

June 24, 2015

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

Re: **Notice of Exempt Modification – Facility Modification
Butternut Hollow Road, Greenwich, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains twelve (12) antennas at the 130-foot level of the existing 180-foot tower off Butternut Hollow Road in Greenwich, Connecticut (the “Property”). The tower and underlying property are owned by the State of Connecticut, Department of Emergency Services and Public Protection (“DESPP”). The Council approved Cellco’s use of this tower in 1992. Cellco now intends to modify its facility by replacing three (3) of its existing antennas with three (3) model HBXX-6516DS-VTM, 1900 MHz antennas and installing three (3) new model HBXX-6516DS-VTM, 2100 MHz antennas, for a total of fifteen (15) antennas, all at the same 130-foot level on the tower. Cellco also intends to install six (6) new remote radio heads (“RRHs”), one (1) each behind its 1900 MHz and 2100 MHz antennas. Included in Attachment 1 are specifications for Cellco’s replacement antennas and RRHs.

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 Peter Tesei, First Selectman for the Town of Greenwich. A copy of this letter is also being sent to the DESPP, the owner of the Property.

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

Melanie A. Bachman

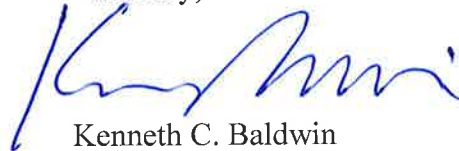
June 24, 2015

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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 130-foot level on the 180-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 replacement antennas 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 is included behind 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, with certain modifications, can support Cellco's proposed modifications. (*See Detailed Structural Analysis and Modification 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:

Peter Tesei, Greenwich First Selectman

State of Connecticut, Department of Emergency Services and Public Protection

Tim Parks

ATTACHMENT 1



HBXX-6516DS-VTM

Andrew® Quad Port Antenna, 1710–2180 MHz, 65° horizontal beamwidth, RET compatible

- Each DualPol® array can be independently adjusted for greater flexibility
- Excellent gain, VSWR, front-to-back ratio, and PIM specifications for robust network performance
- Ideal choice for site collocations and tough zoning restrictions
- Great solution to maximize network coverage and capacity

Electrical Specifications

| Frequency Band, MHz | 1710–1880 | 1850–1990 | 1920–2180 |
|--------------------------------------|------------|------------|------------|
| Gain, dBi | 17.7 | 18.0 | 18.0 |
| Beamwidth, Horizontal, degrees | 67 | 66 | 64 |
| Beamwidth, Vertical, degrees | 7.5 | 7.0 | 6.6 |
| Beam Tilt, degrees | 0–10 | 0–10 | 0–10 |
| USLS, dB | 18 | 18 | 18 |
| Front-to-Back Ratio at 180°, dB | 30 | 30 | 30 |
| CPR at Boresight, dB | 22 | 22 | 21 |
| CPR at Sector, dB | 8 | 9 | 9 |
| Isolation, dB | 30 | 30 | 30 |
| VSWR Return Loss, dB | 1.4 15.6 | 1.4 15.6 | 1.4 15.6 |
| PIM, 3rd Order, 2 x 20 W, dBc | -153 | -153 | -153 |
| Input Power per Port, maximum, watts | 350 | 350 | 350 |
| Polarization | ±45° | ±45° | ±45° |
| Impedance | 50 ohm | 50 ohm | 50 ohm |

Electrical Specifications, BASTA*

| Frequency Band, MHz | 1710–1880 | 1850–1990 | 1920–2180 |
|---|------------|------------|------------|
| Gain by all Beam Tilts, average, dBi | 17.2 | 17.2 | 17.5 |
| Gain by all Beam Tilts Tolerance, dB | ±0.3 | ±0.3 | ±0.5 |
| | 0° 17.0 | 0° 17.1 | 0° 17.4 |
| Gain by Beam Tilt, average, dBi | 5° 17.3 | 5° 17.4 | 5° 17.7 |
| | 10° 17.0 | 10° 17.0 | 10° 17.2 |
| Beamwidth, Horizontal Tolerance, degrees | ±2.7 | ±2.3 | ±3.5 |
| Beamwidth, Vertical Tolerance, degrees | ±0.5 | ±0.4 | ±0.4 |
| USLS, dB | 18 | 19 | 19 |
| Front-to-Back Total Power at 180° ± 30°, dB | 26 | 26 | 26 |
| CPR at Boresight, dB | 22 | 22 | 22 |
| CPR at Sector, dB | 9 | 9 | 9 |

* 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® quad |
| Band | Single band |
| Brand | DualPol® Teletilt® |
| Operating Frequency Band | 1710 – 2180 MHz |

HBXX-6516DS-VTM

POWERED BY



Mechanical Specifications

| | |
|------------------------------|---|
| Color | Light gray |
| Lightning Protection | dc Ground |
| Radiator Material | Low loss circuit board |
| Radome Material | PVC, UV resistant |
| RF Connector Interface | 7-16 DIN Female |
| RF Connector Location | Bottom |
| RF Connector Quantity, total | 4 |
| Wind Loading, maximum | 419.0 N @ 150 km/h 94.2 lbf @ 150 km/h |
| Wind Speed, maximum | 241.0 km/h 149.8 mph |

Dimensions

| | |
|------------|---------------------|
| Depth | 166.0 mm 6.5 in |
| Length | 1297.0 mm 51.1 in |
| Width | 305.0 mm 12.0 in |
| Net Weight | 13.9 kg 30.6 lb |

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 2.0 Actuator HBXX-6516DS-A2M
RET System Teletilt®

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 |



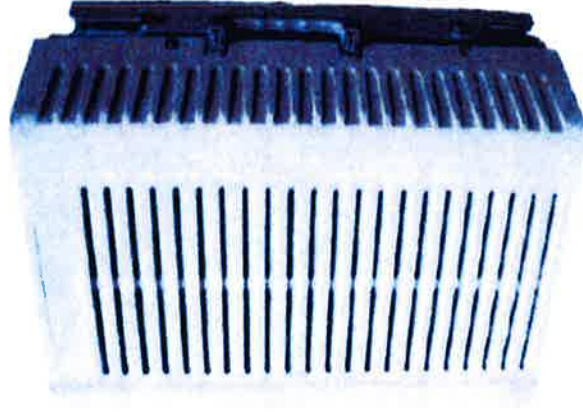
Included Products

600899A-2 — 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.

PCS RF MODULES

RRH1900 2X60 - HW CHARACTERISTICS

LA6.0.1/13.3



| | |
|-------------------------|---|
| RRH2x60 | |
| RF Output Power | 2x60W |
| Instantaneous Bandwidth | 20MHz |
| Transmitter | 2 TX |
| Receiver | 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



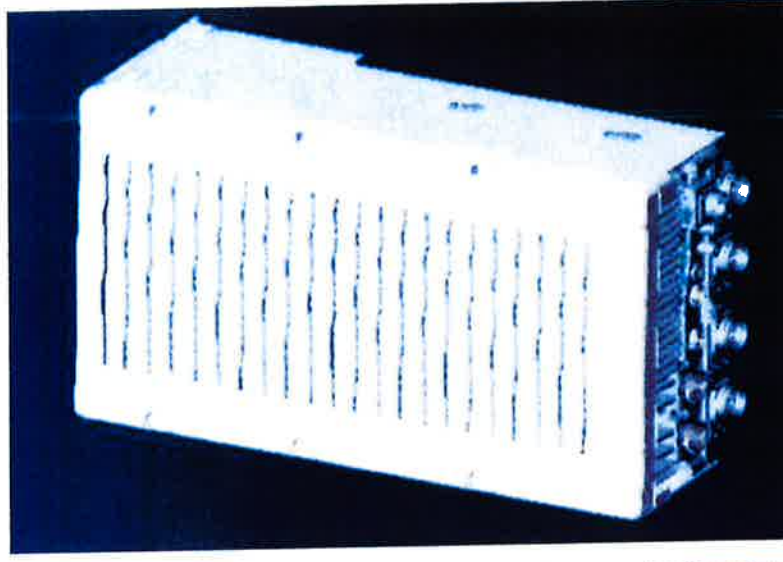
ALCATEL-LUCENT – CONFIDENTIAL – SOLELY FOR AUTHORIZED PERSONS HAVING A NEED TO KNOW – PROPRIETARY – USE PURSUANT TO COMPANY INSTRUCTION

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 |
| CPRJ Ports | 2 CPRJ 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.)

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.

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.

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).

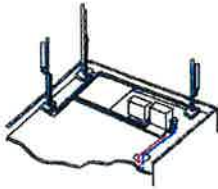
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

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.

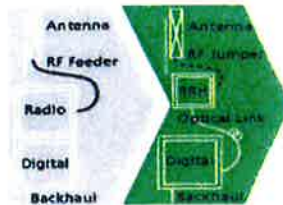
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

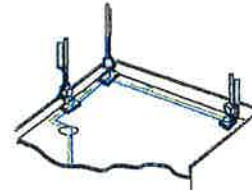
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

Key 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

Key Features

- 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.

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 daisy chaining 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)

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

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)

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AT THE SPEED OF IDEAS™

Alcatel-Lucent



ATTACHMENT 2

| | | General | | Power | | Density | | | | | | | |
|---|------------|-------------|------------|------------------|------------------|--------------------|--------------------|--------------|---------------|--|--|--|--|
| | | # OF CHAN. | WATTS ERP | HEIGHT | CALC. POWER DENS | FREQ. | MAX. PERMISS. EXP. | FRACTION MPE | Total | | | | |
| Site Name: Butternut (Greenwich) | | | | | | | | | | | | | |
| Tower Height: 180Ft. | | | | | | | | | | | | | |
| CARRIER | # OF CHAN. | WATTS ERP | HEIGHT | CALC. POWER DENS | FREQ. | MAX. PERMISS. EXP. | FRACTION MPE | Total | | | | | |
| *State Police | 1 | 1000 | 180 | 0.0111 | 866.7125 | 0.5778 | 1.92% | | | | | | |
| *State Police | 1 | 1000 | 180 | 0.0111 | 866.0125 | 0.5773 | 1.92% | | | | | | |
| *Greenwich | 1 | 1000 | 180 | 0.0111 | 866.7875 | 0.5779 | 1.92% | | | | | | |
| *DOT | 1 | 100 | 180 | 0.0011 | 42.8 | 0.2000 | 0.55% | | | | | | |
| *Greenwich | 1 | 431.67 | 177 | 0.0050 | 18700 | 1.0000 | 0.50% | | | | | | |
| *NU | 1 | 50 | 150 | 0.0008 | 928 | 0.6187 | 0.13% | | | | | | |
| *NU | 1 | 316 | 150 | 0.0050 | 150 | 0.2000 | 2.52% | | | | | | |
| *NU | 1 | 100 | 80 | 0.0056 | 37.8 | 0.2000 | 2.81% | | | | | | |
| *NU | 1 | 555 | 165 | 0.0073 | 944 | 0.6293 | 1.16% | | | | | | |
| *NU | 1 | 316 | 150 | 0.0050 | 450 | 0.3000 | 1.68% | | | | | | |
| *NU | 1 | 100 | 130 | 0.0021 | 47.86 | 0.2000 | 1.06% | | | | | | |
| *State Police | 1 | 55.61 | 176 | 0.0006 | 6700 | 1.0000 | 0.06% | | | | | | |
| *T-Mobile AWS LTE | 2 | 3571 | 137 | 0.1368 | 2100 | 1.0000 | 13.68% | | | | | | |
| *T-Mobile GSM/UMTS | 4 | 1667 | 137 | 0.1277 | 1950 | 1.0000 | 12.77% | | | | | | |
| *T-Mobile LTE | 1 | 1785 | 137 | 0.0342 | 700 | 0.4667 | 7.33% | | | | | | |
| *Sprint CDMA/LTE | 2 | 693 | 117 | 0.0364 | 1900 | 1.0000 | 3.64% | | | | | | |
| *Sprint CDMA/LTE | 1 | 390 | 117 | 0.0102 | 850 | 0.5667 | 1.81% | | | | | | |
| *AT&T UMTS | 1 | 500 | 148 | 0.0082 | 880 | 0.5867 | 1.40% | | | | | | |
| *AT&T UMTS | 1 | 500 | 148 | 0.0082 | 1900 | 1.0000 | 0.82% | | | | | | |
| *AT&T GSM | 6 | 296 | 148 | 0.0292 | 880 | 0.5867 | 4.97% | | | | | | |
| *AT&T GSM | 6 | 427 | 148 | 0.0421 | 1900 | 1.0000 | 4.21% | | | | | | |
| *AT&T LTE | 1 | 500 | 148 | 0.0082 | 740 | 0.4933 | 1.66% | | | | | | |
| Verizon PCS | 1 | 1136 | 130 | 0.0242 | 1970 | 1.0000 | 2.42% | | | | | | |
| Verizon Cellular | 9 | 281 | 130 | 0.0538 | 869 | 0.5793 | 9.29% | | | | | | |
| Verizon AWS | 1 | 1694 | 130 | 0.0360 | 2145 | 1.0000 | 3.60% | | | | | | |
| Verizon 700 | 1 | 752 | 130 | 0.0160 | 746 | 0.4973 | 3.22% | | | | | | |
| | | | | | | | | | 87.07% | | | | |
| * Source: Siting Council | | | | | | | | | | | | | |

ATTACHMENT 3



Submitted to
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Submitted by
AECOM
500 Enterprise Drive,
Suite 3B
Rocky Hill, CT 06067
January 30, 2015

DETAILED STRUCTURAL ANALYSIS AND MODIFICATION OF AN EXISTING 180' SELF SUPPORTING LATTICE TOWER WITH STACK-N-BOLT SYSTEM AND FOUNDATION FOR NEW ANTENNA ARRANGEMENT



Site Address: Butternut Hollow Road
Greenwich, Connecticut
CSP Tower # 74

36917431.00000
VZ5-182 Rev. 1

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 - **PLS-TOWER DETAILED OUTPUT**
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 - **FOUNDATION EVALUATION**

1. EXECUTIVE SUMMARY

This report summarizes the structural analysis and evaluation of the 180' lattice tower located off of Butternut Hollow Road in Greenwich, Connecticut. The analysis was conducted in accordance with the 2005 Connecticut State Building Code, the TIA/EIA-222-F standard and additional requirements of the Connecticut State Police for wind velocity of 90 mph concurrent with 1/2" ice design wind load. The antenna loading considered in the analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined in the Introduction Section of this report.

The proposed Verizon Wireless installation is as follows:

| Proposed Antenna and Mount | Carrier | Antenna Center Elevation |
|---|----------------------------------|--------------------------|
| <p><u>Remove:</u> (3) BXA-171063-8BF-EDIN-2 Panel Antennas (PCS) (6) Diplexer units (PCS)</p> | <p>Verizon (Existing)</p> | <p>@ 130'</p> |
| <p><u>Install:</u> (3) Andrew HBXX-6516DS-A2M Panel Antennas (AWS) (3) ALU RRH Units (AWS) (1) Raycap DB-T1-6Z-8AB-0Z Distribution Box (AWS)</p> | <p>Verizon (Proposed)</p> | <p>@ 130'</p> |
| <p>(3) Andrew HBXX-6516DS-A2M (PCS) Panel Antennas (3) ALU RRH Units (PCS)</p> | | |

The results of an initial analysis indicated the existing tower structure did not have enough capacity for the proposed loading conditions stated above. The tower structure requires modifications shown on SK-1 through SK-3. Once the modifications indicated on sheets SK-1 through SK-3 are performed, the modified structure is considered structurally adequate with the wind load classification specified above with the existing and proposed antenna loading.

The tower deflection (sway) is 0.69 degrees and the tower rotation (twist) is 0.03 degrees. These figures are below the Connecticut State Police specification of 0.75 degrees for deflection (sway) and (rotation) twist.

1. **EXECUTIVE SUMMARY** (*continued*)

This analysis is based on:

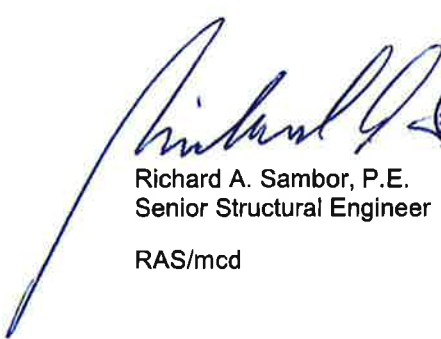
- 1) The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- 2) Member sizes and tower geometry of the outer tower taken from manufacturers drawings prepared by Rohn Industries, Inc., file number 28325, dated December 28, 1992.
- 3) Member sizes and tower geometry of the inner tower taken from design calculations and drawings prepared by Towertek Industries Inc., signed and sealed May 9, 2002.
- 4) Foundation modifications taken from drawings prepared by Walker Engineering Incorporated, Job number 0206-237R2, signed and sealed November 26, 2002.
- 5) Antenna inventory provided by the Connecticut State Police via email on February 14 2014.
- 6) Proposed Verizon Wireless installation taken from RFDS dated June 6, 2014.
- 7) Previous structural analysis performed by URS Corporation on behalf of Verizon Wireless, project number VZ5-182 / 36917431, signed and sealed September 23, 2014.
- 8) Tower Site visit performed by URS Corporation, dated October 31, 2014.
- 9) Antenna inventory as specified in section 2 and 6 of this report.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The contractor shall field verify the antenna and mount configuration used, as well as the physical condition of the tower members and connections. The engineer is to be notified in writing immediately if any of the information in the Structural Analysis is found to be other than specified.

If you should have any questions, please call.

Sincerely,

URS Corporation AES


Richard A. Sambor, P.E.
Senior Structural Engineer

RAS/mcd



2. INTRODUCTION

The subject tower is located off of Butternut Hollow Road in Greenwich, Connecticut. The original outer structure is a self-supporting three-legged 180' steel tapered lattice tower manufactured by Rohn Industries with a Stack-N-Bolt system installed inside the original tower, designed by Towertek.

The existing structure supports numerous communication antennas. The inventory is summarized below:

| Antenna Type | Carrier | Mount | Centerline Elevation / Leg | Cable |
|--|-----------------------------------|---|-----------------------------------|---|
| (3) 6' HP Dish | CSP 75 to 77 (reserved) | Dish Mount | 180 / ABC | N/A |
| (1) PD-420 | NEU – 55 (existing) | 3' Stand-Off | 180 / A | (1) 7/8" |
| (1) DB-583 | TOG – 5 (existing) | <i>Shared with Above</i> | 180 / A | (1) 1-5/8" |
| (1) Scala OGT9-806N (1) Sinclair SC479- HF1LDF (1 upright & 1 inverted) | CSP - 1 & 3 (existing) | 3' Stand-Off | 180 / B | (2) 1-5/8" |
| (2) Sinclair SC479- HF1LDF (inverted) (1) TMA | CSP 2, 4 & 74 (existing) | 3' Stand-Off | 180 / C | (2) 1-5/8" (1) 1/2" |
| (1) PD-420 | NEU – 20 (existing) | <i>Shared with Above (Omni @ 180)</i> | 178 / A | (1) 7/8" |
| 6' HP Dish with Radome | TOG – 7 (existing) | Dish Mount | 177 / B | (1) Elliptical Cable |
| (1) Sinclair SC479- HF1LDF | CSP – 67 (existing) | Leg Mount | 176 / C | (1) 1-5/8" |
| 6' Dish | CSP – 31 (existing) | Dish Mount | 176 / A | (1) WEP65 |
| DB-586-Y | TOG - 6 (existing) | Leg Mounted | 174 / A | (1) 1-5/8" |
| (1) DB-586-Y | NEU-19 (existing) | Leg Mounted | 167 / A | (1) 7/8" |
| (1) AP1185 | Stamford 63 (existing) | 3' Arm | 165 / A | (1) 1-1/4" |
| (1) AP1185 (1) TMA | Stamford 64 & 65 (existing) | 3' Arm | 160 / A | (1) 1-1/4" (1) 3/8" |
| Gabriel GLF6-940 | SPD - 9 (existing) | Dish Mount | 160 / A | (1) EW90 |
| (3) Sinclair SC-479- HF1LDF (1 upright, 2 inverted) (1) TMA | CSP 70 to 73 (existing) | 3' Stand-Off | 160 | (3) 1-5/8" (1) 1/2" |
| (6) Powerwave 7770 (12) TMAs (3) Powerwave P65-16- XLH-RR (6) Ericsson RRU (1) Raycap Surge Suppressor | AT&T (existing) | Side Arm | 150 / ABC | (12) 1-5/8" (1) Fiber Optic Cable (2) DC Cables |

| Antenna Type | Carrier | Mount | Centerline Elevation / Leg | Cable |
|--|---------------------------|----------------------|-----------------------------------|---|
| (1) Kreco CO41AN | NEU – 18 (existing) | 3' Stand-off | 143 / A | (1) 7/8" |
| (3) EMS RR901700DP (6) TMA's | T-Mobile (existing) | Face Mounted | 137 / ABC | (6) 1-5/8" (1) Fiber Optic Cable |
| (1) Celwave PD1142 | CSP – 21 (existing) | Shared with Above | 135 / B | (1) 7/8" |
| (1) Celwave PD1142 | NEU – 17 (existing) | Shared with Above | 135 / B | (1) 1-5/8" |
| (3) Andrew HBXX-6516DS-A2M Panel Antennas (AWS) (3) ALU RRH Units (AWS) (1) Raycap DB-T1-6Z-8AB-0Z Distribution Box (AWS) (3) Andrew HBXX-6516DS-A2M (PCS) Panel Antennas (3) ALU RRH Units (PCS) | Verizon (Proposed) | Shared with Below | 130 / ABC | See Below Cables |
| (3) SLCP 2x6014 Panels (6) Andrew DB844H80-XY Panels (6) Diplexers | Verizon (existing) | Boom Gate (existing) | 130 / ABC | (12) 1 5/8" (1) 1-5/8" Fiber Optic Cable |
| (3) APXVSP18-C Panel Antennas (6) RRH | Sprint (existing) | Boom Gate (existing) | 117 / ABC | (3) Hybriflex Cables |
| (1) PD1142 | NEU – 17 (existing) | 3' Stand-off | 115 / A | (1) 7/8" |
| (1) PD1142 | CSP – 66 (existing) | Leg Mounted | 80 / A | (1) 7/8" |
| (1) 10' Dipole | DOT – 56 (existing) | 3' Arm | 80 / B | (1) 7/8" |
| (1) PD-1142 | DEP – 54 (existing) | Leg Mounted | 80 / C | (1) 7/8" |
| (1) GPS | Sprint - 69 (existing) | Leg Mounted | 62 / B | (1) 1/2" |
| (1) GPS (TMG-26N) | Verizon - 68 (existing) | Leg Mounted | 60 / C | (1) 1/2" |

This structural analysis and evaluation of the communications tower was performed by URS Corporation AES, a subsidiary of AECOM, for Verizon Wireless. The purpose of this analysis was to investigate the structural integrity of the modified tower with its existing and proposed antenna loads. The analysis was also conducted to evaluate twist (rotation), sway (deflection), and stress on the tower.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

The structural analysis was done in accordance with the 2005 Connecticut State Building Code, TIA/EIA-222-F—Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, and the American Institute of Steel Construction (AISC) Manual of Steel Construction—Allowable Stress Design (ASD).

The analysis was conducted using PLS-Tower. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA.

Load Condition 1 = 90 mph (fastest mile) Wind Load + Tower Dead Load

Load Condition 2 = 90 mph (fastest mile) Wind Load (with ice) + Ice Load + Tower Dead Load

The TIA/EIA standard permits one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For purposes of this analysis, in computing the load capacity the allowable stresses of the tower members were increased by one-third.

4. FINDINGS AND EVALUATION

The stresses on the tower structure were evaluated to compare with the allowable stress in accordance with AISC. The results of an initial analysis indicated that the existing tower did not have enough capacity to support the proposed loading conditions. The tower structure requires modifications shown on SK-1 through SK-3. Once the modifications indicated on sheets SK-1 through SK-3 are performed, the modified structure is considered structurally adequate with the wind load classification specified with the existing and proposed antenna loading noted herein. See the below tables for tower capacity and tower deflection (sway) and rotation (twist) figures:

Tower Twist & Sway 90 mph concurrent with ice:

| Component | Allowable | Actual |
|------------------|------------------|---------------|
| Twist | 0.75° | 0.03° |
| Sway | | 0.69° |

Proposed Tower Component Stress vs Capacity Summary

| Component | Component Size | Controlling Member | Stress (% Capacity) | Pass/Fail |
|---------------------------|----------------------------------|-------------------------------------|----------------------------|------------------|
| Rohn Diagonal | L2.5x2.5x3/16 | Rohn-DC21 | 95.45 | Pass |
| Modified Rohn Leg | Pipe 6 SCH 40 w/ 1/4" Bent Plate | Rohn-LF1P | 80.37 | Pass |
| Rohn Horizontal | L1.75x1.75x3/16 | Rohn-H22 | 48.26 | Pass |
| Interior Tower Diagonal | L5x5x5/8 | SNB-DI11 | 92.81 | Pass |
| Interior Tower Leg | Pipe 8 SCH 80 (Extra Strong) | SNB-LH2P | 91.58 | Pass |
| Interior Tower Horizontal | Pipe 4x0.494 (Pipe 4 XXS) | SNB-H9fP | 9.55 | Pass |
| Tower Connection | A325 Bolt | 3/4" Bolt | 74.9 | Pass |
| Foundation | 36.5' Square | Overtopping Moment (F.S. = 2.0 min) | 2.07 / 96.62 | Pass |

Notes:

1. "SNB" member designations under the "Controlling Member" section of the above table refer to the interior tower members in the PLS-Tower analysis program.
2. "F.S." refers to the Factor of Safety of the tower foundation to resist the tower from turning over by a multiplied value of 2.0, as required by the Connecticut State Building Code.

5. CONCLUSIONS

The results of an initial analysis indicated the existing tower structure did not have enough capacity for the proposed loading conditions stated above. The tower structure requires modifications shown on SK-1 through SK-3. Once the modifications indicated on sheets SK-1 through SK-3 are performed, the modified structure is considered structurally adequate with the wind load classification specified above with the existing and proposed antenna loading.

The tower deflection (sway) is 0.69 degrees and the tower rotation (twist) is 0.03 degrees. These figures are below the Connecticut State Police specification of 0.75 degrees for deflection (sway) and (rotation) twist.

Limitations/Assumptions:

This report is based on the following:

- A. Tower is properly installed and maintained.
- B. All members and their geometry are as specified in the original manufacturer drawings and are in good condition.
- C. All required members are in place.
- D. All bolts are in place and are properly tightened.
- E. Tower is in plumb condition.
- F. All member protective coatings are in good condition.
- G. All tower members were properly designed, detailed, fabricated, installed, and have been properly maintained since erection.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

- A. Adding antennas
- B. Removing/replacing antennas
- C. Adding coaxial cables

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

Ongoing and Periodic Inspection and Maintenance:

After the Contractor has successfully completed the installation and the work has been accepted, the owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA/EIA-222-F for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. According to TIA/EIA-222-F section 14.1, Note 1: It is recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading conditions.

6. ANALYSIS DATA

TOWER REINFORCEMENT DRAWINGS SK-1 THROUGH SK-3

GENERAL CONSTRUCTION NOTES

- ALL WORK SHALL COMPLY WITH THE CONNECTICUT STATE BUILDING AND LIFE SAFETY CODES, SUPPLEMENTS AND AMENDMENTS.
- CONTRACTOR IS TO REVIEW ALL DRAWINGS AND NOTES IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUB-CONTRACTORS AND ALL RELATED PARTIES. THE SUB-CONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
- CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON DRAWINGS OR WRITTEN IN SPECIFICATIONS.
- CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
- CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION AND ELECTRICAL SUB-CONTRACTORS SHALL PAY FOR THEIR PERMITS.
- CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS ON SITE AT ALL TIMES AND ENSURE THE DISTRIBUTION OF NEW DRAWINGS TO SUB-CONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. CONTRACTOR SHALL FURNISH 'AS-BUILT' SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
- INSTALLATION OF THIS WIRELESS COMMUNICATIONS EQUIPMENT SITE REQUIRES WORK IN THE IMMEDIATE VICINITY OF EXISTING OPERATING TELECOMMUNICATION SYSTEMS. THE CONTRACTOR SHALL PROVIDE AND COORDINATE THE METHODS OF PROTECTION WITH THE VARIOUS TELECOMMUNICATION CARRIERS AND THE TOWER OWNER. THERE SHALL BE NO INTERRUPTION OF OPERATION WITHOUT TIMELY COORDINATION WITH AND APPROVAL BY THE VARIOUS COMMUNICATIONS OPERATORS INCLUDING THE CONNECTICUT STATE POLICE.
- ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS FOR ANY CONDITION PER MFR'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR ARCHITECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
- CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ARCHITECT FOR REVIEW. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTAL TO THE ARCHITECT FOR REVIEW.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA. SUBMIT ANY DISCREPANCIES FROM THE DRAWINGS TO THE ARCHITECT.
- THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURE AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.
- CONTRACTOR TO CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO VERIFY AND IDENTIFY THE EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES AND OBSTRUCTIONS IDENTIFIED PRIOR TO COMMENCING WORK IN THE CONTRACT AREA.
- CONTRACTOR SHALL COMPLY WITH OWNER ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.
- DIMENSIONS OF EXISTING TOWER ARE BASED ON MANUFACTURER'S DRAWINGS PREPARED BY ROHN INDUSTRIES, INC., DATED DECEMBER 1992, AND ARE NOT GUARANTEED. CONTRACTOR SHALL TAKE FIELD DIMENSIONS AS NECESSARY TO ASSURE PROPER FIT OF ALL FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENT ARE SUBMITTED FOR REVIEW, DIMENSIONS ARE PROVIDED FOR THE ENGINEER'S REFERENCE ONLY.
- TOWER INVENTORY IS BASED ON INFORMATION OBTAINED BY CONNECTICUT STATE POLICE DATED FEBRUARY 2014 AND INFORMATION OBTAINED FROM VERIZON WIRELESS DATED JUNE 2014.
- CONTRACTOR TO VERIFY REQUIRED CLEARANCES INCLUDING BUT NOT LIMITED TO EXISTING BUILDINGS, EQUIPMENT PADS AND SHELTERS PRIOR TO COMMENCING WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. NO MEMBER OF THE TOWER SHALL BE LEFT DISCONNECTED FOR THE NEXT WORKING DAY. THE CONTRACTOR SHALL BE AWARE OF WEATHER AND WIND CONDITIONS AND NOT PERFORM MEMBER REPLACEMENT IN A WIND.

STRUCTURAL NOTES

STRUCTURAL STEEL MATERIAL:

STRUCTURAL STEEL BEAMS, CHANNELS, PLATES..... A36
 STRUCTURAL ANGLES:
 ANGLE SIZE 2-1/2"x2-1/2"x1/4" AND SMALLER A36
 ANGLE SIZE GREATER THAN 2-1/2"x2-1/2"x1/4"..... A 572 Gr. 50
 EXISTING TOWER LEG ROHN PIPE A 572-Gr. 50
 STRUCTURAL STEEL SHALL CONFORM TO ALL THE REQUIREMENTS OF THE ASTM SPECIFICATION, AS REFERENCED IN THE CODE.

UNLESS OTHERWISE NOTED, ALL STEEL WILL BE GALVANIZED IN ACCORDANCE WITH ASTM 123 AFTER FABRICATION. TOUCH UP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCH-UP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL STEEL WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. SUBMIT 2 SETS OF PRINTS FOR THE ENGINEER REVIEW.

MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.

THE OMISSION OF ANY MATERIAL THAT WAS SHOWN ON THE CONTRACT DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF PROVIDING THE SAME.

CONNECTIONS / FIELD ASSEMBLY:

BOLTED CONNECTIONS: UNLESS OTHERWISE NOTED, ALL JOINTS ARE SLIP CRITICAL TYPE, REQUIRING 5/8" DIA, A325-N BOLTS, A563 NUTS AND F436 WASHERS, ALL GALVANIZED. BEVELED WASHERS SHALL BE USED ON BEAM FLANGES HAVING A SLOPE GREATER THAN 1:20.

STRUCTURE IS DESIGNED TO BE LEVEL AND PLUMB, SELF-SUPPORTING AND STABLE AFTER WORK IS COMPLETED.

COMMENCEMENT OF WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.

INSPECTIONS:

SPECIAL INSPECTIONS ARE REQUIRED PER THE CODE FOR STRUCTURAL STEEL WORK.

OWNER WILL SUPPLY THE SERVICES OF A SPECIAL INSPECTOR AND TESTING AGENTS AS REQUIRED. CONTRACTOR SHALL COORDINATE INSPECTIONS OF FABRICATOR'S AND ERECTOR'S WORK AND MATERIALS TO MEET THE REQUIREMENTS OF THE STATEMENT OF SPECIAL INSPECTIONS FOR THIS PROJECT.

COPIES OF TESTING AND INSPECTION REPORTS WILL BE PROVIDED TO THE OWNER, BUILDING OFFICIAL, ENGINEER OF RECORD AND CONTRACTOR.

PROJECT NO.
36917431
 Designed by:
MCD
 Drawn by:
KAP
 Checked by:
KAB
 Approved by:
RAS

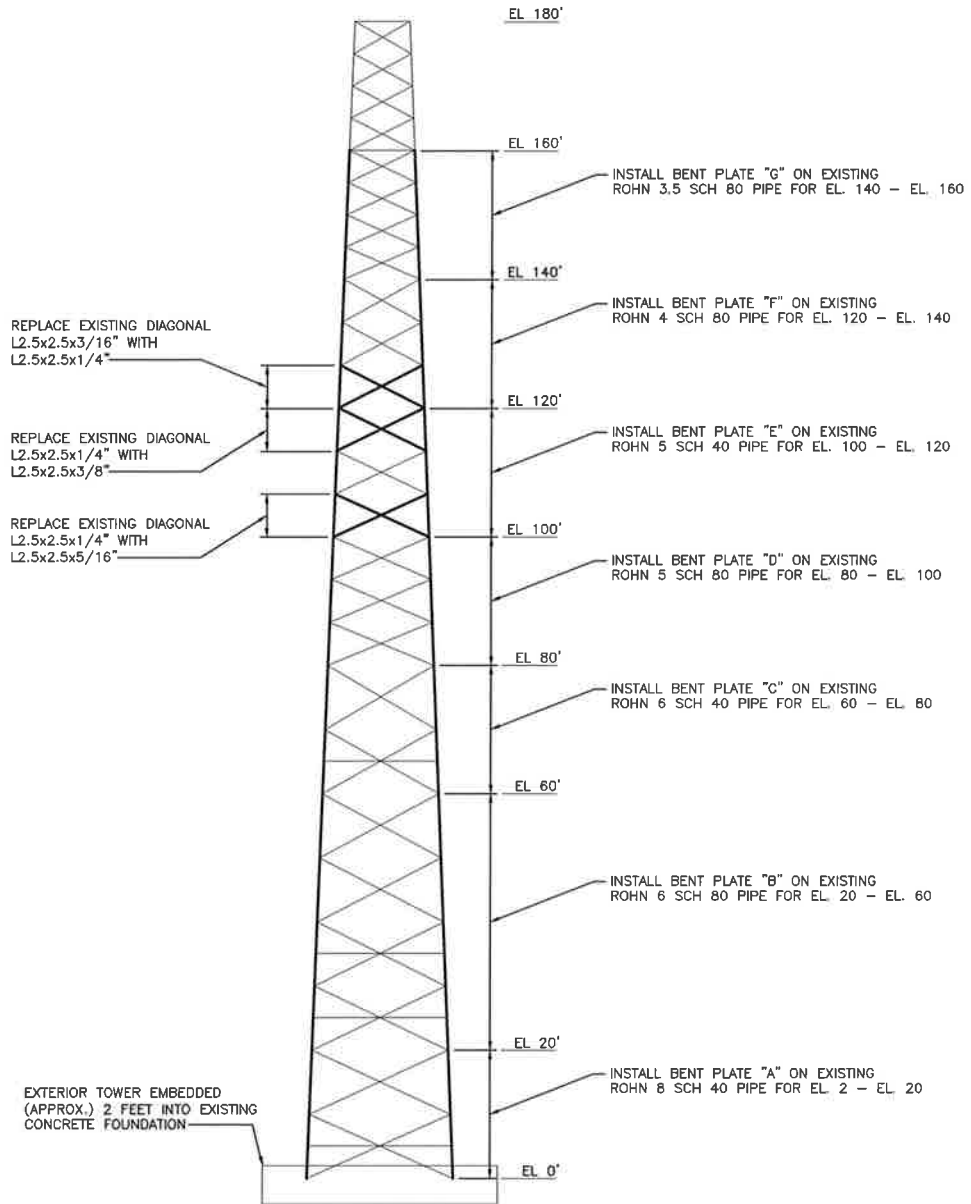
AECOM
 500 ENTERPRISE DRIVE
 ROCKY HILL, CONNECTICUT
 (860)-529-8882


 BUTTERNUT HOLLOW ROAD
 SITE ADDRESS: GREENWICH, CONNECTICUT 06831

| REV. | DATE: | DESCRIPTION |
|------|-------|-------------|
| | | |
| | | |
| | | |

Scale: AS NOTED Date: 01/30/15
 Job No. VZ5-182 File No. Dwg. 1 of 3

Dwg. No.
SK-1
 Dwg. 1 of 3



1 TOWER ELEVATION
 SK-2 SCALE: 1" = 30'-0"

NOTE:
 THE EXISTING TOWER STRUCTURE IS COMPRISED OF AN OUTER TOWER AND AN INNER TOWER. THE WORK TO REINFORCE THE EXISTING TOWER STRUCTURE IS REQUIRED ON THE OUTER TOWER ONLY. THE INNER TOWER IS NOT SHOWN FOR CLARITY.

PROJECT NO.
36917431
 Designed by:
MCD
 Drawn by:
KAP
 Checked by:
KAB
 Approved by:
RAS

AECOM
 500 ENTERPRISE DRIVE
 ROCKY HILL, CONNECTICUT
 (860)-529-8882

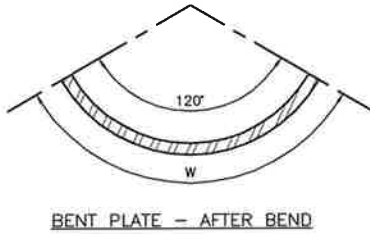
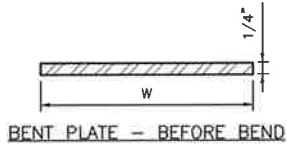


SITE ADDRESS:
 BUTTERNUT HOLLOW ROAD
 GREENWICH, CONNECTICUT 06831

| REV. | DATE: | DESCRIPTION |
|------|-------|-------------|
| | | |
| | | |
| | | |

Scale: AS NOTED Date: 01/30/15
 Job No. VZ5-182 File No. Dwg. 2 of 3

Dwg. No.
SK-2

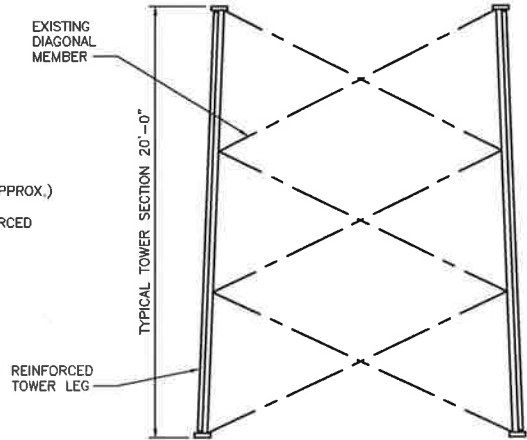


| | WIDTH "W" (in.) |
|--------------|--------------------|
| BENT PLATE G | 4.500 |
| BENT PLATE F | 5.000 |
| BENT PLATE E | 6.1250 |
| BENT PLATE D | 6.1250 |
| BENT PLATE C | 7.25 |
| BENT PLATE B | 7.25 |
| BENT PLATE A | 9.3125 |

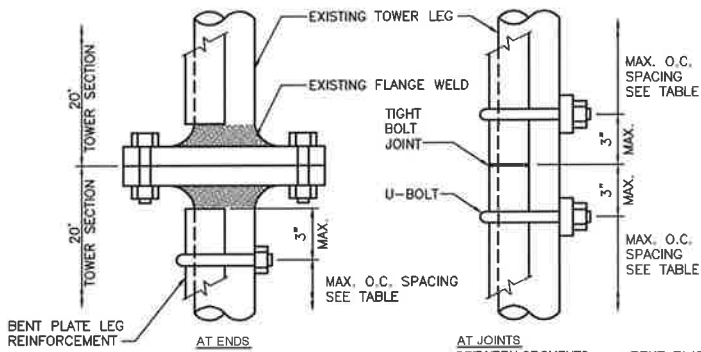
| ELEVATION | MINIMUM # CLAMPS / 20' SECTION | MAXIMUM SPACING (IN.) |
|-----------|-----------------------------------|--------------------------|
| 160 - 140 | 20 / LEG | 12 |
| 140 - 120 | 18 / LEG | 13.25 |
| 120 - 100 | 18 / LEG | 13.25 |
| 100 - 80 | 18 / LEG | 13.25 |
| 80 - 60 | 12 / LEG | 20 |
| 60 - 40 | 12 / LEG | 20 |
| 40 - 20 | 12 / LEG | 20 |
| 20 - 0 | 12 / LEG | 20 |

NOTE:
PLATE SIZES ARE MINIMUM WIDTHS FOR BENDING OF 20' LONG (APPROX.) SEGMENTS CONSISTING OF 50 ksi STEEL (MINIMUM), FULL LENGTH SEGMENTS ARE NOT REQUIRED, HOWEVER, LEGS SHALL BE REINFORCED WITH THE FEWEST NUMBER OF SEGMENTS POSSIBLE.

4 BENT PLATE DETAIL
SK-3 SCALE: N.T.S.



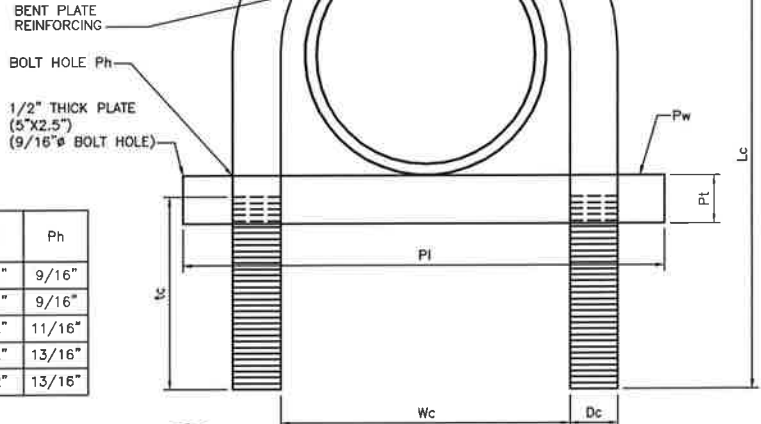
3 LEG REINFORCEMENT AT TOWER SECTION
SK-3 SCALE: N.T.S.



2 REINFORCEMENT DETAIL
SK-3 SCALE: N.T.S.

NOTE: BENT PLATE LEG REINFORCING SHALL BE PLACED AS CLOSE TO EXISTING FLANGE WELD AS POSSIBLE.

| TOWER LEG DIAMETER (in.) | ELEVATION | Dc | Lc | Wc | tc | Pl | Pw | Pt | Ph |
|--------------------------|-------------|------|---------|---------|----|--------|--------|------|--------|
| 4 O.D. | 140' - 160' | 1/2" | 5 1/2" | 4 1/8" | 2" | 6 1/2" | 2 1/2" | 1/2" | 9/16" |
| 4.5 O.D. | 120' - 140' | 1/2" | 5 3/4" | 4 9/16" | 2" | 7" | 3" | 1/2" | 9/16" |
| 5.563 O.D. | 80' - 120' | 5/8" | 7" | 5 9/16" | 2" | 8" | 3" | 1/2" | 11/16" |
| 6.625 O.D. | 20' - 80' | 3/4" | 8 3/4" | 6 3/4" | 3" | 10" | 3" | 1/2" | 13/16" |
| 8.625 O.D. | 0' - 20' | 3/4" | 10 1/4" | 8 3/4" | 3" | 12" | 3" | 1/2" | 13/16" |



1 U-BOLT FOR LEG REINFORCEMENT
SK-3 SCALE: 6" = 1'-0"

NOTES:
U-BOLT DISTANCE FROM END OF BENT PLATE SHALL BE 3" (MAX.) FROM END, U.N.O. U-BOLT MATERIAL SHALL BE (AT MINIMUM) GRADE 2 ASTM J429 HOT DIPPED GALVANIZED.

BENT PLATE LEG REINFORCEMENT SHALL HAVE ENDS BUTTED AGAINST EACH OTHER TO MINIMIZE GAPS BETWEEN THE REINFORCEMENT. BENT PLATE LEG REINFORCING SHALL BE, AT MINIMUM, EQUIVALENT TO THE DETAILS SHOWN.

PROJECT NO.
36917431
Designed by:
MCD
Drawn by:
KAP
Checked by:
KAB
Approved by:
RAS

AECOM
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
(860)-529-8882

verizon wireless
SITE ADDRESS:
BUTTERNUT HOLLOW ROAD
GREENWICH, CONNECTICUT 06831

REV. DATE: DESCRIPTION
Scale: AS NOTED Date: 01/30/15
Job No. VZ5-182 File No.

Dwg. No.
SK-3
Dwg. 3 of 3

TOWER LEG REINFORCEMENT - CALCULATION DATA

Properties 1/4" Bent Plate Simulated 120° Bent Pipe:

(Ref.)

Exp-1 (L8 = P8 Sch 40):

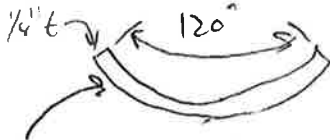
$$A = 2.5248 \text{ in}^2$$

$$I_x = 1.0554 \text{ in}^4$$

$$I_y = 13.4503 \text{ in}^4$$

$$\rightarrow r_x = \sqrt{I_x/A} = 0.6758 \text{ in (governs)}$$

$$\rightarrow r_y = \sqrt{I_y/A} = 2.4053 \text{ in}$$



Arc Length = 9.299 in

Exp-2 (L7 = P6 Sch 80):

$$A = 1.8012 \text{ in}^2$$

$$I_x = 0.4937 \text{ in}^4$$

$$I_y = 6.2587 \text{ in}^4$$

$$\rightarrow r_x = \sqrt{I_x/A} = 0.5235 \text{ in (governs)}$$

$$\rightarrow r_y = \sqrt{I_y/A} = 1.8641 \text{ in}$$



Arc Length = 7.2047 in

Exp-3 (L6 = P6 Sch 40):

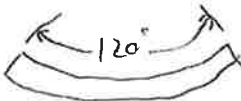
$$A = 1.7999 \text{ in}^2$$

$$I_x = 0.4926 \text{ in}^4$$

$$I_y = 6.2451 \text{ in}^4$$

$$\rightarrow r_x = \sqrt{I_x/A} = 0.5231 \text{ in (governs)}$$

$$\rightarrow r_y = \sqrt{I_y/A} = 1.8627 \text{ in}$$



Arc Length = 7.1995 in

Exp-4 (L5 = P5 Sch 80):

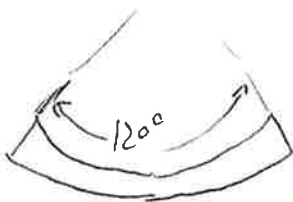
$$A = 1.5218 \text{ in}^2$$

$$I_x = 0.2995 \text{ in}^4$$

$$I_y = 3.7770 \text{ in}^4$$

$$\rightarrow r_x = \sqrt{I_x/A} = 0.4436 \text{ in (governs)}$$

$$\rightarrow r_y = \sqrt{I_y/A} = 1.5754 \text{ in}$$

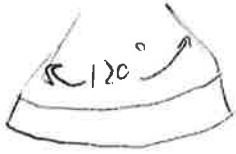


Arc Length = 6.0874 in

Region

EXP-5 (L4 = P5 sch 40):

100'-120'



$$A = 1.5218 \text{ in}^2$$

$$I_x = 0.2995 \text{ in}^4 \rightarrow r_x = \frac{0.4436 \text{ in}}{\text{(governs)}}$$

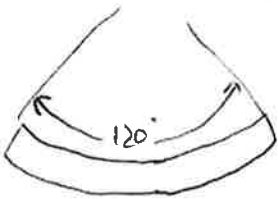
$$I_y = 3.770 \text{ in}^4 \rightarrow r_y = 1.5754 \text{ in}$$

arc length $\approx 6.0874 \text{ in}$

Region

EXP-6 (L3 = P4 sch 80):

120'-140'



$$A = 1.2435 \text{ in}^2$$

$$I_x = 0.1650 \text{ in}^4 \Rightarrow r_x = \sqrt{I_x/A} = 0.3643 \text{ in (governs)}$$

$$I_y = 2.0627 \text{ in}^4 \Rightarrow r_y = \sqrt{I_y/A} = 1.2879 \text{ in}$$

arc length $\approx 4.9742 \text{ in}$

Region

EXP-7 (L2 = P3.5 sch 80):

140'-160'

~~110'~~



$$A = 1.1126 \text{ in}^2$$

$$I_x = 0.1191 \text{ in}^4 \rightarrow r_x = \sqrt{I_x/A} = 0.3272 \text{ in (governs)}$$

$$I_y = 1.4785 \text{ in}^4 \rightarrow r_y = \sqrt{I_y/A} = 1.1528 \text{ in}$$

④

arc length $\approx 4.4506 \text{ in}$

Calculate effective distance of clamp for reinforced leg;

- For the region of 0'-20':

- Use 1/4" bent plate (120°)

Properties:

- Material = 50ksi (min)
- Area = 2.3248 in²
- I_{x1} = 1.0554 in⁴ → $r_x = \sqrt{\frac{I_x}{A}} = 0.6738$ in (governs)
- I_y = 13.4503 in⁴ → $r_y = \sqrt{\frac{I_y}{A}} = 2.4053$ in

- Consider leg effective length = 10ft = 120 in

• Compare property of existing leg against the reinforcing bent plate:

- Leg Properties: (RCHN 8 (8SCH 40))

$K = 1.0$

$L = 120$ in

$r = 2.94$ in

$\frac{KL}{r} = \frac{120 \text{ in}}{2.94 \text{ in}} = 40.8163$

• Consider weaker radius of gyration for analysis

clamps (1/2" ϕ): $\frac{KL / (n \text{ clamp} - 1)}{r_{weak}} \rightarrow \frac{(1.0)(120 \text{ in}) / (6 - 1)}{0.6738 \text{ in}} = 35.6189 < 40.8$ (OK)

Result:

- Because the local (KL/r) ratio is less than the existing (KL/r) ratio, the use of 6 clamps at a maximum spacing of 20 inches shall be a minimum requirement for reinforcing leg installation.

Calculate effective distance of clamp for reinforced leg:

- For the region of 20'-60':

- Use 1/4" bent plate (120°)

Properties:

- Material = 50 ksi (min.)

- Area = 1.8012 in²

- $I_x = 0.14937 \text{ in}^4 \rightarrow r_x = \sqrt{I_x/A} = 0.5235 \text{ in (governs)}$

- $I_y = 6.2587 \text{ in}^4 \rightarrow r_y = \sqrt{I_y/A} = 1.8641 \text{ in}$

- Consider leg effective length = 10ft = 120 in

- Compare property of existing leg against the reinforcing bent plate:

- Leg properties: (R11N6EH (6 Sch 80))

$k = 1.0$

$L = 120 \text{ in}$

$r = 2.19 \text{ in}$

$$\frac{kL}{r} = \frac{(1)(120)}{2.19} = 54.7945$$

- Consider weaker radius of gyration for analysis:

Clamps (1/2" ϕ): $\frac{kL / (Clamps - 1)}{r_{weak}} \rightarrow \frac{(1)(120 \text{ in}) / (6 - 1)}{0.5235 \text{ in}} = 45.8453 < 54.7945$
(OK)

Result:

- Because the local (kL/r) ratio is less than the existing (kL/r) ratio, the use of 6 clamps at a maximum spacing of 20 inches shall be a minimum requirement for reinforcing leg installation.

Calculate effective distance of Clamp for reinforced legs:

- For the region 60'-90':

- Use 1/4" bent plate (12C")

Properties:

- Material = 50ksi (min.)
- Area = 1.7999 in²
- I_x = 0.4926 in⁴ → r_x = √(I_x/A) = √(0.4926 / 1.7999) = 0.5231 in (governs)
- I_y = 6.2451 in⁴ → r_y = √(I_y/A) = √(6.2451 / 1.7999) = 1.8627 in

- Consider leg effective length = 12ft = 120 in

• Compare property of existing leg against the reinforcing bent plate:

- Leg properties: (R0HN6 (6SCH40))

K = 1.0

L = 120 in

r = 2.25 in

$$\frac{KL}{r} = \frac{(1)(120)}{2.25} = 53.3333$$

• Consider weaker radius of gyration for analysis:

Clamps (1/2" Ø): $\frac{KL / (n_{clamps} - 1)}{r_{weak}} \rightarrow \frac{(1)(120 in) / (6 - 1)}{0.5231 in} = 45.8803 < 53.3333$ (OK)

Result:

- Because the local (KL/r) ratio is less than the existing (KL/r) ratio, the use of 6 clamps at a maximum spacing of ≥ 20 inches shall be a minimum requirement for reinforcing leg installation.

Calculate effective distance of clamp for reinforced leg:

- For the region 80'-100':

- Use 1/4" bent plate (120°)

Properties:

• Material = 50ksi (min.)

• Area = 1.5218 in²

• $I_x = 0.2995 \text{ in}^4 \rightarrow r_x = \sqrt{I_x/A} = 0.4436 \text{ in (governs)}$

• $I_y = 3.7770 \text{ in}^4 \rightarrow r_y = \sqrt{I_y/A} = 1.5754 \text{ in}$

- Consider leg effective length = $\frac{2cF_t}{3} = 6.667 F_t = 80 \text{ in}$

• Compare property of existing leg against the reinforcing bent plate:

- Leg properties: (RCHN 5EH(5SCH80))

$K = 1.0$

$L = 80 \text{ in}$

$r = 1.574 \text{ in}$

$$\frac{KL}{r} = \frac{(1)(80)}{1.574} = 43.4783 \quad \frac{1000}{43} = 43.4783$$

• Consider weaker radius of gyration for analysis:

$$\# \text{clamps } (1/2" \phi); \frac{KL/(\text{clamps}-1)}{r_{\text{weak}}} = \frac{(1)(80)/(6-1)}{0.4436 \text{ in}} = 36.0685 < 43.4783 \quad \text{OK}$$

Result:

- Because the local (KL/r) ratio is less than the existing (KL/r) ratio, the use of 6 clamps at a maximum spacing of 13.25 inches shall be a minimum requirement for reinforcing leg installation.

Calculate effective distance of clamp for reinforced leg:

- For the region 100' - 120' :

- Use 1/4" bent plate (120°)

- Properties:

- Material = 50ksi (min.)
- Area = 1.5218 in²
- $I_x = 0.2995 \text{ in}^4 \rightarrow r_x = \sqrt{I_x/A} = 0.4436 \text{ in}$ (governs)
- $I_y = 3.7770 \text{ in}^4 \rightarrow r_y = \sqrt{I_y/A} = 1.5754 \text{ in}$

- Consider leg effective length = $\frac{2cf_t}{3} = 6.66 \rightarrow f_t = 80 \text{ in}$

- Compare property of existing leg against the reinforcing bent plate:

- Leg Properties: (RCHN 5 (55CH 40))

$K = 1.0$

$L = 80 \text{ in}$

$r = 1.88 \text{ in}$

$$\frac{KL}{r} = \frac{(1)(80)}{1.88} = 42.5532$$

- Consider weaker radius of gyration for analysis:

$$\# \text{ Clamps } (1/2" \text{ } \emptyset): \frac{KL / (\text{clamps} - 1)}{r_{\text{weak}}} = \frac{(1)(80 \text{ in}) / (6 - 1)}{0.4436} = 36.0685 < 42.5532 \text{ OK}$$

Result:

- Because the local (KL/r) ratio is less than the existing (KL/r) ratio, the use of 6 clamps at a maximum spacing of 13.25 inches shall be a minimum requirement for reinforcing leg installation

Calculate effective distance of clamp for reinforced leg:

- For the region 120' - 140':

- Use 1/4" bent plate (120')

- Properties:

• Material = 50 ksi (min)

• Area = 1.2435 in²

• $I_x = 0.1650 \text{ in}^4 \rightarrow r_x = \sqrt{I_x/A} = 0.3643 \text{ in (governs)}$

• $I_y = 2.0627 \text{ in}^4 \rightarrow r_y = \sqrt{I_y/A} = 1.2879 \text{ in}$

- Consider leg effective length = $\frac{2cfr}{5} = 6.667ft = 80 \text{ in}$

• Compare property of existing leg against the reinforcing bent plate:

- Leg Properties (ROHW P4EH (45CH80)):

$K = 1.0$

$L = 80 \text{ in}$

$r = 1.48 \text{ in}$

$$\frac{KL}{r} = \frac{(1)(80)}{1.48} = 54.0541$$

• Consider weaker radius of gyration for analysis:

$$\# \text{ clamps } (\frac{1}{2} \text{ in } \phi): \frac{KL / (n_{\text{clamps}} - 1)}{r_{\text{weak}}} = \frac{(1)(80 \text{ in}) / (6 - 1)}{0.3643 \text{ in}} = 43.9198 < 54.0541 \text{ (OK)}$$

Result:

- Because the local (KL/r) ratio is less than the existing (KL/r) ratio, the use of 6 clamps at a maximum spacing of 13.25 inches shall be a minimum requirement for reinforcing leg installation.

Calculate effective distance of clamp for reinforced leg:

- For the region 140'-160':

- Use 1/4" bent plate (120°)

- Properties:

- Material = 50 ksi (min)
- Area = 1.1126 in²
- $I_x = 0.1191 \text{ in}^4 \rightarrow r_x = \sqrt{I_x/A} = 0.3272 \text{ in (governs)}$
- $I_y = 1.4785 \text{ in}^4 \rightarrow r_y = \sqrt{I_y/A} = 1.1528 \text{ in}$

- Consider property of existing leg against the reinforcing bent plate:

- Leg Properties

- $K = 1.0$
- $L = 60 \text{ in}$
- $r = 1.31 \text{ in}$

Leg effective length = $\frac{20ft}{4} = 5ft = 60 \text{ in}$

$$\frac{KL}{r} = \frac{(1)(60)}{1.31} = 45.8015$$

• Consider weaker radius of gyration for analysis:

clamps (1/2" Ø): $\frac{KL/(clamps-1)}{r_{weak}} = \frac{(1)(60)/(6-1)}{0.3272 \text{ in}} = 36.6748 < 45.8015 \text{ (OK)}$

Result:

- Because the local (KL/r) ratio is less than the existing (KL/r) ratio, the use of 6 clamps at a maximum spacing of 12.0 inches shall be a minimum requirement for reinforcing leg installation.

PLS-TOWER INPUT / OUTPUT SUMMARY

Project Name : VZ5-170 / Verizon Wireless
 Project Notes : Butternut Hollow
 Project File : C:\Users\Michael_Dalickas\Desktop\Greenwich Copy for MOD\all_passing_tower.tow
 Date run : 12:51:17 PM Friday, January 30, 2015
 by : Tower Version 10.62
 Licensed to : URS Connecticut

Successfully performed nonlinear analysis

Unusual number of fixed joints found: 6. Towers normally have from between 1 and 4 fixed joints. ??
 Linear appurtenance "1-5/8" @ 180" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "7/8" @ 180" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1/2" @ 180" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "Elliptical @ 175" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-5/8" @ 175" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "Elliptical @ 170" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "7/8" @ 170" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-1/4" @ 165" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "7/8" @ 165" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "Elliptical @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-1/4" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "3/8" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-5/8" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1/2" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-5/8" @ 140" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "Optic Fiber Cable @ ATT" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "DC Cable @ ATT" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "7/8" @ 145" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-5/8" @ 140" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1-5/8" @ VZW" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "Optic Fiber Cable @ VZW" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "Hybridflex Cables @ Sprint" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "7/8" @ 113" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "7/8" @ 80" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1/2" @ 60" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 Linear appurtenance "1/2" @ 20" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
 The model has 27 warnings. ??

Member check option: TIA/EIA 222-F
 Connection rupture check: ASCE 10
 Crossing diagonal check: ASCE 10 [Alternate Unsupported RLOUT = 1]
 Loads from file: c:\users\michael_dalickas\desktop\greenwich copy for mod\vz5-182.eia

*** Analysis Results:

Maximum element usage is 95.45% for Angle "Rohn-DC21" in load case "W+I 0 deg"

Summary of Joint Support Reactions For All Load Cases:

| Load Case | Joint Label | Long. Force (kips) | Tran. Force (kips) | Vert. Force (kips) | Shear Force (kips) | Tran. Moment (ft-k) | Long. Moment (ft-k) | Vert. Moment (ft-k) | Bending Moment (ft-k) | Found. Usage % |
|-------------|-------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|-----------------------|----------------|
| W+I -90 deg | RohnJP | 9.86 | 1.94 | 19.63 | 10.05 | -0.70 | 3.96 | -0.03 | 4.02 | 0.00 |
| W+I -90 deg | SNB-JP | 22.94 | 3.19 | 19.42 | 23.16 | 0.74 | 6.75 | 0.03 | 6.79 | 0.00 |
| W+I -90 deg | RohnJ1 | 3.00 | 6.68 | 249.25 | 7.33 | 0.79 | -0.63 | 0.01 | 1.01 | 0.00 |
| W+I -90 deg | RohnJ2 | -12.85 | 23.79 | -210.40 | 27.04 | -6.17 | -3.24 | 0.01 | 6.97 | 0.00 |
| W+I -90 deg | SNB-J1 | 1.42 | 5.65 | 296.17 | 5.83 | 0.71 | 0.14 | -0.02 | 0.72 | 0.00 |
| W+I -90 deg | SNB-J2 | -24.36 | 45.27 | -257.64 | 51.41 | -11.15 | -6.77 | -0.01 | 13.04 | 0.00 |
| W+I -60 deg | RohnJP | 0.21 | 1.57 | 149.29 | 1.58 | -0.50 | 2.29 | -0.02 | 2.34 | 0.00 |
| W+I -60 deg | SNB-JP | 6.91 | 2.68 | 175.50 | 7.41 | 0.73 | 3.25 | 0.03 | 3.33 | 0.00 |
| W+I -60 deg | RohnJ1 | -1.33 | 0.52 | 149.16 | 1.42 | 1.78 | -1.49 | 0.02 | 2.32 | 0.00 |
| W+I -60 deg | RohnJ2 | -14.66 | 25.22 | -239.97 | 29.17 | -6.33 | -3.72 | -0.00 | 7.34 | 0.00 |
| W+I -60 deg | SNB-J1 | -5.76 | -4.66 | 175.40 | 7.41 | 3.19 | -0.98 | -0.03 | 3.33 | 0.00 |

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| W+I -60 deg | SNB-J2 | -27.45 | 47.52 | -292.96 | 54.88 | -11.97 | -6.92 | -0.00 | 13.83 | 0.00 |
|---------------|--------|--------|--------|---------|-------|--------|-------|-------|-------|------|
| W+I 0 deg | RohnJP | -11.46 | -0.09 | 302.83 | 11.46 | 0.06 | 0.27 | 0.00 | 0.28 | 0.00 |
| W+I 0 deg | RohnJP | -11.46 | -0.01 | 361.65 | 12.71 | 0.01 | -0.96 | 0.00 | 0.96 | 0.00 |
| W+I 0 deg | RohnJ1 | -11.86 | -16.88 | -122.12 | 20.63 | 4.68 | -3.54 | 0.03 | 5.87 | 0.00 |
| W+I 0 deg | RohnJ2 | -11.70 | 16.97 | -122.24 | 20.61 | -4.73 | -3.45 | -0.02 | 5.85 | 0.00 |
| W+I 0 deg | SNB-J1 | -23.00 | 33.76 | -151.80 | 40.85 | 9.48 | -4.86 | -0.02 | 10.66 | 0.00 |
| W+I 0 deg | SNB-J2 | -22.98 | 33.77 | -151.90 | 40.85 | -9.49 | -4.85 | 0.02 | 10.66 | 0.00 |
| W+I 60 deg | RohnJP | 0.21 | -1.66 | 149.29 | 1.87 | 0.55 | 2.29 | 0.02 | 2.35 | 0.00 |
| W+I 60 deg | SNB-JP | 6.91 | -2.70 | 175.50 | 7.42 | -0.72 | -0.03 | 3.33 | 0.00 | 0.00 |
| W+I 60 deg | RohnJ1 | -14.73 | -25.18 | -239.86 | 29.17 | 6.31 | -3.76 | 0.00 | 7.34 | 0.00 |
| W+I 60 deg | RohnJ2 | -1.25 | -0.48 | 149.05 | 1.34 | -1.81 | -1.44 | -0.01 | 2.31 | 0.00 |
| W+I 60 deg | SNB-J1 | -27.45 | -47.52 | -292.86 | 54.88 | 11.97 | -6.92 | 0.00 | 13.83 | 0.00 |
| W+I 60 deg | SNB-J2 | -27.45 | 47.52 | -292.86 | 54.88 | -11.97 | -6.92 | 0.00 | 13.83 | 0.00 |
| W+I 90 deg | RohnJP | 9.86 | -1.95 | 19.63 | 10.05 | 0.71 | 3.95 | 0.03 | 4.02 | 0.00 |
| W+I 90 deg | SNB-JP | 22.94 | -3.19 | 19.42 | 23.36 | -0.74 | 6.75 | 0.03 | 6.79 | 0.00 |
| W+I 90 deg | RohnJ1 | -12.85 | -23.79 | -210.29 | 27.04 | 6.17 | -3.24 | -0.01 | 6.97 | 0.00 |
| W+I 90 deg | RohnJ2 | 3.00 | -6.68 | 249.14 | 7.32 | -0.79 | -0.63 | -0.01 | 1.01 | 0.00 |
| W+I 90 deg | SNB-J1 | -24.36 | 45.27 | -257.54 | 51.41 | 11.15 | -6.76 | 0.01 | 13.04 | 0.00 |
| W+I 90 deg | SNB-J2 | 1.42 | -5.65 | 296.07 | 5.83 | -0.71 | 0.14 | 0.02 | 0.72 | 0.00 |
| DL + Ice Only | RohnJP | 9.78 | -0.00 | 19.65 | 9.78 | 0.00 | 3.98 | 0.00 | 3.98 | 0.00 |
| DL + Ice Only | SNB-JP | 22.79 | -0.00 | 19.39 | 22.79 | 0.00 | 6.80 | 0.00 | 6.80 | 0.00 |
| DL + Ice Only | RohnJ1 | -4.89 | -8.47 | 19.41 | 9.78 | 3.45 | -1.99 | -0.00 | 3.98 | 0.00 |
| DL + Ice Only | RohnJ2 | -4.89 | 8.47 | 19.41 | 9.78 | -3.45 | -1.99 | -0.00 | 3.98 | 0.00 |
| DL + Ice Only | SNB-J1 | -11.39 | -19.74 | 19.28 | 22.79 | 5.89 | -3.40 | -0.00 | 6.80 | 0.00 |
| DL + Ice Only | SNB-J2 | -11.40 | 19.74 | 19.18 | 22.79 | -5.89 | -3.40 | 0.00 | 6.80 | 0.00 |

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

| Load Case | Support | Origin | Joint | Member | Leg Dir. | Leg Force In Residual Shear | | Residual Shear | | Horizontal | | Total | |
|---------------|---------|---------|-----------|----------|----------|-----------------------------|---------|----------------|----------|------------|---------|--------|--------|
| | | | | | | Force | Dir. | Horizontal | Vertical | Long. | Trans. | Force | Force |
| | | | | | | (kips) | (kips) | (kips) | (kips) | (kips) | (kips) | (kips) | (kips) |
| W+I -90 deg | RohnJP | RohnIaS | Rohn-LI2P | 19.227 | 10.804 | 10.812 | -1.944 | -10.636 | 9.86 | 1.94 | 19.63 | | |
| W+I -90 deg | SNB-JP | SNB-IaS | SNB-LI2P | 18.500 | 23.896 | 23.914 | -3.188 | -23.701 | 22.94 | 3.19 | 19.42 | | |
| W+I -90 deg | RohnJ1 | RohnIaI | Rohn-LI21 | 249.340 | 2.661 | 2.663 | 1.843 | 8.697 | -12.85 | 6.68 | 249.25 | | |
| W+I -90 deg | RohnJ2 | RohnIaI | Rohn-LI22 | -211.303 | 18.719 | 18.734 | -16.593 | 4.409 | 1.42 | 23.79 | -210.40 | | |
| W+I -90 deg | SNB-J1 | SNB-IaI | SNB-LI21 | 296.165 | 6.251 | 6.258 | 4.339 | 19.295 | -24.36 | 5.65 | 296.17 | | |
| W+I -90 deg | SNB-J2 | SNB-IaI | SNB-LI22 | -259.462 | 41.245 | 41.276 | -36.490 | -6.104 | 0.21 | 45.27 | -257.64 | | |
| W+I -60 deg | RohnJP | RohnIaS | Rohn-LI2P | 149.165 | 6.298 | 6.302 | -1.569 | -13.818 | 6.91 | 2.68 | 175.50 | | |
| W+I -60 deg | SNB-JP | SNB-IaS | SNB-LI2P | 175.097 | 14.065 | 14.075 | -2.682 | 4.271 | -1.33 | 0.52 | 149.16 | | |
| W+I -60 deg | RohnJ1 | RohnIaI | Rohn-LI21 | 149.037 | 6.258 | 6.263 | 4.580 | 9.918 | -14.66 | 25.22 | -239.97 | | |
| W+I -60 deg | RohnJ2 | RohnIaI | Rohn-LI22 | -240.937 | 19.679 | 19.695 | -17.015 | 9.209 | -5.76 | -4.66 | 175.40 | | |
| W+I -60 deg | SNB-J1 | SNB-IaI | SNB-LI21 | 174.996 | 14.057 | 14.067 | 10.633 | 21.682 | -27.45 | 47.52 | -292.96 | | |
| W+I -60 deg | SNB-J2 | SNB-IaI | SNB-LI22 | -294.890 | 43.319 | 43.352 | -37.541 | -0.503 | -11.46 | -0.09 | 302.83 | | |
| W+I 0 deg | RohnJP | RohnIaS | Rohn-LI2P | 303.049 | 0.511 | 0.511 | 0.689 | -1.518 | -12.71 | -0.01 | 361.65 | | |
| W+I 0 deg | SNB-JP | SNB-IaS | SNB-LI2P | 361.872 | 1.517 | 1.518 | 0.013 | 9.447 | -11.86 | -16.88 | -122.12 | | |
| W+I 0 deg | RohnJ1 | RohnIaI | Rohn-LI21 | -122.834 | 15.816 | 15.829 | 12.700 | 20.009 | -23.00 | 33.77 | -151.90 | | |
| W+I 0 deg | RohnJ2 | RohnIaI | Rohn-LI22 | -122.955 | 15.794 | 15.806 | -12.789 | 9.289 | -11.70 | 16.97 | -122.24 | | |
| W+I 0 deg | SNB-J1 | SNB-IaI | SNB-LI21 | -153.285 | 34.869 | 34.896 | 28.589 | 19.989 | -22.98 | 33.77 | -151.90 | | |
| W+I 0 deg | SNB-J2 | SNB-IaI | SNB-LI22 | -153.382 | 34.862 | 34.889 | -28.595 | -6.104 | 0.21 | -2.70 | 175.50 | | |
| W+I 60 deg | RohnJP | RohnIaS | Rohn-LI2P | 149.169 | 6.321 | 6.326 | 1.660 | -13.819 | 6.91 | 2.68 | 175.50 | | |
| W+I 60 deg | SNB-JP | SNB-IaS | SNB-LI2P | 175.095 | 14.069 | 14.079 | -2.696 | 9.998 | -14.73 | -25.18 | -239.86 | | |
| W+I 60 deg | RohnJ1 | RohnIaI | Rohn-LI21 | -240.824 | 19.681 | 19.697 | 16.971 | 4.193 | -1.25 | -0.48 | 149.05 | | |
| W+I 60 deg | RohnJ2 | RohnIaI | Rohn-LI22 | 148.921 | 6.237 | 6.242 | -4.623 | 21.692 | -27.45 | 47.52 | -292.86 | | |
| W+I 60 deg | SNB-J1 | SNB-IaI | SNB-LI21 | -294.789 | 43.323 | 43.356 | -37.539 | -0.503 | -11.46 | -0.09 | 302.83 | | |
| W+I 60 deg | SNB-J2 | SNB-IaI | SNB-LI22 | -174.896 | 14.051 | 14.061 | -10.635 | 9.199 | -5.75 | 4.66 | 175.30 | | |
| W+I 90 deg | RohnJP | RohnIaS | Rohn-LI2P | 19.227 | 10.804 | 10.812 | 1.946 | -10.636 | 9.86 | 1.95 | 19.63 | | |
| W+I 90 deg | SNB-JP | SNB-IaS | SNB-LI2P | 18.500 | 23.897 | 23.915 | 3.191 | -23.701 | 22.94 | -3.19 | 19.42 | | |
| W+I 90 deg | RohnJ1 | RohnIaI | Rohn-LI21 | -211.190 | 18.721 | 18.735 | -16.594 | 8.697 | -12.85 | -23.79 | -210.29 | | |
| W+I 90 deg | RohnJ2 | RohnIaI | Rohn-LI22 | 249.228 | 2.660 | 2.662 | -1.842 | 1.922 | 3.00 | 6.68 | 249.14 | | |
| W+I 90 deg | SNB-J1 | SNB-IaI | SNB-LI21 | -259.361 | 41.250 | 41.281 | -36.494 | 19.296 | -24.36 | 45.27 | -257.54 | | |
| W+I 90 deg | SNB-J2 | SNB-IaI | SNB-LI22 | 256.063 | 6.249 | 6.253 | 4.408 | -10.553 | 9.78 | -0.00 | 19.65 | | |
| DL + Ice Only | RohnJP | RohnIaS | Rohn-LI2P | 19.244 | 10.544 | 10.553 | 0.001 | -10.553 | 9.78 | 0.00 | 19.65 | | |
| DL + Ice Only | SNB-JP | SNB-IaS | SNB-LI2P | 18.480 | 23.537 | 23.556 | 0.002 | -23.556 | 22.79 | -0.00 | 19.39 | | |
| DL + Ice Only | RohnJ1 | RohnIaI | Rohn-LI21 | 19.119 | 10.543 | 10.551 | 9.138 | 5.274 | -4.89 | -8.47 | 19.52 | | |

DL + Ice Only RohnJ2 RohnIa2 Rohn-LI22 19.005 10.541 10.549 -9.136 5.274 -4.89 6.47 19.41
DL + Ice Only SNB-J1 SNB-Ia1 SNB-LI21 18.374 23.534 23.552 20.398 11.773 -11.39 -19.74 19.28
DL + Ice Only SNB-J2 SNB-Ia2 SNB-LI22 18.270 23.531 23.549 -20.395 11.773 -11.40 19.74 19.18

EIA Sections Information:

| Section Label | Top Z (ft) | Bottom Z (ft) | Joint Member | Top Count | Bottom Count | Width (ft) | Gross Area (ft ²) | Face Adj Factor | Face Adj Factor | Ar Adj Factor | Dead Load Factor |
|---------------|------------|---------------|--------------|-----------|--------------|------------|-------------------------------|-----------------|-----------------|---------------|------------------|
| A | 180.000 | 160.000 | 36 | 111 | 7.50 | 8.87 | 163.75 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| B | 160.000 | 140.000 | 33 | 93 | 8.87 | 10.23 | 191.05 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| C | 140.000 | 120.000 | 27 | 72 | 10.23 | 11.60 | 218.31 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| D | 120.000 | 100.000 | 27 | 72 | 11.60 | 12.96 | 245.54 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| E | 100.000 | 80.000 | 27 | 72 | 12.96 | 14.32 | 272.78 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| F | 80.000 | 60.000 | 21 | 51 | 14.32 | 15.68 | 300.04 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| G | 60.000 | 40.000 | 21 | 51 | 15.68 | 17.05 | 327.29 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| H | 40.000 | 20.000 | 21 | 51 | 17.05 | 18.41 | 354.57 | 0.9000 | 0.9000 | 0.9000 | 1.000 |
| I | 20.000 | 0.000 | 18 | 39 | 18.41 | 19.78 | 381.92 | 0.9000 | 0.9000 | 0.9000 | 1.000 |

*** Overall summary for all load cases - Usage = Maximum Stress / Allowable Stress
Printed capacities do not include EIA allowable stress increase for wind load cases.
Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

| Group Label | Group Desc. | Angle Type | Group Angle | Steel Strength (ksi) | Max Usage % | Max In Comp. % | Comp. Control Member | Comp. Force (kips) | Comp. Control Load Case | L/R Capacity (kips) | Comp. Shear Capacity (kips) | Comp. Bearing Capacity (kips) | RLX Capacity (kips) | RLY Capacity (kips) | RLZ Capacity (kips) | L/R Length Member (ft) | Curve No. | No. Bolts | Comp. |
|-------------|-------------------|------------|------------------|----------------------|-------------|----------------|----------------------|--------------------|-------------------------|---------------------|-----------------------------|-------------------------------|---------------------|---------------------|---------------------|------------------------|-----------|-----------|-------|
| Rohn-D1 | Rohn Diagonal 1 | SAE | 1.75X1.75X0.1875 | 36.0 | 71.90 | 71.90 | Rohn-DA72 | -2.881W+I -90 deg | 0.000 | 3.005 | 16.200 | 8.156 | 0.500 | 0.500 | 0.500 | 175.53 | 10.034 | 4 | 1 |
| Rohn-D2 | Rohn Diagonal 2 | SAE | 2X2X0.1875 | 36.0 | 91.36 | 91.36 | Rohn-DB61 | -4.658 W+I 0 deg | 0.000 | 3.824 | 16.200 | 8.156 | 0.500 | 0.500 | 0.500 | 166.50 | 10.934 | 4 | 1 |
| Rohn-D3 | Rohn Diagonal 3 | SAE | 2.5X2.5X0.1875 | 36.0 | 95.45 | 95.45 | Rohn-DC21 | -7.585 W+I 0 deg | 0.000 | 5.960 | 16.200 | 8.156 | 0.500 | 0.500 | 0.500 | 150.33 | 12.402 | 4 | 1 |
| Rohn-D4 | Rohn Diagonal 4 | SAE | 2.5X2.5X0.25 | 36.0 | 66.28 | 66.28 | Rohn-DD31 | -5.383W+I 90 deg | 0.000 | 6.092 | 16.200 | 10.875 | 0.500 | 0.500 | 0.500 | 170.80 | 13.977 | 4 | 1 |
| Rohn-D5 | Rohn Diagonal 5 | SAE | 3X3X0.25 | 50.0 | 80.69 | 80.69 | Rohn-DE51 | -9.268W+I 90 deg | 0.000 | 8.615 | 16.200 | 12.187 | 0.500 | 0.500 | 0.500 | 157.99 | 15.589 | 4 | 1 |
| Rohn-D6 | Rohn Diagonal 6 | SAE | 3.5X3.5X0.25 | 50.0 | 82.16 | 82.16 | Rohn-DG11 | -10.366W+I 90 deg | 0.000 | 9.463 | 16.200 | 12.187 | 0.500 | 0.500 | 0.500 | 163.31 | 18.889 | 4 | 1 |
| Rohn-D7 | Rohn Diagonal 7 | Pipe | 4X4X0.25 | 50.0 | 82.40 | 82.40 | Rohn-DI21 | -12.370 W+I 0 deg | 0.000 | 11.259 | 16.200 | 0.000 | 1.000 | 1.000 | 1.000 | 160.41 | 21.254 | 4 | 1 |
| Rohn-L1 | Rohn Leg 1 | Pipe | Pipe3EH | 50.0 | 0.00 | 0.00 | Rohn-LA4P | -15.428 W+I 0 deg | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 |
| Rohn-L2 | Rohn Leg 2 | Pipe | Pipe3EH | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-L3 | Rohn Leg 3 | Pipe | Pipe4EH | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-L4 | Rohn Leg 4 | Pipe | Pipe5TD | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-L5 | Rohn Leg 5 | Pipe | Pipe5EH | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-L6 | Rohn Leg 6 | Pipe | Pipe6EHS | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-L7 | Rohn Leg 7 | Pipe | Pipe6EH | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-L8 | Rohn Leg 8 | Pipe | Pipe8EHS | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-H1 | Rohn Horizontal 1 | SAE | 1.75X1.75X0.1875 | 36.0 | 48.26 | 48.26 | Rohn-H22 | -2.475W+I 90 deg | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | |
| Rohn-D1 | Rohn Diagonal 1 | SAE | 2X2X0.3125 | 36.0 | 10.08 | 10.08 | Rohn-DA82 | -1.775W+I -90 deg | 0.000 | 13.207 | 16.200 | 13.594 | 0.500 | 0.500 | 0.500 | 155.16 | 8.870 | 4 | 0 |
| Rohn-D2 | Rohn Diagonal 2 | SAE | 2X2X0.25 | 36.0 | 19.28 | 18.53 | Rohn-DB81 | -2.148 W+I 0 deg | 0.000 | 8.696 | 16.200 | 10.875 | 0.500 | 0.500 | 0.500 | 171.38 | 7.240 | 4 | 0 |
| Rohn-D3 | Rohn Diagonal 3 | SAE | 3X3X0.5 | 36.0 | 60.06 | 60.06 | Rohn-DD62 | -8.994W+I -90 deg | 0.000 | 11.119 | 16.200 | 13.594 | 0.500 | 0.500 | 0.500 | 127.05 | 8.279 | 4 | 1 |
| Rohn-D4 | Rohn Diagonal 4 | SAE | 3X3X0.5 | 36.0 | 65.53 | 65.53 | Rohn-DE11 | -14.115W+I 90 deg | 0.000 | 27.855 | 16.200 | 21.750 | 0.500 | 0.500 | 0.500 | 140.03 | 11.412 | 4 | 1 |
| Rohn-D5 | Rohn Diagonal 5 | SAE | 4X4X0.5 | 36.0 | 33.87 | 33.87 | Rohn-DF42 | -10.838W+I -90 deg | 0.000 | 39.016 | 24.000 | 26.100 | 0.500 | 0.500 | 0.500 | 121.07 | 11.784 | 4 | 1 |
| Rohn-D6 | Rohn Diagonal 6 | SAE | 4X4X0.625 | 36.0 | 50.98 | 50.98 | Rohn-DH11 | -16.313W+I 90 deg | 0.000 | 39.490 | 24.000 | 32.625 | 0.500 | 0.500 | 0.500 | 119.15 | 15.529 | 1 | 1 |
| Rohn-D7 | Rohn Diagonal 7 | SAE | 5X5X0.625 | 36.0 | 92.81 | 92.81 | Rohn-DI11 | -29.699W+I 90 deg | 0.000 | 66.757 | 24.000 | 32.625 | 0.500 | 0.500 | 0.500 | 132.03 | 17.142 | 4 | 1 |
| Rohn-L1 | Rohn Leg 1 | Pipe | P3-437 | 36.0 | 9.41 | 9.41 | Rohn-LA4P | -9.431 W+I 0 deg | 0.000 | 75.146 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 112.06 | 18.267 | 1 | 1 |
| Rohn-L2 | Rohn Leg 2 | Pipe | P4-494 | 36.0 | 40.13 | 40.13 | Rohn-LC3P | -59.062 W+I 0 deg | 0.000 | 110.397 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.09 | 5.004 | 1 | 0 |
| Rohn-L3 | Rohn Leg 3 | Pipe | Pipe5EH | 36.0 | 71.69 | 71.69 | Rohn-LD3P | -103.491 W+I 0 deg | 0.000 | 108.266 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 56.33 | 6.665 | 1 | 0 |
| Rohn-L4 | Rohn Leg 4 | Pipe | P6-562 | 36.0 | 79.20 | 79.20 | Rohn-LF2P | -201.366 W+I 0 deg | 0.000 | 190.663 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 43.23 | 6.665 | 1 | 0 |
| Rohn-L5 | Rohn Leg 5 | Pipe | Pipe8XS | 36.0 | 91.58 | 91.58 | Rohn-LH2P | -297.736 W+I 0 deg | 0.000 | 243.879 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.86 | 10.008 | 1 | 0 |
| Rohn-L6 | Rohn Leg 6 | Pipe | Pipe10XS | 36.0 | 85.55 | 85.55 | Rohn-LI2P | -362.131 W+I 0 deg | 0.000 | 317.480 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 41.70 | 10.008 | 1 | 0 |
| Connect | Connect Towers | BIG | 0.1X0.1X1 | 36.0 | 0.05 | 0.01 | Connect Ial | -3.397W+I 60 deg | 0.000 | 17202.963 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 2.41 | 2.004 | 1 | 0 |
| Rohn-H1 | Rohn Horizontal 1 | Pipe | P3-425 | 36.0 | 5.73 | 0.00 | Rohn-H4FP | 0.000 | 77.281 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 44.46 | 4.066 | 1 | 0 |

URS Connecticut - all_passing_tower

| Group Label | Group Angle Desc. Type | Angle Size | Steel Strength (ksi) | Max Usage % | Max In Tens % | Tension Force (kips) | Tension Control Member | Tension Control Case | Section Capacity (kips) | Net Tens. Capacity (kips) | Shear Capacity (kips) | Bearing Capacity (kips) | Tens. Capacity (kips) | Conn. Length (ft) | No. Of Bolts | No. Of Holes | Hole Diameter (in) |
|-------------|------------------------|---------------|----------------------|-------------|---------------|----------------------|------------------------|----------------------|-------------------------|---------------------------|-----------------------|-------------------------|-----------------------|-------------------|--------------|--------------|--------------------|
| SNB-H2 | SNB Horizontal 2 | Pipe | 36.0 | 9.55 | 0.00 | 0.000 | SNB-H95P | 0.000 | 106.339 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 63.14 | 7.472 | 1 |
| Rohn-D8 | Rohn Diagonal 6 | SAE | 36.0 | 72.51 | 72.51 | -6.534W+I 90 deg | Rohn-DB71 | -6.534W+I 90 deg | 6.759 | 16.200 | 16.200 | 16.312 | 0.500 | 0.500 | 173.34 | 11.238 | 4 |
| WLAC-1 | Wind Lacing 1 | SAE | 36.0 | 2.60 | 2.60 | -0.312W+I 60 deg | SNB-WL-D1P | -0.312W+I 60 deg | 9.011 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 124.79 | 4.066 | 4 |
| WLAC-2 | Wind Lacing 2 | SAE | 36.0 | 4.01 | 4.01 | -0.347W+I 60 deg | SNB-WL-I1P | -0.347W+I 60 deg | 6.485 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 183.36 | 7.472 | 4 |
| Rohn-D4a | Rohn Diagonal 4a | SAE | 36.0 | 91.11 | 91.11 | -8.521 W+I 0 deg | Rohn-DD61 | -8.521 W+I 0 deg | 7.015 | 16.200 | 13.594 | 0.500 | 0.500 | 0.500 | 176.30 | 14.368 | 4 |
| Rohn-D3a | Rohn Diagonal 3a | SAE | 36.0 | 89.49 | 89.49 | -8.177W+I 90 deg | Rohn-DC51 | -8.177W+I 90 deg | 6.854 | 16.200 | 10.875 | 0.500 | 0.500 | 0.500 | 161.02 | 13.177 | 4 |
| SNB-D7a | SNB Diagonal 7a | SAE | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 |
| SNB-D7b | SNB Diagonal 7b | DAE | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 |
| SNB-D7c | SNB Diagonal 7c | SAE | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 |
| Rohn-L8a | Rohn Leg 8a EXP-1 | MOD-P6STD | 50.0 | 62.69 | 62.69 | -279.467 W+I 0 deg | Rohn-LI1P | -279.467 W+I 0 deg | 334.331 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 43.22 | 10.008 | 1 |
| Rohn-L7a | Rohn Leg 7a EXP-2 | MOD-P6SCH80 | 50.0 | 76.46 | 76.46 | -232.586 W+I 0 deg | Rohn-LG2P | -232.586 W+I 0 deg | 228.165 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 55.85 | 10.008 | 1 |
| Rohn-L6a | Rohn Leg 6a EXP-3 | MOD-P6STD | 50.0 | 80.37 | 80.37 | -174.400 W+I 0 deg | Rohn-LF1P | -174.400 W+I 0 deg | 162.747 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 55.25 | 10.008 | 1 |
| Rohn-L5a | Rohn Leg 5a EXP-4 | MOD-P5SCH80 | 50.0 | 63.69 | 63.69 | -155.940 W+I 0 deg | Rohn-LE3P | -155.940 W+I 0 deg | 183.623 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 44.42 | 6.665 | 1 |
| Rohn-L4a | Rohn Leg 4a EXP-5 | MOD-P5STD | 50.0 | 67.55 | 67.55 | -124.847 W+I 0 deg | Rohn-LD3P | -124.847 W+I 0 deg | 138.328 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 43.96 | 6.665 | 1 |
| Rohn-L3a | Rohn Leg 3a EXP-6 | MOD-P4SCH80 | 50.0 | 42.23 | 37.37 | -82.849 W+I 0 deg | Rohn-LC3P | -82.849 W+I 0 deg | 166.273 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 55.51 | 6.665 | 1 |
| Rohn-L2a | Rohn Leg 2a EXP-7 | MOD-P3-5SCH80 | 50.0 | 27.40 | 27.16 | -45.514 W+I 0 deg | Rohn-LB4P | -45.514 W+I 0 deg | 125.693 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 47.74 | 5.004 | 1 |
| Rohn-D4b | Rohn Diagonal 4b | SAE | 36.0 | 85.04 | 85.04 | -10.479 W+I 0 deg | Rohn-DD21 | -10.479 W+I 0 deg | 9.242 | 16.200 | 16.312 | 0.500 | 0.500 | 0.500 | 167.19 | 13.570 | 4 |

Group Summary (Tension Portion):

| Group Label | Group Angle Desc. Type | Angle Size | Steel Strength (ksi) | Max Usage % | Max In Tens % | Tension Force (kips) | Tension Control Member | Tension Control Case | Section Capacity (kips) | Net Tens. Capacity (kips) | Shear Capacity (kips) | Bearing Capacity (kips) | Tens. Capacity (kips) | Conn. Length (ft) | No. Of Bolts | No. Of Holes | Hole Diameter (in) |
|-------------|------------------------|------------|----------------------|-------------|---------------|----------------------|------------------------|----------------------|-------------------------|---------------------------|-----------------------|-------------------------|-----------------------|-------------------|--------------|--------------|--------------------|
| Rohn-D1 | Rohn Diagonal 1 | SAE | 36.0 | 71.90 | 23.97 | 2.607 W+I 0 deg | Rohn-DA8P | 2.607 W+I 0 deg | 10.681 | 16.200 | 16.200 | 8.156 | 8.684 | 10.034 | 1 | 1.000 | 0.6875 |
| Rohn-D2 | Rohn Diagonal 2 | SAE | 36.0 | 91.36 | 46.97 | 5.108W+I 60 deg | Rohn-DB5P | 5.108W+I 60 deg | 12.639 | 16.200 | 16.200 | 8.156 | 9.527 | 10.934 | 1 | 1.000 | 0.6875 |
| Rohn-D3 | Rohn Diagonal 3 | SAE | 36.0 | 95.45 | 72.17 | 7.935W+I 90 deg | Rohn-DC42 | 7.935W+I 90 deg | 16.155 | 16.200 | 16.200 | 10.875 | 10.195 | 12.798 | 1 | 1.000 | 0.6875 |
| Rohn-D4 | Rohn Diagonal 4 | SAE | 36.0 | 66.28 | 57.14 | 8.285W+I 90 deg | Rohn-DD42 | 8.285W+I 90 deg | 22.144 | 16.200 | 16.200 | 10.875 | 13.594 | 13.977 | 1 | 1.000 | 0.6875 |
| Rohn-D5 | Rohn Diagonal 5 | SAE | 50.0 | 60.69 | 48.92 | 30.910 | Rohn-DE3P | 30.910 | 37.004 | 16.200 | 16.200 | 12.187 | 15.234 | 15.188 | 1 | 1.000 | 0.6875 |
| Rohn-D6 | Rohn Diagonal 6 | SAE | 50.0 | 82.16 | 55.36 | 7.995W+I 90 deg | Rohn-DG42 | 7.995W+I 90 deg | 37.004 | 16.200 | 16.200 | 12.187 | 15.234 | 19.470 | 1 | 1.000 | 0.6875 |
| Rohn-D7 | Rohn Diagonal 7 | SAE | 50.0 | 82.40 | 75.00 | 12.187W+I 90 deg | Rohn-DF42 | 12.187W+I 90 deg | 43.098 | 16.200 | 16.200 | 12.187 | 15.234 | 21.860 | 1 | 1.000 | 0.6875 |
| Rohn-L1 | Rohn Leg 1 | Pipe | 50.0 | 17.09 | 11.19 | 0.000 | Rohn-LA42 | 12.664W+I -60 de | 84.900 | 0.000 | 0.000 | 0.000 | 0.000 | 5.004 | 0 | 0.000 | 0 |
| Rohn-L2 | Rohn Leg 2 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L3 | Rohn Leg 3 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L4 | Rohn Leg 4 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L5 | Rohn Leg 5 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L6 | Rohn Leg 6 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L7 | Rohn Leg 7 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L8 | Rohn Leg 8 | Pipe | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-H1 | Rohn Horizontal 1 | SAE | 36.0 | 48.26 | 0.00 | 0.000 | Rohn-H22 | 0.000 | 13.392 | 0.000 | 0.000 | 0.000 | 0.000 | 8.870 | 0 | 0.000 | 0 |
| SNB-D1 | SNB Diagonal 1 | SAE | 36.0 | 10.08 | 7.84 | 1.421W+I 90 deg | SNB-DA82 | 1.421W+I 90 deg | 20.340 | 16.200 | 16.200 | 13.594 | 15.879 | 7.240 | 1 | 1.000 | 0.6875 |
| SNB-D2 | SNB Diagonal 2 | SAE | 36.0 | 19.28 | 19.28 | 2.796W+I 90 deg | SNB-DB62 | 2.796W+I 90 deg | 16.707 | 16.200 | 16.200 | 10.875 | 12.703 | 8.011 | 1 | 1.000 | 0.6875 |
| SNB-D3 | SNB Diagonal 3 | SAE | 36.0 | 60.06 | 50.00 | 9.062W+I -90 de | SNB-DD31 | 9.062W+I -90 de | 27.082 | 16.200 | 16.200 | 13.594 | 16.992 | 11.059 | 1 | 1.000 | 0.6875 |
| SNB-D4 | SNB Diagonal 4 | SAE | 36.0 | 65.53 | 44.40 | 14.209W+I 90 deg | SNB-DE42 | 14.209W+I 90 deg | 50.976 | 26.100 | 26.100 | 26.100 | 32.625 | 12.172 | 1 | 1.000 | 0.8125 |
| SNB-D5 | SNB Diagonal 5 | SAE | 36.0 | 33.87 | 32.71 | 10.467W+I -90 de | SNB-DF11 | 10.467W+I -90 de | 72.726 | 24.000 | 24.000 | 26.100 | 32.625 | 15.014 | 1 | 1.000 | 0.8125 |
| SNB-D6 | SNB Diagonal 6 | SAE | 36.0 | 50.96 | 46.17 | 14.775W+I 90 deg | SNB-DH42 | 14.775W+I 90 deg | 69.222 | 24.000 | 24.000 | 32.625 | 40.781 | 17.700 | 1 | 1.000 | 0.8125 |
| SNB-D7 | SNB Diagonal 7 | SAE | 36.0 | 92.81 | 91.65 | 29.328W+I 90 deg | SNB-DI42 | 29.328W+I 90 deg | 116.410 | 24.000 | 24.000 | 32.625 | 40.781 | 18.841 | 1 | 1.000 | 0.8125 |
| SNB-L1 | SNB Leg 1 | Pipe | 36.0 | 9.41 | 6.76 | 8.177W+I -60 de | SNB-LA42 | 8.177W+I -60 de | 90.720 | 0.000 | 0.000 | 0.000 | 0.000 | 5.004 | 0 | 0.000 | 0 |
| SNB-L2 | SNB Leg 2 | Pipe | 36.0 | 40.13 | 30.14 | 53.912W+I -60 de | SNB-LC32 | 53.912W+I -60 de | 134.136 | 0.000 | 0.000 | 0.000 | 0.000 | 6.665 | 0 | 0.000 | 0 |
| SNB-L3 | SNB Leg 3 | Pipe | 36.0 | 71.69 | 55.56 | 91.526W+I -60 de | SNB-LD32 | 91.526W+I -60 de | 231.552 | 0.000 | 0.000 | 0.000 | 0.000 | 6.665 | 0 | 0.000 | 0 |
| SNB-L4 | SNB Leg 4 | Pipe | 36.0 | 79.20 | 57.00 | 175.658W+I -60 de | SNB-LF22 | 175.658W+I -60 de | 231.120 | 0.000 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| SNB-L5 | SNB Leg 5 | Pipe | 36.0 | 91.58 | 63.70 | 234.801W+I -60 de | SNB-LH22 | 234.801W+I -60 de | 276.480 | 0.000 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| SNB-L6 | SNB Leg 6 | Pipe | 36.0 | 85.55 | 60.12 | 278.780W+I -60 de | SNB-LI12 | 278.780W+I -60 de | 347.759 | 0.000 | 0.000 | 0.000 | 0.000 | 2.002 | 0 | 0.000 | 0 |
| Connect | Connect Towers | BIG | 36.0 | 0.05 | 0.05 | Connect IP | 10.581 W+I 0 deg | 17279.973 | | | | | | | | | |
| SNB-H1 | SNB Horizontal 1 | Pipe | 36.0 | 5.73 | 5.73 | 6.770W+I 90 deg | SNB-H4F1P | 6.770W+I 90 deg | 88.668 | 0.000 | 0.000 | 0.000 | 0.000 | 4.066 | 0 | 0.000 | 0 |
| SNB-H2 | SNB Horizontal 2 | Pipe | 36.0 | 9.55 | 9.55 | 17.082W+I -60 de | SNB-H9AP | 17.082W+I -60 de | 134.136 | 0.000 | 0.000 | 0.000 | 0.000 | 7.472 | 0 | 0.000 | 0 |
| Rohn-D8 | Rohn Diagonal 8 | SAE | 36.0 | 72.51 | 23.81 | 5.143 W+I 0 deg | Rohn-DB7P | 5.143 W+I 0 deg | 23.973 | 16.200 | 16.200 | 16.312 | 19.055 | 11.238 | 1 | 1.000 | 0.6875 |
| WLAC-1 | Wind Lacing 1 | SAE | 36.0 | 2.60 | 2.60 | 0.361 W+I 0 deg | SNB-WL-D3P | 0.361 W+I 0 deg | 20.304 | 0.000 | 0.000 | 0.000 | 0.000 | 4.066 | 0 | 0.000 | 0 |
| WLAC-2 | Wind Lacing 2 | SAE | 36.0 | 4.01 | 1.07 | 0.449 W+I 0 deg | SNB-WL-G3P | 0.449 W+I 0 deg | 31.536 | 0.000 | 0.000 | 0.000 | 0.000 | 6.110 | 0 | 0.000 | 0 |
| Rohn-D4a | Rohn Diagonal 4a | SAE | 36.0 | 91.11 | 27.42 | 4.970W+I 90 deg | Rohn-DD62 | 4.970W+I 90 deg | 27.082 | 16.200 | 16.200 | 13.594 | 16.992 | 14.368 | 1 | 1.000 | 0.6875 |
| Rohn-D3a | Rohn Diagonal 3a | SAE | 36.0 | 89.49 | 36.75 | 5.328W+I -90 de | Rohn-DC52 | 5.328W+I -90 de | 22.144 | 16.200 | 16.200 | 10.875 | 13.594 | 13.177 | 1 | 1.000 | 0.6875 |
| SNB-D7a | SNB Diagonal 7a | DAE | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| SNB-D7b | SNB Diagonal 7b | DAE | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| SNB-D7c | SNB Diagonal 7c | SAE | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |

| | | | | | | | | | | | | | |
|----------|----------------------|---------------|------|-------|-------|-----------|------------|-----|-----|---------|--------|-------|--------|
| Rohn-L8a | Rohn Leg 8a EXP-1 | MOD-P6STD | 50.0 | 62.69 | 59.06 | Rohn-LI12 | 232.933W+I | -60 | de | 395.312 | 0.000 | 0.000 | 0 |
| Rohn-L7a | Rohn Leg 7a EXP-2 | MOD-P6SCH80 | 50.0 | 76.46 | 68.19 | Rohn-LH22 | 214.914W+I | -60 | de | 292.362 | 0.000 | 0.000 | 0 |
| Rohn-L6a | Rohn Leg 6a EXP-3 | MOD-P6STD | 50.0 | 80.37 | 59.12 | Rohn-LF22 | 158.682W+I | -60 | de | 207.657 | 0.000 | 0.000 | 0 |
| Rohn-L5a | Rohn Leg 5a EXP-4 | MOD-P5SCH80 | 50.0 | 63.69 | 57.34 | Rohn-LD32 | 131.200W+I | -60 | de | 218.625 | 0.000 | 0.000 | 0 |
| Rohn-L4a | Rohn Leg 4a EXP-5 | MOD-P5STD | 50.0 | 67.55 | 64.72 | Rohn-LD32 | 104.328W+I | -60 | de | 164.262 | 0.000 | 0.000 | 0 |
| Rohn-L3a | Rohn Leg 3a EXP-6 | MOD-P4SCH80 | 50.0 | 42.23 | 42.23 | Rohn-LC32 | 69.937W+I | -60 | de | 212.541 | 0.000 | 0.000 | 0 |
| Rohn-L2a | Rohn Leg 2a EXP-7 | MOD-P3.5SCH80 | 50.0 | 27.40 | 27.40 | Rohn-LB41 | 37.700W+I | 60 | deg | 152.673 | 0.000 | 0.000 | 0 |
| Rohn-D4b | Rohn Diagonal 4b SAE | 2.5X2.5X0.375 | 36.0 | 85.04 | 27.59 | Rohn-DD22 | 5.959W+I | 90 | deg | 32.020 | 16.200 | 1.000 | 0.6875 |

*** Maximum Stress Summary for Each Load Case

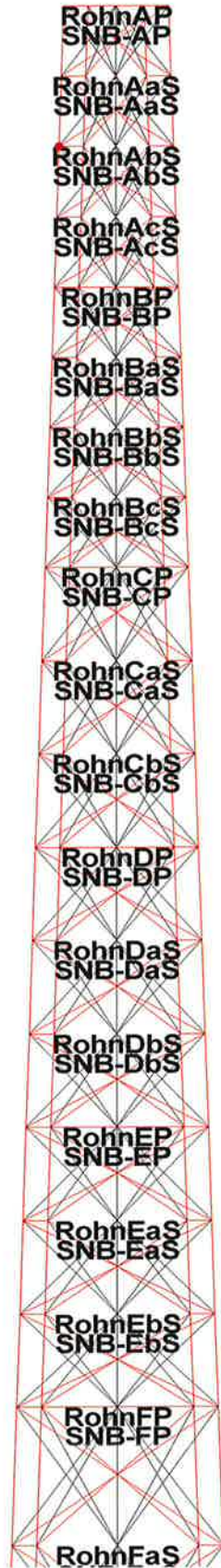
Summary of Maximum Usages by Load Case:

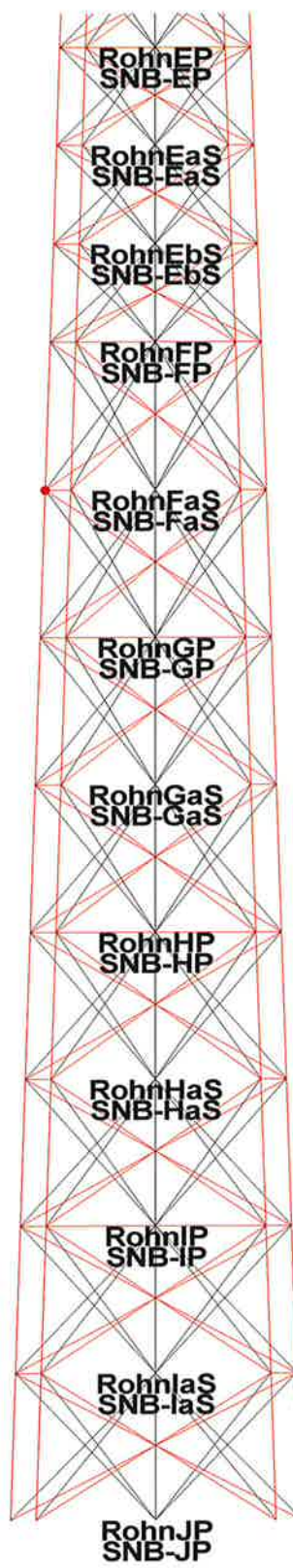
| Load Case | Maximum Usage % | Element Label | Element Type |
|---------------|-----------------|---------------|--------------|
| W+I -90 deg | 92.80 | SNB-DI22 | Angle |
| W+I -60 deg | 89.43 | SNB-DI4P | Angle |
| W+I 0 deg | 95.45 | Rohn-DC21 | Angle |
| W+I 60 deg | 89.47 | SNB-DI3P | Angle |
| W+I 90 deg | 92.81 | SNB-DI11 | Angle |
| DL + Ice Only | 53.66 | SNB-DI2P | Angle |

*** Weight of structure (lbs): 66037.7
 Weight of Angles*Section DLF: 12155.2
 Weight of Equipment: 78192.9
 Total:

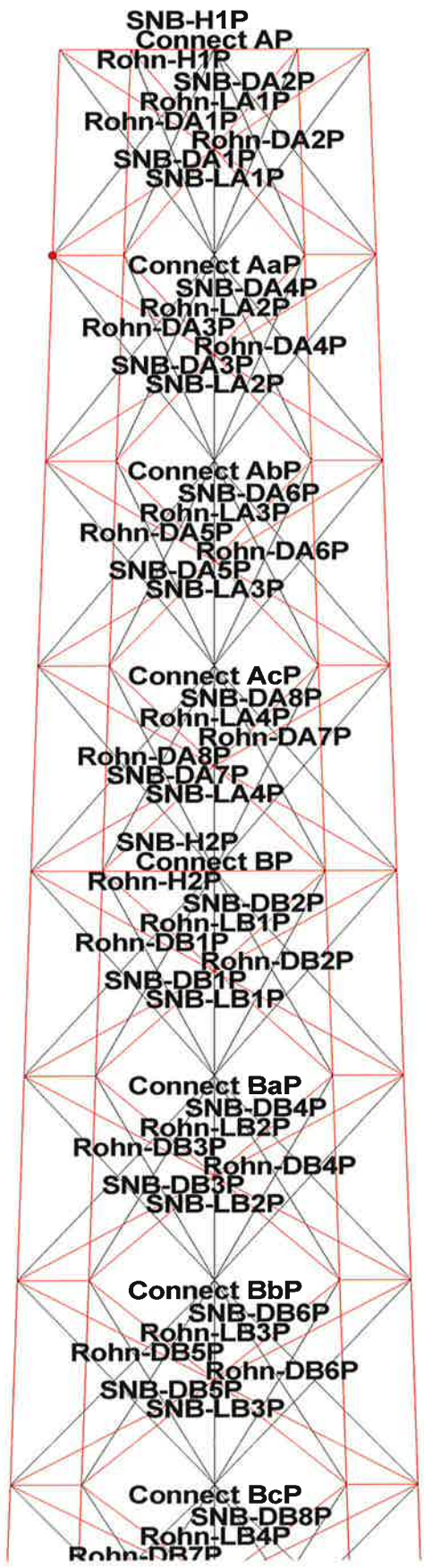
*** End of Report

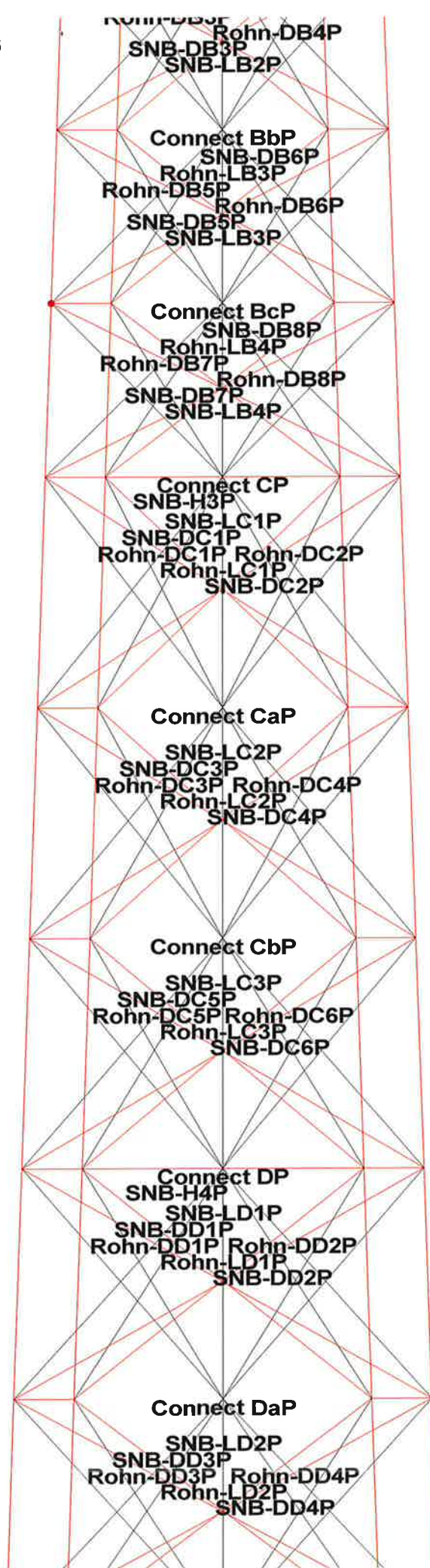
PLS-TOWER NODE LOCATIONS

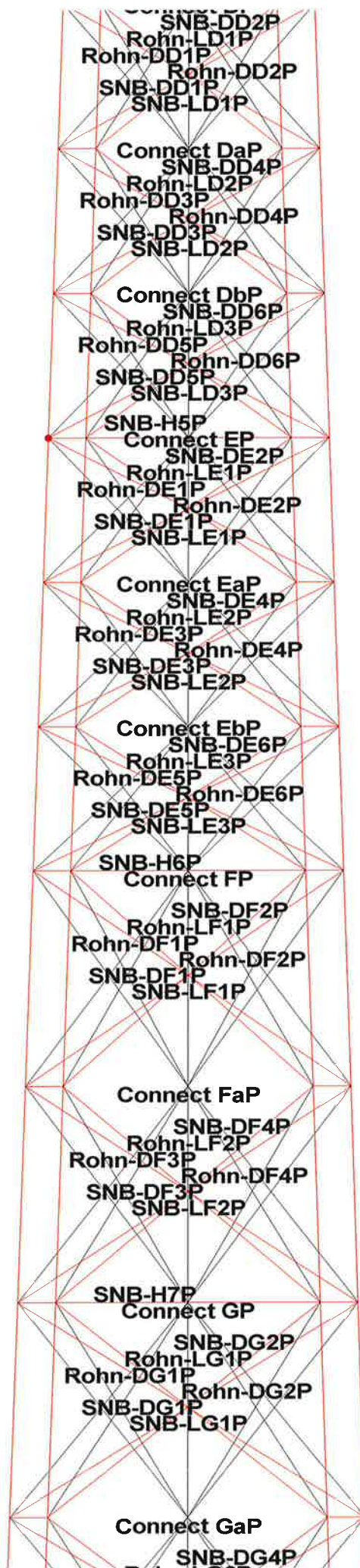


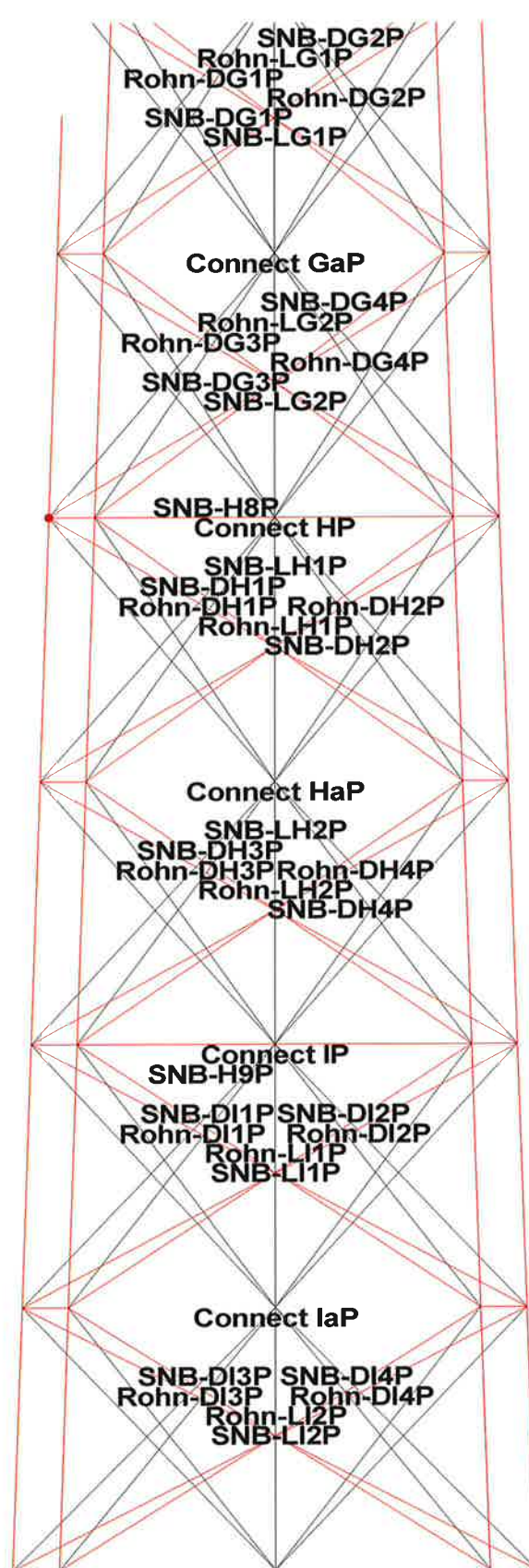


PLS-TOWER MEMBER LOCATIONS









PLS-TOWER DETAILED OUTPUT

* TOWER - Analysis and Design - Copyright Power Line Systems, Inc. 1986-2006 *

Project Name : VZ5-170 / Verizon Wireless
Project Notes : Butternut Hollow
Project File : C:\Users\Michael_Dalickas\Desktop\Greenwich Copy for MOD\all_passing_tower.tow
Date run : 12:51:15 PM Friday, January 30, 2015
by : Tower Version 10.62
Licensed to : URS Connecticut

Successfully performed nonlinear analysis

Unusual number of fixed joints found: 6. Towers normally have from between 1 and 4 fixed joints. ??
Linear appurtenance "1-5/8" @ 180" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "7/8" @ 180" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1/2" @ 180" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "Elliptical @ 175" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-5/8" @ 175" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "Elliptical @ 170" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "7/8" @ 170" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-1/4" @ 165" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "7/8" @ 165" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "Elliptical @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-1/4" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "3/8" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-5/8" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1/2" @ 160" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-5/8" @ 145" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "DC Cable @ ATW" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "7/8" @ 145" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-5/8" @ 140" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1-5/8" @ VZW" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "HybridFlex Cables @ Sprint" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "7/8" @ 113" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "7/8" @ 80" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1/2" @ 60" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
Linear appurtenance "1/2" @ 20" is included in the face zone (face solidity ratio for Rev. F), but does not contribute to wind load: this is nonsensical ??
The model has 27 warnings. ??

Nonlinear convergence parameters: Use Standard Parameters
Member check option: TIA/EIA 222-F
Connection rupture check: ASCE 10
Crossing diagonal check: ASCE 10 [Alternate Unsupported RLOUT = 1]

Joints Geometry:

Table with columns: Joint Label, Symmetry, X Coord. (ft), Y Coord. (ft), Z Coord. (ft), X Disp. (ft), Y Disp. (ft), Z Disp. (ft), X Rest., Y Rest., Z Rest., X Rot., Y Rot., Z Rot., Rest.

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| Group Label | Group Angle Description Type | Angle Material Size Type | Element Type | Group Type | Optimize Group | Allow. Angle Width For Optimize (in) |
|-------------|------------------------------|--------------------------|--------------|------------|----------------|--------------------------------------|
| Rohn-D1 | Rohn Diagonal 1 | SAE 1.75X1.75X0.1875 | Truss | Other | None | 0.000 |
| Rohn-D2 | Rohn Diagonal 2 | 2X2X0.1875 | Truss | Other | None | 0.000 |
| Rohn-D3 | Rohn Diagonal 3 | SAE 2.5X2.5X0.1875 | Truss | Other | None | 0.000 |
| Rohn-D4 | Rohn Diagonal 4 | SAE 2.5X2.5X0.25 | Truss | Other | None | 0.000 |
| Rohn-D5 | Rohn Diagonal 5 | SAE 3X3X0.25 | Truss | Other | None | 0.000 |
| Rohn-D6 | Rohn Diagonal 6 | SAE 3.5X3.5X0.25 | Truss | Other | None | 0.000 |
| Rohn-D7 | Rohn Diagonal 7 | SAE 4X4X0.25 | Truss | Other | None | 0.000 |
| Rohn-L1 | Rohn Leg 1 | Pipe3EH | Beam | Leg | None | 0.000 |
| Rohn-L2 | Rohn Leg 2 | Pipe3.5EH | Beam | Leg | None | 0.000 |
| Rohn-L3 | Rohn Leg 3 | Pipe4EH | Beam | Leg | None | 0.000 |
| Rohn-L4 | Rohn Leg 4 | Pipe5STD | Beam | Leg | None | 0.000 |
| Rohn-L5 | Rohn Leg 5 | Pipe5EH | Beam | Leg | None | 0.000 |
| Rohn-L6 | Rohn Leg 6 | Pipe6EHS | Beam | Leg | None | 0.000 |
| Rohn-L7 | Rohn Leg 7 | Pipe6EH | Beam | Leg | None | 0.000 |
| Rohn-L8 | Rohn Leg 8 | Pipe8EHS | Beam | Leg | None | 0.000 |
| Rohn-H1 | Rohn Horizontal 1 | SAE 1.75X1.75X0.1875 | Truss | Other | None | 0.000 |
| Rohn-D1 | SNB Diagonal 1 | SAE 2X2X0.3125 | Truss | Other | None | 0.000 |
| Rohn-D2 | SNB Diagonal 2 | SAE 2X2X0.25 | Truss | Other | None | 0.000 |
| Rohn-D3 | SNB Diagonal 3 | SAE 2.5X2.5X0.3125 | Truss | Other | None | 0.000 |
| Rohn-D4 | SNB Diagonal 4 | SAE 3X3X0.5 | Truss | Other | None | 0.000 |
| Rohn-D5 | SNB Diagonal 5 | SAE 4X4X0.5 | Truss | Other | None | 0.000 |
| Rohn-D6 | SNB Diagonal 6 | SAE 4X4X0.625 | Truss | Other | None | 0.000 |
| Rohn-D7 | SNB Diagonal 7 | SAE 5X5X0.625 | Truss | Other | None | 0.000 |
| Rohn-L1 | SNB Leg 1 | Pipe P3-437 | Beam | Leg | None | 0.000 |
| Rohn-L2 | SNB Leg 2 | Pipe P4-494 | Beam | Leg | None | 0.000 |
| Rohn-L3 | SNB Leg 3 | Pipe5EH | Beam | Leg | None | 0.000 |
| Rohn-L4 | SNB Leg 4 | Pipe5EH | Beam | Leg | None | 0.000 |
| Rohn-L5 | SNB Leg 5 | Pipe6EHS | Beam | Leg | None | 0.000 |
| Rohn-L6 | SNB Leg 6 | Pipe8EHS | Beam | Leg | None | 0.000 |
| Rohn-L7 | SNB Leg 7 | Pipe10XS | Beam | Leg | None | 0.000 |
| Rohn-L8 | SNB Leg 8 | Pipe10XS | Beam | Leg | None | 0.000 |
| Connect | Connect Towers | BIG 0.1X0.1X1 | Truss | Other | None | 0.000 |
| Rohn-H1 | SNB Horizontal 1 | Pipe P3-425 | Beam | Other | None | 0.000 |
| Rohn-H2 | SNB Horizontal 2 | Pipe P4-494 | Beam | Other | None | 0.000 |
| Rohn-D8 | Rohn Diagonal 8 | SAE 2X2X0.375 | Truss | Other | None | 0.000 |
| WLAC-1 | Wind Lacing 1 | SAE 2X2X0.25 | Truss | Redundant | None | 0.000 |
| WLAC-2 | Wind Lacing 2 | SAE 2.5X2.5X0.3125 | Truss | Redundant | None | 0.000 |
| Rohn-D4a | Rohn Diagonal 4a | SAE 2.5X2.5X0.3125 | Truss | Other | None | 0.000 |
| Rohn-D3a | Rohn Diagonal 3a | SAE 2.5X2.5X0.25 | Truss | Other | None | 0.000 |
| Rohn-D7a | SNB Diagonal 7a | SAE 5X5X0.5 | Truss | Other | None | 0.000 |
| Rohn-D7b | SNB Diagonal 7b | DAE 4X4X0.25 | Truss | Other | None | 0.000 |
| Rohn-D7c | SNB Diagonal 7c | SAE 5X5X0.4375 | Truss | Other | None | 0.000 |
| Rohn-L8a | Rohn Leg 8a | EXP-1 MOD-P8STD | Beam | Leg | None | 0.000 |
| Rohn-L7a | Rohn Leg 7a | EXP-2 MOD-P6SCH80 | Beam | Leg | None | 0.000 |
| Rohn-L6a | Rohn Leg 6a | EXP-3 MOD-P6STD | Beam | Leg | None | 0.000 |
| Rohn-L5a | Rohn Leg 5a | EXP-4 MOD-P5SCH80 | Beam | Leg | None | 0.000 |
| Rohn-L4a | Rohn Leg 4a | EXP-5 MOD-P5STD | Beam | Leg | None | 0.000 |
| Rohn-L3a | Rohn Leg 3a | EXP-6 MOD-P4SCH80 | Beam | Leg | None | 0.000 |
| Rohn-L2a | Rohn Leg 2a | EXP-7 MOD-P3.5SCH80 | Beam | Leg | None | 0.000 |
| Rohn-D4b | Rohn Diagonal 4b | SAE 2.5X2.5X0.375 | Truss | Other | None | 0.000 |

Aggregate Angle Information:

Note: Estimate of surface area reported for painting purposes, not wind loading.

| Angle Type | Angle Material Size | Total Length (ft) | Total Surface Area (ft ²) | Total Weight (lbs) |
|----------------------|---------------------|-------------------|---------------------------------------|--------------------|
| SAE 1.75X1.75X0.1875 | A 36 | 279.43 | 163.00 | 592.39 |
| SAE 2X2X0.1875 | A 36 | 191.38 | 127.59 | 466.96 |

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| SAE | 2X2X0.375 | A 36 | 67.43 | 44.95 | 316.92 |
|-------|----------------|---------|--------|--------|---------|
| SAE | 2.5X2.5X0.1875 | A 36 | 151.20 | 126.00 | 464.18 |
| SAE | 2.5X2.5X0.25 | A 36 | 162.93 | 135.77 | 667.99 |
| SAE | 2.5X2.5X0.375 | A 36 | 81.42 | 67.85 | 480.38 |
| SAE | 2.5X2.5X0.3125 | A 36 | 556.84 | 464.03 | 2784.19 |
| SAE | 3X3X0.25 | A572-50 | 273.29 | 273.29 | 1339.11 |
| SAE | 3.5X3.5X0.25 | A572-50 | 446.54 | 520.96 | 2589.91 |
| SAE | 4X4X0.25 | A572-50 | 502.96 | 670.61 | 3319.52 |
| Pipe | Pipe3EH | A572-50 | 60.05 | 64.05 | 618.48 |
| EXP-7 | MOD-P3-SSCH80 | A572-50 | 60.05 | 73.70 | 1039.83 |
| EXP-6 | MOD-P4SCH80 | A572-50 | 60.05 | 83.32 | 1447.58 |
| EXP-5 | MOD-P5STD | A572-50 | 60.05 | 106.18 | 1118.76 |
| EXP-4 | MOD-P5SCH80 | A572-50 | 60.05 | 103.84 | 1489.01 |
| EXP-3 | MOD-P6STD | A572-50 | 60.05 | 127.05 | 1414.32 |
| EXP-2 | MOD-P6SCH80 | A572-50 | 120.09 | 248.01 | 3982.45 |
| EXP-1 | MOD-P8STD | A572-50 | 60.05 | 162.63 | 2692.42 |
| SAE | 2X2X0.3125 | A 36 | 165.23 | 110.15 | 647.69 |
| SAE | 2X2X0.25 | A 36 | 225.69 | 150.46 | 719.94 |
| SAE | 3X3X0.5 | A 36 | 219.00 | 219.00 | 2058.63 |
| SAE | 4X4X0.5 | A 36 | 183.26 | 244.34 | 2345.69 |
| SAE | 4X4X0.625 | A 36 | 404.95 | 539.94 | 6357.75 |
| SAE | 5X5X0.625 | A 36 | 222.84 | 371.07 | 4452.86 |
| Pipe | P3-437 | A 36 | 60.05 | 61.31 | 900.70 |
| Pipe | P4-494 | A 36 | 303.38 | 405.11 | 6492.26 |
| Pipe | Pipe5EH | A 36 | 60.05 | 103.84 | 1248.96 |
| Pipe | P6-562 | A 36 | 120.09 | 242.69 | 4395.40 |
| Pipe | Pipe8XS | A 36 | 120.09 | 325.25 | 5210.82 |
| Pipe | Pipe10XS | A 36 | 60.05 | 205.16 | 3286.94 |
| Big | 0.1X0.1X1 | A 36 | 150.03 | 5.00 | 0.00 |
| Pipe | P3-425 | A 36 | 73.04 | 74.87 | 1095.63 |

Sections:
 The adjustment factors below only apply to dead load and wind areas that are calculated for members in the model.
 They do not apply to equipment or to manually input dead load and drag areas.

| Section Label | Joint Defining Section Bottom | Joint Load Adjust. Factor | Transverse Area Drag x Area Factor | Longitudinal Area Drag x Area Factor | Af Flat Ar Round Factor (CD From) | Transverse Area Drag x Area Factor (CD From) | Longitudinal Area Drag x Area Factor (CD From) | Transverse Area Drag x Area Factor (CD From) | Longitudinal Area Drag x Area Factor (CD From) | SAPS Angle Drag x Area Factor | SAPS Round Force Drag x Area Factor | Long Edge Dist. | End Edge Dist. | Bolt Type | # Bolts | Shear Holes | Planes | Connect Leg | Short Edge Dist. | Long Edge Dist. | End Bolt Rest. Spacing Coef. | |
|---------------|-------------------------------|---------------------------|------------------------------------|--------------------------------------|-----------------------------------|--|--|--|--|-------------------------------|-------------------------------------|-----------------|----------------|-----------|---------|-------------|--------|-------------|------------------|-----------------|------------------------------|-------|
| A | RohnBP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| B | RohnCP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| C | RohnDP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| D | RohnEP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| E | RohnFP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| F | RohnGP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| G | RohnHP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| H | RohnIP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| I | RohnJP | 1.000 | 0.000 | 0.000 | 0.000 | 0.900 | 0.900 | 0.900 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | 0.000 | 0.000 | 0.000 | 0.000 |

Angle Member Connectivity:

| Member Label | Group Label | Section Label | Symmetry Code | Origin Joint | End Ecc. Joint Code | Rest. Code | Ratio RLY | Ratio RLU | Ratio RLZ | Bolt Type | # Bolts | Shear Holes | Planes | Connect Leg | Short Edge Dist. | Long Edge Dist. | End Bolt Rest. Spacing Coef. | |
|--------------|-------------|---------------|---------------|--------------|---------------------|------------|-----------|-----------|-----------|-----------|---------|-------------|--------|-------------|------------------|-----------------|------------------------------|---|
| Rohn-DA1P | Rohn-D1 | | Tri-Symmetry | RohnAP | RohnAa1 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA11 | Rohn-D1 | | Tri-Symmetry | RohnA1 | RohnAa2 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA12 | Rohn-D1 | | Tri-Gen 1 | RohnA2 | RohnAa3 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA2P | Rohn-D1 | | Tri-Symmetry | RohnAP | RohnAa2 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA21 | Rohn-D1 | | Tri-Gen 1 | RohnA1 | RohnAa3 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA22 | Rohn-D1 | | Tri-Gen 2 | RohnA2 | RohnAa1 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA3P | Rohn-D1 | | Tri-Symmetry | RohnAP | RohnAa1 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |
| Rohn-DA31 | Rohn-D1 | | Tri-Gen 1 | RohnA1 | RohnAa2 | 1 | 4 | 0.5 | 0.5 | 0.5 | 5/8 | A325-N | 1 | 1 | Long only | 0 | 0 | 0 |

| Member Group | Design Label | Comp. Control | Design Tension | Tension Control | L/r Length | L/r Connection | Shear Capacity | Bearing Capacity | Section Tension | Net Rupture | RTE End | Edge | Override | Override | Override | Override | Face |
|--------------------|--------------|--------------------|--------------------|--------------------|------------|-----------------|-----------------|------------------|-------------------------|-------------------------|--------------|-------------------------|--------------|-----------------------|-----------------------|-------------------|-------------|
| Warnings or Errors | Label | Capacity Criterion | Capacity Criterion | Capacity Criterion | (ft) | Capacity (kips) | Capacity (kips) | Capacity (kips) | Tension Capacity (kips) | Tension Capacity (kips) | Dist. (kips) | Tension Capacity (kips) | Dist. (kips) | Comp. Capacity (kips) | Comp. Capacity (kips) | Control Criterion | Member ship |
| SNB-WL-F3P | WLAAC-2 | None | SNB-WL-F3S | SNB-WL-F1S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-G1P | WLAAC-2 | None | SNB-WL-G1S | SNB-WL-G2S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-G2P | WLAAC-2 | None | SNB-WL-G2S | SNB-WL-G3S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-G3P | WLAAC-2 | None | SNB-WL-G3S | SNB-WL-G4S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-H1P | WLAAC-2 | None | SNB-WL-H1S | SNB-WL-H2S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-H2P | WLAAC-2 | None | SNB-WL-H2S | SNB-WL-H3S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-H3P | WLAAC-2 | None | SNB-WL-H3S | SNB-WL-H4S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-I1P | WLAAC-2 | None | SNB-WL-I1S | SNB-WL-I2S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-I2P | WLAAC-2 | None | SNB-WL-I2S | SNB-WL-I3S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SNB-WL-I3P | WLAAC-2 | None | SNB-WL-I3S | SNB-WL-I4S | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Member Capacities and Overrides:

| Member Group | Design Label | Comp. Control | Design Tension | Tension Control | L/r Length | L/r Connection | Shear Capacity | Bearing Capacity | Section Tension | Net Rupture | RTE End | Edge | Override | Override | Override | Override | Face |
|--------------------|--------------|--------------------|--------------------|--------------------|------------|-----------------|-----------------|------------------|-------------------------|-------------------------|--------------|-------------------------|--------------|-----------------------|-----------------------|-------------------|-------------|
| Warnings or Errors | Label | Capacity Criterion | Capacity Criterion | Capacity Criterion | (ft) | Capacity (kips) | Capacity (kips) | Capacity (kips) | Tension Capacity (kips) | Tension Capacity (kips) | Dist. (kips) | Tension Capacity (kips) | Dist. (kips) | Comp. Capacity (kips) | Comp. Capacity (kips) | Control Criterion | Member ship |
| Rohn-DA1P | Rohn-D1 | L/r | 8.156 | Bearing | 160 | 3.605 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA11 | Rohn-D1 | L/r | 8.156 | Bearing | 160 | 3.605 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA2P | Rohn-D1 | L/r | 8.156 | Bearing | 160 | 3.605 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA21 | Rohn-D1 | L/r | 8.156 | Bearing | 160 | 3.605 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA22 | Rohn-D1 | L/r | 8.156 | Bearing | 160 | 3.605 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA3P | Rohn-D1 | L/r | 8.156 | Bearing | 165 | 3.389 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA31 | Rohn-D1 | L/r | 8.156 | Bearing | 165 | 3.389 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA4P | Rohn-D1 | L/r | 8.156 | Bearing | 165 | 3.389 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA41 | Rohn-D1 | L/r | 8.156 | Bearing | 165 | 3.389 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA5P | Rohn-D1 | L/r | 8.156 | Bearing | 165 | 3.389 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA51 | Rohn-D1 | L/r | 8.156 | Bearing | 170 | 3.189 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA52 | Rohn-D1 | L/r | 8.156 | Bearing | 170 | 3.189 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA6P | Rohn-D1 | L/r | 8.156 | Bearing | 170 | 3.189 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA61 | Rohn-D1 | L/r | 8.156 | Bearing | 170 | 3.189 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA62 | Rohn-D1 | L/r | 8.156 | Bearing | 170 | 3.189 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA7P | Rohn-D1 | L/r | 8.156 | Bearing | 176 | 3.005 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA71 | Rohn-D1 | L/r | 8.156 | Bearing | 176 | 3.005 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA72 | Rohn-D1 | L/r | 8.156 | Bearing | 176 | 3.005 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA8P | Rohn-D1 | L/r | 8.156 | Bearing | 176 | 3.005 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA81 | Rohn-D1 | L/r | 8.156 | Bearing | 176 | 3.005 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DA82 | Rohn-D1 | L/r | 8.156 | Bearing | 176 | 3.005 | 16.200 | 8.156 | 10.681 | 8.684 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB1P | Rohn-D2 | L/r | 4.283 | Bearing | 157 | 4.283 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB11 | Rohn-D2 | L/r | 4.283 | Bearing | 157 | 4.283 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB12 | Rohn-D2 | L/r | 4.283 | Bearing | 157 | 4.283 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB2P | Rohn-D2 | L/r | 4.283 | Bearing | 157 | 4.283 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB21 | Rohn-D2 | L/r | 4.283 | Bearing | 157 | 4.283 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB22 | Rohn-D2 | L/r | 4.283 | Bearing | 157 | 4.283 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB3P | Rohn-D2 | L/r | 4.045 | Bearing | 162 | 4.045 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB31 | Rohn-D2 | L/r | 4.045 | Bearing | 162 | 4.045 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB32 | Rohn-D2 | L/r | 4.045 | Bearing | 162 | 4.045 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB4P | Rohn-D2 | L/r | 4.045 | Bearing | 162 | 4.045 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB41 | Rohn-D2 | L/r | 4.045 | Bearing | 162 | 4.045 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB42 | Rohn-D2 | L/r | 4.045 | Bearing | 162 | 4.045 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB5P | Rohn-D2 | L/r | 3.824 | Bearing | 167 | 3.824 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB51 | Rohn-D2 | L/r | 3.824 | Bearing | 167 | 3.824 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB52 | Rohn-D2 | L/r | 3.824 | Bearing | 167 | 3.824 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB6P | Rohn-D2 | L/r | 3.824 | Bearing | 167 | 3.824 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB61 | Rohn-D2 | L/r | 3.824 | Bearing | 167 | 3.824 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB62 | Rohn-D2 | L/r | 3.824 | Bearing | 167 | 3.824 | 16.200 | 8.156 | 12.639 | 9.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |
| Rohn-DB7P | Rohn-D8 | L/r | 6.759 | Shear | 173 | 6.759 | 16.200 | 16.312 | 23.973 | 19.055 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Automatic | |

| | | |
|---|------------|---------|
| C | SNB-Ca1 | 133.340 |
| C | SNB-C1 | 140.000 |
| C | SNB-Ca2 | 133.340 |
| C | SNB-C2 | 140.000 |
| C | SNB-Ca3 | 133.340 |
| C | SNB-Cb1 | 126.660 |
| C | SNB-Cb2 | 126.660 |
| C | SNB-Cb3 | 126.660 |
| C | SNB-D1 | 120.000 |
| C | SNB-D2 | 120.000 |
| C | SNB-DP | 120.000 |
| C | SNB-WL-D1S | 120.000 |
| C | SNB-WL-D2S | 120.000 |
| C | SNB-WL-D3S | 120.000 |
| D | RohnD1 | 120.000 |
| D | RohnDa1 | 113.340 |
| D | RohnD1 | 120.000 |
| D | RohnDa2 | 113.340 |
| D | RohnD2 | 120.000 |
| D | RohnDa3 | 113.340 |
| D | RohnD1 | 106.660 |
| D | RohnD2 | 106.660 |
| D | RohnD3 | 106.660 |
| D | RohnE1 | 100.000 |
| D | RohnE2 | 100.000 |
| D | RohnEP | 100.000 |
| D | SNB-DP | 120.000 |
| D | SNB-Da1 | 113.340 |
| D | SNB-D1 | 120.000 |
| D | SNB-Da2 | 113.340 |
| D | SNB-D2 | 120.000 |
| D | SNB-Da3 | 113.340 |
| D | SNB-Db1 | 106.660 |
| D | SNB-Db2 | 106.660 |
| D | SNB-Db3 | 106.660 |
| D | SNB-E1 | 100.000 |
| D | SNB-E2 | 100.000 |
| D | SNB-EP | 100.000 |
| D | SNB-WL-E1S | 100.000 |
| D | SNB-WL-E2S | 100.000 |
| D | SNB-WL-E3S | 100.000 |
| E | RohnE1 | 100.000 |
| E | RohnEa1 | 93.340 |
| E | RohnE1 | 100.000 |
| E | RohnEa2 | 93.340 |
| E | RohnE2 | 100.000 |
| E | RohnEa3 | 93.340 |
| E | RohnE1 | 86.660 |
| E | RohnE2 | 86.660 |
| E | RohnE3 | 86.660 |
| E | RohnF1 | 80.000 |
| E | RohnF2 | 80.000 |
| E | RohnFP | 80.000 |
| E | SNB-EP | 100.000 |
| E | SNB-Ea1 | 93.340 |
| E | SNB-E1 | 100.000 |
| E | SNB-Ea2 | 93.340 |
| E | SNB-E2 | 100.000 |
| E | SNB-Ea3 | 93.340 |
| E | SNB-Eb1 | 86.660 |
| E | SNB-Eb2 | 86.660 |
| E | SNB-Eb3 | 86.660 |
| E | SNB-F1 | 80.000 |
| E | SNB-F2 | 80.000 |
| E | SNB-FP | 80.000 |
| E | SNB-WL-F1S | 80.000 |

| | | |
|---|------------|--------|
| E | SNB-WL-F2S | 80.000 |
| E | SNB-WL-F3S | 80.000 |
| F | RohnF2 | 80.000 |
| F | RohnFa1 | 70.000 |
| F | RohnF1 | 80.000 |
| F | RohnFa2 | 70.000 |
| F | RohnF2 | 80.000 |
| F | RohnFaS | 70.000 |
| F | RohnG1 | 60.000 |
| F | RohnG2 | 60.000 |
| F | RohnGP | 60.000 |
| F | SNB-F2 | 80.000 |
| F | SNB-F2a1 | 70.000 |
| F | SNB-F1 | 80.000 |
| F | SNB-F2a2 | 70.000 |
| F | SNB-F2 | 80.000 |
| F | SNB-F2aS | 70.000 |
| F | SNB-G1 | 60.000 |
| F | SNB-G2 | 60.000 |
| F | SNB-GP | 60.000 |
| F | SNB-WL-G1S | 60.000 |
| F | SNB-WL-G2S | 60.000 |
| F | SNB-WL-G3S | 60.000 |
| G | RohnGP | 60.000 |
| G | RohnGa1 | 50.000 |
| G | RohnGa2 | 50.000 |
| G | RohnG2 | 60.000 |
| G | RohnGaS | 50.000 |
| G | RohnH1 | 40.000 |
| G | RohnH2 | 40.000 |
| G | RohnHP | 40.000 |
| G | SNB-GP | 60.000 |
| G | SNB-Ga1 | 50.000 |
| G | SNB-G1 | 60.000 |
| G | SNB-Ga2 | 50.000 |
| G | SNB-G2 | 60.000 |
| G | SNB-GaS | 50.000 |
| G | SNB-H1 | 40.000 |
| G | SNB-H2 | 40.000 |
| G | SNB-HP | 40.000 |
| G | SNB-WL-H1S | 40.000 |
| G | SNB-WL-H2S | 40.000 |
| G | SNB-WL-H3S | 40.000 |
| H | RohnHP | 40.000 |
| H | RohnKa1 | 30.000 |
| H | RohnH1 | 40.000 |
| H | RohnH2 | 30.000 |
| H | RohnHaS | 40.000 |
| H | RohnHaS | 30.000 |
| H | RohnI1 | 20.000 |
| H | RohnI2 | 20.000 |
| H | RohnIP | 20.000 |
| H | SNB-HP | 40.000 |
| H | SNB-Ha1 | 30.000 |
| H | SNB-H1 | 40.000 |
| H | SNB-Ha2 | 30.000 |
| H | SNB-H2 | 40.000 |
| H | SNB-HaS | 30.000 |
| H | SNB-I1 | 20.000 |
| H | SNB-I2 | 20.000 |
| H | SNB-IP | 20.000 |
| H | SNB-WL-I1S | 20.000 |
| H | SNB-WL-I2S | 20.000 |
| H | SNB-WL-I3S | 20.000 |
| I | RohnIP | 20.000 |

| Section Label | Top Z (ft) | Bottom Z (ft) | Joint Count | Member Count | Top Width (ft) | Bottom Width (ft) | Gross Area (ft^2) | Face Area (ft^2) | Adjust Factor | Ar Factor | Dead Load |
|---------------|------------|---------------|-------------|--------------|----------------|-------------------|-------------------|------------------|---------------|-----------|-----------|
| I | 10.000 | | | | | | | | | | |
| I | Rohn1a1 | 10.000 | | | | | | | | | |
| I | Rohn1i | 20.000 | | | | | | | | | |
| I | Rohn1a2 | 10.000 | | | | | | | | | |
| I | Rohn1i2 | 20.000 | | | | | | | | | |
| I | Rohn1a5 | 10.000 | | | | | | | | | |
| I | Rohn1i5 | 0.000 | | | | | | | | | |
| I | RohnJ1 | 0.000 | | | | | | | | | |
| I | RohnJ2 | 0.000 | | | | | | | | | |
| I | RohnJ3 | 0.000 | | | | | | | | | |
| I | RohnJ4 | 0.000 | | | | | | | | | |
| I | RohnJ5 | 0.000 | | | | | | | | | |
| I | RohnJ6 | 0.000 | | | | | | | | | |
| I | RohnJ7 | 0.000 | | | | | | | | | |
| I | RohnJ8 | 0.000 | | | | | | | | | |
| I | RohnJ9 | 0.000 | | | | | | | | | |
| I | RohnJ10 | 0.000 | | | | | | | | | |
| I | RohnJ11 | 0.000 | | | | | | | | | |
| I | RohnJ12 | 0.000 | | | | | | | | | |
| I | RohnJ13 | 0.000 | | | | | | | | | |
| I | RohnJ14 | 0.000 | | | | | | | | | |
| I | RohnJ15 | 0.000 | | | | | | | | | |
| I | RohnJ16 | 0.000 | | | | | | | | | |
| I | RohnJ17 | 0.000 | | | | | | | | | |
| I | RohnJ18 | 0.000 | | | | | | | | | |
| I | RohnJ19 | 0.000 | | | | | | | | | |
| I | RohnJ20 | 0.000 | | | | | | | | | |
| I | RohnJ21 | 0.000 | | | | | | | | | |
| I | RohnJ22 | 0.000 | | | | | | | | | |
| I | RohnJ23 | 0.000 | | | | | | | | | |
| I | RohnJ24 | 0.000 | | | | | | | | | |
| I | RohnJ25 | 0.000 | | | | | | | | | |
| I | RohnJ26 | 0.000 | | | | | | | | | |
| I | RohnJ27 | 0.000 | | | | | | | | | |
| I | RohnJ28 | 0.000 | | | | | | | | | |
| I | RohnJ29 | 0.000 | | | | | | | | | |
| I | RohnJ30 | 0.000 | | | | | | | | | |
| I | RohnJ31 | 0.000 | | | | | | | | | |
| I | RohnJ32 | 0.000 | | | | | | | | | |
| I | RohnJ33 | 0.000 | | | | | | | | | |
| I | RohnJ34 | 0.000 | | | | | | | | | |
| I | RohnJ35 | 0.000 | | | | | | | | | |
| I | RohnJ36 | 0.000 | | | | | | | | | |
| I | RohnJ37 | 0.000 | | | | | | | | | |
| I | RohnJ38 | 0.000 | | | | | | | | | |
| I | RohnJ39 | 0.000 | | | | | | | | | |
| I | RohnJ40 | 0.000 | | | | | | | | | |
| I | RohnJ41 | 0.000 | | | | | | | | | |
| I | RohnJ42 | 0.000 | | | | | | | | | |
| I | RohnJ43 | 0.000 | | | | | | | | | |
| I | RohnJ44 | 0.000 | | | | | | | | | |
| I | RohnJ45 | 0.000 | | | | | | | | | |
| I | RohnJ46 | 0.000 | | | | | | | | | |
| I | RohnJ47 | 0.000 | | | | | | | | | |
| I | RohnJ48 | 0.000 | | | | | | | | | |
| I | RohnJ49 | 0.000 | | | | | | | | | |
| I | RohnJ50 | 0.000 | | | | | | | | | |
| I | RohnJ51 | 0.000 | | | | | | | | | |
| I | RohnJ52 | 0.000 | | | | | | | | | |
| I | RohnJ53 | 0.000 | | | | | | | | | |
| I | RohnJ54 | 0.000 | | | | | | | | | |
| I | RohnJ55 | 0.000 | | | | | | | | | |
| I | RohnJ56 | 0.000 | | | | | | | | | |
| I | RohnJ57 | 0.000 | | | | | | | | | |
| I | RohnJ58 | 0.000 | | | | | | | | | |
| I | RohnJ59 | 0.000 | | | | | | | | | |
| I | RohnJ60 | 0.000 | | | | | | | | | |
| I | RohnJ61 | 0.000 | | | | | | | | | |
| I | RohnJ62 | 0.000 | | | | | | | | | |
| I | RohnJ63 | 0.000 | | | | | | | | | |
| I | RohnJ64 | 0.000 | | | | | | | | | |
| I | RohnJ65 | 0.000 | | | | | | | | | |
| I | RohnJ66 | 0.000 | | | | | | | | | |
| I | RohnJ67 | 0.000 | | | | | | | | | |
| I | RohnJ68 | 0.000 | | | | | | | | | |
| I | RohnJ69 | 0.000 | | | | | | | | | |
| I | RohnJ70 | 0.000 | | | | | | | | | |
| I | RohnJ71 | 0.000 | | | | | | | | | |
| I | RohnJ72 | 0.000 | | | | | | | | | |
| I | RohnJ73 | 0.000 | | | | | | | | | |
| I | RohnJ74 | 0.000 | | | | | | | | | |
| I | RohnJ75 | 0.000 | | | | | | | | | |
| I | RohnJ76 | 0.000 | | | | | | | | | |
| I | RohnJ77 | 0.000 | | | | | | | | | |
| I | RohnJ78 | 0.000 | | | | | | | | | |
| I | RohnJ79 | 0.000 | | | | | | | | | |
| I | RohnJ80 | 0.000 | | | | | | | | | |
| I | RohnJ81 | 0.000 | | | | | | | | | |
| I | RohnJ82 | 0.000 | | | | | | | | | |
| I | RohnJ83 | 0.000 | | | | | | | | | |
| I | RohnJ84 | 0.000 | | | | | | | | | |
| I | RohnJ85 | 0.000 | | | | | | | | | |
| I | RohnJ86 | 0.000 | | | | | | | | | |
| I | RohnJ87 | 0.000 | | | | | | | | | |
| I | RohnJ88 | 0.000 | | | | | | | | | |
| I | RohnJ89 | 0.000 | | | | | | | | | |
| I | RohnJ90 | 0.000 | | | | | | | | | |
| I | RohnJ91 | 0.000 | | | | | | | | | |
| I | RohnJ92 | 0.000 | | | | | | | | | |
| I | RohnJ93 | 0.000 | | | | | | | | | |
| I | RohnJ94 | 0.000 | | | | | | | | | |
| I | RohnJ95 | 0.000 | | | | | | | | | |
| I | RohnJ96 | 0.000 | | | | | | | | | |
| I | RohnJ97 | 0.000 | | | | | | | | | |
| I | RohnJ98 | 0.000 | | | | | | | | | |
| I | RohnJ99 | 0.000 | | | | | | | | | |
| I | RohnJ100 | 0.000 | | | | | | | | | |

EIA Sections Information:

Equipment Library:

| Equipment Property Label | Stock Number | Weight (lbs) | Area (ft^2) | Ice Area (ft^2) | EIA Antenna Type | Coef. | Height (ft) |
|-----------------------------|--------------|--------------|-------------|-----------------|------------------|-------|-------------|
| RFS PD1142 w/ ice | Omni | 21.5 | 2.80 | 0.00 | Circle | 1.00 | 0.00 |
| Andrew DB-583 w/ ice | Omni | 11.6 | 0.71 | 0.00 | Circle | 1.00 | 0.00 |
| EMS RR90-17-XXDP w/ ice | Panel | 40.4 | 4.77 | 0.00 | Square | 1.00 | 0.00 |
| Andrew DB844H80-XY | Panel | 40.0 | 3.58 | 0.00 | Square | 1.00 | 0.00 |
| 12' T-Arm | Mount | 600.0 | 10.00 | 0.00 | Square | 1.00 | 0.00 |
| 3' Stand-Off | Mount | 75.0 | 1.50 | 0.00 | Square | 1.00 | 0.00 |
| Dipole | Dish | 71.0 | 6.00 | 0.00 | Circle | 1.00 | 0.00 |
| 6' Dish with Radome | Dish | 220.0 | 29.00 | 0.00 | Circle | 1.00 | 0.00 |
| TWA | TWA | 15.0 | 1.00 | 0.00 | Square | 1.00 | 0.00 |
| GLF-940 Grid | Dish | 120.0 | 20.00 | 0.00 | Circle | 1.00 | 0.00 |
| GPS | GPS | 20.0 | 1.00 | 0.00 | Circle | 1.00 | 0.00 |
| Powerwave 7770 | Panel | 35.0 | 5.88 | 0.00 | Square | 1.00 | 0.00 |
| Powerwave F65-16-XLH-RR | Panel | 65.0 | 8.40 | 0.00 | Square | 1.00 | 0.00 |
| Raycap Surge Suppressor | Other | 20.0 | 1.27 | 0.00 | Circle | 1.00 | 0.00 |
| Ericsson RRU | Other | 80.0 | 5.45 | 0.00 | Square | 1.00 | 0.00 |
| 10x4.6x4 Panel | Panel | 20.0 | 0.50 | 0.00 | Square | 1.00 | 0.00 |
| DB586-Y | Omni | 10.0 | 0.40 | 0.00 | Circle | 1.00 | 0.00 |
| 8' Omni | Omni | 150.0 | 1.60 | 0.00 | Circle | 1.00 | 0.00 |
| 12' Omni | Omni | 170.0 | 2.40 | 0.00 | Circle | 1.00 | 0.00 |
| Boom Gate | Mount | 470.0 | 24.40 | 0.00 | Square | 1.00 | 0.00 |
| Scala OGT9-806 w/ ice | Omni | 22.7 | 1.98 | 0.00 | Circle | 1.00 | 0.00 |
| Sinclair SC479-HFLDF w/ ice | Omni | 69.8 | 6.54 | 0.00 | Circle | 1.00 | 0.00 |
| RFS APXVSP18-C w/ ice | Panel | 106.5 | 8.81 | 0.00 | Square | 1.00 | 0.00 |
| ALU RRH | RRH | 66.7 | 2.44 | 0.00 | Square | 1.00 | 0.00 |
| 6' Stand-Off | Mount | 150.0 | 3.00 | 0.00 | Square | 1.00 | 0.00 |

| | | | | | | | | |
|---------------------------------|--------|------|------|------|--------|------|------|------|
| Swedcom SLCP 2x6014 | Panel | 70.5 | 7.65 | 0.00 | Square | 1.00 | 0.00 | 0.00 |
| Raycap DB-T1-6Z-8AB-0Z Diplexer | Panel | 10.0 | 0.50 | 0.00 | Square | 1.00 | 0.00 | 0.00 |
| CommScope HBXX-6516DS-A2M | Panel | 73.0 | 5.75 | 0.00 | Square | 1.00 | 0.00 | 0.00 |
| Decibel PD-420 2 bay - Dipole | Dipole | 24.7 | 2.48 | 0.00 | Square | 1.00 | 0.00 | 0.00 |

Equipment Connectivity:

| Equipment Attach Label | Equipment Attach Label | Equipment EIA Antenna Property Orientation Set | Angle (deg) |
|------------------------|-------------------------------|--|-------------|
| Top-A RohnAP | 6` Stand-Off | | 0.00 |
| Top-B RohnA1 | 6` Stand-Off | | 120.00 |
| Top-C1 RohnA2 | 6` Stand-Off | | 260.00 |
| Top-C2 RohnA2 | 6` Stand-Off | | 220.00 |
| CSP-3 RohnA2 | Sinclair SC479-HFILDF w/ ice | | 240.00 |
| CSP-75 RohnAP | 6` Dish with Radome | | 0.00 |
| CSP-76 RohnA1 | 6` Dish with Radome | | 120.00 |
| CSP-77 RohnA2 | 6` Dish with Radome | | 240.00 |
| CSP-1 RohnA1 | Scala OGT9-806 w/ ice | | 120.00 |
| CSP-74 RohnA1 | TMA | | 120.00 |
| TOG-5 RohnAP | Andrew DB-583 w/ ice | | 0.00 |
| NEU-55 RohnA2 | Decibel PD-420 2 bay - Dipole | | 240.00 |
| NEU-20 RohnA1 | Decibel PD-420 2 bay - Dipole | | 120.00 |
| CSP-67 RohnAal | Sinclair SC479-HFILDF w/ ice | | 0.00 |
| CSP-31 RohnAas | 6` Dish with Radome | | 0.00 |
| TOG-6 RohnAas | DB586-Y | | 0.00 |
| TOG-7 RohnAb1 | DB586-Y | | 120.00 |
| NEU-19 RohnAbs | TMA | | 0.00 |
| NEU-19-B RohnAbs | TMA | | 0.00 |
| CSP-4 RohnAc2 | Sinclair SC479-HFILDF w/ ice | | 240.00 |
| CSP-2 RohnAc2 | Scala OGT9-806 w/ ice | | 120.00 |
| STAM-63 RohnAcs | 10x4.6x4 Panel | | 0.00 |
| SEP-9 RohnBP | GLF-940 | | 0.00 |
| 159-A RohnBP | 3` Stand-Off | | 0.00 |
| 159-B RohnB1 | 3` Stand-Off | | 120.00 |
| STAM-65 RohnBP | 10x4.6x4 Panel | | 0.00 |
| CSP-70 RohnBP | Sinclair SC479-HFILDF w/ ice | | 0.00 |
| CSP-71 RohnB1 | Sinclair SC479-HFILDF w/ ice | | 120.00 |
| CSP-72 RohnB2 | Sinclair SC479-HFILDF w/ ice | | 240.00 |
| CSP-73 RohnB2 | TMA | | 240.00 |
| 160 RohnBP | 3` Stand-Off | | 0.00 |
| STAM-64 RohnBP | TMA | | 0.00 |
| ATT-A RohnBbs | 12` T-Arm | | 0.00 |
| ATT-B RohnBb1 | 12` T-Arm | | 120.00 |
| ATT-C RohnBb2 | 12` T-Arm | | 240.00 |
| ATT-A1 RohnBbs | Powerwave 7770 | | 0.00 |
| ATT-A2 RohnBbs | Powerwave P65-16-XLH-RR | | 0.00 |
| ATT-A3 RohnBbs | Powerwave 7770 | | 0.00 |
| ATT-A4 RohnBbs | Ericsson RRU | | 0.00 |
| ATT-A5 RohnBbs | Ericsson RRU | | 0.00 |
| ATT-A6 RohnBbs | TMA | | 0.00 |
| ATT-A7 RohnBbs | TMA | | 0.00 |
| ATT-A8 RohnBbs | TMA | | 0.00 |
| ATT-A9 RohnBbs | TMA | | 0.00 |
| ATT-A10 RohnBbs | Raycap Surge Suppressor | | 0.00 |
| ATT-B1 RohnBb1 | Powerwave 7770 | | 120.00 |
| ATT-B2 RohnBb1 | Powerwave P65-16-XLH-RR | | 120.00 |
| ATT-B3 RohnBb1 | Powerwave 7770 | | 120.00 |
| ATT-B4 RohnBb1 | Ericsson RRU | | 120.00 |
| ATT-B5 RohnBb1 | Ericsson RRU | | 120.00 |
| ATT-B6 RohnBb1 | TMA | | 120.00 |
| ATT-B7 RohnBb1 | TMA | | 120.00 |
| ATT-B8 RohnBb1 | TMA | | 120.00 |

| | | |
|------------------------|----------------------------------|--------|
| ATT-B9 RohnBb1 | TWA | 120.00 |
| ATT-C1 RohnBb2 | Powerwave 7770 | 240.00 |
| ATT-C2 RohnBb2 | Powerwave P65-16-XLH-RR | 240.00 |
| ATT-C3 RohnBb2 | Powerwave 7770 | 240.00 |
| ATT-C4 RohnBb2 | Ericsson RRU | 240.00 |
| ATT-C5 RohnBb2 | Ericsson RRU | 240.00 |
| ATT-C6 RohnBb2 | TWA | 240.00 |
| ATT-C7 RohnBb2 | TWA | 240.00 |
| ATT-C8 RohnBb2 | TWA | 240.00 |
| ATT-C9 RohnBb2 | TWA | 240.00 |
| 143-A RohnBcS | 3` Stand-Off | 0.00 |
| NEU-18 RohnBcS | 12` Omni | 0.00 |
| CSP-21 RohnC1 | 8` Omni | 120.00 |
| NEU-16 RohnC1 | 8` Omni | 120.00 |
| T-Mobile-1 RohnCP | EMS RR90-17-XXDP w/ ice | 0.00 |
| T-Mobile-2 RohnCP | TWA | 0.00 |
| T-Mobile-3 RohnCP | TWA | 0.00 |
| T-Mobile-4 RohnC1 | EMS RR90-17-XXDP w/ ice | 120.00 |
| T-Mobile-5 RohnC1 | TWA | 120.00 |
| T-Mobile-6 RohnC1 | TWA | 120.00 |
| T-Mobile-7 RohnC2 | EMS RR90-17-XXDP w/ ice | 240.00 |
| T-Mobile-8 RohnC2 | TWA | 240.00 |
| T-Mobile-9 RohnC2 | TWA | 240.00 |
| Verizon-A RohnCa1 | Boom Gate | 0.00 |
| Verizon-B RohnCa1 | Boom Gate | 120.00 |
| Verizon-C RohnCa2 | Boom Gate | 240.00 |
| Verizon-1_700 RohnCaS | Swedcom SLCP 2x6014 | 0.00 |
| Verizon-2_850 RohnCaS | Andrew DB844H80-XY | 0.00 |
| Verizon-3_850 RohnCaS | Andrew DB844H80-XY | 0.00 |
| Verizon-4_LTE RohnCaS | CommScope HBXX-6516DS-A2M | 0.00 |
| Verizon-5_PCS RohnCaS | CommScope HBXX-6516DS-A2M | 0.00 |
| Verizon-6_700 RohnCa1 | Swedcom SLCP 2x6014 | 120.00 |
| Verizon-7_850 RohnCa1 | Andrew DB844H80-XY | 120.00 |
| Verizon-8_850 RohnCa1 | Andrew DB844H80-XY | 120.00 |
| Verizon-9_LTE RohnCa1 | CommScope HBXX-6516DS-A2M | 120.00 |
| Verizon-10_PCS RohnCa1 | CommScope HBXX-6516DS-A2M | 120.00 |
| Verizon-11_700 RohnCa2 | Swedcom SLCP 2x6014 | 240.00 |
| Verizon-12_850 RohnCa2 | Andrew DB844H80-XY | 240.00 |
| Verizon-13_850 RohnCa2 | Andrew DB844H80-XY | 240.00 |
| Verizon-14_LTE RohnCa2 | CommScope HBXX-6516DS-A2M | 240.00 |
| Verizon-15_PCS RohnCa2 | CommScope HBXX-6516DS-A2M | 240.00 |
| Verizon-16_AWS RohnCaS | ALU RRH | 0.00 |
| Verizon-17_AWS RohnCa1 | ALU RRH | 120.00 |
| Verizon-18_AWS RohnCa2 | ALU RRH | 240.00 |
| Verizon-19_PCS RohnCaS | ALU RRH | 0.00 |
| Verizon-20_PCS RohnCa1 | ALU RRH | 120.00 |
| Verizon-21_PCS RohnCa2 | ALU RRH | 240.00 |
| Verizon-22_AWS RohnCa2 | Raycap DB-T1-6Z-8AB-0Z Dist. Box | 240.00 |
| Sprint-A RohnDP | 12` T-Arm | 0.00 |
| Sprint-B RohnD1 | 12` T-Arm | 120.00 |
| Sprint-C RohnD2 | 12` T-Arm | 240.00 |
| Sprint-1 RohnDP | RFS APXVSP18-C w/ ice | 0.00 |
| Sprint-2 RohnDP | ALU RRH | 0.00 |
| Sprint-3 RohnDP | ALU RRH | 0.00 |
| Sprint-4 RohnD1 | ALU RRH | 120.00 |
| Sprint-5 RohnD1 | ALU RRH | 120.00 |
| Sprint-6 RohnD1 | ALU RRH | 120.00 |
| Sprint-7 RohnD2 | RFS APXVSP18-C w/ ice | 240.00 |
| Sprint-8 RohnD2 | ALU RRH | 240.00 |
| Sprint-9 RohnD2 | ALU RRH | 240.00 |
| 115-A RohnBaS | 3` Stand-Off | 0.00 |
| NEU-17 RohnBaS | 12` Omni | 0.00 |
| 85-A RohnEBS | 3` Stand-Off | 0.00 |
| CSP-66 RohnFF | RFS PD1142 w/ ice | 0.00 |
| DOT-56 RohnF1 | Dipole | 120.00 |
| DEP-54 RohnF2 | RFS PD1142 w/ ice | 240.00 |

| | | |
|------------|---------|--------|
| GPS-68 | RohnG2 | 240.00 |
| GPS-69 | RohnG1 | 120.00 |
| GPS-53 | RohnIP | 0.00 |
| Verizon-D1 | RohnCas | 0.00 |
| Verizon-D2 | RohnCas | 120.00 |
| Verizon-D3 | RohnCal | 120.00 |
| Verizon-D4 | RohnCal | 240.00 |
| Verizon-D5 | RohnCa2 | 240.00 |
| Verizon-D6 | RohnCa2 | 240.00 |

Linear Appurtenances:

| Description From | To | Quantity | Shape | Width or Perimeter | Diameter | In | Unit | In | Include in |
|-------------------------------------|------|----------|-------|--------------------|----------|----------|------|-----------|------------|
| (ft) | (ft) | (ft) | (in) | (in) | (in) | (lbs/ft) | Zone | Wind Load | Zone |
| Full Cable Tray 2-150 (wind only) | 2 | 150 | 2 | Flat | 24 | 0 | 0 | Yes | Yes |
| Full Cable Tray 150-top (wind only) | 150 | 180 | 1 | Flat | 24 | 0 | 0 | Yes | Yes |
| 1-5/8" @ 180" | 2 | 180 | 3 | Round | 0 | 0 | 2.55 | Yes | No |
| 7/8" @ 180" | 2 | 180 | 2 | Round | 0 | 0 | 1.52 | Yes | No |
| 1/2" @ 180" | 2 | 180 | 1 | Round | 0 | 0 | 0.91 | Yes | No |
| Elliptical @ 175" | 2 | 175 | 1 | Round | 0 | 0 | 2 | Yes | No |
| 1-5/8" @ 175" | 2 | 175 | 2 | Round | 0 | 0 | 2.55 | Yes | No |
| Elliptical @ 170" | 2 | 170 | 1 | Round | 0 | 0 | 2 | Yes | No |
| 7/8" @ 170" | 2 | 170 | 1 | Round | 0 | 0 | 1.52 | Yes | No |
| 1-1/4" @ 165" | 2 | 165 | 1 | Round | 0 | 0 | 1.91 | Yes | No |
| 7/8" @ 165" | 2 | 165 | 2 | Round | 0 | 0 | 1.52 | Yes | No |
| Elliptical @ 160" | 2 | 160 | 1 | Round | 0 | 0 | 2 | Yes | No |
| 1-1/4" @ 160" | 2 | 160 | 1 | Round | 0 | 0 | 1.91 | Yes | No |
| 3/8" @ 160" | 2 | 160 | 3 | Round | 0 | 0 | 0.65 | Yes | No |
| 1-5/8" @ 160" | 2 | 160 | 3 | Round | 0 | 0 | 2.55 | Yes | No |
| 1/2" @ 160" | 2 | 160 | 1 | Round | 0 | 0 | 0.91 | Yes | No |
| 1-5/8" @ ATT | 2 | 150 | 12 | Round | 0 | 0 | 2.55 | Yes | No |
| Optic Fiber Cable @ ATT | 2 | 150 | 1 | Round | 0 | 0 | 0.3 | Yes | No |
| DC Cable @ ATT | 2 | 150 | 2 | Round | 0 | 0 | 0.3 | Yes | No |
| 7/8" @ 145" | 2 | 145 | 1 | Round | 0 | 0 | 1.52 | Yes | No |
| 1-5/8" @ 140" | 2 | 140 | 7 | Round | 0 | 0 | 2.55 | Yes | No |
| 1-5/8" @ VZW | 2 | 133 | 12 | Round | 0 | 0 | 2.55 | Yes | No |
| Optic Fiber Cable @ VZW | 2 | 133 | 1 | Round | 0 | 0 | 0.3 | Yes | No |
| Hybriflex Cables @ Sprint | 2 | 120 | 3 | Round | 0 | 0 | 0.37 | Yes | No |
| 7/8" @ 113" | 2 | 113 | 1 | Round | 0 | 0 | 1.52 | Yes | No |
| 7/8" @ 80" | 2 | 80 | 3 | Round | 0 | 0 | 1.52 | Yes | No |
| 1/2" @ 60" | 2 | 60 | 2 | Round | 0 | 0 | 0.91 | Yes | No |
| 1/2" @ 20" | 2 | 20 | 1 | Round | 0 | 0 | 0.91 | Yes | No |

*** Loads Data

Loads from file: c:\users\michael_dalickas\desktop\greenwich copy for mod\vz5-182.eia

Structure Height Summary (used for calculating wind/ice adjust with height):

Structure height above ground 180.00 (ft)

Elevation of structure bottom for wind height adjustment: 0.00 (ft)

Structure height for structure gust response factor: 180.00 (ft)

Structure gust response factor, Gh: 1.1209

Guy installation temperature: 60.00 (deg F)

Tower type: Triangular Latticed

EIA Rev. F Load Cases:

| Description | Factor | Dead Load | Wind Load | Ice Load | Strength Factor | Allowable Increase | Stress Factor | Basic Wind Speed (mph) | Wind Dir. (Deg) | Ice Thick. (in) | Ice Density (lbs/ft ³) | Ice Temperature (deg F) | Point Loads | Joint Displ. |
|---------------|--------|-----------|-----------|----------|-----------------|--------------------|---------------|------------------------|-----------------|-----------------|------------------------------------|-------------------------|-------------|--------------|
| W+I -90 deg | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.3333 | 90.0000 | 90.0000 | -90 | 0.5000 | 0.0 | 56.0000 | 0.0 | | |
| W+I -60 deg | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.3333 | 90.0000 | 90.0000 | -60 | 0.5000 | 0.0 | 56.0000 | 0.0 | | |
| W+I 0 deg | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.3333 | 90.0000 | 90.0000 | 0 | 0.5000 | 0.0 | 56.0000 | 0.0 | | |
| W+I 60 deg | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.3333 | 90.0000 | 90.0000 | 60 | 0.5000 | 0.0 | 56.0000 | 0.0 | | |
| W+I 90 deg | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.3333 | 90.0000 | 90.0000 | 90 | 0.5000 | 0.0 | 56.0000 | 0.0 | | |
| DL + Ice Only | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.3333 | 0.0000 | 0.0000 | 0 | 0.5000 | 0.0 | 56.0000 | 0.0 | | |

Equipment Load Case Information for "W+I -90 deg":

| Equipment Label | Equipment Property Set | Elevation Above Ground (ft) | qzGh (psf) | Ice Thick. (in) | Total Wind Incidence Area (ft ²) | Wind Angle (deg) | 222-G CA | 222-G CS | 222-G CM | Antenna Side Load (lbs) | Antenna Moment (ft-lbs) | Antenna Long. Load (lbs) | Trans. Load (lbs) | Vert. Load (lbs) |
|-----------------|-------------------------------|-----------------------------|------------|-----------------|--|------------------|----------|----------|----------|-------------------------|-------------------------|--------------------------|-------------------|------------------|
| Top-A | 6` Stand-Off | 180.00 | 37.72 | 0.50 | 3.00 | 90.00 | | | | 0.00 | 0.00 | -113.15 | 150.00 | 0.00 |
| Top-B | 6` Stand-Off | 180.00 | 37.72 | 0.50 | 3.00 | 210.00 | | | | 0.00 | 0.00 | -113.15 | 150.00 | 0.00 |
| Top-C1 | 6` Stand-Off | 180.00 | 37.72 | 0.50 | 3.00 | 350.00 | | | | 0.00 | 0.00 | -113.15 | 150.00 | 0.00 |
| Top-C2 | 6` Stand-Off | 180.00 | 37.72 | 0.50 | 3.00 | 310.00 | | | | 0.00 | 0.00 | -113.15 | 150.00 | 0.00 |
| CSP-3 | Sinclair SC479-HF1LDF w/ ice | 180.00 | 37.72 | 0.50 | 6.54 | 330.00 | | | | 0.00 | 0.00 | -246.67 | 69.80 | 0.00 |
| CSP-75 | 6` Dish with Radome | 180.00 | 37.72 | 0.50 | 29.00 | 90.00 | | | | 0.00 | 0.00 | -1093.80 | 220.00 | 0.00 |
| CSP-76 | 6` Dish with Radome | 180.00 | 37.72 | 0.50 | 29.00 | 210.00 | | | | 0.00 | 0.00 | -1093.80 | 220.00 | 0.00 |
| CSP-77 | 6` Dish with Radome | 180.00 | 37.72 | 0.50 | 29.00 | 330.00 | | | | 0.00 | 0.00 | -1093.80 | 220.00 | 0.00 |
| CSP-1 | Scala OGT9-806 w/ ice | 180.00 | 37.72 | 0.50 | 1.98 | 210.00 | | | | 0.00 | 0.00 | -74.68 | 22.70 | 0.00 |
| CSP-74 | TWA | 180.00 | 37.72 | 0.50 | 1.00 | 210.00 | | | | 0.00 | 0.00 | -37.72 | 15.00 | 0.00 |
| TOG-5 | Andrew DB-583 w/ ice | 180.00 | 37.72 | 0.50 | 0.71 | 90.00 | | | | 0.00 | 0.00 | -26.78 | 11.60 | 0.00 |
| NEU-55 | Decibel PD-420 2 bay - Dipole | 180.00 | 37.72 | 0.50 | 2.48 | 330.00 | | | | 0.00 | 0.00 | -93.69 | 24.70 | 0.00 |
| NEU-20 | Decibel PD-420 2 bay - Dipole | 180.00 | 37.72 | 0.50 | 2.48 | 210.00 | | | | 0.00 | 0.00 | -93.69 | 24.70 | 0.00 |
| CSP-67 | Sinclair SC479-HF1LDF w/ ice | 175.00 | 37.41 | 0.50 | 6.54 | 90.00 | | | | 0.00 | 0.00 | -244.69 | 69.80 | 0.00 |
| CSP-31 | 6` Dish with Radome | 175.00 | 37.41 | 0.50 | 29.00 | 90.00 | | | | 0.00 | 0.00 | -1085.03 | 220.00 | 0.00 |
| TOG-6 | DES86-Y | 175.00 | 37.11 | 0.50 | 0.40 | 90.00 | | | | 0.00 | 0.00 | -14.97 | 10.00 | 0.00 |
| TOG-7 | 6` Dish with Radome | 170.00 | 37.11 | 0.50 | 29.00 | 210.00 | | | | 0.00 | 0.00 | -1076.08 | 220.00 | 0.00 |
| NEU-19 | DES86-Y | 170.00 | 37.11 | 0.50 | 0.40 | 90.00 | | | | 0.00 | 0.00 | -14.84 | 10.00 | 0.00 |
| NEU-19-B | TWA | 170.00 | 37.11 | 0.50 | 1.00 | 90.00 | | | | 0.00 | 0.00 | -37.11 | 15.00 | 0.00 |
| CSP-4 | Sinclair SC479-HF1LDF w/ ice | 165.00 | 36.79 | 0.50 | 6.54 | 330.00 | | | | 0.00 | 0.00 | -240.61 | 69.80 | 0.00 |
| CSP-2 | Scala OGT9-806 w/ ice | 165.00 | 36.79 | 0.50 | 1.98 | 210.00 | | | | 0.00 | 0.00 | -72.85 | 22.70 | 0.00 |
| SPD-9 | 10x4.6x4 Panel | 165.00 | 36.79 | 0.50 | 0.50 | 90.00 | | | | 0.00 | 0.00 | -18.40 | 20.00 | 0.00 |
| SPD-9 | GLF-940 | 160.00 | 36.47 | 0.50 | 20.00 | 90.00 | | | | 0.00 | 0.00 | -729.38 | 120.00 | 0.00 |
| 159-A | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 90.00 | | | | 0.00 | 0.00 | -54.70 | 75.00 | 0.00 |
| 159-B | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 210.00 | | | | 0.00 | 0.00 | -54.70 | 75.00 | 0.00 |
| SPAM-65 | 10x4.6x4 Panel | 160.00 | 36.47 | 0.50 | 0.50 | 90.00 | | | | 0.00 | 0.00 | -18.23 | 20.00 | 0.00 |
| CSP-70 | Sinclair SC479-HF1LDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 90.00 | | | | 0.00 | 0.00 | -238.51 | 69.80 | 0.00 |
| CSP-71 | Sinclair SC479-HF1LDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 210.00 | | | | 0.00 | 0.00 | -238.51 | 69.80 | 0.00 |

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|----------------|------------------------------|--------|-------|------|-------|--------|------|---------|--------|
| CSP-72 | Sinclair SC479-HFILDf w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 330.00 | 0.00 | -238.51 | 69.80 |
| CSP-73 | TMA | 160.00 | 36.47 | 0.50 | 1.00 | 330.00 | 0.00 | -36.47 | 15.00 |
| 160 | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 90.00 | 0.00 | -54.70 | 75.00 |
| STAM-64 | TMA | 160.00 | 36.47 | 0.50 | 1.00 | 90.00 | 0.00 | -36.47 | 15.00 |
| ATT-A | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 90.00 | 0.00 | -358.03 | 600.00 |
| ATT-B | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 210.00 | 0.00 | -358.03 | 600.00 |
| ATT-C | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 330.00 | 0.00 | -358.03 | 600.00 |
| ATT-A1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 90.00 | 0.00 | -210.52 | 35.00 |
| ATT-A2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 90.00 | 0.00 | -300.74 | 65.00 |
| ATT-A3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 90.00 | 0.00 | -210.52 | 35.00 |
| ATT-A4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 90.00 | 0.00 | -195.12 | 80.00 |
| ATT-A5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 90.00 | 0.00 | -195.12 | 80.00 |
| ATT-A6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 90.00 | 0.00 | -35.80 | 15.00 |
| ATT-A7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 90.00 | 0.00 | -35.80 | 15.00 |
| ATT-A8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 90.00 | 0.00 | -35.80 | 15.00 |
| ATT-A9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 90.00 | 0.00 | -35.80 | 15.00 |
| ATT-A10 | Raycap Surge Suppressor | 150.00 | 35.80 | 0.50 | 1.27 | 90.00 | 0.00 | -45.47 | 20.00 |
| ATT-B1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 210.00 | 0.00 | -210.52 | 35.00 |
| ATT-B2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 210.00 | 0.00 | -300.74 | 65.00 |
| ATT-B3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 210.00 | 0.00 | -210.52 | 35.00 |
| ATT-B4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 210.00 | 0.00 | -195.12 | 80.00 |
| ATT-B5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 210.00 | 0.00 | -195.12 | 80.00 |
| ATT-B6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 210.00 | 0.00 | -35.80 | 15.00 |
| ATT-B7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 210.00 | 0.00 | -35.80 | 15.00 |
| ATT-B8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 210.00 | 0.00 | -35.80 | 15.00 |
| ATT-B9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 210.00 | 0.00 | -35.80 | 15.00 |
| ATT-C1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 330.00 | 0.00 | -210.52 | 35.00 |
| ATT-C2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 330.00 | 0.00 | -300.74 | 65.00 |
| ATT-C3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 330.00 | 0.00 | -210.52 | 35.00 |
| ATT-C4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 330.00 | 0.00 | -195.12 | 80.00 |
| ATT-C5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 330.00 | 0.00 | -195.12 | 80.00 |
| ATT-C6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 330.00 | 0.00 | -35.80 | 15.00 |
| ATT-C7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 330.00 | 0.00 | -35.80 | 15.00 |
| ATT-C8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 330.00 | 0.00 | -35.80 | 15.00 |
| ATT-C9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 330.00 | 0.00 | -35.80 | 15.00 |
| 143-A | 3` Stand-Off | 145.00 | 35.46 | 0.50 | 1.50 | 90.00 | 0.00 | -53.19 | 75.00 |
| NEU-18 | 12` Omni | 145.00 | 35.46 | 0.50 | 2.40 | 90.00 | 0.00 | -85.10 | 170.00 |
| CSP-21 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 210.00 | 0.00 | -56.17 | 160.00 |
| NEU-16 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 210.00 | 0.00 | -56.17 | 160.00 |
| T-Mobile-1 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 90.00 | 0.00 | -167.45 | 40.40 |
| T-Mobile-2 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 90.00 | 0.00 | -35.10 | 15.00 |
| T-Mobile-3 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 90.00 | 0.00 | -35.10 | 15.00 |
| T-Mobile-4 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 210.00 | 0.00 | -167.45 | 40.40 |
| T-Mobile-5 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 210.00 | 0.00 | -35.10 | 15.00 |
| T-Mobile-6 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 210.00 | 0.00 | -35.10 | 15.00 |
| T-Mobile-7 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 330.00 | 0.00 | -167.45 | 40.40 |
| T-Mobile-8 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 330.00 | 0.00 | -35.10 | 15.00 |
| T-Mobile-9 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 330.00 | 0.00 | -35.10 | 15.00 |
| Verizon-A | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 90.00 | 0.00 | -844.69 | 470.00 |
| Verizon-B | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 210.00 | 0.00 | -844.69 | 470.00 |
| Verizon-C | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 330.00 | 0.00 | -844.69 | 470.00 |
| Verizon-1_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 90.00 | 0.00 | -264.83 | 70.50 |
| Verizon-2_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 90.00 | 0.00 | -123.93 | 40.00 |
| Verizon-3_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 90.00 | 0.00 | -123.93 | 40.00 |
| Verizon-4_LTE | CommScope HBXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 90.00 | 0.00 | -219.83 | 65.90 |
| Verizon-5_PCS | CommScope HBXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 90.00 | 0.00 | -219.83 | 65.90 |
| Verizon-6_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 210.00 | 0.00 | -264.83 | 70.50 |
| Verizon-7_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 210.00 | 0.00 | -123.93 | 40.00 |
| Verizon-8_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 210.00 | 0.00 | -123.93 | 40.00 |
| Verizon-9_LTE | CommScope HBXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 210.00 | 0.00 | -219.83 | 65.90 |
| Verizon-10_PCS | CommScope HBXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 210.00 | 0.00 | -219.83 | 65.90 |
| Verizon-11_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 330.00 | 0.00 | -264.83 | 70.50 |
| Verizon-12_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 330.00 | 0.00 | -123.93 | 40.00 |
| Verizon-13_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 330.00 | 0.00 | -123.93 | 40.00 |
| Verizon-14_LTE | CommScope HBXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 330.00 | 0.00 | -219.83 | 65.90 |
| Verizon-15_PCS | CommScope HBXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 330.00 | 0.00 | -219.83 | 65.90 |

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|------------|-------------------------------|--------|-------|------|-------|--------|--------|---------|--------|
| CSP-77 | 6` Dish with Radome | 180.00 | 37.72 | 0.50 | 29.00 | 300.00 | 546.90 | -947.26 | 220.00 |
| CSP-1 | Scala OGT9-806 w/ ice | 180.00 | 37.72 | 0.50 | 1.98 | 180.00 | 37.34 | -64.67 | 22.70 |
| CSP-74 | TMA | 180.00 | 37.72 | 0.50 | 1.00 | 180.00 | 18.86 | -32.66 | 15.00 |
| TOG-5 | Andrew DB-583 w/ ice | 180.00 | 37.72 | 0.50 | 0.71 | 60.00 | 13.39 | -23.19 | 11.60 |
| NEU-55 | Decibel PD-420 2 bay - Dipole | 180.00 | 37.72 | 0.50 | 2.48 | 300.00 | 46.84 | -81.14 | 24.70 |
| NEU-20 | Decibel PD-420 2 bay - Dipole | 180.00 | 37.72 | 0.50 | 2.48 | 180.00 | 46.84 | -81.14 | 24.70 |
| CSP-67 | Sinclair SC479-HFILDF w/ ice | 175.00 | 37.41 | 0.50 | 6.54 | 60.00 | 122.35 | -211.91 | 69.80 |
| CSP-31 | 6` Dish with Radome | 175.00 | 37.41 | 0.50 | 29.00 | 60.00 | 542.51 | -939.66 | 220.00 |
| TOG-6 | DB586-Y | 175.00 | 37.41 | 0.50 | 0.40 | 60.00 | 7.48 | -12.96 | 10.00 |
| TOG-7 | 6` Dish with Radome | 170.00 | 37.11 | 0.50 | 29.00 | 180.00 | 538.04 | -931.91 | 220.00 |
| NEU-19 | DB586-Y | 170.00 | 37.11 | 0.50 | 0.40 | 60.00 | 7.42 | -12.85 | 10.00 |
| NEU-19-B | TMA | 170.00 | 37.11 | 0.50 | 1.00 | 60.00 | 18.55 | -32.13 | 15.00 |
| CSP-4 | Sinclair SC479-HFILDF w/ ice | 165.00 | 36.79 | 0.50 | 6.54 | 300.00 | 120.31 | -208.38 | 69.80 |
| CSP-2 | Scala OGT9-806 w/ ice | 165.00 | 36.79 | 0.50 | 1.98 | 180.00 | 36.42 | -63.09 | 22.70 |
| STAM-63 | 10x4.6x4 Panel | 165.00 | 36.79 | 0.50 | 0.50 | 60.00 | 9.20 | -15.93 | 20.00 |
| SED-9 | GLF-940 | 160.00 | 36.47 | 0.50 | 20.00 | 60.00 | 364.69 | -631.66 | 120.00 |
| 159-A | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 60.00 | 27.35 | -47.37 | 75.00 |
| 159-B | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 180.00 | 27.35 | -47.37 | 75.00 |
| STAM-65 | 10x4.6x4 Panel | 160.00 | 36.47 | 0.50 | 0.50 | 60.00 | 9.12 | -15.79 | 20.00 |
| CSP-70 | Sinclair SC479-HFILDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 60.00 | 119.25 | -206.55 | 69.80 |
| CSP-71 | Sinclair SC479-HFILDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 180.00 | 119.25 | -206.55 | 69.80 |
| CSP-72 | Sinclair SC479-HFILDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 300.00 | 119.25 | -206.55 | 69.80 |
| CSP-73 | TMA | 160.00 | 36.47 | 0.50 | 1.00 | 300.00 | 18.23 | -31.58 | 15.00 |
| 160 | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 60.00 | 27.35 | -47.37 | 75.00 |
| STAM-64 | TMA | 160.00 | 36.47 | 0.50 | 1.00 | 60.00 | 18.23 | -31.58 | 15.00 |
| ATT-A | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 60.00 | 179.01 | -310.06 | 600.00 |
| ATT-B | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 180.00 | 179.01 | -310.06 | 600.00 |
| ATT-C | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 300.00 | 179.01 | -310.06 | 600.00 |
| ATT-A1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 60.00 | 105.26 | -182.32 | 35.00 |
| ATT-A2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 60.00 | 150.37 | -260.45 | 65.00 |
| ATT-A3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 60.00 | 105.26 | -182.32 | 35.00 |
| ATT-A4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 60.00 | 97.56 | -168.98 | 80.00 |
| ATT-A5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 60.00 | 97.56 | -168.98 | 80.00 |
| ATT-A6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | -31.01 | 15.00 |
| ATT-A7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | -31.01 | 15.00 |
| ATT-A8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | -31.01 | 15.00 |
| ATT-A9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | -31.01 | 15.00 |
| ATT-A10 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | -31.01 | 15.00 |
| ATT-B1 | Raycap Surge Suppressor | 150.00 | 35.80 | 0.50 | 1.27 | 60.00 | 22.73 | -39.38 | 20.00 |
| ATT-B2 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 180.00 | 105.26 | -182.32 | 35.00 |
| ATT-B3 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 180.00 | 150.37 | -260.45 | 65.00 |
| ATT-B4 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 180.00 | 105.26 | -182.32 | 35.00 |
| ATT-B5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 180.00 | 97.56 | -168.98 | 80.00 |
| ATT-B6 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 180.00 | 97.56 | -168.98 | 80.00 |
| ATT-B7 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 180.00 | 97.56 | -168.98 | 80.00 |
| ATT-B8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | -31.01 | 15.00 |
| ATT-B9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | -31.01 | 15.00 |
| ATT-C1 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | -31.01 | 15.00 |
| ATT-C2 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 300.00 | 105.26 | -182.32 | 35.00 |
| ATT-C3 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 300.00 | 150.37 | -260.45 | 65.00 |
| ATT-C4 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 300.00 | 105.26 | -182.32 | 35.00 |
| ATT-C5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 300.00 | 97.56 | -168.98 | 80.00 |
| ATT-C6 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 300.00 | 97.56 | -168.98 | 80.00 |
| ATT-C7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | -31.01 | 15.00 |
| ATT-C8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | -31.01 | 15.00 |
| ATT-C9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | -31.01 | 15.00 |
| 143-A | 3` Stand-Off | 145.00 | 35.46 | 0.50 | 1.50 | 60.00 | 26.59 | -46.06 | 75.00 |
| NEU-18 | 12` Omni | 145.00 | 35.46 | 0.50 | 2.40 | 60.00 | 42.55 | -73.70 | 170.00 |
| CSP-21 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 180.00 | 28.08 | -48.64 | 160.00 |
| NEU-16 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 180.00 | 28.08 | -48.64 | 160.00 |
| T-Mobile-1 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 60.00 | 83.72 | -145.01 | 40.40 |
| T-Mobile-2 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 60.00 | 17.55 | -30.40 | 15.00 |
| T-Mobile-3 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 60.00 | 17.55 | -30.40 | 15.00 |
| T-Mobile-4 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 180.00 | 83.72 | -145.01 | 40.40 |
| T-Mobile-5 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | -30.40 | 15.00 |
| T-Mobile-6 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | -30.40 | 15.00 |

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|----------------|----------------------------------|--------|-------|------|-------|--------|------|--------|
| ATT-B9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 120.00 | 0.00 | 15.00 |
| ATT-C1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 240.00 | 0.00 | 35.00 |
| ATT-C2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 240.00 | 0.00 | 65.00 |
| ATT-C3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 240.00 | 0.00 | 35.00 |
| ATT-C4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 240.00 | 0.00 | 80.00 |
| ATT-C5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 240.00 | 0.00 | 80.00 |
| ATT-C6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| ATT-C7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| ATT-C8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| ATT-C9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| 143-A | 3` Stand-Off | 145.00 | 35.46 | 0.50 | 1.50 | 0.00 | 0.00 | 75.00 |
| NEU-18 | 12` Omni | 145.00 | 35.46 | 0.50 | 2.40 | 0.00 | 0.00 | 170.00 |
| CSP-21 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 120.00 | 0.00 | 160.00 |
| NEU-16 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 120.00 | 0.00 | 160.00 |
| T-Mobile-1 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 0.00 | 0.00 | 40.40 |
| T-Mobile-2 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| T-Mobile-3 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| T-Mobile-4 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 120.00 | 0.00 | 40.40 |
| T-Mobile-5 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 120.00 | 0.00 | 15.00 |
| T-Mobile-6 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 120.00 | 0.00 | 15.00 |
| T-Mobile-7 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 240.00 | 0.00 | 40.40 |
| T-Mobile-8 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| T-Mobile-9 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 240.00 | 0.00 | 15.00 |
| Verizon-A | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 0.00 | 0.00 | 470.00 |
| Verizon-B | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 120.00 | 0.00 | 470.00 |
| Verizon-C | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 240.00 | 0.00 | 470.00 |
| Verizon-1_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 0.00 | 0.00 | 70.50 |
| Verizon-2_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 0.00 | 0.00 | 40.00 |
| Verizon-3_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 0.00 | 0.00 | 40.00 |
| Verizon-4_LTE | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 0.00 | 0.00 | 65.90 |
| Verizon-5_PCS | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 0.00 | 0.00 | 65.90 |
| Verizon-6_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 120.00 | 0.00 | 70.50 |
| Verizon-7_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 120.00 | 0.00 | 40.00 |
| Verizon-8_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 120.00 | 0.00 | 40.00 |
| Verizon-9_LTE | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 120.00 | 0.00 | 65.90 |
| Verizon-10_PCS | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 120.00 | 0.00 | 65.90 |
| Verizon-11_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 240.00 | 0.00 | 70.50 |
| Verizon-12_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 240.00 | 0.00 | 40.00 |
| Verizon-13_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 240.00 | 0.00 | 40.00 |
| Verizon-14_LTE | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 240.00 | 0.00 | 65.90 |
| Verizon-15_PCS | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 240.00 | 0.00 | 65.90 |
| Verizon-16_AWS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 0.00 | 0.00 | 66.70 |
| Verizon-17_AWS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 120.00 | 0.00 | 66.70 |
| Verizon-18_AWS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 240.00 | 0.00 | 66.70 |
| Verizon-19_PCS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 0.00 | 0.00 | 66.70 |
| Verizon-20_PCS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 120.00 | 0.00 | 66.70 |
| Verizon-21_PCS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 240.00 | 0.00 | 66.70 |
| Verizon-22_AWS | Raycap DB-T1-6Z-8AB-0Z Dist. Box | 133.34 | 34.62 | 0.50 | 5.75 | 240.00 | 0.00 | 73.00 |
| Sprint-A | 12` T-Arm | 120.00 | 33.59 | 0.50 | 10.00 | 0.00 | 0.00 | 600.00 |
| Sprint-B | 12` T-Arm | 120.00 | 33.59 | 0.50 | 10.00 | 120.00 | 0.00 | 600.00 |
| Sprint-C | 12` T-Arm | 120.00 | 33.59 | 0.50 | 10.00 | 240.00 | 0.00 | 600.00 |
| Sprint-1 | RFS APXVFP18-C w/ ice | 120.00 | 33.59 | 0.50 | 8.81 | 0.00 | 0.00 | 600.00 |
| Sprint-2 | ALU RRH | 120.00 | 33.59 | 0.50 | 2.44 | 0.00 | 0.00 | 106.50 |
| Sprint-3 | ALU RRH | 120.00 | 33.59 | 0.50 | 2.44 | 0.00 | 0.00 | 66.70 |
| Sprint-4 | ALU RRH | 120.00 | 33.59 | 0.50 | 8.81 | 120.00 | 0.00 | 106.50 |
| Sprint-5 | ALU RRH | 120.00 | 33.59 | 0.50 | 2.44 | 240.00 | 0.00 | 66.70 |
| Sprint-6 | ALU RRH | 120.00 | 33.59 | 0.50 | 2.44 | 0.00 | 0.00 | 66.70 |
| Sprint-7 | RFS APXVFP18-C w/ ice | 120.00 | 33.59 | 0.50 | 8.81 | 120.00 | 0.00 | 106.50 |
| Sprint-8 | ALU RRH | 120.00 | 33.59 | 0.50 | 2.44 | 240.00 | 0.00 | 66.70 |
| Sprint-9 | ALU RRH | 120.00 | 33.59 | 0.50 | 2.44 | 240.00 | 0.00 | 66.70 |
| NEU-17 | 115-A | 113.34 | 33.05 | 0.50 | 1.50 | 0.00 | 0.00 | 75.00 |
| 85-A | 3` Stand-Off | 86.66 | 30.61 | 0.50 | 1.50 | 0.00 | 0.00 | 75.00 |
| CSP-66 | RFS PD1142 w/ ice | 80.00 | 29.92 | 0.50 | 2.80 | 0.00 | 0.00 | 71.50 |
| DOT-56 | Dipole | 80.00 | 29.92 | 0.50 | 6.00 | 120.00 | 0.00 | 71.50 |
| DEP-54 | RFS PD1142 w/ ice | 80.00 | 29.92 | 0.50 | 2.80 | 240.00 | 0.00 | 71.50 |

| | | | | | | | | | |
|----------------|---------------------------|--------|-------|------|-------|--------|--------|--------|--------|
| ATT-A | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 300.00 | 179.01 | 310.06 | 600.00 |
| ATT-B | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 60.00 | 179.01 | 310.06 | 600.00 |
| ATT-C | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 180.00 | 179.01 | 310.06 | 600.00 |
| ATT-AL | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 300.00 | 105.26 | 182.32 | 35.00 |
| ATT-A1 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 300.00 | 150.37 | 260.45 | 65.00 |
| ATT-A2 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 300.00 | 105.26 | 182.32 | 35.00 |
| ATT-A3 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 300.00 | 97.56 | 168.98 | 80.00 |
| ATT-A4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 300.00 | 97.56 | 168.98 | 80.00 |
| ATT-A5 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | 31.01 | 15.00 |
| ATT-A6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | 31.01 | 15.00 |
| ATT-A7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | 31.01 | 15.00 |
| ATT-A8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | 31.01 | 15.00 |
| ATT-A9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 300.00 | 17.90 | 31.01 | 15.00 |
| ATT-A10 | Raycap Surge Suppressor | 150.00 | 35.80 | 0.50 | 1.27 | 300.00 | 22.73 | 39.38 | 20.00 |
| ATT-B1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 60.00 | 105.26 | 182.32 | 35.00 |
| ATT-B2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 60.00 | 105.26 | 182.32 | 35.00 |
| ATT-B3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 60.00 | 97.56 | 168.98 | 80.00 |
| ATT-B4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 60.00 | 97.56 | 168.98 | 80.00 |
| ATT-B5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 60.00 | 97.56 | 168.98 | 80.00 |
| ATT-B6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | 31.01 | 15.00 |
| ATT-B7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | 31.01 | 15.00 |
| ATT-B8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | 31.01 | 15.00 |
| ATT-B9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 60.00 | 17.90 | 31.01 | 15.00 |
| ATT-C1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 180.00 | 105.26 | 182.32 | 35.00 |
| ATT-C2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 180.00 | 150.37 | 260.45 | 65.00 |
| ATT-C3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 180.00 | 105.26 | 182.32 | 35.00 |
| ATT-C4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 180.00 | 97.56 | 168.98 | 80.00 |
| ATT-C5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 180.00 | 97.56 | 168.98 | 80.00 |
| ATT-C6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | 31.01 | 15.00 |
| ATT-C7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | 31.01 | 15.00 |
| ATT-C8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | 31.01 | 15.00 |
| ATT-C9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 180.00 | 17.90 | 31.01 | 15.00 |
| NEU-1 | 3` Stand-Off | 145.00 | 35.46 | 0.50 | 1.50 | 300.00 | 26.59 | 46.06 | 75.00 |
| NEU-1A | 12` Omni | 145.00 | 35.46 | 0.50 | 2.40 | 300.00 | 42.55 | 73.70 | 170.00 |
| NEU-2 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 60.00 | 28.08 | 48.64 | 160.00 |
| NEU-21 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 60.00 | 28.08 | 48.64 | 160.00 |
| NEU-16 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 300.00 | 83.72 | 145.01 | 40.40 |
| T-Mobile-1 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | 30.40 | 15.00 |
| T-Mobile-2 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | 30.40 | 15.00 |
| T-Mobile-3 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | 30.40 | 15.00 |
| T-Mobile-4 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 300.00 | 83.72 | 145.01 | 40.40 |
| T-Mobile-5 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 60.00 | 17.55 | 30.40 | 15.00 |
| T-Mobile-6 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 60.00 | 17.55 | 30.40 | 15.00 |
| T-Mobile-7 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 180.00 | 83.72 | 145.01 | 40.40 |
| T-Mobile-8 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | 30.40 | 15.00 |
| T-Mobile-9 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 180.00 | 17.55 | 30.40 | 15.00 |
| Verizon-A | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 300.00 | 422.34 | 731.52 | 470.00 |
| Verizon-B | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 300.00 | 422.34 | 731.52 | 470.00 |
| Verizon-C | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 300.00 | 422.34 | 731.52 | 470.00 |
| Verizon-1_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 300.00 | 132.42 | 229.35 | 70.50 |
| Verizon-2_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 300.00 | 61.97 | 107.33 | 40.00 |
| Verizon-3_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 300.00 | 61.97 | 107.33 | 40.00 |
| Verizon-4_LTE | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 300.00 | 109.91 | 190.38 | 65.90 |
| Verizon-5_PCS | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 300.00 | 109.91 | 190.38 | 65.90 |
| Verizon-6_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 60.00 | 132.42 | 229.35 | 70.50 |
| Verizon-7_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 60.00 | 61.97 | 107.33 | 40.00 |
| Verizon-8_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 60.00 | 61.97 | 107.33 | 40.00 |
| Verizon-9_LTE | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 60.00 | 109.91 | 190.38 | 65.90 |
| Verizon-10_PCS | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 60.00 | 109.91 | 190.38 | 65.90 |
| Verizon-11_700 | Swedcom SLCP 2x6014 | 133.34 | 34.62 | 0.50 | 7.65 | 180.00 | 132.42 | 229.35 | 70.50 |
| Verizon-12_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 180.00 | 61.97 | 107.33 | 40.00 |
| Verizon-13_850 | Andrew DB844H80-XY | 133.34 | 34.62 | 0.50 | 3.58 | 180.00 | 61.97 | 107.33 | 40.00 |
| Verizon-14_LTE | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 180.00 | 109.91 | 190.38 | 65.90 |
| Verizon-15_PCS | CommScope HEXX-6516DS-A2M | 133.34 | 34.62 | 0.50 | 6.35 | 180.00 | 109.91 | 190.38 | 65.90 |
| Verizon-16_AWS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 300.00 | 42.23 | 73.15 | 66.70 |
| Verizon-17_AWS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 60.00 | 42.23 | 73.15 | 66.70 |
| Verizon-18_AWS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 180.00 | 42.23 | 73.15 | 66.70 |
| Verizon-19_PCS | ALU RRH | 133.34 | 34.62 | 0.50 | 2.44 | 300.00 | 42.23 | 73.15 | 66.70 |

| | | | | | | | | | |
|------------|-------------------------------|--------|-------|------|-------|--------|------|---------|--------|
| NEU-55 | Decibel PD-420 2 bay - Dipole | 180.00 | 37.72 | 0.50 | 2.48 | 150.00 | 0.00 | 93.69 | 24.70 |
| NEU-20 | Decibel PD-420 2 bay - Dipole | 180.00 | 37.72 | 0.50 | 2.48 | 30.00 | 0.00 | 93.69 | 24.70 |
| CSP-67 | Sinclair SC479-HFILDF w/ ice | 175.00 | 37.41 | 0.50 | 6.54 | 270.00 | 0.00 | 1085.03 | 220.00 |
| CSP-31 | 6` Dish with Radome | 175.00 | 37.41 | 0.50 | 29.00 | 270.00 | 0.00 | 14.97 | 10.00 |
| TOG-6 | DB586-Y | 170.00 | 37.11 | 0.50 | 29.00 | 30.00 | 0.00 | 1076.08 | 220.00 |
| NEU-19 | DB586-Y | 170.00 | 37.11 | 0.50 | 0.40 | 270.00 | 0.00 | 14.84 | 10.00 |
| NEU-19-B | TMA | 170.00 | 37.11 | 0.50 | 1.00 | 270.00 | 0.00 | 37.11 | 15.00 |
| CSP-4 | Sinclair SC479-HFILDF w/ ice | 165.00 | 36.79 | 0.50 | 6.54 | 150.00 | 0.00 | 240.61 | 69.80 |
| CSP-2 | Scala OGT9-806 w/ ice | 165.00 | 36.79 | 0.50 | 1.98 | 30.00 | 0.00 | 72.85 | 22.70 |
| STAM-63 | 10x4.6x4 Panel | 160.00 | 36.47 | 0.50 | 20.00 | 270.00 | 0.00 | 18.40 | 20.00 |
| SPD-9 | GLF-940 | 160.00 | 36.47 | 0.50 | 20.00 | 270.00 | 0.00 | 729.38 | 120.00 |
| 159-A | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 270.00 | 0.00 | 54.70 | 75.00 |
| 159-B | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 30.00 | 0.00 | 54.70 | 75.00 |
| STAM-65 | 10x4.6x4 Panel | 160.00 | 36.47 | 0.50 | 0.50 | 270.00 | 0.00 | 18.23 | 20.00 |
| CSP-70 | Sinclair SC479-HFILDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 270.00 | 0.00 | 238.51 | 69.80 |
| CSP-71 | Sinclair SC479-HFILDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 30.00 | 0.00 | 238.51 | 69.80 |
| CSP-72 | Sinclair SC479-HFILDF w/ ice | 160.00 | 36.47 | 0.50 | 6.54 | 150.00 | 0.00 | 238.51 | 69.80 |
| CSP-73 | TMA | 160.00 | 36.47 | 0.50 | 1.00 | 150.00 | 0.00 | 36.47 | 15.00 |
| 160 | 3` Stand-Off | 160.00 | 36.47 | 0.50 | 1.50 | 270.00 | 0.00 | 54.70 | 75.00 |
| STAM-64 | TMA | 160.00 | 36.47 | 0.50 | 1.00 | 270.00 | 0.00 | 36.47 | 15.00 |
| ATT-A | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 270.00 | 0.00 | 358.03 | 600.00 |
| ATT-B | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 30.00 | 0.00 | 358.03 | 600.00 |
| ATT-C | 12` T-Arm | 150.00 | 35.80 | 0.50 | 10.00 | 150.00 | 0.00 | 358.03 | 600.00 |
| ATT-A1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 270.00 | 0.00 | 210.52 | 35.00 |
| ATT-A2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 270.00 | 0.00 | 300.74 | 65.00 |
| ATT-A3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 270.00 | 0.00 | 210.52 | 35.00 |
| ATT-A4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 270.00 | 0.00 | 195.12 | 80.00 |
| ATT-A5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 270.00 | 0.00 | 195.12 | 80.00 |
| ATT-A6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 270.00 | 0.00 | 35.80 | 15.00 |
| ATT-A7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 270.00 | 0.00 | 35.80 | 15.00 |
| ATT-A8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 270.00 | 0.00 | 35.80 | 15.00 |
| ATT-A9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 270.00 | 0.00 | 35.80 | 15.00 |
| ATT-A10 | Raycap Surge Suppressor | 150.00 | 35.80 | 0.50 | 1.27 | 270.00 | 0.00 | 45.47 | 20.00 |
| ATT-B1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 30.00 | 0.00 | 210.52 | 35.00 |
| ATT-B2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 30.00 | 0.00 | 300.74 | 65.00 |
| ATT-B3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 30.00 | 0.00 | 210.52 | 35.00 |
| ATT-B4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 30.00 | 0.00 | 195.12 | 80.00 |
| ATT-B5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 30.00 | 0.00 | 195.12 | 80.00 |
| ATT-B6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 30.00 | 0.00 | 35.80 | 15.00 |
| ATT-B7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 30.00 | 0.00 | 35.80 | 15.00 |
| ATT-B8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 30.00 | 0.00 | 35.80 | 15.00 |
| ATT-B9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 30.00 | 0.00 | 35.80 | 15.00 |
| ATT-C1 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 150.00 | 0.00 | 210.52 | 35.00 |
| ATT-C2 | Powerwave P65-16-XLH-RR | 150.00 | 35.80 | 0.50 | 8.40 | 150.00 | 0.00 | 300.74 | 65.00 |
| ATT-C3 | Powerwave 7770 | 150.00 | 35.80 | 0.50 | 5.88 | 150.00 | 0.00 | 210.52 | 35.00 |
| ATT-C4 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 150.00 | 0.00 | 195.12 | 80.00 |
| ATT-C5 | Ericsson RRU | 150.00 | 35.80 | 0.50 | 5.45 | 150.00 | 0.00 | 195.12 | 80.00 |
| ATT-C6 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 150.00 | 0.00 | 35.80 | 15.00 |
| ATT-C7 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 150.00 | 0.00 | 35.80 | 15.00 |
| ATT-C8 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 150.00 | 0.00 | 35.80 | 15.00 |
| ATT-C9 | TMA | 150.00 | 35.80 | 0.50 | 1.00 | 150.00 | 0.00 | 35.80 | 15.00 |
| 143-A | 3` Stand-Off | 145.00 | 35.46 | 0.50 | 1.50 | 270.00 | 0.00 | 53.19 | 75.00 |
| NEU-18 | 12` Omni | 145.00 | 35.46 | 0.50 | 2.40 | 270.00 | 0.00 | 85.10 | 170.00 |
| CSP-21 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 30.00 | 0.00 | 56.17 | 160.00 |
| NEU-16 | 8` Omni | 140.00 | 35.10 | 0.50 | 1.60 | 30.00 | 0.00 | 56.17 | 160.00 |
| NEU-17 | EMS RR90-17-XXDP w/ ice | 140.00 | 35.10 | 0.50 | 4.77 | 270.00 | 0.00 | 167.45 | 40.40 |
| T-Mobile-1 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 270.00 | 0.00 | 35.10 | 15.00 |
| T-Mobile-2 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 270.00 | 0.00 | 35.10 | 15.00 |
| T-Mobile-3 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 270.00 | 0.00 | 35.10 | 15.00 |
| T-Mobile-4 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 30.00 | 0.00 | 167.45 | 40.40 |
| T-Mobile-5 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 30.00 | 0.00 | 35.10 | 15.00 |
| T-Mobile-6 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 30.00 | 0.00 | 35.10 | 15.00 |
| T-Mobile-7 | TMA | 140.00 | 35.10 | 0.50 | 4.77 | 150.00 | 0.00 | 167.45 | 40.40 |
| T-Mobile-8 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 150.00 | 0.00 | 35.10 | 15.00 |
| T-Mobile-9 | TMA | 140.00 | 35.10 | 0.50 | 1.00 | 150.00 | 0.00 | 35.10 | 15.00 |
| Verizon-A | Boom Gate | 133.34 | 34.62 | 0.50 | 24.40 | 270.00 | 0.00 | 844.69 | 470.00 |

Equipment Load Case Information for "DL + Ice Only":

| Equipment Label | Equipment Property Set | Elevation Above Ground (ft) | qzch (psf) | Ice Thick. (in) | Total Wind Area (ft ²) | Wind Incidence Angle (deg) | 222-G CA | 222-G CS | 222-G CM | Antenna Axial Load (lbs) | Antenna Side Load (lbs) | Antenna Moment (ft-lbs) | Antenna Long. Load (lbs) | Trans. Load (lbs) | Vert. Load (lbs) |
|-----------------|-------------------------------|-----------------------------|------------|-----------------|------------------------------------|----------------------------|----------|----------|----------|--------------------------|-------------------------|-------------------------|--------------------------|-------------------|------------------|
| TOP-A | 6` Stand-Off | 180.00 | 0.00 | 0.50 | 3.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 150.00 |
| TOP-B | 6` Stand-Off | 180.00 | 0.00 | 0.50 | 3.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 150.00 |
| TOP-C1 | 6` Stand-Off | 180.00 | 0.00 | 0.50 | 3.00 | 260.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 150.00 |
| TOP-C2 | 6` Stand-Off | 180.00 | 0.00 | 0.50 | 3.00 | 220.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 150.00 |
| CSP-3 | Sinclair SC479-HFILDF w/ ice | 180.00 | 0.00 | 0.50 | 6.54 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69.80 |
| CSP-75 | 6` Dish with Radome | 180.00 | 0.00 | 0.50 | 29.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 220.00 |
| CSP-76 | 6` Dish with Radome | 180.00 | 0.00 | 0.50 | 29.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 220.00 |
| CSP-77 | 6` Dish with Radome | 180.00 | 0.00 | 0.50 | 29.00 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 220.00 |
| CSP-1 | Scala OGT9-806 w/ ice | 180.00 | 0.00 | 0.50 | 1.98 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 22.70 |
| CSP-74 | Scala TMA | 180.00 | 0.00 | 0.50 | 1.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| TOG-5 | Andrew DB-583 w/ ice | 180.00 | 0.00 | 0.50 | 0.71 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.60 |
| NEU-55 | Decibel PD-420 2 bay - Dipole | 180.00 | 0.00 | 0.50 | 2.48 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.70 |
| NEU-20 | Decibel PD-420 2 bay - Dipole | 180.00 | 0.00 | 0.50 | 2.48 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.70 |
| CSP-67 | Sinclair SC479-HFILDF w/ ice | 175.00 | 0.00 | 0.50 | 6.54 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69.80 |
| CSP-31 | 6` Dish with Radome | 175.00 | 0.00 | 0.50 | 29.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 220.00 |
| TOG-6 | DB586-Y | 175.00 | 0.00 | 0.50 | 0.40 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| TOG-7 | 6` Dish with Radome | 170.00 | 0.00 | 0.50 | 29.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 220.00 |
| NEU-19 | DB586-Y | 170.00 | 0.00 | 0.50 | 0.40 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| NEU-19-B | TMA | 170.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| CSP-4 | Sinclair SC479-HFILDF w/ ice | 165.00 | 0.00 | 0.50 | 6.54 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69.80 |
| CSP-2 | Scala OGT9-806 w/ ice | 165.00 | 0.00 | 0.50 | 1.98 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 22.70 |
| STAM-63 | 10x4.6x4 Panel | 165.00 | 0.00 | 0.50 | 0.50 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 |
| SPD-9 | GLF-940 | 160.00 | 0.00 | 0.50 | 20.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 120.00 |
| 159-A | 3` Stand-Off | 160.00 | 0.00 | 0.50 | 1.50 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 75.00 |
| 159-B | 3` Stand-Off | 160.00 | 0.00 | 0.50 | 1.50 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 75.00 |
| STAM-65 | 10x4.6x4 Panel | 160.00 | 0.00 | 0.50 | 0.50 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 |
| CSP-70 | Sinclair SC479-HFILDF w/ ice | 160.00 | 0.00 | 0.50 | 6.54 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69.80 |
| CSP-71 | Sinclair SC479-HFILDF w/ ice | 160.00 | 0.00 | 0.50 | 6.54 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69.80 |
| CSP-72 | Sinclair SC479-HFILDF w/ ice | 160.00 | 0.00 | 0.50 | 6.54 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69.80 |
| CSP-73 | TMA | 160.00 | 0.00 | 0.50 | 1.00 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| 160 | 3` Stand-Off | 160.00 | 0.00 | 0.50 | 1.50 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 75.00 |
| STAM-64 | TMA | 160.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-A | 12` T-Arm | 150.00 | 0.00 | 0.50 | 10.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 600.00 |
| ATT-B | 12` T-Arm | 150.00 | 0.00 | 0.50 | 10.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 600.00 |
| ATT-C | 12` T-Arm | 150.00 | 0.00 | 0.50 | 10.00 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 600.00 |
| ATT-A1 | Powerwave 7770 | 150.00 | 0.00 | 0.50 | 5.88 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 |
| ATT-A2 | Powerwave P65-16-XLH-RR | 150.00 | 0.00 | 0.50 | 8.40 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 65.00 |
| ATT-A3 | Powerwave 7770 | 150.00 | 0.00 | 0.50 | 5.88 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 |
| ATT-A4 | Ericsson RRU | 150.00 | 0.00 | 0.50 | 5.45 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 80.00 |
| ATT-A5 | Ericsson RRU | 150.00 | 0.00 | 0.50 | 5.45 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 80.00 |
| ATT-A6 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-A7 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-A8 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-A9 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-A10 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-B1 | Raycap Surge Suppressor | 150.00 | 0.00 | 0.50 | 1.27 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 |
| ATT-B2 | Powerwave 7770 | 150.00 | 0.00 | 0.50 | 5.88 | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 |
| ATT-B3 | Powerwave P65-16-XLH-RR | 150.00 | 0.00 | 0.50 | 8.40 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 65.00 |
| ATT-B4 | Powerwave 7770 | 150.00 | 0.00 | 0.50 | 5.88 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 |
| ATT-B5 | Ericsson RRU | 150.00 | 0.00 | 0.50 | 5.45 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 80.00 |
| ATT-B6 | Ericsson RRU | 150.00 | 0.00 | 0.50 | 5.45 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 80.00 |
| ATT-B7 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-B8 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-B9 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 120.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| ATT-C1 | Powerwave 7770 | 150.00 | 0.00 | 0.50 | 5.88 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 |
| ATT-C2 | Powerwave P65-16-XLH-RR | 150.00 | 0.00 | 0.50 | 8.40 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 65.00 |
| ATT-C3 | Powerwave 7770 | 150.00 | 0.00 | 0.50 | 5.88 | 240.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 |

| | | | | | | | | | |
|----------------|----------------------------------|--------|------|------|-------|--------|------|------|--------|
| ATT-C4 | Ericsson RRU | 150.00 | 0.00 | 0.50 | 5.45 | 240.00 | 0.00 | 0.00 | 80.00 |
| ATT-C5 | Ericsson RRU | 150.00 | 0.00 | 0.50 | 5.45 | 240.00 | 0.00 | 0.00 | 80.00 |
| ATT-C6 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 15.00 |
| ATT-C7 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 15.00 |
| ATT-C8 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 15.00 |
| ATT-C9 | TMA | 150.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 15.00 |
| 143-A | 3` Stand-Off | 145.00 | 0.00 | 0.50 | 1.50 | 0.00 | 0.00 | 0.00 | 75.00 |
| NEU-18 | 12` Omni | 145.00 | 0.00 | 0.50 | 2.40 | 0.00 | 0.00 | 0.00 | 170.00 |
| CSP-21 | 8` Omni | 140.00 | 0.00 | 0.50 | 1.60 | 120.00 | 0.00 | 0.00 | 160.00 |
| NEU-16 | 8` Omni | 140.00 | 0.00 | 0.50 | 1.60 | 120.00 | 0.00 | 0.00 | 160.00 |
| T-Mobile-1 | EMS RR90-17-XXDP w/ ice | 140.00 | 0.00 | 0.50 | 4.77 | 0.00 | 0.00 | 0.00 | 40.40 |
| T-Mobile-2 | TMA | 140.00 | 0.00 | 0.50 | 1.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| T-Mobile-3 | TMA | 140.00 | 0.00 | 0.50 | 1.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| T-Mobile-4 | EMS RR90-17-XXDP w/ ice | 140.00 | 0.00 | 0.50 | 4.77 | 120.00 | 0.00 | 0.00 | 40.40 |
| T-Mobile-5 | TMA | 140.00 | 0.00 | 0.50 | 1.00 | 120.00 | 0.00 | 0.00 | 15.00 |
| T-Mobile-6 | TMA | 140.00 | 0.00 | 0.50 | 1.00 | 120.00 | 0.00 | 0.00 | 15.00 |
| T-Mobile-7 | EMS RR90-17-XXDP w/ ice | 140.00 | 0.00 | 0.50 | 4.77 | 240.00 | 0.00 | 0.00 | 40.40 |
| T-Mobile-8 | TMA | 140.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 15.00 |
| T-Mobile-9 | TMA | 140.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 15.00 |
| Verizon-A | Boom Gate | 133.34 | 0.00 | 0.50 | 24.40 | 0.00 | 0.00 | 0.00 | 470.00 |
| Verizon-B | Boom Gate | 133.34 | 0.00 | 0.50 | 24.40 | 120.00 | 0.00 | 0.00 | 470.00 |
| Verizon-C | Boom Gate | 133.34 | 0.00 | 0.50 | 24.40 | 240.00 | 0.00 | 0.00 | 470.00 |
| Verizon-1_700 | Swedcom SLCP 2x6014 | 133.34 | 0.00 | 0.50 | 7.65 | 0.00 | 0.00 | 0.00 | 70.50 |
| Verizon-2_850 | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 0.00 | 0.00 | 0.00 | 40.00 |
| Verizon-3_850 | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 0.00 | 0.00 | 0.00 | 40.00 |
| Verizon-4_LTE | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 0.00 | 0.00 | 0.00 | 40.00 |
| Verizon-5_PCS | Commscope HBXX-6516DS-A2M | 133.34 | 0.00 | 0.50 | 6.35 | 0.00 | 0.00 | 0.00 | 65.90 |
| Verizon-6_700 | Commscope HBXX-6516DS-A2M | 133.34 | 0.00 | 0.50 | 6.35 | 0.00 | 0.00 | 0.00 | 65.90 |
| Verizon-7_850 | Swedcom SLCP 2x6014 | 133.34 | 0.00 | 0.50 | 7.65 | 120.00 | 0.00 | 0.00 | 70.50 |
| Verizon-8_850 | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 240.00 | 0.00 | 0.00 | 40.00 |
| Verizon-9_LTE | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 240.00 | 0.00 | 0.00 | 40.00 |
| Verizon-10_PCS | Commscope HBXX-6516DS-A2M | 133.34 | 0.00 | 0.50 | 6.35 | 120.00 | 0.00 | 0.00 | 65.90 |
| Verizon-11_700 | Commscope HBXX-6516DS-A2M | 133.34 | 0.00 | 0.50 | 6.35 | 120.00 | 0.00 | 0.00 | 65.90 |
| Verizon-12_850 | Swedcom SLCP 2x6014 | 133.34 | 0.00 | 0.50 | 7.65 | 240.00 | 0.00 | 0.00 | 70.50 |
| Verizon-13_850 | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 240.00 | 0.00 | 0.00 | 40.00 |
| Verizon-14_LTE | Andrew DB844H80-XY | 133.34 | 0.00 | 0.50 | 3.58 | 240.00 | 0.00 | 0.00 | 40.00 |
| Verizon-15_PCS | Commscope HBXX-6516DS-A2M | 133.34 | 0.00 | 0.50 | 6.35 | 240.00 | 0.00 | 0.00 | 65.90 |
| Verizon-16_AWS | Commscope HBXX-6516DS-A2M | 133.34 | 0.00 | 0.50 | 6.35 | 240.00 | 0.00 | 0.00 | 65.90 |
| Verizon-17_AWS | ALU RRH | 133.34 | 0.00 | 0.50 | 2.44 | 120.00 | 0.00 | 0.00 | 66.70 |
| Verizon-18_AWS | ALU RRH | 133.34 | 0.00 | 0.50 | 2.44 | 240.00 | 0.00 | 0.00 | 66.70 |
| Verizon-19_PCS | ALU RRH | 133.34 | 0.00 | 0.50 | 2.44 | 0.00 | 0.00 | 0.00 | 66.70 |
| Verizon-20_PCS | ALU RRH | 133.34 | 0.00 | 0.50 | 2.44 | 120.00 | 0.00 | 0.00 | 66.70 |
| Verizon-21_PCS | ALU RRH | 133.34 | 0.00 | 0.50 | 2.44 | 240.00 | 0.00 | 0.00 | 66.70 |
| Verizon-22_AWS | ALU RRH | 133.34 | 0.00 | 0.50 | 2.44 | 240.00 | 0.00 | 0.00 | 66.70 |
| Sprint-A | Raycap DB-T1-6Z-8AB-0Z Dist. Box | 120.00 | 0.00 | 0.50 | 10.00 | 0.00 | 0.00 | 0.00 | 600.00 |
| Sprint-B | 12` T-Arm | 120.00 | 0.00 | 0.50 | 10.00 | 120.00 | 0.00 | 0.00 | 600.00 |
| Sprint-C | 12` T-Arm | 120.00 | 0.00 | 0.50 | 10.00 | 240.00 | 0.00 | 0.00 | 600.00 |
| Sprint-1 | RFS APXVSP18-C w/ ice | 120.00 | 0.00 | 0.50 | 8.81 | 0.00 | 0.00 | 0.00 | 106.50 |
| Sprint-2 | ALU RRH | 120.00 | 0.00 | 0.50 | 2.44 | 0.00 | 0.00 | 0.00 | 66.70 |
| Sprint-3 | ALU RRH | 120.00 | 0.00 | 0.50 | 2.44 | 0.00 | 0.00 | 0.00 | 66.70 |
| Sprint-4 | RFS APXVSP18-C w/ ice | 120.00 | 0.00 | 0.50 | 8.81 | 120.00 | 0.00 | 0.00 | 106.50 |
| Sprint-5 | ALU RRH | 120.00 | 0.00 | 0.50 | 2.44 | 120.00 | 0.00 | 0.00 | 66.70 |
| Sprint-6 | ALU RRH | 120.00 | 0.00 | 0.50 | 2.44 | 120.00 | 0.00 | 0.00 | 66.70 |
| Sprint-7 | RFS APXVSP18-C w/ ice | 120.00 | 0.00 | 0.50 | 8.81 | 240.00 | 0.00 | 0.00 | 106.50 |
| Sprint-8 | ALU RRH | 120.00 | 0.00 | 0.50 | 2.44 | 240.00 | 0.00 | 0.00 | 66.70 |
| Sprint-9 | ALU RRH | 120.00 | 0.00 | 0.50 | 2.44 | 240.00 | 0.00 | 0.00 | 66.70 |
| 115-A | 3` Stand-Off | 113.34 | 0.00 | 0.50 | 1.50 | 0.00 | 0.00 | 0.00 | 75.00 |
| NEU-17 | 12` Omni | 113.34 | 0.00 | 0.50 | 2.40 | 0.00 | 0.00 | 0.00 | 170.00 |
| 85-A | 3` Stand-Off | 86.66 | 0.00 | 0.50 | 1.50 | 0.00 | 0.00 | 0.00 | 75.00 |
| CSP-66 | RFS PD1142 w/ ice | 80.00 | 0.00 | 0.50 | 2.80 | 0.00 | 0.00 | 0.00 | 21.50 |
| DOT-56 | Dipole | 80.00 | 0.00 | 0.50 | 6.00 | 120.00 | 0.00 | 0.00 | 71.00 |
| DEP-54 | RFS PD1142 w/ ice | 80.00 | 0.00 | 0.50 | 2.80 | 240.00 | 0.00 | 0.00 | 21.50 |
| GPS-68 | GPS | 60.00 | 0.00 | 0.50 | 1.00 | 240.00 | 0.00 | 0.00 | 20.00 |
| GPS-69 | GPS | 60.00 | 0.00 | 0.50 | 1.00 | 120.00 | 0.00 | 0.00 | 20.00 |
| GPS-53 | GPS | 20.00 | 0.00 | 0.50 | 1.00 | 0.00 | 0.00 | 0.00 | 20.00 |
| Verizon-D1 | Diplexer | 133.34 | 0.00 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 10.00 |

*** Analysis Results:

Maximum element usage is 95.45% for Angle "Rohn-DC21" in load case "W+I 0 deg"
 Angle Forces For All Load Cases:
 Positive for tension - negative for compression

| Group Label | Angle Label | Max. Usage For All LC % | Max. Tens. For All LC (kips) | Max. Comp. For All LC (kips) | LC 1 (kips) | LC 2 (kips) | LC 3 (kips) | LC 4 (kips) | LC 5 (kips) | LC 6 (kips) |
|-------------|-------------|-------------------------|------------------------------|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rohn-D1 | Rohn-DA1P | 28.39 | 1.659 | -1.365 | -1.365 | -0.409 | 1.468 | 1.659 | 1.043 | -0.162 |
| Rohn-D1 | Rohn-DA1I | 40.20 | 1.612 | -1.932 | 1.612 | 1.400 | -0.082 | -1.643 | -1.932 | -0.161 |
| Rohn-D1 | Rohn-DA12 | 40.38 | 1.040 | -1.941 | -1.941 | -1.281 | 1.941 | -0.770 | 0.140 | -0.164 |
| Rohn-D1 | Rohn-DA2P | 27.99 | 1.688 | -1.346 | 1.028 | 1.688 | 1.549 | -0.355 | 1.346 | -0.160 |
| Rohn-D1 | Rohn-DA2I | 34.92 | 0.146 | -1.679 | 0.146 | -1.679 | -1.679 | 1.154 | -0.470 | -0.161 |
| Rohn-D1 | Rohn-DA22 | 43.70 | 1.770 | -2.100 | -2.100 | -0.693 | 0.099 | 1.628 | 1.770 | -0.165 |
| Rohn-D1 | Rohn-DA3P | 38.26 | 2.336 | -1.729 | -1.729 | -0.721 | 1.643 | 2.336 | 1.832 | 0.054 |
| Rohn-D1 | Rohn-DA3I | 47.79 | 2.271 | -2.271 | 2.042 | 0.241 | -1.754 | -2.159 | -2.159 | 0.058 |
| Rohn-D1 | Rohn-DA32 | 36.04 | 1.095 | -1.628 | -1.628 | -1.628 | 0.147 | 1.095 | 0.060 | 0.060 |
| Rohn-D1 | Rohn-DA4P | 34.54 | 2.341 | -1.561 | 1.669 | 2.341 | 1.934 | -0.434 | -1.561 | 0.055 |
| Rohn-D1 | Rohn-DA4I | 44.61 | 1.069 | -2.016 | 1.069 | -2.016 | -1.812 | -0.965 | 0.056 | 0.056 |
| Rohn-D1 | Rohn-DA42 | 36.88 | 1.784 | -1.666 | -1.666 | -1.288 | 0.314 | 1.653 | 1.784 | 0.060 |
| Rohn-D1 | Rohn-DA5P | 27.50 | 2.234 | -1.169 | -1.169 | 0.071 | 2.234 | 2.063 | 1.167 | -0.001 |
| Rohn-D1 | Rohn-DA5I | 58.70 | 2.489 | -2.496 | 2.489 | 2.457 | 0.652 | -1.812 | -2.496 | -0.004 |
| Rohn-D1 | Rohn-DA52 | 51.38 | 1.433 | -2.185 | -2.185 | -2.185 | -2.028 | 0.264 | 1.433 | 0.006 |
| Rohn-D1 | Rohn-DA6P | 29.62 | 1.923 | -1.260 | 1.250 | 1.923 | 1.805 | -0.224 | 1.260 | -0.005 |
| Rohn-D1 | Rohn-DA6I | 66.61 | 1.241 | -2.833 | 1.241 | -0.300 | -2.833 | -2.433 | -1.246 | 0.001 |
| Rohn-D1 | Rohn-DA62 | 52.16 | 2.219 | -2.218 | -2.218 | -1.992 | -0.193 | 1.795 | 2.219 | 0.004 |
| Rohn-D1 | Rohn-DA7P | 41.54 | 2.110 | -1.664 | -1.664 | 0.998 | 1.902 | -0.482 | 1.664 | -0.148 |
| Rohn-D1 | Rohn-DA7I | 67.03 | 0.998 | -2.686 | -2.686 | 0.376 | -2.686 | -2.319 | -1.276 | -0.137 |
| Rohn-D1 | Rohn-DA72 | 71.90 | 2.606 | -2.881 | -2.881 | -2.530 | -0.233 | 2.153 | 2.606 | -0.137 |
| Rohn-D1 | Rohn-DA8P | 41.80 | 2.607 | -1.675 | -1.675 | -0.138 | 2.607 | 2.477 | 1.388 | -0.144 |
| Rohn-D1 | Rohn-DA8I | 64.18 | 2.283 | -2.572 | 2.283 | 2.088 | 0.187 | -2.054 | -2.572 | -0.143 |
| Rohn-D1 | Rohn-DA82 | 59.48 | 0.927 | -2.383 | -2.383 | -2.101 | -2.383 | 0.927 | 0.927 | -0.136 |
| Rohn-D2 | Rohn-DB1P | 42.92 | 3.349 | -2.451 | -2.451 | 0.456 | 3.297 | 3.349 | 2.009 | -0.226 |
| Rohn-D2 | Rohn-DB1I | 63.57 | 3.181 | -3.631 | 3.181 | 2.779 | -0.009 | -3.631 | -3.631 | -0.222 |
| Rohn-D2 | Rohn-DB12 | 59.81 | 1.880 | -3.415 | -3.415 | -3.240 | 0.162 | 1.880 | -0.210 | -0.210 |
| Rohn-D2 | Rohn-DB2P | 42.78 | 3.123 | -2.443 | 1.995 | 3.123 | 2.855 | -0.667 | -2.443 | -0.229 |
| Rohn-D2 | Rohn-DB2I | 65.28 | 1.886 | -3.728 | 1.886 | -0.073 | -3.728 | -3.673 | -2.314 | -0.214 |
| Rohn-D2 | Rohn-DB22 | 62.65 | 3.140 | -3.578 | -3.578 | -3.199 | -0.444 | 2.521 | 3.140 | -0.215 |
| Rohn-D2 | Rohn-DB3P | 47.55 | 3.554 | -2.565 | -2.565 | 0.765 | 3.039 | 3.554 | 2.491 | -0.030 |
| Rohn-D2 | Rohn-DB3I | 58.73 | 3.110 | -3.168 | 3.110 | 3.040 | 0.794 | -2.285 | -3.168 | -0.029 |
| Rohn-D2 | Rohn-DB32 | 60.82 | 1.524 | -3.280 | -3.280 | -2.846 | -3.280 | -0.233 | 1.524 | -0.015 |
| Rohn-D2 | Rohn-DB4P | 47.64 | 3.335 | -2.570 | 2.489 | 3.335 | 2.600 | -0.990 | -2.570 | -0.034 |
| Rohn-D2 | Rohn-DB4I | 68.82 | 1.512 | -3.712 | 1.512 | -0.454 | -3.712 | -3.061 | -1.560 | -0.019 |
| Rohn-D2 | Rohn-DB42 | 58.80 | 3.127 | -3.171 | -3.171 | -2.505 | 0.359 | 3.127 | -0.022 | -0.022 |
| Rohn-D2 | Rohn-DB5P | 56.77 | 5.108 | -2.895 | -2.895 | 0.251 | 4.876 | 5.108 | 3.361 | 0.229 |
| Rohn-D2 | Rohn-DB5I | 88.52 | 4.965 | -4.514 | 4.965 | 4.525 | 0.720 | -3.566 | -4.514 | 0.230 |
| Rohn-D2 | Rohn-DB52 | 83.56 | 2.763 | -4.261 | -4.261 | -2.285 | -4.045 | 0.262 | 2.763 | 0.243 |
| Rohn-D2 | Rohn-DB6P | 56.97 | 4.901 | -2.905 | 3.363 | 4.901 | 4.453 | -0.472 | -2.905 | 0.226 |
| Rohn-D2 | Rohn-DB6I | 91.36 | 2.764 | -4.658 | -4.658 | 0.068 | 4.658 | -4.254 | -2.297 | 0.238 |
| Rohn-D2 | Rohn-DB62 | 88.69 | 4.990 | -4.522 | -4.522 | -3.774 | 0.323 | 4.384 | 4.990 | 0.239 |
| Rohn-D8 | Rohn-DB7P | 43.26 | 5.143 | -3.898 | -3.898 | -0.652 | 5.143 | 4.750 | 2.458 | -0.725 |
| Rohn-D8 | Rohn-DB7I | 72.51 | 5.052 | -6.534 | 5.052 | 4.139 | -0.829 | -5.733 | -6.534 | -0.726 |
| Rohn-D8 | Rohn-DB72 | 69.29 | 2.952 | -6.244 | -6.244 | -6.244 | -5.846 | 0.030 | 2.952 | -0.709 |
| Rohn-D8 | Rohn-DB8P | 42.96 | 4.764 | -3.872 | 2.421 | 4.533 | 4.764 | -0.819 | -3.872 | -0.730 |
| Rohn-D8 | Rohn-DB8I | 71.95 | 5.001 | -6.487 | -6.487 | -6.208 | -6.317 | -6.487 | -4.380 | -0.716 |
| Rohn-D8 | Rohn-DB82 | 71.65 | 4.660 | -6.457 | -6.457 | -5.267 | -1.211 | 3.896 | 5.001 | -0.714 |
| Rohn-D3 | Rohn-DC1P | 72.44 | 4.660 | -5.757 | -5.757 | -2.903 | 3.445 | 4.660 | 3.300 | -1.323 |
| Rohn-D3 | Rohn-DC1I | 84.95 | 4.139 | -6.751 | 4.139 | 4.139 | -0.424 | -6.751 | -6.751 | -1.332 |
| Rohn-D3 | Rohn-DC12 | 89.92 | 0.682 | -7.146 | -7.146 | -5.715 | -7.146 | -2.352 | 0.682 | -1.313 |
| Rohn-D3 | Rohn-DC2P | 72.92 | 4.440 | -5.795 | 3.122 | 4.440 | 4.440 | -3.179 | -5.795 | -1.330 |
| Rohn-D3 | Rohn-DC2I | 95.45 | 0.651 | -7.585 | -7.585 | -2.591 | -7.585 | -5.925 | -3.299 | -1.322 |
| Rohn-D3 | Rohn-DC22 | 85.25 | 4.166 | -6.775 | -6.775 | -5.343 | -0.062 | 3.935 | 4.166 | -1.316 |

| | | | | | | | | | |
|----------|-------|--------|---------|---------|---------|---------|---------|---------|--------|
| Rohn-D3 | 71.88 | 7.817 | -3.220 | -3.220 | 0.334 | 7.347 | 7.817 | 5.545 | 1.159 |
| Rohn-D3 | 74.54 | 7.840 | -5.563 | 7.840 | 7.288 | 2.022 | -4.143 | -5.563 | 1.155 |
| Rohn-D3 | 72.71 | 4.326 | -3.426 | -4.653 | -4.653 | -5.426 | 0.764 | 4.326 | 1.166 |
| Rohn-D3 | 69.99 | 7.611 | -3.224 | 5.533 | 7.611 | 6.947 | 0.132 | -3.224 | 1.151 |
| Rohn-D3 | 76.55 | 4.355 | -5.713 | 4.355 | 0.649 | -5.713 | 4.827 | -2.050 | 1.162 |
| Rohn-D3 | 75.47 | 7.935 | -5.632 | 4.354 | 1.729 | 7.935 | 7.218 | 7.935 | 1.167 |
| Rohn-D3a | 53.72 | 5.240 | -4.909 | -1.272 | 5.240 | 4.680 | 4.680 | 2.115 | -1.407 |
| Rohn-D3a | 89.49 | 5.328 | -8.177 | 5.328 | 4.267 | -1.511 | -7.477 | -8.177 | -1.407 |
| Rohn-D3a | 83.46 | 2.608 | -7.626 | -7.626 | 7.626 | -7.626 | 0.797 | 2.608 | -1.394 |
| Rohn-D3a | 53.82 | 4.954 | -4.918 | 2.115 | 4.954 | 4.954 | -1.422 | -4.918 | -1.413 |
| Rohn-D3a | 85.41 | 2.603 | -7.805 | -2.603 | -7.805 | 7.998 | -7.998 | 5.389 | -1.400 |
| Rohn-D3a | 88.95 | 5.298 | -8.128 | -8.128 | -1.806 | 4.089 | 4.089 | 5.298 | 1.396 |
| Rohn-D4b | 60.74 | 7.288 | -7.485 | -7.485 | 3.289 | 5.148 | 5.728 | 3.113 | -2.181 |
| Rohn-D4b | 83.59 | 5.931 | -10.301 | 5.931 | 5.256 | -1.030 | -8.526 | -10.301 | -2.179 |
| Rohn-D4b | 82.71 | 1.407 | -10.192 | -7.738 | -8.927 | -10.192 | -2.860 | 1.407 | -2.161 |
| Rohn-D4b | 60.78 | 5.573 | -7.490 | 3.105 | 5.573 | 4.845 | -3.444 | -7.490 | -2.187 |
| Rohn-D4b | 85.04 | 1.397 | -10.479 | -3.007 | -10.479 | 9.072 | -5.740 | -2.166 | -2.166 |
| Rohn-D4b | 83.64 | 5.959 | -10.307 | -10.307 | 1.312 | 5.135 | 5.959 | -2.167 | -2.167 |
| Rohn-D4 | 56.40 | 8.178 | -2.249 | -2.249 | 1.438 | 8.178 | 7.761 | 5.245 | 1.483 |
| Rohn-D4 | 66.28 | 8.285 | -5.383 | 8.285 | 7.269 | 4.326 | 5.383 | 1.483 | 1.483 |
| Rohn-D4 | 59.41 | 5.419 | -4.825 | -2.398 | -4.746 | 4.825 | 1.948 | 5.419 | 1.504 |
| Rohn-D4 | 62.81 | 5.417 | -5.101 | 5.242 | 7.626 | 7.908 | 1.297 | -2.257 | 1.478 |
| Rohn-D4 | 66.07 | 8.285 | -5.366 | -4.444 | 1.265 | 7.135 | 8.285 | 1.496 | 1.496 |
| Rohn-D4a | 63.49 | 4.794 | -5.938 | -5.938 | -2.447 | 4.474 | 4.794 | 2.635 | -1.650 |
| Rohn-D4a | 89.03 | 4.956 | -8.326 | 4.956 | 4.339 | -0.812 | -6.914 | -8.326 | -1.647 |
| Rohn-D4a | 88.26 | 1.537 | -8.255 | 4.808 | 7.380 | -8.255 | -1.957 | 1.537 | -1.629 |
| Rohn-D4a | 63.51 | 4.658 | -5.940 | 2.628 | 4.658 | 4.206 | -2.563 | -5.940 | -1.654 |
| Rohn-D4a | 91.11 | 1.528 | -8.521 | 1.528 | -8.521 | -7.514 | -4.811 | -1.634 | -1.634 |
| Rohn-D4a | 89.00 | 4.970 | -8.324 | -7.041 | 1.065 | 4.221 | 4.970 | -2.387 | -1.637 |
| Rohn-D5 | 45.69 | 2.816 | -5.844 | -2.981 | 2.697 | 2.816 | 1.030 | -2.387 | -2.387 |
| Rohn-D5 | 60.80 | 2.952 | -7.777 | -2.952 | -2.388 | -1.799 | -6.656 | -7.777 | -2.385 |
| Rohn-D5 | 60.45 | 0.302 | -7.733 | -5.058 | -7.072 | -7.733 | -2.524 | 0.302 | -2.368 |
| Rohn-D5 | 45.75 | 2.693 | -5.852 | 1.027 | 2.693 | 2.451 | -3.110 | -5.852 | -2.392 |
| Rohn-D5 | 62.42 | 0.297 | -7.985 | 0.297 | -2.651 | -7.985 | -7.202 | -5.063 | -2.373 |
| Rohn-D5 | 60.68 | 2.956 | -7.762 | -7.762 | -2.034 | 2.269 | 2.956 | -2.375 | -2.375 |
| Rohn-D5 | 48.92 | 7.949 | -0.721 | -0.721 | 2.341 | 7.949 | 5.401 | 2.315 | 2.315 |
| Rohn-D5 | 48.51 | 7.882 | -3.318 | 7.882 | 7.017 | 2.341 | -2.430 | 3.318 | 2.316 |
| Rohn-D5 | 34.69 | 5.637 | -2.950 | -0.919 | -2.833 | -2.950 | 2.770 | 5.637 | 2.332 |
| Rohn-D5 | 47.40 | 7.702 | -0.728 | 5.398 | 7.336 | 7.702 | 0.212 | -0.728 | 2.311 |
| Rohn-D5 | 34.66 | 5.632 | -3.181 | 5.632 | 2.652 | -3.181 | -0.923 | 2.327 | 2.327 |
| Rohn-D5 | 48.63 | 7.902 | -3.322 | -3.322 | -2.549 | 2.113 | 6.316 | 7.902 | 2.325 |
| Rohn-D5 | 55.84 | 3.267 | -6.414 | -6.414 | 3.056 | 3.267 | 2.816 | 0.517 | -2.935 |
| Rohn-D5 | 80.69 | 3.366 | -9.268 | 3.366 | 2.401 | -2.924 | -8.275 | -9.268 | -2.935 |
| Rohn-D5 | 77.08 | 0.639 | -8.854 | -6.539 | -8.661 | -8.854 | -2.582 | 0.639 | -2.922 |
| Rohn-D5 | 55.71 | 3.051 | -6.399 | 0.494 | 2.691 | 3.051 | -3.150 | -6.399 | -2.939 |
| Rohn-D5 | 79.33 | 0.637 | -9.112 | 0.637 | -2.711 | -9.112 | -8.794 | -6.545 | -2.926 |
| Rohn-D5 | 80.35 | 3.344 | -9.229 | -9.229 | -8.346 | -3.128 | 2.375 | 3.344 | -2.927 |
| Rohn-D5 | 53.80 | 8.742 | -3.906 | -3.906 | 0.552 | 8.742 | 8.048 | 5.074 | 0.542 |
| Rohn-D5 | 55.68 | 8.889 | -7.958 | 8.889 | 7.656 | 0.689 | -6.571 | -7.958 | 0.540 |
| Rohn-D6 | 51.53 | 5.231 | -7.365 | -4.084 | -6.988 | -7.365 | 0.997 | 5.231 | 0.554 |
| Rohn-D6 | 52.08 | 8.462 | -3.913 | 5.072 | 7.909 | 8.462 | 0.408 | -3.913 | 0.537 |
| Rohn-D6 | 53.77 | 5.207 | -7.684 | 5.207 | 0.819 | -7.684 | -7.136 | 4.071 | 0.549 |
| Rohn-D6 | 55.43 | 8.869 | -7.922 | -7.922 | -6.693 | 0.387 | 7.483 | 8.869 | 0.549 |
| Rohn-D6 | 49.51 | 7.444 | -6.644 | -6.644 | 1.717 | 7.444 | 6.778 | 3.516 | -1.559 |
| Rohn-D6 | 81.90 | 7.723 | -10.991 | 7.723 | -1.305 | -9.392 | -10.991 | -1.561 | -1.561 |
| Rohn-D6 | 77.93 | 3.427 | -10.458 | -6.508 | -9.778 | -10.458 | -1.314 | 3.427 | -1.552 |
| Rohn-D6 | 49.53 | 7.146 | -6.647 | 3.510 | 6.627 | 7.146 | -8.667 | -6.647 | -1.563 |
| Rohn-D6 | 80.01 | 3.429 | -10.738 | 3.429 | -1.452 | -10.738 | -9.922 | -6.514 | -1.554 |
| Rohn-D6 | 7.741 | 10.997 | -10.997 | -10.997 | -9.535 | 1.577 | 6.253 | 7.741 | -1.555 |
| Rohn-D6 | 49.25 | 7.701 | -6.213 | -6.213 | 1.414 | 7.701 | 7.239 | 4.107 | -1.067 |
| Rohn-D6 | 82.16 | 8.122 | -10.366 | 8.122 | 6.896 | -0.596 | -8.692 | -10.366 | -1.068 |
| Rohn-D6 | 78.88 | 3.630 | -9.952 | -9.952 | -9.045 | -9.952 | -1.058 | 3.630 | -1.062 |
| Rohn-D6 | 49.26 | 7.435 | -6.215 | 4.104 | 7.435 | -1.549 | -1.549 | -6.215 | -1.069 |
| Rohn-D6 | 81.03 | 3.628 | -10.223 | 3.628 | -1.194 | -10.223 | -9.182 | -5.753 | -1.064 |
| Rohn-D6 | 82.10 | 8.122 | -10.358 | -10.358 | -8.816 | -0.855 | 6.763 | 8.122 | -1.064 |

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|----------|-------|--------|---------|---------|---------|---------|---------|---------|--------|--------|
| Rohn-D6 | 52.69 | 8.562 | -5.177 | -9.236 | 8.990 | -0.440 | 8.562 | 8.135 | 5.080 | -0.055 |
| Rohn-D6 | 77.80 | 8.990 | -9.236 | 8.990 | 7.799 | 0.455 | -7.557 | -9.238 | -0.056 | -0.056 |
| Rohn-D6 | 74.61 | 4.526 | -8.860 | -4.610 | 7.881 | -8.860 | -0.099 | 4.526 | -0.057 | -0.057 |
| Rohn-D6 | 51.12 | 8.307 | -5.178 | 5.077 | 6.007 | 8.307 | -0.568 | -5.178 | -0.057 | -0.057 |
| Rohn-D6 | 76.73 | 4.524 | -9.112 | 4.524 | -0.227 | -9.112 | -8.008 | -4.611 | -0.053 | -0.053 |
| Rohn-D6 | 77.79 | 8.995 | -9.238 | -9.238 | -7.680 | 0.210 | 7.679 | 8.995 | -0.052 | -0.052 |
| Rohn-D7 | 46.75 | 5.800 | -7.596 | -7.596 | -2.908 | 5.800 | 5.015 | -2.863 | -2.863 | -2.863 |
| Rohn-D7 | 73.41 | 6.039 | -11.928 | 6.039 | 4.703 | -2.705 | -10.424 | -11.928 | -2.863 | -2.863 |
| Rohn-D7 | 70.12 | 1.920 | -11.393 | -7.633 | -10.735 | -1.393 | -2.584 | 1.920 | -2.858 | -2.858 |
| Rohn-D7 | 46.76 | 5.559 | -7.598 | 1.904 | 4.894 | 5.559 | -3.030 | -7.598 | -2.864 | -2.864 |
| Rohn-D7 | 71.60 | 1.919 | -11.635 | 1.919 | -2.706 | -11.635 | -10.857 | -7.636 | -2.859 | -2.859 |
| Rohn-D7 | 73.38 | 6.041 | -11.924 | -11.924 | -10.539 | -2.938 | 4.587 | 6.041 | -2.859 | -2.859 |
| Rohn-D7 | 59.87 | 9.729 | -3.455 | -3.455 | 0.968 | 9.729 | 9.729 | 7.080 | 1.799 | 1.799 |
| Rohn-D7 | 63.40 | 10.302 | -6.883 | 10.302 | 9.423 | 6.883 | -5.024 | -6.883 | 1.799 | 1.799 |
| Rohn-D7 | 42.96 | 5.680 | -6.830 | -2.019 | -5.315 | 5.680 | 1.272 | 5.680 | 1.803 | 1.803 |
| Rohn-D7 | 59.17 | 9.615 | -3.456 | 7.078 | 9.615 | 9.615 | 9.427 | 0.853 | -3.456 | -3.456 |
| Rohn-D7 | 44.39 | 5.678 | -7.058 | 5.678 | 1.157 | -7.058 | -5.429 | -2.020 | 1.802 | 1.802 |
| Rohn-D7 | 63.42 | 10.305 | -6.881 | -6.881 | -5.134 | 2.638 | 9.314 | 10.305 | 1.802 | 1.802 |
| Rohn-D7 | 63.36 | 0.634 | -9.511 | -9.511 | -6.062 | 0.634 | 0.473 | -1.682 | -5.591 | -5.591 |
| Rohn-D7 | 81.83 | 0.956 | -12.284 | 0.956 | 0.165 | -5.039 | -10.970 | -12.284 | -5.591 | -5.591 |
| Rohn-D7 | 80.94 | 0.000 | -12.150 | -8.841 | -11.262 | -12.150 | -5.749 | -2.379 | -5.587 | -5.587 |
| Rohn-D7 | 63.37 | 0.413 | -9.513 | -1.683 | 0.363 | 0.413 | -6.173 | -9.513 | -5.592 | -5.592 |
| Rohn-D7 | 82.40 | 0.000 | -12.370 | -2.360 | -5.859 | -12.370 | -11.372 | -8.842 | -5.588 | -5.588 |
| Rohn-D7 | 81.82 | 0.958 | -12.282 | -12.282 | -11.076 | -5.254 | 0.058 | 0.958 | -5.589 | -5.589 |
| Rohn-D7 | 74.99 | 0.000 | 2.521 | 5.421 | 11.523 | 12.186 | 10.690 | 6.579 | 6.579 | 6.579 |
| Rohn-D7 | 74.99 | 12.186 | 0.000 | 12.186 | 11.922 | 0.000 | 2.428 | 0.847 | 6.580 | 6.580 |
| Rohn-D7 | 53.49 | 8.692 | 0.000 | 4.589 | 2.162 | 8.692 | 5.692 | 8.692 | 6.582 | 6.582 |
| Rohn-D7 | 74.40 | 12.090 | 0.000 | 10.689 | 12.090 | 11.331 | 5.324 | 2.521 | 6.578 | 6.578 |
| Rohn-D7 | 53.48 | 8.690 | 0.000 | 8.690 | 5.595 | 0.311 | 2.065 | 4.588 | 6.580 | 6.580 |
| Rohn-D7 | 75.00 | 12.187 | 0.000 | 0.848 | 2.334 | 7.833 | 11.828 | 12.187 | 6.581 | 6.581 |
| Rohn-L1 | 2.37 | 0.000 | -2.141 | -0.130 | -1.193 | -2.141 | -1.207 | -0.328 | -0.333 | -0.333 |
| Rohn-L1 | 1.67 | 0.985 | -1.504 | -1.504 | -0.964 | 0.421 | 0.985 | 0.770 | -0.385 | -0.385 |
| Rohn-L1 | 1.96 | 0.903 | -1.766 | 0.683 | 0.903 | 0.683 | -1.191 | -1.766 | -0.563 | -0.563 |
| Rohn-L1 | 7.05 | 0.000 | -6.367 | -0.810 | -3.450 | -6.367 | -3.620 | -1.008 | -0.937 | -0.937 |
| Rohn-L1 | 5.95 | 4.463 | -5.369 | -5.369 | -3.363 | 2.012 | 4.463 | 3.757 | -0.832 | -0.832 |
| Rohn-L1 | 5.78 | 3.997 | -5.218 | 3.997 | 3.997 | 1.844 | -3.373 | -5.218 | -0.940 | -0.940 |
| Rohn-L1 | 11.65 | 0.000 | -10.522 | -0.958 | -5.524 | -10.522 | -5.599 | -1.044 | -1.028 | -1.028 |
| Rohn-L1 | 10.43 | 8.334 | -9.420 | -9.420 | -8.871 | 3.833 | 8.419 | 7.257 | -1.121 | -1.121 |
| Rohn-L1 | 10.18 | 8.334 | -9.192 | 7.220 | 8.334 | 3.809 | -5.718 | -9.192 | -1.015 | -1.015 |
| Rohn-L1 | 17.09 | 0.000 | -15.428 | -1.060 | -7.944 | -15.428 | -7.869 | -0.972 | -1.041 | -1.041 |
| Rohn-L1 | 14.33 | 12.441 | -12.937 | -12.937 | -7.853 | 5.987 | 12.441 | 10.774 | -1.122 | -1.122 |
| Rohn-L1 | 14.52 | 12.664 | -13.113 | 10.947 | 12.664 | 6.447 | -7.922 | -13.113 | -1.119 | -1.119 |
| Rohn-L2a | 12.90 | 0.000 | -21.621 | -11.153 | -11.153 | -21.621 | -11.151 | -1.615 | -1.652 | -1.652 |
| Rohn-L2a | 12.75 | 17.540 | -18.124 | -18.124 | -10.955 | 8.525 | 17.540 | 15.189 | -1.517 | -1.517 |
| Rohn-L2a | 12.77 | 17.564 | -18.058 | 15.217 | 17.564 | 8.576 | -10.887 | -18.058 | -1.464 | -1.464 |
| Rohn-L2a | 16.62 | 0.000 | -27.860 | -1.997 | -14.262 | -27.860 | -14.269 | -1.999 | -2.040 | -2.040 |
| Rohn-L2a | 16.49 | 22.686 | -23.429 | -23.429 | -14.153 | 11.068 | 22.686 | 19.695 | -1.920 | -1.920 |
| Rohn-L2a | 16.52 | 22.729 | -23.399 | 19.741 | 22.729 | 11.123 | -14.111 | -23.399 | -1.877 | -1.877 |
| Rohn-L2a | 21.82 | 0.000 | -36.563 | -3.378 | -19.087 | -36.563 | -19.084 | -3.368 | -3.426 | -3.426 |
| Rohn-L2a | 20.46 | 28.149 | -30.790 | -30.790 | -18.918 | 13.349 | 28.149 | 24.335 | -3.300 | -3.300 |
| Rohn-L2a | 20.48 | 28.185 | -30.771 | 24.369 | 28.185 | 13.402 | -18.884 | -30.771 | -3.269 | -3.269 |
| Rohn-L2a | 27.16 | 0.000 | -45.514 | -2.960 | -23.093 | -45.514 | -23.120 | -2.985 | -3.020 | -3.020 |
| Rohn-L2a | 27.40 | 37.700 | -37.958 | -37.958 | -22.725 | 18.695 | 37.700 | 32.801 | -2.660 | -2.660 |
| Rohn-L2a | 27.38 | 37.672 | -37.922 | 32.788 | 37.672 | 18.697 | -22.694 | -37.922 | -2.643 | -2.643 |
| Rohn-L3a | 24.79 | 0.000 | -54.949 | -27.368 | -27.368 | -54.949 | -27.367 | -2.746 | -2.809 | -2.809 |
| Rohn-L3a | 28.12 | 46.568 | -46.026 | -46.026 | -27.351 | 23.403 | 46.568 | 40.631 | -2.775 | -2.775 |
| Rohn-L3a | 28.32 | 46.902 | -45.737 | -46.902 | -46.902 | 23.750 | -27.038 | -45.737 | -2.460 | -2.460 |
| Rohn-L3a | 32.31 | 0.000 | -71.542 | -6.604 | -37.193 | -71.542 | -37.178 | -6.655 | -6.665 | -6.665 |
| Rohn-L3a | 33.01 | 54.655 | -60.341 | 37.139 | 25.936 | 54.655 | 47.296 | 6.637 | -6.416 | -6.416 |
| Rohn-L3a | 33.17 | 54.929 | -60.166 | 47.557 | 54.929 | 26.217 | -36.926 | -60.166 | -6.416 | -6.416 |
| Rohn-L3a | 37.37 | 0.000 | -82.849 | -4.300 | -41.269 | -82.849 | -41.280 | -4.302 | -4.354 | -4.354 |
| Rohn-L3a | 42.13 | 69.768 | -69.309 | -69.309 | -41.242 | 35.057 | 69.768 | 60.866 | -4.335 | -4.335 |
| Rohn-L3a | 42.23 | 69.937 | -69.087 | 61.041 | 69.937 | 35.266 | -41.017 | -69.087 | -4.132 | -4.132 |
| Rohn-L4a | 52.59 | 0.000 | -96.989 | -5.052 | -48.236 | -96.989 | -48.251 | -5.057 | -5.129 | -5.129 |
| Rohn-L4a | 50.47 | 81.351 | -81.005 | -81.005 | -48.194 | 81.351 | 70.998 | 81.351 | -5.129 | -5.129 |
| Rohn-L4a | 50.58 | 81.541 | -80.830 | 71.190 | 81.541 | 41.162 | -48.004 | -80.830 | -4.941 | -4.941 |

| | | | | | | | | | |
|----------|-------|---------|----------|----------|----------|----------|----------|----------|---------|
| Rohn-L4a | 62.65 | 0.000 | -115.451 | -9.230 | -59.047 | -115.451 | -59.058 | -9.229 | -9.286 |
| Rohn-L4a | 56.28 | 90.718 | -96.667 | -96.667 | -58.782 | 44.174 | 90.718 | 78.805 | -9.061 |
| Rohn-L4a | 56.38 | 90.880 | -96.494 | -78.968 | 90.880 | 44.367 | -58.597 | -96.494 | -8.890 |
| Rohn-L4a | 67.55 | 0.000 | -124.587 | -6.612 | -61.838 | -124.587 | -61.853 | -6.616 | -6.676 |
| Rohn-L4a | 64.62 | 104.171 | -103.679 | -103.679 | -61.622 | 52.657 | 104.171 | 91.005 | -6.474 |
| Rohn-L4a | 64.72 | 104.328 | -103.529 | 91.164 | 104.328 | 52.838 | -61.457 | -103.529 | -6.316 |
| Rohn-L4a | 55.35 | 0.000 | -135.517 | -6.784 | -66.927 | -135.517 | -66.936 | -6.782 | -6.858 |
| Rohn-L4a | 49.79 | 113.775 | -112.585 | -112.585 | -66.727 | 57.826 | 113.775 | 99.498 | -6.577 |
| Rohn-L4a | 61.30 | 0.000 | -112.440 | 99.638 | 113.914 | 57.994 | -66.570 | -112.440 | -6.532 |
| Rohn-L4a | 61.30 | 0.000 | -112.440 | 99.638 | 113.914 | 57.994 | -66.570 | -112.440 | -6.532 |
| Rohn-L4a | 51.57 | 117.983 | -125.133 | -125.133 | -75.838 | 58.041 | 117.983 | 102.708 | -11.325 |
| Rohn-L4a | 51.63 | 118.121 | -125.040 | 102.845 | 118.121 | 58.202 | -75.698 | -125.040 | -11.193 |
| Rohn-L4a | 63.69 | 0.000 | -155.940 | -7.421 | -76.535 | -155.940 | -76.557 | -7.434 | -7.506 |
| Rohn-L4a | 57.30 | 131.098 | -129.129 | -129.129 | -76.302 | 67.108 | 131.098 | 114.815 | -7.282 |
| Rohn-L4a | 57.34 | 131.200 | -128.998 | 114.923 | 131.200 | 67.238 | -76.167 | -128.998 | -7.160 |
| Rohn-L4a | 80.37 | 0.000 | -174.460 | -11.667 | -87.239 | -174.460 | -87.259 | -11.679 | -11.680 |
| Rohn-L4a | 66.77 | 139.895 | -144.890 | -144.890 | -87.074 | 70.001 | 139.895 | 122.140 | -11.517 |
| Rohn-L4a | 66.70 | 140.032 | -144.722 | 122.283 | 140.032 | 70.166 | -86.903 | -144.722 | -11.358 |
| Rohn-L4a | 75.63 | 0.000 | -191.528 | -9.993 | -94.070 | -191.528 | -94.074 | -9.986 | -10.019 |
| Rohn-L4a | 75.63 | 0.000 | -191.528 | -9.993 | -94.070 | -191.528 | -94.074 | -9.986 | -10.019 |
| Rohn-L4a | 62.51 | 158.526 | -158.322 | -158.322 | -93.898 | 81.053 | 158.526 | 138.889 | -9.866 |
| Rohn-L4a | 62.46 | 158.682 | -158.187 | 139.042 | 158.682 | 81.227 | -93.746 | -158.187 | -9.719 |
| Rohn-L4a | 69.83 | 0.000 | -212.443 | -11.849 | -104.521 | -212.443 | -104.528 | -11.847 | -11.671 |
| Rohn-L4a | 57.69 | 173.813 | -175.514 | -175.514 | -104.385 | 88.685 | 173.813 | 152.277 | -11.744 |
| Rohn-L4a | 57.65 | 173.947 | -175.379 | 152.411 | 173.947 | 88.840 | -104.239 | -175.379 | -11.607 |
| Rohn-L4a | 76.46 | 0.000 | -232.586 | -13.709 | -114.619 | -232.586 | -114.626 | -13.709 | -13.722 |
| Rohn-L4a | 63.12 | 188.432 | -192.023 | -192.023 | -114.481 | 95.968 | 188.432 | 165.076 | -13.599 |
| Rohn-L4a | 63.08 | 188.564 | -191.897 | 165.208 | 188.564 | 96.116 | -114.345 | -191.897 | -13.468 |
| Rohn-L4a | 69.91 | 0.000 | -248.942 | -12.340 | -121.213 | -248.942 | -121.219 | -12.339 | -12.341 |
| Rohn-L4a | 65.28 | 205.758 | -204.848 | -204.848 | -121.086 | 106.209 | 205.758 | 180.652 | -12.223 |
| Rohn-L4a | 65.32 | 205.882 | -204.774 | 180.776 | 205.882 | 106.348 | -120.955 | -204.774 | -12.096 |
| Rohn-L4a | 75.96 | 0.000 | -270.496 | -17.759 | -133.860 | -270.496 | -133.865 | -17.759 | -17.741 |
| Rohn-L4a | 68.15 | 214.794 | -223.145 | -223.145 | -133.734 | 108.855 | 214.794 | 188.112 | -17.628 |
| Rohn-L4a | 68.19 | 214.914 | -223.027 | 188.233 | 214.914 | 108.988 | -133.609 | -223.027 | -17.506 |
| Rohn-L4a | 62.69 | 0.000 | -279.467 | -12.447 | -134.926 | -279.467 | -134.931 | -12.447 | -12.451 |
| Rohn-L4a | 59.03 | 232.817 | -229.205 | -229.205 | -134.787 | 121.293 | 232.817 | 204.762 | -12.329 |
| Rohn-L4a | 59.06 | 232.933 | -229.089 | 204.879 | 232.933 | 121.420 | -134.666 | -229.089 | -12.210 |
| Rohn-L4a | 61.21 | 0.000 | -302.460 | -24.731 | -151.971 | -302.460 | -151.975 | -24.731 | -24.692 |
| Rohn-L4a | 58.34 | 230.076 | -250.001 | -250.001 | -151.841 | 114.361 | 230.076 | 240.997 | -24.566 |
| Rohn-L4a | 58.37 | 230.190 | -249.888 | 201.111 | 230.190 | 114.483 | -151.724 | -249.888 | -24.451 |
| Rohn-H1 | 35.08 | 0.000 | -3.049 | -2.820 | -3.049 | -3.022 | -2.460 | -2.441 | -2.499 |
| Rohn-H1 | 35.08 | 0.000 | -3.049 | -2.820 | -3.049 | -3.022 | -2.460 | -2.441 | -2.499 |
| Rohn-H1 | 43.86 | 0.000 | -3.141 | -2.081 | -2.443 | -3.095 | -3.141 | -2.883 | -2.500 |
| Rohn-H1 | 47.55 | 0.000 | -2.438 | -2.438 | -2.400 | -2.160 | -1.941 | -1.910 | -2.187 |
| Rohn-H1 | 44.20 | 0.000 | -2.266 | -2.075 | -2.080 | -2.153 | -2.247 | -2.266 | -2.185 |
| Rohn-H1 | 48.26 | 0.000 | -2.475 | -1.871 | -1.860 | -2.070 | -2.389 | -2.475 | -2.186 |
| Rohn-H1 | 3.52 | 0.314 | -0.638 | -0.638 | -0.295 | 0.296 | 0.314 | 0.075 | -0.287 |
| Rohn-H1 | 4.22 | 0.195 | -0.764 | -0.764 | -0.119 | -0.274 | -0.701 | -0.764 | -0.289 |
| Rohn-H1 | 3.69 | 0.016 | -0.669 | -0.588 | -0.669 | -0.541 | -0.136 | -0.016 | -0.292 |
| Rohn-H1 | 3.33 | 0.220 | -0.604 | 0.036 | 0.220 | 0.184 | -0.318 | -0.604 | -0.288 |
| Rohn-H1 | 3.20 | 0.000 | -0.581 | -0.028 | -0.133 | -0.452 | -0.581 | -0.581 | -0.290 |
| Rohn-H1 | 5.41 | 0.410 | -0.980 | -0.980 | -0.903 | -0.297 | 0.299 | 0.410 | -0.289 |
| Rohn-H1 | 6.81 | 1.234 | -0.150 | 0.408 | 1.234 | 0.994 | 0.994 | 0.527 | 0.187 |
| Rohn-H1 | 6.45 | 1.169 | -0.789 | 1.169 | 1.065 | 0.266 | -0.616 | -0.789 | 0.190 |
| Rohn-H1 | 4.20 | 0.591 | -0.762 | -0.223 | -0.627 | 0.762 | 0.077 | 0.591 | 0.184 |
| Rohn-H1 | 7.42 | 1.345 | -0.397 | 0.778 | 1.262 | 1.345 | 0.255 | -0.397 | 0.189 |
| Rohn-H1 | 4.25 | 0.621 | -0.770 | 0.621 | 0.094 | -0.770 | -0.649 | -0.245 | 0.188 |
| Rohn-H1 | 5.06 | 0.916 | -0.548 | -0.548 | -0.481 | 0.119 | 0.778 | 0.916 | 0.184 |
| Rohn-H1 | 5.53 | 1.003 | -0.590 | -0.590 | -0.964 | 1.003 | 0.640 | 0.022 | 0.022 |
| Rohn-H1 | 7.82 | 1.417 | -1.376 | 1.417 | 1.155 | -0.096 | -1.239 | -1.376 | 0.019 |
| Rohn-H1 | 6.25 | 0.649 | -1.133 | -1.133 | -1.081 | -1.133 | 0.013 | 0.649 | 0.014 |
| Rohn-H1 | 5.00 | 0.906 | -0.473 | 0.529 | 0.873 | 0.906 | 0.024 | -0.473 | 0.025 |
| Rohn-H1 | 7.74 | 0.925 | -1.403 | 0.925 | 0.155 | -1.317 | -1.403 | -0.888 | 0.016 |
| Rohn-H1 | 6.76 | 1.225 | -1.193 | -1.193 | -0.979 | 0.110 | 1.097 | 1.225 | 0.014 |
| Rohn-H1 | 7.02 | 1.273 | -1.114 | -1.114 | -1.084 | 1.144 | 1.273 | -0.173 | -0.173 |
| Rohn-H1 | 8.10 | 1.084 | -1.426 | 1.084 | 1.001 | 0.052 | -1.140 | -1.426 | -0.174 |
| Rohn-H1 | 8.39 | 0.405 | -1.478 | -0.771 | -1.305 | -1.478 | -0.290 | 0.405 | -0.186 |

| | | | | | | | | | |
|----------|--------|-------|---------|--------|---------|---------|---------|---------|--------|
| SNB-D1 | 6.65 | 1.206 | -1.102 | 0.771 | 1.206 | 1.026 | -0.392 | -1.102 | -0.170 |
| SNB-DA8P | 7.34 | 0.253 | -1.292 | 0.253 | -0.334 | -1.292 | -1.071 | -0.609 | -0.183 |
| SNB-DA81 | 10.08 | 1.421 | -1.775 | -1.496 | -1.496 | -0.053 | 1.141 | 0.591 | -0.329 |
| SNB-DA82 | 8.94 | 1.150 | -1.232 | -1.232 | 1.150 | 1.150 | 1.141 | 0.591 | -0.329 |
| SNB-DB1P | 14.31 | 1.321 | -1.972 | 1.321 | -1.145 | -0.145 | -1.647 | -1.972 | -0.331 |
| SNB-DB11 | 13.87 | 0.416 | -1.911 | -1.080 | -1.705 | -1.911 | -0.422 | 0.416 | -0.340 |
| SNB-DB12 | 8.90 | 1.177 | -1.227 | 0.589 | 1.148 | 1.177 | -0.383 | -1.227 | -0.326 |
| SNB-DB2P | 14.36 | 0.416 | -1.979 | -0.416 | -0.460 | -0.460 | -1.730 | -1.073 | -0.338 |
| SNB-DB21 | 13.77 | 1.238 | -1.898 | -1.898 | -1.600 | -0.182 | 1.066 | 1.238 | -0.336 |
| SNB-DB22 | 14.86 | 2.155 | -0.954 | -0.954 | 0.200 | 0.155 | 1.841 | 0.972 | 0.007 |
| SNB-DB3P | 17.10 | 2.251 | -2.238 | 2.251 | 1.823 | -0.184 | -2.005 | -2.238 | 0.006 |
| SNB-DB31 | 15.79 | 1.338 | -2.066 | -1.346 | -2.066 | -1.960 | 0.232 | 1.338 | -0.003 |
| SNB-DB32 | 14.64 | 2.122 | -0.950 | 0.975 | 1.825 | 2.122 | 0.188 | -0.950 | 0.010 |
| SNB-DB4P | 15.75 | 1.338 | -2.061 | 1.338 | 0.225 | -1.963 | -2.061 | -1.340 | 0.000 |
| SNB-DB41 | 17.33 | 2.270 | -2.268 | -2.268 | -2.044 | -0.212 | 1.828 | 2.270 | 0.001 |
| SNB-DB42 | 18.29 | 2.652 | -1.137 | -1.137 | 0.056 | 2.426 | 2.652 | 1.919 | 0.388 |
| SNB-DB5P | 19.28 | 2.795 | -2.018 | 2.795 | 2.606 | 0.765 | -1.489 | -2.018 | 0.390 |
| SNB-DB51 | 15.88 | 1.308 | -1.962 | 0.539 | -1.508 | -1.962 | 0.080 | 1.308 | 0.379 |
| SNB-DB52 | 18.17 | 2.635 | -1.132 | 1.918 | 2.635 | 2.402 | 0.051 | -1.132 | 0.390 |
| SNB-DB6P | 15.98 | 1.321 | -1.975 | 1.321 | 0.081 | -1.975 | -1.514 | -0.540 | 0.384 |
| SNB-DB61 | 19.28 | 2.796 | -2.034 | -2.034 | -1.515 | 0.742 | 2.603 | 2.796 | 0.382 |
| SNB-DB62 | 13.40 | 1.046 | -1.553 | -0.746 | 0.887 | 1.046 | 1.046 | 0.538 | -0.502 |
| SNB-DB7P | 18.27 | 1.157 | -2.119 | 1.157 | 1.044 | -0.198 | -1.745 | -2.119 | -0.493 |
| SNB-DB71 | 13.58 | 0.115 | -2.144 | -1.129 | -1.804 | -0.748 | 0.115 | -0.504 | 0.496 |
| SNB-DB72 | 18.49 | 1.075 | -1.575 | 1.075 | 1.075 | 0.893 | -0.761 | -1.575 | -0.496 |
| SNB-DB8P | 18.53 | 0.101 | -2.148 | 0.101 | -0.766 | -2.148 | -1.785 | -1.105 | -0.498 |
| SNB-DB81 | 18.25 | 1.132 | -2.116 | -2.116 | -1.769 | -0.256 | 0.999 | 1.132 | -0.505 |
| SNB-DB82 | 22.71 | 1.617 | -4.116 | -4.116 | -2.074 | 1.617 | 1.282 | -0.201 | -2.161 |
| SNB-DC1P | 33.94 | 1.887 | -6.151 | 1.887 | 1.213 | -2.287 | -5.633 | -6.151 | -2.155 |
| SNB-DC11 | 31.89 | 0.000 | -5.779 | -4.305 | -5.668 | -5.779 | -2.032 | -0.018 | -2.160 |
| SNB-DC12 | 22.43 | 1.559 | -4.064 | 0.239 | 1.217 | 1.559 | -2.058 | 4.064 | -2.156 |
| SNB-DC2P | 32.06 | 0.010 | -5.811 | 0.010 | -2.028 | -5.811 | -5.706 | -4.334 | -2.160 |
| SNB-DC21 | 34.12 | 1.909 | -6.184 | -6.184 | -5.653 | -2.275 | 1.238 | -2.161 | -2.161 |
| SNB-DC22 | 36.48 | 6.975 | -0.360 | -0.360 | 2.368 | 6.975 | 6.254 | 4.242 | 1.939 |
| SNB-DC3P | 39.66 | 7.188 | -3.365 | -3.365 | -2.620 | -2.693 | -2.776 | -3.365 | 1.939 |
| SNB-DC31 | 27.67 | 5.015 | -2.854 | -1.137 | 2.854 | 2.854 | 2.422 | 5.015 | 1.945 |
| SNB-DC32 | 38.36 | 6.952 | -0.364 | 0.249 | 6.245 | 6.952 | -0.364 | 1.945 | 1.945 |
| SNB-DC4P | 38.92 | 4.969 | -2.803 | 4.969 | 2.385 | -2.682 | -2.803 | -1.085 | 1.939 |
| SNB-DC41 | 27.42 | 7.232 | -3.416 | 3.416 | -2.851 | 1.471 | 6.216 | 7.232 | 1.936 |
| SNB-DC42 | 27.42 | 3.160 | -4.954 | -4.954 | 2.335 | 2.810 | 3.160 | -1.723 | 1.936 |
| SNB-DC5P | 39.17 | 3.636 | -7.077 | 3.636 | -1.046 | -5.979 | -7.077 | -1.726 | 1.936 |
| SNB-DC51 | 38.19 | 0.422 | -6.901 | -3.875 | -5.988 | -6.901 | -2.317 | -0.422 | -1.720 |
| SNB-DC52 | 27.41 | 3.162 | -4.953 | 1.509 | 3.162 | 2.811 | -2.335 | -4.953 | -1.720 |
| SNB-DC6P | 38.46 | 0.435 | -6.950 | 0.435 | -2.331 | -6.950 | -6.022 | 3.887 | -1.730 |
| SNB-DC61 | 38.92 | 3.587 | -7.033 | -7.033 | -5.952 | -1.065 | 3.096 | 3.587 | -1.729 |
| SNB-DC62 | 30.44 | 3.155 | -5.146 | -5.146 | -2.340 | 3.081 | 3.155 | 1.293 | -1.926 |
| SNB-DD1P | 45.00 | 3.759 | -7.606 | 3.759 | 3.107 | -1.506 | -6.569 | -7.606 | -1.928 |
| SNB-DD11 | 43.32 | 0.583 | -7.321 | -4.498 | -6.616 | -7.321 | -2.926 | 0.583 | -1.940 |
| SNB-DD12 | 30.42 | 3.136 | -5.141 | 1.293 | 3.136 | 3.048 | -2.351 | -5.141 | -1.923 |
| SNB-DD2P | 43.43 | 0.581 | -7.340 | 0.581 | -2.309 | -7.340 | -6.620 | 4.494 | -1.939 |
| SNB-DD21 | 45.11 | 3.771 | -7.625 | -7.625 | -6.602 | -6.602 | 3.103 | 3.771 | -1.932 |
| SNB-DD22 | 49.55 | 8.980 | -0.692 | 0.692 | 2.973 | 8.980 | 7.668 | 4.907 | 2.095 |
| SNB-DD3P | 50.00 | 9.062 | -4.979 | 9.062 | 7.614 | 1.250 | -4.318 | -4.979 | 2.091 |
| SNB-DD31 | 35.19 | 6.378 | -4.255 | -2.178 | -4.355 | -3.925 | 2.985 | 6.378 | 2.084 |
| SNB-DD32 | 49.41 | 8.955 | -0.693 | 4.910 | 7.657 | 8.955 | -2.961 | -0.693 | 2.085 |
| SNB-DD4P | 35.22 | 6.384 | -4.371 | 6.384 | -2.973 | -4.371 | -2.181 | 2.085 | 2.089 |
| SNB-DD41 | 49.93 | 9.050 | -4.971 | -4.971 | -4.324 | 7.591 | 9.050 | -4.971 | 2.089 |
| SNB-DD42 | 44.845 | 4.845 | -6.065 | 6.065 | 4.472 | 4.845 | 2.626 | -1.690 | 2.089 |
| SNB-DD5P | 60.00 | 5.492 | -8.895 | 5.492 | 4.812 | -0.828 | -7.396 | -8.895 | -1.699 |
| SNB-DD51 | 59.10 | 1.202 | -8.762 | -4.632 | -7.451 | -8.762 | -2.514 | 1.202 | -1.699 |
| SNB-DD52 | 40.88 | 4.829 | -6.060 | 2.625 | 4.829 | 4.446 | -2.554 | -6.060 | -1.689 |
| SNB-DD6P | 59.25 | 1.200 | -8.784 | 1.200 | -2.527 | -8.784 | -7.459 | -4.829 | -1.698 |
| SNB-DD61 | 50.06 | 5.498 | -8.904 | -8.904 | -7.418 | -0.855 | 4.805 | 5.498 | -1.694 |
| SNB-DD62 | 44.97 | 3.818 | -9.714 | -9.714 | -5.040 | 3.818 | 0.408 | -9.714 | -4.744 |
| SNB-DE1P | 65.53 | 4.682 | -14.155 | 4.682 | 3.335 | -14.155 | -12.655 | -14.155 | -4.745 |
| SNB-DE11 | 62.67 | 0.000 | -13.537 | -9.401 | -12.701 | -13.537 | -5.004 | -0.254 | -4.752 |
| SNB-DE12 | | | | | | | | | |

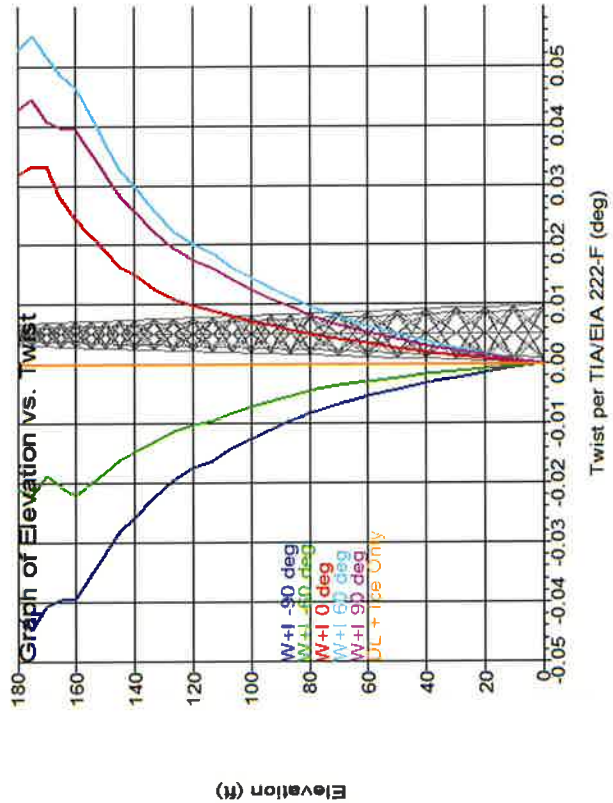
| | | | | | | | | | |
|----------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| SNB-D4 | 44.97 | 3.794 | -9.714 | 0.113 | 3.363 | 3.794 | -5.051 | -9.714 | -4.742 |
| SNB-DE2P | 62.83 | 0.000 | -13.572 | 0.251 | -5.020 | -13.572 | -12.719 | -9.403 | -4.751 |
| SNB-D4 | 62.83 | 0.000 | -14.145 | -14.145 | -12.663 | -4.648 | 3.307 | 4.668 | -4.748 |
| SNB-DE22 | 45.20 | 13.503 | 0.000 | 0.486 | 5.092 | 13.503 | 12.955 | 9.885 | 5.136 |
| SNB-DE3P | 44.36 | 14.196 | -4.045 | 14.196 | 12.903 | 5.353 | -2.554 | -4.046 | 5.136 |
| SNB-DE31 | 30.25 | 19.681 | -3.369 | 0.674 | -2.601 | -3.369 | 5.138 | 9.681 | 5.131 |
| SNB-DE32 | 42.09 | 13.467 | 0.000 | 0.880 | 12.931 | 13.467 | 5.081 | 0.493 | 5.137 |
| SNB-DE4P | 30.26 | 9.682 | -3.392 | -3.392 | 5.126 | -3.392 | -2.611 | 0.675 | 5.132 |
| SNB-DE41 | 44.40 | 14.209 | -4.063 | -4.063 | -2.583 | 5.326 | 12.903 | 14.209 | 5.134 |
| SNB-D4 | 33.35 | 1.620 | -10.673 | -6.509 | 1.620 | 1.540 | -1.217 | -5.886 | -5.886 |
| SNB-D4 | 44.76 | 2.544 | -14.321 | 2.544 | 1.516 | -5.329 | -12.759 | -14.321 | -5.884 |
| SNB-DE51 | 43.86 | 0.000 | -14.034 | -9.705 | -12.812 | -14.034 | -6.490 | -2.186 | -5.887 |
| SNB-DE52 | 33.42 | 1.604 | -10.693 | -1.194 | -1.551 | 1.604 | 6.534 | -10.693 | -5.885 |
| SNB-DE61 | 43.92 | 0.000 | -14.055 | -2.191 | -6.507 | -14.055 | -12.616 | -9.699 | -5.886 |
| SNB-DE62 | 44.72 | 2.530 | -14.311 | -14.311 | -12.772 | -5.374 | 1.483 | 2.530 | -5.886 |
| SNB-DF1P | 30.15 | 9.649 | -3.823 | -3.823 | 0.615 | 9.649 | 6.985 | 6.985 | 1.541 |
| SNB-DF11 | 32.71 | 10.467 | -7.570 | 10.467 | 9.610 | 2.678 | 5.652 | -7.570 | 1.545 |
| SNB-D5 | 23.14 | 5.238 | -7.403 | -2.126 | -2.679 | -7.403 | 0.672 | -7.403 | 1.544 |
| SNB-DF2P | 30.08 | 9.626 | -3.816 | 6.982 | 9.626 | 9.308 | 0.602 | -3.816 | 1.543 |
| SNB-DF21 | 23.28 | 5.258 | -7.448 | 5.258 | -0.667 | -7.448 | 5.719 | -2.147 | 1.543 |
| SNB-D5 | 32.67 | 10.454 | -7.559 | -7.559 | 0.653 | 2.658 | 9.590 | 10.454 | 1.544 |
| SNB-DF3P | 21.88 | 4.781 | -7.001 | -7.001 | -2.907 | 4.781 | 4.339 | 1.674 | -2.626 |
| SNB-D5 | 33.82 | 5.392 | -10.823 | 5.392 | -4.280 | -2.314 | -9.384 | -10.823 | -2.624 |
| SNB-DF32 | 32.66 | 1.219 | -10.450 | -6.503 | -9.438 | -10.450 | -2.867 | 1.219 | -2.621 |
| SNB-DF4P | 21.89 | 4.743 | -7.004 | 1.676 | 4.321 | 4.743 | -2.928 | -7.004 | -2.627 |
| SNB-DF41 | 32.73 | 1.212 | -10.472 | -1.212 | -2.884 | -10.472 | 9.444 | -6.497 | -2.622 |
| SNB-DF42 | 33.67 | 5.411 | -10.838 | -10.838 | -2.349 | 4.278 | 5.411 | -2.621 | -2.623 |
| SNB-D6 | 23.25 | 4.975 | -7.440 | -7.440 | -3.184 | 4.975 | 4.551 | 1.802 | -2.611 |
| SNB-DG11 | 35.69 | 5.663 | -11.420 | 5.663 | -4.522 | -2.395 | -9.863 | -11.420 | -2.809 |
| SNB-D6 | 34.60 | 1.170 | -11.071 | -6.811 | -9.900 | -11.071 | -3.123 | 1.170 | -2.803 |
| SNB-DG2P | 23.26 | 4.946 | -7.442 | 1.802 | 4.537 | 4.946 | -3.199 | -7.442 | -2.812 |
| SNB-DG21 | 34.72 | 1.169 | -11.112 | 1.169 | -3.144 | -11.112 | -9.922 | -6.815 | -2.806 |
| SNB-DG22 | 35.65 | 5.656 | -11.407 | -11.407 | -9.867 | -2.423 | 4.501 | 5.656 | -2.805 |
| SNB-DG3P | 27.16 | 8.691 | -4.770 | -4.770 | 0.184 | 8.691 | 8.289 | 5.354 | 0.311 |
| SNB-D6 | 29.48 | 9.432 | -9.015 | 9.432 | 0.850 | -7.285 | -9.015 | 0.311 | 0.311 |
| SNB-D6 | 27.19 | 4.548 | -8.700 | -3.939 | -8.700 | -0.097 | 4.548 | 0.309 | 0.309 |
| SNB-DG4P | 27.05 | 8.655 | -4.771 | 5.352 | 6.270 | 8.655 | -0.161 | -4.771 | 0.309 |
| SNB-DG41 | 27.28 | 4.545 | -8.728 | -8.728 | -0.114 | -8.728 | -7.334 | -3.939 | 0.315 |
| SNB-DG42 | 29.51 | 9.442 | -9.019 | -9.019 | -7.302 | 8.230 | 8.230 | 9.442 | 0.315 |
| SNB-DH1P | 36.38 | 1.942 | -11.640 | -11.640 | -6.915 | 1.942 | 1.108 | -2.031 | -6.815 |
| SNB-D6 | 50.98 | 2.491 | -16.313 | 2.491 | -1.071 | -6.715 | -14.749 | -16.313 | -6.815 |
| SNB-DH11 | 49.37 | 0.000 | -15.797 | -11.515 | -14.789 | -15.797 | -6.867 | -2.181 | -6.810 |
| SNB-DH2P | 36.38 | 1.911 | -11.642 | -2.032 | 1.093 | 1.911 | -6.932 | -11.642 | -6.817 |
| SNB-DH21 | 49.48 | 0.000 | -15.832 | -2.183 | -6.885 | -15.832 | -14.808 | -11.517 | -6.812 |
| SNB-D6 | 50.96 | 2.492 | -16.307 | -16.307 | -14.758 | -6.741 | 1.057 | 2.492 | -6.812 |
| SNB-DH3P | 43.16 | 13.811 | -1.254 | -1.254 | 3.841 | 13.811 | 13.635 | 10.537 | 4.651 |
| SNB-DH31 | 46.15 | 14.769 | -5.701 | 14.769 | 13.594 | 5.622 | -3.588 | -5.701 | 4.652 |
| SNB-D6 | 28.39 | 9.084 | -5.560 | 0.254 | -3.622 | -5.560 | 3.891 | 9.084 | 4.657 |
| SNB-DH4P | 43.06 | 13.779 | -1.255 | 10.535 | 13.618 | 13.779 | 3.825 | -1.255 | 4.650 |
| SNB-DH41 | 28.38 | 9.081 | -5.590 | 9.081 | 3.874 | -5.590 | -3.637 | 0.252 | 4.655 |
| SNB-DH42 | 46.17 | 14.775 | -5.700 | -5.700 | -3.601 | 5.598 | 13.586 | 14.775 | 4.656 |
| SNB-DI1P | 69.99 | 0.000 | -22.395 | -22.395 | -16.021 | -7.399 | -12.142 | -17.167 | -17.167 |
| SNB-DI11 | 92.81 | 0.000 | -29.699 | 4.825 | -7.440 | -18.679 | -28.341 | -29.699 | -17.167 |
| SNB-DI12 | 88.67 | 0.000 | -28.375 | -24.658 | -28.375 | -28.332 | -15.977 | -9.903 | -17.161 |
| SNB-DI2P | 69.99 | 0.000 | -22.397 | -12.144 | -7.414 | -4.824 | -16.039 | -22.397 | -17.169 |
| SNB-DI21 | 88.72 | 0.000 | -28.391 | -9.905 | -15.994 | -28.363 | -28.391 | -24.661 | -17.163 |
| SNB-DI22 | 92.80 | 0.000 | -29.694 | -29.694 | -18.702 | -7.451 | -4.821 | -17.163 | -17.163 |
| SNB-DI3P | 89.47 | 28.631 | 6.419 | 13.068 | 27.143 | 28.631 | 25.190 | 15.723 | 4.651 |
| SNB-DI31 | 91.64 | 29.323 | 0.000 | 29.323 | 28.601 | 19.002 | 5.561 | 1.858 | 15.725 |
| SNB-DI32 | 30.251 | 0.000 | 1.127 | 13.113 | 20.251 | 15.720 | 15.720 | 15.720 | 15.720 |
| SNB-DI4P | 89.43 | 28.617 | 0.000 | 25.189 | 28.617 | 27.116 | 13.054 | 6.419 | 15.722 |
| SNB-DI41 | 63.27 | 20.247 | 0.000 | 20.247 | 13.097 | 1.098 | 5.513 | 11.424 | 15.727 |
| SNB-DI42 | 91.65 | 29.328 | 0.000 | 1.861 | 5.552 | 18.982 | 28.593 | 29.328 | 15.729 |
| SNB-L1 | 0.63 | 0.188 | -0.631 | 0.188 | -0.211 | -0.631 | -0.266 | 0.132 | 0.164 |
| SNB-L11 | 0.59 | 0.720 | -0.394 | -0.394 | 0.258 | 0.280 | 0.701 | 0.720 | 0.167 |
| SNB-L12 | 0.76 | 0.923 | -0.592 | 0.921 | 0.923 | 0.365 | -0.394 | -0.592 | 0.169 |

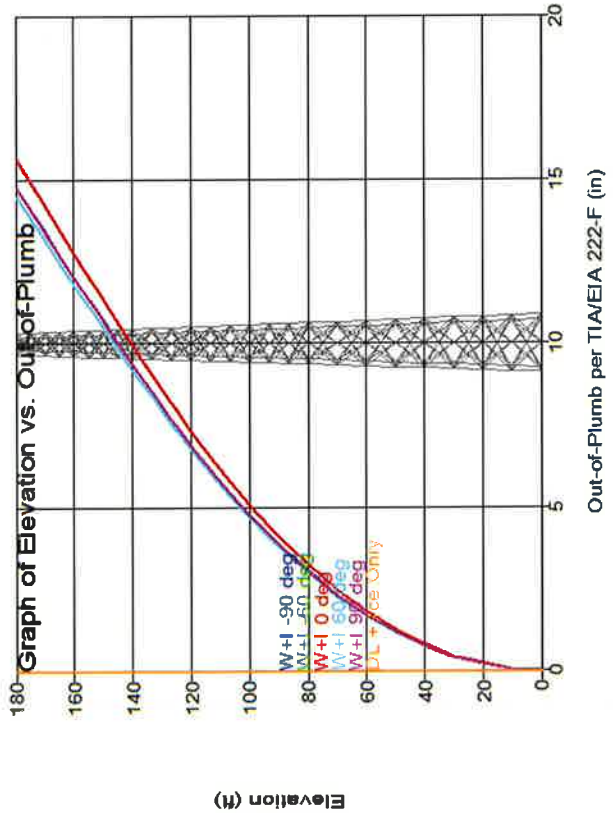
| | | | | | | | | | |
|----------|-------|---------|----------|----------|----------|----------|----------|----------|---------|
| SNB-L1 | 3.43 | 0.000 | -3.440 | -0.687 | -2.201 | -3.440 | -1.678 | -0.505 | -0.700 |
| SNB-LA2P | 3.09 | 1.967 | -3.095 | -3.095 | -2.172 | 0.514 | 1.967 | 1.718 | -0.694 |
| SNB-LA21 | 2.89 | 1.865 | -2.894 | 1.865 | 1.865 | 0.634 | -1.946 | -0.685 | -0.685 |
| SNB-LA22 | 6.02 | 0.000 | -6.035 | -0.675 | -3.309 | -3.161 | -0.495 | -0.587 | -0.587 |
| SNB-LA3P | 5.044 | 5.044 | -5.414 | -5.414 | -3.289 | 2.400 | 5.044 | 4.281 | -0.572 |
| SNB-LA31 | 5.23 | 4.933 | -5.238 | 4.138 | 4.933 | 2.431 | -3.132 | -5.238 | -0.552 |
| SNB-LA32 | 9.41 | 0.000 | -9.431 | -0.360 | -4.710 | -9.431 | -4.908 | -0.593 | -0.473 |
| SNB-LA4P | 7.79 | 7.929 | -7.755 | -7.755 | -4.630 | 3.862 | 7.929 | 6.878 | -0.445 |
| SNB-LA41 | 7.95 | 8.177 | -7.966 | 7.147 | 8.177 | 3.926 | -4.807 | -7.966 | -0.412 |
| SNB-LA42 | 8.48 | 0.000 | -8.348 | -0.748 | -6.794 | -13.348 | -6.810 | -0.759 | -0.755 |
| SNB-LB1P | 7.22 | 11.459 | -11.364 | -11.364 | -6.816 | 5.598 | 11.459 | 9.963 | -0.707 |
| SNB-LB12 | 7.16 | 11.441 | -11.269 | 9.950 | 11.441 | 5.605 | -6.751 | -11.269 | -0.663 |
| SNB-LB2P | 12.03 | 0.000 | -18.926 | -1.423 | 9.766 | -18.926 | -9.776 | -1.428 | -0.438 |
| SNB-LB21 | 10.16 | 15.344 | -15.990 | -15.990 | -9.695 | 7.415 | 15.344 | 13.280 | -1.374 |
| SNB-LB22 | 10.14 | 15.413 | -15.954 | 13.346 | 15.413 | 7.476 | -9.655 | -15.954 | -1.320 |
| SNB-LB3P | 15.67 | 0.000 | -24.655 | -2.093 | -12.814 | -24.655 | -12.823 | -2.098 | -2.105 |
| SNB-LB31 | 13.23 | 19.414 | -20.821 | -20.821 | -12.743 | 9.250 | 19.414 | 16.796 | -2.032 |
| SNB-LB32 | 13.19 | 19.481 | -20.755 | 16.861 | 19.481 | 9.314 | -12.682 | -20.755 | -1.963 |
| SNB-LB4P | 18.05 | 0.000 | -28.406 | -1.233 | -14.124 | -28.406 | -14.110 | -1.213 | -1.249 |
| SNB-LB41 | 15.11 | 24.601 | -23.780 | -23.780 | -14.041 | 12.423 | 24.601 | 21.462 | -1.175 |
| SNB-LB42 | 15.06 | 24.686 | -23.695 | 21.539 | 24.686 | 12.519 | -13.952 | -23.695 | -1.090 |
| SNB-LC1P | 23.02 | 0.440 | -33.891 | 0.440 | -15.792 | -33.891 | -15.812 | 0.422 | 0.407 |
| SNB-LC12 | 19.03 | 32.947 | -28.009 | -28.009 | -15.705 | 17.680 | 32.947 | 28.992 | 0.478 |
| SNB-LC11 | 19.03 | 32.947 | -27.934 | 29.108 | 33.063 | 17.783 | -15.625 | -27.934 | 0.577 |
| SNB-LC12 | 18.98 | 33.063 | -27.934 | 29.108 | 33.063 | 17.783 | -15.625 | -27.934 | 0.577 |
| SNB-LC2P | 35.03 | 0.000 | -51.517 | -5.447 | -27.182 | -51.517 | -27.230 | -5.498 | -5.494 |
| SNB-LC21 | 29.57 | 38.090 | -43.563 | 43.563 | -27.102 | 17.671 | 38.090 | 32.819 | -5.423 |
| SNB-LC22 | 29.57 | 38.229 | -43.491 | 32.964 | 38.229 | 17.773 | -27.030 | -43.491 | -5.312 |
| SNB-LC3P | 40.13 | 0.000 | -59.062 | -0.998 | -28.360 | -59.062 | -28.348 | -0.960 | -1.017 |
| SNB-LC31 | 33.32 | 53.827 | -49.042 | 49.042 | -28.281 | 28.136 | 53.827 | 47.222 | -0.939 |
| SNB-LC32 | 33.22 | 53.912 | -48.897 | 47.305 | 53.912 | 28.244 | -28.145 | -48.897 | -0.823 |
| SNB-LD1P | 50.43 | 0.000 | -72.798 | -1.814 | -35.215 | -72.798 | -35.220 | -1.815 | -1.855 |
| SNB-LD11 | 41.89 | 65.068 | -60.466 | -60.466 | -35.116 | 33.770 | 65.068 | 57.035 | -1.759 |
| SNB-LD12 | 41.81 | 65.204 | -60.357 | 57.167 | 65.204 | 33.900 | -35.003 | -60.357 | -1.637 |
| SNB-LD2P | 64.57 | 0.000 | -93.156 | -7.178 | -47.578 | -93.156 | -47.576 | -7.172 | -7.177 |
| SNB-LD21 | 54.16 | 73.854 | -78.139 | -78.139 | -47.463 | 35.935 | 73.854 | 64.151 | -7.060 |
| SNB-LD22 | 54.07 | 73.974 | -78.005 | 64.269 | 73.974 | 36.125 | -47.331 | -78.005 | -6.931 |
| SNB-LD3P | 71.69 | 0.000 | -103.491 | -2.990 | -60.111 | -103.491 | -60.116 | -2.993 | -3.045 |
| SNB-LD31 | 59.46 | 91.389 | -85.835 | 85.835 | -49.979 | 47.412 | 91.389 | 80.123 | -2.912 |
| SNB-LD32 | 59.38 | 91.526 | -85.711 | 80.257 | 91.526 | 47.547 | -49.853 | -85.711 | -2.781 |
| SNB-LE1P | 43.05 | 0.000 | -119.235 | -0.761 | -56.185 | -119.235 | -56.186 | -0.758 | -0.864 |
| SNB-LE11 | 35.75 | 110.169 | -98.276 | -98.276 | -56.038 | 58.610 | 110.169 | 96.985 | -0.718 |
| SNB-LE12 | 35.79 | 110.295 | -98.135 | 97.110 | 110.295 | 58.744 | -55.899 | -98.135 | -0.582 |
| SNB-LE2P | 54.13 | 0.000 | -149.828 | -12.356 | -76.551 | -149.828 | -76.561 | -12.363 | -12.322 |
| SNB-LE21 | 45.28 | 116.342 | -125.332 | -125.332 | -76.397 | 56.621 | 116.342 | 101.097 | -12.167 |
| SNB-LE22 | 45.24 | 116.488 | -125.202 | 101.242 | 116.488 | 56.763 | -76.265 | -125.202 | -12.027 |
| SNB-LE3P | 56.26 | 0.000 | -155.792 | -0.901 | -73.067 | -155.792 | -73.056 | -0.886 | -0.969 |
| SNB-LE31 | 46.60 | 143.585 | -128.021 | -128.021 | -72.905 | 76.719 | 143.585 | 126.546 | -0.811 |
| SNB-LE32 | 46.84 | 143.722 | -127.873 | 126.679 | 143.722 | 76.869 | -72.754 | -127.873 | -0.667 |
| SNB-LF1P | 72.62 | 0.000 | -184.623 | -10.812 | -91.635 | -184.623 | -91.625 | -10.798 | -10.765 |
| SNB-LF11 | 60.28 | 151.265 | -153.252 | -153.252 | -91.478 | 76.410 | 151.265 | 132.218 | -10.609 |
| SNB-LF12 | 60.22 | 151.399 | -153.098 | 132.348 | 151.399 | 76.558 | -91.324 | -153.098 | -10.465 |
| SNB-LF2P | 79.20 | 0.000 | -201.366 | -5.996 | -96.590 | -201.366 | -96.602 | -6.006 | -6.022 |
| SNB-LF21 | 65.21 | 175.509 | -165.798 | -165.798 | -96.437 | 91.944 | 175.509 | 154.292 | -5.871 |
| SNB-LF22 | 65.16 | 175.658 | -165.665 | 154.442 | 175.658 | 92.088 | -96.302 | -165.665 | -5.727 |
| SNB-LG1P | 68.94 | 0.000 | -222.879 | -7.756 | -107.230 | -222.879 | -107.233 | -7.756 | -7.761 |
| SNB-LG12 | 56.40 | 191.500 | -183.402 | -183.402 | -107.093 | 100.050 | 191.500 | 168.334 | -7.618 |
| SNB-LG2P | 56.36 | 191.627 | -183.257 | 168.462 | 191.627 | 100.185 | -106.950 | -183.257 | -7.479 |
| SNB-LG21 | 76.28 | 0.000 | -248.023 | -12.480 | -121.116 | -248.023 | -121.120 | -12.482 | -12.482 |
| SNB-LG22 | 62.87 | 205.094 | -204.434 | -204.434 | -120.980 | 105.531 | 205.094 | 179.932 | -12.348 |
| SNB-LG23 | 62.83 | 205.229 | -204.306 | 180.066 | 205.229 | 105.665 | -120.851 | -204.306 | -12.215 |
| SNB-LH1P | 80.93 | 0.000 | -262.840 | -6.208 | -124.265 | -262.840 | -124.266 | -6.208 | -6.216 |
| SNB-LH11 | 66.12 | 230.203 | -214.989 | -214.989 | -124.141 | 122.339 | 230.203 | 202.998 | -6.089 |
| SNB-LH12 | 66.08 | 230.324 | -214.862 | 203.119 | 230.324 | 122.463 | -124.015 | -214.862 | -5.962 |
| SNB-LH2P | 91.58 | 0.000 | -297.796 | -20.327 | -147.671 | -297.796 | -147.672 | -20.329 | -20.296 |
| SNB-LH21 | 75.55 | 234.682 | -245.676 | -245.676 | -147.552 | 118.647 | 234.682 | 205.478 | -20.174 |
| SNB-LH22 | 75.52 | 234.801 | -245.558 | 205.596 | 234.801 | 118.765 | -147.434 | -245.558 | -20.054 |

| | | | | | | | | | |
|---------|-------------|---------|----------|----------|----------|----------|----------|----------|---------|
| SNB-L6 | SNB-L11P | 1.433 | -301.239 | 1.433 | -137.111 | -301.239 | -137.111 | 1.433 | 1.344 |
| SNB-L6 | SNB-L11L | 278.669 | -243.950 | 243.950 | -136.999 | 152.930 | 278.669 | 247.092 | 1.460 |
| SNB-L6 | SNB-L112 | 278.780 | -243.837 | 247.202 | 278.780 | 153.040 | -136.887 | -243.837 | 1.574 |
| SNB-L6 | SNB-L12P | 85.55 | -362.131 | -35.284 | -184.538 | -362.131 | -184.537 | -35.284 | -35.104 |
| SNB-L6 | SNB-L121 | 263.750 | -299.815 | -299.815 | -184.434 | 128.455 | 263.750 | 229.836 | -34.995 |
| SNB-L6 | SNB-L122 | 70.80 | -299.710 | 229.940 | 263.854 | 128.556 | -184.331 | -299.710 | -34.889 |
| Connect | Connect AP | 0.02 | 0.000 | 4.503 | 4.509 | 4.477 | 4.587 | 4.585 | 4.576 |
| Connect | Connect A1 | 4.682 | 0.000 | 4.673 | 4.682 | 4.605 | 4.433 | 4.408 | 4.572 |
| Connect | Connect A2 | 4.772 | 0.000 | 4.310 | 4.337 | 4.592 | 4.772 | 4.772 | 4.572 |
| Connect | Connect AaP | 0.00 | -0.073 | 0.175 | 0.651 | 1.025 | 0.446 | -0.073 | 0.044 |
| Connect | Connect Aa1 | 0.00 | -0.153 | 0.205 | 0.110 | -0.088 | -0.153 | -0.099 | 0.048 |
| Connect | Connect Aa2 | 0.00 | -0.232 | -0.100 | -0.232 | -0.231 | 0.037 | 0.191 | 0.042 |
| Connect | Connect ABP | 0.00 | -0.072 | 0.006 | -0.054 | -0.072 | 0.046 | 0.111 | 0.054 |
| Connect | Connect Ab1 | 0.00 | -0.784 | 0.726 | 0.784 | 0.535 | -0.240 | -0.726 | 0.046 |
| Connect | Connect Ab2 | 0.225 | -0.077 | -0.077 | 0.006 | 0.167 | 0.225 | 0.179 | 0.045 |
| Connect | Connect ACP | 0.00 | -0.197 | 0.197 | 0.197 | 0.077 | -0.055 | -0.104 | 0.040 |
| Connect | Connect AC1 | 0.00 | -0.080 | -0.080 | -0.008 | 0.160 | 0.202 | 0.162 | 0.035 |
| Connect | Connect AC2 | 0.237 | -0.265 | -0.162 | -0.265 | -0.201 | 0.095 | 0.237 | 0.033 |
| Connect | Connect BP | 4.594 | 0.000 | 4.434 | 4.392 | 4.364 | 4.543 | 4.594 | 4.540 |
| Connect | Connect B1 | 4.982 | 0.000 | 4.106 | 4.273 | 4.747 | 4.982 | 4.929 | 4.540 |
| Connect | Connect B2 | 5.015 | 0.000 | 4.926 | 5.015 | 4.939 | 4.334 | 4.112 | 4.541 |
| Connect | Connect BaP | 0.00 | 0.000 | 0.058 | 0.395 | 0.714 | 0.403 | 0.070 | 0.052 |
| Connect | Connect Ba1 | 0.762 | -0.721 | 0.762 | 0.762 | -0.279 | -0.721 | -0.645 | 0.053 |
| Connect | Connect Ba2 | 0.00 | -0.723 | -0.643 | -0.723 | -0.271 | 0.506 | 0.756 | 0.052 |
| Connect | Connect BBP | 0.00 | -0.114 | -0.008 | 0.070 | 0.114 | 0.079 | -0.002 | -0.008 |
| Connect | Connect Bb1 | 0.00 | -0.116 | -0.124 | 0.116 | 0.067 | -0.124 | -0.105 | -0.003 |
| Connect | Connect Bb2 | 0.111 | -0.131 | -0.106 | -0.131 | -0.049 | 0.068 | 0.111 | -0.007 |
| Connect | Connect BcP | 0.387 | -1.063 | 0.387 | 0.274 | -1.063 | -0.305 | 0.343 | 0.365 |
| Connect | Connect Bc1 | 1.810 | -0.874 | -0.874 | -0.334 | 1.448 | 1.810 | 1.643 | 0.374 |
| Connect | Connect Bc2 | 1.752 | -0.852 | 1.608 | 1.752 | 1.102 | -0.328 | -0.852 | 0.368 |
| Connect | Connect CP | 5.477 | 0.000 | 3.327 | 4.365 | 5.477 | 4.414 | 3.373 | 3.337 |
| Connect | Connect C1 | 5.266 | 0.000 | 5.266 | 4.443 | 2.186 | 1.111 | 1.395 | 3.334 |
| Connect | Connect C2 | 5.165 | 0.000 | 1.510 | 1.247 | 2.284 | 4.411 | 5.165 | 3.342 |
| Connect | Connect Csp | 1.986 | 0.000 | 0.063 | 0.998 | 1.986 | 0.972 | 0.024 | 0.043 |
| Connect | Connect Ca1 | 1.660 | -1.792 | 1.660 | 0.962 | -0.908 | -1.792 | -1.565 | 0.041 |
| Connect | Connect Cc2 | 1.781 | -1.943 | -1.682 | -1.943 | -1.003 | 1.023 | 1.781 | 0.043 |
| Connect | Connect CBP | 0.380 | 0.000 | 0.230 | 0.327 | 0.368 | 0.380 | 0.287 | 0.260 |
| Connect | Connect Cb1 | 0.375 | 0.000 | 0.375 | 0.311 | 0.170 | 0.075 | 0.130 | 0.251 |
| Connect | Connect Cb2 | 0.354 | 0.000 | 0.153 | 0.113 | 0.217 | 0.320 | 0.354 | 0.252 |
| Connect | Connect DP | 5.667 | 0.000 | 5.663 | 5.456 | 5.150 | 5.667 | 5.667 | 5.667 |
| Connect | Connect D1 | 5.990 | 0.000 | 5.319 | 5.483 | 5.871 | 5.990 | 5.954 | 5.657 |
| Connect | Connect D2 | 5.971 | 0.000 | 5.941 | 5.971 | 5.863 | 5.492 | 5.329 | 5.655 |
| Connect | Connect DaP | 2.983 | 0.000 | 0.642 | 1.748 | 2.983 | 1.752 | 0.641 | 0.651 |
| Connect | Connect Da1 | 2.524 | -1.465 | 2.524 | 1.704 | -0.484 | -1.465 | -1.208 | 0.656 |
| Connect | Connect Da2 | 2.524 | -1.464 | -1.204 | -1.464 | -0.483 | 1.708 | 2.524 | 0.658 |
| Connect | Connect DbP | 0.903 | 0.000 | 0.350 | 0.608 | 0.903 | 0.611 | 0.349 | 0.362 |
| Connect | Connect Db1 | 0.840 | -0.163 | 0.840 | 0.632 | 0.086 | -0.163 | -0.112 | 0.363 |
| Connect | Connect Db2 | 0.839 | -0.166 | -0.111 | -0.166 | 0.083 | 0.633 | 0.839 | 0.363 |
| Connect | Connect EP | 9.120 | 0.000 | 6.219 | 7.589 | 9.120 | 7.592 | 6.218 | 6.169 |
| Connect | Connect E1 | 8.605 | 0.000 | 8.605 | 7.582 | 4.727 | 3.400 | 3.740 | 6.170 |
| Connect | Connect E2 | 8.602 | 0.000 | 3.740 | 3.397 | 4.724 | 7.583 | 8.602 | 6.168 |
| Connect | Connect EaP | 0.276 | 0.000 | 0.247 | 0.165 | 0.105 | 0.173 | 0.252 | 0.276 |
| Connect | Connect Ea1 | 0.447 | 0.000 | 0.142 | 0.185 | 0.343 | 0.447 | 0.412 | 0.279 |
| Connect | Connect Ea2 | 0.449 | 0.000 | 0.415 | 0.449 | 0.348 | 0.190 | 0.141 | 0.280 |
| Connect | Connect EBP | 0.185 | -0.907 | 0.180 | -0.323 | -0.907 | -0.348 | 0.148 | 0.185 |
| Connect | Connect Eb1 | 1.260 | -0.760 | -0.760 | -0.362 | 0.745 | 1.260 | 1.130 | 0.191 |
| Connect | Connect Eb2 | 1.230 | -0.744 | 1.114 | 1.230 | 0.718 | -0.359 | -0.744 | 0.192 |
| Connect | Connect FP | 4.788 | 0.000 | 4.772 | 3.923 | 2.894 | 3.930 | 4.779 | 4.788 |
| Connect | Connect F1 | 6.361 | 0.000 | 3.347 | 3.980 | 5.657 | 6.361 | 6.182 | 4.790 |
| Connect | Connect F2 | 6.437 | 0.000 | 6.248 | 6.437 | 5.702 | 3.950 | 3.284 | 4.792 |
| Connect | Connect FaP | 0.370 | -1.078 | 0.360 | -0.304 | -1.078 | -0.327 | 0.332 | 0.370 |
| Connect | Connect Fa1 | 1.723 | -0.848 | -0.848 | -0.334 | 1.078 | 1.723 | 1.563 | 0.374 |
| Connect | Connect Fa2 | 1.700 | -0.831 | 1.551 | 1.700 | 1.056 | -0.330 | -0.831 | 0.377 |
| Connect | Connect Gp | 5.400 | 0.000 | 5.233 | 5.400 | 5.238 | 5.400 | 5.108 | 5.132 |
| Connect | Connect G1 | 5.366 | 0.000 | 5.366 | 5.252 | 4.940 | 4.819 | 4.848 | 5.133 |
| Connect | Connect G2 | 5.365 | 0.000 | 4.855 | 4.827 | 4.949 | 5.256 | 5.365 | 5.136 |

| | | | | | | | | | | |
|---------|-------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Connect | Connect GaP | 0.00 | 0.614 | 0.000 | 0.038 | 0.296 | 0.614 | 0.297 | 0.038 | 0.061 |
| Connect | Connect GaI | 0.00 | 0.489 | -0.467 | 0.489 | 0.287 | -0.253 | -0.467 | -0.412 | 0.061 |
| Connect | Connect Ga2 | 0.00 | 0.490 | -0.467 | -0.411 | -0.467 | -0.254 | 0.289 | 0.490 | 0.062 |
| Connect | Connect Hp | 0.03 | 6.059 | 0.000 | 5.946 | 5.946 | 6.059 | 5.946 | 5.946 | 5.856 |
| Connect | Connect H1 | 0.03 | 6.029 | 0.000 | 6.029 | 5.946 | 5.703 | 5.586 | 5.618 | 5.855 |
| Connect | Connect H2 | 0.03 | 6.028 | 0.000 | 5.618 | 5.586 | 5.704 | 5.946 | 6.028 | 5.854 |
| Connect | Connect H3P | 0.01 | 1.256 | 0.000 | 0.192 | 0.656 | 1.256 | 0.656 | 0.193 | 0.228 |
| Connect | Connect Ha1 | 1.035 | 1.035 | -0.711 | 1.035 | 0.663 | -0.330 | -0.711 | -0.623 | 0.228 |
| Connect | Connect Ha2 | 0.00 | 1.036 | -0.710 | -0.622 | -0.710 | -0.329 | 0.664 | 1.036 | 0.229 |
| Connect | Connect IP | 0.05 | 10.581 | 0.000 | 6.450 | 8.307 | 10.581 | 8.307 | 6.450 | 6.467 |
| Connect | Connect I1 | 0.04 | 9.739 | 0.000 | 9.739 | 8.238 | 4.385 | 2.743 | 3.149 | 6.469 |
| Connect | Connect I2 | 0.04 | 9.739 | 0.000 | 3.150 | 2.743 | 4.386 | 8.239 | 9.739 | 6.469 |
| Connect | Connect I3P | 0.01 | 0.677 | -1.453 | -1.453 | -0.500 | 0.677 | -0.500 | -1.453 | -1.433 |
| Connect | Connect I3L | 0.01 | 0.250 | -3.397 | -3.397 | -0.492 | -2.541 | -3.397 | -3.190 | -1.432 |
| Connect | Connect I3L | 0.01 | 0.250 | -3.396 | -3.189 | -3.396 | -2.541 | -0.492 | -0.250 | -1.431 |
| Connect | Connect I3L | 2.44 | 2.889 | 0.000 | 2.889 | 2.736 | 2.512 | 2.633 | 2.768 | 2.851 |
| Connect | Connect I3L | 2.47 | 2.916 | 0.000 | 2.741 | 2.736 | 2.796 | 2.880 | 2.916 | 2.851 |
| Connect | Connect I3L | 2.51 | 2.972 | 0.000 | 2.719 | 2.792 | 2.949 | 2.972 | 2.938 | 2.850 |
| Connect | Connect I3L | 2.57 | 3.039 | 0.000 | 3.015 | 3.039 | 2.949 | 2.725 | 2.642 | 2.850 |
| Connect | Connect I3L | 2.45 | 2.894 | 0.000 | 2.894 | 2.888 | 2.853 | 2.788 | 2.766 | 2.851 |
| Connect | Connect I3L | 2.46 | 2.914 | 0.000 | 2.746 | 2.641 | 2.569 | 2.788 | 2.914 | 2.851 |
| Connect | Connect I3L | 2.70 | 3.195 | 0.000 | 3.110 | 3.110 | 2.972 | 3.049 | 3.119 | 3.183 |
| Connect | Connect I3L | 2.79 | 3.296 | 0.000 | 3.048 | 3.110 | 3.255 | 3.267 | 3.267 | 3.183 |
| Connect | Connect I3L | 2.76 | 3.267 | 0.000 | 3.079 | 3.134 | 3.240 | 3.267 | 3.244 | 3.182 |
| Connect | Connect I3L | 2.86 | 3.381 | 0.000 | 3.375 | 3.381 | 3.240 | 3.020 | 2.949 | 3.182 |
| Connect | Connect I3L | 2.83 | 3.343 | 0.000 | 3.343 | 3.343 | 3.324 | 3.133 | 3.034 | 3.183 |
| Connect | Connect I3L | 2.69 | 3.183 | 0.000 | 3.137 | 3.096 | 3.040 | 3.133 | 3.181 | 3.183 |
| Connect | Connect I3L | 3.90 | 4.608 | 0.000 | 4.608 | 4.564 | 4.101 | 3.718 | 3.666 | 4.128 |
| Connect | Connect I3L | 3.86 | 4.564 | 0.000 | 4.407 | 4.564 | 4.488 | 4.054 | 3.867 | 4.128 |
| Connect | Connect I3L | 3.60 | 4.261 | 0.000 | 4.313 | 3.753 | 3.723 | 4.046 | 4.261 | 4.127 |
| Connect | Connect I3L | 3.65 | 4.315 | 0.000 | 4.315 | 4.089 | 3.723 | 3.710 | 3.859 | 4.128 |
| Connect | Connect I3L | 3.86 | 4.559 | 0.000 | 3.884 | 4.078 | 4.511 | 4.559 | 4.386 | 4.128 |
| Connect | Connect I3L | 3.88 | 4.587 | 0.000 | 3.683 | 3.742 | 4.124 | 4.559 | 4.587 | 4.128 |
| Connect | Connect I3L | 5.72 | 6.765 | 0.000 | 6.765 | 6.687 | 6.159 | 5.779 | 5.740 | 6.258 |
| Connect | Connect I3L | 5.67 | 6.704 | 0.000 | 6.484 | 6.687 | 6.704 | 6.247 | 6.021 | 6.258 |
| Connect | Connect I3L | 5.50 | 6.503 | 0.000 | 5.920 | 5.772 | 5.819 | 6.259 | 6.503 | 6.255 |
| Connect | Connect I3L | 5.48 | 6.482 | 0.000 | 6.482 | 6.240 | 5.819 | 5.791 | 5.941 | 6.255 |
| Connect | Connect I3L | 5.66 | 6.693 | 0.000 | 6.014 | 6.235 | 6.693 | 6.686 | 6.489 | 6.256 |
| Connect | Connect I3L | 5.73 | 6.770 | 0.000 | 5.732 | 5.768 | 6.148 | 6.686 | 6.770 | 6.256 |
| Connect | Connect I3L | 5.78 | 10.343 | 0.000 | 10.268 | 10.343 | 9.837 | 7.946 | 8.852 | 8.852 |
| Connect | Connect I3L | 5.78 | 10.343 | 0.000 | 10.343 | 10.343 | 9.837 | 7.946 | 7.915 | 8.852 |
| Connect | Connect I3L | 5.07 | 9.073 | 0.000 | 8.500 | 7.934 | 7.586 | 8.411 | 9.073 | 8.849 |
| Connect | Connect I3L | 9.070 | 9.070 | 0.000 | 9.070 | 8.409 | 7.586 | 7.936 | 8.502 | 8.849 |
| Connect | Connect I3L | 5.78 | 10.340 | 0.000 | 7.913 | 8.418 | 9.832 | 10.340 | 9.981 | 8.850 |
| Connect | Connect I3L | 5.78 | 10.340 | 0.000 | 7.628 | 7.943 | 9.262 | 10.340 | 10.266 | 8.850 |
| Connect | Connect I3L | 4.64 | 8.291 | 0.000 | 8.291 | 8.231 | 7.595 | 7.017 | 6.922 | 7.589 |
| Connect | Connect I3L | 4.60 | 8.231 | 0.000 | 7.998 | 8.231 | 8.159 | 7.504 | 7.215 | 7.589 |
| Connect | Connect I3L | 4.38 | 7.935 | 0.000 | 7.263 | 7.027 | 6.980 | 7.504 | 7.835 | 7.588 |
| Connect | Connect I3L | 7.847 | 7.847 | 0.000 | 7.847 | 7.514 | 6.981 | 7.088 | 7.351 | 7.588 |
| Connect | Connect I3L | 8.229 | 8.229 | 0.000 | 7.218 | 7.508 | 8.164 | 8.229 | 7.993 | 7.589 |
| Connect | Connect I3L | 4.63 | 8.285 | 0.000 | 6.926 | 7.022 | 7.599 | 8.229 | 8.285 | 7.589 |
| Connect | Connect I3L | 5.27 | 9.418 | 0.000 | 9.418 | 9.333 | 8.631 | 8.004 | 7.907 | 8.645 |
| Connect | Connect I3L | 5.22 | 9.333 | 0.000 | 9.065 | 9.333 | 9.312 | 8.591 | 8.259 | 8.645 |
| Connect | Connect I3L | 5.01 | 8.960 | 0.000 | 8.259 | 8.008 | 7.979 | 8.592 | 8.960 | 8.644 |
| Connect | Connect I3L | 5.01 | 8.963 | 0.000 | 8.963 | 8.595 | 7.979 | 8.005 | 8.355 | 8.644 |
| Connect | Connect I3L | 5.22 | 9.333 | 0.000 | 8.259 | 8.592 | 9.314 | 9.333 | 9.064 | 8.644 |
| Connect | Connect I3L | 5.27 | 9.416 | 0.000 | 7.907 | 8.005 | 8.632 | 9.333 | 9.416 | 8.644 |
| Connect | Connect I3L | 6.51 | 11.640 | 0.000 | 11.640 | 11.586 | 10.815 | 9.932 | 9.823 | 10.702 |
| Connect | Connect I3L | 6.48 | 11.303 | 0.000 | 11.303 | 11.586 | 11.465 | 10.554 | 10.161 | 10.702 |
| Connect | Connect I3L | 6.16 | 11.008 | 0.000 | 10.335 | 9.992 | 9.854 | 10.554 | 11.008 | 10.701 |
| Connect | Connect I3L | 6.16 | 11.010 | 0.000 | 11.010 | 10.555 | 9.854 | 9.991 | 10.334 | 10.701 |
| Connect | Connect I3L | 6.48 | 11.586 | 0.000 | 10.161 | 10.554 | 11.466 | 11.586 | 11.302 | 10.702 |
| Connect | Connect I3L | 6.51 | 11.639 | 0.000 | 9.823 | 9.992 | 10.815 | 11.586 | 11.639 | 10.702 |
| Connect | Connect I3L | 9.55 | 17.082 | 0.000 | 17.027 | 17.082 | 15.966 | 14.368 | 13.941 | 15.399 |
| Connect | Connect I3L | 9.55 | 17.082 | 0.000 | 16.715 | 17.082 | 16.568 | 14.887 | 14.253 | 15.399 |
| Connect | Connect I3L | 8.77 | 15.685 | 0.000 | 15.062 | 14.366 | 13.832 | 14.885 | 15.685 | 15.397 |

| | | | | | | | | | | |
|--------|------------|------|--------|--------|--------|--------|--------|--------|--------|--------|
| SNB-H2 | SNB-H9DP | 8.77 | 15.686 | 0.000 | 15.686 | 14.885 | 13.832 | 14.365 | 15.062 | 15.397 |
| SNB-H2 | SNB-H9EP | 9.55 | 17.081 | 0.000 | 14.252 | 14.867 | 16.568 | 17.081 | 16.714 | 15.398 |
| SNB-H2 | SNB-H9FP | 9.55 | 17.081 | 0.000 | 13.941 | 14.367 | 15.965 | 17.081 | 17.026 | 15.398 |
| WLAC-1 | SNB-WL-A1P | 0.76 | 0.147 | -0.165 | 0.147 | 0.082 | -0.095 | -0.165 | -0.148 | -0.000 |
| WLAC-1 | SNB-WL-A2P | 0.76 | 0.147 | -0.165 | -0.148 | -0.165 | -0.095 | 0.082 | 0.147 | -0.000 |
| WLAC-1 | SNB-WL-A3P | 0.70 | 0.189 | -0.001 | -0.000 | 0.082 | 0.189 | 0.082 | -0.001 | -0.000 |
| WLAC-1 | SNB-WL-B1P | 0.88 | 0.147 | -0.165 | 0.147 | 0.082 | -0.095 | -0.165 | -0.148 | -0.000 |
| WLAC-1 | SNB-WL-B2P | 0.88 | 0.147 | -0.165 | -0.148 | -0.165 | -0.095 | 0.082 | 0.147 | -0.000 |
| WLAC-1 | SNB-WL-B3P | 0.70 | 0.189 | -0.000 | -0.000 | 0.082 | 0.189 | 0.082 | -0.000 | -0.000 |
| WLAC-1 | SNB-WL-C1P | 1.43 | 0.200 | -0.224 | 0.200 | 0.111 | -0.129 | -0.224 | -0.201 | -0.001 |
| WLAC-1 | SNB-WL-C2P | 1.43 | 0.200 | -0.224 | -0.201 | -0.224 | -0.129 | 0.111 | 0.200 | -0.001 |
| WLAC-1 | SNB-WL-C3P | 0.95 | 0.257 | -0.001 | -0.001 | 0.111 | 0.257 | 0.111 | -0.001 | -0.001 |
| WLAC-1 | SNB-WL-D1P | 2.60 | 0.279 | -0.312 | 0.279 | 0.154 | -0.182 | -0.312 | -0.282 | -0.001 |
| WLAC-1 | SNB-WL-D2P | 2.60 | 0.279 | -0.312 | -0.282 | -0.312 | -0.182 | 0.154 | 0.279 | -0.001 |
| WLAC-1 | SNB-WL-D3P | 1.33 | 0.361 | -0.001 | -0.001 | 0.154 | 0.361 | 0.154 | -0.001 | -0.001 |
| WLAC-2 | SNB-WL-E1P | 1.51 | 0.283 | -0.317 | 0.283 | 0.157 | -0.317 | -0.285 | -0.001 | -0.001 |
| WLAC-2 | SNB-WL-E2P | 1.51 | 0.283 | -0.317 | -0.285 | -0.317 | -0.184 | 0.157 | 0.283 | -0.001 |
| WLAC-2 | SNB-WL-E3P | 0.87 | 0.365 | -0.001 | -0.001 | 0.157 | 0.365 | 0.157 | -0.001 | -0.001 |
| WLAC-2 | SNB-WL-F1P | 1.99 | 0.289 | -0.326 | 0.289 | 0.159 | -0.190 | -0.326 | -0.293 | -0.002 |
| WLAC-2 | SNB-WL-F2P | 1.99 | 0.289 | -0.326 | -0.293 | -0.326 | -0.190 | 0.159 | 0.289 | -0.002 |
| WLAC-2 | SNB-WL-F3P | 0.89 | 0.373 | -0.002 | -0.002 | 0.159 | 0.373 | 0.159 | -0.002 | -0.002 |
| WLAC-2 | SNB-WL-G1P | 3.04 | 0.347 | -0.393 | 0.347 | 0.181 | -0.230 | -0.393 | -0.354 | -0.003 |
| WLAC-2 | SNB-WL-G2P | 3.04 | 0.347 | -0.393 | -0.354 | -0.393 | -0.230 | 0.181 | 0.347 | -0.003 |
| WLAC-2 | SNB-WL-G3P | 1.07 | 0.449 | -0.003 | -0.003 | 0.191 | 0.449 | 0.191 | -0.003 | -0.003 |
| WLAC-2 | SNB-WL-H1P | 3.60 | 0.332 | -0.377 | 0.332 | 0.183 | -0.219 | -0.377 | -0.339 | -0.004 |
| WLAC-2 | SNB-WL-H2P | 3.60 | 0.332 | -0.377 | -0.339 | -0.377 | -0.219 | 0.183 | 0.332 | -0.004 |
| WLAC-2 | SNB-WL-H3P | 1.02 | 0.428 | -0.004 | -0.004 | 0.183 | 0.428 | 0.183 | -0.004 | -0.004 |
| WLAC-2 | SNB-WL-I1P | 4.01 | 0.308 | -0.347 | 0.308 | 0.170 | -0.202 | -0.347 | -0.312 | -0.002 |
| WLAC-2 | SNB-WL-I2P | 4.01 | 0.308 | -0.347 | -0.347 | -0.347 | -0.202 | 0.170 | 0.308 | -0.002 |
| WLAC-2 | SNB-WL-I3P | 0.94 | 0.397 | -0.002 | -0.002 | 0.170 | 0.397 | 0.170 | -0.002 | -0.002 |





Twist and Out-of-Plumb for "W+I -90 deg":

| Elevation (ft) | Twist (deg) | Out-of-Plumb (in) |
|----------------|-------------|-------------------|
| 0.00 | 0.00 | 0.00 |
| 10.00 | -0.00 | 0.03 |
| 20.00 | -0.00 | 0.07 |
| 30.00 | -0.00 | 0.11 |
| 40.00 | -0.00 | 0.16 |
| 50.00 | -0.00 | 0.20 |
| 60.00 | -0.01 | 0.25 |
| 70.00 | -0.01 | 0.29 |
| 80.00 | -0.01 | 0.35 |
| 86.66 | -0.01 | 0.39 |
| 93.34 | -0.01 | 0.41 |
| 100.00 | -0.01 | 0.44 |
| 106.66 | -0.01 | 0.47 |
| 113.34 | -0.02 | 0.52 |
| 120.00 | -0.02 | 0.54 |
| 126.66 | -0.02 | 0.57 |
| 133.34 | -0.02 | 0.60 |
| 140.00 | -0.03 | 0.61 |
| 145.00 | -0.03 | 0.61 |
| 150.00 | -0.03 | 0.64 |
| 155.00 | -0.04 | 0.63 |
| 160.00 | -0.04 | 0.65 |
| 165.00 | -0.04 | 0.65 |
| 170.00 | -0.04 | 0.65 |

175.00 -0.04 0.66 14.09
 180.00 -0.04 0.65 14.78

Twist and Out-of-Plumb for "W+I -60 deg":

| Elevation | Twist | Sway | Out of Plumb |
|-----------|-------|-------|--------------|
| (ft) | (deg) | (deg) | (in) |
| 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | -0.00 | 0.03 | 0.04 |
| 20.00 | -0.00 | 0.06 | 0.20 |
| 30.00 | -0.00 | 0.10 | 0.40 |
| 40.00 | -0.00 | 0.16 | 0.74 |
| 50.00 | -0.00 | 0.20 | 1.14 |
| 60.00 | -0.00 | 0.24 | 1.66 |
| 70.00 | -0.00 | 0.28 | 2.23 |
| 80.00 | -0.00 | 0.34 | 2.96 |
| 86.66 | -0.01 | 0.38 | 3.43 |
| 93.34 | -0.01 | 0.40 | 4.05 |
| 100.00 | -0.01 | 0.43 | 4.66 |
| 106.66 | -0.01 | 0.46 | 5.30 |
| 113.34 | -0.01 | 0.51 | 6.02 |
| 120.00 | -0.01 | 0.53 | 6.76 |
| 126.66 | -0.01 | 0.56 | 7.54 |
| 133.34 | -0.01 | 0.59 | 8.38 |
| 140.00 | -0.01 | 0.59 | 9.20 |
| 145.00 | -0.02 | 0.60 | 9.82 |
| 150.00 | -0.02 | 0.63 | 10.50 |
| 155.00 | -0.02 | 0.62 | 11.14 |
| 160.00 | -0.02 | 0.64 | 11.81 |
| 165.00 | -0.02 | 0.63 | 12.47 |
| 170.00 | -0.02 | 0.64 | 13.15 |
| 175.00 | -0.02 | 0.64 | 13.82 |
| 180.00 | -0.02 | 0.64 | 14.50 |

Twist and Out-of-Plumb for "W+I 0 deg":

| Elevation | Twist | Sway | Out of Plumb |
|-----------|-------|-------|--------------|
| (ft) | (deg) | (deg) | (in) |
| 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.04 | 0.04 |
| 20.00 | 0.00 | 0.07 | 0.21 |
| 30.00 | 0.00 | 0.11 | 0.44 |
| 40.00 | 0.00 | 0.17 | 0.81 |
| 50.00 | 0.00 | 0.21 | 1.25 |
| 60.00 | 0.00 | 0.26 | 1.81 |
| 70.00 | 0.00 | 0.31 | 2.43 |
| 80.00 | 0.01 | 0.37 | 3.23 |
| 86.66 | 0.01 | 0.41 | 3.80 |
| 93.34 | 0.01 | 0.44 | 4.41 |
| 100.00 | 0.01 | 0.47 | 5.07 |
| 106.66 | 0.01 | 0.50 | 5.76 |
| 113.34 | 0.01 | 0.55 | 6.53 |
| 120.00 | 0.01 | 0.57 | 7.33 |
| 126.66 | 0.01 | 0.60 | 8.17 |
| 133.34 | 0.01 | 0.64 | 9.07 |
| 140.00 | 0.02 | 0.64 | 9.96 |
| 145.00 | 0.02 | 0.65 | 10.63 |
| 150.00 | 0.02 | 0.68 | 11.36 |
| 155.00 | 0.02 | 0.67 | 12.05 |

160.00 0.02 0.68 12.77
 165.00 0.03 0.68 13.48
 170.00 0.03 0.69 14.21
 175.00 0.03 0.69 14.92
 180.00 0.03 0.69 15.65

Twist and Out-of-Plumb for "W+I 60 deg":

| Elevation (ft) | Twist (deg) | Sway (deg) | Out of Plumb (in) |
|----------------|-------------|------------|-------------------|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.03 | 0.04 |
| 20.00 | 0.00 | 0.06 | 0.20 |
| 30.00 | 0.00 | 0.10 | 0.40 |
| 40.00 | 0.00 | 0.16 | 0.74 |
| 50.00 | 0.00 | 0.20 | 1.14 |
| 60.00 | 0.01 | 0.24 | 1.66 |
| 70.00 | 0.01 | 0.28 | 2.23 |
| 80.00 | 0.01 | 0.34 | 2.96 |
| 93.34 | 0.01 | 0.38 | 3.49 |
| 100.00 | 0.01 | 0.40 | 4.05 |
| 106.66 | 0.02 | 0.46 | 5.30 |
| 113.34 | 0.02 | 0.51 | 6.01 |
| 120.00 | 0.02 | 0.53 | 6.76 |
| 126.66 | 0.02 | 0.56 | 7.53 |
| 133.34 | 0.03 | 0.59 | 8.37 |
| 140.00 | 0.03 | 0.59 | 9.19 |
| 145.00 | 0.03 | 0.60 | 9.82 |
| 150.00 | 0.04 | 0.63 | 10.49 |
| 155.00 | 0.04 | 0.62 | 11.13 |
| 160.00 | 0.05 | 0.63 | 11.80 |
| 165.00 | 0.05 | 0.63 | 12.46 |
| 170.00 | 0.05 | 0.64 | 13.13 |
| 175.00 | 0.06 | 0.65 | 13.81 |
| 180.00 | 0.05 | 0.64 | 14.48 |

Twist and Out-of-Plumb for "W+I 90 deg":

| Elevation (ft) | Twist (deg) | Sway (deg) | Out of Plumb (in) |
|----------------|-------------|------------|-------------------|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.03 | 0.04 |
| 20.00 | 0.00 | 0.07 | 0.20 |
| 30.00 | 0.00 | 0.11 | 0.41 |
| 40.00 | 0.00 | 0.16 | 0.76 |
| 50.00 | 0.00 | 0.20 | 1.17 |
| 60.00 | 0.01 | 0.25 | 1.70 |
| 70.00 | 0.01 | 0.29 | 2.28 |
| 80.00 | 0.01 | 0.35 | 3.02 |
| 86.66 | 0.01 | 0.39 | 3.56 |
| 93.34 | 0.01 | 0.41 | 4.14 |
| 100.00 | 0.01 | 0.44 | 4.76 |
| 106.66 | 0.01 | 0.47 | 5.41 |
| 113.34 | 0.02 | 0.52 | 6.14 |
| 120.00 | 0.02 | 0.54 | 6.90 |
| 126.66 | 0.02 | 0.57 | 7.69 |
| 133.34 | 0.02 | 0.60 | 8.54 |
| 140.00 | 0.03 | 0.60 | 9.38 |

145.00 0.03 0.61 10.01
 150.00 0.03 0.64 10.70
 155.00 0.04 0.63 11.35
 160.00 0.04 0.65 12.03
 165.00 0.04 0.64 12.70
 170.00 0.04 0.65 13.39
 175.00 0.04 0.66 14.08
 180.00 0.04 0.65 14.76

Twist and Out-of-Plumb for "DL + Ice Only":

| Elevation | Twist (ft) | Sway (deg) | Out of Plumb (deg) | Out of Plumb (in) |
|-----------|------------|------------|--------------------|-------------------|
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| 30.00 | 0.00 | -0.03 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| 80.00 | 0.00 | 0.03 | 0.00 | 0.00 |
| 86.66 | 0.00 | -0.04 | 0.00 | 0.00 |
| 93.34 | 0.00 | 0.01 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| 106.66 | 0.00 | 0.01 | 0.00 | 0.00 |
| 113.34 | 0.00 | 0.00 | 0.00 | 0.00 |
| 120.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| 126.66 | 0.00 | -0.02 | 0.01 | 0.01 |
| 133.34 | 0.00 | 0.00 | 0.01 | 0.01 |
| 140.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| 145.00 | 0.00 | -0.02 | 0.01 | 0.01 |
| 150.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| 155.00 | 0.00 | -0.01 | 0.01 | 0.01 |
| 160.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| 165.00 | 0.00 | -0.01 | 0.01 | 0.01 |
| 170.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| 175.00 | 0.00 | -0.01 | 0.01 | 0.01 |
| 180.00 | 0.00 | 0.01 | 0.01 | 0.01 |

Equilibrium Joint Positions and Rotations for Load Case "W+I -90 deg":

| Joint Label | X-Displ (ft) | Y-Displ (ft) | Z-Displ (ft) | X-Rot (deg) | Y-Rot (deg) | Z-Rot (deg) | X-Pos (ft) | Y-Pos (ft) | Z-Pos (ft) |
|-------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|------------|------------|
| RohnAP | -0.0007753 | -1.235 | -0.08252 | 0.6440 | -0.0206 | 0.0252 | 4.332 | -1.235 | 179.9 |
| RohnBP | -0.001444 | -1.007 | -0.07325 | 0.5546 | -0.0079 | 0.0257 | 5.12 | -1.007 | 159.9 |
| RohnCP | -0.002471 | -0.785 | -0.06339 | 0.5967 | 0.0083 | 0.0236 | 5.907 | -0.785 | 139.9 |
| RohnDP | -0.003359 | -0.5711 | -0.0546 | 0.5511 | -0.0023 | 0.0218 | 6.692 | -0.5711 | 119.9 |
| RohnEP | -0.003436 | -0.3985 | -0.04511 | 0.4550 | 0.0044 | 0.0181 | 7.478 | -0.3985 | 99.95 |
| RohnFP | -0.005752 | -0.2534 | -0.03605 | 0.3811 | -0.0077 | 0.0151 | 8.262 | -0.2534 | 79.96 |
| RohnGP | -0.007664 | -0.1423 | -0.02692 | 0.2632 | -0.0162 | 0.0105 | 9.047 | -0.1423 | 59.97 |
| RohnHP | -0.00782 | -0.06359 | -0.01804 | 0.1840 | 0.0083 | 0.0075 | 9.833 | -0.06359 | 39.98 |
| RohnIP | -0.006049 | -0.01694 | -0.009035 | 0.0883 | 0.0190 | 0.0036 | 10.62 | -0.01694 | 19.99 |
| RohnJP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 11.42 | 0 | 0 |
| SNB-AP | 9.052e-006 | -1.231 | -0.07953 | 0.6546 | -0.0207 | 0.0256 | 2.333 | -1.231 | 179.9 |
| SNB-BP | -0.0006597 | -1.004 | -0.07038 | 0.6461 | -0.0090 | 0.0254 | 3.12 | -1.004 | 159.9 |
| SNB-CP | -0.001687 | -0.782 | -0.06123 | 0.6196 | 0.0147 | 0.0246 | 3.906 | -0.782 | 139.9 |
| SNB-DP | -0.002577 | -0.5754 | -0.05216 | 0.5603 | -0.0048 | 0.0221 | 4.692 | -0.5754 | 119.9 |
| SNB-EP | -0.002655 | -0.3966 | -0.04307 | 0.4498 | 0.0027 | 0.0178 | 5.478 | -0.3966 | 99.96 |
| SNB-FP | -0.004972 | -0.2527 | -0.03452 | 0.3763 | 0.0008 | 0.0149 | 6.263 | -0.2527 | 79.97 |
| SNB-GP | -0.006885 | -0.1415 | -0.02593 | 0.2876 | -0.0312 | 0.0106 | 7.048 | -0.1415 | 59.97 |
| SNB-HP | -0.007041 | -0.06321 | -0.01741 | 0.1824 | 0.0073 | 0.0074 | 7.834 | -0.06321 | 39.98 |
| SNB-IP | -0.005269 | -0.0163 | -0.008754 | 0.0917 | 0.0191 | 0.0038 | 8.623 | -0.0163 | 19.99 |
| SNB-JP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 9.415 | 0 | 0 |
| RohnA1 | -6.337e-005 | -1.227 | -0.1244 | 0.6393 | 0.0142 | 0.0129 | 2.167 | -4.98 | 179.9 |
| RohnA2 | 0.005342 | -1.232 | -0.0403 | 0.6731 | 0.0114 | -0.0128 | -2.161 | 2.521 | 180 |
| RohnB1 | -0.0004894 | -1.004 | -0.1213 | 0.6379 | 0.0072 | -0.0127 | -2.561 | -5.434 | 159.9 |
| RohnB2 | 0.005458 | -1.004 | -0.02478 | 0.6543 | 0.0022 | -0.0128 | -2.555 | 3.431 | 160 |
| RohnC1 | 0.0002265 | -0.7779 | -0.1161 | 0.6137 | -0.0119 | -0.0118 | -2.954 | -5.895 | 139.9 |
| RohnC2 | 0.004841 | -0.7841 | -0.11136 | 0.6005 | 0.0063 | -0.0116 | -2.95 | 4.333 | 140 |
| RohnD1 | 0.0004862 | -0.5709 | -0.1086 | 0.5514 | -0.0006 | -0.0109 | -3.347 | -6.369 | 119.9 |
| RohnD2 | 0.004627 | -0.5783 | -0.0003321 | 0.5563 | 0.0050 | -0.0108 | -3.343 | 5.22 | 120 |
| RohnE1 | 0.0006675 | -0.3929 | -0.04942 | 0.4567 | -0.0026 | -0.0090 | -3.74 | -6.872 | 99.91 |
| RohnE2 | 0.003688 | -0.3998 | 0.004219 | 0.4459 | -0.0004 | -0.0090 | -3.737 | 6.079 | 100 |
| RohnF1 | 0.001157 | -0.2474 | -0.07925 | 0.3579 | -0.0121 | -0.0074 | -4.132 | -7.408 | 79.92 |
| RohnF2 | 0.004858 | -0.258 | -0.007325 | 0.3713 | -0.0029 | -0.0075 | -4.129 | 6.902 | 80.01 |
| RohnG1 | 0.002611 | -0.1354 | -0.05983 | 0.2495 | 0.0067 | -0.0052 | -4.525 | -7.977 | 59.94 |
| RohnG2 | 0.005406 | -0.1489 | 0.006111 | 0.2776 | 0.0102 | -0.0052 | -4.522 | 7.693 | 60.01 |
| RohnH1 | 0.002808 | -0.05719 | -0.04151 | 0.1858 | -0.0022 | -0.0037 | -4.918 | -8.58 | 39.96 |
| RohnH2 | 0.005157 | -0.07082 | 0.005494 | 0.1716 | -0.0056 | -0.0037 | -4.915 | 8.452 | 40.01 |
| RohnI1 | 0.002427 | -0.01195 | -0.02002 | 0.0976 | -0.0064 | -0.0018 | -5.313 | -9.218 | 19.98 |
| RohnI2 | 0.003658 | -0.02241 | 0.001978 | 0.0644 | -0.0122 | -0.0018 | -5.311 | 9.183 | 20 |
| RohnJ1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | -9.89 | 0 |
| RohnJ2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | 9.89 | 0 |
| SNB-A1 | 0.002184 | -1.23 | -0.1025 | 0.6383 | 0.0125 | -0.0129 | -1.164 | -3.25 | 179.9 |
| SNB-A2 | 0.002387 | -1.233 | -0.05644 | 0.6721 | 0.0130 | -0.0127 | -1.164 | 0.7878 | 179.9 |
| SNB-B1 | 0.002002 | -1.002 | -0.1005 | 0.6363 | 0.0066 | -0.0127 | -1.558 | -3.705 | 159.9 |
| SNB-B2 | 0.002191 | -1.005 | -0.04013 | 0.6537 | 0.0054 | -0.0127 | -1.558 | 1.638 | 160 |
| SNB-C1 | 0.001821 | -0.7798 | -0.097 | 0.6266 | -0.0034 | -0.0123 | -1.952 | -4.164 | 139.9 |
| SNB-C2 | 0.004444 | -0.7845 | -0.02529 | 0.6026 | -0.0089 | -0.0123 | -1.952 | 2.6 | 140 |
| SNB-D1 | 0.001884 | -0.5727 | -0.0907 | 0.5513 | 0.0059 | -0.0110 | -2.346 | -4.639 | 119.9 |
| SNB-D2 | 0.002465 | -0.5786 | -0.01345 | 0.5606 | 0.0011 | -0.0111 | -2.345 | 3.487 | 120 |
| SNB-E1 | 0.001506 | -0.3943 | -0.07913 | 0.4521 | -0.0008 | -0.0089 | -2.739 | -5.141 | 99.92 |
| SNB-E2 | 0.002303 | -0.3998 | -0.006869 | 0.4480 | -0.0003 | -0.0089 | -2.738 | 4.347 | 99.99 |
| SNB-F1 | 0.002337 | -0.2488 | -0.0662 | 0.3670 | -0.0058 | -0.0074 | -3.132 | -5.677 | 79.93 |
| SNB-F2 | 0.00331 | -0.2579 | -0.000728 | 0.3660 | -0.0053 | -0.0075 | -3.131 | 5.17 | 80 |
| SNB-G1 | 0.002961 | -0.1365 | -0.05361 | 0.2358 | 0.0189 | -0.0053 | -3.525 | -6.246 | 59.95 |
| SNB-G2 | 0.004292 | -0.1487 | 0.001841 | 0.2896 | 0.0133 | -0.0053 | -3.523 | 5.961 | 60 |
| SNB-H1 | 0.002934 | -0.05817 | -0.03785 | 0.1852 | -0.0015 | -0.0037 | -3.918 | -6.849 | 39.96 |
| SNB-H2 | 0.004275 | -0.07043 | 0.003077 | 0.1728 | -0.0053 | -0.0037 | -3.916 | 6.72 | 40 |
| SNB-I1 | 0.002117 | -0.01267 | -0.01909 | 0.0999 | -0.0046 | -0.0019 | -4.312 | -7.485 | 19.98 |

| | | | | | | | | | |
|------------|------------|-----------|-----------|--------|---------|---------|--------|-----------|-------|
| SNB-I2 | 0.003214 | -0.02176 | 0.001607 | 0.0668 | -0.0142 | -0.0019 | -4.311 | 7.45 | 20 |
| SNB-J1 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -4.708 | -8.154 | 0 |
| SNB-J2 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -4.708 | 8.154 | 0 |
| RohnAas | 0.0001795 | -1.178 | -0.08019 | 0.6562 | 0.0055 | 0.0259 | 4.53 | -1.178 | 174.9 |
| RohnAbs | -0.0009596 | -1.12 | -0.0779 | 0.6627 | 0.0014 | 0.0261 | 4.726 | -1.12 | 169.9 |
| RohnACS | -0.0001439 | -1.063 | -0.07553 | 0.6412 | 0.0049 | 0.0253 | 4.924 | -1.063 | 164.9 |
| RohnBas | -0.0004632 | -0.9502 | -0.07088 | 0.6353 | 0.0030 | 0.0251 | 5.318 | -0.9502 | 154.9 |
| RohnBbs | -0.001671 | -0.8954 | -0.0686 | 0.6445 | -0.0028 | 0.0254 | 5.711 | -0.8954 | 149.9 |
| RohnBcs | -0.000521 | -0.8381 | -0.06616 | 0.6377 | 0.0039 | 0.0252 | 5.711 | -0.8381 | 144.9 |
| RohnCAs | -0.001398 | -0.7147 | -0.0608 | 0.6142 | -0.0159 | 0.0241 | 6.169 | -0.7147 | 133.3 |
| RohnCbs | -0.001162 | -0.6433 | -0.05758 | 0.5938 | 0.0156 | 0.0236 | 6.432 | -0.6433 | 126.6 |
| RohnDas | -0.001477 | -0.5138 | -0.05141 | 0.5382 | 0.0212 | 0.0212 | 6.955 | -0.5138 | 113.3 |
| RohnDbs | -0.002079 | -0.4529 | -0.04816 | 0.4941 | 0.0130 | 0.0197 | 7.217 | -0.4529 | 106.6 |
| RohnEAs | -0.002774 | -0.3465 | -0.04207 | 0.4302 | -0.0214 | 0.0169 | 7.74 | -0.3465 | 93.3 |
| RohnEbs | -0.001462 | -0.2986 | -0.03887 | 0.3965 | 0.0249 | 0.0159 | 8.004 | -0.2986 | 86.62 |
| RohnFAs | 0.0004056 | -0.191 | -0.03113 | 0.3159 | 0.0126 | 0.0125 | 8.662 | -0.191 | 69.97 |
| RohnGAs | -0.000547 | -0.09823 | -0.02217 | 0.2259 | 0.0011 | 0.0090 | 9.449 | -0.09823 | 49.98 |
| RohnHas | -0.0008812 | -0.0345 | -0.01338 | 0.1322 | -0.0159 | 0.0052 | 10.23 | -0.0345 | 29.99 |
| RohnIAs | -0.004944 | -0.003506 | -0.004751 | 0.0506 | -0.0321 | 0.0021 | 11.02 | -0.003506 | 9.995 |
| SNB-Aas | 0.0009652 | -1.174 | -0.07722 | 0.6543 | 0.0055 | 0.0259 | 2.531 | -1.174 | 174.9 |
| SNB-Ads | -0.0001751 | -1.117 | -0.07495 | 0.6553 | -0.0014 | 0.0259 | 2.727 | -1.117 | 169.9 |
| SNB-Acs | 0.0006405 | -1.06 | -0.07261 | 0.6481 | 0.0052 | 0.0256 | 2.925 | -1.06 | 164.9 |
| SNB-Bas | 0.000321 | -0.9472 | -0.06805 | 0.6444 | 0.0032 | 0.0255 | 3.318 | -0.9472 | 154.9 |
| SNB-Bbs | -0.000885 | -0.8914 | -0.06579 | 0.6334 | -0.0024 | 0.0250 | 3.514 | -0.8914 | 149.9 |
| SNB-Bcs | 0.0002596 | -0.8365 | -0.06343 | 0.6261 | 0.0023 | 0.0248 | 3.712 | -0.8365 | 144.9 |
| SNB-Cas | -0.0006121 | -0.7108 | -0.05822 | 0.6049 | -0.0178 | 0.0237 | 4.169 | -0.7108 | 133.3 |
| SNB-Cbs | -0.0003798 | -0.6414 | -0.05504 | 0.5797 | -0.0167 | 0.0231 | 4.433 | -0.6414 | 126.6 |
| SNB-DAs | -0.000694 | -0.5112 | -0.0491 | 0.5364 | -0.0119 | 0.0211 | 4.956 | -0.5112 | 113.3 |
| SNB-Dbs | -0.001297 | -0.4513 | -0.04596 | 0.4909 | -0.0133 | 0.0195 | 5.218 | -0.4513 | 106.6 |
| SNB-EAs | -0.001993 | -0.3454 | -0.04023 | 0.4276 | -0.0203 | 0.0168 | 5.741 | -0.3454 | 93.3 |
| SNB-Ebs | -0.0006813 | -0.2973 | -0.03713 | 0.3959 | -0.0225 | 0.0158 | 6.005 | -0.2973 | 86.62 |
| SNB-FAs | -0.001186 | -0.1907 | -0.02983 | 0.3162 | -0.0143 | 0.0125 | 6.663 | -0.1907 | 69.97 |
| SNB-Fbs | -0.001327 | -0.09711 | -0.02139 | 0.2327 | -0.0051 | 0.0089 | 7.449 | -0.09711 | 49.98 |
| SNB-GAs | -0.0001008 | -0.03384 | -0.01302 | 0.1329 | -0.0155 | 0.0053 | 8.234 | -0.03384 | 29.99 |
| SNB-HAs | -0.004163 | -0.002403 | -0.004826 | 0.0470 | -0.0286 | 0.0019 | 9.017 | -0.002403 | 9.995 |
| SNB-WL-A1S | 0.001246 | -1.23 | -0.1389 | 0.0000 | 0.0000 | 0.0000 | 0.5845 | -2.241 | 179.9 |
| SNB-WL-A2S | 0.001973 | -1.231 | -0.1265 | 0.0000 | 0.0000 | 0.0000 | -1.165 | -1.231 | 179.9 |
| SNB-WL-A3S | 0.001335 | -1.231 | -0.1158 | 0.0000 | 0.0000 | 0.0000 | 0.5846 | -0.221 | 179.9 |
| SNB-WL-B1S | 0.0008143 | -1.002 | -0.1432 | 0.0000 | 0.0000 | 0.0000 | 0.7811 | -2.354 | 159.9 |
| SNB-WL-B2S | 0.001777 | -1.003 | -0.1263 | 0.0000 | 0.0000 | 0.0000 | -1.559 | -1.003 | 159.9 |
| SNB-WL-B3S | 0.0003127 | -1.004 | -0.1115 | 0.0000 | 0.0000 | 0.0000 | 0.7812 | 0.3479 | 159.9 |
| SNB-WL-C1S | 0.000426 | -0.7807 | -0.1538 | 0.0000 | 0.0000 | 0.0000 | 0.9774 | -2.473 | 139.8 |
| SNB-WL-C2S | 0.001604 | -0.7813 | -0.1424 | 0.0000 | 0.0000 | 0.0000 | -1.952 | -0.7813 | 139.9 |
| SNB-WL-C3S | 0.0004956 | -0.7821 | -0.1322 | 0.0000 | 0.0000 | 0.0000 | 0.9775 | 0.9101 | 139.9 |
| SNB-WL-D1S | 0.0001057 | -0.5739 | -0.1704 | 0.0000 | 0.0000 | 0.0000 | 1.174 | -2.607 | 119.8 |
| SNB-WL-D2S | 0.001498 | -0.5746 | -0.1574 | 0.0000 | 0.0000 | 0.0000 | -2.346 | -0.5746 | 119.8 |
| SNB-WL-D3S | 0.0001435 | -0.5756 | -0.1445 | 0.0000 | 0.0000 | 0.0000 | 1.174 | 1.457 | 119.9 |
| SNB-WL-E1S | -0.0001904 | -0.3955 | -0.1434 | 0.0000 | 0.0000 | 0.0000 | -1.37 | -2.769 | 99.85 |
| SNB-WL-E2S | 0.001424 | -0.3964 | -0.1395 | 0.0000 | 0.0000 | 0.0000 | -2.739 | -0.3964 | 99.86 |
| SNB-WL-E3S | -0.0001683 | -0.3974 | -0.1348 | 0.0000 | 0.0000 | 0.0000 | 1.37 | 1.976 | 99.87 |
| SNB-WL-F1S | -0.0004111 | -0.2514 | -0.2073 | 0.0000 | 0.0000 | 0.0000 | 1.567 | -2.965 | 79.79 |
| SNB-WL-F2S | 0.001423 | -0.2523 | -0.2018 | 0.0000 | 0.0000 | 0.0000 | -3.133 | -0.2523 | 79.8 |
| SNB-WL-F3S | -0.00041 | -0.2535 | -0.1972 | 0.0000 | 0.0000 | 0.0000 | 1.567 | 2.461 | 79.8 |
| SNB-WL-G1S | -0.0005868 | -0.1405 | -0.2447 | 0.0000 | 0.0000 | 0.0000 | 1.763 | -3.195 | 59.76 |
| SNB-WL-G2S | -0.001463 | -0.1416 | -0.2449 | 0.0000 | 0.0000 | 0.0000 | -3.526 | -0.1416 | 59.76 |
| SNB-WL-G3S | -0.0006147 | -0.1429 | -0.2464 | 0.0000 | 0.0000 | 0.0000 | 1.763 | 2.912 | 59.76 |
| SNB-WL-H1S | -0.0007226 | -0.06236 | -0.2411 | 0.0000 | 0.0000 | 0.0000 | 1.96 | -3.458 | 39.76 |
| SNB-WL-H2S | 0.001155 | -0.06362 | -0.2461 | 0.0000 | 0.0000 | 0.0000 | -3.919 | -0.06362 | 39.75 |
| SNB-WL-H3S | -0.0000765 | -0.06502 | -0.2522 | 0.0000 | 0.0000 | 0.0000 | 1.959 | 3.33 | 39.75 |
| SNB-WL-I1S | -0.0008258 | -0.01556 | -0.182 | 0.0000 | 0.0000 | 0.0000 | 2.156 | -3.752 | 19.82 |
| SNB-WL-I2S | 0.00167 | -0.01697 | -0.1927 | 0.0000 | 0.0000 | 0.0000 | -4.312 | -0.01697 | 19.81 |
| SNB-WL-I3S | -0.0008813 | -0.01851 | -0.2047 | 0.0000 | 0.0000 | 0.0000 | 2.156 | 3.718 | 19.8 |
| RohnAa1 | -0.0008063 | -1.171 | -0.124 | 0.6572 | -0.0027 | 0.0129 | -2.266 | -5.094 | 174.9 |
| RohnAa2 | 0.004884 | -1.174 | -0.03606 | 0.6539 | -0.0042 | -0.0131 | -2.26 | 2.207 | 175 |
| RohnAb1 | -0.0002869 | -1.113 | -0.1233 | 0.6537 | -0.0050 | -0.0130 | -2.364 | -5.207 | 169.9 |
| RohnAb2 | 0.005638 | -1.117 | -0.03208 | 0.6558 | 0.0011 | -0.0129 | -2.358 | 2.976 | 170 |

| Joint Label | X (kips) | Y (kips) | Z (kips) | Comp. Usage % | Uplift Usage % | Result. Force (kips) | Usage % | X-Moment (ft-k) | Usage % | Y-Moment (ft-k) | Usage % | Z-Moment (ft-k) | Usage % |
|-------------|-------------|-----------|-----------|---------------|----------------|----------------------|---------|-----------------|---------|-----------------|---------|-----------------|---------|
| RohnAc1 | -0.001256 | -1.057 | -0.1224 | 0.6553 | -0.0009 | -0.0129 | -2.463 | -5.321 | 164.9 | | | | |
| RohnAc2 | 0.004971 | -1.06 | -0.02827 | 0.8455 | 0.0019 | -0.0127 | -2.457 | 3.204 | 165 | | | | |
| RohnBa1 | -0.001226 | -0.944 | -0.1203 | 0.6397 | 0.0064 | -0.0124 | -2.66 | -5.55 | 154.9 | | | | |
| RohnBa2 | 0.004936 | -0.9472 | -0.02107 | 0.6354 | 0.0065 | -0.0123 | -2.654 | 3.658 | 155 | | | | |
| RohnBb1 | 4.907e-005 | -0.8876 | -0.1192 | 0.6347 | 0.0015 | -0.0125 | -2.757 | -5.664 | 149.9 | | | | |
| RohnBb2 | 0.004652 | -0.8928 | -0.01762 | 0.6407 | 0.0042 | -0.0125 | -2.753 | 3.883 | 150 | | | | |
| RohnBc1 | -0.001207 | -0.8331 | -0.1177 | 0.6297 | 0.0016 | -0.0124 | -2.857 | -5.78 | 144.9 | | | | |
| RohnBc2 | 0.004485 | -0.8362 | -0.01424 | 0.6245 | 0.0031 | -0.0125 | -2.852 | 4.111 | 145 | | | | |
| RohnCa1 | 1.666e-005 | -0.7084 | -0.114 | 0.5894 | 0.0316 | -0.0119 | -3.085 | -6.052 | 133.2 | | | | |
| RohnCa2 | 0.003608 | -0.7127 | -0.007248 | 0.6177 | 0.0069 | -0.0119 | -3.082 | 4.631 | 133.3 | | | | |
| RohnCb1 | -0.0008366 | -0.6391 | -0.1114 | 0.5987 | 0.0051 | -0.0117 | -3.217 | -6.21 | 126.5 | | | | |
| RohnCb2 | 0.004011 | -0.6428 | -0.003449 | 0.5732 | 0.0086 | -0.0117 | -3.213 | 4.929 | 126.7 | | | | |
| RohnDa1 | -0.000631 | -0.5097 | -0.1043 | 0.5176 | 0.0108 | -0.0105 | -3.479 | -6.534 | 113.2 | | | | |
| RohnDa2 | 0.00363 | -0.5136 | 0.001814 | 0.5399 | 0.0038 | -0.0106 | -3.475 | 5.511 | 113.3 | | | | |
| RohnDb1 | -0.0006475 | -0.4492 | 0.009445 | 0.5062 | 0.0091 | -0.0098 | -3.61 | -6.701 | 106.6 | | | | |
| RohnDb2 | 0.003998 | -0.454 | 0.003381 | 0.4847 | -0.0022 | -0.0097 | -3.606 | 5.798 | 106.7 | | | | |
| RohnEa1 | -4.894e-005 | -0.3424 | -0.08956 | 0.4051 | 0.0131 | -0.0084 | -3.872 | -7.048 | 93.25 | | | | |
| RohnEa2 | 0.003752 | -0.3482 | -0.005639 | 0.4424 | 0.0100 | -0.0084 | -3.868 | 6.358 | 93.35 | | | | |
| RohnEb1 | -0.0004908 | -0.2957 | -0.08441 | 0.4189 | 0.0154 | -0.0079 | -4.003 | -7.229 | 86.58 | | | | |
| RohnEb2 | 0.002731 | -0.299 | 0.006868 | 0.3772 | -0.0087 | -0.0079 | -4.003 | 6.634 | 86.67 | | | | |
| RohnFa1 | -0.002961 | -0.1931 | -0.06972 | 0.3266 | 0.0075 | -0.0062 | -4.334 | -7.694 | 69.93 | | | | |
| RohnFa2 | 0.002922 | -0.193 | 0.007592 | 0.3055 | 0.0043 | -0.0062 | -4.328 | 7.308 | 70.01 | | | | |
| RohnGa1 | -0.002128 | -0.09977 | -0.05076 | 0.2244 | -0.0004 | -0.0084 | -4.726 | -8.282 | 49.95 | | | | |
| RohnGa2 | 0.001711 | -0.09916 | 0.006506 | 0.2227 | -0.0001 | -0.0045 | -4.722 | 8.083 | 50.01 | | | | |
| RohnHa1 | -0.001516 | -0.03578 | -0.03097 | 0.1204 | 0.0056 | -0.0026 | -5.119 | -8.9 | 29.97 | | | | |
| RohnHa2 | 0.002364 | -0.03749 | 0.004242 | 0.1481 | 0.0105 | -0.0026 | -5.115 | 8.827 | 30 | | | | |
| RohnIa1 | 0.0011 | -0.001096 | -0.01044 | 0.0241 | 0.0136 | -0.0010 | -5.511 | -9.549 | 9.99 | | | | |
| RohnIa2 | 0.003772 | -0.009745 | 0.0009524 | 0.0796 | 0.0185 | -0.0010 | -5.509 | 9.538 | 10 | | | | |
| SNB-Ra1 | 0.001511 | -1.173 | -0.1021 | 0.6579 | 0.0017 | -0.0129 | -1.263 | -3.365 | 174.9 | | | | |
| SNB-Ra2 | -0.001741 | -1.175 | -0.05219 | 0.6521 | -0.0010 | -0.0130 | -1.263 | 1.016 | 174.9 | | | | |
| SNB-Ab1 | 0.001951 | -1.116 | -0.1017 | 0.6525 | 0.0029 | -0.0129 | -1.362 | -3.477 | 169.9 | | | | |
| SNB-Ab2 | 0.002257 | -1.118 | -0.04807 | 0.6558 | 0.0014 | -0.0129 | -1.361 | 1.243 | 170 | | | | |
| SNB-Ac1 | 0.001321 | -1.059 | -0.1011 | 0.6550 | 0.0026 | -0.0129 | -1.461 | -3.591 | 164.9 | | | | |
| SNB-Ac2 | 0.001365 | -1.061 | -0.04398 | 0.6464 | 0.0002 | -0.0128 | -1.46 | 1.472 | 165 | | | | |
| SNB-Ba1 | -0.001208 | -0.9464 | -0.09977 | 0.6445 | 0.0011 | -0.0127 | -1.658 | -3.82 | 154.9 | | | | |
| SNB-Ba2 | 0.001718 | -0.9481 | -0.03617 | 0.6399 | 0.0013 | -0.0127 | -1.657 | 1.925 | 155 | | | | |
| SNB-Bb1 | 0.001171 | -0.8896 | -0.099 | 0.6346 | 0.0002 | -0.0125 | -1.756 | -3.933 | 149.9 | | | | |
| SNB-Bb2 | -0.002197 | -0.8932 | -0.03242 | 0.6401 | 0.0048 | -0.0125 | -1.755 | 2.15 | 150 | | | | |
| SNB-Bc1 | 0.001183 | -0.8355 | -0.09801 | 0.6272 | 0.0002 | -0.0124 | -1.854 | -4.049 | 144.9 | | | | |
| SNB-Bc2 | 0.001334 | -0.837 | -0.02869 | 0.6247 | 0.0001 | -0.0124 | -1.854 | 2.377 | 145 | | | | |
| SNB-Ca1 | 0.0009304 | -0.7099 | -0.09536 | 0.5870 | 0.0113 | -0.0118 | -2.084 | -4.321 | 133.2 | | | | |
| SNB-Ca2 | 0.001954 | -0.7127 | -0.02092 | 0.6185 | 0.0090 | -0.0118 | -2.083 | 2.899 | 133.3 | | | | |
| SNB-Cb1 | 0.0006495 | -0.641 | -0.09312 | 0.5977 | 0.0098 | -0.0116 | -2.216 | -4.48 | 126.6 | | | | |
| SNB-Cb2 | 0.001747 | -0.6431 | -0.0168 | 0.5701 | -0.0049 | -0.0115 | -2.215 | 3.136 | 126.6 | | | | |
| SNB-Da1 | 0.0002545 | -0.5112 | -0.08745 | 0.5188 | 0.0110 | -0.0105 | -2.478 | -4.804 | 113.3 | | | | |
| SNB-Da2 | 0.001956 | -0.5136 | -0.01061 | 0.5400 | 0.0032 | -0.0106 | -2.476 | 3.779 | 113.3 | | | | |
| SNB-Db1 | 0.0004563 | -0.4508 | -0.08348 | 0.5077 | 0.0095 | -0.0098 | -2.609 | -4.971 | 106.6 | | | | |
| SNB-Db2 | 0.002124 | -0.4541 | -0.00831 | 0.4858 | 0.0025 | -0.0097 | -2.608 | 4.066 | 106.7 | | | | |
| SNB-Ea1 | 0.0008493 | -0.344 | -0.07593 | 0.4077 | 0.0123 | -0.0084 | -2.871 | -5.318 | 93.26 | | | | |
| SNB-Ea2 | 0.001983 | -0.3483 | -0.004392 | 0.4430 | 0.0098 | -0.0084 | -2.87 | 4.625 | 93.34 | | | | |
| SNB-Eb1 | 0.0002371 | -0.2971 | -0.07204 | 0.4174 | 0.0028 | -0.0079 | -3.003 | -5.498 | 86.59 | | | | |
| SNB-Eb2 | 0.001226 | -0.299 | -0.002089 | 0.3796 | -0.0092 | -0.0079 | -3.002 | 4.902 | 86.66 | | | | |
| SNB-Fa1 | -0.002224 | -0.1945 | -0.06096 | 0.3295 | 0.0076 | -0.0062 | -3.333 | -5.963 | 69.94 | | | | |
| SNB-Fa2 | 0.001442 | -0.193 | 0.001369 | 0.3055 | 0.0060 | -0.0063 | -3.329 | 5.576 | 70 | | | | |
| SNB-Ga1 | -0.002131 | -0.1007 | -0.04581 | 0.2288 | -0.0029 | -0.0044 | -3.726 | -6.551 | 49.95 | | | | |
| SNB-Ga2 | 0.0009579 | -0.1037 | 0.003093 | 0.2203 | 0.0018 | -0.0045 | -3.723 | 6.351 | 50 | | | | |
| SNB-Ha1 | -0.001668 | -0.03659 | -0.02876 | 0.1215 | 0.0066 | -0.0026 | -4.119 | -7.168 | 29.97 | | | | |
| SNB-Ha2 | 0.001771 | -0.03693 | -0.002749 | 0.1486 | 0.0092 | -0.0027 | -4.115 | 7.094 | 30 | | | | |
| SNB-Ia1 | 0.000416 | -0.001603 | -0.01029 | 0.0268 | 0.0118 | -0.0009 | -4.51 | -7.814 | 9.99 | | | | |
| SNB-Ia2 | 0.003712 | -0.008878 | 0.000647 | 0.0761 | 0.0170 | -0.0010 | -4.507 | 7.804 | 10 | | | | |

Joint Support Reactions for Load Case "W+I -90 deg":

Joint X X Y Y Z Comp. Uplift Result. Force Usage Force Usage X X-M. Y Y-M. Z Z-M. Max. Label (kips) % (kips) % (kips) % (kips) % (kips) % (ft-k) % (ft-k) % (ft-k) %

| | | | | | | | | | | | | | | | | | |
|--------|--------|-----|-------|------|---------|-------|-----|--------|-------|-----|--------|-----|------|-----|-------|-----|-----|
| RohnJP | 9.86 | 0.0 | 0.0 | 1.94 | 0.0 | 19.63 | 0.0 | 0.0 | 22.05 | 0.0 | -0.70 | 0.0 | 4.0 | 0.0 | -0.03 | 0.0 | 0.0 |
| SNB-JP | 22.94 | 0.0 | 3.19 | 0.0 | 19.42 | 0.0 | 0.0 | 30.22 | 0.0 | 0.0 | 0.74 | 0.0 | 6.7 | 0.0 | 0.03 | 0.0 | 0.0 |
| RohnJ1 | 3.00 | 0.0 | 6.68 | 0.0 | 249.25 | 0.0 | 0.0 | 249.35 | 0.0 | 0.0 | 0.79 | 0.0 | -0.6 | 0.0 | 0.01 | 0.0 | 0.0 |
| RohnJ2 | -12.85 | 0.0 | 23.79 | 0.0 | -210.40 | 0.0 | 0.0 | 212.13 | 0.0 | 0.0 | -6.17 | 0.0 | -3.2 | 0.0 | 0.01 | 0.0 | 0.0 |
| SNB-J1 | 1.42 | 0.0 | 5.65 | 0.0 | 296.17 | 0.0 | 0.0 | 296.23 | 0.0 | 0.0 | 0.71 | 0.0 | 0.1 | 0.0 | -0.02 | 0.0 | 0.0 |
| SNB-J2 | -24.36 | 0.0 | 45.27 | 0.0 | -257.64 | 0.0 | 0.0 | 262.72 | 0.0 | 0.0 | -11.15 | 0.0 | -6.8 | 0.0 | -0.01 | 0.0 | 0.0 |

Joint Displacements, Loads and Member Forces on Joints for Load Case "W+I -90 deg":

| Joint Label | X External Load (kips) | Y External Load (kips) | Z External Load (kips) | X Member Force (kips) | Y Member Force (kips) | Z Member Force (kips) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) |
|-------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------|--------------|--------------|
| RohnAP | 0.0000 | -1.3800 | -0.5168 | -0.0000 | 1.3800 | 0.5168 | -0.0008 | -1.2347 | -0.0825 |
| RohnBP | 0.0000 | -1.4777 | -0.7107 | -0.0000 | 1.4777 | 0.7107 | -0.0014 | -1.0072 | -0.0732 |
| RohnCP | 0.0000 | -0.7156 | -0.5960 | 0.0000 | 0.7156 | 0.5960 | -0.0025 | -0.7850 | -0.0639 |
| RohnDP | 0.0000 | -1.3577 | -1.5259 | 0.0000 | 1.3577 | 1.5259 | -0.0034 | -0.5771 | -0.0546 |
| RohnEP | 0.0000 | -0.5735 | -0.8302 | 0.0000 | 0.5735 | 0.8302 | -0.0034 | -0.3985 | -0.0451 |
| RohnFP | 0.0000 | -0.7246 | -1.1116 | 0.0000 | 0.7246 | 1.1116 | -0.0058 | -0.2534 | -0.0361 |
| RohnGP | 0.0000 | -0.6873 | -1.3426 | 0.0000 | 0.6873 | 1.3426 | -0.0077 | -0.1423 | -0.0269 |
| RohnHP | 0.0000 | -0.6489 | -1.4805 | 0.0000 | 0.6489 | 1.4805 | -0.0078 | -0.0636 | -0.0180 |
| RohnIP | 0.0000 | -0.7154 | -1.7490 | 0.0000 | 0.7154 | 1.7490 | -0.0060 | -0.0169 | -0.0090 |
| RohnJP | 0.0000 | -0.3798 | -0.9701 | -9.8604 | -1.5643 | -18.6613 | 0.0000 | 0.0000 | 0.0000 |
| SNB-AP | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0000 | -1.2314 | -0.0795 |
| SNB-BP | 0.0000 | -0.3457 | -0.3359 | -0.0000 | 0.3457 | 0.3359 | -0.0007 | -1.0037 | -0.0704 |
| SNB-CP | 0.0000 | -0.4780 | -0.5256 | -0.0000 | 0.4780 | 0.5256 | -0.0017 | -0.7820 | -0.0612 |
| SNB-DP | 0.0000 | -0.5620 | -0.6860 | -0.0000 | 0.5620 | 0.6860 | -0.0026 | -0.5754 | -0.0522 |
| SNB-EP | 0.0000 | -0.5735 | -0.8302 | 0.0000 | 0.5735 | 0.8302 | -0.0027 | -0.3966 | -0.0431 |
| SNB-FP | 0.0000 | -0.6409 | -1.0901 | 0.0000 | 0.6409 | 1.0901 | -0.0050 | -0.2527 | -0.0345 |
| SNB-GP | 0.0000 | -0.6873 | -1.3426 | -0.0000 | 0.6873 | 1.3426 | -0.0069 | -0.1415 | -0.0259 |
| SNB-HP | 0.0000 | -0.6489 | -1.4805 | 0.0000 | 0.6489 | 1.4805 | -0.0070 | -0.0632 | -0.0174 |
| SNB-IP | 0.0000 | -0.6921 | -1.7290 | 0.0000 | 0.6921 | 1.7290 | -0.0053 | -0.0163 | -0.0088 |
| SNB-JP | 0.0000 | -0.3798 | -0.9701 | -22.9365 | -2.0806 | -18.4469 | 0.0000 | 0.0000 | 0.0000 |
| RohnA1 | 0.0000 | -1.5593 | -0.7497 | 0.0000 | 1.5593 | 0.7497 | -0.0001 | -1.2275 | -0.1244 |
| RohnA2 | 0.0000 | -1.8067 | -0.7497 | 0.0000 | 1.8067 | 0.7497 | -0.0053 | -1.2319 | -0.0403 |
| RohnB1 | 0.0000 | -0.6389 | -0.4807 | 0.0000 | 0.6389 | 0.4807 | -0.0005 | -0.9993 | -0.1213 |
| RohnB2 | 0.0000 | -0.6207 | -0.4207 | 0.0000 | 0.6207 | 0.4207 | 0.0055 | -1.0043 | -0.0248 |
| RohnC1 | 0.0000 | -0.8279 | -0.9160 | 0.0000 | 0.8279 | 0.9160 | 0.0002 | -0.7779 | -0.1161 |
| RohnC2 | 0.0000 | -0.7156 | -0.5960 | 0.0000 | 0.7156 | 0.5960 | 0.0048 | -0.7841 | -0.0114 |
| RohnD1 | 0.0000 | -1.3577 | -1.5259 | 0.0000 | 1.3577 | 1.5259 | 0.0005 | -0.5709 | -0.1086 |
| RohnD2 | 0.0000 | -1.5259 | -1.5259 | 0.0000 | 1.5259 | 0.0046 | -0.0046 | -0.5783 | -0.0003 |
| RohnE1 | 0.0000 | -0.5735 | -0.8302 | 0.0000 | 0.5735 | 0.8302 | 0.0007 | -0.3929 | -0.0942 |
| RohnE2 | 0.0000 | -0.5735 | -0.8302 | 0.0000 | 0.5735 | 0.8302 | 0.0039 | -0.3998 | 0.0042 |
| RohnF1 | 0.0000 | -0.8204 | -1.1611 | 0.0000 | 0.8204 | 1.1611 | 0.0016 | -0.2474 | -0.0792 |
| RohnF2 | 0.0000 | -0.7246 | -1.1116 | 0.0000 | 0.7246 | 1.1116 | 0.0049 | -0.2580 | 0.0073 |
| RohnG1 | 0.0000 | -0.7149 | -1.3626 | 0.0000 | 0.7149 | 1.3626 | 0.0026 | -0.1354 | -0.0598 |
| RohnG2 | 0.0000 | -0.7149 | -1.3626 | 0.0000 | 0.7149 | 1.3626 | 0.0054 | -0.1489 | -0.0061 |
| RohnH1 | 0.0000 | -0.6489 | -1.4805 | -0.0000 | 0.6489 | 1.4805 | 0.0028 | -0.0572 | -0.0415 |
| RohnH2 | 0.0000 | -0.6489 | -1.4805 | 0.0000 | 0.6489 | 1.4805 | 0.0052 | -0.0708 | 0.0055 |
| RohnI1 | 0.0000 | -0.6921 | -1.7290 | 0.0000 | 0.6921 | 1.7290 | 0.0024 | -0.0119 | -0.0200 |
| RohnI2 | 0.0000 | -0.6921 | -1.7290 | 0.0000 | 0.6921 | 1.7290 | 0.0037 | -0.0224 | 0.0020 |
| RohnJ1 | 0.0000 | -0.3798 | -0.9701 | -3.0007 | -6.3033 | -248.2768 | 0.0000 | 0.0000 | 0.0000 |
| RohnJ2 | 0.0000 | -0.3798 | -0.9701 | 12.8521 | -23.4106 | 211.3706 | 0.0000 | 0.0000 | 0.0000 |
| SNB-A1 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0022 | -1.2298 | -0.1025 |
| SNB-A2 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0024 | -1.2327 | -0.0564 |
| SNB-B1 | 0.0000 | -0.3457 | -0.3359 | -0.0000 | 0.3457 | 0.3359 | 0.0020 | -1.0017 | -0.1005 |
| SNB-B2 | 0.0000 | -0.3457 | -0.3359 | -0.0000 | 0.3457 | 0.3359 | 0.0022 | -1.0052 | -0.0401 |
| SNB-C1 | 0.0000 | -0.4780 | -0.5256 | -0.0000 | 0.4780 | 0.5256 | 0.0018 | -0.7798 | -0.0970 |
| SNB-C2 | 0.0000 | -0.4780 | -0.5256 | -0.0000 | 0.4780 | 0.5256 | 0.0024 | -0.7845 | -0.0253 |
| SNB-D1 | 0.0000 | -0.5620 | -0.6860 | -0.0000 | 0.5619 | 0.6860 | 0.0019 | -0.5727 | -0.0907 |
| SNB-D2 | 0.0000 | -0.5620 | -0.6860 | -0.0000 | 0.5620 | 0.6860 | 0.0025 | -0.5786 | -0.0135 |
| SNB-E1 | 0.0000 | -0.5735 | -0.8302 | -0.0000 | 0.5735 | 0.8302 | 0.0015 | -0.3943 | -0.0791 |
| SNB-E2 | 0.0000 | -0.5735 | -0.8302 | -0.0000 | 0.5735 | 0.8302 | 0.0023 | -0.3998 | -0.0069 |
| SNB-F1 | 0.0000 | -0.6409 | -1.0901 | -0.0000 | 0.6409 | 1.0901 | 0.0023 | -0.2488 | -0.0682 |

| | | | | | | | | | |
|---------|--------|---------|---------|---------|--------|--------|---------|---------|---------|
| SNB-F2 | 0.0000 | -0.6409 | -1.0901 | -0.0000 | 0.6409 | 1.0901 | 0.0033 | -0.2579 | -0.0007 |
| SNB-G1 | 0.0000 | -0.6873 | -1.3426 | -0.0000 | 0.6873 | 1.3426 | 0.0030 | -0.1365 | -0.0536 |
| SNB-G2 | 0.0000 | -0.6873 | -1.3426 | -0.0000 | 0.6873 | 1.3426 | 0.0043 | -0.1487 | -0.0018 |
| SNB-H1 | 0.0000 | -0.6489 | -1.4805 | -0.0000 | 0.6489 | 1.4805 | 0.0029 | -0.0582 | -0.0378 |
| SNB-H2 | 0.0000 | -0.6489 | -1.4805 | -0.0000 | 0.6489 | 1.4805 | 0.0043 | -0.0704 | 0.0031 |
| SNB-I1 | 0.0000 | -0.6921 | -1.7290 | -0.0000 | 0.6921 | 1.7290 | 0.0021 | -0.0127 | -0.0191 |
| SNB-I2 | 0.0000 | -0.6921 | -1.7290 | -0.0000 | 0.6921 | 1.7290 | 0.0033 | -0.0218 | 0.0016 |
| SNB-J1 | 0.0000 | -0.3798 | -1.4186 | -0.0000 | 0.3798 | 1.4186 | 0.0000 | 0.0000 | 0.0000 |
| SNB-J2 | 0.0000 | -0.3798 | -1.4186 | -0.0000 | 0.3798 | 1.4186 | 0.0000 | 0.0000 | 0.0000 |
| RohnAAs | 0.0000 | -1.2463 | -0.3652 | -0.0000 | 1.2463 | 0.3652 | -0.0002 | -1.1781 | -0.0802 |
| RohnABs | 0.0000 | -0.1982 | -0.1602 | -0.0000 | 0.1982 | 0.1602 | -0.0010 | -1.1202 | -0.0779 |
| RohnACs | 0.0000 | -0.1647 | -0.1552 | -0.0000 | 0.1647 | 0.1552 | -0.0001 | -1.0631 | -0.0755 |
| RohnABs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | -0.0005 | -0.9502 | -0.0709 |
| RohnBbs | 0.0000 | -1.8582 | -1.1757 | -0.0000 | 1.8582 | 1.1757 | -0.0017 | -0.8954 | -0.0686 |
| RohnBcs | 0.0000 | -0.3377 | -0.4457 | -0.0000 | 0.3377 | 0.4457 | -0.0005 | -0.8381 | -0.0662 |
| RohnCas | 0.0000 | -2.2791 | -1.2307 | -0.0000 | 2.2791 | 1.2307 | -0.0004 | -0.7147 | -0.0608 |
| RohnCbs | 0.0000 | -0.3250 | -0.2785 | -0.0000 | 0.3250 | 0.2785 | -0.0012 | -0.6433 | -0.0576 |
| RohnDas | 0.0000 | -0.4123 | -0.6061 | -0.0000 | 0.4123 | 0.6061 | -0.0015 | -0.5138 | -0.0514 |
| RohnDBs | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | -0.0021 | -0.4529 | -0.0482 |
| RohnEAs | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | -0.0028 | -0.3465 | -0.0421 |
| RohnEbs | 0.0000 | -0.3360 | -0.5442 | -0.0000 | 0.3360 | 0.5442 | -0.0015 | -0.2986 | -0.0389 |
| RohnFAs | 0.0000 | -0.3508 | -0.6209 | -0.0000 | 0.3508 | 0.6209 | 0.0004 | -0.1910 | -0.0311 |
| RohnGas | 0.0000 | -0.3366 | -0.7217 | -0.0000 | 0.3366 | 0.7217 | 0.0005 | -0.0982 | -0.0222 |
| RohnHAs | 0.0000 | -0.3123 | -0.7589 | -0.0000 | 0.3123 | 0.7589 | -0.0009 | -0.0345 | -0.0134 |
| RohnHAs | 0.0000 | -0.3798 | -0.9701 | -0.0000 | 0.3798 | 0.9701 | -0.0049 | -0.0035 | -0.0048 |
| SNB-ABs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0010 | -1.1742 | -0.0772 |
| SNB-ABs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0002 | -1.1171 | -0.0750 |
| SNB-ACs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0006 | -1.0600 | -0.0726 |
| SNB-ABs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0003 | -0.9472 | -0.0680 |
| SNB-BBs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | -0.0009 | -0.8914 | -0.0658 |
| SNB-Bcs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0003 | -0.8365 | -0.0634 |
| SNB-CAs | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | -0.0006 | -0.7108 | -0.0582 |
| SNB-Cbs | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | -0.0004 | -0.6414 | -0.0550 |
| SNB-DAs | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | -0.0007 | -0.5112 | -0.0491 |
| SNB-Dbs | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | -0.0013 | -0.4513 | -0.0460 |
| SNB-EAs | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | -0.0020 | -0.3454 | -0.0402 |
| SNB-Ebs | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | -0.0007 | -0.2973 | -0.0371 |
| SNB-FAs | 0.0000 | -0.3366 | -0.6209 | -0.0000 | 0.3366 | 0.6209 | 0.0012 | -0.1907 | -0.0298 |
| SNB-FAs | 0.0000 | -0.3366 | -0.6209 | -0.0000 | 0.3366 | 0.6209 | 0.0013 | -0.0971 | -0.0214 |
| SNB-GAs | 0.0000 | -0.3123 | -0.7589 | -0.0000 | 0.3123 | 0.7589 | -0.0001 | -0.0338 | -0.0130 |
| SNB-IAs | 0.0000 | -0.3798 | -0.9701 | -0.0000 | 0.3798 | 0.9701 | -0.0042 | -0.0024 | -0.0048 |
| SNB-ALs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0012 | -1.2303 | -0.1389 |
| SNB-AZs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0020 | -1.2307 | -0.1265 |
| SNB-ALs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0013 | -1.2313 | -0.1158 |
| SNB-BLs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0008 | -1.0023 | -0.1432 |
| SNB-BLs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0018 | -1.0028 | -0.1263 |
| SNB-BLs | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0009 | -1.0036 | -0.1115 |
| SNB-CLs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0004 | -0.7807 | -0.1538 |
| SNB-CLs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0015 | -0.7813 | -0.1424 |
| SNB-CLs | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0005 | -0.7821 | -0.1322 |
| SNB-DLs | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0001 | -0.5739 | -0.1704 |
| SNB-DLs | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0015 | -0.5746 | -0.1574 |
| SNB-DLs | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0001 | -0.5756 | -0.1445 |
| SNB-ELs | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | -0.0002 | -0.3955 | -0.1454 |
| SNB-ELs | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | -0.0014 | -0.3964 | -0.1395 |
| SNB-ELs | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | -0.0002 | -0.3974 | -0.1348 |
| SNB-FLs | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | -0.0004 | -0.2514 | -0.2073 |
| SNB-FLs | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | 0.0014 | -0.2523 | -0.2018 |
| SNB-FLs | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | -0.0004 | -0.2535 | -0.1972 |
| SNB-GLs | 0.0000 | -0.3508 | -0.6209 | -0.0000 | 0.3508 | 0.6209 | -0.0006 | -0.1405 | -0.2447 |
| SNB-GLs | 0.0000 | -0.3508 | -0.6209 | -0.0000 | 0.3508 | 0.6209 | 0.0015 | -0.1416 | -0.2449 |
| SNB-GLs | 0.0000 | -0.3508 | -0.6209 | -0.0000 | 0.3508 | 0.6209 | -0.0005 | -0.1429 | -0.2464 |
| SNB-HLs | 0.0000 | -0.3366 | -0.7217 | -0.0000 | 0.3366 | 0.7217 | -0.0007 | -0.0624 | -0.2411 |
| SNB-HLs | 0.0000 | -0.3366 | -0.7217 | -0.0000 | 0.3366 | 0.7217 | 0.0015 | -0.0636 | -0.2461 |
| SNB-HLs | 0.0000 | -0.3366 | -0.7217 | -0.0000 | 0.3366 | 0.7217 | -0.0008 | -0.0650 | -0.2522 |
| SNB-ILs | 0.0000 | -0.3123 | -0.7589 | -0.0000 | 0.3123 | 0.7589 | -0.0008 | -0.0156 | -0.1620 |

| | | | | | | | | | |
|------------|--------|---------|---------|---------|--------|--------|---------|---------|---------|
| SNB-WL-I25 | 0.0000 | -0.3123 | -0.7589 | 0.0000 | 0.3123 | 0.7589 | 0.0017 | -0.0170 | -0.1927 |
| SNB-WL-I35 | 0.0000 | -0.3123 | -0.7589 | -0.0000 | 0.3123 | 0.7589 | -0.0009 | -0.0185 | -0.2047 |
| RohnAa1 | 0.0000 | -0.1463 | -0.2050 | 0.0000 | 0.1463 | 0.2050 | -0.0008 | -1.1711 | -0.1240 |
| RohnAa2 | 0.0000 | -0.1463 | -0.1352 | 0.0000 | 0.1463 | 0.1352 | -0.0049 | -1.1738 | -0.0361 |
| RohnAb1 | 0.0000 | -1.2223 | -0.3552 | 0.0000 | 1.2223 | 0.3552 | -0.0003 | -1.1133 | -0.1233 |
| RohnAb2 | 0.0000 | -0.1463 | -0.1352 | 0.0000 | 0.1463 | 0.1352 | -0.0056 | -1.1174 | -0.0321 |
| RohnAc1 | 0.0000 | -0.1463 | -0.1352 | 0.0000 | 0.1463 | 0.1352 | -0.0013 | -1.0567 | -0.1224 |
| RohnAc2 | 0.0000 | -0.4597 | -0.2277 | 0.0000 | 0.4597 | 0.2277 | -0.0050 | -1.0599 | -0.0283 |
| RohnBa1 | 0.0000 | -0.1994 | -0.2007 | 0.0000 | 0.1994 | 0.2007 | -0.0012 | -0.9440 | -0.1203 |
| RohnBa2 | 0.0000 | -0.1994 | -0.2007 | 0.0000 | 0.1994 | 0.2007 | 0.0049 | -0.9472 | -0.0211 |
| RohnBb1 | 0.0000 | -1.8127 | -1.1557 | 0.0000 | 1.8127 | 1.1557 | 0.0000 | -0.8876 | -0.1192 |
| RohnBb2 | 0.0000 | -1.8127 | -1.1557 | 0.0000 | 1.8127 | 1.1557 | 0.0047 | -0.8928 | -0.0176 |
| RohnBc1 | 0.0000 | -0.1994 | -0.2007 | 0.0000 | 0.1994 | 0.2007 | -0.0012 | -0.8331 | -0.1177 |
| RohnBc2 | 0.0000 | -0.1994 | -0.2007 | 0.0000 | 0.1994 | 0.2007 | 0.0045 | -0.8362 | -0.0142 |
| RohnCa1 | 0.0000 | -2.2791 | -1.2307 | 0.0000 | 2.2791 | 1.2307 | 0.0000 | -0.7084 | -0.1140 |
| RohnCa2 | 0.0000 | -2.2791 | -1.2307 | 0.0000 | 2.2791 | 1.2307 | 0.0036 | -0.7127 | -0.0072 |
| RohnCb1 | 0.0000 | -0.2785 | -0.2785 | 0.0000 | 0.2785 | 0.2785 | -0.0008 | -0.6391 | -0.1114 |
| RohnCb2 | 0.0000 | -0.2785 | -0.3250 | 0.0000 | 0.2785 | 0.3250 | 0.0040 | -0.6428 | -0.0034 |
| RohnDa1 | 0.0000 | -0.2834 | -0.3611 | 0.0000 | 0.2834 | 0.3611 | -0.0006 | -0.5097 | -0.1043 |
| RohnDa2 | 0.0000 | -0.2834 | -0.3611 | 0.0000 | 0.2834 | 0.3611 | -0.0036 | -0.5136 | -0.0018 |
| RohnDb1 | 0.0000 | -0.2834 | -0.3611 | 0.0000 | 0.2834 | 0.3611 | -0.0005 | -0.4492 | -0.0994 |
| RohnDb2 | 0.0000 | -0.2834 | -0.3611 | 0.0000 | 0.2834 | 0.3611 | 0.0040 | -0.4540 | -0.0034 |
| RohnEa1 | 0.0000 | -0.2901 | -0.4692 | 0.0000 | 0.2901 | 0.4692 | -0.0038 | -0.3482 | -0.0056 |
| RohnEa2 | 0.0000 | -0.2901 | -0.4692 | 0.0000 | 0.2901 | 0.4692 | -0.0005 | -0.2957 | -0.0844 |
| RohnEb1 | 0.0000 | -0.2901 | -0.4692 | 0.0000 | 0.2901 | 0.4692 | 0.0027 | -0.2990 | -0.0069 |
| RohnEb2 | 0.0000 | -0.2901 | -0.4692 | 0.0000 | 0.2901 | 0.4692 | -0.0030 | -0.1931 | -0.0697 |
| RohnFa1 | 0.0000 | -0.3508 | -0.6209 | 0.0000 | 0.3508 | 0.6209 | 0.0029 | -0.1930 | -0.0076 |
| RohnFa2 | 0.0000 | -0.3508 | -0.6209 | 0.0000 | 0.3508 | 0.6209 | 0.0029 | -0.1930 | -0.0076 |
| RohnGa1 | 0.0000 | -0.3366 | -0.7217 | 0.0000 | 0.3366 | 0.7217 | -0.0021 | -0.0998 | -0.0508 |
| RohnGa2 | 0.0000 | -0.3366 | -0.7217 | 0.0000 | 0.3366 | 0.7217 | 0.0017 | -0.0992 | -0.0065 |
| RohnHa1 | 0.0000 | -0.3123 | -0.7589 | 0.0000 | 0.3123 | 0.7589 | -0.0015 | -0.0358 | -0.0310 |
| RohnHa2 | 0.0000 | -0.3123 | -0.7589 | 0.0000 | 0.3123 | 0.7589 | 0.0024 | -0.0375 | -0.0042 |
| RohnIa1 | 0.0000 | -0.3798 | -0.9701 | 0.0000 | 0.3798 | 0.9701 | 0.0011 | -0.0011 | -0.0104 |
| RohnIa2 | 0.0000 | -0.3798 | -0.9701 | 0.0000 | 0.3798 | 0.9701 | 0.0038 | -0.0097 | -0.0010 |
| SNB-Aa1 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0015 | -1.1735 | -0.1021 |
| SNB-Aa2 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0017 | -1.1747 | -0.0522 |
| SNB-Ab1 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0020 | -1.1156 | -0.1017 |
| SNB-Ab2 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0023 | -1.1183 | -0.0481 |
| SNB-Ac1 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0013 | -1.0592 | -0.1011 |
| SNB-Ac2 | 0.0000 | -0.1463 | -0.1352 | -0.0000 | 0.1463 | 0.1352 | 0.0018 | -1.0608 | -0.0440 |
| SNB-Ba1 | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0012 | -0.9464 | -0.0998 |
| SNB-Ba2 | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0017 | -0.9481 | -0.0362 |
| SNB-Bb1 | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0017 | -0.8896 | -0.0990 |
| SNB-Bb2 | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0022 | -0.8932 | -0.0324 |
| SNB-Bc1 | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0012 | -0.8355 | -0.0980 |
| SNB-Bc2 | 0.0000 | -0.1994 | -0.2007 | -0.0000 | 0.1994 | 0.2007 | 0.0013 | -0.8370 | -0.0287 |
| SNB-Ca1 | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0009 | -0.7099 | -0.0954 |
| SNB-Ca2 | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0020 | -0.7127 | -0.0309 |
| SNB-Cb1 | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0006 | -0.6410 | -0.0931 |
| SNB-Cb2 | 0.0000 | -0.2785 | -0.3250 | -0.0000 | 0.2785 | 0.3250 | 0.0017 | -0.6431 | -0.0168 |
| SNB-Da1 | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | 0.0003 | -0.5112 | -0.0874 |
| SNB-Da2 | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | 0.0020 | -0.5136 | -0.0106 |
| SNB-Db1 | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | 0.0005 | -0.4508 | -0.0835 |
| SNB-Db2 | 0.0000 | -0.2834 | -0.3611 | -0.0000 | 0.2834 | 0.3611 | 0.0021 | -0.4541 | -0.0083 |
| SNB-Ea1 | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | 0.0009 | -0.3440 | -0.0759 |
| SNB-Ea2 | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | 0.0020 | -0.3483 | -0.0044 |
| SNB-Eb1 | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | 0.0002 | -0.2971 | -0.0720 |
| SNB-Eb2 | 0.0000 | -0.2901 | -0.4692 | -0.0000 | 0.2901 | 0.4692 | 0.0012 | -0.2990 | -0.0021 |
| SNB-Fa1 | 0.0000 | -0.3508 | -0.6209 | -0.0000 | 0.3508 | 0.6209 | -0.0022 | -0.1945 | -0.0610 |
| SNB-Fa2 | 0.0000 | -0.3508 | -0.6209 | -0.0000 | 0.3508 | 0.6209 | 0.0014 | -0.1930 | -0.0014 |
| SNB-Ga1 | 0.0000 | -0.3366 | -0.7217 | -0.0000 | 0.3366 | 0.7217 | -0.0021 | -0.1007 | -0.0458 |
| SNB-Ga2 | 0.0000 | -0.3366 | -0.7217 | -0.0000 | 0.3366 | 0.7217 | 0.0010 | -0.0987 | -0.0031 |
| SNB-Ha1 | 0.0000 | -0.3123 | -0.7589 | -0.0000 | 0.3123 | 0.7589 | -0.0017 | -0.0366 | -0.0288 |
| SNB-Ha2 | 0.0000 | -0.3123 | -0.7589 | -0.0000 | 0.3123 | 0.7589 | 0.0018 | -0.0369 | -0.0027 |
| SNB-Ia1 | 0.0000 | -0.3798 | -0.9701 | -0.0000 | 0.3798 | 0.9701 | 0.0004 | -0.0016 | -0.0103 |
| SNB-Ia2 | 0.0000 | -0.3798 | -0.9701 | -0.0000 | 0.3798 | 0.9701 | 0.0037 | -0.0089 | -0.0006 |

Moments for Angles Modeled as Beams:

| Angle Torsion Label | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | Origin X Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | End X Shear (lbs) | End Y Shear (lbs) |
|---------------------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|
| Rohn-LA1P | 0.00 | 0.00 | 0.00 | -63.16 | -134.89 | -12.63 | -26.97 |
| Rohn-LA1 | -0.00 | 0.00 | -0.00 | -92.58 | 87.17 | -18.51 | 17.43 |
| Rohn-LA12 | -0.00 | 0.00 | 0.00 | 99.11 | 80.75 | 19.81 | 16.14 |
| Rohn-LA2P | 0.01 | 63.17 | 134.89 | 29.29 | 170.26 | 18.48 | 61.01 |
| Rohn-LA21 | -0.00 | 92.59 | -87.17 | 110.49 | -126.85 | 40.60 | -42.79 |
| Rohn-LA22 | 0.00 | -99.10 | -80.75 | -108.72 | -108.65 | -41.55 | -37.86 |
| Rohn-LA3P | 0.02 | -29.29 | -170.26 | 81.91 | -202.54 | 10.52 | -74.53 |
| Rohn-LA31 | -0.00 | 110.49 | 126.85 | -118.79 | 157.66 | -45.84 | 56.89 |
| Rohn-LA32 | -0.01 | 108.72 | 108.65 | 161.62 | 104.59 | 54.04 | 42.63 |
| Rohn-LA4P | 0.01 | -81.91 | 202.54 | -150.99 | 268.51 | -46.56 | 94.18 |
| Rohn-LA41 | 0.01 | 118.79 | -157.66 | 208.74 | -199.73 | 65.49 | -71.46 |
| Rohn-LA42 | -0.01 | 161.62 | -104.59 | -206.87 | -106.12 | -73.66 | -42.12 |
| Rohn-LB1P | 0.02 | 150.99 | -268.51 | 369.36 | -391.86 | 104.03 | -132.02 |
| Rohn-LB11 | -0.01 | -208.74 | 199.73 | -229.22 | 353.41 | -87.57 | 110.60 |
| Rohn-LB12 | -0.02 | 206.87 | 106.12 | 420.00 | 57.55 | 125.31 | 32.72 |
| Rohn-LB2P | 0.01 | -369.36 | 391.86 | -473.41 | 457.56 | -168.49 | 169.82 |
| Rohn-LB21 | -0.00 | 229.23 | -353.41 | 286.64 | -442.37 | 103.15 | -159.12 |
| Rohn-LB22 | -0.01 | 419.99 | -57.55 | -479.19 | -31.01 | -179.74 | -17.70 |
| Rohn-LB3P | 0.00 | 473.41 | -457.55 | 550.39 | -533.41 | 204.69 | -198.12 |
| Rohn-LB31 | -0.01 | -286.63 | 442.37 | -230.15 | 441.08 | -103.34 | 176.66 |
| Rohn-LB32 | 0.02 | 479.19 | 31.00 | 662.35 | 113.87 | 228.18 | 28.96 |
| Rohn-LB4P | -0.11 | -550.39 | 533.42 | -86.70 | 484.33 | -127.37 | 203.48 |
| Rohn-LB41 | 0.06 | 230.16 | -441.08 | 410.77 | -288.47 | 128.17 | -145.89 |
| Rohn-LB42 | 0.05 | -662.35 | 113.86 | -391.09 | -220.67 | -210.56 | -66.87 |
| Rohn-LC1P | -0.05 | 86.70 | -484.33 | -185.34 | -109.20 | -14.81 | -89.09 |
| Rohn-LC11 | 0.02 | -430.77 | 288.47 | -33.73 | -76.72 | -66.73 | 31.73 |
| Rohn-LC12 | 0.02 | 391.09 | 220.67 | 124.70 | 210.65 | 77.40 | 64.73 |
| Rohn-LC2P | -0.05 | 185.35 | 109.20 | 500.97 | -378.11 | 102.71 | -40.24 |
| Rohn-LC21 | 0.01 | 33.73 | 76.72 | -109.26 | 335.42 | -11.31 | 61.69 |
| Rohn-LC22 | 0.04 | -124.70 | -210.65 | 563.50 | 30.40 | 65.65 | -26.97 |
| Rohn-LC3P | -0.15 | -500.97 | 378.11 | -162.68 | 654.80 | -50.77 | 155.04 |
| Rohn-LC31 | 0.09 | 109.27 | -335.42 | 842.82 | -404.49 | 142.95 | -111.09 |
| Rohn-LC32 | 0.05 | -563.49 | -30.40 | -301.74 | -242.58 | -129.83 | -40.96 |
| Rohn-LD1P | 0.03 | -162.68 | 654.80 | 83.74 | -458.57 | -11.85 | -167.11 |
| Rohn-LD11 | -0.02 | 842.81 | 404.50 | -197.51 | 184.79 | -156.22 | 88.49 |
| Rohn-LD12 | -0.02 | 301.74 | 242.58 | 614.97 | 265.78 | 137.53 | 76.27 |
| Rohn-LD2P | -0.11 | -83.74 | 458.57 | 756.32 | -27.39 | 100.65 | 64.53 |
| Rohn-LD21 | 0.04 | 197.51 | -184.78 | 414.69 | 195.73 | 91.67 | 1.64 |
| Rohn-LD22 | 0.06 | -614.98 | -265.78 | 436.88 | -151.48 | -26.64 | -62.41 |
| Rohn-LD3P | -0.05 | 756.31 | 27.40 | -7.80 | 190.83 | -114.69 | 32.76 |
| Rohn-LD31 | 0.08 | -414.68 | -195.73 | 531.62 | -320.36 | 17.56 | -77.51 |
| Rohn-LD32 | -0.03 | 436.88 | 151.48 | 229.09 | 117.99 | -31.17 | 40.42 |
| Rohn-LE1P | 0.02 | 7.81 | -190.83 | 626.01 | 454.15 | 95.13 | 39.52 |
| Rohn-LE11 | -0.04 | 531.61 | 320.37 | 754.42 | -70.99 | 33.46 | 37.45 |
| Rohn-LE12 | 0.02 | -229.09 | -117.99 | -42.23 | -377.52 | -40.70 | -74.34 |
| Rohn-LE2P | 0.25 | 626.00 | -454.15 | 212.26 | -1604.94 | -61.92 | -308.14 |
| Rohn-LE21 | -0.11 | -754.42 | 70.99 | -1096.30 | 778.36 | -277.11 | 127.17 |
| Rohn-LE22 | -0.14 | 42.23 | 377.52 | 1663.27 | 841.69 | 255.09 | 182.36 |
| Rohn-LE3P | -0.19 | -212.25 | 1604.94 | 172.12 | 2415.41 | -6.02 | 603.45 |
| Rohn-LE31 | 0.10 | 1096.31 | -778.37 | -1462.67 | -1462.65 | 557.60 | -336.56 |
| Rohn-LE32 | 0.09 | -1663.28 | 841.67 | 1515.53 | -986.75 | -476.86 | -274.28 |
| Rohn-LF1P | 0.92 | -172.12 | -2415.41 | 1327.57 | -2879.77 | 115.51 | -529.35 |
| Rohn-LF11 | -0.56 | 2616.43 | 462.72 | -1896.53 | 1912.81 | -451.45 | 337.67 |
| Rohn-LF12 | -0.36 | 1515.51 | 986.78 | 3025.67 | 1019.06 | 453.67 | 200.38 |
| Rohn-LF2P | -1.11 | -1327.57 | 2879.77 | -116.21 | 3539.26 | -144.33 | 641.69 |
| Rohn-LF21 | 0.70 | 1896.60 | -1912.75 | 3666.92 | -2239.27 | 556.58 | -415.37 |
| Rohn-LF22 | 0.42 | -3025.69 | 1019.01 | -2382.98 | -1352.76 | -1540.29 | -236.92 |
| Rohn-LG1P | 0.74 | 116.21 | -3539.26 | 1296.02 | -4085.90 | 141.17 | -762.26 |
| Rohn-LG11 | -0.47 | -3666.84 | 2239.40 | -2869.90 | 2465.20 | -653.83 | 470.57 |

| | | | | | | | |
|-----------|-------|----------|----------|----------|----------|---------|---------|
| Rohn-LG12 | -0.28 | 2382.96 | 1352.80 | 4118.77 | 1681.83 | 649.57 | 303.18 |
| Rohn-LG2P | -0.95 | -1296.02 | 4085.90 | 31.93 | 3858.80 | -126.37 | 794.21 |
| Rohn-LG21 | 0.59 | 2869.99 | -2465.10 | 4090.60 | -2407.46 | 696.27 | -487.40 |
| Rohn-LG22 | 0.37 | 4118.82 | -1681.73 | -2500.05 | -1510.13 | 661.25 | -318.88 |
| Rohn-LHIP | 1.14 | -31.93 | 3858.80 | 1608.95 | -3093.37 | 157.65 | -694.98 |
| Rohn-LH11 | -0.72 | 4090.51 | 2407.60 | -2021.62 | 2159.93 | -611.42 | 456.91 |
| Rohn-LH12 | -0.43 | 2500.01 | 1510.18 | 3243.42 | 1000.35 | 573.75 | 250.80 |
| Rohn-LH21 | -0.48 | 1608.95 | 3093.37 | -218.51 | 1988.22 | -182.69 | 507.99 |
| Rohn-LH22 | 0.43 | 2021.69 | -2159.87 | 2745.12 | -1781.05 | 476.87 | -394.25 |
| Rohn-LI1P | 0.07 | 3243.44 | -1000.31 | -594.93 | -278.83 | -383.43 | -127.78 |
| Rohn-LI11 | 0.49 | 218.51 | -1988.22 | 2914.94 | 1665.19 | 313.23 | -32.29 |
| Rohn-LI12 | -0.44 | 2745.08 | 1781.10 | 2507.89 | 349.18 | -23.72 | 213.07 |
| Rohn-LI21 | 1.02 | -2914.94 | -1665.19 | 704.82 | -3958.38 | -220.94 | -562.17 |
| Rohn-LI22 | -0.15 | -2507.89 | -349.19 | -785.80 | 626.65 | -329.46 | 27.75 |
| Rohn-LI23 | -0.82 | 485.55 | 1919.15 | 6171.21 | 3241.31 | 665.07 | 515.57 |
| SNB-LA1P | 0.00 | 0.00 | 0.00 | 2.27 | -183.57 | 0.45 | -36.70 |
| SNB-LA11 | 0.00 | 0.00 | -0.00 | -137.32 | 99.37 | -27.45 | 19.87 |
| SNB-LA12 | 0.00 | 0.00 | 0.00 | 140.73 | 98.75 | 28.14 | 19.74 |
| SNB-LA2P | 0.00 | -2.27 | 183.57 | -9.41 | 232.28 | -2.33 | 82.14 |
| SNB-LA21 | -0.00 | 137.33 | -99.37 | 174.87 | -131.13 | 62.42 | -46.08 |
| SNB-LA22 | -0.00 | -140.73 | -98.75 | -167.05 | -115.87 | -61.53 | -42.91 |
| SNB-LA3P | 0.01 | 9.41 | -232.27 | 59.88 | -278.78 | 13.85 | -102.17 |
| SNB-LA31 | -0.00 | -174.87 | 131.13 | -192.45 | 169.14 | -73.44 | 60.03 |
| SNB-LA32 | -0.01 | 167.05 | 115.87 | 233.12 | 124.10 | 80.00 | 47.97 |
| SNB-LA4P | -0.01 | -59.88 | 278.78 | -45.66 | 378.43 | -21.10 | 131.39 |
| SNB-LA41 | 0.01 | 192.46 | -169.14 | 323.41 | -233.24 | 103.14 | -80.45 |
| SNB-LA42 | 0.00 | -233.12 | -124.10 | -284.60 | -160.66 | -103.50 | -56.93 |
| SNB-LB1P | -0.00 | 45.66 | -378.43 | 75.73 | -593.23 | 24.27 | -194.26 |
| SNB-LB11 | 0.00 | -323.41 | 233.24 | -466.05 | 330.05 | 25.27 | 112.62 |
| SNB-LB12 | -0.00 | 284.60 | 160.66 | 527.93 | 278.81 | 162.44 | 87.85 |
| SNB-LB2P | -0.04 | -75.73 | 593.23 | 117.11 | 691.32 | 8.27 | 256.81 |
| SNB-LB21 | 0.02 | 466.05 | -330.05 | 639.85 | -314.77 | 221.11 | -128.93 |
| SNB-LB22 | 0.02 | -527.93 | -278.81 | -530.32 | -386.59 | -211.55 | -133.02 |
| SNB-LB3P | 0.03 | -117.11 | -691.32 | 11.46 | -773.52 | -21.12 | -292.86 |
| SNB-LB31 | -0.01 | 639.84 | 314.77 | -509.37 | 315.33 | -229.78 | 125.99 |
| SNB-LB32 | -0.02 | 530.32 | 386.59 | 800.94 | 470.13 | 266.13 | 171.26 |
| SNB-LB4P | -0.03 | -11.46 | 773.53 | 104.07 | 555.84 | 18.52 | 285.77 |
| SNB-LB41 | 0.01 | 509.37 | -315.33 | 519.12 | -252.88 | 205.65 | -113.61 |
| SNB-LB42 | 0.02 | -800.95 | -470.12 | -413.38 | -311.51 | -242.74 | -156.95 |
| SNB-LC1P | 0.03 | -104.07 | -555.84 | 89.47 | -127.48 | -2.19 | -102.56 |
| SNB-LC11 | -0.01 | 519.12 | 252.89 | 3.159 | 58.99 | -77.39 | 46.82 |
| SNB-LC12 | -0.01 | 413.38 | 311.51 | 203.40 | 75.06 | 92.56 | 58.01 |
| SNB-LC2P | -0.00 | -89.47 | 127.49 | 242.73 | -326.89 | 22.93 | -29.84 |
| SNB-LC21 | -0.00 | -3.159 | -58.99 | -143.38 | 219.24 | -22.00 | 23.99 |
| SNB-LC22 | 0.00 | -203.40 | -75.06 | 433.93 | 107.22 | 34.49 | 4.81 |
| SNB-LC3P | -0.07 | 242.72 | 326.90 | 14.57 | 611.92 | -34.24 | 140.81 |
| SNB-LC31 | 0.05 | 143.39 | -219.25 | 756.32 | -426.55 | 135.08 | -96.96 |
| SNB-LC32 | 0.02 | -433.93 | -107.22 | -308.48 | -186.28 | -111.40 | -44.04 |
| SNB-LD1P | 0.08 | -14.57 | -611.92 | 478.14 | -466.09 | 69.58 | -161.80 |
| SNB-LD11 | -0.06 | -756.31 | 426.56 | -86.53 | 320.73 | -126.55 | 112.20 |
| SNB-LD12 | -0.03 | 308.48 | 186.28 | 735.08 | 143.70 | 156.58 | 49.51 |
| SNB-LD2P | -0.05 | 478.14 | 466.09 | 458.74 | -53.29 | -2.90 | 61.78 |
| SNB-LD21 | 0.03 | 86.53 | -320.73 | 316.58 | 101.39 | 60.35 | -32.84 |
| SNB-LD22 | 0.02 | -735.08 | -143.70 | 379.85 | -27.19 | -53.14 | -25.56 |
| SNB-LD3P | -0.04 | -458.74 | 53.30 | 391.56 | 272.21 | -10.08 | 48.86 |
| SNB-LD31 | 0.05 | -316.58 | -101.40 | 829.58 | -280.92 | 77.04 | -57.41 |
| SNB-LD32 | -0.00 | -379.85 | 27.19 | 401.56 | -18.29 | 3.26 | 1.33 |
| SNB-LE1P | -0.04 | -391.55 | -272.21 | 765.99 | 929.65 | 56.20 | 98.68 |
| SNB-LE11 | 0.00 | -829.57 | 280.93 | 1490.19 | -401.73 | 99.19 | -18.14 |
| SNB-LE12 | 0.03 | -401.56 | 18.29 | -140.90 | -507.70 | -81.39 | -73.43 |
| SNB-LE2P | 0.34 | -765.99 | -929.65 | 865.32 | -3157.63 | 17.86 | -611.66 |
| SNB-LE21 | -0.18 | -1490.18 | 401.73 | -1994.86 | 1685.86 | -521.72 | 312.52 |
| SNB-LE22 | -0.16 | 140.90 | 507.70 | 3436.66 | 1495.85 | 535.18 | 299.72 |
| SNB-LE3P | -0.49 | -885.31 | 3157.63 | 139.76 | 4290.70 | -111.90 | 1117.94 |
| SNB-LE31 | 0.29 | 1994.89 | -1685.84 | 4625.15 | -2638.46 | 994.03 | -649.31 |

| | | | | | | | |
|----------|-------|----------|----------|----------|----------|----------|----------|
| SNB-LE32 | 0.20 | -3436.68 | -1495.81 | -2722.28 | -1698.40 | -924.04 | -479.23 |
| SNB-LF1P | 1.48 | -139.76 | -4290.69 | 1947.29 | -4759.11 | 180.69 | -904.67 |
| SNB-LF11 | -0.92 | -4625.08 | 2638.58 | -3321.31 | 3105.36 | -794.73 | 574.46 |
| SNB-LF12 | -0.57 | 2722.25 | 1698.44 | 4822.15 | 1722.05 | 753.83 | 341.77 |
| SNB-LF2P | -1.87 | -1947.29 | 4759.11 | -257.95 | 6338.88 | -220.45 | 1109.39 |
| SNB-LF21 | 1.18 | 3321.42 | -3105.25 | 6575.12 | -4026.89 | 989.80 | -713.32 |
| SNB-LF22 | 0.71 | -4822.17 | -1721.97 | -8266.92 | -2399.22 | -908.11 | -411.16 |
| SNB-LGLP | 1.52 | 257.95 | -6338.88 | 3534.77 | -5048.07 | 379.13 | -1538.14 |
| SNB-LG11 | -0.97 | -6574.98 | 4027.12 | -6050.36 | 5653.69 | -1262.68 | 968.19 |
| SNB-LG12 | -0.57 | 4266.88 | 2393.31 | 9429.86 | 3522.05 | 1368.53 | 591.04 |
| SNB-LG2P | -2.15 | -3534.77 | 9048.07 | -452.54 | 8890.16 | -398.59 | 1793.20 |
| SNB-LG21 | 1.39 | 6050.56 | -5653.48 | 9305.39 | -5759.23 | 1535.85 | -1141.46 |
| SNB-LG22 | 0.79 | -9429.94 | -3521.84 | -5882.86 | -3257.63 | -1529.95 | -677.36 |
| SNB-LHP | 2.59 | 452.54 | -8890.16 | 4152.80 | -7191.69 | 480.36 | -1607.60 |
| SNB-LH11 | -1.68 | -9405.19 | 5759.54 | -4559.75 | 5161.37 | -1386.77 | 1092.30 |
| SNB-LH12 | -0.94 | 5882.79 | 3257.75 | 7689.97 | 2171.08 | 1356.01 | 542.38 |
| SNB-LH2P | -0.89 | 4152.80 | 7191.69 | -1083.75 | 4613.64 | -523.48 | 1180.14 |
| SNB-LH21 | 0.94 | 4559.90 | -5161.24 | 6176.71 | -4329.27 | 1073.96 | -949.32 |
| SNB-LH22 | -0.01 | -7690.00 | -2170.98 | -1592.49 | -423.83 | -997.38 | -259.24 |
| SNB-LI1P | 1.47 | 1083.75 | -4513.64 | 7752.13 | 2486.11 | 883.25 | -212.67 |
| SNB-LI11 | -1.23 | -6176.62 | 4329.38 | 4709.85 | 1892.22 | -146.70 | 622.25 |
| SNB-LI12 | -0.26 | 1592.49 | 423.84 | 202.57 | -4230.90 | 179.34 | -380.36 |
| SNB-LI2P | 1.93 | -7752.13 | -2486.11 | -738.35 | -6746.82 | -848.79 | -923.01 |
| SNB-LI21 | -0.02 | -4709.84 | -1892.24 | -711.45 | -139.37 | -542.27 | -203.21 |
| SNB-LI22 | -1.86 | -202.63 | 4230.90 | 11144.82 | 6770.25 | 1093.26 | 1099.15 |

Equilibrium Joint Positions and Rotations for Load Case "W+I -60 deg":

| Joint Label | X-Displ (ft) | Y-Displ (ft) | Z-Displ (ft) | X-Rot (deg) | Y-Rot (deg) | Z-Rot (deg) | X-Pos (ft) | Y-Pos (ft) | Z-Pos (ft) |
|-------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|------------|------------|
| RohnAP | 0.6021 | -1.047 | -0.1061 | 0.5499 | 0.2978 | 0.0215 | 4.935 | -1.047 | 179.9 |
| RohnBP | 0.4898 | -0.4898 | -0.1004 | 0.5554 | 0.3087 | 0.0218 | 5.611 | -0.854 | 159.9 |
| RohnCP | 0.3803 | -0.6654 | -0.09341 | 0.5065 | 0.3085 | 0.0201 | 6.289 | -0.6654 | 139.9 |
| RohnDP | 0.2782 | -0.4889 | -0.08513 | 0.4680 | 0.2698 | 0.0185 | 6.973 | -0.4889 | 119.9 |
| RohnEP | 0.1908 | -0.3373 | -0.07288 | 0.3860 | 0.2266 | 0.0154 | 7.672 | -0.3373 | 99.9 |
| RohnFP | 0.1182 | -0.2143 | -0.06048 | 0.3234 | 0.1686 | 0.0128 | 8.386 | -0.2143 | 79.94 |
| RohnGP | 0.06214 | -0.1202 | -0.04553 | 0.2229 | 0.1132 | 0.0089 | 9.117 | -0.1202 | 59.95 |
| RohnHP | 0.02375 | -0.05364 | -0.03131 | 0.1556 | 0.0951 | 0.0063 | 9.865 | -0.05364 | 39.97 |
| RohnIP | 0.002505 | -0.01424 | -0.01524 | 0.0746 | 0.0578 | 0.0031 | 10.63 | -0.01424 | 19.98 |
| RohnJP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 11.42 | 0 | 0 |
| RohnKP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 12.28 | 0 | 0 |
| RohnLP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 13.14 | 0 | 0 |
| RohnMP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 14.00 | 0 | 0 |
| RohnNP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 14.86 | 0 | 0 |
| RohnOP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 15.72 | 0 | 0 |
| RohnPP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 16.58 | 0 | 0 |
| RohnQP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 17.44 | 0 | 0 |
| RohnRP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 18.30 | 0 | 0 |
| RohnSP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 19.16 | 0 | 0 |
| RohnTP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 20.02 | 0 | 0 |
| RohnUP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 20.88 | 0 | 0 |
| RohnVP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 21.74 | 0 | 0 |
| RohnWP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 22.60 | 0 | 0 |
| RohnXP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 23.46 | 0 | 0 |
| RohnYP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 24.32 | 0 | 0 |
| RohnZP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 25.18 | 0 | 0 |
| RohnA1 | 0.6044 | -1.043 | -0.106 | 0.5427 | 0.3394 | 0.0220 | -1.562 | -4.795 | 179.9 |
| RohnA2 | 0.6072 | -1.047 | -0.03451 | 0.5724 | 0.3378 | 0.0003 | -1.559 | 2.705 | 180 |
| RohnB1 | 0.4921 | -0.8487 | -0.1003 | 0.5430 | 0.3257 | 0.0217 | -2.068 | -5.284 | 159.9 |
| RohnB2 | 0.4955 | -0.8536 | -0.01822 | 0.5567 | 0.3201 | -0.0001 | -2.065 | 3.581 | 160 |
| RohnC1 | 0.384 | -0.6602 | -0.09333 | 0.5190 | 0.2833 | -0.0201 | -2.57 | -5.778 | 139.9 |
| RohnC2 | 0.3869 | -0.6663 | -0.004301 | 0.5136 | 0.2978 | 0.0000 | -2.568 | 4.451 | 140 |
| RohnD1 | 0.2826 | -0.484 | -0.08505 | 0.4672 | 0.2703 | 0.0185 | -3.065 | -6.282 | 119.9 |
| RohnD2 | 0.2854 | -0.4915 | 0.006899 | 0.4742 | 0.2748 | 0.0000 | -3.062 | 5.307 | 120 |
| RohnE1 | 0.1953 | -0.3328 | -0.07282 | 0.3883 | 0.2200 | 0.0153 | -3.545 | -6.812 | 99.93 |
| RohnE2 | 0.1974 | -0.3398 | 0.01074 | 0.3815 | 0.2214 | 0.0000 | -3.543 | 6.139 | 100 |
| RohnF1 | 0.1255 | -0.2088 | -0.06044 | 0.3068 | 0.1946 | -0.0127 | -4.008 | -7.369 | 78.94 |
| RohnF2 | 0.1278 | -0.2139 | -0.01302 | 0.3121 | 0.1811 | 0.0000 | -4.006 | 6.394 | 80.01 |
| RohnG1 | 0.07229 | -0.1134 | -0.0455 | 0.2089 | 0.1357 | 0.0088 | -4.455 | -7.955 | 59.95 |
| RohnG2 | 0.07424 | -0.1276 | 0.01041 | 0.2381 | 0.1381 | 0.0000 | -4.453 | 7.714 | 60.01 |
| RohnH1 | 0.03409 | -0.04708 | -0.03129 | 0.1597 | 0.0865 | 0.0063 | -4.886 | -8.57 | 39.97 |
| RohnH2 | 0.03581 | -0.0614 | 0.008545 | 0.1432 | 0.0832 | 0.0000 | -4.885 | 8.461 | 40.01 |
| RohnI1 | 0.01081 | -0.009131 | -0.01523 | 0.0869 | 0.0351 | -0.0030 | -5.304 | -9.215 | 19.98 |
| RohnI2 | 0.01171 | -0.01398 | -0.0034 | 0.0504 | 0.0296 | 0.0000 | -5.303 | 9.186 | 20 |
| RohnJ1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | -9.89 | 0 |
| RohnJ2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | 9.89 | 0 |
| RohnK1 | 0.6052 | -1.044 | -0.09234 | 0.5409 | 0.3362 | 0.0219 | -0.5613 | -3.065 | 179.9 |
| RohnK2 | 0.6054 | -1.047 | -0.05316 | 0.5737 | 0.3355 | 0.0002 | -0.5611 | 0.9733 | 179.9 |
| RohnA | 0.4933 | -0.8504 | -0.08727 | 0.5400 | 0.3227 | 0.0216 | -1.067 | -3.553 | 159.9 |
| RohnB | 0.4937 | -0.8537 | -0.03595 | 0.5571 | 0.3217 | -0.0000 | -1.067 | 1.849 | 160 |
| RohnC | 0.3845 | -0.6615 | -0.08136 | 0.5359 | 0.2891 | -0.0209 | -1.569 | -4.046 | 139.9 |
| RohnD | 0.3852 | -0.6663 | -0.02041 | 0.5091 | 0.2943 | 0.0000 | -1.569 | 2.718 | 140 |
| RohnE | 0.2834 | -0.4854 | -0.0739 | 0.4689 | 0.2793 | 0.0188 | -2.064 | -4.551 | 119.9 |
| RohnF | 0.284 | -0.4913 | -0.008264 | 0.4759 | 0.2752 | 0.0000 | -2.064 | 3.575 | 120 |
| RohnG | 0.1955 | -0.3338 | -0.06341 | 0.3840 | 0.2194 | 0.0151 | -2.545 | -5.081 | 99.94 |
| RohnH | 0.1962 | -0.3396 | -0.002076 | 0.3802 | 0.2197 | 0.0000 | -2.544 | 4.407 | 100 |
| RohnI | 0.126 | -0.21 | -0.05353 | 0.3141 | 0.1875 | 0.0126 | -3.008 | -5.638 | 79.95 |
| RohnJ | 0.1268 | -0.2195 | 0.003707 | 0.3077 | 0.1778 | 0.0000 | -3.007 | 5.209 | 80 |
| RohnK | 0.07234 | -0.1144 | -0.04155 | 0.1970 | 0.1485 | 0.0089 | -3.455 | -6.224 | 59.96 |
| RohnL | 0.07347 | -0.1271 | 0.005454 | 0.2483 | 0.1434 | 0.0000 | -3.454 | 5.983 | 60.01 |
| RohnM | 0.03406 | -0.0496 | -0.02895 | 0.1587 | 0.0868 | 0.0063 | -3.886 | -6.838 | 39.97 |
| RohnN | 0.03517 | -0.06087 | 0.005724 | 0.1444 | 0.0835 | 0.0000 | -3.885 | 6.773 | 40.01 |
| RohnO | 0.0103 | -0.009733 | -0.01458 | 0.0894 | 0.0381 | -0.0032 | -4.304 | -7.482 | 19.99 |

| | | | | | | | | | |
|------------|-----------|-----------|-----------|--------|---------|---------|---------|-----------|-------|
| SNB-I2 | 0.01119 | -0.01937 | 0.002937 | 0.0516 | 0.0299 | 0.0000 | 4.303 | 7.453 | 20 |
| SNB-J1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | -8.154 | 0 |
| SNB-J2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | 8.154 | 0 |
| RohnAas | 0.5751 | -0.9992 | -0.1049 | 0.5577 | 0.3276 | 0.0221 | 5.105 | -0.9992 | 174.9 |
| RohnAbs | 0.5458 | -0.95 | -0.1035 | 0.5638 | 0.3199 | 0.0222 | 5.273 | -0.95 | 169.9 |
| RohnACS | 0.5188 | -0.9014 | -0.102 | 0.5445 | 0.3231 | 0.0215 | 5.443 | -0.9014 | 164.9 |
| RohnBAs | 0.4632 | -0.8056 | -0.0988 | 0.5393 | 0.3174 | 0.0213 | 5.781 | -0.8056 | 154.9 |
| RohnBBS | 0.4347 | -0.7591 | -0.09719 | 0.5470 | 0.3101 | 0.0215 | 5.95 | -0.7591 | 149.9 |
| RohnBcs | 0.4087 | -0.7104 | -0.09531 | 0.5417 | 0.3107 | 0.0213 | 6.121 | -0.7104 | 144.9 |
| RohnCas | 0.3467 | -0.6057 | -0.09089 | 0.5216 | 0.2792 | 0.0204 | 6.517 | -0.6057 | 133.2 |
| RohnCbs | 0.313 | -0.5451 | -0.08803 | 0.5043 | 0.2023 | 0.0200 | 6.746 | -0.5451 | 126.6 |
| RohnDas | 0.2493 | -0.4352 | -0.08136 | 0.4572 | 0.2455 | 0.0180 | 7.206 | -0.4352 | 113.3 |
| RohnDbs | 0.2193 | -0.3834 | -0.07718 | 0.4193 | 0.2566 | 0.0167 | 7.439 | -0.3834 | 106.6 |
| RohnEAs | 0.1665 | -0.2932 | -0.06893 | 0.3651 | 0.1856 | 0.0143 | 7.91 | -0.2932 | 93.27 |
| RohnEBS | 0.1443 | -0.2526 | -0.06463 | 0.3359 | 0.2205 | 0.0135 | 8.15 | -0.2526 | 86.6 |
| RohnFAs | 0.09552 | -0.1614 | -0.05295 | 0.2675 | 0.1675 | 0.0106 | 8.757 | -0.1614 | 69.95 |
| RohnGAs | 0.04963 | -0.08285 | -0.03833 | 0.1912 | 0.1104 | 0.0076 | 9.498 | -0.08285 | 49.96 |
| RohnHas | 0.01753 | -0.02898 | -0.02332 | 0.1117 | 0.0504 | 0.0044 | 10.25 | -0.02898 | 29.98 |
| RohnIAs | -0.001933 | -0.002863 | -0.007965 | 0.0425 | -0.0061 | 0.0017 | 11.02 | -0.002863 | 9.992 |
| SNB-AAs | 0.576 | -0.9971 | -0.09116 | 0.5562 | 0.3277 | 0.0220 | 3.106 | -0.9971 | 174.9 |
| SNB-ABs | 0.5466 | -0.9486 | -0.08995 | 0.5575 | 0.3199 | 0.0220 | 3.274 | -0.9486 | 169.9 |
| SNB-ABs | 0.5197 | -0.8999 | -0.08862 | 0.5514 | 0.3236 | 0.0218 | 3.444 | -0.8999 | 164.9 |
| SNB-ABs | 0.4641 | -0.8041 | -0.08591 | 0.5481 | 0.3177 | 0.0216 | 3.782 | -0.8041 | 154.9 |
| SNB-BBs | 0.4355 | -0.7566 | -0.0845 | 0.5386 | 0.3092 | 0.0213 | 3.95 | -0.7566 | 149.9 |
| SNB-Bcs | 0.4095 | -0.7099 | -0.08293 | 0.5323 | 0.3092 | 0.0210 | 4.121 | -0.7099 | 144.9 |
| SNB-CAs | 0.3475 | -0.603 | -0.07918 | 0.5144 | 0.2773 | 0.0201 | 4.518 | -0.603 | 133.3 |
| SNB-Cbs | 0.3138 | -0.5441 | -0.07654 | 0.4926 | 0.3036 | 0.0196 | 4.747 | -0.5441 | 126.6 |
| SNB-DAs | 0.2501 | -0.4334 | -0.07077 | 0.4559 | 0.2463 | 0.0179 | 5.207 | -0.4334 | 113.3 |
| SNB-Dbs | 0.2201 | -0.3825 | -0.06716 | 0.4166 | 0.2576 | 0.0166 | 5.439 | -0.3825 | 106.6 |
| SNB-EAs | 0.1673 | -0.2927 | -0.06041 | 0.3632 | 0.1875 | 0.0142 | 5.91 | -0.2927 | 93.28 |
| SNB-Ebs | 0.1451 | -0.2519 | -0.05686 | 0.3357 | 0.2179 | 0.0134 | 6.151 | -0.2519 | 86.6 |
| SNB-FAs | 0.09631 | -0.1614 | -0.04742 | 0.2680 | 0.1697 | 0.0106 | 6.758 | -0.1614 | 69.95 |
| SNB-GAs | 0.05041 | -0.08212 | -0.03519 | 0.1895 | 0.1150 | 0.0075 | 7.498 | -0.08212 | 49.96 |
| SNB-HAs | 0.01831 | -0.02855 | -0.02191 | 0.1124 | 0.0508 | 0.0044 | 8.253 | -0.02855 | 29.98 |
| SNB-IAs | -0.001152 | -0.001991 | -0.007909 | 0.0398 | -0.0027 | 0.0016 | 9.02 | -0.001991 | 9.992 |
| SNB-WL-A1S | 0.6039 | -1.045 | -0.1416 | 0.0000 | 0.0000 | 0.0000 | 1.187 | -2.055 | 179.9 |
| SNB-WL-A2S | 0.6047 | -1.045 | -0.119 | 0.0000 | 0.0000 | 0.0000 | -0.5618 | -1.045 | 179.9 |
| SNB-WL-A3S | 0.604 | -1.046 | -0.1217 | 0.0000 | 0.0000 | 0.0000 | 1.187 | -0.03556 | 179.9 |
| SNB-WL-B1S | 0.4918 | -0.8509 | -0.1453 | 0.0000 | 0.0000 | 0.0000 | 1.272 | -2.202 | 159.9 |
| SNB-WL-B2S | 0.4928 | -0.8515 | -0.1171 | 0.0000 | 0.0000 | 0.0000 | -1.068 | -0.8515 | 159.9 |
| SNB-WL-B3S | 0.4919 | -0.8521 | -0.1178 | 0.0000 | 0.0000 | 0.0000 | 1.272 | 0.4993 | 159.9 |
| SNB-WL-C1S | 0.3828 | -0.6625 | -0.1553 | 0.0000 | 0.0000 | 0.0000 | 1.36 | -2.355 | 139.8 |
| SNB-WL-C2S | 0.384 | -0.6632 | -0.1364 | 0.0000 | 0.0000 | 0.0000 | -1.57 | -0.6632 | 139.9 |
| SNB-WL-C3S | 0.3829 | -0.6639 | -0.1367 | 0.0000 | 0.0000 | 0.0000 | 1.36 | 1.028 | 139.9 |
| SNB-WL-D1S | 0.2812 | -0.4867 | -0.1722 | 0.0000 | 0.0000 | 0.0000 | 1.455 | -2.52 | 119.8 |
| SNB-WL-D2S | 0.2827 | -0.4875 | -0.15 | 0.0000 | 0.0000 | 0.0000 | -2.065 | -0.4875 | 119.8 |
| SNB-WL-D3S | 0.2813 | -0.4884 | -0.1502 | 0.0000 | 0.0000 | 0.0000 | 1.455 | 1.545 | 119.8 |
| SNB-WL-E1S | 0.1936 | -0.3352 | -0.1461 | 0.0000 | 0.0000 | 0.0000 | 1.584 | -2.709 | 99.85 |
| SNB-WL-E2S | 0.1952 | -0.336 | -0.1368 | 0.0000 | 0.0000 | 0.0000 | -2.545 | -0.336 | 99.86 |
| SNB-WL-E3S | 0.1936 | -0.337 | -0.1367 | 0.0000 | 0.0000 | 0.0000 | 1.564 | -2.036 | 99.86 |
| SNB-WL-F1S | 0.1229 | -0.2128 | -0.208 | 0.0000 | 0.0000 | 0.0000 | 1.69 | -2.927 | 79.79 |
| SNB-WL-F2S | 0.1248 | -0.2138 | -0.1991 | 0.0000 | 0.0000 | 0.0000 | -3.009 | -0.2138 | 79.8 |
| SNB-WL-F3S | 0.1229 | -0.2149 | -0.1993 | 0.0000 | 0.0000 | 0.0000 | 1.69 | 2.499 | 79.8 |
| SNB-WL-G1S | 0.06859 | -0.1188 | -0.2448 | 0.0000 | 0.0000 | 0.0000 | 1.832 | -3.174 | 59.76 |
| SNB-WL-G2S | 0.07067 | -0.1199 | -0.2456 | 0.0000 | 0.0000 | 0.0000 | -3.457 | -0.1199 | 59.75 |
| SNB-WL-G3S | 0.06856 | -0.1211 | -0.2457 | 0.0000 | 0.0000 | 0.0000 | 1.832 | 2.934 | 59.75 |
| SNB-WL-H1S | 0.03035 | -0.05256 | -0.2405 | 0.0000 | 0.0000 | 0.0000 | 1.991 | -3.448 | 39.76 |
| SNB-WL-H2S | 0.03265 | -0.05382 | -0.2495 | 0.0000 | 0.0000 | 0.0000 | -3.888 | -0.05382 | 39.75 |
| SNB-WL-H3S | 0.03031 | -0.05518 | -0.2495 | 0.0000 | 0.0000 | 0.0000 | 1.991 | 3.34 | 39.75 |
| SNB-WL-I1S | 0.007459 | -0.01292 | -0.1807 | 0.0000 | 0.0000 | 0.0000 | 2.164 | -3.749 | 19.82 |
| SNB-WL-I2S | 0.009999 | -0.01434 | -0.1994 | 0.0000 | 0.0000 | 0.0000 | -4.304 | -0.01434 | 19.8 |
| SNB-WL-I3S | 0.007426 | -0.01583 | -0.1993 | 0.0000 | 0.0000 | 0.0000 | 2.164 | 3.72 | 19.8 |
| RohnAa1 | 0.5755 | -0.9951 | -0.1048 | 0.5579 | 0.3151 | 0.0218 | -1.69 | -4.918 | 174.9 |
| RohnAa2 | 0.5783 | -0.9978 | -0.03003 | 0.5556 | 0.3177 | 0.0002 | -1.687 | 2.925 | 175 |
| RohnAb1 | 0.5483 | -0.9459 | -0.1034 | 0.5565 | 0.3265 | -0.0220 | -1.815 | -5.04 | 169.9 |
| RohnAb2 | 0.5512 | -0.9498 | -0.02584 | 0.5583 | 0.3210 | -0.0001 | -1.812 | 3.144 | 170 |

| Joint Label | X (kips) | Y (kips) | Z (kips) | Comp. Usage % | Uplift Result. Force (kips) | Result. Force (kips) | X Moment (ft-k) | Y Moment (ft-k) | Z Moment (ft-k) | X-M. Usage % | Y-M. Usage % | Z-M. Usage % | Max. Usage |
|-------------|----------|------------|-----------|---------------|-----------------------------|----------------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|------------|
| RohnAc1 | 0.519 | -0.8977 | -0.1019 | 0.5589 | 0.3208 | -0.0220 | -1.943 | -5.162 | 164.9 | | | | |
| RohnAc2 | 0.5226 | -0.9009 | -0.02184 | 0.5496 | 0.3187 | 0.0000 | -1.939 | 3.363 | 165 | | | | |
| RohnBa1 | 0.4636 | -0.8017 | -0.0987 | 0.5425 | 0.3061 | 0.0212 | -2.195 | -5.407 | 154.9 | | | | |
| RohnBa2 | 0.4674 | -0.8055 | -0.01433 | 0.5426 | 0.3153 | 0.0001 | -2.192 | 3.801 | 155 | | | | |
| RohnBb1 | 0.4378 | -0.7539 | -0.09709 | 0.5409 | 0.3172 | 0.0214 | -2.32 | -5.53 | 149.9 | | | | |
| RohnBb2 | 0.4404 | -0.7586 | -0.01074 | 0.5409 | 0.3174 | 0.0001 | -2.317 | 4.018 | 150 | | | | |
| RohnBc1 | 0.4087 | -0.7072 | -0.09522 | 0.5381 | 0.3120 | 0.0212 | -2.447 | -5.654 | 144.9 | | | | |
| RohnBc2 | 0.4125 | -0.7106 | -0.07251 | 0.5289 | 0.3067 | 0.0000 | -2.444 | 4.236 | 145 | | | | |
| RohnCa1 | 0.3492 | -0.6014 | -0.09081 | 0.5014 | 0.3110 | 0.0203 | -2.736 | -5.945 | 133.2 | | | | |
| RohnCa2 | 0.3514 | -0.6053 | -0.2916 | 0.5254 | 0.3053 | 0.0001 | -2.734 | 4.739 | 133.3 | | | | |
| RohnCb1 | 0.3138 | -0.5421 | -0.08795 | 0.5125 | 0.2843 | 0.0199 | -2.903 | -6.113 | 126.6 | | | | |
| RohnCb2 | 0.3171 | -0.5462 | 0.003783 | 0.4839 | 0.2805 | 0.0000 | -2.9 | 5.025 | 126.7 | | | | |
| RohnDa1 | 0.2505 | -0.4321 | -0.08128 | 0.4403 | 0.2724 | 0.0179 | -3.228 | -6.457 | 113.3 | | | | |
| RohnDa2 | 0.2534 | -0.4364 | 0.008885 | 0.4583 | 0.2657 | 0.0000 | -3.225 | 5.588 | 113.3 | | | | |
| RohnDb1 | 0.2209 | -0.3805 | -0.07711 | 0.4306 | 0.2334 | 0.0166 | -3.389 | -6.633 | 106.6 | | | | |
| RohnDb2 | 0.2242 | -0.3866 | 0.01021 | 0.4113 | 0.2287 | 0.0000 | -3.385 | 5.866 | 106.7 | | | | |
| RohnEa1 | 0.1694 | -0.2898 | -0.06888 | 0.3423 | 0.2224 | 0.0143 | -3.702 | -6.996 | 93.27 | | | | |
| RohnEa2 | 0.172 | -0.2961 | 0.01193 | 0.3772 | 0.2190 | 0.0000 | -3.7 | 6.41 | 93.35 | | | | |
| RohnEb1 | 0.1454 | -0.2504 | -0.06458 | 0.3578 | 0.1792 | 0.0134 | -3.858 | -7.184 | 86.6 | | | | |
| RohnEb2 | 0.1476 | -0.2541 | 0.01288 | 0.3180 | 0.1847 | 0.0000 | -3.855 | 6.679 | 86.67 | | | | |
| RohnFa1 | 0.0911 | -0.1628 | -0.05232 | 0.2783 | 0.1473 | 0.0105 | -4.24 | -7.664 | 69.95 | | | | |
| RohnFa2 | 0.09572 | -0.1646 | 0.01285 | 0.2580 | 0.1497 | 0.0000 | -4.235 | 7.336 | 70.01 | | | | |
| RohnGa1 | 0.04631 | -0.08401 | -0.03831 | 0.1907 | 0.1097 | 0.0076 | -4.678 | -8.266 | 49.96 | | | | |
| RohnGa2 | 0.04931 | -0.08462 | 0.01023 | 0.1884 | 0.1094 | 0.0000 | -4.675 | 8.098 | 50.01 | | | | |
| RohnHa1 | 0.01595 | -0.02944 | -0.02331 | 0.0990 | 0.0709 | 0.0044 | -5.102 | -8.894 | 29.98 | | | | |
| RohnHa2 | 0.01911 | -0.03265 | 0.006521 | 0.1285 | 0.0747 | 0.0000 | -5.099 | 8.832 | 30.01 | | | | |
| RohnIa1 | 0.003319 | 0.0003166 | -0.007962 | 0.0154 | 0.0389 | 0.0017 | -5.509 | -9.548 | 9.992 | | | | |
| RohnIa2 | 0.005566 | -0.008493 | 0.001687 | 0.0724 | 0.0424 | 0.0000 | -5.507 | 9.538 | 10 | | | | |
| SNB-Aa1 | 0.5764 | -0.9978 | -0.09113 | 0.5598 | 0.3184 | 0.0220 | -1.194 | -3.677 | 154.9 | | | | |
| SNB-Aa2 | 0.5767 | -0.9978 | -0.04867 | 0.5546 | 0.3194 | 0.0000 | -1.193 | 2.068 | 155 | | | | |
| SNB-Ab1 | 0.549 | -0.9472 | -0.08992 | 0.5549 | 0.3223 | 0.0220 | -1.193 | -3.799 | 149.9 | | | | |
| SNB-Ab2 | 0.5492 | -0.9499 | -0.04431 | 0.5578 | 0.3233 | 0.0000 | -1.145 | 2.285 | 150 | | | | |
| SNB-Ac1 | 0.5202 | -0.8994 | -0.08858 | 0.5571 | 0.3166 | 0.0219 | -0.9418 | -3.923 | 144.9 | | | | |
| SNB-Ac2 | 0.5207 | -0.9009 | 0.04001 | 0.5496 | 0.3187 | 0.0001 | -0.9413 | 1.631 | 165 | | | | |
| SNB-Ba1 | 0.4649 | -0.8034 | -0.06587 | 0.5490 | 0.3167 | 0.0217 | -1.194 | -3.677 | 154.9 | | | | |
| SNB-Ba2 | 0.4654 | -0.8052 | -0.03179 | 0.5431 | 0.3144 | 0.0000 | -1.193 | 2.068 | 155 | | | | |
| SNB-Bb1 | 0.438 | -0.755 | -0.08446 | 0.5380 | 0.3117 | 0.0213 | -1.319 | -3.799 | 149.9 | | | | |
| SNB-Bb2 | 0.4385 | -0.7586 | -0.02786 | 0.5458 | 0.3155 | 0.0000 | -1.319 | 2.285 | 150 | | | | |
| SNB-Bc1 | 0.4105 | -0.7092 | -0.08289 | 0.5334 | 0.3070 | 0.0210 | -1.445 | -3.923 | 144.9 | | | | |
| SNB-Bc2 | 0.4107 | -0.7106 | -0.02395 | 0.5309 | 0.3069 | 0.0000 | -1.445 | 2.503 | 145 | | | | |
| SNB-Ca1 | 0.3488 | -0.6021 | -0.07914 | 0.4971 | 0.3073 | 0.0201 | -1.736 | -4.214 | 133.3 | | | | |
| SNB-Ca2 | 0.3498 | -0.6021 | -0.01589 | 0.5276 | 0.3050 | 0.0000 | -1.735 | 3.006 | 133.3 | | | | |
| SNB-Cb1 | 0.3146 | -0.5435 | -0.07651 | 0.5088 | 0.2753 | 0.0196 | -1.902 | -4.383 | 126.6 | | | | |
| SNB-Cb2 | 0.3156 | -0.5461 | -0.01166 | 0.4837 | 0.2795 | 0.0000 | -1.901 | 3.293 | 126.6 | | | | |
| SNB-Da1 | 0.2505 | -0.4331 | -0.07073 | 0.4410 | 0.2720 | 0.0179 | -2.228 | -4.726 | 113.3 | | | | |
| SNB-Da2 | 0.2521 | -0.4362 | -0.005475 | 0.4585 | 0.2650 | 0.0000 | -2.226 | 3.856 | 113.3 | | | | |
| SNB-Db1 | 0.2214 | -0.3817 | -0.06713 | 0.4311 | 0.2323 | 0.0166 | -2.388 | -4.902 | 106.6 | | | | |
| SNB-Db2 | 0.2229 | -0.3857 | -0.003306 | 0.4125 | 0.2395 | 0.0000 | -2.387 | 4.134 | 106.7 | | | | |
| SNB-Ea1 | 0.17 | -0.2911 | -0.06038 | 0.4429 | 0.2210 | 0.0142 | -2.702 | -5.265 | 93.28 | | | | |
| SNB-Ea2 | 0.1709 | -0.2958 | 0.0003375 | 0.3782 | 0.2186 | 0.0000 | -2.701 | 4.678 | 93.34 | | | | |
| SNB-Eb1 | 0.1457 | -0.2515 | -0.05683 | 0.3564 | 0.1819 | 0.0134 | -2.857 | -5.453 | 86.6 | | | | |
| SNB-Eb2 | 0.1466 | -0.2537 | 0.002522 | 0.3200 | 0.1849 | 0.0000 | -2.856 | 4.948 | 86.66 | | | | |
| SNB-Fa1 | 0.09166 | -0.164 | -0.0474 | 0.2809 | 0.1474 | 0.0106 | -3.239 | -5.933 | 69.95 | | | | |
| SNB-Fa2 | 0.09487 | -0.1642 | 0.005443 | 0.2576 | 0.1489 | 0.0000 | -3.236 | 5.605 | 70.01 | | | | |
| SNB-Ga1 | 0.04591 | -0.08468 | -0.03517 | 0.1943 | 0.1067 | 0.0075 | -3.678 | -6.535 | 49.96 | | | | |
| SNB-Ga2 | 0.04861 | -0.08412 | 0.006265 | 0.1863 | 0.1076 | 0.0000 | -3.675 | 6.366 | 50.01 | | | | |
| SNB-Ha1 | 0.01557 | -0.03011 | -0.0219 | 0.1002 | 0.0720 | 0.0044 | -4.102 | -7.161 | 29.98 | | | | |
| SNB-Ha2 | 0.01854 | -0.03208 | 0.004778 | 0.1285 | 0.0742 | 0.0000 | -4.099 | 7.099 | 30 | | | | |
| SNB-Ia1 | 0.002295 | 5.352e-006 | -0.007907 | 0.0175 | 0.0358 | 0.0016 | -4.508 | -7.813 | 9.992 | | | | |
| SNB-Ia2 | 0.005114 | -0.008851 | 0.001347 | 0.0695 | 0.0401 | 0.0000 | -4.506 | 7.804 | 10 | | | | |

Joint Support Reactions for Load Case "W-I -60 deg":

| | | | | | | | | | | | | | | | | |
|--------|--------|-----|-------|-----|---------|-----|-----|--------|-----|--------|-----|------|-----|-------|-----|-----|
| RohnJP | 0.21 | 0.0 | 1.57 | 0.0 | 149.29 | 0.0 | 0.0 | 149.30 | 0.0 | -0.50 | 0.0 | 2.3 | 0.0 | -0.02 | 0.0 | 0.0 |
| SNB-JP | 6.91 | 0.0 | 2.68 | 0.0 | 175.50 | 0.0 | 0.0 | 175.66 | 0.0 | 0.73 | 0.0 | 3.3 | 0.0 | 0.03 | 0.0 | 0.0 |
| RohnJ1 | -1.33 | 0.0 | 0.52 | 0.0 | 149.16 | 0.0 | 0.0 | 149.17 | 0.0 | 1.78 | 0.0 | -1.5 | 0.0 | 0.02 | 0.0 | 0.0 |
| RohnJ2 | -14.66 | 0.0 | 25.22 | 0.0 | -239.97 | 0.0 | 0.0 | 241.74 | 0.0 | -6.33 | 0.0 | -3.7 | 0.0 | -0.00 | 0.0 | 0.0 |
| SNB-J1 | -5.76 | 0.0 | -4.66 | 0.0 | 175.40 | 0.0 | 0.0 | 175.56 | 0.0 | 3.19 | 0.0 | -1.0 | 0.0 | -0.03 | 0.0 | 0.0 |
| SNB-J2 | -27.45 | 0.0 | 47.52 | 0.0 | -292.96 | 0.0 | 0.0 | 298.05 | 0.0 | -11.97 | 0.0 | -6.9 | 0.0 | -0.00 | 0.0 | 0.0 |

Joint Displacements, Loads and Member Forces on Joints for Load Case "W+I -60 deg":

| Joint Label | X External Load (kips) | Y External Load (kips) | Z External Load (kips) | X Member Force (kips) | Y Member Force (kips) | Z Member Force (kips) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) |
|-------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------|--------------|--------------|
| RohnAP | 0.6874 | -1.1905 | -0.5168 | -0.6874 | 1.1905 | 0.5168 | 0.6021 | -1.0474 | -0.1061 |
| RohnBP | 0.7325 | -1.2687 | -0.7107 | -0.7325 | 1.2687 | 0.7107 | 0.4898 | -0.8540 | -0.1004 |
| RohnCP | 0.3486 | -0.6038 | -0.3486 | -0.3486 | 0.6038 | 0.3486 | 0.3803 | -0.6654 | -0.0934 |
| RohnDP | 0.6679 | -1.1569 | -0.6679 | -0.6679 | 1.1569 | 0.6679 | 1.5259 | -0.2782 | -0.4889 |
| RohnEP | 0.2758 | -0.4776 | -0.2758 | -0.2758 | 0.4776 | 0.2758 | 0.8302 | -0.1908 | -0.3373 |
| RohnFP | 0.3499 | -0.6061 | -0.3499 | -0.3499 | 0.6061 | 0.3499 | 1.1116 | -0.2143 | -0.0605 |
| RohnGP | 0.3305 | -0.5724 | -0.3305 | -0.3305 | 0.5724 | 0.3305 | 1.3426 | -0.0621 | -0.1202 |
| RohnHP | 0.3120 | -0.5404 | -0.3120 | -0.3120 | 0.5404 | 0.3120 | 1.4805 | 0.0237 | -0.0536 |
| RohnIP | 0.3445 | -0.5967 | -0.3445 | -0.3445 | 0.5967 | 0.3445 | 1.7490 | 0.0025 | -0.0142 |
| RohnJP | 0.1827 | -0.3165 | -0.1827 | -0.1827 | 0.3165 | 0.1827 | 1.4831 | 0.0000 | 0.0000 |
| SNB-AP | 0.0705 | -0.1221 | -0.0705 | -0.0705 | 0.1221 | 0.0705 | 0.6029 | -1.0458 | -0.0924 |
| SNB-BP | 0.1665 | -0.2884 | -0.1665 | -0.1665 | 0.2884 | 0.1665 | 0.3359 | -0.4906 | -0.8521 |
| SNB-CP | 0.2298 | -0.3990 | -0.2298 | -0.2298 | 0.3990 | 0.2298 | 0.5256 | -0.3811 | -0.6636 |
| SNB-DP | 0.2700 | -0.4677 | -0.2700 | -0.2700 | 0.4677 | 0.2700 | 0.6860 | -0.2790 | -0.4880 |
| SNB-EP | 0.2758 | -0.4776 | -0.2758 | -0.2758 | 0.4776 | 0.2758 | 0.8302 | -0.1916 | -0.3362 |
| SNB-FP | 0.3080 | -0.5335 | -0.3080 | -0.3080 | 0.5335 | 0.3080 | 1.0901 | -0.1189 | -0.2141 |
| SNB-GP | 0.3305 | -0.5426 | -0.3305 | -0.3305 | 0.5426 | 0.3305 | 1.3426 | 0.0629 | -0.1198 |
| SNB-HP | 0.3120 | -0.5404 | -0.3120 | -0.3120 | 0.5404 | 0.3120 | 1.4805 | 0.0245 | -0.0535 |
| SNB-IP | 0.3329 | -0.5765 | -0.3329 | -0.3329 | 0.5765 | 0.3329 | 1.7290 | 0.0033 | -0.0138 |
| SNB-JP | 0.1827 | -0.3165 | -0.1827 | -0.1827 | 0.3165 | 0.1827 | 1.4831 | 0.0000 | 0.0000 |
| RohnA1 | 0.7770 | -1.3458 | -0.5676 | -0.5676 | 1.3458 | 0.5676 | 0.6044 | -1.0430 | -0.1060 |
| RohnA2 | 0.9007 | -1.5601 | -0.7497 | -0.7497 | 1.5601 | 0.7497 | 0.6072 | -1.0472 | -0.1034 |
| RohnB1 | 0.3131 | -0.5423 | -0.4807 | -0.4807 | 0.5423 | 0.4807 | 0.4921 | -0.8487 | -0.1003 |
| RohnB2 | 0.3040 | -0.5265 | -0.4207 | -0.4207 | 0.5265 | 0.4207 | 0.4955 | -0.8536 | -0.1182 |
| RohnC1 | 0.4048 | -0.7011 | -0.9160 | -0.9160 | 0.7011 | 0.9160 | 0.3840 | -0.6502 | -0.0933 |
| RohnC2 | 0.3486 | -0.6038 | -0.5960 | -0.5960 | 0.6038 | 0.5960 | 0.3869 | -0.6663 | -0.0043 |
| RohnD1 | 0.6679 | -1.1569 | -0.6679 | -0.6679 | 1.1569 | 0.6679 | 1.5259 | -0.2826 | -0.4840 |
| RohnD2 | 0.6679 | -1.1569 | -0.6679 | -0.6679 | 1.1569 | 0.6679 | 1.5259 | -0.2826 | -0.4840 |
| RohnE1 | 0.2758 | -0.4776 | -0.2758 | -0.2758 | 0.4776 | 0.2758 | 0.8302 | -0.1953 | -0.3328 |
| RohnE2 | 0.2758 | -0.4776 | -0.2758 | -0.2758 | 0.4776 | 0.2758 | 0.8302 | -0.1953 | -0.3328 |
| RohnF1 | 0.3978 | -0.6890 | -1.1611 | -1.1611 | 0.6890 | 1.1611 | 0.1255 | -0.2088 | -0.0604 |
| RohnF2 | 0.3499 | -0.6061 | -1.1116 | -1.1116 | 0.6061 | 1.1116 | 0.1278 | -0.2199 | -0.0130 |
| RohnG1 | 0.3442 | -0.5963 | -1.3626 | -1.3626 | 0.5963 | 1.3626 | 0.0723 | -0.1134 | -0.0455 |
| RohnG2 | 0.3442 | -0.5963 | -1.3626 | -1.3626 | 0.5963 | 1.3626 | 0.0723 | -0.1134 | -0.0455 |
| RohnH1 | 0.3120 | -0.5404 | -1.4805 | -1.4805 | 0.5404 | 1.4805 | 0.0341 | -0.0471 | -0.0313 |
| RohnH2 | 0.3120 | -0.5404 | -1.4805 | -1.4805 | 0.5404 | 1.4805 | 0.0341 | -0.0471 | -0.0313 |
| RohnI1 | 0.3329 | -0.5765 | -1.7290 | -1.7290 | 0.5765 | 1.7290 | 0.0108 | -0.0091 | -0.0152 |
| RohnI2 | 0.3329 | -0.5765 | -1.7290 | -1.7290 | 0.5765 | 1.7290 | 0.0108 | -0.0091 | -0.0152 |
| RohnJ1 | 0.1827 | -0.3165 | -0.9701 | -0.9701 | 0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| RohnJ2 | 0.1827 | -0.3165 | -0.9701 | -0.9701 | 0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| SNB-A1 | 0.0705 | -0.1221 | -0.0705 | -0.0705 | 0.1221 | 0.0705 | 0.6029 | -1.0444 | -0.0923 |
| SNB-A2 | 0.0705 | -0.1221 | -0.0705 | -0.0705 | 0.1221 | 0.0705 | 0.6029 | -1.0444 | -0.0923 |
| SNB-B1 | 0.1665 | -0.2884 | -0.1665 | -0.1665 | 0.2884 | 0.1665 | 0.3359 | -0.4933 | -0.8504 |
| SNB-B2 | 0.1665 | -0.2884 | -0.1665 | -0.1665 | 0.2884 | 0.1665 | 0.3359 | -0.4933 | -0.8504 |
| SNB-C1 | 0.2298 | -0.3990 | -0.2298 | -0.2298 | 0.3990 | 0.2298 | 0.5256 | -0.3845 | -0.6615 |
| SNB-C2 | 0.2298 | -0.3990 | -0.2298 | -0.2298 | 0.3990 | 0.2298 | 0.5256 | -0.3845 | -0.6615 |
| SNB-D1 | 0.2700 | -0.4677 | -0.2700 | -0.2700 | 0.4677 | 0.2700 | 0.6860 | -0.2834 | -0.4854 |
| SNB-D2 | 0.2700 | -0.4677 | -0.2700 | -0.2700 | 0.4677 | 0.2700 | 0.6860 | -0.2834 | -0.4854 |
| SNB-E1 | 0.2758 | -0.4776 | -0.2758 | -0.2758 | 0.4776 | 0.2758 | 0.8302 | -0.1955 | -0.3338 |
| SNB-E2 | 0.2758 | -0.4776 | -0.2758 | -0.2758 | 0.4776 | 0.2758 | 0.8302 | -0.1955 | -0.3338 |
| SNB-F1 | 0.3080 | -0.5335 | -1.0901 | -1.0901 | 0.5335 | 1.0901 | 0.1260 | -0.2100 | -0.0535 |

| | | | | | | | | |
|---------|--------|---------|---------|--------|-----------|---------|---------|---------|
| SNB-F2 | 0.3080 | -1.0901 | -0.3080 | 0.5335 | 1.0901 | 0.1268 | -0.2195 | 0.0037 |
| SNB-G1 | 0.3305 | -1.3426 | -0.3305 | 0.5724 | 1.3426 | 0.0723 | -0.1144 | -0.0416 |
| SNB-G2 | 0.3305 | -1.3426 | -0.3305 | 0.5724 | 1.3426 | 0.0735 | -0.1271 | 0.0055 |
| SNB-H1 | 0.3120 | -1.4805 | -0.3120 | 0.5404 | 1.4805 | 0.0341 | -0.0480 | -0.0289 |
| SNB-H2 | 0.3120 | -1.4805 | -0.3120 | 0.5404 | 1.4805 | 0.0352 | -0.0609 | 0.0057 |
| SNB-I1 | 0.3329 | -1.7290 | -0.3329 | 0.5765 | 1.7290 | 0.0103 | -0.0097 | -0.0146 |
| SNB-I2 | 0.3329 | -1.7290 | -0.3329 | 0.5765 | 1.7290 | 0.0112 | -0.0194 | 0.0029 |
| SNB-J1 | 0.1827 | -0.3165 | -0.3165 | 4.9725 | -174.4335 | 0.0000 | 0.0000 | 0.0000 |
| SNB-J2 | 0.1827 | -0.3165 | -0.3165 | 4.9725 | -174.4335 | 0.0000 | 0.0000 | 0.0000 |
| RohnAas | 0.6205 | -1.0747 | -0.3652 | 1.0747 | 293.9288 | 0.5751 | -0.9992 | -0.1049 |
| RohnAbs | 0.0965 | -0.1671 | -0.0965 | 0.1671 | 0.1602 | 0.5458 | -0.9500 | -0.1035 |
| RohnAcs | 0.0797 | -0.1380 | -0.0797 | 0.1380 | 0.1552 | 0.5188 | -0.9014 | -0.1020 |
| RohnBas | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.4632 | -0.8056 | -0.0988 |
| RohnBbs | 0.9254 | -1.6028 | -0.9254 | 1.6028 | 1.1757 | 0.4347 | -0.7591 | -0.0572 |
| RohnBcs | 0.1652 | -0.2861 | -0.1652 | 0.2861 | 0.4457 | 0.4087 | -0.7104 | -0.0953 |
| RohnCas | 1.1340 | -1.9642 | -1.1340 | 1.9642 | 1.2307 | 0.3467 | -0.6057 | -0.0909 |
| RohnCbs | 0.1337 | -0.2317 | -0.1337 | 0.2317 | 0.3250 | 0.3130 | -0.5451 | -0.0880 |
| RohnDas | 0.2007 | -0.3477 | -0.2007 | 0.3477 | 0.6061 | 0.2493 | -0.4352 | -0.0814 |
| RohnDbs | 0.1363 | -0.2360 | -0.1363 | 0.2360 | 0.3611 | 0.2193 | -0.3834 | -0.0772 |
| RohnEas | 0.1395 | -0.2416 | -0.1395 | 0.2416 | 0.4692 | 0.1665 | -0.2932 | -0.0689 |
| RohnEbs | 0.1624 | -0.2813 | -0.1624 | 0.2813 | 0.5442 | 0.1443 | -0.2526 | -0.0646 |
| RohnFas | 0.1686 | -0.2920 | -0.1686 | 0.2920 | 0.6209 | 0.0955 | -0.1614 | -0.0530 |
| RohnFbs | 0.1619 | -0.2804 | -0.1619 | 0.2804 | 0.7217 | 0.0496 | -0.0828 | -0.0383 |
| RohnFas | 0.1501 | -0.2600 | -0.1501 | 0.2600 | 0.7589 | 0.0175 | -0.0290 | -0.0233 |
| RohnFbs | 0.1827 | -0.3165 | -0.1827 | 0.3165 | 0.9701 | -0.0019 | -0.0029 | -0.0080 |
| RohnFas | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.5760 | -0.9971 | -0.0912 |
| RohnFbs | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.5466 | -0.9486 | -0.0900 |
| RohnFas | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.5197 | -0.8999 | -0.0886 |
| RohnFbs | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.4641 | -0.8041 | -0.0859 |
| RohnFas | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.4355 | -0.7566 | -0.0845 |
| RohnFbs | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.4095 | -0.7099 | -0.0829 |
| RohnFas | 0.1337 | -0.2317 | -0.1337 | 0.2317 | 0.3250 | 0.3475 | -0.6030 | -0.0792 |
| RohnFbs | 0.1337 | -0.2317 | -0.1337 | 0.2317 | 0.3250 | 0.3138 | -0.5441 | -0.0765 |
| RohnFas | 0.1363 | -0.2360 | -0.1363 | 0.2360 | 0.3611 | 0.2501 | -0.4334 | -0.0708 |
| RohnFbs | 0.1363 | -0.2360 | -0.1363 | 0.2360 | 0.3611 | 0.2201 | -0.3825 | -0.0672 |
| RohnFas | 0.1395 | -0.2416 | -0.1395 | 0.2416 | 0.4692 | 0.1673 | -0.2927 | -0.0604 |
| RohnFbs | 0.1395 | -0.2416 | -0.1395 | 0.2416 | 0.4692 | 0.1451 | -0.2519 | -0.0569 |
| RohnFas | 0.1686 | -0.2920 | -0.1686 | 0.2920 | 0.6209 | 0.0963 | -0.1614 | -0.0474 |
| RohnFbs | 0.1619 | -0.2804 | -0.1619 | 0.2804 | 0.7217 | 0.0504 | -0.0821 | -0.0352 |
| RohnFas | 0.1501 | -0.2600 | -0.1501 | 0.2600 | 0.7589 | 0.0183 | -0.0286 | -0.0219 |
| RohnFbs | 0.1827 | -0.3165 | -0.1827 | 0.3165 | 0.9701 | -0.0012 | -0.0020 | -0.0079 |
| RohnFas | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.6035 | -1.0449 | -0.1416 |
| RohnFbs | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.6047 | -1.0454 | -0.1190 |
| RohnFas | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.6040 | -1.0458 | -0.1217 |
| RohnFbs | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.4918 | -0.8509 | -0.1453 |
| RohnFas | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.4928 | -0.8515 | -0.1171 |
| RohnFbs | 0.0705 | -0.1221 | -0.0705 | 0.1221 | 0.1352 | 0.4919 | -0.8521 | -0.1178 |
| RohnFas | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.3828 | -0.6625 | -0.1553 |
| RohnFbs | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.3840 | -0.6632 | -0.1364 |
| RohnFas | 0.0960 | -0.1663 | -0.0960 | 0.1663 | 0.2007 | 0.3829 | -0.6639 | -0.1367 |
| RohnFbs | 0.1337 | -0.2317 | -0.1337 | 0.2317 | 0.3250 | 0.2812 | -0.4867 | -0.1722 |
| RohnFas | 0.1337 | -0.2317 | -0.1337 | 0.2317 | 0.3250 | 0.2827 | -0.4875 | -0.1500 |
| RohnFbs | 0.1363 | -0.2360 | -0.1363 | 0.2360 | 0.3611 | 0.2813 | -0.4884 | -0.1502 |
| RohnFas | 0.1363 | -0.2360 | -0.1363 | 0.2360 | 0.3611 | 0.1936 | -0.3352 | -0.1461 |
| RohnFbs | 0.1363 | -0.2360 | -0.1363 | 0.2360 | 0.3611 | 0.1952 | -0.3360 | -0.1368 |
| RohnFas | 0.1395 | -0.2416 | -0.1395 | 0.2416 | 0.4692 | 0.1936 | -0.3370 | -0.1367 |
| RohnFbs | 0.1395 | -0.2416 | -0.1395 | 0.2416 | 0.4692 | 0.1229 | -0.2128 | -0.2080 |
| RohnFas | 0.1395 | -0.2416 | -0.1395 | 0.2416 | 0.4692 | 0.1248 | -0.2138 | -0.1991 |
| RohnFbs | 0.1686 | -0.2920 | -0.1686 | 0.2920 | 0.6209 | 0.1229 | -0.2149 | -0.1993 |
| RohnFas | 0.1686 | -0.2920 | -0.1686 | 0.2920 | 0.6209 | 0.0686 | -0.1188 | -0.2448 |
| RohnFbs | 0.1686 | -0.2920 | -0.1686 | 0.2920 | 0.6209 | 0.0707 | -0.1199 | -0.2456 |
| RohnFas | 0.1686 | -0.2920 | -0.1686 | 0.2920 | 0.6209 | 0.0686 | -0.1211 | -0.2457 |
| RohnFbs | 0.1619 | -0.2804 | -0.1619 | 0.2804 | 0.7217 | 0.0327 | -0.0538 | -0.2495 |
| RohnFas | 0.1619 | -0.2804 | -0.1619 | 0.2804 | 0.7217 | 0.0303 | -0.0552 | -0.2495 |
| RohnFbs | 0.1501 | -0.2600 | -0.1501 | 0.2600 | 0.7589 | 0.0075 | -0.0129 | -0.1807 |

| | | | | | | | | | |
|------------|--------|---------|---------|---------|--------|--------|--------|---------|---------|
| SNB-WL-125 | 0.1501 | -0.2600 | -0.7589 | -0.1501 | 0.2600 | 0.7589 | 0.0100 | -0.0143 | -0.1994 |
| SNB-WL-135 | 0.1501 | -0.2600 | -0.7589 | -0.1501 | 0.2600 | 0.7589 | 0.0074 | -0.0158 | -0.1993 |
| RohnAa1 | 0.1928 | -0.3340 | -0.2050 | -0.1928 | 0.3340 | 0.2050 | 0.5755 | -0.9951 | -0.1048 |
| RohnAa2 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5783 | -0.9978 | -0.0300 |
| RohnAb1 | 0.6085 | -1.0540 | -0.3552 | -0.6085 | 1.0540 | 0.3552 | 0.5483 | -0.9459 | -0.1034 |
| RohnAb2 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5512 | -0.9498 | -0.0258 |
| RohnAc1 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5190 | -0.8977 | -0.1019 |
| RohnAc2 | 0.2272 | -0.3936 | -0.2277 | -0.2272 | 0.3936 | 0.2277 | 0.5226 | -0.9009 | -0.0218 |
| RohnBa1 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4636 | -0.8017 | -0.0987 |
| RohnBa2 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4674 | -0.8050 | -0.0143 |
| RohnBb1 | 0.9026 | -1.5634 | -1.1557 | -0.9026 | 1.5634 | 1.1557 | 0.4378 | -0.7539 | -0.0971 |
| RohnBb2 | 0.9026 | -1.5634 | -1.1557 | -0.9026 | 1.5634 | 1.1557 | 0.4404 | -0.7586 | -0.0107 |
| RohnBc1 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4087 | -0.7072 | -0.0952 |
| RohnBc2 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4125 | -0.7106 | -0.0073 |
| RohnCa1 | 1.1340 | -2.1340 | -1.2307 | -1.1340 | 1.9642 | 1.2307 | 0.3492 | -0.6014 | -0.0908 |
| RohnCa2 | 1.2336 | -2.1336 | -1.2337 | -1.2336 | 2.1336 | 1.2337 | 0.3514 | -0.6053 | -0.0001 |
| RohnCb1 | 0.1337 | -0.2317 | -0.3250 | -0.1337 | 0.2317 | 0.3250 | 0.3138 | -0.5421 | -0.0880 |
| RohnCb2 | 0.1337 | -0.2317 | -0.3250 | -0.1337 | 0.2317 | 0.3250 | 0.3171 | -0.5462 | 0.0038 |
| RohnDa1 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2505 | -0.4321 | -0.0813 |
| RohnDa2 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2534 | -0.4364 | 0.0089 |
| RohnDb1 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2209 | -0.3805 | -0.0771 |
| RohnDb2 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2242 | -0.3860 | 0.0102 |
| RohnEa1 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1694 | -0.2898 | -0.0689 |
| RohnEa2 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1720 | -0.2961 | 0.0119 |
| RohnEb1 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1454 | -0.2504 | -0.0646 |
| RohnEb2 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1476 | -0.2541 | 0.0129 |
| RohnFa1 | 0.1686 | -0.2920 | -0.6209 | -0.1686 | 0.2920 | 0.6209 | 0.0911 | -0.1628 | -0.0529 |
| RohnFa2 | 0.1686 | -0.2920 | -0.6209 | -0.1686 | 0.2920 | 0.6209 | 0.0957 | -0.1646 | 0.0127 |
| RohnGa1 | 0.1619 | -0.2804 | -0.7217 | -0.1619 | 0.2804 | 0.7217 | 0.0463 | -0.0840 | -0.0383 |
| RohnGa2 | 0.1619 | -0.2804 | -0.7217 | -0.1619 | 0.2804 | 0.7217 | 0.0493 | -0.0846 | 0.0102 |
| RohnHa1 | 0.1501 | -0.2600 | -0.7589 | -0.1501 | 0.2600 | 0.7589 | 0.0160 | -0.0294 | -0.0233 |
| RohnHa2 | 0.1501 | -0.2600 | -0.7589 | -0.1501 | 0.2600 | 0.7589 | 0.0191 | -0.0326 | 0.0065 |
| RohnIa1 | 0.1827 | -0.3165 | -0.9701 | -0.1827 | 0.3165 | 0.9701 | 0.0033 | 0.0003 | -0.0080 |
| RohnIa2 | 0.1827 | -0.3165 | -0.9701 | -0.1827 | 0.3165 | 0.9701 | 0.0056 | -0.0095 | 0.0017 |
| SNB-Aa1 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5764 | -0.9966 | -0.0911 |
| SNB-Aa2 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5767 | -0.9978 | -0.0487 |
| SNB-Ab1 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5490 | -0.9472 | -0.0899 |
| SNB-Ab2 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5492 | -0.9499 | -0.0443 |
| SNB-Ac1 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5202 | -0.8994 | -0.0886 |
| SNB-Ac2 | 0.0705 | -0.1221 | -0.1352 | -0.0705 | 0.1221 | 0.1352 | 0.5207 | -0.9009 | 0.0400 |
| SNB-Ba1 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4649 | -0.8034 | -0.0859 |
| SNB-Ba2 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4654 | -0.8052 | -0.0318 |
| SNB-Bb1 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4380 | -0.7550 | -0.0845 |
| SNB-Bb2 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4385 | -0.7586 | -0.0279 |
| SNB-Bc1 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4105 | -0.7092 | -0.0829 |
| SNB-Bc2 | 0.0960 | -0.1663 | -0.2007 | -0.0960 | 0.1663 | 0.2007 | 0.4107 | -0.7106 | -0.0240 |
| SNB-Ca1 | 0.1337 | -0.2317 | -0.3250 | -0.1337 | 0.2317 | 0.3250 | 0.3488 | -0.6021 | -0.0791 |
| SNB-Ca2 | 0.1337 | -0.2317 | -0.3250 | -0.1337 | 0.2317 | 0.3250 | 0.3498 | -0.6052 | -0.0159 |
| SNB-Cb1 | 0.1337 | -0.2317 | -0.3250 | -0.1337 | 0.2317 | 0.3250 | 0.3146 | -0.5435 | -0.0765 |
| SNB-Cb2 | 0.1337 | -0.2317 | -0.3250 | -0.1337 | 0.2317 | 0.3250 | 0.3156 | -0.5461 | -0.0117 |
| SNB-Da1 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2505 | -0.4331 | -0.0707 |
| SNB-Da2 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2521 | -0.4362 | -0.0055 |
| SNB-Db1 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2214 | -0.3817 | -0.0671 |
| SNB-Db2 | 0.1363 | -0.2360 | -0.3611 | -0.1363 | 0.2360 | 0.3611 | 0.2229 | -0.3857 | -0.0033 |
| SNB-Ea1 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1700 | -0.2911 | -0.0604 |
| SNB-Ea2 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1709 | -0.2958 | -0.0003 |
| SNB-Eb1 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1457 | -0.2515 | -0.0568 |
| SNB-Eb2 | 0.1395 | -0.2416 | -0.4692 | -0.1395 | 0.2416 | 0.4692 | 0.1466 | -0.2537 | -0.0025 |
| SNB-Fa1 | 0.1686 | -0.2920 | -0.6209 | -0.1686 | 0.2920 | 0.6209 | 0.0917 | -0.1640 | -0.0474 |
| SNB-Fa2 | 0.1686 | -0.2920 | -0.6209 | -0.1686 | 0.2920 | 0.6209 | 0.0949 | -0.1642 | -0.0054 |
| SNB-Ga1 | 0.1619 | -0.2804 | -0.7217 | -0.1619 | 0.2804 | 0.7217 | 0.0459 | -0.0847 | -0.0352 |
| SNB-Ga2 | 0.1619 | -0.2804 | -0.7217 | -0.1619 | 0.2804 | 0.7217 | 0.0486 | -0.0841 | 0.0063 |
| SNB-Ha1 | 0.1501 | -0.2600 | -0.7589 | -0.1501 | 0.2600 | 0.7589 | 0.0156 | -0.0301 | -0.0219 |
| SNB-Ha2 | 0.1501 | -0.2600 | -0.7589 | -0.1501 | 0.2600 | 0.7589 | 0.0185 | -0.0321 | -0.0048 |
| SNB-Ia1 | 0.1827 | -0.3165 | -0.9701 | -0.1827 | 0.3165 | 0.9701 | 0.0023 | 0.0000 | -0.0079 |
| SNB-Ia2 | 0.1827 | -0.3165 | -0.9701 | -0.1827 | 0.3165 | 0.9701 | 0.0051 | -0.0089 | -0.0013 |

Moments for Angles Modeled as Beams:

| Angle Torsion Label | (ft-lbs) | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | X Shear (lbs) | Y Shear (lbs) |
|---------------------|----------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|---------------|---------------|
| Rohn-LA1P | 0.00 | 0.00 | 0.00 | -40.51 | -154.04 | -81.10 | -30.80 | | |
| Rohn-LA11 | -0.00 | 0.00 | -0.00 | -78.44 | 125.17 | -15.68 | 25.02 | | |
| Rohn-LA12 | -0.00 | 0.00 | 0.00 | 86.81 | 103.64 | 17.36 | 20.72 | | |
| Rohn-LA2P | 0.01 | 40.51 | 154.04 | 9.25 | 193.95 | 9.95 | 69.58 | | |
| Rohn-LA21 | -0.00 | 78.45 | -125.17 | 85.75 | -184.08 | 32.83 | -61.83 | | |
| Rohn-LA22 | -0.00 | -86.81 | -103.64 | -100.91 | -120.51 | -37.53 | -44.81 | | |
| Rohn-LA3P | 0.02 | -9.25 | -193.95 | 90.41 | -210.44 | 16.23 | -80.85 | | |
| Rohn-LA31 | -0.00 | -85.75 | 184.08 | -98.49 | 213.84 | -36.84 | 79.56 | | |
| Rohn-LA32 | -0.00 | 100.91 | -120.51 | 145.84 | -132.14 | 49.33 | 50.51 | | |
| Rohn-LA4P | 0.01 | -90.41 | 210.44 | -146.40 | 284.82 | -47.35 | 99.02 | | |
| Rohn-LA41 | 0.02 | 98.50 | -213.84 | 181.08 | -239.14 | 55.90 | -90.57 | | |
| Rohn-LA42 | -0.00 | -145.84 | -132.14 | -182.52 | -139.07 | -65.64 | -54.21 | | |
| Rohn-LB1P | 0.02 | 146.40 | -284.81 | 328.28 | -383.45 | 94.91 | -133.61 | | |
| Rohn-LB11 | -0.02 | -181.08 | 239.15 | -176.22 | 460.38 | -71.44 | 139.86 | | |
| Rohn-LB12 | -0.01 | 182.52 | -139.07 | 341.75 | -133.65 | 104.80 | 66.51 | | |
| Rohn-LB2P | 0.00 | -328.27 | 383.45 | -415.35 | 466.56 | -148.68 | 169.95 | | |
| Rohn-LB21 | -0.01 | 176.23 | -460.37 | 198.32 | -585.31 | 74.89 | -209.08 | | |
| Rohn-LB22 | 0.00 | -341.75 | -193.64 | -366.95 | -218.14 | -141.66 | -82.31 | | |
| Rohn-LB3P | 0.01 | 415.36 | -466.56 | 478.92 | -473.74 | 178.01 | -188.01 | | |
| Rohn-LB31 | -0.01 | -198.30 | 585.32 | -169.86 | 643.83 | -73.62 | 245.77 | | |
| Rohn-LB32 | 0.00 | 366.95 | -218.14 | 547.48 | -339.17 | 182.78 | 111.40 | | |
| Rohn-LB4P | -0.10 | -474.91 | 473.75 | -76.22 | 499.16 | -110.20 | 194.54 | | |
| Rohn-LB41 | 0.10 | 169.91 | -643.82 | 385.65 | -319.18 | 111.09 | -192.56 | | |
| Rohn-LB42 | 0.00 | -547.49 | -339.15 | -374.97 | -237.59 | -184.37 | -115.28 | | |
| Rohn-LC1P | 0.04 | 76.22 | -499.15 | -159.02 | -44.35 | -12.43 | -81.59 | | |
| Rohn-LC11 | 0.04 | -385.64 | 319.16 | -112.17 | -110.23 | -74.73 | 31.37 | | |
| Rohn-LC12 | -0.00 | 374.97 | -237.59 | 192.81 | 120.34 | 85.20 | 53.71 | | |
| Rohn-LC2P | -0.03 | 159.02 | -44.35 | 427.64 | -313.01 | 87.81 | -40.21 | | |
| Rohn-LC21 | 0.03 | -112.18 | 110.23 | -59.23 | 523.09 | 7.92 | 94.79 | | |
| Rohn-LC22 | -0.00 | -192.81 | 120.33 | 448.95 | 263.10 | 38.32 | 21.36 | | |
| Rohn-LC3P | -0.15 | -427.63 | 313.02 | 135.85 | 816.00 | -43.80 | 169.49 | | |
| Rohn-LC31 | 0.15 | 59.24 | -523.09 | 762.28 | -306.72 | 123.33 | -124.57 | | |
| Rohn-LC32 | -0.00 | -448.95 | -263.09 | -298.62 | -173.53 | -65.51 | -175.26 | | |
| Rohn-LD1P | 0.02 | -135.85 | -816.00 | 70.58 | -351.35 | -9.80 | 86.09 | | |
| Rohn-LD11 | -0.03 | 762.28 | 306.72 | -248.13 | 266.65 | -151.70 | 73.50 | | |
| Rohn-LD12 | -0.00 | 298.62 | 173.53 | 601.94 | 346.74 | 135.10 | 78.05 | | |
| Rohn-LD2P | -0.08 | -70.58 | 351.35 | 651.97 | 139.62 | 87.03 | 73.50 | | |
| Rohn-LD21 | 0.08 | 248.13 | -266.65 | 433.37 | -478.29 | 102.02 | 31.68 | | |
| Rohn-LD22 | -0.00 | -601.95 | -346.73 | 293.71 | 168.03 | -46.10 | -26.73 | | |
| Rohn-LD3P | -0.09 | -651.97 | -139.62 | -15.58 | 433.61 | -100.23 | 44.14 | | |
| Rohn-LD31 | 0.09 | 433.36 | -478.30 | 374.51 | -222.51 | -8.84 | -105.23 | | |
| Rohn-LD32 | -0.00 | -293.71 | 168.02 | 274.97 | 163.69 | -2.81 | -0.65 | | |
| Rohn-LE1P | 0.05 | 15.58 | -433.61 | 537.52 | 590.50 | 83.04 | 23.56 | | |
| Rohn-LE11 | -0.05 | -374.51 | 222.52 | 772.19 | 162.96 | 59.71 | 57.88 | | |
| Rohn-LE12 | -0.00 | -274.97 | -163.68 | -166.57 | -103.59 | -66.24 | -40.09 | | |
| Rohn-LE2P | 0.20 | -537.52 | 590.50 | 188.32 | -1459.17 | 52.27 | -306.83 | | |
| Rohn-LE21 | -0.20 | 772.18 | -162.97 | -1155.10 | 910.16 | -288.51 | 111.85 | | |
| Rohn-LE22 | -0.00 | 166.57 | 103.59 | 1637.71 | 955.86 | 269.85 | 158.45 | | |
| Rohn-LE3P | -0.17 | -188.32 | 1459.17 | 124.65 | 2752.26 | -9.56 | 632.33 | | |
| Rohn-LE31 | 0.17 | 1155.12 | -910.13 | 2425.91 | -1293.72 | 537.68 | -330.90 | | |
| Rohn-LE32 | -0.00 | -1637.74 | -955.82 | -1491.08 | -865.59 | -469.32 | -273.21 | | |
| Rohn-LF1P | 0.88 | -124.65 | -2752.26 | 1159.99 | -2726.84 | 103.54 | -547.94 | | |
| Rohn-LF11 | -0.87 | 2425.88 | 1293.77 | -1770.70 | 2380.44 | -439.68 | 367.44 | | |
| Rohn-LF12 | -0.00 | 1491.07 | 865.60 | 2733.88 | 1587.72 | 422.04 | 245.07 | | |
| Rohn-LF2P | -1.07 | -1159.98 | 2726.84 | -135.70 | 3974.20 | -129.58 | 670.16 | | |
| Rohn-LF21 | 1.08 | 1770.83 | -2380.35 | 3365.51 | -2113.37 | 513.68 | -449.41 | | |
| Rohn-LF22 | -0.00 | -2733.95 | -1587.61 | -4277.01 | -1320.51 | -500.51 | -290.47 | | |
| Rohn-LG1P | 0.72 | 135.70 | -3974.20 | 1142.17 | -3883.93 | 127.79 | -785.80 | | |
| Rohn-LG11 | -0.72 | -3365.45 | 2113.47 | -2787.29 | 2937.10 | -615.27 | 505.05 | | |

| | | | | | | | |
|-----------|-------|----------|----------|----------|----------|---------|---------|
| Rohn-LG12 | -0.00 | 2276.99 | 1320.54 | 3848.81 | 2227.40 | 611.97 | 354.44 |
| Rohn-LG2P | -0.91 | -1142.16 | 3883.94 | -17.25 | 4366.37 | -115.94 | 825.05 |
| Rohn-LG21 | 0.92 | 2787.43 | -2936.97 | 2768.46 | -2203.42 | 655.60 | -514.05 |
| Rohn-LG22 | -0.00 | -3848.91 | -2227.24 | -2419.87 | -1397.02 | -626.22 | -362.05 |
| Rohn-LH1P | 1.11 | 17.24 | -4366.37 | 1410.15 | -2949.47 | 142.74 | -731.62 |
| Rohn-LH11 | -1.10 | 3768.40 | 2203.52 | 1847.93 | 2697.61 | -561.66 | 490.13 |
| Rohn-LH12 | -0.00 | 2419.85 | 1397.05 | 2866.77 | 1666.82 | 530.07 | 306.05 |
| Rohn-LH2P | -0.58 | -1410.14 | 2949.47 | -237.81 | 2715.37 | -164.81 | 566.53 |
| Rohn-LH21 | 0.58 | 1848.05 | -2697.52 | 2232.75 | -1562.99 | 408.11 | -426.09 |
| Rohn-LH22 | -0.00 | -2886.83 | -1666.73 | -415.85 | -237.36 | -329.89 | -190.19 |
| Rohn-LI1P | 0.59 | 237.81 | -2715.37 | 2540.07 | 1849.90 | 277.78 | -86.54 |
| Rohn-LI11 | -0.60 | -2232.73 | 1563.01 | 2881.59 | 1291.44 | 64.88 | 285.43 |
| Rohn-LI12 | -0.00 | 415.85 | 237.35 | -1158.65 | -683.57 | -74.21 | -44.58 |
| Rohn-LI2P | 0.54 | -2840.07 | -1849.90 | 497.14 | -2287.41 | -204.29 | -413.73 |
| Rohn-LI21 | -0.53 | -2881.58 | -1291.48 | -1781.45 | 1488.55 | -466.31 | 19.71 |
| Rohn-LI22 | -0.00 | 1158.65 | 683.56 | 6332.85 | 3718.32 | 748.41 | 439.75 |
| SNB-LA1P | 0.00 | 0.00 | 0.00 | 10.90 | -209.61 | 2.18 | -41.91 |
| SNB-LA11 | -0.00 | 0.00 | -0.00 | -132.99 | 124.95 | -26.59 | 24.98 |
| SNB-LA12 | -0.00 | 0.00 | 0.00 | 133.84 | 112.82 | 26.76 | 22.56 |
| SNB-LA2P | 0.00 | -10.90 | 209.61 | -19.99 | 264.38 | -6.18 | 94.76 |
| SNB-LA21 | -0.00 | 133.00 | -124.95 | 167.96 | -162.67 | 60.17 | -57.50 |
| SNB-LA22 | 0.00 | -133.84 | -112.82 | -156.05 | -132.73 | -57.95 | -49.09 |
| SNB-LA3P | 0.01 | 19.99 | -264.37 | 62.84 | -230.03 | 16.56 | -110.84 |
| SNB-LA31 | -0.01 | -167.95 | 162.67 | -183.37 | 212.89 | -70.24 | 75.09 |
| SNB-LA32 | -0.00 | 156.05 | 132.73 | 213.52 | 158.06 | 73.88 | 58.13 |
| SNB-LA33 | -0.00 | 167.95 | 132.73 | 213.52 | 158.06 | 73.88 | 58.13 |
| SNB-LA4P | -0.01 | -62.84 | 290.03 | -49.08 | 402.03 | -22.38 | 138.36 |
| SNB-LA41 | 0.01 | 183.38 | -212.89 | 303.16 | -255.68 | 97.27 | -93.68 |
| SNB-LA42 | -0.00 | -512.36 | -306.60 | -558.71 | 325.86 | -214.11 | -126.43 |
| SNB-LB4P | 0.02 | -91.89 | -705.47 | 19.28 | -680.65 | -14.52 | -277.14 |
| SNB-LB41 | -0.00 | 49.08 | 402.03 | 73.96 | -580.12 | 24.60 | -196.36 |
| SNB-LB1P | -0.00 | 303.15 | -255.69 | -461.13 | 362.09 | -152.80 | 123.51 |
| SNB-LB11 | -0.00 | 266.27 | 179.11 | 512.36 | 306.61 | 155.66 | 97.10 |
| SNB-LB12 | -0.04 | -73.96 | 580.12 | 91.89 | 705.47 | 3.58 | 257.03 |
| SNB-LB2P | 0.04 | 461.14 | -362.09 | 654.11 | -274.86 | 222.98 | -127.35 |
| SNB-LB21 | -0.00 | -512.36 | -306.60 | -558.71 | 325.86 | -214.11 | -126.43 |
| SNB-LB22 | -0.00 | 512.36 | 306.60 | 558.71 | -325.86 | 214.11 | 126.43 |
| SNB-LB3P | 0.02 | -91.89 | -705.47 | 19.28 | -680.65 | -14.52 | -277.14 |
| SNB-LB31 | -0.02 | 654.11 | 274.86 | -870.65 | 357.21 | -245.47 | 126.37 |
| SNB-LB32 | -0.00 | 558.71 | 325.87 | 820.45 | 477.47 | 275.70 | 160.59 |
| SNB-LB33 | -0.00 | 558.71 | 325.87 | 820.45 | 477.47 | 275.70 | 160.59 |
| SNB-LB4P | 0.02 | -19.28 | 680.65 | 80.64 | 574.08 | 12.27 | 250.87 |
| SNB-LB41 | -0.02 | 573.65 | -357.20 | 530.72 | -216.71 | 220.81 | -114.75 |
| SNB-LB42 | -0.00 | 820.46 | -477.45 | -437.70 | -255.95 | -251.50 | -146.60 |
| SNB-LC1P | 0.02 | -80.64 | 574.07 | 81.38 | -72.70 | 0.11 | -97.08 |
| SNB-LC11 | -0.02 | 530.71 | 216.71 | -18.72 | 107.43 | -82.47 | 48.65 |
| SNB-LC12 | -0.00 | 437.70 | 255.95 | 193.83 | 114.59 | 94.77 | 55.61 |
| SNB-LC2P | 0.00 | -81.38 | 72.70 | 205.70 | -274.42 | 18.61 | -30.19 |
| SNB-LC21 | -0.00 | 18.72 | -107.43 | -135.19 | 315.09 | -17.43 | 31.08 |
| SNB-LC22 | -0.00 | 193.83 | -114.59 | 384.05 | 221.60 | 28.46 | 16.01 |
| SNB-LC3P | 0.07 | -205.70 | 274.43 | 12.90 | 760.99 | -28.94 | 155.43 |
| SNB-LC31 | -0.07 | 135.20 | -315.08 | 662.81 | -369.02 | 119.79 | -102.69 |
| SNB-LC32 | -0.00 | 384.05 | -221.59 | -281.40 | -164.46 | -99.85 | -57.93 |
| SNB-LD1P | 0.09 | -12.90 | -760.99 | 403.05 | -338.98 | 58.57 | -165.13 |
| SNB-LD11 | -0.08 | 662.80 | 369.02 | -86.85 | 519.81 | -112.54 | 133.44 |
| SNB-LD12 | -0.00 | 281.40 | 164.46 | 641.19 | 374.87 | 138.42 | 80.92 |
| SNB-LD2P | -0.05 | 403.04 | 338.98 | 406.35 | 107.44 | 0.50 | 66.82 |
| SNB-LD21 | 0.05 | 86.87 | -519.81 | 290.65 | 297.51 | 56.54 | -33.27 |
| SNB-LD22 | -0.00 | -641.20 | -374.85 | 303.92 | 171.54 | -50.45 | -30.41 |
| SNB-LD3P | -0.06 | -406.35 | -107.43 | 310.68 | 603.54 | -14.36 | 74.48 |
| SNB-LD31 | 0.06 | -290.84 | -297.52 | 682.58 | -31.06 | 58.81 | -49.33 |
| SNB-LD32 | -0.00 | -303.92 | -171.54 | 364.41 | 216.84 | 9.07 | 6.80 |
| SNB-LE1P | -0.02 | 310.67 | -603.53 | 667.51 | 1254.87 | 53.57 | 97.78 |
| SNB-LE11 | 0.02 | -682.57 | 31.06 | 1411.12 | -51.87 | 109.37 | -3.12 |
| SNB-LE12 | -0.00 | -364.41 | -216.84 | -260.10 | -157.92 | -93.70 | -56.23 |
| SNB-LE2P | 0.30 | -667.51 | -1254.87 | 766.89 | -2835.18 | 14.88 | -612.20 |
| SNB-LE21 | -0.30 | -1411.12 | 51.86 | -2060.20 | 2086.53 | -519.59 | 320.07 |
| SNB-LE22 | -0.00 | 260.10 | 157.92 | 3286.89 | 1909.59 | 530.58 | 309.27 |
| SNB-LE3P | -0.46 | -766.88 | 2835.18 | 84.69 | 4889.28 | -102.42 | 1159.66 |
| SNB-LE31 | 0.46 | 2060.26 | -2086.48 | 4265.24 | -2374.86 | 949.63 | -669.77 |

| | | | | | | | |
|----------|-------|----------|-----------|----------|----------|----------|----------|
| SNB-LB32 | -0.00 | -3286.94 | -1909.50 | -2647.54 | -1537.06 | -890.31 | -517.06 |
| SNB-LF1P | 1.43 | -84.69 | -4889.27 | 1700.70 | -4582.49 | 161.59 | -947.09 |
| SNB-LF11 | -1.43 | 4265.19 | 2374.95 | -3109.68 | 3768.47 | -737.42 | 614.29 |
| SNB-LF12 | -0.00 | 2647.52 | 1537.08 | 4387.99 | 2542.66 | 702.94 | 407.62 |
| SNB-LF2P | 1.82 | -1700.68 | 4582.49 | -279.79 | 7126.40 | -198.03 | 1170.80 |
| SNB-LF21 | 1.83 | 3109.88 | -3768.31 | 6023.33 | -3809.53 | 913.25 | -757.73 |
| SNB-LF22 | -0.00 | -4388.09 | -2542.48 | 4068.11 | -2353.71 | -844.42 | -489.15 |
| SNB-LG1P | 1.49 | 279.79 | -7126.40 | 3088.68 | -8506.35 | 336.81 | -1563.13 |
| SNB-LG11 | -1.48 | -6023.22 | 3809.71 | -5815.08 | 6933.74 | -1183.72 | 1074.24 |
| SNB-LG12 | -0.00 | 4064.08 | 2353.76 | 8686.60 | 5025.77 | 1273.92 | 737.29 |
| SNB-LG2P | -2.12 | 3088.66 | 8506.35 | -478.48 | 10061.55 | -356.70 | 1856.69 |
| SNB-LG21 | 2.12 | 5815.44 | -6933.44 | 8469.14 | -5448.65 | 1428.38 | -1238.14 |
| SNB-LG22 | -0.00 | -8686.82 | -5025.40 | -5568.64 | -3220.24 | -1424.21 | -823.79 |
| SNB-LH1P | 2.56 | 478.48 | -10061.54 | 3619.21 | -6827.99 | 409.75 | -1688.87 |
| SNB-LH11 | -2.55 | -8469.00 | 5448.87 | -4100.57 | 6551.60 | -1256.90 | 1200.01 |
| SNB-LH12 | -0.00 | 5568.60 | 3220.31 | 6760.20 | 3908.28 | 1231.64 | 712.14 |
| SNB-LH2P | -1.22 | -3619.21 | 6827.99 | -1023.98 | 6261.74 | -464.33 | 1308.99 |
| SNB-LH21 | 1.22 | 4100.87 | -6551.61 | 4908.59 | -4019.95 | 900.96 | -1057.17 |
| SNB-LH22 | -0.00 | -6760.33 | -9908.06 | -1032.72 | -596.13 | -778.51 | -449.96 |
| SNB-LI1P | 1.71 | 1023.98 | -6261.73 | 6669.96 | 2844.88 | 769.32 | -341.66 |
| SNB-LI11 | -1.71 | -4908.55 | 4020.00 | 5800.14 | 4355.55 | 89.15 | 837.48 |
| SNB-LI12 | -0.00 | 1032.73 | 596.12 | -1622.78 | -937.56 | -58.95 | -34.11 |
| SNB-LI2P | 0.75 | -6669.96 | -2844.87 | -732.07 | -3251.38 | -740.21 | -609.63 |
| SNB-LI21 | -0.75 | -5800.05 | -4355.66 | -3185.69 | 984.97 | -898.59 | -337.07 |
| SNB-LI22 | -0.00 | 1622.78 | 937.56 | 11972.42 | 6922.26 | 1358.23 | 785.24 |

Equilibrium Joint Positions and Rotations for Load Case "W+I 0 deg":

| Joint Label | X-Displ (ft) | Y-Displ (ft) | Z-Displ (ft) | X-Rot (deg) | Y-Rot (deg) | Z-Rot (deg) | X-Pos (ft) | Y-Pos (ft) | Z-Pos (ft) |
|-------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|-------------|------------|
| RohnAP | 1.301 | 0.001815 | -0.1343 | 0.0048 | 0.6637 | 0.0001 | 5.634 | 0.001815 | 179.9 |
| RohnBP | 1.061 | 0.00171 | -0.1325 | 0.0027 | 0.6729 | 0.0001 | 6.182 | 0.00171 | 159.9 |
| RohnCP | 0.8264 | 0.001222 | -0.128 | 0.0006 | 0.6546 | 0.0000 | 6.735 | 0.001222 | 139.9 |
| RohnDP | 0.6075 | 0.0009513 | -0.1208 | 0.0000 | 0.6483 | 0.0000 | 7.303 | 0.0009513 | 119.9 |
| RohnEP | 0.4188 | 0.000827 | -0.1054 | 0.0004 | 0.6453 | 0.0000 | 7.9 | 0.000827 | 99.89 |
| RohnFP | 0.2642 | 0.0006615 | -0.08912 | 0.0005 | 0.6375 | 0.0000 | 8.532 | 0.0006615 | 79.91 |
| RohnGP | 0.1448 | 0.000511 | -0.0674 | 0.0005 | 0.2655 | 0.0000 | 9.2 | 0.000511 | 59.93 |
| RohnHP | 0.06131 | 0.0003325 | -0.04693 | 0.0005 | 0.1978 | 0.0000 | 9.902 | 0.0003325 | 39.95 |
| RohnIP | 0.01277 | 0.0001695 | -0.02256 | 0.0005 | 0.1040 | 0.0000 | 10.64 | 0.0001695 | 19.98 |
| RohnJP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 11.42 | 0 | 0 |
| RohnAP | 1.302 | -0.0005701 | -0.1082 | 0.0025 | 0.6637 | 0.0001 | 3.635 | -0.0005701 | 179.9 |
| RohnBP | 1.062 | -0.0003967 | -0.1076 | 0.0003 | 0.6718 | 0.0000 | 4.183 | -0.0003967 | 159.9 |
| RohnCP | 0.8273 | -0.0002444 | -0.1053 | 0.0003 | 0.6617 | 0.0000 | 4.735 | -0.0002444 | 139.9 |
| RohnDP | 0.6084 | -0.0001313 | -0.09952 | 0.0003 | 0.5810 | 0.0000 | 5.303 | -0.0001313 | 119.9 |
| RohnEP | 0.4195 | -7.433e-005 | -0.08739 | 0.0001 | 0.4799 | 0.0000 | 5.901 | -7.433e-005 | 99.91 |
| RohnFP | 0.265 | -3.593e-005 | -0.07593 | 0.0001 | 0.3866 | 0.0000 | 6.533 | -3.593e-005 | 79.92 |
| RohnGP | 0.1456 | -1.017e-005 | -0.06001 | 0.0000 | 0.2465 | 0.0000 | 7.201 | -1.017e-005 | 59.94 |
| RohnHP | 0.06209 | 3.312e-006 | -0.0426 | 0.0000 | 0.1969 | 0.0000 | 7.903 | 3.312e-006 | 39.96 |
| RohnIP | 0.01355 | 4.816e-006 | -0.02151 | 0.0000 | 0.1053 | 0.0000 | 8.642 | 4.816e-006 | 19.98 |
| RohnJP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 9.415 | 0 | 0 |
| RohnA1 | 1.308 | 5.032e-006 | -0.05747 | 0.0151 | 0.7100 | 0.0237 | -0.8589 | -3.752 | 179.9 |
| RohnA2 | 1.303 | -0.003628 | -0.05738 | 0.0135 | 0.7120 | 0.0239 | -0.8631 | 3.749 | 179.9 |
| RohnB1 | 1.067 | 0.0007146 | -0.04424 | -0.0039 | 0.6901 | 0.0234 | -1.493 | -4.434 | 160 |
| RohnB2 | 1.063 | -0.003807 | -0.04413 | 0.0064 | 0.6879 | 0.0233 | -1.497 | 4.431 | 160 |
| RohnC1 | 0.8333 | 0.001769 | -0.03225 | -0.0004 | 0.6308 | 0.0215 | -2.121 | -5.116 | 140 |
| RohnC2 | 0.8306 | -0.003957 | -0.03214 | 0.0026 | 0.6282 | 0.0214 | -2.124 | 5.113 | 140 |
| RohnD1 | 0.6144 | 0.002959 | -0.02171 | 0.0042 | 0.5859 | 0.0200 | -2.733 | -5.795 | 120 |
| RohnD2 | 0.6124 | -0.004495 | -0.02163 | -0.0052 | 0.5849 | 0.0199 | -2.735 | 5.794 | 120 |
| RohnE1 | 0.4253 | 0.002915 | -0.01508 | 0.0038 | 0.4797 | 0.0166 | -3.315 | -6.476 | 99.98 |
| RohnE2 | 0.4236 | -0.004095 | -0.01502 | -0.0029 | 0.4788 | 0.0166 | -3.317 | 6.475 | 99.98 |
| RohnF1 | 0.2729 | 0.005387 | -0.00955 | 0.0022 | 0.4024 | 0.0139 | -3.861 | -7.155 | 79.99 |
| RohnF2 | 0.2716 | -0.006286 | -0.009506 | -0.0014 | 0.4015 | 0.0139 | -3.862 | 7.154 | 79.99 |
| RohnG1 | 0.1558 | 0.007133 | -0.006676 | 0.0149 | 0.2884 | 0.0096 | -4.372 | -7.835 | 59.99 |
| RohnG2 | 0.1548 | -0.007774 | -0.006649 | -0.0156 | 0.2875 | 0.0096 | -4.373 | 7.834 | 59.99 |
| RohnH1 | 0.07212 | 0.007382 | -0.003587 | 0.0099 | 0.1903 | 0.0069 | -4.848 | -8.515 | 40 |
| RohnH2 | 0.07153 | -0.007749 | -0.003571 | -0.0092 | 0.1894 | 0.0069 | -4.849 | 8.515 | 40 |
| RohnI1 | 0.02129 | 0.005563 | -0.002259 | 0.0204 | 0.0822 | 0.0034 | -5.294 | -9.2 | 20 |
| RohnI2 | 0.02099 | -0.005738 | -0.002253 | -0.0199 | 0.0814 | 0.0033 | -5.294 | 9.2 | 20 |
| RohnJ1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | -9.89 | 0 |
| RohnJ2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | 9.89 | 0 |
| RohnA1 | 1.305 | 0.0005896 | -0.06614 | 0.0167 | 0.7072 | 0.0237 | 0.1385 | -2.02 | 179.9 |
| RohnA2 | 1.305 | -0.001911 | -0.06609 | -0.0176 | 0.7049 | 0.0236 | 0.1383 | 2.019 | 179.9 |
| RohnB1 | 1.065 | 0.001054 | -0.05246 | 0.0078 | 0.6857 | 0.0232 | -0.4957 | -2.702 | 159.9 |
| RohnB2 | 1.065 | -0.002048 | -0.05241 | -0.0089 | 0.6859 | 0.0232 | -0.4959 | 2.701 | 159.9 |
| RohnC1 | 0.8312 | 0.002082 | -0.03968 | 0.0153 | 0.6458 | 0.0226 | -1.123 | -3.382 | 140 |
| RohnC2 | 0.8311 | -0.002766 | -0.03963 | -0.0145 | 0.6458 | 0.0226 | -1.123 | 3.382 | 140 |
| RohnD1 | 0.6132 | 0.002723 | -0.02876 | 0.0019 | 0.5940 | 0.0203 | -1.734 | -4.063 | 120 |
| RohnD2 | 0.6131 | -0.003178 | -0.02872 | -0.0025 | 0.5938 | 0.0203 | -1.734 | 4.063 | 120 |
| RohnE1 | 0.4238 | 0.002185 | -0.02105 | 0.0018 | 0.4758 | 0.0164 | -2.317 | -4.744 | 99.98 |
| RohnE2 | 0.4237 | -0.003129 | -0.02102 | -0.0014 | 0.4757 | 0.0164 | -2.317 | 4.744 | 99.98 |
| RohnF1 | 0.2722 | 0.004882 | -0.01387 | 0.0063 | 0.3956 | 0.0138 | -2.862 | -5.423 | 79.99 |
| RohnF2 | 0.2722 | -0.005043 | -0.01385 | -0.0061 | 0.3956 | 0.0138 | -2.862 | 5.423 | 79.99 |
| RohnG1 | 0.1555 | 0.006696 | -0.008892 | 0.0242 | 0.2987 | 0.0098 | -3.373 | -6.103 | 59.99 |
| RohnG2 | 0.1549 | -0.006782 | -0.008881 | -0.0244 | 0.2986 | 0.0098 | -3.373 | 6.103 | 59.99 |
| RohnH1 | 0.07154 | 0.006818 | -0.004818 | 0.0083 | 0.1898 | 0.0069 | -3.849 | -6.784 | 40 |
| RohnH2 | 0.07151 | -0.006857 | -0.004801 | -0.0082 | 0.1898 | 0.0069 | -3.849 | 6.784 | 40 |
| RohnI1 | 0.02044 | 0.005154 | -0.002366 | 0.0216 | 0.0856 | 0.0035 | -4.294 | -7.467 | 20 |

| | | | | | | | | | |
|------------|----------|-------------|-----------|---------|--------|---------|---------|-------------|-------|
| SNB-I2 | 0.02043 | -0.005165 | -0.002362 | -0.0216 | 0.0856 | 0.0035 | -4.294 | 7.467 | 20 |
| SNB-J1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | -8.154 | 0 |
| SNB-J2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | 8.154 | 0 |
| RohnAAs | 1.242 | 0.002082 | -0.1342 | -0.0005 | 0.6975 | -0.0000 | 5.772 | 0.002082 | 174.9 |
| RohnABs | 1.181 | 0.001902 | -0.1339 | 0.0003 | 0.6888 | -0.0000 | 5.908 | 0.001902 | 169.9 |
| RohnACs | 1.122 | 0.002075 | -0.1333 | 0.0010 | 0.6888 | -0.0000 | 6.046 | 0.002075 | 164.9 |
| RohnBas | 1.003 | 0.001595 | -0.1317 | 0.0012 | 0.6793 | -0.0000 | 6.321 | 0.001595 | 154.9 |
| RohnBBS | 0.9424 | 0.001436 | -0.1308 | 0.0019 | 0.6703 | -0.0001 | 6.597 | 0.001436 | 149.9 |
| RohnBCs | 0.8853 | 0.001308 | -0.1296 | 0.0012 | 0.6641 | -0.0000 | 6.597 | 0.001308 | 144.9 |
| RohnCAs | 0.7528 | 0.001148 | -0.1261 | 0.0011 | 0.6198 | -0.0000 | 6.924 | 0.001148 | 133.2 |
| RohnCbs | 0.68 | 0.0009865 | -0.1237 | 0.0010 | 0.6333 | -0.0000 | 7.113 | 0.0009865 | 126.5 |
| RohnDas | 0.5429 | 0.0009288 | -0.1164 | 0.0004 | 0.5447 | -0.0000 | 7.5 | 0.0009288 | 113.2 |
| RohnDBs | 0.4789 | 0.0008717 | -0.1111 | 0.0005 | 0.5394 | -0.0000 | 7.698 | 0.0008717 | 106.5 |
| RohnEAs | 0.3655 | 0.0007802 | -0.1004 | 0.0004 | 0.4270 | -0.0000 | 8.109 | 0.0007802 | 93.24 |
| RohnEBS | 0.3158 | 0.0007359 | -0.09481 | 0.0006 | 0.4489 | -0.0000 | 8.322 | 0.0007359 | 86.57 |
| RohnFAs | 0.2078 | 0.000606 | -0.07858 | 0.0004 | 0.3493 | -0.0000 | 8.869 | 0.000606 | 69.92 |
| RohnGAs | 0.1078 | 0.0004262 | -0.05735 | 0.0005 | 0.2393 | -0.0000 | 9.556 | 0.0004262 | 49.94 |
| RohnGbs | 0.03948 | 0.0002534 | -0.03504 | 0.0005 | 0.1290 | -0.0000 | 10.27 | 0.0002534 | 29.96 |
| RohnHAs | 0.001692 | 8.25e-005 | -0.01177 | 0.0006 | 0.0251 | -0.0000 | 11.03 | 8.25e-005 | 9.988 |
| RohnIAs | 0.1243 | 0.0004323 | -0.1082 | 0.0003 | 0.6977 | -0.0000 | 3.773 | 0.0004323 | 174.9 |
| SNB-AAs | 1.182 | -0.0005133 | -0.1081 | 0.0006 | 0.6888 | 0.0000 | 3.909 | -0.0005133 | 169.9 |
| SNB-ACs | 1.123 | -0.0003522 | -0.1079 | 0.0008 | 0.6894 | 0.0000 | 4.047 | -0.0003522 | 164.9 |
| SNB-BAs | 1.003 | -0.0003255 | -0.1072 | 0.0006 | 0.6797 | 0.0000 | 4.321 | -0.0003255 | 154.9 |
| SNB-Bbs | 0.9434 | -0.0003075 | -0.1068 | 0.0003 | 0.6709 | 0.0000 | 4.458 | -0.0003075 | 149.9 |
| SNB-BCs | 0.8862 | -0.0002632 | -0.106 | 0.0004 | 0.6626 | 0.0000 | 4.597 | -0.0002632 | 144.9 |
| SNB-CAs | 0.7538 | -0.0001877 | -0.1039 | 0.0003 | 0.6179 | 0.0000 | 4.924 | -0.0001877 | 133.2 |
| SNB-Cbs | 0.6809 | -0.0001757 | -0.1018 | 0.0002 | 0.6349 | 0.0000 | 5.114 | -0.0001757 | 126.6 |
| SNB-DAs | 0.5438 | -0.0001116 | -0.09622 | 0.0002 | 0.5458 | 0.0000 | 5.501 | -0.0001116 | 113.2 |
| SNB-DBs | 0.4798 | -0.962e-005 | -0.09206 | 0.0002 | 0.5411 | 0.0000 | 5.699 | -9.62e-005 | 106.6 |
| SNB-EAs | 0.3663 | -0.042e-005 | -0.08411 | 0.0002 | 0.4300 | 0.0000 | 6.109 | -6.042e-005 | 93.26 |
| SNB-Ebs | 0.3166 | -4.291e-005 | -0.08005 | 0.0001 | 0.4461 | 0.0000 | 6.323 | -4.291e-005 | 86.58 |
| SNB-FAs | 0.2086 | -1.524e-005 | -0.06813 | 0.0001 | 0.3520 | 0.0000 | 6.87 | -1.524e-005 | 69.93 |
| SNB-GAs | 0.1086 | 5.238e-007 | -0.05147 | 0.0000 | 0.2445 | 0.0000 | 7.557 | 5.238e-007 | 49.95 |
| SNB-HAs | 0.04026 | 6.153e-006 | -0.03244 | 0.0000 | 0.1295 | 0.0000 | 8.275 | 6.153e-006 | 29.97 |
| SNB-IAs | 0.002473 | 3.486e-006 | -0.01158 | -0.0000 | 0.0284 | -0.0000 | 9.024 | 3.486e-006 | 9.988 |
| SNB-WL-A1S | 1.303 | -0.0002136 | -0.1379 | 0.0000 | 0.0000 | 0.0000 | 1.886 | -1.01 | 179.9 |
| SNB-WL-A2S | 1.304 | -0.0006602 | -0.1116 | 0.0000 | 0.0000 | 0.0000 | 0.1375 | -0.0006602 | 179.9 |
| SNB-WL-A3S | 1.303 | -0.0009877 | -0.1369 | 0.0000 | 0.0000 | 0.0000 | 1.886 | 1.009 | 179.9 |
| SNB-WL-B1S | 1.063 | 8.492e-005 | -0.1379 | 0.0000 | 0.0000 | 0.0000 | 1.843 | -1.351 | 159.9 |
| SNB-WL-B2S | 1.064 | -0.0004969 | -0.108 | 0.0000 | 0.0000 | 0.0000 | -0.4967 | -0.0004969 | 159.9 |
| SNB-WL-B3S | 1.063 | -0.0009506 | -0.1367 | 0.0000 | 0.0000 | 0.0000 | 1.843 | 1.35 | 159.9 |
| SNB-WL-C1S | 0.8287 | -0.0003551 | -0.1593 | 0.0000 | 0.0000 | 0.0000 | 1.806 | -1.692 | 139.8 |
| SNB-WL-C2S | 0.8299 | -0.0003419 | -0.1301 | 0.0000 | 0.0000 | 0.0000 | -1.124 | -0.0003419 | 139.9 |
| SNB-WL-C3S | 0.8287 | -0.0009328 | -0.1499 | 0.0000 | 0.0000 | 0.0000 | 1.806 | 1.691 | 139.9 |
| SNB-WL-D1S | 0.6102 | 0.0005985 | -0.1657 | 0.0000 | 0.0000 | 0.0000 | 1.784 | -2.032 | 119.8 |
| SNB-WL-D2S | 0.6117 | -0.0002267 | -0.1415 | 0.0000 | 0.0000 | 0.0000 | -1.736 | -0.0002267 | 119.9 |
| SNB-WL-D3S | 0.6101 | -0.0009466 | -0.1658 | 0.0000 | 0.0000 | 0.0000 | 1.784 | 2.032 | 119.8 |
| SNB-WL-E1S | 0.4213 | 0.0007981 | -0.1429 | 0.0000 | 0.0000 | 0.0000 | 1.792 | -2.373 | 99.86 |
| SNB-WL-E2S | 0.423 | -0.0001389 | -0.1337 | 0.0000 | 0.0000 | 0.0000 | -2.318 | -0.0001389 | 99.87 |
| SNB-WL-E3S | 0.4213 | -0.001012 | -0.143 | 0.0000 | 0.0000 | 0.0000 | 1.792 | 2.372 | 99.86 |
| SNB-WL-F1S | 0.2684 | 0.0009777 | -0.2055 | 0.0000 | 0.0000 | 0.0000 | 1.835 | -2.713 | 79.79 |
| SNB-WL-F2S | 0.2703 | -8.03e-005 | -0.196 | 0.0000 | 0.0000 | 0.0000 | -2.864 | -8.03e-005 | 79.8 |
| SNB-WL-F3S | 0.2684 | -0.001091 | -0.2054 | 0.0000 | 0.0000 | 0.0000 | 1.835 | 2.713 | 79.79 |
| SNB-WL-G1S | 0.1505 | 0.001133 | -0.2448 | 0.0000 | 0.0000 | 0.0000 | 1.914 | -3.054 | 59.76 |
| SNB-WL-G2S | 0.1527 | -4.273e-005 | -0.2466 | 0.0000 | 0.0000 | 0.0000 | -3.375 | -4.273e-005 | 59.75 |
| SNB-WL-G3S | 0.1505 | -0.001185 | -0.2448 | 0.0000 | 0.0000 | 0.0000 | 1.914 | 3.054 | 59.76 |
| SNB-WL-H1S | 0.06735 | 0.001282 | -0.2429 | 0.0000 | 0.0000 | 0.0000 | 2.028 | -3.394 | 39.76 |
| SNB-WL-H2S | 0.06971 | -1.904e-005 | -0.2536 | 0.0000 | 0.0000 | 0.0000 | -3.851 | -1.904e-005 | 39.75 |
| SNB-WL-H3S | 0.06734 | -0.001297 | -0.2429 | 0.0000 | 0.0000 | 0.0000 | 2.028 | 3.394 | 39.76 |
| SNB-WL-I1S | 0.01742 | 0.001421 | -0.1859 | 0.0000 | 0.0000 | 0.0000 | 2.174 | -3.735 | 19.81 |
| SNB-WL-I2S | 0.02004 | -5.355e-006 | -0.2076 | 0.0000 | 0.0000 | 0.0000 | -4.294 | -5.355e-006 | 19.79 |
| SNB-WL-I3S | 0.01741 | -0.001422 | -0.1859 | 0.0000 | 0.0000 | 0.0000 | 2.174 | 3.735 | 19.81 |
| RohnAa1 | 1.246 | -0.0007249 | -0.05394 | 0.0011 | 0.6812 | -0.0233 | -1.019 | -3.924 | 174.9 |
| RohnAa2 | 1.242 | -0.003066 | -0.05384 | 0.0000 | 0.6894 | 0.0237 | -1.023 | 3.92 | 174.9 |
| RohnAb1 | 1.188 | -7.003e-005 | -0.05062 | -0.0001 | 0.6935 | -0.0237 | -1.176 | -4.094 | 169.9 |
| RohnAb2 | 1.182 | -0.003806 | -0.05049 | 0.0031 | 0.6893 | 0.0235 | -1.181 | 4.09 | 169.9 |

| Joint Label | X (kips) | Y (kips) | Z (kips) | Comp. Force Usage % | Uplift Force Usage % | Result. Force Usage % | X Moment Usage % (ft-k) | Y Moment Usage % (ft-k) | Z Moment Usage % (ft-k) | Max. Usage % |
|-------------|----------|------------|-----------|---------------------|----------------------|-----------------------|-------------------------|-------------------------|-------------------------|--------------|
| RohnA1 | 1.126 | -0.0003041 | -0.0473 | 0.0058 | 0.6899 | -0.0237 | -1.336 | -4.265 | 165 | |
| RohnA2 | 1.122 | -0.003055 | -0.0478 | -0.0005 | 0.6810 | 0.0233 | -1.334 | 4.261 | 165 | |
| RohnB1 | 1.007 | 0.0001184 | -0.04101 | -0.0011 | 0.6705 | -0.0228 | -1.652 | -4.605 | 155 | |
| RohnB2 | 1.003 | -0.002963 | -0.04089 | 0.0041 | 0.6665 | 0.0226 | -1.656 | 4.603 | 155 | |
| RohnBb1 | 0.9491 | 0.0006977 | -0.03798 | 0.0028 | 0.6813 | -0.0233 | -1.808 | -4.775 | 150 | |
| RohnBb2 | 0.9459 | -0.003279 | -0.03787 | -0.0004 | 0.6772 | 0.0230 | -1.812 | 4.773 | 150 | |
| RohnBc1 | 0.8886 | 0.0005538 | -0.03492 | 0.0075 | 0.6669 | -0.0230 | -1.967 | -4.946 | 145 | |
| RohnBc2 | 0.8857 | -0.002885 | -0.03481 | -0.0055 | 0.6649 | 0.0229 | -1.97 | 4.944 | 145 | |
| RohnCa1 | 0.7583 | 0.000629 | -0.02847 | 0.0087 | 0.6540 | -0.0221 | -2.327 | -5.343 | 133.3 | |
| RohnCa2 | 0.756 | -0.002514 | -0.02837 | -0.0110 | 0.6511 | 0.0219 | -2.329 | 5.342 | 133.3 | |
| RohnCb1 | 0.6834 | 0.001294 | -0.02483 | 0.0167 | 0.6168 | -0.0216 | -2.533 | -5.57 | 126.6 | |
| RohnCb2 | 0.6812 | -0.002984 | -0.02475 | -0.0153 | 0.6157 | 0.0216 | -2.535 | 5.568 | 126.6 | |
| RohnD1 | 0.5465 | 0.001473 | -0.0191 | -0.0063 | 0.5725 | -0.0194 | -2.932 | -6.023 | 113.3 | |
| RohnD2 | 0.5446 | -0.002901 | -0.01903 | 0.0073 | 0.5716 | 0.0194 | -2.934 | 6.022 | 113.3 | |
| RohnDb1 | 0.4826 | 0.00234 | -0.01682 | 0.0050 | 0.5174 | -0.0180 | -3.127 | -6.25 | 106.6 | |
| RohnDb2 | 0.4809 | -0.003631 | -0.01676 | -0.0078 | 0.5161 | 0.0180 | -3.129 | 6.248 | 106.6 | |
| RohnEa1 | 0.3701 | 0.002776 | -0.01299 | -0.0157 | 0.4649 | -0.0156 | -3.501 | -6.703 | 93.33 | |
| RohnEa2 | 0.3686 | -0.003852 | -0.01293 | 0.0166 | 0.4639 | 0.0155 | -3.503 | 6.702 | 93.33 | |
| RohnEb1 | 0.3186 | 0.001494 | -0.01096 | 0.0194 | 0.4092 | -0.0146 | -3.684 | -6.932 | 86.65 | |
| RohnEb2 | 0.3172 | -0.002467 | -0.01091 | -0.0186 | 0.4083 | 0.0145 | -3.686 | 6.931 | 86.65 | |
| RohnFa1 | 0.2045 | 0.003578 | -0.007427 | 0.0102 | 0.3302 | -0.0116 | -4.126 | -7.5 | 69.99 | |
| RohnFa2 | 0.2034 | -0.002314 | -0.007391 | -0.0094 | 0.3291 | 0.0115 | -4.127 | 7.499 | 69.99 | |
| RohnGa1 | 0.1053 | 0.0007203 | -0.004573 | 0.0019 | 0.2396 | -0.0083 | -4.619 | -8.181 | 50 | |
| RohnGa2 | 0.1045 | -0.001205 | -0.004552 | -0.0012 | 0.2386 | 0.0083 | -4.619 | 8.181 | 50 | |
| RohnHa1 | 0.03827 | 0.002303 | -0.002546 | -0.0155 | 0.1501 | -0.0049 | -5.079 | -8.862 | 30 | |
| RohnHa2 | 0.03782 | -0.002572 | -0.002534 | 0.0160 | 0.1492 | 0.0048 | -5.08 | 8.862 | 30 | |
| RohnIa1 | 0.007006 | 0.005517 | -0.001239 | 0.0291 | 0.0709 | -0.0019 | -5.505 | -9.542 | 9.999 | |
| RohnIa2 | 0.006865 | -0.005599 | -0.001236 | -0.0238 | 0.0698 | 0.0019 | -5.506 | 9.542 | 9.999 | |
| SNB-Aa1 | 1.244 | -0.000154 | -0.06259 | 0.0039 | 0.6861 | -0.0236 | -0.02112 | -2.191 | 174.9 | |
| SNB-Aa2 | 1.244 | 0.001073 | -0.06255 | -0.0024 | 0.6873 | 0.0236 | -0.02119 | 2.19 | 174.9 | |
| SNB-Ab1 | 1.184 | 0.0007607 | -0.05917 | -0.0013 | 0.6917 | -0.0236 | -0.179 | -2.361 | 169.9 | |
| SNB-Ab2 | 1.184 | -0.001865 | -0.05913 | 0.0020 | 0.6914 | 0.0236 | -0.1793 | 2.36 | 169.9 | |
| SNB-Ac1 | 1.124 | 0.0001232 | -0.05572 | -0.0028 | 0.6842 | -0.0235 | -0.3384 | -2.532 | 164.9 | |
| SNB-Ac2 | 1.123 | -0.001217 | -0.05568 | 0.0023 | 0.6837 | 0.0235 | -0.3385 | 2.531 | 164.9 | |
| SNB-Ba1 | 1.005 | 0.0003411 | -0.04909 | 0.0038 | 0.6788 | -0.0234 | -0.6541 | -2.873 | 155 | |
| SNB-Ba2 | 1.005 | -0.001258 | -0.04905 | -0.0030 | 0.6785 | 0.0233 | -0.6542 | 2.872 | 155 | |
| SNB-Bb1 | 0.9464 | 0.001362 | -0.04599 | -0.0048 | 0.6717 | -0.0228 | -0.8109 | -3.042 | 150 | |
| SNB-Bb2 | 0.9462 | -0.002203 | -0.04584 | 0.0056 | 0.6718 | 0.0228 | -0.811 | 3.041 | 150 | |
| SNB-Bc1 | 0.8877 | 0.0001608 | -0.04265 | 0.0017 | 0.6604 | -0.0227 | -0.968 | -3.214 | 145 | |
| SNB-Bc2 | 0.8875 | -0.000929 | -0.04261 | -0.0008 | 0.6604 | 0.0226 | -0.9681 | 3.213 | 145 | |
| SNB-Ca1 | 0.7555 | 0.001312 | -0.03579 | 0.0145 | 0.6476 | -0.0217 | -1.33 | -3.61 | 133.3 | |
| SNB-Ca2 | 0.7554 | -0.001925 | -0.03574 | -0.0152 | 0.6476 | 0.0217 | -1.33 | 3.609 | 133.3 | |
| SNB-Cb1 | 0.6821 | 0.001129 | -0.03198 | 0.0116 | 0.6062 | -0.0211 | -1.534 | -3.838 | 126.6 | |
| SNB-Cb2 | 0.682 | -0.001653 | -0.03194 | -0.0109 | 0.6063 | 0.0211 | -1.535 | 3.837 | 126.6 | |
| SNB-Da1 | 0.5446 | 0.001658 | -0.02578 | -0.0065 | 0.5712 | -0.0194 | -1.934 | -4.291 | 113.3 | |
| SNB-Da2 | 0.5445 | -0.002046 | -0.02574 | 0.0071 | 0.5712 | 0.0194 | -1.934 | 4.291 | 113.3 | |
| SNB-Db1 | 0.4814 | 0.002126 | -0.0231 | 0.0078 | 0.5160 | -0.0179 | -2.128 | -4.518 | 106.6 | |
| SNB-Db2 | 0.4813 | -0.002455 | -0.02307 | -0.0073 | 0.5159 | 0.0179 | -2.128 | 4.518 | 106.6 | |
| SNB-Ea1 | 0.3693 | 0.002362 | -0.01839 | -0.0166 | 0.4631 | -0.0154 | -2.502 | -4.971 | 93.32 | |
| SNB-Ea2 | 0.3692 | -0.002599 | -0.01837 | 0.0169 | 0.4630 | 0.0154 | -2.502 | 4.971 | 93.32 | |
| SNB-Eb1 | 0.3175 | 0.001187 | -0.01575 | -0.0177 | 0.4105 | -0.0146 | -2.685 | -5.2 | 86.64 | |
| SNB-Eb2 | 0.3175 | -0.001385 | -0.01572 | 0.0174 | 0.4104 | 0.0146 | -2.686 | 5.2 | 86.64 | |
| SNB-Fa1 | 0.2041 | 0.0009282 | -0.01073 | 0.0115 | 0.3300 | -0.0116 | -3.127 | -5.768 | 69.99 | |
| SNB-Fa2 | 0.204 | -0.00105 | -0.01071 | -0.0113 | 0.3299 | 0.0116 | -3.127 | 5.768 | 69.99 | |
| SNB-Ga1 | 0.1041 | 0.0004756 | -0.006349 | 0.0038 | 0.2364 | -0.0083 | -3.62 | -6.45 | 49.99 | |
| SNB-Ga2 | 0.1041 | -0.0005352 | -0.006336 | -0.0037 | 0.2363 | 0.0083 | -3.62 | 6.45 | 49.99 | |
| SNB-Ha1 | 0.03742 | 0.00189 | -0.003308 | -0.0149 | 0.1506 | -0.0049 | -4.08 | -7.129 | 30 | |
| SNB-Ha2 | 0.03741 | -0.001912 | -0.003301 | 0.0149 | 0.1505 | 0.0049 | -4.08 | 7.129 | 30 | |
| SNB-Ia1 | 0.005735 | 0.005348 | -0.001448 | -0.0276 | 0.0663 | -0.0018 | -4.505 | -7.807 | 9.999 | |
| SNB-Ia2 | 0.00573 | -0.005352 | -0.001446 | 0.0276 | 0.0663 | 0.0018 | -4.505 | 7.807 | 9.999 | |

Joint Support Reactions for Load Case "W+I 0 degr":

Joint Label X (kips) Y (kips) Z (kips) Comp. Force Usage % Uplift Force Usage % Result. Force Usage % X Moment Usage % (ft-k) Y Moment Usage % (ft-k) Z Moment Usage % (ft-k) Max. Usage %

| Joint Label | X External Load (kips) | Y External Load (kips) | Z External Load (kips) | X Member Force (kips) | Y Member Force (kips) | Z Member Force (kips) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) | | | | | | | | |
|-------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------|--------------|--------------|-------|-----|------|-----|-------|-----|-----|-----|
| RohnJP | -11.46 | 0.0 | -0.09 | 0.0 | 302.83 | 0.0 | 0.0 | 303.05 | 0.0 | 0.06 | 0.0 | 0.3 | 0.0 | 0.00 | 0.0 | 0.0 | 0.0 |
| SNB-JP | -12.71 | 0.0 | -0.01 | 0.0 | 361.65 | 0.0 | 0.0 | 361.87 | 0.0 | 0.01 | 0.0 | -1.0 | 0.0 | 0.00 | 0.0 | 0.0 | 0.0 |
| RohnJ1 | -11.86 | 0.0 | -16.88 | 0.0 | -122.12 | 0.0 | 0.0 | 123.85 | 0.0 | 4.68 | 0.0 | -3.5 | 0.0 | 0.03 | 0.0 | 0.0 | 0.0 |
| RohnJ2 | -11.70 | 0.0 | 16.97 | 0.0 | -122.24 | 0.0 | 0.0 | -123.97 | 0.0 | -4.73 | 0.0 | -3.4 | 0.0 | -0.02 | 0.0 | 0.0 | 0.0 |
| SNB-J1 | -23.00 | 0.0 | -33.76 | 0.0 | -151.80 | 0.0 | 0.0 | 157.20 | 0.0 | 9.48 | 0.0 | -4.9 | 0.0 | -0.02 | 0.0 | 0.0 | 0.0 |
| SNB-J2 | -22.98 | 0.0 | 33.77 | 0.0 | -151.90 | 0.0 | 0.0 | 157.29 | 0.0 | -9.49 | 0.0 | -4.9 | 0.0 | 0.02 | 0.0 | 0.0 | 0.0 |

Joint Displacements, Loads and Member Forces on Joints for Load Case "W+I 0 deg":

| Joint Label | X External Load (kips) | Y External Load (kips) | Z External Load (kips) | X Member Force (kips) | Y Member Force (kips) | Z Member Force (kips) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) |
|-------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------|--------------|--------------|
| RohnAP | 1.3958 | 0.0000 | -0.5168 | -1.3958 | -0.0000 | 0.5168 | 1.3012 | 0.0018 | -0.1343 |
| RohnBP | 1.5157 | 0.0000 | -0.7107 | -1.5157 | 0.0000 | 0.7107 | 1.0607 | 0.0017 | -0.1325 |
| RohnCP | 0.7709 | 0.0000 | -0.5960 | -0.7709 | -0.0000 | 0.5960 | 0.8264 | 0.0012 | -0.1280 |
| RohnDP | 1.4234 | 0.0000 | -1.5259 | -1.4234 | -0.0000 | 1.5259 | 0.6075 | 0.0010 | -0.1208 |
| RohnEP | 0.6395 | 0.0000 | -0.8302 | -0.6395 | -0.0000 | 0.8302 | 0.4188 | 0.0008 | -0.1054 |
| RohnFP | 0.7990 | 0.0000 | -1.1116 | -0.7990 | -0.0000 | 1.1116 | 0.2642 | 0.0007 | -0.0891 |
| RohnGP | 0.7665 | 0.0000 | -1.3426 | -0.7665 | -0.0000 | 1.3426 | 0.1448 | 0.0005 | -0.0674 |
| RohnHP | 0.7233 | 0.0000 | -1.4805 | -0.7233 | -0.0000 | 1.4805 | 0.0613 | 0.0003 | -0.0469 |
| RohnIP | 0.7946 | 0.0000 | -1.7490 | -0.7946 | -0.0000 | 1.7490 | 0.0128 | 0.0002 | -0.0226 |
| RohnJP | 0.4229 | 0.0000 | -0.9701 | -0.4229 | -0.0000 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| SNB-AP | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.3022 | -0.0006 | -0.1082 |
| SNB-BP | 0.3837 | 0.0000 | -0.3359 | -0.3837 | 0.0000 | 0.3359 | 1.0616 | -0.0004 | -0.1076 |
| SNB-CP | 0.5333 | 0.0000 | -0.5256 | -0.5333 | 0.0000 | 0.5256 | 0.8273 | -0.0002 | -0.1053 |
| SNB-DP | 0.6276 | 0.0000 | -0.6860 | -0.6276 | -0.0000 | 0.6860 | 0.6084 | -0.0001 | -0.0995 |
| SNB-EP | 0.6395 | 0.0000 | -0.8302 | -0.6395 | -0.0000 | 0.8302 | 0.4196 | -0.0001 | -0.0874 |
| SNB-FP | 0.7153 | 0.0000 | -1.0901 | -0.7153 | -0.0000 | 1.0901 | 0.2650 | -0.0000 | -0.0759 |
| SNB-GP | 0.7665 | 0.0000 | -1.3426 | -0.7665 | -0.0000 | 1.3426 | 0.1456 | -0.0000 | -0.0600 |
| SNB-HP | 0.7233 | 0.0000 | -1.4805 | -0.7233 | -0.0000 | 1.4805 | 0.0621 | 0.0000 | -0.0426 |
| SNB-IP | 0.7714 | 0.0000 | -1.7290 | -0.7714 | 0.0000 | 1.7290 | 0.0135 | 0.0000 | -0.0215 |
| SNB-JP | 0.4229 | 0.0000 | -0.9701 | -0.4229 | 0.0000 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| RohnA1 | 1.5751 | 0.0000 | -0.5676 | -1.5751 | 0.0000 | 0.5676 | 1.3076 | 0.0000 | -0.0575 |
| RohnA2 | 1.8225 | 0.0000 | -0.7497 | -1.8225 | -0.0000 | 0.7497 | 1.3034 | 0.0036 | -0.0574 |
| RohnB1 | 0.6769 | 0.0000 | -0.4807 | -0.6769 | -0.0000 | 0.4807 | 1.0670 | 0.0007 | -0.0442 |
| RohnB2 | 0.6586 | 0.0000 | -0.4207 | -0.6586 | -0.0000 | 0.4207 | 1.0632 | -0.0038 | -0.0441 |
| RohnC1 | 0.8933 | 0.0000 | -0.9160 | -0.8933 | 0.0000 | 0.9160 | 0.8333 | 0.0018 | -0.0322 |
| RohnC2 | 0.7709 | 0.0000 | -0.5960 | -0.7709 | -0.0000 | 0.5960 | 0.8306 | -0.0040 | -0.0321 |
| RohnD1 | 1.4234 | 0.0000 | -1.5259 | -1.4234 | 0.0000 | 1.5259 | 0.6144 | 0.0030 | -0.0217 |
| RohnD2 | 1.4234 | 0.0000 | -1.5259 | -1.4234 | -0.0000 | 1.5259 | 0.6124 | -0.0045 | -0.0216 |
| RohnE1 | 0.6395 | 0.0000 | -0.8302 | -0.6395 | -0.0000 | 0.8302 | 0.4253 | 0.0029 | -0.0151 |
| RohnE2 | 0.6395 | 0.0000 | -0.8302 | -0.6395 | -0.0000 | 0.8302 | 0.4236 | -0.0041 | -0.0150 |
| RohnF1 | 0.8948 | 0.0000 | -1.1611 | -0.8948 | 0.0000 | 1.1611 | 0.2729 | 0.0054 | -0.0096 |
| RohnF2 | 0.7890 | 0.0000 | -1.1116 | -0.7890 | -0.0000 | 1.1116 | 0.2716 | -0.0063 | -0.0095 |
| RohnG1 | 0.7941 | 0.0000 | -1.3626 | -0.7941 | 0.0000 | 1.3626 | 0.1558 | 0.0071 | -0.0067 |
| RohnG2 | 0.7941 | 0.0000 | -1.3626 | -0.7941 | -0.0000 | 1.3626 | 0.1548 | -0.0077 | -0.0066 |
| RohnH1 | 0.7233 | 0.0000 | -1.4805 | -0.7233 | 0.0000 | 1.4805 | 0.0721 | 0.0074 | -0.0036 |
| RohnH2 | 0.7233 | 0.0000 | -1.4805 | -0.7233 | -0.0000 | 1.4805 | 0.0715 | -0.0077 | -0.0036 |
| RohnI1 | 0.7714 | 0.0000 | -1.7290 | -0.7714 | 0.0000 | 1.7290 | 0.0213 | 0.0056 | -0.0023 |
| RohnI2 | 0.7714 | 0.0000 | -1.7290 | -0.7714 | -0.0000 | 1.7290 | 0.0210 | -0.0057 | -0.0023 |
| RohnJ1 | 0.4229 | 0.0000 | -0.9701 | -0.4229 | 0.0000 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| RohnJ2 | 0.4229 | 0.0000 | -0.9701 | -0.4229 | -0.0000 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| SNB-A1 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.3050 | 0.0006 | -0.0661 |
| SNB-A2 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.3048 | -0.0019 | -0.0661 |
| SNB-B1 | 0.3837 | 0.0000 | -0.3359 | -0.3837 | -0.0000 | 0.3359 | 1.0648 | 0.0011 | -0.0525 |
| SNB-B2 | 0.3837 | 0.0000 | -0.3359 | -0.3837 | 0.0000 | 0.3359 | 1.0646 | -0.0020 | -0.0524 |
| SNB-C1 | 0.5333 | 0.0000 | -0.5256 | -0.5333 | -0.0000 | 0.5256 | 0.8312 | 0.0021 | -0.0397 |
| SNB-C2 | 0.5333 | 0.0000 | -0.5256 | -0.5333 | 0.0000 | 0.5256 | 0.8311 | -0.0028 | -0.0396 |
| SNB-D1 | 0.6276 | 0.0000 | -0.6860 | -0.6276 | -0.0000 | 0.6860 | 0.6132 | 0.0027 | -0.0288 |
| SNB-D2 | 0.6276 | 0.0000 | -0.6860 | -0.6276 | 0.0000 | 0.6860 | 0.6131 | -0.0032 | -0.0287 |
| SNB-E1 | 0.6395 | 0.0000 | -0.8302 | -0.6395 | -0.0000 | 0.8302 | 0.4238 | 0.0029 | -0.0210 |
| SNB-E2 | 0.6395 | 0.0000 | -0.8302 | -0.6395 | 0.0000 | 0.8302 | 0.4237 | -0.0031 | -0.0210 |
| SNB-F1 | 0.7153 | 0.0000 | -1.0901 | -0.7153 | -0.0000 | 1.0901 | 0.2722 | 0.0049 | -0.0139 |

| | | | | | | | | | |
|------------|--------|--------|---------|---------|----------|----------|--------|---------|---------|
| SNB-F2 | 0.7153 | 0.0000 | -1.0901 | -0.7153 | 0.0000 | 1.0901 | 0.2722 | -0.0050 | -0.0139 |
| SNB-G1 | 0.7665 | 0.0000 | -1.3426 | -0.7665 | -0.0000 | 1.3426 | 0.1550 | 0.0067 | -0.0089 |
| SNB-G2 | 0.7665 | 0.0000 | -1.3426 | -0.7665 | 0.0000 | 1.3426 | 0.1549 | -0.0068 | -0.0089 |
| SNB-H1 | 0.7233 | 0.0000 | -1.4805 | -0.7233 | -0.0000 | 1.4805 | 0.0715 | 0.0068 | -0.0048 |
| SNB-H2 | 0.7233 | 0.0000 | -1.4805 | -0.7233 | 0.0000 | 1.4805 | 0.0715 | -0.0069 | -0.0048 |
| SNB-I1 | 0.7714 | 0.0000 | -1.7290 | -0.7714 | -0.0000 | 1.7290 | 0.0204 | 0.0052 | -0.0024 |
| SNB-I2 | 0.7714 | 0.0000 | -1.7290 | -0.7714 | 0.0000 | 1.7290 | 0.0204 | -0.0052 | -0.0024 |
| SNB-J1 | 0.4229 | 0.0000 | -0.9701 | 22.5730 | 33.7625 | 152.7711 | 0.0000 | 0.0000 | 0.0000 |
| SNB-J2 | 0.4229 | 0.0000 | -0.9701 | 22.5847 | -33.7713 | 152.6675 | 0.0000 | 0.0000 | 0.0000 |
| RohnAas | 1.2621 | 0.0000 | -0.3652 | -1.2621 | 0.0000 | 0.3652 | 1.2423 | 0.0021 | -0.1342 |
| RohnAas | 0.2140 | 0.0000 | -0.1602 | -0.2140 | -0.0000 | 0.1602 | 1.1806 | 0.0019 | -0.1339 |
| RohnAcs | 0.1805 | 0.0000 | -0.1852 | -0.1805 | -0.0000 | 0.1852 | 1.1217 | 0.0021 | -0.1333 |
| RohnBas | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 1.0025 | 0.0016 | -0.1317 |
| RohnBbs | 1.8803 | 0.0000 | -1.1757 | -1.8803 | 0.0000 | 1.1757 | 0.9424 | 0.0014 | -0.1308 |
| RohnBcs | 0.3599 | 0.0000 | -0.4457 | -0.3599 | -0.0000 | 0.4457 | 0.8853 | 0.0013 | -0.1296 |
| RohnCas | 2.3123 | 0.0000 | -1.2307 | -2.3123 | 0.0000 | 1.2307 | 0.7528 | 0.0011 | -0.1261 |
| RohnCbs | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.6800 | 0.0010 | -0.1237 |
| RohnDas | 0.4448 | 0.0000 | -0.6061 | -0.4448 | -0.0000 | 0.6061 | 0.5429 | 0.0009 | -0.1164 |
| RohnDbs | 0.3159 | 0.0000 | -0.3611 | -0.3159 | -0.0000 | 0.3611 | 0.4789 | 0.0009 | -0.1111 |
| RohnEas | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.3655 | 0.0008 | -0.1004 |
| RohnEbs | 0.3695 | 0.0000 | -0.5442 | -0.3695 | -0.0000 | 0.5442 | 0.3158 | 0.0007 | -0.0948 |
| RohnFas | 0.3917 | 0.0000 | -0.6209 | -0.3917 | -0.0000 | 0.6209 | 0.2078 | 0.0006 | -0.0786 |
| RohnGas | 0.3749 | 0.0000 | -0.7217 | -0.3749 | -0.0000 | 0.7217 | 0.1078 | 0.0004 | -0.0574 |
| RohnHas | 0.3485 | 0.0000 | -0.7589 | -0.3485 | -0.0000 | 0.7589 | 0.0395 | 0.0003 | -0.0350 |
| RohnIas | 0.4229 | 0.0000 | -0.9701 | -0.4229 | -0.0000 | 0.9701 | 0.0017 | 0.0001 | -0.0118 |
| RohnAas | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.2432 | -0.0004 | -0.1082 |
| SNB-Abs | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.1816 | -0.0005 | -0.1081 |
| SNB-Acs | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.1226 | -0.0004 | -0.1079 |
| SNB-Bas | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 1.0034 | -0.0003 | -0.1072 |
| SNB-Bbs | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 0.9434 | -0.0003 | -0.1068 |
| SNB-Bcs | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 0.8862 | -0.0003 | -0.1060 |
| SNB-Cas | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.7538 | -0.0002 | -0.1039 |
| SNB-Cbs | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.6809 | -0.0002 | -0.1018 |
| SNB-Das | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.5438 | -0.0001 | -0.0962 |
| SNB-Dbs | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.4798 | -0.0001 | -0.0921 |
| SNB-Eas | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.3663 | -0.0001 | -0.0841 |
| SNB-Ebs | 0.3236 | 0.0000 | -0.4692 | -0.3236 | 0.0000 | 0.4692 | 0.3166 | -0.0000 | -0.0800 |
| SNB-Fas | 0.3917 | 0.0000 | -0.6209 | -0.3917 | -0.0000 | 0.6209 | 0.2086 | 0.0000 | -0.0681 |
| SNB-Gas | 0.3749 | 0.0000 | -0.7217 | -0.3749 | -0.0000 | 0.7217 | 0.1086 | 0.0000 | -0.0515 |
| SNB-Has | 0.3485 | 0.0000 | -0.7589 | -0.3485 | -0.0000 | 0.7589 | 0.0403 | 0.0000 | -0.0324 |
| SNB-Ias | 0.4229 | 0.0000 | -0.9701 | -0.4229 | -0.0000 | 0.9701 | 0.0025 | 0.0000 | -0.0116 |
| SNB-WL-A1s | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.3031 | -0.0002 | -0.1379 |
| SNB-WL-A2s | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.3040 | -0.0007 | -0.1116 |
| SNB-WL-A3s | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.3030 | -0.0010 | -0.1369 |
| SNB-WL-B1s | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.0627 | 0.0001 | -0.1379 |
| SNB-WL-B2s | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.0638 | -0.0005 | -0.1080 |
| SNB-WL-B3s | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.0626 | -0.0010 | -0.1367 |
| SNB-WL-C1s | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 0.8287 | 0.0004 | -0.1503 |
| SNB-WL-C2s | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 0.8299 | -0.0003 | -0.1301 |
| SNB-WL-C3s | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 0.8287 | -0.0009 | -0.1499 |
| SNB-WL-D1s | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.6102 | 0.0006 | -0.1657 |
| SNB-WL-D2s | 0.3117 | 0.0000 | -0.3250 | -0.3117 | -0.0000 | 0.3250 | 0.6117 | -0.0002 | -0.1415 |
| SNB-WL-D3s | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.6101 | -0.0009 | -0.1658 |
| SNB-WL-E1s | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.4213 | 0.0008 | -0.1429 |
| SNB-WL-E2s | 0.3159 | 0.0000 | -0.3611 | -0.3159 | -0.0000 | 0.3611 | 0.4230 | -0.0001 | -0.1337 |
| SNB-WL-E3s | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.4213 | -0.0010 | -0.1430 |
| SNB-WL-F1s | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.2684 | 0.0001 | -0.2055 |
| SNB-WL-F2s | 0.3236 | 0.0000 | -0.4692 | -0.3236 | 0.0000 | 0.4692 | 0.2703 | -0.0001 | -0.1960 |
| SNB-WL-F3s | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.2684 | -0.0011 | -0.2054 |
| SNB-WL-G1s | 0.3917 | 0.0000 | -0.6209 | -0.3917 | 0.0000 | 0.6209 | 0.1505 | 0.0011 | -0.2448 |
| SNB-WL-G2s | 0.3917 | 0.0000 | -0.6209 | -0.3917 | -0.0000 | 0.6209 | 0.1527 | -0.0000 | -0.2466 |
| SNB-WL-G3s | 0.3917 | 0.0000 | -0.6209 | -0.3917 | 0.0000 | 0.6209 | 0.1505 | -0.0012 | -0.2448 |
| SNB-WL-H1s | 0.3749 | 0.0000 | -0.7217 | -0.3749 | 0.0000 | 0.7217 | 0.0674 | 0.0013 | -0.2429 |
| SNB-WL-H2s | 0.3749 | 0.0000 | -0.7217 | -0.3749 | -0.0000 | 0.7217 | 0.0697 | -0.0000 | -0.2536 |
| SNB-WL-H3s | 0.3749 | 0.0000 | -0.7217 | -0.3749 | 0.0000 | 0.7217 | 0.0673 | -0.0013 | -0.2429 |
| SNB-WL-I1s | 0.3485 | 0.0000 | -0.7589 | -0.3485 | 0.0000 | 0.7589 | 0.0174 | 0.0014 | -0.1859 |

| | | | | | | | | | |
|------------|--------|--------|---------|---------|---------|--------|--------|---------|---------|
| SNB-WL-12S | 0.3485 | 0.0000 | -0.7589 | -0.3485 | -0.0000 | 0.7589 | 0.0200 | -0.0000 | -0.2076 |
| SNB-WL-13S | 0.3485 | 0.0000 | -0.7589 | -0.3485 | -0.0000 | 0.7589 | 0.0174 | -0.0014 | -0.1859 |
| RohnAa1 | 0.4068 | 0.0000 | -0.2050 | -0.4068 | 0.0000 | 0.2050 | 1.2465 | -0.0007 | -0.0539 |
| RohnAa2 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.2420 | -0.0031 | -0.0538 |
| RohnAb1 | 1.2382 | 0.0000 | -0.3552 | -1.2382 | 0.0000 | 0.3552 | 1.1875 | -0.0001 | -0.0506 |
| RohnAb2 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.1825 | -0.0038 | -0.0505 |
| RohnAc1 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.1259 | -0.0003 | -0.0473 |
| RohnAc2 | 0.4755 | 0.0000 | -0.2277 | -0.4755 | -0.0000 | 0.2277 | 1.1219 | -0.0031 | -0.0472 |
| RohnBa1 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 1.0067 | 0.0001 | -0.0410 |
| RohnBa2 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 1.0033 | -0.0030 | -0.0409 |
| RohnBb1 | 1.8349 | 0.0000 | -1.1557 | -1.8349 | 0.0000 | 1.1557 | 0.9491 | 0.0007 | -0.0380 |
| RohnBb2 | 1.8349 | 0.0000 | -1.1557 | -1.8349 | -0.0000 | 1.1557 | 0.9459 | -0.0033 | -0.0379 |
| RohnBc1 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 0.8886 | 0.0006 | -0.0349 |
| RohnBc2 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 0.8857 | -0.0029 | -0.0348 |
| RohnCa1 | 2.3123 | 0.0000 | -1.2307 | -2.3123 | 0.0000 | 1.2307 | 0.7583 | 0.0006 | -0.0285 |
| RohnCa2 | 2.5114 | 0.0000 | -1.3037 | -2.5114 | -0.0000 | 1.3037 | 0.7560 | -0.0025 | -0.0284 |
| RohnCb1 | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.6834 | 0.0013 | -0.0248 |
| RohnCb2 | 0.3117 | 0.0000 | -0.3250 | -0.3117 | -0.0000 | 0.3250 | 0.6812 | -0.0030 | -0.0247 |
| RohnDa1 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.5465 | 0.0015 | -0.0191 |
| RohnDa2 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | -0.0000 | 0.3611 | 0.5446 | -0.0029 | -0.0190 |
| RohnDb1 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.4826 | 0.0023 | -0.0168 |
| RohnDb2 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | -0.0000 | 0.3611 | 0.4809 | -0.0026 | -0.0168 |
| RohnBa1 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | 0.0000 | 0.4692 | 0.3701 | 0.0028 | -0.0130 |
| RohnBa2 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.3686 | -0.0039 | -0.0129 |
| RohnBb1 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | 0.0000 | 0.4692 | 0.3186 | 0.0015 | -0.0110 |
| RohnBb2 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.3172 | -0.0025 | -0.0109 |
| RohnFa1 | 0.3917 | 0.0000 | -0.6209 | -0.3917 | 0.0000 | 0.6209 | 0.2045 | 0.0016 | -0.0074 |
| RohnFa2 | 0.3917 | 0.0000 | -0.6209 | -0.3917 | -0.0000 | 0.6209 | 0.2034 | -0.0023 | -0.0074 |
| RohnGa1 | 0.3749 | 0.0000 | -0.7217 | -0.3749 | 0.0000 | 0.7217 | 0.1053 | 0.0007 | -0.0046 |
| RohnGa2 | 0.3749 | 0.0000 | -0.7217 | -0.3749 | -0.0000 | 0.7217 | 0.1045 | -0.0012 | -0.0046 |
| RohnHa1 | 0.3485 | 0.0000 | -0.7589 | -0.3485 | 0.0000 | 0.7589 | 0.0383 | 0.0023 | -0.0025 |
| RohnHa2 | 0.3485 | 0.0000 | -0.7589 | -0.3485 | -0.0000 | 0.7589 | 0.0378 | -0.0026 | -0.0025 |
| RohnIa1 | 0.4229 | 0.0000 | -0.9701 | -0.4229 | 0.0000 | 0.9701 | 0.0070 | 0.0055 | -0.0012 |
| RohnIa2 | 0.4229 | 0.0000 | -0.9701 | -0.4229 | -0.0000 | 0.9701 | 0.0069 | -0.0056 | -0.0012 |
| SNB-Aa1 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.2439 | 0.0002 | -0.0626 |
| SNB-Aa2 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.2438 | -0.0011 | -0.0626 |
| SNB-Ab1 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.1845 | 0.0008 | -0.0592 |
| SNB-Ab2 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.1842 | -0.0019 | -0.0591 |
| SNB-Ac1 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | 0.0000 | 0.1352 | 1.1236 | 0.0001 | -0.0557 |
| SNB-Ac2 | 0.1621 | 0.0000 | -0.1352 | -0.1621 | -0.0000 | 0.1352 | 1.1235 | -0.0012 | -0.0557 |
| SNB-Ba1 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 1.0048 | 0.0003 | -0.0491 |
| SNB-Ba2 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 1.0046 | -0.0013 | -0.0490 |
| SNB-Bb1 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 0.9464 | 0.0014 | -0.0459 |
| SNB-Bb2 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 0.9462 | -0.0022 | -0.0458 |
| SNB-Bc1 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | 0.0000 | 0.2007 | 0.8877 | 0.0002 | -0.0427 |
| SNB-Bc2 | 0.2216 | 0.0000 | -0.2007 | -0.2216 | -0.0000 | 0.2007 | 0.8875 | -0.0009 | -0.0426 |
| SNB-Ca1 | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.7555 | 0.0013 | -0.0358 |
| SNB-Ca2 | 0.3117 | 0.0000 | -0.3250 | -0.3117 | -0.0000 | 0.3250 | 0.7554 | -0.0019 | -0.0357 |
| SNB-Cb1 | 0.3117 | 0.0000 | -0.3250 | -0.3117 | 0.0000 | 0.3250 | 0.6821 | 0.0011 | -0.0320 |
| SNB-Cb2 | 0.3117 | 0.0000 | -0.3250 | -0.3117 | -0.0000 | 0.3250 | 0.6820 | -0.0017 | -0.0319 |
| SNB-Da1 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.5446 | 0.0017 | -0.0259 |
| SNB-Da2 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | -0.0000 | 0.3611 | 0.5445 | -0.0020 | -0.0257 |
| SNB-Db1 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | 0.0000 | 0.3611 | 0.4814 | 0.0021 | -0.0231 |
| SNB-Db2 | 0.3159 | 0.0000 | -0.3611 | -0.3159 | -0.0000 | 0.3611 | 0.4813 | -0.0025 | -0.0231 |
| SNB-Ea1 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | 0.0000 | 0.4692 | 0.3693 | 0.0024 | -0.0184 |
| SNB-Ea2 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.3692 | -0.0026 | -0.0184 |
| SNB-Eb1 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | 0.0000 | 0.4692 | 0.3175 | 0.0012 | -0.0157 |
| SNB-Eb2 | 0.3236 | 0.0000 | -0.4692 | -0.3236 | -0.0000 | 0.4692 | 0.3175 | -0.0014 | -0.0157 |
| SNB-Fa1 | 0.3917 | 0.0000 | -0.6209 | -0.3917 | 0.0000 | 0.6209 | 0.2041 | 0.0009 | -0.0107 |
| SNB-Fa2 | 0.3917 | 0.0000 | -0.6209 | -0.3917 | -0.0000 | 0.6209 | 0.2040 | -0.0010 | -0.0107 |
| SNB-Ga1 | 0.3749 | 0.0000 | -0.7217 | -0.3749 | 0.0000 | 0.7217 | 0.1041 | 0.0005 | -0.0063 |
| SNB-Ga2 | 0.3749 | 0.0000 | -0.7217 | -0.3749 | -0.0000 | 0.7217 | 0.1041 | -0.0005 | -0.0063 |
| SNB-Ha1 | 0.3485 | 0.0000 | -0.7589 | -0.3485 | 0.0000 | 0.7589 | 0.0374 | 0.0019 | -0.0033 |
| SNB-Ha2 | 0.3485 | 0.0000 | -0.7589 | -0.3485 | -0.0000 | 0.7589 | 0.0374 | -0.0019 | -0.0033 |
| SNB-Ia1 | 0.4229 | 0.0000 | -0.9701 | -0.4229 | 0.0000 | 0.9701 | 0.0057 | 0.0053 | -0.0014 |
| SNB-Ia2 | 0.4229 | 0.0000 | -0.9701 | -0.4229 | -0.0000 | 0.9701 | 0.0057 | -0.0054 | -0.0014 |

Moments for Angles Modeled as Beams:

| Angle Torsion Label | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | Origin X Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | End X Shear (lbs) | End Y Shear (lbs) |
|---------------------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|
| Rohn-LA1P | 0.00 | -0.00 | 0.00 | 27.75 | -175.09 | 5.55 | -35.01 |
| Rohn-LA11 | 0.00 | 0.00 | 0.00 | -83.73 | 148.65 | -16.74 | 29.72 |
| Rohn-LA12 | 0.00 | -0.00 | 0.00 | 88.15 | 116.98 | 17.62 | 23.39 |
| Rohn-LA2P | 0.00 | -27.75 | 175.09 | -32.27 | 220.29 | -12.00 | 79.05 |
| Rohn-LA21 | -0.01 | 83.74 | -148.65 | 89.77 | -212.32 | 34.69 | -72.17 |
| Rohn-LA22 | 0.00 | -88.16 | -116.98 | -122.59 | -116.57 | -42.13 | -46.69 |
| Rohn-LA3P | 0.00 | 32.27 | -220.29 | 39.46 | -220.30 | 14.34 | -88.10 |
| Rohn-LA31 | 0.01 | -89.77 | 212.33 | -120.25 | 211.35 | -41.98 | 88.70 |
| Rohn-LA32 | 0.00 | 122.59 | 116.57 | 140.96 | 159.58 | 52.69 | 55.21 |
| Rohn-LA4P | -0.01 | -39.46 | 220.30 | -30.69 | 302.47 | -14.03 | 104.53 |
| Rohn-LA41 | 0.01 | 120.25 | -231.34 | 170.68 | -232.60 | 58.16 | -92.75 |
| Rohn-LA42 | 0.00 | -140.96 | -159.58 | -176.74 | -195.22 | -63.51 | -70.93 |
| Rohn-LB1P | 0.00 | 30.69 | -302.47 | 13.33 | -374.86 | 8.80 | -135.43 |
| Rohn-LB11 | -0.02 | -170.68 | 232.61 | -202.39 | 454.29 | -74.58 | 137.32 |
| Rohn-LB12 | 0.02 | 176.74 | -195.23 | 203.23 | -437.03 | 75.96 | -126.40 |
| Rohn-LB2P | 0.00 | -13.33 | 374.86 | -6.04 | 476.52 | -3.87 | 170.24 |
| Rohn-LB21 | -0.02 | 202.40 | -454.28 | 185.82 | -575.85 | 77.61 | -205.93 |
| Rohn-LB22 | 0.02 | -203.24 | 437.03 | -188.71 | -558.70 | -78.35 | 199.05 |
| Rohn-LB3P | 0.00 | 6.04 | -476.51 | -1.06 | -406.39 | 1.00 | -176.56 |
| Rohn-LB31 | 0.01 | -185.81 | 575.86 | -227.05 | -29.51 | -87.54 | 45.08 |
| Rohn-LB32 | -0.01 | 188.69 | -558.71 | 281.83 | 697.80 | 94.06 | -251.18 |
| Rohn-LB4P | 0.00 | 1.06 | -406.39 | -6.10 | 513.80 | -1.01 | 184.02 |
| Rohn-LB41 | 0.09 | 266.48 | -738.19 | 355.28 | -329.86 | 124.49 | -213.50 |
| Rohn-LB42 | -0.09 | -281.86 | 697.79 | -373.35 | -282.23 | -130.97 | 195.90 |
| Rohn-LC1P | 0.00 | 6.10 | -513.79 | 14.29 | -26.47 | 3.06 | -73.16 |
| Rohn-LC11 | 0.04 | -356.27 | 329.86 | -227.05 | -29.51 | -87.54 | 45.08 |
| Rohn-LC12 | -0.04 | 373.35 | -282.23 | 242.55 | -72.43 | 92.43 | -31.49 |
| Rohn-LC2P | 0.00 | -14.29 | 26.47 | -16.62 | -235.37 | -4.63 | -39.19 |
| Rohn-LC21 | 0.06 | 227.06 | -29.51 | 166.04 | 604.30 | 9.13 | 94.83 |
| Rohn-LC22 | -0.07 | -242.56 | 72.43 | -164.27 | 620.57 | -11.71 | 103.69 |
| Rohn-LC3P | 0.01 | 16.62 | -235.37 | 2.17 | 991.39 | 2.82 | 184.20 |
| Rohn-LC31 | 0.11 | 166.06 | -604.29 | 490.05 | -124.74 | 98.46 | -109.40 |
| Rohn-LC32 | -0.11 | -164.29 | 620.57 | -482.94 | -143.52 | -97.13 | 114.66 |
| Rohn-LD1P | 0.00 | -2.17 | -991.39 | 4.42 | -229.68 | 0.34 | -183.39 |
| Rohn-LD11 | -0.03 | 490.05 | 124.74 | -449.32 | 382.20 | -140.96 | 76.07 |
| Rohn-LD12 | 0.03 | -482.94 | 143.52 | 442.95 | -398.30 | 138.93 | -81.30 |
| Rohn-LD2P | 0.00 | -4.42 | 229.68 | -3.02 | 329.90 | -1.11 | 83.80 |
| Rohn-LD21 | 0.12 | 449.33 | -382.19 | 160.22 | 668.29 | 91.19 | 42.80 |
| Rohn-LD22 | -0.12 | -442.97 | 398.29 | -155.41 | -659.28 | -89.52 | 39.04 |
| Rohn-LD3P | 0.00 | 3.02 | -329.89 | 1.75 | 704.64 | 0.72 | 56.29 |
| Rohn-LD31 | -0.00 | 160.19 | -668.29 | -61.23 | 51.91 | -33.22 | -92.48 |
| Rohn-LD32 | 0.01 | 155.38 | -659.28 | 60.73 | 53.88 | 32.43 | -90.84 |
| Rohn-LE1P | 0.00 | -1.75 | -704.64 | -2.83 | 747.66 | -0.69 | 6.46 |
| Rohn-LE11 | 0.02 | 61.23 | -51.91 | 548.72 | -316.63 | 91.52 | 39.72 |
| Rohn-LE12 | -0.02 | -60.74 | 53.88 | -548.57 | 319.22 | -91.43 | 39.81 |
| Rohn-LE2P | 0.00 | 2.83 | -747.66 | 7.91 | -1291.45 | 1.61 | -305.35 |
| Rohn-LE21 | -0.23 | -548.72 | 316.64 | -1420.41 | 1069.58 | -284.59 | 112.64 |
| Rohn-LE22 | 0.24 | 548.57 | -319.23 | 1421.85 | -1063.16 | 294.78 | -111.29 |
| Rohn-LE3P | 0.00 | -7.91 | 1291.45 | -9.50 | 3134.05 | -2.62 | 664.73 |
| Rohn-LE31 | 0.17 | 1420.45 | -1069.53 | 1848.07 | -900.96 | 490.43 | -295.66 |
| Rohn-LE32 | -0.17 | -1421.89 | 1063.11 | -1849.04 | -892.95 | -490.79 | 293.50 |
| Rohn-LF1P | 0.00 | 9.50 | -3134.05 | 7.21 | -2543.18 | 1.67 | -568.00 |
| Rohn-LF11 | -0.72 | -1848.07 | 900.96 | -2029.20 | 2561.99 | -387.44 | 346.04 |
| Rohn-LF12 | 0.73 | 1849.03 | -892.96 | 2030.71 | -2556.05 | 387.69 | -344.65 |
| Rohn-LF2P | -0.01 | -7.21 | 2543.18 | -3.86 | 4467.63 | -1.11 | 701.48 |
| Rohn-LF21 | 0.87 | 2029.39 | -2561.84 | 2607.63 | -1602.05 | 463.34 | -416.06 |
| Rohn-LF22 | -0.87 | -2030.89 | 2555.90 | -2607.17 | -1598.92 | -463.44 | 415.16 |
| Rohn-LG1P | 0.00 | 3.86 | -4467.62 | 2.96 | -3637.47 | 0.68 | -810.81 |
| Rohn-LG11 | -0.57 | -2607.61 | 1602.08 | -3138.15 | 3146.81 | -574.18 | 474.56 |

| | | | | | | | |
|-----------|-------|----------|----------|----------|----------|---------|---------|
| Rohn-LG12 | 0.57 | 2607.16 | 1598.95 | 3137.90 | 3146.40 | 574.11 | 474.21 |
| Rohn-LG2P | -0.00 | -2.96 | 3637.48 | -3.20 | 4948.55 | -0.62 | 858.98 |
| Rohn-LG21 | 0.77 | 3138.36 | -3146.61 | 2886.75 | -1584.87 | 602.08 | -472.81 |
| Rohn-LG22 | -0.76 | -3138.10 | -3146.20 | -2883.82 | -1588.11 | -601.76 | -473.09 |
| Rohn-LHIP | -0.00 | 3.20 | -4948.55 | 1.96 | -2770.88 | 0.52 | -772.32 |
| Rohn-LHL1 | -0.88 | -2886.73 | 1584.90 | -2083.23 | 2858.86 | -496.62 | 444.04 |
| Rohn-LHL2 | 0.88 | 2883.80 | 1588.13 | 2082.43 | 2860.25 | 496.25 | 444.50 |
| Rohn-LHZP | -0.00 | -1.96 | 2770.88 | -2.08 | 3564.40 | -0.40 | 633.89 |
| Rohn-LH21 | 0.25 | 2083.40 | -2858.74 | 948.26 | -710.31 | 302.93 | -356.63 |
| Rohn-LH22 | -0.24 | -2082.62 | -2860.13 | -945.93 | -713.02 | -302.62 | -357.04 |
| Rohn-LHIP | 0.00 | 2.08 | -3564.39 | 13.20 | 2068.32 | 1.53 | -149.66 |
| Rohn-LH11 | -0.25 | -948.26 | 710.30 | 2595.09 | 1522.40 | 164.57 | 223.11 |
| Rohn-LH12 | 0.25 | 945.93 | 713.01 | -2606.56 | 1543.08 | -165.94 | 225.45 |
| Rohn-LI2P | -0.01 | -13.20 | -2068.32 | -57.01 | -271.03 | -7.02 | -234.03 |
| Rohn-LI21 | 1.30 | -2595.05 | -1522.47 | -4674.86 | 3545.89 | -726.49 | 202.20 |
| Rohn-LI22 | 1.30 | 2606.52 | -1543.14 | 4730.99 | 3449.13 | 733.25 | 190.47 |
| SNB-LA1P | 0.00 | 0.00 | 0.00 | 0.00 | 19.41 | 3.88 | -47.65 |
| SNB-LA11 | -0.00 | 0.00 | 0.00 | -144.63 | 148.19 | -28.91 | 29.63 |
| SNB-LA12 | 0.00 | -19.41 | 238.33 | -25.24 | 300.13 | 28.06 | 24.66 |
| SNB-LA2P | 0.00 | 144.63 | -148.19 | 181.11 | -187.45 | 65.12 | -67.10 |
| SNB-LA21 | -0.00 | -140.35 | -123.33 | -170.99 | -152.45 | -62.24 | -55.13 |
| SNB-LA3P | -0.00 | 25.24 | -300.13 | 23.71 | -304.05 | 9.79 | -120.80 |
| SNB-LA31 | 0.00 | -181.10 | 187.45 | -209.93 | 240.09 | -78.18 | 85.47 |
| SNB-LA32 | 0.00 | 170.98 | 152.46 | 200.76 | 207.04 | 74.32 | 71.87 |
| SNB-LA4P | -0.00 | -23.71 | 304.05 | -20.53 | 427.62 | -8.84 | 146.29 |
| SNB-LA41 | 0.01 | 209.94 | -240.08 | 284.65 | -251.09 | 98.88 | -98.19 |
| SNB-LA42 | -0.01 | -200.77 | -207.04 | -279.29 | -222.64 | -95.97 | -85.90 |
| SNB-LA43 | 0.00 | 20.53 | -427.62 | 15.48 | 566.62 | 7.20 | -198.83 |
| SNB-LB1P | 0.00 | -284.64 | 251.10 | -489.95 | 372.11 | -154.85 | 124.59 |
| SNB-LB11 | 0.01 | 279.28 | 222.64 | 488.26 | 352.97 | 153.45 | 115.07 |
| SNB-LB12 | -0.00 | -15.48 | 566.62 | -9.72 | 721.27 | -5.04 | 257.55 |
| SNB-LB2P | 0.04 | 489.97 | -372.10 | 641.97 | -246.77 | 226.29 | -123.72 |
| SNB-LB21 | -0.04 | -488.27 | -352.96 | -640.03 | -234.53 | -223.56 | -117.45 |
| SNB-LB3P | -0.00 | 9.72 | -721.26 | 7.87 | -576.02 | 3.52 | -259.39 |
| SNB-LB31 | 0.03 | -641.96 | 246.78 | -756.65 | 445.80 | -279.60 | 138.46 |
| SNB-LB32 | 0.03 | 640.02 | 234.54 | 753.16 | 434.98 | 278.51 | 133.85 |
| SNB-LB4P | -0.00 | -7.87 | 576.03 | -6.68 | 592.15 | -2.91 | 233.58 |
| SNB-LB41 | 0.03 | 756.67 | -445.78 | 517.56 | -188.40 | 254.73 | -126.78 |
| SNB-LB42 | -0.03 | -753.18 | 434.96 | -512.07 | -177.96 | -252.94 | -122.53 |
| SNB-LCLP | 0.00 | 6.68 | -592.14 | 6.84 | -12.66 | 2.03 | -90.79 |
| SNB-LCL1 | -0.02 | -517.56 | 188.41 | -123.25 | 163.92 | -96.17 | 52.88 |
| SNB-LCL2 | 0.02 | 512.06 | 177.97 | 119.85 | 154.22 | 94.84 | 49.85 |
| SNB-LC2P | -0.00 | -6.84 | 12.66 | -5.59 | -211.60 | -1.86 | -29.78 |
| SNB-LC21 | 0.01 | 123.26 | -163.92 | -220.47 | 381.99 | -14.55 | 32.63 |
| SNB-LC22 | -0.01 | -119.86 | 154.22 | 223.09 | 389.66 | 15.45 | 35.23 |
| SNB-LC3P | 0.00 | 5.59 | 211.61 | 4.57 | 923.11 | 1.53 | 170.37 |
| SNB-LC31 | 0.05 | 220.49 | -381.98 | 399.94 | -220.10 | 93.11 | -90.35 |
| SNB-LC32 | -0.05 | -223.10 | -389.65 | -400.67 | -224.83 | -93.61 | -92.22 |
| SNB-LD1P | -0.00 | -4.57 | 923.10 | -1.72 | -195.07 | -0.94 | -167.90 |
| SNB-LD11 | -0.06 | -399.93 | 220.10 | -304.63 | 690.07 | -105.73 | 136.58 |
| SNB-LD12 | 0.06 | 400.67 | 224.84 | 305.90 | 692.55 | 106.03 | 137.67 |
| SNB-LD2P | -0.00 | 1.72 | 195.08 | 1.26 | 290.98 | 0.44 | 72.78 |
| SNB-LD21 | 0.04 | 304.66 | -690.06 | 11.41 | 447.04 | 47.29 | -36.36 |
| SNB-LD22 | -0.04 | -305.93 | -692.54 | -11.09 | 446.32 | -47.43 | -36.84 |
| SNB-LD3P | -0.00 | -1.26 | -290.97 | 0.17 | 973.44 | -0.16 | 102.50 |
| SNB-LD31 | 0.01 | -11.39 | -447.04 | 111.98 | 384.70 | 15.09 | -9.35 |
| SNB-LD32 | -0.01 | 11.07 | 446.31 | -110.69 | 383.31 | -14.95 | -9.45 |
| SNB-LE1P | -0.00 | -0.17 | -973.43 | -2.49 | 1628.15 | -0.40 | 98.31 |
| SNB-LE11 | 0.05 | -111.98 | -384.70 | 850.08 | 278.22 | 110.76 | -15.98 |
| SNB-LE12 | -0.05 | 110.68 | -383.31 | -848.54 | 282.39 | -110.73 | -15.14 |
| SNB-LE2P | -0.00 | -2.49 | -1628.14 | 5.12 | -2464.23 | 1.14 | -612.69 |
| SNB-LE21 | -0.29 | -850.07 | -278.22 | -2633.56 | 2458.78 | -521.21 | 326.24 |
| SNB-LE22 | 0.29 | 848.54 | -282.40 | 2632.47 | -2452.49 | 520.81 | 324.68 |
| SNB-LE3P | -0.00 | -5.12 | 2464.24 | -4.05 | 5567.61 | -1.38 | 1206.13 |
| SNB-LE31 | 0.41 | 2633.66 | -2458.68 | 3228.39 | -1693.30 | 879.63 | -623.03 |

| | | | | | | | |
|----------|-------|----------|-----------|----------|----------|----------|----------|
| SNB-LE32 | -0.40 | -2632.57 | -2452.38 | -3225.16 | -1687.59 | -878.98 | -621.23 |
| SNB-LF1P | 0.00 | 4.05 | -5567.61 | 4.10 | -4366.52 | 0.82 | -993.62 |
| SNB-LF11 | -1.16 | -3228.37 | 1693.33 | -3404.19 | 3981.56 | -662.84 | 567.13 |
| SNB-LF12 | 1.16 | 3225.14 | 1687.61 | 3403.64 | 3976.88 | 662.46 | 566.09 |
| SNB-LF2P | -0.00 | -4.10 | 4366.53 | -3.10 | 8019.60 | -0.72 | 1238.94 |
| SNB-LF21 | 1.46 | 3404.47 | -3981.32 | 4645.72 | -2892.99 | 804.47 | -686.96 |
| SNB-LF22 | -1.46 | -3403.92 | -3976.64 | -4643.92 | -2888.99 | -804.24 | -686.10 |
| SNB-LG1P | -0.00 | 3.10 | -8019.60 | 3.63 | -7850.88 | 0.67 | -1587.40 |
| SNB-LG11 | -1.17 | -4645.69 | 2893.05 | -6735.86 | 7541.07 | -1137.41 | 1042.73 |
| SNB-LG12 | 1.17 | 4643.88 | 2889.04 | 6736.85 | 7537.58 | 1137.33 | 1041.98 |
| SNB-LG2P | -0.00 | -3.63 | 7850.88 | -1.40 | 11405.23 | -0.50 | 1926.16 |
| SNB-LG21 | 1.65 | 6736.37 | -7540.61 | 6406.37 | -4068.95 | 1313.40 | -1160.18 |
| SNB-LG22 | -1.64 | -6737.36 | -7537.12 | -6405.22 | -4066.46 | -1313.38 | -1159.59 |
| SNB-LH1P | 0.00 | 1.40 | -11405.22 | 1.96 | -6378.53 | 0.34 | -1778.95 |
| SNB-LH11 | -1.98 | -6406.33 | 4069.01 | -4676.41 | 6998.89 | -1107.48 | 1106.00 |
| SNB-LH12 | 1.98 | 6405.18 | 4066.52 | 4677.22 | 6997.50 | 1107.45 | 1105.61 |
| SNB-LH2P | -0.00 | -1.96 | 6378.54 | -1.16 | 8185.80 | -0.31 | 1457.04 |
| SNB-LH21 | 0.30 | 4676.84 | -6998.61 | 1960.43 | -2151.07 | 663.26 | -914.32 |
| SNB-LH22 | -0.30 | -4677.64 | -6997.22 | -1958.86 | -2150.67 | -663.18 | -914.15 |
| SNB-LI1P | 0.00 | 1.16 | -8185.79 | 3.11 | 3270.48 | 0.43 | -491.66 |
| SNB-LI11 | -0.81 | -1960.44 | 2151.06 | -5376.70 | 5027.45 | 341.38 | 717.34 |
| SNB-LI12 | 0.81 | 1958.87 | 2150.66 | -5376.21 | 5028.04 | -341.49 | 717.36 |
| SNB-LI2P | -0.00 | -3.11 | -3270.47 | -5.96 | 964.17 | -0.91 | -230.72 |
| SNB-LI21 | -2.83 | -5376.55 | -5027.61 | -9483.00 | 4863.45 | -1484.98 | -16.41 |
| SNB-LI22 | 2.83 | 5376.06 | -5028.20 | 9487.56 | 4856.81 | 1485.38 | -17.13 |

Equilibrium Joint Positions and Rotations for Load Case "W+I 60 deg":

| Joint Label | X-Displ (ft) | Y-Displ (ft) | Z-Displ (ft) | X-Rot (deg) | Y-Rot (deg) | Z-Rot (deg) | X-Pos (ft) | Y-Pos (ft) | Z-Pos (ft) |
|-------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|------------|------------|
| RohnA1 | 0.6021 | 1.049 | -0.1062 | -0.5447 | 0.2975 | -0.0213 | 4.935 | 1.049 | 179.9 |
| RohnA2 | 0.4898 | 0.8553 | -0.1004 | -0.5577 | 0.3087 | -0.0219 | 5.611 | 0.8553 | 159.9 |
| RohnB1 | 0.3803 | 0.6663 | -0.09342 | -0.5067 | 0.3085 | -0.0201 | 6.289 | 0.6663 | 139.9 |
| RohnB2 | 0.2782 | 0.4897 | -0.08514 | -0.4677 | 0.2698 | -0.0185 | 6.973 | 0.4897 | 119.9 |
| RohnC1 | 0.1908 | 0.338 | -0.07289 | -0.3863 | 0.2267 | -0.0154 | 7.672 | 0.338 | 99.93 |
| RohnC2 | 0.1182 | 0.2149 | -0.06049 | -0.3237 | 0.1686 | -0.0128 | 8.386 | 0.2149 | 79.94 |
| RohnD1 | 0.06214 | 0.1207 | -0.04553 | -0.2234 | 0.1132 | -0.0089 | 9.117 | 0.1207 | 59.95 |
| RohnD2 | 0.02375 | 0.05396 | -0.03131 | -0.1561 | 0.0951 | -0.0063 | 9.865 | 0.05396 | 39.97 |
| RohnE1 | 0.002504 | 0.01441 | -0.01524 | -0.0751 | 0.0578 | -0.0031 | 10.63 | 0.01441 | 19.98 |
| RohnE2 | 0 | 0 | 0 | 0 | 0 | 0 | 11.42 | 0 | 0 |
| RohnF1 | 0.6029 | 1.045 | -0.09236 | -0.5549 | 0.2975 | -0.0217 | 2.936 | 1.045 | 179.9 |
| RohnF2 | 0.4906 | 0.8513 | -0.0873 | -0.5487 | 0.3076 | -0.0216 | 3.612 | 0.8513 | 159.9 |
| RohnG1 | 0.3811 | 0.663 | -0.0814 | -0.5260 | 0.3153 | -0.0209 | 4.289 | 0.663 | 139.9 |
| RohnG2 | 0.279 | 0.4877 | -0.07394 | -0.4755 | 0.2668 | -0.0187 | 4.974 | 0.4877 | 119.9 |
| RohnH1 | 0.1916 | 0.336 | -0.06344 | -0.3817 | 0.2232 | -0.0151 | 5.673 | 0.336 | 99.94 |
| RohnH2 | 0.1189 | 0.214 | -0.05356 | -0.3191 | 0.1786 | -0.0126 | 6.387 | 0.214 | 79.95 |
| RohnI1 | 0.06292 | 0.1198 | -0.04157 | -0.2270 | 0.0965 | -0.0089 | 7.118 | 0.1198 | 59.96 |
| RohnI2 | 0.02453 | 0.05348 | -0.02886 | -0.1545 | 0.0941 | -0.0063 | 7.866 | 0.05348 | 39.97 |
| RohnJ1 | 0.003285 | 0.0138 | -0.01459 | -0.0777 | 0.0584 | -0.0032 | 8.631 | 0.0138 | 19.99 |
| RohnJ2 | 0 | 0 | 0 | 0 | 0 | 0 | 9.415 | 0 | 0 |
| RohnK1 | 0.6093 | 1.045 | -0.03453 | -0.5761 | 0.3352 | -0.0001 | -1.557 | -2.708 | 180 |
| RohnK2 | 0.6023 | 1.041 | -0.106 | -0.5398 | 0.3389 | 0.0219 | -1.564 | -4.793 | 179.9 |
| RohnL1 | 0.4974 | 0.8516 | -0.01828 | -0.5538 | 0.3225 | -0.0001 | -2.063 | -3.583 | 160 |
| RohnL2 | 0.4901 | 0.8467 | -0.1002 | -0.5426 | 0.3259 | 0.0217 | -2.07 | -5.282 | 159.9 |
| RohnM1 | 0.3882 | 0.665 | -0.004374 | -0.5125 | 0.2987 | -0.0001 | -2.566 | -4.452 | 140 |
| RohnM2 | 0.3826 | 0.6588 | -0.09323 | -0.5172 | 0.2816 | -0.0200 | -2.572 | -5.776 | 139.9 |
| RohnN1 | 0.2864 | 0.4905 | -0.06843 | -0.4736 | 0.2752 | -0.0000 | -3.061 | -5.308 | 120 |
| RohnN2 | 0.2816 | 0.4831 | -0.08498 | -0.4661 | 0.2697 | 0.0185 | -3.066 | -6.281 | 119.9 |
| RohnO1 | 0.1982 | 0.3391 | -0.01069 | -0.3809 | 0.2219 | -0.0001 | -3.542 | -6.14 | 100 |
| RohnO2 | 0.1945 | 0.3321 | -0.07277 | -0.3878 | 0.2196 | 0.0153 | -3.546 | -6.811 | 99.93 |
| RohnP1 | 0.1284 | 0.2194 | 0.01298 | -0.3115 | 0.1816 | -0.0001 | -4.006 | -6.941 | 80.01 |
| RohnP2 | 0.1248 | 0.2082 | -0.0604 | -0.3063 | 0.1941 | 0.0127 | -4.009 | -7.369 | 79.94 |
| RohnQ1 | 0.07471 | 0.1273 | 0.01039 | -0.2376 | 0.1386 | -0.0000 | -4.453 | -7.715 | 60.01 |
| RohnQ2 | 0.07181 | 0.1131 | -0.04548 | -0.2085 | 0.1353 | 0.0088 | -4.456 | -7.955 | 59.95 |
| RohnR1 | 0.0361 | 0.06121 | 0.008531 | -0.1429 | 0.0837 | -0.0000 | -4.884 | -8.461 | 40.01 |
| RohnR2 | 0.03379 | 0.04688 | -0.03127 | -0.1594 | 0.0861 | 0.0063 | -4.887 | -8.569 | 39.97 |
| RohnS1 | 0.01186 | 0.01989 | 0.003394 | -0.0501 | 0.0300 | -0.0000 | -5.303 | -9.186 | 20 |
| RohnS2 | 0.01067 | 0.005041 | -0.01523 | -0.0866 | 0.0347 | 0.0030 | -5.304 | -9.215 | 19.98 |
| RohnT1 | 0 | 0 | 0 | 0 | 0 | 0 | -5.71 | -9.89 | 0 |
| RohnT2 | 0 | 0 | 0 | 0 | 0 | 0 | -5.71 | -9.89 | 0 |
| RohnU1 | 0.6055 | 1.046 | -0.05319 | -0.5761 | 0.3352 | -0.0001 | -0.561 | -0.9745 | 179.9 |
| RohnU2 | 0.6051 | 1.043 | -0.0923 | -0.5367 | 0.3336 | 0.0218 | -0.5614 | -3.064 | 179.9 |
| RohnV1 | 0.4936 | 0.8528 | -0.03598 | -0.5558 | 0.3215 | -0.0000 | -1.067 | -1.85 | 160 |
| RohnV2 | 0.4932 | 0.8494 | -0.08722 | -0.5394 | 0.3228 | 0.0216 | -1.067 | -3.552 | 159.9 |
| RohnW1 | 0.3852 | 0.6657 | -0.02046 | -0.5082 | 0.2944 | -0.0000 | -1.569 | -2.719 | 140 |
| RohnW2 | 0.3845 | 0.6608 | -0.08132 | -0.5352 | 0.2991 | 0.0209 | -1.57 | -4.045 | 139.9 |
| RohnX1 | 0.284 | 0.4909 | -0.0083 | -0.4755 | 0.2753 | -0.0000 | -2.063 | -3.575 | 120 |
| RohnX2 | 0.2833 | 0.485 | -0.07386 | -0.4682 | 0.2792 | 0.0187 | -2.064 | -4.551 | 119.9 |
| RohnY1 | 0.1963 | 0.3393 | -0.002103 | -0.3797 | 0.2197 | -0.0000 | -2.544 | -4.407 | 100 |
| RohnY2 | 0.1955 | 0.3336 | -0.06338 | -0.3837 | 0.2194 | 0.0151 | -2.545 | -5.08 | 99.94 |
| RohnZ1 | 0.1269 | 0.2194 | 0.003684 | -0.3074 | 0.1776 | -0.0000 | -3.007 | -5.209 | 80 |
| RohnZ2 | 0.1259 | 0.2098 | -0.05351 | -0.3139 | 0.1674 | 0.0126 | -3.008 | -5.638 | 79.95 |
| RohnAA1 | 0.07349 | 0.1271 | -0.005438 | -0.2481 | 0.1435 | -0.0000 | -3.454 | -5.983 | 60.01 |
| RohnAA2 | 0.07232 | 0.1143 | -0.04154 | -0.1969 | 0.1485 | 0.0089 | -3.455 | -6.224 | 59.96 |
| RohnAB1 | 0.03518 | 0.06584 | 0.005714 | -0.1443 | 0.0835 | -0.0000 | -3.885 | -6.73 | 40.01 |
| RohnAB2 | 0.03405 | 0.04793 | -0.02893 | -0.1586 | 0.0868 | 0.0062 | -3.886 | -6.838 | 39.97 |
| RohnAC1 | 0.0112 | 0.01936 | 0.002932 | -0.0516 | 0.0299 | -0.0000 | -4.303 | -7.453 | 20 |

| | | | | | | | | | |
|------------|-----------|----------|-----------|---------|---------|---------|---------|----------|-------|
| SNB-I2 | 0.01029 | 0.009725 | -0.01458 | -0.0893 | 0.0380 | 0.0032 | -4.304 | 7.482 | 19.99 |
| SNB-J1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | -8.154 | 0 |
| SNB-J2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | 8.154 | 0 |
| RohnAas | 0.5752 | 1.001 | -0.1049 | -0.5578 | 0.3280 | -0.0221 | 5.105 | 1.001 | 174.9 |
| RohnAbs | 0.5458 | 0.9514 | -0.1035 | -0.5630 | 0.3138 | -0.0222 | 5.273 | 0.9514 | 169.9 |
| RohnAcs | 0.5189 | 0.903 | -0.102 | -0.5452 | 0.3230 | -0.0216 | 5.443 | 0.903 | 164.9 |
| RohnBas | 0.4632 | 0.8068 | -0.09881 | -0.5401 | 0.3174 | -0.0213 | 5.781 | 0.8068 | 154.9 |
| RohnBcs | 0.4346 | 0.7602 | -0.09972 | -0.5484 | 0.3101 | -0.0215 | 5.95 | 0.7602 | 149.9 |
| RohnBds | 0.4087 | 0.7114 | -0.09532 | -0.5425 | 0.3107 | -0.0213 | 6.121 | 0.7114 | 144.9 |
| RohnCas | 0.3467 | 0.6066 | -0.0909 | -0.5224 | 0.2791 | -0.0204 | 6.517 | 0.6066 | 133.2 |
| RohnCbs | 0.313 | 0.5459 | -0.08804 | -0.5050 | 0.3023 | -0.0200 | 6.746 | 0.5459 | 126.6 |
| RohnDas | 0.2493 | 0.4359 | -0.08137 | -0.4574 | 0.2566 | -0.0180 | 7.206 | 0.4359 | 113.3 |
| RohnDbs | 0.2193 | 0.3842 | -0.07718 | -0.4196 | 0.2456 | -0.0167 | 7.439 | 0.3842 | 106.6 |
| RohnEas | 0.1665 | 0.2939 | -0.06894 | -0.3653 | 0.1855 | -0.0144 | 7.91 | 0.2939 | 93.27 |
| RohnEbs | 0.1443 | 0.2532 | -0.06464 | -0.3363 | 0.2205 | -0.0135 | 8.15 | 0.2532 | 86.6 |
| RohnFas | 0.09552 | 0.1619 | -0.05295 | -0.2678 | 0.1675 | -0.0106 | 8.757 | 0.1619 | 69.95 |
| RohnGas | 0.04963 | 0.08326 | -0.03833 | -0.1916 | 0.1104 | -0.0076 | 9.498 | 0.08326 | 49.96 |
| RohnHas | 0.01752 | 0.02923 | -0.02332 | -0.1121 | 0.0504 | -0.0044 | 10.25 | 0.02923 | 29.38 |
| RohnIas | -0.001933 | 0.002945 | -0.007966 | -0.0431 | -0.0061 | -0.0017 | 11.02 | 0.002945 | 9.992 |
| SNB-Aas | 0.576 | 0.9961 | -0.09115 | -0.5561 | 0.3281 | -0.0220 | 3.106 | 0.9961 | 174.9 |
| SNB-Abs | 0.5466 | 0.9475 | -0.08995 | -0.5565 | 0.3198 | -0.0219 | 3.274 | 0.9475 | 169.9 |
| SNB-Acs | 0.5197 | 0.8991 | -0.08862 | -0.5502 | 0.3234 | -0.0216 | 3.444 | 0.8991 | 164.9 |
| SNB-Bas | 0.4641 | 0.8033 | -0.0859 | -0.5471 | 0.3177 | -0.0216 | 3.782 | 0.8033 | 154.9 |
| SNB-Bbs | 0.4355 | 0.7559 | -0.0845 | -0.5379 | 0.3106 | -0.0212 | 3.95 | 0.7559 | 149.9 |
| SNB-Bcs | 0.4095 | 0.7093 | -0.08293 | -0.5316 | 0.3091 | -0.0210 | 4.121 | 0.7093 | 144.9 |
| SNB-Cas | 0.3475 | 0.6026 | -0.07918 | -0.5137 | 0.2773 | -0.0201 | 4.518 | 0.6026 | 133.3 |
| SNB-Cbs | 0.3138 | 0.5437 | -0.07654 | -0.4921 | 0.3037 | -0.0195 | 4.747 | 0.5437 | 126.6 |
| SNB-Das | 0.2501 | 0.4332 | -0.07077 | -0.4556 | 0.2454 | -0.0179 | 5.207 | 0.4332 | 113.3 |
| SNB-Dbs | 0.2201 | 0.3823 | -0.06716 | -0.4463 | 0.2576 | -0.0166 | 5.439 | 0.3823 | 106.6 |
| SNB-Eas | 0.1673 | 0.2925 | -0.0604 | -0.3629 | 0.1875 | -0.0142 | 5.991 | 0.2925 | 93.28 |
| SNB-Ebs | 0.1451 | 0.2518 | -0.05686 | -0.3354 | 0.2179 | -0.0134 | 6.151 | 0.2518 | 86.6 |
| SNB-Fas | 0.09631 | 0.1613 | -0.04742 | -0.2678 | 0.1697 | -0.0106 | 6.758 | 0.1613 | 69.95 |
| SNB-Fbs | 0.05041 | 0.0821 | -0.03519 | -0.1894 | 0.1150 | -0.0075 | 7.498 | 0.0821 | 49.96 |
| SNB-Has | 0.01831 | 0.02855 | -0.02191 | -0.1124 | 0.0508 | -0.0044 | 8.253 | 0.02855 | 29.98 |
| SNB-Ias | -0.001152 | 0.001994 | -0.007909 | -0.0398 | -0.0027 | -0.0016 | 9.02 | 0.001994 | 9.992 |
| SNB-WL-A1s | 1.045 | 1.045 | -0.1218 | 0.0000 | 0.0000 | 0.0000 | 1.187 | 0.03436 | 179.9 |
| SNB-WL-A2s | 0.6047 | 1.044 | -0.1201 | 0.0000 | 0.0000 | 0.0000 | -0.5618 | 1.044 | 179.9 |
| SNB-WL-A3s | 0.6039 | 1.044 | -0.1407 | 0.0000 | 0.0000 | 0.0000 | 1.187 | 2.054 | 179.9 |
| SNB-WL-B1s | 0.4919 | 0.8512 | -0.1186 | 0.0000 | 0.0000 | 0.0000 | 1.272 | -0.5002 | 159.9 |
| SNB-WL-B2s | 0.4928 | 0.8506 | -0.1191 | 0.0000 | 0.0000 | 0.0000 | -1.068 | 0.8506 | 159.9 |
| SNB-WL-B3s | 0.4917 | 0.8501 | -0.1449 | 0.0000 | 0.0000 | 0.0000 | 1.272 | 2.202 | 159.9 |
| SNB-WL-CLs | 0.3829 | 0.6633 | -0.1372 | 0.0000 | 0.0000 | 0.0000 | 1.36 | -1.029 | 139.9 |
| SNB-WL-C2s | 0.384 | 0.6625 | -0.1374 | 0.0000 | 0.0000 | 0.0000 | -1.157 | 0.6625 | 139.9 |
| SNB-WL-C3s | 0.3828 | 0.6619 | -0.1554 | 0.0000 | 0.0000 | 0.0000 | 1.36 | 2.354 | 139.8 |
| SNB-WL-D1s | 0.2813 | 0.488 | -0.15 | 0.0000 | 0.0000 | 0.0000 | 1.455 | -1.545 | 119.9 |
| SNB-WL-D2s | 0.2827 | 0.4871 | -0.1497 | 0.0000 | 0.0000 | 0.0000 | -2.065 | 0.4871 | 119.9 |
| SNB-WL-D3s | 0.2812 | 0.4864 | -0.1722 | 0.0000 | 0.0000 | 0.0000 | 1.455 | 2.519 | 119.8 |
| SNB-WL-E1s | 0.1937 | 0.3368 | -0.1367 | 0.0000 | 0.0000 | 0.0000 | 1.564 | -2.037 | 99.66 |
| SNB-WL-E2s | 0.1952 | 0.3358 | -0.1368 | 0.0000 | 0.0000 | 0.0000 | -2.545 | 0.3358 | 99.66 |
| SNB-WL-E3s | 0.1936 | 0.3349 | -0.1461 | 0.0000 | 0.0000 | 0.0000 | 1.564 | 2.708 | 99.85 |
| SNB-WL-F1s | 0.1229 | 0.2148 | -0.1994 | 0.0000 | 0.0000 | 0.0000 | 1.69 | -2.499 | 79.8 |
| SNB-WL-F2s | 0.1248 | 0.2137 | -0.1994 | 0.0000 | 0.0000 | 0.0000 | -3.009 | 0.2137 | 79.8 |
| SNB-WL-F3s | 0.1229 | 0.2127 | -0.2081 | 0.0000 | 0.0000 | 0.0000 | 1.69 | 2.927 | 79.79 |
| SNB-WL-G1s | 0.06857 | 0.1211 | -0.2457 | 0.0000 | 0.0000 | 0.0000 | 1.832 | -2.934 | 59.75 |
| SNB-WL-G2s | 0.07067 | 0.1198 | -0.2457 | 0.0000 | 0.0000 | 0.0000 | -3.457 | 0.1198 | 59.75 |
| SNB-WL-G3s | 0.06858 | 0.1187 | -0.2447 | 0.0000 | 0.0000 | 0.0000 | 1.832 | 3.174 | 59.76 |
| SNB-WL-H1s | 0.03032 | 0.05516 | -0.2495 | 0.0000 | 0.0000 | 0.0000 | 1.991 | -3.34 | 39.75 |
| SNB-WL-H2s | 0.03265 | 0.05379 | -0.2495 | 0.0000 | 0.0000 | 0.0000 | -3.888 | 0.05379 | 39.75 |
| SNB-WL-H3s | 0.03034 | 0.05254 | -0.2405 | 0.0000 | 0.0000 | 0.0000 | 1.991 | 3.448 | 39.76 |
| SNB-WL-I1s | 0.007428 | 0.01583 | -0.1993 | 0.0000 | 0.0000 | 0.0000 | 2.164 | -3.72 | 19.8 |
| SNB-WL-I2s | 0.009999 | 0.01433 | -0.1994 | 0.0000 | 0.0000 | 0.0000 | -4.304 | 0.01433 | 19.8 |
| SNB-WL-I3s | 0.007456 | 0.01292 | -0.1807 | 0.0000 | 0.0000 | 0.0000 | 2.164 | 3.749 | 19.82 |
| RohnAal | 0.5806 | 0.9353 | -0.03006 | -0.5520 | 0.3173 | 0.0001 | -1.684 | -2.928 | 175 |
| RohnAa2 | 0.5732 | 0.9277 | -0.1047 | -0.5631 | 0.3229 | 0.0221 | -1.692 | -4.916 | 174.9 |
| RohnAb1 | 0.5534 | 0.9477 | -0.02592 | -0.5580 | 0.3216 | 0.0001 | -1.81 | 3.146 | 170 |
| RohnAb2 | 0.5455 | 0.9431 | -0.1033 | -0.5529 | 0.3229 | 0.0219 | -1.818 | 5.037 | 169.9 |

| Joint Label | X (kips) | X % | Y (kips) | Y % | Z Comp. Force (kips) | Z Comp. Usage % | Uplift Result. Force (kips) | Uplift Usage % | Result. Force (kips) | Force Usage % | X Moment (ft-k) | X-Moment Usage % | Y Moment (ft-k) | Y-Moment Usage % | Z Moment (ft-k) | Z-Moment Usage % | Max. Usage % |
|-------------|----------|-------------|------------|---------|----------------------|-----------------|-----------------------------|----------------|----------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|--------------|
| RohnAc1 | 0.5247 | 0.8985 | -0.02191 | -0.5492 | 0.3207 | -0.0001 | -1.937 | -3.366 | 165 | | | | | | | | |
| RohnAc2 | 0.5171 | 0.8957 | -0.1018 | -0.5532 | 0.3138 | 0.0217 | -1.945 | 5.16 | 164.9 | | | | | | | | |
| RohnBa1 | 0.4691 | 0.8032 | -0.0144 | -0.5413 | 0.3037 | -0.0002 | -2.19 | 3.802 | 155 | | | | | | | | |
| RohnBa2 | 0.4619 | 0.7999 | -0.0986 | -0.5401 | 0.3169 | 0.0211 | -2.197 | 5.405 | 154.9 | | | | | | | | |
| RohnBb1 | 0.442 | 0.7569 | -0.01081 | -0.5429 | 0.3194 | -0.0002 | -2.316 | 4.019 | 150 | | | | | | | | |
| RohnBb2 | 0.4362 | 0.7522 | -0.097 | -0.5386 | 0.3151 | 0.0213 | -2.321 | 5.528 | 149.9 | | | | | | | | |
| RohnBc1 | 0.4139 | 0.709 | -0.007318 | -0.5271 | 0.3081 | -0.0001 | -2.442 | 4.238 | 145 | | | | | | | | |
| RohnBc2 | 0.4073 | 0.7057 | -0.09512 | -0.5370 | 0.3114 | 0.0212 | -2.449 | 5.652 | 144.9 | | | | | | | | |
| RohnCa1 | 0.3526 | 0.604 | -0.0001359 | -0.5241 | 0.3066 | -0.0001 | -2.733 | -4.74 | 133.3 | | | | | | | | |
| RohnCa2 | 0.3491 | 0.6003 | -0.09072 | -0.4998 | 0.2894 | 0.0203 | -2.737 | 5.944 | 133.2 | | | | | | | | |
| RohnCb1 | 0.3182 | 0.5452 | 0.003723 | -0.4824 | 0.2815 | -0.0001 | -2.898 | 5.026 | 126.7 | | | | | | | | |
| RohnCb2 | 0.3127 | 0.541 | -0.08788 | -0.5119 | 0.2841 | 0.0199 | -2.904 | 6.112 | 126.6 | | | | | | | | |
| RohnDa1 | 0.2544 | 0.4355 | 0.008833 | -0.4574 | 0.2662 | -0.0001 | -3.224 | 5.589 | 113.3 | | | | | | | | |
| RohnDa2 | 0.2496 | 0.4313 | -0.08122 | -0.4397 | 0.2721 | 0.0179 | -3.229 | 6.456 | 113.3 | | | | | | | | |
| RohnDb1 | 0.2251 | 0.3852 | 0.01016 | -0.4106 | 0.2393 | -0.0001 | -3.385 | 5.867 | 106.7 | | | | | | | | |
| RohnDb2 | 0.22 | 0.3797 | -0.07705 | -0.4298 | 0.2327 | 0.0166 | -3.39 | 6.632 | 106.6 | | | | | | | | |
| RohnEa1 | 0.1728 | 0.2954 | 0.01189 | -0.3767 | 0.2195 | -0.0001 | -3.699 | -6.41 | 93.35 | | | | | | | | |
| RohnEa2 | 0.1686 | 0.2892 | -0.06883 | -0.3417 | 0.2218 | 0.0143 | -3.703 | 6.995 | 93.27 | | | | | | | | |
| RohnEb1 | 0.1483 | 0.2535 | 0.01285 | -0.3173 | 0.1853 | -0.0001 | -3.855 | -6.68 | 86.67 | | | | | | | | |
| RohnEb2 | 0.1447 | 0.2498 | -0.06454 | -0.3573 | 0.1789 | 0.0134 | -3.858 | 7.183 | 86.6 | | | | | | | | |
| RohnFa1 | 0.09628 | 0.1642 | 0.01262 | -0.2576 | 0.1501 | -0.0000 | -4.234 | -7.337 | 70.01 | | | | | | | | |
| RohnFa2 | 0.09056 | 0.1624 | -0.05289 | -0.2777 | 0.1467 | 0.0105 | -4.24 | 7.663 | 69.95 | | | | | | | | |
| RohnGa1 | 0.04969 | 0.08435 | 0.01021 | -0.1880 | 0.1099 | -0.0000 | -4.674 | -8.098 | 50.01 | | | | | | | | |
| RohnGa2 | 0.04593 | 0.08374 | -0.03829 | -0.1902 | 0.1092 | 0.0075 | -4.678 | 8.266 | 49.96 | | | | | | | | |
| RohnHa1 | 0.01934 | 0.0325 | 0.006511 | -0.1282 | 0.0751 | -0.0000 | -5.098 | -8.832 | 30.01 | | | | | | | | |
| RohnHa2 | 0.01573 | 0.02929 | -0.0233 | -0.0987 | 0.0705 | 0.0044 | -5.102 | 8.893 | 29.98 | | | | | | | | |
| RohnIa1 | 0.005636 | 0.009451 | 0.001684 | -0.0721 | 0.0430 | -0.0000 | -5.507 | -9.538 | 10 | | | | | | | | |
| RohnIa2 | 0.003248 | -0.0003584 | -0.007959 | -0.0150 | 0.0383 | 0.0016 | -5.509 | 9.548 | 9.992 | | | | | | | | |
| SNB-Aa1 | 0.5768 | 0.9965 | -0.04869 | -0.5512 | 0.3188 | -0.0000 | -0.6882 | -1.195 | 175 | | | | | | | | |
| SNB-Aa2 | 0.5764 | 0.9955 | -0.09108 | -0.5609 | 0.3190 | 0.0220 | -0.6886 | 3.187 | 174.9 | | | | | | | | |
| SNB-Ab1 | 0.5494 | 0.949 | -0.04436 | -0.5576 | 0.3226 | -0.0000 | -0.8141 | -1.413 | 170 | | | | | | | | |
| SNB-Ab2 | 0.5489 | 0.946 | 0.08988 | -0.5535 | 0.3239 | 0.0220 | -0.8146 | 3.308 | 169.9 | | | | | | | | |
| SNB-Ac1 | 0.8998 | 0.94004 | -0.04004 | -0.5500 | 0.3191 | -0.0001 | -0.9412 | -1.632 | 165 | | | | | | | | |
| SNB-Ac2 | 0.5202 | 0.8985 | -0.08854 | -0.5553 | 0.3165 | 0.0218 | -0.9418 | 3.431 | 164.9 | | | | | | | | |
| SNB-Ba1 | 0.4655 | 0.8043 | -0.03182 | -0.5427 | 0.3145 | -0.0000 | -1.193 | -2.069 | 155 | | | | | | | | |
| SNB-Ba2 | 0.4648 | 0.8026 | -0.08582 | -0.5477 | 0.3164 | 0.0216 | -1.194 | 3.676 | 154.9 | | | | | | | | |
| SNB-Bb1 | 0.4386 | 0.7579 | -0.0279 | -0.5448 | 0.3156 | -0.0000 | -1.319 | -2.286 | 150 | | | | | | | | |
| SNB-Bb2 | 0.438 | 0.7542 | 0.08441 | -0.5373 | 0.3118 | 0.0213 | -1.319 | 3.798 | 149.9 | | | | | | | | |
| SNB-Bc1 | 0.4108 | 0.7098 | -0.02399 | -0.5300 | 0.3069 | -0.0000 | -1.445 | -2.504 | 145 | | | | | | | | |
| SNB-Bc2 | 0.4104 | 0.7085 | 0.08284 | -0.5326 | 0.3070 | 0.0210 | -1.445 | 3.923 | 144.9 | | | | | | | | |
| SNB-Ca1 | 0.3499 | 0.6046 | -0.01592 | -0.5270 | 0.3051 | -0.0000 | -1.735 | -3.007 | 133.3 | | | | | | | | |
| SNB-Ca2 | 0.3488 | 0.6016 | -0.0791 | -0.4963 | 0.3073 | 0.0201 | -1.736 | 4.213 | 133.3 | | | | | | | | |
| SNB-Cb1 | 0.3157 | 0.5456 | -0.01169 | -0.4828 | 0.2795 | -0.0000 | -1.901 | -3.293 | 126.6 | | | | | | | | |
| SNB-Cb2 | 0.3145 | 0.543 | -0.07646 | -0.5084 | 0.2753 | 0.0196 | -1.902 | 4.382 | 126.6 | | | | | | | | |
| SNB-Da1 | 0.2521 | 0.4358 | -0.005509 | -0.4579 | 0.2651 | -0.0000 | -2.226 | -3.857 | 113.3 | | | | | | | | |
| SNB-Da2 | 0.2505 | 0.4327 | -0.0707 | -0.4406 | 0.2720 | 0.0179 | -2.228 | 4.725 | 113.3 | | | | | | | | |
| SNB-Db1 | 0.223 | 0.3854 | -0.003336 | -0.4122 | 0.2386 | -0.0000 | -2.387 | -4.135 | 106.7 | | | | | | | | |
| SNB-Db2 | 0.2214 | 0.3814 | -0.06709 | -0.4306 | 0.2323 | 0.0166 | -2.388 | 4.901 | 106.6 | | | | | | | | |
| SNB-Ea1 | 0.171 | 0.2955 | 0.0003116 | -0.3779 | 0.2186 | -0.0000 | -2.701 | -4.678 | 93.34 | | | | | | | | |
| SNB-Ea2 | 0.1699 | 0.2909 | -0.06035 | -0.3435 | 0.2210 | 0.0142 | -2.702 | 5.265 | 93.28 | | | | | | | | |
| SNB-Eb1 | 0.1466 | 0.2535 | 0.002498 | -0.3196 | 0.1849 | -0.0000 | -2.856 | -4.948 | 86.66 | | | | | | | | |
| SNB-Eb2 | 0.1457 | 0.2513 | -0.05681 | -0.3561 | 0.1819 | 0.0134 | -2.857 | 5.453 | 86.6 | | | | | | | | |
| SNB-Fa1 | 0.09489 | 0.1641 | 0.005424 | -0.2574 | 0.1489 | -0.0000 | -3.236 | -5.605 | 70.01 | | | | | | | | |
| SNB-Fa2 | 0.09164 | 0.1639 | -0.04738 | -0.2806 | 0.1473 | 0.0106 | -3.239 | 5.933 | 69.95 | | | | | | | | |
| SNB-Ga1 | 0.04862 | 0.08407 | 0.006252 | -0.1862 | 0.1077 | -0.0000 | -3.675 | -6.366 | 50.01 | | | | | | | | |
| SNB-Ga2 | 0.0459 | 0.08463 | -0.03516 | -0.1941 | 0.1067 | 0.0075 | -3.678 | 6.535 | 49.96 | | | | | | | | |
| SNB-Ha1 | 0.01855 | 0.03206 | -0.004771 | -0.1284 | 0.0743 | -0.0000 | -4.099 | -7.099 | 30 | | | | | | | | |
| SNB-Ha2 | 0.01556 | 0.0301 | -0.02189 | -0.1001 | 0.0720 | 0.0044 | -4.102 | 7.161 | 29.98 | | | | | | | | |
| SNB-Ia1 | 0.005116 | 0.008849 | 0.001345 | -0.0694 | 0.0402 | -0.0000 | -4.506 | -7.804 | 10 | | | | | | | | |
| SNB-Ia2 | 0.002293 | -7.703e-006 | -0.007905 | -0.0175 | 0.0358 | 0.0016 | -4.508 | 7.813 | 9.992 | | | | | | | | |

Joint Support Reactions for Load Case "W+I 60 deg":

Joint Label X X % Y Y % Z Comp. Force (kips) Z Comp. Usage % Uplift Result. Force (kips) Uplift Usage % Result. Force (kips) Force Usage % X Moment (ft-k) X-Moment Usage % Y Moment (ft-k) Y-Moment Usage % Z Moment (ft-k) Z-Moment Usage % Max. Usage %

| | | | | | | | | | | | | | | | | |
|--------|--------|-----|--------|-----|---------|-----|-----|--------|-----|-------|-----|------|-----|-------|-----|-----|
| RohnJP | 0.21 | 0.0 | -1.66 | 0.0 | 149.29 | 0.0 | 0.0 | 149.30 | 0.0 | 0.55 | 0.0 | 2.3 | 0.0 | 0.02 | 0.0 | 0.0 |
| SNB-JP | 6.91 | 0.0 | -2.70 | 0.0 | 175.50 | 0.0 | 0.0 | 175.66 | 0.0 | -0.72 | 0.0 | 3.3 | 0.0 | -0.03 | 0.0 | 0.0 |
| RohnJ1 | -14.73 | 0.0 | -25.18 | 0.0 | -239.86 | 0.0 | 0.0 | 241.63 | 0.0 | 6.31 | 0.0 | -3.8 | 0.0 | 0.00 | 0.0 | 0.0 |
| RohnJ2 | -1.25 | 0.0 | -0.48 | 0.0 | 149.05 | 0.0 | 0.0 | 149.05 | 0.0 | -1.81 | 0.0 | -1.4 | 0.0 | -0.01 | 0.0 | 0.0 |
| SNB-J1 | -27.45 | 0.0 | -47.52 | 0.0 | -292.86 | 0.0 | 0.0 | 297.95 | 0.0 | 11.97 | 0.0 | -6.9 | 0.0 | 0.00 | 0.0 | 0.0 |
| SNB-J2 | -5.75 | 0.0 | 4.66 | 0.0 | 175.30 | 0.0 | 0.0 | 175.46 | 0.0 | -3.19 | 0.0 | -1.0 | 0.0 | 0.03 | 0.0 | 0.0 |

Joint Displacements, Loads and Member Forces on Joints for Load Case "W+I 60 deg":

| Label | External Load (kips) | External Y Load (kips) | External Z Load (kips) | External X Load (kips) | Member Force (kips) | Member Y Force (kips) | Member Z Force (kips) | Member Force (kips) | Disp. (ft) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) |
|--------|----------------------|------------------------|------------------------|------------------------|---------------------|-----------------------|-----------------------|---------------------|------------|--------------|--------------|--------------|
| RohnAP | 0.6874 | 1.1905 | -0.5168 | -0.6874 | -1.1905 | 0.5168 | 0.6021 | 1.0486 | -0.6021 | 1.0486 | -0.1062 | -0.1062 |
| RohnBP | 0.7325 | 1.2687 | -0.7107 | -0.7325 | -1.2687 | 0.7107 | 0.4898 | 0.8553 | -0.4898 | 0.8553 | -0.1004 | -0.1004 |
| RohnCP | 0.3486 | 0.6038 | -0.5960 | -0.3486 | -0.6038 | 0.5960 | 0.3803 | 0.6663 | -0.3803 | 0.6663 | -0.0934 | -0.0934 |
| RohnDP | 0.6679 | 1.1569 | -0.6679 | -1.1569 | 1.1569 | 1.5259 | 0.2782 | 0.4897 | -0.2782 | 0.4897 | -0.0651 | -0.0651 |
| RohnEP | 0.2758 | 0.4776 | -0.4776 | -0.2758 | -0.4776 | 0.4776 | 0.1908 | 0.3380 | -0.1908 | 0.3380 | -0.0729 | -0.0729 |
| RohnFP | 0.3499 | 0.6061 | -1.1116 | -0.3499 | -0.6061 | 1.1116 | 0.1182 | 0.2149 | -0.1182 | 0.2149 | -0.0605 | -0.0605 |
| RohnGP | 0.3305 | 0.5724 | -1.3426 | -0.3305 | -0.5724 | 1.3426 | 0.0621 | 0.1207 | -0.0621 | 0.1207 | -0.0455 | -0.0455 |
| RohnHP | 0.3120 | 0.5404 | -1.4805 | -0.3120 | -0.5404 | 1.4805 | 0.0237 | 0.0540 | -0.0237 | 0.0540 | -0.0313 | -0.0313 |
| RohnIP | 0.3445 | 0.5967 | -1.7490 | -0.3445 | -0.5967 | 1.7490 | 0.0025 | 0.0144 | -0.0025 | 0.0144 | -0.0152 | -0.0152 |
| RohnJP | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| SNB-AP | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.6029 | 1.0446 | -0.6029 | 1.0446 | -0.0924 | -0.0924 |
| SNB-BP | 0.1665 | 0.2884 | -0.3359 | -0.1665 | -0.2884 | 0.3359 | 0.4906 | 0.8513 | -0.4906 | 0.8513 | -0.0873 | -0.0873 |
| SNB-CP | 0.2298 | 0.3980 | -0.5256 | -0.2298 | -0.3980 | 0.5256 | 0.3811 | 0.6630 | -0.3811 | 0.6630 | -0.0814 | -0.0814 |
| SNB-DP | 0.2700 | 0.4677 | -0.6860 | -0.2700 | -0.4677 | 0.6860 | 0.2790 | 0.4877 | -0.2790 | 0.4877 | -0.0739 | -0.0739 |
| SNB-EP | 0.2758 | 0.4776 | -0.8302 | -0.2758 | -0.4776 | 0.8302 | 0.1916 | 0.3360 | -0.1916 | 0.3360 | -0.0634 | -0.0634 |
| SNB-FP | 0.3080 | 0.5335 | -1.0901 | -0.3080 | -0.5335 | 1.0901 | 0.1091 | 0.2140 | -0.1091 | 0.2140 | -0.0536 | -0.0536 |
| SNB-GP | 0.3305 | 0.5724 | -1.3426 | -0.3305 | -0.5724 | 1.3426 | 0.0629 | 0.1198 | -0.0629 | 0.1198 | -0.0416 | -0.0416 |
| SNB-HP | 0.3120 | 0.5404 | -1.4805 | -0.3120 | -0.5404 | 1.4805 | 0.0245 | 0.0553 | -0.0245 | 0.0553 | -0.0230 | -0.0230 |
| SNB-IP | 0.3329 | 0.5765 | -1.7290 | -0.3329 | -0.5765 | 1.7290 | 0.0033 | 0.0138 | -0.0033 | 0.0138 | -0.0146 | -0.0146 |
| SNB-JP | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| RohnA1 | 0.7007 | 1.3458 | -0.6776 | -0.7007 | -1.3458 | 0.5676 | 0.6093 | 1.0447 | -0.6093 | 1.0447 | -0.1060 | -0.1060 |
| RohnA2 | 0.9070 | 1.5601 | -0.7497 | -0.9070 | -1.5601 | 0.7497 | 0.6023 | 1.0406 | -0.6023 | 1.0406 | -0.1060 | -0.1060 |
| RohnB1 | 0.3131 | 0.5423 | -0.4807 | -0.3131 | -0.5423 | 0.4807 | 0.4974 | 0.8516 | -0.4974 | 0.8516 | -0.1183 | -0.1183 |
| RohnB2 | 0.3040 | 0.5265 | -0.4207 | -0.3040 | -0.5265 | 0.4207 | 0.4901 | 0.8467 | -0.4901 | 0.8467 | -0.1002 | -0.1002 |
| RohnC1 | 0.4048 | 0.7011 | -0.9160 | -0.4048 | -0.7011 | 0.9160 | 0.3882 | 0.6650 | -0.3882 | 0.6650 | -0.0044 | -0.0044 |
| RohnC2 | 0.3486 | 0.6038 | -0.5960 | -0.3486 | -0.6038 | 0.5960 | 0.2826 | 0.4905 | -0.2826 | 0.4905 | -0.0068 | -0.0068 |
| RohnD1 | 0.6679 | 1.1569 | -0.6679 | -1.1569 | 1.1569 | 1.5259 | 0.2864 | 0.4905 | -0.2864 | 0.4905 | -0.0085 | -0.0085 |
| RohnD2 | 0.6679 | 1.1569 | -0.6679 | -1.1569 | 1.1569 | 1.5259 | 0.2816 | 0.4831 | -0.2816 | 0.4831 | -0.0850 | -0.0850 |
| RohnE1 | 0.2758 | 0.4776 | -0.4776 | -0.2758 | -0.4776 | 0.4776 | 0.1982 | 0.3391 | -0.1982 | 0.3391 | -0.0107 | -0.0107 |
| RohnE2 | 0.2758 | 0.4776 | -0.8302 | -0.2758 | -0.4776 | 0.8302 | 0.1945 | 0.3321 | -0.1945 | 0.3321 | -0.0728 | -0.0728 |
| RohnF1 | 0.3378 | 0.6890 | -1.1611 | -0.3378 | -0.6890 | 1.1611 | 0.1284 | 0.2194 | -0.1284 | 0.2194 | -0.0130 | -0.0130 |
| RohnF2 | 0.3499 | 0.6061 | -1.1116 | -0.3499 | -0.6061 | 1.1116 | 0.1248 | 0.2082 | -0.1248 | 0.2082 | -0.0604 | -0.0604 |
| RohnG1 | 0.3442 | 0.5963 | -1.3626 | -0.3442 | -0.5963 | 1.3626 | 0.0747 | 0.1273 | -0.0747 | 0.1273 | -0.0104 | -0.0104 |
| RohnG2 | 0.3442 | 0.5963 | -1.3626 | -0.3442 | -0.5963 | 1.3626 | 0.0718 | 0.1131 | -0.0718 | 0.1131 | -0.0455 | -0.0455 |
| RohnH1 | 0.3120 | 0.5404 | -1.4805 | -0.3120 | -0.5404 | 1.4805 | 0.0361 | 0.0612 | -0.0361 | 0.0612 | -0.0085 | -0.0085 |
| RohnH2 | 0.3120 | 0.5404 | -1.4805 | -0.3120 | -0.5404 | 1.4805 | 0.0338 | 0.0469 | -0.0338 | 0.0469 | -0.0313 | -0.0313 |
| RohnI1 | 0.3329 | 0.5765 | -1.7290 | -0.3329 | -0.5765 | 1.7290 | 0.0119 | 0.0199 | -0.0119 | 0.0199 | -0.0034 | -0.0034 |
| RohnI2 | 0.3329 | 0.5765 | -1.7290 | -0.3329 | -0.5765 | 1.7290 | 0.0107 | 0.0090 | -0.0107 | 0.0090 | -0.0152 | -0.0152 |
| RohnJ1 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| RohnJ2 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| SNB-A1 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.6055 | 1.0459 | -0.6055 | 1.0459 | -0.0532 | -0.0532 |
| SNB-A2 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.6051 | 1.0432 | -0.6051 | 1.0432 | -0.0923 | -0.0923 |
| SNB-B1 | 0.1665 | 0.2884 | -0.3359 | -0.1665 | -0.2884 | 0.3359 | 0.4936 | 0.8528 | -0.4936 | 0.8528 | -0.0360 | -0.0360 |
| SNB-B2 | 0.1665 | 0.2884 | -0.3359 | -0.1665 | -0.2884 | 0.3359 | 0.4932 | 0.8494 | -0.4932 | 0.8494 | -0.0872 | -0.0872 |
| SNB-C1 | 0.2298 | 0.3980 | -0.5256 | -0.2298 | -0.3980 | 0.5256 | 0.3852 | 0.6657 | -0.3852 | 0.6657 | -0.0205 | -0.0205 |
| SNB-C2 | 0.2298 | 0.3980 | -0.5256 | -0.2298 | -0.3980 | 0.5256 | 0.3845 | 0.6608 | -0.3845 | 0.6608 | -0.0813 | -0.0813 |
| SNB-D1 | 0.2700 | 0.4677 | -0.6860 | -0.2700 | -0.4677 | 0.6860 | 0.2840 | 0.4909 | -0.2840 | 0.4909 | -0.0083 | -0.0083 |
| SNB-D2 | 0.2700 | 0.4677 | -0.6860 | -0.2700 | -0.4677 | 0.6860 | 0.2833 | 0.4850 | -0.2833 | 0.4850 | -0.0739 | -0.0739 |
| SNB-E1 | 0.2758 | 0.4776 | -0.8302 | -0.2758 | -0.4776 | 0.8302 | 0.1963 | 0.3393 | -0.1963 | 0.3393 | -0.0021 | -0.0021 |
| SNB-E2 | 0.2758 | 0.4776 | -0.8302 | -0.2758 | -0.4776 | 0.8302 | 0.1955 | 0.3336 | -0.1955 | 0.3336 | -0.0634 | -0.0634 |
| SNB-F1 | 0.3080 | 0.5335 | -1.0901 | -0.3080 | -0.5335 | 1.0901 | 0.1269 | 0.2194 | -0.1269 | 0.2194 | -0.0037 | -0.0037 |

| | | | | | | | | | |
|------------|--------|--------|---------|---------|---------|--------|---------|--------|---------|
| SNB-F2 | 0.3080 | 0.5335 | -1.0901 | -0.3080 | -0.5335 | 1.0901 | 0.1259 | 0.2098 | -0.0535 |
| SNB-G1 | 0.3305 | 0.5724 | -1.3426 | -0.3305 | -0.5724 | 1.3426 | 0.0735 | 0.1271 | 0.0054 |
| SNB-G2 | 0.3305 | 0.5724 | -1.3426 | -0.3305 | -0.5724 | 1.3426 | 0.0735 | 0.1143 | -0.0415 |
| SNB-H1 | 0.3120 | 0.5404 | -1.4805 | -0.3120 | -0.5404 | 1.4805 | 0.0352 | 0.0608 | 0.0057 |
| SNB-H2 | 0.3120 | 0.5404 | -1.4805 | -0.3120 | -0.5404 | 1.4805 | 0.0340 | 0.0479 | -0.0289 |
| SNB-I1 | 0.3329 | 0.5765 | -1.7290 | -0.3329 | -0.5765 | 1.7290 | 0.0112 | 0.0194 | 0.0029 |
| SNB-I2 | 0.3329 | 0.5765 | -1.7290 | -0.3329 | -0.5765 | 1.7290 | 0.0103 | 0.0097 | -0.0146 |
| SNB-J1 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | 0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| SNB-J2 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | 0.3165 | 0.9701 | 0.0000 | 0.0000 | 0.0000 |
| RohnAas | 0.6205 | 1.0747 | -3.3652 | -0.6205 | -1.0747 | 3.3652 | 1.0007 | 1.0007 | -0.1049 |
| RohnAbs | 0.0965 | 0.1671 | -0.1602 | -0.0965 | -0.1671 | 0.1602 | 0.5458 | 0.9514 | -0.1035 |
| RohnAcs | 0.0797 | 0.1380 | -0.1552 | -0.0797 | -0.1380 | 0.1552 | 0.5189 | 0.9030 | -0.1020 |
| RohnBas | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4632 | 0.8068 | -0.0988 |
| RohnBbs | 0.9254 | 1.6028 | -1.1757 | -0.9254 | -1.6028 | 1.1757 | 0.4345 | 0.7602 | -0.0972 |
| RohnBcs | 0.1652 | 0.2861 | -0.4457 | -0.1652 | -0.2861 | 0.4457 | 0.4087 | 0.7114 | -0.0953 |
| RohnCas | 1.1340 | 1.9642 | -1.2307 | -1.1340 | -1.9642 | 1.2307 | 0.3467 | 0.6066 | -0.0909 |
| RohnCbs | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3130 | 0.5459 | -0.0880 |
| RohnDbs | 0.2007 | 0.3477 | -0.6061 | -0.2007 | -0.3477 | 0.6061 | 0.2493 | 0.4359 | -0.0814 |
| RohnEbs | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2193 | 0.3842 | -0.0772 |
| RohnEas | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1665 | 0.2939 | -0.0689 |
| RohnFbs | 0.1624 | 0.2813 | -0.5442 | -0.1624 | -0.2813 | 0.5442 | 0.1443 | 0.2532 | -0.0646 |
| RohnFas | 0.1696 | 0.2920 | -0.6209 | -0.1696 | -0.2920 | 0.6209 | 0.0955 | 0.1619 | -0.0530 |
| RohnGas | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0496 | 0.0833 | -0.0383 |
| RohnHas | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0175 | 0.0292 | -0.0233 |
| RohnFas | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | -0.0019 | 0.0029 | -0.0080 |
| SNB-Aas | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5760 | 0.9961 | -0.0911 |
| SNB-Abs | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5466 | 0.9475 | -0.0900 |
| SNB-Acs | 0.1221 | 0.1352 | -0.0705 | -0.1221 | -0.1352 | 0.0705 | 0.5197 | 0.8991 | -0.0866 |
| SNB-Abs | 0.1663 | 0.1663 | -0.2007 | -0.1663 | -0.1663 | 0.2007 | 0.4641 | 0.8033 | -0.0859 |
| SNB-Bbs | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4355 | 0.7559 | -0.0845 |
| SNB-Bbs | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4095 | 0.7093 | -0.0829 |
| SNB-Bcs | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3475 | 0.6026 | -0.0792 |
| SNB-Cas | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3138 | 0.5437 | -0.0765 |
| SNB-Cbs | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2501 | 0.4332 | -0.0708 |
| SNB-Dbs | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2201 | 0.3823 | -0.0672 |
| SNB-Ebs | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1673 | 0.2925 | -0.0604 |
| SNB-Ebs | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1451 | 0.2518 | -0.0569 |
| SNB-Fas | 0.1619 | 0.2920 | -0.6209 | -0.1619 | -0.2920 | 0.6209 | 0.0963 | 0.1613 | -0.0474 |
| SNB-Fas | 0.1619 | 0.2920 | -0.6209 | -0.1619 | -0.2920 | 0.6209 | 0.0821 | 0.1352 | -0.0432 |
| SNB-Gas | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0183 | 0.0286 | -0.0219 |
| SNB-Has | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0012 | 0.0020 | -0.0079 |
| SNB-Ias | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.6041 | 1.0446 | -0.1218 |
| SNB-WL-A1S | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.6041 | 1.0441 | -0.1201 |
| SNB-WL-A2S | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.6039 | 1.0437 | -0.1186 |
| SNB-WL-A3S | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.4919 | 0.8512 | -0.1186 |
| SNB-WL-B1S | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.4928 | 0.8506 | -0.1191 |
| SNB-WL-B2S | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.4917 | 0.8501 | -0.1449 |
| SNB-WL-B3S | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.3829 | 0.6633 | -0.1372 |
| SNB-WL-C1S | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.3840 | 0.6625 | -0.1374 |
| SNB-WL-C2S | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.3828 | 0.6619 | -0.1554 |
| SNB-WL-C3S | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.2813 | 0.4880 | -0.1500 |
| SNB-WL-D1S | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.2827 | 0.4871 | -0.1497 |
| SNB-WL-D2S | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.2812 | 0.4864 | -0.1722 |
| SNB-WL-D3S | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.1937 | 0.3368 | -0.1367 |
| SNB-WL-E1S | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.1952 | 0.3358 | -0.1368 |
| SNB-WL-E2S | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.1936 | 0.3349 | -0.1461 |
| SNB-WL-E3S | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1229 | 0.2148 | -0.1994 |
| SNB-WL-F1S | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1248 | 0.2137 | -0.1994 |
| SNB-WL-F2S | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1229 | 0.2127 | -0.2081 |
| SNB-WL-F3S | 0.1696 | 0.2920 | -0.6209 | -0.1696 | -0.2920 | 0.6209 | 0.0686 | 0.1211 | -0.2457 |
| SNB-WL-G1S | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0707 | 0.1198 | -0.2457 |
| SNB-WL-G2S | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0686 | 0.1187 | -0.2447 |
| SNB-WL-G3S | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0303 | 0.0552 | -0.2495 |
| SNB-WL-H1S | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0327 | 0.0538 | -0.2495 |
| SNB-WL-H2S | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0303 | 0.0525 | -0.2405 |
| SNB-WL-H3S | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0074 | 0.0158 | -0.1993 |
| SNB-WL-I1S | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0074 | 0.0158 | -0.1993 |

| | | | | | | | | | |
|------------|--------|--------|---------|---------|---------|--------|--------|---------|---------|
| SNB-WL-12S | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0100 | 0.0143 | -0.1894 |
| SNB-WL-13S | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0075 | 0.0129 | -0.1867 |
| RohnAa1 | 0.1928 | 0.3340 | -0.2050 | -0.1928 | -0.3340 | 0.2050 | 0.5806 | 0.9953 | -0.0301 |
| RohnAa2 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5732 | 0.9927 | -0.1047 |
| RohnAb1 | 0.6085 | 1.0540 | -0.3552 | -0.6085 | -1.0540 | 0.3552 | 0.5454 | 0.9477 | -0.0259 |
| RohnAb2 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5455 | 0.9431 | -0.1033 |
| RohnAc1 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5247 | 0.8985 | -0.0219 |
| RohnAc2 | 0.2272 | 0.3936 | -0.2272 | -0.2272 | -0.3936 | 0.2272 | 0.5171 | 0.8957 | -0.1018 |
| RohnBa1 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4691 | 0.8032 | -0.0444 |
| RohnBa2 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4619 | 0.7999 | -0.0986 |
| RohnBb1 | 0.9026 | 1.5634 | -1.1557 | -0.9026 | -1.5634 | 1.1557 | 0.4420 | 0.7569 | -0.0108 |
| RohnBb2 | 0.9026 | 1.5634 | -1.1557 | -0.9026 | -1.5634 | 1.1557 | 0.4362 | 0.7522 | -0.0970 |
| RohnBc1 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4139 | 0.7090 | -0.0073 |
| RohnBc2 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4073 | 0.7057 | -0.0951 |
| RohnCa1 | 1.1340 | 1.9642 | -1.2307 | -1.1340 | -1.9642 | 1.2307 | 0.3526 | 0.6040 | -0.0001 |
| RohnCa2 | 1.2336 | 2.1136 | -1.3037 | -1.2336 | -2.1136 | 1.3037 | 0.3481 | 0.6003 | -0.0907 |
| RohnCb1 | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3182 | 0.5452 | -0.0037 |
| RohnCb2 | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3127 | 0.5410 | -0.0879 |
| RohnDa1 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2544 | 0.4355 | -0.0088 |
| RohnDa2 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2496 | 0.4313 | -0.0812 |
| RohnDb1 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2251 | 0.3852 | -0.0102 |
| RohnDb2 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2200 | 0.3797 | -0.0771 |
| RohnEa1 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1728 | 0.2954 | -0.0119 |
| RohnEa2 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1686 | 0.2892 | -0.0688 |
| RohnEb1 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1483 | 0.2535 | -0.0128 |
| RohnEb2 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1447 | 0.2498 | -0.0645 |
| RohnFa1 | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0963 | 0.1642 | -0.0126 |
| RohnFa2 | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0906 | 0.1624 | -0.0529 |
| RohnGa1 | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0497 | 0.0844 | -0.0102 |
| RohnGa2 | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0459 | 0.0837 | -0.0383 |
| RohnHa1 | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0193 | 0.0325 | -0.0065 |
| RohnHa2 | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0157 | 0.0293 | -0.0233 |
| RohnIa1 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0056 | 0.0095 | -0.0017 |
| RohnIa2 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0032 | -0.0004 | -0.0080 |
| SNB-Ra1 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5768 | 0.9965 | -0.0897 |
| SNB-Ra2 | 0.1221 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5764 | 0.9955 | -0.0911 |
| SNB-Ab1 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5494 | 0.9490 | -0.0444 |
| SNB-Ab2 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5489 | 0.9460 | -0.0899 |
| SNB-Ac1 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5208 | 0.8998 | -0.0400 |
| SNB-Ac2 | 0.0705 | 0.1221 | -0.1352 | -0.0705 | -0.1221 | 0.1352 | 0.5202 | 0.8985 | -0.0885 |
| SNB-Ba1 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4655 | 0.8043 | -0.0318 |
| SNB-Ba2 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4648 | 0.8026 | -0.0858 |
| SNB-Bb1 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4386 | 0.7579 | -0.0279 |
| SNB-Bb2 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4380 | 0.7542 | -0.0844 |
| SNB-Bc1 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4108 | 0.7098 | -0.0240 |
| SNB-Bc2 | 0.0960 | 0.1663 | -0.2007 | -0.0960 | -0.1663 | 0.2007 | 0.4104 | 0.7085 | -0.0828 |
| SNB-Ca1 | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3499 | 0.6046 | -0.0159 |
| SNB-Ca2 | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3488 | 0.6016 | -0.0791 |
| SNB-Cb1 | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3157 | 0.5456 | -0.0117 |
| SNB-Cb2 | 0.1337 | 0.2317 | -0.3250 | -0.1337 | -0.2317 | 0.3250 | 0.3145 | 0.5430 | -0.0785 |
| SNB-Da1 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2521 | 0.4358 | -0.0055 |
| SNB-Da2 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2505 | 0.4327 | -0.0707 |
| SNB-Db1 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2230 | 0.3854 | -0.0033 |
| SNB-Db2 | 0.1363 | 0.2360 | -0.3611 | -0.1363 | -0.2360 | 0.3611 | 0.2214 | 0.3814 | -0.0671 |
| SNB-Ea1 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1710 | 0.2955 | -0.0003 |
| SNB-Ea2 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1699 | 0.2909 | -0.0603 |
| SNB-Eb1 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1456 | 0.2535 | -0.0025 |
| SNB-Eb2 | 0.1395 | 0.2416 | -0.4692 | -0.1395 | -0.2416 | 0.4692 | 0.1457 | 0.2513 | -0.0568 |
| SNB-Fa1 | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0949 | 0.1641 | -0.0054 |
| SNB-Fa2 | 0.1686 | 0.2920 | -0.6209 | -0.1686 | -0.2920 | 0.6209 | 0.0916 | 0.1639 | -0.0474 |
| SNB-Ga1 | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0486 | 0.0841 | -0.0063 |
| SNB-Ga2 | 0.1619 | 0.2804 | -0.7217 | -0.1619 | -0.2804 | 0.7217 | 0.0459 | 0.0846 | -0.0352 |
| SNB-Ha1 | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0185 | 0.0321 | -0.0048 |
| SNB-Ha2 | 0.1501 | 0.2600 | -0.7589 | -0.1501 | -0.2600 | 0.7589 | 0.0356 | 0.0301 | -0.0219 |
| SNB-Ia1 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0051 | 0.0088 | -0.0013 |
| SNB-Ia2 | 0.1827 | 0.3165 | -0.9701 | -0.1827 | -0.3165 | 0.9701 | 0.0023 | -0.0000 | -0.0079 |

Moments for Angles Modeled as Beams:

| Angle Torsion Label | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | Origin X Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | Shear (lbs) | Shear (lbs) |
|---------------------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------|-------------|
| Rohn-LA1P | -0.00 | -0.00 | 0.00 | 67.79 | -157.45 | 13.55 | -31.48 | 13.55 | -31.48 | 13.55 | -31.48 |
| Rohn-LA1 | 0.00 | 0.00 | 0.00 | -124.57 | 92.29 | -24.90 | 18.45 | -24.90 | 18.45 | -24.90 | 18.45 |
| Rohn-LA12 | 0.00 | -0.00 | 0.00 | 120.49 | 82.52 | 24.09 | 16.50 | 24.09 | 16.50 | 24.09 | 16.50 |
| Rohn-LA2P | -0.01 | -67.79 | 157.45 | -41.29 | 199.78 | -21.81 | 71.42 | -21.81 | 71.42 | -21.81 | 71.42 |
| Rohn-LA2 | 0.00 | 124.57 | -92.29 | 155.44 | -114.61 | 55.98 | -41.36 | 55.98 | -41.36 | 55.98 | -41.36 |
| Rohn-LA21 | -0.00 | -120.49 | -82.52 | -173.30 | -82.32 | -58.74 | -32.96 | -58.74 | -32.96 | -58.74 | -32.96 |
| Rohn-LA3P | -0.02 | 41.29 | -19.78 | 50.82 | -216.24 | -1.91 | -83.18 | -1.91 | -83.18 | -1.91 | -83.18 |
| Rohn-LA3 | 0.00 | -155.44 | 114.61 | -200.91 | 119.44 | -71.23 | 46.79 | -71.23 | 46.79 | -71.23 | 46.79 |
| Rohn-LA31 | 0.01 | 173.30 | 82.32 | 174.74 | 128.91 | 69.59 | 42.23 | 69.59 | 42.23 | 69.59 | 42.23 |
| Rohn-LA32 | -0.01 | -173.30 | -82.32 | -174.74 | -128.91 | -69.59 | -42.23 | -69.59 | -42.23 | -69.59 | -42.23 |
| Rohn-LA4 | 0.00 | 200.91 | -119.44 | 224.60 | -128.96 | 85.06 | -49.65 | 85.06 | -49.65 | 85.06 | -49.65 |
| Rohn-LA41 | 0.00 | 200.91 | -119.44 | 224.60 | -128.96 | 85.06 | -49.65 | 85.06 | -49.65 | 85.06 | -49.65 |
| Rohn-LA42 | 0.00 | -174.75 | 128.91 | -229.51 | -191.25 | -80.83 | -64.01 | -80.83 | -64.01 | -80.83 | -64.01 |
| Rohn-LB1P | -0.02 | -115.56 | 289.91 | -314.77 | -388.77 | -86.04 | -135.69 | -86.04 | -135.69 | -86.04 | -135.69 |
| Rohn-LB1 | 0.00 | -224.60 | 128.97 | -365.51 | 193.12 | -117.96 | 64.38 | -117.96 | 64.38 | -117.96 | 64.38 |
| Rohn-LB11 | 0.00 | -224.60 | 128.97 | -365.51 | 193.12 | -117.96 | 64.38 | -117.96 | 64.38 | -117.96 | 64.38 |
| Rohn-LB12 | 0.03 | 229.51 | -191.25 | 201.18 | 442.42 | 86.11 | 126.69 | 86.11 | 126.69 | 86.11 | 126.69 |
| Rohn-LB2P | -0.01 | 314.77 | -388.78 | 409.40 | 471.84 | 144.79 | 172.07 | 144.79 | 172.07 | 144.79 | 172.07 |
| Rohn-LB2 | 0.00 | 365.51 | -193.11 | 383.56 | -221.25 | 149.73 | -82.83 | 149.73 | -82.83 | 149.73 | -82.83 |
| Rohn-LB21 | 0.00 | 365.51 | -193.11 | 383.56 | -221.25 | 149.73 | -82.83 | 149.73 | -82.83 | 149.73 | -82.83 |
| Rohn-LB22 | 0.01 | -201.19 | 442.41 | -217.78 | -571.20 | -83.77 | -202.66 | -83.77 | -202.66 | -83.77 | -202.66 |
| Rohn-LB3P | -0.01 | -409.40 | 471.84 | -476.06 | -478.32 | -177.05 | -189.98 | -177.05 | -189.98 | -177.05 | -189.98 |
| Rohn-LB3 | 0.00 | -383.56 | 221.26 | -561.62 | 349.01 | -168.93 | 113.99 | -168.93 | 113.99 | -168.93 | 113.99 |
| Rohn-LB31 | 0.01 | 217.76 | -571.21 | 199.34 | 612.97 | 83.40 | 236.77 | 83.40 | 236.77 | 83.40 | 236.77 |
| Rohn-LB32 | 0.01 | 217.76 | -571.21 | 199.34 | 612.97 | 83.40 | 236.77 | 83.40 | 236.77 | 83.40 | 236.77 |
| Rohn-LB4 | 0.10 | 476.06 | -78.33 | 70.07 | 503.31 | 109.20 | 196.28 | 109.20 | 196.28 | 109.20 | 196.28 |
| Rohn-LB41 | 0.00 | 561.63 | -349.00 | 396.36 | -243.16 | 191.47 | -118.36 | 191.47 | -118.36 | 191.47 | -118.36 |
| Rohn-LB42 | -0.10 | -199.36 | 78.33 | -243.16 | -243.46 | -276.11 | -124.53 | -276.11 | -124.53 | -276.11 | -124.53 |
| Rohn-LC1P | 0.04 | -70.07 | 503.31 | 174.54 | -48.44 | 15.68 | -82.82 | 15.68 | -82.82 | 15.68 | -82.82 |
| Rohn-LC1 | 0.00 | -396.36 | 243.17 | -217.47 | 120.44 | -92.11 | 54.56 | -92.11 | 54.56 | -92.11 | 54.56 |
| Rohn-LC12 | -0.04 | 423.45 | -276.11 | 153.11 | -154.83 | 86.55 | -18.21 | 86.55 | -18.21 | 86.55 | -18.21 |
| Rohn-LC2P | 0.03 | -174.55 | 48.44 | -444.83 | -309.48 | -92.70 | -39.07 | -92.70 | -39.07 | -92.70 | -39.07 |
| Rohn-LC2 | 0.00 | 217.47 | -120.43 | -426.12 | 268.51 | -31.21 | 22.15 | -31.21 | 22.15 | -31.21 | 22.15 |
| Rohn-LC21 | 0.00 | 217.47 | -120.43 | -426.12 | 268.51 | -31.21 | 22.15 | -31.21 | 22.15 | -31.21 | 22.15 |
| Rohn-LC22 | -0.04 | -153.12 | 154.82 | 34.81 | 546.14 | -17.71 | 104.91 | -17.71 | 104.91 | -17.71 | 104.91 |
| Rohn-LC3P | 0.16 | 444.83 | -309.49 | -133.07 | 813.21 | 46.80 | 168.54 | 46.80 | 168.54 | 46.80 | 168.54 |
| Rohn-LC3 | 0.00 | 426.12 | -268.50 | 289.34 | -169.83 | 107.35 | -65.77 | 107.35 | -65.77 | 107.35 | -65.77 |
| Rohn-LC31 | 0.00 | 426.12 | -268.50 | 289.34 | -169.83 | 107.35 | -65.77 | 107.35 | -65.77 | 107.35 | -65.77 |
| Rohn-LC32 | -0.15 | -34.82 | 546.14 | -745.27 | -322.44 | -117.11 | -130.40 | -117.11 | -130.40 | -117.11 | -130.40 |
| Rohn-LD1P | -0.02 | 133.07 | -813.21 | -65.79 | -349.40 | 10.10 | -174.55 | 10.10 | -174.55 | 10.10 | -174.55 |
| Rohn-LD1 | 0.00 | -289.34 | 169.83 | -598.42 | 340.62 | -133.18 | 76.57 | -133.18 | 76.57 | -133.18 | 76.57 |
| Rohn-LD11 | 0.00 | -289.34 | 169.83 | -598.42 | 340.62 | -133.18 | 76.57 | -133.18 | 76.57 | -133.18 | 76.57 |
| Rohn-LD12 | 0.04 | 745.26 | -322.45 | 238.99 | 276.80 | 147.77 | 89.97 | 147.77 | 89.97 | 147.77 | 89.97 |
| Rohn-LD2P | 0.08 | 65.79 | -349.41 | -654.79 | 138.56 | -88.17 | 73.05 | -88.17 | 73.05 | -88.17 | 73.05 |
| Rohn-LD2 | 0.00 | 598.42 | -340.60 | -293.38 | 172.22 | 45.62 | -25.18 | 45.62 | -25.18 | 45.62 | -25.18 |
| Rohn-LD21 | 0.00 | 598.42 | -340.60 | -293.38 | 172.22 | 45.62 | -25.18 | 45.62 | -25.18 | 45.62 | -25.18 |
| Rohn-LD22 | -0.07 | -239.00 | 428.41 | -428.41 | 473.47 | -99.91 | 29.44 | -99.91 | 29.44 | -99.91 | 29.44 |
| Rohn-LD3P | 0.09 | 654.79 | -138.56 | 17.72 | 433.92 | 100.98 | 44.35 | 100.98 | 44.35 | 100.98 | 44.35 |
| Rohn-LD3 | 0.00 | 293.38 | -172.22 | -275.52 | 162.01 | 2.68 | -1.53 | 2.68 | -1.53 | 2.68 | -1.53 |
| Rohn-LD31 | 0.00 | 293.38 | -172.22 | -275.52 | 162.01 | 2.68 | -1.53 | 2.68 | -1.53 | 2.68 | -1.53 |
| Rohn-LD32 | -0.08 | 428.40 | -473.47 | -373.83 | -222.33 | 8.19 | -104.48 | 8.19 | -104.48 | 8.19 | -104.48 |
| Rohn-LE1P | -0.05 | -17.72 | 433.91 | -540.28 | 590.91 | -83.78 | 23.57 | -83.78 | 23.57 | -83.78 | 23.57 |
| Rohn-LE1 | 0.00 | 275.52 | -162.01 | 171.29 | -102.12 | 67.03 | -39.62 | 67.03 | -39.62 | 67.03 | -39.62 |
| Rohn-LE11 | 0.00 | 275.52 | -162.01 | 171.29 | -102.12 | 67.03 | -39.62 | 67.03 | -39.62 | 67.03 | -39.62 |
| Rohn-LE12 | 0.05 | 373.82 | -222.33 | -776.41 | 167.29 | -60.44 | 58.50 | -60.44 | 58.50 | -60.44 | 58.50 |
| Rohn-LE2P | -0.20 | 540.28 | -590.90 | -180.09 | -1459.93 | 53.92 | -307.00 | 53.92 | -307.00 | 53.92 | -307.00 |
| Rohn-LE2 | 0.00 | -171.29 | 102.12 | -1646.03 | 852.14 | -271.80 | 157.67 | -271.80 | 157.67 | -271.80 | 157.67 |
| Rohn-LE21 | 0.00 | -171.29 | 102.12 | -1646.03 | 852.14 | -271.80 | 157.67 | -271.80 | 157.67 | -271.80 | 157.67 |
| Rohn-LE22 | 0.21 | 776.41 | -167.30 | 1165.38 | 899.53 | 290.68 | 109.61 | 290.68 | 109.61 | 290.68 | 109.61 |
| Rohn-LE3P | 0.17 | 180.08 | -1459.93 | -134.26 | 2753.08 | 6.88 | 632.57 | 6.88 | 632.57 | 6.88 | 632.57 |
| Rohn-LE3 | 0.00 | 1646.05 | -952.10 | 1501.41 | -861.08 | 472.12 | -271.98 | 472.12 | -271.98 | 472.12 | -271.98 |
| Rohn-LE31 | 0.00 | 1646.05 | -952.10 | 1501.41 | -861.08 | 472.12 | -271.98 | 472.12 | -271.98 | 472.12 | -271.98 |
| Rohn-LE32 | -0.16 | -1165.41 | -899.50 | 2436.93 | -1380.41 | -540.88 | -327.31 | -540.88 | -327.31 | -540.88 | -327.31 |
| Rohn-LF1P | -0.89 | 134.26 | -2753.07 | -1152.00 | -2727.54 | -101.78 | -548.09 | -101.78 | -548.09 | -101.78 | -548.09 |
| Rohn-LF1 | 0.00 | -1501.41 | 861.09 | -2740.15 | 1585.33 | -423.70 | 244.38 | -423.70 | 244.38 | -423.70 | 244.38 |
| Rohn-LF11 | 0.00 | -1501.41 | 861.09 | -2740.15 | 1585.33 | -423.70 | 244.38 | -423.70 | 244.38 | -423.70 | 244.38 |
| Rohn-LF12 | 0.88 | 2436.90 | 1280.46 | 1779.26 | 2371.31 | 421.64 | 365.19 | 421.64 | 365.19 | 421.64 | 365.19 |
| Rohn-LF2P | 1.07 | 1151.98 | -2727.55 | 131.70 | 3974.83 | 128.38 | 670.30 | 128.38 | 670.30 | 128.38 | 670.30 |
| Rohn-LF2 | 0.00 | 2740.21 | -1585.22 | 2281.94 | -1319.55 | 501.63 | -290.14 | 501.63 | -290.14 | 501.63 | -290.14 |
| Rohn-LF21 | 0.00 | 2740.21 | -1585.22 | 2281.94 | -1319.55 | 501.63 | -290.14 | 501.63 | -290.14 | 501.63 | -290.14 |
| Rohn-LF22 | -1.07 | -1779.39 | -2371.31 | -3369.58 | -2108.69 | -514.94 | -448.03 | -514.94 | -448.03 | -514.94 | -448.03 |
| Rohn-LG1P | -0.72 | -131.70 | -3974.83 | -1138.71 | -3884.42 | -127.04 | -785.92 | -127.04 | -785.92 | -127.04 | -785.92 |
| Rohn-LG1 | 0.00 | -2281.93 | 1319.57 | -3851.18 | 2226.71 | -612.70 | 354.27 | -612.70 | 354.27 | -612.70 | 354.27 |
| Rohn-LG11 | 0.00 | -2281.93 | 1319.57 | -3851.18 | 2226.71 | -612.70 | 354.27 | -612.70 | 354.27 | -612.70 | 354.27 |

| | | | | | | | |
|-----------|-------|----------|----------|----------|----------|---------|---------|
| Rohn-LG12 | 0.72 | 3369.52 | 2108.78 | 2789.90 | 2935.61 | 615.93 | 504.43 |
| Rohn-LG2P | 0.91 | 1138.70 | 3884.42 | 14.05 | 4366.72 | 115.28 | 825.13 |
| Rohn-LG21 | 0.01 | 3851.28 | -2226.54 | 2422.88 | -1395.17 | 626.76 | -361.79 |
| Rohn-LG22 | -0.91 | -2790.04 | -2935.47 | -3768.05 | -2204.49 | -655.82 | -514.01 |
| Rohn-LH1P | 1.11 | -14.05 | 4366.72 | -1407.76 | 2949.70 | -142.19 | -731.67 |
| Rohn-LH11 | 0.00 | -2422.86 | 1395.20 | 2887.66 | 1666.14 | -530.46 | 305.79 |
| Rohn-LH12 | 1.11 | 3767.99 | 2204.59 | 1848.41 | 2698.02 | 561.66 | 490.28 |
| Rohn-LH2P | 0.58 | 1407.76 | 2949.70 | 235.70 | 2715.52 | 164.36 | 566.57 |
| Rohn-LH21 | 0.00 | 2887.72 | -1666.04 | 417.70 | -236.08 | 330.16 | -189.99 |
| Rohn-LH22 | -0.58 | -1848.53 | -2697.93 | -2231.78 | -1564.10 | -408.07 | -426.24 |
| Rohn-LI1P | 0.59 | -235.70 | -2715.52 | -2526.07 | 1849.83 | -276.17 | -86.57 |
| Rohn-LI11 | 0.00 | -417.70 | 236.08 | 1153.00 | -693.69 | 73.46 | -45.72 |
| Rohn-LI12 | 0.61 | 2331.76 | 1564.12 | 2886.72 | 1301.51 | -65.49 | 286.55 |
| Rohn-LI2P | -0.55 | 2526.06 | -1849.83 | -554.61 | -2287.45 | 197.15 | -413.73 |
| Rohn-LI21 | 0.00 | -1153.01 | 693.69 | -6304.45 | 3766.39 | -745.01 | 445.57 |
| Rohn-LI22 | 0.53 | 2886.71 | -1301.51 | 1801.52 | 1440.33 | 469.63 | 13.88 |
| SNB-LA1P | -0.00 | -0.00 | 0.00 | 8.20 | -214.45 | 1.64 | -42.87 |
| SNB-LA11 | 0.00 | -0.00 | 0.00 | -174.92 | 114.99 | -34.97 | 22.99 |
| SNB-LA12 | 0.00 | -0.00 | -0.00 | 169.63 | 102.45 | 33.91 | 20.48 |
| SNB-LA2P | -0.00 | -8.20 | 214.45 | -5.04 | 272.44 | -2.65 | 97.34 |
| SNB-LA21 | 0.00 | 174.92 | -114.99 | 220.41 | -141.51 | 78.03 | -51.28 |
| SNB-LA22 | 0.00 | -169.64 | -102.45 | -222.05 | -136.60 | -78.31 | -47.79 |
| SNB-LA3P | -0.01 | 5.04 | -272.44 | -39.27 | -297.93 | -6.85 | -114.03 |
| SNB-LA31 | 0.00 | -220.41 | 141.51 | -274.06 | 166.37 | -98.85 | 61.55 |
| SNB-LA32 | 0.01 | 222.04 | 136.40 | 234.73 | 188.25 | 91.32 | 64.95 |
| SNB-LA4P | 0.01 | 39.27 | 297.94 | 28.79 | 409.06 | 13.61 | 141.35 |
| SNB-LA41 | 0.00 | 274.06 | -166.36 | 314.76 | -183.83 | 117.71 | -70.01 |
| SNB-LA42 | -0.01 | -234.73 | -188.25 | -346.16 | -232.03 | -116.14 | -84.03 |
| SNB-LB1P | -0.00 | -28.79 | -409.06 | -58.133 | -587.77 | -17.42 | -199.30 |
| SNB-LB11 | 0.00 | -314.76 | 183.83 | -546.01 | 308.69 | -172.08 | 98.46 |
| SNB-LB12 | 0.00 | 346.15 | 232.03 | 493.23 | 344.82 | 167.82 | 115.33 |
| SNB-LB2P | 0.03 | 58.32 | 587.77 | -102.18 | 712.88 | -8.77 | 260.04 |
| SNB-LB21 | 0.00 | 546.01 | -308.69 | 584.41 | -328.90 | 225.98 | -127.46 |
| SNB-LB22 | -0.03 | -493.24 | -344.82 | -877.62 | -264.74 | -234.09 | -121.87 |
| SNB-LB3P | -0.02 | 102.18 | -712.87 | -10.03 | -686.70 | 18.42 | -279.83 |
| SNB-LB31 | 0.00 | -584.41 | 328.91 | -845.64 | 482.24 | -285.87 | 162.15 |
| SNB-LB32 | 0.02 | 677.61 | 264.74 | 595.35 | 349.47 | 254.51 | 122.80 |
| SNB-LB4P | 0.02 | 10.03 | 686.71 | -88.30 | 578.71 | -15.65 | 253.01 |
| SNB-LB41 | 0.00 | 845.65 | -482.23 | 462.74 | -261.52 | 261.54 | -148.67 |
| SNB-LB42 | -0.02 | -595.36 | -349.46 | -549.56 | -210.17 | -228.91 | -111.89 |
| SNB-LC1P | -0.02 | 88.30 | -578.71 | 73.49 | 776.66 | 2.22 | -98.37 |
| SNB-LC11 | 0.00 | -462.73 | 261.53 | -214.23 | 119.17 | -101.59 | 57.13 |
| SNB-LC12 | 0.02 | 549.56 | 210.18 | 36.14 | 101.22 | 87.92 | 46.74 |
| SNB-LC2P | -0.00 | 73.49 | 76.67 | -211.59 | -271.15 | -20.67 | -29.11 |
| SNB-LC21 | 0.00 | 214.23 | -119.16 | -367.92 | 219.06 | -22.99 | 14.94 |
| SNB-LC22 | -0.00 | -36.15 | -101.22 | 122.05 | 320.90 | 12.86 | 32.88 |
| SNB-LC3P | 0.07 | 211.59 | 271.15 | -7.64 | 758.40 | 30.62 | 154.55 |
| SNB-LC31 | -0.00 | 367.93 | -219.05 | 271.03 | -163.52 | 95.87 | -57.40 |
| SNB-LC32 | -0.07 | -122.05 | -320.90 | -652.69 | -373.43 | -116.30 | -104.23 |
| SNB-LD1P | -0.09 | 7.64 | -758.39 | -404.90 | -337.14 | -59.64 | -164.47 |
| SNB-LD11 | 0.00 | -271.03 | 163.52 | -634.27 | 374.30 | -135.83 | 80.69 |
| SNB-LD12 | 0.09 | 652.68 | 373.44 | 81.97 | 522.38 | 110.29 | 134.48 |
| SNB-LD2P | 0.05 | 404.89 | 337.14 | -404.26 | 106.45 | 0.10 | 66.40 |
| SNB-LD21 | -0.00 | 634.28 | -374.28 | -305.91 | 171.89 | 49.12 | -30.27 |
| SNB-LD22 | -0.05 | -81.98 | -522.38 | -287.90 | 296.51 | -55.37 | -33.81 |
| SNB-LD3P | 0.06 | 404.26 | -106.44 | -310.57 | 603.79 | 14.07 | 74.67 |
| SNB-LD31 | 0.00 | 305.91 | -171.88 | -363.72 | 217.08 | -8.67 | 6.78 |
| SNB-LD32 | -0.06 | 287.89 | -296.51 | -681.27 | -31.72 | -59.06 | -49.28 |
| SNB-LE1P | 0.01 | 310.57 | -603.79 | -669.45 | 1255.96 | -53.88 | 97.90 |
| SNB-LE11 | 0.00 | 363.72 | -217.07 | 267.69 | -158.59 | 94.74 | -56.36 |
| SNB-LE12 | -0.02 | 681.27 | 31.73 | -1416.27 | -48.39 | -110.34 | -2.50 |
| SNB-LE2P | -0.30 | 669.45 | -1255.95 | -761.15 | -2836.87 | -13.72 | -612.61 |
| SNB-LE21 | 0.00 | -267.69 | 158.59 | -3297.97 | 1911.47 | -533.38 | 309.65 |
| SNB-LE22 | 0.30 | 1416.26 | 48.39 | 2071.09 | 2081.78 | 521.99 | 318.84 |
| SNB-LE3P | 0.45 | 761.14 | 2836.88 | -88.81 | 4890.78 | 100.94 | 1160.14 |
| SNB-LE31 | 0.00 | 3298.02 | -1911.39 | 2659.78 | -1539.31 | 893.81 | -517.68 |

| | | | | | | | |
|----------|-------|----------|-----------|-----------|----------|----------|----------|
| SNB-LB32 | -0.46 | -2071.14 | -2081.73 | -4273.41 | -2370.72 | -952.49 | -666.44 |
| SNB-LF1P | -1.43 | 88.81 | -4890.78 | -1695.57 | -4583.63 | -160.66 | -947.36 |
| SNB-LF11 | 0.00 | -2659.77 | 1539.34 | -4395.22 | 2544.31 | -704.88 | 408.01 |
| SNB-LF12 | 1.43 | 4273.35 | 2370.81 | 3117.18 | 3764.63 | 738.99 | 613.49 |
| SNB-LF2P | 1.82 | 1695.55 | 4583.64 | 276.49 | 7127.53 | 197.19 | 1171.03 |
| SNB-LF21 | 0.00 | 4395.32 | 4071.49 | -2354.13 | 2354.74 | 845.88 | -489.42 |
| SNB-LF22 | -1.82 | -3117.38 | -3764.47 | -6028.01 | -3805.72 | -914.47 | -756.96 |
| SNB-LG1P | -1.49 | -276.49 | -7127.53 | -3883.74 | -8507.47 | -335.99 | -1563.36 |
| SNB-LG11 | 0.00 | -4071.46 | 2354.79 | -8690.00 | 5026.78 | -1275.00 | 737.49 |
| SNB-LG12 | 1.49 | 6027.89 | 3805.89 | 5820.79 | 6930.45 | 1184.76 | 1073.53 |
| SNB-LG2P | 2.11 | 3083.72 | 8507.48 | 477.01 | 10062.42 | 356.05 | 1856.89 |
| SNB-LG21 | 0.00 | 8690.21 | -5026.41 | 5572.46 | -3221.22 | 1424.94 | -823.99 |
| SNB-LG22 | -2.12 | -5821.15 | -6930.15 | -8470.79 | -5446.42 | -1429.11 | -1237.59 |
| SNB-LH1P | -2.56 | -477.01 | -10062.42 | -3616.15 | -6828.54 | -409.30 | -1689.01 |
| SNB-LH11 | 0.00 | -5572.42 | 3221.29 | -6760.80 | 3909.08 | -1232.08 | 712.32 |
| SNB-LH12 | 2.56 | 8470.64 | 5446.64 | 4102.97 | 6550.48 | 1257.30 | 1199.65 |
| SNB-LH2P | 1.22 | 3616.14 | 6828.55 | 1022.57 | 6262.11 | 463.88 | 1309.08 |
| SNB-LH21 | 0.00 | 6760.94 | -3908.85 | 1034.93 | -596.62 | 778.79 | -450.09 |
| SNB-LH22 | -1.22 | -4103.26 | -6550.29 | -4908.26 | 4019.17 | -901.16 | -1056.96 |
| SNB-LI1P | -1.71 | -1022.57 | -6362.11 | -6665.02 | 2844.70 | -768.69 | -341.71 |
| SNB-LI11 | 0.00 | -1034.93 | 596.61 | 1623.29 | -937.31 | 58.78 | -34.04 |
| SNB-LI12 | 1.71 | 4908.21 | 4019.22 | -5798.59 | 4355.18 | -89.03 | 837.36 |
| SNB-LI2P | -0.75 | 6665.02 | -2844.70 | 725.16 | -3251.38 | 739.03 | -609.62 |
| SNB-LI21 | 0.00 | -1623.29 | 937.30 | -11969.59 | 6924.80 | -1358.00 | 785.46 |
| SNB-LI22 | 0.75 | 5798.51 | -4355.29 | 3187.83 | 982.25 | 898.64 | -337.31 |

Equilibrium Joint Positions and Rotations for Load Case "W+I 90 deg":

| Joint Label | X-Displ (ft) | Y-Displ (ft) | Z-Displ (ft) | X-Rot (deg) | Y-Rot (deg) | Z-Rot (deg) | X-Pos (ft) | Y-Pos (ft) | Z-Pos (ft) |
|-------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|------------|------------|
| RohnAP | -0.0007802 | 1.233 | -0.08252 | -0.6433 | -0.0211 | -0.0251 | 4.332 | 1.233 | 179.9 |
| RohnBP | -0.001451 | 1.006 | -0.07324 | -0.6537 | -0.0079 | -0.0257 | 5.12 | 1.006 | 159.9 |
| RohnCP | -0.002475 | 0.7844 | -0.0639 | -0.5959 | 0.0082 | -0.0236 | 5.907 | 0.7844 | 139.9 |
| RohnDP | -0.003354 | 0.5767 | -0.0545 | -0.5505 | -0.0023 | -0.0218 | 6.692 | 0.5767 | 119.9 |
| RohnEP | -0.004335 | 0.3982 | -0.0451 | -0.5045 | -0.0181 | -0.0178 | 7.478 | 0.3982 | 99.95 |
| RohnFP | -0.005752 | 0.2532 | -0.03605 | -0.3809 | -0.0077 | -0.0151 | 8.262 | 0.2532 | 79.96 |
| RohnGP | -0.007665 | 0.1422 | -0.02692 | -0.2631 | -0.0161 | -0.0105 | 9.047 | 0.1422 | 59.97 |
| RohnHP | -0.007821 | 0.06357 | -0.01804 | -0.1839 | -0.0083 | -0.0075 | 9.833 | 0.06357 | 39.98 |
| RohnJP | -0.006049 | 0.01693 | -0.009035 | -0.0883 | -0.0190 | -0.0036 | 10.62 | 0.01693 | 19.99 |
| RohnK | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 11.42 | 0 | 0 |
| SNB-AP | 4.18e-006 | 1.23 | -0.07951 | -0.6538 | -0.0211 | -0.0256 | 2.333 | 1.23 | 179.9 |
| SNB-BP | -0.0006668 | 1.003 | -0.07037 | -0.6453 | -0.0090 | -0.0254 | 3.12 | 1.003 | 159.9 |
| SNB-CP | -0.001691 | 0.7814 | -0.06122 | -0.6188 | -0.0147 | -0.0246 | 3.906 | 0.7814 | 139.9 |
| SNB-DP | -0.002573 | 0.575 | -0.05216 | -0.5597 | -0.0049 | -0.0221 | 4.692 | 0.575 | 119.9 |
| SNB-EP | -0.002654 | 0.3964 | -0.04306 | -0.4494 | -0.0027 | -0.0178 | 5.478 | 0.3964 | 99.96 |
| SNB-FP | -0.004972 | 0.2526 | -0.03452 | -0.3760 | 0.0008 | -0.0149 | 6.263 | 0.2526 | 79.97 |
| SNB-GP | -0.006885 | 0.1415 | -0.02593 | -0.2675 | -0.0312 | -0.0106 | 7.048 | 0.1415 | 59.97 |
| SNB-HP | -0.007041 | 0.06319 | -0.01741 | -0.1824 | -0.0073 | -0.0074 | 7.834 | 0.06319 | 39.98 |
| SNB-IP | -0.005269 | 0.0163 | -0.008754 | -0.0917 | -0.0191 | -0.0038 | 8.623 | 0.0163 | 19.99 |
| SNB-JP | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 9.415 | 0 | 0 |
| RohnA1 | 0.005379 | 1.231 | -0.04033 | -0.6761 | 0.0095 | 0.0129 | 2.161 | -2.522 | 180 |
| RohnA2 | -3.513e-005 | 1.226 | -0.1244 | -0.6346 | -0.0125 | -0.0128 | 2.167 | 4.979 | 179.9 |
| RohnB1 | 0.005485 | 1.003 | -0.02485 | -0.6519 | 0.0038 | 0.0127 | -2.555 | -3.431 | 160 |
| RohnB2 | -0.0005065 | 0.9983 | -0.1212 | -0.6386 | 0.0087 | 0.0128 | -2.561 | 5.433 | 159.9 |
| RohnC1 | 0.004481 | 0.7835 | -0.01143 | -0.6001 | -0.0059 | 0.0116 | -2.595 | -4.334 | 140 |
| RohnC2 | 0.0001895 | 0.7772 | -0.116 | -0.6126 | -0.0124 | -0.0118 | -2.954 | 5.895 | 139.9 |
| RohnD1 | 0.004632 | 0.5779 | -0.003883 | -0.5560 | 0.0049 | 0.0108 | -3.343 | -5.22 | 120 |
| RohnD2 | 0.0004895 | 0.5705 | -0.1085 | -0.5506 | -0.0008 | -0.0103 | -3.347 | 6.369 | 119.9 |
| RohnE1 | 0.00389 | 0.3996 | 0.004177 | -0.4495 | -0.0004 | 0.0090 | -3.737 | -6.079 | 100 |
| RohnE2 | 0.0006673 | 0.3927 | -0.09415 | -0.4565 | -0.0026 | 0.0030 | -3.74 | 6.871 | 99.91 |
| RohnF1 | 0.004839 | 0.2579 | 0.007291 | -0.3710 | -0.0028 | 0.0075 | -4.129 | -6.902 | 80.01 |
| RohnF2 | 0.001548 | 0.2473 | -0.07921 | -0.3577 | -0.0121 | -0.0074 | -4.132 | 7.408 | 79.92 |
| RohnG1 | 0.005405 | 0.1489 | 0.006089 | -0.2774 | 0.0103 | 0.0052 | -4.522 | -7.693 | 60.01 |
| RohnG2 | 0.002609 | 0.1353 | -0.05981 | -0.2494 | 0.0068 | 0.0052 | -4.525 | 7.977 | 59.94 |
| RohnH1 | 0.005157 | 0.0708 | 0.00548 | -0.1715 | -0.0056 | 0.0037 | -4.915 | -8.452 | 40.01 |
| RohnH2 | 0.002808 | 0.05716 | -0.04149 | -0.1857 | -0.0022 | 0.0037 | -4.918 | 8.58 | 39.96 |
| RohnI1 | 0.003658 | 0.0224 | 0.001972 | -0.0644 | -0.0122 | 0.0018 | -5.311 | -9.183 | 20 |
| RohnI2 | 0.002427 | 0.01194 | -0.02001 | -0.0976 | -0.0064 | 0.0018 | -5.313 | 9.218 | 19.98 |
| RohnJ1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | -9.89 | 0 |
| RohnJ2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | 9.89 | 0 |
| SNB-A1 | 0.002339 | 1.231 | -0.05646 | -0.6751 | 0.0113 | 0.0128 | -1.164 | -0.789 | 179.9 |
| SNB-A2 | 0.00214 | 1.229 | -0.1025 | -0.6336 | 0.0108 | 0.0127 | -1.164 | 3.249 | 179.9 |
| SNB-B1 | 0.002167 | 1.004 | -0.04016 | -0.6525 | 0.0054 | 0.0127 | -1.558 | -1.699 | 160 |
| SNB-B2 | 0.001981 | 1.001 | -0.1004 | -0.6359 | 0.0065 | 0.0127 | -1.559 | 3.704 | 159.9 |
| SNB-C1 | 0.002447 | 0.784 | -0.02533 | -0.6018 | -0.0089 | 0.0123 | -1.952 | -2.6 | 140 |
| SNB-C2 | 0.001823 | 0.7792 | -0.09699 | -0.6260 | -0.0034 | -0.0123 | -1.952 | 4.164 | 139.9 |
| SNB-D1 | 0.002467 | 0.5782 | -0.01349 | -0.5602 | 0.0011 | 0.0111 | -2.345 | -3.488 | 120 |
| SNB-D2 | 0.001889 | 0.5723 | -0.03066 | -0.5506 | 0.0058 | 0.0110 | -2.346 | 4.638 | 119.9 |
| SNB-E1 | 0.002304 | 0.3996 | -0.006896 | -0.4476 | -0.0003 | 0.0089 | -2.738 | -4.347 | 99.99 |
| SNB-E2 | 0.001508 | 0.3941 | -0.0791 | -0.4519 | -0.0008 | 0.0089 | -2.739 | 5.141 | 99.92 |
| SNB-F1 | 0.00331 | 0.2578 | -0.0007505 | -0.3657 | -0.0053 | 0.0075 | -3.131 | -5.17 | 80 |
| SNB-F2 | 0.002339 | 0.2487 | -0.06817 | -0.3668 | 0.0058 | 0.0074 | -3.132 | 5.677 | 79.93 |
| SNB-G1 | 0.00429 | 0.1486 | 0.001825 | -0.2894 | -0.0133 | 0.0053 | -3.523 | -5.961 | 60 |
| SNB-G2 | 0.00296 | 0.1364 | -0.0536 | -0.2357 | 0.0189 | 0.0053 | -3.525 | 6.246 | 59.95 |
| SNB-H1 | 0.004274 | 0.0704 | 0.003067 | -0.1727 | -0.0053 | 0.0037 | -3.916 | -6.72 | 40 |
| SNB-H2 | 0.002935 | 0.05814 | -0.03784 | -0.1851 | -0.0015 | 0.0037 | -3.918 | 6.849 | 39.96 |
| SNB-I1 | 0.003213 | 0.02176 | 0.001602 | -0.0668 | -0.0142 | 0.0019 | -4.311 | -7.45 | 20 |

| | | | | | | | | | |
|------------|------------|----------|-----------|---------|---------|---------|--------|----------|-------|
| SNB-I2 | 0.002118 | 0.01266 | -0.01909 | -0.0998 | -0.0046 | 0.0019 | -4.312 | 7.485 | 19.98 |
| SNB-J1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | -8.154 | 0 |
| SNB-J2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | 8.154 | 0 |
| RohnAas | 1.177 | 1.177 | -0.08019 | -0.6553 | 0.0059 | -0.0259 | 4.53 | 1.177 | 174.9 |
| RohnAbs | -0.000992 | 1.119 | -0.07789 | -0.6617 | -0.0015 | -0.0261 | 4.726 | 1.119 | 169.9 |
| RohnAcs | -0.0001221 | 1.062 | -0.07551 | -0.6404 | 0.0047 | -0.0253 | 4.924 | 1.062 | 164.9 |
| RohnBas | -0.0004548 | 0.9494 | -0.07087 | -0.6344 | 0.0030 | -0.0250 | 5.318 | 0.9494 | 154.9 |
| RohnBbs | -0.00168 | 0.8946 | -0.06866 | -0.6437 | -0.0028 | -0.0253 | 5.513 | 0.8946 | 149.9 |
| RohnBcs | -0.0005174 | 0.8374 | -0.06616 | -0.6369 | -0.0039 | -0.0251 | 5.711 | 0.8374 | 144.9 |
| RohnCas | -0.001388 | 0.7141 | -0.06079 | -0.6136 | -0.0159 | -0.0241 | 6.169 | 0.7141 | 133.3 |
| RohnCbs | -0.001166 | 0.6428 | -0.05758 | -0.5933 | 0.0156 | -0.0236 | 6.432 | 0.6428 | 126.6 |
| RohnDas | -0.001478 | 0.5135 | -0.05141 | -0.5377 | -0.0125 | -0.0212 | 6.955 | 0.5135 | 113.3 |
| RohnDbs | -0.002077 | 0.4526 | -0.04816 | -0.4937 | 0.0130 | -0.0197 | 7.217 | 0.4526 | 106.6 |
| RohnEas | -0.002774 | 0.3463 | -0.04207 | -0.4299 | -0.0215 | -0.0169 | 7.74 | 0.3463 | 93.3 |
| RohnEbs | -0.001461 | 0.2984 | -0.03887 | -0.3962 | 0.0249 | -0.0159 | 8.004 | 0.2984 | 86.6 |
| RohnFas | 0.0004068 | 0.1909 | -0.03113 | -0.3157 | 0.0126 | -0.0125 | 8.662 | 0.1909 | 69.97 |
| RohnFbs | 0.0005476 | 0.09819 | -0.02217 | -0.2258 | 0.0011 | -0.0090 | 9.449 | 0.09819 | 49.38 |
| RohnHas | 0.0008909 | 0.03449 | -0.01338 | -0.1322 | -0.0159 | -0.0052 | 10.23 | 0.03449 | 29.99 |
| RohnFas | 0.004944 | 0.003506 | -0.004751 | -0.0506 | -0.0321 | -0.0021 | 11.02 | 0.003506 | 9.995 |
| SNB-Aas | 0.0009745 | 1.173 | -0.0772 | -0.6534 | 0.0059 | -0.0259 | 2.531 | 1.173 | 174.9 |
| SNB-Abs | -0.0002075 | 1.116 | -0.07495 | -0.6544 | -0.0016 | -0.0258 | 2.727 | 1.116 | 169.9 |
| SNB-Acs | 0.0006623 | 1.059 | -0.07261 | -0.6472 | 0.0050 | -0.0256 | 2.925 | 1.059 | 164.9 |
| SNB-Bas | 0.0003293 | 0.9464 | -0.06804 | -0.6436 | 0.0032 | -0.0254 | 3.318 | 0.9464 | 154.9 |
| SNB-Bbs | -0.0008935 | 0.8906 | -0.06579 | -0.6326 | -0.0023 | -0.0250 | 3.514 | 0.8906 | 149.9 |
| SNB-Bcs | 0.0002652 | 0.8358 | -0.06343 | -0.6254 | 0.0022 | -0.0247 | 3.712 | 0.8358 | 144.9 |
| SNB-Cas | -0.0006028 | 0.7102 | -0.05821 | -0.6042 | -0.0178 | -0.0237 | 4.169 | 0.7102 | 133.3 |
| SNB-Cbs | -0.0003837 | 0.641 | -0.05503 | -0.5791 | 0.0168 | -0.0230 | 4.433 | 0.641 | 126.6 |
| SNB-Das | -0.0006935 | 0.5109 | -0.0491 | -0.5359 | -0.0119 | -0.0211 | 4.956 | 0.5109 | 113.3 |
| SNB-Dbs | -0.001295 | 0.451 | -0.04596 | -0.4905 | 0.0133 | -0.0195 | 5.218 | 0.451 | 106.6 |
| SNB-Eas | -0.001993 | 0.3452 | -0.04022 | -0.4273 | -0.0203 | -0.0168 | 5.741 | 0.3452 | 93.3 |
| SNB-Ebs | -0.0006799 | 0.2972 | -0.03712 | -0.3956 | 0.0225 | -0.0158 | 6.005 | 0.2972 | 86.62 |
| SNB-Fas | 0.001187 | 0.1906 | -0.02983 | -0.3160 | 0.0143 | -0.0125 | 6.663 | 0.1906 | 69.97 |
| SNB-Gas | 0.001328 | 0.09707 | -0.02139 | -0.2236 | 0.0051 | -0.0089 | 7.449 | 0.09707 | 49.98 |
| SNB-Has | -0.0001006 | 0.03383 | -0.01302 | -0.1328 | -0.0155 | -0.0053 | 8.234 | 0.03383 | 29.99 |
| SNB-Ias | -0.0004163 | 0.002403 | -0.004826 | -0.0470 | -0.0286 | -0.0019 | 9.017 | 0.002403 | 9.995 |
| SNB-WL-A1S | 0.001319 | 1.23 | -0.1154 | 0.0000 | 0.0000 | 0.0000 | 0.5846 | 0.2198 | 179.9 |
| SNB-WL-A2S | 0.001957 | 1.229 | -0.1278 | 0.0000 | 0.0000 | 0.0000 | -1.165 | 1.229 | 179.9 |
| SNB-WL-A3S | 0.00123 | 1.229 | -0.1385 | 0.0000 | 0.0000 | 0.0000 | 0.5845 | 2.239 | 179.9 |
| SNB-WL-B1S | 0.0009121 | 1.003 | -0.1117 | 0.0000 | 0.0000 | 0.0000 | 0.7812 | -0.3488 | 159.9 |
| SNB-WL-B2S | 0.001777 | 1.002 | -0.1266 | 0.0000 | 0.0000 | 0.0000 | -1.559 | 1.002 | 159.9 |
| SNB-WL-B3S | 0.0008154 | 1.001 | -0.1435 | 0.0000 | 0.0000 | 0.0000 | 0.7811 | 2.353 | 159.9 |
| SNB-WL-C1S | 0.0005036 | 0.7815 | -0.1326 | 0.0000 | 0.0000 | 0.0000 | 0.9775 | -0.9107 | 139.9 |
| SNB-WL-C2S | 0.001611 | 0.7807 | -0.1435 | 0.0000 | 0.0000 | 0.0000 | -1.952 | 0.7807 | 139.9 |
| SNB-WL-C3S | 0.0004331 | 0.7801 | -0.1541 | 0.0000 | 0.0000 | 0.0000 | 0.9774 | 2.472 | 139.8 |
| SNB-WL-D1S | 0.0001442 | 0.5752 | -0.1444 | 0.0000 | 0.0000 | 0.0000 | 1.174 | -1.458 | 119.9 |
| SNB-WL-D2S | 0.001499 | 0.5743 | -0.1571 | 0.0000 | 0.0000 | 0.0000 | -2.346 | 0.5743 | 119.8 |
| SNB-WL-D3S | 0.001073 | 0.5735 | -0.1703 | 0.0000 | 0.0000 | 0.0000 | 1.174 | 2.607 | 119.8 |
| SNB-WL-E1S | -0.0001676 | 0.3971 | -0.1348 | 0.0000 | 0.0000 | 0.0000 | 1.37 | -1.976 | 99.87 |
| SNB-WL-E2S | 0.001425 | 0.3961 | -0.1395 | 0.0000 | 0.0000 | 0.0000 | -2.739 | 0.3961 | 99.86 |
| SNB-WL-E3S | -0.0001894 | 0.3953 | -0.1454 | 0.0000 | 0.0000 | 0.0000 | 1.37 | 2.769 | 99.85 |
| SNB-WL-F1S | -0.0004071 | 0.2533 | -0.1973 | 0.0000 | 0.0000 | 0.0000 | 1.567 | -2.461 | 79.8 |
| SNB-WL-F2S | 0.001426 | 0.2522 | -0.2021 | 0.0000 | 0.0000 | 0.0000 | -3.133 | 0.2522 | 79.8 |
| SNB-WL-F3S | -0.0004084 | 0.2512 | -0.2074 | 0.0000 | 0.0000 | 0.0000 | 1.567 | 2.965 | 79.79 |
| SNB-WL-G1S | -0.0006143 | 0.1428 | -0.2464 | 0.0000 | 0.0000 | 0.0000 | 1.763 | -2.912 | 59.75 |
| SNB-WL-G2S | 0.001463 | 0.1415 | -0.245 | 0.0000 | 0.0000 | 0.0000 | -3.526 | 0.1415 | 59.75 |
| SNB-WL-G3S | -0.0005965 | 0.1404 | -0.2447 | 0.0000 | 0.0000 | 0.0000 | 1.763 | 3.195 | 59.76 |
| SNB-WL-H1S | -0.0007649 | 0.065 | -0.2522 | 0.0000 | 0.0000 | 0.0000 | 1.959 | -3.33 | 39.75 |
| SNB-WL-H2S | 0.00155 | 0.0636 | -0.2461 | 0.0000 | 0.0000 | 0.0000 | -3.919 | 0.0636 | 39.75 |
| SNB-WL-H3S | -0.0007225 | 0.06234 | -0.2411 | 0.0000 | 0.0000 | 0.0000 | 1.96 | 3.458 | 39.76 |
| SNB-WL-I1S | -0.0008813 | 0.01851 | -0.2047 | 0.0000 | 0.0000 | 0.0000 | 2.156 | -3.718 | 19.8 |
| SNB-WL-I2S | 0.00167 | 0.01697 | -0.1927 | 0.0000 | 0.0000 | 0.0000 | -4.312 | 0.01697 | 19.81 |
| SNB-WL-I3S | -0.0008257 | 0.01556 | -0.182 | 0.0000 | 0.0000 | 0.0000 | 2.156 | 3.752 | 19.82 |
| RohnAa1 | 0.004909 | 1.173 | -0.0361 | -0.6479 | -0.0000 | 0.0128 | -2.26 | -2.75 | 175 |
| RohnAa2 | -0.0008003 | 1.17 | -0.1239 | -0.6614 | 0.0016 | -0.0131 | -2.266 | 5.093 | 174.9 |
| RohnAb1 | 0.005286 | 1.117 | -0.03216 | -0.6567 | 0.0006 | 0.0130 | -2.358 | -2.977 | 170 |
| RohnAb2 | -0.0006505 | 1.112 | -0.1233 | -0.6509 | 0.0032 | 0.0129 | -2.364 | 5.205 | 169.9 |

| Joint Label | X (kips) | Y (kips) | Z Comp. Force (kips) | Uplift Force (kips) | Result. Usage % | Result. Usage % | X-Moment (ft-k) | Y-Moment (ft-k) | Z-Moment (ft-k) | Max. Usage % |
|-------------|------------|----------|----------------------|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| RohnAc1 | 0.005157 | 1.059 | -0.02833 | -0.6477 | -0.0010 | 0.0128 | -2.457 | -3.206 | 1.65 | |
| RohnAc2 | -0.001075 | 1.056 | -0.1223 | -0.6514 | -0.0038 | 0.0127 | -2.463 | 5.32 | 164.9 | |
| RohnBa1 | -0.004938 | 0.9464 | -0.02113 | -0.6352 | -0.0061 | 0.0123 | -2.654 | -3.659 | 155 | |
| RohnBa2 | -0.001231 | 0.9432 | -0.1202 | -0.6383 | -0.0069 | 0.0124 | -2.66 | 5.549 | 154.9 | |
| RohnBb1 | 0.004656 | 0.8921 | -0.01769 | -0.6339 | -0.0041 | 0.0125 | -2.753 | -3.884 | 150 | |
| RohnBb2 | 4.626e-005 | 0.8869 | -0.1191 | -0.6399 | 0.0014 | 0.0125 | -2.757 | 5.663 | 149.9 | |
| RohnBc1 | 0.004499 | 0.8354 | -0.0143 | -0.6233 | -0.0027 | 0.0124 | -2.852 | -4.111 | 145 | |
| RohnBc2 | -0.001199 | 0.8324 | -0.1177 | -0.6292 | -0.0020 | 0.0124 | -2.857 | 5.779 | 144.9 | |
| RohnCa1 | 0.003666 | 0.7121 | -0.00731 | -0.6172 | -0.0068 | 0.0119 | -3.082 | -4.632 | 133.3 | |
| RohnCa2 | 7.803e-005 | 0.7079 | -0.1139 | -0.5986 | 0.0115 | 0.0119 | -3.085 | 6.052 | 133.2 | |
| RohnCb1 | 0.004001 | 0.6424 | -0.003509 | -0.5721 | -0.0082 | 0.0117 | -3.213 | -4.929 | 126.7 | |
| RohnCb2 | -0.0008483 | 0.6386 | -0.1114 | -0.5986 | -0.0046 | 0.0117 | -3.217 | 6.21 | 126.5 | |
| RohnDa1 | 0.003631 | 0.5133 | 0.001762 | -0.5393 | 0.0039 | 0.0105 | -3.475 | -5.511 | 113.3 | |
| RohnDa2 | -0.0006313 | 0.5093 | -0.1043 | -0.5173 | -0.0109 | 0.0105 | -3.479 | 6.534 | 113.2 | |
| RohnDb1 | 0.004537 | 0.4489 | 0.003335 | -0.4844 | -0.0022 | 0.0097 | -3.606 | -5.798 | 106.7 | |
| RohnDb2 | -0.0006473 | 0.4489 | -0.0994 | -0.5057 | -0.0091 | 0.0098 | -3.61 | 6.701 | 106.6 | |
| RohnEa1 | 0.003753 | 0.348 | 0.0056 | -0.4422 | -0.0099 | 0.0084 | -3.868 | -6.358 | 93.35 | |
| RohnEa2 | -5e-005 | 0.3422 | -0.08952 | -0.4047 | -0.0130 | 0.0084 | -3.872 | 7.048 | 93.25 | |
| RohnEb1 | 0.002737 | 0.2988 | 0.006833 | -0.3768 | -0.0086 | 0.0078 | -4 | -6.635 | 86.67 | |
| RohnEb2 | -0.0004864 | 0.2955 | -0.08437 | -0.4188 | -0.0152 | 0.0079 | -4.003 | 7.228 | 86.58 | |
| RohnFa1 | 0.002925 | 0.1929 | 0.007564 | -0.3054 | -0.0044 | 0.0062 | -4.328 | -7.308 | 70.01 | |
| RohnFa2 | -0.002953 | 0.193 | -0.0697 | -0.3263 | -0.0076 | 0.0062 | -4.334 | 7.694 | 69.93 | |
| RohnGa1 | 0.001712 | 0.09912 | 0.006488 | -0.2226 | -0.0002 | 0.0045 | -4.722 | -8.083 | 50.01 | |
| RohnGa2 | -0.002127 | 0.09973 | -0.05074 | -0.2242 | -0.0004 | 0.0044 | -4.726 | 8.282 | 49.95 | |
| RohnHa1 | 0.002364 | 0.03748 | 0.004232 | -0.1481 | -0.0105 | 0.0026 | -5.115 | -8.827 | 30 | |
| RohnHa2 | -0.001515 | 0.03577 | -0.03096 | -0.1204 | -0.0056 | 0.0026 | -5.119 | 8.9 | 29.97 | |
| RohnIa1 | 0.003772 | 0.009744 | 0.0009494 | -0.0795 | -0.0185 | 0.0010 | -5.509 | -9.538 | 10 | |
| RohnIa2 | 0.0011 | 0.001095 | -0.01044 | -0.0241 | -0.0136 | 0.0010 | -5.511 | 9.549 | 9.99 | |
| SNB-Aa1 | 0.001793 | 1.173 | -0.05221 | -0.6485 | -0.0011 | 0.0129 | -1.263 | -1.018 | 174.9 | |
| SNB-Aa2 | 0.001567 | 1.172 | -0.1021 | -0.6596 | -0.0017 | 0.0130 | -1.263 | 3.364 | 174.9 | |
| SNB-Ab1 | 0.002256 | 1.117 | -0.04811 | -0.6557 | -0.0016 | 0.0129 | -1.361 | -1.244 | 170 | |
| SNB-Ab2 | 0.001953 | 1.114 | -0.1016 | -0.6509 | -0.0031 | 0.0129 | -1.362 | 3.476 | 169.9 | |
| SNB-Ac1 | 0.001787 | 1.06 | -0.04401 | -0.6468 | -0.0004 | 0.0128 | -1.46 | -1.473 | 165 | |
| SNB-Ac2 | 0.001346 | 1.058 | -0.1011 | -0.6529 | -0.0024 | 0.0128 | -1.461 | 3.591 | 164.9 | |
| SNB-Ba1 | 0.001722 | 0.9473 | -0.0362 | -0.6395 | -0.0015 | 0.0127 | -1.657 | -1.926 | 155 | |
| SNB-Ba2 | 0.001214 | 0.9456 | -0.09972 | -0.6432 | -0.0009 | 0.0127 | -1.658 | 3.819 | 154.9 | |
| SNB-Bb1 | 0.002194 | 0.8925 | -0.03246 | -0.6391 | -0.0049 | 0.0124 | -1.755 | -2.151 | 150 | |
| SNB-Bb2 | 0.00171 | 0.8889 | -0.09895 | -0.6239 | -0.0003 | 0.0125 | -1.756 | 3.932 | 149.9 | |
| SNB-Bc1 | 0.001333 | 0.8363 | -0.02873 | -0.6338 | -0.0000 | 0.0123 | -1.854 | -2.378 | 145 | |
| SNB-Bc2 | 0.001187 | 0.8348 | -0.09796 | -0.6264 | -0.0001 | 0.0124 | -1.854 | 4.049 | 144.9 | |
| SNB-Ca1 | 0.001952 | 0.7121 | -0.02096 | -0.6180 | -0.0090 | 0.0118 | -2.083 | -2.899 | 133.3 | |
| SNB-Ca2 | 0.0009335 | 0.7094 | -0.09531 | -0.5863 | -0.0113 | 0.0118 | -2.084 | 4.321 | 133.2 | |
| SNB-Cb1 | 0.001741 | 0.6427 | -0.01684 | -0.5693 | -0.0049 | 0.0115 | -2.215 | -3.196 | 126.6 | |
| SNB-Cb2 | 0.0006457 | 0.6405 | -0.09307 | -0.5973 | -0.0098 | 0.0115 | -2.216 | 4.479 | 126.6 | |
| SNB-Da1 | 0.001955 | 0.5133 | -0.01065 | -0.5394 | -0.0032 | 0.0105 | -2.476 | -3.779 | 113.3 | |
| SNB-Da2 | 0.0002564 | 0.5108 | -0.08741 | -0.5184 | -0.0110 | 0.0105 | -2.478 | 4.804 | 113.3 | |
| SNB-Db1 | 0.002123 | 0.4539 | -0.00834 | -0.4855 | -0.0025 | 0.0097 | -2.608 | -4.066 | 106.7 | |
| SNB-Db2 | 0.0004593 | 0.4505 | -0.08344 | -0.5072 | -0.0095 | 0.0098 | -2.609 | 4.971 | 106.6 | |
| SNB-Ea1 | 0.001982 | 0.3481 | -0.004418 | -0.4428 | -0.0098 | 0.0084 | -2.87 | -4.626 | 93.34 | |
| SNB-Ea2 | 0.0009498 | 0.3438 | -0.0759 | -0.4073 | -0.0123 | 0.0084 | -2.871 | 5.317 | 93.26 | |
| SNB-Eb1 | 0.001227 | 0.2988 | -0.002112 | -0.3793 | -0.0092 | 0.0079 | -3.002 | -4.903 | 86.66 | |
| SNB-Eb2 | 0.0002399 | 0.2969 | -0.07201 | -0.4172 | -0.0124 | 0.0079 | -3.003 | 5.498 | 86.59 | |
| SNB-Fa1 | 0.001442 | 0.1928 | 0.00135 | -0.3054 | -0.0060 | 0.0063 | -3.329 | -5.576 | 70 | |
| SNB-Fa2 | -0.00222 | 0.1944 | -0.06094 | -0.3292 | -0.0076 | 0.0062 | -3.333 | 5.963 | 69.94 | |
| SNB-Ga1 | 0.0009573 | 0.09865 | 0.003079 | -0.2202 | -0.0018 | 0.0045 | -3.723 | -6.352 | 50 | |
| SNB-Ga2 | -0.002129 | 0.1006 | -0.0458 | -0.2287 | -0.0029 | 0.0044 | -3.726 | 6.551 | 49.95 | |
| SNB-Ha1 | 0.00177 | 0.03692 | 0.002741 | -0.1485 | -0.0092 | 0.0027 | -4.115 | -7.094 | 30 | |
| SNB-Ha2 | -0.001667 | 0.03658 | -0.02876 | -0.1215 | -0.0066 | 0.0026 | -4.119 | 7.168 | 29.97 | |
| SNB-Ia1 | 0.003711 | 0.008877 | 0.0006448 | -0.0761 | -0.0170 | 0.0010 | -4.507 | -7.804 | 10 | |
| SNB-Ia2 | 0.0004167 | 0.001603 | -0.01029 | -0.0268 | -0.0118 | 0.0009 | -4.51 | 7.814 | 9.99 | |

Joint Support Reactions for Load Case "W-I 90 deg":

Joint Label X Force Usage % Y Force Usage % Z Comp. Force Usage % Uplift Force Usage % Result. Usage % Result. Usage % X-Moment Usage % Y-Moment Usage % Z-Moment Usage % Max. Usage %

| Joint Label | X External Load (kips) | Y External Load (kips) | Z External Load (kips) | X Member Force (kips) | Y Member Force (kips) | Z Member Force (kips) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) | | | | | | | |
|-------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------|--------------|--------------|-------|-----|------|-----|-------|-----|-----|
| RohnJP | 9.86 | 0.0 | -1.95 | 0.0 | 19.63 | 0.0 | 0.0 | 22.05 | 0.0 | 0.71 | 0.0 | 4.0 | 0.0 | 0.03 | 0.0 | 0.0 |
| SNB-JP | 22.94 | 0.0 | -3.19 | 0.0 | 19.42 | 0.0 | 0.0 | 30.22 | 0.0 | -0.74 | 0.0 | 6.7 | 0.0 | -0.03 | 0.0 | 0.0 |
| RohnJ1 | -12.85 | 0.0 | -23.79 | 0.0 | -210.29 | 0.0 | 0.0 | 212.02 | 0.0 | 6.17 | 0.0 | -3.2 | 0.0 | -0.01 | 0.0 | 0.0 |
| RohnJ2 | 3.00 | 0.0 | -6.68 | 0.0 | 249.14 | 0.0 | 0.0 | 249.24 | 0.0 | -0.79 | 0.0 | 0.6 | 0.0 | -0.01 | 0.0 | 0.0 |
| SNB-J1 | -24.36 | 0.0 | -45.27 | 0.0 | -257.54 | 0.0 | 0.0 | 262.62 | 0.0 | 11.15 | 0.0 | -6.8 | 0.0 | 0.01 | 0.0 | 0.0 |
| SNB-J2 | 1.42 | 0.0 | -5.65 | 0.0 | 296.07 | 0.0 | 0.0 | 296.13 | 0.0 | -0.71 | 0.0 | 0.1 | 0.0 | 0.02 | 0.0 | 0.0 |

Joint Displacements, Loads and Member Forces on Joints for Load Case "W+I 90 deg":

| Joint Label | X External Load (kips) | Y External Load (kips) | Z External Load (kips) | X Member Force (kips) | Y Member Force (kips) | Z Member Force (kips) | X Disp. (ft) | Y Disp. (ft) | Z Disp. (ft) |
|-------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------|--------------|--------------|
| RohnAP | 0.0000 | 0.0000 | -1.3800 | -0.0000 | -1.3800 | 0.5168 | -0.0008 | 1.2235 | -0.0825 |
| RohnBP | 0.0000 | 1.4777 | -0.7107 | -0.0000 | -1.4777 | 0.7107 | -0.0015 | 1.0063 | -0.0732 |
| RohnCP | 0.0000 | 0.0000 | -0.5960 | 0.0000 | -0.7156 | 0.5960 | -0.0025 | 0.7844 | -0.0639 |
| RohnDP | 0.0000 | 1.3577 | -1.5259 | 0.0000 | -1.3577 | 1.5259 | -0.0034 | 0.5767 | -0.0546 |
| RohnEP | 0.0000 | 0.5735 | -0.8302 | 0.0000 | -0.5735 | 0.8302 | -0.0034 | 0.3982 | -0.0451 |
| RohnFP | 0.0000 | 0.7246 | -1.1116 | 0.0000 | -0.7246 | 1.1116 | -0.0058 | 0.2532 | -0.0361 |
| RohnGP | 0.0000 | 0.6873 | -1.3426 | 0.0000 | -0.6873 | 1.3426 | -0.0077 | 0.1422 | -0.0269 |
| RohnHP | 0.0000 | 0.6489 | -1.4805 | 0.0000 | -0.6489 | 1.4805 | -0.0078 | 0.0636 | -0.0180 |
| RohnIP | 0.0000 | 0.7154 | -1.7490 | 0.0000 | -0.7154 | 1.7490 | -0.0060 | 0.0169 | -0.0090 |
| RohnJP | 0.0000 | 0.3798 | -0.9701 | -9.8604 | 1.5658 | -18.6613 | 0.0000 | 0.0000 | 0.0000 |
| SNB-AP | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0000 | 1.2302 | -0.0795 |
| SNB-BP | 0.0000 | 0.3457 | -0.3359 | -0.0000 | -0.3457 | 0.3359 | -0.0007 | 1.0028 | -0.0704 |
| SNB-CP | 0.0000 | 0.4780 | -0.5256 | -0.0000 | -0.4780 | 0.5256 | -0.0017 | 0.7814 | -0.0612 |
| SNB-DP | 0.0000 | 0.5620 | -0.6860 | -0.0000 | -0.5620 | 0.6860 | -0.0026 | 0.5750 | -0.0522 |
| SNB-EP | 0.0000 | 0.5735 | -0.8302 | 0.0000 | -0.5735 | 0.8302 | -0.0027 | 0.3964 | -0.0431 |
| SNB-FP | 0.0000 | 0.6409 | -1.0901 | 0.0000 | -0.6409 | 1.0901 | -0.0050 | 0.2526 | -0.0345 |
| SNB-GP | 0.0000 | 0.6873 | -1.3426 | 0.0000 | -0.6873 | 1.3426 | -0.0069 | 0.1415 | -0.0259 |
| SNB-HP | 0.0000 | 0.6489 | -1.4805 | 0.0000 | -0.6489 | 1.4805 | -0.0070 | 0.0632 | -0.0174 |
| SNB-IP | 0.0000 | 0.6921 | -1.7290 | 0.0000 | -0.6921 | 1.7290 | -0.0053 | 0.0163 | -0.0088 |
| SNB-JP | 0.0000 | 0.3798 | -0.9701 | -22.9368 | 2.8116 | -18.4470 | 0.0000 | 0.0000 | 0.0000 |
| RohnA1 | 0.0000 | 1.5593 | -0.5676 | 0.0000 | -1.5593 | 0.5676 | 0.0054 | 1.2307 | -0.0403 |
| RohnA2 | 0.0000 | 1.8067 | -0.7497 | 0.0000 | -1.8067 | 0.7497 | -0.0000 | 1.2263 | -0.1244 |
| RohnB1 | 0.0000 | 0.6389 | -0.4807 | 0.0000 | -0.6389 | 0.4807 | 0.0054 | 1.0034 | -0.0248 |
| RohnB2 | 0.0000 | 0.6207 | -0.4207 | 0.0000 | -0.6207 | 0.4207 | -0.0005 | 0.9983 | -0.1212 |
| RohnC1 | 0.0000 | 0.8279 | -0.9160 | 0.0000 | -0.8279 | 0.9160 | 0.0048 | 0.7835 | -0.0114 |
| RohnC2 | 0.0000 | 0.7156 | -0.5960 | 0.0000 | -0.7156 | 0.5960 | 0.0002 | 0.7772 | -0.1160 |
| RohnD1 | 0.0000 | 1.3577 | -1.5259 | 0.0000 | -1.3577 | 1.5259 | 0.0046 | 0.5779 | -0.0004 |
| RohnD2 | 0.0000 | 1.3577 | -1.5259 | 0.0000 | -1.3577 | 1.5259 | 0.0005 | 0.5705 | -0.1085 |
| RohnE1 | 0.0000 | 0.5735 | -0.8302 | 0.0000 | -0.5735 | 0.8302 | 0.0039 | 0.3996 | -0.0042 |
| RohnE2 | 0.0000 | 0.5735 | -0.8302 | 0.0000 | -0.5735 | 0.8302 | 0.0007 | 0.3927 | -0.0942 |
| RohnF1 | 0.0000 | 0.8204 | -1.1611 | 0.0000 | -0.8204 | 1.1611 | 0.0048 | 0.2579 | 0.0073 |
| RohnF2 | 0.0000 | 0.7246 | -1.1116 | 0.0000 | -0.7246 | 1.1116 | 0.0015 | 0.2473 | -0.0792 |
| RohnG1 | 0.0000 | 0.7149 | -1.3626 | 0.0000 | -0.7149 | 1.3626 | 0.0054 | 0.1489 | -0.0061 |
| RohnG2 | 0.0000 | 0.7149 | -1.3626 | 0.0000 | -0.7149 | 1.3626 | 0.0026 | 0.1353 | -0.0598 |
| RohnH1 | 0.0000 | 0.6489 | -1.4805 | 0.0000 | -0.6489 | 1.4805 | 0.0052 | 0.0708 | 0.0055 |
| RohnH2 | 0.0000 | 0.6489 | -1.4805 | 0.0000 | -0.6489 | 1.4805 | 0.0028 | 0.0572 | -0.0415 |
| RohnI1 | 0.0000 | 0.6921 | -1.7290 | 0.0000 | -0.6921 | 1.7290 | 0.0037 | 0.0224 | 0.0020 |
| RohnI2 | 0.0000 | 0.6921 | -1.7290 | 0.0000 | -0.6921 | 1.7290 | 0.0024 | 0.0119 | -0.0200 |
| RohnJ1 | 0.0000 | 0.3798 | -0.9701 | 12.8502 | 23.4081 | 211.2576 | 0.0000 | 0.0000 | 0.0000 |
| RohnJ2 | 0.0000 | 0.3798 | -0.9701 | -2.9368 | 6.3007 | -248.1649 | 0.0000 | 0.0000 | 0.0000 |
| SNB-A1 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0023 | 1.2315 | -0.0565 |
| SNB-A2 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0021 | 1.2286 | -0.1025 |
| SNB-B1 | 0.0000 | 0.3457 | -0.3359 | -0.0000 | -0.3457 | 0.3359 | 0.0022 | 1.0043 | -0.0402 |
| SNB-B2 | 0.0000 | 0.3457 | -0.3359 | -0.0000 | -0.3457 | 0.3359 | 0.0020 | 1.0008 | -0.1004 |
| SNB-C1 | 0.0000 | 0.4780 | -0.5256 | -0.0000 | -0.4780 | 0.5256 | 0.0024 | 0.7840 | -0.0253 |
| SNB-C2 | 0.0000 | 0.4780 | -0.5256 | -0.0000 | -0.4780 | 0.5256 | 0.0018 | 0.7792 | -0.0959 |
| SNB-D1 | 0.0000 | 0.5620 | -0.6860 | -0.0000 | -0.5620 | 0.6860 | 0.0025 | 0.5782 | -0.0135 |
| SNB-D2 | 0.0000 | 0.5620 | -0.6860 | -0.0000 | -0.5620 | 0.6860 | 0.0019 | 0.5723 | -0.0907 |
| SNB-E1 | 0.0000 | 0.5735 | -0.8302 | 0.0000 | -0.5735 | 0.8302 | 0.0023 | 0.3996 | -0.0069 |
| SNB-E2 | 0.0000 | 0.5735 | -0.8302 | 0.0000 | -0.5735 | 0.8302 | 0.0015 | 0.3941 | -0.0791 |
| SNB-F1 | 0.0000 | 0.6409 | -1.0901 | -0.0000 | -0.6409 | 1.0901 | 0.0033 | 0.2578 | -0.0008 |

| | | | | | | | | | |
|------------|--------|--------|---------|---------|---------|-----------|---------|--------|---------|
| SNB-F2 | 0.0000 | 0.6409 | -1.0901 | -0.0000 | -0.6409 | 1.0901 | 0.0023 | 0.2487 | -0.0682 |
| SNB-G1 | 0.0000 | 0.6873 | -1.3426 | -0.0000 | -0.6873 | 1.3426 | 0.0043 | 0.1486 | 0.0018 |
| SNB-G2 | 0.0000 | 0.6873 | -1.3426 | -0.0000 | -0.6873 | 1.3426 | 0.0030 | 0.1364 | 0.0536 |
| SNB-H1 | 0.0000 | 0.6489 | -1.4805 | -0.0000 | -0.6489 | 1.4805 | 0.0043 | 0.0704 | 0.0031 |
| SNB-H2 | 0.0000 | 0.6489 | -1.4805 | -0.0000 | -0.6489 | 1.4805 | 0.0029 | 0.0581 | 0.0378 |
| SNB-I1 | 0.0000 | 0.6921 | -1.7290 | -0.0000 | -0.6921 | 1.7290 | 0.0032 | 0.0218 | 0.0016 |
| SNB-I2 | 0.0000 | 0.6921 | -1.7290 | -0.0000 | -0.6921 | 1.7290 | 0.0021 | 0.0127 | 0.0191 |
| SNB-J1 | 0.0000 | 0.3798 | -0.9701 | 24.3626 | 44.8910 | 258.5093 | 0.0000 | 0.0000 | 0.0000 |
| SNB-J2 | 0.0000 | 0.3798 | -0.9701 | -1.4168 | 5.2744 | -295.1011 | 0.0000 | 0.0000 | 0.0000 |
| RohnAAs | 0.0000 | 1.2463 | -0.3652 | 0.0000 | -1.2463 | 0.3652 | 0.0002 | 1.1770 | -0.0802 |
| RohnBs | 0.0000 | 0.1982 | -0.1602 | 0.0000 | -0.1982 | 0.1602 | -0.0010 | 1.1192 | -0.0779 |
| RohnAcS | 0.0000 | 0.1647 | -0.1552 | 0.0000 | -0.1647 | 0.1552 | -0.0001 | 1.0622 | -0.0755 |
| RohnBas | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | -0.0005 | 0.9494 | -0.0709 |
| RohnBbs | 0.0000 | 1.8582 | -1.1757 | -0.0000 | -1.8582 | 1.1757 | 0.0017 | 0.8946 | -0.0686 |
| RohnBcs | 0.0000 | 0.3377 | -0.4457 | -0.0000 | -0.3377 | 0.4457 | -0.0005 | 0.8374 | -0.0662 |
| RohnCas | 0.0000 | 2.2791 | -1.2307 | -0.0000 | -2.2791 | 1.2307 | -0.0014 | 0.7141 | -0.0608 |
| RohnCbs | 0.0000 | 0.2785 | -0.3250 | 0.0000 | -0.2785 | 0.3250 | -0.0012 | 0.6428 | -0.0576 |
| RohnDas | 0.0000 | 0.4123 | -0.6061 | -0.0000 | -0.4123 | 0.6061 | -0.0015 | 0.5135 | -0.0514 |
| RohnDbs | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | -0.0021 | 0.4526 | -0.0482 |
| RohnEAs | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | -0.0028 | 0.3463 | -0.0421 |
| RohnEbs | 0.0000 | 0.3360 | -0.5442 | 0.0000 | -0.3360 | 0.5442 | -0.0015 | 0.2984 | -0.0389 |
| RohnFAs | 0.0000 | 0.3508 | -0.6209 | -0.0000 | -0.3508 | 0.6209 | 0.0004 | 0.1909 | -0.0311 |
| RohnFbs | 0.0000 | 0.3366 | -0.7217 | -0.0000 | -0.3366 | 0.7217 | 0.0005 | 0.0982 | -0.0222 |
| RohnFas | 0.0000 | 0.3123 | -0.7589 | 0.0000 | -0.3123 | 0.7589 | -0.0009 | 0.0345 | -0.0134 |
| RohnGAs | 0.0000 | 0.3798 | -0.9701 | 0.0000 | -0.3798 | 0.9701 | -0.0049 | 0.0035 | -0.0048 |
| RohnGbs | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | -0.0010 | 1.1731 | -0.0772 |
| RohnAAs | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | -0.0002 | 1.1160 | -0.0749 |
| RohnAcs | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0007 | 1.0590 | -0.0726 |
| RohnBAs | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | 0.0003 | 0.9464 | -0.0680 |
| RohnBbs | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | -0.0009 | 0.8906 | -0.0658 |
| RohnBcs | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | 0.0003 | 0.8358 | -0.0634 |
| RohnCAs | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | -0.0006 | 0.7102 | -0.0582 |
| RohnCbs | 0.0000 | 0.2785 | -0.3250 | 0.0000 | -0.2785 | 0.3250 | -0.0000 | 0.6410 | -0.0550 |
| RohnDas | 0.0000 | 0.2834 | -0.3611 | -0.0000 | -0.2834 | 0.3611 | -0.0007 | 0.5109 | -0.0491 |
| RohnDbs | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | -0.0013 | 0.4510 | -0.0460 |
| RohnEAs | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | -0.0020 | 0.3452 | -0.0402 |
| RohnEbs | 0.0000 | 0.2901 | -0.4692 | 0.0000 | -0.2901 | 0.4692 | -0.0007 | 0.2972 | -0.0371 |
| RohnFAs | 0.0000 | 0.3508 | -0.6209 | -0.0000 | -0.3508 | 0.6209 | 0.0012 | 0.1906 | -0.0298 |
| RohnFbs | 0.0000 | 0.3366 | -0.7217 | 0.0000 | -0.3366 | 0.7217 | 0.0013 | 0.0971 | -0.0214 |
| RohnGAs | 0.0000 | 0.3123 | -0.7589 | 0.0000 | -0.3123 | 0.7589 | -0.0001 | 0.0338 | -0.0130 |
| RohnGbs | 0.0000 | 0.3798 | -0.9701 | 0.0000 | -0.3798 | 0.9701 | -0.0042 | 0.0024 | -0.0048 |
| RohnHAs | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0013 | 1.2301 | -0.1154 |
| RohnHbs | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0020 | 1.2295 | -0.1128 |
| RohnIAs | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0012 | 1.2291 | -0.1385 |
| RohnIBs | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0009 | 1.0027 | -0.1117 |
| RohnJAs | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0018 | 1.0019 | -0.1286 |
| RohnJBs | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0008 | 1.0014 | -0.1435 |
| RohnKAs | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | 0.0005 | 0.7815 | -0.1326 |
| RohnKBs | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0016 | 0.7807 | -0.1435 |
| RohnKCs | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | 0.0004 | 0.7801 | -0.1541 |
| RohnLAs | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | 0.0001 | 0.5752 | -0.1444 |
| RohnLbs | 0.0000 | 0.2785 | -0.3250 | 0.0000 | -0.2785 | 0.3250 | 0.0015 | 0.5743 | -0.1571 |
| RohnLDs | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | 0.0001 | 0.5735 | -0.1703 |
| RohnMEs | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | -0.0002 | 0.3971 | -0.1348 |
| RohnMbs | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | 0.0014 | 0.3961 | -0.1395 |
| RohnNEs | 0.0000 | 0.2834 | -0.3611 | -0.0000 | -0.2834 | 0.3611 | -0.0002 | 0.3953 | -0.1454 |
| RohnNEbs | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | -0.0004 | 0.2533 | -0.1973 |
| RohnNAs | 0.0000 | 0.2901 | -0.4692 | 0.0000 | -0.2901 | 0.4692 | 0.0014 | 0.2522 | -0.2021 |
| RohnNBs | 0.0000 | 0.3508 | -0.6209 | -0.0000 | -0.3508 | 0.6209 | -0.0006 | 0.2512 | -0.2074 |
| RohnNGs | 0.0000 | 0.3508 | -0.6209 | 0.0000 | -0.3508 | 0.6209 | 0.0004 | 0.1428 | -0.2464 |
| RohnOGs | 0.0000 | 0.3508 | -0.6209 | -0.0000 | -0.3508 | 0.6209 | 0.0015 | 0.1415 | -0.2450 |
| RohnOHs | 0.0000 | 0.3508 | -0.6209 | 0.0000 | -0.3508 | 0.6209 | -0.0006 | 0.1404 | -0.2447 |
| RohnOhs | 0.0000 | 0.3366 | -0.7217 | -0.0000 | -0.3366 | 0.7217 | -0.0009 | 0.0650 | -0.2522 |
| RohnPHs | 0.0000 | 0.3366 | -0.7217 | 0.0000 | -0.3366 | 0.7217 | 0.0015 | 0.0636 | -0.2461 |
| RohnPHbs | 0.0000 | 0.3366 | -0.7217 | -0.0000 | -0.3366 | 0.7217 | -0.0007 | 0.0623 | -0.2441 |
| RohnWL-I1S | 0.0000 | 0.3123 | -0.7589 | -0.0000 | -0.3123 | 0.7589 | -0.0009 | 0.0185 | -0.2047 |

| | | | | | | | | | |
|------------|--------|--------|---------|---------|---------|--------|---------|--------|---------|
| SNB-WL-I25 | 0.0000 | 0.3123 | -0.7589 | 0.0000 | -0.3123 | 0.7589 | 0.0017 | 0.0170 | -0.1927 |
| SNB-WL-I35 | 0.0000 | 0.3123 | -0.7589 | -0.0000 | -0.3123 | 0.7589 | -0.0008 | 0.0156 | -0.1820 |
| RohnAa1 | 0.0000 | 0.3910 | -0.2050 | 0.0000 | -0.3910 | 0.2050 | 0.0049 | 1.1726 | -0.0361 |
| RohnAa2 | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | -0.0008 | 1.1701 | -0.1239 |
| RohnAb1 | 0.0000 | 1.2223 | -0.3552 | 0.0000 | -1.2223 | 0.3552 | 0.0053 | 1.1167 | -0.0322 |
| RohnAb2 | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | -0.0007 | 1.1118 | -0.1233 |
| RohnAc1 | 0.0000 | 0.1463 | -0.1352 | 0.0000 | -0.1463 | 0.1352 | 0.0052 | 1.0587 | -0.0283 |
| RohnAc2 | 0.0000 | 0.4597 | -0.2277 | 0.0000 | -0.4597 | 0.2277 | -0.0011 | 1.0560 | -0.1223 |
| RohnBa1 | 0.0000 | 0.1994 | -0.1994 | 0.0000 | -0.1994 | 0.2007 | 0.0049 | 0.9464 | -0.0211 |
| RohnBa2 | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | -0.0012 | 0.9432 | -0.1202 |
| RohnBb1 | 0.0000 | 1.8127 | -1.1557 | 0.0000 | -1.8127 | 1.1557 | 0.0047 | 0.8921 | -0.0177 |
| RohnBb2 | 0.0000 | 1.8127 | -1.1557 | 0.0000 | -1.8127 | 1.1557 | 0.0000 | 0.8869 | -0.1191 |
| RohnBc1 | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | 0.0045 | 0.8354 | -0.0143 |
| RohnBc2 | 0.0000 | 0.1994 | -0.2007 | 0.0000 | -0.1994 | 0.2007 | -0.0012 | 0.8324 | -0.1177 |
| RohnCa1 | 0.0000 | 2.2791 | -1.2307 | 0.0000 | -2.2791 | 1.2307 | 0.0037 | 0.7121 | -0.0073 |
| RohnCa2 | 0.0000 | 2.4782 | -1.3037 | 0.0000 | -2.4782 | 1.3037 | 0.0001 | 0.7079 | -0.1139 |
| RohnCb1 | 0.0000 | 0.2785 | -0.3250 | 0.0000 | -0.2785 | 0.3250 | -0.0040 | 0.6424 | -0.0035 |
| RohnCb2 | 0.0000 | 0.2785 | -0.3250 | 0.0000 | -0.2785 | 0.3250 | -0.0008 | 0.6386 | -0.1114 |
| RohnDa1 | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | -0.0036 | 0.5133 | -0.0018 |
| RohnDa2 | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | -0.0006 | 0.5093 | -0.1043 |
| RohnDb1 | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | 0.0040 | 0.4537 | -0.0033 |
| RohnDb2 | 0.0000 | 0.2834 | -0.3611 | 0.0000 | -0.2834 | 0.3611 | -0.0006 | 0.4489 | -0.0994 |
| RohnEa1 | 0.0000 | 0.2901 | -0.4692 | 0.0000 | -0.2901 | 0.4692 | 0.0038 | 0.3480 | 0.0056 |
| RohnEa2 | 0.0000 | 0.2901 | -0.4692 | 0.0000 | -0.2901 | 0.4692 | -0.0001 | 0.3422 | -0.0895 |
| RohnEb1 | 0.0000 | 0.2901 | -0.4692 | 0.0000 | -0.2901 | 0.4692 | 0.0027 | 0.2988 | 0.0068 |
| RohnEb2 | 0.0000 | 0.2901 | -0.4692 | 0.0000 | -0.2901 | 0.4692 | -0.0005 | 0.2955 | -0.0844 |
| RohnFa1 | 0.0000 | 0.3508 | -0.6209 | 0.0000 | -0.3508 | 0.6209 | -0.0029 | 0.1929 | -0.0076 |
| RohnFa2 | 0.0000 | 0.3508 | -0.6209 | 0.0000 | -0.3508 | 0.6209 | -0.0030 | 0.1930 | -0.0697 |
| RohnGa1 | 0.0000 | 0.3366 | -0.7217 | 0.0000 | -0.3366 | 0.7217 | 0.0017 | 0.0991 | 0.0065 |
| RohnGa2 | 0.0000 | 0.3366 | -0.7217 | 0.0000 | -0.3366 | 0.7217 | -0.0021 | 0.0997 | -0.0507 |
| RohnHa1 | 0.0000 | 0.3123 | -0.7589 | 0.0000 | -0.3123 | 0.7589 | 0.0024 | 0.0375 | -0.0042 |
| RohnHa2 | 0.0000 | 0.3123 | -0.7589 | 0.0000 | -0.3123 | 0.7589 | -0.0015 | 0.0358 | -0.0310 |
| RohnIa1 | 0.0000 | 0.3798 | -0.9701 | 0.0000 | -0.3798 | 0.9701 | 0.0038 | 0.0097 | 0.0009 |
| RohnIa2 | 0.0000 | 0.3798 | -0.9701 | 0.0000 | -0.3798 | 0.9701 | 0.0011 | 0.0011 | -0.0104 |
| SNB-Aa1 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0016 | 1.1734 | -0.0522 |
| SNB-Aa2 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0016 | 1.1725 | -0.1021 |
| SNB-Ab1 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0023 | 1.1175 | -0.0481 |
| SNB-Ab2 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0020 | 1.1143 | -0.1016 |
| SNB-Ac1 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0018 | 1.0596 | -0.0440 |
| SNB-Ac2 | 0.0000 | 0.1463 | -0.1352 | -0.0000 | -0.1463 | 0.1352 | 0.0013 | 1.0584 | -0.1011 |
| SNB-Ba1 | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0017 | 0.9473 | -0.0362 |
| SNB-Ba2 | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0012 | 0.9456 | -0.0997 |
| SNB-Bb1 | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0022 | 0.8925 | -0.0325 |
| SNB-Bb2 | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0017 | 0.8889 | -0.0990 |
| SNB-Bc1 | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0013 | 0.8363 | -0.0287 |
| SNB-Bc2 | 0.0000 | 0.1994 | -0.2007 | -0.0000 | -0.1994 | 0.2007 | 0.0012 | 0.8348 | -0.0980 |
| SNB-Ca1 | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | 0.0020 | 0.7121 | -0.0210 |
| SNB-Ca2 | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | 0.0009 | 0.7094 | -0.0953 |
| SNB-Cb1 | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | 0.0017 | 0.6427 | -0.0168 |
| SNB-Cb2 | 0.0000 | 0.2785 | -0.3250 | -0.0000 | -0.2785 | 0.3250 | 0.0006 | 0.6405 | -0.0931 |
| SNB-Da1 | 0.0000 | 0.2834 | -0.3611 | -0.0000 | -0.2834 | 0.3611 | 0.0020 | 0.5133 | -0.0106 |
| SNB-Da2 | 0.0000 | 0.2834 | -0.3611 | -0.0000 | -0.2834 | 0.3611 | 0.0003 | 0.5108 | -0.0874 |
| SNB-Db1 | 0.0000 | 0.2834 | -0.3611 | -0.0000 | -0.2834 | 0.3611 | 0.0021 | 0.4539 | -0.0083 |
| SNB-Db2 | 0.0000 | 0.2834 | -0.3611 | -0.0000 | -0.2834 | 0.3611 | 0.0005 | 0.4505 | -0.0834 |
| SNB-Ea1 | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | 0.0020 | 0.3481 | -0.0044 |
| SNB-Ea2 | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | 0.0009 | 0.3438 | -0.0759 |
| SNB-Eb1 | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | 0.0012 | 0.2988 | -0.0021 |
| SNB-Eb2 | 0.0000 | 0.2901 | -0.4692 | -0.0000 | -0.2901 | 0.4692 | 0.0002 | 0.2969 | -0.0720 |
| SNB-Fa1 | 0.0000 | 0.3508 | -0.6209 | -0.0000 | -0.3508 | 0.6209 | 0.0014 | 0.1928 | -0.0013 |
| SNB-Fa2 | 0.0000 | 0.3508 | -0.6209 | -0.0000 | -0.3508 | 0.6209 | -0.0022 | 0.1944 | -0.0609 |
| SNB-Ga1 | 0.0000 | 0.3366 | -0.7217 | -0.0000 | -0.3366 | 0.7217 | 0.0010 | 0.0986 | 0.0031 |
| SNB-Ga2 | 0.0000 | 0.3366 | -0.7217 | -0.0000 | -0.3366 | 0.7217 | -0.0021 | 0.1006 | -0.0458 |
| SNB-Ha1 | 0.0000 | 0.3123 | -0.7589 | -0.0000 | -0.3123 | 0.7589 | 0.0018 | 0.0369 | -0.0027 |
| SNB-Ha2 | 0.0000 | 0.3123 | -0.7589 | -0.0000 | -0.3123 | 0.7589 | -0.0017 | 0.0366 | -0.0288 |
| SNB-Ia1 | 0.0000 | 0.3798 | -0.9701 | 0.0000 | -0.3798 | 0.9701 | 0.0037 | 0.0089 | 0.0006 |
| SNB-Ia2 | 0.0000 | 0.3798 | -0.9701 | 0.0000 | -0.3798 | 0.9701 | 0.0004 | 0.0016 | -0.0103 |

Moments for Angles Modeled as Beams:

| Label | Angle Torsion (ft-lbs) | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | Origin X Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | End X Shear (lbs) | End Y Shear (lbs) |
|-----------|------------------------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|
| Rohn-LA1P | 0.00 | -0.00 | 0.00 | 62.20 | -139.08 | 12.43 | -27.80 | 9.85 |
| Rohn-LA11 | 0.00 | -0.00 | -0.00 | -145.63 | 49.28 | -29.11 | 11.28 | 63.24 |
| Rohn-LA12 | 0.00 | -0.00 | 0.00 | 138.57 | 56.41 | 27.70 | -19.17 | -24.21 |
| Rohn-LA2P | 0.01 | -62.20 | 139.08 | -28.91 | 177.25 | -18.22 | 67.29 | -77.31 |
| Rohn-LA21 | 0.00 | 145.63 | -49.28 | 190.97 | -46.60 | 67.29 | -19.17 | 63.24 |
| Rohn-LA22 | -0.00 | -138.57 | -56.41 | -192.73 | -64.69 | -66.24 | -24.21 | 19.04 |
| Rohn-LA3P | -0.02 | 28.91 | -177.25 | -81.43 | -209.46 | -10.50 | -77.31 | 19.04 |
| Rohn-LA31 | 0.01 | -192.73 | 46.60 | -237.41 | 48.67 | -85.63 | 33.12 | -24.34 |
| Rohn-LA32 | 0.01 | 192.73 | -46.60 | 237.41 | -48.67 | 85.63 | -33.12 | 24.34 |
| Rohn-LA4P | -0.01 | 81.43 | 209.46 | 150.48 | 274.50 | 46.36 | 96.76 | -53.36 |
| Rohn-LA41 | 0.01 | -237.41 | -48.67 | -259.26 | -73.10 | 99.28 | -24.34 | 101.64 |
| Rohn-LA42 | 0.01 | -195.16 | -100.94 | -261.43 | -165.92 | -91.30 | 53.36 | -24.03 |
| Rohn-LB1P | -0.02 | -150.48 | -274.50 | -368.79 | -397.88 | -103.82 | -134.42 | 24.03 |
| Rohn-LB11 | 0.01 | -259.27 | 73.10 | -448.15 | 47.13 | -141.41 | 24.03 | 101.64 |
| Rohn-LB12 | 0.02 | 261.43 | 165.92 | 257.84 | 342.44 | 103.83 | 172.16 | -14.37 |
| Rohn-LB2P | -0.01 | 368.79 | 397.88 | 473.37 | 463.23 | 168.37 | 172.16 | -14.37 |
| Rohn-LB21 | 0.01 | -448.15 | -47.13 | -500.32 | -24.76 | 189.60 | -14.37 | 101.64 |
| Rohn-LB22 | 0.00 | -257.84 | -342.44 | -307.34 | -435.66 | -113.01 | -155.58 | 24.03 |
| Rohn-LB3P | -0.00 | -473.37 | -463.23 | -550.35 | -538.17 | -204.67 | -200.21 | 24.03 |
| Rohn-LB31 | -0.02 | 500.32 | 24.76 | -687.58 | 101.88 | -237.45 | 25.31 | 172.78 |
| Rohn-LB32 | 0.01 | 307.33 | 435.67 | 254.89 | 428.38 | 112.42 | 172.78 | -205.32 |
| Rohn-LB4P | 0.11 | 550.34 | 538.18 | 86.52 | 488.78 | 127.33 | 205.32 | -60.29 |
| Rohn-LB41 | -0.05 | -687.58 | -101.88 | -425.62 | -199.74 | 222.51 | -60.29 | 138.83 |
| Rohn-LB42 | 0.06 | -254.90 | -428.38 | -443.79 | -265.84 | -139.72 | -138.83 | 90.46 |
| Rohn-LC1P | 0.05 | -86.52 | -488.78 | 187.71 | -113.92 | 15.19 | -90.46 | 57.94 |
| Rohn-LC11 | -0.02 | 425.62 | 199.74 | -161.27 | 186.33 | -88.07 | 57.94 | -24.34 |
| Rohn-LC12 | -0.02 | 443.78 | 265.84 | 71.84 | -103.70 | 77.41 | 24.34 | -38.92 |
| Rohn-LC2P | 0.06 | -187.71 | -113.92 | -501.95 | -373.99 | -103.21 | -38.92 | 21.04 |
| Rohn-LC21 | -0.04 | 161.27 | -186.33 | -536.44 | 45.73 | -56.13 | -21.04 | 68.32 |
| Rohn-LC22 | 0.01 | -71.84 | 103.70 | 82.61 | 352.69 | 1.61 | 68.32 | -153.94 |
| Rohn-LC3P | 0.15 | 501.95 | 373.99 | -161.61 | 651.64 | 51.08 | 153.94 | -44.22 |
| Rohn-LC31 | -0.05 | -536.44 | -45.73 | -287.41 | -248.98 | 123.62 | -44.22 | 114.78 |
| Rohn-LC32 | -0.10 | -82.62 | -352.69 | -827.34 | -411.79 | -136.63 | -114.78 | 177.55 |
| Rohn-LD1P | -0.03 | 161.60 | -451.64 | -82.99 | -456.46 | 11.80 | -166.32 | 77.55 |
| Rohn-LD11 | 0.02 | -287.41 | 248.98 | -606.97 | 267.94 | -134.18 | 77.55 | -89.95 |
| Rohn-LD12 | 0.02 | 827.33 | 411.80 | 191.16 | 187.20 | 152.95 | 89.95 | -64.05 |
| Rohn-LD2P | 0.11 | 82.98 | 456.46 | -755.75 | -28.49 | -100.68 | 64.05 | -62.78 |
| Rohn-LD21 | -0.07 | 606.97 | -267.94 | 439.09 | -151.92 | 35.11 | -62.78 | 1.20 |
| Rohn-LD22 | -0.03 | -191.17 | -187.20 | -411.57 | 195.39 | -90.25 | 1.20 | 32.95 |
| Rohn-LD3P | 0.05 | 755.75 | 28.49 | 8.28 | 191.05 | 114.68 | 32.95 | -40.36 |
| Rohn-LD31 | 0.02 | -439.09 | 151.82 | -229.07 | 117.20 | 31.50 | 40.36 | -77.52 |
| Rohn-LD32 | -0.07 | 411.57 | -195.20 | -530.35 | -320.98 | -17.84 | -77.52 | 39.57 |
| Rohn-LE1P | -0.02 | -8.29 | -191.05 | -625.60 | 454.70 | -95.14 | 39.57 | -73.75 |
| Rohn-LE11 | -0.02 | 229.07 | -117.20 | 47.61 | -374.36 | 41.51 | -73.75 | 38.03 |
| Rohn-LE12 | 0.05 | 530.34 | 320.98 | -759.10 | -67.73 | -34.35 | 38.03 | -308.36 |
| Rohn-LE2P | -0.25 | 625.60 | -454.70 | -211.65 | -1605.85 | 61.95 | -308.36 | 180.70 |
| Rohn-LE21 | 0.13 | -47.61 | 374.36 | -1673.39 | 833.74 | -257.41 | 180.70 | 125.41 |
| Rohn-LE22 | 0.12 | 759.10 | 67.72 | 1107.40 | 769.86 | 279.47 | 125.41 | 603.72 |
| Rohn-LE3P | 0.19 | 211.64 | 1605.86 | -172.42 | 2416.33 | 5.89 | 603.72 | -271.64 |
| Rohn-LE31 | -0.09 | 1673.40 | -833.71 | 1528.11 | -977.10 | 480.26 | -271.64 | 333.65 |
| Rohn-LE32 | -0.10 | -1107.42 | -769.84 | -2628.37 | -1451.76 | -561.06 | 333.65 | -115.30 |
| Rohn-LF1P | -0.92 | 172.42 | -2416.33 | -1325.81 | -2880.51 | -115.30 | -529.51 | 198.83 |
| Rohn-LF11 | 0.35 | -1528.10 | 977.12 | -3033.47 | 1013.11 | -455.70 | 198.83 | 335.83 |
| Rohn-LF12 | 0.56 | 2628.33 | 1451.82 | 1905.80 | 1905.35 | 453.57 | 335.83 | -641.83 |
| Rohn-LF2P | 1.11 | 1325.81 | 2880.51 | 115.80 | 3539.92 | 144.11 | 641.83 | -236.06 |
| Rohn-LF21 | -0.43 | 3033.48 | -1013.07 | 2388.60 | -1350.05 | 541.63 | -236.06 | -414.24 |
| Rohn-LF22 | -0.69 | -1905.87 | 1905.28 | -3671.65 | -2235.39 | -557.98 | -414.24 | 141.03 |
| Rohn-LG1P | -0.74 | -115.80 | -3539.91 | -1294.94 | -4086.44 | -141.03 | -762.38 | 302.82 |
| Rohn-LG11 | 0.28 | -2388.57 | 1350.09 | -4121.10 | 1680.90 | -650.37 | 302.82 | 141.03 |

| | | | | | | | |
|-----------|-------|----------|----------|----------|----------|---------|---------|
| Rohn-LG12 | 0.48 | 3671.57 | 2235.52 | 2873.25 | 2463.52 | 654.64 | 470.02 |
| Rohn-LG2P | 0.95 | 1294.94 | 4086.44 | -31.97 | 3859.19 | 126.26 | 794.30 |
| Rohn-LG21 | -0.37 | 4121.14 | -1680.80 | 2502.01 | -1509.96 | 661.68 | -318.77 |
| Rohn-LG31 | -0.58 | -2873.34 | -2463.43 | -4091.61 | -2406.66 | -696.70 | -487.15 |
| Rohn-LHIP | -1.13 | 31.97 | -3959.19 | -1608.06 | -3093.62 | -157.55 | -695.04 |
| Rohn-LH1 | 0.42 | -2501.97 | 1510.02 | -3243.81 | 1000.47 | -573.99 | 250.79 |
| Rohn-LH2 | 0.73 | 4091.52 | 2406.80 | 2022.78 | 2159.45 | 611.64 | 456.78 |
| Rohn-LH2P | 0.48 | 1608.06 | 3093.62 | 218.43 | 1988.39 | 182.59 | 508.04 |
| Rohn-LH21 | -0.07 | 3243.82 | -1000.42 | 595.89 | -279.04 | 383.57 | -127.81 |
| Rohn-LH22 | -0.42 | -2022.85 | -2159.39 | -2745.13 | -1780.63 | -476.99 | -394.16 |
| Rohn-LH23 | -0.49 | -218.43 | -1988.39 | -2913.31 | 1665.09 | -313.06 | -32.32 |
| Rohn-LH11 | 0.07 | -595.88 | 279.05 | 486.04 | -1918.72 | -10.97 | -163.82 |
| Rohn-LH12 | 0.45 | 2745.09 | 1780.68 | -2506.89 | 348.65 | 23.83 | 212.98 |
| Rohn-LH2P | -1.02 | 2913.31 | -1665.09 | 705.89 | -3958.31 | 220.67 | -562.16 |
| Rohn-LI21 | 0.82 | -486.01 | 1918.73 | -6170.86 | 3240.85 | -665.08 | 515.49 |
| Rohn-LI22 | 0.16 | 2506.89 | -348.65 | 785.77 | 627.20 | 329.35 | 27.86 |
| SNB-LA1P | 0.00 | -0.00 | -0.00 | -2.32 | -189.34 | -0.46 | -37.85 |
| SNB-LA11 | 0.00 | -0.00 | -0.00 | -186.00 | 87.12 | -37.19 | 17.42 |
| SNB-LA12 | 0.00 | -0.00 | -0.00 | 182.37 | 87.62 | 36.46 | 17.52 |
| SNB-LA2P | -0.00 | 2.31 | 189.34 | 9.38 | 241.83 | 2.34 | 86.20 |
| SNB-LA21 | 0.00 | 186.00 | -87.12 | 235.90 | -106.08 | 84.35 | -38.62 |
| SNB-LA22 | 0.00 | -182.37 | -87.62 | -243.50 | -121.19 | -85.14 | -41.75 |
| SNB-LA3P | -0.01 | -9.38 | -241.82 | -59.84 | -288.18 | -13.84 | -105.96 |
| SNB-LA31 | 0.00 | -235.90 | 106.07 | -298.12 | 114.76 | -106.76 | 44.15 |
| SNB-LA32 | 0.01 | 243.49 | 121.19 | 257.47 | 159.72 | 100.16 | 56.16 |
| SNB-LA4P | 0.01 | 59.84 | 288.19 | 45.89 | 386.83 | 21.14 | 134.95 |
| SNB-LA41 | -0.00 | 288.12 | -114.76 | 398.02 | -149.71 | 127.17 | -52.87 |
| SNB-LA42 | -0.00 | -257.48 | -159.72 | -376.53 | -222.26 | -126.76 | -76.37 |
| SNB-LB1P | 0.00 | -45.89 | -386.82 | -75.44 | -602.29 | -24.26 | -197.75 |
| SNB-LB11 | 0.00 | 338.02 | 149.71 | -565.88 | 270.12 | -180.70 | 83.93 |
| SNB-LB12 | 0.00 | 376.53 | 222.27 | 504.36 | 321.11 | 176.12 | 108.64 |
| SNB-LB2P | 0.04 | 75.43 | 602.30 | -117.69 | 699.94 | -8.45 | 260.35 |
| SNB-LB21 | -0.02 | 565.88 | -270.12 | 558.46 | -383.23 | 224.76 | -130.61 |
| SNB-LB22 | -0.02 | -504.37 | -221.11 | -667.56 | 310.38 | -234.31 | -126.26 |
| SNB-LB3P | -0.03 | 117.69 | -699.93 | -9.81 | -780.43 | -21.57 | -295.96 |
| SNB-LB31 | 0.02 | -558.46 | 383.23 | -827.00 | 469.90 | -276.96 | 170.54 |
| SNB-LB32 | 0.01 | 667.55 | 310.38 | 535.43 | 313.10 | 240.53 | 124.66 |
| SNB-LB4P | 0.03 | 9.80 | 780.44 | -105.08 | 560.98 | -19.05 | 268.18 |
| SNB-LB41 | -0.02 | 827.00 | -469.90 | 438.61 | -312.52 | 252.99 | -156.40 |
| SNB-LB42 | -0.01 | -535.44 | -313.10 | -542.79 | -251.70 | -215.59 | -112.93 |
| SNB-LC1P | -0.03 | 105.08 | -560.98 | -87.84 | -131.87 | 2.59 | -103.99 |
| SNB-LC11 | 0.01 | -438.61 | 312.52 | -228.37 | 75.13 | -99.49 | 58.17 |
| SNB-LC12 | 0.01 | 542.78 | 251.70 | 18.11 | 57.48 | 84.20 | 46.41 |
| SNB-LC2P | 0.00 | 87.84 | 131.88 | -243.05 | -323.23 | -23.23 | -28.63 |
| SNB-LC21 | -0.00 | 224.37 | -75.14 | -416.96 | 108.50 | -28.81 | 4.99 |
| SNB-LC22 | 0.00 | -18.12 | -57.48 | 127.21 | 221.49 | 16.33 | 24.55 |
| SNB-LC3P | 0.07 | 243.05 | 323.23 | -13.59 | 608.93 | 34.44 | 139.91 |
| SNB-LC31 | -0.02 | 416.96 | -108.50 | 297.47 | -187.75 | 107.20 | -44.45 |
| SNB-LC32 | -0.05 | -127.22 | -221.49 | -744.36 | -428.70 | -130.85 | -97.62 |
| SNB-LD1P | -0.08 | 13.59 | -608.93 | -477.89 | -463.91 | -69.69 | -161.03 |
| SNB-LD11 | 0.03 | -297.47 | 187.75 | -727.81 | 144.21 | -153.83 | 49.81 |
| SNB-LD12 | 0.06 | 744.35 | 428.71 | 80.88 | 321.95 | 123.91 | 112.71 |
| SNB-LD2P | 0.05 | 477.88 | 463.92 | -457.43 | -54.46 | 3.06 | 61.28 |
| SNB-LD21 | -0.02 | 727.81 | -144.21 | -381.82 | -26.93 | 51.76 | -25.60 |
| SNB-LD22 | -0.03 | -60.89 | -321.95 | -313.38 | 100.82 | -59.03 | -33.11 |
| SNB-LD3P | 0.04 | 457.42 | 54.46 | -391.44 | 272.51 | 9.90 | 49.08 |
| SNB-LD31 | 0.00 | 381.82 | 26.92 | -401.37 | -19.11 | -2.93 | 1.17 |
| SNB-LD32 | -0.05 | 313.38 | -100.82 | -828.29 | -280.99 | -77.33 | -57.34 |
| SNB-LE1P | 0.04 | 301.44 | -272.50 | 764.96 | 930.83 | -56.06 | 98.81 |
| SNB-LE11 | -0.03 | 491.37 | 19.10 | 149.26 | -505.95 | 82.62 | -73.05 |
| SNB-LE12 | 0.00 | 828.28 | 281.00 | -1496.69 | -400.02 | -100.35 | -17.87 |
| SNB-LE2P | 0.34 | 764.95 | -930.82 | -884.10 | -3159.49 | -17.83 | -612.11 |
| SNB-LE21 | 0.16 | -149.26 | 505.95 | -3448.40 | 1494.44 | -536.19 | 259.25 |
| SNB-LE22 | 0.18 | 1496.68 | 400.02 | 2008.34 | 1683.92 | 524.71 | 311.97 |
| SNB-LE3P | 0.49 | 884.10 | 3159.49 | -139.80 | 4292.31 | 111.71 | 1118.46 |
| SNB-LE31 | -0.21 | 3448.42 | -1494.39 | 2734.84 | -1697.93 | 927.68 | -478.95 |

| | | | | | | | |
|----------|-------|----------|----------|-----------|----------|----------|----------|
| SNB-LE32 | -0.29 | -2008.37 | -1683.89 | -4635.93 | -2636.78 | -997.67 | -648.77 |
| SNB-LF1P | -1.48 | 139.80 | -4292.31 | -1945.27 | -4760.33 | -180.48 | -904.95 |
| SNB-LF11 | 0.57 | -2734.81 | 1697.97 | -4829.76 | 1721.54 | -755.84 | 341.68 |
| SNB-LF12 | 0.93 | 4635.85 | 2636.91 | 3330.50 | 3103.33 | 796.72 | 574.09 |
| SNB-LF2P | 1.87 | 1945.27 | 4760.33 | 257.57 | 6340.06 | 220.21 | 1109.64 |
| SNB-LF21 | -0.71 | 4829.79 | -1721.47 | 4274.75 | -2392.42 | 909.65 | -411.03 |
| SNB-LF22 | -1.18 | -3330.61 | -3103.22 | -6581.05 | -4024.47 | -991.31 | -712.88 |
| SNB-LG1P | -1.52 | -257.58 | -6340.06 | -3532.07 | -3049.24 | -378.83 | -1538.37 |
| SNB-LG11 | 0.57 | -4274.70 | 2392.51 | -9433.78 | 3521.51 | -1369.70 | 590.91 |
| SNB-LG12 | 0.97 | 6580.91 | 4024.69 | 6056.88 | 5651.46 | 1263.92 | 967.72 |
| SNB-LG2P | 2.14 | 3532.07 | 9049.24 | 452.31 | 8891.04 | 398.30 | 1793.40 |
| SNB-LG21 | -0.79 | 9433.86 | -3521.30 | 5887.06 | -3257.62 | 1530.77 | -677.30 |
| SNB-LG22 | -1.39 | -6057.08 | -5851.25 | -9307.46 | -5757.68 | -1536.71 | -1141.09 |
| SNB-LHIP | -2.59 | -452.31 | -8891.04 | -4150.53 | -7192.26 | -460.11 | -1607.74 |
| SNB-LH11 | 0.94 | -5887.00 | 3257.74 | -7690.71 | 2171.49 | -1356.51 | 542.42 |
| SNB-LH12 | 1.68 | 9307.26 | 5757.99 | 4562.44 | 5160.26 | 1387.24 | 1092.04 |
| SNB-LHZP | 0.89 | 4150.53 | 7192.26 | 1083.25 | 4614.03 | 523.21 | 1180.24 |
| SNB-LH21 | 0.01 | 7690.74 | -2171.39 | 1594.52 | -424.53 | 927.66 | -259.35 |
| SNB-LH22 | -0.94 | -4562.59 | -5160.13 | -6176.76 | -4328.22 | -1074.23 | -949.10 |
| SNB-LI1P | -1.47 | -1083.25 | -4614.03 | -7748.50 | 2485.89 | -882.83 | -212.73 |
| SNB-LI11 | 0.25 | -1594.52 | 424.53 | -201.53 | 4229.78 | -179.44 | -380.18 |
| SNB-LI12 | 1.23 | 6176.68 | 4328.33 | -4707.71 | 1890.96 | 146.92 | 622.02 |
| SNB-LI2P | -1.93 | 7748.50 | -2485.89 | 736.31 | -6746.67 | 848.22 | -922.97 |
| SNB-LI21 | 1.86 | 201.59 | 4229.78 | -11144.23 | 6768.93 | -1093.31 | 1098.91 |
| SNB-LI22 | 0.03 | 4707.70 | -1890.98 | 711.31 | -137.96 | 542.04 | -202.95 |

*** Analysis Results for Load Case No. 6 "DL + Ice Only" - Number of iterations in SAPS 11

Equilibrium Joint Positions and Rotations for Load Case "DL + Ice Only":

| Joint Label | X-Displ (ft) | Y-Displ (ft) | Z-Displ (ft) | X-Rot (deg) | Y-Rot (deg) | Z-Rot (deg) | X-Pos (ft) | Y-Pos (ft) | Z-Pos (ft) |
|-------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|-------------|------------|
| RohnA1 | -0.00125 | -0.0006168 | -0.0771 | 0.0004 | -0.0211 | 0.0000 | 4.332 | -0.0006168 | 179.9 |
| RohnA2 | -0.001839 | -0.0004588 | -0.0691 | 0.0004 | -0.0080 | 0.0000 | 5.119 | -0.0004588 | 159.9 |
| RohnA3 | -0.00278 | -0.0003128 | -0.0609 | 0.0004 | 0.0081 | 0.0000 | 5.906 | -0.0003128 | 139.9 |
| RohnA4 | -0.003591 | -0.0001985 | -0.05276 | 0.0003 | -0.0025 | 0.0000 | 6.691 | -0.0001985 | 119.9 |
| RohnA5 | -0.003576 | -0.0001197 | -0.04406 | 0.0002 | 0.0043 | 0.0000 | 7.477 | -0.0001197 | 99.96 |
| RohnA6 | -0.005836 | -6.712e-005 | -0.03552 | 0.0001 | -0.0076 | 0.0000 | 8.262 | -6.712e-005 | 79.96 |
| RohnA7 | -0.007684 | -3.218e-005 | -0.02669 | 0.0001 | -0.0161 | 0.0000 | 9.047 | -3.218e-005 | 59.97 |
| RohnA8 | -0.007806 | -1.197e-005 | -0.01797 | 0.0000 | 0.0083 | 0.0000 | 9.833 | -1.197e-005 | 39.98 |
| RohnA9 | -0.006022 | -1.966e-006 | -0.009024 | 0.0000 | 0.0191 | 0.0000 | 10.62 | -1.966e-006 | 19.99 |
| RohnA10 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 11.42 | 0 | 0 |
| RohnA11 | -0.0004686 | -0.0006175 | -0.0741 | 0.0005 | -0.0232 | 0.0000 | 2.333 | -0.0006175 | 179.9 |
| RohnA12 | -0.001058 | -0.0004584 | -0.06625 | 0.0004 | -0.0092 | 0.0000 | 3.12 | -0.0004584 | 159.9 |
| RohnA13 | -0.001998 | -0.0003135 | -0.05832 | 0.0004 | 0.0146 | 0.0000 | 3.906 | -0.0003135 | 139.9 |
| RohnA14 | -0.00281 | -0.0001987 | -0.05031 | 0.0003 | -0.0051 | 0.0000 | 4.692 | -0.0001987 | 119.9 |
| RohnA15 | -0.002795 | -0.0001199 | -0.04201 | 0.0002 | 0.0027 | 0.0000 | 5.478 | -0.0001199 | 99.96 |
| RohnA16 | -0.005056 | -6.724e-005 | -0.03399 | 0.0001 | 0.0008 | 0.0000 | 6.263 | -6.724e-005 | 79.97 |
| RohnA17 | -0.006905 | -3.251e-005 | -0.02357 | 0.0001 | -0.0310 | 0.0000 | 7.048 | -3.251e-005 | 59.97 |
| RohnA18 | -0.007026 | -1.205e-005 | -0.01734 | 0.0000 | 0.0072 | 0.0000 | 7.834 | -1.205e-005 | 39.98 |
| RohnA19 | -0.005242 | -2.159e-006 | -0.008742 | 0.0000 | 0.0191 | 0.0000 | 8.623 | -2.159e-006 | 19.99 |
| RohnA20 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | 9.415 | 0 | 0 |
| RohnA21 | 0.002187 | 0.001368 | -0.07704 | -0.0186 | 0.0116 | -0.0000 | -2.164 | -3.751 | 179.9 |
| RohnA22 | 0.002188 | -0.002602 | -0.07699 | 0.0194 | 0.0117 | -0.0000 | -2.164 | 3.75 | 179.9 |
| RohnA23 | 0.00209 | 0.00181 | -0.06903 | -0.0071 | 0.0051 | 0.0000 | -2.558 | -4.433 | 159.9 |
| RohnA24 | -0.002727 | -0.06896 | -0.06896 | 0.0080 | 0.0051 | 0.0000 | 2.558 | 4.432 | 159.9 |
| RohnA25 | 0.002204 | -0.002568 | -0.06093 | -0.0069 | -0.0032 | -0.0000 | -2.952 | -5.115 | 139.9 |
| RohnA26 | 0.002204 | -0.003194 | -0.06085 | -0.0061 | -0.0032 | 0.0000 | -2.952 | 5.114 | 139.9 |
| RohnA27 | 0.002233 | -0.003219 | -0.0527 | 0.0023 | 0.0020 | -0.0000 | -3.345 | -5.795 | 119.9 |
| RohnA28 | 0.002332 | -0.003618 | -0.05264 | 0.0029 | 0.0020 | -0.0000 | -3.345 | 5.794 | 119.9 |
| RohnA29 | 0.002105 | -0.003161 | -0.04401 | 0.0036 | -0.0017 | -0.0000 | -3.738 | -6.476 | 99.96 |
| RohnA30 | 0.002106 | -0.003401 | -0.04397 | 0.0033 | -0.0017 | 0.0000 | -3.738 | 6.475 | 99.96 |
| RohnA31 | 0.003094 | 0.00509 | -0.03548 | -0.0067 | 0.0042 | -0.0000 | -4.131 | -7.155 | 79.96 |
| RohnA32 | -0.003095 | -0.005226 | -0.03545 | 0.0069 | -0.0041 | 0.0000 | -4.131 | 7.155 | 79.96 |
| RohnA33 | 0.003927 | 0.006673 | -0.02667 | -0.0140 | 0.0082 | -0.0000 | -4.524 | -7.835 | 59.97 |
| RohnA34 | -0.003928 | -0.006738 | -0.02665 | 0.0141 | -0.0082 | 0.0000 | -4.524 | 7.835 | 59.97 |
| RohnA35 | 0.003935 | 0.006767 | -0.01796 | -0.0071 | 0.0040 | -0.0000 | -4.917 | -8.516 | 39.98 |
| RohnA36 | -0.003936 | -0.006792 | -0.01795 | 0.0070 | -0.0040 | 0.0000 | -4.917 | 8.516 | 39.98 |
| RohnA37 | 0.003017 | 0.005217 | -0.009017 | 0.0165 | -0.0095 | -0.0000 | -5.312 | -9.201 | 19.99 |
| RohnA38 | -0.003017 | -0.005221 | -0.009011 | -0.0165 | 0.0095 | 0.0000 | -5.312 | 9.201 | 19.99 |
| RohnA39 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | -9.89 | 0 |
| RohnA40 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -5.71 | 9.89 | 0 |
| RohnA41 | 0.001796 | 0.0006909 | -0.07407 | -0.0185 | 0.0117 | -0.0000 | -1.165 | -2.02 | 179.9 |
| RohnA42 | -0.001796 | -0.0006909 | -0.07404 | 0.0195 | 0.0117 | 0.0000 | -1.165 | 2.019 | 179.9 |
| RohnA43 | 0.001699 | 0.001133 | -0.06521 | -0.0081 | 0.0057 | -0.0000 | -1.559 | -2.702 | 159.9 |
| RohnA44 | -0.001699 | -0.00205 | -0.06517 | 0.0090 | 0.0057 | 0.0000 | -1.559 | 2.701 | 159.9 |
| RohnA45 | 0.001815 | 0.001889 | -0.05828 | 0.0125 | -0.0064 | -0.0000 | -1.952 | -3.383 | 139.9 |
| RohnA46 | -0.001815 | -0.002516 | -0.05824 | -0.0118 | 0.0064 | 0.0000 | -1.952 | 3.382 | 139.9 |
| RohnA47 | 0.001938 | -0.002544 | -0.05027 | -0.0045 | 0.0033 | -0.0000 | -2.346 | -4.063 | 119.9 |
| RohnA48 | -0.001939 | -0.002943 | -0.05023 | 0.0051 | -0.0033 | 0.0000 | -2.346 | 4.063 | 119.9 |
| RohnA49 | 0.001716 | -0.002485 | -0.04198 | -0.0023 | 0.0009 | -0.0000 | -2.739 | -4.744 | 99.96 |
| RohnA50 | -0.001716 | -0.002726 | -0.04195 | 0.0019 | -0.0009 | 0.0000 | -2.739 | 4.744 | 99.96 |
| RohnA51 | 0.002705 | -0.004455 | -0.03396 | 0.0006 | -0.0001 | -0.0000 | -3.131 | -5.424 | 79.97 |
| RohnA52 | -0.002705 | 0.004455 | -0.03394 | -0.0004 | 0.0001 | 0.0000 | -3.131 | 5.424 | 79.97 |
| RohnA53 | 0.003538 | -0.005997 | -0.02567 | -0.0269 | 0.0157 | -0.0000 | -3.524 | -6.104 | 59.97 |
| RohnA54 | -0.003538 | 0.006063 | -0.02567 | 0.0270 | -0.0157 | 0.0000 | -3.524 | 6.104 | 59.97 |
| RohnA55 | 0.003545 | -0.006092 | -0.01733 | -0.0062 | 0.0035 | -0.0000 | -3.917 | -6.784 | 39.98 |
| RohnA56 | -0.003545 | 0.006117 | -0.01732 | 0.0061 | -0.0035 | 0.0000 | -3.917 | 6.784 | 39.98 |
| RohnA57 | 0.002627 | 0.004541 | -0.008737 | 0.0165 | -0.0095 | -0.0000 | -4.311 | -7.468 | 19.99 |

URS Connecticut - all_passing_tower

| | | | | | | | | | |
|------------|--------------|-------------|-----------|---------|---------|--------|--------|-------------|-------|
| SNB-I2 | 0.002627 | -0.004546 | -0.008733 | -0.0165 | -0.0095 | 0.0000 | 4.311 | 7.469 | 19.99 |
| SNB-J1 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | -8.154 | 0 |
| SNB-J2 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 | -4.708 | 8.154 | 0 |
| RohnAas | -0.0002578 | -0.0005826 | -0.07509 | 0.0005 | 0.0056 | 0.0000 | 4.53 | -0.0005826 | 174.9 |
| RohnAbs | -0.001407 | -0.000537 | -0.07312 | 0.0005 | -0.0015 | 0.0000 | 4.726 | -0.000537 | 169.9 |
| RohnACS | -0.0005356 | -0.0004957 | -0.07107 | 0.0004 | 0.0047 | 0.0000 | 4.923 | -0.0004957 | 164.9 |
| RohnBas | -0.0008239 | -0.0004203 | -0.06706 | 0.0004 | 0.0029 | 0.0000 | 5.317 | -0.0004203 | 154.9 |
| RohnBbs | -0.002022 | -0.0003841 | -0.06508 | 0.0004 | -0.0028 | 0.0000 | 5.513 | -0.0003841 | 149.9 |
| RohnBcs | -0.0008433 | -0.0000349 | -0.06297 | 0.0004 | 0.0038 | 0.0000 | 5.711 | -0.0000349 | 144.9 |
| RohnCas | -0.001674 | -0.0002686 | -0.05825 | 0.0003 | -0.0160 | 0.0000 | 6.169 | -0.0002686 | 133.3 |
| RohnCbs | -0.001419 | -0.0002331 | -0.05542 | 0.0003 | 0.0156 | 0.0000 | 6.432 | -0.0002331 | 126.6 |
| RohnDas | -0.001674 | -0.0001676 | -0.04987 | 0.0002 | -0.0125 | 0.0000 | 6.955 | -0.0001676 | 113.3 |
| RohnDBs | -0.002271 | -0.0001419 | -0.04689 | 0.0002 | 0.0128 | 0.0000 | 7.217 | -0.0001419 | 106.6 |
| RohnEas | -0.002923 | -0.0001 | -0.04322 | 0.0002 | -0.0214 | 0.0000 | 7.74 | -0.00001 | 93.3 |
| RohnEbs | -0.001582 | -0.0001 | -0.03819 | 0.0001 | 0.0245 | 0.0000 | 8.004 | -0.00001 | 86.62 |
| RohnFas | 0.0003153 | -4.593e-005 | -0.03079 | 0.0001 | 0.0123 | 0.0000 | 8.662 | -4.593e-005 | 69.97 |
| RohnGas | 0.0004849 | -2.039e-005 | -0.02204 | 0.0001 | 0.0010 | 0.0000 | 9.448 | -2.039e-005 | 49.98 |
| RohnHas | -0.000092 | -5.393e-006 | -0.01336 | 0.0000 | -0.0159 | 0.0000 | 10.23 | -5.393e-006 | 29.99 |
| RohnIas | 0.0004958 | 1.328e-007 | -0.00475 | 0.0000 | 0.0320 | 0.0000 | 11.02 | 1.328e-007 | 9.995 |
| RohnIbs | 0.0005243 | -0.0005768 | -0.07211 | 0.0005 | 0.0057 | 0.0000 | 2.531 | -0.0005768 | 174.9 |
| RohnAbs | 0.0006248 | -0.0005374 | -0.07018 | 0.0005 | -0.0016 | 0.0000 | 2.726 | -0.0005374 | 169.9 |
| RohnAcs | 0.0002464 | -0.0004967 | -0.06817 | 0.0005 | 0.0051 | 0.0000 | 2.824 | -0.0004967 | 164.9 |
| RohnBas | -4.1199e-005 | -0.0004203 | -0.06423 | 0.0004 | 0.0031 | 0.0000 | 3.318 | -0.0004203 | 154.9 |
| RohnBbs | -0.00124 | -0.0003837 | -0.06229 | 0.0004 | -0.0024 | 0.0000 | 3.513 | -0.0003837 | 149.9 |
| RohnBcs | -6.727e-005 | -0.0003471 | -0.06023 | 0.0004 | 0.0021 | 0.0000 | 3.711 | -0.0003471 | 144.9 |
| RohnCas | -0.0008927 | -0.0002703 | -0.05569 | 0.0003 | -0.0179 | 0.0000 | 4.169 | -0.0002703 | 133.3 |
| RohnCbs | -0.0006371 | -0.0002329 | -0.05287 | 0.0003 | 0.0167 | 0.0000 | 4.432 | -0.0002329 | 126.6 |
| RohnDas | -0.0008931 | -0.0001683 | -0.04756 | 0.0002 | -0.0119 | 0.0000 | 4.956 | -0.0001683 | 113.3 |
| RohnDBs | -0.00149 | -0.0001414 | -0.04469 | 0.0002 | 0.0131 | 0.0000 | 5.218 | -0.0001414 | 106.6 |
| RohnEas | -0.002142 | -0.0001002 | -0.03937 | 0.0002 | -0.0203 | 0.0000 | 5.741 | -0.0001002 | 93.3 |
| RohnEbs | -0.0008015 | -8.276e-005 | -0.03644 | 0.0001 | 0.0222 | 0.0000 | 6.005 | -8.276e-005 | 86.62 |
| RohnFas | 0.001096 | -4.681e-005 | -0.02949 | 0.0001 | 0.0140 | 0.0000 | 6.663 | -4.681e-005 | 69.97 |
| RohnGas | 0.001265 | -0.035e-005 | -0.02126 | 0.0001 | 0.0050 | 0.0000 | 7.449 | -2.035e-005 | 49.98 |
| RohnHas | -0.0001398 | -5.477e-006 | -0.013 | 0.0000 | -0.0156 | 0.0000 | 8.234 | -5.477e-006 | 29.99 |
| RohnIas | -0.004177 | 1.154e-007 | -0.004824 | 0.0000 | -0.0285 | 0.0000 | 9.017 | 1.154e-007 | 9.995 |
| SNB-AL1 | 0.0008133 | -0.000223 | -0.122 | 0.0000 | 0.0000 | 0.0000 | 0.5841 | -1.01 | 179.9 |
| SNB-WL-A2 | 0.0001496 | -0.0006169 | -0.0006 | 0.0000 | 0.0000 | 0.0000 | -1.165 | -0.0006169 | 179.9 |
| SNB-WL-A3 | 0.0008133 | -0.001011 | -0.122 | 0.0000 | 0.0000 | 0.0000 | 0.5841 | 1.009 | 179.9 |
| SNB-WL-B1 | 0.000475 | 6.896e-005 | -0.1236 | 0.0000 | 0.0000 | 0.0000 | 0.7807 | -1.351 | 159.9 |
| SNB-WL-B2 | 0.001388 | -0.000458 | -0.1236 | 0.0000 | 0.0000 | 0.0000 | -1.559 | -0.000458 | 159.9 |
| SNB-WL-B3 | 0.000475 | -0.000985 | -0.1236 | 0.0000 | 0.0000 | 0.0000 | 0.7807 | -1.35 | 159.9 |
| SNB-WL-CL1 | 0.0001626 | 0.0003471 | -0.1405 | 0.0000 | 0.0000 | 0.0000 | 0.9772 | -1.692 | 139.9 |
| SNB-WL-C2 | 0.0001306 | -0.0003128 | -0.1405 | 0.0000 | 0.0000 | 0.0000 | -1.953 | -0.0003128 | 139.9 |
| SNB-WL-C3 | 0.0001626 | -0.0009727 | -0.1405 | 0.0000 | 0.0000 | 0.0000 | 0.9772 | 1.691 | 139.9 |
| SNB-WL-D1 | -0.0001023 | 0.0005938 | -0.1558 | 0.0000 | 0.0000 | 0.0000 | 1.174 | -2.032 | 119.8 |
| SNB-WL-D2 | 0.001271 | -0.000199 | -0.1558 | 0.0000 | 0.0000 | 0.0000 | -2.346 | -0.000199 | 119.8 |
| SNB-WL-D3 | -0.0001023 | -0.0009919 | -0.1558 | 0.0000 | 0.0000 | 0.0000 | 1.174 | 2.032 | 119.8 |
| SNB-WL-E1 | -0.0003225 | 0.0008055 | -0.1388 | 0.0000 | 0.0000 | 0.0000 | 1.37 | -2.373 | 99.86 |
| SNB-WL-E2 | 0.00128 | -0.00012 | -0.1388 | 0.0000 | 0.0000 | 0.0000 | -2.739 | -0.00012 | 99.86 |
| SNB-WL-E3 | -0.0003225 | -0.001045 | -0.1388 | 0.0000 | 0.0000 | 0.0000 | 1.37 | 2.372 | 99.86 |
| SNB-WL-F1 | -0.0004935 | 0.0009911 | -0.2017 | 0.0000 | 0.0000 | 0.0000 | 1.567 | -2.713 | 79.8 |
| SNB-WL-F2 | 0.00134 | -6.737e-005 | -0.2017 | 0.0000 | 0.0000 | 0.0000 | -3.133 | -6.737e-005 | 79.8 |
| SNB-WL-F3 | -0.0004935 | -0.001126 | -0.2017 | 0.0000 | 0.0000 | 0.0000 | 1.567 | 2.713 | 79.8 |
| SNB-WL-G1 | -0.0006308 | 0.001159 | -0.245 | 0.0000 | 0.0000 | 0.0000 | 1.763 | -3.054 | 59.75 |
| SNB-WL-G2 | 0.001433 | -3.267e-005 | -0.245 | 0.0000 | 0.0000 | 0.0000 | -3.526 | -3.267e-005 | 59.75 |
| SNB-WL-G3 | -0.0006308 | -0.001224 | -0.245 | 0.0000 | 0.0000 | 0.0000 | 1.763 | 3.054 | 59.75 |
| SNB-WL-H1 | -0.0007429 | 0.001312 | -0.2462 | 0.0000 | 0.0000 | 0.0000 | 1.96 | -3.394 | 39.75 |
| SNB-WL-H2 | 0.001551 | -1.229e-005 | -0.2462 | 0.0000 | 0.0000 | 0.0000 | -3.919 | -1.229e-005 | 39.75 |
| SNB-WL-H3 | -0.0007429 | -0.001336 | -0.2462 | 0.0000 | 0.0000 | 0.0000 | 1.96 | 3.394 | 39.75 |
| SNB-WL-I1 | -0.000837 | 0.001455 | -0.1928 | 0.0000 | 0.0000 | 0.0000 | 2.156 | -3.735 | 19.81 |
| SNB-WL-I2 | 0.001687 | -2.347e-006 | -0.1928 | 0.0000 | 0.0000 | 0.0000 | -4.312 | -2.347e-006 | 19.81 |
| SNB-WL-I3 | -0.000837 | -0.001459 | -0.1928 | 0.0000 | 0.0000 | 0.0000 | 2.156 | 3.735 | 19.81 |
| RohnA1 | 0.001596 | 0.0004876 | -0.07502 | 0.0047 | -0.0017 | 0.0000 | -2.263 | -3.923 | 174.9 |
| RohnA2 | 0.001592 | -0.001645 | -0.07496 | -0.0038 | 0.0017 | 0.0000 | -2.263 | 3.921 | 174.9 |
| RohnA3 | 0.002068 | -0.001471 | -0.07306 | -0.0015 | 0.0017 | 0.0000 | -2.361 | -4.092 | 169.9 |
| RohnA2 | 0.002068 | -0.002545 | -0.07299 | 0.0025 | 0.0019 | 0.0000 | -2.361 | 4.091 | 169.9 |

| Joint Label | X (kips) | X Usage % | Y (kips) | Y Usage % | Z Comp. Usage % | Uplift Result. | Result. Force (kips) | Force Usage % | X-M. Moment (ft-k) | X-M. Usage % | Y-M. Moment (ft-k) | Y-M. Usage % | Z-M. Moment (ft-k) | Z-M. Usage % | Max. Usage % |
|-------------|-------------|------------|-----------|-----------|-----------------|----------------|----------------------|---------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------|
| RohnAc1 | 0.001537 | 0.0006972 | -0.07101 | 0.0039 | -0.0013 | -0.0000 | -2.46 | | | | | | | | |
| RohnAc2 | 0.001538 | -0.001691 | -0.07094 | -0.0030 | -0.0012 | -0.0000 | -2.46 | | | | | | | | |
| RohnBa1 | 0.001486 | 0.0009146 | -0.06699 | 0.0023 | -0.0004 | -0.0000 | -2.658 | | | | | | | | |
| RohnBa2 | 0.001486 | -0.001756 | -0.06691 | -0.0015 | -0.0004 | -0.0000 | -2.658 | | | | | | | | |
| RohnBb1 | 0.001995 | 0.001936 | -0.06501 | 0.0026 | 0.0024 | -0.0000 | -2.756 | | | | | | | | |
| RohnBb2 | 0.001995 | -0.002704 | -0.06494 | -0.0034 | 0.0024 | -0.0000 | -2.756 | | | | | | | | |
| RohnBc1 | 0.001322 | 0.0009054 | -0.0629 | 0.0032 | -0.0009 | -0.0000 | -2.855 | | | | | | | | |
| RohnBc2 | 0.001322 | -0.001603 | -0.06283 | -0.0023 | -0.0009 | -0.0000 | -2.855 | | | | | | | | |
| RohnCa1 | 0.001552 | 0.001593 | -0.05819 | 0.0140 | -0.0088 | -0.0000 | -3.084 | | | | | | | | |
| RohnCa2 | 0.001552 | -0.002135 | -0.05812 | -0.0147 | -0.0088 | -0.0000 | -3.084 | | | | | | | | |
| RohnCb1 | 0.001332 | 0.001355 | -0.05336 | 0.0133 | -0.0070 | -0.0000 | -3.215 | | | | | | | | |
| RohnCb2 | 0.001332 | -0.001822 | -0.05329 | -0.0127 | -0.0070 | -0.0000 | -3.215 | | | | | | | | |
| RohnDa1 | 0.001288 | 0.001543 | -0.0498 | 0.0110 | 0.0069 | -0.0000 | -3.477 | | | | | | | | |
| RohnDa2 | 0.001288 | -0.001881 | -0.04975 | -0.0115 | -0.0069 | -0.0000 | -3.477 | | | | | | | | |
| RohnDb1 | 0.001514 | 0.002046 | -0.04683 | 0.0109 | -0.0058 | -0.0000 | -3.608 | | | | | | | | |
| RohnDb2 | 0.001514 | -0.002332 | -0.04679 | -0.0105 | -0.0058 | -0.0000 | -3.608 | | | | | | | | |
| RohnEa1 | 0.001726 | 0.002585 | -0.04117 | 0.0186 | 0.0111 | -0.0000 | -3.87 | | | | | | | | |
| RohnEa2 | 0.001727 | -0.002786 | -0.04113 | -0.0189 | -0.0111 | -0.0000 | -3.87 | | | | | | | | |
| RohnEb1 | 0.001008 | 0.001414 | -0.03815 | 0.0211 | -0.0119 | -0.0000 | -4.002 | | | | | | | | |
| RohnEb2 | 0.001008 | -0.001158 | -0.03811 | -0.0209 | -0.0119 | -0.0000 | -4.002 | | | | | | | | |
| RohnFa1 | -3.494e-005 | -0.0002456 | -0.03076 | 0.0106 | -0.0059 | -0.0000 | -4.331 | | | | | | | | |
| RohnFa2 | -3.255e-005 | -0.0001496 | -0.03073 | -0.0104 | -0.0059 | -0.0000 | -4.331 | | | | | | | | |
| RohnGa1 | -0.0001876 | -0.0004077 | -0.02203 | 0.0008 | -0.0003 | -0.0000 | -4.724 | | | | | | | | |
| RohnGa2 | -0.0001866 | 0.0003651 | -0.02201 | -0.0007 | -0.0003 | -0.0000 | -4.724 | | | | | | | | |
| RohnHa1 | 0.0004754 | 0.0008013 | -0.01335 | 0.0138 | 0.0080 | -0.0000 | -5.117 | | | | | | | | |
| RohnHa2 | 0.0004764 | -0.0008137 | -0.01334 | -0.0139 | -0.0080 | -0.0000 | -5.117 | | | | | | | | |
| RohnIa1 | 0.002479 | 0.004235 | -0.004746 | -0.0277 | 0.0160 | -0.0000 | -5.51 | | | | | | | | |
| RohnIa2 | 0.00248 | -0.004236 | -0.004743 | 0.0277 | 0.0160 | -0.0000 | -5.51 | | | | | | | | |
| SNB-Aa1 | 0.001201 | -0.0001873 | -0.07208 | -0.0047 | -0.0017 | -0.0000 | -1.264 | | | | | | | | |
| SNB-Aa2 | 0.001202 | 0.0009676 | -0.07205 | 0.0038 | -0.0017 | -0.0000 | -1.264 | | | | | | | | |
| SNB-Ab1 | 0.001677 | 0.0007932 | -0.07014 | 0.0016 | -0.0019 | -0.0000 | -1.362 | | | | | | | | |
| SNB-Ab2 | 0.001677 | -0.001867 | -0.07011 | -0.0025 | -0.0019 | -0.0000 | -1.362 | | | | | | | | |
| SNB-Ac1 | 0.001143 | 2.141e-005 | -0.06813 | 0.0042 | -0.0014 | -0.0000 | -1.461 | | | | | | | | |
| SNB-Ac2 | 0.001144 | -0.001016 | -0.06809 | -0.0033 | -0.0014 | -0.0000 | -1.461 | | | | | | | | |
| SNB-Ba1 | 0.001096 | 0.000237 | -0.06819 | 0.0025 | -0.0005 | -0.0000 | -1.658 | | | | | | | | |
| SNB-Ba2 | 0.001096 | -0.001078 | -0.06815 | -0.0016 | -0.0005 | -0.0000 | -1.658 | | | | | | | | |
| SNB-Bb1 | 0.001604 | 0.001259 | -0.06225 | 0.0023 | -0.0022 | -0.0000 | -1.756 | | | | | | | | |
| SNB-Bb2 | 0.001604 | -0.002027 | -0.06221 | -0.0031 | -0.0022 | -0.0000 | -1.756 | | | | | | | | |
| SNB-Bc1 | 0.0009304 | 0.0002284 | -0.06019 | 0.0017 | -0.0001 | -0.0000 | -1.855 | | | | | | | | |
| SNB-Bc2 | 0.0009316 | -0.0009248 | -0.06015 | -0.0009 | -0.0001 | -0.0000 | -1.855 | | | | | | | | |
| SNB-Ca1 | 0.000161 | 0.0009161 | -0.05565 | 0.0156 | 0.0098 | -0.0000 | -2.084 | | | | | | | | |
| SNB-Ca2 | 0.001163 | -0.001459 | -0.05561 | -0.0163 | -0.0098 | -0.0000 | -2.084 | | | | | | | | |
| SNB-Cb1 | 0.0009397 | 0.0006789 | -0.05283 | 0.0143 | -0.0076 | -0.0000 | -2.216 | | | | | | | | |
| SNB-Cb2 | 0.0009405 | -0.001146 | -0.05279 | -0.0137 | -0.0076 | -0.0000 | -2.216 | | | | | | | | |
| SNB-Da1 | 0.0008989 | 0.0008662 | -0.04752 | 0.0104 | 0.0066 | -0.0000 | -2.477 | | | | | | | | |
| SNB-Da2 | 0.0008989 | -0.001204 | -0.04749 | -0.0109 | -0.0066 | -0.0000 | -2.477 | | | | | | | | |
| SNB-Db1 | 0.001124 | 0.001137 | -0.04465 | 0.0112 | -0.0060 | -0.0000 | -2.609 | | | | | | | | |
| SNB-Db2 | 0.001125 | -0.001655 | -0.04462 | -0.0108 | -0.0060 | -0.0000 | -2.609 | | | | | | | | |
| SNB-Ea1 | 0.001336 | 0.001909 | -0.03934 | 0.0176 | 0.0106 | -0.0000 | -2.87 | | | | | | | | |
| SNB-Ea2 | 0.001336 | -0.00211 | -0.03931 | -0.0180 | -0.0106 | -0.0000 | -2.87 | | | | | | | | |
| SNB-Eb1 | 0.0006186 | 0.0007375 | -0.03641 | 0.0191 | -0.0107 | -0.0000 | -3.002 | | | | | | | | |
| SNB-Eb2 | 0.0006191 | -0.0009039 | -0.03639 | -0.0189 | -0.0107 | -0.0000 | -3.002 | | | | | | | | |
| SNB-Fa1 | -0.0004237 | -0.0009221 | -0.02947 | 0.0121 | -0.0068 | -0.0000 | -3.331 | | | | | | | | |
| SNB-Fa2 | -0.0004221 | 0.0008256 | -0.02945 | -0.0119 | -0.0068 | -0.0000 | -3.331 | | | | | | | | |
| SNB-Ga1 | -0.0005779 | -0.001083 | -0.02125 | 0.0043 | -0.0023 | -0.0000 | -3.725 | | | | | | | | |
| SNB-Ga2 | -0.0005768 | 0.001084 | -0.02123 | -0.0043 | -0.0023 | -0.0000 | -3.725 | | | | | | | | |
| SNB-Ha1 | 8.533e-005 | 0.0001255 | -0.01299 | 0.0135 | 0.0079 | -0.0000 | -4.117 | | | | | | | | |
| SNB-Ha2 | 8.623e-005 | -0.000138 | -0.01298 | -0.0135 | -0.0079 | -0.0000 | -4.117 | | | | | | | | |
| SNB-Ia1 | 0.002089 | 0.003618 | -0.004821 | -0.0247 | 0.0143 | -0.0000 | -4.509 | | | | | | | | |
| SNB-Ia2 | 0.00209 | -0.003619 | -0.004819 | 0.0247 | 0.0143 | -0.0000 | -4.509 | | | | | | | | |

Joint Support Reactions for Load Case "DL + Ice Only":

Joint Label X Force Usage (kips) X Usage % X Comp. Usage % Uplift Result. Force Usage (kips) Force Usage % Result. Force Usage (kips) Force Usage % X-M. Moment Usage (ft-k) X-M. Usage % Y-M. Moment Usage (ft-k) Y-M. Usage % Z-M. Moment Usage (ft-k) Z-M. Usage % Max. Usage %

| Label | Load (kips) | External Y (kips) | External Z (kips) | Member X (kips) | Member Y (kips) | Member Z (kips) | Force (kips) | Disp. (ft) | X (ft) | Y (ft) | Z (ft) | | | | | |
|--------|-------------|-------------------|-------------------|-----------------|-----------------|-----------------|--------------|------------|--------|--------|--------|------|-----|-------|-----|-----|
| RohnJP | 9.78 | 0.0 | -0.00 | 0.0 | 19.65 | 0.0 | 0.0 | 21.94 | 0.0 | 0.00 | 0.0 | 4.0 | 0.0 | 0.00 | 0.0 | 0.0 |
| SNB-JP | 22.79 | 0.0 | -0.00 | 0.0 | 19.39 | 0.0 | 0.0 | 29.93 | 0.0 | 0.00 | 0.0 | 6.8 | 0.0 | 0.00 | 0.0 | 0.0 |
| RohnJ1 | -4.89 | 0.0 | -8.47 | 0.0 | 19.52 | 0.0 | 0.0 | 21.83 | 0.0 | 3.45 | 0.0 | -2.0 | 0.0 | -0.00 | 0.0 | 0.0 |
| RohnJ2 | -4.89 | 0.0 | 8.47 | 0.0 | 19.41 | 0.0 | 0.0 | 21.73 | 0.0 | -3.45 | 0.0 | -2.0 | 0.0 | 0.00 | 0.0 | 0.0 |
| SNB-J1 | -11.39 | 0.0 | -19.74 | 0.0 | 19.28 | 0.0 | 0.0 | 29.86 | 0.0 | 5.89 | 0.0 | -3.4 | 0.0 | -0.00 | 0.0 | 0.0 |
| SNB-J2 | -11.40 | 0.0 | 19.74 | 0.0 | 19.18 | 0.0 | 0.0 | 29.79 | 0.0 | -5.89 | 0.0 | -3.4 | 0.0 | 0.00 | 0.0 | 0.0 |

Joint Displacements, Loads and Member Forces on Joints for Load Case "DL + Ice Only":

| Label | Load (kips) | External Y (kips) | External Z (kips) | Member X (kips) | Member Y (kips) | Member Z (kips) | Force (kips) | Disp. (ft) | X (ft) | Y (ft) | Z (ft) |
|--------|-------------|-------------------|-------------------|-----------------|-----------------|-----------------|--------------|------------|---------|--------|--------|
| RohnAF | 0.0000 | 0.0000 | 0.0000 | -0.5168 | -0.0000 | 0.5168 | -0.0013 | -0.0006 | -0.0771 | 0.0000 | 0.0000 |
| RohnBP | 0.0000 | 0.0000 | -0.7107 | 0.0000 | 0.0000 | 0.7107 | -0.0018 | -0.0005 | -0.0691 | 0.0000 | 0.0000 |
| RohnCP | 0.0000 | 0.0000 | -0.5960 | 0.0000 | -0.0000 | 0.5960 | -0.0028 | -0.0003 | -0.0610 | 0.0000 | 0.0000 |
| RohnDP | 0.0000 | 0.0000 | -1.5259 | 0.0000 | -0.0000 | 1.5259 | -0.0036 | -0.0002 | -0.0528 | 0.0000 | 0.0000 |
| RohnEP | 0.0000 | 0.0000 | -0.8302 | 0.0000 | -0.0000 | 0.8302 | -0.0036 | -0.0001 | -0.0441 | 0.0000 | 0.0000 |
| RohnFP | 0.0000 | 0.0000 | -1.1116 | 0.0000 | -0.0000 | 1.1116 | -0.0058 | -0.0001 | -0.0355 | 0.0000 | 0.0000 |
| RohnGP | 0.0000 | 0.0000 | -1.3426 | 0.0000 | -0.0000 | 1.3426 | -0.0077 | -0.0000 | -0.0267 | 0.0000 | 0.0000 |
| RohnHP | 0.0000 | 0.0000 | -1.4805 | 0.0000 | -0.0000 | 1.4805 | -0.0078 | -0.0000 | -0.0180 | 0.0000 | 0.0000 |
| RohnIP | 0.0000 | 0.0000 | -1.7490 | 0.0000 | -0.0000 | 1.7490 | -0.0060 | -0.0000 | -0.0090 | 0.0000 | 0.0000 |
| RohnJP | 0.0000 | 0.0000 | -0.9701 | -9.7765 | 0.0006 | 18.6751 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| SNB-AP | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | -0.0005 | -0.0006 | -0.0741 | 0.0000 | 0.0000 |
| SNB-BP | 0.0000 | 0.0000 | -0.3359 | 0.0000 | -0.0000 | 0.3359 | -0.0011 | -0.0005 | -0.0662 | 0.0000 | 0.0000 |
| SNB-CP | 0.0000 | 0.0000 | -0.5256 | 0.0000 | -0.0000 | 0.5256 | -0.0020 | -0.0003 | -0.0583 | 0.0000 | 0.0000 |
| SNB-DF | 0.0000 | 0.0000 | -0.6860 | 0.0000 | -0.0000 | 0.6860 | -0.0028 | -0.0002 | -0.0503 | 0.0000 | 0.0000 |
| SNB-EP | 0.0000 | 0.0000 | -0.8302 | 0.0000 | -0.0000 | 0.8302 | -0.0028 | -0.0001 | -0.0420 | 0.0000 | 0.0000 |
| SNB-FP | 0.0000 | 0.0000 | -1.0901 | 0.0000 | -0.0000 | 1.0901 | -0.0051 | -0.0001 | -0.0340 | 0.0000 | 0.0000 |
| SNB-GP | 0.0000 | 0.0000 | -1.3426 | 0.0000 | -0.0000 | 1.3426 | -0.0069 | -0.0000 | -0.0257 | 0.0000 | 0.0000 |
| SNB-HP | 0.0000 | 0.0000 | -1.4805 | 0.0000 | -0.0000 | 1.4805 | -0.0070 | -0.0000 | -0.0173 | 0.0000 | 0.0000 |
| SNB-IP | 0.0000 | 0.0000 | -1.7290 | -0.0000 | -0.0000 | 1.7290 | -0.0052 | -0.0000 | -0.0087 | 0.0000 | 0.0000 |
| SNB-JP | 0.0000 | 0.0000 | -0.9701 | -22.7925 | 0.0016 | 18.4208 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| RohnA1 | 0.0000 | 0.0000 | -0.5676 | 0.0000 | -0.0000 | 0.5676 | 0.0022 | 0.0014 | -0.0770 | 0.0000 | 0.0000 |
| RohnA2 | 0.0000 | 0.0000 | -0.7497 | 0.0000 | -0.0000 | 0.7497 | 0.0022 | 0.0026 | -0.0770 | 0.0000 | 0.0000 |
| RohnB1 | 0.0000 | 0.0000 | -0.4807 | 0.0000 | -0.0000 | 0.4807 | 0.0021 | 0.0018 | -0.0690 | 0.0000 | 0.0000 |
| RohnB2 | 0.0000 | 0.0000 | -0.4207 | 0.0000 | -0.0000 | 0.4207 | 0.0021 | 0.0027 | -0.0690 | 0.0000 | 0.0000 |
| RohnC1 | 0.0000 | 0.0000 | -0.9160 | 0.0000 | -0.0000 | 0.9160 | 0.0022 | 0.0026 | -0.0609 | 0.0000 | 0.0000 |
| RohnC2 | 0.0000 | 0.0000 | -0.5960 | 0.0000 | -0.0000 | 0.5960 | 0.0022 | -0.0032 | -0.0609 | 0.0000 | 0.0000 |
| RohnD1 | 0.0000 | 0.0000 | -1.5259 | 0.0000 | -0.0000 | 1.5259 | 0.0023 | 0.0032 | -0.0527 | 0.0000 | 0.0000 |
| RohnD2 | 0.0000 | 0.0000 | -1.5259 | 0.0000 | -0.0000 | 1.5259 | 0.0023 | 0.0036 | -0.0526 | 0.0000 | 0.0000 |
| RohnE1 | 0.0000 | 0.0000 | -0.8302 | 0.0000 | -0.0000 | 0.8302 | 0.0021 | 0.0032 | -0.0440 | 0.0000 | 0.0000 |
| RohnE2 | 0.0000 | 0.0000 | -0.8302 | 0.0000 | -0.0000 | 0.8302 | 0.0021 | 0.0034 | -0.0440 | 0.0000 | 0.0000 |
| RohnF1 | 0.0000 | 0.0000 | -1.1611 | 0.0000 | -0.0000 | 1.1611 | 0.0031 | 0.0051 | -0.0355 | 0.0000 | 0.0000 |
| RohnF2 | 0.0000 | 0.0000 | -1.1116 | 0.0000 | -0.0000 | 1.1116 | 0.0031 | 0.0052 | -0.0354 | 0.0000 | 0.0000 |
| RohnG1 | 0.0000 | 0.0000 | -1.3626 | 0.0000 | -0.0000 | 1.3626 | 0.0039 | 0.0067 | -0.0267 | 0.0000 | 0.0000 |
| RohnG2 | 0.0000 | 0.0000 | -1.3626 | 0.0000 | -0.0000 | 1.3626 | 0.0039 | 0.0067 | -0.0267 | 0.0000 | 0.0000 |
| RohnH1 | 0.0000 | 0.0000 | -1.4805 | 0.0000 | -0.0000 | 1.4805 | 0.0039 | 0.0068 | -0.0180 | 0.0000 | 0.0000 |
| RohnH2 | 0.0000 | 0.0000 | -1.4805 | 0.0000 | -0.0000 | 1.4805 | 0.0039 | 0.0068 | -0.0179 | 0.0000 | 0.0000 |
| RohnI1 | 0.0000 | 0.0000 | -1.7290 | 0.0000 | -0.0000 | 1.7290 | 0.0030 | 0.0052 | -0.0090 | 0.0000 | 0.0000 |
| RohnI2 | 0.0000 | 0.0000 | -1.7290 | 0.0000 | -0.0000 | 1.7290 | 0.0030 | 0.0052 | -0.0090 | 0.0000 | 0.0000 |
| RohnJ1 | 0.0000 | 0.0000 | -0.9701 | 4.8887 | 8.4702 | 18.5504 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| RohnJ2 | 0.0000 | 0.0000 | -0.9701 | 4.8908 | -8.4726 | 18.4359 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| SNB-A1 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0018 | 0.0007 | -0.0741 | 0.0000 | 0.0000 |
| SNB-A2 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0018 | 0.0019 | -0.0740 | 0.0000 | 0.0000 |
| SNB-B1 | 0.0000 | 0.0000 | -0.3359 | 0.0000 | -0.0000 | 0.3359 | 0.0017 | 0.0011 | -0.0662 | 0.0000 | 0.0000 |
| SNB-B2 | 0.0000 | 0.0000 | -0.3359 | 0.0000 | -0.0000 | 0.3359 | 0.0017 | 0.0021 | -0.0662 | 0.0000 | 0.0000 |
| SNB-C1 | 0.0000 | 0.0000 | -0.5256 | 0.0000 | -0.0000 | 0.5256 | 0.0018 | 0.0019 | -0.0583 | 0.0000 | 0.0000 |
| SNB-C2 | 0.0000 | 0.0000 | -0.5256 | 0.0000 | -0.0000 | 0.5256 | 0.0018 | 0.0025 | -0.0582 | 0.0000 | 0.0000 |
| SNB-D1 | 0.0000 | 0.0000 | -0.6860 | 0.0000 | -0.0000 | 0.6860 | 0.0019 | 0.0025 | -0.0503 | 0.0000 | 0.0000 |
| SNB-D2 | 0.0000 | 0.0000 | -0.6860 | 0.0000 | -0.0000 | 0.6860 | 0.0019 | 0.0029 | -0.0502 | 0.0000 | 0.0000 |
| SNB-E1 | 0.0000 | 0.0000 | -0.8302 | 0.0000 | -0.0000 | 0.8302 | 0.0017 | 0.0025 | -0.0420 | 0.0000 | 0.0000 |
| SNB-E2 | 0.0000 | 0.0000 | -0.8302 | 0.0000 | -0.0000 | 0.8302 | 0.0017 | 0.0027 | -0.0420 | 0.0000 | 0.0000 |
| SNB-F1 | 0.0000 | 0.0000 | -1.0901 | 0.0000 | -0.0000 | 1.0901 | 0.0027 | 0.0044 | -0.0340 | 0.0000 | 0.0000 |

| | | | | | | | | | |
|------------|--------|--------|---------|----------|----------|--------|---------|---------|---------|
| SNB-F2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.0901 | 0.0027 | -0.0045 | -0.0339 |
| SNB-G1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.3426 | 0.0035 | 0.0060 | -0.0257 |
| SNB-G2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.3426 | 0.0035 | -0.0061 | -0.0257 |
| SNB-H1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.4805 | 0.0035 | 0.0061 | -0.0173 |
| SNB-H2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.4805 | 0.0035 | -0.0061 | -0.0173 |
| SNB-I1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.7290 | 0.0026 | 0.0045 | -0.0087 |
| SNB-I2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.7290 | 0.0026 | -0.0045 | -0.0087 |
| SNB-J1 | 0.0000 | 0.0000 | 11.3940 | 18.7412 | -18.3146 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| SNB-J2 | 0.0000 | 0.0000 | 11.3956 | -19.7409 | -19.2106 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| RohnAas | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.3652 | -0.0003 | -0.0006 | -0.0751 |
| RohnAbs | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.1602 | 0.0014 | -0.0005 | -0.0731 |
| RohnAcs | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.1552 | -0.0005 | -0.0005 | -0.0711 |
| RohnBas | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.2007 | 0.0008 | -0.0004 | -0.0671 |
| RohnBbs | 0.0000 | 0.0000 | -1.1757 | 0.0000 | -0.0000 | 1.1757 | -0.0020 | -0.0004 | -0.0651 |
| RohnBcs | 0.0000 | 0.0000 | -0.4457 | 0.0000 | -0.0000 | 0.4457 | -0.0008 | -0.0003 | -0.0630 |
| RohnCas | 0.0000 | 0.0000 | -1.2307 | 0.0000 | -0.0000 | 1.2307 | -0.0017 | -0.0003 | -0.0583 |
| RohnCbs | 0.0000 | 0.0000 | 0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0014 | -0.0002 | -0.0554 |
| RohnDas | 0.0000 | 0.0000 | -0.6061 | 0.0000 | -0.0000 | 0.6061 | -0.0017 | -0.0002 | -0.0499 |
| RohnDbs | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | -0.0023 | -0.0001 | -0.0469 |
| RohnEas | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | -0.0029 | -0.0001 | -0.0412 |
| RohnEbs | 0.0000 | 0.0000 | -0.5442 | 0.0000 | -0.0000 | 0.5442 | -0.0016 | -0.0001 | -0.0382 |
| RohnFas | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | 0.0003 | -0.0000 | -0.0308 |
| RohnFbs | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | 0.0005 | -0.0000 | -0.0220 |
| RohnHas | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | -0.0009 | -0.0000 | -0.0134 |
| RohnIas | 0.0000 | 0.0000 | -0.9701 | 0.0000 | -0.0000 | 0.9701 | -0.0050 | -0.0000 | -0.0047 |
| RohnIbs | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0005 | -0.0006 | -0.0721 |
| SNB-Abs | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | -0.0006 | -0.0005 | -0.0702 |
| SNB-Acs | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0002 | -0.0005 | -0.0692 |
| SNB-Bas | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | -0.0000 | -0.0004 | -0.0642 |
| SNB-Bbs | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0012 | -0.0004 | -0.0623 |
| SNB-Bcs | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | -0.0001 | -0.0003 | -0.0602 |
| SNB-Cas | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | -0.0009 | -0.0003 | -0.0557 |
| SNB-Cbs | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0006 | -0.0002 | -0.0529 |
| SNB-Das | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | -0.0009 | -0.0002 | -0.0476 |
| SNB-Dbs | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0015 | -0.0001 | -0.0447 |
| SNB-Eas | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | -0.0021 | -0.0001 | -0.0394 |
| SNB-Ebs | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0008 | -0.0001 | -0.0364 |
| SNB-Fas | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | 0.0011 | -0.0000 | -0.0295 |
| SNB-Gas | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | 0.0013 | -0.0000 | -0.0213 |
| SNB-Has | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | -0.0001 | -0.0000 | -0.0130 |
| SNB-Ias | 0.0000 | 0.0000 | -0.9701 | 0.0000 | -0.0000 | 0.9701 | -0.0042 | 0.0000 | -0.0048 |
| SNB-WL-A1S | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0008 | -0.0002 | -0.1220 |
| SNB-WL-A2S | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0015 | -0.0006 | -0.1220 |
| SNB-WL-A3S | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0008 | -0.0010 | -0.1220 |
| SNB-WL-B1S | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0005 | 0.0001 | -0.1236 |
| SNB-WL-B2S | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0014 | -0.0005 | -0.1236 |
| SNB-WL-B3S | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0005 | -0.0010 | -0.1236 |
| SNB-WL-C1S | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0002 | -0.0003 | -0.1405 |
| SNB-WL-C2S | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0013 | -0.0003 | -0.1405 |
| SNB-WL-C3S | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0002 | -0.0010 | -0.1405 |
| SNB-WL-D1S | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | -0.0001 | -0.0006 | -0.1558 |
| SNB-WL-D2S | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0013 | -0.0002 | -0.1558 |
| SNB-WL-D3S | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | -0.0001 | -0.0010 | -0.1558 |
| SNB-WL-E1S | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | -0.0003 | -0.0008 | -0.1388 |
| SNB-WL-E2S | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0013 | -0.0001 | -0.1388 |
| SNB-WL-E3S | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | -0.0003 | -0.0010 | -0.1388 |
| SNB-WL-F1S | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | -0.0005 | -0.0010 | -0.2017 |
| SNB-WL-F2S | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0013 | -0.0001 | -0.2017 |
| SNB-WL-F3S | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | -0.0005 | -0.0011 | -0.2017 |
| SNB-WL-G1S | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | -0.0006 | -0.0012 | -0.2450 |
| SNB-WL-G2S | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | 0.0014 | -0.0000 | -0.2450 |
| SNB-WL-G3S | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | -0.0006 | -0.0012 | -0.2450 |
| SNB-WL-H1S | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | -0.0007 | -0.0013 | -0.2462 |
| SNB-WL-H2S | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | 0.0016 | -0.0000 | -0.2462 |
| SNB-WL-H3S | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | -0.0007 | -0.0013 | -0.2462 |
| SNB-WL-I1S | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | -0.0008 | 0.0015 | -0.1928 |

| | | | | | | | | | |
|------------|--------|--------|---------|--------|---------|--------|---------|---------|---------|
| SNB-WL-I2S | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | 0.0017 | -0.0000 | -0.1928 |
| SNB-WL-I3S | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | -0.0008 | -0.0015 | -0.1928 |
| RohnAa1 | 0.0000 | 0.0000 | -0.2050 | 0.0000 | -0.0000 | 0.2050 | 0.0016 | 0.0005 | -0.0750 |
| RohnAa2 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0016 | 0.0016 | -0.0750 |
| RohnAb1 | 0.0000 | 0.0000 | -0.3552 | 0.0000 | -0.0000 | 0.3552 | 0.0021 | 0.0015 | -0.0731 |
| RohnAb2 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0021 | 0.0025 | -0.0730 |
| RohnAc1 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0015 | 0.0007 | -0.0710 |
| RohnAc2 | 0.0000 | 0.0000 | -0.2277 | 0.0000 | -0.0000 | 0.2277 | 0.0015 | 0.0017 | -0.0709 |
| RohnBa1 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0015 | 0.0009 | -0.0670 |
| RohnBa2 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0015 | -0.0018 | -0.0669 |
| RohnBb1 | 0.0000 | 0.0000 | -1.1557 | 0.0000 | -0.0000 | 1.1557 | 0.0020 | 0.0019 | -0.0650 |
| RohnBb2 | 0.0000 | 0.0000 | -1.1557 | 0.0000 | -0.0000 | 1.1557 | 0.0020 | 0.0027 | -0.0649 |
| RohnBc1 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0013 | 0.0009 | -0.0629 |
| RohnBc2 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0013 | 0.0016 | -0.0628 |
| RohnCa1 | 0.0000 | 0.0000 | -1.2307 | 0.0000 | -0.0000 | 1.2307 | 0.0016 | 0.0016 | -0.0582 |
| RohnCa2 | 0.0000 | 0.0000 | -1.3037 | 0.0000 | -0.0000 | 1.3037 | 0.0016 | -0.0021 | -0.0581 |
| RohnCb1 | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0013 | 0.0014 | -0.0554 |
| RohnCb2 | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0013 | 0.0018 | -0.0553 |
| RohnDa1 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0013 | 0.0015 | -0.0498 |
| RohnDa2 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0013 | 0.0019 | -0.0497 |
| RohnDb1 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0015 | 0.0020 | -0.0468 |
| RohnDb2 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0015 | 0.0023 | -0.0468 |
| RohnEa1 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0017 | 0.0026 | -0.0412 |
| RohnEa2 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0017 | 0.0028 | -0.0411 |
| RohnEb1 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0010 | 0.0014 | -0.0382 |
| RohnEb2 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0010 | 0.0016 | -0.0381 |
| RohnFa1 | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | -0.0000 | 0.0002 | -0.0308 |
| RohnFa2 | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | -0.0000 | 0.0001 | -0.0307 |
| RohnGa1 | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | -0.0002 | -0.0004 | -0.0220 |
| RohnGa2 | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | -0.0002 | 0.0004 | -0.0220 |
| RohnHa1 | 0.0000 | 0.0000 | -0.7589 | 0.0000 | 0.0000 | 0.7589 | 0.0005 | 0.0008 | -0.0133 |
| RohnHa2 | 0.0000 | 0.0000 | -0.7589 | 0.0000 | 0.0000 | 0.7589 | 0.0005 | 0.0008 | -0.0133 |
| RohnIa1 | 0.0000 | 0.0000 | -0.9701 | 0.0000 | 0.0000 | 0.9701 | 0.0025 | 0.0043 | -0.0047 |
| RohnIa2 | 0.0000 | 0.0000 | -0.9701 | 0.0000 | 0.0000 | 0.9701 | 0.0025 | 0.0043 | -0.0047 |
| RohnIb1 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0012 | 0.0002 | -0.0721 |
| RohnIb2 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0012 | 0.0010 | -0.0720 |
| SNB-Ab1 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0017 | 0.0008 | -0.0701 |
| SNB-Ab2 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0017 | 0.0019 | -0.0701 |
| SNB-Ac1 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0011 | 0.0000 | -0.0681 |
| SNB-Ac2 | 0.0000 | 0.0000 | -0.1352 | 0.0000 | -0.0000 | 0.1352 | 0.0011 | 0.0010 | -0.0681 |
| SNB-Ba1 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0011 | 0.0002 | -0.0642 |
| SNB-Ba2 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0011 | 0.0011 | -0.0642 |
| SNB-Bb1 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0016 | 0.0011 | -0.0622 |
| SNB-Bb2 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0016 | 0.0020 | -0.0622 |
| SNB-Bc1 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0009 | 0.0002 | -0.0602 |
| SNB-Bc2 | 0.0000 | 0.0000 | -0.2007 | 0.0000 | -0.0000 | 0.2007 | 0.0009 | 0.0009 | -0.0601 |
| SNB-Ca1 | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0012 | 0.0009 | -0.0556 |
| SNB-Ca2 | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0012 | 0.0015 | -0.0556 |
| SNB-Cb1 | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0009 | 0.0007 | -0.0528 |
| SNB-Cb2 | 0.0000 | 0.0000 | -0.3250 | 0.0000 | -0.0000 | 0.3250 | 0.0009 | 0.0011 | -0.0528 |
| SNB-Da1 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0009 | 0.0009 | -0.0475 |
| SNB-Da2 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0009 | 0.0012 | -0.0475 |
| SNB-db1 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0011 | 0.0014 | -0.0447 |
| SNB-db2 | 0.0000 | 0.0000 | -0.3611 | 0.0000 | -0.0000 | 0.3611 | 0.0011 | 0.0017 | -0.0446 |
| SNB-Ea1 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0013 | 0.0019 | -0.0393 |
| SNB-Ea2 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0013 | 0.0021 | -0.0393 |
| SNB-Eb1 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0006 | 0.0007 | -0.0364 |
| SNB-Eb2 | 0.0000 | 0.0000 | -0.4692 | 0.0000 | -0.0000 | 0.4692 | 0.0006 | 0.0009 | -0.0364 |
| SNB-Fa1 | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | -0.0004 | 0.0009 | -0.0295 |
| SNB-Fa2 | 0.0000 | 0.0000 | -0.6209 | 0.0000 | -0.0000 | 0.6209 | -0.0004 | 0.0008 | -0.0294 |
| SNB-Ga1 | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | -0.0006 | 0.0011 | -0.0212 |
| SNB-Ga2 | 0.0000 | 0.0000 | -0.7217 | 0.0000 | -0.0000 | 0.7217 | -0.0006 | 0.0010 | -0.0212 |
| SNB-Ha1 | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | 0.0001 | 0.0001 | -0.0130 |
| SNB-Ha2 | 0.0000 | 0.0000 | -0.7589 | 0.0000 | -0.0000 | 0.7589 | 0.0001 | 0.0001 | -0.0130 |
| SNB-Ia1 | 0.0000 | 0.0000 | -0.9701 | 0.0000 | -0.0000 | 0.9701 | 0.0021 | 0.0036 | -0.0048 |
| SNB-Ia2 | 0.0000 | 0.0000 | -0.9701 | 0.0000 | -0.0000 | 0.9701 | 0.0021 | 0.0036 | -0.0048 |

Moments for Angles Modeled as Beams:

| Angle Torsion Label | Origin X Moment (ft-lbs) | Origin Y Moment (ft-lbs) | Origin X Moment (ft-lbs) | End X Moment (ft-lbs) | End Y Moment (ft-lbs) | End X Shear (lbs) | End Y Shear (lbs) |
|---------------------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|
| Rohn-LA1P | 0.00 | 0.00 | 0.00 | -0.57 | -138.26 | -0.11 | -27.64 |
| Rohn-LA1 | 0.00 | 0.00 | -0.00 | -120.24 | 68.71 | -24.04 | 13.74 |
| Rohn-LA12 | 0.00 | 0.00 | -0.00 | 119.85 | 69.15 | 23.96 | 13.82 |
| Rohn-LA2P | 0.00 | 0.57 | 138.26 | 0.29 | 175.24 | 0.17 | 62.68 |
| Rohn-LA21 | 0.00 | 120.24 | -68.71 | 152.26 | -87.18 | 54.48 | -31.17 |
| Rohn-LA22 | 0.00 | -119.85 | 69.15 | -151.98 | -87.35 | -54.35 | -31.29 |
| Rohn-LA3P | 0.00 | -0.29 | -175.24 | 0.17 | -207.51 | -0.02 | -76.52 |
| Rohn-LA3 | 0.00 | 152.26 | 87.18 | -179.92 | 103.54 | -66.41 | 38.13 |
| Rohn-LA32 | 0.00 | 151.98 | 87.35 | 179.95 | 103.37 | 66.36 | 38.13 |
| Rohn-LA4P | 0.00 | -0.17 | 207.51 | -0.19 | 273.11 | -0.07 | 96.09 |
| Rohn-LA4 | 0.00 | 179.92 | -103.54 | 236.48 | -136.51 | 83.25 | -47.99 |
| Rohn-LA42 | 0.00 | -179.95 | 103.37 | -236.42 | -136.26 | -83.24 | -47.91 |
| Rohn-LB1P | 0.00 | 0.19 | -273.11 | 0.23 | -396.02 | 0.08 | -133.78 |
| Rohn-LB1 | 0.00 | 236.47 | 136.52 | -342.82 | 198.69 | -115.82 | 67.02 |
| Rohn-LB12 | 0.00 | 236.41 | 136.26 | 342.95 | 198.50 | 115.83 | 66.93 |
| Rohn-LB2P | 0.00 | -0.23 | 396.02 | 0.11 | 460.41 | -0.02 | 171.22 |
| Rohn-LB2 | 0.00 | 342.82 | -198.69 | 398.64 | -230.17 | 148.24 | -85.74 |
| Rohn-LB22 | 0.00 | 342.95 | -198.50 | -398.34 | -230.12 | -148.20 | -85.69 |
| Rohn-LB3P | 0.00 | -0.11 | -460.41 | 0.20 | -535.03 | -0.06 | -199.02 |
| Rohn-LB3 | 0.00 | 398.64 | 230.17 | -463.95 | 267.74 | -172.45 | 99.55 |
| Rohn-LB32 | 0.00 | 398.34 | 230.13 | 463.61 | 267.77 | 172.33 | 99.54 |
| Rohn-LB4P | 0.00 | 0.20 | 535.03 | 0.21 | 485.83 | 0.08 | 204.10 |
| Rohn-LB4 | 0.00 | 463.95 | -267.74 | 421.35 | -242.17 | 177.00 | -101.94 |
| Rohn-LB42 | 0.00 | -463.61 | -267.77 | -420.43 | -241.89 | -176.74 | -101.89 |
| Rohn-LC1P | 0.00 | -0.21 | -485.83 | 0.88 | -110.83 | 0.10 | -89.55 |
| Rohn-LC1 | 0.00 | 421.35 | 282.18 | -96.27 | 55.84 | -77.69 | 44.73 |
| Rohn-LC12 | 0.00 | 420.43 | 281.89 | 96.84 | 55.15 | 77.64 | 44.58 |
| Rohn-LC2P | 0.00 | -0.88 | 110.83 | -0.22 | -377.82 | -0.16 | -39.96 |
| Rohn-LC2 | 0.00 | 96.27 | -55.84 | -326.98 | 189.38 | -34.52 | 19.98 |
| Rohn-LC22 | 0.00 | -96.84 | -55.15 | 327.36 | 189.85 | 34.50 | 20.16 |
| Rohn-LC3P | 0.00 | 0.22 | 377.82 | 0.36 | 657.61 | 0.09 | 155.41 |
| Rohn-LC3 | 0.00 | 326.98 | -189.37 | 569.32 | -329.01 | 134.53 | -77.81 |
| Rohn-LC32 | 0.00 | -327.36 | -189.85 | -568.83 | -329.13 | -134.51 | -77.90 |
| Rohn-LD1P | 0.00 | -0.36 | -657.61 | 0.49 | -465.70 | 0.02 | -168.61 |
| Rohn-LD1 | 0.00 | 569.32 | 329.01 | -403.57 | 234.26 | -146.03 | 84.55 |
| Rohn-LD12 | 0.00 | 568.83 | 329.14 | 404.46 | 234.21 | 146.09 | 84.56 |
| Rohn-LD2P | 0.00 | -0.49 | 465.70 | 0.25 | -16.00 | -0.04 | 67.30 |
| Rohn-LD2 | 0.00 | 403.57 | -234.26 | -13.54 | 8.93 | 58.37 | -33.72 |
| Rohn-LD22 | 0.00 | -404.46 | 234.20 | 13.99 | 8.90 | -58.43 | -33.72 |
| Rohn-LD3P | 0.00 | 0.25 | 16.00 | 0.23 | 177.05 | -0.00 | 28.98 |
| Rohn-LD3 | 0.00 | 13.54 | -8.93 | 152.64 | -87.95 | 24.94 | -14.54 |
| Rohn-LD32 | 0.00 | -13.99 | -8.90 | -151.99 | -87.84 | -24.91 | -14.52 |
| Rohn-LE1P | 0.00 | -0.23 | -177.05 | 0.31 | 463.44 | 0.01 | 42.99 |
| Rohn-LE1 | 0.00 | 152.64 | 87.95 | 401.46 | -231.11 | 37.35 | -21.49 |
| Rohn-LE12 | 0.00 | 151.99 | 87.84 | -401.05 | -231.22 | -37.38 | -21.52 |
| Rohn-LE2P | 0.00 | 0.31 | -463.44 | 0.15 | -1603.40 | -0.02 | -309.30 |
| Rohn-LE2 | 0.00 | -401.46 | 231.11 | -1388.72 | 802.70 | -267.90 | 154.71 |
| Rohn-LE22 | 0.00 | 401.04 | 231.22 | 1389.09 | 802.75 | 267.90 | 154.73 |
| Rohn-LE3P | 0.00 | -0.15 | 1603.40 | 0.02 | 2404.82 | -0.02 | 601.63 |
| Rohn-LE3 | 0.00 | 1388.74 | -802.68 | 2082.00 | -1202.61 | 520.95 | -300.99 |
| Rohn-LE32 | 0.00 | -1389.10 | -802.73 | -2081.49 | -1202.35 | -520.93 | -300.96 |
| Rohn-LF1P | 0.00 | -0.02 | -2404.82 | 0.75 | -2863.30 | 0.07 | -526.64 |
| Rohn-LF1 | 0.00 | 2081.97 | 1202.66 | -2478.91 | 1433.85 | -455.94 | 263.56 |
| Rohn-LF12 | 0.00 | 2081.47 | 1202.39 | 2479.55 | 1433.35 | 455.95 | 263.49 |
| Rohn-LF2P | 0.00 | -0.75 | 2863.30 | -0.09 | 3515.30 | -0.08 | 637.65 |
| Rohn-LF2 | 0.00 | 2478.95 | -1433.79 | 3043.25 | -1758.37 | 552.04 | -319.11 |
| Rohn-LF22 | 0.00 | -2479.59 | -1433.30 | -3042.74 | -1757.96 | -552.05 | -319.02 |
| Rohn-LG1P | 0.00 | 0.09 | -3515.30 | 0.47 | -4055.27 | 0.06 | -756.80 |
| Rohn-LG1 | 0.00 | -3043.21 | 1758.45 | -3511.13 | 2029.74 | -655.21 | 378.69 |

| | | | | | | | |
|-----------|-------|----------|----------|----------|----------|---------|---------|
| Rohn-LG12 | 0.00 | 3042.69 | 1758.05 | 3511.62 | 2029.48 | 655.21 | 378.62 |
| Rohn-LG2P | -0.00 | -0.47 | 4055.27 | 0.03 | 3825.23 | -0.04 | 787.79 |
| Rohn-LG21 | 0.00 | 3511.18 | -2029.64 | 3311.73 | -1913.31 | 682.06 | -394.16 |
| Rohn-LG22 | -0.00 | -3511.67 | -2029.38 | -3311.23 | -1913.05 | -682.06 | -394.11 |
| Rohn-LH1P | 0.00 | -0.03 | 3825.23 | 0.42 | -3059.51 | 0.04 | -688.24 |
| Rohn-LH11 | -0.00 | -3311.67 | 1913.40 | -2648.85 | 1531.48 | -595.85 | 344.37 |
| Rohn-LH12 | 0.00 | 3311.18 | 1913.15 | 2649.23 | 1531.22 | 595.84 | 344.32 |
| Rohn-LH2P | -0.00 | -0.42 | 3059.51 | -0.02 | 1951.47 | -0.04 | 500.94 |
| Rohn-LH21 | 0.00 | 2648.88 | -1531.43 | 1689.17 | -976.03 | 433.66 | -250.66 |
| Rohn-LH22 | -0.00 | -2649.27 | -1531.16 | -1688.68 | -975.73 | -433.65 | -250.61 |
| Rohn-LI1P | 0.00 | 0.02 | 1951.47 | 0.81 | 1697.33 | 0.08 | -25.41 |
| Rohn-LI11 | -0.00 | -1689.16 | 976.05 | 1470.15 | -847.46 | -21.89 | 12.85 |
| Rohn-LI12 | 0.00 | 1688.67 | 975.75 | -1469.40 | -847.95 | 21.92 | 12.78 |
| Rohn-LI2P | 0.00 | -0.81 | -1697.33 | -0.48 | -3982.75 | -0.13 | -567.82 |
| Rohn-LI21 | -0.00 | -1470.15 | 847.47 | -3449.37 | 1991.84 | -491.79 | 283.84 |
| Rohn-LI22 | 0.00 | 1469.39 | 847.96 | 3449.47 | 1992.45 | 491.73 | 283.95 |
| SNB-LA1P | 0.00 | 0.00 | 0.00 | 0.12 | -187.99 | 0.02 | -37.58 |
| SNB-LA11 | -0.00 | 0.00 | -0.00 | -163.06 | 94.10 | -32.60 | 18.81 |
| SNB-LA12 | 0.00 | -0.00 | 0.00 | 162.98 | 93.91 | 32.58 | 18.77 |
| SNB-LA2P | 0.00 | -0.12 | 187.99 | -0.16 | 238.97 | -0.06 | 85.36 |
| SNB-LA21 | -0.00 | 163.06 | -94.10 | 207.16 | -119.63 | 74.01 | -42.73 |
| SNB-LA22 | 0.00 | -162.98 | -93.91 | -207.09 | -119.40 | -73.99 | -42.65 |
| SNB-LA3P | 0.00 | 0.16 | -238.97 | 0.22 | -285.66 | 0.08 | -104.89 |
| SNB-LA31 | -0.00 | -207.16 | 119.63 | -247.38 | 143.06 | -90.87 | 52.52 |
| SNB-LA32 | 0.00 | 207.09 | 119.40 | 247.44 | 142.84 | 90.87 | 52.43 |
| SNB-LA4P | -0.00 | -0.22 | 285.66 | -0.12 | 385.24 | -0.07 | 134.13 |
| SNB-LA41 | 0.00 | 247.38 | -143.06 | 333.51 | -192.73 | 116.13 | -67.13 |
| SNB-LA42 | 0.00 | -247.44 | -142.84 | -333.36 | -192.51 | -116.12 | -67.04 |
| SNB-LB1P | 0.00 | 0.12 | -385.24 | 0.32 | -600.49 | 0.09 | -197.07 |
| SNB-LB11 | -0.00 | 333.50 | 192.73 | -520.03 | 300.95 | -170.64 | 98.70 |
| SNB-LB12 | 0.00 | -333.36 | 192.51 | 520.23 | 300.70 | 170.65 | 98.60 |
| SNB-LB2P | -0.00 | -0.32 | 600.49 | -0.21 | 697.27 | -0.11 | 259.45 |
| SNB-LB21 | 0.00 | 520.03 | -300.95 | 603.71 | -348.54 | 224.66 | -129.85 |
| SNB-LB22 | -0.00 | -520.23 | -300.69 | -603.46 | -348.15 | -224.65 | -129.72 |
| SNB-LB3P | 0.00 | 0.21 | -697.27 | 0.51 | -777.37 | 0.14 | -294.82 |
| SNB-LB31 | -0.00 | 603.71 | 348.54 | -673.64 | 389.77 | -255.37 | 147.61 |
| SNB-LB32 | 0.00 | -603.46 | 348.16 | 673.62 | 389.17 | 255.32 | 147.41 |
| SNB-LB4P | -0.00 | -0.51 | 777.37 | -0.10 | 557.87 | -0.12 | 266.95 |
| SNB-LB41 | 0.00 | 673.64 | -389.76 | 483.26 | -278.92 | 231.29 | -133.69 |
| SNB-LB42 | -0.00 | -673.63 | -389.16 | -482.41 | -278.32 | -231.12 | -133.44 |
| SNB-LC1P | 0.00 | 0.10 | -557.87 | 0.52 | -128.46 | 0.09 | -103.01 |
| SNB-LC11 | -0.00 | 483.25 | 278.93 | -111.31 | 64.89 | -89.24 | 51.60 |
| SNB-LC12 | 0.00 | -482.40 | 278.32 | 111.64 | 64.48 | 89.16 | 51.45 |
| SNB-LC2P | 0.00 | -0.52 | 128.46 | 0.05 | -327.09 | -0.07 | -29.72 |
| SNB-LC21 | -0.00 | 111.31 | -64.89 | -283.14 | 163.82 | -25.71 | 14.81 |
| SNB-LC22 | 0.00 | -111.64 | -64.48 | 283.59 | 164.03 | 25.73 | 14.90 |
| SNB-LC3P | -0.00 | -0.05 | 327.09 | 0.33 | 614.46 | 0.04 | 141.32 |
| SNB-LC31 | 0.00 | 283.14 | -163.82 | 532.22 | -306.96 | 122.38 | -70.66 |
| SNB-LC32 | -0.00 | -283.59 | -164.03 | -531.77 | -307.08 | -122.38 | -70.71 |
| SNB-LD1P | 0.00 | -0.33 | 614.46 | 0.25 | -473.43 | -0.01 | -163.29 |
| SNB-LD11 | -0.00 | 532.21 | 306.96 | -410.61 | 237.60 | -141.51 | 81.74 |
| SNB-LD12 | 0.00 | 531.76 | 307.08 | 411.46 | 237.80 | 141.57 | 81.78 |
| SNB-LD2P | -0.00 | -0.25 | 473.43 | 0.62 | -40.43 | 0.06 | 64.80 |
| SNB-LD21 | 0.00 | 410.61 | -237.59 | -34.44 | 21.53 | 56.29 | -32.33 |
| SNB-LD22 | -0.00 | -411.46 | -237.80 | 35.06 | 21.17 | -56.33 | -32.42 |
| SNB-LD3P | 0.00 | -0.62 | 40.43 | 0.05 | 253.83 | -0.09 | 44.17 |
| SNB-LD31 | 0.00 | 34.44 | -21.53 | 218.77 | -126.34 | 38.01 | -22.20 |
| SNB-LD32 | -0.00 | -35.06 | -21.17 | -218.01 | -125.96 | -37.99 | -22.08 |
| SNB-LE1P | 0.00 | -0.05 | -253.83 | 0.63 | 946.05 | 0.09 | 103.90 |
| SNB-LE11 | -0.00 | -218.77 | 126.34 | 819.42 | -471.60 | 90.15 | -51.82 |
| SNB-LE12 | 0.00 | 218.01 | 125.97 | -818.45 | -471.77 | -90.12 | -51.90 |
| SNB-LE2P | 0.00 | -0.63 | 946.05 | 0.43 | -3154.16 | -0.03 | -613.59 |
| SNB-LE21 | -0.00 | -819.41 | 471.60 | -2731.81 | 1579.22 | -531.44 | 306.90 |
| SNB-LE22 | 0.00 | 818.45 | 471.77 | 2732.67 | 1579.21 | 531.42 | 306.93 |
| SNB-LE3P | -0.00 | -0.43 | 3154.16 | 0.16 | 4271.37 | -0.04 | 1114.52 |
| SNB-LE31 | 0.00 | 2731.83 | -1579.18 | 3697.98 | -2135.95 | 965.07 | -557.61 |

| | | | | | | | |
|----------|-------|----------|----------|----------|----------|----------|----------|
| SNB-LB32 | -0.00 | -2732.69 | -1579.17 | -3697.04 | -2135.60 | -965.06 | -557.56 |
| SNB-LF1P | 0.00 | -0.16 | -4271.37 | 0.89 | -4731.78 | 0.07 | -900.00 |
| SNB-LF11 | -0.00 | -3697.94 | 2136.03 | -4096.67 | 2369.04 | -779.19 | 450.35 |
| SNB-LF12 | 0.00 | 3696.99 | 2135.68 | 4097.45 | 2368.47 | 779.17 | 450.26 |
| SNB-LF2P | -0.00 | -0.89 | 4731.78 | -0.06 | 6296.05 | -0.10 | 1102.38 |
| SNB-LF21 | 0.00 | 4096.73 | -2368.94 | 5450.59 | -3149.26 | 954.38 | -551.62 |
| SNB-LF22 | -0.00 | -4097.51 | -2368.37 | -5449.60 | -3148.62 | -954.36 | -551.50 |
| SNB-LG1P | 0.00 | 0.06 | -6296.05 | 1.26 | -8979.69 | 0.13 | -1527.02 |
| SNB-LG11 | -0.00 | -5450.50 | 3149.41 | -7774.61 | 4495.08 | -1322.03 | 764.17 |
| SNB-LG12 | 0.00 | 5449.52 | -3148.77 | 7775.92 | -4494.38 | 1322.07 | -764.04 |
| SNB-LG2P | -0.00 | -1.26 | 8979.69 | -0.03 | 8812.56 | -0.13 | 1778.61 |
| SNB-LG21 | 0.00 | 7774.73 | -4494.86 | 7629.41 | -4408.13 | 1539.88 | -889.99 |
| SNB-LG22 | -0.00 | -7776.04 | -4494.17 | -7628.31 | -4407.46 | -1539.90 | -889.85 |
| SNB-LH1P | 0.00 | 0.03 | -8812.56 | 1.10 | -7113.52 | 0.11 | -1592.02 |
| SNB-LH11 | -0.00 | -7629.29 | 4408.33 | -6158.59 | 5561.04 | -1378.28 | 796.64 |
| SNB-LH12 | 0.00 | 7628.19 | -4407.66 | 6159.57 | -5560.34 | 1378.27 | -796.51 |
| SNB-LH2P | -0.00 | -1.10 | 7113.52 | -0.22 | 4530.96 | -0.13 | 1164.07 |
| SNB-LH21 | 0.00 | 6158.66 | -3560.91 | 3921.80 | -2266.46 | 1007.71 | -582.55 |
| SNB-LH22 | -0.00 | -6159.64 | -3560.21 | -3920.79 | -2265.62 | -1007.71 | -582.39 |
| SNB-LI1P | 0.00 | 0.22 | -4530.96 | 1.83 | 2554.67 | 0.20 | -197.55 |
| SNB-LI11 | -0.00 | -3921.78 | 2266.50 | 2213.12 | -1274.46 | -170.80 | 99.17 |
| SNB-LI12 | 0.00 | 3920.76 | -2265.67 | -2211.51 | -1275.64 | 170.86 | -98.96 |
| SNB-LI2P | 0.00 | -1.83 | 2554.67 | -1.04 | -6798.35 | -0.29 | -935.01 |
| SNB-LI21 | -0.00 | -2213.11 | 1274.48 | -5888.22 | 3399.84 | -809.88 | 467.29 |
| SNB-LI22 | 0.00 | 2211.50 | -1275.65 | 5888.47 | -3401.18 | 809.75 | -467.54 |

*** Overall summary for all load cases - Usage = Maximum Stress / Allowable Stress
 Printed capacities do not include EIA allowable stress increase for wind load cases.
 Printed capacities do not include the strength factor entered for each load case.
 The Group Summary reports on the member and load case that resulted in maximum usage
 which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

| Group Label | Group Desc. | Group Angle Type | Angle Size | Steel Strength (ksi) | Max Usage % | Comp. % | Comp. Force (kips) | Comp. Control Load Case | L/R Capacity (kips) | Comp. Shear Capacity (kips) | Comp. Conn. Bearing Capacity (kips) | RLX | RLY | RLZ | L/R Length Member (ft) | Curve No. | Bolts No. | Comp. Member | No. of Comp. |
|-------------|-------------------|------------------|------------------|----------------------|-------------|---------|--------------------|-------------------------|---------------------|-----------------------------|-------------------------------------|-------|-------|-------|------------------------|-----------|-----------|--------------|--------------|
| Rohn-D1 | Rohn Diagonal 1 | SAE | 1.75X1.75X0.1875 | 36.0 | 71.90 | 71.90 | -2.881W+I -90 deg | Rohn-D472 | 3.005 | 16.200 | 8.156 | 0.500 | 0.500 | 0.500 | 175.53 | 10.034 | 4 | 1 | 1 |
| Rohn-D2 | Rohn Diagonal 2 | SAE | 2X2X0.1875 | 36.0 | 91.36 | 91.36 | -4.658 W+I 0 deg | Rohn-DB61 | 3.824 | 16.200 | 8.156 | 0.500 | 0.500 | 0.500 | 166.50 | 10.934 | 4 | 1 | 1 |
| Rohn-D3 | Rohn Diagonal 3 | SAE | 2.5X2.5X0.1875 | 36.0 | 95.45 | 95.45 | -7.583 W+I 0 deg | Rohn-DC21 | 5.960 | 16.200 | 8.156 | 0.500 | 0.500 | 0.500 | 150.33 | 12.402 | 4 | 1 | 1 |
| Rohn-D4 | Rohn Diagonal 4 | SAE | 2.5X2.5X0.25 | 36.0 | 66.28 | 66.28 | -5.383W+I 90 deg | Rohn-DD31 | 6.092 | 16.200 | 10.875 | 0.500 | 0.500 | 0.500 | 170.80 | 13.977 | 4 | 1 | 1 |
| Rohn-D5 | Rohn Diagonal 5 | SAE | 3X3X0.25 | 50.0 | 80.69 | 80.69 | -9.268W+I 90 deg | Rohn-DE51 | 8.635 | 16.200 | 12.187 | 0.500 | 0.500 | 0.500 | 157.99 | 15.589 | 4 | 1 | 1 |
| Rohn-D6 | Rohn Diagonal 6 | SAE | 3.5X3.5X0.25 | 50.0 | 82.16 | 82.16 | -10.366W+I 90 deg | Rohn-DE11 | 9.463 | 16.200 | 12.187 | 0.500 | 0.500 | 0.500 | 163.31 | 18.889 | 4 | 1 | 1 |
| Rohn-D7 | Rohn Diagonal 7 | SAE | 4X4X0.25 | 50.0 | 82.40 | 82.40 | -12.370 W+I 0 deg | Rohn-DI21 | 11.259 | 16.200 | 12.187 | 0.500 | 0.500 | 0.500 | 160.41 | 21.254 | 4 | 1 | 1 |
| Rohn-L1 | Rohn Leg 1 | Pipe | Pipe3EH | 50.0 | 17.09 | 17.09 | -15.428 W+I 0 deg | Rohn-LA4P | 67.718 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 52.67 | 5.004 | 0 | 0 | 0 |
| Rohn-L2 | Rohn Leg 2 | Pipe | Pipe3.5EH | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 |
| Rohn-L3 | Rohn Leg 3 | Pipe | Pipe4EH | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-L4 | Rohn Leg 4 | Pipe | Pipe5STD | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-L5 | Rohn Leg 5 | Pipe | Pipe5EH | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-L6 | Rohn Leg 6 | Pipe | Pipe6EHS | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-L7 | Rohn Leg 7 | Pipe | Pipe6EH | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-L8 | Rohn Leg 8 | Pipe | Pipe8EHS | 50.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-H1 | Rohn Horizontal 1 | SAE | 1.75X1.75X0.1875 | 36.0 | 48.26 | 48.26 | -2.475W+I 90 deg | Rohn-H22 | 3.846 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 |
| SNB-D1 | SNB Diagonal 1 | SAE | 2X2X0.3125 | 36.0 | 10.08 | 10.08 | -2.177W+I -90 deg | SNB-DB82 | 13.207 | 16.200 | 13.594 | 0.500 | 0.500 | 0.500 | 155.16 | 8.870 | 4 | 0 | 0 |
| SNB-D2 | SNB Diagonal 2 | SAE | 2X2X0.25 | 36.0 | 19.28 | 18.53 | -2.148 W+I 0 deg | SNB-DB91 | 8.696 | 16.200 | 10.875 | 0.500 | 0.500 | 0.500 | 111.38 | 7.240 | 4 | 1 | 1 |
| SNB-D3 | SNB Diagonal 3 | SAE | 2.5X2.5X0.3125 | 36.0 | 60.06 | 60.06 | -8.904W+I -90 deg | SNB-DD62 | 11.119 | 16.200 | 13.594 | 0.500 | 0.500 | 0.500 | 127.05 | 8.279 | 4 | 1 | 1 |
| SNB-D4 | SNB Diagonal 4 | SAE | 3X3X0.5 | 36.0 | 65.53 | 65.53 | -14.155W+I 90 deg | SNB-DE11 | 27.855 | 16.200 | 26.100 | 0.500 | 0.500 | 0.500 | 140.03 | 11.412 | 4 | 1 | 1 |
| SNB-D5 | SNB Diagonal 5 | SAE | 4X4X0.5 | 36.0 | 33.87 | 33.87 | -10.838W+I -90 deg | SNB-DF42 | 39.016 | 24.000 | 26.100 | 0.500 | 0.500 | 0.500 | 121.07 | 11.784 | 4 | 1 | 1 |
| SNB-D6 | SNB Diagonal 6 | SAE | 4X4X0.625 | 36.0 | 50.98 | 50.98 | -16.313W+I 90 deg | SNB-DH11 | 39.490 | 24.000 | 32.625 | 0.500 | 0.500 | 0.500 | 119.15 | 15.529 | 4 | 1 | 1 |
| SNB-D7 | SNB Diagonal 7 | SAE | 5X5X0.625 | 36.0 | 92.81 | 92.81 | -29.699W+I 90 deg | SNB-DI11 | 66.757 | 24.000 | 32.625 | 0.500 | 0.500 | 0.500 | 132.03 | 17.142 | 4 | 1 | 1 |
| SNB-L1 | SNB Leg 1 | Pipe | P3-437 | 36.0 | 9.41 | 9.41 | -9.431 W+I 0 deg | SNB-LA4P | 75.146 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 112.06 | 18.267 | 1 | 0 | 0 |
| SNB-L2 | SNB Leg 2 | Pipe | P4-494 | 36.0 | 40.13 | 40.13 | -59.082 W+I 0 deg | SNB-LC3P | 110.387 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.09 | 5.004 | 1 | 0 | 0 |
| SNB-L3 | SNB Leg 3 | Pipe | Pipe5EH | 36.0 | 71.69 | 71.69 | -103.491 W+I 0 deg | SNB-LD3P | 108.286 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 56.33 | 6.665 | 1 | 0 | 0 |
| SNB-L4 | SNB Leg 4 | Pipe | P6-562 | 36.0 | 79.20 | 79.20 | -201.366 W+I 0 deg | SNB-LF2P | 190.683 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 43.23 | 6.665 | 1 | 0 | 0 |
| SNB-L5 | SNB Leg 5 | Pipe | Pipe8XS | 36.0 | 91.58 | 91.58 | -297.736 W+I 0 deg | SNB-LH2P | 243.879 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.86 | 10.008 | 1 | 0 | 0 |
| SNB-L6 | SNB Leg 6 | Pipe | Pipe10XS | 36.0 | 85.55 | 85.55 | -362.131 W+I 0 deg | SNB-LI2P | 317.480 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 41.70 | 10.008 | 1 | 0 | 0 |
| Connect | Connect Towers | BTG | 0.1X0.1X1 | 36.0 | 0.05 | 0.01 | Connect Ial | | 17202.963 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 33.08 | 10.008 | 1 | 0 | 0 |
| SNB-H1 | SNB Horizontal 1 | Pipe | P3-425 | 36.0 | 5.73 | 0.00 | 0.000 | SNB-H4FP | 77.281 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 2.41 | 2.004 | 1 | 0 | 0 |
| SNB-H2 | SNB Horizontal 2 | Pipe | P4-494 | 36.0 | 9.55 | 0.00 | 0.000 | SNB-H9FP | 106.339 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 44.46 | 4.066 | 1 | 0 | 0 |
| SNB-D8 | Rohn Diagonal 8 | SAE | 2X2X0.375 | 36.0 | 72.51 | 72.51 | -6.312W+I 90 deg | Rohn-DB71 | 6.759 | 16.200 | 16.312 | 0.500 | 0.500 | 0.500 | 63.14 | 7.472 | 1 | 0 | 0 |
| WLAC-1 | Wind Lacing 1 | SAE | 2X2X0.25 | 36.0 | 2.60 | 2.60 | 0.000 | SNB-WL-D1P | 9.011 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 173.34 | 11.238 | 4 | 1 | 1 |
| WLAC-2 | Wind Lacing 2 | SAE | 2.5X2.5X0.3125 | 36.0 | 4.01 | 4.01 | -0.347W+I 60 deg | SNB-WL-D1P | 6.485 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 124.79 | 4.066 | 4 | 0 | 0 |
| Rohn-D4a | Rohn Diagonal 4a | SAE | 2.5X2.5X0.3125 | 36.0 | 91.11 | 91.11 | -8.152 W+I 60 deg | Rohn-DD61 | 7.015 | 16.200 | 13.594 | 0.500 | 0.500 | 0.500 | 183.36 | 7.472 | 4 | 0 | 0 |
| Rohn-D3a | Rohn Diagonal 3a | SAE | 2.5X2.5X0.25 | 36.0 | 89.49 | 89.49 | -8.177W+I 90 deg | Rohn-DC51 | 6.854 | 16.200 | 10.875 | 0.500 | 0.500 | 0.500 | 176.30 | 14.368 | 4 | 1 | 1 |
| SNB-D7a | SNB Diagonal 7a | SAE | 5X5X0.5 | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| SNB-D7b | SNB Diagonal 7b | DAE | 4X4X0.25 | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| SNB-D7c | SNB Diagonal 7c | SAE | 5X5X0.4375 | 36.0 | 0.00 | 0.00 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0 | 0 | 0 | 0 |
| Rohn-L8a | Rohn Leg 8a | EXP-1 | MOD-P8STD | 50.0 | 62.69 | 62.69 | -279.467 W+I 0 deg | Rohn-LI1P | 334.331 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 43.22 | 10.008 | 1 | 0 | 0 |
| Rohn-L7a | Rohn Leg 7a | EXP-2 | MOD-P6SCH80 | 50.0 | 76.46 | 76.46 | -232.586 W+I 0 deg | Rohn-LG2P | 228.165 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.85 | 10.008 | 1 | 0 | 0 |
| Rohn-L6a | Rohn Leg 6a | EXP-3 | MOD-P6STD | 50.0 | 80.37 | 80.37 | -174.400 W+I 0 deg | Rohn-LF1P | 162.747 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.25 | 10.008 | 1 | 0 | 0 |
| Rohn-L5a | Rohn Leg 5a | EXP-4 | MOD-P5SCH80 | 50.0 | 63.69 | 63.69 | -155.940 W+I 0 deg | Rohn-LE3P | 183.623 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 44.42 | 6.665 | 1 | 0 | 0 |
| Rohn-L4a | Rohn Leg 4a | EXP-5 | MOD-P5STD | 50.0 | 67.55 | 67.55 | -124.587 W+I 0 deg | Rohn-LD3P | 138.328 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 43.96 | 6.665 | 1 | 0 | 0 |
| Rohn-L3a | Rohn Leg 3a | EXP-6 | MOD-P4SCH80 | 50.0 | 42.23 | 37.37 | -82.849 W+I 0 deg | Rohn-LC3P | 166.273 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 55.51 | 6.665 | 1 | 0 | 0 |
| Rohn-L2a | Rohn Leg 2a | EXP-7 | MOD-P3.5SCH80 | 50.0 | 27.40 | 27.16 | -45.154 W+I 0 deg | Rohn-LB4P | 125.693 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 47.74 | 5.004 | 1 | 0 | 0 |
| Rohn-D4b | Rohn Diagonal 4b | SAE | 2.5X2.5X0.375 | 36.0 | 85.04 | 85.04 | -10.479 W+I 0 deg | Rohn-DD21 | 9.242 | 16.200 | 16.312 | 0.500 | 0.500 | 0.500 | 167.19 | 13.570 | 4 | 1 | 1 |

Group Summary (Tension Portion):

| Group Label | Group Desc. | Angle Type | Group Angle | Angle Size | Steel Strength (ksi) | Max Usage % | Max In Tens. % | Tension Force (kips) | Control Member | Tension Control Load Case | Section Capacity (kips) | Net Tens. Shear Capacity (kips) | Conn. Bearing Capacity (kips) | Tens. Rupture Capacity (kips) | Length Tens. Member (ft) | No. Of Bolts | No. Of Holes | Hole Diameter (in) |
|-------------|-------------------|------------|------------------|------------|----------------------|-------------|----------------|----------------------|----------------|---------------------------|-------------------------|---------------------------------|-------------------------------|-------------------------------|--------------------------|--------------|--------------|--------------------|
| Rohn-D1 | Rohn Diagonal 1 | SAE | 1.75X1.75X0.1875 | | 36.0 | 71.90 | 23.97 | Rohn-DA8P | 2.607 W+I | 0 deg | 10.681 | 16.200 | 8.156 | 8.684 | 10.034 | 1 | 1.000 | 0.6875 |
| Rohn-D2 | Rohn Diagonal 2 | SAE | 2X2X0.1875 | | 36.0 | 91.36 | 46.97 | Rohn-DB5P | 5.108W+I | 60 deg | 12.639 | 16.200 | 8.156 | 9.527 | 10.934 | 1 | 1.000 | 0.6875 |
| Rohn-D3 | Rohn Diagonal 3 | SAE | 2.5X2.5X0.1875 | | 36.0 | 95.45 | 72.97 | Rohn-DC42 | 7.935W+I | 90 deg | 16.815 | 16.200 | 8.156 | 10.195 | 12.798 | 1 | 1.000 | 0.6875 |
| Rohn-D4 | Rohn Diagonal 4 | SAE | 2.5X2.5X0.25 | | 36.0 | 66.28 | 57.14 | Rohn-DD42 | 8.285W+I | 90 deg | 22.144 | 16.200 | 10.875 | 13.594 | 13.977 | 1 | 1.000 | 0.6875 |
| Rohn-D5 | Rohn Diagonal 5 | SAE | 3X3X0.25 | | 50.0 | 80.69 | 48.92 | Rohn-DE3P | 7.949 W+I | 0 deg | 30.910 | 16.200 | 12.187 | 15.234 | 15.188 | 1 | 1.000 | 0.6875 |
| Rohn-D6 | Rohn Diagonal 6 | SAE | 3.5X3.5X0.25 | | 50.0 | 82.16 | 58.36 | Rohn-DG42 | 8.995W+I | 90 deg | 37.004 | 16.200 | 12.187 | 15.234 | 19.470 | 1 | 1.000 | 0.6875 |
| Rohn-D7 | Rohn Diagonal 7 | SAE | 4X4X0.25 | | 50.0 | 84.40 | 75.00 | Rohn-DI42 | 12.187W+I | 90 deg | 43.098 | 16.200 | 12.187 | 15.234 | 21.860 | 1 | 1.000 | 0.6875 |
| Rohn-L1 | Rohn Leg 1 | Pipe | Pipe3EH | | 50.0 | 17.09 | 11.19 | Rohn-LA42 | 12.664W+I | -60 de | 84.900 | 0.000 | 0.000 | 0.000 | 5.004 | 0 | 0.000 | 0 |
| Rohn-L2 | Rohn Leg 2 | Pipe | Pipe3.5EH | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-L3 | Rohn Leg 3 | Pipe | Pipe4EH | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-L4 | Rohn Leg 4 | Pipe | Pipe5STD | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-L5 | Rohn Leg 5 | Pipe | Pipe5SRH | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-L6 | Rohn Leg 6 | Pipe | Pipe6EHS | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-L7 | Rohn Leg 7 | Pipe | Pipe6EH | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-L8 | Rohn Leg 8 | Pipe | Pipe8EHS | | 50.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 | |
| Rohn-H1 | Rohn Horizontal 1 | SAE | 1.75X1.75X0.1875 | | 36.0 | 48.26 | 0.00 | Rohn-H22 | 0.000 | 0.000 | 13.392 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-D1 | Rohn Diagonal 1 | SAE | 2X2X0.3125 | | 36.0 | 10.08 | 7.84 | Rohn-DA82 | 1.421W+I | 90 deg | 20.340 | 16.200 | 10.875 | 12.703 | 8.011 | 1 | 1.000 | 0.6875 |
| Rohn-D2 | Rohn Diagonal 2 | SAE | 2X2X0.25 | | 36.0 | 19.28 | 19.28 | Rohn-DB62 | 2.796W+I | 90 deg | 16.707 | 16.200 | 10.875 | 12.703 | 8.011 | 1 | 1.000 | 0.6875 |
| Rohn-D3 | Rohn Diagonal 3 | SAE | 2.5X2.5X0.3125 | | 36.0 | 60.06 | 50.00 | Rohn-DD31 | 9.062W+I | -90 de | 27.082 | 16.200 | 13.594 | 16.992 | 11.059 | 1 | 1.000 | 0.6875 |
| Rohn-D4 | Rohn Diagonal 4 | SAE | 3X3X0.5 | | 36.0 | 65.53 | 44.40 | Rohn-DE42 | 14.209W+I | 90 deg | 50.976 | 24.000 | 26.100 | 32.625 | 12.172 | 1 | 1.000 | 0.8125 |
| Rohn-D5 | Rohn Diagonal 5 | SAE | 4X4X0.5 | | 36.0 | 33.87 | 32.71 | Rohn-DF11 | 10.467W+I | -90 de | 72.726 | 24.000 | 26.100 | 32.625 | 15.014 | 1 | 1.000 | 0.8125 |
| Rohn-D6 | Rohn Diagonal 6 | SAE | 4X4X0.625 | | 36.0 | 50.98 | 46.17 | Rohn-DH42 | 14.775W+I | 90 deg | 89.222 | 24.000 | 32.625 | 40.781 | 17.700 | 1 | 1.000 | 0.8125 |
| Rohn-D7 | Rohn Diagonal 7 | SAE | 5X5X0.625 | | 36.0 | 92.81 | 91.65 | Rohn-DI42 | 29.328W+I | 90 deg | 116.410 | 24.000 | 32.625 | 40.781 | 18.841 | 1 | 1.000 | 0.8125 |
| Rohn-L1 | Rohn Leg 1 | Pipe | P3-437 | | 36.0 | 9.41 | 6.76 | Rohn-LA42 | 8.177W+I | -60 de | 90.720 | 0.000 | 0.000 | 0.000 | 5.004 | 0 | 0.000 | 0 |
| Rohn-L2 | Rohn Leg 2 | Pipe | P4-494 | | 36.0 | 40.13 | 30.14 | Rohn-LC32 | 53.912W+I | -60 de | 134.136 | 0.000 | 0.000 | 0.000 | 6.665 | 0 | 0.000 | 0 |
| Rohn-L3 | Rohn Leg 3 | Pipe | Pipe5EH | | 36.0 | 71.69 | 55.56 | Rohn-LD32 | 91.526W+I | -60 de | 133.552 | 0.000 | 0.000 | 0.000 | 6.665 | 0 | 0.000 | 0 |
| Rohn-L4 | Rohn Leg 4 | Pipe | P6-562 | | 36.0 | 79.20 | 57.00 | Rohn-LF22 | 175.658W+I | -60 de | 231.120 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| Rohn-L5 | Rohn Leg 5 | Pipe | Pipe8XS | | 36.0 | 91.58 | 63.70 | Rohn-LH22 | 234.801W+I | -60 de | 276.480 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| Rohn-L6 | Rohn Leg 6 | Pipe | Pipe10XS | | 36.0 | 85.55 | 60.12 | Rohn-LI12 | 278.780W+I | -60 de | 347.759 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| Connect | Connect Towers | BIT | 0.1X0.1X1 | | 36.0 | 0.05 | 0.05 | Connect IP | 10.581 W+I | 0 deg | 17279.973 | 0.000 | 0.000 | 0.000 | 2.002 | 0 | 0.000 | 0 |
| Rohn-H1 | Rohn Horizontal 1 | Pipe | P3-425 | | 36.0 | 5.73 | 5.73 | Rohn-H4P | 6.770W+I | 90 deg | 88.668 | 0.000 | 0.000 | 0.000 | 4.066 | 0 | 0.000 | 0 |
| Rohn-H2 | Rohn Horizontal 2 | Pipe | P4-494 | | 36.0 | 9.55 | 9.55 | Rohn-H9aP | 17.082W+I | -60 de | 134.136 | 0.000 | 0.000 | 0.000 | 7.472 | 0 | 0.000 | 0 |
| Rohn-D8 | Rohn Diagonal 8 | SAE | 2X2X0.375 | | 36.0 | 72.51 | 23.81 | Rohn-DB7P | 5.143 W+I | 0 deg | 23.973 | 16.200 | 16.312 | 19.055 | 11.238 | 1 | 1.000 | 0.6875 |
| WLAC-1 | Wind Lacing 1 | SAE | 2X2X0.25 | | 36.0 | 2.60 | 1.33 | Rohn-WL-D3P | 0.361 W+I | 0 deg | 20.304 | 0.000 | 0.000 | 0.000 | 4.066 | 0 | 0.000 | 0 |
| WLAC-2 | Wind Lacing 2 | SAE | 2.5X2.5X0.3125 | | 36.0 | 4.01 | 1.07 | Rohn-WL-G3P | 0.449 W+I | 0 deg | 31.536 | 0.000 | 0.000 | 0.000 | 6.110 | 0 | 0.000 | 0 |
| Rohn-D4a | Rohn Diagonal 4a | SAE | 2.5X2.5X0.3125 | | 36.0 | 91.11 | 27.42 | Rohn-DD62 | 4.970W+I | 90 deg | 27.082 | 16.200 | 13.594 | 16.992 | 14.368 | 1 | 1.000 | 0.6875 |
| Rohn-D3a | Rohn Diagonal 3a | SAE | 2.5X2.5X0.25 | | 36.0 | 89.49 | 36.75 | Rohn-DC51 | 5.328W+I | -90 de | 22.144 | 16.200 | 10.875 | 13.594 | 13.177 | 1 | 1.000 | 0.6875 |
| Rohn-D7a | Rohn Diagonal 7a | SAE | 5X5X0.5 | | 36.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-D7b | Rohn Diagonal 7b | DAE | 4X4X0.25 | | 36.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-D7c | Rohn Diagonal 7c | SAE | 5X5X0.4375 | | 36.0 | 0.00 | 0.00 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L8a | Rohn Leg 8a | EXP-1 | MOD-P6STD | | 50.0 | 62.69 | 59.06 | Rohn-LI12 | 232.933W+I | -60 de | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | 0.000 | 0 |
| Rohn-L7a | Rohn Leg 7a | EXP-2 | MOD-P6SCH80 | | 50.0 | 76.46 | 68.19 | Rohn-LH22 | 214.914W+I | -60 de | 395.312 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| Rohn-L6a | Rohn Leg 6a | EXP-3 | MOD-P6STD | | 50.0 | 80.37 | 59.12 | Rohn-LF22 | 158.682W+I | -60 de | 282.362 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| Rohn-L5a | Rohn Leg 5a | EXP-4 | MOD-P5SCH80 | | 50.0 | 63.69 | 57.34 | Rohn-LF32 | 131.200W+I | -60 de | 207.657 | 0.000 | 0.000 | 0.000 | 10.008 | 0 | 0.000 | 0 |
| Rohn-L4a | Rohn Leg 4a | EXP-5 | MOD-P5STD | | 50.0 | 67.55 | 64.72 | Rohn-LD32 | 104.328W+I | -60 de | 218.625 | 0.000 | 0.000 | 0.000 | 6.665 | 0 | 0.000 | 0 |
| Rohn-L3a | Rohn Leg 3a | EXP-6 | MOD-P4SCH80 | | 50.0 | 42.23 | 42.23 | Rohn-LC32 | 69.937W+I | -60 de | 164.262 | 0.000 | 0.000 | 0.000 | 6.665 | 0 | 0.000 | 0 |
| Rohn-L2a | Rohn Leg 2a | EXP-7 | MOD-P3.5SCH80 | | 50.0 | 27.40 | 27.40 | Rohn-LB41 | 37.700W+I | 60 deg | 152.673 | 0.000 | 0.000 | 0.000 | 5.004 | 0 | 0.000 | 0 |
| Rohn-D4b | Rohn Diagonal 4b | SAE | 2.5X2.5X0.375 | | 36.0 | 85.04 | 27.59 | Rohn-DD22 | 5.959W+I | 90 deg | 32.020 | 16.200 | 16.312 | 20.391 | 13.570 | 1 | 1.000 | 0.6875 |

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

| Load Case | Maximum Usage % | Element Label | Element Type |
|-----------|-----------------|---------------|--------------|
|-----------|-----------------|---------------|--------------|

```

-----
W+I -90 deg  92.60  SNB-DI22  Angle
W+I -60 deg  89.43  SNB-DI4P  Angle
W+I  0 deg  95.45  Rohn-DC21  Angle
W+I 60 deg  89.47  SNB-DI3P  Angle
W+I 90 deg  92.81  SNB-DI11  Angle
DL + Ice Only  53.66  SNB-DI2P  Angle

```

```

*** Weight of structure (lbs) :      66037.7
Weight of Angles*Section DLF:      12155.2
Weight of Equipment:                78192.9
Total:

```

*** End of Report

CONNECTION BETWEEN TOWERS EVALUATION

| | | | | | | | |
|-------------|--|-------------|------------------|-------|-----------------|----|----------|
| Job | <u>180' ROHN SSV Tower w/ SNB Reinf. - Greenwich</u> | Project No. | <u>VZ5-182R1</u> | Sheet | <u>1</u> | of | <u>1</u> |
| Description | <u>Tower Connection</u> | Computed by | <u>MCD</u> | Date | <u>01/30/15</u> | | |
| | | Checked by | <u> </u> | Date | <u> </u> | | |

| | | |
|---------------------------------|--|---|
| Bolt Diameter | $\text{Dia}_{\text{bolt}} := \frac{3}{4} \text{ in}$ | |
| Bolt Shear Capacity | $\text{Capacity}_{\text{bolt}} := 5.3 \text{ kip}$ | Per AISC 9th Edition p. 4-5 for 3/4" A325 slip critical bolt |
| Shear Plane Area | $\text{Area}_{\text{plate}} := \frac{3}{8} \text{ in} \cdot \left(\frac{3}{4} \text{ in} + 1 \text{ in} \right)$ | $\text{Area}_{\text{plate}} = 0.6563 \text{ in}^2$ |
| Yield Strength of Plate | $\text{Fy}_{\text{plate}} := 36 \text{ ksi}$ | |
| Plate Capacity | $\text{Capacity}_{\text{plate}} := \text{Area}_{\text{plate}} \cdot \text{Fy}_{\text{plate}}$ | $\text{Capacity}_{\text{plate}} = 23.625 \text{ kip}$ |
| U-Bolt Size | $\text{Dia}_{\text{ubolt}} := \frac{1}{2} \text{ in}$ | |
| U-Bolt Area | $\text{Area}_{\text{ubolt}} := 2 \cdot \pi \left(\frac{\text{Dia}_{\text{ubolt}}}{2} \right)^2$ | $\text{Area}_{\text{ubolt}} = 0.3927 \text{ in}^2$ |
| | $\text{Fy}_{\text{ubolt}} := 58 \text{ ksi}$ | |
| | $\text{Capacity}_{\text{ubolt}} := \text{Area}_{\text{ubolt}} \cdot \text{Fy}_{\text{ubolt}}$ | $\text{Capacity}_{\text{ubolt}} = 22.7765 \text{ kip}$ |
| Connection Capacity | $\text{Capacity}_{\text{connection}} := \min(\text{Capacity}_{\text{bolt}}, \text{Capacity}_{\text{plate}}, \text{Capacity}_{\text{ubolt}})$ | |
| | $\text{Capacity}_{\text{connection}} = 5.3 \cdot \text{kip}$ | |
| Max Connection Spacing | $\text{Spacing} := 5 \text{ ft}$ | |
| Connection Capacity per Foot | $\text{Capacity}_{\text{LF}} := \frac{\text{Capacity}_{\text{connection}}}{\text{Spacing}}$ | $\text{Capacity}_{\text{LF}} = 1.06 \frac{\text{kip}}{\text{ft}}$ |
| Max Connection Force | $\text{F}_{\text{max}} := 10.58 \text{ kip}$ | |
| Connection Spacing in PLS-Tower | $\text{Spacing}_{\text{PLS.Tower}} := 10 \text{ ft}$ | |
| Connection Force per Foot | $\text{Force}_{\text{LF}} := \frac{\text{F}_{\text{max}}}{\text{Spacing}_{\text{PLS.Tower}}}$ | $\text{Force}_{\text{LF}} = 1.0581 \cdot \text{kip}$ |
| Percent Capacity | $\text{Percent}_{\text{capacity}} := \frac{\text{Force}_{\text{LF}}}{\left(\frac{4}{3} \text{ Capacity}_{\text{LF}} \right)}$ | $\text{Percent}_{\text{capacity}} = 74.9\%$ |

Note: 1/3 increase in allowable stress per TIA/EIA-222-F is NOT included in these calculations

FOUNDATION EVALUATION



From PLS-Tower Output Summary

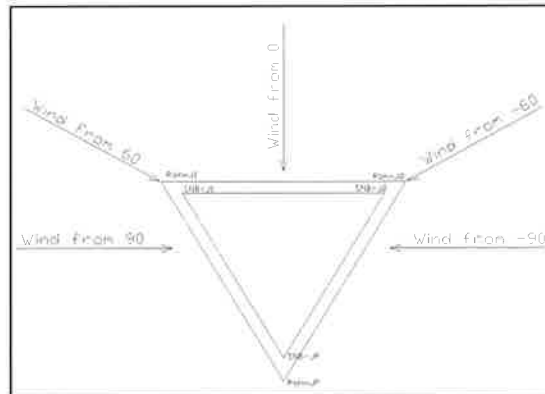
Summary of Joint Support Reactions For All Load Cases:

| Load Case | Joint Label | Long. Force (kips) | Tran. Force (kips) | Vert. Force (kips) | Shear Force (kips) | Tran. Moment (ft-k) | Long. Moment (ft-k) | Vert. Moment (ft-k) | Bending Moment (ft-k) | Found. Usage % |
|---------------|-------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|-----------------------|----------------|
| W+I -90 deg | RohnJP | 9.86 | 1.94 | 19.63 | 10.05 | -0.7 | 3.96 | -0.03 | 4.02 | 0 |
| W+I -90 deg | SNB-JP | 22.94 | 3.19 | 19.42 | 23.16 | 0.74 | 6.75 | 0.03 | 6.79 | 0 |
| W+I -90 deg | RohnJ1 | 3 | 6.68 | 249.25 | 7.33 | 0.79 | -0.63 | 0.01 | 1.01 | 0 |
| W+I -90 deg | RohnJ2 | -12.85 | 23.79 | -210.4 | 27.04 | -6.17 | -3.24 | 0.01 | 6.97 | 0 |
| W+I -90 deg | SNB-J1 | 1.42 | 5.65 | 296.17 | 5.83 | 0.71 | 0.14 | -0.02 | 0.72 | 0 |
| W+I -90 deg | SNB-J2 | -24.36 | 45.27 | -257.64 | 51.41 | -11.15 | -6.77 | -0.01 | 13.04 | 0 |
| W+I -60 deg | RohnJP | 0.21 | 1.57 | 149.29 | 1.58 | -0.5 | 2.29 | -0.02 | 2.34 | 0 |
| W+I -60 deg | SNB-JP | 6.91 | 2.68 | 175.5 | 7.41 | 0.73 | 3.25 | 0.03 | 3.33 | 0 |
| W+I -60 deg | RohnJ1 | -1.33 | 0.52 | 149.16 | 1.42 | 1.78 | -1.49 | 0.02 | 2.32 | 0 |
| W+I -60 deg | RohnJ2 | -14.66 | 25.22 | -239.97 | 29.17 | -6.33 | -3.72 | 0 | 7.34 | 0 |
| W+I -60 deg | SNB-J1 | -5.76 | -4.66 | 175.4 | 7.41 | 3.19 | -0.98 | -0.03 | 3.33 | 0 |
| W+I -60 deg | SNB-J2 | -27.45 | 47.52 | -292.96 | 54.88 | -11.97 | -6.92 | 0 | 13.83 | 0 |
| W+I 0 deg | RohnJP | -11.46 | -0.09 | 302.83 | 11.46 | 0.06 | 0.27 | 0 | 0.28 | 0 |
| W+I 0 deg | SNB-JP | -12.71 | -0.01 | 361.65 | 12.71 | 0.01 | -0.96 | 0 | 0.96 | 0 |
| W+I 0 deg | RohnJ1 | -11.86 | -16.88 | -122.12 | 20.63 | 4.68 | -3.54 | 0.03 | 5.87 | 0 |
| W+I 0 deg | RohnJ2 | -11.7 | 16.97 | -122.24 | 20.61 | -4.73 | -3.45 | -0.02 | 5.85 | 0 |
| W+I 0 deg | SNB-J1 | -23 | -33.76 | -151.8 | 40.85 | 9.48 | -4.86 | -0.02 | 10.66 | 0 |
| W+I 0 deg | SNB-J2 | -22.98 | 33.77 | -151.9 | 40.85 | -9.49 | -4.85 | 0.02 | 10.66 | 0 |
| W+I 60 deg | RohnJP | 0.21 | -1.66 | 149.29 | 1.67 | 0.55 | 2.29 | 0.02 | 2.35 | 0 |
| W+I 60 deg | SNB-JP | 6.91 | -2.7 | 175.5 | 7.42 | -0.72 | 3.25 | -0.03 | 3.33 | 0 |
| W+I 60 deg | RohnJ1 | -14.73 | -25.18 | -239.86 | 29.17 | 6.31 | -3.76 | 0 | 7.34 | 0 |
| W+I 60 deg | RohnJ2 | -1.25 | -0.48 | 149.05 | 1.34 | -1.81 | -1.44 | -0.01 | 2.31 | 0 |
| W+I 60 deg | SNB-J1 | -27.45 | -47.52 | -292.86 | 54.88 | 11.97 | -6.92 | 0 | 13.83 | 0 |
| W+I 60 deg | SNB-J2 | -5.75 | 4.66 | 175.3 | 7.4 | -3.19 | -0.98 | 0.03 | 3.34 | 0 |
| W+I 90 deg | RohnJP | 9.86 | -1.95 | 19.63 | 10.05 | 0.71 | 3.96 | 0.03 | 4.02 | 0 |
| W+I 90 deg | SNB-JP | 22.94 | -3.19 | 19.42 | 23.16 | -0.74 | 6.75 | -0.03 | 6.79 | 0 |
| W+I 90 deg | RohnJ1 | -12.85 | -23.79 | -210.29 | 27.04 | 6.17 | -3.24 | -0.01 | 6.97 | 0 |
| W+I 90 deg | RohnJ2 | 3 | -6.68 | 249.14 | 7.32 | -0.79 | -0.63 | -0.01 | 1.01 | 0 |
| W+I 90 deg | SNB-J1 | -24.36 | -45.27 | -257.54 | 51.41 | 11.15 | -6.76 | 0.01 | 13.04 | 0 |
| W+I 90 deg | SNB-J2 | 1.42 | -5.65 | 296.07 | 5.83 | -0.71 | 0.14 | 0.02 | 0.72 | 0 |
| DL + Ice Only | RohnJP | 9.78 | 0 | 19.65 | 9.78 | 0 | 3.98 | 0 | 3.98 | 0 |
| DL + Ice Only | SNB-JP | 22.79 | 0 | 19.39 | 22.79 | 0 | 6.8 | 0 | 6.8 | 0 |
| DL + Ice Only | RohnJ1 | -4.89 | -8.47 | 19.52 | 9.78 | 3.45 | -1.99 | 0 | 3.98 | 0 |
| DL + Ice Only | RohnJ2 | -4.89 | 8.47 | 19.41 | 9.78 | -3.45 | -1.99 | 0 | 3.98 | 0 |
| DL + Ice Only | SNB-J1 | -11.39 | -19.74 | 19.28 | 22.79 | 5.89 | -3.4 | 0 | 6.8 | 0 |
| DL + Ice Only | SNB-J2 | -11.4 | 19.74 | 19.18 | 22.79 | -5.89 | -3.4 | 0 | 6.8 | 0 |

| Load Case | Joint Label | Vert. Tower Forces (k) | Leg Moment Arm (ft) | Moment (ft-k) | Total Moment (ft-k) | Shear (k) | Total Shear (k) |
|-------------|-------------|------------------------|---------------------|---------------|---------------------|-----------|-----------------|
| W+I -90 deg | RohnJP | -0.02 | 0.00 | 0.00 | 10463.9 | 10.05 | 124.8 |
| W+I -90 deg | SNB-JP | 0.03 | 0.00 | 0.00 | | 23.16 | |
| W+I -90 deg | RohnJ1 | 229.73 | 11.42 | 2623.52 | | 7.33 | |
| W+I -90 deg | RohnJ2 | -229.81 | -11.42 | 2624.43 | | 27.04 | |
| W+I -90 deg | SNB-J1 | 276.89 | 9.42 | 2608.30 | | 5.83 | |
| W+I -90 deg | SNB-J2 | -276.82 | -9.42 | 2607.64 | | 51.41 | |
| W+I -60 deg | RohnJP | 129.64 | 6.60 | 855.62 | 10224.5 | 1.58 | 101.9 |
| W+I -60 deg | SNB-JP | 156.11 | 5.44 | 849.24 | | 7.41 | |
| W+I -60 deg | RohnJ1 | 129.64 | 6.60 | 855.62 | | 1.42 | |
| W+I -60 deg | RohnJ2 | -259.38 | -13.18 | 3418.63 | | 29.17 | |
| W+I -60 deg | SNB-J1 | 156.12 | 5.44 | 849.29 | | 7.41 | |
| W+I -60 deg | SNB-J2 | -312.14 | -10.88 | 3396.08 | | 54.88 | |
| W+I 0 deg | RohnJP | 283.18 | 13.18 | 3732.31 | 11187.2 | 11.46 | 147.1 |
| W+I 0 deg | SNB-JP | 342.26 | 10.88 | 3723.79 | | 12.71 | |
| W+I 0 deg | RohnJ1 | -141.64 | -6.60 | 934.82 | | 20.63 | |
| W+I 0 deg | RohnJ2 | -141.65 | -6.60 | 934.89 | | 20.61 | |
| W+I 0 deg | SNB-J1 | -171.08 | -5.44 | 930.68 | | 40.85 | |
| W+I 0 deg | SNB-J2 | -171.08 | -5.44 | 930.68 | | 40.85 | |
| W+I 60 deg | RohnJP | 129.64 | 6.60 | 855.62 | 10224.5 | 1.67 | 101.9 |
| W+I 60 deg | SNB-JP | 156.11 | 5.44 | 849.24 | | 7.42 | |
| W+I 60 deg | RohnJ1 | -259.38 | -13.18 | 3418.63 | | 29.17 | |
| W+I 60 deg | RohnJ2 | 129.64 | 6.60 | 855.62 | | 1.34 | |
| W+I 60 deg | SNB-J1 | -312.14 | -10.88 | 3396.08 | | 54.88 | |
| W+I 60 deg | SNB-J2 | 156.12 | 5.44 | 849.29 | | 7.40 | |
| W+I 90 deg | RohnJP | -0.02 | 0.00 | 0.00 | 10463.9 | 10.05 | 124.8 |
| W+I 90 deg | SNB-JP | 0.03 | 0.00 | 0.00 | | 23.16 | |
| W+I 90 deg | RohnJ1 | -229.81 | -11.42 | 2624.43 | | 27.04 | |
| W+I 90 deg | RohnJ2 | 229.73 | 11.42 | 2623.52 | | 7.32 | |
| W+I 90 deg | SNB-J1 | -276.82 | -9.42 | 2607.64 | | 51.41 | |
| W+I 90 deg | SNB-J2 | 276.89 | 9.42 | 2608.30 | | 5.83 | |

Forces taken from PLS-Tower output with DL + Ice Only load case subtracted from Vertical Tower Forces

Dimensions taken from CAD drawing



| | | | | | |
|-------------|---|-------------|-----------|-------|----------|
| Job | 180' ROHN SSV Tower w/ SNB Reinf. - Greenwich | Project No. | VZ5-182R1 | Sheet | 1 of 4 |
| Description | Foundation Analysis | Computed by | MCD | Date | 01/30/15 |
| | | Checked by | | Date | |

PIER AND MAT FOUNDATION ANALYSIS - 3 PIERS

TOWER FORCES:

| | |
|------------------------|--|
| Moment Caused by Tower | $M_t := 11187.2 \text{ kip}\cdot\text{ft}$ |
| Shear at Base of Tower | $S_t := 147.1 \text{ kip}$ |
| Height of Tower | $H_t := 180 \text{ ft}$ |
| Width of Tower at Base | $W_t := 22.833 \text{ ft}$ |
| Weight of Tower | $WT_t := 119.1 \text{ kip}$ |

FOOTING DIMENSIONS:

| | |
|--------------------------|--------------------------|
| Width of Footing | $W_f := 36.5 \text{ ft}$ |
| Overall Depth of Footing | $D_f := 3.5 \text{ ft}$ |
| Thickness of Footing | $T_f := 6.0 \text{ ft}$ |

MATERIAL PROPERTIES:

| | | | |
|---------------------------------------|--|----------------------------|-------------------------------|
| Compressive Strength of Concrete | $f_c := 3000 \text{ psi}$ | Unit Weight of Soil | $\gamma_s := 130 \text{ pcf}$ |
| Yield Strength of Steel Reinforcement | $f_y := 60000 \text{ psi}$ | Unit Weight of Concrete | $\gamma_c := 150 \text{ pcf}$ |
| Internal Friction Angle of Soil | $\phi_s := 36 \text{ deg}$ | Depth to Neglect | $n := 0 \text{ ft}$ |
| Allowable Bearing Capacity | $q_s := 4000 \text{ psf}$ | Cohesion of Clay Type Soil | $c_c := 0 \text{ ksf}$ |
| Coefficient of Lateral Soil Pressure | $K_p := \frac{1 + \sin(\phi_s)}{1 - \sin(\phi_s)}$ | Note: Use 0 for Sandy Soil | |

$K_p = 3.8518$

What is Position of Center of Tower with respect to Center of Pad? 1=Offset $Pos_{tower} := 2$
 2=Not Offset

STABILITY OF FOOTING

 Factor of Safety Req'd: $FS_{req} := 2.0$

Passive Pressure:

$$P_{pn} := K_p \cdot \gamma_s \cdot n + c \cdot 2 \cdot \sqrt{K_p}$$

$$P_{pn} = 0 \cdot \text{ksf}$$

$$P_{pt} := K_p \cdot \gamma_s \cdot (D_f - T_f) + c \cdot 2 \cdot \sqrt{K_p}$$

$$P_{pt} = -1.2518 \cdot \text{ksf}$$

$$P_{top} := \text{if}[n < (D_f - T_f), P_{pt}, P_{pn}]$$

$$P_{top} = 0 \cdot \text{ksf}$$

$$P_{bot} := K_p \cdot \gamma_s \cdot D_f + c \cdot 2 \cdot \sqrt{K_p}$$

$$P_{bot} = 1.7526 \cdot \text{ksf}$$

$$P_{ave} := \frac{P_{top} + P_{bot}}{2}$$

$$P_{ave} = 0.8763 \cdot \text{ksf}$$

Shear:

$$T_{pp} := \text{if}[n < (D_f - T_f), T_f, (D_f - n)]$$

$$T_{pp} = 3.5 \cdot \text{ft}$$

$$A_{pp} := W_f \cdot T_{pp}$$

$$A_{pp} = 127.75 \cdot \text{ft}^2$$

Ultimate Shear:

$$S_u := P_{ave} \cdot A_{pp}$$

$$S_u = 111.9465 \cdot \text{kip}$$

 Weight of
Concrete Pad:

$$WT_c := (W_f^2 \cdot T_f) \cdot \gamma_c$$

$$WT_c = 1199.025 \cdot \text{kip}$$

 Weight of Soil
above Footing:

$$WT_{s1} := 0$$

$$WT_{s1} = 0 \cdot \text{kip}$$

 Weight of Soil
Wedge at back face:

$$WT_{s2} := \left[\frac{(D_f - n)^2 \cdot \tan(\phi_s)}{2} \cdot W_f \right] \cdot \gamma_s$$

$$WT_{s2} = 21.1156 \cdot \text{kip}$$

 Distance to center of
Tower Leg from Edge
of Footing:

$$X_{t1} := \frac{W_f}{2} - \frac{W_t \cdot \cos(30 \cdot \text{deg})}{2}$$

$$X_{t2} := \frac{W_f}{2} - \frac{W_t \cdot \cos(30 \cdot \text{deg})}{3}$$

$$X_t := \text{if}(\text{Pos}_{tower} = 1, X_{t1}, X_{t2})$$

$$X_t = 11.6587 \cdot \text{ft}$$

 Additional Offset of
Footing:

$$X_{off1} := \frac{W_f}{2} - \left(\frac{W_t \cdot \cos(30 \cdot \text{deg})}{3} + X_t \right)$$

$$X_{off2} := 0$$

$$X_{off} := \text{if}(\text{Pos}_{tower} = 1, X_{off1}, X_{off2})$$

$$X_{off} = 0 \cdot \text{ft}$$

Resisting Moment:

$$M_r := (WT_c + WT_{s1}) \cdot \frac{W_f}{2} + WT_t \cdot \left(\frac{W_f}{2} - X_{off} \right) + S_u \cdot \frac{T_{pp}}{3} + WT_{s2} \cdot \left(W_f + \frac{T_{pp} \cdot \tan(\phi_s)}{3} \right)$$

$$M_r = 24975.003 \cdot \text{kip} \cdot \text{ft}$$

Overturning Moment:

$$M_{ot} := M_t + S_t \cdot (T_f) + WT_t \cdot X_{off}$$

$$M_{ot} = 12069.8 \cdot \text{kip} \cdot \text{ft}$$

Factor of Safety:

$$FS := \frac{M_r}{M_{ot}}$$

$$FS = 2.07$$

$$\text{SafetyCheck} := \text{if}(FS > FS_{req}, \text{"Okay"}, \text{"No Good"})$$

$$\text{SafetyCheck} = \text{"Okay"}$$

BEARING PRESSURE CHECK:

| | | |
|-------------------|---|--|
| Pressure Applied: | $LOAD_{tot} := WT_c + WT_{s1} + WT_t$ $A_{mat} := W_f^2$ $S := \frac{W_f^3}{6}$ $P_{max} := \frac{LOAD_{tot}}{A_{mat}} + \frac{M_{ot}}{S}$ $P_{min} := \frac{LOAD_{tot}}{A_{mat}} - \frac{M_{ot}}{S}$ $MaxPressure := \text{if}(P_{max} < q_s, \text{"Okay"}, \text{"No Good"})$ $MinPressure := \text{if}[(P_{min} \ge 0) \cdot (P_{min} < q_s), \text{"Okay"}, \text{"No Good"}]$ | $LOAD_{tot} = 1318.125 \cdot \text{kip}$ $A_{mat} = 1332.25 \cdot \text{ft}^2$ $S = 8104.5208 \cdot \text{ft}^3$ $P_{max} = 2.4787 \cdot \text{ksf}$ $P_{min} = -0.4999 \cdot \text{ksf}$ $MaxPressure = \text{"Okay"}$ $MinPressure = \text{"No Good"}$ |
|-------------------|---|--|

Distance to Resultant of Pressure Distribution:

| | | |
|--|--|---------------------------------|
| | $X_p := \frac{\frac{P_{max}}{P_{max} - P_{min}} \cdot \frac{1}{3}}{W_f}$ | $X_p = 10.1248 \cdot \text{ft}$ |
|--|--|---------------------------------|

| | | |
|-------------------|------------------------|---------------------------------|
| Distance to Kern: | $X_k := \frac{W_f}{3}$ | $X_k = 12.1667 \cdot \text{ft}$ |
|-------------------|------------------------|---------------------------------|

Since Resultant Force is Not in Kern, Area to which Pressure is Applied Must be Reduced.

| | | |
|---------------|----------------------------------|--------------|
| Eccentricity: | $e := \frac{M_{ot}}{LOAD_{tot}}$ | $e = 9.1568$ |
|---------------|----------------------------------|--------------|

| | | |
|-------------------------|--|---------------------------------|
| Adjusted Soil Pressure: | $q_a := \frac{2 \cdot LOAD_{tot}}{3 \cdot W_f \cdot \left(\frac{W_f}{2} - e \right)}$ | $q_a = 2.6476 \cdot \text{ksf}$ |
|-------------------------|--|---------------------------------|

| | | |
|------------------|---|-------------------------------------|
| Revised Maximum: | $q_{max} := \text{if}(X_p < X_k, q_a, P_{max})$ | $q_{max} = 2.6476 \cdot \text{kip}$ |
|------------------|---|-------------------------------------|

| | | |
|--|--|---------------------------------|
| | $PressureCheck := \text{if}(q_{max} < q_s, \text{"Okay"}, \text{"No Good"})$ | $PressureCheck = \text{"Okay"}$ |
|--|--|---------------------------------|