Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

June 15, 2020

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

RE: **Notice of Exempt Modification for AT&T – Crown BU 823529**
38 Hatchetts Hill Road, Old Lyme, CT 06371
Latitude: 41° 19′ 3.26″ / Longitude: -72° 16′ 11.87″

Dear Ms. Bachman:

AT&T currently maintains three (3) antennas at the 190-foot mount on the existing 190-foot Monopole Tower, located at 38 Hatchetts Hill Road, Old Lyme, CT. The tower is owned by Crown Castle and the property is owned by Hatchetts Hill LLC. AT&T now intends to replace six (6) existing antennas with three (3) new 850 MHz antennas and three (3) new 1900 MHz antennas. The new antennas will be installed at the 190-ft level of the tower. AT&T is also proposing tower mount modifications, as shown on the enclosed mount analysis.

The facility was approved by the Town of Old Lyme Zoning Commission on January 14, 1999. The approval was given without conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §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 Timothy Griswold, First Selectman for the Town of Old Lyme, Dan Bourret, Land Use Administrator, Crown Castle as the tower owner, and Hatchetts Hill LLC, the property owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modification 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 emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Anne Marie Zsamba.

Sincerely,

Anne Marie Zsamba
Site Acquisition Specialist
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
(201) 236-9224
AnneMarie.Zsamba@crowncastle.com

Attachments
cc:

Timothy Griswold, First Selectman
Town of Old Lyme
Town Hall – Selectwoman's Office
52 Lyme Street
Old Lyme, CT 06371
860-434-1605

Dan Bourret, Land Use Coordinator
Town of Old Lyme
Town Hall
52 Lyme Street
Old Lyme, CT 06371
860-434-1605

Hatchetts Hill LLC, Property Owner
38 Hatchetts Hill Road
Old Lyme, CT 06371

Crown Castle, Tower Owner

ORIGIN ID:ONHA (585) 445-5896
RICHARD ZAJAC
CROWN CASTLE
629 KAYLEIGH DR

WEBSTER, NY 14580
UNITED STATES US

SHIP DATE: 15JUN20
ACTWGT: 2.00 LB
CAD: 104924194/INET4220

BILL SENDER

TO **DAN BOURRET, LAND USE**
TOWN OF OLD LYME
52 LYME STREET

OLD LYME CT 06371
(860) 434-1605 REF: 1734.7680
INV:
PO: DEPT:

56BJ1/C7DD/FE4A

FedEx Express

J201120042401uv

TUE - 16 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7707 0784 2236**

XE SKKA

06371
CT-US **BDL**

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ORIGIN ID:ONHA (585) 445-5896
RICHARD ZAJAC
CROWN CASTLE
629 KAYLEIGH DR

WEBSTER, NY 14580
UNITED STATES US

SHIP DATE: 15JUN20
ACTWGT: 2.00 LB
CAD: 104924194/INET4220

BILL SENDER

TO **HATCHETTS HILL LLC**
38 HATCHETTS HILL ROAD

OLD LYME CT 06371
(201) 236-9224 REF: 1734.7680
INV:
PO: DEPT:

56BJ1/C7DD/FE4A

FedEx Express
J201120042401uv

TRK# 0201 **7707 0786 6027**

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ORIGIN ID:ONHA (585) 445-5896
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629 KAYLEIGH DR

WEBSTER, NY 14580
UNITED STATES US

SHIP DATE: 15JUN20
ACTWGT: 2.00 LB
CAD: 104924194/INET4220

BILL SENDER

TO **TIMOTHY GRISWOLD**
TOWN OF OLD LYME
SELECTMAN'S OFFICE
52 LYME STREET
OLD LYME CT 06371
(860) 434-1605 REF: 1734.7680
INV:
PO: DEPT:

56BJ1/C7DD/FE4A

FedEx Express

J201120042401uv

TRK# **7707 0779 9048**
0201

TUE - 16 JUN 10:30A
PRIORITY OVERNIGHT

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Exhibit A

Original Facility Approval

TOWN OF OLD LYME, CONNECTICUT

ZONING COMMISSION
52 Lyme Street
P.O. Box 160
Old Lyme, CT 06371
Tel (860) 434-9174
Fax (860) 434-5636

CERTIFICATE OF DECISION

SPECIAL EXCEPTION

Application of: Omnipoint Communication, Inc. at 36 Hatchetts Hill Road, Old Lyme, CT., Map #19, Lot #22 in a LI-80 zone.

Request for a Special Exception Approval/Site Development Plan Approval for a proposed telecommunications tower. The Public Hearing was held on November 12, 1998.

Commission Members Present and Voting: Jeff Flower, Alan Bayreuther, Connie Kastelowitz, Robert McCarthy and Steven Ross.

Decision on January 14, 1999.

In this application the Commission members voted unanimously to approve the Site Development Plan/Special Exception as shown on the plan dated September 10, 1998 revised through December 9, 1998 with the following conditions:

1. Paragraph 13 be amended in accordance with Attorney Mattern's letter of January 13, 1999.

The Planning Commission concluded that this proposal, as approved, will not adversely affect the public health, safety, welfare or property values of the Town of Old Lyme.

This Certificate of Decision must be recorded in the land records of the Town of Old Lyme, Connecticut. The Town Clerk shall index the same in the grantor's index under the name of the record owner's, and the record owner shall pay the fees for such recording.

Dated at Old Lyme, Connecticut this 28th day of January 1999.

_____, Chairman
Old Lyme Planning Commission

Received for Record 2/19/99 at 1 0:15 m P
Recorded by Eileen K. Coppa A.T.C.
Town Clerk

Exhibit B

Property Card

38 HATCHETTS HILL RD

Location	38 HATCHETTS HILL RD	**Mblu**	19/ / 22/2 /
Acct#	00080200	**Owner**	HATCHETTS HILL LLC
Assessment	$319,400	**Appraisal**	$456,400
PID	891	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$456,400	$456,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$319,400	$319,400

Owner of Record

Owner	HATCHETTS HILL LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	38 HATCHETTS HILL RD OLD LYME, CT 06371	**Book & Page**	0220/0677
		Sale Date	08/02/1994

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
HATCHETTS HILL LLC	$0		0220/0677	08/02/1994

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes

Field	Description
Style	Outbuildings
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Usrfld 103	
Usrfld 104	
Usrfld 105	
Usrfld 106	
Usrfld 107	
Num Park	
Fireplaces	
Usrfld 108	
Usrfld 101	
Usrfld 102	
Usrfld 100	
Usrfld 300	
Usrfld 301	

Building Photo

(http://images.vgsi.com/photos/OldLymeCTPhotos//default.jpg)

Building Layout

Building Layout

(http://images.vgsi.com/photos/OldLymeCTPhotos//Sketches/891_891.jpg)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	4410
Description	IND LD PO
Zone	LI80
Neighborhood	IND
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	6.88
Frontage	0
Depth	0
Assessed Value	$319,400
Appraised Value	$456,400

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$456,400	$456,400
2019	$0	$380,300	$380,300
2018	$0	$380,300	$380,300

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$319,400	$319,400
2019	$0	$266,200	$266,200
2018	$0	$266,200	$266,200


Search
Selection
Themes
4.19 AC
21
4.45 AC
22-2
6.88 AC
23
2.47 AC
26
1.88 AC
22
8.20 AC
34
3.43 AC
Short Hills Rd
Short Hills Rd
Short Hills Rd
Hatchetts Hill Rd
Hatchetts Hill Rd
Hatchetts Hill Rd
Hatchetts Hill Rd
High St
High St
Machnik Dr
Map data ©2020
100 ft

Exhibit C

Construction Drawings

AT&T

AT&T SITE NUMBER: CTL02196
AT&T SITE NAME: OLD LYME HATCHETS HILL
AT&T FA CODE: 10035302
AT&T PACE NUMBER: MRCTB046560, MRCTB046590, MRCTB046515, MRCTB046695, MRCTB046663
SITE TYPE: MONOPOLE

BUSINESS UNIT #: 823529
SITE ADDRESS: 38 HATCHETS HILL ROAD
OLD LYME, CT 06371
COUNTY: NEW LONDON
TOWER HEIGHT: 190'-0"

PROJECT: AT&T LTE 3C, 4C, 4TX4RX, 5G NR

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	CT038/EASTLYME/I-95/X72
SITE ADDRESS:	38 HATCHETS HILL ROAD OLD LYME, CT 06371
COUNTY:	NEW LONDON
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41.317575
LONGITUDE:	-72.269971
LAT/LONG TYPE:	NAD83
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	AT&T MOBILITY ONE AT&T WAY BEDMINSTER, NJ 07921
CROWN CASTLE USA INC. APPLICATION ID:	517072

PROJECT TEAM

A&E FIRM:	B+T GROUP 1717 SOUTH BOULDER, SUITE 300 TULSA, OK 74119 MIKE OAKES (918) 217-8574
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3200 HORIZON SRIVE, SUITE 150 KING OF PRUSSIA, PA 19406

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	SITE PLAN
C-2	EQUIPMENT PLAN
C-3	TOWER ELEVATIONS
C-4	ANTENNA ORIENTATION
C-5	ANTENNA SCHEDULE
C-6	ANTENNA AND RRH SPECS.
C-7	ANTENNA AND RRH DETAIL
C-8	PLUMBING DIAGRAM
C-9	COLOR CODE STANDARD
G-1	GROUNDING DETAILS
G-2	GROUNDING DETAILS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11x17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT DESCRIPTION

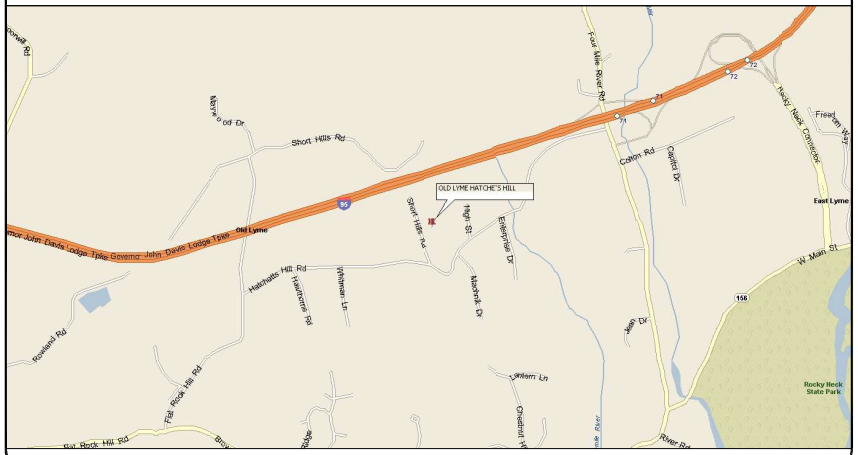
THE PURPOSE OF THIS PROJECT IS TO PROPOSE AN ANTENNA MODIFICATION ON AN EXISTING WIRELESS SITE.

TOWER SCOPE OF WORK
- REMOVE (3) POWERWAVE DUO14178686 ANTENNAS
- REMOVE (3) POWERWAVE 7770 ANTENNAS
- REMOVE (3) POWERWAVE TT19-08BP111-001 TMAS
- REMOVE (3) ERICSSON RRUS-11 B12 RRHS
- REMOVE (3) ERICSSON RRUS-12 B2 +RRUS-A2 B25 RRHS
- RELOCATE (3) ANDREW SBNHH-1D65A ANTENNAS
- RELOCATE (1) RAYCAP DC6-48-60-18-8F SQUID
- INSTALL (3) CCI DMP65R-BU4DA ANTENNAS
- INSTALL (3) CCI OPA65R-BU4A ANTENNAS
- INSTALL (3) ERICSSON 4449 B5/B12 RRHS
- INSTALL (3) ERICSSON 4478 B14 RRHS
- INSTALL (3) ERICSSON 8843 B2/B66A RRHS
- INSTALL (1) RAYCAP DC9-48-60-24-8C-EV SQUID
- INSTALL (1) ROSENBERGER LEONI FB-L98B-034-XXX
- INSTALL (3) ROSENBERGER LEONI WR-VG86ST-BRD
- MODIFY EXISTING MOUNTS PER MA BY TES DATED 4/20/20

GROUND SCOPE OF WORK
- INSTALL (1) 6630 WITH (1) IDLe
- REMOVE (6) POWERWAVE LGP 21901 DIPLEXERS

DESIGN PACKAGE BASED ON THE RFDS	DESIGN PACKAGE BASED ON THE APPLICATION
REVISION: 1.00	ID: 517072
DATE: 3/24/20	REVISION: 0

LOCATION MAP



NO SCALE

APPLICABLE CODES/REFERENCE DOCUMENTS

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2018 CONNECTICUT STATE BUILDING CODE (2015 IBC)
MECHANICAL	2018 CONNECTICUT STATE BUILDING CODE (2015 IMC)
ELECTRICAL	2018 CONNECTICUT STATE BUILDING CODE (2017 NEC)

REFERENCE DOCUMENTS:
STRUCTURAL ANALYSIS: PAUL J. FORD & COMPANY MAY 13, 2020
MOUNT ANALYSIS: TOWER ENGINEERING PROFESSIONALS APRIL 20, 2020

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER

CALL CONNECTICUT ONE CALL
(800) 922-4455
CALL 3 WORKING DAYS BEFORE YOU DIG!

AT&T
ONE AT&T WAY
BEDMINSTER, NJ 07921

CROWN CASTLE
3200 HORIZON DRIVE, SUITE 150
KING OF PRUSSIA, PA 19406

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL02196

BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
OLD LYME, CT 06371

EXISTING 190'-0"
MONOPOLE

ISSUED FOR:

REV.	DATE	DRWN	DESCRIPTION	DES./QA
0	6/4/20	JCO	CONSTRUCTION	RMC

STATE OF CONNECTICUT
31627
LICENSED PROFESSIONAL ENGINEER
6/4/20

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: T-1
REVISION: 0

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES, SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
3. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE" AND LATEST VERSION OF TIA 1019 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
4. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
5. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
6. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
13. NOTICE TO PROCEED– NO WORK TO COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF A PURCHASE ORDER.
14. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN STANDARD CED-STD-10253 INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
2. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
3. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8"ø ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
4. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALLS.....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

MASONRY NOTES:

1. HOLLOW CONCRETE MASONRY UNITS SHALL MEET A.S.T.M. SPECIFICATION C90, GRADE N. TYPE 1. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'm) SHALL BE 1500 PSI.
2. MORTAR SHALL MEET THE PROPERTY SPECIFICATION OF A.S.T.M. C270 TYP. "S" MORTAR AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
3. GROUT SHALL MEET A.S.T.M. SPECIFICATION C475 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.
4. CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
5. WALL SHALL RECEIVE TEMPORARY BRACING. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL GROUT IS FULLY CURED.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR–
   SUBCONTRACTOR– GENERAL CONTRACTOR (CONSTRUCTION)
   CARRIER– AT&T
   TOWER OWNER– CROWN CASTLE USA INC.
   OEM– ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR AND CROWN CASTLE USA INC.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

ABBREVIATIONS AND SYMBOLS:

ABBREVIATIONS:

AGL	ABOVE GRADE LEVEL
BTS	BASE TRANSCEIVER STATION
EXISTING	EXISTING
MIN.	MINIMUM
REF	REFERENCE
RF	RADIO FREQUENCY
T.B.D.	TO BE DETERMINED
T.B.R.	TO BE RESOLVED
TYP	TYPICAL
REQ	REQUIRED
EGR	EQUIPMENT GROUND RING
AWG	AMERICAN WIRE GAUGE
MGB	MASTER GROUND BAR
EG	EQUIPMENT GROUND
BCW	BARE COPPER WIRE
SIAD	SMART INTEGRATED ACCESS DEVICE
GEN	GENERATOR
IGR	INTERIOR GROUND RING (HALO)
RBS	RADIO BASE STATION

SYMBOLS:

#S/G#	SOLID GROUND BUS BAR
#S/N#	SOLID NEUTRAL BUS BAR
	SUPPLEMENTAL GROUND CONDUCTOR
	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	CHEMICAL GROUND ROD
	TEST WELL
	DISCONNECT SWITCH
M	METER
	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
	MECHANICAL CONNECTION
	GROUNDING WIRE

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC. HILTI EPOXY ANCHORS ARE REQUIRED BY CROWN CASTLE USA INC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
21. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).
22. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHIN ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL; SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.
24. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
28. INSTALL PLASTIC LABEL ON THE METER CENTER TO SHOW "AT&T".
29. ALL CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 AWG SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS, WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 TINNED SOLID IN 3/4" LIQUID TIGHT CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE LIQUID TIGHT CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).

NEC INSULATOR COLOR CODE

DESCRIPTION	PHASE/CODE LETTER	WIRE COLOR
240/120 1Ø	LEG 1	BLACK
	LEG 2	RED
AC NEUTRAL	N	WHITE
GROUND (EGC)	G	GREEN
VDC POS	+	*RED-POLARITY MARK AT TERMINATION
VDC NEG	–	*BLACK-POLARITY MARK AT TERMINATION
240V OR 208V, 3Ø	PHASE A	BLACK
	PHASE B	RED(ORG. IF HI LEG)
	PHASE C	BLUE
480V, 3Ø	PHASE A	BROWN
	PHASE B	ORANGE OR PURPLE
	PHASE C	YELLOW

* SEE NEC 210.5(C)(1) AND (2)

AT&T
ONE AT&T WAY
BEDMINSTER, NJ 07921

CROWN CASTLE
3200 HORIZON DRIVE, SUITE 150
KING OF PRUSSIA, PA 19406

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL02196

BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
OLD LYME, CT 06371

EXISTING 190'-0"
MONOPOLE

ISSUED FOR:

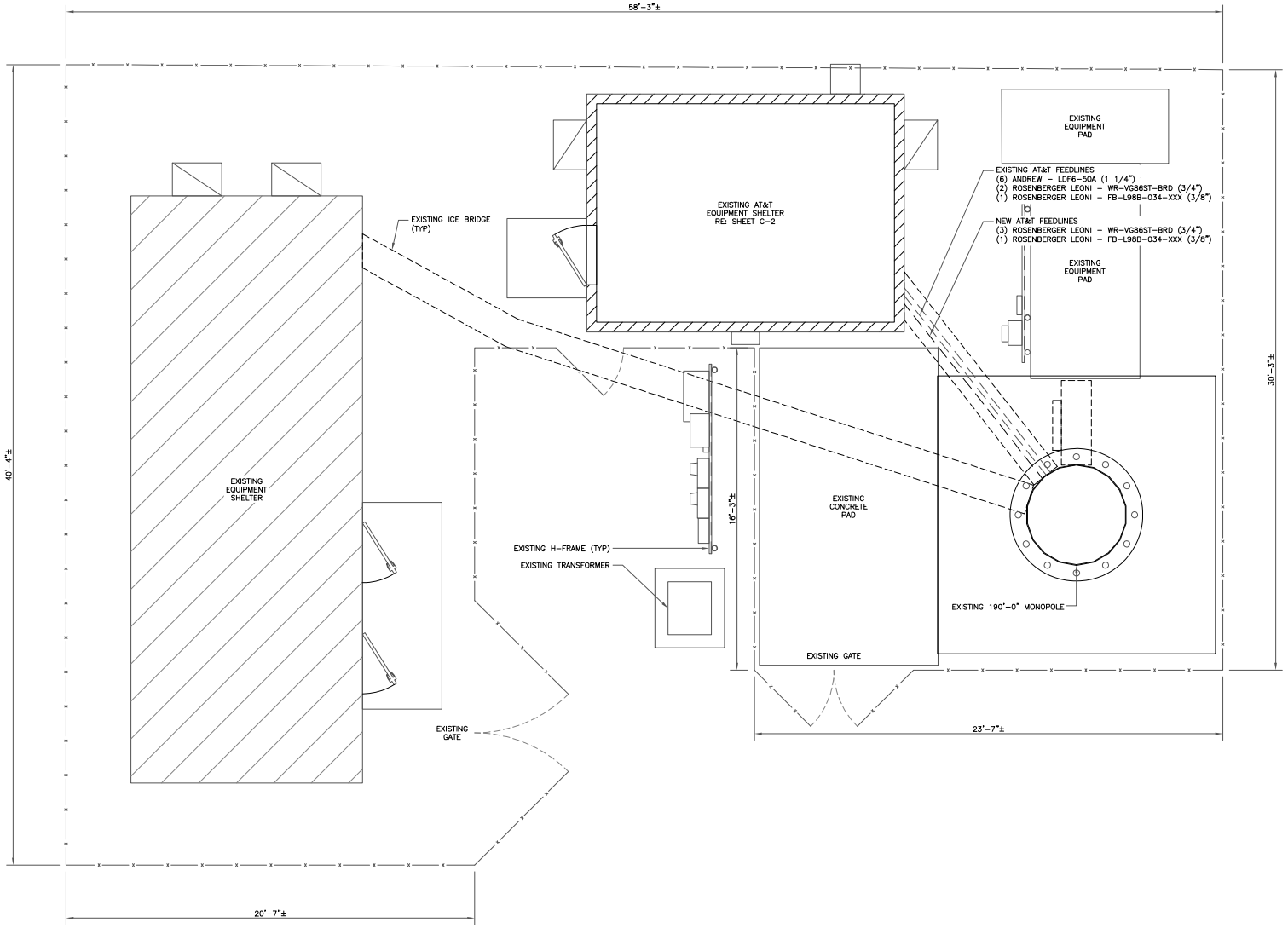
REV.	DATE	DRWN	DESCRIPTION	DES./QA
0	6/4/20	JCO	CONSTRUCTION	RMC

6/4/20

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: T-2

REVISION: 0



1 SITE PLAN
SCALE: 3/4"=1'-0" (FULL SIZE) 3/8"=1'-0" (11x17)

N

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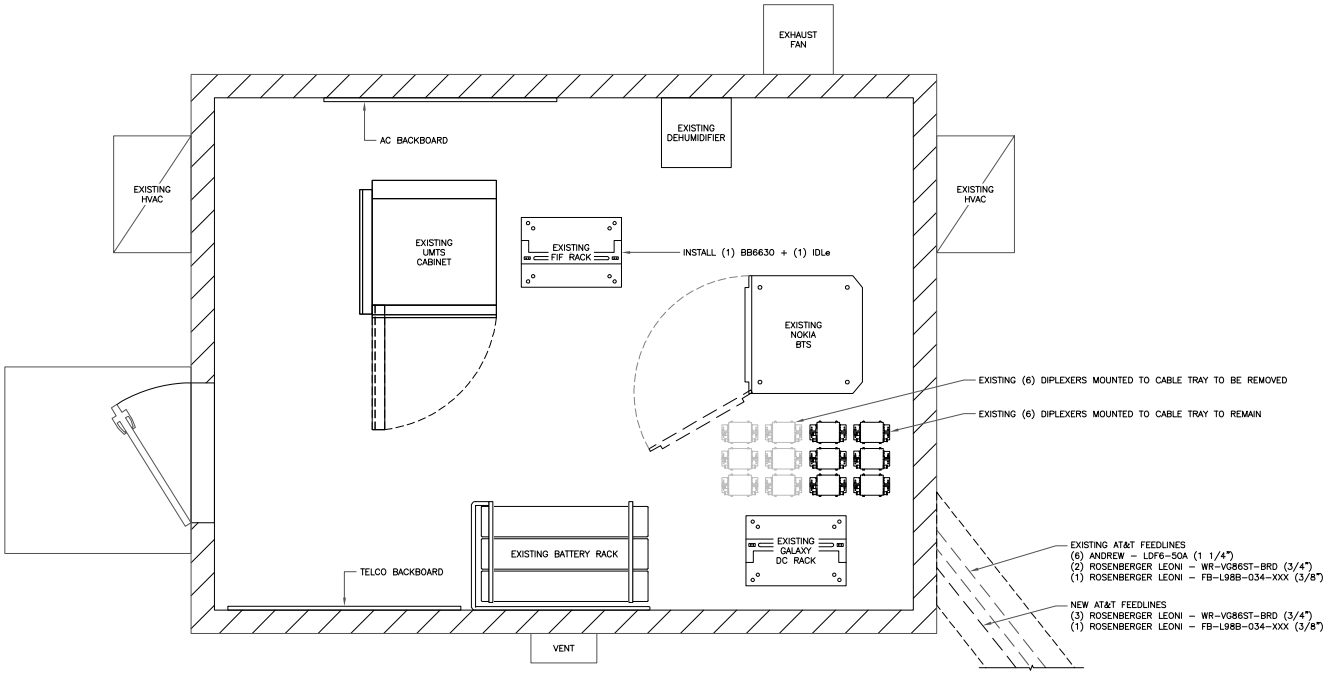
STATE OF CONNECTICUT
31627
LICENSED PROFESSIONAL ENGINEER
6/4/20

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: C-1
REVISION: 0



1 EXISTING EQUIPMENT PLAN

SCALE: 1-1/2"=1'-0" (FULL SIZE) 3/4"=1'-0" (11x17)

N

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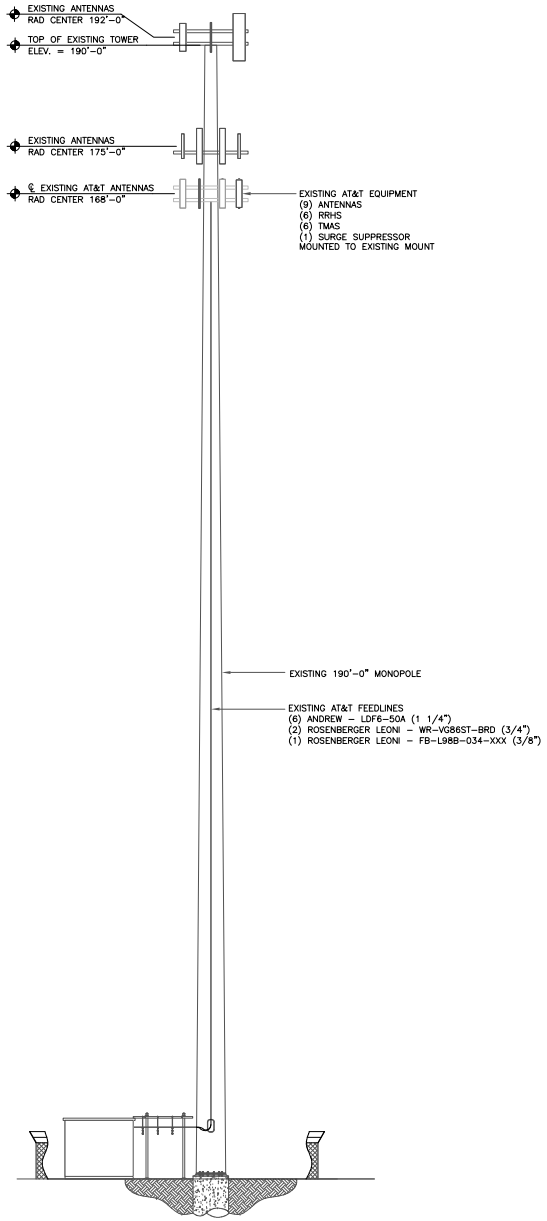
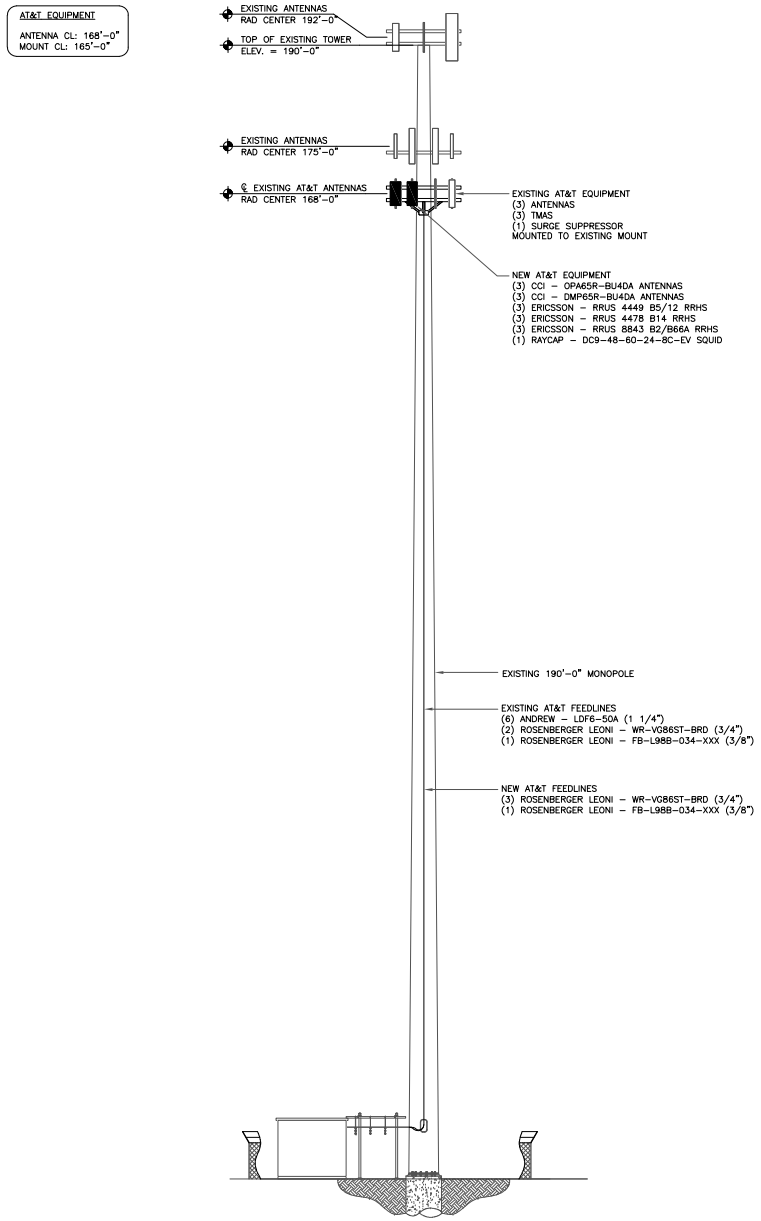
SHEET NUMBER: C-2

REVISION: 0



1 EXISTING ELEVATION
SCALE: NOT TO SCALE



2 FINAL ELEVATION
SCALE: NOT TO SCALE

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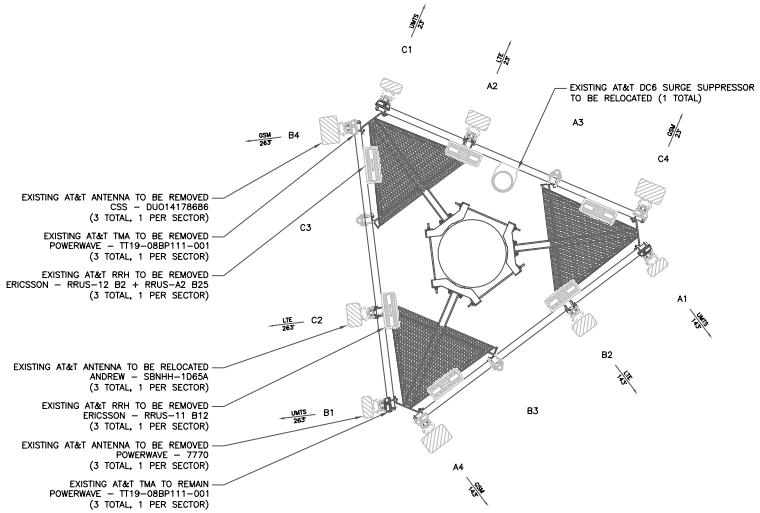
SHEET NUMBER: C-3
REVISION: 0



1 EXISTING ANTENNA LAYOUT
SCALE: NOT TO SCALE

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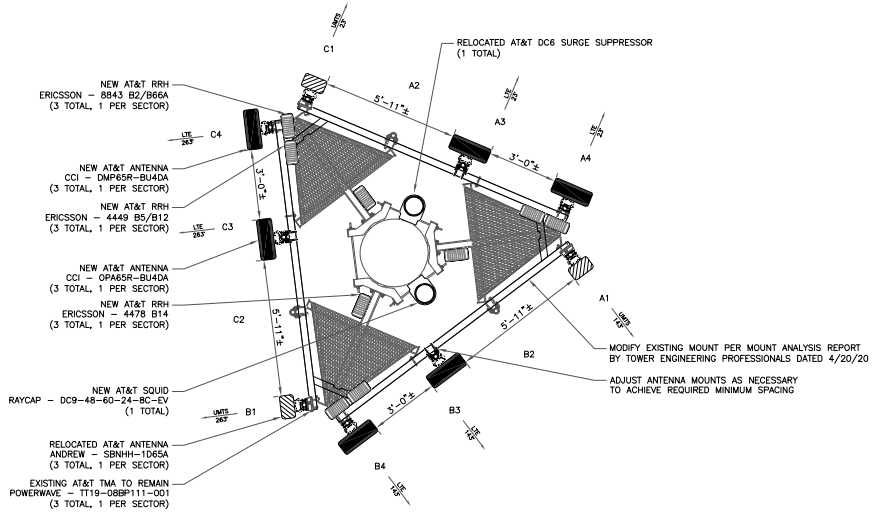

2 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE

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PEC.0001564
Expires 2/10/21

SHEET NUMBER: C-4
REVISION: 0

FINAL ANTENNA AND COAXIAL CABLE SCHEDULE

POS.	TECH	STATUS	AZIMUTH	ANTENNA TYPE	ANTENNA RAD CENTER	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	MAIN COAX SIZE	MAIN COAX LENGTH	COAX QTY	TMA QTY AND MODEL	RAYCAP	DC (WR-VG86ST-BRD) FIBER CABLES (FB-L98B-034-XXX)	RRHS	DIPLEXER	RET CABLE
ALPHA SECTOR																
A1	UMTS	EXISTING	143°	ANDREW SBNHH-1D65A	168'-0"	3°	2°	1 1/4"	190'-0"	2	(1) TT19-08BP111-001	DC6-48-60-18-8F	–	–	(2) CM1007-DBPXBC-003 (SHELTER)	Y
A2	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–
A3	LTE	NEW	23°	CCI OPA65R-BU4DA	168'-0"	0°	9°/2°/2°	–	190'-0"	–	–		(1) FIBER (2) DC LINES	(1) 4478 B14	–	Y
A4	LTE	NEW	23°	CCI DMP65R-BU4DA	168'-0"	0°	2°/2°/2°/2°/2°	–	190'-0"	–	–			(1) 4449 B5/B12 (1) 8843 B2/B66A	–	Y
BETA SECTOR																
B1	UMTS	EXISTING	263°	ANDREW SBNHH-1D65A	168'-0"	0°	2°	1 1/4"	190'-0"	2	(1) TT19-08BP111-001	DC9-48-60-24-8C-EV	–	–	(2) CM1007-DBPXBC-003 (SHELTER)	Y
B2	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–
B3	LTE	NEW	143°	CCI OPA65R-BU4DA	168'-0"	0°	4°/4°/4°	–	190'-0"	–	–		(1) FIBER (3) DC LINES	(1) 4478 B14	–	Y
B4	LTE	NEW	143°	CCI DMP65R-BU4DA	168'-0"	0°	4°/4°/4°/4°/4°	–	190'-0"	–	–			(1) 4449 B5/B12 (1) 8843 B2/B66A	–	Y
GAMMA SECTOR																
C1	UMTS	EXISTING	23°	ANDREW SBNHH-1D65A	168'-0"	0°	2°	1 1/4"	190'-0"	2	(1) TT19-08BP111-001	–	–	–	(2) CM1007-DBPXBC-003 (SHELTER)	Y
C2	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–
C3	LTE	NEW	263°	CCI OPA65R-BU4DA	168'-0"	0°	2°/2°/2°	–	190'-0"	–	–		–	(1) 4478 B14	–	Y
C4	LTE	NEW	263°	CCI DMP65R-BU4DA	168'-0"	0°	2°/2°/2°/2°/2°	–	190'-0"	–	–		–	(1) 4449 B5/B12 (1) 8843 B2/B66A	–	Y

NOTE: BOLD DENOTES NEW EQUIPMENT

1 FINAL ANTENNA AND COAXIAL CABLE SCHEDULE
SCALE: NOT TO SCALE

AT&T
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BEDMINSTER, NJ 07921

CROWN CASTLE
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PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL02196

BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
OLD LYME, CT 06371

EXISTING 190'-0"
MONOPOLE

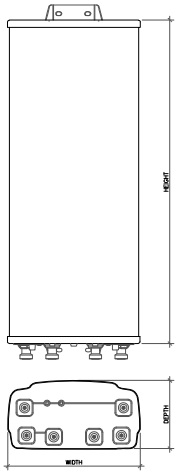
ISSUED FOR:

REV.	DATE	DRWN	DESCRIPTION	DES./QA
0	6/4/20	JCO	CONSTRUCTION	RMC

STATE OF CONNECTICUT
31627
LICENSED
PROFESSIONAL ENGINEER
6/4/20

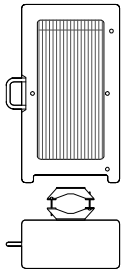
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: C-5
REVISION: 0



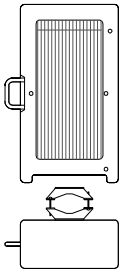
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU4DA	48"	20.7"	7.7"	67.9 lbs
OPA65R-BU4DA	48.2"	21.0"	7.8"	52.5 lbs

1 ANTENNA DETAIL
SCALE: NOT TO SCALE



ERICSSON - 4449 B5/B12
WEIGHT (FULLY EQUIPPED): 71.0 LBS
SIZE (HxWxD): 17.9x13.19x9.44 IN.

2 RRH DETAIL
SCALE: NOT TO SCALE

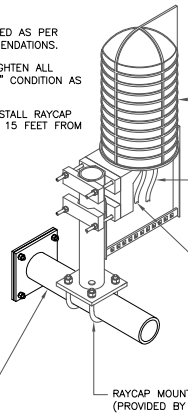


ERICSSON - 8843 B2/B66A
WEIGHT (FULLY EQUIPPED): 72.0 LBS
SIZE (HxWxD): 14.9x13.2x10.9 IN.

3 RRH DETAIL
SCALE: NOT TO SCALE

NOTES:

1. UNIT SHALL BE MOUNTED AS PER MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR SHALL TIGHTEN ALL BOLTS TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
3. CONTRACTOR SHALL INSTALL RAYCAP DISTRIBUTION UNIT WITHIN 15 FEET FROM ALL RRHS.



PROPOSED RAYCAP FIBER AND DC DISTRIBUTION UNIT W/ INTEGRATED SURGE PROTECTOR MOUNTED TO ANTENNA MOUNT ARM (PART# DC9-48-60-24-8C-EV) (SEE NOTE 3) (TYP. OF 1)

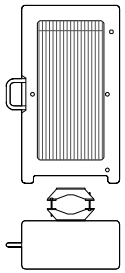
PROPOSED FIBER AND DC CABLE ROUTED FROM EQUIPMENT SHELTER. (6) 7/8" ROSENBERGER THREE PAIR POWER CABLES PART# WR-VG86ST-BRD AND (3) 3/8" ROSENBERGER 18-PAIR FIBER CABLE PART# FB-L98B-034-XXX

PROPOSED FIBER AND DC CABLE ROUTED TO PROPOSED RRU UNITS. (1) ROSENBERGER SINGLE PAIR POWER CABLES PART# WR-VG122ST-BRDA AND (1) ROSENBERGER SINGLE PAIR FIBER CABLE PART# FB-L98B-035-5000 (TYP. PER RRU)

PROPOSED ANTENNA MOUNT ARM

RAYCAP MOUNT BRACKET (PROVIDED BY MANUFACTURER)

4 SURGE SUPPRESSOR DETAIL
SCALE: NOT TO SCALE



ERICSSON - 4478 B14
WEIGHT (FULLY EQUIPPED): 59.9 LBS
SIZE (HxWxD): 16.5x13.4x7.7 IN.

5 RRH DETAIL
SCALE: NOT TO SCALE

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AT&T SITE NUMBER:
CTL02196

BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
OLD LYME, CT 06371

EXISTING 190'-0"
MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	6/4/20	JCO	CONSTRUCTION	RMC

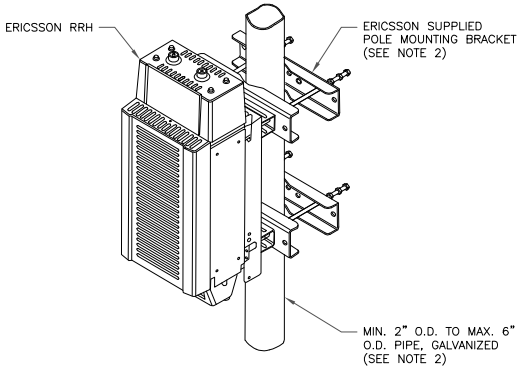
6/4/20

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

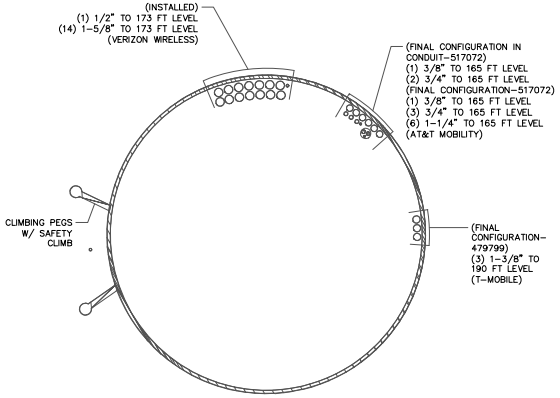
SHEET NUMBER: C-6
REVISION: 0

NOTES:

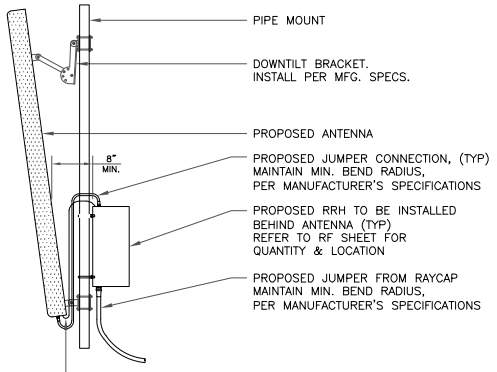
1. ERICSSON VIA AT&T SUPPLIES RRH, RRH POLE-MOUNTING BRACKET. SUBCONTRACTOR SHALL SUPPLY POLE/PIPE AND INSTALL ALL MOUNTING HARDWARE INCLUDING ERICSSON RRH POLE-MOUNTING BRACKET. ERICSSON INSTALLS RRH AND MAKES CABLE TERMINATIONS.
2. FOR POLE DIAMETERS FROM 6" TO 15", ERICSSON CAN SUPPLY A PAIR OF POLE MOUNTING METAL BANDS WITH BOLTING WELDMENT.
3. NO PAINTING OF THE RRH OR SOLAR SHIELD IS ALLOWED



1 RRH MOUNTING DETAIL
SCALE: NOT TO SCALE



2 BASE LEVEL DRAWING
SCALE: NOT TO SCALE



3 ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE

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BU #: **823529**
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38 HATCHETS HILL
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OLD LYME, CT 06371

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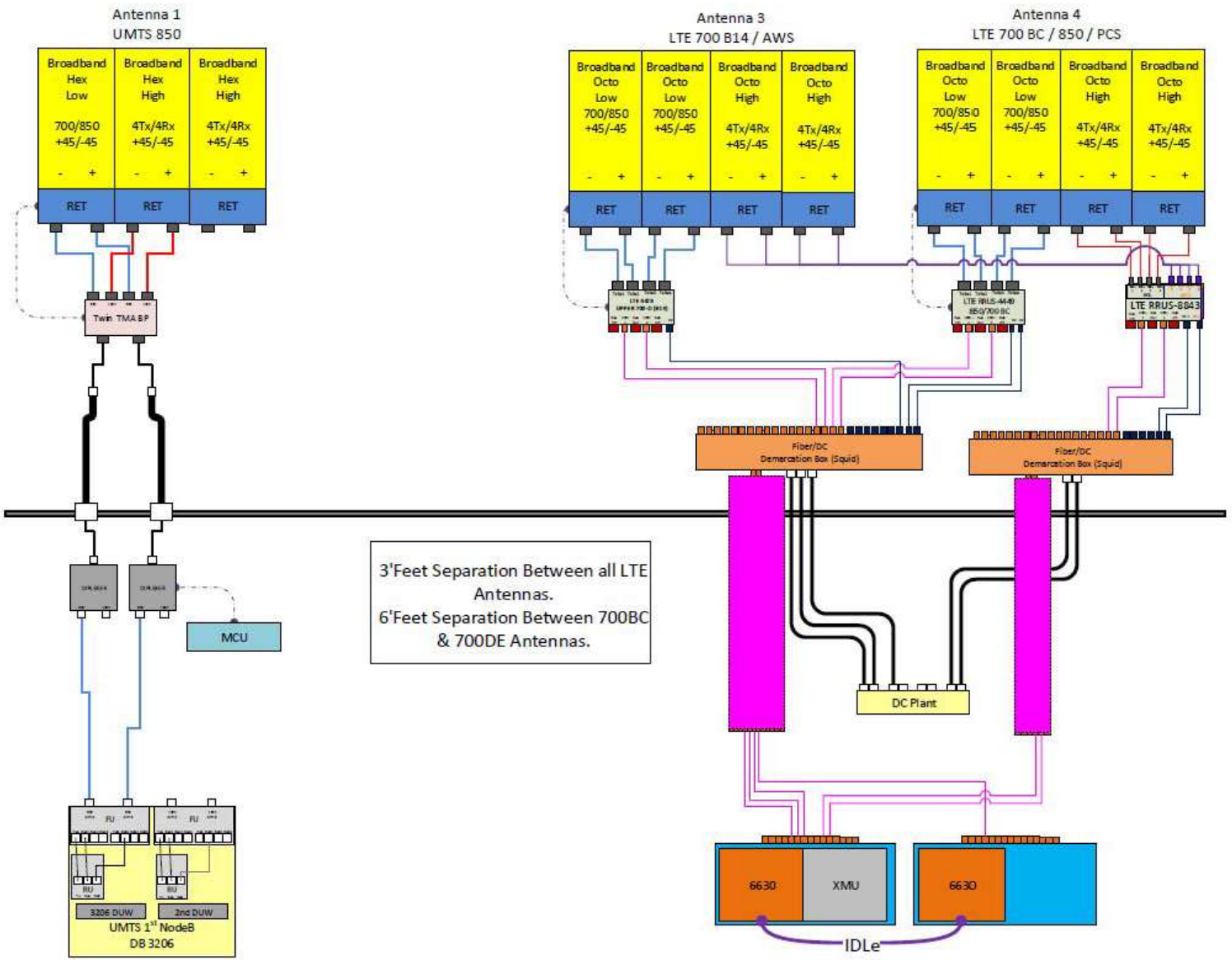
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: C-7

REVISION: 0



1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

AT&T
ONE AT&T WAY
BEDMINSTER, NJ 07921

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LICENSED PROFESSIONAL ENGINEER
6/4/20

B&T ENGINEERING, INC.
PEC.0001564
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SHEET NUMBER: C-8
REVISION: 0

SECTOR	TECHNOLOGY	FREQUENCY BAND	COLOR CODE – SECTOR DESIGNATION FOR SECTOR SPLIT	COLOR CODE – SECTOR (AMOUNT OF BANDS BASED ON POSITION)	COLOR CODE – FREQUENCY			45 + COAX	45 – COAX
A	LTE	700 (B/C)	BLANK	GREEN	VIOLET		BLANK	YELLOW	BLANK
A	LTE	850	BLANK	GREEN	YELLOW		BLANK	YELLOW	BLANK
A	LTE	850 – 2ND BLOCK	BLANK	GREEN	YELLOW	YELLOW	BLANK	YELLOW	BLANK
A	LTE	1900 (PCS)	BLANK	GREEN	RED		BLANK	YELLOW	BLANK
A	LTE	1900 (PCS) – 2ND BLOCK	BLANK	GREEN	RED	RED	BLANK	YELLOW	BLANK
A	LTE	2100 (AWS)	BLANK	GREEN	ORANGE		BLANK	YELLOW	BLANK
A	LTE	2100 (AWS) – 2ND BLOCK	BLANK	GREEN	ORANGE	ORANGE	BLANK	YELLOW	BLANK
A	LTE	2300 (WCS)	BLANK	GREEN	SLATE		BLANK	YELLOW	BLANK
A	LTE	2300 (WCS) – 2ND BLOCK	BLANK	GREEN	BROWN		BLANK	YELLOW	BLANK
A	LTE	2300 (WCS) – SXM REPEATER	BLANK	GREEN	BROWN	BROWN	BLANK	YELLOW	BLANK
A	LTE	700 (D/E)	BLANK	GREEN	BROWN	BROWN	BROWN	YELLOW	BLANK
A	LTE	700 FIRSTNET	BLANK	GREEN	VIOLET	BLUE	BLANK	YELLOW	BLANK
A	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLANK	GREEN	VIOLET	VIOLET	BLUE	YELLOW	BLANK
A	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLANK	GREEN	RED	ORANGE	BLANK	YELLOW	BLANK
A	LTE	8500 / 700 D/E (DUAL RRH)	BLANK	GREEN	YELLOW	SLATE	BLANK	YELLOW	BLANK
A – SPLIT	LTE	700 (B/C)	GREEN	ORANGE	VIOLET		BLANK	YELLOW	BLANK
A – SPLIT	LTE	850	GREEN	ORANGE	YELLOW		BLANK	YELLOW	BLANK
A – SPLIT	LTE	850 – 2ND BLOCK	GREEN	ORANGE	YELLOW	YELLOW	BLANK	YELLOW	BLANK
A – SPLIT	LTE	1900 (PCS)	GREEN	ORANGE	RED		BLANK	YELLOW	BLANK
A – SPLIT	LTE	1900 (PCS) – 2ND BLOCK	GREEN	ORANGE	RED	RED	BLANK	YELLOW	BLANK
A – SPLIT	LTE	2100 (AWS)	GREEN	ORANGE	ORANGE		BLANK	YELLOW	BLANK
A – SPLIT	LTE	2100 (AWS) – 2ND BLOCK	GREEN	ORANGE	ORANGE	ORANGE	BLANK	YELLOW	BLANK
A – SPLIT	LTE	2300 (WCS)	GREEN	ORANGE	SLATE		BLANK	YELLOW	BLANK
A – SPLIT	LTE	2300 (WCS) – 2ND BLOCK	GREEN	ORANGE	BROWN		BLANK	YELLOW	BLANK
A – SPLIT	LTE	2300 (WCS) – SXM REPEATER	GREEN	ORANGE	BROWN	BROWN	BLANK	YELLOW	BLANK
A – SPLIT	LTE	700 (D/E)	GREEN	ORANGE	BROWN	BROWN	BROWN	YELLOW	BLANK
A – SPLIT	LTE	700 FIRSTNET	GREEN	ORANGE	VIOLET	BLUE	BLANK	YELLOW	BLANK
A – SPLIT	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	GREEN	ORANGE	VIOLET	VIOLET	BLUE	YELLOW	BLANK
A – SPLIT	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	GREEN	ORANGE	RED	ORANGE	BLANK	YELLOW	BLANK
A – SPLIT	LTE	8500 / 700 D/E (DUAL RRH)	GREEN	ORANGE	YELLOW	SLATE	BLANK	YELLOW	BLANK
B	LTE	700 (B/C)	BLANK	BLUE	VIOLET		BLANK	YELLOW	BLANK
B	LTE	850	BLANK	BLUE	YELLOW		BLANK	YELLOW	BLANK
B	LTE	850 – 2ND BLOCK	BLANK	BLUE	YELLOW	YELLOW	BLANK	YELLOW	BLANK
B	LTE	1900 (PCS)	BLANK	BLUE	RED		BLANK	YELLOW	BLANK
B	LTE	1900 (PCS) – 2ND BLOCK	BLANK	BLUE	RED	RED	BLANK	YELLOW	BLANK
B	LTE	2100 (AWS)	BLANK	BLUE	ORANGE		BLANK	YELLOW	BLANK
B	LTE	2100 (AWS) – 2ND BLOCK	BLANK	BLUE	ORANGE	ORANGE	BLANK	YELLOW	BLANK
B	LTE	2300 (WCS)	BLANK	BLUE	SLATE		BLANK	YELLOW	BLANK
B	LTE	2300 (WCS) – 2ND BLOCK	BLANK	BLUE	BROWN		BLANK	YELLOW	BLANK
B	LTE	2300 (WCS) – SXM REPEATER	BLANK	BLUE	BROWN	BROWN	BLANK	YELLOW	BLANK
B	LTE	700 (D/E)	BLANK	BLUE	BROWN	BROWN	BROWN	YELLOW	BLANK
B	LTE	700 FIRSTNET	BLANK	BLUE	VIOLET	VIOLET	BLUE	YELLOW	BLANK
B	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLANK	BLUE	VIOLET	VIOLET	BLUE	YELLOW	BLANK
B	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLANK	BLUE	RED	ORANGE	BLANK	YELLOW	BLANK
B	LTE	8500 / 700 D/E (DUAL RRH)	BLANK	BLUE	YELLOW	SLATE	BLANK	YELLOW	BLANK
B – SPLIT	LTE	700 (B/C)	BLUE	BROWN	VIOLET		BLANK	YELLOW	BLANK
B – SPLIT	LTE	850	BLUE	BROWN	YELLOW		BLANK	YELLOW	BLANK
B – SPLIT	LTE	850 – 2ND BLOCK	BLUE	BROWN	YELLOW	YELLOW	BLANK	YELLOW	BLANK
B – SPLIT	LTE	1900 (PCS)	BLUE	BROWN	RED		BLANK	YELLOW	BLANK
B – SPLIT	LTE	1900 (PCS) – 2ND BLOCK	BLUE	BROWN	RED	RED	BLANK	YELLOW	BLANK
B – SPLIT	LTE	2100 (AWS)	BLUE	BROWN	ORANGE		BLANK	YELLOW	BLANK
B – SPLIT	LTE	2100 (AWS) – 2ND BLOCK	BLUE	BROWN	ORANGE	ORANGE	BLANK	YELLOW	BLANK
B – SPLIT	LTE	2300 (WCS)	BLUE	BROWN	SLATE		BLANK	YELLOW	BLANK
B – SPLIT	LTE	2300 (WCS) – 2ND BLOCK	BLUE	BROWN	BROWN		BLANK	YELLOW	BLANK
B – SPLIT	LTE	2300 (WCS) – SXM REPEATER	BLUE	BROWN	BROWN	BROWN	BLANK	YELLOW	BLANK
B – SPLIT	LTE	700 (D/E)	BLUE	BROWN	BROWN	BROWN	BROWN	YELLOW	BLANK
B – SPLIT	LTE	700 FIRSTNET	BLUE	BROWN	VIOLET	BLUE	BLANK	YELLOW	BLANK
B – SPLIT	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLUE	BROWN	VIOLET	VIOLET	BLUE	YELLOW	BLANK
B – SPLIT	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLUE	BROWN	RED	ORANGE	BLANK	YELLOW	BLANK
B – SPLIT	LTE	8500 / 700 D/E (DUAL RRH)	BLUE	BROWN	YELLOW	SLATE	BLANK	YELLOW	BLANK
C	LTE	700 (B/C)	BLANK	WHITE	VIOLET		BLANK	YELLOW	BLANK
C	LTE	850	BLANK	WHITE	YELLOW		BLANK	YELLOW	BLANK
C	LTE	850 – 2ND BLOCK	BLANK	WHITE	YELLOW	YELLOW	BLANK	YELLOW	BLANK
C	LTE	1900 (PCS)	BLANK	WHITE	RED		BLANK	YELLOW	BLANK
C	LTE	1900 (PCS) – 2ND BLOCK	BLANK	WHITE	RED	RED	BLANK	YELLOW	BLANK
C	LTE	2100 (AWS)	BLANK	WHITE	ORANGE		BLANK	YELLOW	BLANK
C	LTE	2100 (AWS) – 2ND BLOCK	BLANK	WHITE	ORANGE	ORANGE	BLANK	YELLOW	BLANK
C	LTE	2300 (WCS)	BLANK	WHITE	SLATE		BLANK	YELLOW	BLANK
C	LTE	2300 (WCS) – 2ND BLOCK	BLANK	WHITE	BROWN		BLANK	YELLOW	BLANK
C	LTE	2300 (WCS) – SXM REPEATER	BLANK	WHITE	BROWN	BROWN	BLANK	YELLOW	BLANK
C	LTE	700 (D/E)	BLANK	WHITE	BROWN	BROWN	BROWN	YELLOW	BLANK
C	LTE	700 FIRSTNET	BLANK	WHITE	VIOLET	BLUE	BLANK	YELLOW	BLANK
C	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLANK	WHITE	VIOLET	VIOLET	BLUE	YELLOW	BLANK
C	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLANK	WHITE	RED	ORANGE	BLANK	YELLOW	BLANK
C	LTE	8500 / 700 D/E (DUAL RRH)	BLANK	WHITE	YELLOW	SLATE	BLANK	YELLOW	BLANK
C – SPLIT	LTE	700 (B/C)	WHITE	VIOLET	VIOLET		BLANK	YELLOW	BLANK
C – SPLIT	LTE	850	WHITE	VIOLET	YELLOW		BLANK	YELLOW	BLANK
C – SPLIT	LTE	850 – 2ND BLOCK	WHITE	VIOLET	YELLOW	YELLOW	BLANK	YELLOW	BLANK
C – SPLIT	LTE	1900 (PCS)	WHITE	VIOLET	RED		BLANK	YELLOW	BLANK
C – SPLIT	LTE	1900 (PCS) – 2ND BLOCK	WHITE	VIOLET	RED	RED	BLANK	YELLOW	BLANK
C – SPLIT	LTE	2100 (AWS)	WHITE	VIOLET	ORANGE		BLANK	YELLOW	BLANK
C – SPLIT	LTE	2100 (AWS) – 2ND BLOCK	WHITE	VIOLET	ORANGE	ORANGE	BLANK	YELLOW	BLANK
C – SPLIT	LTE	2300 (WCS)	WHITE	VIOLET	SLATE		BLANK	YELLOW	BLANK
C – SPLIT	LTE	2300 (WCS) – 2ND BLOCK	WHITE	VIOLET	BROWN		BLANK	YELLOW	BLANK
C – SPLIT	LTE	2300 (WCS) – SXM REPEATER	WHITE	VIOLET	BROWN	BROWN	BLANK	YELLOW	BLANK
C – SPLIT	LTE	700 (D/E)	WHITE	VIOLET	BROWN	BROWN	BROWN	YELLOW	BLANK
C – SPLIT	LTE	700 FIRSTNET	WHITE	VIOLET	VIOLET	BLUE	BLANK	YELLOW	BLANK
C – SPLIT	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	WHITE	VIOLET	VIOLET	VIOLET	BLUE	YELLOW	BLANK
C – SPLIT	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	WHITE	VIOLET	RED	ORANGE	BLANK	YELLOW	BLANK
C – SPLIT	LTE	8500 / 700 D/E (DUAL RRH)	WHITE	VIOLET	YELLOW	SLATE	BLANK	YELLOW	BLANK
D	LTE	700 (B/C)	BLANK	ORANGE	VIOLET		BLANK	YELLOW	BLANK
D	LTE	850	BLANK	ORANGE	YELLOW		BLANK	YELLOW	BLANK
D	LTE	850 – 2ND BLOCK	BLANK	ORANGE	YELLOW	YELLOW	BLANK	YELLOW	BLANK
D	LTE	1900 (PCS)	BLANK	ORANGE	RED		BLANK	YELLOW	BLANK
D	LTE	1900 (PCS) – 2ND BLOCK	BLANK	ORANGE	RED	RED	BLANK	YELLOW	BLANK
D	LTE	2100 (AWS)	BLANK	ORANGE	ORANGE		BLANK	YELLOW	BLANK
D	LTE	2100 (AWS) – 2ND BLOCK	BLANK	ORANGE	ORANGE	ORANGE	BLANK	YELLOW	BLANK
D	LTE	2300 (WCS)	BLANK	ORANGE	SLATE		BLANK	YELLOW	BLANK
D	LTE	2300 (WCS) – 2ND BLOCK	BLANK	ORANGE	BROWN		BLANK	YELLOW	BLANK
D	LTE	2300 (WCS) – SXM REPEATER	BLANK	ORANGE	BROWN	BROWN	BLANK	YELLOW	BLANK
D	LTE	700 (D/E)	BLANK	ORANGE	BROWN	BROWN	BROWN	YELLOW	BLANK
D	LTE	700 FIRSTNET	BLANK	ORANGE	VIOLET	BLUE	BLANK	YELLOW	BLANK
D	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLANK	ORANGE	VIOLET	VIOLET	BLUE	YELLOW	BLANK
D	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLANK	ORANGE	RED	ORANGE	BLANK	YELLOW	BLANK
D	LTE	8500 / 700 D/E (DUAL RRH)	BLANK	ORANGE	YELLOW	SLATE	BLANK	YELLOW	BLANK
E	LTE	700 (B/C)	BLANK	BROWN	VIOLET		BLANK	YELLOW	BLANK
E	LTE	850	BLANK	BROWN	YELLOW		BLANK	YELLOW	BLANK
E	LTE	850 – 2ND BLOCK	BLANK	BROWN	YELLOW	YELLOW	BLANK	YELLOW	BLANK
E	LTE	1900 (PCS)	BLANK	BROWN	RED		BLANK	YELLOW	BLANK
E	LTE	1900 (PCS) – 2ND BLOCK	BLANK	BROWN	RED	RED	BLANK	YELLOW	BLANK
E	LTE	2100 (AWS)	BLANK	BROWN	ORANGE		BLANK	YELLOW	BLANK
E	LTE	2100 (AWS) – 2ND BLOCK	BLANK	BROWN	ORANGE	ORANGE	BLANK	YELLOW	BLANK
E	LTE	2300 (WCS)	BLANK	BROWN	SLATE		BLANK	YELLOW	BLANK
E	LTE	2300 (WCS) – 2ND BLOCK	BLANK	BROWN	BROWN		BLANK	YELLOW	BLANK
E	LTE	2300 (WCS) – SXM REPEATER	BLANK	BROWN	BROWN	BROWN	BLANK	YELLOW	BLANK
E	LTE	700 (D/E)	BLANK	BROWN	BROWN	BROWN	BROWN	YELLOW	BLANK
E	LTE	700 FIRSTNET	BLANK	BROWN	VIOLET	BLUE	BLANK	YELLOW	BLANK
E	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLANK	BROWN	VIOLET	VIOLET	BLUE	YELLOW	BLANK
E	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLANK	BROWN	RED	ORANGE	BLANK	YELLOW	BLANK
E	LTE	8500 / 700 D/E (DUAL RRH)	BLANK	BROWN	YELLOW	SLATE	BLANK	YELLOW	BLANK
F	LTE	700 (B/C)	BLANK	VIOLET	VIOLET		BLANK	YELLOW	BLANK
F	LTE	850	BLANK	VIOLET	YELLOW		BLANK	YELLOW	BLANK
F	LTE	850 – 2ND BLOCK	BLANK	VIOLET	YELLOW	YELLOW	BLANK	YELLOW	BLANK
F	LTE	1900 (PCS)	BLANK	VIOLET	RED		BLANK	YELLOW	BLANK
F	LTE	1900 (PCS) – 2ND BLOCK	BLANK	VIOLET	RED	RED	BLANK	YELLOW	BLANK
F	LTE	2100 (AWS)	BLANK	VIOLET	ORANGE		BLANK	YELLOW	BLANK
F	LTE	2100 (AWS) – 2ND BLOCK	BLANK	VIOLET	ORANGE	ORANGE	BLANK	YELLOW	BLANK
F	LTE	2300 (WCS)	BLANK	VIOLET	SLATE		BLANK	YELLOW	BLANK
F	LTE	2300 (WCS) – 2ND BLOCK	BLANK	VIOLET	BROWN		BLANK	YELLOW	BLANK
F	LTE	2300 (WCS) – SXM REPEATER	BLANK	VIOLET	BROWN	BROWN	BLANK	YELLOW	BLANK
F	LTE	700 (D/E)	BLANK	VIOLET	BROWN	BROWN	BROWN	YELLOW	BLANK
F	LTE	700 FIRSTNET	BLANK	VIOLET	VIOLET	BLUE	BLANK	YELLOW	BLANK
F	LTE	700 (B/C) / 700 FIRSTNET (DUAL RRH)	BLANK	VIOLET	VIOLET	VIOLET	BLUE	YELLOW	BLANK
F	LTE	1900 (PCS) / 2100 (AWS) (DUAL RRH)	BLANK	VIOLET	RED	ORANGE	BLANK	YELLOW	BLANK
F	LTE	8500 / 700 D/E (DUAL RRH)	BLANK	VIOLET	YELLOW	SLATE	BLANK	YELLOW	BLANK

NOTE 1: PRODUCTS ARE ONLY TO BE USED WHEN ADEQUATE PHYSICAL SPACE EXISTS FOR PROPER INSTALLATION.

NOTE 2: HEAT SHRINK MAY ONLY BE USED AT GROUND LEVEL OR ROOFTOP SITES WHEN APPLIED WITH A HEAT GUN. USE ON TOWERS OR INSTALLING WITH AN OPEN FLAME DEVICE, SUCH AS A TORCH, IS PROHIBITED DUE TO POTENTIAL DAMAGE TO CONNECTORS AND CABLES. HEAT SHRINK IS NOT ALLOWED ON CONNECTIONS TO TOWER TOP EQUIPMENT EVEN IF THE HEAT SHRINK IS APPLIED ON THE GROUND PRIOR TO INSTALLING THE EQUIPMENT ON THE TOWER TOP.

NOTE 3: HEAT SHRINK IS NOT TO BE USED ON RET/AISG CONNECTORS FOUND ON RF DEVICES (RRH/RRU, ANTENNAS, ETC.), DUE TO POSSIBLE DAMAGE BEING CAUSED TO THE DEVICE. IT MAY BE USED ON CONNECTORS ATTACHED TO RET SURGE PROTECTORS.

NOTE 4: WHEN GAMMA ELECTRONICS COLD SHRINK IS USED ON FULLY THREADED DIN CONNECTORS THE THREADS MUST HAVE EITHER ROSENBERGER THREAD ADAPTER OR BUTYL APPLIED PRIOR TO THE COLD SHRINK BEING INSTALLED. REFER TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS INCLUDED WITH THE PRODUCT FOR DETAILS.

TABLE 1: E/ PA / S. NJ / DE – COAX COLOR CODE

SECTOR	ALPHA	GREEN		
	A–SPLIT	GREEN	ORANGE	BLANK
	BETA	BLUE		
	B–SPLIT	BROWN	BROWN	BLANK
	GAMMA	WHITE		
	C–SPLIT	WHITE	VIOLET	BLANK
	D	ORANGE		
	E	BROWN		
	F	VIOLET		

DC TRUCNK / DC JUMPER / FIRST FIBER JUMPER

FREQUENCY BAND	700 (B/C)	VIOLET		
	850	YELLOW		
	850 – 2ND BLOCK	YELLOW	YELLOW	BLANK
	1900 (PCS)	RED		
	1900 (PCS) – 2ND BLOCK	RED	RED	BLANK
	2100 (AWS)	ORANGE		
	2100 (AWS) – 2ND BLOCK	ORANGE	ORANGE	BLANK
	2300 (WCS)	BROWN		
	2300 (WCS) – 2ND BLOCK	BROWN	BROWN	BLANK
	2300 (WCS) – SXM REPEATER	BROWN	BROWN	BROWN
	700 (D/E)	SLATE		
	700 FIRSTNET	VIOLET	BLUE	BLANK
	700 (B/C) / 700 FIRSTNET (DUAL RRH)	VIOLET	VIOLET	BLUE
	1900 (PCS) / 2100 (AWS) (DUAL RRH)	RED	ORANGE	BLANK
	8500 / 700 D/E (DUAL RRH)	YELLOW	SLATE	BLANK

WEATHERPROOFING PRODUCT APPLICATION TABLE

PRODUCT	APPLICATION					
	HARDLINE TO JUMPER CONNECTION	7–16 DIN RF CONNECTOR	4.3–10 RF CONNECTOR	RRH/RRU DC CONNECTOR	RRH/RRU FIBER CONNECTOR	RET/AISG
TAPE & BUTYL	YES	YES (1)	YES (1)	NO	NO	NO
SELF–FUSING TAPE	YES	YES (1)	YES (1)	YES	NO	YES
JUMPER BOOT	NO	YES	YES	NO	NO	NO

TORQUE VALUES FOR CONNECTORS

CONNECTOR TYPE	TORQUE Ft–lbs	TORQUE In–lbs
7–16 DIN	19–22	221–265
4.3–10	3.67	44
N	1.25	15
SMA	0.42	5
TNC	0.42	5
RET/AISG	HAND TIGHTEN	HAND TIGHTEN

MINIMUM BENDING RADIUS FOR GROUNDING CONDUCTORS

GROUNDING CONDUCTOR SIZE	MINIMUM BENDING RADIUS (INCHES)
6 AWG	2
4 AWG	3
2 AWG	3
1/0 AWG	4
4/0 AWG	4
750 KCML	7

1 COLOR CODE STANDARD
SCALE: NOT TO SCALE

AT&T
ONE AT&T WAY
BEDMINSTER, NJ 07921

CROWN CASTLE
3200 HORIZON DRIVE, SUITE 150
KING OF PRUSSIA, PA 19406

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL02196

BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
OLD LYME, CT 06371

EXISTING 190'-0"
MONOPOLE

ISSUED FOR:

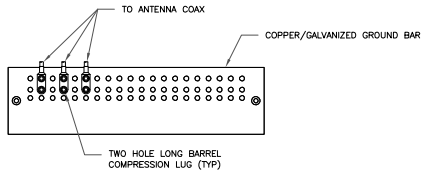
REV.	DATE	DRWN	DESCRIPTION	DES./QA
0	6/4/20	JCO	CONSTRUCTION	RMC

STATE OF CONNECTICUT
31627
LICENSED PROFESSIONAL ENGINEER
6/4/20

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

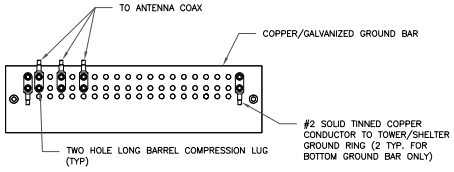
SHEET NUMBER: C-9
REVISION: 0



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL.

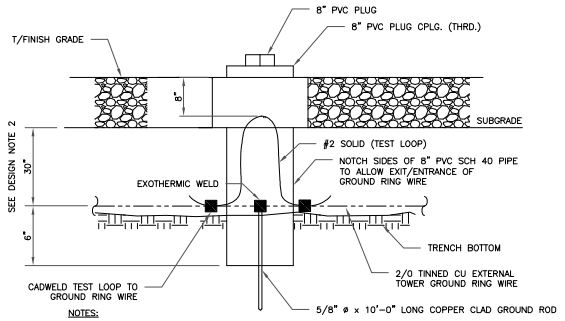
1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

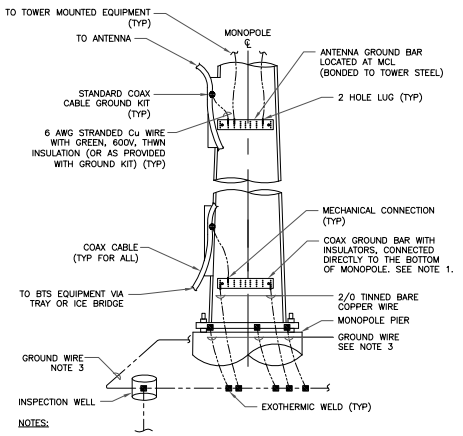
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

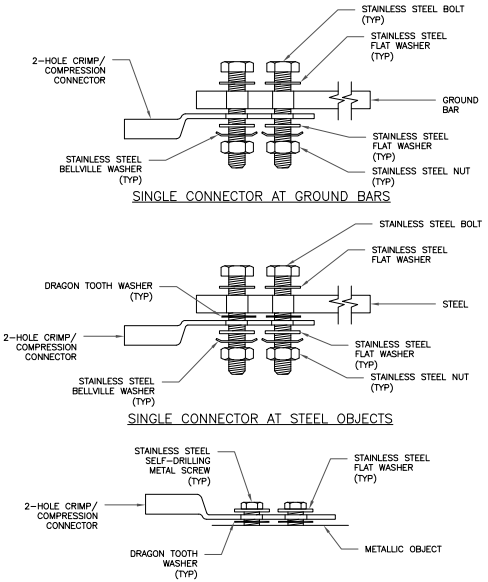
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



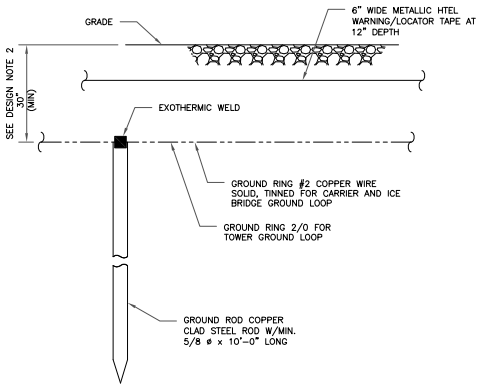
NOTES:

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

AT&T
ONE AT&T WAY
BEDMINSTER, NJ 07921

CROWN CASTLE
3200 HORIZON DRIVE, SUITE 150
KING OF PRUSSIA, PA 19406

B+T GRP
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AT&T SITE NUMBER:
CTL02196

BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
OLD LYME, CT 06371

EXISTING 190'-0" MONOPOLE

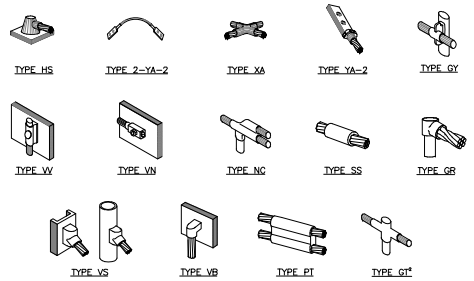
ISSUED FOR:

REV.	DATE	DRWN	DESCRIPTION	DES./QA
0	6/4/20	JCO	CONSTRUCTION	RMC

STATE OF CONNECTICUT
31627
LICENSED PROFESSIONAL ENGINEER
6/4/20

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: G-1
REVISION: 0

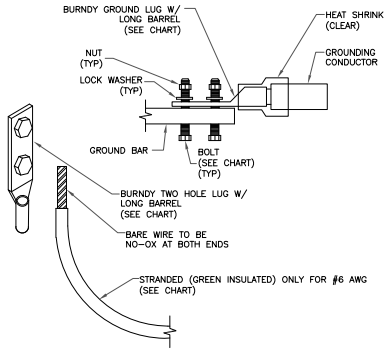


NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE

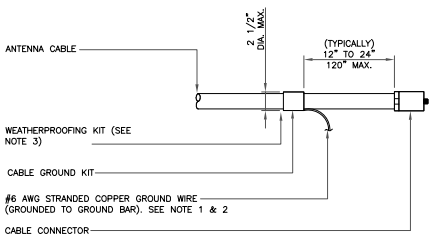
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA2B-2N	1/2" - 16 NC S 2 BOLT



NOTES:

1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER,GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

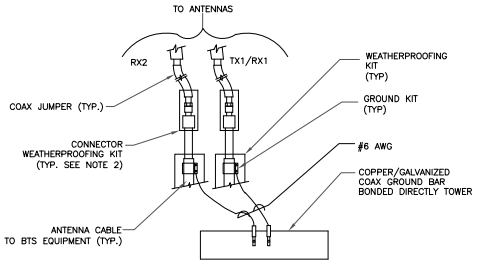
2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

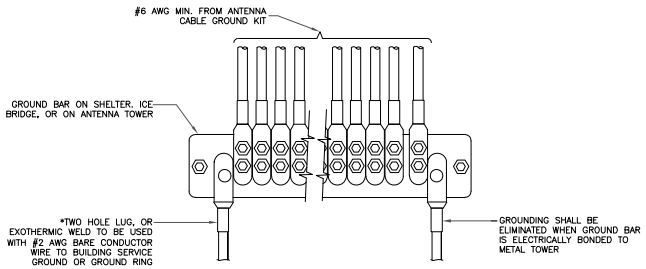
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



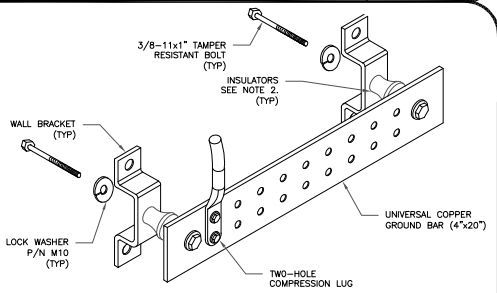
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



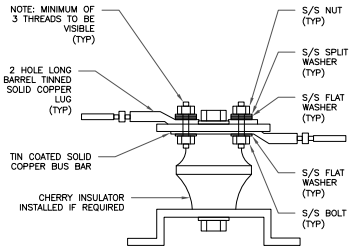
5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



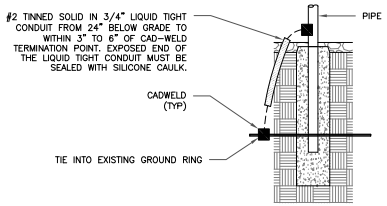
NOTES:

1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

AT&T
ONE AT&T WAY
BEDMINSTER, NJ 07921

CROWN CASTLE
3200 HORIZON DRIVE, SUITE 150
KING OF PRUSSIA, PA 19406

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BU #: **823529**
CT038/EASTLYME/I-95/X72

38 HATCHETS HILL ROAD
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EXISTING 190'-0" MONOPOLE

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0	6/4/20	JCO	CONSTRUCTION	RMC

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

SHEET NUMBER: G-2
REVISION: 0

Exhibit D

Structural Analysis Report

PAUL J. FORD & COMPANY

Date: May 13, 2020

Cheryl Schultz
Crown Castle
6325 Ardrey Kell RddSuite 600
Charlotte, NC 28277

Paul J. Ford and Company
250 E. Broad St., Ste 600
Columbus, OH 43215
614-221-6679

Subject:	**Structural Analysis Report**	
Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	65079
	Carrier Site Name:	OLD LYME HATCHETTS HILL
Crown Castle Designation:	**Crown Castle BU Number:**	823529
	Crown Castle Site Name:	CT038/EastLyme/ I-95/ X72
	Crown Castle JDE Job Number:	605374
	Crown Castle Work Order Number:	1845310
	Crown Castle Order Number:	517072 Rev. 0
Engineering Firm Designation:	**Paul J. Ford and Company Project Number:**	37520-0839.001.7805
Site Data:	**38 Hatchetts Hill Road, Old Lyme, New London County, CT** **Latitude *41° 19' 3.26"*, Longitude *-72° 16' 11.87"*** **190 Foot - Monopole Tower**	

Dear Cheryl Schultz,

Paul J. Ford and Company is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 87.3%**

This analysis utilizes an ultimate 3-second gust wind speed of 135 mph as required by the 2018 Connecticut State Building Code and Appendix N. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

Steven Pozz, EI
Structural Designer
spozz@pauljford.com

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED PROFESSIONAL ENGINEER

2020.05.15 14:22:35-04'00'

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 190 ft Monopole tower designed by PIROD MANUFACTURES INC. in December of 1998.

The tower has been modified per reinforcement drawings prepared by TEP. Reinforcement consist of shaft reinforcing and bolted flange jumps.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	135 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
165.0	167.0	1	raycap	DC6-48-60-18-8F	6 2 5 1	1-1/4 3/8 3/4 2” Cond.
	165.0	3	andrew	SBNHH-1D65A w/ Mount Pipe		
		3	cci antennas	DMP65R-BU4D w/ Mount Pipe		
		3	cci antennas	OPA65R-BU4D w/ Mount Pipe		
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 4478 B14		
		3	ericsson	RRUS 8843 B2/B66A		
		3	powerwave technologies	TT19-08BP111-001		
		1	raycap	DC9-48-60-24-8C-EV		
		1	tower mounts	Platform Mount [LP 712-1]		
		1	sitepro1	PRK-1245		
		1	sitepro1	HRK12-3HD		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
190.0	192.0	3	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe	3	1-3/8
		3	ericsson	RADIO 2217 B2		
		3	ericsson	RADIO 4449 B12/B71		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		1	tower mounts	Platform Mount [LP 405-1_HR-1]		
173.0	175.0	3	alcatel lucent	B13 RRH 4X30	14 1	1-5/8 1/2
		3	alcatel lucent	B25 RRH4X30		
		3	alcatel lucent	RRH4X45-AWS4 B66		
		6	andrew	SBNHH-1D65B w/ Mount Pipe		
		6	antel	LPA-80080/4CF w/ Mount Pipe		
		1	gps	GPS_A		
		2	raycap	RRFDC-3315-PF-48		
		6	rfs celwave	FD9R6004/2C-3L		
	173.0	1	tower mounts	Platform Mount [LP 403-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	FDH, 1423I91600, 03/27/2014	3500965	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Pirod, A-115008-Q-77682, 12/09/1998	3505479	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Pirod, A-115008-Q-77682, 12/09/1998	3500968	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	TEP, 100010.20, 10/24/2011	3771952	CCISITES
4-POST-MODIFICATION INSPECTION	PJF, 32912-0003, 01/09/2012	3826084	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

3.2) Assumptions

1) Tower and structures were maintained in accordance with the TIA-222 standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
3) In accordance with discussions with CCI Corporate Engineering: Based on the assumption that the monopole manufacturer (PiRod) has designed the flange plates at splices to adequately develop the full capacity of the unreinforced shaft section using unpublished and/or proprietary methodologies, we are assuming that if our analysis shows that both the existing shaft and the existing flange bolts are at a usage capacity of 100% or less, then the existing flange plates are at a usage capacity of 100% or less and no additional analysis of the flange plate is required.
4) The monopole is sufficient without the shaft reinforcements; therefore, the shaft reinforcements were excluded from the analysis, and the PiRod assumption mentioned above (Assumption #3) was used for all flanges in this analysis.

This analysis may be affected if any assumptions are not valid or have been made in error. Paul J. Ford and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	190 - 160	Pole	P24x0.375	1	-13.94	1104.67	45.6	Pass
L2	160 - 140	Pole	30" x 0.375"	2	-17.52	1376.61	66.8	Pass
L3	140 - 120	Pole	36" x 0.375"	3	-21.72	1564.60	75.9	Pass
L4	120 - 100	Pole	42" x 0.375"	4	-27.99	1752.31	80.1	Pass
L5	100 - 80	Pole	P48x0.375	5	-34.34	1939.86	82.1	Pass
L6	80 - 60	Pole	P54x3/8	6	-41.42	2127.30	82.8	Pass
L7	60 - 40	Pole	P60x3/8	7	-49.09	2314.65	83.0	Pass
L8	40 - 20	Pole	P60x1/2	8	-57.94	3281.97	72.5	Pass
L9	20 - 0	Pole	P60x5/8	9	-68.46	4346.11	66.5	Pass
							Summary	
						Pole (L7)	83.0	Pass
						Rating =	83.0	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Bolts	160	43.5	Pass
1, 2	Flange Plates	160	45.6	Pass
1	Flange Bolts	140	67.4	Pass
1, 2	Flange Plates	140	66.8	Pass
1	Flange Bolts	120	78.8	Pass
1, 2	Flange Plates	120	75.9	Pass
1	Flange Bolts	100	84.4	Pass
1, 2, 3	Flange Plates	100	80.1	Pass
1	Flange Bolts	80	87.3	Pass
1, 2, 3	Flange Plates	80	82.1	Pass
1	Flange Bolts	60	73.9	Pass
1, 2, 3	Flange Plates	60	82.8	Pass
1	Flange Bolts	40	58.6	Pass
1, 2, 3	Flange Plates	40	83.0	Pass
1	Flange Bolts	20	70.1	Pass
1, 2, 3	Flange Plates	20	72.5	Pass
1	Anchor Rods	0	51.0	Pass
1, 2	Base Plate	0	66.5	Pass
1	Base Foundation Steel	0	54.3	Pass
1	Base Foundation Soil Interaction	0	85.5	Pass

Structure Rating (max from all components) =	87.3%

Notes:
- All structural ratings are per TIA-222-H Section 15.5.

1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
2) See assumption #3.
3) See assumption #4.

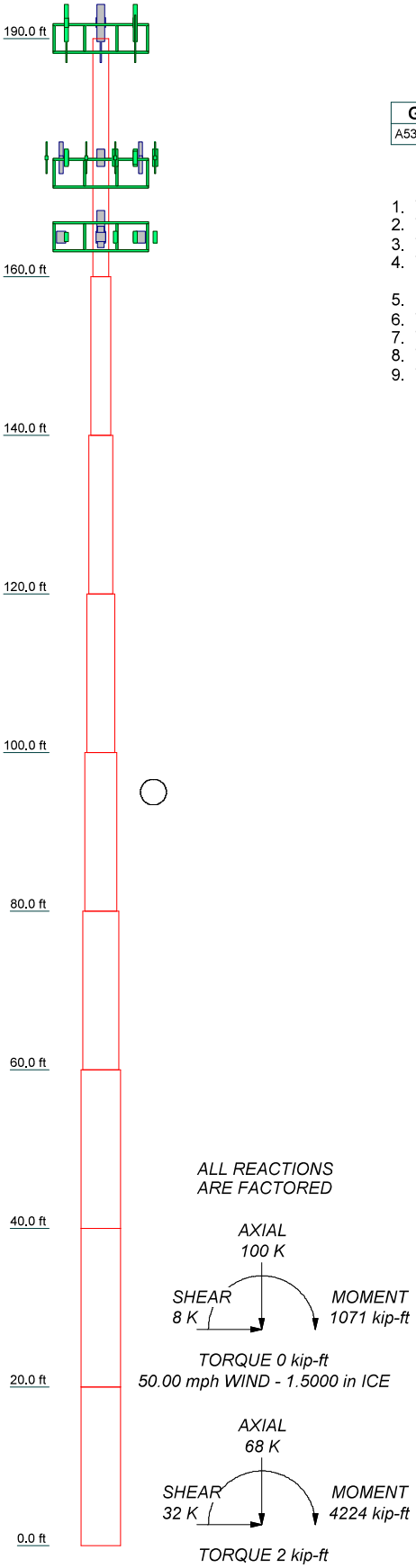
4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section	Size	Length (ft)	Grade	Weight (K)
1	P24x0.375	30.0000	A53-B-42	2.8
2	30" x 0.375"	20.0000		2.4
3	36" x 0.375"	20.0000		2.9
4	42" x 0.375"	20.0000		3.3
5	P48x0.375	20.0000		3.8
6	P54x3/8	20.0000		4.3
7	P60x3/8	20.0000		4.8
8	P60x1/2	20.0000		6.4
9	P60x5/8	20.0000		7.9
				38.6



ALL REACTIONS ARE FACTORED

AXIAL 100 K

SHEAR 8 K

MOMENT 1071 kip-ft

TORQUE 0 kip-ft

50.00 mph WIND - 1.5000 in ICE

AXIAL 68 K

SHEAR 32 K

MOMENT 4224 kip-ft

TORQUE 2 kip-ft

REACTIONS - 135.00 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 135.00 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50.00 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.0000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 83%

PJFLogo

Paul J. Ford and Company
250 E. Broad St., Ste 600
Columbus, OH 43215
Phone: 614-221-6679
FAX:

Job: *190 ft Monopole [CT038/EASTLYME/I-95/X72]*			
Project: *PJF 37519-1562 | BU 823529*			
Client: CCI	Drawn by: Steven Pozz	App'd:	
Code: TIA-222-H	Date: 05/13/20	Scale: NTS	
Path: G:\TOWER\375_Crown_Castle\2020\37520-0838_823528_CT038-EastLyme_I-95~X\37520-0839.001.7805_SA_184531\37520-0839.001.7805.eri		Dwg No. E-1	

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

1) Tower is located in New London County, Connecticut.
2) Tower base elevation above sea level: 168.0000 ft.
3) Basic wind speed of 135.00 mph.
4) Risk Category II.
5) Exposure Category B.
6) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
7) Topographic Category: 1.
8) Crest Height: 0.0000 ft.
9) Nominal ice thickness of 1.5000 in.
10) Ice thickness is considered to increase with height.
11) Ice density of 56.00 pcf.
12) A wind speed of 50.00 mph is used in combination with ice.
13) Temperature drop of 50.00 °F.
14) Deflections calculated using a wind speed of 60.00 mph.
15) TIA-222-H Annex S.
16) A non-linear (P-delta) analysis was used.
17) Pressures are calculated at each section.
18) Stress ratio used in pole design is 1.05.
19) Tower analysis based on target reliabilities in accordance with Annex S.
20) Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
21) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Pole Section Geometry

Section	*Elevation ft*	*Section Length ft*	*Pole Size*	*Pole Grade*	*Socket Length ft*
L1	190.0000-160.0000	30.0000	P24x0.375	A53-B-42 (42 ksi)	
L2	160.0000-140.0000	20.0000	30" x 0.375"	A53-B-42 (42 ksi)	
L3	140.0000-120.0000	20.0000	36" x 0.375"	A53-B-42 (42 ksi)	
L4	120.0000-100.0000	20.0000	42" x 0.375"	A53-B-42 (42 ksi)	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L5	100.0000-80.0000	20.0000	P48x0.375	A53-B-42 (42 ksi)	
L6	80.0000-60.0000	20.0000	P54x3/8	A53-B-42 (42 ksi)	
L7	60.0000-40.0000	20.0000	P60x3/8	A53-B-42 (42 ksi)	
L8	40.0000-20.0000	20.0000	P60x1/2	A53-B-42 (42 ksi)	
L9	20.0000-0.0000	20.0000	P60x5/8	A53-B-42 (42 ksi)	

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 190.0000-160.0000				1	1	1			
L2 160.0000-140.0000				1	1	1			
L3 140.0000-120.0000				1	1	1			
L4 120.0000-100.0000				1	1	1			
L5 100.0000-80.0000				1	1	1			
L6 80.0000-60.0000				1	1	1			
L7 60.0000-40.0000				1	1	1			
L8 40.0000-20.0000				1	1	1			
L9 20.0000-0.0000				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
3/4" ladder rung (12" long 12" oc) **********	C	No	Surface Ar (CaAa)	190.0000 - 10.0000	1	1	-0.167 -0.167	0.7500		1.50
CCI-045100 (L)	A	No	Surface Af (CaAa)	23.5000 - 17.2500	1	1	-0.250 -0.250	4.5000	11.0000	15.31
CCI-045100 (L)	B	No	Surface Af (CaAa)	23.5000 - 17.2500	1	1	-0.250 -0.250	4.5000	11.0000	15.31
CCI-045100 (L)	C	No	Surface Af (CaAa)	23.5000 - 17.2500	1	1	-0.250 -0.250	4.5000	11.0000	15.31
CCI-045100 (L)	A	No	Surface Af (CaAa)	90.5000 - 36.7500	1	1	-0.250 -0.250	4.5000	11.0000	15.31
CCI-045100 (L)	B	No	Surface Af (CaAa)	90.5000 - 36.7500	1	1	-0.250 -0.250	4.5000	11.0000	15.31
CCI-045100 (L)	C	No	Surface Af (CaAa)	90.5000 - 36.7500	1	1	-0.250 -0.250	4.5000	11.0000	15.31
FP 4 x 4.5	A	No	Surface Af (CaAa)	106.7500 - 98.2500	1	1	-0.250 -0.250	4.0000	17.0000	61.25
FP 4 x 4.5	B	No	Surface Af (CaAa)	106.7500 - 98.2500	1	1	-0.250 -0.250	4.0000	17.0000	61.25
FP 4 x 4.5	C	No	Surface Af (CaAa)	106.7500 - 98.2500	1	1	-0.250 -0.250	4.0000	17.0000	61.25

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
**********									
HCS 6X12 6AWG(1-3/8)	C	No	No	Inside Pole	190.0000 - 0.0000	3	No Ice	0.0000	1.70
							1/2" Ice	0.0000	1.70
							1" Ice	0.0000	1.70
							2" Ice	0.0000	1.70
***									
LDF4-50A(1/2)	C	No	No	Inside Pole	173.0000 - 0.0000	1	No Ice	0.0000	0.15
							1/2" Ice	0.0000	0.15
							1" Ice	0.0000	0.15
							2" Ice	0.0000	0.15
LDF7-50A(1-5/8)	C	No	No	Inside Pole	173.0000 - 0.0000	12	No Ice	0.0000	0.82
							1/2" Ice	0.0000	0.82
							1" Ice	0.0000	0.82
							2" Ice	0.0000	0.82
HB158-1-08U8-S8J18(1-5/8)	C	No	No	Inside Pole	173.0000 - 0.0000	2	No Ice	0.0000	1.30
							1/2" Ice	0.0000	1.30
							1" Ice	0.0000	1.30
							2" Ice	0.0000	1.30
**********									
FB-L98B-034-XXX(3/8)	C	No	No	Inside Pole	165.0000 - 0.0000	2	No Ice	0.0000	0.06
							1/2" Ice	0.0000	0.06
							1" Ice	0.0000	0.06
							2" Ice	0.0000	0.06
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	165.0000 - 0.0000	5	No Ice	0.0000	0.58
							1/2" Ice	0.0000	0.58
							1" Ice	0.0000	0.58
							2" Ice	0.0000	0.58
LDF6-50A(1-1/4)	C	No	No	Inside Pole	165.0000 - 0.0000	6	No Ice	0.0000	0.60
							1/2" Ice	0.0000	0.60
							1" Ice	0.0000	0.60
							2" Ice	0.0000	0.60
2" (Nominal) Conduit	C	No	No	Inside Pole	165.0000 - 0.0000	1	No Ice	0.0000	0.72
							1/2" Ice	0.0000	0.72
							1" Ice	0.0000	0.72
							2" Ice	0.0000	0.72

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	190.0000-160.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	2.250	0.000	0.40
L2	160.0000-140.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	1.500	0.000	0.53
L3	140.0000-120.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	1.500	0.000	0.53
L4	120.0000-100.0000	A	0.000	0.000	3.896	0.000	0.41
		B	0.000	0.000	3.896	0.000	0.41
		C	0.000	0.000	5.396	0.000	0.94
L5	100.0000-80.0000	A	0.000	0.000	8.885	0.000	0.27
		B	0.000	0.000	8.885	0.000	0.27
		C	0.000	0.000	10.385	0.000	0.80
L6	80.0000-60.0000	A	0.000	0.000	15.000	0.000	0.31
		B	0.000	0.000	15.000	0.000	0.31
		C	0.000	0.000	16.500	0.000	0.84
L7	60.0000-40.0000	A	0.000	0.000	15.000	0.000	0.31
		B	0.000	0.000	15.000	0.000	0.31
		C	0.000	0.000	16.500	0.000	0.84

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L8	40.0000-20.0000	A	0.000	0.000	4.681	0.000	0.10
		B	0.000	0.000	4.681	0.000	0.10
		C	0.000	0.000	6.181	0.000	0.63
L9	20.0000-0.0000	A	0.000	0.000	1.762	0.000	0.04
		B	0.000	0.000	1.762	0.000	0.04
		C	0.000	0.000	2.512	0.000	0.56

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	190.0000-160.0000	A	1.506	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	11.289	0.000	0.52
L2	160.0000-140.0000	A	1.483	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	7.434	0.000	0.61
L3	140.0000-120.0000	A	1.462	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	7.349	0.000	0.61
L4	120.0000-100.0000	A	1.438	0.000	0.000	5.073	0.000	0.50
		B		0.000	0.000	5.073	0.000	0.50
		C		0.000	0.000	12.326	0.000	1.11
L5	100.0000-80.0000	A	1.410	0.000	0.000	12.145	0.000	0.38
		B		0.000	0.000	12.145	0.000	0.38
		C		0.000	0.000	19.283	0.000	0.99
L6	80.0000-60.0000	A	1.375	0.000	0.000	20.498	0.000	0.48
		B		0.000	0.000	20.498	0.000	0.48
		C		0.000	0.000	27.497	0.000	1.08
L7	60.0000-40.0000	A	1.329	0.000	0.000	20.316	0.000	0.47
		B		0.000	0.000	20.316	0.000	0.47
		C		0.000	0.000	27.133	0.000	1.07
L8	40.0000-20.0000	A	1.263	0.000	0.000	5.975	0.000	0.16
		B		0.000	0.000	5.975	0.000	0.16
		C		0.000	0.000	12.527	0.000	0.75
L9	20.0000-0.0000	A	1.132	0.000	0.000	2.097	0.000	0.06
		B		0.000	0.000	2.097	0.000	0.06
		C		0.000	0.000	5.110	0.000	0.60

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	190.0000-160.0000	0.2490	0.6840	0.5176	1.4218
L2	160.0000-140.0000	0.2505	0.6880	0.5329	1.4638
L3	140.0000-120.0000	0.2514	0.6907	0.5422	1.4894
L4	120.0000-100.0000	0.1987	0.5459	0.4725	1.2980
L5	100.0000-80.0000	0.1642	0.4511	0.4099	1.1259
L6	80.0000-60.0000	0.1398	0.3839	0.3601	0.9892
L7	60.0000-40.0000	0.1464	0.4020	0.3668	1.0076
L8	40.0000-20.0000	0.2063	0.5668	0.4553	1.2506
L9	20.0000-0.0000	0.1180	0.3242	0.2339	0.6426

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	1	3/4" ladder rung (12" long 12" oc)	160.00 - 190.00	1.0000	1.0000
L2	1	3/4" ladder rung (12" long 12" oc)	140.00 - 160.00	1.0000	1.0000
L3	1	3/4" ladder rung (12" long 12" oc)	120.00 - 140.00	1.0000	1.0000
L4	1	3/4" ladder rung (12" long 12" oc)	100.00 - 120.00	1.0000	1.0000
L4	24	FP 4 x 4.5	100.00 - 106.75	1.0000	1.0000
L4	25	FP 4 x 4.5	100.00 - 106.75	1.0000	1.0000
L4	26	FP 4 x 4.5	100.00 - 106.75	1.0000	1.0000
L5	1	3/4" ladder rung (12" long 12" oc)	80.00 - 100.00	1.0000	1.0000
L5	21	CCI-045100 (L)	80.00 - 90.50	1.0000	1.0000
L5	22	CCI-045100 (L)	80.00 - 90.50	1.0000	1.0000
L5	23	CCI-045100 (L)	80.00 - 90.50	1.0000	1.0000
L5	24	FP 4 x 4.5	98.25 - 100.00	1.0000	1.0000
L5	25	FP 4 x 4.5	98.25 - 100.00	1.0000	1.0000
L5	26	FP 4 x 4.5	98.25 - 100.00	1.0000	1.0000
L6	1	3/4" ladder rung (12" long 12" oc)	60.00 - 80.00	1.0000	1.0000
L6	21	CCI-045100 (L)	60.00 - 80.00	1.0000	1.0000
L6	22	CCI-045100 (L)	60.00 - 80.00	1.0000	1.0000
L6	23	CCI-045100 (L)	60.00 - 80.00	1.0000	1.0000
L7	1	3/4" ladder rung (12" long 12" oc)	40.00 - 60.00	1.0000	1.0000
L7	21	CCI-045100 (L)	40.00 - 60.00	1.0000	1.0000
L7	22	CCI-045100 (L)	40.00 - 60.00	1.0000	1.0000
L7	23	CCI-045100 (L)	40.00 - 60.00	1.0000	1.0000
L8	1	3/4" ladder rung (12" long 12" oc)	20.00 - 40.00	1.0000	1.0000
L8	18	CCI-045100 (L)	20.00 - 23.50	1.0000	1.0000
L8	19	CCI-045100 (L)	20.00 - 23.50	1.0000	1.0000
L8	20	CCI-045100 (L)	20.00 - 23.50	1.0000	1.0000
L8	21	CCI-045100 (L)	36.75 - 40.00	1.0000	1.0000
L8	22	CCI-045100 (L)	36.75 - 40.00	1.0000	1.0000
L8	23	CCI-045100 (L)	36.75 - 40.00	1.0000	1.0000
L9	1	3/4" ladder rung (12" long 12" oc)	10.00 - 20.00	1.0000	1.0000
L9	18	CCI-045100 (L)	17.25 - 20.00	1.0000	1.0000
L9	19	CCI-045100 (L)	17.25 - 20.00	1.0000	1.0000
L9	20	CCI-045100 (L)	17.25 - 20.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
AIR 32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	6.7474 7.2017 7.6475 8.5651	6.0700 6.8671 7.5828 9.0629	0.15 0.21 0.28 0.44
AIR 32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	6.7474 7.2017 7.6475 8.5651	6.0700 6.8671 7.5828 9.0629	0.15 0.21 0.28 0.44
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	6.7474 7.2017 7.6475 8.5651	6.0700 6.8671 7.5828 9.0629	0.15 0.21 0.28 0.44
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6900 15.4600 16.2300 17.8200	6.8700 7.5500 8.2500 9.6700	0.19 0.31 0.46 0.79
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6900 15.4600 16.2300 17.8200	6.8700 7.5500 8.2500 9.6700	0.19 0.31 0.46 0.79
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6900 15.4600 16.2300 17.8200	6.8700 7.5500 8.2500 9.6700	0.19 0.31 0.46 0.79
RADIO 2217 B2	A	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.3509 1.4966 1.6496 1.9779	0.5856 0.6899 0.8048 1.0588	0.03 0.04 0.05 0.08
RADIO 2217 B2	B	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.3509 1.4966 1.6496 1.9779	0.5856 0.6899 0.8048 1.0588	0.03 0.04 0.05 0.08
RADIO 2217 B2	C	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.3509 1.4966 1.6496 1.9779	0.5856 0.6899 0.8048 1.0588	0.03 0.04 0.05 0.08
RADIO 4449 B12/B71	A	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.6500 1.8104 1.9781 2.3359	1.1625 1.3012 1.4473 1.7618	0.07 0.09 0.11 0.16
RADIO 4449 B12/B71	B	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.6500 1.8104 1.9781 2.3359	1.1625 1.3012 1.4473 1.7618	0.07 0.09 0.11 0.16
RADIO 4449 B12/B71	C	From Leg	4.0000 0.00 2.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.6500 1.8104 1.9781 2.3359	1.1625 1.3012 1.4473 1.7618	0.07 0.09 0.11 0.16
2.375" OD x 6' Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice	1.4250 1.9250 2.2939 3.0596	1.4250 1.9250 2.2939 3.0596	0.03 0.04 0.05 0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice			
2.375" OD x 6' Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.4250 1.9250 2.2939 3.0596	1.4250 1.9250 2.2939 3.0596	0.03 0.04 0.05 0.09
2.375" OD x 6' Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.4250 1.9250 2.2939 3.0596	1.4250 1.9250 2.2939 3.0596	0.03 0.04 0.05 0.09
Platform Mount [LP 405-1_HR-1]	C	None		0.0000	190.0000	No Ice 1/2" Ice 1" Ice 2" Ice	25.3300 33.7900 42.1600 58.7700	25.3300 33.7900 42.1600 58.7700	2.06 2.63 3.36 5.25
***									
(2) SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0900 4.4900 4.8900 5.7200	3.3000 3.6800 4.0700 4.8700	0.07 0.13 0.20 0.39
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0900 4.4900 4.8900 5.7200	3.3000 3.6800 4.0700 4.8700	0.07 0.13 0.20 0.39
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0900 4.4900 4.8900 5.7200	3.3000 3.6800 4.0700 4.8700	0.07 0.13 0.20 0.39
(2) LPA-80080/4CF w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.8561 3.2195 3.5922 4.3374	6.5689 7.1948 7.8369 9.1700	0.03 0.08 0.13 0.25
(2) LPA-80080/4CF w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.8561 3.2195 3.5922 4.3374	6.5689 7.1948 7.8369 9.1700	0.03 0.08 0.13 0.25
(2) LPA-80080/4CF w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.8561 3.2195 3.5922 4.3374	6.5689 7.1948 7.8369 9.1700	0.03 0.08 0.13 0.25
GPS_A	B	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.2550 0.3205 0.3934 0.5614	0.2550 0.3205 0.3934 0.5614	0.00 0.00 0.01 0.02
(2) FD9R6004/2C-3L	A	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.3142 0.3862 0.4656 0.6468	0.0762 0.1189 0.1685 0.2940	0.00 0.01 0.01 0.02
(2) FD9R6004/2C-3L	B	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.3142 0.3862 0.4656 0.6468	0.0762 0.1189 0.1685 0.2940	0.00 0.01 0.01 0.02
(2) FD9R6004/2C-3L	C	From Leg	4.0000 0.00 2.00	0.0000	173.0000	No Ice 1/2" Ice	0.3142 0.3862 0.4656	0.0762 0.1189 0.1685	0.00 0.01 0.01

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice	0.6468	0.2940	0.02
						2" Ice			
B13 RRH 4X30	A	From Leg	4.0000	0.0000	173.0000	No Ice	2.0552	1.3201	0.06
			0.00			1/2" Ice	2.2405	1.4754	0.07
			2.00			1" Ice	2.4333	1.6376	0.09
						2" Ice	2.8411	1.9966	0.14
B13 RRH 4X30	B	From Leg	4.0000	0.0000	173.0000	No Ice	2.0552	1.3201	0.06
			0.00			1/2" Ice	2.2405	1.4754	0.07
			2.00			1" Ice	2.4333	1.6376	0.09
						2" Ice	2.8411	1.9966	0.14
B13 RRH 4X30	C	From Leg	4.0000	0.0000	173.0000	No Ice	2.0552	1.3201	0.06
			0.00			1/2" Ice	2.2405	1.4754	0.07
			2.00			1" Ice	2.4333	1.6376	0.09
						2" Ice	2.8411	1.9966	0.14
B25 RRH4X30	A	From Leg	4.0000	0.0000	173.0000	No Ice	2.2000	1.7417	0.06
			0.00			1/2" Ice	2.3926	1.9204	0.08
			2.00			1" Ice	2.5926	2.1065	0.10
						2" Ice	3.0148	2.5009	0.16
B25 RRH4X30	B	From Leg	4.0000	0.0000	173.0000	No Ice	2.2000	1.7417	0.06
			0.00			1/2" Ice	2.3926	1.9204	0.08
			2.00			1" Ice	2.5926	2.1065	0.10
						2" Ice	3.0148	2.5009	0.16
B25 RRH4X30	C	From Leg	4.0000	0.0000	173.0000	No Ice	2.2000	1.7417	0.06
			0.00			1/2" Ice	2.3926	1.9204	0.08
			2.00			1" Ice	2.5926	2.1065	0.10
						2" Ice	3.0148	2.5009	0.16
RRH4X45-AWS4 B66	A	From Leg	4.0000	0.0000	173.0000	No Ice	2.6600	1.5861	0.06
			0.00			1/2" Ice	2.8781	1.7690	0.08
			2.00			1" Ice	3.1037	1.9588	0.11
						2" Ice	3.5770	2.3594	0.17
RRH4X45-AWS4 B66	B	From Leg	4.0000	0.0000	173.0000	No Ice	2.6600	1.5861	0.06
			0.00			1/2" Ice	2.8781	1.7690	0.08
			2.00			1" Ice	3.1037	1.9588	0.11
						2" Ice	3.5770	2.3594	0.17
RRH4X45-AWS4 B66	C	From Leg	4.0000	0.0000	173.0000	No Ice	2.6600	1.5861	0.06
			0.00			1/2" Ice	2.8781	1.7690	0.08
			2.00			1" Ice	3.1037	1.9588	0.11
						2" Ice	3.5770	2.3594	0.17
(2) RRFDC-3315-PF-48	B	From Leg	4.0000	0.0000	173.0000	No Ice	3.3636	2.1921	0.03
			0.00			1/2" Ice	3.5972	2.3950	0.06
			2.00			1" Ice	3.8383	2.6056	0.09
						2" Ice	4.3426	3.0491	0.17
Platform Mount [LP 403-1]	C	None		0.0000	173.0000	No Ice	18.9400	18.9400	1.50
						1/2" Ice	23.3100	23.3100	1.90
						1" Ice	27.7400	27.7400	2.37
						2" Ice	36.7700	36.7700	3.53
***									
SBNHH-1D65A w/ Mount Pipe	A	From Leg	4.0000	0.0000	165.0000	No Ice	3.0400	2.4500	0.05
			0.00			1/2" Ice	3.3400	2.7500	0.10
			0.00			1" Ice	3.6500	3.0500	0.16
						2" Ice	4.3100	3.6800	0.31
SBNHH-1D65A w/ Mount Pipe	B	From Leg	4.0000	0.0000	165.0000	No Ice	3.0400	2.4500	0.05
			0.00				3.3400	2.7500	0.10

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	3.6500	3.0500	0.16
						1" Ice	4.3100	3.6800	0.31
						2" Ice			
SBNHH-1D65A w/ Mount Pipe	C	From Leg	4.0000	0.0000	165.0000	No Ice	3.0400	2.4500	0.05
			0.00			1/2" Ice	3.3400	2.7500	0.10
			0.00			1" Ice	3.6500	3.0500	0.16
						2" Ice	4.3100	3.6800	0.31
DMP65R-BU4D w/ Mount Pipe	A	From Leg	4.0000	0.0000	165.0000	No Ice	7.5300	3.7900	0.09
			0.00			1/2" Ice	8.0400	4.2300	0.16
			0.00			1" Ice	8.5700	4.6800	0.22
						2" Ice	9.6800	5.6300	0.39
DMP65R-BU4D w/ Mount Pipe	B	From Leg	4.0000	0.0000	165.0000	No Ice	7.5300	3.7900	0.09
			0.00			1/2" Ice	8.0400	4.2300	0.16
			0.00			1" Ice	8.5700	4.6800	0.22
						2" Ice	9.6800	5.6300	0.39
DMP65R-BU4D w/ Mount Pipe	C	From Leg	4.0000	0.0000	165.0000	No Ice	7.5300	3.7900	0.09
			0.00			1/2" Ice	8.0400	4.2300	0.16
			0.00			1" Ice	8.5700	4.6800	0.22
						2" Ice	9.6800	5.6300	0.39
OPA65R-BU4D w/ Mount Pipe	A	From Leg	4.0000	0.0000	165.0000	No Ice	8.1000	4.0300	0.08
			0.00			1/2" Ice	8.6500	4.5000	0.14
			0.00			1" Ice	9.2100	4.9800	0.21
						2" Ice	10.3900	5.9800	0.38
OPA65R-BU4D w/ Mount Pipe	B	From Leg	4.0000	0.0000	165.0000	No Ice	8.1000	4.0300	0.08
			0.00			1/2" Ice	8.6500	4.5000	0.14
			0.00			1" Ice	9.2100	4.9800	0.21
						2" Ice	10.3900	5.9800	0.38
OPA65R-BU4D w/ Mount Pipe	C	From Leg	4.0000	0.0000	165.0000	No Ice	8.1000	4.0300	0.08
			0.00			1/2" Ice	8.6500	4.5000	0.14
			0.00			1" Ice	9.2100	4.9800	0.21
						2" Ice	10.3900	5.9800	0.38
(2) TT19-08BP111-001	B	From Leg	4.0000	0.0000	165.0000	No Ice	0.5527	0.4455	0.02
			0.00			1/2" Ice	0.6487	0.5342	0.02
			0.00			1" Ice	0.7520	0.6303	0.03
						2" Ice	0.9809	0.8448	0.05
TT19-08BP111-001	C	From Leg	4.0000	0.0000	165.0000	No Ice	0.5527	0.4455	0.02
			0.00			1/2" Ice	0.6487	0.5342	0.02
			0.00			1" Ice	0.7520	0.6303	0.03
						2" Ice	0.9809	0.8448	0.05
DC6-48-60-18-8F	A	From Leg	4.0000	0.0000	165.0000	No Ice	1.2117	1.2117	0.03
			0.00			1/2" Ice	1.8924	1.8924	0.05
			2.00			1" Ice	2.1051	2.1051	0.08
						2" Ice	2.5703	2.5703	0.14
(3) RRUS 4478 B14	A	From Leg	4.0000	0.0000	165.0000	No Ice	2.0212	1.2459	0.06
			0.00			1/2" Ice	2.1999	1.3960	0.08
			0.00			1" Ice	2.3860	1.5536	0.10
						2" Ice	2.7804	1.8909	0.15
DC9-48-60-24-8C-EV	A	From Leg	4.0000	0.0000	165.0000	No Ice	2.7366	4.7848	0.03
			0.00			1/2" Ice	2.9630	5.0645	0.06
			0.00			1" Ice	3.1964	5.3517	0.10
						2" Ice	3.6842	5.9483	0.20
RRUS 8843 B2/B66A	A	From Leg	4.0000	0.0000	165.0000	No Ice	1.6390	1.3534	0.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	1.7988	1.5005	0.09
			0.00			1" Ice	1.9660	1.6549	0.11
						2" Ice	2.3227	1.9860	0.16
RRUS 8843 B2/B66A	B	From Leg	4.0000	0.0000	165.0000	No Ice	1.6390	1.3534	0.07
			0.00			1/2" Ice	1.7988	1.5005	0.09
			0.00			1" Ice	1.9660	1.6549	0.11
						2" Ice	2.3227	1.9860	0.16
RRUS 8843 B2/B66A	C	From Leg	4.0000	0.0000	165.0000	No Ice	1.6390	1.3534	0.07
			0.00			1/2" Ice	1.7988	1.5005	0.09
			0.00			1" Ice	1.9660	1.6549	0.11
						2" Ice	2.3227	1.9860	0.16
(3) RRUS 4449 B5/B12	B	From Leg	4.0000	0.0000	165.0000	No Ice	1.9675	1.4081	0.07
			0.00			1/2" Ice	2.1439	1.5637	0.09
			0.00			1" Ice	2.3278	1.7267	0.11
						2" Ice	2.7177	2.0749	0.16
Platform Mount [LP 712-1_KCKR]	C	None		0.0000	165.0000	No Ice	35.7800	35.7800	1.61
						1/2" Ice	42.1400	42.1400	2.33
						1" Ice	48.6600	48.6600	3.15
						2" Ice	62.2300	62.2300	5.06
Miscellaneous [NA 507-1]	C	None		0.0000	165.0000	No Ice	4.5600	4.5600	0.25
						1/2" Ice	6.3900	6.3900	0.31
						1" Ice	8.1800	8.1800	0.40
						2" Ice	11.6600	11.6600	0.66
2.375" OD x 6' Mount Pipe	A	From Leg	4.0000	0.0000	165.0000	No Ice	1.4250	1.4250	0.03
			0.00			1/2" Ice	1.9250	1.9250	0.04
			0.00			1" Ice	2.2939	2.2939	0.05
						2" Ice	3.0596	3.0596	0.09
2.375" OD x 6' Mount Pipe	B	From Leg	4.0000	0.0000	165.0000	No Ice	1.4250	1.4250	0.03
			0.00			1/2" Ice	1.9250	1.9250	0.04
			0.00			1" Ice	2.2939	2.2939	0.05
						2" Ice	3.0596	3.0596	0.09
2.375" OD x 6' Mount Pipe	C	From Leg	4.0000	0.0000	165.0000	No Ice	1.4250	1.4250	0.03
			0.00			1/2" Ice	1.9250	1.9250	0.04
			0.00			1" Ice	2.2939	2.2939	0.05
						2" Ice	3.0596	3.0596	0.09

Tower Pressures - No Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 190.0000-160.0000	175.0000	1.16	48.53	60.000	A	0.000	60.000	60.000	100.00	0.000	0.000
					B	0.000	60.000		100.00	0.000	0.000
					C	0.000	60.000		100.00	2.250	0.000
L2 160.0000-140.0000	150.0000	1.11	46.44	50.000	A	0.000	50.000	50.000	100.00	0.000	0.000
					B	0.000	50.000		100.00	0.000	0.000
					C	0.000	50.000		100.00	1.500	0.000
L3 140.0000-120.0000	130.0000	1.065	44.58	60.000	A	0.000	60.000	60.000	100.00	0.000	0.000
					B	0.000	60.000		100.00	0.000	0.000
					C	0.000	60.000		100.00	1.500	0.000
L4 120.0000-100.0000	110.0000	1.016	42.50	70.000	A	0.000	70.000	70.000	100.00	3.896	0.000
					B	0.000	70.000		100.00	3.896	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
					C	0.000	70.000		100.00	5.396	0.000
L5 100.0000-80.0000	90.0000	0.959	40.13	80.000	A	0.000	80.000	80.000	100.00	8.885	0.000
					B	0.000	80.000		100.00	8.885	0.000
					C	0.000	80.000		100.00	10.385	0.000
L6 80.0000-60.0000	70.0000	0.892	37.35	90.000	A	0.000	90.000	90.000	100.00	15.000	0.000
					B	0.000	90.000		100.00	15.000	0.000
					C	0.000	90.000		100.00	16.500	0.000
L7 60.0000-40.0000	50.0000	0.811	33.93	100.000	A	0.000	100.000	100.000	100.00	15.000	0.000
					B	0.000	100.000		100.00	15.000	0.000
					C	0.000	100.000		100.00	16.500	0.000
L8 40.0000-20.0000	30.0000	0.701	29.32	100.000	A	0.000	100.000	100.000	100.00	4.681	0.000
					B	0.000	100.000		100.00	4.681	0.000
					C	0.000	100.000		100.00	6.181	0.000
L9 20.0000-0.0000	10.0000	0.7	29.30	100.000	A	0.000	100.000	100.000	100.00	1.762	0.000
					B	0.000	100.000		100.00	1.762	0.000
					C	0.000	100.000		100.00	2.512	0.000

Tower Pressure - With Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 190.0000-160.0000	175.0000	1.16	6.66	1.5065	67.532	A	0.000	67.532	67.532	100.00	0.000	0.000
						B	0.000	67.532		100.00	0.000	0.000
						C	0.000	67.532		100.00	11.289	0.000
L2 160.0000-140.0000	150.0000	1.11	6.37	1.4834	54.945	A	0.000	54.945	54.945	100.00	0.000	0.000
						B	0.000	54.945		100.00	0.000	0.000
						C	0.000	54.945		100.00	7.434	0.000
L3 140.0000-120.0000	130.0000	1.065	6.12	1.4624	64.875	A	0.000	64.875	64.875	100.00	0.000	0.000
						B	0.000	64.875		100.00	0.000	0.000
						C	0.000	64.875		100.00	7.349	0.000
L4 120.0000-100.0000	110.0000	1.016	5.83	1.4381	74.794	A	0.000	74.794	74.794	100.00	5.073	0.000
						B	0.000	74.794		100.00	5.073	0.000
						C	0.000	74.794		100.00	12.326	0.000
L5 100.0000-80.0000	90.0000	0.959	5.51	1.4096	84.699	A	0.000	84.699	84.699	100.00	12.145	0.000
						B	0.000	84.699		100.00	12.145	0.000
						C	0.000	84.699		100.00	19.283	0.000
L6 80.0000-60.0000	70.0000	0.892	5.12	1.3746	94.582	A	0.000	94.582	94.582	100.00	20.498	0.000
						B	0.000	94.582		100.00	20.498	0.000
						C	0.000	94.582		100.00	27.497	0.000
L7 60.0000-40.0000	50.0000	0.811	4.65	1.3291	104.430	A	0.000	104.430	104.430	100.00	20.316	0.000
						B	0.000	104.430		100.00	20.316	0.000
						C	0.000	104.430		100.00	27.133	0.000
L8 40.0000-20.0000	30.0000	0.701	4.02	1.2629	104.210	A	0.000	104.210	104.210	100.00	5.975	0.000
						B	0.000	104.210		100.00	5.975	0.000
						C	0.000	104.210		100.00	12.527	0.000
L9 20.0000-0.0000	10.0000	0.7	4.02	1.1315	103.772	A	0.000	103.772	103.772	100.00	2.097	0.000
						B	0.000	103.772		100.00	2.097	0.000
						C	0.000	103.772		100.00	5.110	0.000

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 190.0000-160.0000	175.0000	1.16	9.03	60.000	A	0.000	60.000	60.000	100.00	0.000	0.000
					B	0.000	60.000		100.00	0.000	0.000
					C	0.000	60.000		100.00	2.250	0.000
L2 160.0000-140.0000	150.0000	1.11	8.64	50.000	A	0.000	50.000	50.000	100.00	0.000	0.000
					B	0.000	50.000		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
					C	0.000	50.000		100.00	1.500	0.000
L3 140.0000-120.0000	130.0000	1.065	8.29	60.000	A	0.000	60.000	60.000	100.00	0.000	0.000
					B	0.000	60.000		100.00	0.000	0.000
					C	0.000	60.000		100.00	1.500	0.000
L4 120.0000-100.0000	110.0000	1.016	7.91	70.000	A	0.000	70.000	70.000	100.00	3.896	0.000
					B	0.000	70.000		100.00	3.896	0.000
					C	0.000	70.000		100.00	5.396	0.000
L5 100.0000-80.0000	90.0000	0.959	7.47	80.000	A	0.000	80.000	80.000	100.00	8.885	0.000
					B	0.000	80.000		100.00	8.885	0.000
					C	0.000	80.000		100.00	10.385	0.000
L6 80.0000-60.0000	70.0000	0.892	6.95	90.000	A	0.000	90.000	90.000	100.00	15.000	0.000
					B	0.000	90.000		100.00	15.000	0.000
					C	0.000	90.000		100.00	16.500	0.000
L7 60.0000-40.0000	50.0000	0.811	6.31	100.000	A	0.000	100.000	100.000	100.00	15.000	0.000
					B	0.000	100.000		100.00	15.000	0.000
					C	0.000	100.000		100.00	16.500	0.000
L8 40.0000-20.0000	30.0000	0.701	5.45	100.000	A	0.000	100.000	100.000	100.00	4.681	0.000
					B	0.000	100.000		100.00	4.681	0.000
					C	0.000	100.000		100.00	6.181	0.000
L9 20.0000-0.0000	10.0000	0.7	5.45	100.000	A	0.000	100.000	100.000	100.00	1.762	0.000
					B	0.000	100.000		100.00	1.762	0.000
					C	0.000	100.000		100.00	2.512	0.000

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service

Comb. No.	Description
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	190 - 160	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.77	-3.55	1.03
			Max. Mx	8	-13.95	-288.32	-0.54
			Max. My	2	-13.96	-0.56	286.23
			Max. Vy	8	17.18	-288.32	-0.54
			Max. Vx	2	-17.10	-0.56	286.23
			Max. Torque	25			-1.93
L2	160 - 140	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-36.48	-3.69	0.90
			Max. Mx	8	-17.53	-648.19	-2.17
			Max. My	2	-17.54	0.98	644.37
			Max. Vy	8	18.78	-648.19	-2.17
			Max. Vx	2	-18.70	0.98	644.37
			Max. Torque	25			-1.93
L3	140 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41.97	-3.78	0.73
			Max. Mx	8	-21.72	-1041.68	-3.82
			Max. My	2	-21.73	2.55	1036.14
			Max. Vy	8	20.55	-1041.68	-3.82
			Max. Vx	2	-20.47	2.55	1036.14
			Max. Torque	25			-1.92
L4	120 - 100	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.95	-3.77	0.53
			Max. Mx	8	-28.00	-1472.65	-5.48
			Max. My	2	-28.01	4.13	1465.39
			Max. Vy	8	22.53	-1472.65	-5.48
			Max. Vx	2	-22.45	4.13	1465.39
			Max. Torque	25			-1.92
L5	100 - 80	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-58.26	-3.75	0.30
			Max. Mx	8	-34.34	-1943.63	-7.15
			Max. My	2	-34.35	5.71	1934.65
			Max. Vy	8	24.56	-1943.63	-7.15
			Max. Vx	2	-24.48	5.71	1934.65
			Max. Torque	25			-1.92
L6	80 - 60	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67.61	-3.73	0.06
			Max. Mx	8	-41.42	-2455.39	-8.83
			Max. My	2	-41.43	7.28	2444.71
			Max. Vy	8	26.62	-2455.39	-8.83
			Max. Vx	2	-26.53	7.28	2444.71
			Max. Torque	25			-1.92
L7	60 - 40	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-77.64	-3.71	-0.21
			Max. Mx	8	-49.09	-3007.61	-10.49
			Max. My	14	-49.10	-12.11	-2995.25
			Max. Vy	8	28.61	-3007.61	-10.49
			Max. Vx	14	28.53	-12.11	-2995.25
			Max. Torque	25			-1.92
L8	40 - 20	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-88.39	-3.69	-0.46
			Max. Mx	8	-57.95	-3595.89	-12.14
			Max. My	14	-57.95	-13.67	-3582.04

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-30.22	3593.07	11.93
			Max. Vx	14	30.14	-13.67	-3582.04
			Max. Torque	25			-1.92
L9	20 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-100.46	-3.67	-0.57
			Max. Mx	8	-68.46	-4215.25	-13.72
			Max. My	14	-68.46	-15.20	-4199.89
			Max. Vy	20	-31.71	4212.50	13.41
			Max. Vx	14	31.63	-15.20	-4199.89
			Max. Torque	25			-1.92

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	100.46	0.00	-0.00
	Max. H_x	20	68.47	31.70	0.08
	Max. H_z	3	51.35	0.08	31.62
	Max. M_x	2	4199.60	0.08	31.62
	Max. M_z	8	4215.25	-31.70	-0.08
	Max. Torsion	13	1.91	-15.92	-27.42
	Min. Vert	9	51.35	-31.70	-0.08
	Min. H_x	9	51.35	-31.70	-0.08
	Min. H_z	15	51.35	-0.08	-31.62
	Min. M_x	14	-4199.89	-0.08	-31.62
	Min. M_z	20	-4212.50	31.70	0.08
	Min. Torsion	25	-1.92	15.92	27.42

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	57.06	-0.00	0.00	0.13	-1.25	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	68.47	-0.08	-31.62	-4199.60	11.93	1.65
0.9 Dead+1.0 Wind 0 deg - No Ice	51.35	-0.08	-31.62	-4152.73	12.20	1.66
1.2 Dead+1.0 Wind 30 deg - No Ice	68.47	15.79	-27.35	-3630.65	-2097.26	0.96
0.9 Dead+1.0 Wind 30 deg - No Ice	51.35	15.79	-27.35	-3589.97	-2073.33	0.96
1.2 Dead+1.0 Wind 60 deg - No Ice	68.47	27.42	-15.75	-2088.25	-3644.92	0.00
0.9 Dead+1.0 Wind 60 deg - No Ice	51.35	27.42	-15.75	-2064.88	-3603.62	0.01
1.2 Dead+1.0 Wind 90 deg - No Ice	68.47	31.70	0.08	13.72	-4215.25	-0.95
0.9 Dead+1.0 Wind 90 deg - No Ice	51.35	31.70	0.08	13.52	-4167.91	-0.95
1.2 Dead+1.0 Wind 120 deg - No Ice	68.47	27.49	15.88	2112.03	-3658.44	-1.64
0.9 Dead+1.0 Wind 120 deg - No Ice	51.35	27.49	15.88	2088.30	-3616.97	-1.65
1.2 Dead+1.0 Wind 150 deg - No Ice	68.47	15.92	27.42	3644.47	-2120.73	-1.90
0.9 Dead+1.0 Wind 150 deg - No Ice	51.35	15.92	27.42	3603.57	-2096.52	-1.91
1.2 Dead+1.0 Wind 180 deg - No Ice	68.47	0.08	31.62	4199.89	-15.20	-1.64
0.9 Dead+1.0 Wind 180 deg - No Ice	51.35	0.08	31.62	4152.96	-14.60	-1.66

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 210 deg - No Ice	68.47	-15.79	27.35	3630.94	2093.98	-0.96
0.9 Dead+1.0 Wind 210 deg - No Ice	51.35	-15.79	27.35	3590.20	2070.92	-0.96
1.2 Dead+1.0 Wind 240 deg - No Ice	68.47	-27.42	15.75	2088.55	3641.63	-0.01
0.9 Dead+1.0 Wind 240 deg - No Ice	51.35	-27.42	15.75	2065.11	3601.21	-0.01
1.2 Dead+1.0 Wind 270 deg - No Ice	68.47	-31.70	-0.08	-13.41	4212.50	0.94
0.9 Dead+1.0 Wind 270 deg - No Ice	51.35	-31.70	-0.08	-13.28	4165.50	0.94
1.2 Dead+1.0 Wind 300 deg - No Ice	68.47	-27.49	-15.88	-2111.72	3655.17	1.64
0.9 Dead+1.0 Wind 300 deg - No Ice	51.35	-27.49	-15.88	-2088.07	3614.59	1.65
1.2 Dead+1.0 Wind 330 deg - No Ice	68.47	-15.92	-27.42	-3644.17	2117.47	1.90
0.9 Dead+1.0 Wind 330 deg - No Ice	51.35	-15.92	-27.42	-3603.33	2094.12	1.92
1.2 Dead+1.0 Ice+1.0 Temp	100.46	-0.00	0.00	0.57	-3.67	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	100.46	-0.01	-8.11	-1062.31	-1.63	0.33
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	100.46	4.05	-7.02	-918.70	-534.68	0.21
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	100.46	7.03	-4.05	-528.77	-925.54	0.04
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	100.46	8.13	0.01	2.99	-1069.50	-0.14
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	100.46	7.05	4.07	534.10	-927.97	-0.29
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	100.46	4.08	7.03	922.25	-538.89	-0.36
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	100.46	0.01	8.11	1063.43	-6.50	-0.33
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	100.46	-4.05	7.02	919.82	526.54	-0.21
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	100.46	-7.03	4.05	529.89	917.40	-0.04
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	100.46	-8.13	-0.01	-1.87	1061.36	0.14
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	100.46	-7.05	-4.07	-532.98	919.84	0.29
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	100.46	-4.08	-7.03	-921.13	530.75	0.36
Dead+Wind 0 deg - Service	57.06	-0.01	-5.88	-776.00	1.15	0.31
Dead+Wind 30 deg - Service	57.06	2.94	-5.09	-670.76	-388.58	0.18
Dead+Wind 60 deg - Service	57.06	5.10	-2.93	-385.77	-674.55	0.00
Dead+Wind 90 deg - Service	57.06	5.90	0.01	2.63	-780.14	-0.18
Dead+Wind 120 deg - Service	57.06	5.11	2.95	390.35	-677.06	-0.31
Dead+Wind 150 deg - Service	57.06	2.96	5.10	673.51	-392.92	-0.36
Dead+Wind 180 deg - Service	57.06	0.01	5.88	776.24	-3.87	-0.31
Dead+Wind 210 deg - Service	57.06	-2.94	5.09	671.01	385.86	-0.18
Dead+Wind 240 deg - Service	57.06	-5.10	2.93	386.01	671.83	-0.00
Dead+Wind 270 deg - Service	57.06	-5.90	-0.01	-2.38	777.42	0.18
Dead+Wind 300 deg - Service	57.06	-5.11	-2.95	-390.11	674.34	0.31
Dead+Wind 330 deg - Service	57.06	-2.96	-5.10	-673.27	390.20	0.36

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.00	-57.06	0.00	0.00	57.06	-0.00	0.000%
2	-0.08	-68.47	-31.62	0.08	68.47	31.62	0.005%
3	-0.08	-51.35	-31.62	0.08	51.35	31.62	0.004%
4	15.79	-68.47	-27.35	-15.79	68.47	27.35	0.000%
5	15.79	-51.35	-27.35	-15.79	51.35	27.35	0.000%
6	27.42	-68.47	-15.75	-27.42	68.47	15.75	0.000%
7	27.42	-51.35	-15.75	-27.42	51.35	15.75	0.000%
8	31.70	-68.47	0.08	-31.70	68.47	-0.08	0.010%
9	31.70	-51.35	0.08	-31.70	51.35	-0.08	0.008%
10	27.49	-68.47	15.88	-27.49	68.47	-15.88	0.000%
11	27.49	-51.35	15.88	-27.49	51.35	-15.88	0.000%
12	15.92	-68.47	27.42	-15.92	68.47	-27.42	0.000%
13	15.92	-51.35	27.42	-15.92	51.35	-27.42	0.000%
14	0.08	-68.47	31.62	-0.08	68.47	-31.62	0.005%
15	0.08	-51.35	31.62	-0.08	51.35	-31.62	0.004%
16	-15.79	-68.47	27.35	15.79	68.47	-27.35	0.000%
17	-15.79	-51.35	27.35	15.79	51.35	-27.35	0.000%
18	-27.42	-68.47	15.75	27.42	68.47	-15.75	0.000%
19	-27.42	-51.35	15.75	27.42	51.35	-15.75	0.000%
20	-31.70	-68.47	-0.08	31.70	68.47	0.08	0.005%
21	-31.70	-51.35	-0.08	31.70	51.35	0.08	0.008%
22	-27.49	-68.47	-15.88	27.49	68.47	15.88	0.000%
23	-27.49	-51.35	-15.88	27.49	51.35	15.88	0.000%
24	-15.92	-68.47	-27.42	15.92	68.47	27.42	0.000%
25	-15.92	-51.35	-27.42	15.92	51.35	27.42	0.000%
26	0.00	-100.46	0.00	0.00	100.46	-0.00	0.001%
27	-0.01	-100.46	-8.12	0.01	100.46	8.11	0.000%
28	4.05	-100.46	-7.02	-4.05	100.46	7.02	0.000%
29	7.03	-100.46	-4.05	-7.03	100.46	4.05	0.000%
30	8.13	-100.46	0.01	-8.13	100.46	-0.01	0.000%
31	7.05	-100.46	4.07	-7.05	100.46	-4.07	0.000%
32	4.08	-100.46	7.03	-4.08	100.46	-7.03	0.000%
33	0.01	-100.46	8.12	-0.01	100.46	-8.11	0.000%
34	-4.05	-100.46	7.02	4.05	100.46	-7.02	0.000%
35	-7.03	-100.46	4.05	7.03	100.46	-4.05	0.000%
36	-8.13	-100.46	-0.01	8.13	100.46	0.01	0.000%
37	-7.05	-100.46	-4.07	7.05	100.46	4.07	0.000%
38	-4.08	-100.46	-7.03	4.08	100.46	7.03	0.000%
39	-0.01	-57.06	-5.88	0.01	57.06	5.88	0.002%
40	2.94	-57.06	-5.09	-2.94	57.06	5.09	0.002%
41	5.10	-57.06	-2.93	-5.10	57.06	2.93	0.002%
42	5.90	-57.06	0.01	-5.90	57.06	-0.01	0.002%
43	5.12	-57.06	2.95	-5.11	57.06	-2.95	0.002%
44	2.96	-57.06	5.10	-2.96	57.06	-5.10	0.002%
45	0.01	-57.06	5.88	-0.01	57.06	-5.88	0.002%
46	-2.94	-57.06	5.09	2.94	57.06	-5.09	0.002%
47	-5.10	-57.06	2.93	5.10	57.06	-2.93	0.002%
48	-5.90	-57.06	-0.01	5.90	57.06	0.01	0.002%
49	-5.12	-57.06	-2.95	5.11	57.06	2.95	0.002%
50	-2.96	-57.06	-5.10	2.96	57.06	5.10	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00003115
2	Yes	17	0.00006447	0.00010775
3	Yes	17	0.00004330	0.00009206
4	Yes	22	0.00000001	0.00009909
5	Yes	21	0.00000001	0.00014861
6	Yes	22	0.00000001	0.00009780
7	Yes	21	0.00000001	0.00014654
8	Yes	16	0.00012375	0.00010090
9	Yes	16	0.00008428	0.00009291
10	Yes	22	0.00000001	0.00009751
11	Yes	21	0.00000001	0.00014588
12	Yes	22	0.00000001	0.00010247
13	Yes	22	0.00000001	0.00007702
14	Yes	17	0.00006447	0.00014847
15	Yes	17	0.00004330	0.00012471
16	Yes	22	0.00000001	0.00009591
17	Yes	21	0.00000001	0.00014379
18	Yes	22	0.00000001	0.00009744
19	Yes	21	0.00000001	0.00014616
20	Yes	17	0.00006445	0.00009380
21	Yes	16	0.00008429	0.00014836
22	Yes	22	0.00000001	0.00010192
23	Yes	22	0.00000001	0.00007664
24	Yes	22	0.00000001	0.00009672
25	Yes	21	0.00000001	0.00014483
26	Yes	10	0.00000001	0.00003478
27	Yes	19	0.00000001	0.00013037
28	Yes	19	0.00000001	0.00014584
29	Yes	19	0.00000001	0.00014600
30	Yes	19	0.00000001	0.00013179
31	Yes	19	0.00000001	0.00014652
32	Yes	19	0.00000001	0.00014660
33	Yes	19	0.00000001	0.00013013
34	Yes	19	0.00000001	0.00014319
35	Yes	19	0.00000001	0.00014333
36	Yes	19	0.00000001	0.00012932
37	Yes	19	0.00000001	0.00014461
38	Yes	19	0.00000001	0.00014425
39	Yes	16	0.00010065	0.00001467
40	Yes	16	0.00010063	0.00003380
41	Yes	16	0.00010065	0.00003081
42	Yes	16	0.00010070	0.00001276
43	Yes	16	0.00010064	0.00002761
44	Yes	16	0.00010061	0.00003780
45	Yes	16	0.00010062	0.00001498
46	Yes	16	0.00010055	0.00002762
47	Yes	16	0.00010053	0.00003024
48	Yes	16	0.00010058	0.00001287
49	Yes	16	0.00010055	0.00003645
50	Yes	16	0.00010058	0.00002669

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	190 - 160	18.817	43	0.9506	0.0023
L2	160 - 140	13.021	43	0.8578	0.0018
L3	140 - 120	9.664	43	0.7290	0.0011
L4	120 - 100	6.868	43	0.5956	0.0007
L5	100 - 80	4.619	43	0.4711	0.0005
L6	80 - 60	2.871	43	0.3582	0.0003
L7	60 - 40	1.576	43	0.2563	0.0002
L8	40 - 20	0.689	43	0.1642	0.0001
L9	20 - 0	0.172	43	0.0801	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.0000	AIR 32 B2A/B66AA w/ Mount Pipe	43	18.817	0.9506	0.0023	58628
173.0000	(2) SBNHH-1D65B w/ Mount Pipe	43	15.462	0.9100	0.0021	17243
165.0000	SBNHH-1D65A w/ Mount Pipe	43	13.941	0.8812	0.0019	11725

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	190 - 160	101.615	10	5.1349	0.0121
L2	160 - 140	70.375	10	4.6362	0.0096
L3	140 - 120	52.250	10	3.9434	0.0060
L4	120 - 100	37.142	10	3.2224	0.0039
L5	100 - 80	24.983	10	2.5492	0.0026
L6	80 - 60	15.530	10	1.9380	0.0017
L7	60 - 40	8.525	10	1.3865	0.0011
L8	40 - 20	3.727	10	0.8880	0.0006
L9	20 - 0	0.931	10	0.4332	0.0003

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.0000	AIR 32 B2A/B66AA w/ Mount Pipe	10	101.615	5.1349	0.0121	11126
173.0000	(2) SBNHH-1D65B w/ Mount Pipe	10	83.535	4.9164	0.0111	3270
165.0000	SBNHH-1D65A w/ Mount Pipe	10	75.332	4.7617	0.0103	2222

Compression Checks
Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	190 - 160 (1)	P24x0.375	30.0000	0.0000	0.0	27.8325	-13.94	1052.07	0.013
L2	160 - 140 (2)	30" x 0.375"	20.0000	0.0000	0.0	34.9011	-17.52	1311.06	0.013
L3	140 - 120 (3)	36" x 0.375"	20.0000	0.0000	0.0	41.9697	-21.72	1490.10	0.015
L4	120 - 100 (4)	42" x 0.375"	20.0000	0.0000	0.0	49.0383	-27.99	1668.87	0.017
L5	100 - 80 (5)	P48x0.375	20.0000	0.0000	0.0	56.1069	-34.34	1847.49	0.019
L6	80 - 60 (6)	P54x3/8	20.0000	0.0000	0.0	63.1755	-41.42	2026.00	0.020
L7	60 - 40 (7)	P60x3/8	20.0000	0.0000	0.0	70.2440	-49.09	2204.43	0.022
L8	40 - 20 (8)	P60x1/2	20.0000	0.0000	0.0	93.4624	-57.94	3125.69	0.019
L9	20 - 0 (9)	P60x5/8	20.0000	0.0000	0.0	116.5830	-68.46	4139.15	0.017

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	190 - 160 (1)	P24x0.375	288.48	623.72	0.463	0.00	623.72	0.000
L2	160 - 140 (2)	30" x 0.375"	649.40	947.86	0.685	0.00	947.86	0.000
L3	140 - 120 (3)	36" x 0.375"	1043.98	1338.81	0.780	0.00	1338.81	0.000
L4	120 - 100 (4)	42" x 0.375"	1476.08	1796.56	0.822	0.00	1796.56	0.000
L5	100 - 80 (5)	P48x0.375	1948.19	2321.11	0.839	0.00	2321.11	0.000
L6	80 - 60 (6)	P54x3/8	2461.09	2912.46	0.845	0.00	2912.46	0.000
L7	60 - 40 (7)	P60x3/8	3014.46	3570.61	0.844	0.00	3570.61	0.000
L8	40 - 20 (8)	P60x1/2	3603.87	4860.41	0.741	0.00	4860.41	0.000
L9	20 - 0 (9)	P60x5/8	4224.32	6198.18	0.682	0.00	6198.18	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	190 - 160 (1)	P24x0.375	17.24	315.62	0.055	1.65	655.57	0.003
L2	160 - 140 (2)	30" x 0.375"	18.84	395.78	0.048	1.65	994.73	0.002
L3	140 - 120 (3)	36" x 0.375"	20.61	454.19	0.045	1.65	1094.28	0.002
L4	120 - 100 (4)	42" x 0.375"	22.58	421.13	0.054	1.65	1185.51	0.001
L5	100 - 80 (5)	P48x0.375	24.61	394.81	0.062	1.64	1270.83	0.001
L6	80 - 60 (6)	P54x3/8	26.66	406.96	0.066	1.64	1474.98	0.001
L7	60 - 40 (7)	P60x3/8	28.66	418.12	0.069	1.64	1684.97	0.001
L8	40 - 20 (8)	P60x1/2	30.27	797.08	0.038	1.64	3205.39	0.001
L9	20 - 0 (9)	P60x5/8	31.76	1314.11	0.024	1.64	5273.53	0.000

Pole Interaction Design Data

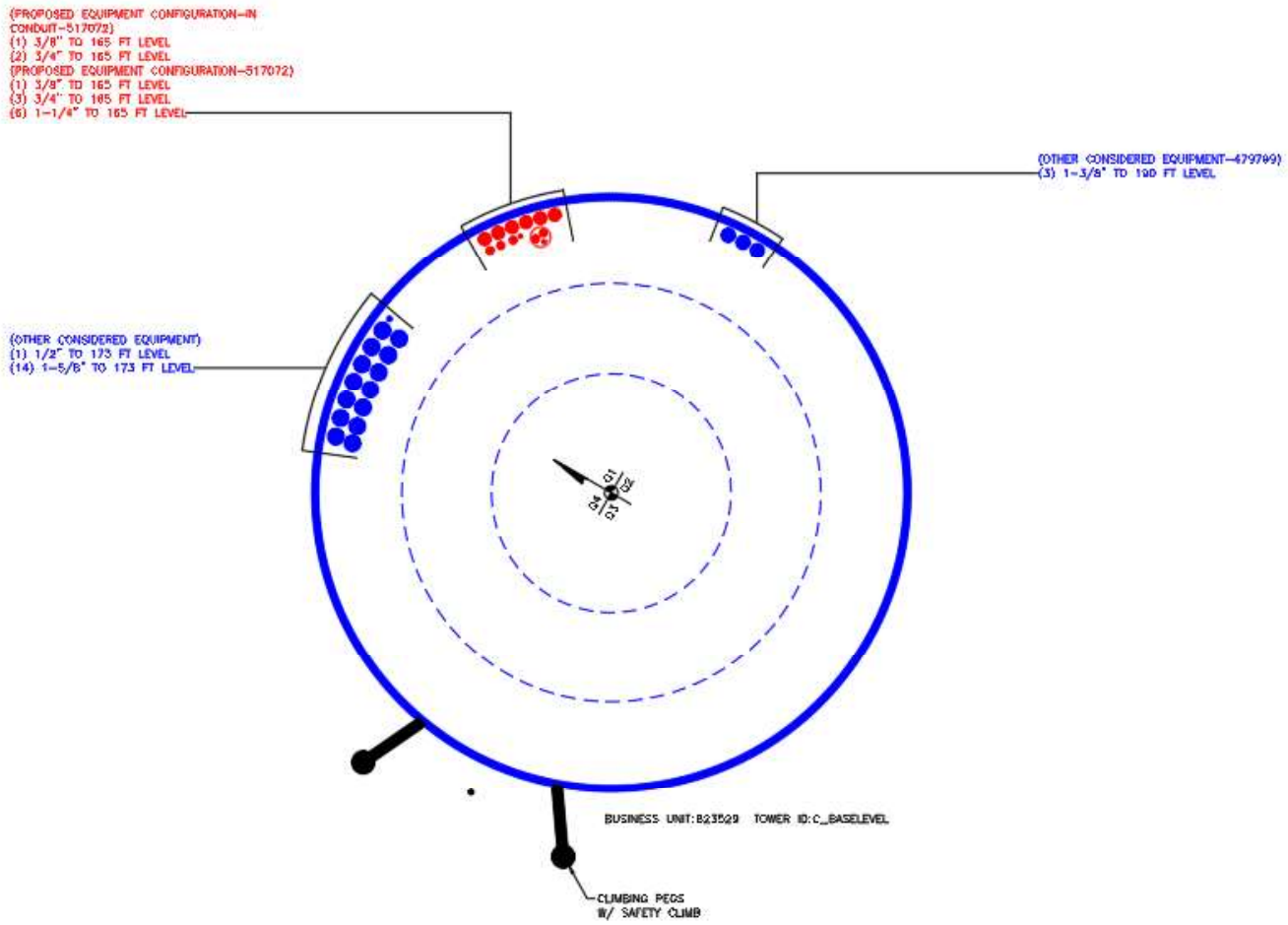
Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	190 - 160 (1)	0.013	0.463	0.000	0.055	0.003	0.479	1.050	4.8.2
L2	160 - 140 (2)	0.013	0.685	0.000	0.048	0.002	0.701	1.050	4.8.2
L3	140 - 120 (3)	0.015	0.780	0.000	0.045	0.002	0.797	1.050	4.8.2
L4	120 - 100 (4)	0.017	0.822	0.000	0.054	0.001	0.841	1.050	4.8.2
L5	100 - 80 (5)	0.019	0.839	0.000	0.062	0.001	0.862	1.050	4.8.2
L6	80 - 60 (6)	0.020	0.845	0.000	0.066	0.001	0.870	1.050	4.8.2
L7	60 - 40 (7)	0.022	0.844	0.000	0.069	0.001	0.871	1.050	4.8.2
L8	40 - 20 (8)	0.019	0.741	0.000	0.038	0.001	0.761	1.050	4.8.2
L9	20 - 0 (9)	0.017	0.682	0.000	0.024	0.000	0.699	1.050	4.8.2

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	190 - 160	Pole	P24x0.375	1	-13.94	1104.67	45.6	Pass
L2	160 - 140	Pole	30" x 0.375"	2	-17.52	1376.61	66.8	Pass
L3	140 - 120	Pole	36" x 0.375"	3	-21.72	1564.60	75.9	Pass
L4	120 - 100	Pole	42" x 0.375"	4	-27.99	1752.31	80.1	Pass
L5	100 - 80	Pole	P48x0.375	5	-34.34	1939.86	82.1	Pass
L6	80 - 60	Pole	P54x3/8	6	-41.42	2127.30	82.8	Pass
L7	60 - 40	Pole	P60x3/8	7	-49.09	2314.65	83.0	Pass
L8	40 - 20	Pole	P60x1/2	8	-57.94	3281.97	72.5	Pass
L9	20 - 0	Pole	P60x5/8	9	-68.46	4346.11	66.5	Pass
							Summary	
						Pole (L7)	83.0	Pass
						RATING =	**83.0**	**Pass**

APPENDIX B

BASE LEVEL DRAWING


(PROPOSED EQUIPMENT CONFIGURATION-IN CONDUIT-517072)
(1) 3/8" TO 165 FT LEVEL
(2) 3/4" TO 165 FT LEVEL
(PROPOSED EQUIPMENT CONFIGURATION-517072)
(1) 3/8" TO 165 FT LEVEL
(3) 3/4" TO 165 FT LEVEL
(6) 1-1/4" TO 165 FT LEVEL
(OTHER CONSIDERED EQUIPMENT-479789)
(3) 1-3/8" TO 190 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1/2" TO 173 FT LEVEL
(14) 1-5/8" TO 173 FT LEVEL
BUSINESS UNIT:823529 TOWER ID:C_BASELEVEL
CLIMBING PEGS
W/ SAFETY CLIMB

APPENDIX C

ADDITIONAL CALCULATIONS

Monopole Flange Plate Connection

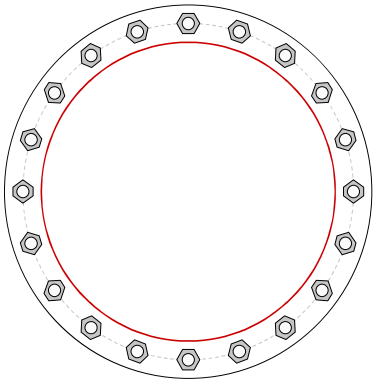
Elevation = 160 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

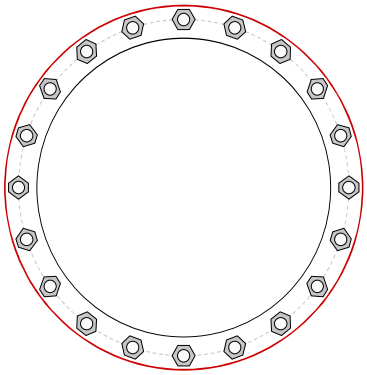
Applied Loads	
Moment (kip-ft)	288.48
Axial Force (kips)	13.94
Shear Force (kips)	17.24

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(20) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 27" BC

Top Plate Data

30" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

24" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

30" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	24.93	
Allowable (kips)	54.52	
Stress Rating:	**43.5%**	Pass

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Monopole Flange Plate Connection

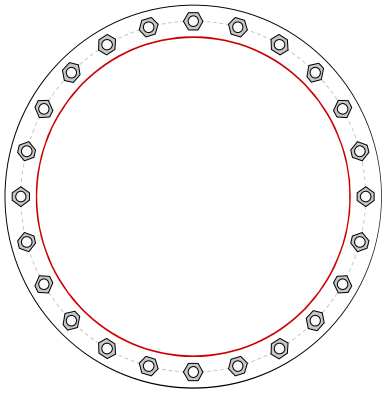
Elevation = 140 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

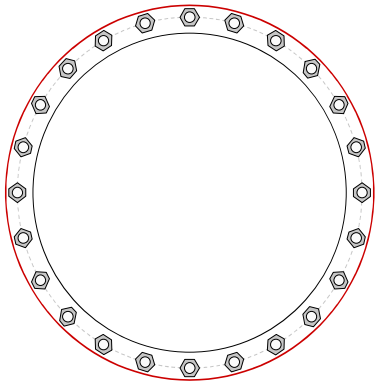
Applied Loads	
Moment (kip-ft)	649.40
Axial Force (kips)	17.52
Shear Force (kips)	18.84

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(24) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 33" BC

Top Plate Data

36" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

30" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

30" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	38.61	
Allowable (kips)	54.53	
Stress Rating:	**67.4%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Monopole Flange Plate Connection

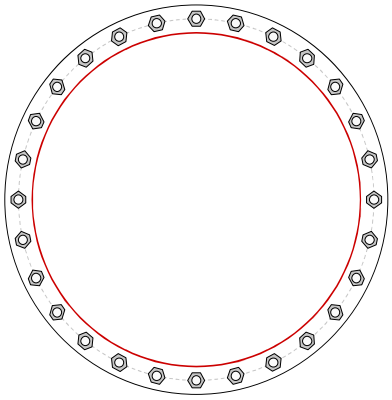
Elevation = 120 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

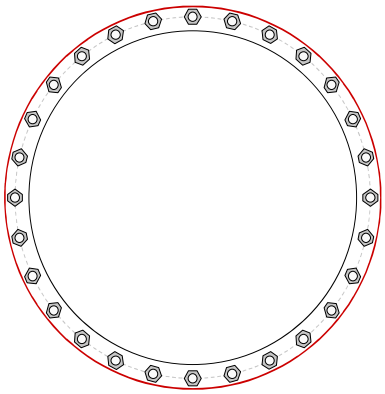
Applied Loads	
Moment (kip-ft)	1043.98
Axial Force (kips)	21.72
Shear Force (kips)	20.61

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(28) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 39" BC

Top Plate Data

42" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

36" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	45.10	
Allowable (kips)	54.53	
Stress Rating:	**78.8%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Monopole Flange Plate Connection

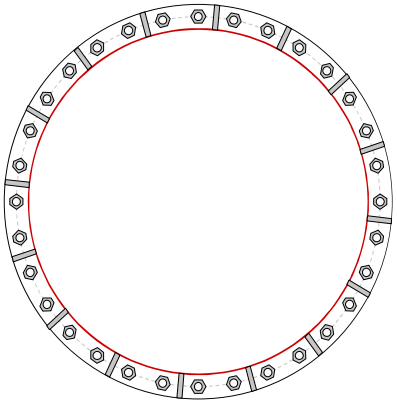
Elevation = 100 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

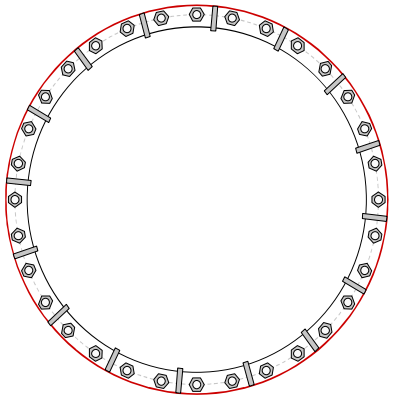
Applied Loads	
Moment (kip-ft)	1476.08
Axial Force (kips)	27.99
Shear Force (kips)	22.58

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 45" BC

Top Plate Data

48" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

42" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(16) 5"H x 3"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

(16) 5"H x 3"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	48.32	
Allowable (kips)	54.53	
Stress Rating:	**84.4%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

Monopole Flange Plate Connection

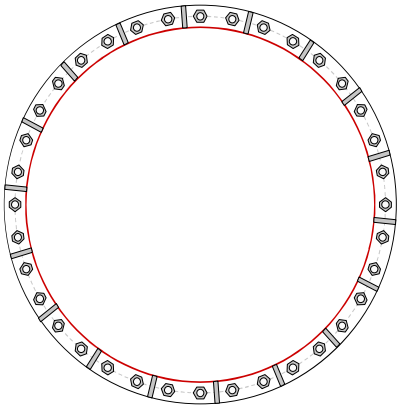
Elevation = 80 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

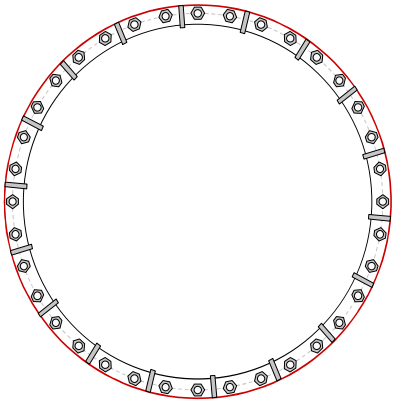
Applied Loads	
Moment (kip-ft)	1948.19
Axial Force (kips)	34.34
Shear Force (kips)	24.61

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(36) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 51" BC

Top Plate Data

54" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

48" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(18) 5"H x 3"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

(18) 5"H x 3"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	49.97	
Allowable (kips)	54.53	
Stress Rating:	**87.3%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

Monopole Flange Plate Connection

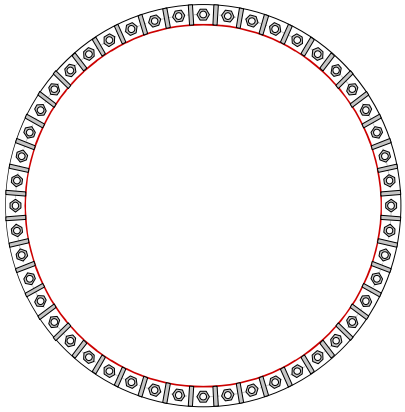
Elevation = 60 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

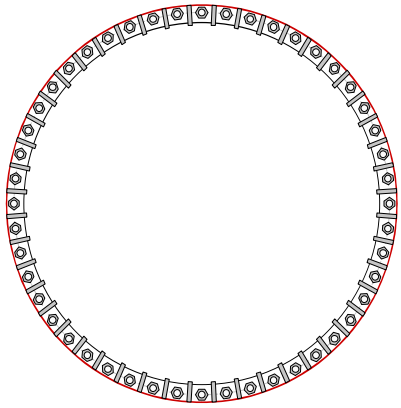
Applied Loads	
Moment (kip-ft)	2461.09
Axial Force (kips)	41.42
Shear Force (kips)	26.66

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(48) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 57" BC

Top Plate Data

60" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

54" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(48) 5"H x 3"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

(48) 5"H x 3"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	42.31	
Allowable (kips)	54.53	
Stress Rating:	**73.9%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

Monopole Flange Plate Connection

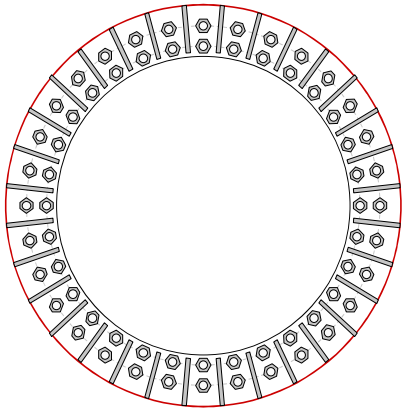
Elevation = 40 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

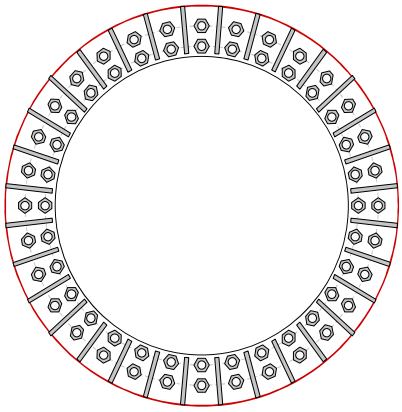
Applied Loads	
Moment (kip-ft)	3014.46
Axial Force (kips)	49.09
Shear Force (kips)	28.66

**TIA-222-H Section 15.5 Applied*

Top Plate - Internal



Bottom Plate - Internal



Connection Properties

Bolt Data

GROUP 1: (32) 1-1/4" ø bolts (A490 N; Fy=130 ksi, Fu=150 ksi) on 47" BC
GROUP 2: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 53" BC

Top Plate Data
44" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data
44" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data
(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.375" fillet
vert. weld: 0.375" fillet

Bottom Stiffener Data
(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.375" fillet
vert. weld: 0.375" fillet

Top Pole Data
60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data
60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	46.98	
Allowable (kips)	76.31	
Stress Rating:	**58.6%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

Monopole Flange Plate Connection

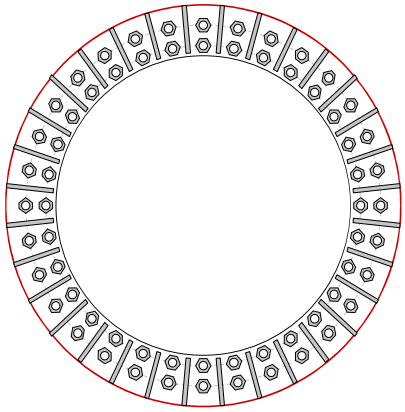
Elevation = 20 ft.

BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0
TIA-222 Revision	H

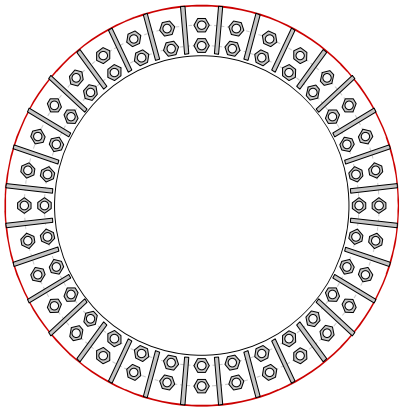
Applied Loads	
Moment (kip-ft)	3603.86
Axial Force (kips)	57.94
Shear Force (kips)	30.27

**TIA-222-H Section 15.5 Applied*

Top Plate - Internal



Bottom Plate - Internal



Connection Properties

Bolt Data

GROUP 1: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 47" BC
GROUP 2: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 53" BC

Top Plate Data
44" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data
44" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data
(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.375" fillet
vert. weld: 0.375" fillet

Bottom Stiffener Data
(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.375" fillet
vert. weld: 0.375" fillet

Top Pole Data
60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data
60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	56.18	
Allowable (kips)	76.31	
Stress Rating:	**70.1%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

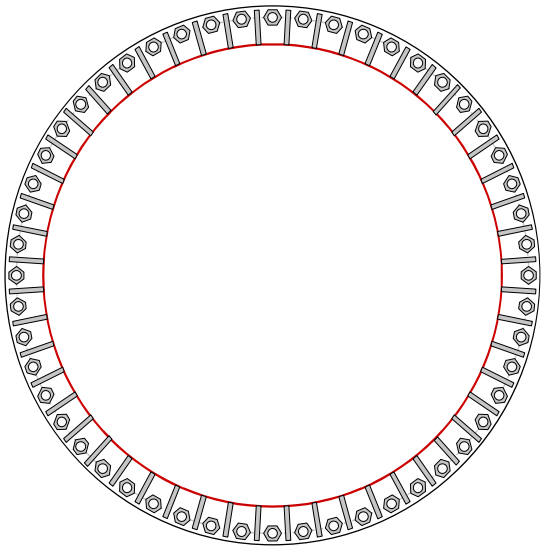
Monopole Base Plate Connection

Site Info	
BU #	823529
Site Name	038/EastLyme/ I-95/ X
Order #	517072 Rev. 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	1.75

Applied Loads	
Moment (kip-ft)	4224.32
Axial Force (kips)	68.46
Shear Force (kips)	31.76

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

(52) 1-1/4" ø bolts (F1554-105 N; Fy=105 ksi, Fu=125 ksi) on 67" BC

Base Plate Data

70" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Stiffener Data

(52) 8"H x 4.5"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.375" fillet
vert. weld: 0.375" fillet

Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

Pu_c = 59.51	ϕPn_c = 115.97	**Stress Rating**
Vu = 0.61	ϕVn = 52.19	**51.0%**
Mu = 0.69	ϕMn = 30.76	**Pass**

Base Plate Summary

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**

Stiffener Summary

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Pole Summary

Punching Shear:	**Pirod OK**

PAUL J. FORD & COMPANY

Date: 5/14/2020 Page: 1 of 2

Job Number:	A37520-0839.001.7805
Site Number:	823529
Site Name:	CT038/EastLyme/ I-95/ X72
WO No.:	1845310
Order No.:	517072 Rev 0
Engineer:	STP

Version: 3.0 Effective: 1/29/2020

Flexible Foundation Analysis

Applied Reactions for RISA-3D

TNX Moment =	4224	k-ft
TNX Axial =	68	kips
TNX Shear =	32	kips
Total Unfactored Axial =	56.7	kips
TIA Standard =	H	

Passive Pressure on Pad/Mat

Horiz Subgr Modulus =	10	kcf
Plate Width =	0.5	ft
Depth to Ignore =	0.5	ft
Pad Thickness =	3.8	ft
k (side) =	1.35	k/in
k (corner) =	0.68	k/in

Pad/Mat & Pier Input

Pier Number Sides =	Round	
Pier Width/Diameter =		ft
Pier Height =		ft
Ht Above Grade =		ft (Pier or Pad)
Pad Thickness =	3.75	ft
Pad Width =	14	ft
Pad Length =	14	ft
Concrete Density =	150	pcf
Concrete f'c =	3	ksi
β1 =	0.85	
Rebar Fy =	60	ksi

	Width	Length	
Location =			
Top Bar Quantity =	19		
Top Bar Size #	8		
Top Clear Cover =	12		in
Bottom Bar Quantity =	19		
Bottom Bar Size #	8		
Bottom Clear Cover =	3		in
As, min =	13.61		in^2
Use Comp Side Rebar?	No		
Mu (Comp Top) =	1573.03		k-ft
Mu (Comp Bot) =	260.25		k-ft
	LC3		

Pad/Mat Analysis

Location	Comp Side	c, in	d, in	εt, in/in	Mu, k-ft	Φ	ΦMn, k-ft	Ratio
Width	Top	2.65	40.50	-0.043	1573.0	0.90	2761.1	54.3%
Width	Bot	2.65	31.50	-0.033	260.3	0.90	2153.2	11.5%

Soil Weight

Soil Unit Weight=		pcf
Apply Soil Weight =		
Volume =		ft^3
Weight =		kips
Weight per Sq Ft =		ksf

Soil Modulus by Layer

Layer	Start, ft	End, ft	Vert, pci	Horiz, pci
1	0.0			
2				
3				
4				
5				
6				
7				
8				
9				

Rock Anchor Capacity

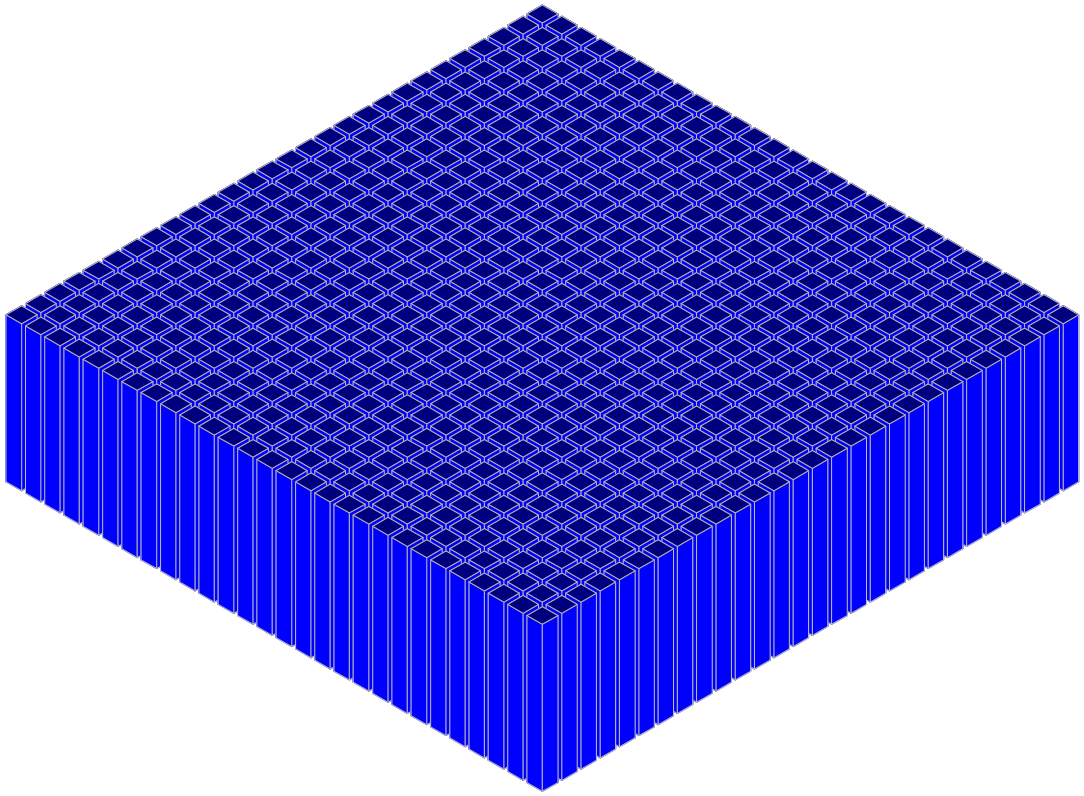
Anchor Type =	Rock Anchor	
Pile Type =	Other	
Ag =		in^2
Ag Override =	2.896	in^2
E =	29000	ksi
Lu =	5	ft
k = An (E) / Lu =	1399.7	k/in
Pu =		ksi
Capacity = 0.8 (Pu) =		kips
Capacity Override =	240.8	kips
Max Tension from RISA =	117.3	kips
Ratio =	**46.4%**	**OK**

Bearing Check

Max Bearing Load =	6.73	kip
Plate Width =	0.5	ft
Plate Length =	0.5	ft
Design Brg Capacity =	40	ksf = Φqn
Bearing Pressure =	26.9	ksf
Ratio =	**85.5%**	**OK**

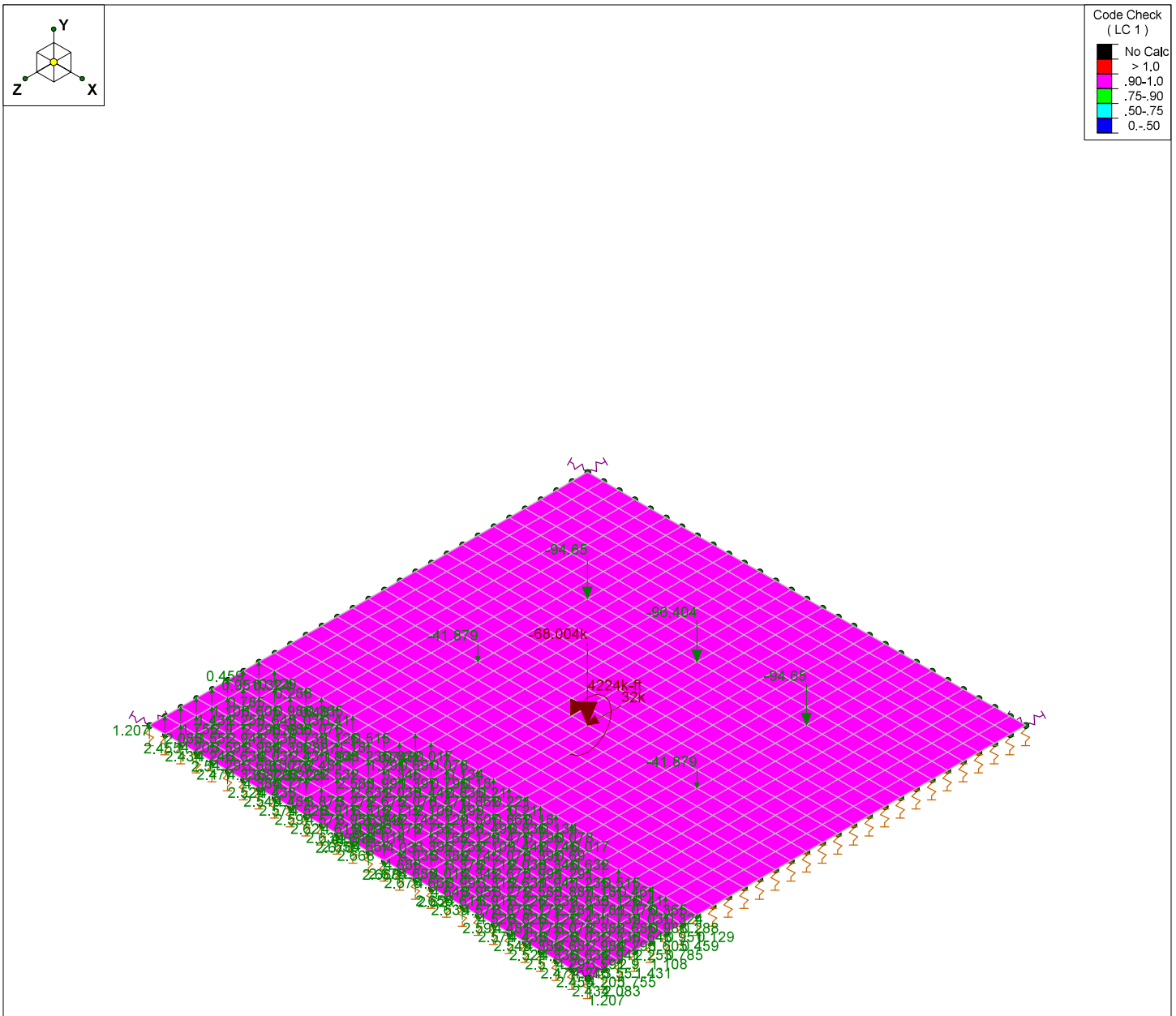
Subgrade Modulus Conversion

Subgrade Modulus =	3600	pci
ks =	6220.8	kcf



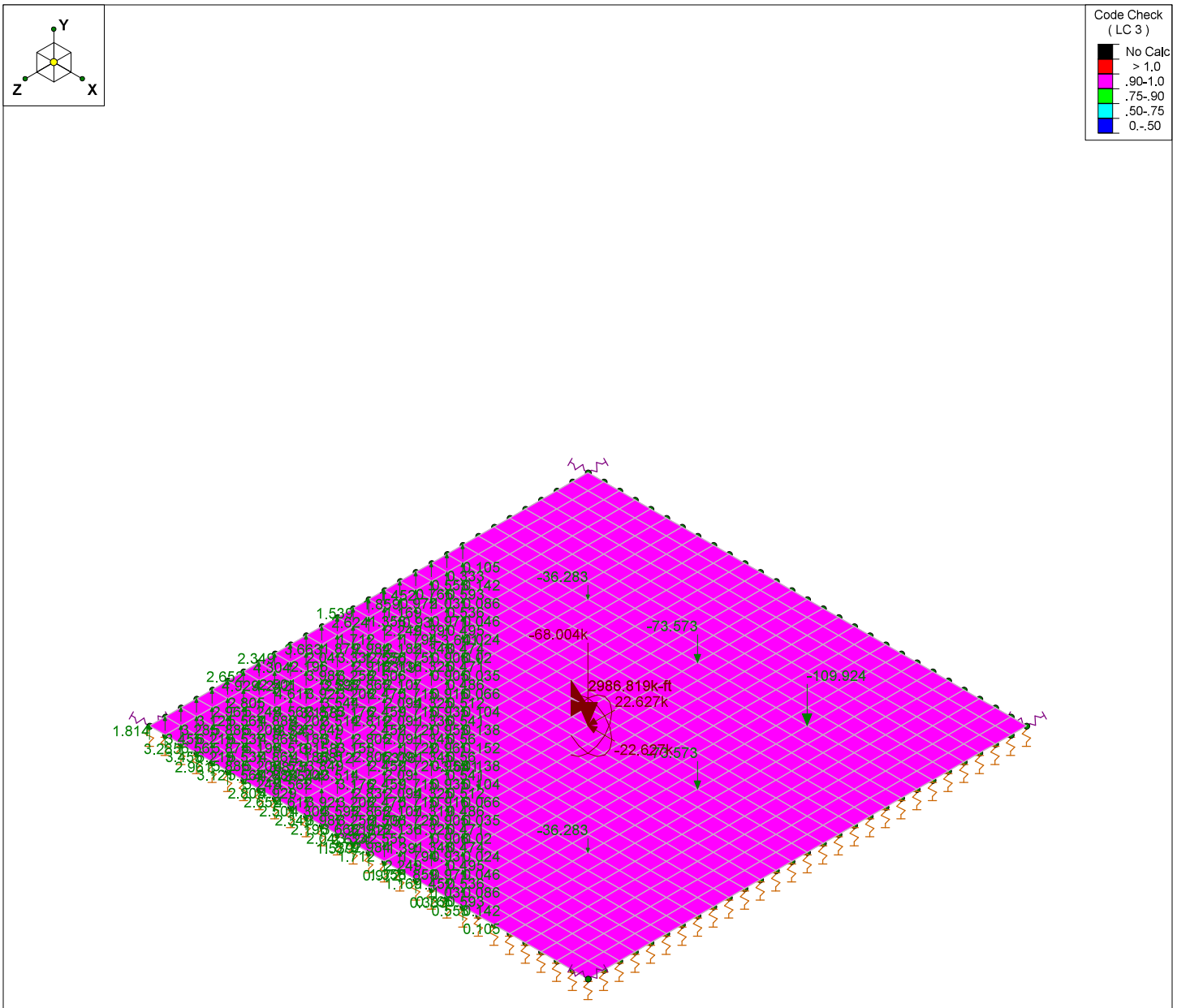
Envelope Only Solution

Paul J. Ford & Company	BU 823529 | CT038/EastLyme/ I-95/ X72	SK - 1
STP		May 14, 2020 at 5:00 PM
37520-0839.001.7805		37520-0839.001.7805.r3d



Member Code Checks Displayed
Loads: LC 1, 1.2 Dead + Wind 0
Results for LC 1, 1.2 Dead + Wind 0
Y-direction Reaction Units are k and k-ft

Paul J. Ford & Company	BU 823529 | CT038/EastLyme/ I-95/ X72	SK - 2
STP		May 14, 2020 at 5:01 PM
37520-0839.001.7805		37520-0839.001.7805.r3d



Member Code Checks Displayed
Loads: LC 3, 1.2 Dead + Wind 45
Results for LC 3, 1.2 Dead + Wind 45
Y-direction Reaction Units are k and k-ft

Paul J. Ford & Company	BU 823529 | CT038/EastLyme/ I-95/ X72	SK - 3
STP		May 14, 2020 at 5:02 PM
37520-0839.001.7805		37520-0839.001.7805.r3d

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	None		-1		1				
2	Wind 0	None				2				
3	Wind 45	None				4				
4	Wind 90	None				2				
5	Wind 135	None				4				

Load Combinations

	Description	Solve	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2 Dead + Wind 0	Yes	Y		1	1.2	2	1																		
2	0.9 Dead + Wind 0	Yes	Y		1	.9	2	1																		
3	1.2 Dead + Wind 45	Yes	Y		1	1.2	3	1																		
4	0.9 Dead + Wind 45	Yes	Y		1	.9	3	1																		
5	1.2 Dead + Wind 90	Yes	Y		1	1.2	4	1																		
6	0.9 Dead + Wind 90	Yes	Y		1	.9	4	1																		
7	1.2 Dead + Wind 135	Yes	Y		1	1.2	5	1																		
8	0.9 Dead + Wind 135	Yes	Y		1	.9	5	1																		
9	1.2 Dead + Wind 180	Yes	Y		1	1.2	2	-1																		
10	0.9 Dead + Wind 180	Yes	Y		1	.9	2	-1																		
11	1.2 Dead + Wind 225	Yes	Y		1	1.2	3	-1																		
12	0.9 Dead + Wind 225	Yes	Y		1	.9	3	-1																		
13	1.2 Dead + Wind 270	Yes	Y		1	1.2	4	-1																		
14	0.9 Dead + Wind 270	Yes	Y		1	.9	4	-1																		
15	1.2 Dead + Wind 315	Yes	Y		1	1.2	5	-1																		
16	0.9 Dead + Wind 315	Yes	Y		1	.9	5	-1																		

Joint Loads and Enforced Displacements (BLC 1 : Dead)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	CENTER	L	Y	-56.67

Joint Loads and Enforced Displacements (BLC 2 : Wind 0)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	CENTER	L	Mx	4224
2	CENTER	L	Z	32

Joint Loads and Enforced Displacements (BLC 3 : Wind 45)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	CENTER	L	Mz	2986.819
2	CENTER	L	Mx	2986.819
3	CENTER	L	X	-22.627
4	CENTER	L	Z	22.627

Joint Loads and Enforced Displacements (BLC 4 : Wind 90)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	CENTER	L	Mz	4224
2	CENTER	L	X	-32

Joint Loads and Enforced Displacements (BLC 5 : Wind 135)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	CENTER	L	Mz	2986.819
2	CENTER	L	Mx	-2986.819
3	CENTER	L	X	-22.627
4	CENTER	L	Z	-22.627

Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	f'c[ksi]	Lambda	Flex Steel[...	Shear Stee...
1	Conc3000NW	3156	1372	.15	.6	.145	3	1	60	60
2	Conc3500NW	3409	1482	.15	.6	.145	3.5	1	60	60
3	Conc4000NW	3644	1584	.15	.6	.145	4	1	60	60
4	Conc3000LW	2085	907	.15	.6	.11	3	.75	60	60
5	Conc3500LW	2252	979	.15	.6	.11	3.5	.75	60	60
6	Conc4000LW	2408	1047	.15	.6	.11	4	.75	60	60

Concrete Column Design Parameters

Label	Shape	Length[ft]	Lu-yy[ft]	Lu-zz[ft]	Cm-yy	Cm-zz	Kyy	Kzz	y sway	z sway	Icr Fac...	Flexur...	Shear ...
No Data to Print ...													

Envelope Concrete Column Design Results

Column	Shape	UC M...	Loc[ft]	UC LC	Shear...	LC	Loc[ft]	Dir	Phi used	Pn[k]	Mny[k-ft]	Mnz[k-ft]	Vny[k]	Vnz[k]
No Data to Print ...														

Envelope Joint Displacements

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1	ANCHOR1	max	11.765	14	.1	4	11.765	2	1.143e-3	2	0	16	1.143e-3	6
2		min	-11.765	5	-.019	11	-11.765	9	-9.63e-4	10	0	1	-9.63e-4	14
3	ANCHOR2	max	11.765	14	.088	2	11.765	2	1.191e-3	2	0	16	1.097e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
4		min	-11.765	5	-.007	9	-11.765	9	-1.007e-3	10	0	1	-1.097e-3	14
5	ANCHOR3	max	11.765	14	.1	16	11.765	2	1.143e-3	2	0	16	9.63e-4	6
6		min	-11.765	5	-.019	7	-11.765	9	-9.63e-4	10	0	1	-1.143e-3	14
7	ANCHOR4	max	11.765	14	.088	14	11.765	2	1.097e-3	2	0	16	1.007e-3	6
8		min	-11.765	5	-.007	5	-11.765	9	-1.097e-3	10	0	1	-1.191e-3	14
9	ANCHOR5	max	11.765	14	.088	6	11.765	2	1.097e-3	2	0	16	1.191e-3	6
10		min	-11.765	5	-.007	13	-11.765	9	-1.097e-3	10	0	1	-1.007e-3	14
11	ANCHOR6	max	11.765	14	.1	8	11.765	2	9.63e-4	2	0	16	1.143e-3	6
12		min	-11.765	5	-.019	15	-11.765	9	-1.143e-3	10	0	1	-9.63e-4	14
13	ANCHOR7	max	11.765	14	.088	10	11.765	2	1.007e-3	2	0	16	1.097e-3	6
14		min	-11.765	5	-.007	1	-11.765	9	-1.191e-3	10	0	1	-1.097e-3	14
15	ANCHOR8	max	11.765	14	.1	12	11.765	2	9.63e-4	2	0	16	9.63e-4	6
16		min	-11.765	5	-.019	3	-11.765	9	-1.143e-3	10	0	1	-1.143e-3	14
17	N1	max	11.765	14	.167	8	11.765	2	9.128e-4	2	0	16	1.139e-3	6
18		min	-11.765	5	-.058	16	-11.765	9	-1.139e-3	10	0	1	-9.128e-4	14
19	N2	max	11.765	14	.167	12	11.765	2	9.128e-4	2	0	16	9.128e-4	6
20		min	-11.765	5	-.058	4	-11.765	9	-1.139e-3	10	0	1	-1.139e-3	14
21	N3	max	11.765	14	.167	16	11.765	2	1.139e-3	2	0	16	9.128e-4	6
22		min	-11.765	5	-.058	8	-11.765	9	-9.128e-4	10	0	1	-1.139e-3	14
23	N4	max	11.765	14	.167	4	11.765	2	1.139e-3	2	0	16	1.139e-3	6
24		min	-11.765	5	-.058	12	-11.765	9	-9.128e-4	10	0	1	-9.128e-4	14
25	N5	max	11.765	14	.162	4	11.765	2	1.139e-3	2	0	16	1.139e-3	6
26		min	-11.765	5	-.055	12	-11.765	9	-9.124e-4	10	0	1	-9.132e-4	14
27	N6	max	11.765	14	.157	4	11.765	2	1.14e-3	2	0	16	1.139e-3	6
28		min	-11.765	5	-.052	12	-11.765	9	-9.122e-4	10	0	1	-9.145e-4	14
29	N7	max	11.765	14	.152	4	11.765	2	1.141e-3	2	0	16	1.138e-3	6
30		min	-11.765	5	-.049	12	-11.765	9	-9.125e-4	10	0	1	-9.174e-4	14
31	N8	max	11.765	14	.148	4	11.765	2	1.143e-3	2	0	16	1.137e-3	6
32		min	-11.765	5	-.047	12	-11.765	9	-9.132e-4	10	0	1	-9.224e-4	14
33	N9	max	11.765	14	.143	4	11.765	2	1.145e-3	2	0	16	1.134e-3	6
34		min	-11.765	5	-.044	12	-11.765	9	-9.143e-4	10	0	1	-9.297e-4	14
35	N10	max	11.765	14	.138	4	11.765	2	1.147e-3	2	0	16	1.131e-3	6
36		min	-11.765	5	-.042	12	-11.765	9	-9.156e-4	10	0	1	-9.393e-4	14
37	N11	max	11.765	14	.136	2	11.765	2	1.15e-3	2	0	16	1.126e-3	6
38		min	-11.765	5	-.04	10	-11.765	9	-9.17e-4	10	0	1	-9.511e-4	14
39	N12	max	11.765	14	.136	2	11.765	2	1.152e-3	2	0	16	1.12e-3	6
40		min	-11.765	5	-.041	10	-11.765	9	-9.186e-4	10	0	1	-9.648e-4	14
41	N13	max	11.765	14	.136	2	11.765	2	1.155e-3	2	0	16	1.113e-3	6
42		min	-11.765	5	-.041	10	-11.765	9	-9.201e-4	10	0	1	-9.8e-4	14
43	N14	max	11.765	14	.137	2	11.765	2	1.157e-3	2	0	16	1.105e-3	6
44		min	-11.765	5	-.041	10	-11.765	9	-9.215e-4	10	0	1	-9.96e-4	14
45	N15	max	11.765	14	.137	2	11.765	2	1.158e-3	2	0	16	1.096e-3	6
46		min	-11.765	5	-.041	10	-11.765	9	-9.227e-4	10	0	1	-1.012e-3	14
47	N16	max	11.765	14	.137	2	11.765	2	1.16e-3	2	0	16	1.085e-3	6
48		min	-11.765	5	-.042	10	-11.765	9	-9.236e-4	10	0	1	-1.029e-3	14
49	N17	max	11.765	14	.137	2	11.765	2	1.16e-3	2	0	16	1.073e-3	6
50		min	-11.765	5	-.042	10	-11.765	9	-9.242e-4	10	0	1	-1.045e-3	14
51	N18	max	11.765	14	.137	2	11.765	2	1.161e-3	2	0	16	1.059e-3	6
52		min	-11.765	5	-.042	10	-11.765	9	-9.244e-4	10	0	1	-1.059e-3	14
53	N19	max	11.765	14	.137	2	11.765	2	1.16e-3	2	0	16	1.045e-3	6
54		min	-11.765	5	-.042	10	-11.765	9	-9.242e-4	10	0	1	-1.073e-3	14
55	N20	max	11.765	14	.137	2	11.765	2	1.16e-3	2	0	16	1.029e-3	6
56		min	-11.765	5	-.042	10	-11.765	9	-9.236e-4	10	0	1	-1.085e-3	14
57	N21	max	11.765	14	.137	2	11.765	2	1.158e-3	2	0	16	1.012e-3	6
58		min	-11.765	5	-.041	10	-11.765	9	-9.227e-4	10	0	1	-1.096e-3	14
59	N22	max	11.765	14	.137	2	11.765	2	1.157e-3	2	0	16	9.96e-4	6
60		min	-11.765	5	-.041	10	-11.765	9	-9.215e-4	10	0	1	-1.105e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
61	N23	max	11.765	14	.136	2	11.765	2	1.155e-3	2	0	16	9.8e-4	6
62		min	-11.765	5	-.041	10	-11.765	9	-9.201e-4	10	0	1	-1.113e-3	14
63	N24	max	11.765	14	.136	2	11.765	2	1.152e-3	2	0	16	9.648e-4	6
64		min	-11.765	5	-.041	10	-11.765	9	-9.186e-4	10	0	1	-1.12e-3	14
65	N25	max	11.765	14	.136	2	11.765	2	1.15e-3	2	0	16	9.511e-4	6
66		min	-11.765	5	-.04	10	-11.765	9	-9.17e-4	10	0	1	-1.126e-3	14
67	N26	max	11.765	14	.138	16	11.765	2	1.147e-3	2	0	16	9.393e-4	6
68		min	-11.765	5	-.042	8	-11.765	9	-9.156e-4	10	0	1	-1.131e-3	14
69	N27	max	11.765	14	.143	16	11.765	2	1.145e-3	2	0	16	9.297e-4	6
70		min	-11.765	5	-.044	8	-11.765	9	-9.143e-4	10	0	1	-1.134e-3	14
71	N28	max	11.765	14	.148	16	11.765	2	1.143e-3	2	0	16	9.224e-4	6
72		min	-11.765	5	-.047	8	-11.765	9	-9.132e-4	10	0	1	-1.137e-3	14
73	N29	max	11.765	14	.152	16	11.765	2	1.141e-3	2	0	16	9.174e-4	6
74		min	-11.765	5	-.049	8	-11.765	9	-9.125e-4	10	0	1	-1.138e-3	14
75	N30	max	11.765	14	.157	16	11.765	2	1.14e-3	2	0	16	9.145e-4	6
76		min	-11.765	5	-.052	8	-11.765	9	-9.122e-4	10	0	1	-1.139e-3	14
77	N31	max	11.765	14	.162	16	11.765	2	1.139e-3	2	0	16	9.132e-4	6
78		min	-11.765	5	-.055	8	-11.765	9	-9.124e-4	10	0	1	-1.139e-3	14
79	N32	max	11.765	14	.162	16	11.765	2	1.139e-3	2	0	16	9.124e-4	6
80		min	-11.765	5	-.055	8	-11.765	9	-9.132e-4	10	0	1	-1.139e-3	14
81	N33	max	11.765	14	.157	16	11.765	2	1.139e-3	2	0	16	9.122e-4	6
82		min	-11.765	5	-.052	8	-11.765	9	-9.145e-4	10	0	1	-1.14e-3	14
83	N34	max	11.765	14	.152	16	11.765	2	1.138e-3	2	0	16	9.125e-4	6
84		min	-11.765	5	-.049	8	-11.765	9	-9.174e-4	10	0	1	-1.141e-3	14
85	N35	max	11.765	14	.148	16	11.765	2	1.137e-3	2	0	16	9.132e-4	6
86		min	-11.765	5	-.047	8	-11.765	9	-9.224e-4	10	0	1	-1.143e-3	14
87	N36	max	11.765	14	.143	16	11.765	2	1.134e-3	2	0	16	9.143e-4	6
88		min	-11.765	5	-.044	8	-11.765	9	-9.297e-4	10	0	1	-1.145e-3	14
89	N37	max	11.765	14	.138	16	11.765	2	1.131e-3	2	0	16	9.156e-4	6
90		min	-11.765	5	-.042	8	-11.765	9	-9.393e-4	10	0	1	-1.147e-3	14
91	N38	max	11.765	14	.136	14	11.765	2	1.126e-3	2	0	16	9.17e-4	6
92		min	-11.765	5	-.04	6	-11.765	9	-9.511e-4	10	0	1	-1.15e-3	14
93	N39	max	11.765	14	.136	14	11.765	2	1.12e-3	2	0	16	9.186e-4	6
94		min	-11.765	5	-.041	6	-11.765	9	-9.648e-4	10	0	1	-1.152e-3	14
95	N40	max	11.765	14	.136	14	11.765	2	1.113e-3	2	0	16	9.201e-4	6
96		min	-11.765	5	-.041	6	-11.765	9	-9.8e-4	10	0	1	-1.155e-3	14
97	N41	max	11.765	14	.137	14	11.765	2	1.105e-3	2	0	16	9.215e-4	6
98		min	-11.765	5	-.041	6	-11.765	9	-9.96e-4	10	0	1	-1.157e-3	14
99	N42	max	11.765	14	.137	14	11.765	2	1.096e-3	2	0	16	9.227e-4	6
100		min	-11.765	5	-.041	6	-11.765	9	-1.012e-3	10	0	1	-1.158e-3	14
101	N43	max	11.765	14	.137	14	11.765	2	1.085e-3	2	0	16	9.236e-4	6
102		min	-11.765	5	-.042	6	-11.765	9	-1.029e-3	10	0	1	-1.16e-3	14
103	N44	max	11.765	14	.137	14	11.765	2	1.073e-3	2	0	16	9.242e-4	6
104		min	-11.765	5	-.042	6	-11.765	9	-1.045e-3	10	0	1	-1.16e-3	14
105	N45	max	11.765	14	.137	14	11.765	2	1.059e-3	2	0	16	9.244e-4	6
106		min	-11.765	5	-.042	6	-11.765	9	-1.059e-3	10	0	1	-1.161e-3	14
107	N46	max	11.765	14	.137	14	11.765	2	1.045e-3	2	0	16	9.242e-4	6
108		min	-11.765	5	-.042	6	-11.765	9	-1.073e-3	10	0	1	-1.16e-3	14
109	N47	max	11.765	14	.137	14	11.765	2	1.029e-3	2	0	16	9.236e-4	6
110		min	-11.765	5	-.042	6	-11.765	9	-1.085e-3	10	0	1	-1.16e-3	14
111	N48	max	11.765	14	.137	14	11.765	2	1.012e-3	2	0	16	9.227e-4	6
112		min	-11.765	5	-.041	6	-11.765	9	-1.096e-3	10	0	1	-1.158e-3	14
113	N49	max	11.765	14	.137	14	11.765	2	9.96e-4	2	0	16	9.215e-4	6
114		min	-11.765	5	-.041	6	-11.765	9	-1.105e-3	10	0	1	-1.157e-3	14
115	N50	max	11.765	14	.136	14	11.765	2	9.8e-4	2	0	16	9.201e-4	6
116		min	-11.765	5	-.041	6	-11.765	9	-1.113e-3	10	0	1	-1.155e-3	14
117	N51	max	11.765	14	.136	14	11.765	2	9.648e-4	2	0	16	9.186e-4	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
118		min	-11.765	5	-.041	6	-11.765	9	-1.12e-3	10	0	1	-1.152e-3	14
119	N52	max	11.765	14	.136	14	11.765	2	9.511e-4	2	0	16	9.17e-4	6
120		min	-11.765	5	-.04	6	-11.765	9	-1.126e-3	10	0	1	-1.15e-3	14
121	N53	max	11.765	14	.138	12	11.765	2	9.393e-4	2	0	16	9.156e-4	6
122		min	-11.765	5	-.042	4	-11.765	9	-1.131e-3	10	0	1	-1.147e-3	14
123	N54	max	11.765	14	.143	12	11.765	2	9.297e-4	2	0	16	9.143e-4	6
124		min	-11.765	5	-.044	4	-11.765	9	-1.134e-3	10	0	1	-1.145e-3	14
125	N55	max	11.765	14	.148	12	11.765	2	9.224e-4	2	0	16	9.132e-4	6
126		min	-11.765	5	-.047	4	-11.765	9	-1.137e-3	10	0	1	-1.143e-3	14
127	N56	max	11.765	14	.152	12	11.765	2	9.174e-4	2	0	16	9.125e-4	6
128		min	-11.765	5	-.049	4	-11.765	9	-1.138e-3	10	0	1	-1.141e-3	14
129	N57	max	11.765	14	.157	12	11.765	2	9.145e-4	2	0	16	9.122e-4	6
130		min	-11.765	5	-.052	4	-11.765	9	-1.139e-3	10	0	1	-1.14e-3	14
131	N58	max	11.765	14	.162	12	11.765	2	9.132e-4	2	0	16	9.124e-4	6
132		min	-11.765	5	-.055	4	-11.765	9	-1.139e-3	10	0	1	-1.139e-3	14
133	N59	max	11.765	14	.162	12	11.765	2	9.124e-4	2	0	16	9.132e-4	6
134		min	-11.765	5	-.055	4	-11.765	9	-1.139e-3	10	0	1	-1.139e-3	14
135	N60	max	11.765	14	.157	12	11.765	2	9.122e-4	2	0	16	9.145e-4	6
136		min	-11.765	5	-.052	4	-11.765	9	-1.14e-3	10	0	1	-1.139e-3	14
137	N61	max	11.765	14	.152	12	11.765	2	9.125e-4	2	0	16	9.174e-4	6
138		min	-11.765	5	-.049	4	-11.765	9	-1.141e-3	10	0	1	-1.138e-3	14
139	N62	max	11.765	14	.148	12	11.765	2	9.132e-4	2	0	16	9.224e-4	6
140		min	-11.765	5	-.047	4	-11.765	9	-1.143e-3	10	0	1	-1.137e-3	14
141	N63	max	11.765	14	.143	12	11.765	2	9.143e-4	2	0	16	9.297e-4	6
142		min	-11.765	5	-.044	4	-11.765	9	-1.145e-3	10	0	1	-1.134e-3	14
143	N64	max	11.765	14	.138	12	11.765	2	9.156e-4	2	0	16	9.393e-4	6
144		min	-11.765	5	-.042	4	-11.765	9	-1.147e-3	10	0	1	-1.131e-3	14
145	N65	max	11.765	14	.136	10	11.765	2	9.17e-4	2	0	16	9.511e-4	6
146		min	-11.765	5	-.04	2	-11.765	9	-1.15e-3	10	0	1	-1.126e-3	14
147	N66	max	11.765	14	.136	10	11.765	2	9.186e-4	2	0	16	9.648e-4	6
148		min	-11.765	5	-.041	2	-11.765	9	-1.152e-3	10	0	1	-1.12e-3	14
149	N67	max	11.765	14	.136	10	11.765	2	9.201e-4	2	0	16	9.8e-4	6
150		min	-11.765	5	-.041	2	-11.765	9	-1.155e-3	10	0	1	-1.113e-3	14
151	N68	max	11.765	14	.137	10	11.765	2	9.215e-4	2	0	16	9.96e-4	6
152		min	-11.765	5	-.041	2	-11.765	9	-1.157e-3	10	0	1	-1.105e-3	14
153	N69	max	11.765	14	.137	10	11.765	2	9.227e-4	2	0	16	1.012e-3	6
154		min	-11.765	5	-.041	2	-11.765	9	-1.158e-3	10	0	1	-1.096e-3	14
155	N70	max	11.765	14	.137	10	11.765	2	9.236e-4	2	0	16	1.029e-3	6
156		min	-11.765	5	-.042	2	-11.765	9	-1.16e-3	10	0	1	-1.085e-3	14
157	N71	max	11.765	14	.137	10	11.765	2	9.242e-4	2	0	16	1.045e-3	6
158		min	-11.765	5	-.042	2	-11.765	9	-1.16e-3	10	0	1	-1.073e-3	14
159	N72	max	11.765	14	.137	10	11.765	2	9.244e-4	2	0	16	1.059e-3	6
160		min	-11.765	5	-.042	2	-11.765	9	-1.161e-3	10	0	1	-1.059e-3	14
161	N73	max	11.765	14	.137	10	11.765	2	9.242e-4	2	0	16	1.073e-3	6
162		min	-11.765	5	-.042	2	-11.765	9	-1.16e-3	10	0	1	-1.045e-3	14
163	N74	max	11.765	14	.137	10	11.765	2	9.236e-4	2	0	16	1.085e-3	6
164		min	-11.765	5	-.042	2	-11.765	9	-1.16e-3	10	0	1	-1.029e-3	14
165	N75	max	11.765	14	.137	10	11.765	2	9.227e-4	2	0	16	1.096e-3	6
166		min	-11.765	5	-.041	2	-11.765	9	-1.158e-3	10	0	1	-1.012e-3	14
167	N76	max	11.765	14	.137	10	11.765	2	9.215e-4	2	0	16	1.105e-3	6
168		min	-11.765	5	-.041	2	-11.765	9	-1.157e-3	10	0	1	-9.96e-4	14
169	N77	max	11.765	14	.136	10	11.765	2	9.201e-4	2	0	16	1.113e-3	6
170		min	-11.765	5	-.041	2	-11.765	9	-1.155e-3	10	0	1	-9.8e-4	14
171	N78	max	11.765	14	.136	10	11.765	2	9.186e-4	2	0	16	1.12e-3	6
172		min	-11.765	5	-.041	2	-11.765	9	-1.152e-3	10	0	1	-9.648e-4	14
173	N79	max	11.765	14	.136	10	11.765	2	9.17e-4	2	0	16	1.126e-3	6
174		min	-11.765	5	-.04	2	-11.765	9	-1.15e-3	10	0	1	-9.511e-4	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
175	N80	max	11.765	14	.138	8	11.765	2	9.156e-4	2	0	16	1.131e-3	6
176		min	-11.765	5	-.042	16	-11.765	9	-1.147e-3	10	0	1	-9.393e-4	14
177	N81	max	11.765	14	.143	8	11.765	2	9.143e-4	2	0	16	1.134e-3	6
178		min	-11.765	5	-.044	16	-11.765	9	-1.145e-3	10	0	1	-9.297e-4	14
179	N82	max	11.765	14	.148	8	11.765	2	9.132e-4	2	0	16	1.137e-3	6
180		min	-11.765	5	-.047	16	-11.765	9	-1.143e-3	10	0	1	-9.224e-4	14
181	N83	max	11.765	14	.152	8	11.765	2	9.125e-4	2	0	16	1.138e-3	6
182		min	-11.765	5	-.049	16	-11.765	9	-1.141e-3	10	0	1	-9.174e-4	14
183	N84	max	11.765	14	.157	8	11.765	2	9.122e-4	2	0	16	1.139e-3	6
184		min	-11.765	5	-.052	16	-11.765	9	-1.14e-3	10	0	1	-9.145e-4	14
185	N85	max	11.765	14	.162	8	11.765	2	9.124e-4	2	0	16	1.139e-3	6
186		min	-11.765	5	-.055	16	-11.765	9	-1.139e-3	10	0	1	-9.132e-4	14
187	N86	max	11.765	14	.162	8	11.765	2	9.132e-4	2	0	16	1.139e-3	6
188		min	-11.765	5	-.055	16	-11.765	9	-1.139e-3	10	0	1	-9.124e-4	14
189	N87	max	11.765	14	.157	8	11.765	2	9.145e-4	2	0	16	1.14e-3	6
190		min	-11.765	5	-.052	16	-11.765	9	-1.139e-3	10	0	1	-9.122e-4	14
191	N88	max	11.765	14	.152	8	11.765	2	9.174e-4	2	0	16	1.141e-3	6
192		min	-11.765	5	-.049	16	-11.765	9	-1.138e-3	10	0	1	-9.125e-4	14
193	N89	max	11.765	14	.148	8	11.765	2	9.224e-4	2	0	16	1.143e-3	6
194		min	-11.765	5	-.047	16	-11.765	9	-1.137e-3	10	0	1	-9.132e-4	14
195	N90	max	11.765	14	.143	8	11.765	2	9.297e-4	2	0	16	1.145e-3	6
196		min	-11.765	5	-.044	16	-11.765	9	-1.134e-3	10	0	1	-9.143e-4	14
197	N91	max	11.765	14	.138	8	11.765	2	9.393e-4	2	0	16	1.147e-3	6
198		min	-11.765	5	-.042	16	-11.765	9	-1.131e-3	10	0	1	-9.156e-4	14
199	N92	max	11.765	14	.136	6	11.765	2	9.511e-4	2	0	16	1.15e-3	6
200		min	-11.765	5	-.04	14	-11.765	9	-1.126e-3	10	0	1	-9.17e-4	14
201	N93	max	11.765	14	.136	6	11.765	2	9.648e-4	2	0	16	1.152e-3	6
202		min	-11.765	5	-.041	14	-11.765	9	-1.12e-3	10	0	1	-9.186e-4	14
203	N94	max	11.765	14	.136	6	11.765	2	9.8e-4	2	0	16	1.155e-3	6
204		min	-11.765	5	-.041	14	-11.765	9	-1.113e-3	10	0	1	-9.201e-4	14
205	N95	max	11.765	14	.137	6	11.765	2	9.96e-4	2	0	16	1.157e-3	6
206		min	-11.765	5	-.041	14	-11.765	9	-1.105e-3	10	0	1	-9.215e-4	14
207	N96	max	11.765	14	.137	6	11.765	2	1.012e-3	2	0	16	1.158e-3	6
208		min	-11.765	5	-.041	14	-11.765	9	-1.096e-3	10	0	1	-9.227e-4	14
209	N97	max	11.765	14	.137	6	11.765	2	1.029e-3	2	0	16	1.16e-3	6
210		min	-11.765	5	-.042	14	-11.765	9	-1.085e-3	10	0	1	-9.236e-4	14
211	N98	max	11.765	14	.137	6	11.765	2	1.045e-3	2	0	16	1.16e-3	6
212		min	-11.765	5	-.042	14	-11.765	9	-1.073e-3	10	0	1	-9.242e-4	14
213	N99	max	11.765	14	.137	6	11.765	2	1.059e-3	2	0	16	1.161e-3	6
214		min	-11.765	5	-.042	14	-11.765	9	-1.059e-3	10	0	1	-9.244e-4	14
215	N100	max	11.765	14	.137	6	11.765	2	1.073e-3	2	0	16	1.16e-3	6
216		min	-11.765	5	-.042	14	-11.765	9	-1.045e-3	10	0	1	-9.242e-4	14
217	N101	max	11.765	14	.137	6	11.765	2	1.085e-3	2	0	16	1.16e-3	6
218		min	-11.765	5	-.042	14	-11.765	9	-1.029e-3	10	0	1	-9.236e-4	14
219	N102	max	11.765	14	.137	6	11.765	2	1.096e-3	2	0	16	1.158e-3	6
220		min	-11.765	5	-.041	14	-11.765	9	-1.012e-3	10	0	1	-9.227e-4	14
221	N103	max	11.765	14	.137	6	11.765	2	1.105e-3	2	0	16	1.157e-3	6
222		min	-11.765	5	-.041	14	-11.765	9	-9.96e-4	10	0	1	-9.215e-4	14
223	N104	max	11.765	14	.136	6	11.765	2	1.113e-3	2	0	16	1.155e-3	6
224		min	-11.765	5	-.041	14	-11.765	9	-9.8e-4	10	0	1	-9.201e-4	14
225	N105	max	11.765	14	.136	6	11.765	2	1.12e-3	2	0	16	1.152e-3	6
226		min	-11.765	5	-.041	14	-11.765	9	-9.648e-4	10	0	1	-9.186e-4	14
227	N106	max	11.765	14	.136	6	11.765	2	1.126e-3	2	0	16	1.15e-3	6
228		min	-11.765	5	-.04	14	-11.765	9	-9.511e-4	10	0	1	-9.17e-4	14
229	N107	max	11.765	14	.138	4	11.765	2	1.131e-3	2	0	16	1.147e-3	6
230		min	-11.765	5	-.042	12	-11.765	9	-9.393e-4	10	0	1	-9.156e-4	14
231	N108	max	11.765	14	.143	4	11.765	2	1.134e-3	2	0	16	1.145e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
232		min	-11.765	5	-.044	12	-11.765	9	-9.297e-4	10	0	1	-9.143e-4	14
233	N109	max	11.765	14	.148	4	11.765	2	1.137e-3	2	0	16	1.143e-3	6
234		min	-11.765	5	-.047	12	-11.765	9	-9.224e-4	10	0	1	-9.132e-4	14
235	N110	max	11.765	14	.152	4	11.765	2	1.138e-3	2	0	16	1.141e-3	6
236		min	-11.765	5	-.049	12	-11.765	9	-9.174e-4	10	0	1	-9.125e-4	14
237	N111	max	11.765	14	.157	4	11.765	2	1.139e-3	2	0	16	1.14e-3	6
238		min	-11.765	5	-.052	12	-11.765	9	-9.145e-4	10	0	1	-9.122e-4	14
239	N112	max	11.765	14	.162	4	11.765	2	1.139e-3	2	0	16	1.139e-3	6
240		min	-11.765	5	-.055	12	-11.765	9	-9.132e-4	10	0	1	-9.124e-4	14
241	N113	max	11.765	14	.157	4	11.765	2	1.139e-3	2	0	16	1.139e-3	6
242		min	-11.765	5	-.052	12	-11.765	9	-9.126e-4	10	0	1	-9.126e-4	14
243	N114	max	11.765	14	.152	4	11.765	2	1.139e-3	2	0	16	1.14e-3	6
244		min	-11.765	5	-.049	12	-11.765	9	-9.136e-4	10	0	1	-9.124e-4	14
245	N115	max	11.765	14	.148	4	11.765	2	1.138e-3	2	0	16	1.141e-3	6
246		min	-11.765	5	-.046	12	-11.765	9	-9.162e-4	10	0	1	-9.127e-4	14
247	N116	max	11.765	14	.143	4	11.765	2	1.136e-3	2	0	16	1.143e-3	6
248		min	-11.765	5	-.044	12	-11.765	9	-9.209e-4	10	0	1	-9.133e-4	14
249	N117	max	11.765	14	.138	4	11.765	2	1.133e-3	2	0	16	1.145e-3	6
250		min	-11.765	5	-.041	12	-11.765	9	-9.279e-4	10	0	1	-9.143e-4	14
251	N118	max	11.765	14	.134	4	11.765	2	1.129e-3	2	0	16	1.147e-3	6
252		min	-11.765	5	-.038	12	-11.765	9	-9.373e-4	10	0	1	-9.155e-4	14
253	N119	max	11.765	14	.129	6	11.765	2	1.125e-3	2	0	16	1.15e-3	6
254		min	-11.765	5	-.036	12	-11.765	9	-9.49e-4	10	0	1	-9.169e-4	14
255	N120	max	11.765	14	.129	6	11.765	2	1.119e-3	2	0	16	1.152e-3	6
256		min	-11.765	5	-.035	14	-11.765	9	-9.626e-4	10	0	1	-9.183e-4	14
257	N121	max	11.765	14	.129	6	11.765	2	1.112e-3	2	0	16	1.154e-3	6
258		min	-11.765	5	-.035	14	-11.765	9	-9.777e-4	10	0	1	-9.196e-4	14
259	N122	max	11.765	14	.13	6	11.765	2	1.104e-3	2	0	16	1.156e-3	6
260		min	-11.765	5	-.036	14	-11.765	9	-9.937e-4	10	0	1	-9.209e-4	14
261	N123	max	11.765	14	.13	6	11.765	2	1.094e-3	2	0	16	1.158e-3	6
262		min	-11.765	5	-.036	14	-11.765	9	-1.01e-3	10	0	1	-9.221e-4	14
263	N124	max	11.765	14	.13	6	11.765	2	1.083e-3	2	0	16	1.159e-3	6
264		min	-11.765	5	-.036	14	-11.765	9	-1.027e-3	10	0	1	-9.229e-4	14
265	N125	max	11.765	14	.13	6	11.765	2	1.071e-3	2	0	16	1.16e-3	6
266		min	-11.765	5	-.036	14	-11.765	9	-1.042e-3	10	0	1	-9.235e-4	14
267	N126	max	11.765	14	.13	6	11.765	2	1.057e-3	2	0	16	1.16e-3	6
268		min	-11.765	5	-.036	14	-11.765	9	-1.057e-3	10	0	1	-9.237e-4	14
269	N127	max	11.765	14	.13	6	11.765	2	1.042e-3	2	0	16	1.16e-3	6
270		min	-11.765	5	-.036	14	-11.765	9	-1.071e-3	10	0	1	-9.235e-4	14
271	N128	max	11.765	14	.13	6	11.765	2	1.027e-3	2	0	16	1.159e-3	6
272		min	-11.765	5	-.036	14	-11.765	9	-1.083e-3	10	0	1	-9.229e-4	14
273	N129	max	11.765	14	.13	6	11.765	2	1.01e-3	2	0	16	1.158e-3	6
274		min	-11.765	5	-.036	14	-11.765	9	-1.094e-3	10	0	1	-9.221e-4	14
275	N130	max	11.765	14	.13	6	11.765	2	9.937e-4	2	0	16	1.156e-3	6
276		min	-11.765	5	-.036	14	-11.765	9	-1.104e-3	10	0	1	-9.209e-4	14
277	N131	max	11.765	14	.129	6	11.765	2	9.777e-4	2	0	16	1.154e-3	6
278		min	-11.765	5	-.035	14	-11.765	9	-1.112e-3	10	0	1	-9.196e-4	14
279	N132	max	11.765	14	.129	6	11.765	2	9.626e-4	2	0	16	1.152e-3	6
280		min	-11.765	5	-.035	14	-11.765	9	-1.119e-3	10	0	1	-9.183e-4	14
281	N133	max	11.765	14	.129	6	11.765	2	9.49e-4	2	0	16	1.15e-3	6
282		min	-11.765	5	-.036	16	-11.765	9	-1.125e-3	10	0	1	-9.169e-4	14
283	N134	max	11.765	14	.134	8	11.765	2	9.373e-4	2	0	16	1.147e-3	6
284		min	-11.765	5	-.038	16	-11.765	9	-1.129e-3	10	0	1	-9.155e-4	14
285	N135	max	11.765	14	.138	8	11.765	2	9.279e-4	2	0	16	1.145e-3	6
286		min	-11.765	5	-.041	16	-11.765	9	-1.133e-3	10	0	1	-9.143e-4	14
287	N136	max	11.765	14	.143	8	11.765	2	9.209e-4	2	0	16	1.143e-3	6
288		min	-11.765	5	-.044	16	-11.765	9	-1.136e-3	10	0	1	-9.133e-4	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
289	N137	max	11.765	14	.148	8	11.765	2	9.162e-4	2	0	16	1.141e-3	6
290		min	-11.765	5	-.046	16	-11.765	9	-1.138e-3	10	0	1	-9.127e-4	14
291	N138	max	11.765	14	.152	8	11.765	2	9.136e-4	2	0	16	1.14e-3	6
292		min	-11.765	5	-.049	16	-11.765	9	-1.139e-3	10	0	1	-9.124e-4	14
293	N139	max	11.765	14	.157	8	11.765	2	9.126e-4	2	0	16	1.139e-3	6
294		min	-11.765	5	-.052	16	-11.765	9	-1.139e-3	10	0	1	-9.126e-4	14
295	N140	max	11.765	14	.152	4	11.765	2	1.14e-3	2	0	16	1.139e-3	6
296		min	-11.765	5	-.049	12	-11.765	9	-9.124e-4	10	0	1	-9.136e-4	14
297	N141	max	11.765	14	.148	4	11.765	2	1.139e-3	2	0	16	1.139e-3	6
298		min	-11.765	5	-.046	12	-11.765	9	-9.134e-4	10	0	1	-9.134e-4	14
299	N142	max	11.765	14	.143	4	11.765	2	1.138e-3	2	0	16	1.141e-3	6
300		min	-11.765	5	-.044	12	-11.765	9	-9.16e-4	10	0	1	-9.137e-4	14
301	N143	max	11.765	14	.138	4	11.765	2	1.136e-3	2	0	16	1.143e-3	6
302		min	-11.765	5	-.041	12	-11.765	9	-9.205e-4	10	0	1	-9.144e-4	14
303	N144	max	11.765	14	.134	4	11.765	2	1.134e-3	2	0	16	1.145e-3	6
304		min	-11.765	5	-.038	12	-11.765	9	-9.275e-4	10	0	1	-9.153e-4	14
305	N145	max	11.765	14	.129	4	11.765	2	1.13e-3	2	0	16	1.147e-3	6
306		min	-11.765	5	-.035	12	-11.765	9	-9.369e-4	10	0	1	-9.165e-4	14
307	N146	max	11.765	14	.124	4	11.765	2	1.125e-3	2	0	16	1.15e-3	6
308		min	-11.765	5	-.033	12	-11.765	9	-9.487e-4	10	0	1	-9.178e-4	14
309	N147	max	11.765	14	.122	6	11.765	2	1.119e-3	2	0	16	1.152e-3	6
310		min	-11.765	5	-.03	11	-11.765	9	-9.625e-4	10	0	1	-9.192e-4	14
311	N148	max	11.765	14	.123	6	11.765	2	1.112e-3	2	0	16	1.154e-3	6
312		min	-11.765	5	-.03	13	-11.765	9	-9.778e-4	10	0	1	-9.205e-4	14
313	N149	max	11.765	14	.123	6	11.765	2	1.104e-3	2	0	16	1.156e-3	6
314		min	-11.765	5	-.031	13	-11.765	9	-9.94e-4	10	0	1	-9.218e-4	14
315	N150	max	11.765	14	.123	6	11.765	2	1.095e-3	2	0	16	1.158e-3	6
316		min	-11.765	5	-.031	13	-11.765	9	-1.011e-3	10	0	1	-9.229e-4	14
317	N151	max	11.765	14	.123	6	11.765	2	1.084e-3	2	0	16	1.159e-3	6
318		min	-11.765	5	-.031	13	-11.765	9	-1.027e-3	10	0	1	-9.238e-4	14
319	N152	max	11.765	14	.123	6	11.765	2	1.072e-3	2	0	16	1.16e-3	6
320		min	-11.765	5	-.031	13	-11.765	9	-1.043e-3	10	0	1	-9.244e-4	14
321	N153	max	11.765	14	.123	6	11.765	2	1.058e-3	2	0	16	1.16e-3	6
322		min	-11.765	5	-.031	13	-11.765	9	-1.058e-3	10	0	1	-9.246e-4	14
323	N154	max	11.765	14	.123	6	11.765	2	1.043e-3	2	0	16	1.16e-3	6
324		min	-11.765	5	-.031	13	-11.765	9	-1.072e-3	10	0	1	-9.244e-4	14
325	N155	max	11.765	14	.123	6	11.765	2	1.027e-3	2	0	16	1.159e-3	6
326		min	-11.765	5	-.031	13	-11.765	9	-1.084e-3	10	0	1	-9.238e-4	14
327	N156	max	11.765	14	.123	6	11.765	2	1.011e-3	2	0	16	1.158e-3	6
328		min	-11.765	5	-.031	13	-11.765	9	-1.095e-3	10	0	1	-9.229e-4	14
329	N157	max	11.765	14	.123	6	11.765	2	9.94e-4	2	0	16	1.156e-3	6
330		min	-11.765	5	-.031	13	-11.765	9	-1.104e-3	10	0	1	-9.218e-4	14
331	N158	max	11.765	14	.123	6	11.765	2	9.778e-4	2	0	16	1.154e-3	6
332		min	-11.765	5	-.03	13	-11.765	9	-1.112e-3	10	0	1	-9.205e-4	14
333	N159	max	11.765	14	.122	6	11.765	2	9.625e-4	2	0	16	1.152e-3	6
334		min	-11.765	5	-.03	15	-11.765	9	-1.119e-3	10	0	1	-9.192e-4	14
335	N160	max	11.765	14	.124	8	11.765	2	9.487e-4	2	0	16	1.15e-3	6
336		min	-11.765	5	-.033	16	-11.765	9	-1.125e-3	10	0	1	-9.178e-4	14
337	N161	max	11.765	14	.129	8	11.765	2	9.369e-4	2	0	16	1.147e-3	6
338		min	-11.765	5	-.035	16	-11.765	9	-1.13e-3	10	0	1	-9.165e-4	14
339	N162	max	11.765	14	.134	8	11.765	2	9.275e-4	2	0	16	1.145e-3	6
340		min	-11.765	5	-.038	16	-11.765	9	-1.134e-3	10	0	1	-9.153e-4	14
341	N163	max	11.765	14	.138	8	11.765	2	9.205e-4	2	0	16	1.143e-3	6
342		min	-11.765	5	-.041	16	-11.765	9	-1.136e-3	10	0	1	-9.144e-4	14
343	N164	max	11.765	14	.143	8	11.765	2	9.16e-4	2	0	16	1.141e-3	6
344		min	-11.765	5	-.044	16	-11.765	9	-1.138e-3	10	0	1	-9.137e-4	14
345	N165	max	11.765	14	.148	8	11.765	2	9.134e-4	2	0	16	1.139e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
346		min	-11.765	5	-.046	16	-11.765	9	-1.139e-3	10	0	1	-9.134e-4	14
347	N166	max	11.765	14	.152	8	11.765	2	9.124e-4	2	0	16	1.139e-3	6
348		min	-11.765	5	-.049	16	-11.765	9	-1.14e-3	10	0	1	-9.136e-4	14
349	N167	max	11.765	14	.148	4	11.765	2	1.141e-3	2	0	16	1.138e-3	6
350		min	-11.765	5	-.046	12	-11.765	9	-9.127e-4	10	0	1	-9.162e-4	14
351	N168	max	11.765	14	.143	4	11.765	2	1.141e-3	2	0	16	1.138e-3	6
352		min	-11.765	5	-.044	12	-11.765	9	-9.137e-4	10	0	1	-9.16e-4	14
353	N169	max	11.765	14	.138	4	11.765	2	1.14e-3	2	0	16	1.14e-3	6
354		min	-11.765	5	-.041	12	-11.765	9	-9.163e-4	10	0	1	-9.163e-4	14
355	N170	max	11.765	14	.134	4	11.765	2	1.138e-3	2	0	16	1.142e-3	6
356		min	-11.765	5	-.038	12	-11.765	9	-9.209e-4	10	0	1	-9.17e-4	14
357	N171	max	11.765	14	.129	4	11.765	2	1.135e-3	2	0	16	1.144e-3	6
358		min	-11.765	5	-.035	12	-11.765	9	-9.281e-4	10	0	1	-9.181e-4	14
359	N172	max	11.765	14	.124	4	11.765	2	1.132e-3	2	0	16	1.147e-3	6
360		min	-11.765	5	-.033	12	-11.765	9	-9.377e-4	10	0	1	-9.193e-4	14
361	N173	max	11.765	14	.12	4	11.765	2	1.127e-3	2	0	16	1.15e-3	6
362		min	-11.765	5	-.03	11	-11.765	9	-9.498e-4	10	0	1	-9.208e-4	14
363	N174	max	11.765	14	.115	6	11.765	2	1.121e-3	2	0	16	1.152e-3	6
364		min	-11.765	5	-.027	11	-11.765	9	-9.639e-4	10	0	1	-9.223e-4	14
365	N175	max	11.765	14	.116	6	11.765	2	1.114e-3	2	0	16	1.154e-3	6
366		min	-11.765	5	-.025	13	-11.765	9	-9.795e-4	10	0	1	-9.238e-4	14
367	N176	max	11.765	14	.116	6	11.765	2	1.107e-3	2	0	16	1.156e-3	6
368		min	-11.765	5	-.026	13	-11.765	9	-9.961e-4	10	0	1	-9.253e-4	14
369	N177	max	11.765	14	.116	6	11.765	2	1.098e-3	2	0	16	1.158e-3	6
370		min	-11.765	5	-.026	13	-11.765	9	-1.013e-3	10	0	1	-9.267e-4	14
371	N178	max	11.765	14	.116	6	11.765	2	1.087e-3	2	0	16	1.16e-3	6
372		min	-11.765	5	-.026	13	-11.765	9	-1.03e-3	10	0	1	-9.278e-4	14
373	N179	max	11.765	14	.116	6	11.765	2	1.075e-3	2	0	16	1.161e-3	6
374		min	-11.765	5	-.026	13	-11.765	9	-1.046e-3	10	0	1	-9.285e-4	14
375	N180	max	11.765	14	.116	6	11.765	2	1.061e-3	2	0	16	1.161e-3	6
376		min	-11.765	5	-.026	13	-11.765	9	-1.061e-3	10	0	1	-9.287e-4	14
377	N181	max	11.765	14	.116	6	11.765	2	1.046e-3	2	0	16	1.161e-3	6
378		min	-11.765	5	-.026	13	-11.765	9	-1.075e-3	10	0	1	-9.285e-4	14
379	N182	max	11.765	14	.116	6	11.765	2	1.03e-3	2	0	16	1.16e-3	6
380		min	-11.765	5	-.026	13	-11.765	9	-1.087e-3	10	0	1	-9.278e-4	14
381	N183	max	11.765	14	.116	6	11.765	2	1.013e-3	2	0	16	1.158e-3	6
382		min	-11.765	5	-.026	13	-11.765	9	-1.098e-3	10	0	1	-9.267e-4	14
383	N184	max	11.765	14	.116	6	11.765	2	9.961e-4	2	0	16	1.156e-3	6
384		min	-11.765	5	-.026	13	-11.765	9	-1.107e-3	10	0	1	-9.253e-4	14
385	N185	max	11.765	14	.116	6	11.765	2	9.795e-4	2	0	16	1.154e-3	6
386		min	-11.765	5	-.025	13	-11.765	9	-1.114e-3	10	0	1	-9.238e-4	14
387	N186	max	11.765	14	.115	6	11.765	2	9.639e-4	2	0	16	1.152e-3	6
388		min	-11.765	5	-.027	15	-11.765	9	-1.121e-3	10	0	1	-9.223e-4	14
389	N187	max	11.765	14	.12	8	11.765	2	9.498e-4	2	0	16	1.15e-3	6
390		min	-11.765	5	-.03	15	-11.765	9	-1.127e-3	10	0	1	-9.208e-4	14
391	N188	max	11.765	14	.124	8	11.765	2	9.377e-4	2	0	16	1.147e-3	6
392		min	-11.765	5	-.033	16	-11.765	9	-1.132e-3	10	0	1	-9.193e-4	14
393	N189	max	11.765	14	.129	8	11.765	2	9.281e-4	2	0	16	1.144e-3	6
394		min	-11.765	5	-.035	16	-11.765	9	-1.135e-3	10	0	1	-9.181e-4	14
395	N190	max	11.765	14	.134	8	11.765	2	9.209e-4	2	0	16	1.142e-3	6
396		min	-11.765	5	-.038	16	-11.765	9	-1.138e-3	10	0	1	-9.17e-4	14
397	N191	max	11.765	14	.138	8	11.765	2	9.163e-4	2	0	16	1.14e-3	6
398		min	-11.765	5	-.041	16	-11.765	9	-1.14e-3	10	0	1	-9.163e-4	14
399	N192	max	11.765	14	.143	8	11.765	2	9.137e-4	2	0	16	1.138e-3	6
400		min	-11.765	5	-.044	16	-11.765	9	-1.141e-3	10	0	1	-9.16e-4	14
401	N193	max	11.765	14	.148	8	11.765	2	9.127e-4	2	0	16	1.138e-3	6
402		min	-11.765	5	-.046	16	-11.765	9	-1.141e-3	10	0	1	-9.162e-4	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
403	N194	max	11.765	14	.143	4	11.765	2	1.143e-3	2	0	16	1.136e-3	6
404		min	-11.765	5	-.044	12	-11.765	9	-9.133e-4	10	0	1	-9.209e-4	14
405	N195	max	11.765	14	.138	4	11.765	2	1.143e-3	2	0	16	1.136e-3	6
406		min	-11.765	5	-.041	12	-11.765	9	-9.144e-4	10	0	1	-9.205e-4	14
407	N196	max	11.765	14	.134	4	11.765	2	1.142e-3	2	0	16	1.138e-3	6
408		min	-11.765	5	-.038	12	-11.765	9	-9.17e-4	10	0	1	-9.209e-4	14
409	N197	max	11.765	14	.129	4	11.765	2	1.14e-3	2	0	16	1.14e-3	6
410		min	-11.765	5	-.035	12	-11.765	9	-9.218e-4	10	0	1	-9.218e-4	14
411	N198	max	11.765	14	.124	4	11.765	2	1.138e-3	2	0	16	1.143e-3	6
412		min	-11.765	5	-.032	12	-11.765	9	-9.292e-4	10	0	1	-9.231e-4	14
413	N199	max	11.765	14	.12	4	11.765	2	1.134e-3	2	0	16	1.146e-3	6
414		min	-11.765	5	-.03	11	-11.765	9	-9.392e-4	10	0	1	-9.247e-4	14
415	N200	max	11.765	14	.115	4	11.765	2	1.13e-3	2	0	16	1.149e-3	6
416		min	-11.765	5	-.027	11	-11.765	9	-9.518e-4	10	0	1	-9.264e-4	14
417	N201	max	11.765	14	.11	4	11.765	2	1.124e-3	2	0	16	1.152e-3	6
418		min	-11.765	5	-.025	11	-11.765	9	-9.664e-4	10	0	1	-9.284e-4	14
419	N202	max	11.765	14	.109	6	11.765	2	1.118e-3	2	0	16	1.155e-3	6
420		min	-11.765	5	-.022	11	-11.765	9	-9.826e-4	10	0	1	-9.305e-4	14
421	N203	max	11.765	14	.109	6	11.765	2	1.111e-3	2	0	16	1.157e-3	6
422		min	-11.765	5	-.021	13	-11.765	9	-9.998e-4	10	0	1	-9.326e-4	14
423	N204	max	11.765	14	.109	6	11.765	2	1.102e-3	2	0	16	1.16e-3	6
424		min	-11.765	5	-.021	13	-11.765	9	-1.017e-3	10	0	1	-9.345e-4	14
425	N205	max	11.765	14	.109	6	11.765	2	1.092e-3	2	0	16	1.162e-3	6
426		min	-11.765	5	-.021	13	-11.765	9	-1.034e-3	10	0	1	-9.361e-4	14
427	N206	max	11.765	14	.109	6	11.765	2	1.08e-3	2	0	16	1.164e-3	6
428		min	-11.765	5	-.021	13	-11.765	9	-1.051e-3	10	0	1	-9.371e-4	14
429	N207	max	11.765	14	.109	6	11.765	2	1.066e-3	2	0	16	1.164e-3	6
430		min	-11.765	5	-.021	13	-11.765	9	-1.066e-3	10	0	1	-9.375e-4	14
431	N208	max	11.765	14	.109	6	11.765	2	1.051e-3	2	0	16	1.164e-3	6
432		min	-11.765	5	-.021	13	-11.765	9	-1.08e-3	10	0	1	-9.371e-4	14
433	N209	max	11.765	14	.109	6	11.765	2	1.034e-3	2	0	16	1.162e-3	6
434		min	-11.765	5	-.021	13	-11.765	9	-1.092e-3	10	0	1	-9.361e-4	14
435	N210	max	11.765	14	.109	6	11.765	2	1.017e-3	2	0	16	1.16e-3	6
436		min	-11.765	5	-.021	13	-11.765	9	-1.102e-3	10	0	1	-9.345e-4	14
437	N211	max	11.765	14	.109	6	11.765	2	9.998e-4	2	0	16	1.157e-3	6
438		min	-11.765	5	-.021	13	-11.765	9	-1.111e-3	10	0	1	-9.326e-4	14
439	N212	max	11.765	14	.109	6	11.765	2	9.826e-4	2	0	16	1.155e-3	6
440		min	-11.765	5	-.022	15	-11.765	9	-1.118e-3	10	0	1	-9.305e-4	14
441	N213	max	11.765	14	.11	8	11.765	2	9.664e-4	2	0	16	1.152e-3	6
442		min	-11.765	5	-.025	15	-11.765	9	-1.124e-3	10	0	1	-9.284e-4	14
443	N214	max	11.765	14	.115	8	11.765	2	9.518e-4	2	0	16	1.149e-3	6
444		min	-11.765	5	-.027	15	-11.765	9	-1.13e-3	10	0	1	-9.264e-4	14
445	N215	max	11.765	14	.12	8	11.765	2	9.392e-4	2	0	16	1.146e-3	6
446		min	-11.765	5	-.03	15	-11.765	9	-1.134e-3	10	0	1	-9.247e-4	14
447	N216	max	11.765	14	.124	8	11.765	2	9.292e-4	2	0	16	1.143e-3	6
448		min	-11.765	5	-.032	16	-11.765	9	-1.138e-3	10	0	1	-9.231e-4	14
449	N217	max	11.765	14	.129	8	11.765	2	9.218e-4	2	0	16	1.14e-3	6
450		min	-11.765	5	-.035	16	-11.765	9	-1.14e-3	10	0	1	-9.218e-4	14
451	N218	max	11.765	14	.134	8	11.765	2	9.17e-4	2	0	16	1.138e-3	6
452		min	-11.765	5	-.038	16	-11.765	9	-1.142e-3	10	0	1	-9.209e-4	14
453	N219	max	11.765	14	.138	8	11.765	2	9.144e-4	2	0	16	1.136e-3	6
454		min	-11.765	5	-.041	16	-11.765	9	-1.143e-3	10	0	1	-9.205e-4	14
455	N220	max	11.765	14	.143	8	11.765	2	9.133e-4	2	0	16	1.136e-3	6
456		min	-11.765	5	-.044	16	-11.765	9	-1.143e-3	10	0	1	-9.209e-4	14
457	N221	max	11.765	14	.138	4	11.765	2	1.145e-3	2	0	16	1.133e-3	6
458		min	-11.765	5	-.041	12	-11.765	9	-9.143e-4	10	0	1	-9.279e-4	14
459	N222	max	11.765	14	.134	4	11.765	2	1.145e-3	2	0	16	1.134e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
460		min	-11.765	5	-.038	12	-11.765	9	-9.153e-4	10	0	1	-9.275e-4	14
461	N223	max	11.765	14	.129	4	11.765	2	1.144e-3	2	0	16	1.135e-3	6
462		min	-11.765	5	-.035	12	-11.765	9	-9.181e-4	10	0	1	-9.281e-4	14
463	N224	max	11.765	14	.124	4	11.765	2	1.143e-3	2	0	16	1.138e-3	6
464		min	-11.765	5	-.032	12	-11.765	9	-9.231e-4	10	0	1	-9.292e-4	14
465	N225	max	11.765	14	.12	4	11.765	2	1.141e-3	2	0	16	1.141e-3	6
466		min	-11.765	5	-.03	11	-11.765	9	-9.308e-4	10	0	1	-9.308e-4	14
467	N226	max	11.765	14	.115	4	11.765	2	1.138e-3	2	0	16	1.145e-3	6
468		min	-11.765	5	-.027	11	-11.765	9	-9.414e-4	10	0	1	-9.329e-4	14
469	N227	max	11.765	14	.11	4	11.765	2	1.133e-3	2	0	16	1.149e-3	6
470		min	-11.765	5	-.024	11	-11.765	9	-9.546e-4	10	0	1	-9.353e-4	14
471	N228	max	11.765	14	.106	4	11.765	2	1.128e-3	2	0	16	1.152e-3	6
472		min	-11.765	5	-.022	11	-11.765	9	-9.7e-4	10	0	1	-9.381e-4	14
473	N229	max	11.765	14	.102	6	11.765	2	1.122e-3	2	0	16	1.155e-3	6
474		min	-11.765	5	-.019	11	-11.765	9	-9.871e-4	10	0	1	-9.411e-4	14
475	N230	max	11.765	14	.102	6	11.765	2	1.116e-3	2	0	16	1.159e-3	6
476		min	-11.765	5	-.016	11	-11.765	9	-1.005e-3	10	0	1	-9.443e-4	14
477	N231	max	11.765	14	.102	6	11.765	2	1.109e-3	2	0	16	1.163e-3	6
478		min	-11.765	5	-.016	13	-11.765	9	-1.023e-3	10	0	1	-9.474e-4	14
479	N232	max	11.765	14	.102	6	11.765	2	1.099e-3	2	0	16	1.166e-3	6
480		min	-11.765	5	-.016	13	-11.765	9	-1.041e-3	10	0	1	-9.5e-4	14
481	N233	max	11.765	14	.103	6	11.765	2	1.088e-3	2	0	16	1.169e-3	6
482		min	-11.765	5	-.016	13	-11.765	9	-1.058e-3	10	0	1	-9.518e-4	14
483	N234	max	11.765	14	.103	6	11.765	2	1.074e-3	2	0	16	1.17e-3	6
484		min	-11.765	5	-.016	13	-11.765	9	-1.074e-3	10	0	1	-9.524e-4	14
485	N235	max	11.765	14	.103	6	11.765	2	1.058e-3	2	0	16	1.169e-3	6
486		min	-11.765	5	-.016	13	-11.765	9	-1.088e-3	10	0	1	-9.518e-4	14
487	N236	max	11.765	14	.102	6	11.765	2	1.041e-3	2	0	16	1.166e-3	6
488		min	-11.765	5	-.016	13	-11.765	9	-1.099e-3	10	0	1	-9.5e-4	14
489	N237	max	11.765	14	.102	6	11.765	2	1.023e-3	2	0	16	1.163e-3	6
490		min	-11.765	5	-.016	13	-11.765	9	-1.109e-3	10	0	1	-9.474e-4	14
491	N238	max	11.765	14	.102	6	11.765	2	1.005e-3	2	0	16	1.159e-3	6
492		min	-11.765	5	-.016	15	-11.765	9	-1.116e-3	10	0	1	-9.443e-4	14
493	N239	max	11.765	14	.102	6	11.765	2	9.871e-4	2	0	16	1.155e-3	6
494		min	-11.765	5	-.019	15	-11.765	9	-1.122e-3	10	0	1	-9.411e-4	14
495	N240	max	11.765	14	.106	8	11.765	2	9.7e-4	2	0	16	1.152e-3	6
496		min	-11.765	5	-.022	15	-11.765	9	-1.128e-3	10	0	1	-9.381e-4	14
497	N241	max	11.765	14	.11	8	11.765	2	9.546e-4	2	0	16	1.149e-3	6
498		min	-11.765	5	-.024	15	-11.765	9	-1.133e-3	10	0	1	-9.353e-4	14
499	N242	max	11.765	14	.115	8	11.765	2	9.414e-4	2	0	16	1.145e-3	6
500		min	-11.765	5	-.027	15	-11.765	9	-1.138e-3	10	0	1	-9.329e-4	14
501	N243	max	11.765	14	.12	8	11.765	2	9.308e-4	2	0	16	1.141e-3	6
502		min	-11.765	5	-.03	15	-11.765	9	-1.141e-3	10	0	1	-9.308e-4	14
503	N244	max	11.765	14	.124	8	11.765	2	9.231e-4	2	0	16	1.138e-3	6
504		min	-11.765	5	-.032	16	-11.765	9	-1.143e-3	10	0	1	-9.292e-4	14
505	N245	max	11.765	14	.129	8	11.765	2	9.181e-4	2	0	16	1.135e-3	6
506		min	-11.765	5	-.035	16	-11.765	9	-1.144e-3	10	0	1	-9.281e-4	14
507	N246	max	11.765	14	.134	8	11.765	2	9.153e-4	2	0	16	1.134e-3	6
508		min	-11.765	5	-.038	16	-11.765	9	-1.145e-3	10	0	1	-9.275e-4	14
509	N247	max	11.765	14	.138	8	11.765	2	9.143e-4	2	0	16	1.133e-3	6
510		min	-11.765	5	-.041	16	-11.765	9	-1.145e-3	10	0	1	-9.279e-4	14
511	N248	max	11.765	14	.134	4	11.765	2	1.147e-3	2	0	16	1.129e-3	6
512		min	-11.765	5	-.038	12	-11.765	9	-9.155e-4	10	0	1	-9.373e-4	14
513	N249	max	11.765	14	.129	4	11.765	2	1.147e-3	2	0	16	1.13e-3	6
514		min	-11.765	5	-.035	12	-11.765	9	-9.165e-4	10	0	1	-9.369e-4	14
515	N250	max	11.765	14	.124	4	11.765	2	1.147e-3	2	0	16	1.132e-3	6
516		min	-11.765	5	-.033	12	-11.765	9	-9.193e-4	10	0	1	-9.377e-4	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
517	N251	max	11.765	14	.12	4	11.765	2	1.146e-3	2	0	16	1.134e-3	6
518		min	-11.765	5	-.03	11	-11.765	9	-9.247e-4	10	0	1	-9.392e-4	14
519	N252	max	11.765	14	.115	4	11.765	2	1.145e-3	2	0	16	1.138e-3	6
520		min	-11.765	5	-.027	11	-11.765	9	-9.329e-4	10	0	1	-9.414e-4	14
521	N253	max	11.765	14	.11	4	11.765	2	1.142e-3	2	0	16	1.142e-3	6
522		min	-11.765	5	-.024	11	-11.765	9	-9.442e-4	10	0	1	-9.442e-4	14
523	N254	max	11.765	14	.105	4	11.765	2	1.138e-3	2	0	16	1.148e-3	6
524		min	-11.765	5	-.022	11	-11.765	9	-9.583e-4	10	0	1	-9.475e-4	14
525	N255	max	11.765	14	.101	4	11.765	2	1.133e-3	2	0	16	1.152e-3	6
526		min	-11.765	5	-.019	11	-11.765	9	-9.749e-4	10	0	1	-9.516e-4	14
527	N256	max	11.765	14	.096	4	11.765	2	1.128e-3	2	0	16	1.156e-3	6
528		min	-11.765	5	-.016	11	-11.765	9	-9.931e-4	10	0	1	-9.563e-4	14
529	N257	max	11.765	14	.095	6	11.765	2	1.123e-3	2	0	16	1.162e-3	6
530		min	-11.765	5	-.013	11	-11.765	9	-1.012e-3	10	0	1	-9.613e-4	14
531	N258	max	11.765	14	.096	6	11.765	2	1.117e-3	2	0	16	1.167e-3	6
532		min	-11.765	5	-.011	13	-11.765	9	-1.031e-3	10	0	1	-9.664e-4	14
533	N259	max	11.765	14	.096	6	11.765	2	1.109e-3	2	0	16	1.173e-3	6
534		min	-11.765	5	-.011	13	-11.765	9	-1.05e-3	10	0	1	-9.709e-4	14
535	N260	max	11.765	14	.096	6	11.765	2	1.098e-3	2	0	16	1.177e-3	6
536		min	-11.765	5	-.012	13	-11.765	9	-1.067e-3	10	0	1	-9.739e-4	14
537	N261	max	11.765	14	.096	6	11.765	2	1.084e-3	2	0	16	1.179e-3	6
538		min	-11.765	5	-.012	13	-11.765	9	-1.084e-3	10	0	1	-9.75e-4	14
539	N262	max	11.765	14	.096	6	11.765	2	1.067e-3	2	0	16	1.177e-3	6
540		min	-11.765	5	-.012	13	-11.765	9	-1.098e-3	10	0	1	-9.739e-4	14
541	N263	max	11.765	14	.096	6	11.765	2	1.05e-3	2	0	16	1.173e-3	6
542		min	-11.765	5	-.011	13	-11.765	9	-1.109e-3	10	0	1	-9.709e-4	14
543	N264	max	11.765	14	.096	6	11.765	2	1.031e-3	2	0	16	1.167e-3	6
544		min	-11.765	5	-.011	13	-11.765	9	-1.117e-3	10	0	1	-9.664e-4	14
545	N265	max	11.765	14	.095	6	11.765	2	1.012e-3	2	0	16	1.162e-3	6
546		min	-11.765	5	-.013	15	-11.765	9	-1.123e-3	10	0	1	-9.613e-4	14
547	N266	max	11.765	14	.096	8	11.765	2	9.931e-4	2	0	16	1.156e-3	6
548		min	-11.765	5	-.016	15	-11.765	9	-1.128e-3	10	0	1	-9.563e-4	14
549	N267	max	11.765	14	.101	8	11.765	2	9.749e-4	2	0	16	1.152e-3	6
550		min	-11.765	5	-.019	15	-11.765	9	-1.133e-3	10	0	1	-9.516e-4	14
551	N268	max	11.765	14	.105	8	11.765	2	9.583e-4	2	0	16	1.148e-3	6
552		min	-11.765	5	-.022	15	-11.765	9	-1.138e-3	10	0	1	-9.475e-4	14
553	N269	max	11.765	14	.11	8	11.765	2	9.442e-4	2	0	16	1.142e-3	6
554		min	-11.765	5	-.024	15	-11.765	9	-1.142e-3	10	0	1	-9.442e-4	14
555	N270	max	11.765	14	.115	8	11.765	2	9.329e-4	2	0	16	1.138e-3	6
556		min	-11.765	5	-.027	15	-11.765	9	-1.145e-3	10	0	1	-9.414e-4	14
557	N271	max	11.765	14	.12	8	11.765	2	9.247e-4	2	0	16	1.134e-3	6
558		min	-11.765	5	-.03	15	-11.765	9	-1.146e-3	10	0	1	-9.392e-4	14
559	N272	max	11.765	14	.124	8	11.765	2	9.193e-4	2	0	16	1.132e-3	6
560		min	-11.765	5	-.033	16	-11.765	9	-1.147e-3	10	0	1	-9.377e-4	14
561	N273	max	11.765	14	.129	8	11.765	2	9.165e-4	2	0	16	1.13e-3	6
562		min	-11.765	5	-.035	16	-11.765	9	-1.147e-3	10	0	1	-9.369e-4	14
563	N274	max	11.765	14	.134	8	11.765	2	9.155e-4	2	0	16	1.129e-3	6
564		min	-11.765	5	-.038	16	-11.765	9	-1.147e-3	10	0	1	-9.373e-4	14
565	N275	max	11.765	14	.129	2	11.765	2	1.15e-3	2	0	16	1.125e-3	6
566		min	-11.765	5	-.036	12	-11.765	9	-9.169e-4	10	0	1	-9.49e-4	14
567	N276	max	11.765	14	.124	4	11.765	2	1.15e-3	2	0	16	1.125e-3	6
568		min	-11.765	5	-.033	12	-11.765	9	-9.178e-4	10	0	1	-9.487e-4	14
569	N277	max	11.765	14	.12	4	11.765	2	1.15e-3	2	0	16	1.127e-3	6
570		min	-11.765	5	-.03	11	-11.765	9	-9.208e-4	10	0	1	-9.498e-4	14
571	N278	max	11.765	14	.115	4	11.765	2	1.149e-3	2	0	16	1.13e-3	6
572		min	-11.765	5	-.027	11	-11.765	9	-9.264e-4	10	0	1	-9.518e-4	14
573	N279	max	11.765	14	.11	4	11.765	2	1.149e-3	2	0	16	1.133e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
574		min	-11.765	5	-.024	11	-11.765	9	-9.353e-4	10	0	1	-9.546e-4	14
575	N280	max	11.765	14	.105	4	11.765	2	1.148e-3	2	0	16	1.138e-3	6
576		min	-11.765	5	-.022	11	-11.765	9	-9.475e-4	10	0	1	-9.583e-4	14
577	N282	max	11.765	14	.096	4	11.765	2	1.139e-3	2	0	16	1.15e-3	6
578		min	-11.765	5	-.016	11	-11.765	9	-9.812e-4	10	0	1	-9.689e-4	14
579	N283	max	11.765	14	.092	4	11.765	2	1.137e-3	2	0	16	1.158e-3	6
580		min	-11.765	5	-.013	11	-11.765	9	-1.001e-3	10	0	1	-9.759e-4	14
581	N284	max	11.765	14	.089	6	11.765	2	1.134e-3	2	0	16	1.166e-3	6
582		min	-11.765	5	-.01	11	-11.765	9	-1.022e-3	10	0	1	-9.84e-4	14
583	N285	max	11.765	14	.089	6	11.765	2	1.129e-3	2	0	16	1.175e-3	6
584		min	-11.765	5	-.007	11	-11.765	9	-1.043e-3	10	0	1	-9.924e-4	14
585	N286	max	11.765	14	.089	6	11.765	2	1.122e-3	2	0	16	1.183e-3	6
586		min	-11.765	5	-.006	13	-11.765	9	-1.062e-3	10	0	1	-1.e-3	14
587	N287	max	11.765	14	.089	6	11.765	2	1.112e-3	2	0	16	1.189e-3	6
588		min	-11.765	5	-.007	13	-11.765	9	-1.08e-3	10	0	1	-1.005e-3	14
589	N289	max	11.765	14	.089	6	11.765	2	1.08e-3	2	0	16	1.189e-3	6
590		min	-11.765	5	-.007	13	-11.765	9	-1.112e-3	10	0	1	-1.005e-3	14
591	N290	max	11.765	14	.089	6	11.765	2	1.062e-3	2	0	16	1.183e-3	6
592		min	-11.765	5	-.006	13	-11.765	9	-1.122e-3	10	0	1	-1.e-3	14
593	N291	max	11.765	14	.089	6	11.765	2	1.043e-3	2	0	16	1.175e-3	6
594		min	-11.765	5	-.007	15	-11.765	9	-1.129e-3	10	0	1	-9.924e-4	14
595	N292	max	11.765	14	.089	6	11.765	2	1.022e-3	2	0	16	1.166e-3	6
596		min	-11.765	5	-.01	15	-11.765	9	-1.134e-3	10	0	1	-9.84e-4	14
597	N293	max	11.765	14	.092	8	11.765	2	1.001e-3	2	0	16	1.158e-3	6
598		min	-11.765	5	-.013	15	-11.765	9	-1.137e-3	10	0	1	-9.759e-4	14
599	N294	max	11.765	14	.096	8	11.765	2	9.812e-4	2	0	16	1.15e-3	6
600		min	-11.765	5	-.016	15	-11.765	9	-1.139e-3	10	0	1	-9.689e-4	14
601	N296	max	11.765	14	.105	8	11.765	2	9.475e-4	2	0	16	1.138e-3	6
602		min	-11.765	5	-.022	15	-11.765	9	-1.148e-3	10	0	1	-9.583e-4	14
603	N297	max	11.765	14	.11	8	11.765	2	9.353e-4	2	0	16	1.133e-3	6
604		min	-11.765	5	-.024	15	-11.765	9	-1.149e-3	10	0	1	-9.546e-4	14
605	N298	max	11.765	14	.115	8	11.765	2	9.264e-4	2	0	16	1.13e-3	6
606		min	-11.765	5	-.027	15	-11.765	9	-1.149e-3	10	0	1	-9.518e-4	14
607	N299	max	11.765	14	.12	8	11.765	2	9.208e-4	2	0	16	1.127e-3	6
608		min	-11.765	5	-.03	15	-11.765	9	-1.15e-3	10	0	1	-9.498e-4	14
609	N300	max	11.765	14	.124	8	11.765	2	9.178e-4	2	0	16	1.125e-3	6
610		min	-11.765	5	-.033	16	-11.765	9	-1.15e-3	10	0	1	-9.487e-4	14
611	N301	max	11.765	14	.129	10	11.765	2	9.169e-4	2	0	16	1.125e-3	6
612		min	-11.765	5	-.036	16	-11.765	9	-1.15e-3	10	0	1	-9.49e-4	14
613	N302	max	11.765	14	.129	2	11.765	2	1.152e-3	2	0	16	1.119e-3	6
614		min	-11.765	5	-.035	10	-11.765	9	-9.183e-4	10	0	1	-9.626e-4	14
615	N303	max	11.765	14	.122	2	11.765	2	1.152e-3	2	0	16	1.119e-3	6
616		min	-11.765	5	-.03	11	-11.765	9	-9.192e-4	10	0	1	-9.625e-4	14
617	N304	max	11.765	14	.115	2	11.765	2	1.152e-3	2	0	16	1.121e-3	6
618		min	-11.765	5	-.027	11	-11.765	9	-9.223e-4	10	0	1	-9.639e-4	14
619	N305	max	11.765	14	.11	4	11.765	2	1.152e-3	2	0	16	1.124e-3	6
620		min	-11.765	5	-.025	11	-11.765	9	-9.284e-4	10	0	1	-9.664e-4	14
621	N306	max	11.765	14	.106	4	11.765	2	1.152e-3	2	0	16	1.128e-3	6
622		min	-11.765	5	-.022	11	-11.765	9	-9.381e-4	10	0	1	-9.7e-4	14
623	N307	max	11.765	14	.101	4	11.765	2	1.152e-3	2	0	16	1.133e-3	6
624		min	-11.765	5	-.019	11	-11.765	9	-9.516e-4	10	0	1	-9.749e-4	14
625	N308	max	11.765	14	.096	4	11.765	2	1.15e-3	2	0	16	1.139e-3	6
626		min	-11.765	5	-.016	11	-11.765	9	-9.689e-4	10	0	1	-9.812e-4	14
627	N309	max	11.765	14	.092	4	11.765	2	1.149e-3	2	0	16	1.149e-3	6
628		min	-11.765	5	-.013	11	-11.765	9	-9.894e-4	10	0	1	-9.894e-4	14
629	N310	max	11.765	14	.088	4	11.765	2	1.148e-3	2	0	16	1.16e-3	6
630		min	-11.765	5	-.01	11	-11.765	9	-1.012e-3	10	0	1	-9.997e-4	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
631	N311	max	11.765	14	.083	4	11.765	2	1.148e-3	2	0	16	1.174e-3	6
632		min	-11.765	5	-.007	11	-11.765	9	-1.036e-3	10	0	1	-1.012e-3	14
633	N312	max	11.765	14	.082	6	11.765	2	1.145e-3	2	0	16	1.188e-3	6
634		min	-11.765	5	-.004	11	-11.765	9	-1.059e-3	10	0	1	-1.026e-3	14
635	N313	max	11.765	14	.082	6	11.765	2	1.14e-3	2	0	16	1.201e-3	6
636		min	-11.765	5	-.001	13	-11.765	9	-1.08e-3	10	0	1	-1.039e-3	14
637	N314	max	11.765	14	.082	6	11.765	2	1.13e-3	2	0	16	1.21e-3	6
638		min	-11.765	5	-.002	13	-11.765	9	-1.099e-3	10	0	1	-1.049e-3	14
639	N315	max	11.765	14	.082	6	11.765	2	1.116e-3	2	0	16	1.213e-3	6
640		min	-11.765	5	-.002	13	-11.765	9	-1.116e-3	10	0	1	-1.052e-3	14
641	N316	max	11.765	14	.082	6	11.765	2	1.099e-3	2	0	16	1.21e-3	6
642		min	-11.765	5	-.002	13	-11.765	9	-1.13e-3	10	0	1	-1.049e-3	14
643	N317	max	11.765	14	.082	6	11.765	2	1.08e-3	2	0	16	1.201e-3	6
644		min	-11.765	5	-.001	13	-11.765	9	-1.14e-3	10	0	1	-1.039e-3	14
645	N318	max	11.765	14	.082	6	11.765	2	1.059e-3	2	0	16	1.188e-3	6
646		min	-11.765	5	-.004	15	-11.765	9	-1.145e-3	10	0	1	-1.026e-3	14
647	N319	max	11.765	14	.083	8	11.765	2	1.036e-3	2	0	16	1.174e-3	6
648		min	-11.765	5	-.007	15	-11.765	9	-1.148e-3	10	0	1	-1.012e-3	14
649	N320	max	11.765	14	.088	8	11.765	2	1.012e-3	2	0	16	1.16e-3	6
650		min	-11.765	5	-.01	15	-11.765	9	-1.148e-3	10	0	1	-9.997e-4	14
651	N321	max	11.765	14	.092	8	11.765	2	9.894e-4	2	0	16	1.149e-3	6
652		min	-11.765	5	-.013	15	-11.765	9	-1.149e-3	10	0	1	-9.894e-4	14
653	N322	max	11.765	14	.096	8	11.765	2	9.689e-4	2	0	16	1.139e-3	6
654		min	-11.765	5	-.016	15	-11.765	9	-1.15e-3	10	0	1	-9.812e-4	14
655	N323	max	11.765	14	.101	8	11.765	2	9.516e-4	2	0	16	1.133e-3	6
656		min	-11.765	5	-.019	15	-11.765	9	-1.152e-3	10	0	1	-9.749e-4	14
657	N324	max	11.765	14	.106	8	11.765	2	9.381e-4	2	0	16	1.128e-3	6
658		min	-11.765	5	-.022	15	-11.765	9	-1.152e-3	10	0	1	-9.7e-4	14
659	N325	max	11.765	14	.11	8	11.765	2	9.284e-4	2	0	16	1.124e-3	6
660		min	-11.765	5	-.025	15	-11.765	9	-1.152e-3	10	0	1	-9.664e-4	14
661	N326	max	11.765	14	.115	10	11.765	2	9.223e-4	2	0	16	1.121e-3	6
662		min	-11.765	5	-.027	15	-11.765	9	-1.152e-3	10	0	1	-9.639e-4	14
663	N327	max	11.765	14	.122	10	11.765	2	9.192e-4	2	0	16	1.119e-3	6
664		min	-11.765	5	-.03	15	-11.765	9	-1.152e-3	10	0	1	-9.625e-4	14
665	N328	max	11.765	14	.129	10	11.765	2	9.183e-4	2	0	16	1.119e-3	6
666		min	-11.765	5	-.035	2	-11.765	9	-1.152e-3	10	0	1	-9.626e-4	14
667	N329	max	11.765	14	.129	2	11.765	2	1.154e-3	2	0	16	1.112e-3	6
668		min	-11.765	5	-.035	10	-11.765	9	-9.196e-4	10	0	1	-9.777e-4	14
669	N330	max	11.765	14	.123	2	11.765	2	1.154e-3	2	0	16	1.112e-3	6
670		min	-11.765	5	-.03	9	-11.765	9	-9.205e-4	10	0	1	-9.778e-4	14
671	N331	max	11.765	14	.116	2	11.765	2	1.154e-3	2	0	16	1.114e-3	6
672		min	-11.765	5	-.025	9	-11.765	9	-9.238e-4	10	0	1	-9.795e-4	14
673	N332	max	11.765	14	.109	2	11.765	2	1.155e-3	2	0	16	1.118e-3	6
674		min	-11.765	5	-.022	11	-11.765	9	-9.305e-4	10	0	1	-9.826e-4	14
675	N333	max	11.765	14	.102	2	11.765	2	1.155e-3	2	0	16	1.122e-3	6
676		min	-11.765	5	-.019	11	-11.765	9	-9.411e-4	10	0	1	-9.871e-4	14
677	N334	max	11.765	14	.096	4	11.765	2	1.156e-3	2	0	16	1.128e-3	6
678		min	-11.765	5	-.016	11	-11.765	9	-9.563e-4	10	0	1	-9.931e-4	14
679	N335	max	11.765	14	.092	4	11.765	2	1.158e-3	2	0	16	1.137e-3	6
680		min	-11.765	5	-.013	11	-11.765	9	-9.759e-4	10	0	1	-1.001e-3	14
681	N336	max	11.765	14	.088	4	11.765	2	1.16e-3	2	0	16	1.148e-3	6
682		min	-11.765	5	-.01	11	-11.765	9	-9.997e-4	10	0	1	-1.012e-3	14
683	N337	max	11.765	14	.083	4	11.765	2	1.164e-3	2	0	16	1.164e-3	6
684		min	-11.765	5	-.007	11	-11.765	9	-1.026e-3	10	0	1	-1.026e-3	14
685	N338	max	11.765	14	.079	4	11.765	2	1.167e-3	2	0	16	1.183e-3	6
686		min	-11.765	5	-.004	11	-11.765	9	-1.055e-3	10	0	1	-1.045e-3	14
687	N339	max	11.765	14	.075	6	11.765	2	1.168e-3	2	0	16	1.206e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
688		min	-11.765	5	-.001	11	-11.765	9	-1.082e-3	10	0	1	-1.067e-3	14
689	N340	max	11.765	14	.076	6	11.765	2	1.165e-3	2	0	16	1.229e-3	6
690		min	-11.765	5	.002	11	-11.765	9	-1.106e-3	10	0	1	-1.09e-3	14
691	N341	max	11.765	14	.076	6	11.765	2	1.157e-3	2	0	16	1.246e-3	6
692		min	-11.765	5	.004	13	-11.765	9	-1.127e-3	10	0	1	-1.108e-3	14
693	N342	max	11.765	14	.076	6	11.765	2	1.144e-3	2	0	16	1.252e-3	6
694		min	-11.765	5	.003	13	-11.765	9	-1.144e-3	10	0	1	-1.114e-3	14
695	N343	max	11.765	14	.076	6	11.765	2	1.127e-3	2	0	16	1.246e-3	6
696		min	-11.765	5	.004	13	-11.765	9	-1.157e-3	10	0	1	-1.108e-3	14
697	N344	max	11.765	14	.076	6	11.765	2	1.106e-3	2	0	16	1.229e-3	6
698		min	-11.765	5	.002	15	-11.765	9	-1.165e-3	10	0	1	-1.09e-3	14
699	N345	max	11.765	14	.075	6	11.765	2	1.082e-3	2	0	16	1.206e-3	6
700		min	-11.765	5	-.001	15	-11.765	9	-1.168e-3	10	0	1	-1.067e-3	14
701	N346	max	11.765	14	.079	8	11.765	2	1.055e-3	2	0	16	1.183e-3	6
702		min	-11.765	5	-.004	15	-11.765	9	-1.167e-3	10	0	1	-1.045e-3	14
703	N347	max	11.765	14	.083	8	11.765	2	1.026e-3	2	0	16	1.164e-3	6
704		min	-11.765	5	-.007	15	-11.765	9	-1.164e-3	10	0	1	-1.026e-3	14
705	N348	max	11.765	14	.088	8	11.765	2	9.997e-4	2	0	16	1.148e-3	6
706		min	-11.765	5	-.01	15	-11.765	9	-1.16e-3	10	0	1	-1.012e-3	14
707	N349	max	11.765	14	.092	8	11.765	2	9.759e-4	2	0	16	1.137e-3	6
708		min	-11.765	5	-.013	15	-11.765	9	-1.158e-3	10	0	1	-1.001e-3	14
709	N350	max	11.765	14	.096	8	11.765	2	9.563e-4	2	0	16	1.128e-3	6
710		min	-11.765	5	-.016	15	-11.765	9	-1.156e-3	10	0	1	-9.931e-4	14
711	N351	max	11.765	14	.102	10	11.765	2	9.411e-4	2	0	16	1.122e-3	6
712		min	-11.765	5	-.019	15	-11.765	9	-1.155e-3	10	0	1	-9.871e-4	14
713	N352	max	11.765	14	.109	10	11.765	2	9.305e-4	2	0	16	1.118e-3	6
714		min	-11.765	5	-.022	15	-11.765	9	-1.155e-3	10	0	1	-9.826e-4	14
715	N353	max	11.765	14	.116	10	11.765	2	9.238e-4	2	0	16	1.114e-3	6
716		min	-11.765	5	-.025	1	-11.765	9	-1.154e-3	10	0	1	-9.795e-4	14
717	N354	max	11.765	14	.123	10	11.765	2	9.205e-4	2	0	16	1.112e-3	6
718		min	-11.765	5	-.03	1	-11.765	9	-1.154e-3	10	0	1	-9.778e-4	14
719	N355	max	11.765	14	.129	10	11.765	2	9.196e-4	2	0	16	1.112e-3	6
720		min	-11.765	5	-.035	2	-11.765	9	-1.154e-3	10	0	1	-9.777e-4	14
721	N356	max	11.765	14	.13	2	11.765	2	1.156e-3	2	0	16	1.104e-3	6
722		min	-11.765	5	-.036	10	-11.765	9	-9.209e-4	10	0	1	-9.937e-4	14
723	N357	max	11.765	14	.123	2	11.765	2	1.156e-3	2	0	16	1.104e-3	6
724		min	-11.765	5	-.031	9	-11.765	9	-9.218e-4	10	0	1	-9.94e-4	14
725	N358	max	11.765	14	.116	2	11.765	2	1.156e-3	2	0	16	1.107e-3	6
726		min	-11.765	5	-.026	9	-11.765	9	-9.253e-4	10	0	1	-9.961e-4	14
727	N359	max	11.765	14	.109	2	11.765	2	1.157e-3	2	0	16	1.111e-3	6
728		min	-11.765	5	-.021	9	-11.765	9	-9.326e-4	10	0	1	-9.998e-4	14
729	N360	max	11.765	14	.102	2	11.765	2	1.159e-3	2	0	16	1.116e-3	6
730		min	-11.765	5	-.016	11	-11.765	9	-9.443e-4	10	0	1	-1.005e-3	14
731	N361	max	11.765	14	.095	2	11.765	2	1.162e-3	2	0	16	1.123e-3	6
732		min	-11.765	5	-.013	11	-11.765	9	-9.613e-4	10	0	1	-1.012e-3	14
733	N362	max	11.765	14	.089	2	11.765	2	1.166e-3	2	0	16	1.134e-3	6
734		min	-11.765	5	-.01	11	-11.765	9	-9.84e-4	10	0	1	-1.022e-3	14
735	N363	max	11.765	14	.083	4	11.765	2	1.174e-3	2	0	16	1.148e-3	6
736		min	-11.765	5	-.007	11	-11.765	9	-1.012e-3	10	0	1	-1.036e-3	14
737	N364	max	11.765	14	.079	4	11.765	2	1.183e-3	2	0	16	1.167e-3	6
738		min	-11.765	5	-.004	11	-11.765	9	-1.045e-3	10	0	1	-1.055e-3	14
739	N365	max	11.765	14	.074	4	11.765	2	1.194e-3	2	0	16	1.194e-3	6
740		min	-11.765	5	-.001	11	-11.765	9	-1.081e-3	10	0	1	-1.081e-3	14
741	N366	max	11.765	14	.07	4	11.765	2	1.202e-3	2	0	16	1.229e-3	6
742		min	-11.765	5	.002	11	-11.765	9	-1.115e-3	10	0	1	-1.115e-3	14
743	N367	max	11.765	14	.069	6	11.765	2	1.205e-3	2	0	16	1.268e-3	6
744		min	-11.765	5	.006	11	-11.765	9	-1.146e-3	10	0	1	-1.154e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
745	N368	max	11.765	14	.069	6	11.765	2	1.199e-3	2	0	16	1.301e-3	6
746		min	-11.765	5	.009	13	-11.765	9	-1.169e-3	10	0	1	-1.187e-3	14
747	N369	max	11.765	14	.069	6	11.765	2	1.187e-3	2	0	16	1.314e-3	6
748		min	-11.765	5	.009	13	-11.765	9	-1.187e-3	10	0	1	-1.2e-3	14
749	N370	max	11.765	14	.069	6	11.765	2	1.169e-3	2	0	16	1.301e-3	6
750		min	-11.765	5	.009	13	-11.765	9	-1.199e-3	10	0	1	-1.187e-3	14
751	N371	max	11.765	14	.069	6	11.765	2	1.146e-3	2	0	16	1.268e-3	6
752		min	-11.765	5	.006	15	-11.765	9	-1.205e-3	10	0	1	-1.154e-3	14
753	N372	max	11.765	14	.07	8	11.765	2	1.115e-3	2	0	16	1.229e-3	6
754		min	-11.765	5	.002	15	-11.765	9	-1.202e-3	10	0	1	-1.115e-3	14
755	N373	max	11.765	14	.074	8	11.765	2	1.081e-3	2	0	16	1.194e-3	6
756		min	-11.765	5	-.001	15	-11.765	9	-1.194e-3	10	0	1	-1.081e-3	14
757	N374	max	11.765	14	.079	8	11.765	2	1.045e-3	2	0	16	1.167e-3	6
758		min	-11.765	5	-.004	15	-11.765	9	-1.183e-3	10	0	1	-1.055e-3	14
759	N375	max	11.765	14	.083	8	11.765	2	1.012e-3	2	0	16	1.148e-3	6
760		min	-11.765	5	-.007	15	-11.765	9	-1.174e-3	10	0	1	-1.036e-3	14
761	N376	max	11.765	14	.089	10	11.765	2	9.84e-4	2	0	16	1.134e-3	6
762		min	-11.765	5	-.01	15	-11.765	9	-1.166e-3	10	0	1	-1.022e-3	14
763	N377	max	11.765	14	.095	10	11.765	2	9.613e-4	2	0	16	1.123e-3	6
764		min	-11.765	5	-.013	15	-11.765	9	-1.162e-3	10	0	1	-1.012e-3	14
765	N378	max	11.765	14	.102	10	11.765	2	9.443e-4	2	0	16	1.116e-3	6
766		min	-11.765	5	-.016	15	-11.765	9	-1.159e-3	10	0	1	-1.005e-3	14
767	N379	max	11.765	14	.109	10	11.765	2	9.326e-4	2	0	16	1.111e-3	6
768		min	-11.765	5	-.021	1	-11.765	9	-1.157e-3	10	0	1	-9.998e-4	14
769	N380	max	11.765	14	.116	10	11.765	2	9.253e-4	2	0	16	1.107e-3	6
770		min	-11.765	5	-.026	1	-11.765	9	-1.156e-3	10	0	1	-9.961e-4	14
771	N381	max	11.765	14	.123	10	11.765	2	9.218e-4	2	0	16	1.104e-3	6
772		min	-11.765	5	-.031	1	-11.765	9	-1.156e-3	10	0	1	-9.94e-4	14
773	N382	max	11.765	14	.13	10	11.765	2	9.209e-4	2	0	16	1.104e-3	6
774		min	-11.765	5	-.036	2	-11.765	9	-1.156e-3	10	0	1	-9.937e-4	14
775	N383	max	11.765	14	.13	2	11.765	2	1.158e-3	2	0	16	1.094e-3	6
776		min	-11.765	5	-.036	10	-11.765	9	-9.221e-4	10	0	1	-1.01e-3	14
777	N384	max	11.765	14	.123	2	11.765	2	1.158e-3	2	0	16	1.095e-3	6
778		min	-11.765	5	-.031	9	-11.765	9	-9.229e-4	10	0	1	-1.011e-3	14
779	N385	max	11.765	14	.116	2	11.765	2	1.158e-3	2	0	16	1.098e-3	6
780		min	-11.765	5	-.026	9	-11.765	9	-9.267e-4	10	0	1	-1.013e-3	14
781	N386	max	11.765	14	.109	2	11.765	2	1.16e-3	2	0	16	1.102e-3	6
782		min	-11.765	5	-.021	9	-11.765	9	-9.345e-4	10	0	1	-1.017e-3	14
783	N387	max	11.765	14	.102	2	11.765	2	1.163e-3	2	0	16	1.109e-3	6
784		min	-11.765	5	-.016	9	-11.765	9	-9.474e-4	10	0	1	-1.023e-3	14
785	N388	max	11.765	14	.096	2	11.765	2	1.167e-3	2	0	16	1.117e-3	6
786		min	-11.765	5	-.011	9	-11.765	9	-9.664e-4	10	0	1	-1.031e-3	14
787	N389	max	11.765	14	.089	2	11.765	2	1.175e-3	2	0	16	1.129e-3	6
788		min	-11.765	5	-.007	11	-11.765	9	-9.924e-4	10	0	1	-1.043e-3	14
789	N390	max	11.765	14	.082	2	11.765	2	1.188e-3	2	0	16	1.145e-3	6
790		min	-11.765	5	-.004	11	-11.765	9	-1.026e-3	10	0	1	-1.059e-3	14
791	N391	max	11.765	14	.075	2	11.765	2	1.206e-3	2	0	16	1.168e-3	6
792		min	-11.765	5	-.001	11	-11.765	9	-1.067e-3	10	0	1	-1.082e-3	14
793	N392	max	11.765	14	.07	4	11.765	2	1.229e-3	2	0	16	1.202e-3	6
794		min	-11.765	5	.002	11	-11.765	9	-1.115e-3	10	0	1	-1.115e-3	14
795	N393	max	11.765	14	.065	4	11.765	2	1.253e-3	2	0	16	1.253e-3	6
796		min	-11.765	5	.006	11	-11.765	9	-1.166e-3	10	0	1	-1.166e-3	14
797	N394	max	11.765	14	.062	6	11.765	2	1.267e-3	2	0	16	1.32e-3	6
798		min	-11.765	5	.009	11	-11.765	9	-1.208e-3	10	0	1	-1.232e-3	14
799	N395	max	11.765	14	.062	6	11.765	2	1.27e-3	2	0	16	1.385e-3	6
800		min	-11.765	5	.013	11	-11.765	9	-1.24e-3	10	0	1	-1.297e-3	14
801	N396	max	11.765	14	.063	6	11.765	2	1.258e-3	2	0	16	1.413e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
802		min	-11.765	5	.015	13	-11.765	9	-1.258e-3	10	0	1	-1.325e-3	14
803	N397	max	11.765	14	.062	6	11.765	2	1.24e-3	2	0	16	1.385e-3	6
804		min	-11.765	5	.013	15	-11.765	9	-1.27e-3	10	0	1	-1.297e-3	14
805	N398	max	11.765	14	.062	6	11.765	2	1.208e-3	2	0	16	1.32e-3	6
806		min	-11.765	5	.009	15	-11.765	9	-1.267e-3	10	0	1	-1.232e-3	14
807	N399	max	11.765	14	.065	8	11.765	2	1.166e-3	2	0	16	1.253e-3	6
808		min	-11.765	5	.006	15	-11.765	9	-1.253e-3	10	0	1	-1.166e-3	14
809	N400	max	11.765	14	.07	8	11.765	2	1.115e-3	2	0	16	1.202e-3	6
810		min	-11.765	5	.002	15	-11.765	9	-1.229e-3	10	0	1	-1.115e-3	14
811	N401	max	11.765	14	.075	10	11.765	2	1.067e-3	2	0	16	1.168e-3	6
812		min	-11.765	5	-.001	15	-11.765	9	-1.206e-3	10	0	1	-1.082e-3	14
813	N402	max	11.765	14	.082	10	11.765	2	1.026e-3	2	0	16	1.145e-3	6
814		min	-11.765	5	-.004	15	-11.765	9	-1.188e-3	10	0	1	-1.059e-3	14
815	N403	max	11.765	14	.089	10	11.765	2	9.924e-4	2	0	16	1.129e-3	6
816		min	-11.765	5	-.007	15	-11.765	9	-1.175e-3	10	0	1	-1.043e-3	14
817	N404	max	11.765	14	.096	10	11.765	2	9.664e-4	2	0	16	1.117e-3	6
818		min	-11.765	5	-.011	1	-11.765	9	-1.167e-3	10	0	1	-1.031e-3	14
819	N405	max	11.765	14	.102	10	11.765	2	9.474e-4	2	0	16	1.109e-3	6
820		min	-11.765	5	-.016	1	-11.765	9	-1.163e-3	10	0	1	-1.023e-3	14
821	N406	max	11.765	14	.109	10	11.765	2	9.345e-4	2	0	16	1.102e-3	6
822		min	-11.765	5	-.021	1	-11.765	9	-1.16e-3	10	0	1	-1.017e-3	14
823	N407	max	11.765	14	.116	10	11.765	2	9.267e-4	2	0	16	1.098e-3	6
824		min	-11.765	5	-.026	1	-11.765	9	-1.158e-3	10	0	1	-1.013e-3	14
825	N408	max	11.765	14	.123	10	11.765	2	9.229e-4	2	0	16	1.095e-3	6
826		min	-11.765	5	-.031	1	-11.765	9	-1.158e-3	10	0	1	-1.011e-3	14
827	N409	max	11.765	14	.13	10	11.765	2	9.221e-4	2	0	16	1.094e-3	6
828		min	-11.765	5	-.036	2	-11.765	9	-1.158e-3	10	0	1	-1.01e-3	14
829	N410	max	11.765	14	.13	2	11.765	2	1.159e-3	2	0	16	1.083e-3	6
830		min	-11.765	5	-.036	10	-11.765	9	-9.229e-4	10	0	1	-1.027e-3	14
831	N411	max	11.765	14	.123	2	11.765	2	1.159e-3	2	0	16	1.084e-3	6
832		min	-11.765	5	-.031	9	-11.765	9	-9.238e-4	10	0	1	-1.027e-3	14
833	N412	max	11.765	14	.116	2	11.765	2	1.16e-3	2	0	16	1.087e-3	6
834		min	-11.765	5	-.026	9	-11.765	9	-9.278e-4	10	0	1	-1.03e-3	14
835	N413	max	11.765	14	.109	2	11.765	2	1.162e-3	2	0	16	1.092e-3	6
836		min	-11.765	5	-.021	9	-11.765	9	-9.361e-4	10	0	1	-1.034e-3	14
837	N414	max	11.765	14	.102	2	11.765	2	1.166e-3	2	0	16	1.099e-3	6
838		min	-11.765	5	-.016	9	-11.765	9	-9.5e-4	10	0	1	-1.041e-3	14
839	N415	max	11.765	14	.096	2	11.765	2	1.173e-3	2	0	16	1.109e-3	6
840		min	-11.765	5	-.011	9	-11.765	9	-9.709e-4	10	0	1	-1.05e-3	14
841	N416	max	11.765	14	.089	2	11.765	2	1.183e-3	2	0	16	1.122e-3	6
842		min	-11.765	5	-.006	9	-11.765	9	-1.e-3	10	0	1	-1.062e-3	14
843	N417	max	11.765	14	.082	2	11.765	2	1.201e-3	2	0	16	1.14e-3	6
844		min	-11.765	5	-.001	9	-11.765	9	-1.039e-3	10	0	1	-1.08e-3	14
845	N418	max	11.765	14	.076	2	11.765	2	1.229e-3	2	0	16	1.165e-3	6
846		min	-11.765	5	.002	11	-11.765	9	-1.09e-3	10	0	1	-1.106e-3	14
847	N419	max	11.765	14	.069	2	11.765	2	1.268e-3	2	0	16	1.205e-3	6
848		min	-11.765	5	.006	11	-11.765	9	-1.154e-3	10	0	1	-1.146e-3	14
849	N420	max	11.765	14	.062	2	11.765	2	1.32e-3	2	0	16	1.267e-3	6
850		min	-11.765	5	.009	11	-11.765	9	-1.232e-3	10	0	1	-1.208e-3	14
851	N421	max	11.765	14	.056	4	11.765	2	1.374e-3	2	0	16	1.374e-3	6
852		min	-11.765	5	.013	11	-11.765	9	-1.315e-3	10	0	1	-1.315e-3	14
853	N422	max	11.765	14	.055	6	11.765	2	1.389e-3	2	0	16	1.511e-3	6
854		min	-11.765	5	.017	11	-11.765	9	-1.358e-3	10	0	1	-1.451e-3	14
855	N423	max	11.765	14	.056	6	11.765	2	1.395e-3	2	0	16	1.579e-3	6
856		min	-11.765	5	.021	13	-11.765	9	-1.395e-3	10	0	1	-1.518e-3	14
857	N424	max	11.765	14	.055	6	11.765	2	1.358e-3	2	0	16	1.511e-3	6
858		min	-11.765	5	.017	15	-11.765	9	-1.389e-3	10	0	1	-1.451e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
859	N425	max	11.765	14	.056	8	11.765	2	1.315e-3	2	0	16	1.374e-3	6
860		min	-11.765	5	.013	15	-11.765	9	-1.374e-3	10	0	1	-1.315e-3	14
861	N426	max	11.765	14	.062	10	11.765	2	1.232e-3	2	0	16	1.267e-3	6
862		min	-11.765	5	.009	15	-11.765	9	-1.32e-3	10	0	1	-1.208e-3	14
863	N427	max	11.765	14	.069	10	11.765	2	1.154e-3	2	0	16	1.205e-3	6
864		min	-11.765	5	.006	15	-11.765	9	-1.268e-3	10	0	1	-1.146e-3	14
865	N428	max	11.765	14	.076	10	11.765	2	1.09e-3	2	0	16	1.165e-3	6
866		min	-11.765	5	.002	15	-11.765	9	-1.229e-3	10	0	1	-1.106e-3	14
867	N429	max	11.765	14	.082	10	11.765	2	1.039e-3	2	0	16	1.14e-3	6
868		min	-11.765	5	-.001	1	-11.765	9	-1.201e-3	10	0	1	-1.08e-3	14
869	N430	max	11.765	14	.089	10	11.765	2	1.e-3	2	0	16	1.122e-3	6
870		min	-11.765	5	-.006	1	-11.765	9	-1.183e-3	10	0	1	-1.062e-3	14
871	N431	max	11.765	14	.096	10	11.765	2	9.709e-4	2	0	16	1.109e-3	6
872		min	-11.765	5	-.011	1	-11.765	9	-1.173e-3	10	0	1	-1.05e-3	14
873	N432	max	11.765	14	.102	10	11.765	2	9.5e-4	2	0	16	1.099e-3	6
874		min	-11.765	5	-.016	1	-11.765	9	-1.166e-3	10	0	1	-1.041e-3	14
875	N433	max	11.765	14	.109	10	11.765	2	9.361e-4	2	0	16	1.092e-3	6
876		min	-11.765	5	-.021	1	-11.765	9	-1.162e-3	10	0	1	-1.034e-3	14
877	N434	max	11.765	14	.116	10	11.765	2	9.278e-4	2	0	16	1.087e-3	6
878		min	-11.765	5	-.026	1	-11.765	9	-1.16e-3	10	0	1	-1.03e-3	14
879	N435	max	11.765	14	.123	10	11.765	2	9.238e-4	2	0	16	1.084e-3	6
880		min	-11.765	5	-.031	1	-11.765	9	-1.159e-3	10	0	1	-1.027e-3	14
881	N436	max	11.765	14	.13	10	11.765	2	9.229e-4	2	0	16	1.083e-3	6
882		min	-11.765	5	-.036	2	-11.765	9	-1.159e-3	10	0	1	-1.027e-3	14
883	N437	max	11.765	14	.13	2	11.765	2	1.16e-3	2	0	16	1.071e-3	6
884		min	-11.765	5	-.036	10	-11.765	9	-9.235e-4	10	0	1	-1.042e-3	14
885	N438	max	11.765	14	.123	2	11.765	2	1.16e-3	2	0	16	1.072e-3	6
886		min	-11.765	5	-.031	9	-11.765	9	-9.244e-4	10	0	1	-1.043e-3	14
887	N439	max	11.765	14	.116	2	11.765	2	1.161e-3	2	0	16	1.075e-3	6
888		min	-11.765	5	-.026	9	-11.765	9	-9.285e-4	10	0	1	-1.046e-3	14
889	N440	max	11.765	14	.109	2	11.765	2	1.164e-3	2	0	16	1.08e-3	6
890		min	-11.765	5	-.021	9	-11.765	9	-9.371e-4	10	0	1	-1.051e-3	14
891	N441	max	11.765	14	.103	2	11.765	2	1.169e-3	2	0	16	1.088e-3	6
892		min	-11.765	5	-.016	9	-11.765	9	-9.518e-4	10	0	1	-1.058e-3	14
893	N442	max	11.765	14	.096	2	11.765	2	1.177e-3	2	0	16	1.098e-3	6
894		min	-11.765	5	-.012	9	-11.765	9	-9.739e-4	10	0	1	-1.067e-3	14
895	N443	max	11.765	14	.089	2	11.765	2	1.189e-3	2	0	16	1.112e-3	6
896		min	-11.765	5	-.007	9	-11.765	9	-1.005e-3	10	0	1	-1.08e-3	14
897	N444	max	11.765	14	.082	2	11.765	2	1.21e-3	2	0	16	1.13e-3	6
898		min	-11.765	5	-.002	9	-11.765	9	-1.049e-3	10	0	1	-1.099e-3	14
899	N445	max	11.765	14	.076	2	11.765	2	1.246e-3	2	0	16	1.157e-3	6
900		min	-11.765	5	.004	9	-11.765	9	-1.108e-3	10	0	1	-1.127e-3	14
901	N446	max	11.765	14	.069	2	11.765	2	1.301e-3	2	0	16	1.199e-3	6
902		min	-11.765	5	.009	9	-11.765	9	-1.187e-3	10	0	1	-1.169e-3	14
903	N447	max	11.765	14	.062	2	11.765	2	1.385e-3	2	0	16	1.27e-3	6
904		min	-11.765	5	.013	11	-11.765	9	-1.297e-3	10	0	1	-1.24e-3	14
905	N448	max	11.765	14	.055	2	11.765	2	1.511e-3	2	0	16	1.389e-3	6
906		min	-11.765	5	.017	11	-11.765	9	-1.451e-3	10	0	1	-1.358e-3	14
907	N449	max	11.765	14	.048	6	11.765	2	1.678e-3	2	0	16	1.678e-3	6
908		min	-11.765	5	.021	11	-11.765	9	-1.647e-3	10	0	1	-1.647e-3	14
909	N450	max	11.765	14	.048	6	11.765	2	1.62e-3	2	0	16	1.922e-3	6
910		min	-11.765	5	.026	11	-11.765	9	-1.62e-3	10	0	1	-1.889e-3	14
911	N451	max	11.765	14	.048	10	11.765	2	1.647e-3	2	0	16	1.678e-3	6
912		min	-11.765	5	.021	15	-11.765	9	-1.678e-3	10	0	1	-1.647e-3	14
913	N452	max	11.765	14	.055	10	11.765	2	1.451e-3	2	0	16	1.389e-3	6
914		min	-11.765	5	.017	15	-11.765	9	-1.511e-3	10	0	1	-1.358e-3	14
915	N453	max	11.765	14	.062	10	11.765	2	1.297e-3	2	0	16	1.27e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
916		min	-11.765	5	.013	15	-11.765	9	-1.385e-3	10	0	1	-1.24e-3	14
917	N454	max	11.765	14	.069	10	11.765	2	1.187e-3	2	0	16	1.199e-3	6
918		min	-11.765	5	.009	1	-11.765	9	-1.301e-3	10	0	1	-1.169e-3	14
919	N455	max	11.765	14	.076	10	11.765	2	1.108e-3	2	0	16	1.157e-3	6
920		min	-11.765	5	.004	1	-11.765	9	-1.246e-3	10	0	1	-1.127e-3	14
921	N456	max	11.765	14	.082	10	11.765	2	1.049e-3	2	0	16	1.13e-3	6
922		min	-11.765	5	-.002	1	-11.765	9	-1.21e-3	10	0	1	-1.099e-3	14
923	N457	max	11.765	14	.089	10	11.765	2	1.005e-3	2	0	16	1.112e-3	6
924		min	-11.765	5	-.007	1	-11.765	9	-1.189e-3	10	0	1	-1.08e-3	14
925	N458	max	11.765	14	.096	10	11.765	2	9.739e-4	2	0	16	1.098e-3	6
926		min	-11.765	5	-.012	1	-11.765	9	-1.177e-3	10	0	1	-1.067e-3	14
927	N459	max	11.765	14	.103	10	11.765	2	9.518e-4	2	0	16	1.088e-3	6
928		min	-11.765	5	-.016	1	-11.765	9	-1.169e-3	10	0	1	-1.058e-3	14
929	N460	max	11.765	14	.109	10	11.765	2	9.371e-4	2	0	16	1.08e-3	6
930		min	-11.765	5	-.021	1	-11.765	9	-1.164e-3	10	0	1	-1.051e-3	14
931	N461	max	11.765	14	.116	10	11.765	2	9.285e-4	2	0	16	1.075e-3	6
932		min	-11.765	5	-.026	1	-11.765	9	-1.161e-3	10	0	1	-1.046e-3	14
933	N462	max	11.765	14	.123	10	11.765	2	9.244e-4	2	0	16	1.072e-3	6
934		min	-11.765	5	-.031	1	-11.765	9	-1.16e-3	10	0	1	-1.043e-3	14
935	N463	max	11.765	14	.13	10	11.765	2	9.235e-4	2	0	16	1.071e-3	6
936		min	-11.765	5	-.036	2	-11.765	9	-1.16e-3	10	0	1	-1.042e-3	14
937	N464	max	11.765	14	.13	2	11.765	2	1.16e-3	2	0	16	1.057e-3	6
938		min	-11.765	5	-.036	10	-11.765	9	-9.237e-4	10	0	1	-1.057e-3	14
939	N465	max	11.765	14	.123	2	11.765	2	1.16e-3	2	0	16	1.058e-3	6
940		min	-11.765	5	-.031	9	-11.765	9	-9.246e-4	10	0	1	-1.058e-3	14
941	N466	max	11.765	14	.116	2	11.765	2	1.161e-3	2	0	16	1.061e-3	6
942		min	-11.765	5	-.026	9	-11.765	9	-9.287e-4	10	0	1	-1.061e-3	14
943	N467	max	11.765	14	.109	2	11.765	2	1.164e-3	2	0	16	1.066e-3	6
944		min	-11.765	5	-.021	9	-11.765	9	-9.375e-4	10	0	1	-1.066e-3	14
945	N468	max	11.765	14	.103	2	11.765	2	1.17e-3	2	0	16	1.074e-3	6
946		min	-11.765	5	-.016	9	-11.765	9	-9.524e-4	10	0	1	-1.074e-3	14
947	N469	max	11.765	14	.096	2	11.765	2	1.179e-3	2	0	16	1.084e-3	6
948		min	-11.765	5	-.012	9	-11.765	9	-9.75e-4	10	0	1	-1.084e-3	14
949	N471	max	11.765	14	.082	2	11.765	2	1.213e-3	2	0	16	1.116e-3	6
950		min	-11.765	5	-.002	9	-11.765	9	-1.052e-3	10	0	1	-1.116e-3	14
951	N472	max	11.765	14	.076	2	11.765	2	1.252e-3	2	0	16	1.144e-3	6
952		min	-11.765	5	.003	9	-11.765	9	-1.114e-3	10	0	1	-1.144e-3	14
953	N473	max	11.765	14	.069	2	11.765	2	1.314e-3	2	0	16	1.187e-3	6
954		min	-11.765	5	.009	9	-11.765	9	-1.2e-3	10	0	1	-1.187e-3	14
955	N474	max	11.765	14	.063	2	11.765	2	1.413e-3	2	0	16	1.258e-3	6
956		min	-11.765	5	.015	9	-11.765	9	-1.325e-3	10	0	1	-1.258e-3	14
957	N475	max	11.765	14	.056	2	11.765	2	1.579e-3	2	0	16	1.395e-3	6
958		min	-11.765	5	.021	9	-11.765	9	-1.518e-3	10	0	1	-1.395e-3	14
959	N476	max	11.765	14	.048	2	11.765	2	1.922e-3	2	0	16	1.62e-3	6
960		min	-11.765	5	.026	7	-11.765	9	-1.889e-3	10	0	1	-1.62e-3	14
961	CENTER	max	11.765	14	.039	14	11.765	2	2.912e-3	2	0	16	2.912e-3	6
962		min	-11.765	5	.031	3	-11.765	9	-2.912e-3	10	0	1	-2.912e-3	14
963	N478	max	11.765	14	.048	10	11.765	2	1.889e-3	2	0	16	1.62e-3	6
964		min	-11.765	5	.026	3	-11.765	9	-1.922e-3	10	0	1	-1.62e-3	14
965	N479	max	11.765	14	.056	10	11.765	2	1.518e-3	2	0	16	1.395e-3	6
966		min	-11.765	5	.021	1	-11.765	9	-1.579e-3	10	0	1	-1.395e-3	14
967	N480	max	11.765	14	.063	10	11.765	2	1.325e-3	2	0	16	1.258e-3	6
968		min	-11.765	5	.015	1	-11.765	9	-1.413e-3	10	0	1	-1.258e-3	14
969	N481	max	11.765	14	.069	10	11.765	2	1.2e-3	2	0	16	1.187e-3	6
970		min	-11.765	5	.009	1	-11.765	9	-1.314e-3	10	0	1	-1.187e-3	14
971	N482	max	11.765	14	.076	10	11.765	2	1.114e-3	2	0	16	1.144e-3	6
972		min	-11.765	5	.003	1	-11.765	9	-1.252e-3	10	0	1	-1.144e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
973	N483	max	11.765	14	.082	10	11.765	2	1.052e-3	2	0	16	1.116e-3	6
974		min	-11.765	5	-.002	1	-11.765	9	-1.213e-3	10	0	1	-1.116e-3	14
975	N485	max	11.765	14	.096	10	11.765	2	9.75e-4	2	0	16	1.084e-3	6
976		min	-11.765	5	-.012	1	-11.765	9	-1.179e-3	10	0	1	-1.084e-3	14
977	N486	max	11.765	14	.103	10	11.765	2	9.524e-4	2	0	16	1.074e-3	6
978		min	-11.765	5	-.016	1	-11.765	9	-1.17e-3	10	0	1	-1.074e-3	14
979	N487	max	11.765	14	.109	10	11.765	2	9.375e-4	2	0	16	1.066e-3	6
980		min	-11.765	5	-.021	1	-11.765	9	-1.164e-3	10	0	1	-1.066e-3	14
981	N488	max	11.765	14	.116	10	11.765	2	9.287e-4	2	0	16	1.061e-3	6
982		min	-11.765	5	-.026	1	-11.765	9	-1.161e-3	10	0	1	-1.061e-3	14
983	N489	max	11.765	14	.123	10	11.765	2	9.246e-4	2	0	16	1.058e-3	6
984		min	-11.765	5	-.031	1	-11.765	9	-1.16e-3	10	0	1	-1.058e-3	14
985	N490	max	11.765	14	.13	10	11.765	2	9.237e-4	2	0	16	1.057e-3	6
986		min	-11.765	5	-.036	2	-11.765	9	-1.16e-3	10	0	1	-1.057e-3	14
987	N491	max	11.765	14	.13	2	11.765	2	1.16e-3	2	0	16	1.042e-3	6
988		min	-11.765	5	-.036	10	-11.765	9	-9.235e-4	10	0	1	-1.071e-3	14
989	N492	max	11.765	14	.123	2	11.765	2	1.16e-3	2	0	16	1.043e-3	6
990		min	-11.765	5	-.031	9	-11.765	9	-9.244e-4	10	0	1	-1.072e-3	14
991	N493	max	11.765	14	.116	2	11.765	2	1.161e-3	2	0	16	1.046e-3	6
992		min	-11.765	5	-.026	9	-11.765	9	-9.285e-4	10	0	1	-1.075e-3	14
993	N494	max	11.765	14	.109	2	11.765	2	1.164e-3	2	0	16	1.051e-3	6
994		min	-11.765	5	-.021	9	-11.765	9	-9.371e-4	10	0	1	-1.08e-3	14
995	N495	max	11.765	14	.103	2	11.765	2	1.169e-3	2	0	16	1.058e-3	6
996		min	-11.765	5	-.016	9	-11.765	9	-9.518e-4	10	0	1	-1.088e-3	14
997	N496	max	11.765	14	.096	2	11.765	2	1.177e-3	2	0	16	1.067e-3	6
998		min	-11.765	5	-.012	9	-11.765	9	-9.739e-4	10	0	1	-1.098e-3	14
999	N497	max	11.765	14	.089	2	11.765	2	1.189e-3	2	0	16	1.08e-3	6
1000		min	-11.765	5	-.007	9	-11.765	9	-1.005e-3	10	0	1	-1.112e-3	14
1001	N498	max	11.765	14	.082	2	11.765	2	1.21e-3	2	0	16	1.099e-3	6
1002		min	-11.765	5	-.002	9	-11.765	9	-1.049e-3	10	0	1	-1.13e-3	14
1003	N499	max	11.765	14	.076	2	11.765	2	1.246e-3	2	0	16	1.127e-3	6
1004		min	-11.765	5	.004	9	-11.765	9	-1.108e-3	10	0	1	-1.157e-3	14
1005	N500	max	11.765	14	.069	2	11.765	2	1.301e-3	2	0	16	1.169e-3	6
1006		min	-11.765	5	.009	9	-11.765	9	-1.187e-3	10	0	1	-1.199e-3	14
1007	N501	max	11.765	14	.062	2	11.765	2	1.385e-3	2	0	16	1.24e-3	6
1008		min	-11.765	5	.013	7	-11.765	9	-1.297e-3	10	0	1	-1.27e-3	14
1009	N502	max	11.765	14	.055	2	11.765	2	1.511e-3	2	0	16	1.358e-3	6
1010		min	-11.765	5	.017	7	-11.765	9	-1.451e-3	10	0	1	-1.389e-3	14
1011	N503	max	11.765	14	.048	14	11.765	2	1.678e-3	2	0	16	1.647e-3	6
1012		min	-11.765	5	.021	7	-11.765	9	-1.647e-3	10	0	1	-1.678e-3	14
1013	N504	max	11.765	14	.048	14	11.765	2	1.62e-3	2	0	16	1.889e-3	6
1014		min	-11.765	5	.026	3	-11.765	9	-1.62e-3	10	0	1	-1.922e-3	14
1015	N505	max	11.765	14	.048	14	11.765	2	1.647e-3	2	0	16	1.647e-3	6
1016		min	-11.765	5	.021	3	-11.765	9	-1.678e-3	10	0	1	-1.678e-3	14
1017	N506	max	11.765	14	.055	10	11.765	2	1.451e-3	2	0	16	1.358e-3	6
1018		min	-11.765	5	.017	3	-11.765	9	-1.511e-3	10	0	1	-1.389e-3	14
1019	N507	max	11.765	14	.062	10	11.765	2	1.297e-3	2	0	16	1.24e-3	6
1020		min	-11.765	5	.013	3	-11.765	9	-1.385e-3	10	0	1	-1.27e-3	14
1021	N508	max	11.765	14	.069	10	11.765	2	1.187e-3	2	0	16	1.169e-3	6
1022		min	-11.765	5	.009	1	-11.765	9	-1.301e-3	10	0	1	-1.199e-3	14
1023	N509	max	11.765	14	.076	10	11.765	2	1.108e-3	2	0	16	1.127e-3	6
1024		min	-11.765	5	.004	1	-11.765	9	-1.246e-3	10	0	1	-1.157e-3	14
1025	N510	max	11.765	14	.082	10	11.765	2	1.049e-3	2	0	16	1.099e-3	6
1026		min	-11.765	5	-.002	1	-11.765	9	-1.21e-3	10	0	1	-1.13e-3	14
1027	N511	max	11.765	14	.089	10	11.765	2	1.005e-3	2	0	16	1.08e-3	6
1028		min	-11.765	5	-.007	1	-11.765	9	-1.189e-3	10	0	1	-1.112e-3	14
1029	N512	max	11.765	14	.096	10	11.765	2	9.739e-4	2	0	16	1.067e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1030		min	-11.765	5	-.012	1	-11.765	9	-1.177e-3	10	0	1	-1.098e-3	14
1031	N513	max	11.765	14	.103	10	11.765	2	9.518e-4	2	0	16	1.058e-3	6
1032		min	-11.765	5	-.016	1	-11.765	9	-1.169e-3	10	0	1	-1.088e-3	14
1033	N514	max	11.765	14	.109	10	11.765	2	9.371e-4	2	0	16	1.051e-3	6
1034		min	-11.765	5	-.021	1	-11.765	9	-1.164e-3	10	0	1	-1.08e-3	14
1035	N515	max	11.765	14	.116	10	11.765	2	9.285e-4	2	0	16	1.046e-3	6
1036		min	-11.765	5	-.026	1	-11.765	9	-1.161e-3	10	0	1	-1.075e-3	14
1037	N516	max	11.765	14	.123	10	11.765	2	9.244e-4	2	0	16	1.043e-3	6
1038		min	-11.765	5	-.031	1	-11.765	9	-1.16e-3	10	0	1	-1.072e-3	14
1039	N517	max	11.765	14	.13	10	11.765	2	9.235e-4	2	0	16	1.042e-3	6
1040		min	-11.765	5	-.036	2	-11.765	9	-1.16e-3	10	0	1	-1.071e-3	14
1041	N518	max	11.765	14	.13	2	11.765	2	1.159e-3	2	0	16	1.027e-3	6
1042		min	-11.765	5	-.036	10	-11.765	9	-9.229e-4	10	0	1	-1.083e-3	14
1043	N519	max	11.765	14	.123	2	11.765	2	1.159e-3	2	0	16	1.027e-3	6
1044		min	-11.765	5	-.031	9	-11.765	9	-9.238e-4	10	0	1	-1.084e-3	14
1045	N520	max	11.765	14	.116	2	11.765	2	1.16e-3	2	0	16	1.03e-3	6
1046		min	-11.765	5	-.026	9	-11.765	9	-9.278e-4	10	0	1	-1.087e-3	14
1047	N521	max	11.765	14	.109	2	11.765	2	1.162e-3	2	0	16	1.034e-3	6
1048		min	-11.765	5	-.021	9	-11.765	9	-9.361e-4	10	0	1	-1.092e-3	14
1049	N522	max	11.765	14	.102	2	11.765	2	1.166e-3	2	0	16	1.041e-3	6
1050		min	-11.765	5	-.016	9	-11.765	9	-9.5e-4	10	0	1	-1.099e-3	14
1051	N523	max	11.765	14	.096	2	11.765	2	1.173e-3	2	0	16	1.05e-3	6
1052		min	-11.765	5	-.011	9	-11.765	9	-9.709e-4	10	0	1	-1.109e-3	14
1053	N524	max	11.765	14	.089	2	11.765	2	1.183e-3	2	0	16	1.062e-3	6
1054		min	-11.765	5	-.006	9	-11.765	9	-1.e-3	10	0	1	-1.122e-3	14
1055	N525	max	11.765	14	.082	2	11.765	2	1.201e-3	2	0	16	1.08e-3	6
1056		min	-11.765	5	-.001	9	-11.765	9	-1.039e-3	10	0	1	-1.14e-3	14
1057	N526	max	11.765	14	.076	2	11.765	2	1.229e-3	2	0	16	1.106e-3	6
1058		min	-11.765	5	.002	7	-11.765	9	-1.09e-3	10	0	1	-1.165e-3	14
1059	N527	max	11.765	14	.069	2	11.765	2	1.268e-3	2	0	16	1.146e-3	6
1060		min	-11.765	5	.006	7	-11.765	9	-1.154e-3	10	0	1	-1.205e-3	14
1061	N528	max	11.765	14	.062	2	11.765	2	1.32e-3	2	0	16	1.208e-3	6
1062		min	-11.765	5	.009	7	-11.765	9	-1.232e-3	10	0	1	-1.267e-3	14
1063	N529	max	11.765	14	.056	16	11.765	2	1.374e-3	2	0	16	1.315e-3	6
1064		min	-11.765	5	.013	7	-11.765	9	-1.315e-3	10	0	1	-1.374e-3	14
1065	N530	max	11.765	14	.055	14	11.765	2	1.389e-3	2	0	16	1.451e-3	6
1066		min	-11.765	5	.017	7	-11.765	9	-1.358e-3	10	0	1	-1.511e-3	14
1067	N531	max	11.765	14	.056	14	11.765	2	1.395e-3	2	0	16	1.518e-3	6
1068		min	-11.765	5	.021	5	-11.765	9	-1.395e-3	10	0	1	-1.579e-3	14
1069	N532	max	11.765	14	.055	14	11.765	2	1.358e-3	2	0	16	1.451e-3	6
1070		min	-11.765	5	.017	3	-11.765	9	-1.389e-3	10	0	1	-1.511e-3	14
1071	N533	max	11.765	14	.056	12	11.765	2	1.315e-3	2	0	16	1.315e-3	6
1072		min	-11.765	5	.013	3	-11.765	9	-1.374e-3	10	0	1	-1.374e-3	14
1073	N534	max	11.765	14	.062	10	11.765	2	1.232e-3	2	0	16	1.208e-3	6
1074		min	-11.765	5	.009	3	-11.765	9	-1.32e-3	10	0	1	-1.267e-3	14
1075	N535	max	11.765	14	.069	10	11.765	2	1.154e-3	2	0	16	1.146e-3	6
1076		min	-11.765	5	.006	3	-11.765	9	-1.268e-3	10	0	1	-1.205e-3	14
1077	N536	max	11.765	14	.076	10	11.765	2	1.09e-3	2	0	16	1.106e-3	6
1078		min	-11.765	5	.002	3	-11.765	9	-1.229e-3	10	0	1	-1.165e-3	14
1079	N537	max	11.765	14	.082	10	11.765	2	1.039e-3	2	0	16	1.08e-3	6
1080		min	-11.765	5	-.001	1	-11.765	9	-1.201e-3	10	0	1	-1.14e-3	14
1081	N538	max	11.765	14	.089	10	11.765	2	1.e-3	2	0	16	1.062e-3	6
1082		min	-11.765	5	-.006	1	-11.765	9	-1.183e-3	10	0	1	-1.122e-3	14
1083	N539	max	11.765	14	.096	10	11.765	2	9.709e-4	2	0	16	1.05e-3	6
1084		min	-11.765	5	-.011	1	-11.765	9	-1.173e-3	10	0	1	-1.109e-3	14
1085	N540	max	11.765	14	.102	10	11.765	2	9.5e-4	2	0	16	1.041e-3	6
1086		min	-11.765	5	-.016	1	-11.765	9	-1.166e-3	10	0	1	-1.099e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1087	N541	max	11.765	14	.109	10	11.765	2	9.361e-4	2	0	16	1.034e-3	6
1088		min	-11.765	5	-.021	1	-11.765	9	-1.162e-3	10	0	1	-1.092e-3	14
1089	N542	max	11.765	14	.116	10	11.765	2	9.278e-4	2	0	16	1.03e-3	6
1090		min	-11.765	5	-.026	1	-11.765	9	-1.16e-3	10	0	1	-1.087e-3	14
1091	N543	max	11.765	14	.123	10	11.765	2	9.238e-4	2	0	16	1.027e-3	6
1092		min	-11.765	5	-.031	1	-11.765	9	-1.159e-3	10	0	1	-1.084e-3	14
1093	N544	max	11.765	14	.13	10	11.765	2	9.229e-4	2	0	16	1.027e-3	6
1094		min	-11.765	5	-.036	2	-11.765	9	-1.159e-3	10	0	1	-1.083e-3	14
1095	N545	max	11.765	14	.13	2	11.765	2	1.158e-3	2	0	16	1.01e-3	6
1096		min	-11.765	5	-.036	10	-11.765	9	-9.221e-4	10	0	1	-1.094e-3	14
1097	N546	max	11.765	14	.123	2	11.765	2	1.158e-3	2	0	16	1.011e-3	6
1098		min	-11.765	5	-.031	9	-11.765	9	-9.229e-4	10	0	1	-1.095e-3	14
1099	N547	max	11.765	14	.116	2	11.765	2	1.158e-3	2	0	16	1.013e-3	6
1100		min	-11.765	5	-.026	9	-11.765	9	-9.267e-4	10	0	1	-1.098e-3	14
1101	N548	max	11.765	14	.109	2	11.765	2	1.16e-3	2	0	16	1.017e-3	6
1102		min	-11.765	5	-.021	9	-11.765	9	-9.345e-4	10	0	1	-1.102e-3	14
1103	N549	max	11.765	14	.102	2	11.765	2	1.163e-3	2	0	16	1.023e-3	6
1104		min	-11.765	5	-.016	9	-11.765	9	-9.474e-4	10	0	1	-1.109e-3	14
1105	N550	max	11.765	14	.096	2	11.765	2	1.167e-3	2	0	16	1.031e-3	6
1106		min	-11.765	5	-.011	9	-11.765	9	-9.664e-4	10	0	1	-1.117e-3	14
1107	N551	max	11.765	14	.089	2	11.765	2	1.175e-3	2	0	16	1.043e-3	6
1108		min	-11.765	5	-.007	7	-11.765	9	-9.924e-4	10	0	1	-1.129e-3	14
1109	N552	max	11.765	14	.082	2	11.765	2	1.188e-3	2	0	16	1.059e-3	6
1110		min	-11.765	5	-.004	7	-11.765	9	-1.026e-3	10	0	1	-1.145e-3	14
1111	N553	max	11.765	14	.075	2	11.765	2	1.206e-3	2	0	16	1.082e-3	6
1112		min	-11.765	5	-.001	7	-11.765	9	-1.067e-3	10	0	1	-1.168e-3	14
1113	N554	max	11.765	14	.07	16	11.765	2	1.229e-3	2	0	16	1.115e-3	6
1114		min	-11.765	5	.002	7	-11.765	9	-1.115e-3	10	0	1	-1.202e-3	14
1115	N555	max	11.765	14	.065	16	11.765	2	1.253e-3	2	0	16	1.166e-3	6
1116		min	-11.765	5	.006	7	-11.765	9	-1.166e-3	10	0	1	-1.253e-3	14
1117	N556	max	11.765	14	.062	14	11.765	2	1.267e-3	2	0	16	1.232e-3	6
1118		min	-11.765	5	.009	7	-11.765	9	-1.208e-3	10	0	1	-1.32e-3	14
1119	N557	max	11.765	14	.062	14	11.765	2	1.27e-3	2	0	16	1.297e-3	6
1120		min	-11.765	5	.013	7	-11.765	9	-1.24e-3	10	0	1	-1.385e-3	14
1121	N558	max	11.765	14	.063	14	11.765	2	1.258e-3	2	0	16	1.325e-3	6
1122		min	-11.765	5	.015	5	-11.765	9	-1.258e-3	10	0	1	-1.413e-3	14
1123	N559	max	11.765	14	.062	14	11.765	2	1.24e-3	2	0	16	1.297e-3	6
1124		min	-11.765	5	.013	3	-11.765	9	-1.27e-3	10	0	1	-1.385e-3	14
1125	N560	max	11.765	14	.062	14	11.765	2	1.208e-3	2	0	16	1.232e-3	6
1126		min	-11.765	5	.009	3	-11.765	9	-1.267e-3	10	0	1	-1.32e-3	14
1127	N561	max	11.765	14	.065	12	11.765	2	1.166e-3	2	0	16	1.166e-3	6
1128		min	-11.765	5	.006	3	-11.765	9	-1.253e-3	10	0	1	-1.253e-3	14
1129	N562	max	11.765	14	.07	12	11.765	2	1.115e-3	2	0	16	1.115e-3	6
1130		min	-11.765	5	.002	3	-11.765	9	-1.229e-3	10	0	1	-1.202e-3	14
1131	N563	max	11.765	14	.075	10	11.765	2	1.067e-3	2	0	16	1.082e-3	6
1132		min	-11.765	5	-.001	3	-11.765	9	-1.206e-3	10	0	1	-1.168e-3	14
1133	N564	max	11.765	14	.082	10	11.765	2	1.026e-3	2	0	16	1.059e-3	6
1134		min	-11.765	5	-.004	3	-11.765	9	-1.188e-3	10	0	1	-1.145e-3	14
1135	N565	max	11.765	14	.089	10	11.765	2	9.924e-4	2	0	16	1.043e-3	6
1136		min	-11.765	5	-.007	3	-11.765	9	-1.175e-3	10	0	1	-1.129e-3	14
1137	N566	max	11.765	14	.096	10	11.765	2	9.664e-4	2	0	16	1.031e-3	6
1138		min	-11.765	5	-.011	1	-11.765	9	-1.167e-3	10	0	1	-1.117e-3	14
1139	N567	max	11.765	14	.102	10	11.765	2	9.474e-4	2	0	16	1.023e-3	6
1140		min	-11.765	5	-.016	1	-11.765	9	-1.163e-3	10	0	1	-1.109e-3	14
1141	N568	max	11.765	14	.109	10	11.765	2	9.345e-4	2	0	16	1.017e-3	6
1142		min	-11.765	5	-.021	1	-11.765	9	-1.16e-3	10	0	1	-1.102e-3	14
1143	N569	max	11.765	14	.116	10	11.765	2	9.267e-4	2	0	16	1.013e-3	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1144		min	-11.765	5	-.026	1	-11.765	9	-1.158e-3	10	0	1	-1.098e-3	14
1145	N570	max	11.765	14	.123	10	11.765	2	9.229e-4	2	0	16	1.011e-3	6
1146		min	-11.765	5	-.031	1	-11.765	9	-1.158e-3	10	0	1	-1.095e-3	14
1147	N571	max	11.765	14	.13	10	11.765	2	9.221e-4	2	0	16	1.01e-3	6
1148		min	-11.765	5	-.036	2	-11.765	9	-1.158e-3	10	0	1	-1.094e-3	14
1149	N572	max	11.765	14	.13	2	11.765	2	1.156e-3	2	0	16	9.937e-4	6
1150		min	-11.765	5	-.036	10	-11.765	9	-9.209e-4	10	0	1	-1.104e-3	14
1151	N573	max	11.765	14	.123	2	11.765	2	1.156e-3	2	0	16	9.94e-4	6
1152		min	-11.765	5	-.031	9	-11.765	9	-9.218e-4	10	0	1	-1.104e-3	14
1153	N574	max	11.765	14	.116	2	11.765	2	1.156e-3	2	0	16	9.961e-4	6
1154		min	-11.765	5	-.026	9	-11.765	9	-9.253e-4	10	0	1	-1.107e-3	14
1155	N575	max	11.765	14	.109	2	11.765	2	1.157e-3	2	0	16	9.998e-4	6
1156		min	-11.765	5	-.021	9	-11.765	9	-9.326e-4	10	0	1	-1.111e-3	14
1157	N576	max	11.765	14	.102	2	11.765	2	1.159e-3	2	0	16	1.005e-3	6
1158		min	-11.765	5	-.016	7	-11.765	9	-9.443e-4	10	0	1	-1.116e-3	14
1159	N577	max	11.765	14	.095	2	11.765	2	1.162e-3	2	0	16	1.012e-3	6
1160		min	-11.765	5	-.013	7	-11.765	9	-9.613e-4	10	0	1	-1.123e-3	14
1161	N578	max	11.765	14	.089	2	11.765	2	1.166e-3	2	0	16	1.022e-3	6
1162		min	-11.765	5	-.01	7	-11.765	9	-9.84e-4	10	0	1	-1.134e-3	14
1163	N579	max	11.765	14	.083	16	11.765	2	1.174e-3	2	0	16	1.036e-3	6
1164		min	-11.765	5	-.007	7	-11.765	9	-1.012e-3	10	0	1	-1.148e-3	14
1165	N580	max	11.765	14	.079	16	11.765	2	1.183e-3	2	0	16	1.055e-3	6
1166		min	-11.765	5	-.004	7	-11.765	9	-1.045e-3	10	0	1	-1.167e-3	14
1167	N581	max	11.765	14	.074	16	11.765	2	1.194e-3	2	0	16	1.081e-3	6
1168		min	-11.765	5	-.001	7	-11.765	9	-1.081e-3	10	0	1	-1.194e-3	14
1169	N582	max	11.765	14	.07	16	11.765	2	1.202e-3	2	0	16	1.115e-3	6
1170		min	-11.765	5	.002	7	-11.765	9	-1.115e-3	10	0	1	-1.229e-3	14
1171	N583	max	11.765	14	.069	14	11.765	2	1.205e-3	2	0	16	1.154e-3	6
1172		min	-11.765	5	.006	7	-11.765	9	-1.146e-3	10	0	1	-1.268e-3	14
1173	N584	max	11.765	14	.069	14	11.765	2	1.199e-3	2	0	16	1.187e-3	6
1174		min	-11.765	5	.009	5	-11.765	9	-1.169e-3	10	0	1	-1.301e-3	14
1175	N585	max	11.765	14	.069	14	11.765	2	1.187e-3	2	0	16	1.2e-3	6
1176		min	-11.765	5	.009	5	-11.765	9	-1.187e-3	10	0	1	-1.314e-3	14
1177	N586	max	11.765	14	.069	14	11.765	2	1.169e-3	2	0	16	1.187e-3	6
1178		min	-11.765	5	.009	5	-11.765	9	-1.199e-3	10	0	1	-1.301e-3	14
1179	N587	max	11.765	14	.069	14	11.765	2	1.146e-3	2	0	16	1.154e-3	6
1180		min	-11.765	5	.006	3	-11.765	9	-1.205e-3	10	0	1	-1.268e-3	14
1181	N588	max	11.765	14	.07	12	11.765	2	1.115e-3	2	0	16	1.115e-3	6
1182		min	-11.765	5	.002	3	-11.765	9	-1.202e-3	10	0	1	-1.229e-3	14
1183	N589	max	11.765	14	.074	12	11.765	2	1.081e-3	2	0	16	1.081e-3	6
1184		min	-11.765	5	-.001	3	-11.765	9	-1.194e-3	10	0	1	-1.194e-3	14
1185	N590	max	11.765	14	.079	12	11.765	2	1.045e-3	2	0	16	1.055e-3	6
1186		min	-11.765	5	-.004	3	-11.765	9	-1.183e-3	10	0	1	-1.167e-3	14
1187	N591	max	11.765	14	.083	12	11.765	2	1.012e-3	2	0	16	1.036e-3	6
1188		min	-11.765	5	-.007	3	-11.765	9	-1.174e-3	10	0	1	-1.148e-3	14
1189	N592	max	11.765	14	.089	10	11.765	2	9.84e-4	2	0	16	1.022e-3	6
1190		min	-11.765	5	-.01	3	-11.765	9	-1.166e-3	10	0	1	-1.134e-3	14
1191	N593	max	11.765	14	.095	10	11.765	2	9.613e-4	2	0	16	1.012e-3	6
1192		min	-11.765	5	-.013	3	-11.765	9	-1.162e-3	10	0	1	-1.123e-3	14
1193	N594	max	11.765	14	.102	10	11.765	2	9.443e-4	2	0	16	1.005e-3	6
1194		min	-11.765	5	-.016	3	-11.765	9	-1.159e-3	10	0	1	-1.116e-3	14
1195	N595	max	11.765	14	.109	10	11.765	2	9.326e-4	2	0	16	9.998e-4	6
1196		min	-11.765	5	-.021	1	-11.765	9	-1.157e-3	10	0	1	-1.111e-3	14
1197	N596	max	11.765	14	.116	10	11.765	2	9.253e-4	2	0	16	9.961e-4	6
1198		min	-11.765	5	-.026	1	-11.765	9	-1.156e-3	10	0	1	-1.107e-3	14
1199	N597	max	11.765	14	.123	10	11.765	2	9.218e-4	2	0	16	9.94e-4	6
1200		min	-11.765	5	-.031	1	-11.765	9	-1.156e-3	10	0	1	-1.104e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1201	N598	max	11.765	14	.13	10	11.765	2	9.209e-4	2	0	16	9.937e-4	6
1202		min	-11.765	5	-.036	2	-11.765	9	-1.156e-3	10	0	1	-1.104e-3	14
1203	N599	max	11.765	14	.129	2	11.765	2	1.154e-3	2	0	16	9.777e-4	6
1204		min	-11.765	5	-.035	10	-11.765	9	-9.196e-4	10	0	1	-1.112e-3	14
1205	N600	max	11.765	14	.123	2	11.765	2	1.154e-3	2	0	16	9.778e-4	6
1206		min	-11.765	5	-.03	9	-11.765	9	-9.205e-4	10	0	1	-1.112e-3	14
1207	N601	max	11.765	14	.116	2	11.765	2	1.154e-3	2	0	16	9.795e-4	6
1208		min	-11.765	5	-.025	9	-11.765	9	-9.238e-4	10	0	1	-1.114e-3	14
1209	N602	max	11.765	14	.109	2	11.765	2	1.155e-3	2	0	16	9.826e-4	6
1210		min	-11.765	5	-.022	7	-11.765	9	-9.305e-4	10	0	1	-1.118e-3	14
1211	N603	max	11.765	14	.102	2	11.765	2	1.155e-3	2	0	16	9.871e-4	6
1212		min	-11.765	5	-.019	7	-11.765	9	-9.411e-4	10	0	1	-1.122e-3	14
1213	N604	max	11.765	14	.096	16	11.765	2	1.156e-3	2	0	16	9.931e-4	6
1214		min	-11.765	5	-.016	7	-11.765	9	-9.563e-4	10	0	1	-1.128e-3	14
1215	N605	max	11.765	14	.092	16	11.765	2	1.158e-3	2	0	16	1.001e-3	6
1216		min	-11.765	5	-.013	7	-11.765	9	-9.759e-4	10	0	1	-1.137e-3	14
1217	N606	max	11.765	14	.088	16	11.765	2	1.16e-3	2	0	16	1.012e-3	6
1218		min	-11.765	5	-.01	7	-11.765	9	-9.997e-4	10	0	1	-1.148e-3	14
1219	N607	max	11.765	14	.083	16	11.765	2	1.164e-3	2	0	16	1.026e-3	6
1220		min	-11.765	5	-.007	7	-11.765	9	-1.026e-3	10	0	1	-1.164e-3	14
1221	N608	max	11.765	14	.079	16	11.765	2	1.167e-3	2	0	16	1.045e-3	6
1222		min	-11.765	5	-.004	7	-11.765	9	-1.055e-3	10	0	1	-1.183e-3	14
1223	N609	max	11.765	14	.075	14	11.765	2	1.168e-3	2	0	16	1.067e-3	6
1224		min	-11.765	5	-.001	7	-11.765	9	-1.082e-3	10	0	1	-1.206e-3	14
1225	N610	max	11.765	14	.076	14	11.765	2	1.165e-3	2	0	16	1.09e-3	6
1226		min	-11.765	5	.002	7	-11.765	9	-1.106e-3	10	0	1	-1.229e-3	14
1227	N611	max	11.765	14	.076	14	11.765	2	1.157e-3	2	0	16	1.108e-3	6
1228		min	-11.765	5	.004	5	-11.765	9	-1.127e-3	10	0	1	-1.246e-3	14
1229	N612	max	11.765	14	.076	14	11.765	2	1.144e-3	2	0	16	1.114e-3	6
1230		min	-11.765	5	.003	5	-11.765	9	-1.144e-3	10	0	1	-1.252e-3	14
1231	N613	max	11.765	14	.076	14	11.765	2	1.127e-3	2	0	16	1.108e-3	6
1232		min	-11.765	5	.004	5	-11.765	9	-1.157e-3	10	0	1	-1.246e-3	14
1233	N614	max	11.765	14	.076	14	11.765	2	1.106e-3	2	0	16	1.09e-3	6
1234		min	-11.765	5	.002	3	-11.765	9	-1.165e-3	10	0	1	-1.229e-3	14
1235	N615	max	11.765	14	.075	14	11.765	2	1.082e-3	2	0	16	1.067e-3	6
1236		min	-11.765	5	-.001	3	-11.765	9	-1.168e-3	10	0	1	-1.206e-3	14
1237	N616	max	11.765	14	.079	12	11.765	2	1.055e-3	2	0	16	1.045e-3	6
1238		min	-11.765	5	-.004	3	-11.765	9	-1.167e-3	10	0	1	-1.183e-3	14
1239	N617	max	11.765	14	.083	12	11.765	2	1.026e-3	2	0	16	1.026e-3	6
1240		min	-11.765	5	-.007	3	-11.765	9	-1.164e-3	10	0	1	-1.164e-3	14
1241	N618	max	11.765	14	.088	12	11.765	2	9.997e-4	2	0	16	1.012e-3	6
1242		min	-11.765	5	-.01	3	-11.765	9	-1.16e-3	10	0	1	-1.148e-3	14
1243	N619	max	11.765	14	.092	12	11.765	2	9.759e-4	2	0	16	1.001e-3	6
1244		min	-11.765	5	-.013	3	-11.765	9	-1.158e-3	10	0	1	-1.137e-3	14
1245	N620	max	11.765	14	.096	12	11.765	2	9.563e-4	2	0	16	9.931e-4	6
1246		min	-11.765	5	-.016	3	-11.765	9	-1.156e-3	10	0	1	-1.128e-3	14
1247	N621	max	11.765	14	.102	10	11.765	2	9.411e-4	2	0	16	9.871e-4	6
1248		min	-11.765	5	-.019	3	-11.765	9	-1.155e-3	10	0	1	-1.122e-3	14
1249	N622	max	11.765	14	.109	10	11.765	2	9.305e-4	2	0	16	9.826e-4	6
1250		min	-11.765	5	-.022	3	-11.765	9	-1.155e-3	10	0	1	-1.118e-3	14
1251	N623	max	11.765	14	.116	10	11.765	2	9.238e-4	2	0	16	9.795e-4	6
1252		min	-11.765	5	-.025	1	-11.765	9	-1.154e-3	10	0	1	-1.114e-3	14
1253	N624	max	11.765	14	.123	10	11.765	2	9.205e-4	2	0	16	9.778e-4	6
1254		min	-11.765	5	-.03	1	-11.765	9	-1.154e-3	10	0	1	-1.112e-3	14
1255	N625	max	11.765	14	.129	10	11.765	2	9.196e-4	2	0	16	9.777e-4	6
1256		min	-11.765	5	-.035	2	-11.765	9	-1.154e-3	10	0	1	-1.112e-3	14
1257	N626	max	11.765	14	.129	2	11.765	2	1.152e-3	2	0	16	9.626e-4	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1258		min	-11.765	5	-.035	10	-11.765	9	-9.183e-4	10	0	1	-1.119e-3	14
1259	N627	max	11.765	14	.122	2	11.765	2	1.152e-3	2	0	16	9.625e-4	6
1260		min	-11.765	5	-.03	7	-11.765	9	-9.192e-4	10	0	1	-1.119e-3	14
1261	N628	max	11.765	14	.115	2	11.765	2	1.152e-3	2	0	16	9.639e-4	6
1262		min	-11.765	5	-.027	7	-11.765	9	-9.223e-4	10	0	1	-1.121e-3	14
1263	N629	max	11.765	14	.11	16	11.765	2	1.152e-3	2	0	16	9.664e-4	6
1264		min	-11.765	5	-.025	7	-11.765	9	-9.284e-4	10	0	1	-1.124e-3	14
1265	N630	max	11.765	14	.106	16	11.765	2	1.152e-3	2	0	16	9.7e-4	6
1266		min	-11.765	5	-.022	7	-11.765	9	-9.381e-4	10	0	1	-1.128e-3	14
1267	N631	max	11.765	14	.101	16	11.765	2	1.152e-3	2	0	16	9.749e-4	6
1268		min	-11.765	5	-.019	7	-11.765	9	-9.516e-4	10	0	1	-1.133e-3	14
1269	N632	max	11.765	14	.096	16	11.765	2	1.15e-3	2	0	16	9.812e-4	6
1270		min	-11.765	5	-.016	7	-11.765	9	-9.689e-4	10	0	1	-1.139e-3	14
1271	N633	max	11.765	14	.092	16	11.765	2	1.149e-3	2	0	16	9.894e-4	6
1272		min	-11.765	5	-.013	7	-11.765	9	-9.894e-4	10	0	1	-1.149e-3	14
1273	N634	max	11.765	14	.088	16	11.765	2	1.148e-3	2	0	16	9.997e-4	6
1274		min	-11.765	5	-.01	7	-11.765	9	-1.012e-3	10	0	1	-1.16e-3	14
1275	N635	max	11.765	14	.083	16	11.765	2	1.148e-3	2	0	16	1.012e-3	6
1276		min	-11.765	5	-.007	7	-11.765	9	-1.036e-3	10	0	1	-1.174e-3	14
1277	N636	max	11.765	14	.082	14	11.765	2	1.145e-3	2	0	16	1.026e-3	6
1278		min	-11.765	5	-.004	7	-11.765	9	-1.059e-3	10	0	1	-1.188e-3	14
1279	N637	max	11.765	14	.082	14	11.765	2	1.14e-3	2	0	16	1.039e-3	6
1280		min	-11.765	5	-.001	5	-11.765	9	-1.08e-3	10	0	1	-1.201e-3	14
1281	N638	max	11.765	14	.082	14	11.765	2	1.13e-3	2	0	16	1.049e-3	6
1282		min	-11.765	5	-.002	5	-11.765	9	-1.099e-3	10	0	1	-1.21e-3	14
1283	N639	max	11.765	14	.082	14	11.765	2	1.116e-3	2	0	16	1.052e-3	6
1284		min	-11.765	5	-.002	5	-11.765	9	-1.116e-3	10	0	1	-1.213e-3	14
1285	N640	max	11.765	14	.082	14	11.765	2	1.099e-3	2	0	16	1.049e-3	6
1286		min	-11.765	5	-.002	5	-11.765	9	-1.13e-3	10	0	1	-1.21e-3	14
1287	N641	max	11.765	14	.082	14	11.765	2	1.08e-3	2	0	16	1.039e-3	6
1288		min	-11.765	5	-.001	5	-11.765	9	-1.14e-3	10	0	1	-1.201e-3	14
1289	N642	max	11.765	14	.082	14	11.765	2	1.059e-3	2	0	16	1.026e-3	6
1290		min	-11.765	5	-.004	3	-11.765	9	-1.145e-3	10	0	1	-1.188e-3	14
1291	N643	max	11.765	14	.083	12	11.765	2	1.036e-3	2	0	16	1.012e-3	6
1292		min	-11.765	5	-.007	3	-11.765	9	-1.148e-3	10	0	1	-1.174e-3	14
1293	N644	max	11.765	14	.088	12	11.765	2	1.012e-3	2	0	16	9.997e-4	6
1294		min	-11.765	5	-.01	3	-11.765	9	-1.148e-3	10	0	1	-1.16e-3	14
1295	N645	max	11.765	14	.092	12	11.765	2	9.894e-4	2	0	16	9.894e-4	6
1296		min	-11.765	5	-.013	3	-11.765	9	-1.149e-3	10	0	1	-1.149e-3	14
1297	N646	max	11.765	14	.096	12	11.765	2	9.689e-4	2	0	16	9.812e-4	6
1298		min	-11.765	5	-.016	3	-11.765	9	-1.15e-3	10	0	1	-1.139e-3	14
1299	N647	max	11.765	14	.101	12	11.765	2	9.516e-4	2	0	16	9.749e-4	6
1300		min	-11.765	5	-.019	3	-11.765	9	-1.152e-3	10	0	1	-1.133e-3	14
1301	N648	max	11.765	14	.106	12	11.765	2	9.381e-4	2	0	16	9.7e-4	6
1302		min	-11.765	5	-.022	3	-11.765	9	-1.152e-3	10	0	1	-1.128e-3	14
1303	N649	max	11.765	14	.11	12	11.765	2	9.284e-4	2	0	16	9.664e-4	6
1304		min	-11.765	5	-.025	3	-11.765	9	-1.152e-3	10	0	1	-1.124e-3	14
1305	N650	max	11.765	14	.115	10	11.765	2	9.223e-4	2	0	16	9.639e-4	6
1306		min	-11.765	5	-.027	3	-11.765	9	-1.152e-3	10	0	1	-1.121e-3	14
1307	N651	max	11.765	14	.122	10	11.765	2	9.192e-4	2	0	16	9.625e-4	6
1308		min	-11.765	5	-.03	3	-11.765	9	-1.152e-3	10	0	1	-1.119e-3	14
1309	N652	max	11.765	14	.129	10	11.765	2	9.183e-4	2	0	16	9.626e-4	6
1310		min	-11.765	5	-.035	2	-11.765	9	-1.152e-3	10	0	1	-1.119e-3	14
1311	N653	max	11.765	14	.129	2	11.765	2	1.15e-3	2	0	16	9.49e-4	6
1312		min	-11.765	5	-.036	8	-11.765	9	-9.169e-4	10	0	1	-1.125e-3	14
1313	N654	max	11.765	14	.124	16	11.765	2	1.15e-3	2	0	16	9.487e-4	6
1314		min	-11.765	5	-.033	8	-11.765	9	-9.178e-4	10	0	1	-1.125e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1315	N655	max	11.765	14	.12	16	11.765	2	1.15e-3	2	0	16	9.498e-4	6
1316		min	-11.765	5	-.03	7	-11.765	9	-9.208e-4	10	0	1	-1.127e-3	14
1317	N656	max	11.765	14	.115	16	11.765	2	1.149e-3	2	0	16	9.518e-4	6
1318		min	-11.765	5	-.027	7	-11.765	9	-9.264e-4	10	0	1	-1.13e-3	14
1319	N657	max	11.765	14	.11	16	11.765	2	1.149e-3	2	0	16	9.546e-4	6
1320		min	-11.765	5	-.024	7	-11.765	9	-9.353e-4	10	0	1	-1.133e-3	14
1321	N658	max	11.765	14	.105	16	11.765	2	1.148e-3	2	0	16	9.583e-4	6
1322		min	-11.765	5	-.022	7	-11.765	9	-9.475e-4	10	0	1	-1.138e-3	14
1323	N660	max	11.765	14	.096	16	11.765	2	1.139e-3	2	0	16	9.689e-4	6
1324		min	-11.765	5	-.016	7	-11.765	9	-9.812e-4	10	0	1	-1.15e-3	14
1325	N661	max	11.765	14	.092	16	11.765	2	1.137e-3	2	0	16	9.759e-4	6
1326		min	-11.765	5	-.013	7	-11.765	9	-1.001e-3	10	0	1	-1.158e-3	14
1327	N662	max	11.765	14	.089	14	11.765	2	1.134e-3	2	0	16	9.84e-4	6
1328		min	-11.765	5	-.01	7	-11.765	9	-1.022e-3	10	0	1	-1.166e-3	14
1329	N663	max	11.765	14	.089	14	11.765	2	1.129e-3	2	0	16	9.924e-4	6
1330		min	-11.765	5	-.007	7	-11.765	9	-1.043e-3	10	0	1	-1.175e-3	14
1331	N664	max	11.765	14	.089	14	11.765	2	1.122e-3	2	0	16	1.e-3	6
1332		min	-11.765	5	-.006	5	-11.765	9	-1.062e-3	10	0	1	-1.183e-3	14
1333	N665	max	11.765	14	.089	14	11.765	2	1.112e-3	2	0	16	1.005e-3	6
1334		min	-11.765	5	-.007	5	-11.765	9	-1.08e-3	10	0	1	-1.189e-3	14
1335	N667	max	11.765	14	.089	14	11.765	2	1.08e-3	2	0	16	1.005e-3	6
1336		min	-11.765	5	-.007	5	-11.765	9	-1.112e-3	10	0	1	-1.189e-3	14
1337	N668	max	11.765	14	.089	14	11.765	2	1.062e-3	2	0	16	1.e-3	6
1338		min	-11.765	5	-.006	5	-11.765	9	-1.122e-3	10	0	1	-1.183e-3	14
1339	N669	max	11.765	14	.089	14	11.765	2	1.043e-3	2	0	16	9.924e-4	6
1340		min	-11.765	5	-.007	3	-11.765	9	-1.129e-3	10	0	1	-1.175e-3	14
1341	N670	max	11.765	14	.089	14	11.765	2	1.022e-3	2	0	16	9.84e-4	6
1342		min	-11.765	5	-.01	3	-11.765	9	-1.134e-3	10	0	1	-1.166e-3	14
1343	N671	max	11.765	14	.092	12	11.765	2	1.001e-3	2	0	16	9.759e-4	6
1344		min	-11.765	5	-.013	3	-11.765	9	-1.137e-3	10	0	1	-1.158e-3	14
1345	N672	max	11.765	14	.096	12	11.765	2	9.812e-4	2	0	16	9.689e-4	6
1346		min	-11.765	5	-.016	3	-11.765	9	-1.139e-3	10	0	1	-1.15e-3	14
1347	N674	max	11.765	14	.105	12	11.765	2	9.475e-4	2	0	16	9.583e-4	6
1348		min	-11.765	5	-.022	3	-11.765	9	-1.148e-3	10	0	1	-1.138e-3	14
1349	N675	max	11.765	14	.11	12	11.765	2	9.353e-4	2	0	16	9.546e-4	6
1350		min	-11.765	5	-.024	3	-11.765	9	-1.149e-3	10	0	1	-1.133e-3	14
1351	N676	max	11.765	14	.115	12	11.765	2	9.264e-4	2	0	16	9.518e-4	6
1352		min	-11.765	5	-.027	3	-11.765	9	-1.149e-3	10	0	1	-1.13e-3	14
1353	N677	max	11.765	14	.12	12	11.765	2	9.208e-4	2	0	16	9.498e-4	6
1354		min	-11.765	5	-.03	3	-11.765	9	-1.15e-3	10	0	1	-1.127e-3	14
1355	N678	max	11.765	14	.124	12	11.765	2	9.178e-4	2	0	16	9.487e-4	6
1356		min	-11.765	5	-.033	4	-11.765	9	-1.15e-3	10	0	1	-1.125e-3	14
1357	N679	max	11.765	14	.129	10	11.765	2	9.169e-4	2	0	16	9.49e-4	6
1358		min	-11.765	5	-.036	4	-11.765	9	-1.15e-3	10	0	1	-1.125e-3	14
1359	N680	max	11.765	14	.134	16	11.765	2	1.147e-3	2	0	16	9.373e-4	6
1360		min	-11.765	5	-.038	8	-11.765	9	-9.155e-4	10	0	1	-1.129e-3	14
1361	N681	max	11.765	14	.129	16	11.765	2	1.147e-3	2	0	16	9.369e-4	6
1362		min	-11.765	5	-.035	8	-11.765	9	-9.165e-4	10	0	1	-1.13e-3	14
1363	N682	max	11.765	14	.124	16	11.765	2	1.147e-3	2	0	16	9.377e-4	6
1364		min	-11.765	5	-.033	8	-11.765	9	-9.193e-4	10	0	1	-1.132e-3	14
1365	N683	max	11.765	14	.12	16	11.765	2	1.146e-3	2	0	16	9.392e-4	6
1366		min	-11.765	5	-.03	7	-11.765	9	-9.247e-4	10	0	1	-1.134e-3	14
1367	N684	max	11.765	14	.115	16	11.765	2	1.145e-3	2	0	16	9.414e-4	6
1368		min	-11.765	5	-.027	7	-11.765	9	-9.329e-4	10	0	1	-1.138e-3	14
1369	N685	max	11.765	14	.11	16	11.765	2	1.142e-3	2	0	16	9.442e-4	6
1370		min	-11.765	5	-.024	7	-11.765	9	-9.442e-4	10	0	1	-1.142e-3	14
1371	N686	max	11.765	14	.105	16	11.765	2	1.138e-3	2	0	16	9.475e-4	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1372		min	-11.765	5	-.022	7	-11.765	9	-9.583e-4	10	0	1	-1.148e-3	14
1373	N687	max	11.765	14	.101	16	11.765	2	1.133e-3	2	0	16	9.516e-4	6
1374		min	-11.765	5	-.019	7	-11.765	9	-9.749e-4	10	0	1	-1.152e-3	14
1375	N688	max	11.765	14	.096	16	11.765	2	1.128e-3	2	0	16	9.563e-4	6
1376		min	-11.765	5	-.016	7	-11.765	9	-9.931e-4	10	0	1	-1.156e-3	14
1377	N689	max	11.765	14	.095	14	11.765	2	1.123e-3	2	0	16	9.613e-4	6
1378		min	-11.765	5	-.013	7	-11.765	9	-1.012e-3	10	0	1	-1.162e-3	14
1379	N690	max	11.765	14	.096	14	11.765	2	1.117e-3	2	0	16	9.664e-4	6
1380		min	-11.765	5	-.011	5	-11.765	9	-1.031e-3	10	0	1	-1.167e-3	14
1381	N691	max	11.765	14	.096	14	11.765	2	1.109e-3	2	0	16	9.709e-4	6
1382		min	-11.765	5	-.011	5	-11.765	9	-1.05e-3	10	0	1	-1.173e-3	14
1383	N692	max	11.765	14	.096	14	11.765	2	1.098e-3	2	0	16	9.739e-4	6
1384		min	-11.765	5	-.012	5	-11.765	9	-1.067e-3	10	0	1	-1.177e-3	14
1385	N693	max	11.765	14	.096	14	11.765	2	1.084e-3	2	0	16	9.75e-4	6
1386		min	-11.765	5	-.012	5	-11.765	9	-1.084e-3	10	0	1	-1.179e-3	14
1387	N694	max	11.765	14	.096	14	11.765	2	1.067e-3	2	0	16	9.739e-4	6
1388		min	-11.765	5	-.012	5	-11.765	9	-1.098e-3	10	0	1	-1.177e-3	14
1389	N695	max	11.765	14	.096	14	11.765	2	1.05e-3	2	0	16	9.709e-4	6
1390		min	-11.765	5	-.011	5	-11.765	9	-1.109e-3	10	0	1	-1.173e-3	14
1391	N696	max	11.765	14	.096	14	11.765	2	1.031e-3	2	0	16	9.664e-4	6
1392		min	-11.765	5	-.011	5	-11.765	9	-1.117e-3	10	0	1	-1.167e-3	14
1393	N697	max	11.765	14	.095	14	11.765	2	1.012e-3	2	0	16	9.613e-4	6
1394		min	-11.765	5	-.013	3	-11.765	9	-1.123e-3	10	0	1	-1.162e-3	14
1395	N698	max	11.765	14	.096	12	11.765	2	9.931e-4	2	0	16	9.563e-4	6
1396		min	-11.765	5	-.016	3	-11.765	9	-1.128e-3	10	0	1	-1.156e-3	14
1397	N699	max	11.765	14	.101	12	11.765	2	9.749e-4	2	0	16	9.516e-4	6
1398		min	-11.765	5	-.019	3	-11.765	9	-1.133e-3	10	0	1	-1.152e-3	14
1399	N700	max	11.765	14	.105	12	11.765	2	9.583e-4	2	0	16	9.475e-4	6
1400		min	-11.765	5	-.022	3	-11.765	9	-1.138e-3	10	0	1	-1.148e-3	14
1401	N701	max	11.765	14	.11	12	11.765	2	9.442e-4	2	0	16	9.442e-4	6
1402		min	-11.765	5	-.024	3	-11.765	9	-1.142e-3	10	0	1	-1.142e-3	14
1403	N702	max	11.765	14	.115	12	11.765	2	9.329e-4	2	0	16	9.414e-4	6
1404		min	-11.765	5	-.027	3	-11.765	9	-1.145e-3	10	0	1	-1.138e-3	14
1405	N703	max	11.765	14	.12	12	11.765	2	9.247e-4	2	0	16	9.392e-4	6
1406		min	-11.765	5	-.03	3	-11.765	9	-1.146e-3	10	0	1	-1.134e-3	14
1407	N704	max	11.765	14	.124	12	11.765	2	9.193e-4	2	0	16	9.377e-4	6
1408		min	-11.765	5	-.033	4	-11.765	9	-1.147e-3	10	0	1	-1.132e-3	14
1409	N705	max	11.765	14	.129	12	11.765	2	9.165e-4	2	0	16	9.369e-4	6
1410		min	-11.765	5	-.035	4	-11.765	9	-1.147e-3	10	0	1	-1.13e-3	14
1411	N706	max	11.765	14	.134	12	11.765	2	9.155e-4	2	0	16	9.373e-4	6
1412		min	-11.765	5	-.038	4	-11.765	9	-1.147e-3	10	0	1	-1.129e-3	14
1413	N707	max	11.765	14	.138	16	11.765	2	1.145e-3	2	0	16	9.279e-4	6
1414		min	-11.765	5	-.041	8	-11.765	9	-9.143e-4	10	0	1	-1.133e-3	14
1415	N708	max	11.765	14	.134	16	11.765	2	1.145e-3	2	0	16	9.275e-4	6
1416		min	-11.765	5	-.038	8	-11.765	9	-9.153e-4	10	0	1	-1.134e-3	14
1417	N709	max	11.765	14	.129	16	11.765	2	1.144e-3	2	0	16	9.281e-4	6
1418		min	-11.765	5	-.035	8	-11.765	9	-9.181e-4	10	0	1	-1.135e-3	14
1419	N710	max	11.765	14	.124	16	11.765	2	1.143e-3	2	0	16	9.292e-4	6
1420		min	-11.765	5	-.032	8	-11.765	9	-9.231e-4	10	0	1	-1.138e-3	14
1421	N711	max	11.765	14	.12	16	11.765	2	1.141e-3	2	0	16	9.308e-4	6
1422		min	-11.765	5	-.03	7	-11.765	9	-9.308e-4	10	0	1	-1.141e-3	14
1423	N712	max	11.765	14	.115	16	11.765	2	1.138e-3	2	0	16	9.329e-4	6
1424		min	-11.765	5	-.027	7	-11.765	9	-9.414e-4	10	0	1	-1.145e-3	14
1425	N713	max	11.765	14	.11	16	11.765	2	1.133e-3	2	0	16	9.353e-4	6
1426		min	-11.765	5	-.024	7	-11.765	9	-9.546e-4	10	0	1	-1.149e-3	14
1427	N714	max	11.765	14	.106	16	11.765	2	1.128e-3	2	0	16	9.381e-4	6
1428		min	-11.765	5	-.022	7	-11.765	9	-9.7e-4	10	0	1	-1.152e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1429	N715	max	11.765	14	.102	14	11.765	2	1.122e-3	2	0	16	9.411e-4	6
1430		min	-11.765	5	-.019	7	-11.765	9	-9.871e-4	10	0	1	-1.155e-3	14
1431	N716	max	11.765	14	.102	14	11.765	2	1.116e-3	2	0	16	9.443e-4	6
1432		min	-11.765	5	-.016	7	-11.765	9	-1.005e-3	10	0	1	-1.159e-3	14
1433	N717	max	11.765	14	.102	14	11.765	2	1.109e-3	2	0	16	9.474e-4	6
1434		min	-11.765	5	-.016	5	-11.765	9	-1.023e-3	10	0	1	-1.163e-3	14
1435	N718	max	11.765	14	.102	14	11.765	2	1.099e-3	2	0	16	9.5e-4	6
1436		min	-11.765	5	-.016	5	-11.765	9	-1.041e-3	10	0	1	-1.166e-3	14
1437	N719	max	11.765	14	.103	14	11.765	2	1.088e-3	2	0	16	9.518e-4	6
1438		min	-11.765	5	-.016	5	-11.765	9	-1.058e-3	10	0	1	-1.169e-3	14
1439	N720	max	11.765	14	.103	14	11.765	2	1.074e-3	2	0	16	9.524e-4	6
1440		min	-11.765	5	-.016	5	-11.765	9	-1.074e-3	10	0	1	-1.17e-3	14
1441	N721	max	11.765	14	.103	14	11.765	2	1.058e-3	2	0	16	9.518e-4	6
1442		min	-11.765	5	-.016	5	-11.765	9	-1.088e-3	10	0	1	-1.169e-3	14
1443	N722	max	11.765	14	.102	14	11.765	2	1.041e-3	2	0	16	9.5e-4	6
1444		min	-11.765	5	-.016	5	-11.765	9	-1.099e-3	10	0	1	-1.166e-3	14
1445	N723	max	11.765	14	.102	14	11.765	2	1.023e-3	2	0	16	9.474e-4	6
1446		min	-11.765	5	-.016	5	-11.765	9	-1.109e-3	10	0	1	-1.163e-3	14
1447	N724	max	11.765	14	.102	14	11.765	2	1.005e-3	2	0	16	9.443e-4	6
1448		min	-11.765	5	-.016	3	-11.765	9	-1.116e-3	10	0	1	-1.159e-3	14
1449	N725	max	11.765	14	.102	14	11.765	2	9.871e-4	2	0	16	9.411e-4	6
1450		min	-11.765	5	-.019	3	-11.765	9	-1.122e-3	10	0	1	-1.155e-3	14
1451	N726	max	11.765	14	.106	12	11.765	2	9.7e-4	2	0	16	9.381e-4	6
1452		min	-11.765	5	-.022	3	-11.765	9	-1.128e-3	10	0	1	-1.152e-3	14
1453	N727	max	11.765	14	.11	12	11.765	2	9.546e-4	2	0	16	9.353e-4	6
1454		min	-11.765	5	-.024	3	-11.765	9	-1.133e-3	10	0	1	-1.149e-3	14
1455	N728	max	11.765	14	.115	12	11.765	2	9.414e-4	2	0	16	9.329e-4	6
1456		min	-11.765	5	-.027	3	-11.765	9	-1.138e-3	10	0	1	-1.145e-3	14
1457	N729	max	11.765	14	.12	12	11.765	2	9.308e-4	2	0	16	9.308e-4	6
1458		min	-11.765	5	-.03	3	-11.765	9	-1.141e-3	10	0	1	-1.141e-3	14
1459	N730	max	11.765	14	.124	12	11.765	2	9.231e-4	2	0	16	9.292e-4	6
1460		min	-11.765	5	-.032	4	-11.765	9	-1.143e-3	10	0	1	-1.138e-3	14
1461	N731	max	11.765	14	.129	12	11.765	2	9.181e-4	2	0	16	9.281e-4	6
1462		min	-11.765	5	-.035	4	-11.765	9	-1.144e-3	10	0	1	-1.135e-3	14
1463	N732	max	11.765	14	.134	12	11.765	2	9.153e-4	2	0	16	9.275e-4	6
1464		min	-11.765	5	-.038	4	-11.765	9	-1.145e-3	10	0	1	-1.134e-3	14
1465	N733	max	11.765	14	.138	12	11.765	2	9.143e-4	2	0	16	9.279e-4	6
1466		min	-11.765	5	-.041	4	-11.765	9	-1.145e-3	10	0	1	-1.133e-3	14
1467	N734	max	11.765	14	.143	16	11.765	2	1.143e-3	2	0	16	9.209e-4	6
1468		min	-11.765	5	-.044	8	-11.765	9	-9.133e-4	10	0	1	-1.136e-3	14
1469	N735	max	11.765	14	.138	16	11.765	2	1.143e-3	2	0	16	9.205e-4	6
1470		min	-11.765	5	-.041	8	-11.765	9	-9.144e-4	10	0	1	-1.136e-3	14
1471	N736	max	11.765	14	.134	16	11.765	2	1.142e-3	2	0	16	9.209e-4	6
1472		min	-11.765	5	-.038	8	-11.765	9	-9.17e-4	10	0	1	-1.138e-3	14
1473	N737	max	11.765	14	.129	16	11.765	2	1.14e-3	2	0	16	9.218e-4	6
1474		min	-11.765	5	-.035	8	-11.765	9	-9.218e-4	10	0	1	-1.14e-3	14
1475	N738	max	11.765	14	.124	16	11.765	2	1.138e-3	2	0	16	9.231e-4	6
1476		min	-11.765	5	-.032	8	-11.765	9	-9.292e-4	10	0	1	-1.143e-3	14
1477	N739	max	11.765	14	.12	16	11.765	2	1.134e-3	2	0	16	9.247e-4	6
1478		min	-11.765	5	-.03	7	-11.765	9	-9.392e-4	10	0	1	-1.146e-3	14
1479	N740	max	11.765	14	.115	16	11.765	2	1.13e-3	2	0	16	9.264e-4	6
1480		min	-11.765	5	-.027	7	-11.765	9	-9.518e-4	10	0	1	-1.149e-3	14
1481	N741	max	11.765	14	.11	16	11.765	2	1.124e-3	2	0	16	9.284e-4	6
1482		min	-11.765	5	-.025	7	-11.765	9	-9.664e-4	10	0	1	-1.152e-3	14
1483	N742	max	11.765	14	.109	14	11.765	2	1.118e-3	2	0	16	9.305e-4	6
1484		min	-11.765	5	-.022	7	-11.765	9	-9.826e-4	10	0	1	-1.155e-3	14
1485	N743	max	11.765	14	.109	14	11.765	2	1.111e-3	2	0	16	9.326e-4	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1486		min	-11.765	5	-.021	5	-11.765	9	-9.998e-4	10	0	1	-1.157e-3	14
1487	N744	max	11.765	14	.109	14	11.765	2	1.102e-3	2	0	16	9.345e-4	6
1488		min	-11.765	5	-.021	5	-11.765	9	-1.017e-3	10	0	1	-1.16e-3	14
1489	N745	max	11.765	14	.109	14	11.765	2	1.092e-3	2	0	16	9.361e-4	6
1490		min	-11.765	5	-.021	5	-11.765	9	-1.034e-3	10	0	1	-1.162e-3	14
1491	N746	max	11.765	14	.109	14	11.765	2	1.08e-3	2	0	16	9.371e-4	6
1492		min	-11.765	5	-.021	5	-11.765	9	-1.051e-3	10	0	1	-1.164e-3	14
1493	N747	max	11.765	14	.109	14	11.765	2	1.066e-3	2	0	16	9.375e-4	6
1494		min	-11.765	5	-.021	5	-11.765	9	-1.066e-3	10	0	1	-1.164e-3	14
1495	N748	max	11.765	14	.109	14	11.765	2	1.051e-3	2	0	16	9.371e-4	6
1496		min	-11.765	5	-.021	5	-11.765	9	-1.08e-3	10	0	1	-1.164e-3	14
1497	N749	max	11.765	14	.109	14	11.765	2	1.034e-3	2	0	16	9.361e-4	6
1498		min	-11.765	5	-.021	5	-11.765	9	-1.092e-3	10	0	1	-1.162e-3	14
1499	N750	max	11.765	14	.109	14	11.765	2	1.017e-3	2	0	16	9.345e-4	6
1500		min	-11.765	5	-.021	5	-11.765	9	-1.102e-3	10	0	1	-1.16e-3	14
1501	N751	max	11.765	14	.109	14	11.765	2	9.998e-4	2	0	16	9.326e-4	6
1502		min	-11.765	5	-.021	5	-11.765	9	-1.111e-3	10	0	1	-1.157e-3	14
1503	N752	max	11.765	14	.109	14	11.765	2	9.826e-4	2	0	16	9.305e-4	6
1504		min	-11.765	5	-.022	3	-11.765	9	-1.118e-3	10	0	1	-1.155e-3	14
1505	N753	max	11.765	14	.11	12	11.765	2	9.664e-4	2	0	16	9.284e-4	6
1506		min	-11.765	5	-.025	3	-11.765	9	-1.124e-3	10	0	1	-1.152e-3	14
1507	N754	max	11.765	14	.115	12	11.765	2	9.518e-4	2	0	16	9.264e-4	6
1508		min	-11.765	5	-.027	3	-11.765	9	-1.13e-3	10	0	1	-1.149e-3	14
1509	N755	max	11.765	14	.12	12	11.765	2	9.392e-4	2	0	16	9.247e-4	6
1510		min	-11.765	5	-.03	3	-11.765	9	-1.134e-3	10	0	1	-1.146e-3	14
1511	N756	max	11.765	14	.124	12	11.765	2	9.292e-4	2	0	16	9.231e-4	6
1512		min	-11.765	5	-.032	4	-11.765	9	-1.138e-3	10	0	1	-1.143e-3	14
1513	N757	max	11.765	14	.129	12	11.765	2	9.218e-4	2	0	16	9.218e-4	6
1514		min	-11.765	5	-.035	4	-11.765	9	-1.14e-3	10	0	1	-1.14e-3	14
1515	N758	max	11.765	14	.134	12	11.765	2	9.17e-4	2	0	16	9.209e-4	6
1516		min	-11.765	5	-.038	4	-11.765	9	-1.142e-3	10	0	1	-1.138e-3	14
1517	N759	max	11.765	14	.138	12	11.765	2	9.144e-4	2	0	16	9.205e-4	6
1518		min	-11.765	5	-.041	4	-11.765	9	-1.143e-3	10	0	1	-1.136e-3	14
1519	N760	max	11.765	14	.143	12	11.765	2	9.133e-4	2	0	16	9.209e-4	6
1520		min	-11.765	5	-.044	4	-11.765	9	-1.143e-3	10	0	1	-1.136e-3	14
1521	N761	max	11.765	14	.148	16	11.765	2	1.141e-3	2	0	16	9.162e-4	6
1522		min	-11.765	5	-.046	8	-11.765	9	-9.127e-4	10	0	1	-1.138e-3	14
1523	N762	max	11.765	14	.143	16	11.765	2	1.141e-3	2	0	16	9.16e-4	6
1524		min	-11.765	5	-.044	8	-11.765	9	-9.137e-4	10	0	1	-1.138e-3	14
1525	N763	max	11.765	14	.138	16	11.765	2	1.14e-3	2	0	16	9.163e-4	6
1526		min	-11.765	5	-.041	8	-11.765	9	-9.163e-4	10	0	1	-1.14e-3	14
1527	N764	max	11.765	14	.134	16	11.765	2	1.138e-3	2	0	16	9.17e-4	6
1528		min	-11.765	5	-.038	8	-11.765	9	-9.209e-4	10	0	1	-1.142e-3	14
1529	N765	max	11.765	14	.129	16	11.765	2	1.135e-3	2	0	16	9.181e-4	6
1530		min	-11.765	5	-.035	8	-11.765	9	-9.281e-4	10	0	1	-1.144e-3	14
1531	N766	max	11.765	14	.124	16	11.765	2	1.132e-3	2	0	16	9.193e-4	6
1532		min	-11.765	5	-.033	8	-11.765	9	-9.377e-4	10	0	1	-1.147e-3	14
1533	N767	max	11.765	14	.12	16	11.765	2	1.127e-3	2	0	16	9.208e-4	6
1534		min	-11.765	5	-.03	7	-11.765	9	-9.498e-4	10	0	1	-1.15e-3	14
1535	N768	max	11.765	14	.115	14	11.765	2	1.121e-3	2	0	16	9.223e-4	6
1536		min	-11.765	5	-.027	7	-11.765	9	-9.639e-4	10	0	1	-1.152e-3	14
1537	N769	max	11.765	14	.116	14	11.765	2	1.114e-3	2	0	16	9.238e-4	6
1538		min	-11.765	5	-.025	5	-11.765	9	-9.795e-4	10	0	1	-1.154e-3	14
1539	N770	max	11.765	14	.116	14	11.765	2	1.107e-3	2	0	16	9.253e-4	6
1540		min	-11.765	5	-.026	5	-11.765	9	-9.961e-4	10	0	1	-1.156e-3	14
1541	N771	max	11.765	14	.116	14	11.765	2	1.098e-3	2	0	16	9.267e-4	6
1542		min	-11.765	5	-.026	5	-11.765	9	-1.013e-3	10	0	1	-1.158e-3	14

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1543	N772	max	11.765	14	.116	14	11.765	2	1.087e-3	2	0	16	9.278e-4	6
1544		min	-11.765	5	-.026	5	-11.765	9	-1.03e-3	10	0	1	-1.16e-3	14
1545	N773	max	11.765	14	.116	14	11.765	2	1.075e-3	2	0	16	9.285e-4	6
1546		min	-11.765	5	-.026	5	-11.765	9	-1.046e-3	10	0	1	-1.161e-3	14
1547	N774	max	11.765	14	.116	14	11.765	2	1.061e-3	2	0	16	9.287e-4	6
1548		min	-11.765	5	-.026	5	-11.765	9	-1.061e-3	10	0	1	-1.161e-3	14
1549	N775	max	11.765	14	.116	14	11.765	2	1.046e-3	2	0	16	9.285e-4	6
1550		min	-11.765	5	-.026	5	-11.765	9	-1.075e-3	10	0	1	-1.161e-3	14
1551	N776	max	11.765	14	.116	14	11.765	2	1.03e-3	2	0	16	9.278e-4	6
1552		min	-11.765	5	-.026	5	-11.765	9	-1.087e-3	10	0	1	-1.16e-3	14
1553	N777	max	11.765	14	.116	14	11.765	2	1.013e-3	2	0	16	9.267e-4	6
1554		min	-11.765	5	-.026	5	-11.765	9	-1.098e-3	10	0	1	-1.158e-3	14
1555	N778	max	11.765	14	.116	14	11.765	2	9.961e-4	2	0	16	9.253e-4	6
1556		min	-11.765	5	-.026	5	-11.765	9	-1.107e-3	10	0	1	-1.156e-3	14
1557	N779	max	11.765	14	.116	14	11.765	2	9.795e-4	2	0	16	9.238e-4	6
1558		min	-11.765	5	-.025	5	-11.765	9	-1.114e-3	10	0	1	-1.154e-3	14
1559	N780	max	11.765	14	.115	14	11.765	2	9.639e-4	2	0	16	9.223e-4	6
1560		min	-11.765	5	-.027	3	-11.765	9	-1.121e-3	10	0	1	-1.152e-3	14
1561	N781	max	11.765	14	.12	12	11.765	2	9.498e-4	2	0	16	9.208e-4	6
1562		min	-11.765	5	-.03	3	-11.765	9	-1.127e-3	10	0	1	-1.15e-3	14
1563	N782	max	11.765	14	.124	12	11.765	2	9.377e-4	2	0	16	9.193e-4	6
1564		min	-11.765	5	-.033	4	-11.765	9	-1.132e-3	10	0	1	-1.147e-3	14
1565	N783	max	11.765	14	.129	12	11.765	2	9.281e-4	2	0	16	9.181e-4	6
1566		min	-11.765	5	-.035	4	-11.765	9	-1.135e-3	10	0	1	-1.144e-3	14
1567	N784	max	11.765	14	.134	12	11.765	2	9.209e-4	2	0	16	9.17e-4	6
1568		min	-11.765	5	-.038	4	-11.765	9	-1.138e-3	10	0	1	-1.142e-3	14
1569	N785	max	11.765	14	.138	12	11.765	2	9.163e-4	2	0	16	9.163e-4	6
1570		min	-11.765	5	-.041	4	-11.765	9	-1.14e-3	10	0	1	-1.14e-3	14
1571	N786	max	11.765	14	.143	12	11.765	2	9.137e-4	2	0	16	9.16e-4	6
1572		min	-11.765	5	-.044	4	-11.765	9	-1.141e-3	10	0	1	-1.138e-3	14
1573	N787	max	11.765	14	.148	12	11.765	2	9.127e-4	2	0	16	9.162e-4	6
1574		min	-11.765	5	-.046	4	-11.765	9	-1.141e-3	10	0	1	-1.138e-3	14
1575	N788	max	11.765	14	.152	16	11.765	2	1.14e-3	2	0	16	9.136e-4	6
1576		min	-11.765	5	-.049	8	-11.765	9	-9.124e-4	10	0	1	-1.139e-3	14
1577	N789	max	11.765	14	.148	16	11.765	2	1.139e-3	2	0	16	9.134e-4	6
1578		min	-11.765	5	-.046	8	-11.765	9	-9.134e-4	10	0	1	-1.139e-3	14
1579	N790	max	11.765	14	.143	16	11.765	2	1.138e-3	2	0	16	9.137e-4	6
1580		min	-11.765	5	-.044	8	-11.765	9	-9.16e-4	10	0	1	-1.141e-3	14
1581	N791	max	11.765	14	.138	16	11.765	2	1.136e-3	2	0	16	9.144e-4	6
1582		min	-11.765	5	-.041	8	-11.765	9	-9.205e-4	10	0	1	-1.143e-3	14
1583	N792	max	11.765	14	.134	16	11.765	2	1.134e-3	2	0	16	9.153e-4	6
1584		min	-11.765	5	-.038	8	-11.765	9	-9.275e-4	10	0	1	-1.145e-3	14
1585	N793	max	11.765	14	.129	16	11.765	2	1.13e-3	2	0	16	9.165e-4	6
1586		min	-11.765	5	-.035	8	-11.765	9	-9.369e-4	10	0	1	-1.147e-3	14
1587	N794	max	11.765	14	.124	16	11.765	2	1.125e-3	2	0	16	9.178e-4	6
1588		min	-11.765	5	-.033	8	-11.765	9	-9.487e-4	10	0	1	-1.15e-3	14
1589	N795	max	11.765	14	.122	14	11.765	2	1.119e-3	2	0	16	9.192e-4	6
1590		min	-11.765	5	-.03	7	-11.765	9	-9.625e-4	10	0	1	-1.152e-3	14
1591	N796	max	11.765	14	.123	14	11.765	2	1.112e-3	2	0	16	9.205e-4	6
1592		min	-11.765	5	-.03	5	-11.765	9	-9.778e-4	10	0	1	-1.154e-3	14
1593	N797	max	11.765	14	.123	14	11.765	2	1.104e-3	2	0	16	9.218e-4	6
1594		min	-11.765	5	-.031	5	-11.765	9	-9.94e-4	10	0	1	-1.156e-3	14
1595	N798	max	11.765	14	.123	14	11.765	2	1.095e-3	2	0	16	9.229e-4	6
1596		min	-11.765	5	-.031	5	-11.765	9	-1.011e-3	10	0	1	-1.158e-3	14
1597	N799	max	11.765	14	.123	14	11.765	2	1.084e-3	2	0	16	9.238e-4	6
1598		min	-11.765	5	-.031	5	-11.765	9	-1.027e-3	10	0	1	-1.159e-3	14
1599	N800	max	11.765	14	.123	14	11.765	2	1.072e-3	2	0	16	9.244e-4	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1600		min	-11.765	5	-.031	5	-11.765	9	-1.043e-3	10	0	1	-1.16e-3	14
1601	N801	max	11.765	14	.123	14	11.765	2	1.058e-3	2	0	16	9.246e-4	6
1602		min	-11.765	5	-.031	5	-11.765	9	-1.058e-3	10	0	1	-1.16e-3	14
1603	N802	max	11.765	14	.123	14	11.765	2	1.043e-3	2	0	16	9.244e-4	6
1604		min	-11.765	5	-.031	5	-11.765	9	-1.072e-3	10	0	1	-1.16e-3	14
1605	N803	max	11.765	14	.123	14	11.765	2	1.027e-3	2	0	16	9.238e-4	6
1606		min	-11.765	5	-.031	5	-11.765	9	-1.084e-3	10	0	1	-1.159e-3	14
1607	N804	max	11.765	14	.123	14	11.765	2	1.011e-3	2	0	16	9.229e-4	6
1608		min	-11.765	5	-.031	5	-11.765	9	-1.095e-3	10	0	1	-1.158e-3	14
1609	N805	max	11.765	14	.123	14	11.765	2	9.94e-4	2	0	16	9.218e-4	6
1610		min	-11.765	5	-.031	5	-11.765	9	-1.104e-3	10	0	1	-1.156e-3	14
1611	N806	max	11.765	14	.123	14	11.765	2	9.778e-4	2	0	16	9.205e-4	6
1612		min	-11.765	5	-.03	5	-11.765	9	-1.112e-3	10	0	1	-1.154e-3	14
1613	N807	max	11.765	14	.122	14	11.765	2	9.625e-4	2	0	16	9.192e-4	6
1614		min	-11.765	5	-.03	3	-11.765	9	-1.119e-3	10	0	1	-1.152e-3	14
1615	N808	max	11.765	14	.124	12	11.765	2	9.487e-4	2	0	16	9.178e-4	6
1616		min	-11.765	5	-.033	4	-11.765	9	-1.125e-3	10	0	1	-1.15e-3	14
1617	N809	max	11.765	14	.129	12	11.765	2	9.369e-4	2	0	16	9.165e-4	6
1618		min	-11.765	5	-.035	4	-11.765	9	-1.13e-3	10	0	1	-1.147e-3	14
1619	N810	max	11.765	14	.134	12	11.765	2	9.275e-4	2	0	16	9.153e-4	6
1620		min	-11.765	5	-.038	4	-11.765	9	-1.134e-3	10	0	1	-1.145e-3	14
1621	N811	max	11.765	14	.138	12	11.765	2	9.205e-4	2	0	16	9.144e-4	6
1622		min	-11.765	5	-.041	4	-11.765	9	-1.136e-3	10	0	1	-1.143e-3	14
1623	N812	max	11.765	14	.143	12	11.765	2	9.16e-4	2	0	16	9.137e-4	6
1624		min	-11.765	5	-.044	4	-11.765	9	-1.138e-3	10	0	1	-1.141e-3	14
1625	N813	max	11.765	14	.148	12	11.765	2	9.134e-4	2	0	16	9.134e-4	6
1626		min	-11.765	5	-.046	4	-11.765	9	-1.139e-3	10	0	1	-1.139e-3	14
1627	N814	max	11.765	14	.152	12	11.765	2	9.124e-4	2	0	16	9.136e-4	6
1628		min	-11.765	5	-.049	4	-11.765	9	-1.14e-3	10	0	1	-1.139e-3	14
1629	N815	max	11.765	14	.157	16	11.765	2	1.139e-3	2	0	16	9.126e-4	6
1630		min	-11.765	5	-.052	8	-11.765	9	-9.126e-4	10	0	1	-1.139e-3	14
1631	N816	max	11.765	14	.152	16	11.765	2	1.139e-3	2	0	16	9.124e-4	6
1632		min	-11.765	5	-.049	8	-11.765	9	-9.136e-4	10	0	1	-1.14e-3	14
1633	N817	max	11.765	14	.148	16	11.765	2	1.138e-3	2	0	16	9.127e-4	6
1634		min	-11.765	5	-.046	8	-11.765	9	-9.162e-4	10	0	1	-1.141e-3	14
1635	N818	max	11.765	14	.143	16	11.765	2	1.136e-3	2	0	16	9.133e-4	6
1636		min	-11.765	5	-.044	8	-11.765	9	-9.209e-4	10	0	1	-1.143e-3	14
1637	N819	max	11.765	14	.138	16	11.765	2	1.133e-3	2	0	16	9.143e-4	6
1638		min	-11.765	5	-.041	8	-11.765	9	-9.279e-4	10	0	1	-1.145e-3	14
1639	N820	max	11.765	14	.134	16	11.765	2	1.129e-3	2	0	16	9.155e-4	6
1640		min	-11.765	5	-.038	8	-11.765	9	-9.373e-4	10	0	1	-1.147e-3	14
1641	N821	max	11.765	14	.129	14	11.765	2	1.125e-3	2	0	16	9.169e-4	6
1642		min	-11.765	5	-.036	8	-11.765	9	-9.49e-4	10	0	1	-1.15e-3	14
1643	N822	max	11.765	14	.129	14	11.765	2	1.119e-3	2	0	16	9.183e-4	6
1644		min	-11.765	5	-.035	6	-11.765	9	-9.626e-4	10	0	1	-1.152e-3	14
1645	N823	max	11.765	14	.129	14	11.765	2	1.112e-3	2	0	16	9.196e-4	6
1646		min	-11.765	5	-.035	6	-11.765	9	-9.777e-4	10	0	1	-1.154e-3	14
1647	N824	max	11.765	14	.13	14	11.765	2	1.104e-3	2	0	16	9.209e-4	6
1648		min	-11.765	5	-.036	6	-11.765	9	-9.937e-4	10	0	1	-1.156e-3	14
1649	N825	max	11.765	14	.13	14	11.765	2	1.094e-3	2	0	16	9.221e-4	6
1650		min	-11.765	5	-.036	6	-11.765	9	-1.01e-3	10	0	1	-1.158e-3	14
1651	N826	max	11.765	14	.13	14	11.765	2	1.083e-3	2	0	16	9.229e-4	6
1652		min	-11.765	5	-.036	6	-11.765	9	-1.027e-3	10	0	1	-1.159e-3	14
1653	N827	max	11.765	14	.13	14	11.765	2	1.071e-3	2	0	16	9.235e-4	6
1654		min	-11.765	5	-.036	6	-11.765	9	-1.042e-3	10	0	1	-1.16e-3	14
1655	N828	max	11.765	14	.13	14	11.765	2	1.057e-3	2	0	16	9.237e-4	6
1656		min	-11.765	5	-.036	6	-11.765	9	-1.057e-3	10	0	1	-1.16e-3	14

Envelope Joint Displacements (Continued)

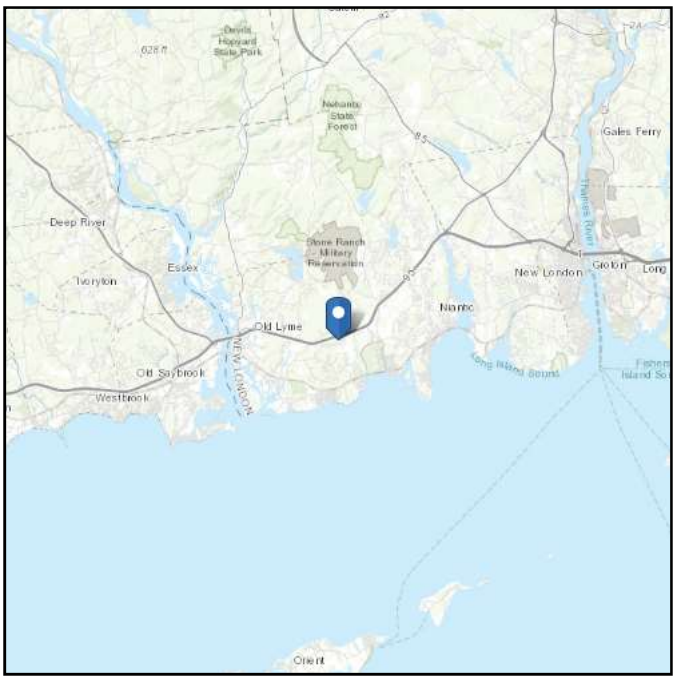
	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1657	N829	max	11.765	14	.13	14	11.765	2	1.042e-3	2	0	16	9.235e-4	6
1658		min	-11.765	5	-.036	6	-11.765	9	-1.071e-3	10	0	1	-1.16e-3	14
1659	N830	max	11.765	14	.13	14	11.765	2	1.027e-3	2	0	16	9.229e-4	6
1660		min	-11.765	5	-.036	6	-11.765	9	-1.083e-3	10	0	1	-1.159e-3	14
1661	N831	max	11.765	14	.13	14	11.765	2	1.01e-3	2	0	16	9.221e-4	6
1662		min	-11.765	5	-.036	6	-11.765	9	-1.094e-3	10	0	1	-1.158e-3	14
1663	N832	max	11.765	14	.13	14	11.765	2	9.937e-4	2	0	16	9.209e-4	6
1664		min	-11.765	5	-.036	6	-11.765	9	-1.104e-3	10	0	1	-1.156e-3	14
1665	N833	max	11.765	14	.129	14	11.765	2	9.777e-4	2	0	16	9.196e-4	6
1666		min	-11.765	5	-.035	6	-11.765	9	-1.112e-3	10	0	1	-1.154e-3	14
1667	N834	max	11.765	14	.129	14	11.765	2	9.626e-4	2	0	16	9.183e-4	6
1668		min	-11.765	5	-.035	6	-11.765	9	-1.119e-3	10	0	1	-1.152e-3	14
1669	N835	max	11.765	14	.129	14	11.765	2	9.49e-4	2	0	16	9.169e-4	6
1670		min	-11.765	5	-.036	4	-11.765	9	-1.125e-3	10	0	1	-1.15e-3	14
1671	N836	max	11.765	14	.134	12	11.765	2	9.373e-4	2	0	16	9.155e-4	6
1672		min	-11.765	5	-.038	4	-11.765	9	-1.129e-3	10	0	1	-1.147e-3	14
1673	N837	max	11.765	14	.138	12	11.765	2	9.279e-4	2	0	16	9.143e-4	6
1674		min	-11.765	5	-.041	4	-11.765	9	-1.133e-3	10	0	1	-1.145e-3	14
1675	N838	max	11.765	14	.143	12	11.765	2	9.209e-4	2	0	16	9.133e-4	6
1676		min	-11.765	5	-.044	4	-11.765	9	-1.136e-3	10	0	1	-1.143e-3	14
1677	N839	max	11.765	14	.148	12	11.765	2	9.162e-4	2	0	16	9.127e-4	6
1678		min	-11.765	5	-.046	4	-11.765	9	-1.138e-3	10	0	1	-1.141e-3	14
1679	N840	max	11.765	14	.152	12	11.765	2	9.136e-4	2	0	16	9.124e-4	6
1680		min	-11.765	5	-.049	4	-11.765	9	-1.139e-3	10	0	1	-1.14e-3	14
1681	N841	max	11.765	14	.157	12	11.765	2	9.126e-4	2	0	16	9.126e-4	6
1682		min	-11.765	5	-.052	4	-11.765	9	-1.139e-3	10	0	1	-1.139e-3	14

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 168.4 ft (NAVD 88)
Latitude: 41.317572
Longitude: -72.269964



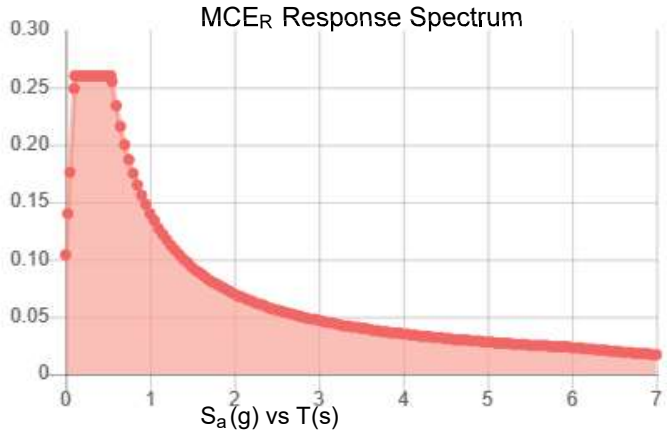
Seismic

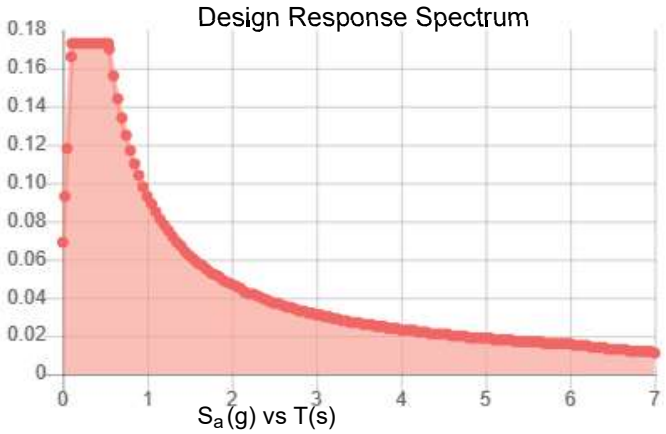
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.163	S_{DS} :	0.173
S_1 :	0.058	S_{D1} :	0.093
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.081
S_{MS} :	0.26	PGA_M :	0.13
S_{M1} :	0.14	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Mon Apr 29 2019

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Mon Apr 29 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Exhibit E

Mount Analysis

April 27, 2020

Darcy Tarr
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277
(704) 405-6589

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351
Structures@tepgroup.net

Subject:	**Mount Modification Analysis**	
Carrier Designation:	***AT&T Mobility* Reconfiguration**	
	Client Site Number:	65079
	Client Site Name:	Old Lyme Hatchetts Hill
	FA Location Code:	10035302
Crown Castle Designation:	**Crown Castle BU Number:**	823529
	Crown Castle Site Name:	CT038/EastLyme/ I-95/ X72
	Crown Castle JDE Job Number:	605374
	Crown Castle Order Number:	517072 Rev. 0
Engineering Firm Designation:	**TEP Project Number:**	248058.408525
Site Data:	**38 Hatchetts Hill Road, Old Lyme, New London County, CT 06371** **Latitude *41° 19' 3.26"*, Longitude *-72° 16' 11.87"***	
Structure Information:	**Tower Height & Type:**	190± ft Monopole
	Mount Elevation:	165 ft
	Mount Width & Type:	12.5 ft Platform w/ Support Rail

Dear Darcy Tarr,

Tower Engineering Professionals is pleased to submit this **"Mount Modification Analysis"** to determine the structural integrity of AT&T Mobility's antenna mounting system with proposed appurtenance and equipment addition on the above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis, we have determined the mount stress level to be:

Platform w/ Support Rail **Sufficient Capacity**

The analysis has been performed in accordance with the 2018 International Building Code based upon an ultimate 3-second gust wind speed of 135 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Pedro Lopez / GHM

Respectfully submitted by:

Aaron T. Rucker, P.E.
Structural Division Manager

Electronic Copy

04/27/2020

TABLE OF CONTENTS

1) INTRODUCTION

The mount is an existing 12.5-ft Platform w/ Support Rail mount.

2) ANALYSIS CRITERIA

Building Code:	2018 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	135 mph
Exposure Category:	B
Topographic Category at Base:	1
Topographic Category at Mount:	1
Ice Thickness:	1.00 in
Wind Speed with Ice:	50 mph
Seismic Design Category:	B
Seismic S_s:	0.164
Seismic S_1:	0.059
Live Loading Wind Speed:	30 mph
Live Loading at Mid/End-Points:	250 lb
Man Live Loading at Mount Pipes:	500 lb

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
165	165	3	Andrew	SBNHH-1D65A	Platform w/ Support Rail Mount
		3	CCI Antennas	DMP65R-BU4D	
		3	CCI Antennas	OPA65R-BU4D	
		3	Ericsson	RRUS 4449 B5/B12	
		3	Ericsson	RRUS 4478 B14	
		3	Ericsson	RRUS 8843 B2/B66A	
		3	Powerwave	TT19-08BP111-001	
		1	Raycap	DC6-48-60-18-8F	
		1	Raycap	DC9-48-60-24-8C-EV	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Loading Application	AT&T Mobility	Order 517072 Rev. 0	CCIsites
Previous Mount Analysis	Tower Engineering Professionals	9035303	CCIsites

3.1) Analysis Method

RISA-3D (Version 17.0.2), a commercially available analysis software package, was used to create a three-dimensional model of the mount and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A and Appendix C.

TEP Mount Analysis Tool, a tool internally developed by TEP using Microsoft Excel, was used to calculate member loading for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis (Revision C)*.

In addition, this analysis is in accordance with AT&T's *Mount Technical Guidance – Revision 15*

3.2) Assumptions

1) The mount was built in accordance with the manufacturer's specifications.
2) The mount has been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, mounts and other appurtenances are as specified in Table 1. All mount components have been assumed to be in sufficient condition to carry their full design capacity for this analysis. Refer to the issued mapping for any structural and/or maintenance issues found during our site visit if applicable.
4) All mount components are in sufficient condition to carry their full design capacity.
5) TEP did not analyze the collar mount connection to the pole and assumes it to have sufficient structural capacity to transfer the applied forces from the mount to the tower.
6) All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA-3D output for confirmation on grades used in this analysis.

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform w/ Support Rail Mount)

Notes	Component	Critical Member	Mount Centerline (ft)	% Capacity	Pass / Fail
1	Face Horizontals	SF1-TH	165	61.7	Pass
1	Support Rails	FF-HR	165	18.7	Pass
1	Support Arms	SA-1	165	31.9	Pass
1	Internals	GSI-1	165	72.4	Pass
1	Mount Pipes	MP-2	165	44.3	Pass
-	Kickers	K1	165	11.7	Pass
2	Connection Bolts	-	165	12.5	Pass
2	Connection Plate	-	165	32.7	Pass

Structure Rating (max from all components) =	72.4%

Notes:
1) See additional documentation in "Appendix C - Analysis Output" for calculations supporting the % capacity listed.
2) See additional documentation in "Appendix D - Additional Calculations" for calculations supporting the % capacity listed.

Table 4 - Tieback Connection Data Table

Tower Connection Node No.	Existing/ Proposed	Resultant End Reaction (lb)	Connected Member Type	Connected Member Size	Member Compressive Capacity (lb)[3]	Notes
-	-	-	-	-	-	-

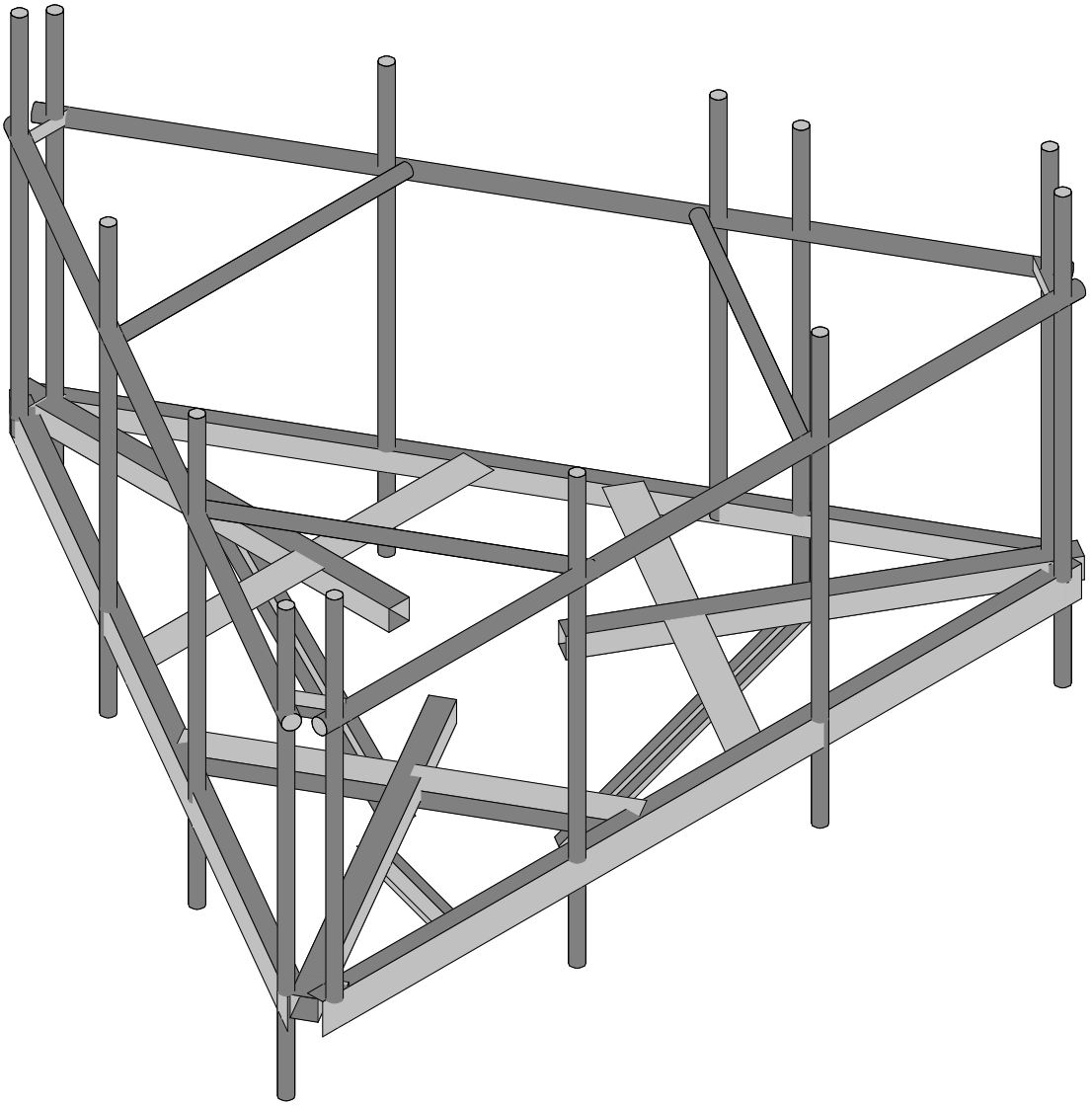
Notes:
1) Tieback connection point is within 25% of either end of the connected tower member.
2) Tower connection point is NOT within 25% of either end of the connected tower member.
3) Reduced member compressive capacity according to CED-STD-10294 *Standard for Installation of Mounts and Appurtenances*.

4.1) Recommendations

1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
2) The modifications depicted in "Appendix E – Mount Modification Design Drawings" shall be installed and, upon completion, inspected. The mount has sufficient capacity to support the proposed loading configuration once the proposed modifications listed below are completed.
   a) (1) SitePro PRK-1245 Platform Reinforcement Kit, or approved equivalent
   b) (1) SitePro HRK12-3HD Handrail Reinforcement Kit, or approved equivalent

APPENDIX A

WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

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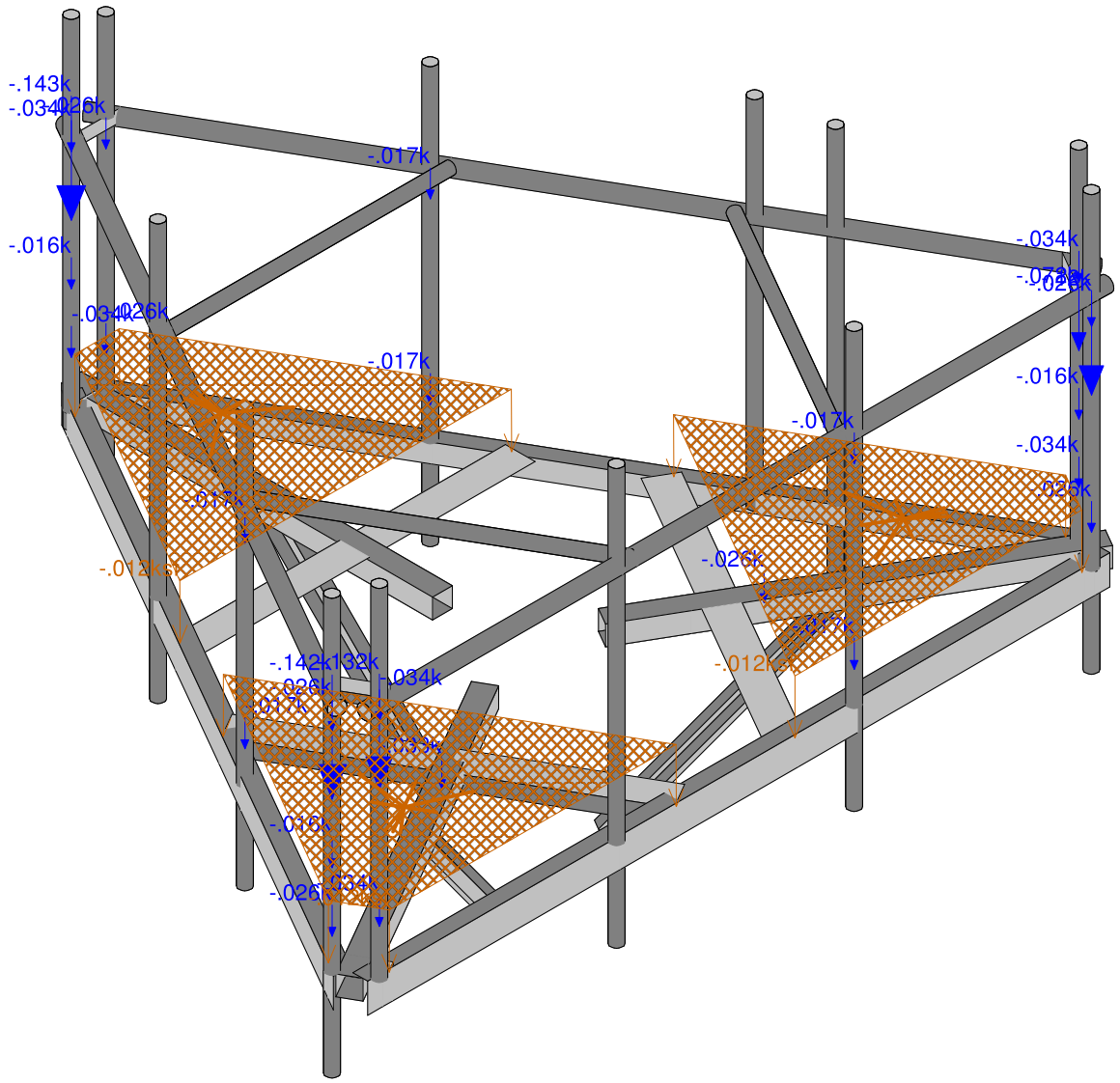

Loads: BLC 1, Dead
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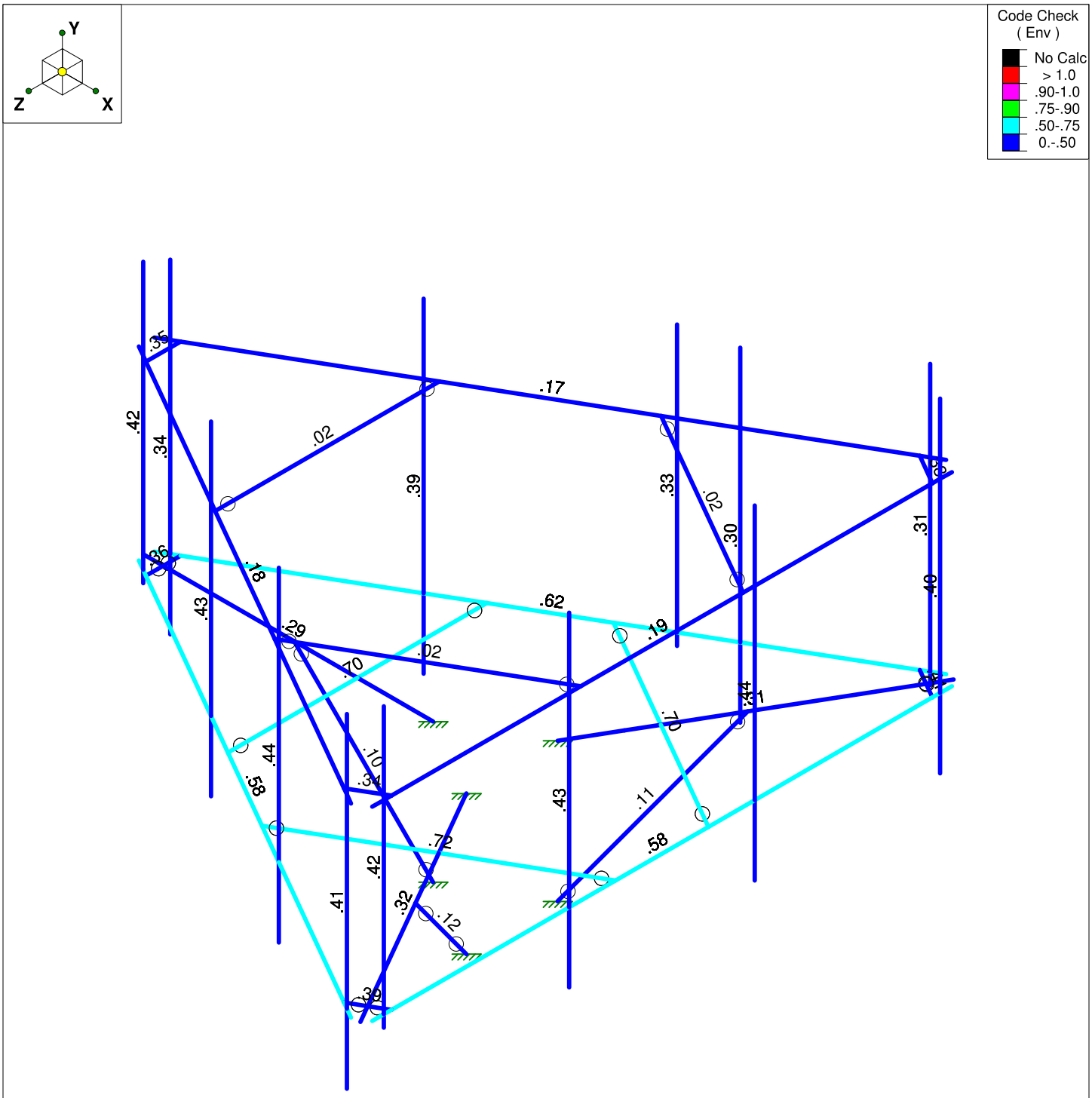

Member Code Checks Displayed (Enveloped)
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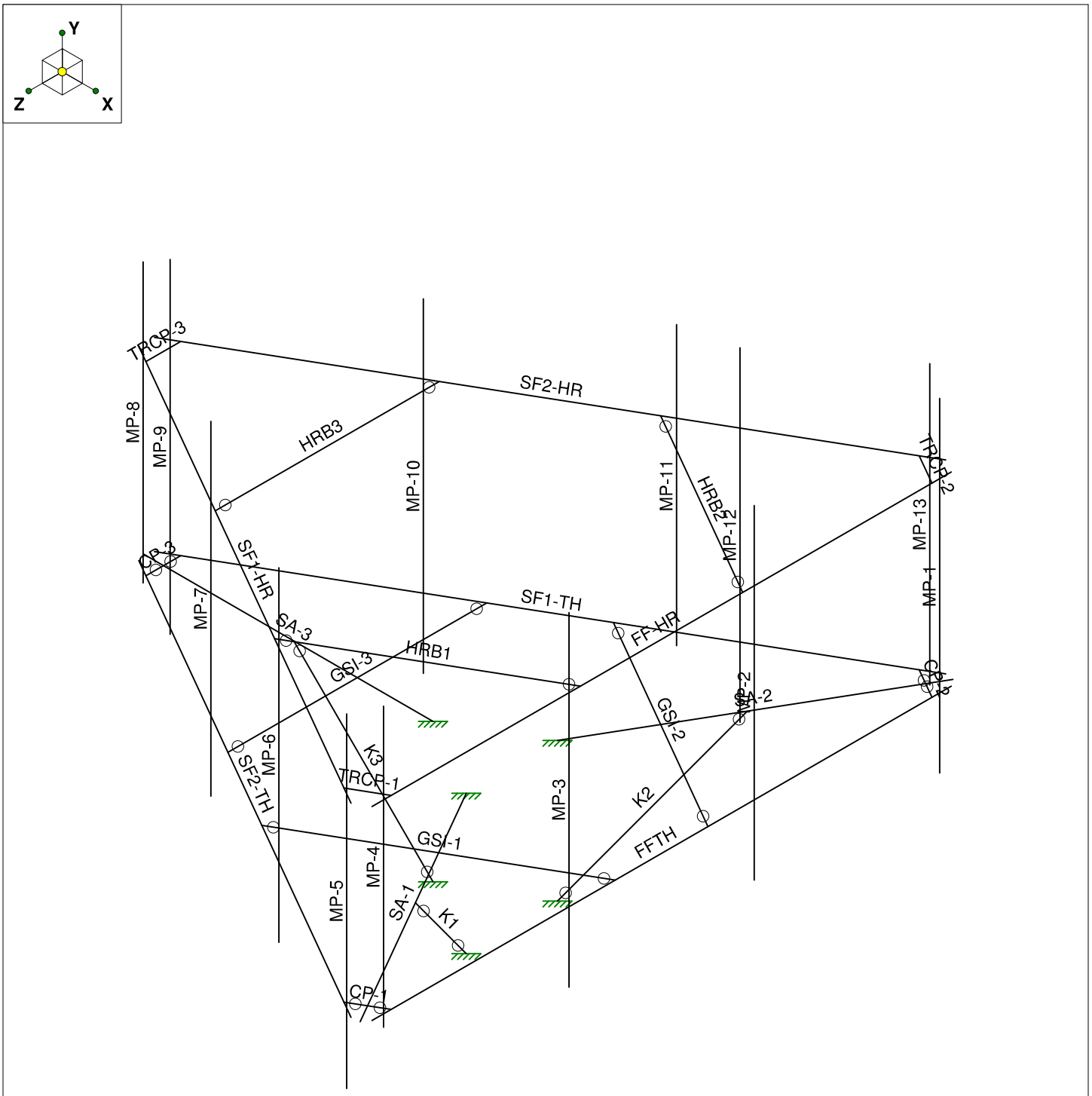
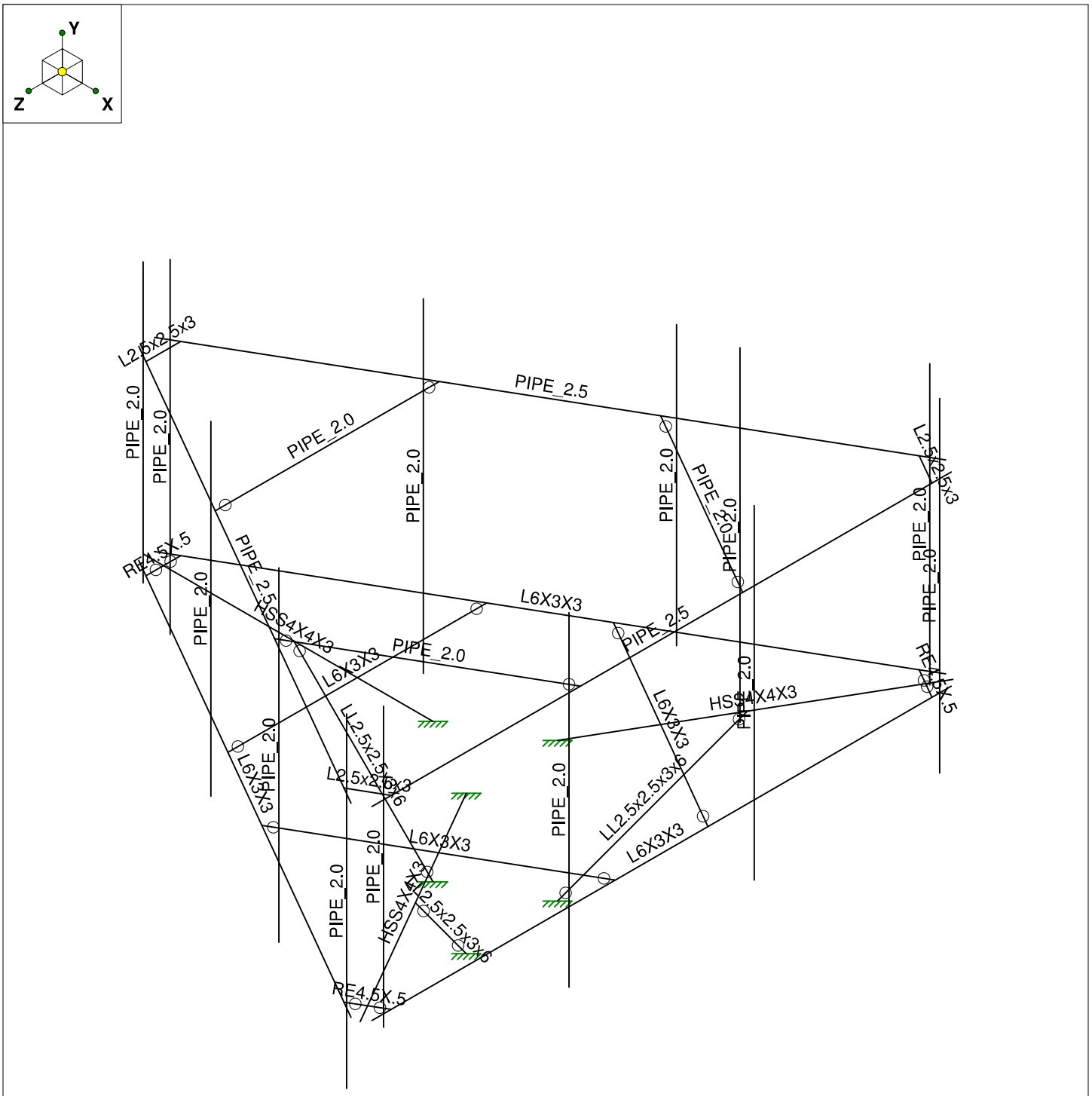


Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 823529	SK - 4
PAL		Apr 27, 2020 at 4:40 PM
TEP No. 248058.408525		CCI BU No. 823529.r3d



Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 823529	SK - 5
PAL		Apr 27, 2020 at 4:41 PM
TEP No. 248058.408525		CCI BU No. 823529.r3d

APPENDIX B

SOFTWARE INPUT CALCULATIONS

TOWER ENGINEERING PROFESSIONALS

CCI BU No. 823529

TEP No.	248058.408525	
Analysis By:	PAL	4/27/2020
Checked By:	GHM	4/27/2020

Code Revisions:	TIA-222-H	IBC 2018
Tower Type:	Monopole	

Wind Inputs:

Ult. Wind Velocity:	135.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	50.0	mph
Base Ice Thickness:	1.00	inches
Mount Centerline:	165.0	ft
Antenna Centerline:	165.0	ft
Exposure Category:	B	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	168.4	ft

Wind Calculations:

K_{zt}:	1.000	Section 2.6.6
K_d:	0.950	
$K_{z\text{-}Mount}$:	1.140	Section 2.6.5.2
$K_{z\text{-}Antenna}$:	1.140	Section 2.6.5.2
K_{iz}:	1.175	Section 2.6.10
Ice Thickness:	1.175	inches - Section 2.6.10

Without Ice - (psf)		With Ice - (psf)	
$(q_zG_h)_{Mount}$:	50.23	**$(q_zG_h)_{Mount}$:**	6.89
$(q_zG_h)_{Antenna}$:	50.23	**$(q_zG_h)_{Antenna}$:**	6.89

TOWER ENGINEERING PROFESSIONALS

CCI BU No. 823529

TEP No.	248058.408525	
Analysis By:	PAL	4/27/2020
Checked By:	GHM	4/27/2020

Antenna Loads are Calculated in Accordance with TIA-222-H

Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

										Distance from start node of the member		
MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
CCI Antennas	OPA65R-BU4D	48.00	21.00	7.80	52.50	0.00	1	Flat	MP-1	2.00	5.00	
Ericsson	RRUS 4478 B14	16.50	13.40	7.70	59.90	0.00	2	Flat	MP-1	3.00		
Andrew	SBNHH-1D65A	55.60	11.90	7.10	33.50	0.00	1	Flat	MP-2	2.00	5.00	
CCI Antennas	DMP65R-BU4D	48.00	20.70	7.70	67.90	0.00	1	Flat	MP-4	2.00	5.00	
Ericsson	RRUS 4478 B14	16.50	13.40	7.70	59.90	0.00	1	Flat	MP-4	3.00		
Ericsson	RRUS 8843 B2/B66A	14.90	13.20	10.90	72.00	0.00	1	Flat	MP-4	3.00		
CCI Antennas	OPA65R-BU4D	48.00	21.00	7.80	52.50	120.00	1	Flat	MP-5	2.00	5.00	
Ericsson	RRUS 4449 B5/B12	17.90	13.19	9.44	71.00	120.00	2	Flat	MP-5	3.00		
Powerwave Technologies	TT19-08BP111-001	9.90	6.70	5.40	16.00	120.00	1	Flat	MP-5	4.00		
Andrew	SBNHH-1D65A	55.60	11.90	7.10	33.50	120.00	1	Flat	MP-6	2.00	5.00	
CCI Antennas	DMP65R-BU4D	48.00	20.70	7.70	67.90	120.00	1	Flat	MP-8	2.00	5.00	
Ericsson	RRUS 4449 B5/B12	17.90	13.19	9.44	71.00	120.00	1	Flat	MP-8	3.00		
Ericsson	RRUS 8843 B2/B66A	14.90	13.20	10.90	72.00	120.00	1	Flat	MP-8	3.00		
Powerwave Technologies	TT19-08BP111-001	9.90	6.70	5.40	16.00	120.00	1	Flat	MP-8	4.00		
CCI Antennas	OPA65R-BU4D	48.00	21.00	7.80	52.50	240.00	1	Flat	MP-9	2.00	5.00	
Andrew	SBNHH-1D65A	55.60	11.90	7.10	33.50	240.00	1	Flat	MP-10	2.00	5.00	
CCI Antennas	DMP65R-BU4D	48.00	20.70	7.70	67.90	240.00	1	Flat	MP-13	2.00	5.00	
Ericsson	RRUS 8843 B2/B66A	14.90	13.20	10.90	72.00	240.00	1	Flat	MP-13	3.00		
Powerwave Technologies	TT19-08BP111-001	9.90	6.70	5.40	16.00	240.00	1	Flat	MP-13	4.00		
Raycap	DC6-48-60-18-8F	31.25	11.00	11.00	32.80	0.00	1	Round	SA-1	2.00		
Raycap	DC9-48-60-24-8C-EV	31.41	10.24	18.28	26.20	300.00	1	Flat	SA-2	2.00		

Member Forces are Calculated in Accordance with TIA-222-H

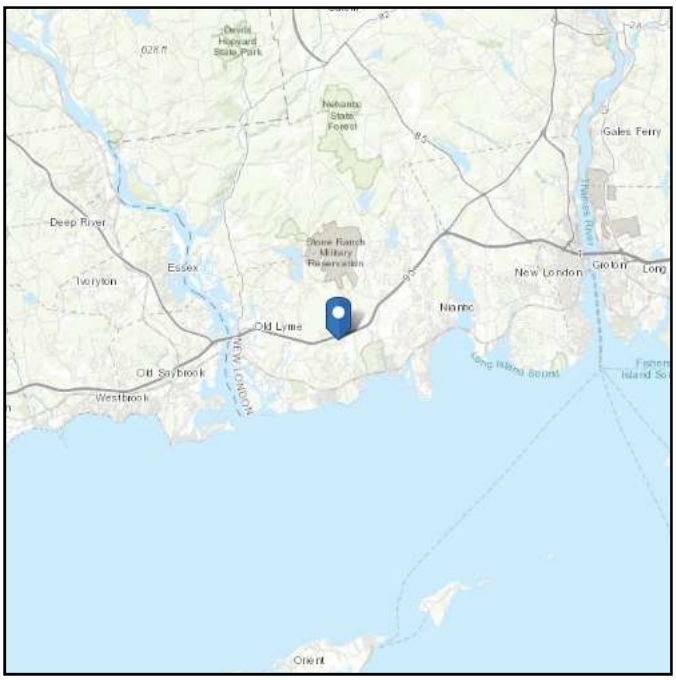
Member Name	Wind Proj. (in)	Length (in)	Shape	θ (°)	Perimeter (in)
CP-1	0.500	9.00	Flat	30.00	10.00
CP-2	0.500	9.00	Flat	-30.00	10.00
CP-3	0.500	9.00	Flat	90.00	10.00
FF-HR	2.875	150.00	Round	90.00	9.03
FFTH	6.000	150.00	Flat	90.00	18.00
GSI-1	3.000	67.00	Flat	30.00	12.00
GSI-2	3.000	67.00	Flat	-30.00	12.00
GSI-3	3.000	67.00	Flat	90.00	12.00
HRB1	2.375	58.00	Round	30.00	7.46
HRB2	2.375	58.00	Round	-30.00	7.46
HRB3	2.375	58.00	Round	90.00	7.46
K1	2.500	50.91	Flat		15.00
K2	2.500	50.91	Flat		15.00
K3	2.500	50.91	Flat		15.00
MP-1	2.375	84.00	Round		7.46
MP-2	2.375	84.00	Round		7.46
MP-3	2.375	84.00	Round		7.46
MP-4	2.375	72.00	Round		7.46
MP-5	2.375	84.00	Round		7.46
MP-6	2.375	84.00	Round		7.46
MP-7	2.375	84.00	Round		7.46
MP-8	2.375	72.00	Round		7.46
MP-9	2.375	84.00	Round		7.46
MP-10	2.375	84.00	Round		7.46
MP-11	2.375	72.00	Round		7.46
MP-12	2.375	84.00	Round		7.46
MP-13	2.375	72.00	Round		7.46
SA-1	4.000	75.00	Flat	-60.00	16.00
SA-2	4.000	75.00	Flat	60.00	16.00
SA-3	4.000	75.00	Flat	0.00	16.00
SF1-HR	2.875	150.00	Round	-30.00	9.03
SF1-TH	6.000	150.00	Flat	30.00	18.00
SF2-HR	2.875	150.00	Round	30.00	9.03
SF2-TH	6.000	150.00	Flat	-30.00	18.00
TRCP-1	2.500	9.00	Flat	30.00	10.00
TRCP-2	2.500	9.00	Flat	-30.00	10.00
TRCP-3	2.500	9.00	Flat	90.00	10.00

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 168.4 ft (NAVD 88)
Latitude: 41.317572
Longitude: -72.269964



Wind

Results:

Wind Speed:	126 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	97 Vmph
100-year MRI	103 Vmph
Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4
Date Accessed:	Tue Apr 14 2020

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

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

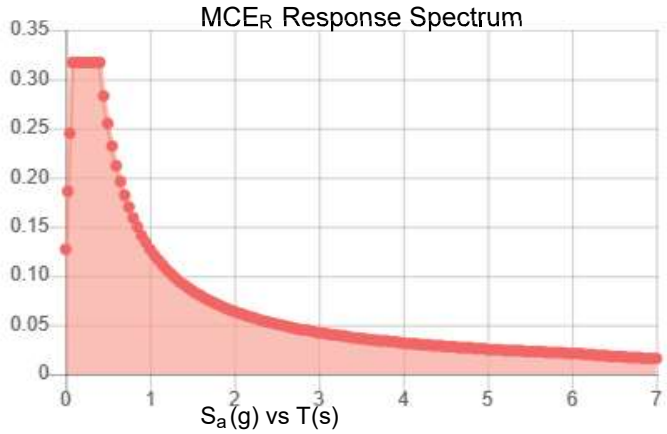
Seismic

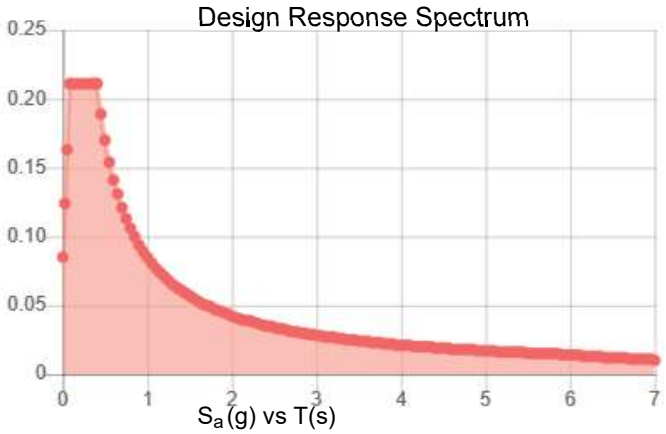
Site Soil Class: D - Stiff Soil

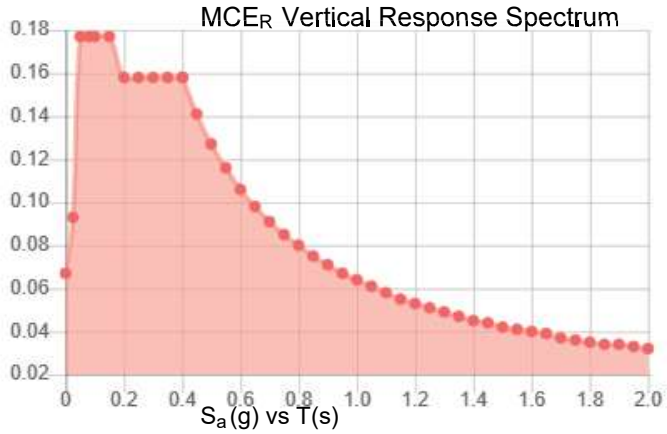
Results:

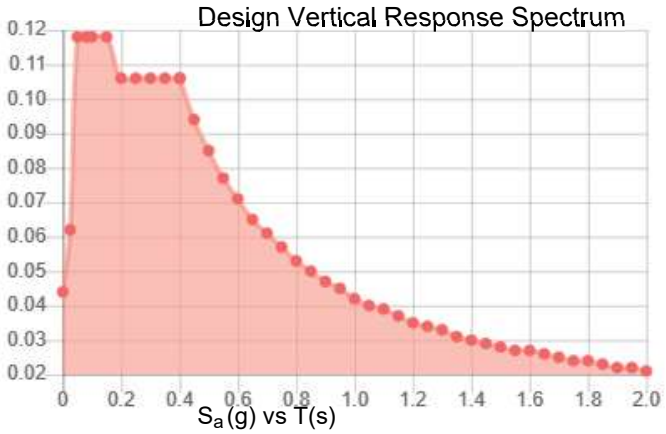
S_S :	0.198	S_{D1} :	0.085
S_1 :	0.053	T_L :	6
F_a :	1.6	PGA :	0.11
F_v :	2.4	PGA_M :	0.174
S_{MS} :	0.317	F_{PGA} :	1.58
S_{M1} :	0.127	I_e :	1
S_{DS} :	0.211	C_v :	0.7

Seismic Design Category B









Data Accessed: Tue Apr 14 2020

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Tue Apr 14 2020

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

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

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISAConnection Code	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

Apr 27, 2020
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(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	L6X3X3	None	None	A36 Gr.36	Typical	1.652	1.159	6.409	.019
2	Support Arm	HSS4X4X3	None	None	A500 Gr.B Re...	Typical	2.58	6.21	6.21	10
3	Internal	L6X3X3	None	None	A36 Gr.36	Typical	1.652	1.159	6.409	.019
4	Corner Plate	RE4.5X.5	None	None	A36 Gr.36	Typical	2.25	.047	3.797	.174
5	Mount Pipe	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	Top Handrail	PIPE_2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
7	Handrail Bracing	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Handrail Connection	L2.5x2.5x3	None	None	A36 Gr.36	Typical	.901	.535	.535	.011
9	Kickers	LL2.5x2.5x3x6	None	None	A36 Gr.36	Typical	1.8	3.09	1.07	.023

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Vertical	P1000 Unistrut	Column	None	A653 SS Gr....	Typical	.554	.19	.21	.002

Material Takeoff

	Material	Size	Pieces	Length[ft]	Weight[K]
1	Hot Rolled Steel				
2	A36 Gr.36	L2.5x2.5x3	3	2.2	0
3	A36 Gr.36	L6X3X3	6	54.2	.3
4	A36 Gr.36	LL2.5x2.5x3x6	3	12.7	0
5	A36 Gr.36	RE4.5X.5	3	2.2	0
6	A500 Gr.B Rect	HSS4X4X3	3	18.8	.2
7	A53 Gr.B	PIPE_2.0	16	101.5	.4
8	A53 Gr.B	PIPE_2.5	3	37.5	.2
9	Total HR Steel		37	229.2	1.1

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	SA3	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	SA1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	SA2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N101A						
5	N102A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N103A						
7	N104A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
8	N105A						
9	N106A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	CP-1	N49	N43		90	Corner Plate	None	None	A36 Gr.36	Typical
2	CP-2	N41	N47		90	Corner Plate	None	None	A36 Gr.36	Typical
3	CP-3	N45	N51		90	Corner Plate	None	None	A36 Gr.36	Typical
4	FF-HR	N45A	N43A		180	Top Handrail	None	None	A53 Gr.B	Typical
5	FFTH	N42	N40		180	Face Horizontal	None	None	A36 Gr.36	Typical
6	GSI-1	GSI1	GSI4		90	Internal	None	None	A36 Gr.36	Typical
7	GSI-2	GSI5	GSI2		90	Internal	None	None	A36 Gr.36	Typical
8	GSI-3	GSI3	GSI6		90	Internal	None	None	A36 Gr.36	Typical
9	HRB1	N99A	N96A			Handrail Bracing	None	None	A53 Gr.B	Typical
10	HRB2	N95A	N98A			Handrail Bracing	None	None	A53 Gr.B	Typical
11	HRB3	N97A	N100A			Handrail Bracing	None	None	A53 Gr.B	Typical
12	K1	N103A	N104A			Kickers	None	None	A36 Gr.36	Typical
13	K2	N105A	N106A			Kickers	None	None	A36 Gr.36	Typical
14	K3	N101A	N102A			Kickers	None	None	A36 Gr.36	Typical
15	MP-1	MP-1A	MP-1B			Mount Pipe	None	None	A53 Gr.B	Typical
16	MP-2	MP-2A	MP-2B			Mount Pipe	None	None	A53 Gr.B	Typical
17	MP-3	MP-3A	MP-3B			Mount Pipe	None	None	A53 Gr.B	Typical
18	MP-4	MP-4A	MP-4B			Mount Pipe	None	None	A53 Gr.B	Typical
19	MP-5	N67A	N71			Mount Pipe	None	None	A53 Gr.B	Typical
20	MP-6	N68A	N72			Mount Pipe	None	None	A53 Gr.B	Typical
21	MP-7	N69A	N73			Mount Pipe	None	None	A53 Gr.B	Typical
22	MP-8	N70A	N74			Mount Pipe	None	None	A53 Gr.B	Typical
23	MP-9	N59	N63			Mount Pipe	None	None	A53 Gr.B	Typical
24	MP-10	N60	N64			Mount Pipe	None	None	A53 Gr.B	Typical
25	MP-11	N61	N65			Mount Pipe	None	None	A53 Gr.B	Typical
26	MP-12	N75	N76			Mount Pipe	None	None	A53 Gr.B	Typical
27	MP-13	N62	N66			Mount Pipe	None	None	A53 Gr.B	Typical
28	SA-1	SA1	FF2			Support Arm	None	None	A500 Gr.B Re...	Typical
29	SA-2	SA2	FF1			Support Arm	None	None	A500 Gr.B Re...	Typical

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

Apr 27, 2020
4:41 PM
Checked By: GHM

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
30	SA-3	SA3	FF5			Support Arm	None	None	A500 Gr.B Re...	Typical
31	SF1-HR	N58	N57		180	Top Handrail	None	None	A53 Gr.B	Typical
32	SF1-TH	N68	N67		180	Face Horizontal	None	None	A36 Gr.36	Typical
33	SF2-HR	N56	N55		180	Top Handrail	None	None	A53 Gr.B	Typical
34	SF2-TH	N70	N69		180	Face Horizontal	None	None	A36 Gr.36	Typical
35	TRCP-1	N49A	N46			Handrail Connection	None	None	A36 Gr.36	Typical
36	TRCP-2	N44	N48			Handrail Connection	None	None	A36 Gr.36	Typical
37	TRCP-3	N47A	N50			Handrail Connection	None	None	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Options	Analysis ...	Inactive	Seismi...
1	CP-1	BenPIN	BenPIN				Yes	** NA **			None
2	CP-2	BenPIN	BenPIN				Yes	** NA **			None
3	CP-3	BenPIN	BenPIN				Yes	** NA **			None
4	FF-HR						Yes	** NA **			None
5	FFTH						Yes	** NA **			None
6	GSI-1	BenPIN	BenPIN				Yes	** NA **			None
7	GSI-2	BenPIN	BenPIN				Yes	** NA **			None
8	GSI-3	BenPIN	BenPIN				Yes	** NA **			None
9	HRB1	BenPIN	BenPIN				Yes	** NA **			None
10	HRB2	BenPIN	BenPIN				Yes	** NA **			None
11	HRB3	BenPIN	BenPIN				Yes	** NA **			None
12	K1	BenPIN	BenPIN				Yes	** NA **			None
13	K2	BenPIN	BenPIN				Yes	** NA **			None
14	K3	BenPIN	BenPIN				Yes	** NA **			None
15	MP-1						Yes	** NA **			None
16	MP-2						Yes	** NA **			None
17	MP-3						Yes	** NA **			None
18	MP-4						Yes	** NA **			None
19	MP-5						Yes	** NA **			None
20	MP-6						Yes	** NA **			None
21	MP-7						Yes	** NA **			None
22	MP-8						Yes	** NA **			None
23	MP-9						Yes	** NA **			None
24	MP-10						Yes	** NA **			None
25	MP-11						Yes	** NA **			None
26	MP-12						Yes	** NA **			None
27	MP-13						Yes	** NA **			None
28	SA-1						Yes	** NA **			None
29	SA-2						Yes	** NA **			None
30	SA-3						Yes	** NA **			None
31	SF1-HR						Yes	** NA **			None
32	SF1-TH						Yes	** NA **			None
33	SF2-HR						Yes	** NA **			None
34	SF2-TH						Yes	** NA **			None
35	TRCP-1						Yes	** NA **			None
36	TRCP-2						Yes	** NA **			None
37	TRCP-3						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torque[ft]	Kyy	Kzz	Cb	Functi...
1	CP-1	Corner Plate	.75	.375	.375				1	1		Lateral
2	CP-2	Corner Plate	.75	.375	.375				1	1		Lateral
3	CP-3	Corner Plate	.75	.375	.375				1	1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torque[ft]	Kyy	Kzz	Cb	Functi...
4	FF-HR	Top Handrail	12.5	4.5					2.1	2.1		Lateral
5	FFTH	Face Horizontal	12.5	5.25					2.1	2.1		Lateral
6	GSI-1	Internal	5.583	2.792					1	1		Lateral
7	GSI-2	Internal	5.583	2.792					1	1		Lateral
8	GSI-3	Internal	5.583	2.792					1	1		Lateral
9	HRB1	Handrail Bracing	4.833						1	1		Lateral
10	HRB2	Handrail Bracing	4.833						1	1		Lateral
11	HRB3	Handrail Bracing	4.833						1	1		Lateral
12	K1	Kickers	4.243						1	1		Lateral
13	K2	Kickers	4.243						1	1		Lateral
14	K3	Kickers	4.243						1	1		Lateral
15	MP-1	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
16	MP-2	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
17	MP-3	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
18	MP-4	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
19	MP-5	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
20	MP-6	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
21	MP-7	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
22	MP-8	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
23	MP-9	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
24	MP-10	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
25	MP-11	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
26	MP-12	Mount Pipe	7	Segment	Segment				2.1	2.1		Lateral
27	MP-13	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
28	SA-1	Support Arm	6.25						2.1	2.1		Lateral
29	SA-2	Support Arm	6.25						2.1	2.1		Lateral
30	SA-3	Support Arm	6.25						2.1	2.1		Lateral
31	SF1-HR	Top Handrail	12.5	4.5					2.1	2.1		Lateral
32	SF1-TH	Face Horizontal	12.5	5.25					2.1	2.1		Lateral
33	SF2-HR	Top Handrail	12.5	4.5					2.1	2.1		Lateral
34	SF2-TH	Face Horizontal	12.5	5.25					2.1	2.1		Lateral
35	TRCP-1	Handrail Conne...	.75						1	1		Lateral
36	TRCP-2	Handrail Conne...	.75						1	1		Lateral
37	TRCP-3	Handrail Conne...	.75						1	1		Lateral

Cold Formed Steel Design Parameters

Label	Shape	Lengt...	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	R	y sway	z sway
No Data to Print ...														

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	None		-1			30		3	
2	0 Wind - No Ice	None					30	37		
3	30 Wind - No Ice	None					60	74		
4	45 Wind - No Ice	None					60	74		
5	60 Wind - No Ice	None					60	74		
6	90 Wind - No Ice	None					30	37		
7	120 Wind - No Ice	None					60	74		
8	135 Wind - No Ice	None					60	74		
9	150 Wind - No Ice	None					60	74		
10	180 Wind - No Ice	None					30	37		
11	210 Wind - No Ice	None					60	74		
12	225 Wind - No Ice	None					60	74		
13	240 Wind - No Ice	None					60	74		

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
14	270 Wind - No Ice	None					30	37		
15	300 Wind - No Ice	None					60	74		
16	315 Wind - No Ice	None					60	74		
17	330 Wind - No Ice	None					60	74		
18	Ice Weight	None					30	37	3	
19	0 Wind - Ice	None					30	37		
20	30 Wind - Ice	None					60	74		
21	45 Wind - Ice	None					60	74		
22	60 Wind - Ice	None					60	74		
23	90 Wind - Ice	None					30	37		
24	120 Wind - Ice	None					60	74		
25	135 Wind - Ice	None					60	74		
26	150 Wind - Ice	None					60	74		
27	180 Wind - Ice	None					30	37		
28	210 Wind - Ice	None					60	74		
29	225 Wind - Ice	None					60	74		
30	240 Wind - Ice	None					60	74		
31	270 Wind - Ice	None					30	37		
32	300 Wind - Ice	None					60	74		
33	315 Wind - Ice	None					60	74		
34	330 Wind - Ice	None					60	74		
35	Lm	None				1				
36	Lv	None				1				
37	BLC 1 Transient Area...	None						42		
38	BLC 18 Transient Are...	None						42		

Load Combinations

	Description	Solve	PDel...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.4D	Yes	Y		1	1.4																				
2	0.9D+1.0 0-Wind	Yes	Y		1	.9	2	1																		
3	0.9D+1.0 30-Wi...	Yes	Y		1	.9	3	1																		
4	0.9D+1.0 45-Wi...	Yes	Y		1	.9	4	1																		
5	0.9D+1.0 60-Wi...	Yes	Y		1	.9	5	1																		
6	0.9D+1.0 90-Wi...	Yes	Y		1	.9	6	1																		
7	0.9D+1.0 120-...	Yes	Y		1	.9	7	1																		
8	0.9D+1.0 135-...	Yes	Y		1	.9	8	1																		
9	0.9D+1.0 150-...	Yes	Y		1	.9	9	1																		
10	0.9D+1.0 180-...	Yes	Y		1	.9	10	1																		
11	0.9D+1.0 210-...	Yes	Y		1	.9	11	1																		
12	0.9D+1.0 225-...	Yes	Y		1	.9	12	1																		
13	0.9D+1.0 240-...	Yes	Y		1	.9	13	1																		
14	0.9D+1.0 270-...	Yes	Y		1	.9	14	1																		
15	0.9D+1.0 300-...	Yes	Y		1	.9	15	1																		
16	0.9D+1.0 315-...	Yes	Y		1	.9	16	1																		
17	0.9D+1.0 330-...	Yes	Y		1	.9	17	1																		
18	1.2D+1.0 0-Wind	Yes	Y		1	1.2	2	1																		
19	1.2D+1.0 30-Wi...	Yes	Y		1	1.2	3	1																		
20	1.2D+1.0 45-Wi...	Yes	Y		1	1.2	4	1																		
21	1.2D+1.0 60-Wi...	Yes	Y		1	1.2	5	1																		
22	1.2D+1.0 90-Wi...	Yes	Y		1	1.2	6	1																		
23	1.2D+1.0 120-...	Yes	Y		1	1.2	7	1																		
24	1.2D+1.0 135-...	Yes	Y		1	1.2	8	1																		
25	1.2D+1.0 150-...	Yes	Y		1	1.2	9	1																		
26	1.2D+1.0 180-...	Yes	Y		1	1.2	10	1																		
27	1.2D+1.0 210-...	Yes	Y		1	1.2	11	1																		

Load Combinations (Continued)

	Description	Solve	PDel..	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
28	1.2D+1.0 225-...	Yes	Y		1	1.2	12	1																				
29	1.2D+1.0 240-...	Yes	Y		1	1.2	13	1																				
30	1.2D+1.0 270-...	Yes	Y		1	1.2	14	1																				
31	1.2D+1.0 300-...	Yes	Y		1	1.2	15	1																				
32	1.2D+1.0 315-...	Yes	Y		1	1.2	16	1																				
33	1.2D+1.0 330-...	Yes	Y		1	1.2	17	1																				
34	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	19	1																		
35	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	20	1																		
36	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	21	1																		
37	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	22	1																		
38	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	23	1																		
39	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	24	1																		
40	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	25	1																		
41	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	26	1																		
42	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	27	1																		
43	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	28	1																		
44	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	29	1																		
45	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	30	1																		
46	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	31	1																		
47	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	32	1																		
48	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	33	1																		
49	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	18	1	34	1																		
50	1.2D+1.5Lv	Yes	Y		36	1.5	1	1.2																				
51	1.2D+1.5Lm+1....	Yes	Y		1	1.2	2	.049	35	1.5																		
52	1.2D+1.5Lm+1....	Yes	Y		1	1.2	3	.049	35	1.5																		
53	1.2D+1.5Lm+1....	Yes	Y		1	1.2	4	.049	35	1.5																		
54	1.2D+1.5Lm+1....	Yes	Y		1	1.2	5	.049	35	1.5																		
55	1.2D+1.5Lm+1....	Yes	Y		1	1.2	6	.049	35	1.5																		
56	1.2D+1.5Lm+1....	Yes	Y		1	1.2	7	.049	35	1.5																		
57	1.2D+1.5Lm+1....	Yes	Y		1	1.2	8	.049	35	1.5																		
58	1.2D+1.5Lm+1....	Yes	Y		1	1.2	9	.049	35	1.5																		
59	1.2D+1.5Lm+1....	Yes	Y		1	1.2	10	.049	35	1.5																		
60	1.2D+1.5Lm+1....	Yes	Y		1	1.2	11	.049	35	1.5																		
61	1.2D+1.5Lm+1....	Yes	Y		1	1.2	12	.049	35	1.5																		
62	1.2D+1.5Lm+1....	Yes	Y		1	1.2	13	.049	35	1.5																		
63	1.2D+1.5Lm+1....	Yes	Y		1	1.2	14	.049	35	1.5																		
64	1.2D+1.5Lm+1....	Yes	Y		1	1.2	15	.049	35	1.5																		
65	1.2D+1.5Lm+1....	Yes	Y		1	1.2	16	.049	35	1.5																		
66	1.2D+1.5Lm+1....	Yes	Y		1	1.2	17	.049	35	1.5																		
67	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.5	0																			
68	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.433	ELZ	.25																		
69	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.354	ELZ	.354																		
70	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.25	ELZ	.433																		
71	(1.2+0.2Sds)D+...		Y		1	1.4	0		ELZ	.5																		
72	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.25	ELZ	.433																		
73	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.354	ELZ	.354																		
74	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.433	ELZ	.25																		
75	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.5	0																			
76	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.433	ELZ	-.25																		
77	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.354	ELZ	-.354																		
78	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	-.25	ELZ	-.433																		
79	(1.2+0.2Sds)D+...		Y		1	1.4	0		ELZ	-.5																		
80	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.25	ELZ	-.433																		
81	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.354	ELZ	-.354																		
82	(1.2+0.2Sds)D+...		Y		1	1.4	ELX	.433	ELZ	-.25																		
83	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.5	0																			
84	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.433	ELZ	.25																		

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Load Combinations (Continued)

	Description	Solve	PDel..	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
85	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.354	ELZ	.354																		
86	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.25	ELZ	.433																		
87	(0.9-0.2Sds)*D...		Y		1	.7	0		ELZ	.5																		
88	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.25	ELZ	.433																		
89	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.354	ELZ	.354																		
90	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.433	ELZ	.25																		
91	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.5	0																			
92	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.433	ELZ	-.25																		
93	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.354	ELZ	-.354																		
94	(0.9-0.2Sds)*D...		Y		1	.7	ELX	-.25	ELZ	-.433																		
95	(0.9-0.2Sds)*D...		Y		1	.7	0		ELZ	-.5																		
96	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.25	ELZ	-.433																		
97	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.354	ELZ	-.354																		
98	(0.9-0.2Sds)*D...		Y		1	.7	ELX	.433	ELZ	-.25																		

Joint Loads and Enforced Displacements (BLC 35 : Lm)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft,...
1	N115	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 36 : Lv)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft,...
1	N40	L	Y	-.25

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.026	2
2	MP-1	Y	-.12	3
3	MP-2	Y	-.017	2
4	MP-4	Y	-.034	2
5	MP-4	Y	-.06	3
6	MP-4	Y	-.072	3
7	MP-5	Y	-.026	2
8	MP-5	Y	-.142	3
9	MP-5	Y	-.016	4
10	MP-6	Y	-.017	2
11	MP-8	Y	-.034	2
12	MP-8	Y	-.071	3
13	MP-8	Y	-.072	3
14	MP-8	Y	-.016	4
15	MP-9	Y	-.026	2
16	MP-10	Y	-.017	2
17	MP-13	Y	-.034	2
18	MP-13	Y	-.072	3
19	MP-13	Y	-.016	4
20	SA-1	Y	-.033	2
21	SA-2	Y	-.026	2
22	MP-1	Y	-.026	5
23	MP-2	Y	-.017	5
24	MP-4	Y	-.034	5
25	MP-5	Y	-.026	5
26	MP-6	Y	-.017	5
27	MP-8	Y	-.034	5
28	MP-9	Y	-.026	5

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
29	MP-10	Y	-.017	5
30	MP-13	Y	-.034	5

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.182	2
2	MP-1	X	-.167	3
3	MP-2	X	-.07	2
4	MP-4	X	-.187	2
5	MP-4	X	-.083	3
6	MP-4	X	-.074	3
7	MP-5	X	-.096	2
8	MP-5	X	-.14	3
9	MP-5	X	-.021	4
10	MP-6	X	-.049	2
11	MP-8	X	-.106	2
12	MP-8	X	-.07	3
13	MP-8	X	-.064	3
14	MP-8	X	-.021	4
15	MP-9	X	-.096	2
16	MP-10	X	-.049	2
17	MP-13	X	-.106	2
18	MP-13	X	0	3
19	MP-13	X	-.021	4
20	SA-1	X	-.055	2
21	SA-2	X	-.193	2
22	MP-1	X	-.182	5
23	MP-2	X	-.07	5
24	MP-4	X	-.187	5
25	MP-5	X	-.096	5
26	MP-6	X	-.049	5
27	MP-8	X	-.106	5
28	MP-9	X	-.096	5
29	MP-10	X	-.049	5
30	MP-13	X	-.106	5

Member Point Loads (BLC 3 : 30 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.133	2
2	MP-1	X	-.129	3
3	MP-2	X	-.054	2
4	MP-4	X	-.139	2
5	MP-4	X	-.064	3
6	MP-4	X	-.061	3
7	MP-5	X	-.059	2
8	MP-5	X	-.11	3
9	MP-5	X	-.017	4
10	MP-6	X	-.036	2
11	MP-8	X	-.069	2
12	MP-8	X	-.055	3
13	MP-8	X	-.053	3
14	MP-8	X	-.017	4
15	MP-9	X	-.133	2
16	MP-10	X	-.054	2
17	MP-13	X	-.139	2
18	MP-13	X	0	3

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 3 : 30 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
19	MP-13	X	-.021	4
20	SA-1	X	-.047	2
21	SA-2	X	-.187	2
22	MP-1	X	-.133	5
23	MP-2	X	-.054	5
24	MP-4	X	-.139	5
25	MP-5	X	-.059	5
26	MP-6	X	-.036	5
27	MP-8	X	-.069	5
28	MP-9	X	-.133	5
29	MP-10	X	-.054	5
30	MP-13	X	-.139	5
31	MP-1	Z	-.077	2
32	MP-1	Z	-.074	3
33	MP-2	Z	-.031	2
34	MP-4	Z	-.08	2
35	MP-4	Z	-.037	3
36	MP-4	Z	-.035	3
37	MP-5	Z	-.034	2
38	MP-5	Z	-.064	3
39	MP-5	Z	-.01	4
40	MP-6	Z	-.021	2
41	MP-8	Z	-.04	2
42	MP-8	Z	-.032	3
43	MP-8	Z	-.031	3
44	MP-8	Z	-.01	4
45	MP-9	Z	-.077	2
46	MP-10	Z	-.031	2
47	MP-13	Z	-.08	2
48	MP-13	Z	0	3
49	MP-13	Z	-.012	4
50	SA-1	Z	-.027	2
51	SA-2	Z	-.108	2
52	MP-1	Z	-.077	5
53	MP-2	Z	-.031	5
54	MP-4	Z	-.08	5
55	MP-5	Z	-.034	5
56	MP-6	Z	-.021	5
57	MP-8	Z	-.04	5
58	MP-9	Z	-.077	5
59	MP-10	Z	-.031	5
60	MP-13	Z	-.08	5

Member Point Loads (BLC 4 : 45 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.088	2
2	MP-1	X	-.093	3
3	MP-2	X	-.039	2
4	MP-4	X	-.094	2
5	MP-4	X	-.046	3
6	MP-4	X	-.048	3
7	MP-5	X	-.053	2
8	MP-5	X	-.092	3
9	MP-5	X	-.014	4
10	MP-6	X	-.031	2
11	MP-8	X	-.061	2

Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
12	MP-8	X	-.046	3
13	MP-8	X	-.044	3
14	MP-8	X	-.014	4
15	MP-9	X	-.123	2
16	MP-10	X	-.048	2
17	MP-13	X	-.127	2
18	MP-13	X	0	3
19	MP-13	X	-.017	4
20	SA-1	X	-.039	2
21	SA-2	X	-.149	2
22	MP-1	X	-.088	5
23	MP-2	X	-.039	5
24	MP-4	X	-.094	5
25	MP-5	X	-.053	5
26	MP-6	X	-.031	5
27	MP-8	X	-.061	5
28	MP-9	X	-.123	5
29	MP-10	X	-.048	5
30	MP-13	X	-.127	5
31	MP-1	Z	-.088	2
32	MP-1	Z	-.093	3
33	MP-2	Z	-.039	2
34	MP-4	Z	-.094	2
35	MP-4	Z	-.046	3
36	MP-4	Z	-.048	3
37	MP-5	Z	-.053	2
38	MP-5	Z	-.092	3
39	MP-5	Z	-.014	4
40	MP-6	Z	-.031	2
41	MP-8	Z	-.061	2
42	MP-8	Z	-.046	3
43	MP-8	Z	-.044	3
44	MP-8	Z	-.014	4
45	MP-9	Z	-.123	2
46	MP-10	Z	-.048	2
47	MP-13	Z	-.127	2
48	MP-13	Z	0	3
49	MP-13	Z	-.017	4
50	SA-1	Z	-.039	2
51	SA-2	Z	-.149	2
52	MP-1	Z	-.088	5
53	MP-2	Z	-.039	5
54	MP-4	Z	-.094	5
55	MP-5	Z	-.053	5
56	MP-6	Z	-.031	5
57	MP-8	Z	-.061	5
58	MP-9	Z	-.123	5
59	MP-10	Z	-.048	5
60	MP-13	Z	-.127	5

Member Point Loads (BLC 5 : 60 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.048	2
2	MP-1	X	-.057	3
3	MP-2	X	-.024	2
4	MP-4	X	-.053	2

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Designer : PAL
Job Number : TEP No. 248058.408525
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Member Point Loads (BLC 5 : 60 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
5	MP-4	X	-.028	3
6	MP-4	X	-.032	3
7	MP-5	X	-.048	2
8	MP-5	X	-.07	3
9	MP-5	X	-.011	4
10	MP-6	X	-.024	2
11	MP-8	X	-.053	2
12	MP-8	X	-.035	3
13	MP-8	X	-.032	3
14	MP-8	X	-.011	4
15	MP-9	X	-.091	2
16	MP-10	X	-.035	2
17	MP-13	X	-.094	2
18	MP-13	X	0	3
19	MP-13	X	-.012	4
20	SA-1	X	-.027	2
21	SA-2	X	-.097	2
22	MP-1	X	-.048	5
23	MP-2	X	-.024	5
24	MP-4	X	-.053	5
25	MP-5	X	-.048	5
26	MP-6	X	-.024	5
27	MP-8	X	-.053	5
28	MP-9	X	-.091	5
29	MP-10	X	-.035	5
30	MP-13	X	-.094	5
31	MP-1	Z	-.083	2
32	MP-1	Z	-.098	3
33	MP-2	Z	-.042	2
34	MP-4	Z	-.092	2
35	MP-4	Z	-.049	3
36	MP-4	Z	-.056	3
37	MP-5	Z	-.083	2
38	MP-5	Z	-.121	3
39	MP-5	Z	-.018	4
40	MP-6	Z	-.042	2
41	MP-8	Z	-.092	2
42	MP-8	Z	-.061	3
43	MP-8	Z	-.056	3
44	MP-8	Z	-.018	4
45	MP-9	Z	-.158	2
46	MP-10	Z	-.06	2
47	MP-13	Z	-.162	2
48	MP-13	Z	0	3
49	MP-13	Z	-.022	4
50	SA-1	Z	-.047	2
51	SA-2	Z	-.167	2
52	MP-1	Z	-.083	5
53	MP-2	Z	-.042	5
54	MP-4	Z	-.092	5
55	MP-5	Z	-.083	5
56	MP-6	Z	-.042	5
57	MP-8	Z	-.092	5
58	MP-9	Z	-.158	5
59	MP-10	Z	-.06	5
60	MP-13	Z	-.162	5

Member Point Loads (BLC 6 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.068	2
2	MP-1	Z	-.096	3
3	MP-2	Z	-.042	2
4	MP-4	Z	-.079	2
5	MP-4	Z	-.048	3
6	MP-4	Z	-.061	3
7	MP-5	Z	-.154	2
8	MP-5	Z	-.165	3
9	MP-5	Z	-.024	4
10	MP-6	Z	-.063	2
11	MP-8	Z	-.16	2
12	MP-8	Z	-.083	3
13	MP-8	Z	-.071	3
14	MP-8	Z	-.024	4
15	MP-9	Z	-.154	2
16	MP-10	Z	-.063	2
17	MP-13	Z	-.16	2
18	MP-13	Z	0	3
19	MP-13	Z	-.024	4
20	SA-1	Z	-.055	2
21	SA-2	Z	-.147	2
22	MP-1	Z	-.068	5
23	MP-2	Z	-.042	5
24	MP-4	Z	-.079	5
25	MP-5	Z	-.154	5
26	MP-6	Z	-.063	5
27	MP-8	Z	-.16	5
28	MP-9	Z	-.154	5
29	MP-10	Z	-.063	5
30	MP-13	Z	-.16	5

Member Point Loads (BLC 7 : 120 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.048	2
2	MP-1	X	.057	3
3	MP-2	X	.024	2
4	MP-4	X	.053	2
5	MP-4	X	.028	3
6	MP-4	X	.032	3
7	MP-5	X	.091	2
8	MP-5	X	.089	3
9	MP-5	X	.012	4
10	MP-6	X	.035	2
11	MP-8	X	.094	2
12	MP-8	X	.044	3
13	MP-8	X	.037	3
14	MP-8	X	.012	4
15	MP-9	X	.048	2
16	MP-10	X	.024	2
17	MP-13	X	.053	2
18	MP-13	X	0	3
19	MP-13	X	.011	4
20	SA-1	X	.027	2
21	SA-2	X	.062	2
22	MP-1	X	.048	5
23	MP-2	X	.024	5

Member Point Loads (BLC 7 : 120 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
24	MP-4	X	.053	5
25	MP-5	X	.091	5
26	MP-6	X	.035	5
27	MP-8	X	.094	5
28	MP-9	X	.048	5
29	MP-10	X	.024	5
30	MP-13	X	.053	5
31	MP-1	Z	-.083	2
32	MP-1	Z	-.098	3
33	MP-2	Z	-.042	2
34	MP-4	Z	-.092	2
35	MP-4	Z	-.049	3
36	MP-4	Z	-.056	3
37	MP-5	Z	-.158	2
38	MP-5	Z	-.154	3
39	MP-5	Z	-.022	4
40	MP-6	Z	-.06	2
41	MP-8	Z	-.162	2
42	MP-8	Z	-.077	3
43	MP-8	Z	-.064	3
44	MP-8	Z	-.022	4
45	MP-9	Z	-.083	2
46	MP-10	Z	-.042	2
47	MP-13	Z	-.092	2
48	MP-13	Z	0	3
49	MP-13	Z	-.018	4
50	SA-1	Z	-.047	2
51	SA-2	Z	-.107	2
52	MP-1	Z	-.083	5
53	MP-2	Z	-.042	5
54	MP-4	Z	-.092	5
55	MP-5	Z	-.158	5
56	MP-6	Z	-.06	5
57	MP-8	Z	-.162	5
58	MP-9	Z	-.083	5
59	MP-10	Z	-.042	5
60	MP-13	Z	-.092	5

Member Point Loads (BLC 8 : 135 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.088	2
2	MP-1	X	.093	3
3	MP-2	X	.039	2
4	MP-4	X	.094	2
5	MP-4	X	.046	3
6	MP-4	X	.048	3
7	MP-5	X	.123	2
8	MP-5	X	.123	3
9	MP-5	X	.017	4
10	MP-6	X	.048	2
11	MP-8	X	.127	2
12	MP-8	X	.062	3
13	MP-8	X	.052	3
14	MP-8	X	.017	4
15	MP-9	X	.053	2
16	MP-10	X	.031	2

Member Point Loads (BLC 8 : 135 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
17	MP-13	X	.061	2
18	MP-13	X	0	3
19	MP-13	X	.014	4
20	SA-1	X	.039	2
21	SA-2	X	.092	2
22	MP-1	X	.088	5
23	MP-2	X	.039	5
24	MP-4	X	.094	5
25	MP-5	X	.123	5
26	MP-6	X	.048	5
27	MP-8	X	.127	5
28	MP-9	X	.053	5
29	MP-10	X	.031	5
30	MP-13	X	.061	5
31	MP-1	Z	-.088	2
32	MP-1	Z	-.093	3
33	MP-2	Z	-.039	2
34	MP-4	Z	-.094	2
35	MP-4	Z	-.046	3
36	MP-4	Z	-.048	3
37	MP-5	Z	-.123	2
38	MP-5	Z	-.123	3
39	MP-5	Z	-.017	4
40	MP-6	Z	-.048	2
41	MP-8	Z	-.127	2
42	MP-8	Z	-.062	3
43	MP-8	Z	-.052	3
44	MP-8	Z	-.017	4
45	MP-9	Z	-.053	2
46	MP-10	Z	-.031	2
47	MP-13	Z	-.061	2
48	MP-13	Z	0	3
49	MP-13	Z	-.014	4
50	SA-1	Z	-.039	2
51	SA-2	Z	-.092	2
52	MP-1	Z	-.088	5
53	MP-2	Z	-.039	5
54	MP-4	Z	-.094	5
55	MP-5	Z	-.123	5
56	MP-6	Z	-.048	5
57	MP-8	Z	-.127	5
58	MP-9	Z	-.053	5
59	MP-10	Z	-.031	5
60	MP-13	Z	-.061	5

Member Point Loads (BLC 9 : 150 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.133	2
2	MP-1	X	.129	3
3	MP-2	X	.054	2
4	MP-4	X	.139	2
5	MP-4	X	.064	3
6	MP-4	X	.061	3
7	MP-5	X	.133	2
8	MP-5	X	.143	3
9	MP-5	X	.021	4

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Designer : PAL
Job Number : TEP No. 248058.408525
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Member Point Loads (BLC 9 : 150 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
10	MP-6	X	.054	2
11	MP-8	X	.139	2
12	MP-8	X	.072	3
13	MP-8	X	.061	3
14	MP-8	X	.021	4
15	MP-9	X	.059	2
16	MP-10	X	.036	2
17	MP-13	X	.069	2
18	MP-13	X	0	3
19	MP-13	X	.017	4
20	SA-1	X	.047	2
21	SA-2	X	.127	2
22	MP-1	X	.133	5
23	MP-2	X	.054	5
24	MP-4	X	.139	5
25	MP-5	X	.133	5
26	MP-6	X	.054	5
27	MP-8	X	.139	5
28	MP-9	X	.059	5
29	MP-10	X	.036	5
30	MP-13	X	.069	5
31	MP-1	Z	-.077	2
32	MP-1	Z	-.074	3
33	MP-2	Z	-.031	2
34	MP-4	Z	-.08	2
35	MP-4	Z	-.037	3
36	MP-4	Z	-.035	3
37	MP-5	Z	-.077	2
38	MP-5	Z	-.083	3
39	MP-5	Z	-.012	4
40	MP-6	Z	-.031	2
41	MP-8	Z	-.08	2
42	MP-8	Z	-.041	3
43	MP-8	Z	-.035	3
44	MP-8	Z	-.012	4
45	MP-9	Z	-.034	2
46	MP-10	Z	-.021	2
47	MP-13	Z	-.04	2
48	MP-13	Z	0	3
49	MP-13	Z	-.01	4
50	SA-1	Z	-.027	2
51	SA-2	Z	-.073	2
52	MP-1	Z	-.077	5
53	MP-2	Z	-.031	5
54	MP-4	Z	-.08	5
55	MP-5	Z	-.077	5
56	MP-6	Z	-.031	5
57	MP-8	Z	-.08	5
58	MP-9	Z	-.034	5
59	MP-10	Z	-.021	5
60	MP-13	Z	-.04	5

Member Point Loads (BLC 10 : 180 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.182	2
2	MP-1	X	.167	3

Member Point Loads (BLC 10 : 180 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
3	MP-2	X	.07	2
4	MP-4	X	.187	2
5	MP-4	X	.083	3
6	MP-4	X	.074	3
7	MP-5	X	.096	2
8	MP-5	X	.14	3
9	MP-5	X	.021	4
10	MP-6	X	.049	2
11	MP-8	X	.106	2
12	MP-8	X	.07	3
13	MP-8	X	.064	3
14	MP-8	X	.021	4
15	MP-9	X	.096	2
16	MP-10	X	.049	2
17	MP-13	X	.106	2
18	MP-13	X	0	3
19	MP-13	X	.021	4
20	SA-1	X	.055	2
21	SA-2	X	.193	2
22	MP-1	X	.182	5
23	MP-2	X	.07	5
24	MP-4	X	.187	5
25	MP-5	X	.096	5
26	MP-6	X	.049	5
27	MP-8	X	.106	5
28	MP-9	X	.096	5
29	MP-10	X	.049	5
30	MP-13	X	.106	5

Member Point Loads (BLC 11 : 210 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.133	2
2	MP-1	X	.129	3
3	MP-2	X	.054	2
4	MP-4	X	.139	2
5	MP-4	X	.064	3
6	MP-4	X	.061	3
7	MP-5	X	.059	2
8	MP-5	X	.11	3
9	MP-5	X	.017	4
10	MP-6	X	.036	2
11	MP-8	X	.069	2
12	MP-8	X	.055	3
13	MP-8	X	.053	3
14	MP-8	X	.017	4
15	MP-9	X	.133	2
16	MP-10	X	.054	2
17	MP-13	X	.139	2
18	MP-13	X	0	3
19	MP-13	X	.021	4
20	SA-1	X	.047	2
21	SA-2	X	.187	2
22	MP-1	X	.133	5
23	MP-2	X	.054	5
24	MP-4	X	.139	5
25	MP-5	X	.059	5

Company : Tower Engineering Professionals, Inc.
Designer : PAL
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Model Name : CCI BU No. 823529

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Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
26	MP-6	X	.036	5
27	MP-8	X	.069	5
28	MP-9	X	.133	5
29	MP-10	X	.054	5
30	MP-13	X	.139	5
31	MP-1	Z	.077	2
32	MP-1	Z	.074	3
33	MP-2	Z	.031	2
34	MP-4	Z	.08	2
35	MP-4	Z	.037	3
36	MP-4	Z	.035	3
37	MP-5	Z	.034	2
38	MP-5	Z	.064	3
39	MP-5	Z	.01	4
40	MP-6	Z	.021	2
41	MP-8	Z	.04	2
42	MP-8	Z	.032	3
43	MP-8	Z	.031	3
44	MP-8	Z	.01	4
45	MP-9	Z	.077	2
46	MP-10	Z	.031	2
47	MP-13	Z	.08	2
48	MP-13	Z	0	3
49	MP-13	Z	.012	4
50	SA-1	Z	.027	2
51	SA-2	Z	.108	2
52	MP-1	Z	.077	5
53	MP-2	Z	.031	5
54	MP-4	Z	.08	5
55	MP-5	Z	.034	5
56	MP-6	Z	.021	5
57	MP-8	Z	.04	5
58	MP-9	Z	.077	5
59	MP-10	Z	.031	5
60	MP-13	Z	.08	5

Member Point Loads (BLC 12 : 225 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.088	2
2	MP-1	X	.093	3
3	MP-2	X	.039	2
4	MP-4	X	.094	2
5	MP-4	X	.046	3
6	MP-4	X	.048	3
7	MP-5	X	.053	2
8	MP-5	X	.092	3
9	MP-5	X	.014	4
10	MP-6	X	.031	2
11	MP-8	X	.061	2
12	MP-8	X	.046	3
13	MP-8	X	.044	3
14	MP-8	X	.014	4
15	MP-9	X	.123	2
16	MP-10	X	.048	2
17	MP-13	X	.127	2
18	MP-13	X	0	3

Member Point Loads (BLC 12 : 225 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
19	MP-13	X	.017	4
20	SA-1	X	.039	2
21	SA-2	X	.149	2
22	MP-1	X	.088	5
23	MP-2	X	.039	5
24	MP-4	X	.094	5
25	MP-5	X	.053	5
26	MP-6	X	.031	5
27	MP-8	X	.061	5
28	MP-9	X	.123	5
29	MP-10	X	.048	5
30	MP-13	X	.127	5
31	MP-1	Z	.088	2
32	MP-1	Z	.093	3
33	MP-2	Z	.039	2
34	MP-4	Z	.094	2
35	MP-4	Z	.046	3
36	MP-4	Z	.048	3
37	MP-5	Z	.053	2
38	MP-5	Z	.092	3
39	MP-5	Z	.014	4
40	MP-6	Z	.031	2
41	MP-8	Z	.061	2
42	MP-8	Z	.046	3
43	MP-8	Z	.044	3
44	MP-8	Z	.014	4
45	MP-9	Z	.123	2
46	MP-10	Z	.048	2
47	MP-13	Z	.127	2
48	MP-13	Z	0	3
49	MP-13	Z	.017	4
50	SA-1	Z	.039	2
51	SA-2	Z	.149	2
52	MP-1	Z	.088	5
53	MP-2	Z	.039	5
54	MP-4	Z	.094	5
55	MP-5	Z	.053	5
56	MP-6	Z	.031	5
57	MP-8	Z	.061	5
58	MP-9	Z	.123	5
59	MP-10	Z	.048	5
60	MP-13	Z	.127	5

Member Point Loads (BLC 13 : 240 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.048	2
2	MP-1	X	.057	3
3	MP-2	X	.024	2
4	MP-4	X	.053	2
5	MP-4	X	.028	3
6	MP-4	X	.032	3
7	MP-5	X	.048	2
8	MP-5	X	.07	3
9	MP-5	X	.011	4
10	MP-6	X	.024	2
11	MP-8	X	.053	2

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 13 : 240 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
12	MP-8	X	.035	3
13	MP-8	X	.032	3
14	MP-8	X	.011	4
15	MP-9	X	.091	2
16	MP-10	X	.035	2
17	MP-13	X	.094	2
18	MP-13	X	0	3
19	MP-13	X	.012	4
20	SA-1	X	.027	2
21	SA-2	X	.097	2
22	MP-1	X	.048	5
23	MP-2	X	.024	5
24	MP-4	X	.053	5
25	MP-5	X	.048	5
26	MP-6	X	.024	5
27	MP-8	X	.053	5
28	MP-9	X	.091	5
29	MP-10	X	.035	5
30	MP-13	X	.094	5
31	MP-1	Z	.083	2
32	MP-1	Z	.098	3
33	MP-2	Z	.042	2
34	MP-4	Z	.092	2
35	MP-4	Z	.049	3
36	MP-4	Z	.056	3
37	MP-5	Z	.083	2
38	MP-5	Z	.121	3
39	MP-5	Z	.018	4
40	MP-6	Z	.042	2
41	MP-8	Z	.092	2
42	MP-8	Z	.061	3
43	MP-8	Z	.056	3
44	MP-8	Z	.018	4
45	MP-9	Z	.158	2
46	MP-10	Z	.06	2
47	MP-13	Z	.162	2
48	MP-13	Z	0	3
49	MP-13	Z	.022	4
50	SA-1	Z	.047	2
51	SA-2	Z	.167	2
52	MP-1	Z	.083	5
53	MP-2	Z	.042	5
54	MP-4	Z	.092	5
55	MP-5	Z	.083	5
56	MP-6	Z	.042	5
57	MP-8	Z	.092	5
58	MP-9	Z	.158	5
59	MP-10	Z	.06	5
60	MP-13	Z	.162	5

Member Point Loads (BLC 14 : 270 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	.068	2
2	MP-1	Z	.096	3
3	MP-2	Z	.042	2
4	MP-4	Z	.079	2

Member Point Loads (BLC 14 : 270 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
5	MP-4	Z	.048	3
6	MP-4	Z	.061	3
7	MP-5	Z	.154	2
8	MP-5	Z	.165	3
9	MP-5	Z	.024	4
10	MP-6	Z	.063	2
11	MP-8	Z	.16	2
12	MP-8	Z	.083	3
13	MP-8	Z	.071	3
14	MP-8	Z	.024	4
15	MP-9	Z	.154	2
16	MP-10	Z	.063	2
17	MP-13	Z	.16	2
18	MP-13	Z	0	3
19	MP-13	Z	.024	4
20	SA-1	Z	.055	2
21	SA-2	Z	.147	2
22	MP-1	Z	.068	5
23	MP-2	Z	.042	5
24	MP-4	Z	.079	5
25	MP-5	Z	.154	5
26	MP-6	Z	.063	5
27	MP-8	Z	.16	5
28	MP-9	Z	.154	5
29	MP-10	Z	.063	5
30	MP-13	Z	.16	5

Member Point Loads (BLC 15 : 300 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.048	2
2	MP-1	X	-.057	3
3	MP-2	X	-.024	2
4	MP-4	X	-.053	2
5	MP-4	X	-.028	3
6	MP-4	X	-.032	3
7	MP-5	X	-.091	2
8	MP-5	X	-.089	3
9	MP-5	X	-.012	4
10	MP-6	X	-.035	2
11	MP-8	X	-.094	2
12	MP-8	X	-.044	3
13	MP-8	X	-.037	3
14	MP-8	X	-.012	4
15	MP-9	X	-.048	2
16	MP-10	X	-.024	2
17	MP-13	X	-.053	2
18	MP-13	X	0	3
19	MP-13	X	-.011	4
20	SA-1	X	-.027	2
21	SA-2	X	-.062	2
22	MP-1	X	-.048	5
23	MP-2	X	-.024	5
24	MP-4	X	-.053	5
25	MP-5	X	-.091	5
26	MP-6	X	-.035	5
27	MP-8	X	-.094	5

Member Point Loads (BLC 15 : 300 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
28	MP-9	X	-.048	5
29	MP-10	X	-.024	5
30	MP-13	X	-.053	5
31	MP-1	Z	.083	2
32	MP-1	Z	.098	3
33	MP-2	Z	.042	2
34	MP-4	Z	.092	2
35	MP-4	Z	.049	3
36	MP-4	Z	.056	3
37	MP-5	Z	.158	2
38	MP-5	Z	.154	3
39	MP-5	Z	.022	4
40	MP-6	Z	.06	2
41	MP-8	Z	.162	2
42	MP-8	Z	.077	3
43	MP-8	Z	.064	3
44	MP-8	Z	.022	4
45	MP-9	Z	.083	2
46	MP-10	Z	.042	2
47	MP-13	Z	.092	2
48	MP-13	Z	0	3
49	MP-13	Z	.018	4
50	SA-1	Z	.047	2
51	SA-2	Z	.107	2
52	MP-1	Z	.083	5
53	MP-2	Z	.042	5
54	MP-4	Z	.092	5
55	MP-5	Z	.158	5
56	MP-6	Z	.06	5
57	MP-8	Z	.162	5
58	MP-9	Z	.083	5
59	MP-10	Z	.042	5
60	MP-13	Z	.092	5

Member Point Loads (BLC 16 : 315 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.088	2
2	MP-1	X	-.093	3
3	MP-2	X	-.039	2
4	MP-4	X	-.094	2
5	MP-4	X	-.046	3
6	MP-4	X	-.048	3
7	MP-5	X	-.123	2
8	MP-5	X	-.123	3
9	MP-5	X	-.017	4
10	MP-6	X	-.048	2
11	MP-8	X	-.127	2
12	MP-8	X	-.062	3
13	MP-8	X	-.052	3
14	MP-8	X	-.017	4
15	MP-9	X	-.053	2
16	MP-10	X	-.031	2
17	MP-13	X	-.061	2
18	MP-13	X	0	3
19	MP-13	X	-.014	4
20	SA-1	X	-.039	2

Member Point Loads (BLC 16 : 315 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
21	SA-2	X	-.092	2
22	MP-1	X	-.088	5
23	MP-2	X	-.039	5
24	MP-4	X	-.094	5
25	MP-5	X	-.123	5
26	MP-6	X	-.048	5
27	MP-8	X	-.127	5
28	MP-9	X	-.053	5
29	MP-10	X	-.031	5
30	MP-13	X	-.061	5
31	MP-1	Z	.088	2
32	MP-1	Z	.093	3
33	MP-2	Z	.039	2
34	MP-4	Z	.094	2
35	MP-4	Z	.046	3
36	MP-4	Z	.048	3
37	MP-5	Z	.123	2
38	MP-5	Z	.123	3
39	MP-5	Z	.017	4
40	MP-6	Z	.048	2
41	MP-8	Z	.127	2
42	MP-8	Z	.062	3
43	MP-8	Z	.052	3
44	MP-8	Z	.017	4
45	MP-9	Z	.053	2
46	MP-10	Z	.031	2
47	MP-13	Z	.061	2
48	MP-13	Z	0	3
49	MP-13	Z	.014	4
50	SA-1	Z	.039	2
51	SA-2	Z	.092	2
52	MP-1	Z	.088	5
53	MP-2	Z	.039	5
54	MP-4	Z	.094	5
55	MP-5	Z	.123	5
56	MP-6	Z	.048	5
57	MP-8	Z	.127	5
58	MP-9	Z	.053	5
59	MP-10	Z	.031	5
60	MP-13	Z	.061	5

Member Point Loads (BLC 17 : 330 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.133	2
2	MP-1	X	-.129	3
3	MP-2	X	-.054	2
4	MP-4	X	-.139	2
5	MP-4	X	-.064	3
6	MP-4	X	-.061	3
7	MP-5	X	-.133	2
8	MP-5	X	-.143	3
9	MP-5	X	-.021	4
10	MP-6	X	-.054	2
11	MP-8	X	-.139	2
12	MP-8	X	-.072	3
13	MP-8	X	-.061	3

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 17 : 330 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	MP-8	X	-.021	4
15	MP-9	X	-.059	2
16	MP-10	X	-.036	2
17	MP-13	X	-.069	2
18	MP-13	X	0	3
19	MP-13	X	-.017	4
20	SA-1	X	-.047	2
21	SA-2	X	-.127	2
22	MP-1	X	-.133	5
23	MP-2	X	-.054	5
24	MP-4	X	-.139	5
25	MP-5	X	-.133	5
26	MP-6	X	-.054	5
27	MP-8	X	-.139	5
28	MP-9	X	-.059	5
29	MP-10	X	-.036	5
30	MP-13	X	-.069	5
31	MP-1	Z	.077	2
32	MP-1	Z	.074	3
33	MP-2	Z	.031	2
34	MP-4	Z	.08	2
35	MP-4	Z	.037	3
36	MP-4	Z	.035	3
37	MP-5	Z	.077	2
38	MP-5	Z	.083	3
39	MP-5	Z	.012	4
40	MP-6	Z	.031	2
41	MP-8	Z	.08	2
42	MP-8	Z	.041	3
43	MP-8	Z	.035	3
44	MP-8	Z	.012	4
45	MP-9	Z	.034	2
46	MP-10	Z	.021	2
47	MP-13	Z	.04	2
48	MP-13	Z	0	3
49	MP-13	Z	.01	4
50	SA-1	Z	.027	2
51	SA-2	Z	.073	2
52	MP-1	Z	.077	5
53	MP-2	Z	.031	5
54	MP-4	Z	.08	5
55	MP-5	Z	.077	5
56	MP-6	Z	.031	5
57	MP-8	Z	.08	5
58	MP-9	Z	.034	5
59	MP-10	Z	.021	5
60	MP-13	Z	.04	5

Member Point Loads (BLC 18 : Ice Weight)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.066	2
2	MP-1	Y	-.083	3
3	MP-2	Y	-.05	2
4	MP-4	Y	-.065	2
5	MP-4	Y	-.042	3
6	MP-4	Y	-.046	3

Member Point Loads (BLC 18 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
7	MP-5	Y	-.066	2
8	MP-5	Y	-.096	3
9	MP-5	Y	-.016	4
10	MP-6	Y	-.05	2
11	MP-8	Y	-.065	2
12	MP-8	Y	-.048	3
13	MP-8	Y	-.046	3
14	MP-8	Y	-.016	4
15	MP-9	Y	-.066	2
16	MP-10	Y	-.05	2
17	MP-13	Y	-.065	2
18	MP-13	Y	-.046	3
19	MP-13	Y	-.016	4
20	SA-1	Y	-.049	2
21	SA-2	Y	-.094	2
22	MP-1	Y	-.066	5
23	MP-2	Y	-.05	5
24	MP-4	Y	-.065	5
25	MP-5	Y	-.066	5
26	MP-6	Y	-.05	5
27	MP-8	Y	-.065	5
28	MP-9	Y	-.066	5
29	MP-10	Y	-.05	5
30	MP-13	Y	-.065	5

Member Point Loads (BLC 19 : 0 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.028	2
2	MP-1	X	-.031	3
3	MP-2	X	-.012	2
4	MP-4	X	-.03	2
5	MP-4	X	-.015	3
6	MP-4	X	-.014	3
7	MP-5	X	-.028	2
8	MP-5	X	-.033	3
9	MP-5	X	-.006	4
10	MP-6	X	-.012	2
11	MP-8	X	-.03	2
12	MP-8	X	-.016	3
13	MP-8	X	-.014	3
14	MP-8	X	-.006	4
15	MP-9	X	-.028	2
16	MP-10	X	-.012	2
17	MP-13	X	-.03	2
18	MP-13	X	0	3
19	MP-13	X	-.006	4
20	SA-1	X	-.01	2
21	SA-2	X	-.022	2
22	MP-1	X	-.028	5
23	MP-2	X	-.012	5
24	MP-4	X	-.03	5
25	MP-5	X	-.028	5
26	MP-6	X	-.012	5
27	MP-8	X	-.03	5
28	MP-9	X	-.028	5
29	MP-10	X	-.012	5

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 19 : 0 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
30	MP-13	X	-.03	5

Member Point Loads (BLC 20 : 30 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.021	2
2	MP-1	X	-.024	3
3	MP-2	X	-.009	2
4	MP-4	X	-.023	2
5	MP-4	X	-.012	3
6	MP-4	X	-.012	3
7	MP-5	X	-.011	2
8	MP-5	X	-.021	3
9	MP-5	X	-.004	4
10	MP-6	X	-.007	2
11	MP-8	X	-.012	2
12	MP-8	X	-.011	3
13	MP-8	X	-.01	3
14	MP-8	X	-.004	4
15	MP-9	X	-.021	2
16	MP-10	X	-.009	2
17	MP-13	X	-.023	2
18	MP-13	X	0	3
19	MP-13	X	-.005	4
20	SA-1	X	-.008	2
21	SA-2	X	-.031	2
22	MP-1	X	-.021	5
23	MP-2	X	-.009	5
24	MP-4	X	-.023	5
25	MP-5	X	-.011	5
26	MP-6	X	-.007	5
27	MP-8	X	-.012	5
28	MP-9	X	-.021	5
29	MP-10	X	-.009	5
30	MP-13	X	-.023	5
31	MP-1	Z	-.012	2
32	MP-1	Z	-.014	3
33	MP-2	Z	-.005	2
34	MP-4	Z	-.013	2
35	MP-4	Z	-.007	3
36	MP-4	Z	-.007	3
37	MP-5	Z	-.006	2
38	MP-5	Z	-.012	3
39	MP-5	Z	-.002	4
40	MP-6	Z	-.004	2
41	MP-8	Z	-.007	2
42	MP-8	Z	-.006	3
43	MP-8	Z	-.006	3
44	MP-8	Z	-.002	4
45	MP-9	Z	-.012	2
46	MP-10	Z	-.005	2
47	MP-13	Z	-.013	2
48	MP-13	Z	0	3
49	MP-13	Z	-.003	4
50	SA-1	Z	-.005	2
51	SA-2	Z	-.018	2
52	MP-1	Z	-.012	5

Member Point Loads (BLC 20 : 30 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
53	MP-2	Z	-.005	5
54	MP-4	Z	-.013	5
55	MP-5	Z	-.006	5
56	MP-6	Z	-.004	5
57	MP-8	Z	-.007	5
58	MP-9	Z	-.012	5
59	MP-10	Z	-.005	5
60	MP-13	Z	-.013	5

Member Point Loads (BLC 21 : 45 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.014	2
2	MP-1	X	-.018	3
3	MP-2	X	-.007	2
4	MP-4	X	-.016	2
5	MP-4	X	-.009	3
6	MP-4	X	-.009	3
7	MP-5	X	-.009	2
8	MP-5	X	-.018	3
9	MP-5	X	-.004	4
10	MP-6	X	-.006	2
11	MP-8	X	-.011	2
12	MP-8	X	-.009	3
13	MP-8	X	-.008	3
14	MP-8	X	-.004	4
15	MP-9	X	-.019	2
16	MP-10	X	-.008	2
17	MP-13	X	-.02	2
18	MP-13	X	0	3
19	MP-13	X	-.004	4
20	SA-1	X	-.007	2
21	SA-2	X	-.025	2
22	MP-1	X	-.014	5
23	MP-2	X	-.007	5
24	MP-4	X	-.016	5
25	MP-5	X	-.009	5
26	MP-6	X	-.006	5
27	MP-8	X	-.011	5
28	MP-9	X	-.019	5
29	MP-10	X	-.008	5
30	MP-13	X	-.02	5
31	MP-1	Z	-.014	2
32	MP-1	Z	-.018	3
33	MP-2	Z	-.007	2
34	MP-4	Z	-.016	2
35	MP-4	Z	-.009	3
36	MP-4	Z	-.009	3
37	MP-5	Z	-.009	2
38	MP-5	Z	-.018	3
39	MP-5	Z	-.004	4
40	MP-6	Z	-.006	2
41	MP-8	Z	-.011	2
42	MP-8	Z	-.009	3
43	MP-8	Z	-.008	3
44	MP-8	Z	-.004	4
45	MP-9	Z	-.019	2

Member Point Loads (BLC 21 : 45 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
46	MP-10	Z	-.008	2
47	MP-13	Z	-.02	2
48	MP-13	Z	0	3
49	MP-13	Z	-.004	4
50	SA-1	Z	-.007	2
51	SA-2	Z	-.025	2
52	MP-1	Z	-.014	5
53	MP-2	Z	-.007	5
54	MP-4	Z	-.016	5
55	MP-5	Z	-.009	5
56	MP-6	Z	-.006	5
57	MP-8	Z	-.011	5
58	MP-9	Z	-.019	5
59	MP-10	Z	-.008	5
60	MP-13	Z	-.02	5

Member Point Loads (BLC 22 : 60 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.008	2
2	MP-1	X	-.011	3
3	MP-2	X	-.004	2
4	MP-4	X	-.009	2
5	MP-4	X	-.006	3
6	MP-4	X	-.006	3
7	MP-5	X	-.008	2
8	MP-5	X	-.013	3
9	MP-5	X	-.003	4
10	MP-6	X	-.004	2
11	MP-8	X	-.009	2
12	MP-8	X	-.007	3
13	MP-8	X	-.006	3
14	MP-8	X	-.003	4
15	MP-9	X	-.014	2
16	MP-10	X	-.006	2
17	MP-13	X	-.015	2
18	MP-13	X	0	3
19	MP-13	X	-.003	4
20	SA-1	X	-.005	2
21	SA-2	X	-.016	2
22	MP-1	X	-.008	5
23	MP-2	X	-.004	5
24	MP-4	X	-.009	5
25	MP-5	X	-.008	5
26	MP-6	X	-.004	5
27	MP-8	X	-.009	5
28	MP-9	X	-.014	5
29	MP-10	X	-.006	5
30	MP-13	X	-.015	5
31	MP-1	Z	-.014	2
32	MP-1	Z	-.019	3
33	MP-2	Z	-.007	2
34	MP-4	Z	-.016	2
35	MP-4	Z	-.01	3
36	MP-4	Z	-.011	3
37	MP-5	Z	-.014	2
38	MP-5	Z	-.023	3

Member Point Loads (BLC 22 : 60 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
39	MP-5	Z	-.004	4
40	MP-6	Z	-.007	2
41	MP-8	Z	-.016	2
42	MP-8	Z	-.012	3
43	MP-8	Z	-.011	3
44	MP-8	Z	-.004	4
45	MP-9	Z	-.025	2
46	MP-10	Z	-.01	2
47	MP-13	Z	-.026	2
48	MP-13	Z	0	3
49	MP-13	Z	-.005	4
50	SA-1	Z	-.008	2
51	SA-2	Z	-.028	2
52	MP-1	Z	-.014	5
53	MP-2	Z	-.007	5
54	MP-4	Z	-.016	5
55	MP-5	Z	-.014	5
56	MP-6	Z	-.007	5
57	MP-8	Z	-.016	5
58	MP-9	Z	-.025	5
59	MP-10	Z	-.01	5
60	MP-13	Z	-.026	5

Member Point Loads (BLC 23 : 90 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.012	2
2	MP-1	Z	-.02	3
3	MP-2	Z	-.008	2
4	MP-4	Z	-.014	2
5	MP-4	Z	-.01	3
6	MP-4	Z	-.012	3
7	MP-5	Z	-.012	2
8	MP-5	Z	-.025	3
9	MP-5	Z	-.005	4
10	MP-6	Z	-.008	2
11	MP-8	Z	-.014	2
12	MP-8	Z	-.012	3
13	MP-8	Z	-.012	3
14	MP-8	Z	-.005	4
15	MP-9	Z	-.012	2
16	MP-10	Z	-.008	2
17	MP-13	Z	-.014	2
18	MP-13	Z	0	3
19	MP-13	Z	-.005	4
20	SA-1	Z	-.01	2
21	SA-2	Z	-.036	2
22	MP-1	Z	-.012	5
23	MP-2	Z	-.008	5
24	MP-4	Z	-.014	5
25	MP-5	Z	-.012	5
26	MP-6	Z	-.008	5
27	MP-8	Z	-.014	5
28	MP-9	Z	-.012	5
29	MP-10	Z	-.008	5
30	MP-13	Z	-.014	5

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 24 : 120 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.008	2
2	MP-1	X	.011	3
3	MP-2	X	.004	2
4	MP-4	X	.009	2
5	MP-4	X	.006	3
6	MP-4	X	.006	3
7	MP-5	X	.014	2
8	MP-5	X	.016	3
9	MP-5	X	.003	4
10	MP-6	X	.006	2
11	MP-8	X	.015	2
12	MP-8	X	.008	3
13	MP-8	X	.007	3
14	MP-8	X	.003	4
15	MP-9	X	.008	2
16	MP-10	X	.004	2
17	MP-13	X	.009	2
18	MP-13	X	0	3
19	MP-13	X	.003	4
20	SA-1	X	.005	2
21	SA-2	X	.011	2
22	MP-1	X	.008	5
23	MP-2	X	.004	5
24	MP-4	X	.009	5
25	MP-5	X	.014	5
26	MP-6	X	.006	5
27	MP-8	X	.015	5
28	MP-9	X	.008	5
29	MP-10	X	.004	5
30	MP-13	X	.009	5
31	MP-1	Z	-.014	2
32	MP-1	Z	-.019	3
33	MP-2	Z	-.007	2
34	MP-4	Z	-.016	2
35	MP-4	Z	-.01	3
36	MP-4	Z	-.011	3
37	MP-5	Z	-.025	2
38	MP-5	Z	-.028	3
39	MP-5	Z	-.005	4
40	MP-6	Z	-.01	2
41	MP-8	Z	-.026	2
42	MP-8	Z	-.014	3
43	MP-8	Z	-.012	3
44	MP-8	Z	-.005	4
45	MP-9	Z	-.014	2
46	MP-10	Z	-.007	2
47	MP-13	Z	-.016	2
48	MP-13	Z	0	3
49	MP-13	Z	-.004	4
50	SA-1	Z	-.008	2
51	SA-2	Z	-.019	2
52	MP-1	Z	-.014	5
53	MP-2	Z	-.007	5
54	MP-4	Z	-.016	5
55	MP-5	Z	-.025	5
56	MP-6	Z	-.01	5
57	MP-8	Z	-.026	5

Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
58	MP-9	Z	-.014	5
59	MP-10	Z	-.007	5
60	MP-13	Z	-.016	5

Member Point Loads (BLC 25 : 135 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.014	2
2	MP-1	X	.018	3
3	MP-2	X	.007	2
4	MP-4	X	.016	2
5	MP-4	X	.009	3
6	MP-4	X	.009	3
7	MP-5	X	.019	2
8	MP-5	X	.023	3
9	MP-5	X	.004	4
10	MP-6	X	.008	2
11	MP-8	X	.02	2
12	MP-8	X	.011	3
13	MP-8	X	.01	3
14	MP-8	X	.004	4
15	MP-9	X	.009	2
16	MP-10	X	.006	2
17	MP-13	X	.011	2
18	MP-13	X	0	3
19	MP-13	X	.004	4
20	SA-1	X	.007	2
21	SA-2	X	.016	2
22	MP-1	X	.014	5
23	MP-2	X	.007	5
24	MP-4	X	.016	5
25	MP-5	X	.019	5
26	MP-6	X	.008	5
27	MP-8	X	.02	5
28	MP-9	X	.009	5
29	MP-10	X	.006	5
30	MP-13	X	.011	5
31	MP-1	Z	-.014	2
32	MP-1	Z	-.018	3
33	MP-2	Z	-.007	2
34	MP-4	Z	-.016	2
35	MP-4	Z	-.009	3
36	MP-4	Z	-.009	3
37	MP-5	Z	-.019	2
38	MP-5	Z	-.023	3
39	MP-5	Z	-.004	4
40	MP-6	Z	-.008	2
41	MP-8	Z	-.02	2
42	MP-8	Z	-.011	3
43	MP-8	Z	-.01	3
44	MP-8	Z	-.004	4
45	MP-9	Z	-.009	2
46	MP-10	Z	-.006	2
47	MP-13	Z	-.011	2
48	MP-13	Z	0	3
49	MP-13	Z	-.004	4
50	SA-1	Z	-.007	2

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 25 : 135 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
51	SA-2	Z	-.016	2
52	MP-1	Z	-.014	5
53	MP-2	Z	-.007	5
54	MP-4	Z	-.016	5
55	MP-5	Z	-.019	5
56	MP-6	Z	-.008	5
57	MP-8	Z	-.02	5
58	MP-9	Z	-.009	5
59	MP-10	Z	-.006	5
60	MP-13	Z	-.011	5

Member Point Loads (BLC 26 : 150 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.021	2
2	MP-1	X	.024	3
3	MP-2	X	.009	2
4	MP-4	X	.023	2
5	MP-4	X	.012	3
6	MP-4	X	.012	3
7	MP-5	X	.021	2
8	MP-5	X	.026	3
9	MP-5	X	.005	4
10	MP-6	X	.009	2
11	MP-8	X	.023	2
12	MP-8	X	.013	3
13	MP-8	X	.012	3
14	MP-8	X	.005	4
15	MP-9	X	.011	2
16	MP-10	X	.007	2
17	MP-13	X	.012	2
18	MP-13	X	0	3
19	MP-13	X	.004	4
20	SA-1	X	.008	2
21	SA-2	X	.022	2
22	MP-1	X	.021	5
23	MP-2	X	.009	5
24	MP-4	X	.023	5
25	MP-5	X	.021	5
26	MP-6	X	.009	5
27	MP-8	X	.023	5
28	MP-9	X	.011	5
29	MP-10	X	.007	5
30	MP-13	X	.012	5
31	MP-1	Z	-.012	2
32	MP-1	Z	-.014	3
33	MP-2	Z	-.005	2
34	MP-4	Z	-.013	2
35	MP-4	Z	-.007	3
36	MP-4	Z	-.007	3
37	MP-5	Z	-.012	2
38	MP-5	Z	-.015	3
39	MP-5	Z	-.003	4
40	MP-6	Z	-.005	2
41	MP-8	Z	-.013	2
42	MP-8	Z	-.008	3
43	MP-8	Z	-.007	3

Member Point Loads (BLC 26 : 150 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
44	MP-8	Z	-.003	4
45	MP-9	Z	-.006	2
46	MP-10	Z	-.004	2
47	MP-13	Z	-.007	2
48	MP-13	Z	0	3
49	MP-13	Z	-.002	4
50	SA-1	Z	-.005	2
51	SA-2	Z	-.013	2
52	MP-1	Z	-.012	5
53	MP-2	Z	-.005	5
54	MP-4	Z	-.013	5
55	MP-5	Z	-.012	5
56	MP-6	Z	-.005	5
57	MP-8	Z	-.013	5
58	MP-9	Z	-.006	5
59	MP-10	Z	-.004	5
60	MP-13	Z	-.007	5

Member Point Loads (BLC 27 : 180 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.028	2
2	MP-1	X	.031	3
3	MP-2	X	.012	2
4	MP-4	X	.03	2
5	MP-4	X	.015	3
6	MP-4	X	.014	3
7	MP-5	X	.028	2
8	MP-5	X	.033	3
9	MP-5	X	.006	4
10	MP-6	X	.012	2
11	MP-8	X	.03	2
12	MP-8	X	.016	3
13	MP-8	X	.014	3
14	MP-8	X	.006	4
15	MP-9	X	.028	2
16	MP-10	X	.012	2
17	MP-13	X	.03	2
18	MP-13	X	0	3
19	MP-13	X	.006	4
20	SA-1	X	.01	2
21	SA-2	X	.022	2
22	MP-1	X	.028	5
23	MP-2	X	.012	5
24	MP-4	X	.03	5
25	MP-5	X	.028	5
26	MP-6	X	.012	5
27	MP-8	X	.03	5
28	MP-9	X	.028	5
29	MP-10	X	.012	5
30	MP-13	X	.03	5

Member Point Loads (BLC 28 : 210 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.021	2
2	MP-1	X	.024	3
3	MP-2	X	.009	2

Member Point Loads (BLC 28 : 210 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
4	MP-4	X	.023	2
5	MP-4	X	.012	3
6	MP-4	X	.012	3
7	MP-5	X	.011	2
8	MP-5	X	.021	3
9	MP-5	X	.004	4
10	MP-6	X	.007	2
11	MP-8	X	.012	2
12	MP-8	X	.011	3
13	MP-8	X	.01	3
14	MP-8	X	.004	4
15	MP-9	X	.021	2
16	MP-10	X	.009	2
17	MP-13	X	.023	2
18	MP-13	X	0	3
19	MP-13	X	.005	4
20	SA-1	X	.008	2
21	SA-2	X	.031	2
22	MP-1	X	.021	5
23	MP-2	X	.009	5
24	MP-4	X	.023	5
25	MP-5	X	.011	5
26	MP-6	X	.007	5
27	MP-8	X	.012	5
28	MP-9	X	.021	5
29	MP-10	X	.009	5
30	MP-13	X	.023	5
31	MP-1	Z	.012	2
32	MP-1	Z	.014	3
33	MP-2	Z	.005	2
34	MP-4	Z	.013	2
35	MP-4	Z	.007	3
36	MP-4	Z	.007	3
37	MP-5	Z	.006	2
38	MP-5	Z	.012	3
39	MP-5	Z	.002	4
40	MP-6	Z	.004	2
41	MP-8	Z	.007	2
42	MP-8	Z	.006	3
43	MP-8	Z	.006	3
44	MP-8	Z	.002	4
45	MP-9	Z	.012	2
46	MP-10	Z	.005	2
47	MP-13	Z	.013	2
48	MP-13	Z	0	3
49	MP-13	Z	.003	4
50	SA-1	Z	.005	2
51	SA-2	Z	.018	2
52	MP-1	Z	.012	5
53	MP-2	Z	.005	5
54	MP-4	Z	.013	5
55	MP-5	Z	.006	5
56	MP-6	Z	.004	5
57	MP-8	Z	.007	5
58	MP-9	Z	.012	5
59	MP-10	Z	.005	5
60	MP-13	Z	.013	5

Member Point Loads (BLC 29 : 225 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.014	2
2	MP-1	X	.018	3
3	MP-2	X	.007	2
4	MP-4	X	.016	2
5	MP-4	X	.009	3
6	MP-4	X	.009	3
7	MP-5	X	.009	2
8	MP-5	X	.018	3
9	MP-5	X	.004	4
10	MP-6	X	.006	2
11	MP-8	X	.011	2
12	MP-8	X	.009	3
13	MP-8	X	.008	3
14	MP-8	X	.004	4
15	MP-9	X	.019	2
16	MP-10	X	.008	2
17	MP-13	X	.02	2
18	MP-13	X	0	3
19	MP-13	X	.004	4
20	SA-1	X	.007	2
21	SA-2	X	.025	2
22	MP-1	X	.014	5
23	MP-2	X	.007	5
24	MP-4	X	.016	5
25	MP-5	X	.009	5
26	MP-6	X	.006	5
27	MP-8	X	.011	5
28	MP-9	X	.019	5
29	MP-10	X	.008	5
30	MP-13	X	.02	5
31	MP-1	Z	.014	2
32	MP-1	Z	.018	3
33	MP-2	Z	.007	2
34	MP-4	Z	.016	2
35	MP-4	Z	.009	3
36	MP-4	Z	.009	3
37	MP-5	Z	.009	2
38	MP-5	Z	.018	3
39	MP-5	Z	.004	4
40	MP-6	Z	.006	2
41	MP-8	Z	.011	2
42	MP-8	Z	.009	3
43	MP-8	Z	.008	3
44	MP-8	Z	.004	4
45	MP-9	Z	.019	2
46	MP-10	Z	.008	2
47	MP-13	Z	.02	2
48	MP-13	Z	0	3
49	MP-13	Z	.004	4
50	SA-1	Z	.007	2
51	SA-2	Z	.025	2
52	MP-1	Z	.014	5
53	MP-2	Z	.007	5
54	MP-4	Z	.016	5
55	MP-5	Z	.009	5
56	MP-6	Z	.006	5
57	MP-8	Z	.011	5

Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
58	MP-9	Z	.019	5
59	MP-10	Z	.008	5
60	MP-13	Z	.02	5

Member Point Loads (BLC 30 : 240 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.008	2
2	MP-1	X	.011	3
3	MP-2	X	.004	2
4	MP-4	X	.009	2
5	MP-4	X	.006	3
6	MP-4	X	.006	3
7	MP-5	X	.008	2
8	MP-5	X	.013	3
9	MP-5	X	.003	4
10	MP-6	X	.004	2
11	MP-8	X	.009	2
12	MP-8	X	.007	3
13	MP-8	X	.006	3
14	MP-8	X	.003	4
15	MP-9	X	.014	2
16	MP-10	X	.006	2
17	MP-13	X	.015	2
18	MP-13	X	0	3
19	MP-13	X	.003	4
20	SA-1	X	.005	2
21	SA-2	X	.016	2
22	MP-1	X	.008	5
23	MP-2	X	.004	5
24	MP-4	X	.009	5
25	MP-5	X	.008	5
26	MP-6	X	.004	5
27	MP-8	X	.009	5
28	MP-9	X	.014	5
29	MP-10	X	.006	5
30	MP-13	X	.015	5
31	MP-1	Z	.014	2
32	MP-1	Z	.019	3
33	MP-2	Z	.007	2
34	MP-4	Z	.016	2
35	MP-4	Z	.01	3
36	MP-4	Z	.011	3
37	MP-5	Z	.014	2
38	MP-5	Z	.023	3
39	MP-5	Z	.004	4
40	MP-6	Z	.007	2
41	MP-8	Z	.016	2
42	MP-8	Z	.012	3
43	MP-8	Z	.011	3
44	MP-8	Z	.004	4
45	MP-9	Z	.025	2
46	MP-10	Z	.01	2
47	MP-13	Z	.026	2
48	MP-13	Z	0	3
49	MP-13	Z	.005	4
50	SA-1	Z	.008	2

Member Point Loads (BLC 30 : 240 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
51	SA-2	Z	.028	2
52	MP-1	Z	.014	5
53	MP-2	Z	.007	5
54	MP-4	Z	.016	5
55	MP-5	Z	.014	5
56	MP-6	Z	.007	5
57	MP-8	Z	.016	5
58	MP-9	Z	.025	5
59	MP-10	Z	.01	5
60	MP-13	Z	.026	5

Member Point Loads (BLC 31 : 270 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	.012	2
2	MP-1	Z	.02	3
3	MP-2	Z	.008	2
4	MP-4	Z	.014	2
5	MP-4	Z	.01	3
6	MP-4	Z	.012	3
7	MP-5	Z	.012	2
8	MP-5	Z	.025	3
9	MP-5	Z	.005	4
10	MP-6	Z	.008	2
11	MP-8	Z	.014	2
12	MP-8	Z	.012	3
13	MP-8	Z	.012	3
14	MP-8	Z	.005	4
15	MP-9	Z	.012	2
16	MP-10	Z	.008	2
17	MP-13	Z	.014	2
18	MP-13	Z	0	3
19	MP-13	Z	.005	4
20	SA-1	Z	.01	2
21	SA-2	Z	.036	2
22	MP-1	Z	.012	5
23	MP-2	Z	.008	5
24	MP-4	Z	.014	5
25	MP-5	Z	.012	5
26	MP-6	Z	.008	5
27	MP-8	Z	.014	5
28	MP-9	Z	.012	5
29	MP-10	Z	.008	5
30	MP-13	Z	.014	5

Member Point Loads (BLC 32 : 300 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.008	2
2	MP-1	X	-.011	3
3	MP-2	X	-.004	2
4	MP-4	X	-.009	2
5	MP-4	X	-.006	3
6	MP-4	X	-.006	3
7	MP-5	X	-.014	2
8	MP-5	X	-.016	3
9	MP-5	X	-.003	4
10	MP-6	X	-.006	2

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 32 : 300 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
11	MP-8	X	-.015	2
12	MP-8	X	-.008	3
13	MP-8	X	-.007	3
14	MP-8	X	-.003	4
15	MP-9	X	-.008	2
16	MP-10	X	-.004	2
17	MP-13	X	-.009	2
18	MP-13	X	0	3
19	MP-13	X	-.003	4
20	SA-1	X	-.005	2
21	SA-2	X	-.011	2
22	MP-1	X	-.008	5
23	MP-2	X	-.004	5
24	MP-4	X	-.009	5
25	MP-5	X	-.014	5
26	MP-6	X	-.006	5
27	MP-8	X	-.015	5
28	MP-9	X	-.008	5
29	MP-10	X	-.004	5
30	MP-13	X	-.009	5
31	MP-1	Z	.014	2
32	MP-1	Z	.019	3
33	MP-2	Z	.007	2
34	MP-4	Z	.016	2
35	MP-4	Z	.01	3
36	MP-4	Z	.011	3
37	MP-5	Z	.025	2
38	MP-5	Z	.028	3
39	MP-5	Z	.005	4
40	MP-6	Z	.01	2
41	MP-8	Z	.026	2
42	MP-8	Z	.014	3
43	MP-8	Z	.012	3
44	MP-8	Z	.005	4
45	MP-9	Z	.014	2
46	MP-10	Z	.007	2
47	MP-13	Z	.016	2
48	MP-13	Z	0	3
49	MP-13	Z	.004	4
50	SA-1	Z	.008	2
51	SA-2	Z	.019	2
52	MP-1	Z	.014	5
53	MP-2	Z	.007	5
54	MP-4	Z	.016	5
55	MP-5	Z	.025	5
56	MP-6	Z	.01	5
57	MP-8	Z	.026	5
58	MP-9	Z	.014	5
59	MP-10	Z	.007	5
60	MP-13	Z	.016	5

Member Point Loads (BLC 33 : 315 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.014	2
2	MP-1	X	-.018	3
3	MP-2	X	-.007	2

Member Point Loads (BLC 33 : 315 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
4	MP-4	X	-.016	2
5	MP-4	X	-.009	3
6	MP-4	X	-.009	3
7	MP-5	X	-.019	2
8	MP-5	X	-.023	3
9	MP-5	X	-.004	4
10	MP-6	X	-.008	2
11	MP-8	X	-.02	2
12	MP-8	X	-.011	3
13	MP-8	X	-.01	3
14	MP-8	X	-.004	4
15	MP-9	X	-.009	2
16	MP-10	X	-.006	2
17	MP-13	X	-.011	2
18	MP-13	X	0	3
19	MP-13	X	-.004	4
20	SA-1	X	-.007	2
21	SA-2	X	-.016	2
22	MP-1	X	-.014	5
23	MP-2	X	-.007	5
24	MP-4	X	-.016	5
25	MP-5	X	-.019	5
26	MP-6	X	-.008	5
27	MP-8	X	-.02	5
28	MP-9	X	-.009	5
29	MP-10	X	-.006	5
30	MP-13	X	-.011	5
31	MP-1	Z	.014	2
32	MP-1	Z	.018	3
33	MP-2	Z	.007	2
34	MP-4	Z	.016	2
35	MP-4	Z	.009	3
36	MP-4	Z	.009	3
37	MP-5	Z	.019	2
38	MP-5	Z	.023	3
39	MP-5	Z	.004	4
40	MP-6	Z	.008	2
41	MP-8	Z	.02	2
42	MP-8	Z	.011	3
43	MP-8	Z	.01	3
44	MP-8	Z	.004	4
45	MP-9	Z	.009	2
46	MP-10	Z	.006	2
47	MP-13	Z	.011	2
48	MP-13	Z	0	3
49	MP-13	Z	.004	4
50	SA-1	Z	.007	2
51	SA-2	Z	.016	2
52	MP-1	Z	.014	5
53	MP-2	Z	.007	5
54	MP-4	Z	.016	5
55	MP-5	Z	.019	5
56	MP-6	Z	.008	5
57	MP-8	Z	.02	5
58	MP-9	Z	.009	5
59	MP-10	Z	.006	5
60	MP-13	Z	.011	5

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Point Loads (BLC 34 : 330 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.021	2
2	MP-1	X	-.024	3
3	MP-2	X	-.009	2
4	MP-4	X	-.023	2
5	MP-4	X	-.012	3
6	MP-4	X	-.012	3
7	MP-5	X	-.021	2
8	MP-5	X	-.026	3
9	MP-5	X	-.005	4
10	MP-6	X	-.009	2
11	MP-8	X	-.023	2
12	MP-8	X	-.013	3
13	MP-8	X	-.012	3
14	MP-8	X	-.005	4
15	MP-9	X	-.011	2
16	MP-10	X	-.007	2
17	MP-13	X	-.012	2
18	MP-13	X	0	3
19	MP-13	X	-.004	4
20	SA-1	X	-.008	2
21	SA-2	X	-.022	2
22	MP-1	X	-.021	5
23	MP-2	X	-.009	5
24	MP-4	X	-.023	5
25	MP-5	X	-.021	5
26	MP-6	X	-.009	5
27	MP-8	X	-.023	5
28	MP-9	X	-.011	5
29	MP-10	X	-.007	5
30	MP-13	X	-.012	5
31	MP-1	Z	.012	2
32	MP-1	Z	.014	3
33	MP-2	Z	.005	2
34	MP-4	Z	.013	2
35	MP-4	Z	.007	3
36	MP-4	Z	.007	3
37	MP-5	Z	.012	2
38	MP-5	Z	.015	3
39	MP-5	Z	.003	4
40	MP-6	Z	.005	2
41	MP-8	Z	.013	2
42	MP-8	Z	.008	3
43	MP-8	Z	.007	3
44	MP-8	Z	.003	4
45	MP-9	Z	.006	2
46	MP-10	Z	.004	2
47	MP-13	Z	.007	2
48	MP-13	Z	0	3
49	MP-13	Z	.002	4
50	SA-1	Z	.005	2
51	SA-2	Z	.013	2
52	MP-1	Z	.012	5
53	MP-2	Z	.005	5
54	MP-4	Z	.013	5
55	MP-5	Z	.012	5
56	MP-6	Z	.005	5
57	MP-8	Z	.013	5

Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
58	MP-9	Z	.006	5
59	MP-10	Z	.004	5
60	MP-13	Z	.007	5

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.001	-.001	0	%100
2	CP-2	X	-.001	-.001	0	%100
3	CP-3	X	-.003	-.003	0	%100
4	FF-HR	X	-.012	-.012	0	%100
5	FFTH	X	-.045	-.045	0	%100
6	GSI-1	X	-.009	-.009	0	%100
7	GSI-2	X	-.009	-.009	0	%100
8	GSI-3	X	-.022	-.022	0	%100
9	HRB1	X	-.004	-.004	0	%100
10	HRB2	X	-.004	-.004	0	%100
11	HRB3	X	-.011	-.011	0	%100
12	K1	X	-.017	-.017	0	%100
13	K2	X	-.017	-.017	0	%100
14	K3	X	-.017	-.017	0	%100
15	MP-1	X	-.011	-.011	0	%100
16	MP-2	X	-.011	-.011	0	%100
17	MP-3	X	-.011	-.011	0	%100
18	MP-4	X	-.011	-.011	0	%100
19	MP-5	X	-.011	-.011	0	%100
20	MP-6	X	-.011	-.011	0	%100
21	MP-7	X	-.011	-.011	0	%100
22	MP-8	X	-.011	-.011	0	%100
23	MP-9	X	-.011	-.011	0	%100
24	MP-10	X	-.011	-.011	0	%100
25	MP-11	X	-.011	-.011	0	%100
26	MP-12	X	-.011	-.011	0	%100
27	MP-13	X	-.011	-.011	0	%100
28	SA-1	X	-.022	-.022	0	%100
29	SA-2	X	-.022	-.022	0	%100
30	SA-3	X	0	0	0	%100
31	SF1-HR	X	-.006	-.006	0	%100
32	SF1-TH	X	-.018	-.018	0	%100
33	SF2-HR	X	-.006	-.006	0	%100
34	SF2-TH	X	-.018	-.018	0	%100
35	TRCP-1	X	-.006	-.006	0	%100
36	TRCP-2	X	-.006	-.006	0	%100
37	TRCP-3	X	-.012	-.012	0	%100

Member Distributed Loads (BLC 3 : 30 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.002	-.002	0	%100
2	CP-2	X	0	0	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.009	-.009	0	%100
5	FFTH	X	-.034	-.034	0	%100
6	GSI-1	X	-.013	-.013	0	%100
7	GSI-2	X	0	0	0	%100
8	GSI-3	X	-.016	-.016	0	%100
9	HRB1	X	-.006	-.006	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
10	HRB2	X	0	0	0	%100
11	HRB3	X	-.008	-.008	0	%100
12	K1	X	-.015	-.015	0	%100
13	K2	X	-.015	-.015	0	%100
14	K3	X	-.015	-.015	0	%100
15	MP-1	X	-.009	-.009	0	%100
16	MP-2	X	-.009	-.009	0	%100
17	MP-3	X	-.009	-.009	0	%100
18	MP-4	X	-.009	-.009	0	%100
19	MP-5	X	-.009	-.009	0	%100
20	MP-6	X	-.009	-.009	0	%100
21	MP-7	X	-.009	-.009	0	%100
22	MP-8	X	-.009	-.009	0	%100
23	MP-9	X	-.009	-.009	0	%100
24	MP-10	X	-.009	-.009	0	%100
25	MP-11	X	-.009	-.009	0	%100
26	MP-12	X	-.009	-.009	0	%100
27	MP-13	X	-.009	-.009	0	%100
28	SA-1	X	-.011	-.011	0	%100
29	SA-2	X	-.022	-.022	0	%100
30	SA-3	X	-.008	-.008	0	%100
31	SF1-HR	X	0	0	0	%100
32	SF1-TH	X	-.027	-.027	0	%100
33	SF2-HR	X	-.009	-.009	0	%100
34	SF2-TH	X	0	0	0	%100
35	TRCP-1	X	-.008	-.008	0	%100
36	TRCP-2	X	0	0	0	%100
37	TRCP-3	X	-.009	-.009	0	%100
38	CP-1	Z	-.001	-.001	0	%100
39	CP-2	Z	0	0	0	%100
40	CP-3	Z	-.001	-.001	0	%100
41	FF-HR	Z	-.005	-.005	0	%100
42	FFTH	Z	-.02	-.02	0	%100
43	GSI-1	Z	-.009	-.009	0	%100
44	GSI-2	Z	0	0	0	%100
45	GSI-3	Z	-.009	-.009	0	%100
46	HRB1	Z	-.004	-.004	0	%100
47	HRB2	Z	0	0	0	%100
48	HRB3	Z	-.005	-.005	0	%100
49	K1	Z	-.009	-.009	0	%100
50	K2	Z	-.009	-.009	0	%100
51	K3	Z	-.009	-.009	0	%100
52	MP-1	Z	-.005	-.005	0	%100
53	MP-2	Z	-.005	-.005	0	%100
54	MP-3	Z	-.005	-.005	0	%100
55	MP-4	Z	-.005	-.005	0	%100
56	MP-5	Z	-.005	-.005	0	%100
57	MP-6	Z	-.005	-.005	0	%100
58	MP-7	Z	-.005	-.005	0	%100
59	MP-8	Z	-.005	-.005	0	%100
60	MP-9	Z	-.005	-.005	0	%100
61	MP-10	Z	-.005	-.005	0	%100
62	MP-11	Z	-.005	-.005	0	%100
63	MP-12	Z	-.005	-.005	0	%100
64	MP-13	Z	-.005	-.005	0	%100
65	SA-1	Z	-.006	-.006	0	%100
66	SA-2	Z	-.011	-.011	0	%100

Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
67	SA-3	Z	-.007	-.007	0	%100
68	SF1-HR	Z	0	0	0	%100
69	SF1-TH	Z	-.018	-.018	0	%100
70	SF2-HR	Z	-.005	-.005	0	%100
71	SF2-TH	Z	0	0	0	%100
72	TRCP-1	Z	-.005	-.005	0	%100
73	TRCP-2	Z	0	0	0	%100
74	TRCP-3	Z	-.005	-.005	0	%100

Member Distributed Loads (BLC 4 : 45 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.002	-.002	0	%100
2	CP-2	X	-.000506	-.000506	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.006	-.006	0	%100
5	FFTH	X	-.023	-.023	0	%100
6	GSI-1	X	-.012	-.012	0	%100
7	GSI-2	X	-.003	-.003	0	%100
8	GSI-3	X	-.011	-.011	0	%100
9	HRB1	X	-.006	-.006	0	%100
10	HRB2	X	-.002	-.002	0	%100
11	HRB3	X	-.005	-.005	0	%100
12	K1	X	-.012	-.012	0	%100
13	K2	X	-.012	-.012	0	%100
14	K3	X	-.012	-.012	0	%100
15	MP-1	X	-.008	-.008	0	%100
16	MP-2	X	-.008	-.008	0	%100
17	MP-3	X	-.008	-.008	0	%100
18	MP-4	X	-.008	-.008	0	%100
19	MP-5	X	-.008	-.008	0	%100
20	MP-6	X	-.008	-.008	0	%100
21	MP-7	X	-.008	-.008	0	%100
22	MP-8	X	-.008	-.008	0	%100
23	MP-9	X	-.008	-.008	0	%100
24	MP-10	X	-.008	-.008	0	%100
25	MP-11	X	-.008	-.008	0	%100
26	MP-12	X	-.008	-.008	0	%100
27	MP-13	X	-.008	-.008	0	%100
28	SA-1	X	-.005	-.005	0	%100
29	SA-2	X	-.018	-.018	0	%100
30	SA-3	X	-.009	-.009	0	%100
31	SF1-HR	X	-.002	-.002	0	%100
32	SF1-TH	X	-.024	-.024	0	%100
33	SF2-HR	X	-.008	-.008	0	%100
34	SF2-TH	X	-.007	-.007	0	%100
35	TRCP-1	X	-.008	-.008	0	%100
36	TRCP-2	X	-.002	-.002	0	%100
37	TRCP-3	X	-.006	-.006	0	%100
38	CP-1	Z	-.002	-.002	0	%100
39	CP-2	Z	-.000581	-.000581	0	%100
40	CP-3	Z	-.002	-.002	0	%100
41	FF-HR	Z	-.006	-.006	0	%100
42	FFTH	Z	-.023	-.023	0	%100
43	GSI-1	Z	-.014	-.014	0	%100
44	GSI-2	Z	-.004	-.004	0	%100
45	GSI-3	Z	-.011	-.011	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
46	HRB1	Z	-.007	-.007	0	%100
47	HRB2	Z	-.002	-.002	0	%100
48	HRB3	Z	-.005	-.005	0	%100
49	K1	Z	-.012	-.012	0	%100
50	K2	Z	-.012	-.012	0	%100
51	K3	Z	-.012	-.012	0	%100
52	MP-1	Z	-.008	-.008	0	%100
53	MP-2	Z	-.008	-.008	0	%100
54	MP-3	Z	-.008	-.008	0	%100
55	MP-4	Z	-.008	-.008	0	%100
56	MP-5	Z	-.008	-.008	0	%100
57	MP-6	Z	-.008	-.008	0	%100
58	MP-7	Z	-.008	-.008	0	%100
59	MP-8	Z	-.008	-.008	0	%100
60	MP-9	Z	-.008	-.008	0	%100
61	MP-10	Z	-.008	-.008	0	%100
62	MP-11	Z	-.008	-.008	0	%100
63	MP-12	Z	-.008	-.008	0	%100
64	MP-13	Z	-.008	-.008	0	%100
65	SA-1	Z	-.004	-.004	0	%100
66	SA-2	Z	-.015	-.015	0	%100
67	SA-3	Z	-.013	-.013	0	%100
68	SF1-HR	Z	-.002	-.002	0	%100
69	SF1-TH	Z	-.029	-.029	0	%100
70	SF2-HR	Z	-.008	-.008	0	%100
71	SF2-TH	Z	-.008	-.008	0	%100
72	TRCP-1	Z	-.008	-.008	0	%100
73	TRCP-2	Z	-.002	-.002	0	%100
74	TRCP-3	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 5 : 60 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.001	-.001	0	%100
2	CP-2	X	-.000691	-.000691	0	%100
3	CP-3	X	-.000832	-.000832	0	%100
4	FF-HR	X	-.003	-.003	0	%100
5	FFTH	X	-.011	-.011	0	%100
6	GSI-1	X	-.009	-.009	0	%100
7	GSI-2	X	-.004	-.004	0	%100
8	GSI-3	X	-.005	-.005	0	%100
9	HRB1	X	-.004	-.004	0	%100
10	HRB2	X	-.002	-.002	0	%100
11	HRB3	X	-.003	-.003	0	%100
12	K1	X	-.009	-.009	0	%100
13	K2	X	-.009	-.009	0	%100
14	K3	X	-.009	-.009	0	%100
15	MP-1	X	-.005	-.005	0	%100
16	MP-2	X	-.005	-.005	0	%100
17	MP-3	X	-.005	-.005	0	%100
18	MP-4	X	-.005	-.005	0	%100
19	MP-5	X	-.005	-.005	0	%100
20	MP-6	X	-.005	-.005	0	%100
21	MP-7	X	-.005	-.005	0	%100
22	MP-8	X	-.005	-.005	0	%100
23	MP-9	X	-.005	-.005	0	%100
24	MP-10	X	-.005	-.005	0	%100

Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
25	MP-11	X	-.005	-.005	0	%100
26	MP-12	X	-.005	-.005	0	%100
27	MP-13	X	-.005	-.005	0	%100
28	SA-1	X	0	0	0	%100
29	SA-2	X	-.011	-.011	0	%100
30	SA-3	X	-.008	-.008	0	%100
31	SF1-HR	X	-.003	-.003	0	%100
32	SF1-TH	X	-.018	-.018	0	%100
33	SF2-HR	X	-.006	-.006	0	%100
34	SF2-TH	X	-.009	-.009	0	%100
35	TRCP-1	X	-.006	-.006	0	%100
36	TRCP-2	X	-.003	-.003	0	%100
37	TRCP-3	X	-.003	-.003	0	%100
38	CP-1	Z	-.003	-.003	0	%100
39	CP-2	Z	-.001	-.001	0	%100
40	CP-3	Z	-.001	-.001	0	%100
41	FF-HR	Z	-.005	-.005	0	%100
42	FFTH	Z	-.02	-.02	0	%100
43	GSI-1	Z	-.018	-.018	0	%100
44	GSI-2	Z	-.009	-.009	0	%100
45	GSI-3	Z	-.009	-.009	0	%100
46	HRB1	Z	-.009	-.009	0	%100
47	HRB2	Z	-.004	-.004	0	%100
48	HRB3	Z	-.005	-.005	0	%100
49	K1	Z	-.015	-.015	0	%100
50	K2	Z	-.015	-.015	0	%100
51	K3	Z	-.015	-.015	0	%100
52	MP-1	Z	-.009	-.009	0	%100
53	MP-2	Z	-.009	-.009	0	%100
54	MP-3	Z	-.009	-.009	0	%100
55	MP-4	Z	-.009	-.009	0	%100
56	MP-5	Z	-.009	-.009	0	%100
57	MP-6	Z	-.009	-.009	0	%100
58	MP-7	Z	-.009	-.009	0	%100
59	MP-8	Z	-.009	-.009	0	%100
60	MP-9	Z	-.009	-.009	0	%100
61	MP-10	Z	-.009	-.009	0	%100
62	MP-11	Z	-.009	-.009	0	%100
63	MP-12	Z	-.009	-.009	0	%100
64	MP-13	Z	-.009	-.009	0	%100
65	SA-1	Z	0	0	0	%100
66	SA-2	Z	-.017	-.017	0	%100
67	SA-3	Z	-.02	-.02	0	%100
68	SF1-HR	Z	-.005	-.005	0	%100
69	SF1-TH	Z	-.037	-.037	0	%100
70	SF2-HR	Z	-.01	-.01	0	%100
71	SF2-TH	Z	-.018	-.018	0	%100
72	TRCP-1	Z	-.01	-.01	0	%100
73	TRCP-2	Z	-.005	-.005	0	%100
74	TRCP-3	Z	-.005	-.005	0	%100

Member Distributed Loads (BLC 6 : 90 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Z	-.003	-.003	0	%100
2	CP-2	Z	-.003	-.003	0	%100
3	CP-3	Z	0	0	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 6 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
4	FF-HR	Z	0	0	0	%100
5	FFTH	Z	0	0	0	%100
6	GSI-1	Z	-.018	-.018	0	%100
7	GSI-2	Z	-.018	-.018	0	%100
8	GSI-3	Z	0	0	0	%100
9	HRB1	Z	-.009	-.009	0	%100
10	HRB2	Z	-.009	-.009	0	%100
11	HRB3	Z	0	0	0	%100
12	K1	Z	-.017	-.017	0	%100
13	K2	Z	-.017	-.017	0	%100
14	K3	Z	-.017	-.017	0	%100
15	MP-1	Z	-.011	-.011	0	%100
16	MP-2	Z	-.011	-.011	0	%100
17	MP-3	Z	-.011	-.011	0	%100
18	MP-4	Z	-.011	-.011	0	%100
19	MP-5	Z	-.011	-.011	0	%100
20	MP-6	Z	-.011	-.011	0	%100
21	MP-7	Z	-.011	-.011	0	%100
22	MP-8	Z	-.011	-.011	0	%100
23	MP-9	Z	-.011	-.011	0	%100
24	MP-10	Z	-.011	-.011	0	%100
25	MP-11	Z	-.011	-.011	0	%100
26	MP-12	Z	-.011	-.011	0	%100
27	MP-13	Z	-.011	-.011	0	%100
28	SA-1	Z	-.011	-.011	0	%100
29	SA-2	Z	-.011	-.011	0	%100
30	SA-3	Z	-.027	-.027	0	%100
31	SF1-HR	Z	-.01	-.01	0	%100
32	SF1-TH	Z	-.037	-.037	0	%100
33	SF2-HR	Z	-.01	-.01	0	%100
34	SF2-TH	Z	-.037	-.037	0	%100
35	TRCP-1	Z	-.01	-.01	0	%100
36	TRCP-2	Z	-.01	-.01	0	%100
37	TRCP-3	Z	0	0	0	%100

Member Distributed Loads (BLC 7 : 120 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	,000691	,000691	0	%100
2	CP-2	X	.001	.001	0	%100
3	CP-3	X	,000832	,000832	0	%100
4	FF-HR	X	,003	,003	0	%100
5	FFTH	X	.011	.011	0	%100
6	GSI-1	X	.004	.004	0	%100
7	GSI-2	X	.009	.009	0	%100
8	GSI-3	X	,005	,005	0	%100
9	HRB1	X	.002	.002	0	%100
10	HRB2	X	,004	,004	0	%100
11	HRB3	X	,003	,003	0	%100
12	K1	X	,009	,009	0	%100
13	K2	X	.009	.009	0	%100
14	K3	X	,009	,009	0	%100
15	MP-1	X	.005	.005	0	%100
16	MP-2	X	.005	.005	0	%100
17	MP-3	X	,005	,005	0	%100
18	MP-4	X	.005	.005	0	%100
19	MP-5	X	.005	.005	0	%100

Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
20	MP-6	X	.005	.005	0	%100
21	MP-7	X	.005	.005	0	%100
22	MP-8	X	.005	.005	0	%100
23	MP-9	X	.005	.005	0	%100
24	MP-10	X	.005	.005	0	%100
25	MP-11	X	.005	.005	0	%100
26	MP-12	X	.005	.005	0	%100
27	MP-13	X	.005	.005	0	%100
28	SA-1	X	.011	.011	0	%100
29	SA-2	X	0	0	0	%100
30	SA-3	X	.008	.008	0	%100
31	SF1-HR	X	.006	.006	0	%100
32	SF1-TH	X	.009	.009	0	%100
33	SF2-HR	X	.003	.003	0	%100
34	SF2-TH	X	.018	.018	0	%100
35	TRCP-1	X	.003	.003	0	%100
36	TRCP-2	X	.006	.006	0	%100
37	TRCP-3	X	.003	.003	0	%100
38	CP-1	Z	-.001	-.001	0	%100
39	CP-2	Z	-.003	-.003	0	%100
40	CP-3	Z	-.001	-.001	0	%100
41	FF-HR	Z	-.005	-.005	0	%100
42	FFTH	Z	-.02	-.02	0	%100
43	GSI-1	Z	-.009	-.009	0	%100
44	GSI-2	Z	-.018	-.018	0	%100
45	GSI-3	Z	-.009	-.009	0	%100
46	HRB1	Z	-.004	-.004	0	%100
47	HRB2	Z	-.009	-.009	0	%100
48	HRB3	Z	-.005	-.005	0	%100
49	K1	Z	-.015	-.015	0	%100
50	K2	Z	-.015	-.015	0	%100
51	K3	Z	-.015	-.015	0	%100
52	MP-1	Z	-.009	-.009	0	%100
53	MP-2	Z	-.009	-.009	0	%100
54	MP-3	Z	-.009	-.009	0	%100
55	MP-4	Z	-.009	-.009	0	%100
56	MP-5	Z	-.009	-.009	0	%100
57	MP-6	Z	-.009	-.009	0	%100
58	MP-7	Z	-.009	-.009	0	%100
59	MP-8	Z	-.009	-.009	0	%100
60	MP-9	Z	-.009	-.009	0	%100
61	MP-10	Z	-.009	-.009	0	%100
62	MP-11	Z	-.009	-.009	0	%100
63	MP-12	Z	-.009	-.009	0	%100
64	MP-13	Z	-.009	-.009	0	%100
65	SA-1	Z	-.017	-.017	0	%100
66	SA-2	Z	0	0	0	%100
67	SA-3	Z	-.02	-.02	0	%100
68	SF1-HR	Z	-.01	-.01	0	%100
69	SF1-TH	Z	-.018	-.018	0	%100
70	SF2-HR	Z	-.005	-.005	0	%100
71	SF2-TH	Z	-.037	-.037	0	%100
72	TRCP-1	Z	-.005	-.005	0	%100
73	TRCP-2	Z	-.01	-.01	0	%100
74	TRCP-3	Z	-.005	-.005	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

Apr 27, 2020
4:41 PM
Checked By: GHM

Member Distributed Loads (BLC 8 : 135 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.000506	.000506	0	%100
2	CP-2	X	.002	.002	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.006	.006	0	%100
5	FFTH	X	.023	.023	0	%100
6	GSI-1	X	.003	.003	0	%100
7	GSI-2	X	.012	.012	0	%100
8	GSI-3	X	.011	.011	0	%100
9	HRB1	X	.002	.002	0	%100
10	HRB2	X	.006	.006	0	%100
11	HRB3	X	.005	.005	0	%100
12	K1	X	.012	.012	0	%100
13	K2	X	.012	.012	0	%100
14	K3	X	.012	.012	0	%100
15	MP-1	X	.008	.008	0	%100
16	MP-2	X	.008	.008	0	%100
17	MP-3	X	.008	.008	0	%100
18	MP-4	X	.008	.008	0	%100
19	MP-5	X	.008	.008	0	%100
20	MP-6	X	.008	.008	0	%100
21	MP-7	X	.008	.008	0	%100
22	MP-8	X	.008	.008	0	%100
23	MP-9	X	.008	.008	0	%100
24	MP-10	X	.008	.008	0	%100
25	MP-11	X	.008	.008	0	%100
26	MP-12	X	.008	.008	0	%100
27	MP-13	X	.008	.008	0	%100
28	SA-1	X	.018	.018	0	%100
29	SA-2	X	.005	.005	0	%100
30	SA-3	X	.009	.009	0	%100
31	SF1-HR	X	.008	.008	0	%100
32	SF1-TH	X	.007	.007	0	%100
33	SF2-HR	X	.002	.002	0	%100
34	SF2-TH	X	.024	.024	0	%100
35	TRCP-1	X	.002	.002	0	%100
36	TRCP-2	X	.008	.008	0	%100
37	TRCP-3	X	.006	.006	0	%100
38	CP-1	Z	-.000581	-.000581	0	%100
39	CP-2	Z	-.002	-.002	0	%100
40	CP-3	Z	-.002	-.002	0	%100
41	FF-HR	Z	-.006	-.006	0	%100
42	FFTH	Z	-.023	-.023	0	%100
43	GSI-1	Z	-.004	-.004	0	%100
44	GSI-2	Z	-.014	-.014	0	%100
45	GSI-3	Z	-.011	-.011	0	%100
46	HRB1	Z	-.002	-.002	0	%100
47	HRB2	Z	-.007	-.007	0	%100
48	HRB3	Z	-.005	-.005	0	%100
49	K1	Z	-.012	-.012	0	%100
50	K2	Z	-.012	-.012	0	%100
51	K3	Z	-.012	-.012	0	%100
52	MP-1	Z	-.008	-.008	0	%100
53	MP-2	Z	-.008	-.008	0	%100
54	MP-3	Z	-.008	-.008	0	%100
55	MP-4	Z	-.008	-.008	0	%100
56	MP-5	Z	-.008	-.008	0	%100
57	MP-6	Z	-.008	-.008	0	%100

Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
58	MP-7	Z	-.008	-.008	0	%100
59	MP-8	Z	-.008	-.008	0	%100
60	MP-9	Z	-.008	-.008	0	%100
61	MP-10	Z	-.008	-.008	0	%100
62	MP-11	Z	-.008	-.008	0	%100
63	MP-12	Z	-.008	-.008	0	%100
64	MP-13	Z	-.008	-.008	0	%100
65	SA-1	Z	-.015	-.015	0	%100
66	SA-2	Z	-.004	-.004	0	%100
67	SA-3	Z	-.013	-.013	0	%100
68	SF1-HR	Z	-.008	-.008	0	%100
69	SF1-TH	Z	-.008	-.008	0	%100
70	SF2-HR	Z	-.002	-.002	0	%100
71	SF2-TH	Z	-.029	-.029	0	%100
72	TRCP-1	Z	-.002	-.002	0	%100
73	TRCP-2	Z	-.008	-.008	0	%100
74	TRCP-3	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 9 : 150 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	0	0	0	%100
2	CP-2	X	.002	.002	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.009	.009	0	%100
5	FFTH	X	.034	.034	0	%100
6	GSI-1	X	0	0	0	%100
7	GSI-2	X	.013	.013	0	%100
8	GSI-3	X	.016	.016	0	%100
9	HRB1	X	0	0	0	%100
10	HRB2	X	.006	.006	0	%100
11	HRB3	X	.008	.008	0	%100
12	K1	X	.015	.015	0	%100
13	K2	X	.015	.015	0	%100
14	K3	X	.015	.015	0	%100
15	MP-1	X	.009	.009	0	%100
16	MP-2	X	.009	.009	0	%100
17	MP-3	X	.009	.009	0	%100
18	MP-4	X	.009	.009	0	%100
19	MP-5	X	.009	.009	0	%100
20	MP-6	X	.009	.009	0	%100
21	MP-7	X	.009	.009	0	%100
22	MP-8	X	.009	.009	0	%100
23	MP-9	X	.009	.009	0	%100
24	MP-10	X	.009	.009	0	%100
25	MP-11	X	.009	.009	0	%100
26	MP-12	X	.009	.009	0	%100
27	MP-13	X	.009	.009	0	%100
28	SA-1	X	.022	.022	0	%100
29	SA-2	X	.011	.011	0	%100
30	SA-3	X	.008	.008	0	%100
31	SF1-HR	X	.009	.009	0	%100
32	SF1-TH	X	0	0	0	%100
33	SF2-HR	X	0	0	0	%100
34	SF2-TH	X	.027	.027	0	%100
35	TRCP-1	X	0	0	0	%100
36	TRCP-2	X	.008	.008	0	%100

Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
37	TRCP-3	X	.009	.009	0	%100
38	CP-1	Z	0	0	0	%100
39	CP-2	Z	-.001	-.001	0	%100
40	CP-3	Z	-.001	-.001	0	%100
41	FF-HR	Z	-.005	-.005	0	%100
42	FFTH	Z	-.02	-.02	0	%100
43	GSI-1	Z	0	0	0	%100
44	GSI-2	Z	-.009	-.009	0	%100
45	GSI-3	Z	-.009	-.009	0	%100
46	HRB1	Z	0	0	0	%100
47	HRB2	Z	-.004	-.004	0	%100
48	HRB3	Z	-.005	-.005	0	%100
49	K1	Z	-.009	-.009	0	%100
50	K2	Z	-.009	-.009	0	%100
51	K3	Z	-.009	-.009	0	%100
52	MP-1	Z	-.005	-.005	0	%100
53	MP-2	Z	-.005	-.005	0	%100
54	MP-3	Z	-.005	-.005	0	%100
55	MP-4	Z	-.005	-.005	0	%100
56	MP-5	Z	-.005	-.005	0	%100
57	MP-6	Z	-.005	-.005	0	%100
58	MP-7	Z	-.005	-.005	0	%100
59	MP-8	Z	-.005	-.005	0	%100
60	MP-9	Z	-.005	-.005	0	%100
61	MP-10	Z	-.005	-.005	0	%100
62	MP-11	Z	-.005	-.005	0	%100
63	MP-12	Z	-.005	-.005	0	%100
64	MP-13	Z	-.005	-.005	0	%100
65	SA-1	Z	-.011	-.011	0	%100
66	SA-2	Z	-.006	-.006	0	%100
67	SA-3	Z	-.007	-.007	0	%100
68	SF1-HR	Z	-.005	-.005	0	%100
69	SF1-TH	Z	0	0	0	%100
70	SF2-HR	Z	0	0	0	%100
71	SF2-TH	Z	-.018	-.018	0	%100
72	TRCP-1	Z	0	0	0	%100
73	TRCP-2	Z	-.005	-.005	0	%100
74	TRCP-3	Z	-.005	-.005	0	%100

Member Distributed Loads (BLC 10 : 180 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.001	.001	0	%100
2	CP-2	X	.001	.001	0	%100
3	CP-3	X	.003	.003	0	%100
4	FF-HR	X	.012	.012	0	%100
5	FFTH	X	.045	.045	0	%100
6	GSI-1	X	.009	.009	0	%100
7	GSI-2	X	.009	.009	0	%100
8	GSI-3	X	.022	.022	0	%100
9	HRB1	X	.004	.004	0	%100
10	HRB2	X	.004	.004	0	%100
11	HRB3	X	.011	.011	0	%100
12	K1	X	.017	.017	0	%100
13	K2	X	.017	.017	0	%100
14	K3	X	.017	.017	0	%100
15	MP-1	X	.011	.011	0	%100

Member Distributed Loads (BLC 10 : 180 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
16	MP-2	X	.011	.011	0	%100
17	MP-3	X	.011	.011	0	%100
18	MP-4	X	.011	.011	0	%100
19	MP-5	X	.011	.011	0	%100
20	MP-6	X	.011	.011	0	%100
21	MP-7	X	.011	.011	0	%100
22	MP-8	X	.011	.011	0	%100
23	MP-9	X	.011	.011	0	%100
24	MP-10	X	.011	.011	0	%100
25	MP-11	X	.011	.011	0	%100
26	MP-12	X	.011	.011	0	%100
27	MP-13	X	.011	.011	0	%100
28	SA-1	X	.022	.022	0	%100
29	SA-2	X	.022	.022	0	%100
30	SA-3	X	0	0	0	%100
31	SF1-HR	X	.006	.006	0	%100
32	SF1-TH	X	.018	.018	0	%100
33	SF2-HR	X	.006	.006	0	%100
34	SF2-TH	X	.018	.018	0	%100
35	TRCP-1	X	.006	.006	0	%100
36	TRCP-2	X	.006	.006	0	%100
37	TRCP-3	X	.012	.012	0	%100

Member Distributed Loads (BLC 11 : 210 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.002	.002	0	%100
2	CP-2	X	0	0	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.009	.009	0	%100
5	FFTH	X	.034	.034	0	%100
6	GSI-1	X	.013	.013	0	%100
7	GSI-2	X	0	0	0	%100
8	GSI-3	X	.016	.016	0	%100
9	HRB1	X	.006	.006	0	%100
10	HRB2	X	0	0	0	%100
11	HRB3	X	.008	.008	0	%100
12	K1	X	.015	.015	0	%100
13	K2	X	.015	.015	0	%100
14	K3	X	.015	.015	0	%100
15	MP-1	X	.009	.009	0	%100
16	MP-2	X	.009	.009	0	%100
17	MP-3	X	.009	.009	0	%100
18	MP-4	X	.009	.009	0	%100
19	MP-5	X	.009	.009	0	%100
20	MP-6	X	.009	.009	0	%100
21	MP-7	X	.009	.009	0	%100
22	MP-8	X	.009	.009	0	%100
23	MP-9	X	.009	.009	0	%100
24	MP-10	X	.009	.009	0	%100
25	MP-11	X	.009	.009	0	%100
26	MP-12	X	.009	.009	0	%100
27	MP-13	X	.009	.009	0	%100
28	SA-1	X	.011	.011	0	%100
29	SA-2	X	.022	.022	0	%100
30	SA-3	X	.008	.008	0	%100
31	SF1-HR	X	0	0	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

Apr 27, 2020
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Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
32	SF1-TH	X	.027	.027	0	%100
33	SF2-HR	X	.009	.009	0	%100
34	SF2-TH	X	0	0	0	%100
35	TRCP-1	X	.008	.008	0	%100
36	TRCP-2	X	0	0	0	%100
37	TRCP-3	X	.009	.009	0	%100
38	CP-1	Z	.001	.001	0	%100
39	CP-2	Z	0	0	0	%100
40	CP-3	Z	.001	.001	0	%100
41	FF-HR	Z	.005	.005	0	%100
42	FFTH	Z	.02	.02	0	%100
43	GSI-1	Z	.009	.009	0	%100
44	GSI-2	Z	0	0	0	%100
45	GSI-3	Z	.009	.009	0	%100
46	HRB1	Z	.004	.004	0	%100
47	HRB2	Z	0	0	0	%100
48	HRB3	Z	.005	.005	0	%100
49	K1	Z	.009	.009	0	%100
50	K2	Z	.009	.009	0	%100
51	K3	Z	.009	.009	0	%100
52	MP-1	Z	.005	.005	0	%100
53	MP-2	Z	.005	.005	0	%100
54	MP-3	Z	.005	.005	0	%100
55	MP-4	Z	.005	.005	0	%100
56	MP-5	Z	.005	.005	0	%100
57	MP-6	Z	.005	.005	0	%100
58	MP-7	Z	.005	.005	0	%100
59	MP-8	Z	.005	.005	0	%100
60	MP-9	Z	.005	.005	0	%100
61	MP-10	Z	.005	.005	0	%100
62	MP-11	Z	.005	.005	0	%100
63	MP-12	Z	.005	.005	0	%100
64	MP-13	Z	.005	.005	0	%100
65	SA-1	Z	.006	.006	0	%100
66	SA-2	Z	.011	.011	0	%100
67	SA-3	Z	.007	.007	0	%100
68	SF1-HR	Z	0	0	0	%100
69	SF1-TH	Z	.018	.018	0	%100
70	SF2-HR	Z	.005	.005	0	%100
71	SF2-TH	Z	0	0	0	%100
72	TRCP-1	Z	.005	.005	0	%100
73	TRCP-2	Z	0	0	0	%100
74	TRCP-3	Z	.005	.005	0	%100

Member Distributed Loads (BLC 12 : 225 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.002	.002	0	%100
2	CP-2	X	.000506	.000506	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.006	.006	0	%100
5	FFTH	X	.023	.023	0	%100
6	GSI-1	X	.012	.012	0	%100
7	GSI-2	X	.003	.003	0	%100
8	GSI-3	X	.011	.011	0	%100
9	HRB1	X	.006	.006	0	%100
10	HRB2	X	.002	.002	0	%100

Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
11	HRB3	X	.005	.005	0	%100
12	K1	X	.012	.012	0	%100
13	K2	X	.012	.012	0	%100
14	K3	X	.012	.012	0	%100
15	MP-1	X	.008	.008	0	%100
16	MP-2	X	.008	.008	0	%100
17	MP-3	X	.008	.008	0	%100
18	MP-4	X	.008	.008	0	%100
19	MP-5	X	.008	.008	0	%100
20	MP-6	X	.008	.008	0	%100
21	MP-7	X	.008	.008	0	%100
22	MP-8	X	.008	.008	0	%100
23	MP-9	X	.008	.008	0	%100
24	MP-10	X	.008	.008	0	%100
25	MP-11	X	.008	.008	0	%100
26	MP-12	X	.008	.008	0	%100
27	MP-13	X	.008	.008	0	%100
28	SA-1	X	.005	.005	0	%100
29	SA-2	X	.018	.018	0	%100
30	SA-3	X	.009	.009	0	%100
31	SF1-HR	X	.002	.002	0	%100
32	SF1-TH	X	.024	.024	0	%100
33	SF2-HR	X	.008	.008	0	%100
34	SF2-TH	X	.007	.007	0	%100
35	TRCP-1	X	.008	.008	0	%100
36	TRCP-2	X	.002	.002	0	%100
37	TRCP-3	X	.006	.006	0	%100
38	CP-1	Z	.002	.002	0	%100
39	CP-2	Z	.000581	.000581	0	%100
40	CP-3	Z	.002	.002	0	%100
41	FF-HR	Z	.006	.006	0	%100
42	FFTH	Z	.023	.023	0	%100
43	GSI-1	Z	.014	.014	0	%100
44	GSI-2	Z	.004	.004	0	%100
45	GSI-3	Z	.011	.011	0	%100
46	HRB1	Z	.007	.007	0	%100
47	HRB2	Z	.002	.002	0	%100
48	HRB3	Z	.005	.005	0	%100
49	K1	Z	.012	.012	0	%100
50	K2	Z	.012	.012	0	%100
51	K3	Z	.012	.012	0	%100
52	MP-1	Z	.008	.008	0	%100
53	MP-2	Z	.008	.008	0	%100
54	MP-3	Z	.008	.008	0	%100
55	MP-4	Z	.008	.008	0	%100
56	MP-5	Z	.008	.008	0	%100
57	MP-6	Z	.008	.008	0	%100
58	MP-7	Z	.008	.008	0	%100
59	MP-8	Z	.008	.008	0	%100
60	MP-9	Z	.008	.008	0	%100
61	MP-10	Z	.008	.008	0	%100
62	MP-11	Z	.008	.008	0	%100
63	MP-12	Z	.008	.008	0	%100
64	MP-13	Z	.008	.008	0	%100
65	SA-1	Z	.004	.004	0	%100
66	SA-2	Z	.015	.015	0	%100
67	SA-3	Z	.013	.013	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
68	SF1-HR	Z	.002	.002	0	%100
69	SF1-TH	Z	.029	.029	0	%100
70	SF2-HR	Z	.008	.008	0	%100
71	SF2-TH	Z	.008	.008	0	%100
72	TRCP-1	Z	.008	.008	0	%100
73	TRCP-2	Z	.002	.002	0	%100
74	TRCP-3	Z	.006	.006	0	%100

Member Distributed Loads (BLC 13 : 240 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.001	.001	0	%100
2	CP-2	X	.000691	.000691	0	%100
3	CP-3	X	.000832	.000832	0	%100
4	FF-HR	X	.003	.003	0	%100
5	FFTH	X	.011	.011	0	%100
6	GSI-1	X	.009	.009	0	%100
7	GSI-2	X	.004	.004	0	%100
8	GSI-3	X	.005	.005	0	%100
9	HRB1	X	.004	.004	0	%100
10	HRB2	X	.002	.002	0	%100
11	HRB3	X	.003	.003	0	%100
12	K1	X	.009	.009	0	%100
13	K2	X	.009	.009	0	%100
14	K3	X	.009	.009	0	%100
15	MP-1	X	.005	.005	0	%100
16	MP-2	X	.005	.005	0	%100
17	MP-3	X	.005	.005	0	%100
18	MP-4	X	.005	.005	0	%100
19	MP-5	X	.005	.005	0	%100
20	MP-6	X	.005	.005	0	%100
21	MP-7	X	.005	.005	0	%100
22	MP-8	X	.005	.005	0	%100
23	MP-9	X	.005	.005	0	%100
24	MP-10	X	.005	.005	0	%100
25	MP-11	X	.005	.005	0	%100
26	MP-12	X	.005	.005	0	%100
27	MP-13	X	.005	.005	0	%100
28	SA-1	X	0	0	0	%100
29	SA-2	X	.011	.011	0	%100
30	SA-3	X	.008	.008	0	%100
31	SF1-HR	X	.003	.003	0	%100
32	SF1-TH	X	.018	.018	0	%100
33	SF2-HR	X	.006	.006	0	%100
34	SF2-TH	X	.009	.009	0	%100
35	TRCP-1	X	.006	.006	0	%100
36	TRCP-2	X	.003	.003	0	%100
37	TRCP-3	X	.003	.003	0	%100
38	CP-1	Z	.003	.003	0	%100
39	CP-2	Z	.001	.001	0	%100
40	CP-3	Z	.001	.001	0	%100
41	FF-HR	Z	.005	.005	0	%100
42	FFTH	Z	.02	.02	0	%100
43	GSI-1	Z	.018	.018	0	%100
44	GSI-2	Z	.009	.009	0	%100
45	GSI-3	Z	.009	.009	0	%100
46	HRB1	Z	.009	.009	0	%100

Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
47	HRB2	Z	.004	.004	0	%100
48	HRB3	Z	.005	.005	0	%100
49	K1	Z	.015	.015	0	%100
50	K2	Z	.015	.015	0	%100
51	K3	Z	.015	.015	0	%100
52	MP-1	Z	.009	.009	0	%100
53	MP-2	Z	.009	.009	0	%100
54	MP-3	Z	.009	.009	0	%100
55	MP-4	Z	.009	.009	0	%100
56	MP-5	Z	.009	.009	0	%100
57	MP-6	Z	.009	.009	0	%100
58	MP-7	Z	.009	.009	0	%100
59	MP-8	Z	.009	.009	0	%100
60	MP-9	Z	.009	.009	0	%100
61	MP-10	Z	.009	.009	0	%100
62	MP-11	Z	.009	.009	0	%100
63	MP-12	Z	.009	.009	0	%100
64	MP-13	Z	.009	.009	0	%100
65	SA-1	Z	0	0	0	%100
66	SA-2	Z	.017	.017	0	%100
67	SA-3	Z	.02	.02	0	%100
68	SF1-HR	Z	.005	.005	0	%100
69	SF1-TH	Z	.037	.037	0	%100
70	SF2-HR	Z	.01	.01	0	%100
71	SF2-TH	Z	.018	.018	0	%100
72	TRCP-1	Z	.01	.01	0	%100
73	TRCP-2	Z	.005	.005	0	%100
74	TRCP-3	Z	.005	.005	0	%100

Member Distributed Loads (BLC 14 : 270 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Z	.003	.003	0	%100
2	CP-2	Z	.003	.003	0	%100
3	CP-3	Z	0	0	0	%100
4	FF-HR	Z	0	0	0	%100
5	FFTH	Z	0	0	0	%100
6	GSI-1	Z	.018	.018	0	%100
7	GSI-2	Z	.018	.018	0	%100
8	GSI-3	Z	0	0	0	%100
9	HRB1	Z	.009	.009	0	%100
10	HRB2	Z	.009	.009	0	%100
11	HRB3	Z	0	0	0	%100
12	K1	Z	.017	.017	0	%100
13	K2	Z	.017	.017	0	%100
14	K3	Z	.017	.017	0	%100
15	MP-1	Z	.011	.011	0	%100
16	MP-2	Z	.011	.011	0	%100
17	MP-3	Z	.011	.011	0	%100
18	MP-4	Z	.011	.011	0	%100
19	MP-5	Z	.011	.011	0	%100
20	MP-6	Z	.011	.011	0	%100
21	MP-7	Z	.011	.011	0	%100
22	MP-8	Z	.011	.011	0	%100
23	MP-9	Z	.011	.011	0	%100
24	MP-10	Z	.011	.011	0	%100
25	MP-11	Z	.011	.011	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 14 : 270 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
26	MP-12	Z	.011	.011	0	%100
27	MP-13	Z	.011	.011	0	%100
28	SA-1	Z	.011	.011	0	%100
29	SA-2	Z	.011	.011	0	%100
30	SA-3	Z	.027	.027	0	%100
31	SF1-HR	Z	.01	.01	0	%100
32	SF1-TH	Z	.037	.037	0	%100
33	SF2-HR	Z	.01	.01	0	%100
34	SF2-TH	Z	.037	.037	0	%100
35	TRCP-1	Z	.01	.01	0	%100
36	TRCP-2	Z	.01	.01	0	%100
37	TRCP-3	Z	0	0	0	%100

Member Distributed Loads (BLC 15 : 300 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.000691	-.000691	0	%100
2	CP-2	X	-.001	-.001	0	%100
3	CP-3	X	-.000832	-.000832	0	%100
4	FF-HR	X	-.003	-.003	0	%100
5	FFTH	X	-.011	-.011	0	%100
6	GSI-1	X	-.004	-.004	0	%100
7	GSI-2	X	-.009	-.009	0	%100
8	GSI-3	X	-.005	-.005	0	%100
9	HRB1	X	-.002	-.002	0	%100
10	HRB2	X	-.004	-.004	0	%100
11	HRB3	X	-.003	-.003	0	%100
12	K1	X	-.009	-.009	0	%100
13	K2	X	-.009	-.009	0	%100
14	K3	X	-.009	-.009	0	%100
15	MP-1	X	-.005	-.005	0	%100
16	MP-2	X	-.005	-.005	0	%100
17	MP-3	X	-.005	-.005	0	%100
18	MP-4	X	-.005	-.005	0	%100
19	MP-5	X	-.005	-.005	0	%100
20	MP-6	X	-.005	-.005	0	%100
21	MP-7	X	-.005	-.005	0	%100
22	MP-8	X	-.005	-.005	0	%100
23	MP-9	X	-.005	-.005	0	%100
24	MP-10	X	-.005	-.005	0	%100
25	MP-11	X	-.005	-.005	0	%100
26	MP-12	X	-.005	-.005	0	%100
27	MP-13	X	-.005	-.005	0	%100
28	SA-1	X	-.011	-.011	0	%100
29	SA-2	X	0	0	0	%100
30	SA-3	X	-.008	-.008	0	%100
31	SF1-HR	X	-.006	-.006	0	%100
32	SF1-TH	X	-.009	-.009	0	%100
33	SF2-HR	X	-.003	-.003	0	%100
34	SF2-TH	X	-.018	-.018	0	%100
35	TRCP-1	X	-.003	-.003	0	%100
36	TRCP-2	X	-.006	-.006	0	%100
37	TRCP-3	X	-.003	-.003	0	%100
38	CP-1	Z	.001	.001	0	%100
39	CP-2	Z	.003	.003	0	%100
40	CP-3	Z	.001	.001	0	%100
41	FF-HR	Z	.005	.005	0	%100

Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
42	FFTH	Z	.02	.02	0	%100
43	GSI-1	Z	.009	.009	0	%100
44	GSI-2	Z	.018	.018	0	%100
45	GSI-3	Z	.009	.009	0	%100
46	HRB1	Z	.004	.004	0	%100
47	HRB2	Z	.009	.009	0	%100
48	HRB3	Z	.005	.005	0	%100
49	K1	Z	.015	.015	0	%100
50	K2	Z	.015	.015	0	%100
51	K3	Z	.015	.015	0	%100
52	MP-1	Z	.009	.009	0	%100
53	MP-2	Z	.009	.009	0	%100
54	MP-3	Z	.009	.009	0	%100
55	MP-4	Z	.009	.009	0	%100
56	MP-5	Z	.009	.009	0	%100
57	MP-6	Z	.009	.009	0	%100
58	MP-7	Z	.009	.009	0	%100
59	MP-8	Z	.009	.009	0	%100
60	MP-9	Z	.009	.009	0	%100
61	MP-10	Z	.009	.009	0	%100
62	MP-11	Z	.009	.009	0	%100
63	MP-12	Z	.009	.009	0	%100
64	MP-13	Z	.009	.009	0	%100
65	SA-1	Z	.017	.017	0	%100
66	SA-2	Z	0	0	0	%100
67	SA-3	Z	.02	.02	0	%100
68	SF1-HR	Z	.01	.01	0	%100
69	SF1-TH	Z	.018	.018	0	%100
70	SF2-HR	Z	.005	.005	0	%100
71	SF2-TH	Z	.037	.037	0	%100
72	TRCP-1	Z	.005	.005	0	%100
73	TRCP-2	Z	.01	.01	0	%100
74	TRCP-3	Z	.005	.005	0	%100

Member Distributed Loads (BLC 16 : 315 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.000506	-.000506	0	%100
2	CP-2	X	-.002	-.002	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.006	-.006	0	%100
5	FFTH	X	-.023	-.023	0	%100
6	GSI-1	X	-.003	-.003	0	%100
7	GSI-2	X	-.012	-.012	0	%100
8	GSI-3	X	-.011	-.011	0	%100
9	HRB1	X	-.002	-.002	0	%100
10	HRB2	X	-.006	-.006	0	%100
11	HRB3	X	-.005	-.005	0	%100
12	K1	X	-.012	-.012	0	%100
13	K2	X	-.012	-.012	0	%100
14	K3	X	-.012	-.012	0	%100
15	MP-1	X	-.008	-.008	0	%100
16	MP-2	X	-.008	-.008	0	%100
17	MP-3	X	-.008	-.008	0	%100
18	MP-4	X	-.008	-.008	0	%100
19	MP-5	X	-.008	-.008	0	%100
20	MP-6	X	-.008	-.008	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
21	MP-7	X	-.008	-.008	0	%100
22	MP-8	X	-.008	-.008	0	%100
23	MP-9	X	-.008	-.008	0	%100
24	MP-10	X	-.008	-.008	0	%100
25	MP-11	X	-.008	-.008	0	%100
26	MP-12	X	-.008	-.008	0	%100
27	MP-13	X	-.008	-.008	0	%100
28	SA-1	X	-.018	-.018	0	%100
29	SA-2	X	-.005	-.005	0	%100
30	SA-3	X	-.009	-.009	0	%100
31	SF1-HR	X	-.008	-.008	0	%100
32	SF1-TH	X	-.007	-.007	0	%100
33	SF2-HR	X	-.002	-.002	0	%100
34	SF2-TH	X	-.024	-.024	0	%100
35	TRCP-1	X	-.002	-.002	0	%100
36	TRCP-2	X	-.008	-.008	0	%100
37	TRCP-3	X	-.006	-.006	0	%100
38	CP-1	Z	.000581	.000581	0	%100
39	CP-2	Z	.002	.002	0	%100
40	CP-3	Z	.002	.002	0	%100
41	FF-HR	Z	.006	.006	0	%100
42	FFTH	Z	.023	.023	0	%100
43	GSI-1	Z	.004	.004	0	%100
44	GSI-2	Z	.014	.014	0	%100
45	GSI-3	Z	.011	.011	0	%100
46	HRB1	Z	.002	.002	0	%100
47	HRB2	Z	.007	.007	0	%100
48	HRB3	Z	.005	.005	0	%100
49	K1	Z	.012	.012	0	%100
50	K2	Z	.012	.012	0	%100
51	K3	Z	.012	.012	0	%100
52	MP-1	Z	.008	.008	0	%100
53	MP-2	Z	.008	.008	0	%100
54	MP-3	Z	.008	.008	0	%100
55	MP-4	Z	.008	.008	0	%100
56	MP-5	Z	.008	.008	0	%100
57	MP-6	Z	.008	.008	0	%100
58	MP-7	Z	.008	.008	0	%100
59	MP-8	Z	.008	.008	0	%100
60	MP-9	Z	.008	.008	0	%100
61	MP-10	Z	.008	.008	0	%100
62	MP-11	Z	.008	.008	0	%100
63	MP-12	Z	.008	.008	0	%100
64	MP-13	Z	.008	.008	0	%100
65	SA-1	Z	.015	.015	0	%100
66	SA-2	Z	.004	.004	0	%100
67	SA-3	Z	.013	.013	0	%100
68	SF1-HR	Z	.008	.008	0	%100
69	SF1-TH	Z	.008	.008	0	%100
70	SF2-HR	Z	.002	.002	0	%100
71	SF2-TH	Z	.029	.029	0	%100
72	TRCP-1	Z	.002	.002	0	%100
73	TRCP-2	Z	.008	.008	0	%100
74	TRCP-3	Z	.006	.006	0	%100

Member Distributed Loads (BLC 17 : 330 Wind - No Ice)

Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	0	0	0	%100
2	CP-2	X	-.002	-.002	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.009	-.009	0	%100
5	FFTH	X	-.034	-.034	0	%100
6	GSI-1	X	0	0	0	%100
7	GSI-2	X	-.013	-.013	0	%100
8	GSI-3	X	-.016	-.016	0	%100
9	HRB1	X	0	0	0	%100
10	HRB2	X	-.006	-.006	0	%100
11	HRB3	X	-.008	-.008	0	%100
12	K1	X	-.015	-.015	0	%100
13	K2	X	-.015	-.015	0	%100
14	K3	X	-.015	-.015	0	%100
15	MP-1	X	-.009	-.009	0	%100
16	MP-2	X	-.009	-.009	0	%100
17	MP-3	X	-.009	-.009	0	%100
18	MP-4	X	-.009	-.009	0	%100
19	MP-5	X	-.009	-.009	0	%100
20	MP-6	X	-.009	-.009	0	%100
21	MP-7	X	-.009	-.009	0	%100
22	MP-8	X	-.009	-.009	0	%100
23	MP-9	X	-.009	-.009	0	%100
24	MP-10	X	-.009	-.009	0	%100
25	MP-11	X	-.009	-.009	0	%100
26	MP-12	X	-.009	-.009	0	%100
27	MP-13	X	-.009	-.009	0	%100
28	SA-1	X	-.022	-.022	0	%100
29	SA-2	X	-.011	-.011	0	%100
30	SA-3	X	-.008	-.008	0	%100
31	SF1-HR	X	-.009	-.009	0	%100
32	SF1-TH	X	0	0	0	%100
33	SF2-HR	X	0	0	0	%100
34	SF2-TH	X	-.027	-.027	0	%100
35	TRCP-1	X	0	0	0	%100
36	TRCP-2	X	-.008	-.008	0	%100
37	TRCP-3	X	-.009	-.009	0	%100
38	CP-1	Z	0	0	0	%100
39	CP-2	Z	.001	.001	0	%100
40	CP-3	Z	.001	.001	0	%100
41	FF-HR	Z	.005	.005	0	%100
42	FFTH	Z	.02	.02	0	%100
43	GSI-1	Z	0	0	0	%100
44	GSI-2	Z	.009	.009	0	%100
45	GSI-3	Z	.009	.009	0	%100
46	HRB1	Z	0	0	0	%100
47	HRB2	Z	.004	.004	0	%100
48	HRB3	Z	.005	.005	0	%100
49	K1	Z	.009	.009	0	%100
50	K2	Z	.009	.009	0	%100
51	K3	Z	.009	.009	0	%100
52	MP-1	Z	.005	.005	0	%100
53	MP-2	Z	.005	.005	0	%100
54	MP-3	Z	.005	.005	0	%100
55	MP-4	Z	.005	.005	0	%100
56	MP-5	Z	.005	.005	0	%100
57	MP-6	Z	.005	.005	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
58	MP-7	Z	.005	.005	0	%100
59	MP-8	Z	.005	.005	0	%100
60	MP-9	Z	.005	.005	0	%100
61	MP-10	Z	.005	.005	0	%100
62	MP-11	Z	.005	.005	0	%100
63	MP-12	Z	.005	.005	0	%100
64	MP-13	Z	.005	.005	0	%100
65	SA-1	Z	.011	.011	0	%100
66	SA-2	Z	.006	.006	0	%100
67	SA-3	Z	.007	.007	0	%100
68	SF1-HR	Z	.005	.005	0	%100
69	SF1-TH	Z	0	0	0	%100
70	SF2-HR	Z	0	0	0	%100
71	SF2-TH	Z	.018	.018	0	%100
72	TRCP-1	Z	0	0	0	%100
73	TRCP-2	Z	.005	.005	0	%100
74	TRCP-3	Z	.005	.005	0	%100

Member Distributed Loads (BLC 18 : Ice Weight)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Y	-.006	-.006	0	%100
2	CP-2	Y	-.006	-.006	0	%100
3	CP-3	Y	-.006	-.006	0	%100
4	FF-HR	Y	-.006	-.006	0	%100
5	FFTH	Y	-.008	-.008	0	%100
6	GSI-1	Y	-.006	-.006	0	%100
7	GSI-2	Y	-.006	-.006	0	%100
8	GSI-3	Y	-.006	-.006	0	%100
9	HRB1	Y	-.005	-.005	0	%100
10	HRB2	Y	-.005	-.005	0	%100
11	HRB3	Y	-.005	-.005	0	%100
12	K1	Y	-.007	-.007	0	%100
13	K2	Y	-.007	-.007	0	%100
14	K3	Y	-.007	-.007	0	%100
15	MP-1	Y	-.005	-.005	0	%100
16	MP-2	Y	-.005	-.005	0	%100
17	MP-3	Y	-.005	-.005	0	%100
18	MP-4	Y	-.005	-.005	0	%100
19	MP-5	Y	-.005	-.005	0	%100
20	MP-6	Y	-.005	-.005	0	%100
21	MP-7	Y	-.005	-.005	0	%100
22	MP-8	Y	-.005	-.005	0	%100
23	MP-9	Y	-.005	-.005	0	%100
24	MP-10	Y	-.005	-.005	0	%100
25	MP-11	Y	-.005	-.005	0	%100
26	MP-12	Y	-.005	-.005	0	%100
27	MP-13	Y	-.005	-.005	0	%100
28	SA-1	Y	-.008	-.008	0	%100
29	SA-2	Y	-.008	-.008	0	%100
30	SA-3	Y	-.008	-.008	0	%100
31	SF1-HR	Y	-.006	-.006	0	%100
32	SF1-TH	Y	-.008	-.008	0	%100
33	SF2-HR	Y	-.006	-.006	0	%100
34	SF2-TH	Y	-.008	-.008	0	%100
35	TRCP-1	Y	-.006	-.006	0	%100
36	TRCP-2	Y	-.006	-.006	0	%100

Member Distributed Loads (BLC 18 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
37	TRCP-3	Y	-.006	-.006	0	%100

Member Distributed Loads (BLC 19 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.002	-.002	0	%100
2	CP-2	X	-.002	-.002	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.003	-.003	0	%100
5	FFTH	X	-.008	-.008	0	%100
6	GSI-1	X	-.004	-.004	0	%100
7	GSI-2	X	-.004	-.004	0	%100
8	GSI-3	X	-.005	-.005	0	%100
9	HRB1	X	-.002	-.002	0	%100
10	HRB2	X	-.002	-.002	0	%100
11	HRB3	X	-.002	-.002	0	%100
12	K1	X	-.004	-.004	0	%100
13	K2	X	-.004	-.004	0	%100
14	K3	X	-.004	-.004	0	%100
15	MP-1	X	-.002	-.002	0	%100
16	MP-2	X	-.002	-.002	0	%100
17	MP-3	X	-.002	-.002	0	%100
18	MP-4	X	-.002	-.002	0	%100
19	MP-5	X	-.002	-.002	0	%100
20	MP-6	X	-.002	-.002	0	%100
21	MP-7	X	-.002	-.002	0	%100
22	MP-8	X	-.002	-.002	0	%100
23	MP-9	X	-.002	-.002	0	%100
24	MP-10	X	-.002	-.002	0	%100
25	MP-11	X	-.002	-.002	0	%100
26	MP-12	X	-.002	-.002	0	%100
27	MP-13	X	-.002	-.002	0	%100
28	SA-1	X	-.005	-.005	0	%100
29	SA-2	X	-.005	-.005	0	%100
30	SA-3	X	-.004	-.004	0	%100
31	SF1-HR	X	-.003	-.003	0	%100
32	SF1-TH	X	-.006	-.006	0	%100
33	SF2-HR	X	-.003	-.003	0	%100
34	SF2-TH	X	-.006	-.006	0	%100
35	TRCP-1	X	-.004	-.004	0	%100
36	TRCP-2	X	-.004	-.004	0	%100
37	TRCP-3	X	-.004	-.004	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.002	-.002	0	%100
2	CP-2	X	0	0	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.002	-.002	0	%100
5	FFTH	X	-.006	-.006	0	%100
6	GSI-1	X	-.003	-.003	0	%100
7	GSI-2	X	0	0	0	%100
8	GSI-3	X	-.003	-.003	0	%100
9	HRB1	X	-.002	-.002	0	%100
10	HRB2	X	0	0	0	%100
11	HRB3	X	-.002	-.002	0	%100
12	K1	X	-.003	-.003	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
13	K2	X	-.003	-.003	0	%100
14	K3	X	-.003	-.003	0	%100
15	MP-1	X	-.002	-.002	0	%100
16	MP-2	X	-.002	-.002	0	%100
17	MP-3	X	-.002	-.002	0	%100
18	MP-4	X	-.002	-.002	0	%100
19	MP-5	X	-.002	-.002	0	%100
20	MP-6	X	-.002	-.002	0	%100
21	MP-7	X	-.002	-.002	0	%100
22	MP-8	X	-.002	-.002	0	%100
23	MP-9	X	-.002	-.002	0	%100
24	MP-10	X	-.002	-.002	0	%100
25	MP-11	X	-.002	-.002	0	%100
26	MP-12	X	-.002	-.002	0	%100
27	MP-13	X	-.002	-.002	0	%100
28	SA-1	X	-.002	-.002	0	%100
29	SA-2	X	-.004	-.004	0	%100
30	SA-3	X	-.002	-.002	0	%100
31	SF1-HR	X	0	0	0	%100
32	SF1-TH	X	-.005	-.005	0	%100
33	SF2-HR	X	-.002	-.002	0	%100
34	SF2-TH	X	0	0	0	%100
35	TRCP-1	X	-.003	-.003	0	%100
36	TRCP-2	X	0	0	0	%100
37	TRCP-3	X	-.003	-.003	0	%100
38	CP-1	Z	-.001	-.001	0	%100
39	CP-2	Z	0	0	0	%100
40	CP-3	Z	-.000916	-.000916	0	%100
41	FF-HR	Z	-.001	-.001	0	%100
42	FFTH	Z	-.003	-.003	0	%100
43	GSI-1	Z	-.002	-.002	0	%100
44	GSI-2	Z	0	0	0	%100
45	GSI-3	Z	-.002	-.002	0	%100
46	HRB1	Z	-.000981	-.000981	0	%100
47	HRB2	Z	0	0	0	%100
48	HRB3	Z	-.000919	-.000919	0	%100
49	K1	Z	-.002	-.002	0	%100
50	K2	Z	-.002	-.002	0	%100
51	K3	Z	-.002	-.002	0	%100
52	MP-1	Z	-.001	-.001	0	%100
53	MP-2	Z	-.001	-.001	0	%100
54	MP-3	Z	-.001	-.001	0	%100
55	MP-4	Z	-.001	-.001	0	%100
56	MP-5	Z	-.001	-.001	0	%100
57	MP-6	Z	-.001	-.001	0	%100
58	MP-7	Z	-.001	-.001	0	%100
59	MP-8	Z	-.001	-.001	0	%100
60	MP-9	Z	-.001	-.001	0	%100
61	MP-10	Z	-.001	-.001	0	%100
62	MP-11	Z	-.001	-.001	0	%100
63	MP-12	Z	-.001	-.001	0	%100
64	MP-13	Z	-.001	-.001	0	%100
65	SA-1	Z	-.001	-.001	0	%100
66	SA-2	Z	-.002	-.002	0	%100
67	SA-3	Z	-.001	-.001	0	%100
68	SF1-HR	Z	0	0	0	%100
69	SF1-TH	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
70	SF2-HR	Z	-.001	-.001	0	%100
71	SF2-TH	Z	0	0	0	%100
72	TRCP-1	Z	-.002	-.002	0	%100
73	TRCP-2	Z	0	0	0	%100
74	TRCP-3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 21 : 45 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.002	-.002	0	%100
2	CP-2	X	-.000408	-.000408	0	%100
3	CP-3	X	-.001	-.001	0	%100
4	FF-HR	X	-.002	-.002	0	%100
5	FFTH	X	-.004	-.004	0	%100
6	GSI-1	X	-.003	-.003	0	%100
7	GSI-2	X	-.000726	-.000726	0	%100
8	GSI-3	X	-.002	-.002	0	%100
9	HRB1	X	-.001	-.001	0	%100
10	HRB2	X	-.000368	-.000368	0	%100
11	HRB3	X	-.001	-.001	0	%100
12	K1	X	-.003	-.003	0	%100
13	K2	X	-.003	-.003	0	%100
14	K3	X	-.003	-.003	0	%100
15	MP-1	X	-.002	-.002	0	%100
16	MP-2	X	-.002	-.002	0	%100
17	MP-3	X	-.002	-.002	0	%100
18	MP-4	X	-.002	-.002	0	%100
19	MP-5	X	-.002	-.002	0	%100
20	MP-6	X	-.002	-.002	0	%100
21	MP-7	X	-.002	-.002	0	%100
22	MP-8	X	-.002	-.002	0	%100
23	MP-9	X	-.002	-.002	0	%100
24	MP-10	X	-.002	-.002	0	%100
25	MP-11	X	-.002	-.002	0	%100
26	MP-12	X	-.002	-.002	0	%100
27	MP-13	X	-.002	-.002	0	%100
28	SA-1	X	-.000941	-.000941	0	%100
29	SA-2	X	-.004	-.004	0	%100
30	SA-3	X	-.002	-.002	0	%100
31	SF1-HR	X	-.000489	-.000489	0	%100
32	SF1-TH	X	-.004	-.004	0	%100
33	SF2-HR	X	-.002	-.002	0	%100
34	SF2-TH	X	-.001	-.001	0	%100
35	TRCP-1	X	-.003	-.003	0	%100
36	TRCP-2	X	-.000694	-.000694	0	%100
37	TRCP-3	X	-.002	-.002	0	%100
38	CP-1	Z	-.002	-.002	0	%100
39	CP-2	Z	-.000424	-.000424	0	%100
40	CP-3	Z	-.001	-.001	0	%100
41	FF-HR	Z	-.001	-.001	0	%100
42	FFTH	Z	-.004	-.004	0	%100
43	GSI-1	Z	-.003	-.003	0	%100
44	GSI-2	Z	-.000808	-.000808	0	%100
45	GSI-3	Z	-.002	-.002	0	%100
46	HRB1	Z	-.002	-.002	0	%100
47	HRB2	Z	-.000415	-.000415	0	%100
48	HRB3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
49	K1	Z	-.003	-.003	0	%100
50	K2	Z	-.003	-.003	0	%100
51	K3	Z	-.003	-.003	0	%100
52	MP-1	Z	-.002	-.002	0	%100
53	MP-2	Z	-.002	-.002	0	%100
54	MP-3	Z	-.002	-.002	0	%100
55	MP-4	Z	-.002	-.002	0	%100
56	MP-5	Z	-.002	-.002	0	%100
57	MP-6	Z	-.002	-.002	0	%100
58	MP-7	Z	-.002	-.002	0	%100
59	MP-8	Z	-.002	-.002	0	%100
60	MP-9	Z	-.002	-.002	0	%100
61	MP-10	Z	-.002	-.002	0	%100
62	MP-11	Z	-.002	-.002	0	%100
63	MP-12	Z	-.002	-.002	0	%100
64	MP-13	Z	-.002	-.002	0	%100
65	SA-1	Z	-.000847	-.000847	0	%100
66	SA-2	Z	-.003	-.003	0	%100
67	SA-3	Z	-.003	-.003	0	%100
68	SF1-HR	Z	-.000602	-.000602	0	%100
69	SF1-TH	Z	-.005	-.005	0	%100
70	SF2-HR	Z	-.002	-.002	0	%100
71	SF2-TH	Z	-.001	-.001	0	%100
72	TRCP-1	Z	-.003	-.003	0	%100
73	TRCP-2	Z	-.000694	-.000694	0	%100
74	TRCP-3	Z	-.002	-.002	0	%100

Member Distributed Loads (BLC 22 : 60 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.001	-.001	0	%100
2	CP-2	X	-.000557	-.000557	0	%100
3	CP-3	X	-.000588	-.000588	0	%100
4	FF-HR	X	-.000823	-.000823	0	%100
5	FFTH	X	-.002	-.002	0	%100
6	GSI-1	X	-.002	-.002	0	%100
7	GSI-2	X	-.000992	-.000992	0	%100
8	GSI-3	X	-.001	-.001	0	%100
9	HRB1	X	-.001	-.001	0	%100
10	HRB2	X	-.000503	-.000503	0	%100
11	HRB3	X	-.00059	-.00059	0	%100
12	K1	X	-.002	-.002	0	%100
13	K2	X	-.002	-.002	0	%100
14	K3	X	-.002	-.002	0	%100
15	MP-1	X	-.001	-.001	0	%100
16	MP-2	X	-.001	-.001	0	%100
17	MP-3	X	-.001	-.001	0	%100
18	MP-4	X	-.001	-.001	0	%100
19	MP-5	X	-.001	-.001	0	%100
20	MP-6	X	-.001	-.001	0	%100
21	MP-7	X	-.001	-.001	0	%100
22	MP-8	X	-.001	-.001	0	%100
23	MP-9	X	-.001	-.001	0	%100
24	MP-10	X	-.001	-.001	0	%100
25	MP-11	X	-.001	-.001	0	%100
26	MP-12	X	-.001	-.001	0	%100
27	MP-13	X	-.001	-.001	0	%100

Member Distributed Loads (BLC 22 : 60 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
28	SA-1	X	0	0	0	%100
29	SA-2	X	-.002	-.002	0	%100
30	SA-3	X	-.002	-.002	0	%100
31	SF1-HR	X	-.000667	-.000667	0	%100
32	SF1-TH	X	-.003	-.003	0	%100
33	SF2-HR	X	-.001	-.001	0	%100
34	SF2-TH	X	-.002	-.002	0	%100
35	TRCP-1	X	-.002	-.002	0	%100
36	TRCP-2	X	-.000948	-.000948	0	%100
37	TRCP-3	X	-.000948	-.000948	0	%100
38	CP-1	Z	-.002	-.002	0	%100
39	CP-2	Z	-.001	-.001	0	%100
40	CP-3	Z	-.000916	-.000916	0	%100
41	FF-HR	Z	-.001	-.001	0	%100
42	FFTH	Z	-.003	-.003	0	%100
43	GSI-1	Z	-.004	-.004	0	%100
44	GSI-2	Z	-.002	-.002	0	%100
45	GSI-3	Z	-.002	-.002	0	%100
46	HRB1	Z	-.002	-.002	0	%100
47	HRB2	Z	-.000981	-.000981	0	%100
48	HRB3	Z	-.000919	-.000919	0	%100
49	K1	Z	-.003	-.003	0	%100
50	K2	Z	-.003	-.003	0	%100
51	K3	Z	-.003	-.003	0	%100
52	MP-1	Z	-.002	-.002	0	%100
53	MP-2	Z	-.002	-.002	0	%100
54	MP-3	Z	-.002	-.002	0	%100
55	MP-4	Z	-.002	-.002	0	%100
56	MP-5	Z	-.002	-.002	0	%100
57	MP-6	Z	-.002	-.002	0	%100
58	MP-7	Z	-.002	-.002	0	%100
59	MP-8	Z	-.002	-.002	0	%100
60	MP-9	Z	-.002	-.002	0	%100
61	MP-10	Z	-.002	-.002	0	%100
62	MP-11	Z	-.002	-.002	0	%100
63	MP-12	Z	-.002	-.002	0	%100
64	MP-13	Z	-.002	-.002	0	%100
65	SA-1	Z	0	0	0	%100
66	SA-2	Z	-.003	-.003	0	%100
67	SA-3	Z	-.004	-.004	0	%100
68	SF1-HR	Z	-.001	-.001	0	%100
69	SF1-TH	Z	-.006	-.006	0	%100
70	SF2-HR	Z	-.003	-.003	0	%100
71	SF2-TH	Z	-.003	-.003	0	%100
72	TRCP-1	Z	-.003	-.003	0	%100
73	TRCP-2	Z	-.002	-.002	0	%100
74	TRCP-3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 23 : 90 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Z	-.002	-.002	0	%100
2	CP-2	Z	-.002	-.002	0	%100
3	CP-3	Z	0	0	0	%100
4	FF-HR	Z	0	0	0	%100
5	FFTH	Z	0	0	0	%100
6	GSI-1	Z	-.004	-.004	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 23 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
7	GSI-2	Z	-.004	-.004	0	%100
8	GSI-3	Z	0	0	0	%100
9	HRB1	Z	-.002	-.002	0	%100
10	HRB2	Z	-.002	-.002	0	%100
11	HRB3	Z	0	0	0	%100
12	K1	Z	-.004	-.004	0	%100
13	K2	Z	-.004	-.004	0	%100
14	K3	Z	-.004	-.004	0	%100
15	MP-1	Z	-.003	-.003	0	%100
16	MP-2	Z	-.003	-.003	0	%100
17	MP-3	Z	-.003	-.003	0	%100
18	MP-4	Z	-.003	-.003	0	%100
19	MP-5	Z	-.003	-.003	0	%100
20	MP-6	Z	-.003	-.003	0	%100
21	MP-7	Z	-.003	-.003	0	%100
22	MP-8	Z	-.003	-.003	0	%100
23	MP-9	Z	-.003	-.003	0	%100
24	MP-10	Z	-.003	-.003	0	%100
25	MP-11	Z	-.003	-.003	0	%100
26	MP-12	Z	-.003	-.003	0	%100
27	MP-13	Z	-.003	-.003	0	%100
28	SA-1	Z	-.002	-.002	0	%100
29	SA-2	Z	-.002	-.002	0	%100
30	SA-3	Z	-.005	-.005	0	%100
31	SF1-HR	Z	-.003	-.003	0	%100
32	SF1-TH	Z	-.006	-.006	0	%100
33	SF2-HR	Z	-.003	-.003	0	%100
34	SF2-TH	Z	-.006	-.006	0	%100
35	TRCP-1	Z	-.003	-.003	0	%100
36	TRCP-2	Z	-.003	-.003	0	%100
37	TRCP-3	Z	0	0	0	%100

Member Distributed Loads (BLC 24 : 120 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	,000557	,000557	0	%100
2	CP-2	X	.001	.001	0	%100
3	CP-3	X	.000588	.000588	0	%100
4	FF-HR	X	,000823	,000823	0	%100
5	FFTH	X	.002	.002	0	%100
6	GSI-1	X	,000992	,000992	0	%100
7	GSI-2	X	,002	,002	0	%100
8	GSI-3	X	.001	.001	0	%100
9	HRB1	X	.000503	.000503	0	%100
10	HRB2	X	,001	,001	0	%100
11	HRB3	X	,00059	,00059	0	%100
12	K1	X	,002	,002	0	%100
13	K2	X	,002	,002	0	%100
14	K3	X	,002	,002	0	%100
15	MP-1	X	,001	,001	0	%100
16	MP-2	X	,001	,001	0	%100
17	MP-3	X	,001	,001	0	%100
18	MP-4	X	,001	,001	0	%100
19	MP-5	X	,001	,001	0	%100
20	MP-6	X	,001	,001	0	%100
21	MP-7	X	,001	,001	0	%100
22	MP-8	X	,001	,001	0	%100

Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
23	MP-9	X	.001	.001	0	%100
24	MP-10	X	.001	.001	0	%100
25	MP-11	X	.001	.001	0	%100
26	MP-12	X	.001	.001	0	%100
27	MP-13	X	.001	.001	0	%100
28	SA-1	X	.002	.002	0	%100
29	SA-2	X	0	0	0	%100
30	SA-3	X	.002	.002	0	%100
31	SF1-HR	X	.001	.001	0	%100
32	SF1-TH	X	.002	.002	0	%100
33	SF2-HR	X	.000667	.000667	0	%100
34	SF2-TH	X	.003	.003	0	%100
35	TRCP-1	X	.000948	.000948	0	%100
36	TRCP-2	X	.002	.002	0	%100
37	TRCP-3	X	.000948	.000948	0	%100
38	CP-1	Z	-.001	-.001	0	%100
39	CP-2	Z	-.002	-.002	0	%100
40	CP-3	Z	-.000916	-.000916	0	%100
41	FF-HR	Z	-.001	-.001	0	%100
42	FFTH	Z	-.003	-.003	0	%100
43	GSI-1	Z	-.002	-.002	0	%100
44	GSI-2	Z	-.004	-.004	0	%100
45	GSI-3	Z	-.002	-.002	0	%100
46	HRB1	Z	-.000981	-.000981	0	%100
47	HRB2	Z	-.002	-.002	0	%100
48	HRB3	Z	-.000919	-.000919	0	%100
49	K1	Z	-.003	-.003	0	%100
50	K2	Z	-.003	-.003	0	%100
51	K3	Z	-.003	-.003	0	%100
52	MP-1	Z	-.002	-.002	0	%100
53	MP-2	Z	-.002	-.002	0	%100
54	MP-3	Z	-.002	-.002	0	%100
55	MP-4	Z	-.002	-.002	0	%100
56	MP-5	Z	-.002	-.002	0	%100
57	MP-6	Z	-.002	-.002	0	%100
58	MP-7	Z	-.002	-.002	0	%100
59	MP-8	Z	-.002	-.002	0	%100
60	MP-9	Z	-.002	-.002	0	%100
61	MP-10	Z	-.002	-.002	0	%100
62	MP-11	Z	-.002	-.002	0	%100
63	MP-12	Z	-.002	-.002	0	%100
64	MP-13	Z	-.002	-.002	0	%100
65	SA-1	Z	-.003	-.003	0	%100
66	SA-2	Z	0	0	0	%100
67	SA-3	Z	-.004	-.004	0	%100
68	SF1-HR	Z	-.003	-.003	0	%100
69	SF1-TH	Z	-.003	-.003	0	%100
70	SF2-HR	Z	-.001	-.001	0	%100
71	SF2-TH	Z	-.006	-.006	0	%100
72	TRCP-1	Z	-.002	-.002	0	%100
73	TRCP-2	Z	-.003	-.003	0	%100
74	TRCP-3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 25 : 135 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.000408	.000408	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
2	CP-2	X	.002	.002	0	%100
3	CP-3	X	.001	.001	0	%100
4	FF-HR	X	.002	.002	0	%100
5	FFTH	X	.004	.004	0	%100
6	GSI-1	X	.000726	.000726	0	%100
7	GSI-2	X	.003	.003	0	%100
8	GSI-3	X	.002	.002	0	%100
9	HRB1	X	.000368	.000368	0	%100
10	HRB2	X	.001	.001	0	%100
11	HRB3	X	.001	.001	0	%100
12	K1	X	.003	.003	0	%100
13	K2	X	.003	.003	0	%100
14	K3	X	.003	.003	0	%100
15	MP-1	X	.002	.002	0	%100
16	MP-2	X	.002	.002	0	%100
17	MP-3	X	.002	.002	0	%100
18	MP-4	X	.002	.002	0	%100
19	MP-5	X	.002	.002	0	%100
20	MP-6	X	.002	.002	0	%100
21	MP-7	X	.002	.002	0	%100
22	MP-8	X	.002	.002	0	%100
23	MP-9	X	.002	.002	0	%100
24	MP-10	X	.002	.002	0	%100
25	MP-11	X	.002	.002	0	%100
26	MP-12	X	.002	.002	0	%100
27	MP-13	X	.002	.002	0	%100
28	SA-1	X	.004	.004	0	%100
29	SA-2	X	.000941	.000941	0	%100
30	SA-3	X	.002	.002	0	%100
31	SF1-HR	X	.002	.002	0	%100
32	SF1-TH	X	.001	.001	0	%100
33	SF2-HR	X	.000489	.000489	0	%100
34	SF2-TH	X	.004	.004	0	%100
35	TRCP-1	X	.000694	.000694	0	%100
36	TRCP-2	X	.003	.003	0	%100
37	TRCP-3	X	.002	.002	0	%100
38	CP-1	Z	-.000424	-.000424	0	%100
39	CP-2	Z	-.002	-.002	0	%100
40	CP-3	Z	-.001	-.001	0	%100
41	FF-HR	Z	-.001	-.001	0	%100
42	FFTH	Z	-.004	-.004	0	%100
43	GSI-1	Z	-.000808	-.000808	0	%100
44	GSI-2	Z	-.003	-.003	0	%100
45	GSI-3	Z	-.002	-.002	0	%100
46	HRB1	Z	-.000415	-.000415	0	%100
47	HRB2	Z	-.002	-.002	0	%100
48	HRB3	Z	-.001	-.001	0	%100
49	K1	Z	-.003	-.003	0	%100
50	K2	Z	-.003	-.003	0	%100
51	K3	Z	-.003	-.003	0	%100
52	MP-1	Z	-.002	-.002	0	%100
53	MP-2	Z	-.002	-.002	0	%100
54	MP-3	Z	-.002	-.002	0	%100
55	MP-4	Z	-.002	-.002	0	%100
56	MP-5	Z	-.002	-.002	0	%100
57	MP-6	Z	-.002	-.002	0	%100
58	MP-7	Z	-.002	-.002	0	%100

Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
59	MP-8	Z	-.002	-.002	0	%100
60	MP-9	Z	-.002	-.002	0	%100
61	MP-10	Z	-.002	-.002	0	%100
62	MP-11	Z	-.002	-.002	0	%100
63	MP-12	Z	-.002	-.002	0	%100
64	MP-13	Z	-.002	-.002	0	%100
65	SA-1	Z	-.003	-.003	0	%100
66	SA-2	Z	-.000847	-.000847	0	%100
67	SA-3	Z	-.003	-.003	0	%100
68	SF1-HR	Z	-.002	-.002	0	%100
69	SF1-TH	Z	-.001	-.001	0	%100
70	SF2-HR	Z	-.000602	-.000602	0	%100
71	SF2-TH	Z	-.005	-.005	0	%100
72	TRCP-1	Z	-.000694	-.000694	0	%100
73	TRCP-2	Z	-.003	-.003	0	%100
74	TRCP-3	Z	-.002	-.002	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	0	0	0	%100
2	CP-2	X	.002	.002	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.002	.002	0	%100
5	FFTH	X	.006	.006	0	%100
6	GSI-1	X	0	0	0	%100
7	GSI-2	X	.003	.003	0	%100
8	GSI-3	X	.003	.003	0	%100
9	HRB1	X	0	0	0	%100
10	HRB2	X	.002	.002	0	%100
11	HRB3	X	.002	.002	0	%100
12	K1	X	.003	.003	0	%100
13	K2	X	.003	.003	0	%100
14	K3	X	.003	.003	0	%100
15	MP-1	X	.002	.002	0	%100
16	MP-2	X	.002	.002	0	%100
17	MP-3	X	.002	.002	0	%100
18	MP-4	X	.002	.002	0	%100
19	MP-5	X	.002	.002	0	%100
20	MP-6	X	.002	.002	0	%100
21	MP-7	X	.002	.002	0	%100
22	MP-8	X	.002	.002	0	%100
23	MP-9	X	.002	.002	0	%100
24	MP-10	X	.002	.002	0	%100
25	MP-11	X	.002	.002	0	%100
26	MP-12	X	.002	.002	0	%100
27	MP-13	X	.002	.002	0	%100
28	SA-1	X	.004	.004	0	%100
29	SA-2	X	.002	.002	0	%100
30	SA-3	X	.002	.002	0	%100
31	SF1-HR	X	.002	.002	0	%100
32	SF1-TH	X	0	0	0	%100
33	SF2-HR	X	0	0	0	%100
34	SF2-TH	X	.005	.005	0	%100
35	TRCP-1	X	0	0	0	%100
36	TRCP-2	X	.003	.003	0	%100
37	TRCP-3	X	.003	.003	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
38	CP-1	Z	0	0	0	%100
39	CP-2	Z	-.001	-.001	0	%100
40	CP-3	Z	-.000916	-.000916	0	%100
41	FF-HR	Z	-.001	-.001	0	%100
42	FFTH	Z	-.003	-.003	0	%100
43	GSI-1	Z	0	0	0	%100
44	GSI-2	Z	-.002	-.002	0	%100
45	GSI-3	Z	-.002	-.002	0	%100
46	HRB1	Z	0	0	0	%100
47	HRB2	Z	-.000981	-.000981	0	%100
48	HRB3	Z	-.000919	-.000919	0	%100
49	K1	Z	-.002	-.002	0	%100
50	K2	Z	-.002	-.002	0	%100
51	K3	Z	-.002	-.002	0	%100
52	MP-1	Z	-.001	-.001	0	%100
53	MP-2	Z	-.001	-.001	0	%100
54	MP-3	Z	-.001	-.001	0	%100
55	MP-4	Z	-.001	-.001	0	%100
56	MP-5	Z	-.001	-.001	0	%100
57	MP-6	Z	-.001	-.001	0	%100
58	MP-7	Z	-.001	-.001	0	%100
59	MP-8	Z	-.001	-.001	0	%100
60	MP-9	Z	-.001	-.001	0	%100
61	MP-10	Z	-.001	-.001	0	%100
62	MP-11	Z	-.001	-.001	0	%100
63	MP-12	Z	-.001	-.001	0	%100
64	MP-13	Z	-.001	-.001	0	%100
65	SA-1	Z	-.002	-.002	0	%100
66	SA-2	Z	-.001	-.001	0	%100
67	SA-3	Z	-.001	-.001	0	%100
68	SF1-HR	Z	-.001	-.001	0	%100
69	SF1-TH	Z	0	0	0	%100
70	SF2-HR	Z	0	0	0	%100
71	SF2-TH	Z	-.003	-.003	0	%100
72	TRCP-1	Z	0	0	0	%100
73	TRCP-2	Z	-.002	-.002	0	%100
74	TRCP-3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 27 : 180 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.002	.002	0	%100
2	CP-2	X	.002	.002	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.003	.003	0	%100
5	FFTH	X	.008	.008	0	%100
6	GSI-1	X	.004	.004	0	%100
7	GSI-2	X	.004	.004	0	%100
8	GSI-3	X	.005	.005	0	%100
9	HRB1	X	.002	.002	0	%100
10	HRB2	X	.002	.002	0	%100
11	HRB3	X	.002	.002	0	%100
12	K1	X	.004	.004	0	%100
13	K2	X	.004	.004	0	%100
14	K3	X	.004	.004	0	%100
15	MP-1	X	.002	.002	0	%100
16	MP-2	X	.002	.002	0	%100

Member Distributed Loads (BLC 27 : 180 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
17	MP-3	X	.002	.002	0	%100
18	MP-4	X	.002	.002	0	%100
19	MP-5	X	.002	.002	0	%100
20	MP-6	X	.002	.002	0	%100
21	MP-7	X	.002	.002	0	%100
22	MP-8	X	.002	.002	0	%100
23	MP-9	X	.002	.002	0	%100
24	MP-10	X	.002	.002	0	%100
25	MP-11	X	.002	.002	0	%100
26	MP-12	X	.002	.002	0	%100
27	MP-13	X	.002	.002	0	%100
28	SA-1	X	.005	.005	0	%100
29	SA-2	X	.005	.005	0	%100
30	SA-3	X	.004	.004	0	%100
31	SF1-HR	X	.003	.003	0	%100
32	SF1-TH	X	.006	.006	0	%100
33	SF2-HR	X	.003	.003	0	%100
34	SF2-TH	X	.006	.006	0	%100
35	TRCP-1	X	.004	.004	0	%100
36	TRCP-2	X	.004	.004	0	%100
37	TRCP-3	X	.004	.004	0	%100

Member Distributed Loads (BLC 28 : 210 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.002	.002	0	%100
2	CP-2	X	0	0	0	%100
3	CP-3	X	.002	.002	0	%100
4	FF-HR	X	.002	.002	0	%100
5	FFTH	X	.006	.006	0	%100
6	GSI-1	X	.003	.003	0	%100
7	GSI-2	X	0	0	0	%100
8	GSI-3	X	.003	.003	0	%100
9	HRB1	X	.002	.002	0	%100
10	HRB2	X	0	0	0	%100
11	HRB3	X	.002	.002	0	%100
12	K1	X	.003	.003	0	%100
13	K2	X	.003	.003	0	%100
14	K3	X	.003	.003	0	%100
15	MP-1	X	.002	.002	0	%100
16	MP-2	X	.002	.002	0	%100
17	MP-3	X	.002	.002	0	%100
18	MP-4	X	.002	.002	0	%100
19	MP-5	X	.002	.002	0	%100
20	MP-6	X	.002	.002	0	%100
21	MP-7	X	.002	.002	0	%100
22	MP-8	X	.002	.002	0	%100
23	MP-9	X	.002	.002	0	%100
24	MP-10	X	.002	.002	0	%100
25	MP-11	X	.002	.002	0	%100
26	MP-12	X	.002	.002	0	%100
27	MP-13	X	.002	.002	0	%100
28	SA-1	X	.002	.002	0	%100
29	SA-2	X	.004	.004	0	%100
30	SA-3	X	.002	.002	0	%100
31	SF1-HR	X	0	0	0	%100
32	SF1-TH	X	.005	.005	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
33	SF2-HR	X	.002	.002	0	%100
34	SF2-TH	X	0	0	0	%100
35	TRCP-1	X	.003	.003	0	%100
36	TRCP-2	X	0	0	0	%100
37	TRCP-3	X	.003	.003	0	%100
38	CP-1	Z	.001	.001	0	%100
39	CP-2	Z	0	0	0	%100
40	CP-3	Z	.000916	.000916	0	%100
41	FF-HR	Z	.001	.001	0	%100
42	FFTH	Z	.003	.003	0	%100
43	GSI-1	Z	.002	.002	0	%100
44	GSI-2	Z	0	0	0	%100
45	GSI-3	Z	.002	.002	0	%100
46	HRB1	Z	.000981	.000981	0	%100
47	HRB2	Z	0	0	0	%100
48	HRB3	Z	.000919	.000919	0	%100
49	K1	Z	.002	.002	0	%100
50	K2	Z	.002	.002	0	%100
51	K3	Z	.002	.002	0	%100
52	MP-1	Z	.001	.001	0	%100
53	MP-2	Z	.001	.001	0	%100
54	MP-3	Z	.001	.001	0	%100
55	MP-4	Z	.001	.001	0	%100
56	MP-5	Z	.001	.001	0	%100
57	MP-6	Z	.001	.001	0	%100
58	MP-7	Z	.001	.001	0	%100
59	MP-8	Z	.001	.001	0	%100
60	MP-9	Z	.001	.001	0	%100
61	MP-10	Z	.001	.001	0	%100
62	MP-11	Z	.001	.001	0	%100
63	MP-12	Z	.001	.001	0	%100
64	MP-13	Z	.001	.001	0	%100
65	SA-1	Z	.001	.001	0	%100
66	SA-2	Z	.002	.002	0	%100
67	SA-3	Z	.001	.001	0	%100
68	SF1-HR	Z	0	0	0	%100
69	SF1-TH	Z	.003	.003	0	%100
70	SF2-HR	Z	.001	.001	0	%100
71	SF2-TH	Z	0	0	0	%100
72	TRCP-1	Z	.002	.002	0	%100
73	TRCP-2	Z	0	0	0	%100
74	TRCP-3	Z	.001	.001	0	%100

Member Distributed Loads (BLC 29 : 225 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.002	.002	0	%100
2	CP-2	X	.000408	.000408	0	%100
3	CP-3	X	.001	.001	0	%100
4	FF-HR	X	.002	.002	0	%100
5	FFTH	X	.004	.004	0	%100
6	GSI-1	X	.003	.003	0	%100
7	GSI-2	X	.000726	.000726	0	%100
8	GSI-3	X	.002	.002	0	%100
9	HRB1	X	.001	.001	0	%100
10	HRB2	X	.000368	.000368	0	%100
11	HRB3	X	.001	.001	0	%100

Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
12	K1	X	.003	.003	0	%100
13	K2	X	.003	.003	0	%100
14	K3	X	.003	.003	0	%100
15	MP-1	X	.002	.002	0	%100
16	MP-2	X	.002	.002	0	%100
17	MP-3	X	.002	.002	0	%100
18	MP-4	X	.002	.002	0	%100
19	MP-5	X	.002	.002	0	%100
20	MP-6	X	.002	.002	0	%100
21	MP-7	X	.002	.002	0	%100
22	MP-8	X	.002	.002	0	%100
23	MP-9	X	.002	.002	0	%100
24	MP-10	X	.002	.002	0	%100
25	MP-11	X	.002	.002	0	%100
26	MP-12	X	.002	.002	0	%100
27	MP-13	X	.002	.002	0	%100
28	SA-1	X	.000941	.000941	0	%100
29	SA-2	X	.004	.004	0	%100
30	SA-3	X	.002	.002	0	%100
31	SF1-HR	X	.000489	.000489	0	%100
32	SF1-TH	X	.004	.004	0	%100
33	SF2-HR	X	.002	.002	0	%100
34	SF2-TH	X	.001	.001	0	%100
35	TRCP-1	X	.003	.003	0	%100
36	TRCP-2	X	.000694	.000694	0	%100
37	TRCP-3	X	.002	.002	0	%100
38	CP-1	Z	.002	.002	0	%100
39	CP-2	Z	.000424	.000424	0	%100
40	CP-3	Z	.001	.001	0	%100
41	FF-HR	Z	.001	.001	0	%100
42	FFTH	Z	.004	.004	0	%100
43	GSI-1	Z	.003	.003	0	%100
44	GSI-2	Z	.000808	.000808	0	%100
45	GSI-3	Z	.002	.002	0	%100
46	HRB1	Z	.002	.002	0	%100
47	HRB2	Z	.000415	.000415	0	%100
48	HRB3	Z	.001	.001	0	%100
49	K1	Z	.003	.003	0	%100
50	K2	Z	.003	.003	0	%100
51	K3	Z	.003	.003	0	%100
52	MP-1	Z	.002	.002	0	%100
53	MP-2	Z	.002	.002	0	%100
54	MP-3	Z	.002	.002	0	%100
55	MP-4	Z	.002	.002	0	%100
56	MP-5	Z	.002	.002	0	%100
57	MP-6	Z	.002	.002	0	%100
58	MP-7	Z	.002	.002	0	%100
59	MP-8	Z	.002	.002	0	%100
60	MP-9	Z	.002	.002	0	%100
61	MP-10	Z	.002	.002	0	%100
62	MP-11	Z	.002	.002	0	%100
63	MP-12	Z	.002	.002	0	%100
64	MP-13	Z	.002	.002	0	%100
65	SA-1	Z	.000847	.000847	0	%100
66	SA-2	Z	.003	.003	0	%100
67	SA-3	Z	.003	.003	0	%100
68	SF1-HR	Z	.000602	.000602	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
69	SF1-TH	Z	.005	.005	0	%100
70	SF2-HR	Z	.002	.002	0	%100
71	SF2-TH	Z	.001	.001	0	%100
72	TRCP-1	Z	.003	.003	0	%100
73	TRCP-2	Z	.000694	.000694	0	%100
74	TRCP-3	Z	.002	.002	0	%100

Member Distributed Loads (BLC 30 : 240 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	.001	.001	0	%100
2	CP-2	X	.000557	.000557	0	%100
3	CP-3	X	.000588	.000588	0	%100
4	FF-HR	X	.000823	.000823	0	%100
5	FFTH	X	.002	.002	0	%100
6	GSI-1	X	.002	.002	0	%100
7	GSI-2	X	.000992	.000992	0	%100
8	GSI-3	X	.001	.001	0	%100
9	HRB1	X	.001	.001	0	%100
10	HRB2	X	.000503	.000503	0	%100
11	HRB3	X	.00059	.00059	0	%100
12	K1	X	.002	.002	0	%100
13	K2	X	.002	.002	0	%100
14	K3	X	.002	.002	0	%100
15	MP-1	X	.001	.001	0	%100
16	MP-2	X	.001	.001	0	%100
17	MP-3	X	.001	.001	0	%100
18	MP-4	X	.001	.001	0	%100
19	MP-5	X	.001	.001	0	%100
20	MP-6	X	.001	.001	0	%100
21	MP-7	X	.001	.001	0	%100
22	MP-8	X	.001	.001	0	%100
23	MP-9	X	.001	.001	0	%100
24	MP-10	X	.001	.001	0	%100
25	MP-11	X	.001	.001	0	%100
26	MP-12	X	.001	.001	0	%100
27	MP-13	X	.001	.001	0	%100
28	SA-1	X	0	0	0	%100
29	SA-2	X	.002	.002	0	%100
30	SA-3	X	.002	.002	0	%100
31	SF1-HR	X	.000667	.000667	0	%100
32	SF1-TH	X	.003	.003	0	%100
33	SF2-HR	X	.001	.001	0	%100
34	SF2-TH	X	.002	.002	0	%100
35	TRCP-1	X	.002	.002	0	%100
36	TRCP-2	X	.000948	.000948	0	%100
37	TRCP-3	X	.000948	.000948	0	%100
38	CP-1	Z	.002	.002	0	%100
39	CP-2	Z	.001	.001	0	%100
40	CP-3	Z	.000916	.000916	0	%100
41	FF-HR	Z	.001	.001	0	%100
42	FFTH	Z	.003	.003	0	%100
43	GSI-1	Z	.004	.004	0	%100
44	GSI-2	Z	.002	.002	0	%100
45	GSI-3	Z	.002	.002	0	%100
46	HRB1	Z	.002	.002	0	%100
47	HRB2	Z	.000981	.000981	0	%100

Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
48	HRB3	Z	.000919	.000919	0	%100
49	K1	Z	.003	.003	0	%100
50	K2	Z	.003	.003	0	%100
51	K3	Z	.003	.003	0	%100
52	MP-1	Z	.002	.002	0	%100
53	MP-2	Z	.002	.002	0	%100
54	MP-3	Z	.002	.002	0	%100
55	MP-4	Z	.002	.002	0	%100
56	MP-5	Z	.002	.002	0	%100
57	MP-6	Z	.002	.002	0	%100
58	MP-7	Z	.002	.002	0	%100
59	MP-8	Z	.002	.002	0	%100
60	MP-9	Z	.002	.002	0	%100
61	MP-10	Z	.002	.002	0	%100
62	MP-11	Z	.002	.002	0	%100
63	MP-12	Z	.002	.002	0	%100
64	MP-13	Z	.002	.002	0	%100
65	SA-1	Z	0	0	0	%100
66	SA-2	Z	.003	.003	0	%100
67	SA-3	Z	.004	.004	0	%100
68	SF1-HR	Z	.001	.001	0	%100
69	SF1-TH	Z	.006	.006	0	%100
70	SF2-HR	Z	.003	.003	0	%100
71	SF2-TH	Z	.003	.003	0	%100
72	TRCP-1	Z	.003	.003	0	%100
73	TRCP-2	Z	.002	.002	0	%100
74	TRCP-3	Z	.001	.001	0	%100

Member Distributed Loads (BLC 31 : 270 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Z	.002	.002	0	%100
2	CP-2	Z	.002	.002	0	%100
3	CP-3	Z	0	0	0	%100
4	FF-HR	Z	0	0	0	%100
5	FFTH	Z	0	0	0	%100
6	GSI-1	Z	.004	.004	0	%100
7	GSI-2	Z	.004	.004	0	%100
8	GSI-3	Z	0	0	0	%100
9	HRB1	Z	.002	.002	0	%100
10	HRB2	Z	.002	.002	0	%100
11	HRB3	Z	0	0	0	%100
12	K1	Z	.004	.004	0	%100
13	K2	Z	.004	.004	0	%100
14	K3	Z	.004	.004	0	%100
15	MP-1	Z	.003	.003	0	%100
16	MP-2	Z	.003	.003	0	%100
17	MP-3	Z	.003	.003	0	%100
18	MP-4	Z	.003	.003	0	%100
19	MP-5	Z	.003	.003	0	%100
20	MP-6	Z	.003	.003	0	%100
21	MP-7	Z	.003	.003	0	%100
22	MP-8	Z	.003	.003	0	%100
23	MP-9	Z	.003	.003	0	%100
24	MP-10	Z	.003	.003	0	%100
25	MP-11	Z	.003	.003	0	%100
26	MP-12	Z	.003	.003	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 31 : 270 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
27	MP-13	Z	.003	.003	0	%100
28	SA-1	Z	.002	.002	0	%100
29	SA-2	Z	.002	.002	0	%100
30	SA-3	Z	.005	.005	0	%100
31	SF1-HR	Z	.003	.003	0	%100
32	SF1-TH	Z	.006	.006	0	%100
33	SF2-HR	Z	.003	.003	0	%100
34	SF2-TH	Z	.006	.006	0	%100
35	TRCP-1	Z	.003	.003	0	%100
36	TRCP-2	Z	.003	.003	0	%100
37	TRCP-3	Z	0	0	0	%100

Member Distributed Loads (BLC 32 : 300 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.000557	-.000557	0	%100
2	CP-2	X	-.001	-.001	0	%100
3	CP-3	X	-.000588	-.000588	0	%100
4	FF-HR	X	-.000823	-.000823	0	%100
5	FFTH	X	-.002	-.002	0	%100
6	GSI-1	X	-.000992	-.000992	0	%100
7	GSI-2	X	-.002	-.002	0	%100
8	GSI-3	X	-.001	-.001	0	%100
9	HRB1	X	-.000503	-.000503	0	%100
10	HRB2	X	-.001	-.001	0	%100
11	HRB3	X	-.00059	-.00059	0	%100
12	K1	X	-.002	-.002	0	%100
13	K2	X	-.002	-.002	0	%100
14	K3	X	-.002	-.002	0	%100
15	MP-1	X	-.001	-.001	0	%100
16	MP-2	X	-.001	-.001	0	%100
17	MP-3	X	-.001	-.001	0	%100
18	MP-4	X	-.001	-.001	0	%100
19	MP-5	X	-.001	-.001	0	%100
20	MP-6	X	-.001	-.001	0	%100
21	MP-7	X	-.001	-.001	0	%100
22	MP-8	X	-.001	-.001	0	%100
23	MP-9	X	-.001	-.001	0	%100
24	MP-10	X	-.001	-.001	0	%100
25	MP-11	X	-.001	-.001	0	%100
26	MP-12	X	-.001	-.001	0	%100
27	MP-13	X	-.001	-.001	0	%100
28	SA-1	X	-.002	-.002	0	%100
29	SA-2	X	0	0	0	%100
30	SA-3	X	-.002	-.002	0	%100
31	SF1-HR	X	-.001	-.001	0	%100
32	SF1-TH	X	-.002	-.002	0	%100
33	SF2-HR	X	-.000667	-.000667	0	%100
34	SF2-TH	X	-.003	-.003	0	%100
35	TRCP-1	X	-.000948	-.000948	0	%100
36	TRCP-2	X	-.002	-.002	0	%100
37	TRCP-3	X	-.000948	-.000948	0	%100
38	CP-1	Z	.001	.001	0	%100
39	CP-2	Z	.002	.002	0	%100
40	CP-3	Z	.000916	.000916	0	%100
41	FF-HR	Z	.001	.001	0	%100
42	FFTH	Z	.003	.003	0	%100

Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
43	GSI-1	Z	.002	.002	0	%100
44	GSI-2	Z	.004	.004	0	%100
45	GSI-3	Z	.002	.002	0	%100
46	HRB1	Z	.000981	.000981	0	%100
47	HRB2	Z	.002	.002	0	%100
48	HRB3	Z	.000919	.000919	0	%100
49	K1	Z	.003	.003	0	%100
50	K2	Z	.003	.003	0	%100
51	K3	Z	.003	.003	0	%100
52	MP-1	Z	.002	.002	0	%100
53	MP-2	Z	.002	.002	0	%100
54	MP-3	Z	.002	.002	0	%100
55	MP-4	Z	.002	.002	0	%100
56	MP-5	Z	.002	.002	0	%100
57	MP-6	Z	.002	.002	0	%100
58	MP-7	Z	.002	.002	0	%100
59	MP-8	Z	.002	.002	0	%100
60	MP-9	Z	.002	.002	0	%100
61	MP-10	Z	.002	.002	0	%100
62	MP-11	Z	.002	.002	0	%100
63	MP-12	Z	.002	.002	0	%100
64	MP-13	Z	.002	.002	0	%100
65	SA-1	Z	.003	.003	0	%100
66	SA-2	Z	0	0	0	%100
67	SA-3	Z	.004	.004	0	%100
68	SF1-HR	Z	.003	.003	0	%100
69	SF1-TH	Z	.003	.003	0	%100
70	SF2-HR	Z	.001	.001	0	%100
71	SF2-TH	Z	.006	.006	0	%100
72	TRCP-1	Z	.002	.002	0	%100
73	TRCP-2	Z	.003	.003	0	%100
74	TRCP-3	Z	.001	.001	0	%100

Member Distributed Loads (BLC 33 : 315 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	-.000408	-.000408	0	%100
2	CP-2	X	-.002	-.002	0	%100
3	CP-3	X	-.001	-.001	0	%100
4	FF-HR	X	-.002	-.002	0	%100
5	FFTH	X	-.004	-.004	0	%100
6	GSI-1	X	-.000726	-.000726	0	%100
7	GSI-2	X	-.003	-.003	0	%100
8	GSI-3	X	-.002	-.002	0	%100
9	HRB1	X	-.000368	-.000368	0	%100
10	HRB2	X	-.001	-.001	0	%100
11	HRB3	X	-.001	-.001	0	%100
12	K1	X	-.003	-.003	0	%100
13	K2	X	-.003	-.003	0	%100
14	K3	X	-.003	-.003	0	%100
15	MP-1	X	-.002	-.002	0	%100
16	MP-2	X	-.002	-.002	0	%100
17	MP-3	X	-.002	-.002	0	%100
18	MP-4	X	-.002	-.002	0	%100
19	MP-5	X	-.002	-.002	0	%100
20	MP-6	X	-.002	-.002	0	%100
21	MP-7	X	-.002	-.002	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
22	MP-8	X	-.002	-.002	0	%100
23	MP-9	X	-.002	-.002	0	%100
24	MP-10	X	-.002	-.002	0	%100
25	MP-11	X	-.002	-.002	0	%100
26	MP-12	X	-.002	-.002	0	%100
27	MP-13	X	-.002	-.002	0	%100
28	SA-1	X	-.004	-.004	0	%100
29	SA-2	X	-.000941	-.000941	0	%100
30	SA-3	X	-.002	-.002	0	%100
31	SF1-HR	X	-.002	-.002	0	%100
32	SF1-TH	X	-.001	-.001	0	%100
33	SF2-HR	X	-.000489	-.000489	0	%100
34	SF2-TH	X	-.004	-.004	0	%100
35	TRCP-1	X	-.000694	-.000694	0	%100
36	TRCP-2	X	-.003	-.003	0	%100
37	TRCP-3	X	-.002	-.002	0	%100
38	CP-1	Z	.000424	.000424	0	%100
39	CP-2	Z	.002	.002	0	%100
40	CP-3	Z	.001	.001	0	%100
41	FF-HR	Z	.001	.001	0	%100
42	FFTH	Z	.004	.004	0	%100
43	GSI-1	Z	.000808	.000808	0	%100
44	GSI-2	Z	.003	.003	0	%100
45	GSI-3	Z	.002	.002	0	%100
46	HRB1	Z	.000415	.000415	0	%100
47	HRB2	Z	.002	.002	0	%100
48	HRB3	Z	.001	.001	0	%100
49	K1	Z	.003	.003	0	%100
50	K2	Z	.003	.003	0	%100
51	K3	Z	.003	.003	0	%100
52	MP-1	Z	.002	.002	0	%100
53	MP-2	Z	.002	.002	0	%100
54	MP-3	Z	.002	.002	0	%100
55	MP-4	Z	.002	.002	0	%100
56	MP-5	Z	.002	.002	0	%100
57	MP-6	Z	.002	.002	0	%100
58	MP-7	Z	.002	.002	0	%100
59	MP-8	Z	.002	.002	0	%100
60	MP-9	Z	.002	.002	0	%100
61	MP-10	Z	.002	.002	0	%100
62	MP-11	Z	.002	.002	0	%100
63	MP-12	Z	.002	.002	0	%100
64	MP-13	Z	.002	.002	0	%100
65	SA-1	Z	.003	.003	0	%100
66	SA-2	Z	.000847	.000847	0	%100
67	SA-3	Z	.003	.003	0	%100
68	SF1-HR	Z	.002	.002	0	%100
69	SF1-TH	Z	.001	.001	0	%100
70	SF2-HR	Z	.000602	.000602	0	%100
71	SF2-TH	Z	.005	.005	0	%100
72	TRCP-1	Z	.000694	.000694	0	%100
73	TRCP-2	Z	.003	.003	0	%100
74	TRCP-3	Z	.002	.002	0	%100

Member Distributed Loads (BLC 34 : 330 Wind - Ice)

Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	X	0	0	0	%100
2	CP-2	X	-.002	-.002	0	%100
3	CP-3	X	-.002	-.002	0	%100
4	FF-HR	X	-.002	-.002	0	%100
5	FFTH	X	-.006	-.006	0	%100
6	GSI-1	X	0	0	0	%100
7	GSI-2	X	-.003	-.003	0	%100
8	GSI-3	X	-.003	-.003	0	%100
9	HRB1	X	0	0	0	%100
10	HRB2	X	-.002	-.002	0	%100
11	HRB3	X	-.002	-.002	0	%100
12	K1	X	-.003	-.003	0	%100
13	K2	X	-.003	-.003	0	%100
14	K3	X	-.003	-.003	0	%100
15	MP-1	X	-.002	-.002	0	%100
16	MP-2	X	-.002	-.002	0	%100
17	MP-3	X	-.002	-.002	0	%100
18	MP-4	X	-.002	-.002	0	%100
19	MP-5	X	-.002	-.002	0	%100
20	MP-6	X	-.002	-.002	0	%100
21	MP-7	X	-.002	-.002	0	%100
22	MP-8	X	-.002	-.002	0	%100
23	MP-9	X	-.002	-.002	0	%100
24	MP-10	X	-.002	-.002	0	%100
25	MP-11	X	-.002	-.002	0	%100
26	MP-12	X	-.002	-.002	0	%100
27	MP-13	X	-.002	-.002	0	%100
28	SA-1	X	-.004	-.004	0	%100
29	SA-2	X	-.002	-.002	0	%100
30	SA-3	X	-.002	-.002	0	%100
31	SF1-HR	X	-.002	-.002	0	%100
32	SF1-TH	X	0	0	0	%100
33	SF2-HR	X	0	0	0	%100
34	SF2-TH	X	-.005	-.005	0	%100
35	TRCP-1	X	0	0	0	%100
36	TRCP-2	X	-.003	-.003	0	%100
37	TRCP-3	X	-.003	-.003	0	%100
38	CP-1	Z	0	0	0	%100
39	CP-2	Z	.001	.001	0	%100
40	CP-3	Z	.000916	.000916	0	%100
41	FF-HR	Z	.001	.001	0	%100
42	FFTH	Z	.003	.003	0	%100
43	GSI-1	Z	0	0	0	%100
44	GSI-2	Z	.002	.002	0	%100
45	GSI-3	Z	.002	.002	0	%100
46	HRB1	Z	0	0	0	%100
47	HRB2	Z	.000981	.000981	0	%100
48	HRB3	Z	.000919	.000919	0	%100
49	K1	Z	.002	.002	0	%100
50	K2	Z	.002	.002	0	%100
51	K3	Z	.002	.002	0	%100
52	MP-1	Z	.001	.001	0	%100
53	MP-2	Z	.001	.001	0	%100
54	MP-3	Z	.001	.001	0	%100
55	MP-4	Z	.001	.001	0	%100
56	MP-5	Z	.001	.001	0	%100
57	MP-6	Z	.001	.001	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
58	MP-7	Z	.001	.001	0	%100
59	MP-8	Z	.001	.001	0	%100
60	MP-9	Z	.001	.001	0	%100
61	MP-10	Z	.001	.001	0	%100
62	MP-11	Z	.001	.001	0	%100
63	MP-12	Z	.001	.001	0	%100
64	MP-13	Z	.001	.001	0	%100
65	SA-1	Z	.002	.002	0	%100
66	SA-2	Z	.001	.001	0	%100
67	SA-3	Z	.001	.001	0	%100
68	SF1-HR	Z	.001	.001	0	%100
69	SF1-TH	Z	0	0	0	%100
70	SF2-HR	Z	0	0	0	%100
71	SF2-TH	Z	.003	.003	0	%100
72	TRCP-1	Z	0	0	0	%100
73	TRCP-2	Z	.002	.002	0	%100
74	TRCP-3	Z	.001	.001	0	%100

Member Distributed Loads (BLC 37 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Y	-.003	-.003	0	.75
2	FFTH	Y	-.0003531	-.005	0	1.25
3	FFTH	Y	-.005	-.01	1.25	2.5
4	FFTH	Y	-.01	-.006	2.5	3.75
5	FFTH	Y	-.006	-.0003203	3.75	5
6	GSI-1	Y	-.009	-.009	.233	5.35
7	SA-1	Y	-.014	-.018	1.875	2.969
8	SA-1	Y	-.018	-.016	2.969	4.063
9	SA-1	Y	-.016	-.008	4.063	5.156
10	SA-1	Y	-.008	-.000624	5.156	6.25
11	SF2-TH	Y	-.0003203	-.006	7.5	8.75
12	SF2-TH	Y	-.006	-.01	8.75	10
13	SF2-TH	Y	-.01	-.005	10	11.25
14	SF2-TH	Y	-.005	-.0003531	11.25	12.5
15	CP-2	Y	-.003	-.003	0	.75
16	FFTH	Y	-.0003203	-.006	7.5	8.75
17	FFTH	Y	-.006	-.01	8.75	10
18	FFTH	Y	-.01	-.005	10	11.25
19	FFTH	Y	-.005	-.0003531	11.25	12.5
20	GSI-2	Y	-.009	-.009	.233	5.35
21	SA-2	Y	-.014	-.018	1.875	2.969
22	SA-2	Y	-.018	-.016	2.969	4.063
23	SA-2	Y	-.016	-.008	4.063	5.156
24	SA-2	Y	-.008	-.000624	5.156	6.25
25	SF1-TH	Y	-.0003531	-.005	0	1.25
26	SF1-TH	Y	-.005	-.01	1.25	2.5
27	SF1-TH	Y	-.01	-.006	2.5	3.75
28	SF1-TH	Y	-.006	-.0003203	3.75	5
29	CP-3	Y	-.003	-.003	0	.75
30	GSI-3	Y	-.009	-.009	.233	5.35
31	SA-3	Y	-.014	-.018	1.875	2.969
32	SA-3	Y	-.018	-.016	2.969	4.063
33	SA-3	Y	-.016	-.008	4.063	5.156
34	SA-3	Y	-.008	-.000624	5.156	6.25
35	SF1-TH	Y	-.0003203	-.006	7.5	8.75
36	SF1-TH	Y	-.006	-.01	8.75	10

Member Distributed Loads (BLC 37 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
37	SF1-TH	Y	-.01	-.005	10	11.25
38	SF1-TH	Y	-.005	-.0003531	11.25	12.5
39	SF2-TH	Y	-.0003531	-.005	0	1.25
40	SF2-TH	Y	-.005	-.01	1.25	2.5
41	SF2-TH	Y	-.01	-.006	2.5	3.75
42	SF2-TH	Y	-.006	-.0003203	3.75	5

Member Distributed Loads (BLC 38 : BLC 18 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	CP-1	Y	-.001	-.001	0	.75
2	FFTH	Y	-.0001471	-.002	0	1.25
3	FFTH	Y	-.002	-.004	1.25	2.5
4	FFTH	Y	-.004	-.003	2.5	3.75
5	FFTH	Y	-.003	-.0001334	3.75	5
6	GSI-1	Y	-.004	-.004	.233	5.35
7	SA-1	Y	-.006	-.007	1.875	2.969
8	SA-1	Y	-.007	-.007	2.969	4.063
9	SA-1	Y	-.007	-.003	4.063	5.156
10	SA-1	Y	-.003	-.00026	5.156	6.25
11	SF2-TH	Y	-.0001334	-.003	7.5	8.75
12	SF2-TH	Y	-.003	-.004	8.75	10
13	SF2-TH	Y	-.004	-.002	10	11.25
14	SF2-TH	Y	-.002	-.0001471	11.25	12.5
15	CP-2	Y	-.001	-.001	0	.75
16	FFTH	Y	-.0001334	-.003	7.5	8.75
17	FFTH	Y	-.003	-.004	8.75	10
18	FFTH	Y	-.004	-.002	10	11.25
19	FFTH	Y	-.002	-.0001471	11.25	12.5
20	GSI-2	Y	-.004	-.004	.233	5.35
21	SA-2	Y	-.006	-.007	1.875	2.969
22	SA-2	Y	-.007	-.007	2.969	4.063
23	SA-2	Y	-.007	-.003	4.063	5.156
24	SA-2	Y	-.003	-.00026	5.156	6.25
25	SF1-TH	Y	-.0001471	-.002	0	1.25
26	SF1-TH	Y	-.002	-.004	1.25	2.5
27	SF1-TH	Y	-.004	-.003	2.5	3.75
28	SF1-TH	Y	-.003	-.0001334	3.75	5
29	CP-3	Y	-.001	-.001	0	.75
30	GSI-3	Y	-.004	-.004	.233	5.35
31	SA-3	Y	-.006	-.007	1.875	2.969
32	SA-3	Y	-.007	-.007	2.969	4.063
33	SA-3	Y	-.007	-.003	4.063	5.156
34	SA-3	Y	-.003	-.00026	5.156	6.25
35	SF1-TH	Y	-.0001334	-.003	7.5	8.75
36	SF1-TH	Y	-.003	-.004	8.75	10
37	SF1-TH	Y	-.004	-.002	10	11.25
38	SF1-TH	Y	-.002	-.0001471	11.25	12.5
39	SF2-TH	Y	-.0001471	-.002	0	1.25
40	SF2-TH	Y	-.002	-.004	1.25	2.5
41	SF2-TH	Y	-.004	-.003	2.5	3.75
42	SF2-TH	Y	-.003	-.0001334	3.75	5

Company : Tower Engineering Professionals, Inc.
Designer : PAL
Job Number : TEP No. 248058.408525
Model Name : CCI BU No. 823529

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Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N43	GSI1	GSI4	N49	Y	Two Way	-.012
2	GSI2	N41	N47	GSI5	Y	Two Way	-.012
3	GSI3	GSI6	N45	N51	Y	Two Way	-.012

Member Area Loads (BLC 18 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N43	GSI1	GSI4	N49	Y	Two Way	-.005
2	GSI2	N41	N47	GSI5	Y	Two Way	-.005
3	GSI3	GSI6	N45	N51	Y	Two Way	-.005

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	SA3	max	6.133	18	.542	10	.9	22	.319	5	1.329	22	.851	18
2		min	-3.83	10	-1.07	18	-.9	30	-.347	29	-1.321	14	-.422	10
3	SA1	max	1.743	5	.463	5	3.125	5	.878	28	1.595	33	.298	7
4		min	-3.211	29	-1.237	29	-5.65	29	-.329	4	-1.594	9	-.61	31
5	SA2	max	1.881	15	.608	15	5.641	23	.458	16	1.551	27	.351	13
6		min	-3.166	23	-1.227	23	-3.412	15	-.908	24	-1.548	3	-.578	21
7	N102A	max	.74	10	3.118	34	.036	6	0	3	0	27	0	66
8		min	-3.081	34	-.765	10	-.036	14	0	27	0	3	0	1
9	N104A	max	1.788	45	3.613	45	3.096	45	0	27	0	27	0	27
10		min	-.236	5	-.498	5	-.409	5	0	3	0	3	0	3
11	N106A	max	1.671	39	3.379	39	.621	15	0	17	0	17	0	25
12		min	-.359	15	-.742	15	-2.893	39	0	25	0	25	0	17
13	Totals:	max	5.871	18	6.66	49	5.628	22						
14		min	-5.871	10	2.517	2	-5.628	14						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[...	Dir	LC	phi*Pnc ...	phi*Pnt...	phi*Mn y-y ...	phi*Mn z-z ...	Cb	Eqn
1	GSI-1	L6X3X3	.724	2.792	42	.045	2.792	z	42	29.598	53.536	1.602	6.561	1....	H2-1
2	GSI-2	L6X3X3	.705	2.792	40	.043	2.792	z	42	29.598	53.536	1.602	6.554	1....	H2-1
3	GSI-3	L6X3X3	.699	2.792	34	.042	2.792	z	34	29.598	53.536	1.602	6.547	1....	H2-1
4	SF1-TH	L6X3X3	.617	4.297	6	.251	.391	z	28	9.229	53.536	.596	1.932	1....	H2-1
5	FFTH	L6X3X3	.581	8.203	9	.273	.391	z	33	9.229	53.536	.596	1.926	2.04	H2-1
6	SF2-TH	L6X3X3	.579	11.979	28	.292	12.1...	z	24	9.229	53.536	.596	2.619	2....	H2-1
7	MP-2	PIPE_2.0	.443	5.469	30	.060	5.469		32	13.788	32.13	1.872	1.872	1....	H1-1b
8	MP-6	PIPE_2.0	.437	5.469	19	.052	5.469		21	13.788	32.13	1.872	1.872	1....	H1-1b
9	MP-7	PIPE_2.0	.431	5.469	28	.051	5.469		26	13.788	32.13	1.872	1.872	1....	H1-1b
10	MP-3	PIPE_2.0	.428	5.469	22	.046	5.469		21	13.788	32.13	1.872	1.872	1....	H1-1b
11	MP-4	PIPE_2.0	.420	5.75	23	.077	5.75		23	13.788	32.13	1.872	1.872	1....	H1-1b
12	MP-8	PIPE_2.0	.419	5.75	28	.079	5.75		29	13.788	32.13	1.872	1.872	2....	H1-1b
13	MP-5	PIPE_2.0	.413	5.469	18	.078	5.469		18	13.788	32.13	1.872	1.872	1....	H1-1b
14	CP-2	RE4.5X.5	.406	.375	23	.202	.375	y	29	69.264	72.9	.759	6.834	1....	H1-1b
15	MP-1	PIPE_2.0	.397	5.469	29	.077	5.469		29	13.788	32.13	1.872	1.872	1....	H1-1b
16	CP-1	RE4.5X.5	.395	.375	28	.227	.375	y	24	69.264	72.9	.759	6.834	1....	H1-1b
17	MP-10	PIPE_2.0	.388	5.469	24	.048	5.469		24	13.788	32.13	1.872	1.872	1....	H1-1b
18	TRCP-2	L2.5x2.5x3	.380	.75	27	.073	0	y	28	27.933	29.192	.873	1.972	1....	H2-1
19	CP-3	RE4.5X.5	.364	.375	18	.193	.375	y	23	69.264	72.9	.759	6.834	1.32	H1-1b
20	TRCP-3	L2.5x2.5x3	.353	0	22	.075	0	y	22	27.933	29.192	.873	1.972	1....	H2-1
21	TRCP-1	L2.5x2.5x3	.343	.75	33	.072	.75	y	25	27.933	29.192	.873	1.972	1....	H2-1
22	MP-9	PIPE_2.0	.341	5.469	24	.070	5.469		23	13.788	32.13	1.872	1.872	1....	H1-1b
23	MP-11	PIPE_2.0	.326	5.75	33	.040	5.75		33	13.788	32.13	1.872	1.872	2.46	H1-1b

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Locl...	Dir	LC	phi*Pnc ...	phi*Pnt...	phi*Mn y-y ...	phi*Mn z-z ...	Cb	Eqn
24	SA-1	HSS4X4X3	.319	2.995	29	.071	2.995	y	45	53.4	106.812	12.662	12.662	1....	H1-1b
25	SA-2	HSS4X4X3	.312	2.995	23	.077	0	z	27	53.4	106.812	12.662	12.662	1....	H1-1b
26	MP-13	PIPE_2.0	.310	5.75	18	.064	5.75		18	13.788	32.13	1.872	1.872	2.61	H1-1b
27	MP-12	PIPE_2.0	.302	5.469	33	.045	5.469		18	13.788	32.13	1.872	1.872	1....	H1-1b
28	SA-3	HSS4X4X3	.287	2.995	18	.062	0	z	30	53.4	106.812	12.662	12.662	1....	H1-1b
29	FF-HR	PIPE_2.5	.187	.521	23	.064	.391		33	3.301	50.715	3.596	3.596	3....	H1-1b
30	SF1-HR	PIPE_2.5	.181	11.979	18	.062	12.1...		25	3.301	50.715	3.596	3.596	3....	H1-1b
31	SF2-HR	PIPE_2.5	.171	8.333	23	.069	12.24		22	3.301	50.715	3.596	3.596	2.71	H1-1b
32	K1	LL2.5x2.5x3x6	.117	4.243	45	.003	0	y	27	43.437	58.32	4.643	2.55	1....	H1-1...
33	K2	LL2.5x2.5x3x6	.109	4.243	39	.003	0	y	25	43.437	58.32	4.643	2.55	1....	H1-1...
34	K3	LL2.5x2.5x3x6	.101	4.243	34	.003	0	y	19	43.437	58.32	4.643	2.55	1	H1-1...
35	HRB3	PIPE_2.0	.023	2.417	26	.044	0		30	24.281	32.13	1.872	1.872	1....	H1-1b
36	HRB2	PIPE_2.0	.021	2.417	31	.044	0		27	24.281	32.13	1.872	1.872	1....	H1-1b
37	HRB1	PIPE_2.0	.021	2.417	21	.041	0		33	24.281	32.13	1.872	1.872	1....	H1-1b

Envelope None Cold Formed Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pn[k]	Tn[k]	Mnyy[k...	Mnzz[k...	Cb	Cmyy	Cmzz	Eqn
No Data to Print ...																

APPENDIX D

ADDITIONAL CALCULATIONS

Job Name: CCI BU No. 823529
Job Number: TEP No. 248058.408525
Calc: PAL Check: GHM
Date: 4/27/2020

Moment Bolt Group - Support Arm

Bolt Size:	0.625	in
# Bolts:	4	
Plate Width:	11.5	in
Plate Height:	11.5	in
Bolt H Gap:	9.25	in
Bolt V Gap:	9.25	in
Plate T:	0.625	in
Slip Member Ø:	N/A	in
Bolt Grade:	A325N	
Fu_{bolt}:	120	ksi
r:	6.5407	in
J:	171.13	in^4/in^2
$Bolt_{Area}$:	0.307	in^2
$Bolt_{Area, Net Tensile}$:	0.226	in^2
Pretension:	19	kips
Slotted Holes:	No	

Code Checks Per ANSI/TIA-222-H:

Bolt Capacity =	**12.5%**	**PASS**
Plate Capacity =	**32.7%**	**PASS**

Plate Bending

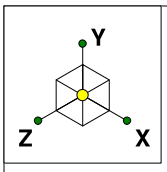
Horizontal Member height: 4 in
Horizontal Member width: 4 in
Plate Fy: 36 ksi

My =	10.1172	k - in	Z_y =	1.123	in^3	S_y =	0.749	in^3
Mz =	11.8898	k - in	Z_z =	1.123	in^3	S_z =	0.749	in^3

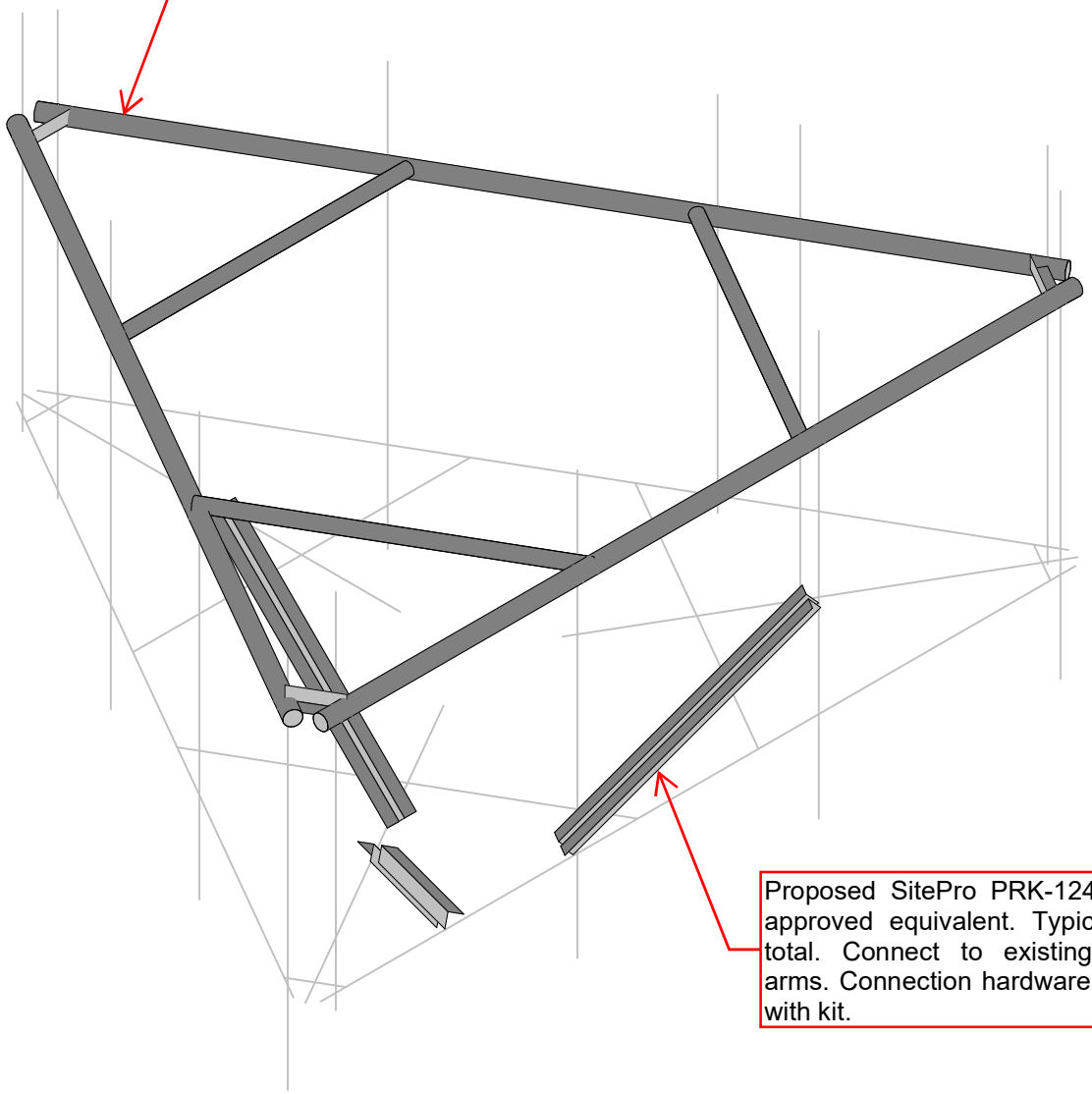
$ØMp_y$ (Z):	36.387	k - in
$ØMp_y$ (S):	38.813	k - in
$ØMp_z$ (Z):	36.387	k - in
$ØMp_z$ (S):	38.813	k - in

APPENDIX E

MOUNT MODIFICATION DESIGN DRAWINGS



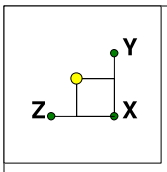
Proposed SitePro HRK12-3HD Kit, or approved equivalent, to replace existing angle support rail. Typical of (1) total. Connect to existing mount pipes. Connection hardware provided with kit.



Proposed SitePro PRK-1245 Kit, or approved equivalent. Typical of (1) total. Connect to existing support arms. Connection hardware provided with kit.

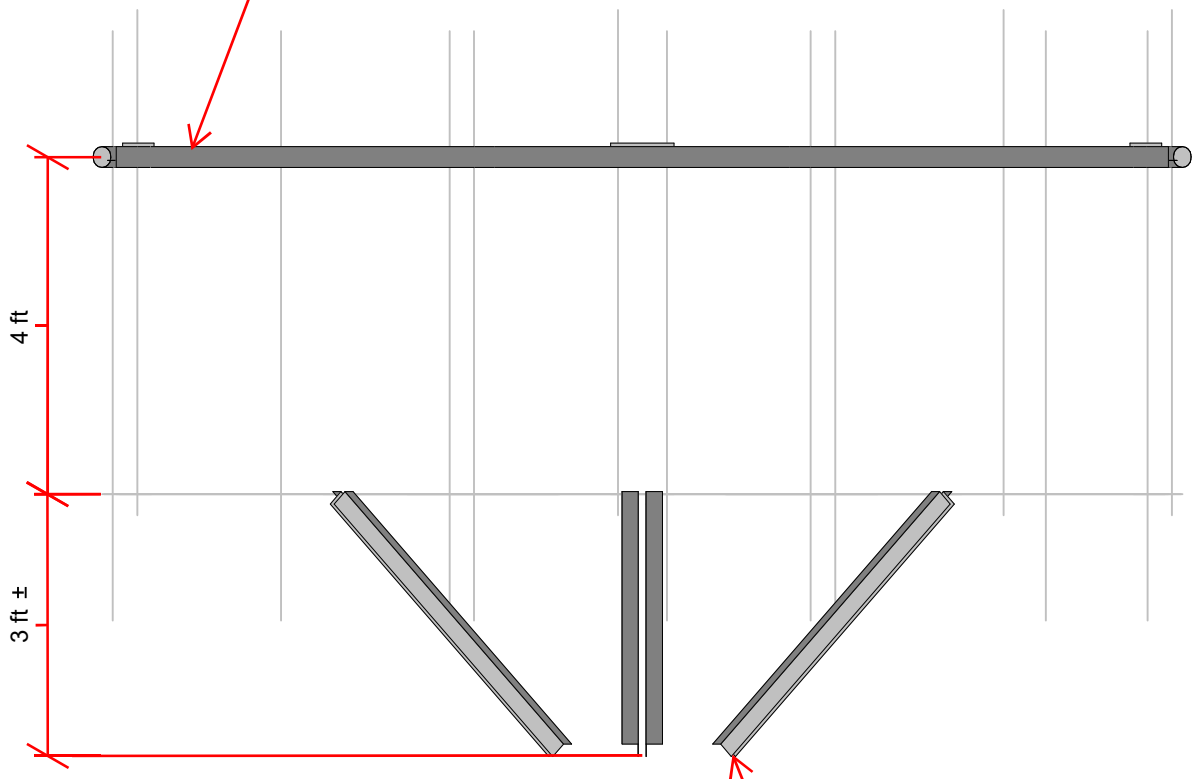
Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 823529	ISO VIEW E - 1
PAL		Apr 27, 2020 at 4:42 PM
TEP No. 248058.408525		CCI BU No. 823529.r3d



NOTE: Existing unistrut verticals are to be removed with the angle support rail.

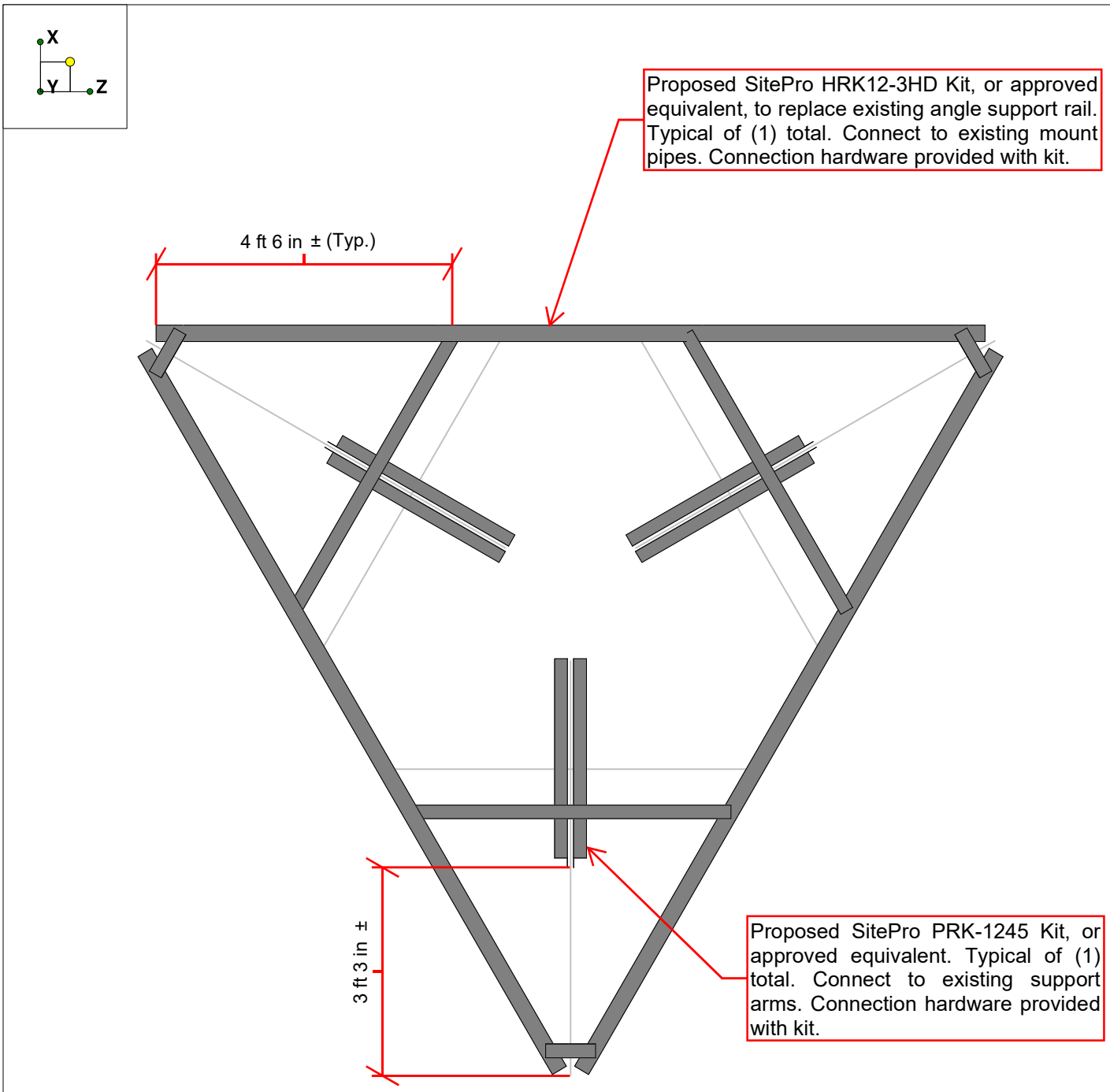
Proposed SitePro HRK12-3HD Kit, or approved equivalent, to replace existing angle support rail. Typical of (1) total. Connect to existing mount pipes. Connection hardware provided with kit.



Proposed SitePro PRK-1245 Kit, or approved equivalent. Typical of (1) total. Connect to existing support arms. Connection hardware provided with kit.

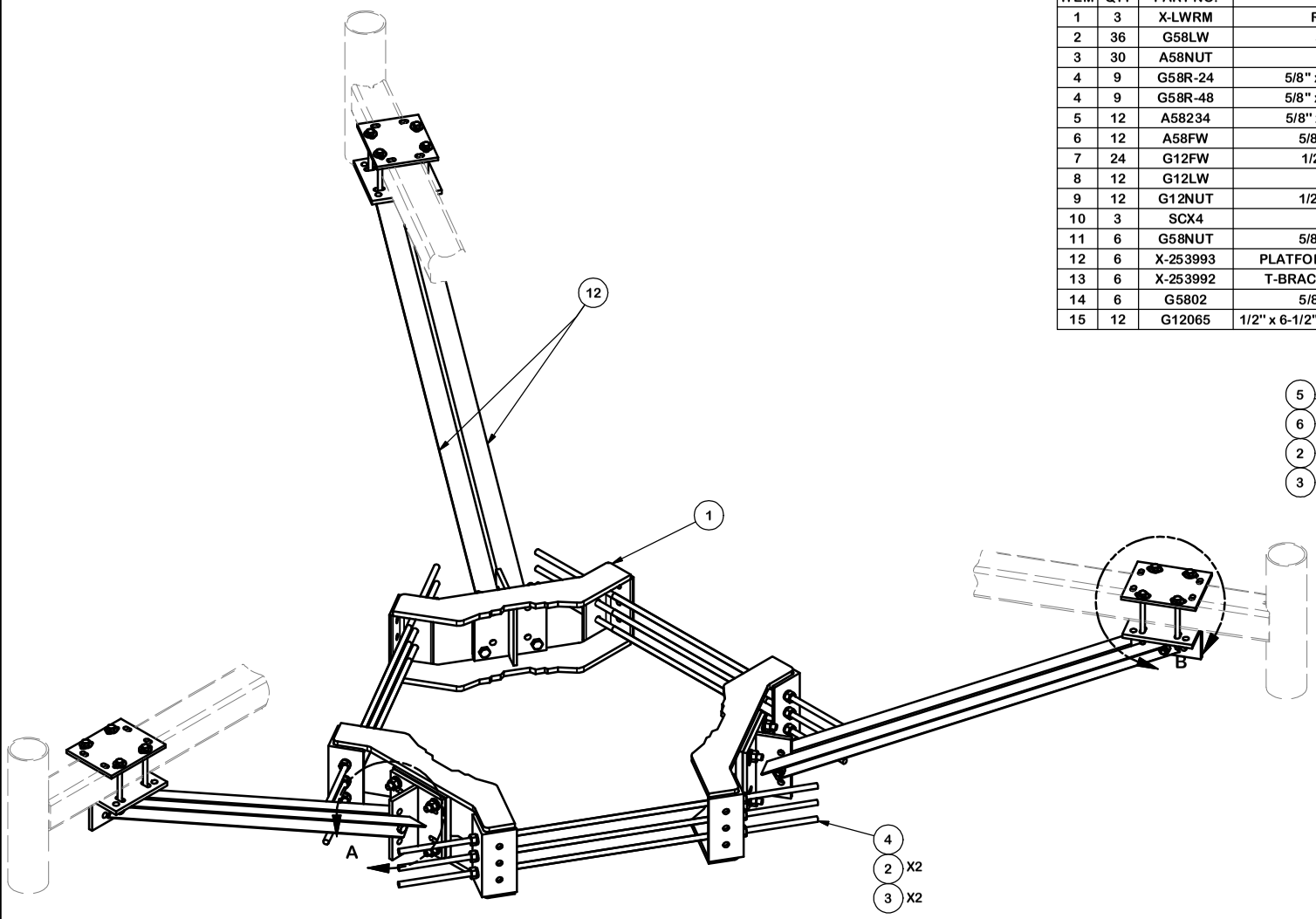
Envelope Only Solution

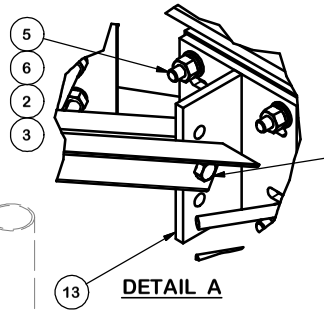
Tower Engineering Profes...	CCI BU No. 823529	ELEVATION VIEW E - 2
PAL		Apr 27, 2020 at 4:43 PM
TEP No. 248058.408525		CCI BU No. 823529.r3d

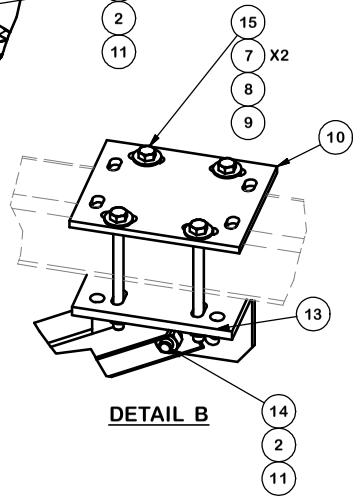


Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 823529	PLAN VIEW E - 3
PAL		Apr 27, 2020 at 4:43 PM
TEP No. 248058.408525		CCI BU No. 823529.r3d







PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	36	G58LW	5/8" HDG LOCKWASHER		0.03	0.94
3	30	A58NUT	5/8" HDG A325 HEX NUT		0.13	3.90
4	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.55	4.94
4	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)		0.55	4.94
5	12	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	4.27
6	12	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.41
7	24	G12FW	1/2" HDG USS FLATWASHER		0.03	0.82
8	12	G12LW	1/2" HDG LOCKWASHER		0.01	0.17
9	12	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.86
10	3	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	18.06
11	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
12	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
13	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
14	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
15	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
					TOTAL WT. #	464.91

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

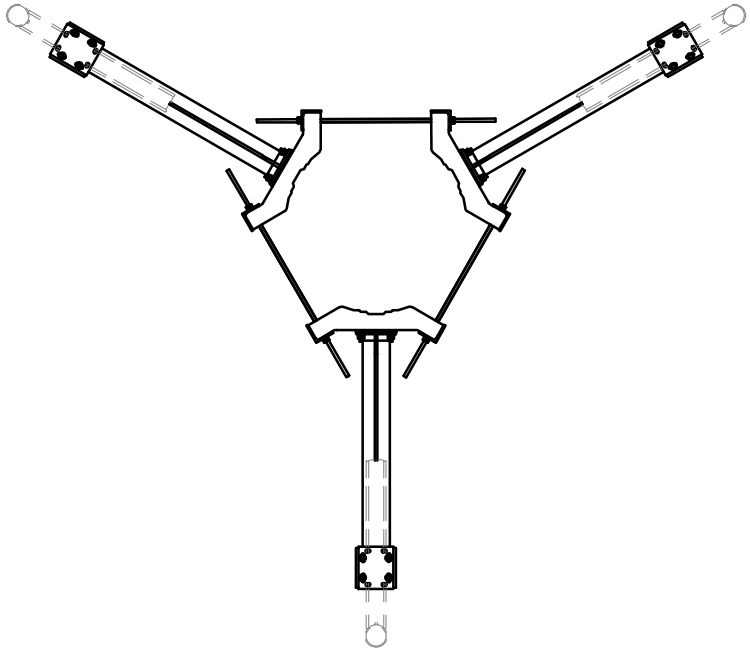
DESCRIPTION
PLATFORM RENIFORCEMENT
ON A 12" TO 45" POLE
4' 6" ANGLE

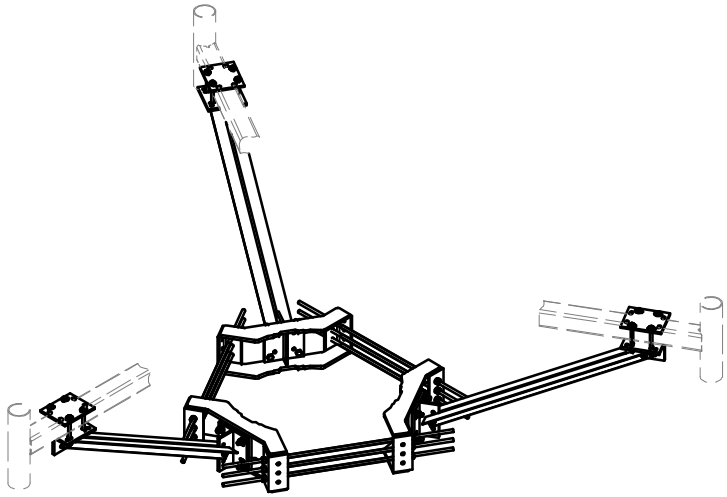
SITE PRO 1 — A valmont COMPANY

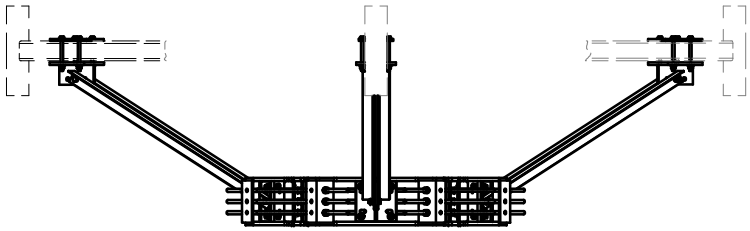
Engineering Support Team: 1-888-753-7446

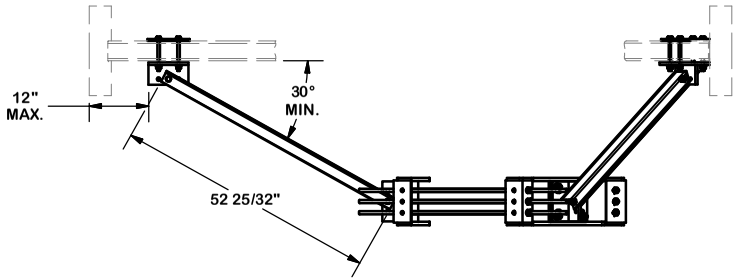
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	
4488	CEK 4/10/2014		PRK-1245	PAGE 1 OF 2
CLASS / SUB: 81 / 01	DRAWING USAGE: CUSTOMER	CHECKED BY: BMC 4/10/2014	DWG. NO.: PRK-1245	









TOLERANCE NOTES

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LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

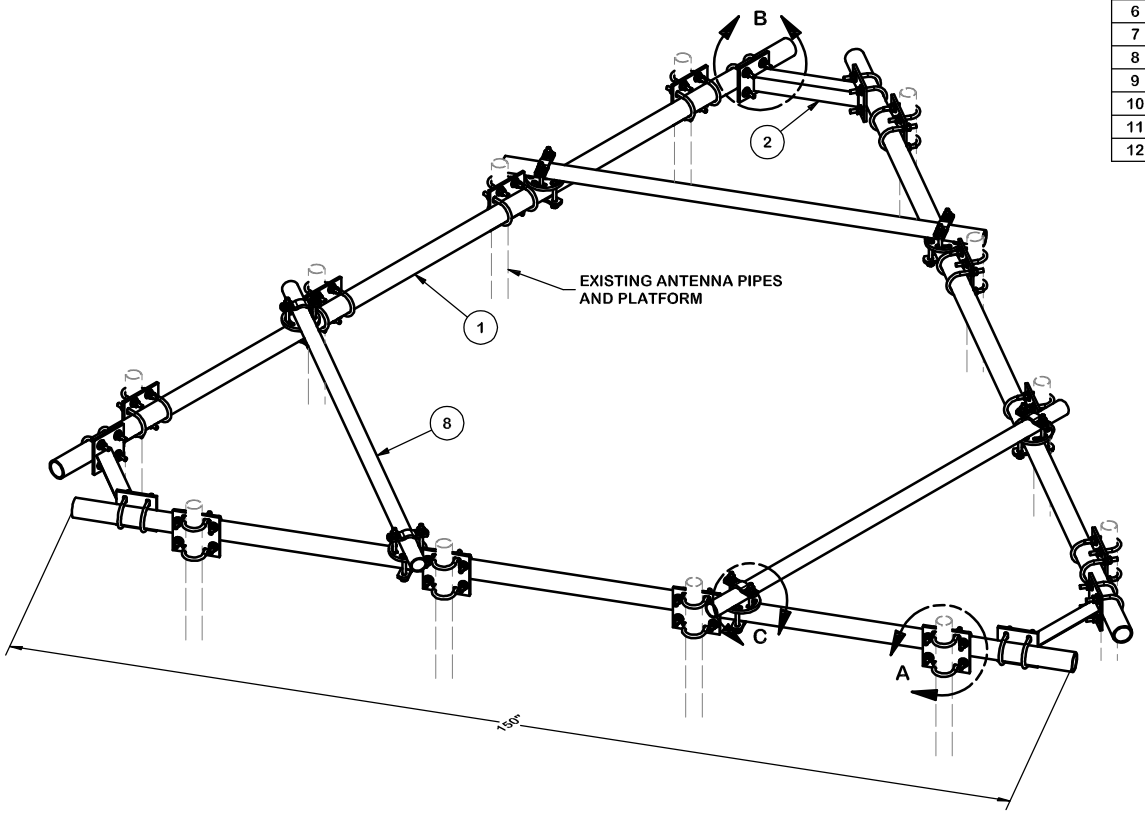
DESCRIPTION
PLATFORM RENIFORCEMENT
ON A 12" TO 45" POLE
4' 6" ANGLE

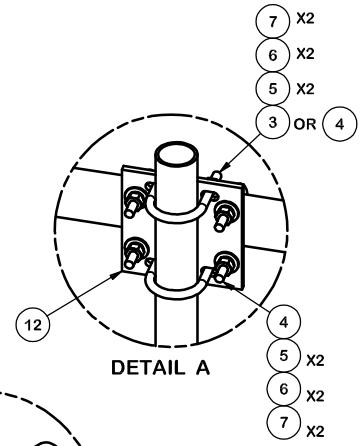
SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

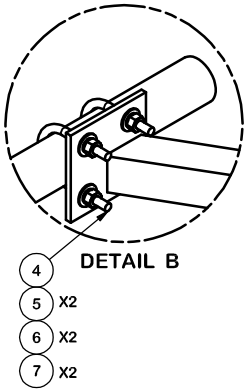
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 4/10/2014		PRK-1245

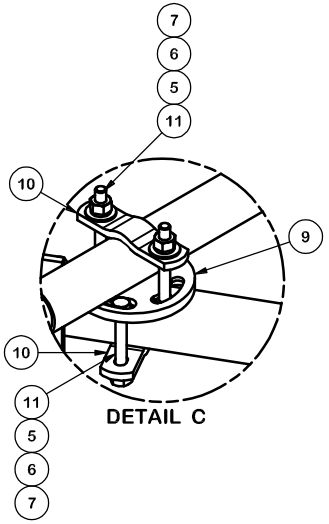
CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 4/10/2014	PRK-1245

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT
1	3	P30150	2-7/8" O.D. X 150" SCH. 40 PIPE	150 in	76.94	230.81
2	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
3	24	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.73	17.56
4	60	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.73	43.90
5	144	G12FW	1/2" HDG USS FLATWASHER		0.03	4.91
6	144	G12LW	1/2" HDG LOCKWASHER		0.01	2.00
7	144	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	10.31
8	3	P272	2-3/8" X 72" SCH 40 GALVANIZED PIPE	72 in	23.07	69.20
9	6	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	14.90
10	12	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	10.95
11	24	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	6.48
12	12	SCX2	CROSSOVER PLATE	7 in	4.80	57.56
					TOTAL WT. #	502.34









TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
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LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
HEAY DUTY HANDRAIL KIT
FOR 12' PLATFORMS WITH
2-7/8" HANDRAIL PIPES

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 4/6/2015		HRK12-3HD

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 4/7/2015	HRK12-3HD

Exhibit F

Power Density/RF Emissions Report

RF EMISSIONS COMPLIANCE REPORT

Crown Castle on behalf of AT&T Mobility, LLC

Crown Castle Site Name: CT038/EastLyme/ I-95/ X72
Crown Castle Site BU: 823529
Order ID: 517072
AT&T Mobility, LLC FA #: 10035302
38 Hatchetts Hill Road
Old Lyme, CT
6/10/2020

Report Status:

AT&T Mobility, LLC is Compliant

Michael Fischer, P.E.
Registered Professional Engineer (Electrical)
Connecticut License Number 33928
Expires January 31, 2021

Signed 11 June 2020

Prepared By:

Site Safe, LLC

8618 Westwood Center Drive
Suite 315
Vienna, VA 22182
Voice: 703-276-1100
Fax: 703-276-1169

Engineering Statement in Re:
Electromagnetic Energy Analysis
Crown Castle
Old Lyme, CT

My signature on the cover of this document indicates:

That I am registered as a Professional Engineer in the jurisdiction indicated; and

That I have extensive professional experience in the wireless communications engineering industry; and

That I am an employee of Site Safe, LLC in Vienna, Virginia; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission ("the FCC" and "the FCC Rules") both in general and specifically as they apply to the FCC's Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That the technical information serving as the basis for this report was supplied by Crown Castle on behalf of AT&T Mobility, LLC (see attached Site Summary and Carrier documents) and that AT&T Mobility, LLC's installation involves communications equipment, antennas and associated technical equipment at a location referred to as "CT038/EastLyme/ I-95/ X72" ("the site"); and

That AT&T Mobility, LLC proposes to operate at the site with transmit antennas listed in the carrier summary and with a maximum effective radiated power as specified by AT&T Mobility, LLC and shown on the worksheet and that worst-case 100% duty cycle has been assumed; and

That this analysis has been performed with the assumption that the ground immediately surrounding the tower is primarily flat or falling; and

That at this time, the FCC requires that certain licensees address specific levels of radio frequency energy to which workers or members of the public might possibly be exposed (at §1.1307(b) of the FCC Rules); and

That such consideration of possible exposure of humans to radio frequency energy must utilize the standards set by the FCC, which is the federal agency having jurisdiction over communications facilities; and

That the FCC rules define two tiers of permissible exposure guidelines: 1) "uncontrolled environments," which defines situations in which persons may not be aware of (the "general public"), or may not be able to control their exposure to a transmission facility; and 2) "controlled environments," which defines situations in which persons are aware of their potential for exposure (industry personnel); and

That this statement specifically addresses the uncontrolled environment (which is more conservative than the controlled environment) and the limit set forth in the FCC rules for licensees of AT&T Mobility, LLC's operating frequencies as shown on the attached antenna worksheet; and

That when applying the uncontrolled environment standards, the predicted Maximum Power Density at two meters above ground level from the proposed AT&T Mobility, LLC operation is no more than 1.274% of the maximum permissible exposure limits in any accessible area on the ground; and

That it is understood per FCC Guidelines and OET 65 Appendix A, that regardless of the existent radio frequency environment, only those licensees whose contributions exceed 5% of the exposure limit pertinent to their operation(s) bear any responsibility for bringing any non-compliant area(s) into compliance; and

That when applying the uncontrolled environment standards, the cumulative predicted energy density from the proposed operation is no more than 3.519% of the maximum in any accessible area up to two meters above the ground per OET 65; and

That the calculations provided in this report are based on data provided by the client and antenna pattern data supplied by the antenna manufacturer, in accordance with FCC guidelines listed in OET 65. Horizontal and vertical antenna patterns are combined for modeling purposes to accurately reflect the energy two meters above ground level where on-axis energy refers to maximum energy two meters above the ground along the azimuth of the antenna and where area energy refers to the maximum energy anywhere two meters above the ground regardless of the antenna azimuth, accounting for cumulative energy from multiple antennas for the carrier(s) and frequency range(s) indicated; and

That the Occupational Safety and Health Administration has policies in place which address worker safety in and around communications sites, thus individual companies will be responsible for their employees' training regarding radio frequency safety; and

In summary, it is stated here that the proposed operation at the site will not result in exposure of the public to excessive levels of radio frequency energy as defined in the FCC Rules and Regulations, specifically 47 CFR 1.1307(b), and that AT&T Mobility, LLC's proposed operation is completely compliant.

Finally, it is stated that access to the tower should be restricted to communication industry professionals and approved contractor personnel trained in radio frequency safety and that this instant analysis addresses exposure levels at two meters above ground level and does not address exposure levels on the tower or in the immediate proximity of the antennas.

Crown Castle
CT038/EastLyme/ I-95/ X72
Site Summary

Carrier	Area Maximum Percentage MPE
AT&T Mobility, LLC	0.058 %
AT&T Mobility, LLC (Proposed)	0.344 %
AT&T Mobility, LLC (Proposed)	0.139 %
AT&T Mobility, LLC (Proposed)	0.159 %
AT&T Mobility, LLC (Proposed)	0.378 %
AT&T Mobility, LLC (Proposed)	0.196 %
T-Mobile	0.367 %
T-Mobile	0.182 %
T-Mobile	0.207 %
T-Mobile	0.175 %
Verizon Wireless	0.418 %
Verizon Wireless	0.364 %
Verizon Wireless	0.296 %
Verizon Wireless	0.236 %
Composite Site MPE:	3.519 %

AT&T Mobility, LLC
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	$\mu W/cm^2$
Maximum power density at ground level:	0.33136	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.05848	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
ANDREW	SBNHH-1D65A	165	23	560	0.219213	0.038685	0.310434	0.054782
ANDREW	SBNHH-1D65A	165	143	560	0.219213	0.038685	0.310434	0.054782
ANDREW	SBNHH-1D65A	165	263	560	0.219213	0.038685	0.310434	0.054782

AT&T Mobility, LLC (Proposed)
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	$\mu W/cm^2$
Maximum power density at ground level:	3.44276	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.34428	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
CCI Antennas	DMP65R-BU4D	165	23	3541	2.651721	0.265172	3.402207	0.340221
CCI Antennas	DMP65R-BU4D	165	143	3541	2.651721	0.265172	3.402207	0.340221
CCI Antennas	DMP65R-BU4D	165	263	3541	2.651721	0.265172	3.402207	0.340221

AT&T Mobility, LLC (Proposed)
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	$\mu W/cm^2$
Maximum power density at ground level:	0.78852	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.13915	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
CCI Antennas	DMP65R-BU4D	165	23	1695	0.747885	0.131980	0.783413	0.138249
CCI Antennas	DMP65R-BU4D	165	143	1695	0.747885	0.131980	0.783413	0.138249
CCI Antennas	DMP65R-BU4D	165	263	1695	0.747885	0.131980	0.783413	0.138249

AT&T Mobility, LLC (Proposed)
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	737	MHz
Maximum Permissible Exposure (MPE):	491.33	$\mu W/cm^2$
Maximum power density at ground level:	0.77971	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.15869	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
CCI Antennas	DMP65R-BU4D	165	23	1582	0.742792	0.151179	0.771593	0.157041
CCI Antennas	DMP65R-BU4D	165	143	1582	0.742792	0.151179	0.771593	0.157041
CCI Antennas	DMP65R-BU4D	165	263	1582	0.742792	0.151179	0.771593	0.157041

AT&T Mobility, LLC (Proposed)
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	$\mu W/cm^2$
Maximum power density at ground level:	3.78483	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.37848	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
CCI	OPA65R-BU4D	165	23	4066	3.007760	0.300776	3.738060	0.373806
CCI	OPA65R-BU4D	165	143	4066	3.007760	0.300776	3.738060	0.373806
CCI	OPA65R-BU4D	165	263	4066	3.007760	0.300776	3.738060	0.373806

AT&T Mobility, LLC (Proposed)
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	763	MHz
Maximum Permissible Exposure (MPE):	508.67	$\mu W/cm^2$
Maximum power density at ground level:	0.99774	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.19615	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
CCI	OPA65R-BU4D	165	23	1775	0.933240	0.183468	0.984206	0.193487
CCI	OPA65R-BU4D	165	143	1775	0.933240	0.183468	0.984206	0.193487
CCI	OPA65R-BU4D	165	263	1775	0.933240	0.183468	0.984206	0.193487

T-Mobile
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	$\mu W/cm^2$
Maximum power density at ground level:	3.66926	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.36693	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
Ericsson	AIR 32 B2A B66AA	192	50	4626	2.563841	0.256384	2.563841	0.256384
Ericsson	AIR 32 B2A B66AA	192	150	4626	2.563841	0.256384	2.563841	0.256384
Ericsson	AIR 32 B2A B66AA	192	270	4626	2.563841	0.256384	2.563841	0.256384

T-Mobile
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	$\mu W/cm^2$
Maximum power density at ground level:	1.81639	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.18164	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
RFS	APXVAARR24_43-U-NA20	192	50	2472	0.461188	0.046119	0.851298	0.085130
Ericsson	AIR 32 B2A B66AA	192	50	4626	0.594392	0.059439	0.678997	0.067900
RFS	APXVAARR24_43-U-NA20	192	150	2472	0.461188	0.046119	0.851298	0.085130
Ericsson	AIR 32 B2A B66AA	192	150	4626	0.594392	0.059439	0.678997	0.067900
RFS	APXVAARR24_43-U-NA20	192	270	2472	0.461188	0.046119	0.851298	0.085130
Ericsson	AIR 32 B2A B66AA	192	270	4626	0.594392	0.059439	0.678997	0.067900

T-Mobile
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	700	MHz
Maximum Permissible Exposure (MPE):	466.67	$\mu W/cm^2$
Maximum power density at ground level:	0.96641	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.20709	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
RFS	APXVAARR24_43-U-NA20	192	50	3484	0.595709	0.127652	0.622776	0.133452
RFS	APXVAARR24_43-U-NA20	192	150	3484	0.595709	0.127652	0.622776	0.133452
RFS	APXVAARR24_43-U-NA20	192	270	3484	0.595709	0.127652	0.622776	0.133452

T-Mobile
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	600	MHz
Maximum Permissible Exposure (MPE):	400	$\mu W/cm^2$
Maximum power density at ground level:	0.69877	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.17469	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
RFS	APXVAARR24_43-U-NA20	192	50	2501	0.460768	0.115192	0.471663	0.117916
RFS	APXVAARR24_43-U-NA20	192	150	2501	0.460768	0.115192	0.471663	0.117916
RFS	APXVAARR24_43-U-NA20	192	270	2501	0.460768	0.115192	0.471663	0.117916

Verizon Wireless
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	$\mu W/cm^2$
Maximum power density at ground level:	4.18306	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.41831	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
ANDREW	SBNHH-1D65B	175	10	7732	2.169846	0.216985	3.292009	0.329201
ANDREW	SBNHH-1D65B	175	160	7732	2.169846	0.216985	3.292009	0.329201
ANDREW	SBNHH-1D65B	175	280	7732	2.169846	0.216985	3.292009	0.329201

Verizon Wireless
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	$\mu W/cm^2$
Maximum power density at ground level:	3.64114	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.36411	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
ANDREW	SBNHH-1D65B	175	10	4583	2.577670	0.257767	3.289129	0.328913
ANDREW	SBNHH-1D65B	175	160	4583	2.577670	0.257767	3.289129	0.328913
ANDREW	SBNHH-1D65B	175	280	4583	2.577670	0.257767	3.289129	0.328913

Verizon Wireless
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	751	MHz
Maximum Permissible Exposure (MPE):	500.67	$\mu W/cm^2$
Maximum power density at ground level:	1.48268	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.29614	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
ANDREW	SBNHH-1D65B	175	10	2043	0.463551	0.092587	0.769871	0.153769
ANDREW	SBNHH-1D65B	175	160	2043	0.463551	0.092587	0.769871	0.153769
ANDREW	SBNHH-1D65B	175	280	2043	0.463551	0.092587	0.769871	0.153769

Verizon Wireless
CT038/EastLyme/ I-95/ X72
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	$\mu W/cm^2$
Maximum power density at ground level:	1.33919	$\mu W/cm^2$
Highest percentage of Maximum Permissible Exposure:	0.23633	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**	**Max Power Density ($\mu W/cm^2$)**	**Percent of MPE**
Antel	LPA-80080-4CF	175	10	1423	0.933901	0.164806	0.976653	0.172351
Antel	LPA-80080-4CF	175	40	1423	0.933901	0.164806	0.976653	0.172351
Antel	LPA-80080-4CF	175	160	1423	0.933901	0.164806	0.976653	0.172351
Antel	LPA-80080-4CF	175	160	1423	0.933901	0.164806	0.976653	0.172351
Antel	LPA-80080-4CF	175	280	1423	0.933901	0.164806	0.976653	0.172351
Antel	LPA-80080-4CF	175	280	1423	0.933901	0.164806	0.976653	0.172351