.523	y	18	20.143	38.802	2.672	1.737	1	H1-...
532	M130	2L2 1/2x2 1/2x3/16x...	.106	5.116	13	.005	10.45	y	17	11.087	38.802	2.672	1.737	1	H1-...
533	M131	2L2 1/2x2 1/2x3/16x...	.034	3.683	17	.002	0	y	18	20.143	38.802	2.672	1.737	1	H1-...
534	M138	2L2 1/2x2 1/2x3/16x...	.108	5.116	17	.005	10.45	y	12	11.087	38.802	2.672	1.737	1	H1-...
535	M139	2L2 1/2x2 1/2x3/16x...	.035	3.683	13	.002	0	y	14	20.143	38.802	2.672	1.737	1	H1-...
536	M147	2L2 1/2x2 1/2x3/16x...	.107	5.116	11	.005	10.45	y	12	11.087	38.802	2.672	1.737	1	H1-...
537	M148	2L2 1/2x2 1/2x3/16x...	.035	3.683	15	.002	7.523	y	17	20.143	38.802	2.672	1.737	1	H1-...
538	M155	2L2 1/2x2 1/2x3/16x...	.106	5.116	15	.005	0	y	11	11.087	38.802	2.672	1.737	1	H1-...
539	M156	2L2 1/2x2 1/2x3/16x...	.034	3.683	11	.002	7.523	y	18	20.143	38.802	2.672	1.737	1	H1-...
540	M164	2L2 1/2x2 1/2x3/16x...	.104	5.116	17	.005	10.45	y	13	11.087	38.802	2.672	1.737	1	H1-...
541	M165	2L2 1/2x2 1/2x3/16x...	.033	3.683	13	.002	0	y	15	20.143	38.802	2.672	1.737	1	H1-...
542	M172	2L2 1/2x2 1/2x3/16x...	.105	5.116	13	.005	0	y	13	11.087	38.802	2.672	1.737	1	H1-...
543	M173	2L2 1/2x2 1/2x3/16x...	.033	3.683	17	.002	7.523	y	12	20.143	38.802	2.672	1.737	1	H1-...
544	M181	2L2 1/2x2 1/2x3/16x...	.105	5.116	15	.005	10.45	y	15	11.087	38.802	2.672	1.737	1	H1-...
545	M182	2L2 1/2x2 1/2x3/16x...	.033	3.683	11	.002	7.523	y	15	20.143	38.802	2.672	1.737	1	H1-...
546	M189	2L2 1/2x2 1/2x3/16x...	.104	5.116	11	.005	0	y	15	11.087	38.802	2.672	1.737	1	H1-...
547	M190	2L2 1/2x2 1/2x3/16x...	.033	3.683	15	.002	7.523	y	13	20.143	38.802	2.672	1.737	1	H1-...
548	M211	2L2 1/2x2 1/2x3/16x...	.100	5.116	12	.005	10.45	y	12	11.109	38.802	2.672	1.737	1	H1-...
549	M212	2L2 1/2x2 1/2x3/16x...	.034	3.683	16	.002	0	y	15	20.179	38.802	2.672	1.737	1	H1-...
550	M219	2L2 1/2x2 1/2x3/16x...	.100	5.116	17	.005	0	y	12	11.109	38.802	2.672	1.737	1	H1-...
551	M220	2L2 1/2x2 1/2x3/16x...	.035	3.683	13	.002	7.523	y	16	20.179	38.802	2.672	1.737	1	H1-...
552	M228	2L2 1/2x2 1/2x3/16x...	.100	5.116	11	.005	10.45	y	11	11.109	38.802	2.672	1.737	1	H1-...
553	M229	2L2 1/2x2 1/2x3/16x...	.035	3.683	15	.002	0	y	12	20.179	38.802	2.672	1.737	1	H1-...
554	M236	2L2 1/2x2 1/2x3/16x...	.100	5.116	16	.005	10.45	y	11	11.109	38.802	2.672	1.737	1	H1-...
555	M237	2L2 1/2x2 1/2x3/16x...	.034	3.683	12	.002	7.523	y	18	20.179	38.802	2.672	1.737	1	H1-...
556	M245	2L2 1/2x2 1/2x3/16x...	.098	5.116	17	.005	10.45	y	12	11.109	38.802	2.672	1.737	1	H1-...
557	M246	2L2 1/2x2 1/2x3/16x...	.033	3.683	13	.002	7.523	y	15	20.179	38.802	2.672	1.737	1	H1-...
558	M253	2L2 1/2x2 1/2x3/16x...	.100	5.116	14	.005	10.45	y	18	11.109	38.802	2.672	1.737	1	H1-...
559	M254	2L2 1/2x2 1/2x3/16x...	.033	3.683	18	.002	7.523	y	13	20.179	38.802	2.672	1.737	1	H1-...
560	M262	2L2 1/2x2 1/2x3/16x...	.100	5.116	14	.005	10.45	y	10	11.109	38.802	2.672	1.737	1	H1-...
561	M263	2L2 1/2x2 1/2x3/16x...	.033	3.683	18	.002	7.523	y	14	20.179	38.802	2.672	1.737	1	H1-...
562	M270	2L2 1/2x2 1/2x3/16x...	.098	5.116	11	.005	10.45	y	12	11.109	38.802	2.672	1.737	1	H1-...
563	M271	2L2 1/2x2 1/2x3/16x...	.033	3.683	15	.002	0	y	11	20.179	38.802	2.672	1.737	1	H1-...
564	M292	2L2 1/2x2 1/2x3/16x...	.096	5.116	12	.005	10.45	y	17	11.309	38.802	2.672	1.737	1	H1-...
565	M293	2L2 1/2x2 1/2x3/16x...	.037	3.683	16	.002	7.523	y	10	20.501	38.802	2.672	1.737	1	H1-...
566	M300	2L2 1/2x2 1/2x3/16x...	.096	5.116	18	.005	10.45	y	12	11.309	38.802	2.672	1.737	1	H1-...
567	M301	2L2 1/2x2 1/2x3/16x...	.038	3.683	14	.002	0	y	13	20.501	38.802	2.672	1.737	1	H1-...
568	M309	2L2 1/2x2 1/2x3/16x...	.096	5.116	18	.005	0	y	11	11.309	38.802	2.672	1.737	1	H1-...
569	M310	2L2 1/2x2 1/2x3/16x...	.038	3.683	14	.002	0	y	10	20.501	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
570	M317	2L2 1/2x2 1/2x3/16x...	.097	5.116	16	.005	10.45	y	18	11.309	38.802	2.672	1.737	1	H1-...
571	M318	2L2 1/2x2 1/2x3/16x...	.037	3.683	12	.002	0	y	15	20.501	38.802	2.672	1.737	1	H1-...
572	M326	2L2 1/2x2 1/2x3/16x...	.095	5.116	16	.005	0	y	13	11.309	38.802	2.672	1.737	1	H1-...
573	M327	2L2 1/2x2 1/2x3/16x...	.036	3.683	12	.002	0	y	17	20.501	38.802	2.672	1.737	1	H1-...
574	M334	2L2 1/2x2 1/2x3/16x...	.097	5.116	14	.005	0	y	18	11.309	38.802	2.672	1.737	1	H1-...
575	M335	2L2 1/2x2 1/2x3/16x...	.036	3.683	18	.002	0	y	18	20.501	38.802	2.672	1.737	1	H1-...
576	M343	2L2 1/2x2 1/2x3/16x...	.097	5.116	14	.005	0	y	11	11.309	38.802	2.672	1.737	1	H1-...
577	M344	2L2 1/2x2 1/2x3/16x...	.036	3.683	18	.002	0	y	15	20.501	38.802	2.672	1.737	1	H1-...
578	M351	2L2 1/2x2 1/2x3/16x...	.095	5.116	12	.005	10.45	y	16	11.309	38.802	2.672	1.737	1	H1-...
579	M352	2L2 1/2x2 1/2x3/16x...	.036	3.683	16	.002	0	y	11	20.501	38.802	2.672	1.737	1	H1-...
580	M373	2L2 1/2x2 1/2x3/16x...	.092	5.116	12	.005	0	y	15	11.332	38.802	2.672	1.737	1	H1-...
581	M374	2L2 1/2x2 1/2x3/16x...	.040	3.683	16	.002	0	y	13	20.537	38.802	2.672	1.737	1	H1-...
582	M381	2L2 1/2x2 1/2x3/16x...	.092	5.116	18	.005	10.45	y	12	11.332	38.802	2.672	1.737	1	H1-...
583	M382	2L2 1/2x2 1/2x3/16x...	.041	3.683	14	.002	7.523	y	16	20.537	38.802	2.672	1.737	1	H1-...
584	M390	2L2 1/2x2 1/2x3/16x...	.091	5.116	18	.005	0	y	14	11.332	38.802	2.672	1.737	1	H1-...
585	M391	2L2 1/2x2 1/2x3/16x...	.041	3.683	14	.002	0	y	11	20.537	38.802	2.672	1.737	1	H1-...
586	M398	2L2 1/2x2 1/2x3/16x...	.092	5.116	16	.005	10.45	y	12	11.332	38.802	2.672	1.737	1	H1-...
587	M399	2L2 1/2x2 1/2x3/16x...	.039	3.683	12	.002	7.523	y	14	20.537	38.802	2.672	1.737	1	H1-...
588	M407	2L2 1/2x2 1/2x3/16x...	.092	5.116	15	.005	0	y	12	11.332	38.802	2.672	1.737	1	H1-...
589	M408	2L2 1/2x2 1/2x3/16x...	.039	3.683	11	.002	0	y	16	20.537	38.802	2.672	1.737	1	H1-...
590	M415	2L2 1/2x2 1/2x3/16x...	.093	5.116	14	.005	0	y	17	11.332	38.802	2.672	1.737	1	H1-...
591	M416	2L2 1/2x2 1/2x3/16x...	.038	3.683	18	.002	7.523	y	11	20.537	38.802	2.672	1.737	1	H1-...
592	M424	2L2 1/2x2 1/2x3/16x...	.094	5.116	13	.005	10.45	y	18	11.332	38.802	2.672	1.737	1	H1-...
593	M425	2L2 1/2x2 1/2x3/16x...	.039	3.683	17	.002	7.523	y	17	20.537	38.802	2.672	1.737	1	H1-...
594	M432	2L2 1/2x2 1/2x3/16x...	.091	5.116	13	.005	0	y	15	11.332	38.802	2.672	1.737	1	H1-...
595	M433	2L2 1/2x2 1/2x3/16x...	.039	3.683	17	.002	0	y	12	20.537	38.802	2.672	1.737	1	H1-...
596	M454	2L2 1/2x2 1/2x3/16x...	.088	5.116	11	.005	10.45	y	18	11.538	38.802	2.672	1.737	1	H1-...
597	M455	2L2 1/2x2 1/2x3/16x...	.043	3.683	15	.002	0	y	10	20.86	38.802	2.672	1.737	1	H1-...
598	M462	2L2 1/2x2 1/2x3/16x...	.088	5.116	11	.005	10.45	y	18	11.538	38.802	2.672	1.737	1	H1-...
599	M463	2L2 1/2x2 1/2x3/16x...	.044	3.683	15	.002	7.523	y	14	20.86	38.802	2.672	1.737	1	H1-...
600	M471	2L2 1/2x2 1/2x3/16x...	.088	5.116	17	.005	10.45	y	17	11.538	38.802	2.672	1.737	1	H1-...
601	M472	2L2 1/2x2 1/2x3/16x...	.044	3.683	13	.002	0	y	14	20.86	38.802	2.672	1.737	1	H1-...
602	M479	2L2 1/2x2 1/2x3/16x...	.089	5.116	17	.005	10.45	y	14	11.538	38.802	2.672	1.737	1	H1-...
603	M480	2L2 1/2x2 1/2x3/16x...	.042	3.683	13	.002	7.523	y	13	20.86	38.802	2.672	1.737	1	H1-...
604	M488	2L2 1/2x2 1/2x3/16x...	.089	5.116	15	.005	0	y	17	11.538	38.802	2.672	1.737	1	H1-...
605	M489	2L2 1/2x2 1/2x3/16x...	.042	3.683	11	.002	0	y	17	20.86	38.802	2.672	1.737	1	H1-...
606	M496	2L2 1/2x2 1/2x3/16x...	.091	5.116	15	.005	10.45	y	18	11.538	38.802	2.672	1.737	1	H1-...
607	M497	2L2 1/2x2 1/2x3/16x...	.041	3.683	11	.002	7.523	y	10	20.86	38.802	2.672	1.737	1	H1-...
608	M505	2L2 1/2x2 1/2x3/16x...	.091	5.116	13	.005	0	y	12	11.538	38.802	2.672	1.737	1	H1-...
609	M506	2L2 1/2x2 1/2x3/16x...	.042	3.683	17	.002	0	y	17	20.86	38.802	2.672	1.737	1	H1-...
610	M513	2L2 1/2x2 1/2x3/16x...	.088	5.116	13	.005	10.45	y	12	11.538	38.802	2.672	1.737	1	H1-...
611	M514	2L2 1/2x2 1/2x3/16x...	.042	3.683	17	.002	7.523	y	17	20.86	38.802	2.672	1.737	1	H1-...
612	M535	2L2 1/2x2 1/2x3/16x...	.082	5.116	11	.004	10.45	y	17	11.562	38.802	2.672	1.737	1	H1-...
613	M536	2L2 1/2x2 1/2x3/16x...	.043	3.683	15	.002	0	y	14	20.896	38.802	2.672	1.737	1	H1-...
614	M543	2L2 1/2x2 1/2x3/16x...	.082	5.116	11	.004	0	y	16	11.562	38.802	2.672	1.737	1	H1-...
615	M544	2L2 1/2x2 1/2x3/16x...	.045	3.683	15	.002	0	y	14	20.896	38.802	2.672	1.737	1	H1-...
616	M552	2L2 1/2x2 1/2x3/16x...	.081	5.116	17	.004	10.45	y	11	11.562	38.802	2.672	1.737	1	H1-...
617	M553	2L2 1/2x2 1/2x3/16x...	.044	3.683	13	.002	0	y	10	20.896	38.802	2.672	1.737	1	H1-...
618	M560	2L2 1/2x2 1/2x3/16x...	.083	5.116	17	.004	10.45	y	18	11.562	38.802	2.672	1.737	1	H1-...
619	M561	2L2 1/2x2 1/2x3/16x...	.043	3.683	13	.002	7.523	y	11	20.896	38.802	2.672	1.737	1	H1-...
620	M569	2L2 1/2x2 1/2x3/16x...	.083	5.116	15	.004	10.45	y	18	11.562	38.802	2.672	1.737	1	H1-...
621	M570	2L2 1/2x2 1/2x3/16x...	.042	3.683	11	.002	7.523	y	11	20.896	38.802	2.672	1.737	1	H1-...
622	M577	2L2 1/2x2 1/2x3/16x...	.085	5.116	15	.004	0	y	18	11.562	38.802	2.672	1.737	1	H1-...
623	M578	2L2 1/2x2 1/2x3/16x...	.042	3.683	11	.002	0	y	13	20.896	38.802	2.672	1.737	1	H1-...
624	M586	2L2 1/2x2 1/2x3/16x...	.085	5.116	13	.004	10.45	y	12	11.562	38.802	2.672	1.737	1	H1-...
625	M587	2L2 1/2x2 1/2x3/16x...	.042	3.683	17	.002	0	y	15	20.896	38.802	2.672	1.737	1	H1-...
626	M594	2L2 1/2x2 1/2x3/16x...	.082	5.116	13	.004	10.45	y	15	11.562	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
627	M595	2L2 1/2x2 1/2x3/16x...	.043	3.683	17	.002	0	y	17	20.896	38.802	2.672	1.737	1	H1-...
628	M616	2L2 1/2x2 1/2x3/16x...	.093	5.116	2	.004	10.45	y	10	11.585	38.802	2.672	1.737	1	H1-...
629	M617	2L2 1/2x2 1/2x3/16x...	.047	3.683	15	.002	0	y	17	20.932	38.802	2.672	1.737	1	H1-...
630	M624	2L2 1/2x2 1/2x3/16x...	.094	5.116	2	.004	10.45	y	10	11.585	38.802	2.672	1.737	1	H1-...
631	M625	2L2 1/2x2 1/2x3/16x...	.048	3.683	15	.002	7.523	y	13	20.932	38.802	2.672	1.737	1	H1-...
632	M633	2L2 1/2x2 1/2x3/16x...	.088	5.116	9	.004	0	y	12	11.585	38.802	2.672	1.737	1	H1-...
633	M634	2L2 1/2x2 1/2x3/16x...	.047	3.683	14	.002	0	y	12	20.932	38.802	2.672	1.737	1	H1-...
634	M641	2L2 1/2x2 1/2x3/16x...	.088	5.116	7	.004	0	y	12	11.585	38.802	2.672	1.737	1	H1-...
635	M642	2L2 1/2x2 1/2x3/16x...	.044	3.683	12	.002	0	y	13	20.932	38.802	2.672	1.737	1	H1-...
636	M650	2L2 1/2x2 1/2x3/16x...	.093	5.116	6	.004	0	y	12	11.585	38.802	2.672	1.737	1	H1-...
637	M651	2L2 1/2x2 1/2x3/16x...	.046	3.683	11	.002	0	y	12	20.932	38.802	2.672	1.737	1	H1-...
638	M658	2L2 1/2x2 1/2x3/16x...	.094	5.116	6	.004	10.45	y	10	11.585	38.802	2.672	1.737	1	H1-...
639	M659	2L2 1/2x2 1/2x3/16x...	.045	3.683	11	.002	0	y	13	20.932	38.802	2.672	1.737	1	H1-...
640	M667	2L2 1/2x2 1/2x3/16x...	.089	5.116	5	.004	10.45	y	11	11.585	38.802	2.672	1.737	1	H1-...
641	M668	2L2 1/2x2 1/2x3/16x...	.043	3.683	18	.002	0	y	16	20.932	38.802	2.672	1.737	1	H1-...
642	M675	2L2 1/2x2 1/2x3/16x...	.087	5.116	3	.004	0	y	14	11.585	38.802	2.672	1.737	1	H1-...
643	M676	2L2 1/2x2 1/2x3/16x...	.045	3.683	16	.002	0	y	16	20.932	38.802	2.672	1.737	1	H1-...
644	M698	2L2 1/2x2 1/2x1/4x3/8	.121	6.278	12	.005	12.556	y	14	10.4	51.305	3.58	2.271	1	H1-...
645	M708	2L2 1/2x2 1/2x1/4x3/8	.120	6.278	18	.005	12.556	y	16	10.4	51.305	3.58	2.271	1	H1-...
646	M719	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	18	.005	0	y	11	10.188	51.305	3.58	2.271	1	H1-...
647	M729	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	16	.005	12.679	y	13	10.188	51.305	3.58	2.271	1	H1-...
648	M740	2L2 1/2x2 1/2x1/4x3/8	.120	6.278	16	.005	12.556	y	17	10.4	51.305	3.58	2.271	1	H1-...
649	M750	2L2 1/2x2 1/2x1/4x3/8	.121	6.278	14	.005	0	y	12	10.4	51.305	3.58	2.271	1	H1-...
650	M761	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	14	.005	12.679	y	10	9.782	51.305	3.58	2.271	1	H1-...
651	M771	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	12	.005	0	y	18	10.188	51.305	3.58	2.271	1	H1-...
652	M699	2L2 1/2x2 1/2x1/4x3/8	.090	5.337	11	.004	10.675	y	16	14.732	51.305	3.58	2.271	1	H1-...
653	M700	2L2 1/2x2 1/2x1/4x3/8	.050	4.014	15	.002	0	y	11	24.888	51.305	3.58	2.271	1	H1-...
654	M709	2L2 1/2x2 1/2x1/4x3/8	.091	5.337	11	.004	0	y	13	14.732	51.305	3.58	2.271	1	H1-...
655	M710	2L2 1/2x2 1/2x1/4x3/8	.051	4.014	15	.002	0	y	10	24.888	51.305	3.58	2.271	1	H1-...
656	M720	2L2 1/2x2 1/2x1/4x3/8	.091	5.283	18	.004	0	y	18	15.062	51.305	3.58	2.271	1	H1-...
657	M721	2L2 1/2x2 1/2x1/4x3/8	.049	4.06	14	.002	0	y	18	24.439	51.305	3.58	2.271	1	H1-...
658	M730	2L2 1/2x2 1/2x1/4x3/8	.091	5.283	16	.004	0	y	18	15.062	51.305	3.58	2.271	1	H1-...
659	M731	2L2 1/2x2 1/2x1/4x3/8	.048	4.06	12	.002	0	y	15	24.439	51.305	3.58	2.271	1	H1-...
660	M741	2L2 1/2x2 1/2x1/4x3/8	.092	5.337	15	.004	10.675	y	12	14.732	51.305	3.58	2.271	1	H1-...
661	M742	2L2 1/2x2 1/2x1/4x3/8	.049	4.014	11	.002	0	y	13	24.888	51.305	3.58	2.271	1	H1-...
662	M751	2L2 1/2x2 1/2x1/4x3/8	.093	5.337	15	.004	10.675	y	10	14.732	51.305	3.58	2.271	1	H1-...
663	M752	2L2 1/2x2 1/2x1/4x3/8	.049	4.014	11	.002	8.199	y	11	24.888	51.305	3.58	2.271	1	H1-...
664	M762	2L2 1/2x2 1/2x1/4x3/8	.091	5.283	14	.004	0	y	12	15.062	51.305	3.58	2.271	1	H1-...
665	M763	2L2 1/2x2 1/2x1/4x3/8	.048	4.06	18	.002	0	y	12	24.439	51.305	3.58	2.271	1	H1-...
666	M772	2L2 1/2x2 1/2x1/4x3/8	.089	5.283	12	.004	0	y	15	15.062	51.305	3.58	2.271	1	H1-...
667	M773	2L2 1/2x2 1/2x1/4x3/8	.048	4.06	16	.002	0	y	12	24.439	51.305	3.58	2.271	1	H1-...
668	M17	L2 1/2x2 1/2x3/16	.308	9.149	4	.004	0	z	16	2.953	19.444	.233	.871	1	H2-1
669	M20	L2 1/2x2 1/2x3/16	.309	9.149	8	.004	9.149	z	13	2.953	19.444	.233	.871	1	H2-1
670	M24	L2 1/2x2 1/2x3/16	.234	9.149	2	.004	0	z	14	2.953	19.444	.233	.871	1	H2-1
671	M27	L2 1/2x2 1/2x3/16	.225	9.149	6	.004	0	z	10	2.953	19.444	.233	.871	1	H2-1
672	M31	L2 1/2x2 1/2x3/16	.292	9.149	8	.004	9.149	z	10	2.953	19.444	.233	.871	1	H2-1
673	M34	L2 1/2x2 1/2x3/16	.290	9.149	4	.004	0	z	16	2.953	19.444	.233	.871	1	H2-1
674	M38	L2 1/2x2 1/2x3/16	.224	9.149	6	.004	9.149	z	12	2.953	19.444	.233	.871	1	H2-1
675	M41	L2 1/2x2 1/2x3/16	.233	9.149	2	.004	0	z	16	2.953	19.444	.233	.871	1	H2-1
676	M54	L3x3x3/16	.016	0	13	.003	7.523	y	11	8.108	23.497	.339	1.395	1	H2-1
677	M62	L3x3x3/16	.017	0	17	.003	7.523	y	16	8.108	23.497	.339	1.395	1	H2-1
678	M70	L3x3x3/16	.018	0	11	.003	7.523	y	18	8.108	23.497	.339	1.395	1	H2-1
679	M78	L3x3x3/16	.016	0	15	.003	7.523	y	14	8.108	23.497	.339	1.395	1	H2-1
680	M86	L3x3x3/16	.021	0	8	.003	7.523	y	14	8.108	23.497	.339	1.395	1	H2-1
681	M94	L3x3x3/16	.020	0	4	.003	0	y	11	8.108	23.497	.339	1.395	1	H2-1
682	M102	L3x3x3/16	.018	0	6	.003	7.523	y	10	8.108	23.497	.339	1.395	1	H2-1
683	M110	L3x3x3/16	.018	0	2	.003	7.523	y	13	8.108	23.497	.339	1.395	1	H2-1

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
684	M127	L3x3x3/16	.056	0	7	.003	7.523	y	13	8.108	23.497	.339	1.395	1	H2-1
685	M135	L3x3x3/16	.055	0	5	.003	7.523	y	17	8.108	23.497	.339	1.395	1	H2-1
686	M144	L3x3x3/16	.062	0	6	.003	7.523	y	18	8.108	23.497	.339	1.395	1	H2-1
687	M152	L3x3x3/16	.060	0	3	.003	7.523	y	14	8.108	23.497	.339	1.395	1	H2-1
688	M161	L3x3x3/16	.043	0	13	.003	0	y	18	8.108	23.497	.339	1.395	1	H2-1
689	M169	L3x3x3/16	.050	0	9	.003	7.523	y	18	8.108	23.497	.339	1.395	1	H2-1
690	M178	L3x3x3/16	.053	0	9	.003	0	y	12	8.108	23.497	.339	1.395	1	H2-1
691	M186	L3x3x3/16	.048	0	6	.003	7.523	y	11	8.108	23.497	.339	1.395	1	H2-1
692	M208	L3x3x3/16	.104	0	7	.003	0	y	12	8.131	23.497	.339	1.396	1	H2-1
693	M216	L3x3x3/16	.100	0	5	.003	7.523	y	16	8.131	23.497	.339	1.396	1	H2-1
694	M225	L3x3x3/16	.113	0	5	.003	7.523	y	13	8.131	23.497	.339	1.396	1	H2-1
695	M233	L3x3x3/16	.108	0	3	.003	7.523	y	15	8.131	23.497	.339	1.396	1	H2-1
696	M242	L3x3x3/16	.090	0	3	.003	0	y	10	8.131	23.497	.339	1.396	1	H2-1
697	M250	L3x3x3/16	.099	0	9	.003	7.523	y	16	8.131	23.497	.339	1.396	1	H2-1
698	M259	L3x3x3/16	.095	0	9	.003	0	y	16	8.131	23.497	.339	1.396	1	H2-1
699	M267	L3x3x3/16	.095	0	7	.003	0	y	16	8.131	23.497	.339	1.396	1	H2-1
700	M289	L3x3x3/16	.172	0	7	.003	0	y	14	8.438	23.497	.339	1.406	1	H2-1
701	M297	L3x3x3/16	.179	0	5	.003	0	y	13	8.438	23.497	.339	1.406	1	H2-1
702	M306	L3x3x3/16	.191	0	5	.003	7.523	y	17	8.438	23.497	.339	1.406	1	H2-1
703	M314	L3x3x3/16	.183	0	3	.003	0	y	14	8.438	23.497	.339	1.406	1	H2-1
704	M323	L3x3x3/16	.168	0	3	.003	0	y	17	8.438	23.497	.339	1.406	1	H2-1
705	M331	L3x3x3/16	.167	0	9	.003	7.523	y	15	8.438	23.497	.339	1.406	1	H2-1
706	M340	L3x3x3/16	.179	0	9	.003	0	y	14	8.438	23.497	.339	1.406	1	H2-1
707	M348	L3x3x3/16	.180	0	7	.003	0	y	11	8.438	23.497	.339	1.406	1	H2-1
708	M370	L3x3x3/16	.231	0	6	.003	7.523	y	16	8.46	23.497	.339	1.407	1	H2-1
709	M378	L3x3x3/16	.239	0	6	.003	7.523	y	14	8.46	23.497	.339	1.407	1	H2-1
710	M387	L3x3x3/16	.238	0	4	.003	7.523	y	11	8.46	23.497	.339	1.407	1	H2-1
711	M395	L3x3x3/16	.231	0	4	.003	7.523	y	13	8.46	23.497	.339	1.407	1	H2-1
712	M404	L3x3x3/16	.232	0	2	.003	0	y	15	8.46	23.497	.339	1.407	1	H2-1
713	M412	L3x3x3/16	.227	0	2	.003	0	y	18	8.46	23.497	.339	1.407	1	H2-1
714	M421	L3x3x3/16	.226	0	8	.003	7.523	y	17	8.46	23.497	.339	1.407	1	H2-1
715	M429	L3x3x3/16	.230	0	8	.003	7.523	y	13	8.46	23.497	.339	1.407	1	H2-1
716	M451	L3x3x3/16	.302	0	6	.003	7.523	y	12	8.781	23.497	.339	1.418	1	H2-1
717	M459	L3x3x3/16	.316	0	6	.003	0	y	12	8.781	23.497	.339	1.418	1	H2-1
718	M468	L3x3x3/16	.312	0	4	.003	0	y	10	8.781	23.497	.339	1.418	1	H2-1
719	M476	L3x3x3/16	.298	0	4	.003	7.523	y	10	8.781	23.497	.339	1.418	1	H2-1
720	M485	L3x3x3/16	.308	0	2	.003	0	y	18	8.781	23.497	.339	1.418	1	H2-1
721	M493	L3x3x3/16	.297	0	2	.003	7.523	y	12	8.781	23.497	.339	1.418	1	H2-1
722	M502	L3x3x3/16	.293	0	8	.003	0	y	18	8.781	23.497	.339	1.418	1	H2-1
723	M510	L3x3x3/16	.304	0	8	.003	7.523	y	12	8.781	23.497	.339	1.418	1	H2-1
724	M532	L3x3x3/16	.405	0	7	.003	0	y	15	8.805	23.497	.339	1.418	1	H2-1
725	M540	L3x3x3/16	.419	0	5	.003	7.523	y	15	8.805	23.497	.339	1.418	1	H2-1
726	M549	L3x3x3/16	.415	0	5	.003	7.523	y	12	8.805	23.497	.339	1.418	1	H2-1
727	M557	L3x3x3/16	.400	0	3	.003	0	y	13	8.805	23.497	.339	1.418	1	H2-1
728	M566	L3x3x3/16	.411	0	3	.003	7.523	y	18	8.805	23.497	.339	1.418	1	H2-1
729	M574	L3x3x3/16	.405	0	9	.003	7.523	y	13	8.805	23.497	.339	1.418	1	H2-1
730	M583	L3x3x3/16	.401	0	9	.003	7.523	y	18	8.805	23.497	.339	1.418	1	H2-1
731	M591	L3x3x3/16	.406	0	7	.003	0	y	13	8.805	23.497	.339	1.418	1	H2-1
732	M613	L3x3x3/16	.530	0	6	.003	7.523	y	12	8.851	23.497	.339	1.42	1	H2-1
733	M621	L3x3x3/16	.546	0	6	.003	7.523	y	17	8.851	23.497	.339	1.42	1	H2-1
734	M630	L3x3x3/16	.447	0	5	.003	7.523	y	14	8.851	23.497	.339	1.42	1	H2-1
735	M638	L3x3x3/16	.437	0	3	.003	7.523	y	15	8.851	23.497	.339	1.42	1	H2-1
736	M647	L3x3x3/16	.534	0	2	.003	0	y	16	8.851	23.497	.339	1.42	1	H2-1
737	M655	L3x3x3/16	.523	0	2	.003	7.523	y	13	8.851	23.497	.339	1.42	1	H2-1
738	M664	L3x3x3/16	.437	0	9	.003	7.523	y	13	8.851	23.497	.339	1.42	1	H2-1
739	M672	L3x3x3/16	.442	0	7	.003	7.523	y	18	8.851	23.497	.339	1.42	1	H2-1
740	M694	L3x3x3/16	.135	0	7	.004	8.199	y	14	8.691	23.497	.339	1.415	1	H2-1

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
741	M704	L3x3x3/16	.136	0	5	.004	8.199	y	14	8.691	23.497	.339	1.415	1	H2-1
742	M715	L3x3x3/16	.068	0	6	.004	0	y	12	8.476	23.497	.339	1.407	1	H2-1
743	M725	L3x3x3/16	.072	0	3	.004	0	y	14	8.476	23.497	.339	1.407	1	H2-1
744	M736	L3x3x3/16	.134	0	3	.004	8.199	y	11	8.691	23.497	.339	1.415	1	H2-1
745	M746	L3x3x3/16	.132	0	9	.004	8.199	y	11	8.691	23.497	.339	1.415	1	H2-1
746	M757	L3x3x3/16	.071	0	9	.004	0	y	18	8.476	23.497	.339	1.407	1	H2-1
747	M767	L3x3x3/16	.067	0	6	.004	8.293	y	17	8.476	23.497	.339	1.407	1	H2-1
748	M807	LL3x3x3x3	.043	6.674	3	.002	0	y	18	10.222	46.994	3.688	2.496	1	H1-...
749	M808	LL3x3x3x3	.039	7.196	7	.002	0	y	17	10.388	46.994	3.688	2.496	1	H1-...
750	M809	LL3x3x3x3	.039	6.621	5	.002	0	y	10	10.388	46.994	3.688	2.496	1	H1-...
751	M810	LL3x3x3x3	.042	7.255	9	.002	0	y	10	10.222	46.994	3.688	2.496	1	H1-...
752	M811	LL3x3x3x3	.042	6.674	7	.002	13.929	y	13	10.222	46.994	3.688	2.496	1	H1-...
753	M812	LL3x3x3x3	.038	7.196	3	.002	13.817	y	11	10.388	46.994	3.688	2.496	1	H1-...
754	M813	LL3x3x3x3	.039	6.621	9	.002	0	y	13	10.388	46.994	3.688	2.496	1	H1-...
755	M814	LL3x3x3x3	.042	7.255	5	.002	0	y	14	10.222	46.994	3.688	2.496	1	H1-...
756	M1246	2L2 1/2x2 1/2x3/16x...	.098	5.944	16	.002	12.14	y	14	7.72	38.802	2.672	1.737	1	H1-...
757	M1247	2L2 1/2x2 1/2x3/16x...	.098	6.196	16	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
758	M1248	2L2 1/2x2 1/2x3/16x...	.098	5.944	14	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
759	M1249	2L2 1/2x2 1/2x3/16x...	.098	6.196	14	.002	0	y	4	7.72	38.802	2.672	1.737	1	H1-...
760	M1250	2L2 1/2x2 1/2x3/16x...	.098	5.944	12	.002	12.14	y	5	7.72	38.802	2.672	1.737	1	H1-...
761	M1251	2L2 1/2x2 1/2x3/16x...	.098	6.196	12	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
762	M1252	2L2 1/2x2 1/2x3/16x...	.098	5.944	18	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
763	M1253	2L2 1/2x2 1/2x3/16x...	.098	6.196	18	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
764	M1194	2L2 1/2x2 1/2x3/16x...	.076	5.944	16	.002	12.14	y	5	7.72	38.802	2.672	1.737	1	H1-...
765	M1195	2L2 1/2x2 1/2x3/16x...	.076	6.196	16	.002	0	y	4	7.72	38.802	2.672	1.737	1	H1-...
766	M1196	2L2 1/2x2 1/2x3/16x...	.076	5.944	14	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
767	M1197	2L2 1/2x2 1/2x3/16x...	.076	6.196	14	.002	12.14	y	5	7.72	38.802	2.672	1.737	1	H1-...
768	M1198	2L2 1/2x2 1/2x3/16x...	.076	5.944	12	.002	12.14	y	7	7.72	38.802	2.672	1.737	1	H1-...
769	M1199	2L2 1/2x2 1/2x3/16x...	.076	6.196	12	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
770	M1200	2L2 1/2x2 1/2x3/16x...	.076	5.944	18	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
771	M1201	2L2 1/2x2 1/2x3/16x...	.076	6.196	18	.002	12.14	y	8	7.72	38.802	2.672	1.737	1	H1-...
772	M1142	2L2 1/2x2 1/2x3/16x...	.076	5.944	16	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
773	M1143	2L2 1/2x2 1/2x3/16x...	.076	6.196	16	.002	12.14	y	5	7.72	38.802	2.672	1.737	1	H1-...
774	M1144	2L2 1/2x2 1/2x3/16x...	.076	5.944	18	.002	12.14	y	4	7.72	38.802	2.672	1.737	1	H1-...
775	M1145	2L2 1/2x2 1/2x3/16x...	.076	6.196	18	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
776	M1146	2L2 1/2x2 1/2x3/16x...	.076	5.944	12	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
777	M1147	2L2 1/2x2 1/2x3/16x...	.076	6.196	12	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
778	M1148	2L2 1/2x2 1/2x3/16x...	.076	5.944	14	.002	12.14	y	7	7.72	38.802	2.672	1.737	1	H1-...
779	M1149	2L2 1/2x2 1/2x3/16x...	.076	6.196	14	.002	0	y	2	7.72	38.802	2.672	1.737	1	H1-...
780	M1090	2L2 1/2x2 1/2x3/16x...	.076	5.944	16	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
781	M1091	2L2 1/2x2 1/2x3/16x...	.076	6.196	16	.002	0	y	3	7.72	38.802	2.672	1.737	1	H1-...
782	M1092	2L2 1/2x2 1/2x3/16x...	.076	5.944	14	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
783	M1093	2L2 1/2x2 1/2x3/16x...	.076	6.196	14	.002	12.14	y	4	7.72	38.802	2.672	1.737	1	H1-...
784	M1094	2L2 1/2x2 1/2x3/16x...	.076	5.944	18	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
785	M1095	2L2 1/2x2 1/2x3/16x...	.076	6.196	18	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
786	M1096	2L2 1/2x2 1/2x3/16x...	.076	5.944	12	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
787	M1097	2L2 1/2x2 1/2x3/16x...	.076	6.196	12	.002	12.14	y	11	7.72	38.802	2.672	1.737	1	H1-...
788	M1038	2L2 1/2x2 1/2x3/16x...	.075	5.944	14	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
789	M1039	2L2 1/2x2 1/2x3/16x...	.075	6.196	14	.002	12.14	y	7	7.72	38.802	2.672	1.737	1	H1-...
790	M1040	2L2 1/2x2 1/2x3/16x...	.076	5.944	12	.002	12.14	y	4	7.72	38.802	2.672	1.737	1	H1-...
791	M1041	2L2 1/2x2 1/2x3/16x...	.076	6.196	12	.002	0	y	2	7.72	38.802	2.672	1.737	1	H1-...
792	M1042	2L2 1/2x2 1/2x3/16x...	.076	5.944	18	.002	0	y	2	7.72	38.802	2.672	1.737	1	H1-...
793	M1043	2L2 1/2x2 1/2x3/16x...	.076	6.196	18	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
794	M1044	2L2 1/2x2 1/2x3/16x...	.076	5.944	16	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
795	M1045	2L2 1/2x2 1/2x3/16x...	.076	6.196	16	.002	12.14	y	8	7.72	38.802	2.672	1.737	1	H1-...
796	M986	2L2 1/2x2 1/2x3/16x...	.076	5.944	16	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
797	M987	2L2 1/2x2 1/2x3/16x...	.076	6.196	16	.002	0	y	4	7.72	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
798	M988	2L2 1/2x2 1/2x3/16x...	.075	5.944	14	.002	12.14	y	14	7.72	38.802	2.672	1.737	1	H1-...
799	M989	2L2 1/2x2 1/2x3/16x...	.075	6.196	14	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
800	M990	2L2 1/2x2 1/2x3/16x...	.076	5.944	12	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
801	M991	2L2 1/2x2 1/2x3/16x...	.076	6.196	12	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
802	M992	2L2 1/2x2 1/2x3/16x...	.076	5.944	18	.002	12.14	y	7	7.72	38.802	2.672	1.737	1	H1-...
803	M993	2L2 1/2x2 1/2x3/16x...	.076	6.196	18	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
804	M934	2L2 1/2x2 1/2x3/16x...	.076	5.944	16	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
805	M935	2L2 1/2x2 1/2x3/16x...	.076	6.196	15	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
806	M936	2L2 1/2x2 1/2x3/16x...	.075	5.944	13	.002	12.14	y	6	7.72	38.802	2.672	1.737	1	H1-...
807	M937	2L2 1/2x2 1/2x3/16x...	.075	6.196	15	.002	12.14	y	3	7.72	38.802	2.672	1.737	1	H1-...
808	M938	2L2 1/2x2 1/2x3/16x...	.076	5.944	12	.002	12.14	y	15	7.72	38.802	2.672	1.737	1	H1-...
809	M939	2L2 1/2x2 1/2x3/16x...	.076	6.196	13	.002	12.14	y	6	7.72	38.802	2.672	1.737	1	H1-...
810	M940	2L2 1/2x2 1/2x3/16x...	.076	5.944	18	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
811	M941	2L2 1/2x2 1/2x3/16x...	.076	6.196	18	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
812	M815	LL3x3x3x3	.097	7.621	13	.002	0	y	13	8.184	46.994	3.688	2.496	1	H1-...
813	M816	LL3x3x3x3	.089	7.843	16	.002	15.366	y	6	8.399	46.994	3.688	2.496	1	H1-...
814	M817	LL3x3x3x3	.092	7.523	15	.002	15.366	y	6	8.399	46.994	3.688	2.496	1	H1-...
815	M818	LL3x3x3x3	.100	7.946	17	.002	0	y	18	8.184	46.994	3.688	2.496	1	H1-...
816	M819	LL3x3x3x3	.100	7.621	17	.002	15.567	y	7	8.184	46.994	3.688	2.496	1	H1-...
817	M820	LL3x3x3x3	.092	7.843	11	.002	0	y	10	8.399	46.994	3.688	2.496	1	H1-...
818	M821	LL3x3x3x3	.092	7.523	11	.002	15.366	y	18	8.399	46.994	3.688	2.496	1	H1-...
819	M822	LL3x3x3x3	.100	7.946	13	.002	0	y	10	8.184	46.994	3.688	2.496	1	H1-...
820	M1238	2L2 1/2x2 1/2x3/16x...	.028	4.911	5	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
821	M1239	2L2 1/2x2 1/2x3/16x...	.028	5.12	9	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
822	M1240	2L2 1/2x2 1/2x3/16x...	.028	4.911	7	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
823	M1241	2L2 1/2x2 1/2x3/16x...	.028	5.12	4	.001	10.031	y	9	11.307	38.802	2.672	1.737	1	H1-...
824	M1242	2L2 1/2x2 1/2x3/16x...	.028	4.911	4	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
825	M1243	2L2 1/2x2 1/2x3/16x...	.028	5.12	2	.001	0	y	7	11.307	38.802	2.672	1.737	1	H1-...
826	M1244	2L2 1/2x2 1/2x3/16x...	.028	4.911	2	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
827	M1245	2L2 1/2x2 1/2x3/16x...	.028	5.12	7	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...
828	M1186	2L2 1/2x2 1/2x3/16x...	.028	4.911	7	.001	0	y	6	11.307	38.802	2.672	1.737	1	H1-...
829	M1187	2L2 1/2x2 1/2x3/16x...	.028	5.12	3	.001	0	y	14	11.307	38.802	2.672	1.737	1	H1-...
830	M1188	2L2 1/2x2 1/2x3/16x...	.028	4.911	5	.001	10.031	y	7	11.307	38.802	2.672	1.737	1	H1-...
831	M1189	2L2 1/2x2 1/2x3/16x...	.028	5.12	9	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
832	M1190	2L2 1/2x2 1/2x3/16x...	.028	4.911	5	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
833	M1191	2L2 1/2x2 1/2x3/16x...	.028	5.12	9	.001	0	y	7	11.307	38.802	2.672	1.737	1	H1-...
834	M1192	2L2 1/2x2 1/2x3/16x...	.028	4.911	7	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
835	M1193	2L2 1/2x2 1/2x3/16x...	.028	5.12	3	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
836	M1134	2L2 1/2x2 1/2x3/16x...	.028	4.911	7	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
837	M1135	2L2 1/2x2 1/2x3/16x...	.028	5.12	3	.001	10.031	y	10	11.307	38.802	2.672	1.737	1	H1-...
838	M1136	2L2 1/2x2 1/2x3/16x...	.028	4.911	5	.001	0	y	3	11.307	38.802	2.672	1.737	1	H1-...
839	M1137	2L2 1/2x2 1/2x3/16x...	.028	5.12	9	.001	10.031	y	3	11.307	38.802	2.672	1.737	1	H1-...
840	M1138	2L2 1/2x2 1/2x3/16x...	.028	4.911	7	.001	0	y	8	11.307	38.802	2.672	1.737	1	H1-...
841	M1139	2L2 1/2x2 1/2x3/16x...	.028	5.12	3	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
842	M1140	2L2 1/2x2 1/2x3/16x...	.028	4.911	5	.001	10.031	y	13	11.307	38.802	2.672	1.737	1	H1-...
843	M1141	2L2 1/2x2 1/2x3/16x...	.028	5.12	9	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
844	M1082	2L2 1/2x2 1/2x3/16x...	.029	4.911	5	.001	0	y	7	11.307	38.802	2.672	1.737	1	H1-...
845	M1083	2L2 1/2x2 1/2x3/16x...	.029	5.12	9	.001	10.031	y	4	11.307	38.802	2.672	1.737	1	H1-...
846	M1084	2L2 1/2x2 1/2x3/16x...	.029	4.911	7	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
847	M1085	2L2 1/2x2 1/2x3/16x...	.029	5.12	3	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
848	M1086	2L2 1/2x2 1/2x3/16x...	.029	4.911	5	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
849	M1087	2L2 1/2x2 1/2x3/16x...	.029	5.12	9	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
850	M1088	2L2 1/2x2 1/2x3/16x...	.029	4.911	3	.001	10.031	y	9	11.307	38.802	2.672	1.737	1	H1-...
851	M1089	2L2 1/2x2 1/2x3/16x...	.029	5.12	7	.001	10.031	y	3	11.307	38.802	2.672	1.737	1	H1-...
852	M1030	2L2 1/2x2 1/2x3/16x...	.029	4.911	5	.001	0	y	3	11.307	38.802	2.672	1.737	1	H1-...
853	M1031	2L2 1/2x2 1/2x3/16x...	.029	5.12	9	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
854	M1032	2L2 1/2x2 1/2x3/16x...	.029	4.911	7	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
855	M1033	2L2 1/2x2 1/2x3/16x...	.029	5.12	3	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
856	M1034	2L2 1/2x2 1/2x3/16x...	.029	4.911	5	.001	10.031	y	9	11.307	38.802	2.672	1.737	1	H1-...
857	M1035	2L2 1/2x2 1/2x3/16x...	.029	5.12	9	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
858	M1036	2L2 1/2x2 1/2x3/16x...	.029	4.911	3	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
859	M1037	2L2 1/2x2 1/2x3/16x...	.029	5.12	7	.001	0	y	10	11.307	38.802	2.672	1.737	1	H1-...
860	M978	2L2 1/2x2 1/2x3/16x...	.029	4.911	5	.001	10.031	y	3	11.307	38.802	2.672	1.737	1	H1-...
861	M979	2L2 1/2x2 1/2x3/16x...	.029	5.12	9	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
862	M980	2L2 1/2x2 1/2x3/16x...	.029	4.911	7	.001	0	y	6	11.307	38.802	2.672	1.737	1	H1-...
863	M981	2L2 1/2x2 1/2x3/16x...	.029	5.12	3	.001	0	y	7	11.307	38.802	2.672	1.737	1	H1-...
864	M982	2L2 1/2x2 1/2x3/16x...	.029	4.911	7	.001	10.031	y	12	11.307	38.802	2.672	1.737	1	H1-...
865	M983	2L2 1/2x2 1/2x3/16x...	.029	5.12	3	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
866	M984	2L2 1/2x2 1/2x3/16x...	.029	4.911	5	.001	10.031	y	7	11.307	38.802	2.672	1.737	1	H1-...
867	M985	2L2 1/2x2 1/2x3/16x...	.029	5.12	9	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...
868	M926	2L2 1/2x2 1/2x3/16x...	.030	4.911	5	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
869	M927	2L2 1/2x2 1/2x3/16x...	.030	5.12	9	.001	10.031	y	18	11.307	38.802	2.672	1.737	1	H1-...
870	M928	2L2 1/2x2 1/2x3/16x...	.030	4.911	7	.001	0	y	6	11.307	38.802	2.672	1.737	1	H1-...
871	M929	2L2 1/2x2 1/2x3/16x...	.030	5.12	3	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
872	M930	2L2 1/2x2 1/2x3/16x...	.030	4.911	5	.001	0	y	3	11.307	38.802	2.672	1.737	1	H1-...
873	M931	2L2 1/2x2 1/2x3/16x...	.030	5.12	9	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
874	M932	2L2 1/2x2 1/2x3/16x...	.030	4.911	3	.001	10.031	y	3	11.307	38.802	2.672	1.737	1	H1-...
875	M933	2L2 1/2x2 1/2x3/16x...	.030	5.12	7	.001	0	y	16	11.307	38.802	2.672	1.737	1	H1-...
876	M874	2L2 1/2x2 1/2x3/16x...	.030	4.911	5	.001	0	y	15	11.307	38.802	2.672	1.737	1	H1-...
877	M875	2L2 1/2x2 1/2x3/16x...	.030	5.12	9	.001	10.031	y	12	11.307	38.802	2.672	1.737	1	H1-...
878	M876	2L2 1/2x2 1/2x3/16x...	.030	4.911	7	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
879	M877	2L2 1/2x2 1/2x3/16x...	.030	5.12	3	.001	0	y	8	11.307	38.802	2.672	1.737	1	H1-...
880	M878	2L2 1/2x2 1/2x3/16x...	.030	4.911	5	.001	0	y	10	11.307	38.802	2.672	1.737	1	H1-...
881	M879	2L2 1/2x2 1/2x3/16x...	.030	5.12	9	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
882	M880	2L2 1/2x2 1/2x3/16x...	.030	4.911	7	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
883	M881	2L2 1/2x2 1/2x3/16x...	.030	5.12	3	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
884	M799	LL4x4x8x3	.018	3.948	3	.002	0	y	9	117.137	161.677	17.228	11.212	1	H1-...
885	M800	LL4x4x8x3	.018	3.948	5	.002	0	y	3	117.137	161.677	17.228	11.212	1	H1-...
886	M801	LL4x4x8x3	.018	3.948	9	.002	7.896	y	6	117.137	161.677	17.228	11.212	1	H1-...
887	M806	LL4x4x8x3	.018	3.948	7	.002	0	y	5	117.137	161.677	17.228	11.212	1	H1-...
888	M1234	2L2 1/2x2 1/2x3/16x...	.103	7.896	7	.002	0	z	7	4.562	38.802	2.672	1.086	1	H1-...
889	M1235	2L2 1/2x2 1/2x3/16x...	.103	7.896	5	.002	0	z	5	4.562	38.802	2.672	1.086	1	H1-...
890	M1236	2L2 1/2x2 1/2x3/16x...	.103	7.896	3	.002	0	z	3	4.562	38.802	2.672	1.086	1	H1-...
891	M1237	2L2 1/2x2 1/2x3/16x...	.103	7.896	9	.002	7.896	z	9	4.562	38.802	2.672	1.086	1	H1-...
892	M1182	2L2 1/2x2 1/2x3/16x...	.102	7.896	7	.002	7.896	z	7	4.562	38.802	2.672	1.086	1	H1-...
893	M1183	2L2 1/2x2 1/2x3/16x...	.102	7.896	5	.002	7.896	z	5	4.562	38.802	2.672	1.086	1	H1-...
894	M1184	2L2 1/2x2 1/2x3/16x...	.102	7.896	9	.002	0	z	9	4.562	38.802	2.672	1.086	1	H1-...
895	M1185	2L2 1/2x2 1/2x3/16x...	.102	7.896	3	.002	7.896	z	3	4.562	38.802	2.672	1.086	1	H1-...
896	M1130	2L2 1/2x2 1/2x3/16x...	.103	7.896	7	.002	0	z	7	4.562	38.802	2.672	1.086	1	H1-...
897	M1131	2L2 1/2x2 1/2x3/16x...	.103	7.896	9	.002	0	z	9	4.562	38.802	2.672	1.086	1	H1-...
898	M1132	2L2 1/2x2 1/2x3/16x...	.103	7.896	5	.002	0	z	5	4.562	38.802	2.672	1.086	1	H1-...
899	M1133	2L2 1/2x2 1/2x3/16x...	.103	7.896	3	.002	0	z	3	4.562	38.802	2.672	1.086	1	H1-...
900	M1078	2L2 1/2x2 1/2x3/16x...	.107	7.896	7	.002	7.896	z	7	4.562	38.802	2.672	1.086	1	H1-...
901	M1079	2L2 1/2x2 1/2x3/16x...	.107	7.896	5	.002	7.896	z	5	4.562	38.802	2.672	1.086	1	H1-...
902	M1080	2L2 1/2x2 1/2x3/16x...	.107	7.896	3	.002	7.896	z	3	4.562	38.802	2.672	1.086	1	H1-...
903	M1081	2L2 1/2x2 1/2x3/16x...	.107	7.896	9	.002	7.896	z	9	4.562	38.802	2.672	1.086	1	H1-...
904	M1026	2L2 1/2x2 1/2x3/16x...	.111	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
905	M1027	2L2 1/2x2 1/2x3/16x...	.111	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
906	M1028	2L2 1/2x2 1/2x3/16x...	.111	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
907	M1029	2L2 1/2x2 1/2x3/16x...	.111	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...
908	M974	2L2 1/2x2 1/2x3/16x...	.116	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
909	M975	2L2 1/2x2 1/2x3/16x...	.115	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
910	M976	2L2 1/2x2 1/2x3/16x...	.115	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
911	M977	2L2 1/2x2 1/2x3/16x...	.116	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
912	M922	2L2 1/2x2 1/2x3/16x...	.112	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
913	M923	2L2 1/2x2 1/2x3/16x...	.112	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...
914	M924	2L2 1/2x2 1/2x3/16x...	.112	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
915	M925	2L2 1/2x2 1/2x3/16x...	.112	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
916	M870	2L2 1/2x2 1/2x3/16x...	.115	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
917	M871	2L2 1/2x2 1/2x3/16x...	.115	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
918	M872	2L2 1/2x2 1/2x3/16x...	.114	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
919	M873	2L2 1/2x2 1/2x3/16x...	.115	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...
920	M802	LL3x3x3x3	.123	7.896	3	.003	7.896	y	3	7.952	46.994	3.688	1.56	1	H1-...
921	M803	LL3x3x3x3	.123	7.896	5	.003	7.896	y	5	7.952	46.994	3.688	1.56	1	H1-...
922	M804	LL3x3x3x3	.124	7.896	9	.003	7.896	y	9	7.952	46.994	3.688	1.56	1	H1-...
923	M805	LL3x3x3x3	.124	7.896	7	.003	7.896	y	7	7.952	46.994	3.688	1.56	1	H1-...
924	M1230	2L2 1/2x2 1/2x3/16x...	.028	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
925	M1231	2L2 1/2x2 1/2x3/16x...	.028	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
926	M1232	2L2 1/2x2 1/2x3/16x...	.028	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
927	M1233	2L2 1/2x2 1/2x3/16x...	.028	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
928	M1178	2L2 1/2x2 1/2x3/16x...	.028	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
929	M1179	2L2 1/2x2 1/2x3/16x...	.028	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
930	M1180	2L2 1/2x2 1/2x3/16x...	.028	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
931	M1181	2L2 1/2x2 1/2x3/16x...	.028	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
932	M1126	2L2 1/2x2 1/2x3/16x...	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
933	M1127	2L2 1/2x2 1/2x3/16x...	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
934	M1128	2L2 1/2x2 1/2x3/16x...	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
935	M1129	2L2 1/2x2 1/2x3/16x...	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
936	M1074	2L2 1/2x2 1/2x3/16x...	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
937	M1075	2L2 1/2x2 1/2x3/16x...	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
938	M1076	2L2 1/2x2 1/2x3/16x...	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
939	M1077	2L2 1/2x2 1/2x3/16x...	.029	3.948	9	.002	7.896	y	7	17.709	38.802	2.672	1.737	1	H1-...
940	M1022	2L2 1/2x2 1/2x3/16x...	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
941	M1023	2L2 1/2x2 1/2x3/16x...	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
942	M1024	2L2 1/2x2 1/2x3/16x...	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
943	M1025	2L2 1/2x2 1/2x3/16x...	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
944	M970	2L2 1/2x2 1/2x3/16x...	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
945	M971	2L2 1/2x2 1/2x3/16x...	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
946	M972	2L2 1/2x2 1/2x3/16x...	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
947	M973	2L2 1/2x2 1/2x3/16x...	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
948	M918	2L2 1/2x2 1/2x3/16x...	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
949	M919	2L2 1/2x2 1/2x3/16x...	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
950	M920	2L2 1/2x2 1/2x3/16x...	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
951	M921	2L2 1/2x2 1/2x3/16x...	.029	3.948	9	.002	7.896	y	7	17.709	38.802	2.672	1.737	1	H1-...
952	M866	2L2 1/2x2 1/2x3/16x...	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
953	M867	2L2 1/2x2 1/2x3/16x...	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
954	M868	2L2 1/2x2 1/2x3/16x...	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
955	M869	2L2 1/2x2 1/2x3/16x...	.029	3.948	5	.002	7.896	y	7	17.709	38.802	2.672	1.737	1	H1-...
956	M783	L2.5x2.5x3	.404	1.396	3	.001	0	y	9	14.868	19.423	.581	1.221	1	H2-1
957	M784	L2.5x2.5x3	.289	1.396	3	.001	0	y	9	14.868	19.423	.581	1.221	1	H2-1
958	M785	L2.5x2.5x3	.399	1.396	9	.001	2.792	y	9	14.868	19.423	.581	1.221	1	H2-1
959	M786	L2.5x2.5x3	.292	1.396	5	.001	0	y	3	14.868	19.423	.581	1.221	1	H2-1
960	M787	L2.5x2.5x3	.293	1.396	7	.001	0	y	7	14.868	19.423	.581	1.221	1	H2-1
961	M788	L2.5x2.5x3	.397	1.396	7	.001	2.792	y	7	14.868	19.423	.581	1.221	1	H2-1
962	M789	L2.5x2.5x3	.291	1.396	5	.001	2.792	y	7	14.868	19.423	.581	1.221	1	H2-1
963	M790	L2.5x2.5x3	.403	1.396	5	.001	0	y	3	14.868	19.423	.581	1.221	1	H2-1
964	M1262	2L2 1/2x2 1/2x3/16x...	.091	6.375	2	.003	0	y	3	6.999	38.802	2.672	1.737	1	H1-...
965	M1263	2L2 1/2x2 1/2x3/16x...	.078	6.375	17	.003	12.75	y	2	6.999	38.802	2.672	1.737	1	H1-...
966	M1264	2L2 1/2x2 1/2x3/16x...	.093	6.375	6	.003	12.75	y	3	6.999	38.802	2.672	1.737	1	H1-...
967	M1265	2L2 1/2x2 1/2x3/16x...	.078	6.375	13	.003	0	y	2	6.999	38.802	2.672	1.737	1	H1-...
968	M53	2L2 1/2x2 1/2x3/16x...	.081	4.188	13	.005	0	y	12	16.945	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
969	M61	2L2 1/2x2 1/2x3/16x...	.081	4.188	17	.005	0	y	12	16.945	38.802	2.672	1.737	1	H1-...
970	M69	2L2 1/2x2 1/2x3/16x...	.082	4.188	11	.005	0	y	11	16.945	38.802	2.672	1.737	1	H1-...
971	M77	2L2 1/2x2 1/2x3/16x...	.082	4.188	15	.005	0	y	11	16.945	38.802	2.672	1.737	1	H1-...
972	M85	2L2 1/2x2 1/2x3/16x...	.082	4.188	17	.005	0	y	17	16.945	38.802	2.672	1.737	1	H1-...
973	M93	2L2 1/2x2 1/2x3/16x...	.082	4.188	13	.005	0	y	17	16.945	38.802	2.672	1.737	1	H1-...
974	M101	2L2 1/2x2 1/2x3/16x...	.081	4.188	15	.005	0	y	14	16.945	38.802	2.672	1.737	1	H1-...
975	M109	2L2 1/2x2 1/2x3/16x...	.080	4.188	11	.005	0	y	14	16.945	38.802	2.672	1.737	1	H1-...
976	M126	2L2 1/2x2 1/2x3/16x...	.072	4.188	13	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
977	M134	2L2 1/2x2 1/2x3/16x...	.072	4.188	17	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
978	M143	2L2 1/2x2 1/2x3/16x...	.072	4.188	11	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
979	M151	2L2 1/2x2 1/2x3/16x...	.072	4.188	15	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
980	M160	2L2 1/2x2 1/2x3/16x...	.071	4.188	18	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
981	M168	2L2 1/2x2 1/2x3/16x...	.071	4.188	14	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
982	M177	2L2 1/2x2 1/2x3/16x...	.071	4.188	14	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
983	M185	2L2 1/2x2 1/2x3/16x...	.071	4.188	18	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
984	M207	2L2 1/2x2 1/2x3/16x...	.071	4.188	12	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
985	M215	2L2 1/2x2 1/2x3/16x...	.070	4.188	16	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
986	M224	2L2 1/2x2 1/2x3/16x...	.072	4.188	11	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
987	M232	2L2 1/2x2 1/2x3/16x...	.072	4.188	16	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
988	M241	2L2 1/2x2 1/2x3/16x...	.070	4.188	18	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
989	M249	2L2 1/2x2 1/2x3/16x...	.071	4.188	14	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
990	M258	2L2 1/2x2 1/2x3/16x...	.071	4.188	14	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
991	M266	2L2 1/2x2 1/2x3/16x...	.070	4.188	11	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
992	M288	2L2 1/2x2 1/2x3/16x...	.070	4.188	12	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
993	M296	2L2 1/2x2 1/2x3/16x...	.069	4.188	18	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
994	M305	2L2 1/2x2 1/2x3/16x...	.069	4.188	18	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
995	M313	2L2 1/2x2 1/2x3/16x...	.070	4.188	16	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
996	M322	2L2 1/2x2 1/2x3/16x...	.069	4.188	16	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
997	M330	2L2 1/2x2 1/2x3/16x...	.070	4.188	14	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
998	M339	2L2 1/2x2 1/2x3/16x...	.070	4.188	14	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
999	M347	2L2 1/2x2 1/2x3/16x...	.069	4.188	11	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
1000	M369	2L2 1/2x2 1/2x3/16x...	.070	4.188	12	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1001	M377	2L2 1/2x2 1/2x3/16x...	.068	4.188	18	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1002	M386	2L2 1/2x2 1/2x3/16x...	.068	4.188	18	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1003	M394	2L2 1/2x2 1/2x3/16x...	.070	4.188	16	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1004	M403	2L2 1/2x2 1/2x3/16x...	.069	4.188	15	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1005	M411	2L2 1/2x2 1/2x3/16x...	.070	4.188	15	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1006	M420	2L2 1/2x2 1/2x3/16x...	.070	4.188	13	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1007	M428	2L2 1/2x2 1/2x3/16x...	.068	4.188	12	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1008	M450	2L2 1/2x2 1/2x3/16x...	.069	4.188	11	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1009	M458	2L2 1/2x2 1/2x3/16x...	.069	4.188	15	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1010	M467	2L2 1/2x2 1/2x3/16x...	.069	4.188	13	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1011	M475	2L2 1/2x2 1/2x3/16x...	.070	4.188	17	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1012	M484	2L2 1/2x2 1/2x3/16x...	.070	4.188	15	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1013	M492	2L2 1/2x2 1/2x3/16x...	.071	4.188	15	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1014	M501	2L2 1/2x2 1/2x3/16x...	.071	4.188	13	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1015	M509	2L2 1/2x2 1/2x3/16x...	.069	4.188	13	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1016	M531	2L2 1/2x2 1/2x3/16x...	.066	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1017	M539	2L2 1/2x2 1/2x3/16x...	.067	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1018	M548	2L2 1/2x2 1/2x3/16x...	.066	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1019	M556	2L2 1/2x2 1/2x3/16x...	.067	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1020	M565	2L2 1/2x2 1/2x3/16x...	.067	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1021	M573	2L2 1/2x2 1/2x3/16x...	.068	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1022	M582	2L2 1/2x2 1/2x3/16x...	.068	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1023	M590	2L2 1/2x2 1/2x3/16x...	.066	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1024	M612	2L2 1/2x2 1/2x3/16x...	.068	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1025	M620	2L2 1/2x2 1/2x3/16x...	.068	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1026	M629	2L2 1/2x2 1/2x3/16x...	.067	4.188	18	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1027	M637	2L2 1/2x2 1/2x3/16x...	.069	4.188	16	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1028	M646	2L2 1/2x2 1/2x3/16x...	.069	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1029	M654	2L2 1/2x2 1/2x3/16x...	.070	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1030	M663	2L2 1/2x2 1/2x3/16x...	.071	4.188	14	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1031	M671	2L2 1/2x2 1/2x3/16x...	.068	4.188	12	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1032	M693	2L2 1/2x2 1/2x3/16x...	.075	4.187	12	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1033	M703	2L2 1/2x2 1/2x3/16x...	.074	4.187	18	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1034	M714	2L2 1/2x2 1/2x3/16x...	.072	4.188	18	.004	0	y	10	17.851	38.802	2.672	1.737	1	H1-...
1035	M724	2L2 1/2x2 1/2x3/16x...	.073	4.187	16	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1036	M735	2L2 1/2x2 1/2x3/16x...	.074	4.187	16	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1037	M745	2L2 1/2x2 1/2x3/16x...	.075	4.187	14	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1038	M756	2L2 1/2x2 1/2x3/16x...	.073	4.187	14	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1039	M766	2L2 1/2x2 1/2x3/16x...	.072	4.187	12	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1040	M1290	2L2 1/2x2 1/2x3/16x...	.051	5.188	4	.003	10.375	y	2	10.57	38.802	2.672	1.737	1	H1-...
1041	M1291	2L2 1/2x2 1/2x3/16x...	.051	5.188	4	.003	0	y	6	10.57	38.802	2.672	1.737	1	H1-...
1042	M1292	2L2 1/2x2 1/2x3/16x...	.051	5.188	6	.003	10.375	y	7	10.57	38.802	2.672	1.737	1	H1-...
1043	M1293	2L2 1/2x2 1/2x3/16x...	.051	5.188	6	.003	0	y	3	10.57	38.802	2.672	1.737	1	H1-...
1044	M1294	2L2 1/2x2 1/2x3/16x...	.051	5.188	8	.003	10.375	y	2	10.57	38.802	2.672	1.737	1	H1-...
1045	M1295	2L2 1/2x2 1/2x3/16x...	.051	5.188	8	.003	0	y	6	10.57	38.802	2.672	1.737	1	H1-...
1046	M1296	2L2 1/2x2 1/2x3/16x...	.051	5.188	2	.003	10.375	y	3	10.57	38.802	2.672	1.737	1	H1-...
1047	M1297	2L2 1/2x2 1/2x3/16x...	.051	5.188	2	.003	0	y	7	10.57	38.802	2.672	1.737	1	H1-...
1048	M55	2L2 1/2x2 1/2x3/16x...	.169	6.281	17	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1049	M63	2L2 1/2x2 1/2x3/16x...	.169	6.281	13	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1050	M71	2L2 1/2x2 1/2x3/16x...	.169	6.281	15	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1051	M79	2L2 1/2x2 1/2x3/16x...	.169	6.281	11	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1052	M87	2L2 1/2x2 1/2x3/16x...	.169	6.281	13	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1053	M95	2L2 1/2x2 1/2x3/16x...	.169	6.281	17	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1054	M103	2L2 1/2x2 1/2x3/16x...	.168	6.281	11	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1055	M111	2L2 1/2x2 1/2x3/16x...	.169	6.281	15	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1056	M128	2L2 1/2x2 1/2x3/16x...	.155	6.281	17	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1057	M136	2L2 1/2x2 1/2x3/16x...	.155	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1058	M145	2L2 1/2x2 1/2x3/16x...	.155	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1059	M153	2L2 1/2x2 1/2x3/16x...	.155	6.281	11	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1060	M162	2L2 1/2x2 1/2x3/16x...	.154	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1061	M170	2L2 1/2x2 1/2x3/16x...	.154	6.281	17	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1062	M179	2L2 1/2x2 1/2x3/16x...	.154	6.281	11	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1063	M187	2L2 1/2x2 1/2x3/16x...	.155	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1064	M209	2L2 1/2x2 1/2x3/16x...	.155	6.281	16	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1065	M217	2L2 1/2x2 1/2x3/16x...	.156	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1066	M226	2L2 1/2x2 1/2x3/16x...	.156	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1067	M234	2L2 1/2x2 1/2x3/16x...	.155	6.281	12	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1068	M243	2L2 1/2x2 1/2x3/16x...	.155	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1069	M251	2L2 1/2x2 1/2x3/16x...	.155	6.281	18	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1070	M260	2L2 1/2x2 1/2x3/16x...	.155	6.281	18	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1071	M268	2L2 1/2x2 1/2x3/16x...	.155	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1072	M290	2L2 1/2x2 1/2x3/16x...	.157	6.281	16	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1073	M298	2L2 1/2x2 1/2x3/16x...	.158	6.281	14	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1074	M307	2L2 1/2x2 1/2x3/16x...	.158	6.281	14	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1075	M315	2L2 1/2x2 1/2x3/16x...	.157	6.281	12	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1076	M324	2L2 1/2x2 1/2x3/16x...	.156	6.281	12	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1077	M332	2L2 1/2x2 1/2x3/16x...	.156	6.281	18	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1078	M341	2L2 1/2x2 1/2x3/16x...	.156	6.281	18	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1079	M349	2L2 1/2x2 1/2x3/16x...	.157	6.281	16	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1080	M371	2L2 1/2x2 1/2x3/16x...	.159	6.281	16	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1081	M379	2L2 1/2x2 1/2x3/16x...	.159	6.281	14	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1082	M388	2L2 1/2x2 1/2x3/16x...	.159	6.281	14	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1083	M396	2L2 1/2x2 1/2x3/16x...	.158	6.281	12	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1084	M405	2L2 1/2x2 1/2x3/16x...	.158	6.281	12	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1085	M413	2L2 1/2x2 1/2x3/16x...	.158	6.281	18	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1086	M422	2L2 1/2x2 1/2x3/16x...	.158	6.281	18	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1087	M430	2L2 1/2x2 1/2x3/16x...	.158	6.281	16	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1088	M452	2L2 1/2x2 1/2x3/16x...	.160	6.281	15	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1089	M460	2L2 1/2x2 1/2x3/16x...	.161	6.281	15	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1090	M469	2L2 1/2x2 1/2x3/16x...	.161	6.281	13	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1091	M477	2L2 1/2x2 1/2x3/16x...	.160	6.281	13	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1092	M486	2L2 1/2x2 1/2x3/16x...	.160	6.281	11	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1093	M494	2L2 1/2x2 1/2x3/16x...	.160	6.281	11	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1094	M503	2L2 1/2x2 1/2x3/16x...	.160	6.281	17	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1095	M511	2L2 1/2x2 1/2x3/16x...	.160	6.281	17	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1096	M533	2L2 1/2x2 1/2x3/16x...	.151	6.281	15	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1097	M541	2L2 1/2x2 1/2x3/16x...	.152	6.281	15	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1098	M550	2L2 1/2x2 1/2x3/16x...	.152	6.281	13	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1099	M558	2L2 1/2x2 1/2x3/16x...	.151	6.281	13	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1100	M567	2L2 1/2x2 1/2x3/16x...	.150	6.281	11	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1101	M575	2L2 1/2x2 1/2x3/16x...	.150	6.281	11	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1102	M584	2L2 1/2x2 1/2x3/16x...	.150	6.281	17	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1103	M592	2L2 1/2x2 1/2x3/16x...	.151	6.281	17	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1104	M614	2L2 1/2x2 1/2x3/16x...	.153	6.281	15	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1105	M622	2L2 1/2x2 1/2x3/16x...	.154	6.281	14	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1106	M631	2L2 1/2x2 1/2x3/16x...	.153	6.281	14	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1107	M639	2L2 1/2x2 1/2x3/16x...	.152	6.281	12	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1108	M648	2L2 1/2x2 1/2x3/16x...	.152	6.281	11	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1109	M656	2L2 1/2x2 1/2x3/16x...	.152	6.281	11	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1110	M665	2L2 1/2x2 1/2x3/16x...	.151	6.281	18	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1111	M673	2L2 1/2x2 1/2x3/16x...	.152	6.281	16	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1112	M695	2L2 1/2x2 1/2x1/4x3/8	.135	5.583	12	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1113	M705	2L2 1/2x2 1/2x1/4x3/8	.133	5.583	18	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1114	M716	2L2 1/2x2 1/2x1/4x3/8	.127	5.583	18	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1115	M726	2L2 1/2x2 1/2x1/4x3/8	.130	5.583	16	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1116	M737	2L2 1/2x2 1/2x1/4x3/8	.133	5.583	16	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1117	M747	2L2 1/2x2 1/2x1/4x3/8	.135	5.583	14	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1118	M758	2L2 1/2x2 1/2x1/4x3/8	.129	5.583	14	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1119	M768	2L2 1/2x2 1/2x1/4x3/8	.127	5.583	12	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1120	M1298	L2 1/2x2 1/2x3/16	.001	0	4	.001	0	y	6	11.212	19.444	.233	1.13	1	H2-1
1121	M1299	L2 1/2x2 1/2x3/16	.001	0	2	.001	4.188	y	8	11.212	19.444	.233	1.13	1	H2-1
1122	M1300	L2 1/2x2 1/2x3/16	.001	0	2	.001	0	y	4	11.212	19.444	.233	1.13	1	H2-1
1123	M1301	L2 1/2x2 1/2x3/16	.001	0	8	.001	4.188	y	6	11.212	19.444	.233	1.13	1	H2-1
1124	M1302	L2 1/2x2 1/2x3/16	.001	0	4	.001	4.188	y	6	11.212	19.444	.233	1.13	1	H2-1
1125	M1303	L2 1/2x2 1/2x3/16	.001	0	6	.001	0	y	4	11.212	19.444	.233	1.13	1	H2-1
1126	M1304	L2 1/2x2 1/2x3/16	.001	0	6	.001	4.188	y	8	11.212	19.444	.233	1.13	1	H2-1
1127	M1305	L2 1/2x2 1/2x3/16	.001	0	8	.001	0	y	6	11.212	19.444	.233	1.13	1	H2-1
1128	M1306	L2 1/2x2 1/2x3/16	.005	0	6	.002	8.375	y	3	3.289	19.444	.233	.893	1	H2-1
1129	M1307	L2 1/2x2 1/2x3/16	.005	0	4	.002	0	y	2	3.289	19.444	.233	.893	1	H2-1
1130	M1308	L2 1/2x2 1/2x3/16	.005	0	2	.002	8.375	y	4	3.289	19.444	.233	.893	1	H2-1
1131	M1309	L2 1/2x2 1/2x3/16	.005	0	8	.002	8.375	y	2	3.289	19.444	.233	.893	1	H2-1
1132	M697	2L3x3x1/4x3/8	.135	6.979	15	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1133	M707	2L3x3x1/4x3/8	.135	6.979	15	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1134	M718	2L3x3x1/4x3/8	.134	6.979	14	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1135	M728	2L3x3x1/4x3/8	.133	6.979	12	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1136	M739	2L3x3x1/4x3/8	.134	6.979	11	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1137	M749	2L3x3x1/4x3/8	.134	6.979	11	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1138	M760	2L3x3x1/4x3/8	.133	6.979	18	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1139	M770	2L3x3x1/4x3/8	.133	6.979	16	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1140	M16	L2 1/2x2 1/2x3/16	.402	0	5	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1141	M19	L2 1/2x2 1/2x3/16	.391	0	7	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1142	M23	L2 1/2x2 1/2x3/16	.279	0	2	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1143	M26	L2 1/2x2 1/2x3/16	.270	0	6	.008	0	y	11	3.49	19.444	.233	.905	1	H2-1
1144	M30	L2 1/2x2 1/2x3/16	.373	0	9	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1145	M33	L2 1/2x2 1/2x3/16	.368	0	3	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1146	M37	L2 1/2x2 1/2x3/16	.266	0	6	.008	0	y	15	3.49	19.444	.233	.905	1	H2-1
1147	M40	L2 1/2x2 1/2x3/16	.278	0	2	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1148	M52	L3x3x3/16	.012	0	13	.003	0	y	13	15.86	23.497	.339	1.673	1	H2-1
1149	M60	L3x3x3/16	.012	0	17	.003	0	y	13	15.86	23.497	.339	1.673	1	H2-1
1150	M68	L3x3x3/16	.013	0	11	.003	4.188	y	14	15.86	23.497	.339	1.673	1	H2-1
1151	M76	L3x3x3/16	.012	0	15	.003	0	y	11	15.86	23.497	.339	1.673	1	H2-1
1152	M84	L3x3x3/16	.013	0	17	.003	4.188	y	12	15.86	23.497	.339	1.673	1	H2-1
1153	M92	L3x3x3/16	.012	0	13	.003	0	y	17	15.86	23.497	.339	1.673	1	H2-1
1154	M100	L3x3x3/16	.012	0	15	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1155	M108	L3x3x3/16	.013	0	12	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1156	M125	L3x3x3/16	.025	0	7	.003	0	y	13	15.86	23.497	.339	1.673	1	H2-1
1157	M133	L3x3x3/16	.026	0	13	.003	0	y	14	15.86	23.497	.339	1.673	1	H2-1
1158	M142	L3x3x3/16	.027	0	6	.003	0	y	11	15.86	23.497	.339	1.673	1	H2-1
1159	M150	L3x3x3/16	.027	0	3	.003	0	y	11	15.86	23.497	.339	1.673	1	H2-1
1160	M159	L3x3x3/16	.022	0	13	.003	4.188	y	12	15.86	23.497	.339	1.673	1	H2-1
1161	M167	L3x3x3/16	.023	0	9	.003	4.188	y	13	15.86	23.497	.339	1.673	1	H2-1
1162	M176	L3x3x3/16	.024	0	9	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1163	M184	L3x3x3/16	.024	0	15	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1164	M206	L3x3x3/16	.043	0	7	.003	0	y	13	15.884	23.497	.339	1.675	1	H2-1
1165	M214	L3x3x3/16	.042	0	5	.003	0	y	13	15.884	23.497	.339	1.675	1	H2-1
1166	M223	L3x3x3/16	.047	0	5	.003	0	y	18	15.884	23.497	.339	1.675	1	H2-1
1167	M231	L3x3x3/16	.045	0	3	.003	4.188	y	15	15.884	23.497	.339	1.675	1	H2-1
1168	M240	L3x3x3/16	.038	0	3	.003	4.188	y	13	15.884	23.497	.339	1.675	1	H2-1
1169	M248	L3x3x3/16	.042	0	9	.003	4.188	y	12	15.884	23.497	.339	1.675	1	H2-1
1170	M257	L3x3x3/16	.040	0	9	.003	0	y	15	15.884	23.497	.339	1.675	1	H2-1
1171	M265	L3x3x3/16	.040	0	7	.003	0	y	15	15.884	23.497	.339	1.675	1	H2-1
1172	M287	L3x3x3/16	.072	0	7	.003	0	y	13	16.053	23.497	.339	1.682	1	H2-1
1173	M295	L3x3x3/16	.075	0	5	.003	0	y	13	16.053	23.497	.339	1.682	1	H2-1
1174	M304	L3x3x3/16	.079	0	5	.003	0	y	11	16.053	23.497	.339	1.682	1	H2-1
1175	M312	L3x3x3/16	.076	0	3	.003	0	y	11	16.053	23.497	.339	1.682	1	H2-1
1176	M321	L3x3x3/16	.070	0	3	.003	4.188	y	13	16.053	23.497	.339	1.682	1	H2-1
1177	M329	L3x3x3/16	.070	0	9	.003	4.188	y	13	16.053	23.497	.339	1.682	1	H2-1
1178	M338	L3x3x3/16	.075	0	9	.003	0	y	15	16.053	23.497	.339	1.682	1	H2-1
1179	M346	L3x3x3/16	.075	0	7	.003	0	y	15	16.053	23.497	.339	1.682	1	H2-1
1180	M368	L3x3x3/16	.095	0	6	.003	0	y	13	16.077	23.497	.339	1.683	1	H2-1
1181	M376	L3x3x3/16	.098	0	6	.003	0	y	13	16.077	23.497	.339	1.683	1	H2-1
1182	M385	L3x3x3/16	.097	0	4	.003	0	y	18	16.077	23.497	.339	1.683	1	H2-1
1183	M393	L3x3x3/16	.095	0	4	.003	0	y	11	16.077	23.497	.339	1.683	1	H2-1
1184	M402	L3x3x3/16	.095	0	2	.003	0	y	17	16.077	23.497	.339	1.683	1	H2-1
1185	M410	L3x3x3/16	.093	0	2	.003	0	y	17	16.077	23.497	.339	1.683	1	H2-1
1186	M419	L3x3x3/16	.093	0	8	.003	0	y	15	16.077	23.497	.339	1.683	1	H2-1
1187	M427	L3x3x3/16	.094	0	8	.003	0	y	15	16.077	23.497	.339	1.683	1	H2-1
1188	M449	L3x3x3/16	.128	0	6	.003	0	y	12	16.245	23.497	.339	1.69	1	H2-1
1189	M457	L3x3x3/16	.134	0	6	.003	0	y	12	16.245	23.497	.339	1.69	1	H2-1
1190	M466	L3x3x3/16	.132	0	4	.003	4.188	y	14	16.245	23.497	.339	1.69	1	H2-1
1191	M474	L3x3x3/16	.127	0	4	.003	4.188	y	14	16.245	23.497	.339	1.69	1	H2-1
1192	M483	L3x3x3/16	.131	0	2	.003	4.188	y	13	16.245	23.497	.339	1.69	1	H2-1
1193	M491	L3x3x3/16	.126	0	2	.003	4.188	y	12	16.245	23.497	.339	1.69	1	H2-1
1194	M500	L3x3x3/16	.125	0	8	.003	4.188	y	11	16.245	23.497	.339	1.69	1	H2-1
1195	M508	L3x3x3/16	.129	0	8	.003	4.188	y	11	16.245	23.497	.339	1.69	1	H2-1
1196	M530	L3x3x3/16	.171	0	7	.003	0	y	13	16.269	23.497	.339	1.691	1	H2-1

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1197	M538	L3x3x3/16	.177	0	5	.003	0	y	12	16.269	23.497	.339	1.691	1	H2-1
1198	M547	L3x3x3/16	.175	0	5	.003	0	y	11	16.269	23.497	.339	1.691	1	H2-1
1199	M555	L3x3x3/16	.169	0	3	.003	0	y	11	16.269	23.497	.339	1.691	1	H2-1
1200	M564	L3x3x3/16	.173	0	3	.003	4.188	y	13	16.269	23.497	.339	1.691	1	H2-1
1201	M572	L3x3x3/16	.171	0	9	.003	4.188	y	12	16.269	23.497	.339	1.691	1	H2-1
1202	M581	L3x3x3/16	.169	0	9	.003	4.188	y	11	16.269	23.497	.339	1.691	1	H2-1
1203	M589	L3x3x3/16	.171	0	7	.003	4.188	y	11	16.269	23.497	.339	1.691	1	H2-1
1204	M611	L3x3x3/16	.225	0	6	.003	4.188	y	17	16.293	23.497	.339	1.692	1	H2-1
1205	M619	L3x3x3/16	.232	0	6	.003	0	y	12	16.293	23.497	.339	1.692	1	H2-1
1206	M628	L3x3x3/16	.188	0	5	.003	4.188	y	14	16.293	23.497	.339	1.692	1	H2-1
1207	M636	L3x3x3/16	.184	0	3	.003	0	y	11	16.293	23.497	.339	1.692	1	H2-1
1208	M645	L3x3x3/16	.227	0	2	.003	4.188	y	12	16.293	23.497	.339	1.692	1	H2-1
1209	M653	L3x3x3/16	.222	0	2	.003	4.188	y	12	16.293	23.497	.339	1.692	1	H2-1
1210	M662	L3x3x3/16	.184	0	9	.003	4.188	y	11	16.293	23.497	.339	1.692	1	H2-1
1211	M670	L3x3x3/16	.186	0	7	.003	4.188	y	11	16.293	23.497	.339	1.692	1	H2-1
1212	M692	L3x3x3/16	.094	0	3	.004	5.583	y	11	13.008	23.497	.339	1.563	1	H2-1
1213	M702	L3x3x3/16	.095	0	9	.004	5.583	y	15	13.008	23.497	.339	1.563	1	H2-1
1214	M713	L3x3x3/16	.052	0	9	.004	0	y	14	13.008	23.497	.339	1.563	1	H2-1
1215	M723	L3x3x3/16	.057	0	7	.004	5.583	y	10	13.008	23.497	.339	1.563	1	H2-1
1216	M734	L3x3x3/16	.094	0	7	.004	5.583	y	13	13.008	23.497	.339	1.563	1	H2-1
1217	M744	L3x3x3/16	.094	0	5	.004	5.583	y	16	13.008	23.497	.339	1.563	1	H2-1
1218	M755	L3x3x3/16	.058	0	5	.004	5.583	y	10	13.008	23.497	.339	1.563	1	H2-1
1219	M765	L3x3x3/16	.053	0	3	.004	5.583	y	10	13.008	23.497	.339	1.563	1	H2-1
1220	M5	2L3x4x5/16x3/8	.259	12.75	13	.008	12.75	y	15	21.978	90.108	10.644	2.637	1	H1-...
1221	M6	2L3x4x5/16x3/8	.260	12.75	12	.008	12.75	y	13	21.978	90.108	10.644	2.637	1	H1-...
1222	M7	2L3x4x5/16x3/8	.261	12.75	17	.008	12.75	y	11	21.978	90.108	10.644	2.637	1	H1-...
1223	M8	2L3x4x5/16x3/8	.261	12.75	18	.008	12.75	y	17	21.978	90.108	10.644	2.637	1	H1-...

Built-Up Double Channels Angles

E6.1 (AISC 13th Edition pg 16.1-37)
2015723.01.TAG0053.06

Code	TIA/EIA-222-F
Number of Sections	8
Max Capacity	100%

Existing Member								Modification						Built-Up Member											Member Analysis				
Section	Member	Member Type	Area (in²)	I_x (in⁴)	r_x (in)	r_y (in)	KL_x/r_x	Mod Type	Area (in²)	I_x (in⁴)	r_x (in)	r_y (in)	KL_x/r_x	Connection Type	I_{x-x} (in⁴)	I_{y-y} (in)	a (in)	h (in)	Area (in²)	r_{x-x} (in)	$(KL/r)_x$	r_y (in)	t_{fb} (in)	α	$(KL/r)_m$	0.75$(KL/r)_m$	a_i/r_i	Design met?	$(KL/r)_{Built-Up}$	(KL/r)
T10	Inner Supp	C4x7.2	2.13	0.425	0.447	0.447	53.73	C4x7.2	2.13	0.425	0.447	0.447	53.73	bolted	2.630519	71.064	24	1.293	4.260	0.786	90.83	0.447	0.447	1.45	105.19	67.83	53.73	Yes	159.09	105.19
T10	Inner Square	C4x7.2	2.13	0.425	0.447	0.447	53.73	C4x7.2	2.13	0.425	0.447	0.447	53.73	bolted	2.630519	100.5	24	1.293	4.260	0.786	127.89	0.447	0.447	1.45	138.72	95.92	53.73	Yes	224.99	138.72
T10	Inner TH	C4x7.2	2.13	0.425	0.447	0.447	53.73	C4x7.2	2.13	0.425	0.447	0.447	53.73	bolted	2.630519	100.5	24	1.293	4.260	0.786	127.89	0.447	0.447	1.45	138.72	95.92	53.73	Yes	224.99	138.72
T10	Inner Corner	C4x7.2	2.13	0.425	0.447	0.447	53.73	C4x7.2	2.13	0.425	0.447	0.447	53.73	bolted	2.630519	142.128	24	1.293	4.260	0.786	180.87	0.447	0.447	1.45	188.68	135.65	53.73	Yes	318.18	188.68
T2	Inner Supp	C10x15.3	4.48	2.270	0.712	0.712	33.72	C10x15.3	4.48	2.270	0.712	0.712	33.72	bolted	10.58677	71.064	24	1.643	8.960	1.087	65.38	0.712	0.712	1.15	73.56	49.03	33.72	Yes	99.83	73.56
T2	Inner Square	C10x15.3	4.48	2.270	0.712	0.712	33.72	C10x15.3	4.48	2.270	0.712	0.712	33.72	bolted	10.58677	100.5	24	1.643	8.960	1.087	92.46	0.712	0.712	1.15	98.41	69.34	33.72	Yes	141.19	98.41
T2	Inner Square Brace	C10x15.3	4.48	2.270	0.712	0.712	33.72	C10x15.3	4.48	2.270	0.712	0.712	33.72	bolted	10.58677	100.5	24	1.643	8.960	1.087	92.46	0.712	0.712	1.15	98.41	69.34	33.72	Yes	141.19	98.41
T2	Inner Corner	C10x15.3	4.48	2.270	0.712	0.712	33.72	C10x15.3	4.48	2.270	0.712	0.712	33.72	bolted	10.58677	100.5	24	1.643	8.960	1.087	92.46	0.712	0.712	1.15	98.41	69.34	33.72	Yes	141.19	98.41

Existing Member								Modification						Built-Up Member											Member Analysis				
Section	Member	Member Type	Area (in²)	I_x (in⁴)	r_x (in)	r_y (in)	KL_x/r_x	Mod Type	Area (in²)	I_x (in⁴)	r_x (in)	r_y (in)	KL_x/r_x	Connection Type	I_{x-x} (in⁴)	I_{y-y} (in)	a (in)	h (in)	Area (in²)	r_{x-x} (in)	$(KL/r)_x$	r_y (in)	t_{fb} (in)	α	$(KL/r)_m$	0.75$(KL/r)_m$	a_i/r_i	Design met?	$(KL/r)_{Built-Up}$	(KL/r)
T10	Inner Supp	C4x7.2	2.130	4.580	1.466	0.447	16.37	C4x7.2	2.13	4.580	1.466	0.447	16.37	bolted	9.16	71.064	24	0.000	4.2600	1.466	68.46	0.447	1.466	0.00	72.36	36.35	53.73	No	48.46	48.46
T10	Inner Square	C4x7.2	2.130	4.580	1.466	0.447	16.37	C4x7.2	2.13	4.580	1.466	0.447	16.37	bolted	9.16	100.5	24	0.000	4.2600	1.466	68.54	0.447	1.466	0.00	87.09	51.40	53.73	No	68.54	68.54
T10	Inner TH	C4x7.2	2.130	4.580	1.466	0.447	16.37	C4x7.2	2.13	4.580	1.466	0.447	16.37	bolted	9.16	100.5	24	0.000	4.2600	1.466	68.54	0.447	1.466	0.00	87.09	51.40	53.73	No	68.54	68.54
T10	Inner Corner	C4x7.2	2.130	4.580	1.466	0.447	16.37	C4x7.2	2.13	4.580	1.466	0.447	16.37	bolted	9.16	142.128	24	0.000	4.2600	1.466	96.93	0.447	1.466	0.00	110.82	72.69	53.73	Yes	96.93	110.82
T2	Inner Supp	C10x15.3	4.480	67.300	3.876	0.712	6.19	C10x15.3	4.48	67.300	3.876	0.712	6.19	bolted	134.6	71.064	24	0.000	8.9600	3.876	18.34	0.712	3.876	0.00	38.38	13.75	33.72	No	18.34	18.34
T2	Inner Square	C10x15.3	4.480	67.300	3.876	0.712	6.19	C10x15.3	4.48	67.300	3.876	0.712	6.19	bolted	134.6	100.5	24	0.000	8.9600	3.876	25.93	0.712	3.876	0.00	42.53	19.45	33.72	No	25.93	25.93
T2	Inner Square Brace	C10x15.3	4.480	67.300	3.876	0.712	6.19	C10x15.3	4.48	67.300	3.876	0.712	6.19	bolted	134.6	100.5	24	0.000	8.9600	3.876	25.93	0.712	3.876	0.00	42.53	19.45	33.72	No	25.93	25.93
T2	Inner Corner	C10x15.3	4.480	67.300	3.876	0.712	6.19	C10x15.3	4.48	67.300	3.876	0.712	6.19	bolted	134.6	100.5	24	0.000	8.9600	3.876	25.93	0.712	3.876	0.00	42.53	19.45	33.72	No	25.93	25.93

Member Summary				Compression Analysis				Tension Analysis					
Section	Member	Original Member	Modification	k	P_n (k)	Pn/Ω (k)	Rating	P_n (k)	A_n (in²)	U	A_e (in²)	Pn/Ω (k)	Rating
T10	Inner Supp	C4x7.2	C4x7.2	1.16	1.06	51.29	4.5%	3.03	7.56	1.00	7.56	183.66	1.7%
T10	Inner Square	C4x7.2	C4x7.2	1.08	3.39	33.27	10.2%	2.18	7.56	1.00	7.56	91.83	2.4%
T10	Inner TH	C4x7.2	C4x7.2	1.08	3.39	33.27	10.2%	0.00	7.56	1.00	7.56	91.83	0.0%
T10	Inner Corner	C4x7.2	C4x7.2	1.14	5.99	17.99	33.3%	4.18	7.56	1.00	7.56	91.83	4.6%
T2	Inner Supp	C10x15.3	C10x15.3	1.13	5.99	145.27	4.1%	0.99	16.50	1.00	16.50	193.15	0.5%
T2	Inner Square	C10x15.3	C10x15.3	1.06	5.99	116.00	5.2%	0.11	16.50	1.00	16.50	193.15	0.1%
T2	Inner Square Brace	C10x15.3	C10x15.3	1.06	5.99	116.00	5.2%	0.00	16.50	1.00	16.50	193.15	0.0%
T2	Inner Corner	C10x15.3	C10x15.3	1.06	5.99	116.00	5.2%	0.63	16.50	1.00	16.50	193.15	0.3%

Bridge/Transition Stiffener Check						
End Dist (in)	Unbraced Section of Existing Leg Member				BUSI	Crushing Control?
	F_y (ksi)	F_u (ksi)	P_n (k)	Pn/Ω (k)	Pn/Ω (k)	

Project #: 2015723.01.TAG0053.06

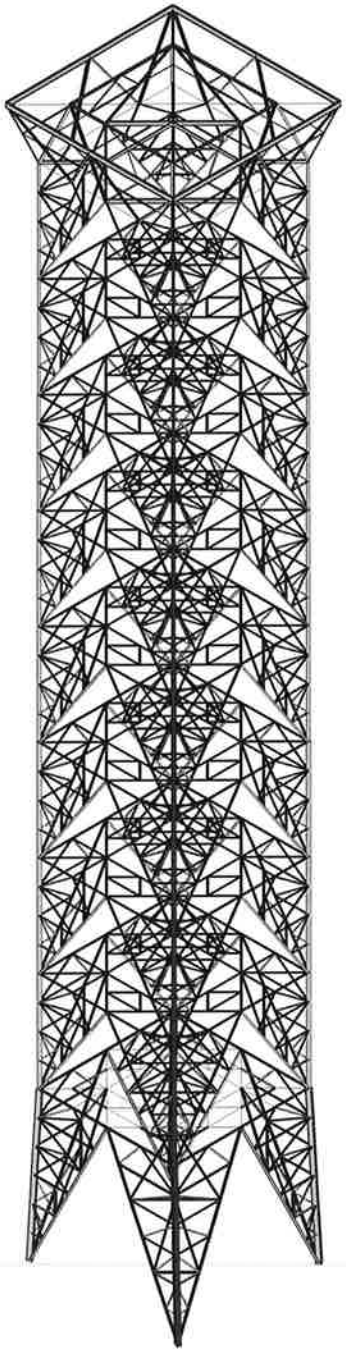
Bolt Checks

Date: 7/27/2015

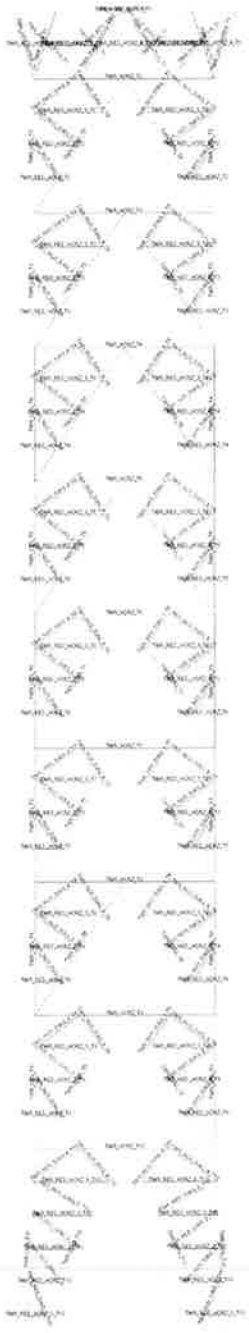
Section #	Elevation	Component Type	Bolt Grade	Bolt Size (in)	# of Bolts	Maximum Load (k)	Maximum Load per Bolt (k)	Allowable Load per Bolt (k)	Ratio	Allowable Ratio	% Capacity	Criteria
T1	250	Leg	A307	0.75	12	11.021	0.918	8.836	0.104	1.000	10.4%	Bolt Tension
		Leg Outer	A307	0.75	3	2.538	0.846	8.836	0.096	1.000	9.6%	Bolt Shear
		Diagonal	A307	0.75	2	5.168	2.584	8.836	0.292	1.333	21.9%	Bolt Shear
		Diagonal Outer	A307	0.75	2	1.632	0.816	8.836	0.092	1.333	6.9%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	1.404	0.702	4.418	0.159	1.333	11.9%	Bolt Shear
		Horizontal Outer	A307	0.75	2	1.511	0.756	4.418	0.171	1.333	12.8%	Bolt Shear
		Inner Supp	A307	0.75	2	2.824	1.412	4.418	0.320	1.333	24.0%	Bolt Shear
T2	237.5	Leg	A307	0.75	16	17.016	2.127	8.836	0.241	1.000	24.1%	Bolt DS
		Diagonal	A307	0.75	4	14.09	3.522	8.836	0.399	1.333	29.9%	Bolt Shear
		Horizontal	A307	0.75	4	2.997	0.749	8.836	0.085	1.333	6.4%	Bolt Shear
T3	212.5	Leg	A307	0.75	16	33.451	4.181	8.836	0.473	1.333	35.5%	Bolt DS
		Horizontal	A307	0.75	3	11.059	3.686	8.836	0.417	1.333	31.3%	Bolt Shear
		Diagonal	A307	0.75	4	20.025	5.006	8.836	0.567	1.333	42.5%	Bolt Shear
		Inner Square	A307	0.75	2	2.777	1.388	8.836	0.157	1.333	11.8%	Bolt Shear
		Inner Corner	A307	0.75	2	3.398	1.699	8.836	0.192	1.333	14.4%	Bolt Shear
T4	187.5	Leg	A307	0.75	22	59.843	5.44	8.836	0.616	1.333	46.2%	Bolt DS
		Horizontal	A307	0.75	3	13.646	4.549	8.836	0.515	1.333	38.6%	Bolt Shear
		Diagonal	A307	0.75	5	26.76	5.352	8.836	0.606	1.333	45.4%	Bolt Shear
		Inner Square	A307	0.75	2	2.889	1.444	8.836	0.163	1.333	12.3%	Bolt Shear
		Inner Corner	A307	0.75	2	3.477	1.738	8.836	0.197	1.333	14.8%	Bolt Shear
T5	162.5	Leg	A307	1	22	93.963	8.542	15.708	0.544	1.333	40.8%	Bolt DS
		Horizontal	A307	0.75	3	16.891	5.63	8.836	0.637	1.333	47.8%	Bolt Shear
		Diagonal	A307	0.75	5	33.369	6.674	8.836	0.755	1.333	56.7%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	1.864	0.932	4.418	0.211	1.333	15.8%	Bolt Shear
		Redundant Diagonal	A307	0.75	2	1.609	0.804	4.418	0.182	1.333	13.7%	Bolt Shear
		Inner Square	A307	0.75	2	3.575	1.788	8.836	0.202	1.333	15.2%	Bolt Shear
		Inner Corner	A307	0.75	2	4.298	2.149	8.836	0.243	1.333	18.2%	Bolt Shear
		Inner Ladder	A307	0.75	2	2.5	1.25	8.836	0.141	1.333	10.6%	Bolt Shear
T6	137.5	Leg	A307	1	24	136.29	11.358	15.708	0.723	1.333	54.2%	Bolt DS
		Horizontal	A307	0.75	3	20.684	6.895	8.836	0.780	1.333	58.5%	Bolt Shear
		Diagonal	A307	0.75	4	40.085	10.021	8.836	1.134	1.333	85.1%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	2.301	1.15	4.418	0.260	1.333	19.5%	Bolt Shear
		Redundant Diagonal	A307	0.75	2	2.026	1.013	4.418	0.229	1.333	17.2%	Bolt Shear
		Inner Square	A307	0.75	2	3.7	1.85	8.836	0.209	1.333	15.7%	Bolt Shear
		Inner Corner	A307	0.75	2	4.392	2.196	8.836	0.249	1.333	18.6%	Bolt Shear
		Inner Ladder	A307	0.75	2	2.577	1.288	8.836	0.146	1.333	10.9%	Bolt Shear
T7	112.5	Leg	A307	1	24	187.117	15.593	15.708	0.993	1.333	74.5%	Bolt DS
		Horizontal	A307	0.75	4	23.862	5.966	8.836	0.675	1.333	50.6%	Bolt Shear
		Diagonal	A307	0.75	4	45.665	11.416	8.836	1.292	1.333	96.9%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	3.152	1.576	4.418	0.357	1.333	26.8%	Bolt Shear
		Redundant Diagonal	A307	0.75	2	2.778	1.389	4.418	0.314	1.333	23.6%	Bolt Shear
		Inner Square	A307	0.75	2	3.714	1.857	8.836	0.210	1.333	15.8%	Bolt Shear
		Inner Corner	A307	0.75	2	4.431	2.216	8.836	0.251	1.333	18.8%	Bolt Shear
		Inner Ladder	A307	0.75	2	2.595	1.298	8.836	0.147	1.333	11.0%	Bolt Shear
T8	87.5	Leg	A307	1	24	245.685	20.474	15.708	1.303	1.333	97.8%	Bolt DS
		Horizontal	A307	0.75	4	27.14	6.785	8.836	0.768	1.333	57.6%	Bolt Shear
		Diagonal	A307	0.75	5	53.027	10.605	8.836	1.200	1.333	90.0%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	4.148	2.074	4.418	0.469	1.333	35.2%	Bolt Shear
		Redundant Diagonal	A307	0.75	2	3.691	1.846	4.418	0.418	1.333	31.3%	Bolt Shear
		Inner Square	A307	0.75	2	4.216	2.108	8.836	0.239	1.333	17.9%	Bolt Shear
		Inner Corner	A307	0.75	2	5.035	2.518	8.836	0.285	1.333	21.4%	Bolt Shear
		Inner Ladder	A307	0.75	2	3.009	1.504	8.836	0.170	1.333	12.8%	Bolt Shear
T9	62.5	Leg	A307	1	32	312.559	19.535	15.708	1.244	1.333	93.3%	Bolt DS
		Horizontal	A307	0.75	4	29.67	7.418	8.836	0.839	1.333	63.0%	Bolt Shear
		Diagonal	A307	0.75	6	59.013	9.836	8.836	1.113	1.333	83.5%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	5.445	2.722	4.418	0.616	1.333	46.2%	Bolt Shear
		Redundant Diagonal	A307	0.75	2	4.834	2.417	4.418	0.547	1.333	41.0%	Bolt Shear
		Inner Supp	A307	0.75	2	2.522	1.261	8.836	0.143	1.333	10.7%	Bolt Shear
		Inner Square	A307	0.75	2	4.598	2.299	8.836	0.260	1.333	19.5%	Bolt Shear
		Inner Corner	A307	0.75	2	5.499	2.75	8.836	0.311	1.333	23.3%	Bolt Shear
		Inner Ladder	A307	0.75	2	3.295	1.648	8.836	0.186	1.333	14.0%	Bolt Shear
T10	37.5	Leg	A307	1	40	387.507	19.375	15.708	1.233	1.333	92.5%	Bolt DS
		Horizontal	A307	0.75	4	30.19	7.548	8.836	0.854	1.333	64.1%	Bolt Shear
		Diagonal	A307	0.75	8	75.311	9.414	8.836	1.065	1.333	79.9%	Bolt Shear
		Redundant Horizontal	A307	0.75	2	1.401	0.7	4.418	0.159	1.333	11.9%	Bolt Shear
		Redundant Diagonal	A307	0.75	2	1.385	0.692	4.418	0.157	1.333	11.8%	Bolt Shear
		Redundant Diagonal 0	A307	0.75	2	9.48	4.74	4.418	1.073	1.333	80.5%	Bolt Shear
		Redundant Horizontal 0	A307	0.75	2	7.735	3.868	4.418	0.875	1.333	65.7%	Bolt Shear
		Inner Girt	A307	0.75	2	2.812	1.406	4.418	0.318	1.000	31.8%	Bolt Shear
		Inner Supp	A307	0.75	2	3.057	1.528	4.418	0.346	1.333	26.0%	Bolt Shear
		Inner Square	A307	0.75	2	3.394	1.697	4.418	0.384	1.333	28.8%	Bolt Shear
		Inner Corner	A307	0.75	2	5.99	2.995	4.418	0.678	1.333	50.9%	Bolt Shear
		Inner Ladder	A307	0.75	2	3.445	1.722	4.418	0.390	1.333	29.2%	Bolt Shear
		Inner Triangle	A307	0.75	2	2.438	1.219	4.418	0.276	1.000	27.6%	Bolt Shear
		Anchor Rods	C1015	2.25	12	387.507	32.292	73.478	0.439	1.333	33.0%	Bolt Tension
										Maximum Capacity	97.8%	

APPENDIX C

Tower Elevation Drawing

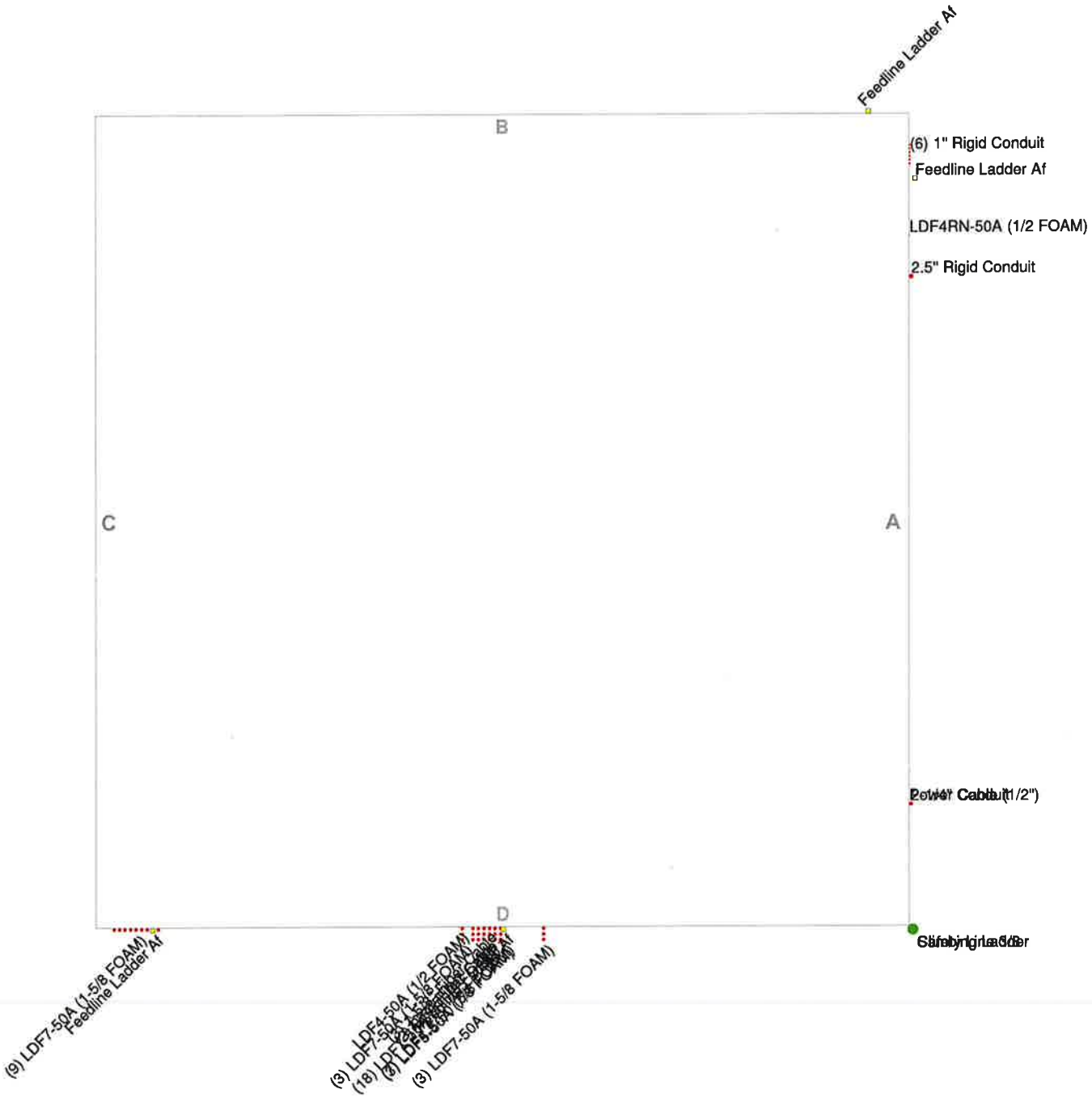


GPD Group	TAG0053 CHESHIRE	SK - 1
tclark		July 27, 2015 at 4:27 PM
2015723.01.TAG0053.06		TAG0053.rt3

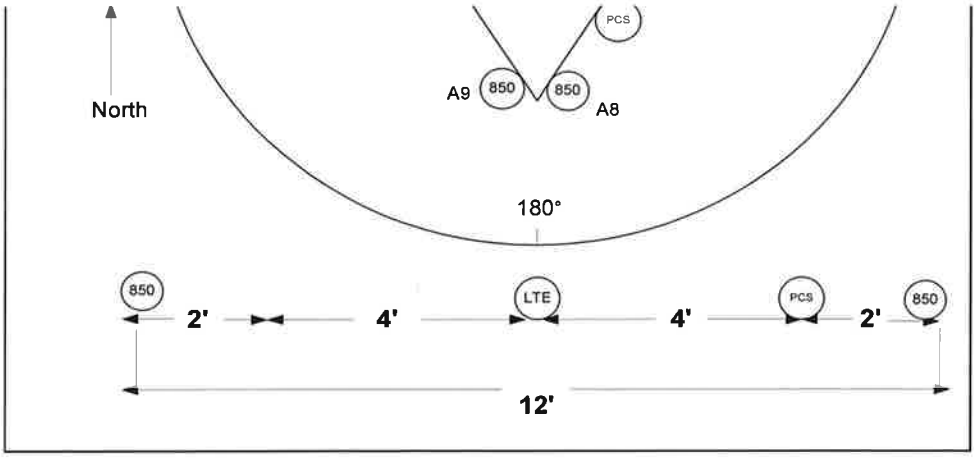


GPD Group	TAG0053 CHESHIRE	SK - 2
tclark		July 27, 2015 at 4:28 PM
2015723.01.TAG0053.06		TAG0053.rt3

Round Flat App In Face App Out Face



GPD Group	**GPD Group**	Job: **TAG0053 CHESHIRE**	
	520 South Main Street, Ste 2531	Project: ***2015723.01.TAG0053.05***	
	Akron, OH	Client: AT&T Towers	Drawn by: tclark / App'd:
	Phone: (330) 572-2100	Code: TIA/EIA-222-F	Date: 07/23/15 / Scale: N
	FAX: (330) 572-2101	Path: N:\2011\ATandT\TAG0053\12 2015723.01.TAG0053.05 Report\Software Analysis\tnxTAG0053 - Final.eri	Dwg No.


North
PCS
A9
850
850
A8
180°
850
2'
4'
LTE
4'
PCS
2'
850
12'