Filed by:
G. Scott Shepherd, Site Development Specialist II - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3807 - gshepherd@sbasite.com

October 12, 2020

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

Notice of Exempt Modification
3 Edmund Road, Newtown, CT 06470
41 25 15.24 N
-73 17 53.17 W
T-Mobile Site #: CT11259F_L600

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 127/128-foot level of the existing 139-foot Monopole Tower at 3 Edmund Road in Newtown, CT. The tower is owned by SBA Infrastructure, LLC. The property is owned by 5-K Enterprises, Inc. T-Mobile intends to replace six (6) antennas install three (3) new 600/700/1900/2100 MHz antennas for a total of nine (9) antennas. The new antennas would be installed at 127/128-foot level of the tower.

Please note: Per the Connecticut Siting Council Website: CSC COVID 19 Guidelines. *In order to prevent the spread of Coronavirus and protect the health and safety of our members and staff, as of March 18, 2020, the Connecticut Siting Council shall convert to full remote operations until March 30, 2020. Please be advised that during this time period, all hard copy filing requirements will be waived in lieu of an electronic filing. Please also be advised that the March 26, 2020 regular meeting shall be held via teleconference. The Council's website is not equipped with an on-line filing fee receipt service. Therefore, filing fees and/or direct cost charges associated with matters received electronically during the above-mentioned time period will be directly invoiced at a later date.*

Planned Modifications:

TOWER

Remove:

- N/A

Remove and Replace:

- (3) Ericsson - AIR21 B4A B2P – Panel (Remove) – (3) Ericsson Air 32 KRD901146-1_B66A_B2A 1900/2100 MHz (Replace)
- (3) Ericsson - KRY 112 114-1 Double TMA (Remove) – (3) Ericsson KRY 112 144/1 (Replace)

Install New:

- (3) RFS APXVAARR24_43-U-NA20 @ 128' 600/700 MHz
- (3) Ericsson Radio 4449 B71+B12 @ 128'
- Added to low profile platform: (1) Metrosite Support Rail Center Pipe Kit (MS-HRCP-35); (1) Metrosite Support Rail w/ End Connection: MS-HRECP-35; (3) Metrosite Mount Pipes: PST2375-8
- (3) 1-5/8" fiber

Existing Equipment to Remain:

- (3) Ericsson - AIR21 B2A B4P – Panel 1900/2100 MHz
- (1) Low profile platform
- (9) 1-5/8" coax

Entitlements:

- (3) 1-5/8" coax
- (1) 1-5/8" fiber

GROUND

Install New:

- Radio equipment inside existing 6131 Equipment cabinet
- Breaker withinh existing PPC

This facility was originally approved by Council on December 22, 2003 under Docket 241. Approval was given for a 130' monopole, not to exceed a height of 130-feet above ground level. A recalculated RF report was to be provided when circumstances in operation would cause a change in power density. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of the facility, the facility was to be brought into compliance with such standards. The Certificate Holder was to permit public or private entities to share space on the proposed tower for fair consideration, or to provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing. The Certificate Holder was also to provide reasonable space on the tower for no compensation for any municipal antennas, provided tower space was available and antennas were compatible with the structural integrity of the tower. Any obsolete antennas were to be removed within sixty days. There were no further post construction stipulations set. Petition 749 was later made to Council and on December 22, 2003 Council approved a 10' extension to the tower, for a height of 140'. The FAA determined the 140' tower would not require obstruction marking or lighting and there were no further post construction stipulations set. Please see attached.

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 the Town of Newtown's First Selectman, Daniel C. Rosenthal, and Deputy Director or Community Development, Christal Preszler, as well as to the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification 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 with certain modifications.

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

Sincerely,

G. Scott Shepherd
Site Development Specialist II
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581
508.251.0720 x3807 + T
508.366.2610 + F
508.868.6000 + C
gshepherd@sbasite.com

Attachments

cc: Daniel C. Rosenthal, First Selectman / with attachments
Town of Newtown, 3 Primrose Street, Newtown, CT 06470
Christal Preszler, Deputy Director of Community Development / with attachments
Town of Newtown, 3 Primrose Street, Newtown, CT 06470
5-K Enterprises, Inc. / with attachments
99 Hanover Rd. Newtown CT 06470 (SBA address on file – the Town Property Card lists SBA corporate office address)

Exhibit List

Exhibit 1	Check Copy	X To Be Invoiced at a later date
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	CSC 12/22/03 Docket No. 241
Exhibit 6	Construction Drawings	Chappell Engineering Assoc. 9/11/19
Exhibit 7	Structural Analysis	TES 7/31/19
Exhibit 8	Post-Mod Mount Analysis	TES 7/25/19
Exhibit 9	Mount Mod Drawings	TES 7/19/19
Exhibit 10	EME Report	Transcom 5/21/19

EXHIBIT 1

Normally, Exhibit 1 would contain a copy of the check for the filing fee.

EXHIBIT 2

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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EXHIBIT 3

3 EDMOND ROAD

Location	3 EDMOND ROAD	**M/B/L**	27/ 6/ 11/C /
Acct#	00927598C	**Owner**	SBA INFRASTRUCTURE LLC
Assessment	$321,720	**Appraisal**	$459,600
PID	15197	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$99,600	$360,000	$459,600
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$69,720	$252,000	$321,720

Owner of Record

Owner	SBA INFRASTRUCTURE LLC	**Sale Price**	$0
Co-Owner	ATTN: TAX DEPT-CT13060-A	**Certificate**	
Address	8051 CONGRESS AVENUE BOCA RATON, FL 33487	**Book & Page**	987/ 191
		Sale Date	04/26/2011
		Instrument	19

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SBA INFRASTRUCTURE LLC	$0		987/ 191	19	04/26/2011
5K ENTERPRISE INC	$0		0890/0525		10/20/2006

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	

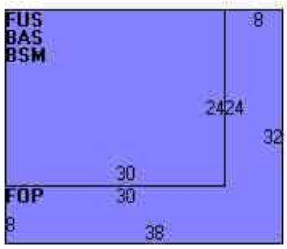
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Extra Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
Blocked FPL(s)	
Woodstove(s)	
SF Fin Bsmt	
Fin Bsmt Qual	
Bsmt Garage	
Int Millwork	
Foundation	
MH Park	

Building Photo

(http://images.vgsi.com/photos/NewtownCTPhotos//\00\02\09/4

Building Layout

FLA[1440]
BMT[720]



(http://images.vgsi.com/photos/NewtownCTPhotos//Sketches/15

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	4310
Description	CELL SITE
Zone	M-5
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0
Frontage	
Depth	
Assessed Value	$252,000
Appraised Value	$360,000

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
CELL	Cell Tower			1 Units	$96,000	1
FN1	Fence			200 L.F.	$720	1
SHD4	Cellular Shed			160 S.F.	$2,880	1

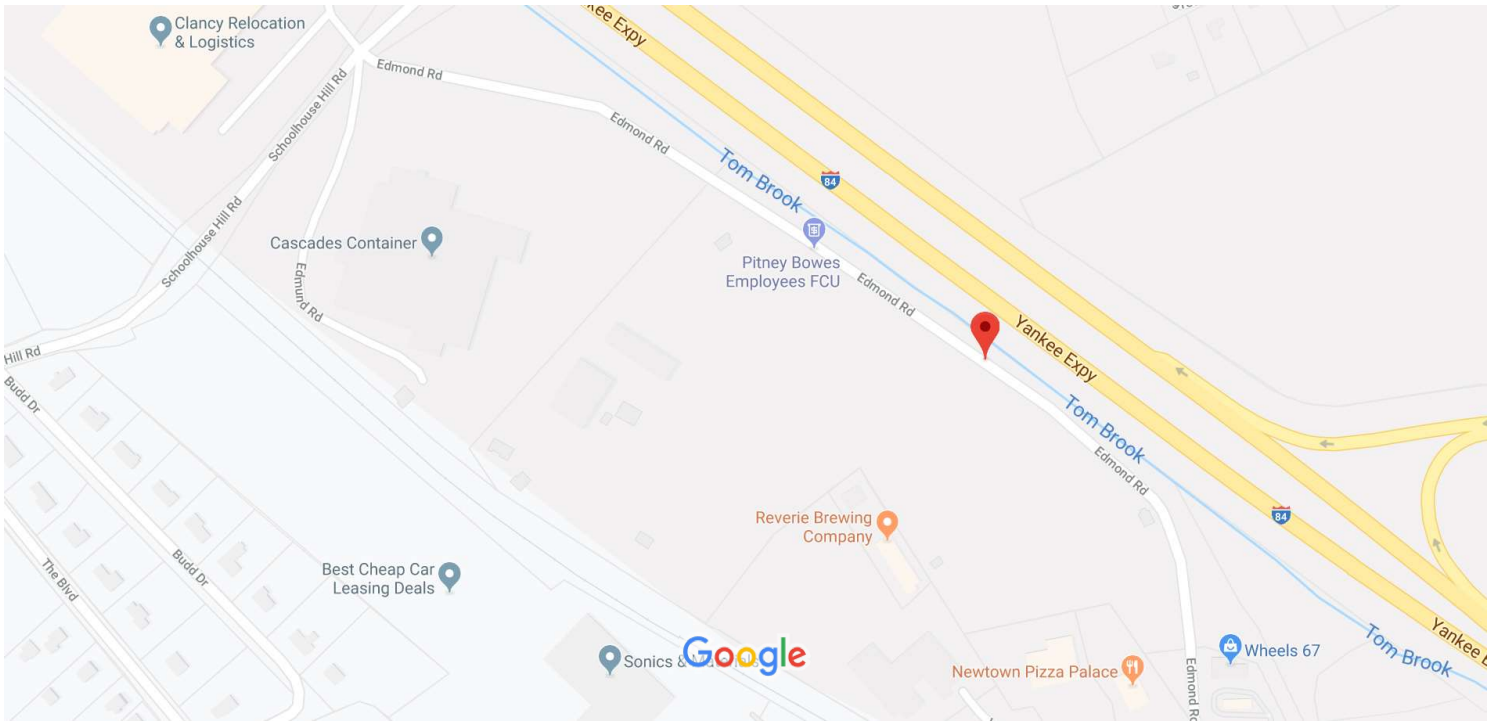
Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$99,600	$360,000	$459,600
2016	$96,000	$360,000	$456,000
2015	$96,000	$360,000	$456,000

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$69,720	$252,000	$321,720
2016	$67,200	$252,000	$319,200
2015	$67,200	$252,000	$319,200

EXHIBIT 4

Google Maps Edmond Rd



Map data ©2019 200 ft

Edmond Rd

Newtown, CT 06470

Directions Save Nearby Send to your phone Share

EXHIBIT 5

DOCKET NO. 241 - Omnipoint Facilities Network 2, LLC, application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility at 79 Church Hill Road or 3 Edmond Road, Newtown, Connecticut.	}	Connecticut Siting Council December 22, 2003

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Omnipoint Facilities Network 2, LLC d/b/a T-Mobile USA Inc. for the construction, maintenance and operation of a wireless telecommunications facility at 3 Edmond Road, Newtown, Connecticut. The Council denies certification of the site at 79 Church Hill Road, Newtown, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile USA Inc., AT&T wireless PCS LLC, and other entities, both public and private, but such tower shall not exceed a height of 130 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a detailed site development plan that depicts the location of the access road, compound, tower, utility line, erosion and sedimentation control features, extent of site clearing and grading, and landscaping. Erosion and sedimentation controls shall be consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended; and
    b) specifications for the tower, tower foundation, antennas, equipment building, and security fence.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided tower space is available and such antennas are compatible with the structural integrity of the tower.

6. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

7. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant, The News-Times, and The Newtown Bee.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Applicant
Omnipoint Facilities Network 2, L.L.C.,
A Subsidiary of T-Mobile, USA, Inc.

Its Representative
Stephen J. Humes, Esq.
LeBoeuf, Lamb, Greene & MacRae, L.L.P.
Goodwin Square
225 Asylum Street
Hartford, CT 06103

Intervenor
AT&T Wireless PCS, LLC
d/b/a AT&T Wireless

Its Representative
Christopher B. Fisher, Esq.
Cuddy & Feder LLP
90 Maple Avenue
White Plains, New York 10601

Intervenor
The Honorable Julia Wasserman
State Representative - 106th District
P.O. Box 848, 113 Walnut Tree Hill Road
Sandy Hook, CT 06482

Its Representative

Intervenor
Zoltan Csillag and Julia Nable
10 Walnut Tree Hill Road
Sandy Hook, CT 06482

Its Representative
Steven R. Smart, Esq.
Riefberg, Smart, Donohue & NeJame, P. C.
17 Downs Street
Danbury, CT 06810

Party
Town of Newtown

Its Representative
Monte E. Frank, Esq.
Cohen and Wolf, P.C.
158 Deer Hill Avenue
Danbury, CT 06810

Petition No. 749
Nextel Communications, Inc.
3 Edmond Road, Newtown
Staff Report

On December 1, 2005, Nextel Communications, Inc. (Nextel) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the extension of an approved wireless telecommunications tower located at 3 Edmond Road in Newtown, Connecticut. On December 12, 2005, Council member Edward S. Wilensky and Council staff member Robert Mercier met with Nextel representatives Christopher B. Fisher, Marc Anderson, and Yvan Joseph at the site to review this petition.

Nextel proposes to place a 10-foot extension on a 130-foot monopole owned by Optasite. The facility was approved by the Council on December 22, 2003, and is currently under construction. The 130-foot tower has been erected. Nextel proposes to mount an antenna platform supporting 12 panel antennas at a centerline height 137 feet above ground level (agl). The overall height of the facility with antennas would be 140 feet agl.

During the docket proceeding, T-Mobile originally proposed to construct a 150-foot monopole at the site; however, the Council determined a tower height of 130 feet would be sufficient to meet the coverage needs of T-Mobile. During the docket decision process, visual impacts of a 150-foot tower were assessed and determined to be insignificant by the Council. A tower design that could support a tower extension to 150 feet was included in the Development and Management Plan approved by the Council.

Nextel would install a 12-foot by 20-foot equipment shelter within the 50-foot by 50-foot compound. No expansion of the compound is necessary.

The Federal Aviation Administration determined the 140-foot tower would not require obstruction marking or lighting.

Content Last Modified on 12/15/2005 1:48:51 PM

EXHIBIT 6

CT259/OPTNEWTON_RL#1

3 EDMUND ROAD
NEWTOWN, CT 06470
FAIRFIELD COUNTY

SITE NO.: CT11259F

SITE TYPE: 139'± MONOPOLE

RF DESIGN GUIDELINE: 67D92DB OUTDOOR

APPROVALS

PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
SECTOR D:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

SITE NOTES

1. THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
   - ADA COMPLIANCE NOT REQUIRED.
   - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
   - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
2. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3. NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
   - BUILDING CODE: 2018 CONNECTICUT STATE BUILDING CODE
   - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
   - STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

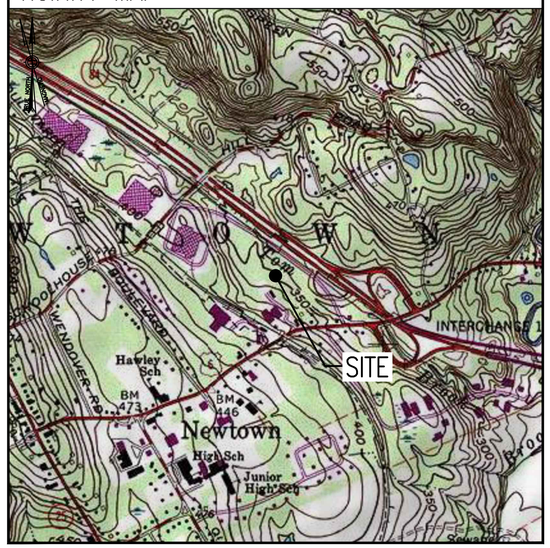
GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMNIPOINT REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811

VICINITY MAP

SCALE: 1" = 1000'-0"



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SHEET INDEX

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SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

PROJECT SUMMARY

SITE NUMBER:	CT11259F
SBA SITE NUMBER:	CT13060-A
SBA SITE NAME:	NEWTOWN 2
SITE ADDRESS:	3 EDMUND ROAD NEWTOWN, CT 06470
PROPERTY OWNER:	5K ENTERPRISES INC. 99 HANOVER ROAD NEWTOWN, CT 06470
TOWER OWNER:	SBA INFRASTRUCTURE, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	FAIRFIELD COUNTY
ZONING DISTRICT:	B-2 (BUSINESS)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	139'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SRoth@sbasite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: N.41.420899° (41° 25' 15.24") LONGITUDE W.73.298102° (73° 17' 53.17")

T-MOBILE NORTHEAST LLC
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CHAPPELL ENGINEERING ASSOCIATES, LLC
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R.K. EXECUTIVE CENTRE
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MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
CLEMENT J. SAMEK
No. 26876
LICENSED
PROFESSIONAL ENGINEER

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	09/11/19	ISSUED FOR CONSTRUCTION	MAM
0	05/28/19	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11259F

SITE ADDRESS:
3 EDMUND ROAD
NEWTOWN, CT 06470

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.061

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – T–MOBILE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T–MOBILE
   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.

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.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.

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 THE OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH ALL T–MOBILE STANDARDS AND SPECIFICATIONS.

16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

17. THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

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 ENGINEERS. 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 SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. 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.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

8. 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 ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. 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 IN THE PROJECT SPECIFICATIONS.

10. 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.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T–MOBILE SPECIFICATION FOR SITE SIGNAGE.

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. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 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 .....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....¾ IN.
   BEAMS AND COLUMNS .....1½ IN.

5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS 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. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

7. CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T–MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾"ø) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ⅝" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL

6. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T–MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID 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 (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, 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.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, 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. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 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.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. 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.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. 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.

27. 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.

28. 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.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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STATE OF CONNECTICUT
CLEMENT J. SAMI
No. 26876
LICENSED
PROFESSIONAL ENGINEER

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	09/11/19	ISSUED FOR CONSTRUCTION	MAM
0	05/28/19	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11259F

SITE ADDRESS:
3 EDMUND ROAD
NEWTOWN, CT 06470

SHEET TITLE
GENERAL NOTES

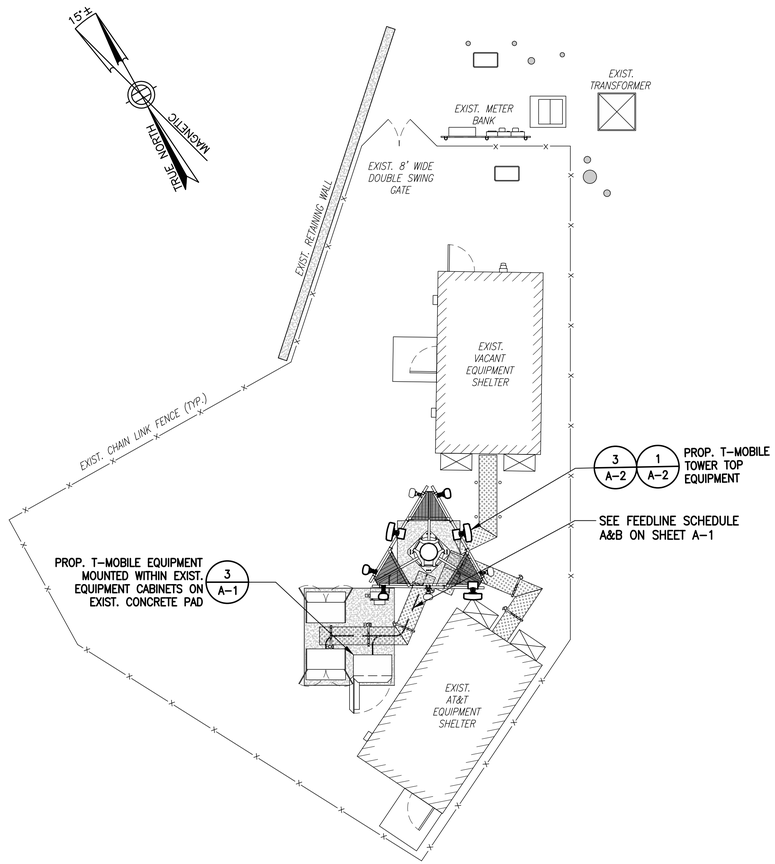
SHEET NUMBER
GN-1

1815.061

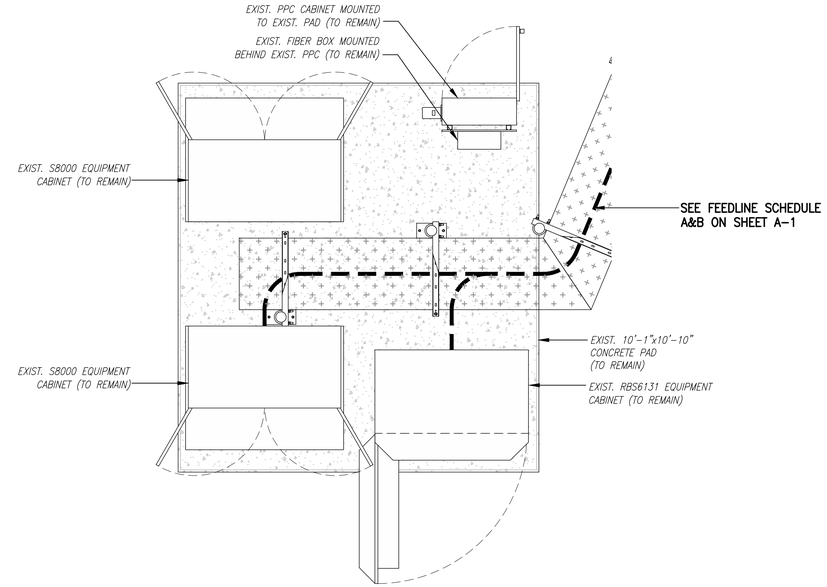
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

FEEDLINE SCHEDULE	FEEDLINES	LOCATION
A	*EXISTING TO REMAIN:* (9) 1-5/8" COAX CABLES (1) 1-5/8" HCS FIBER CABLE *EXISTING TO BE REMOVED:* (3) 1-5/8" COAX CABLES	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (3) 1-5/8" HCS FIBER CABLES	

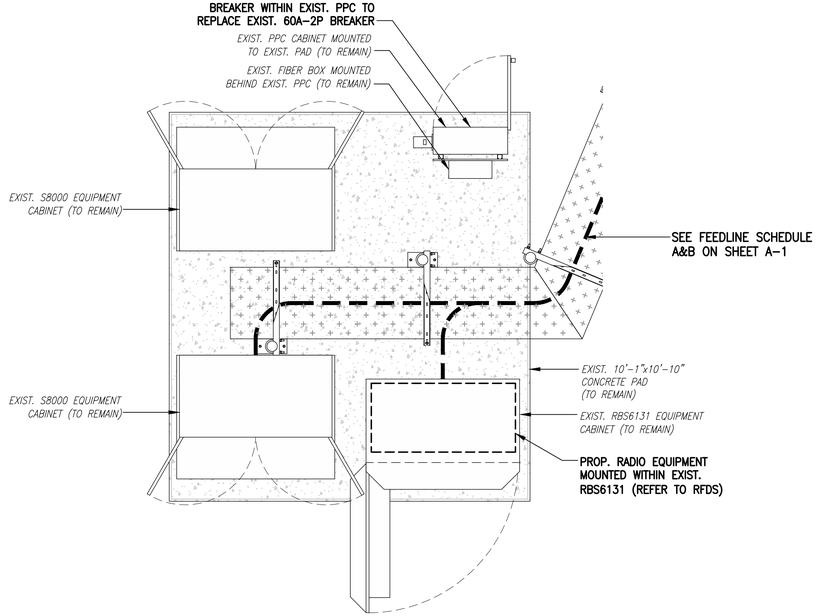
NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.



COMPOUND PLAN (1 / A-1)
SCALE: 1" = 8'-0"
0 8'-0" 16'-0" 24'-0"



EXISTING EQUIPMENT PLAN (2 / A-1)
SCALE: 1/2" = 1'-0"
0 2'-0" 4'-0" 6'-0"



PROPOSED EQUIPMENT PLAN (3 / A-1)
SCALE: 1/2" = 1'-0"
0 2'-0" 4'-0" 6'-0"

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

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SHEET TITLE
COMPOUND & EQUIPMENT PLAN

SHEET NUMBER
A-1

1815.061

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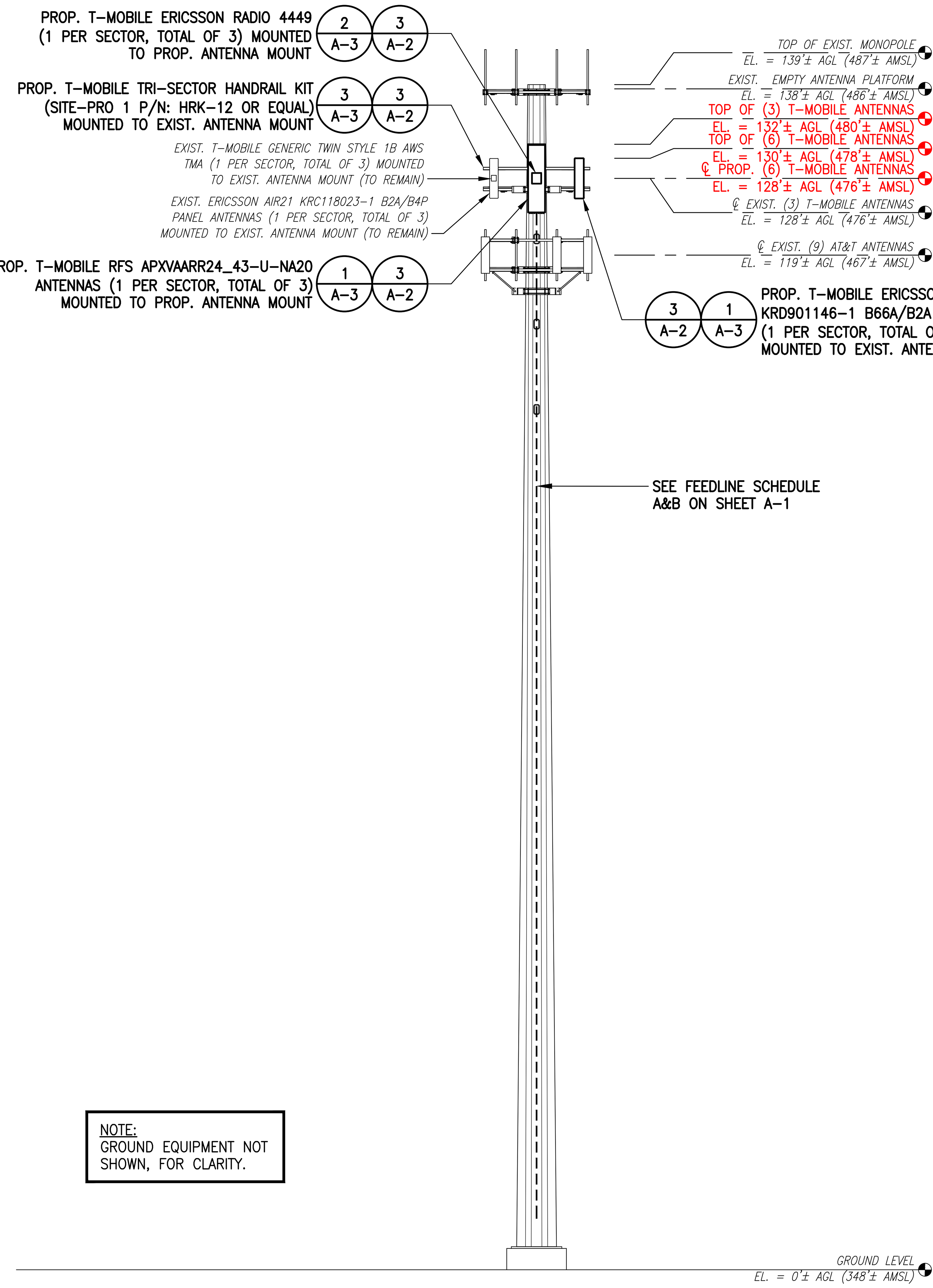
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

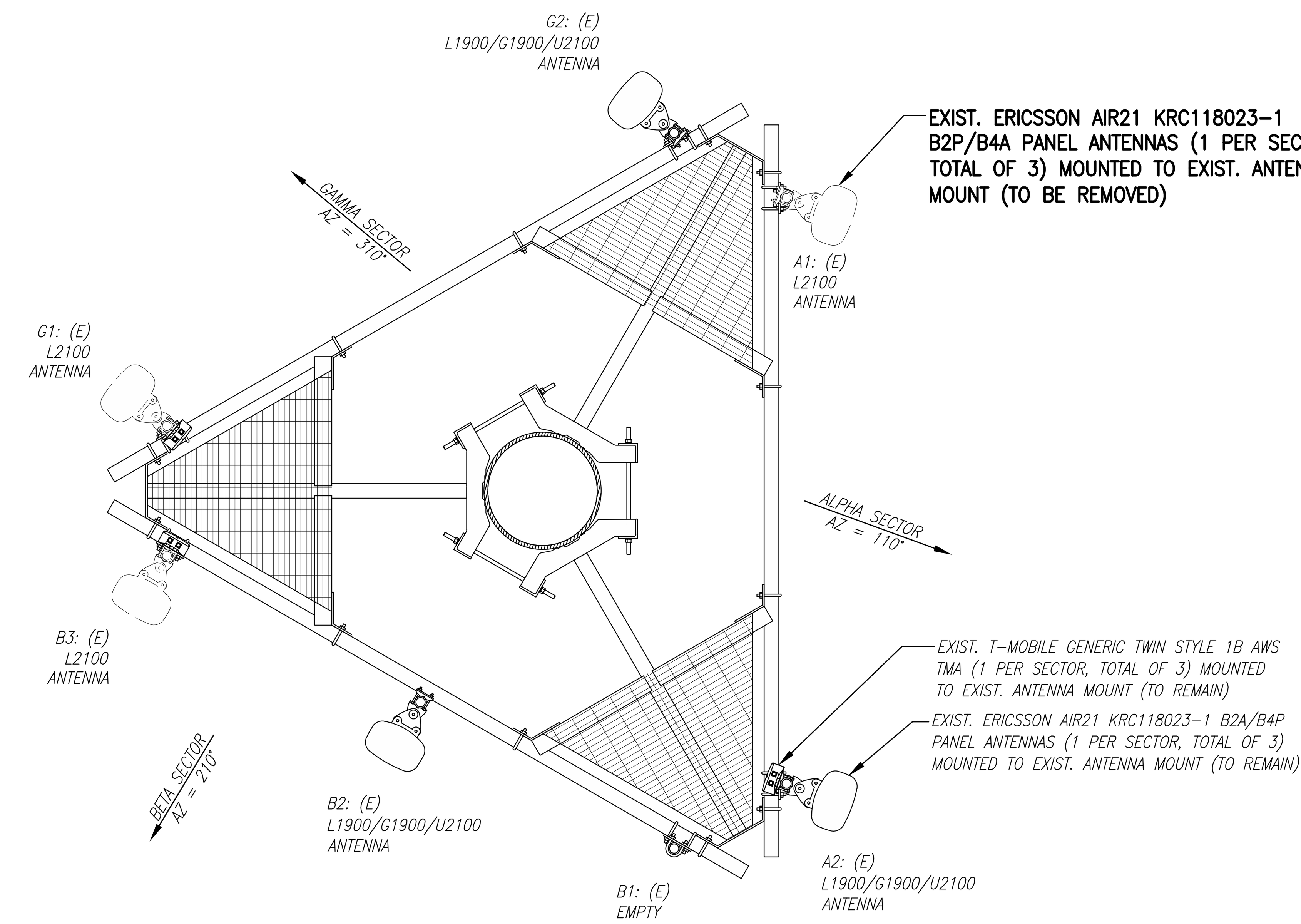
SPECIAL TOWER TOP EQUIPMENT INSTALLATION WORK NOTE (SAFETY-CLIMB ALIGNMENT REQUIREMENTS):
GENERAL CONTRACTOR SHALL ORIENT PROPOSED PLATFORM REINFORCEMENT KIT RING-MOUNTS SO THAT EXISTING SAFETY CLIMB CABLE IS NOT OBSTRUCTED/RE-ROUTED FROM VERTICAL ALIGNMENT AND IS NOT IN PHYSICAL CONTACT WITH EXISTING OR PROPOOSED RING-MOUNT HARDWARE. GENERAL CONTRACTOR SHALL INSTALL NEW OR ADDITIONAL SAFETY-CLIMB CABLE GUIDES IF ADDITIONAL CLEARANCE IS REQUIRED. ADDITIONAL CABLE GUIDES SHALL BE ATTACHED SECURELY TO THE POLE USING MECHANICAL FASTENERS OR FIELD WELDED BY A CERTIFIED WELDING TECHNICIAN.

RAD CENTER NOTE:
T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE RFDS.



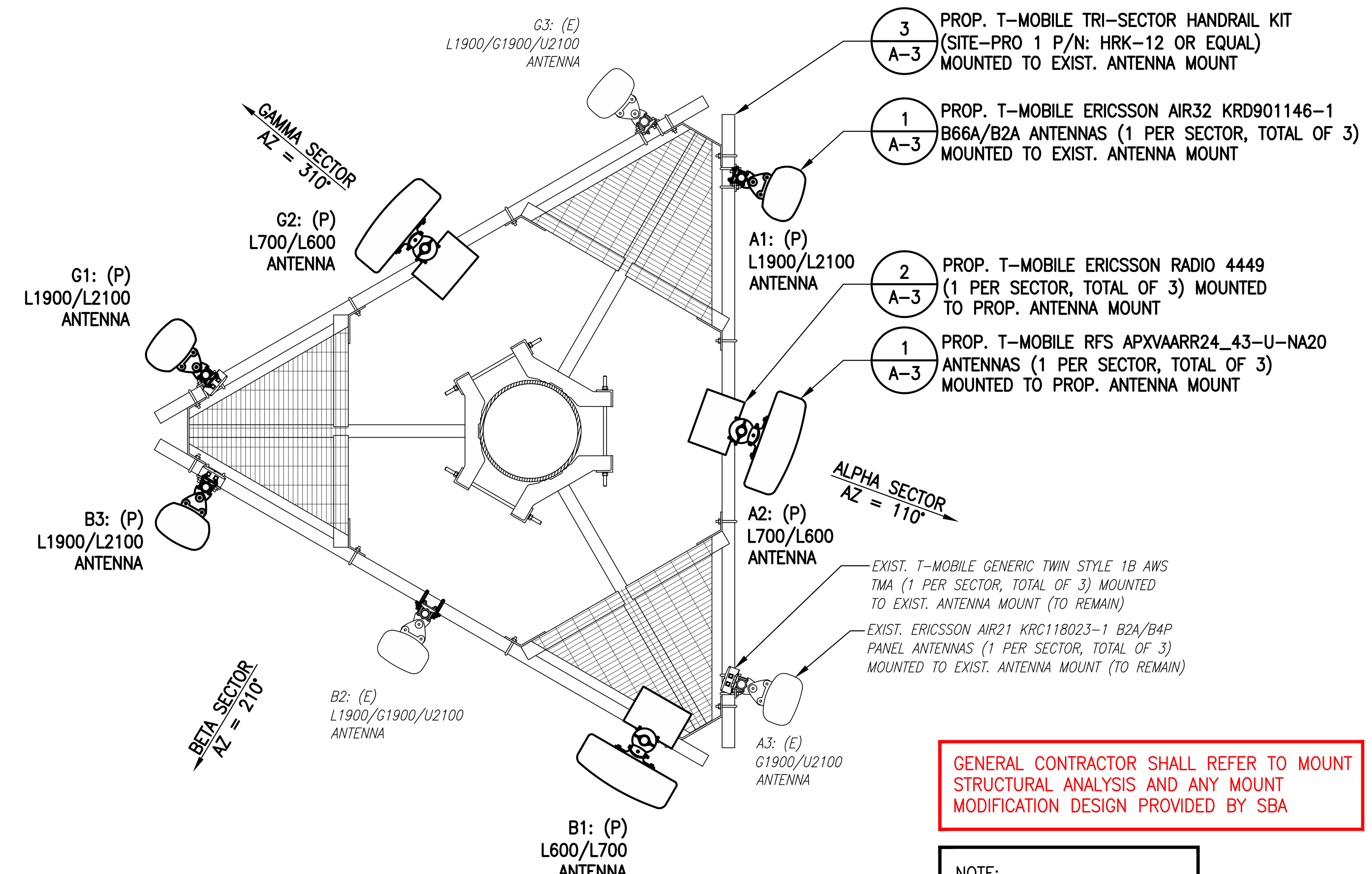
NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

TOWER ELEVATION (1 / A-2)
SCALE: 1" = 10'
0 5' 10' 20' 30'



ANTENNA STATUS LEGEND:
EMPTY – EMPTY PIPE
(E) – EXISTING
(P) – INSTALL
(F) – FUTURE

EXISTING ANTENNA PLAN (2 / A-2)
SCALE: 1/2" = 1'-0"
NORTH



GENERAL CONTRACTOR SHALL REFER TO MOUNT STRUCTURAL ANALYSIS AND ANY MOUNT MODIFICATION DESIGN PROVIDED BY SBA

NOTE:
VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

PROPOSED ANTENNA PLAN (3 / A-2)
SCALE: 1/2" = 1'-0"
NORTH

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NEWTOWN, CT 06470

SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLAN

SHEET NUMBER
A-2

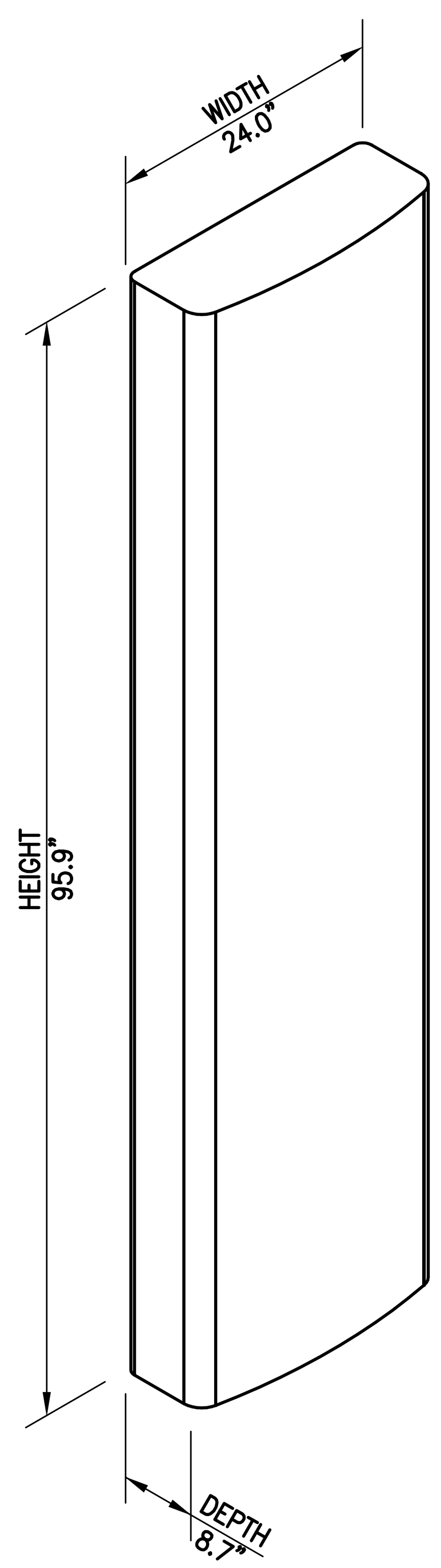
1815.061

FINAL ANTENNA CONFIGURATION

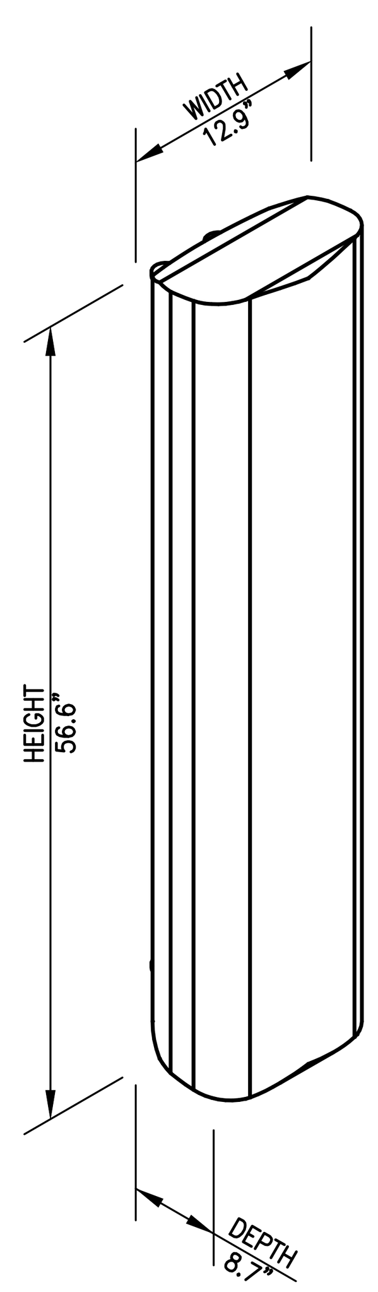
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	RADIOS/TMAS	CABLES
ALPHA	ERICSSON AIR32 KRD901146-1 B66A/B2A	128'± AGL	110°	0°	2°	L2100/L1900	–	*(1) (E) 9x18 (1-⅝") HCS FIBER CABLE (SHARED)*
	RFS APXVAARR24_43-U-NA20	128'± AGL	110°	0°	2°	L600/L700	RADIO 4449 B71+B12	(1) (P) 6x12 (1-⅝") HCS FIBER CABLE
	ERICSSON AIR21 KRC118023-1 B2A/B4P	*128'± AGL*	*110°*	*0°*	*2°*	*U2100*	*GENERIC TWIN STYLE 1B AWS TMA*	(2) (E) 1-⅝" COAX CABLES
						G1900	–	*(1) (E) 9x18 (1-⅝") HCS FIBER CABLE (SHARED)*
BETA	RFS APXVAARR24_43-U-NA20	128'± AGL	210°	0°	2°	L600/L700	RADIO 4449 B71+B12	(1) (P) 6x12 (1-⅝") HCS FIBER CABLE
	ERICSSON AIR21 KRC118023-1 B2A/B4P	*128'± AGL*	*210°*	*0°*	*2°*	*U2100*	*GENERIC TWIN STYLE 1B AWS TMA*	(2) (E) 1-⅝" COAX CABLES
						G1900	–	*(1) (E) 9x18 (1-⅝") HCS FIBER CABLE (SHARED)*
	ERICSSON AIR32 KRD901146-1 B66A/B2A	128'± AGL	210°	0°	2°	L2100/L1900	–	*(1) (E) 9x18 (1-⅝") HCS FIBER CABLE (SHARED)*
GAMMA	ERICSSON AIR32 KRD901146-1 B66A/B2A	128'± AGL	310°	0°	2°	L2100/L1900	–	*(1) (E) 9x18 (1-⅝") HCS FIBER CABLE (SHARED)*
	RFS APXVAARR24_43-U-NA20	128'± AGL	310°	0°	2°	L600/L700	RADIO 4449 B71+B12	(1) (P) 6x12 (1-⅝") HCS FIBER CABLE
	ERICSSON AIR21 KRC118023-1 B2A/B4P	*128'± AGL*	*310°*	*0°*	*2°*	*U2100*	*GENERIC TWIN STYLE 1B AWS TMA*	(2) (E) 1-⅝" COAX CABLES
						G1900	–	*(1) (E) 9x18 (1-⅝") HCS FIBER CABLE (SHARED)*

CABLE NOTE: EXISTING (3) 1-⅝" COAX CABLES TO BE REMOVED. EXISTING (3) 1-⅝" COAX CABLES TO REMAIN DISCONNECTED. (SEE FEEDLINE SCHEDULE A&B ON SHEET A-1)

NOTE: RFDS REV6.1 – 05/14/19



RFS APXVAARR24_43-NA20 PANEL ANTENNA
DIMENSIONS: 95.9"H x 24.0"W x 8.7"D
WEIGHT: 128.0 LBS
1 PER SECTOR, TOTAL OF 3

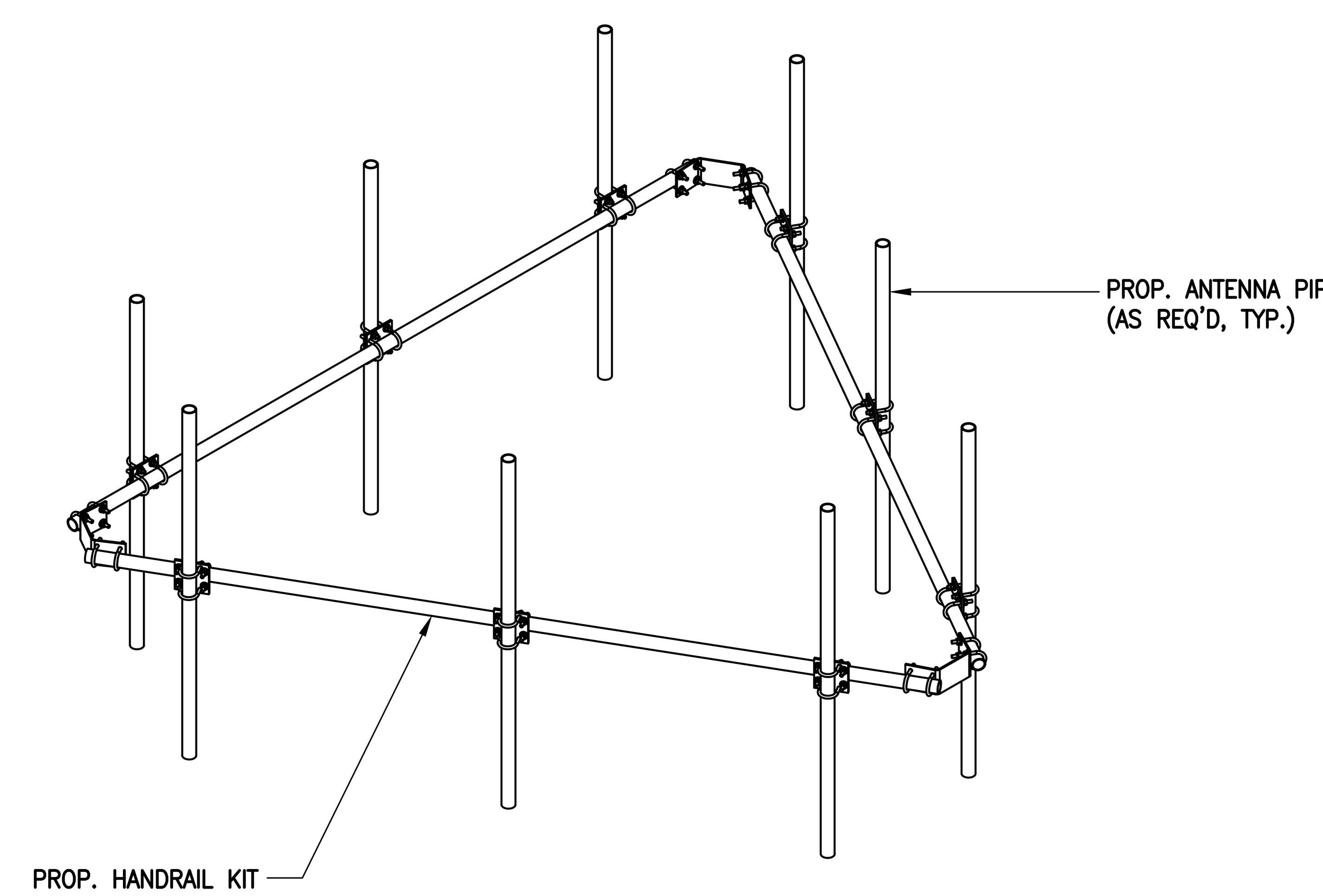


ERICSSON AIR32 KRD901146-1 B66A/B2A ANTENNA
DIMENSIONS: 56.6"H x 12.9"W x 8.7"D
WEIGHT: 132.2 LBS
1 PER SECTOR, TOTAL OF 3

ANTENNA DETAILS (1 / A-3)
SCALE: N.T.S.

ERICSSON RADIO 4449 B12+B71
DIMENSIONS: 14.9"H x 13.2"W x 9.3"D
WEIGHT: 74.0 LBS
1 PER SECTOR, TOTAL OF 3

RRUS DETAILS (2 / A-3)
SCALE: N.T.S.



NOTE:
ANTENNAS & ANTENNA MOUNT NOT SHOWN, FOR CLARITY.

SITE-PRO HANDRAIL KIT
PART NUMBER: HRK12

HANDRAIL DETAIL (3 / A-3)
SCALE: N.T.S.

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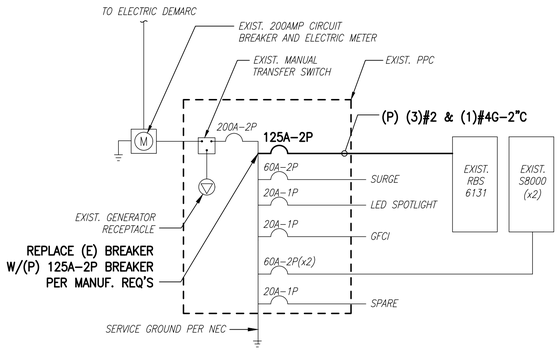
SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

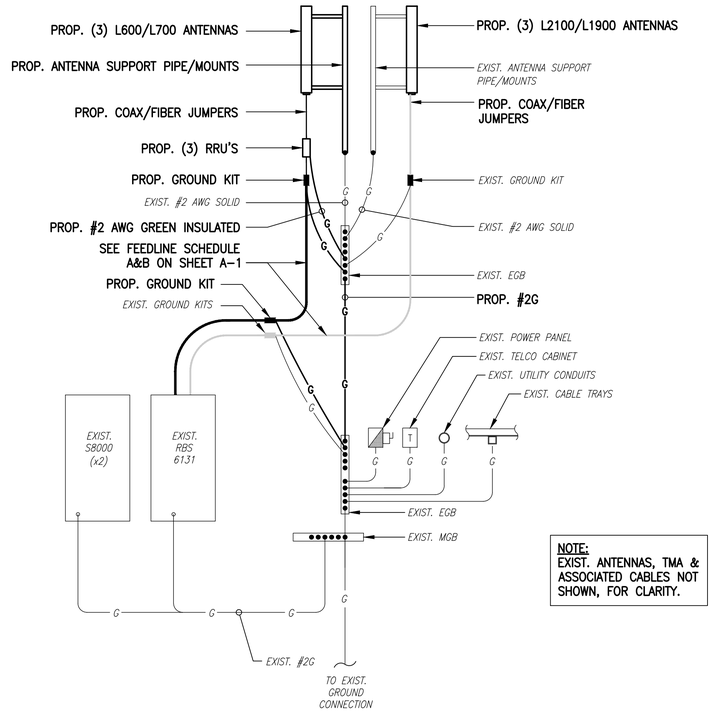
1815.061



ONE LINE DIAGRAM

SCALE: NOT TO SCALE

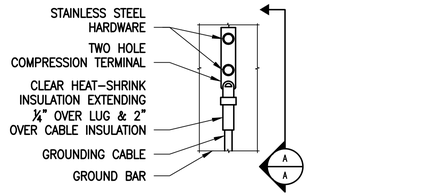
1 E-1



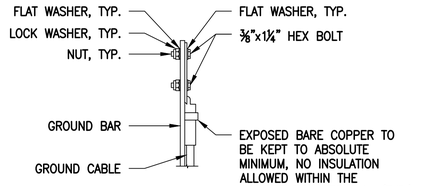
GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

2 E-1



ELEVATION



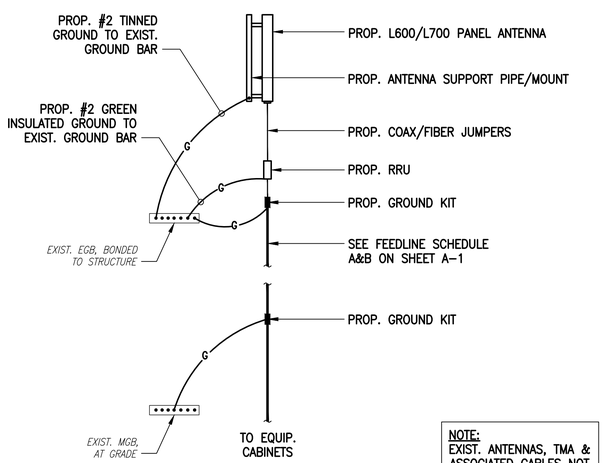
SECTION A-A

NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

TYPICAL GROUND BAR CONNECTIONS DETAIL

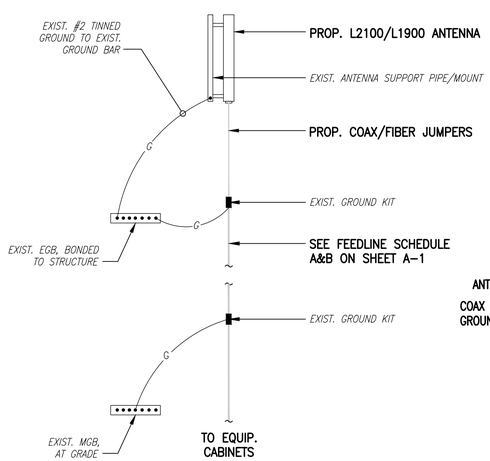
SCALE: NOT TO SCALE

3 E-1



L600/L700

NOTE: EXIST. ANTENNAS, TMA & ASSOCIATED CABLES NOT SHOWN, FOR CLARITY.

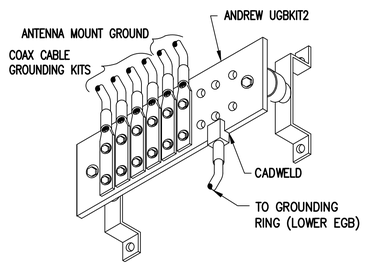


L2100/L1900

COAX CABLE CONNECTION AND GROUNDING DETAIL

SCALE: NOT TO SCALE

4 E-1



GROUND BAR (EGB)

SCALE: NOT TO SCALE

5 E-1

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHNINSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

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ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.061

EXHIBIT 7

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 139 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13060-A

Customer Site Name: Newtown 2

Carrier Name: T-Mobile (App#: 116939, V1)

Carrier Site ID / Name: CT11259F / Newtown

Site Location: 3 Edmund Road

Newtown, Connecticut

Fairfield County

Latitude: 41.420899

Longitude: -73.298102

Analysis Result:

Max Structural Usage: 61.0% [Pass]

Max Foundation Usage: 47.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: +1.2%

Report Prepared By : Dipika Dhungana

Introduction

The purpose of this report is to summarize the analysis results on the 139 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Sabre Job #06-07285, dated 07/28/05
Foundation Drawing	Sabre Job #06-07285, dated 07/28/05
Geotechnical Report	Jaworski Geotech, Inc. Project #04125G, dated 01/30/04
Modification Drawings	N/A

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G**.** In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed Vult = 120.0mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 93.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.208, S_1 = 0.066

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	138.5	-	-	Low Profile Platform	-	-
-	128.0	3	Ericsson - AIR21 B2A B4P - Panel	Low Profile Platform	(13) 1 5/8"	T-Mobile
-		3	Ericsson - AIR21 B4A B2P - Panel			
-		3	Ericsson - KRY 112 114-1 Double TMA			
7	119.0	6	Powerwave - 7770 - Panel	Low Profile Platform w/ Site Pro HRK12 Handrail Kit and PRK-1245L Mount Reinforcement Kit	(12) 1 5/8" (2) 1/2" Fiber (4) 3/4" DC (1) 2" Innerduct	AT&T
8		3	Quintel - QS66512-2 - Panel			
9		3	Cci - HPA-65R-BUU-H6 - Panel			
10		9	Powerwave - LGP21401 - TMA			
11		3	Powerwave - TT19-08BP-111-001 - TMA			
12		6	Kaelus - DBC0061F1V51-2 - Diplexer			
13		3	Ericsson - RRUS 32 B30 - RRU			
14		3	Ericsson - RRUS-11 - RRU			
15		3	Ericsson - RRUS-32 B2 - RRU			
16		2	Raycap - DC6-48-60-18-8F - SP			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
2	127.0	3	Ericsson Air 21 B2A/B4P	Low Profile Platform w/ (1) Metrosite Support Rail Center Pipe Kit: MS-HRCP-35 (1) Metrosite Support Rail w/ End Connection: MS-HRECP-35 (3) Metrosite Mount Pipes: PST2375-8	(9) 1 5/8" (4) 1 5/8" Fiber	T-Mobile
3		3	Ericsson Air 32 KRD901146-1_B66A_B2A			
4		3	RFS APXVAARR24_43-U-NA20@ 125'			
5		3	Ericsson KRY 112 144/1			
6		3	Ericsson Radio 4449 B71+B12@ 125'			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**61.0%**	**55.8%**	**43.8%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	1990.5	19.2	55.9

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.1254 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA/EIA 222-G Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

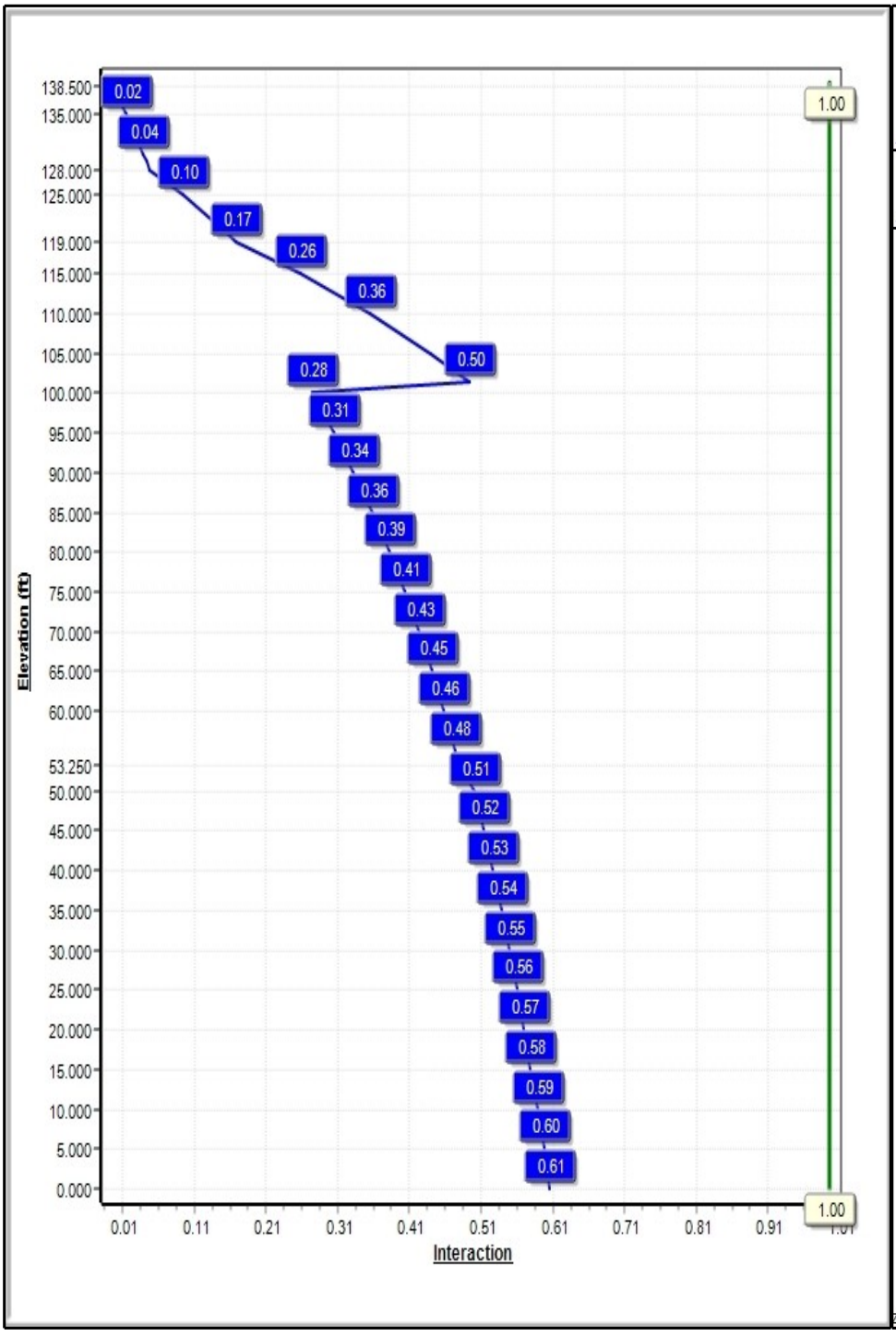
Usage Diagram - Max Ratio 61.04% at 0.0ft

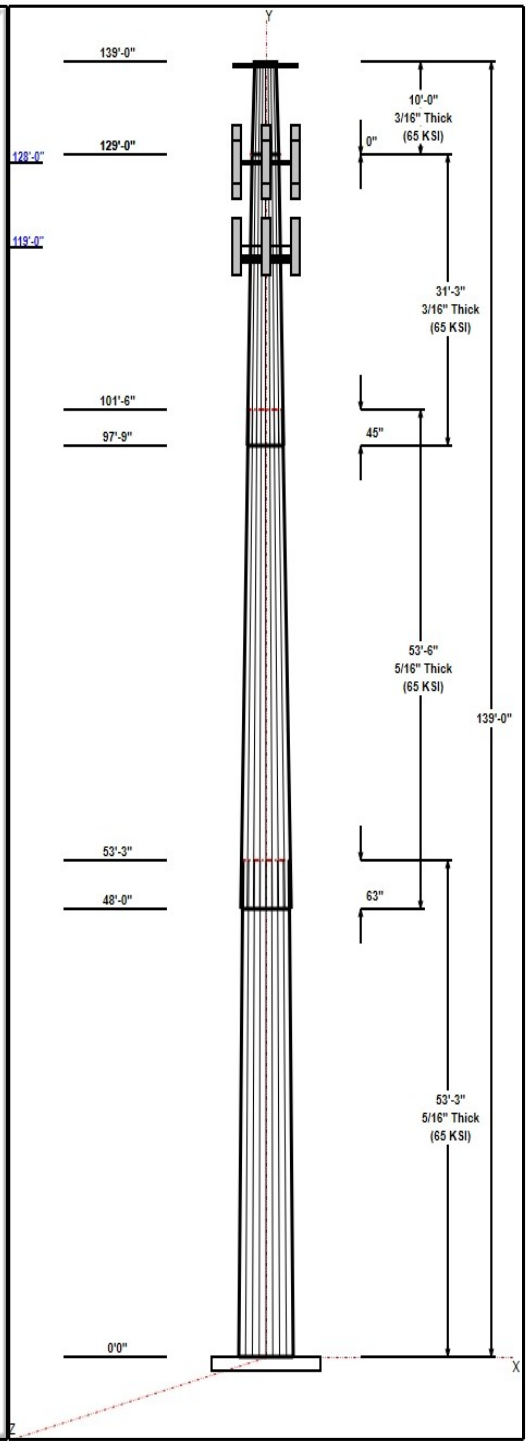
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Gh:**	1.1		
Base Elev:	0.000 (ft)			Page: 1	

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	25
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 93 mph Wind





Structure: CT13060-A-SBA

Type: Tapered
Site Name: Newtown 2
Height: 139.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23496

7/2/2019

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	39.00	51.51	0.313		0.23496	65
2	53.50	28.29	40.86	0.313	Slip	0.23496	65
3	31.25	22.20	29.54	0.188	Slip	0.23496	65
4	10.00	19.85	22.20	0.188	Butt	0.23496	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
138.50	138.50	1	Low Profile Platform	-
128.00	128.00	1	Low Profile Platform	T-Mobile
128.00	128.00	3	Ericsson - AIR21 B2A B4P	T-Mobile
128.00	128.00	3	KRD 9011461-B66A-B2A	T-Mobile
128.00	128.00	3	Ericsson - KRY 112 114-1	T-Mobile
128.00	128.00	3	APXVAARR24_43-U-NA20	T-Mobile
128.00	128.00	3	4449	T-Mobile
128.00	128.00	1	HRK12 (Handrail Kit)	T-Mobile
119.00	119.00	3	Ericsson - RRUS-11 - RRU	AT&T
119.00	119.00	3	Ericsson - RRUS-32 B2 -	AT&T
119.00	119.00	2	Raycap - DC6-48-60-18-8F	AT&T
119.00	119.00	1	Low Profile Platform	AT&T
119.00	119.00	6	Powerwave - 7770	AT&T
119.00	119.00	3	Quintel - QS66512-2	AT&T
119.00	119.00	3	Cci - HPA-65R-BUU-H6	AT&T
119.00	119.00	9	Powerwave - LGP21401 -	AT&T
119.00	119.00	3	Powerwave -	AT&T
119.00	119.00	6	Kaelus - DBC0061F1V51-2	AT&T
119.00	119.00	3	Ericsson - RRUS 32 B30 -	AT&T
119.00	119.00	1	Site Pro HRK12 Handrail	AT&T
119.00	119.00	1	Site Pro PRK-1245L	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	128.00	Inside	1 5/8" Coax	T-Mobile
0.00	119.00	Inside	1 5/8" Coax	AT&T
0.00	119.00	Inside	1/2" Fiber	AT&T
0.00	119.00	Inside	2" Innerduct	AT&T
0.00	119.00	Inside	3/4" DC	AT&T

Anchor Bolts

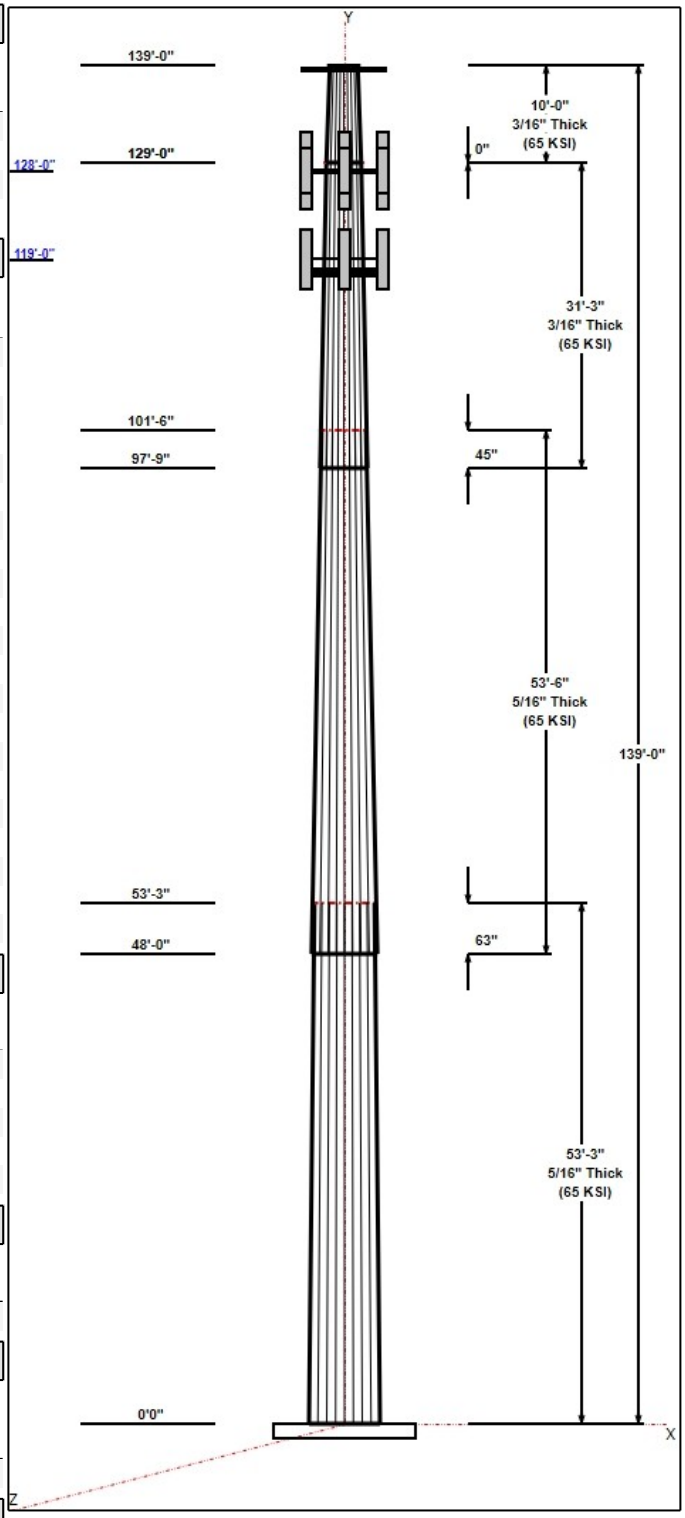
Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	56.0	60.0	Clipped

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	1990.5	19.2	34.7
0.9D + 1.6W 93 mph Wind	1967.2	19.2	26.0



1.2D + 1.0Di + 1.0Wi 50 mph Wind	629.0	6.1	55.9
1.2D + 1.0E	207.5	1.8	34.7
0.9D + 1.0E	204.9	1.8	26.0
1.0D + 1.0W 60 mph Wind	514.1	5.0	28.9

Structure: CT13060-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Newtown 2
Height: 139.00 (ft)

7/2/2019

Tower Engineering Solutions

Shaft Properties

Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.3125	65		0.00	8,077
2	18	53.500	0.3125	65	Slip	63.00	6,186
3	18	31.250	0.1875	65	Slip	45.00	1,625
4	18	10.000	0.1875	65	Flange	0.00	422
					Total Shaft Weight:		**16,310**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	51.51	0.00	50.78	16816.70	27.65	164.83	39.00	53.25	38.37	7255.12	20.59	124.7	0.234964
2	40.86	48.00	40.21	8351.83	21.64	130.74	28.29	101.50	27.75	2743.10	14.55	90.52	0.234964
3	29.54	97.75	17.47	1901.87	26.37	157.56	22.20	129.00	13.10	801.92	19.47	118.4	0.234964
4	22.20	129.0	13.10	801.92	19.47	118.40	19.85	139.00	11.70	571.56	17.26	105.8	0.234964

Load Summary

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	138.50	Low Profile Platform	1	1800.00	37.20	1.00	3358.21	66.827	1.00	0.00	0.00
2	128.00	Low Profile Platform	1	1650.00	33.40	1.00	3067.15	59.792	1.00	0.00	0.00
3	128.00	Ericsson - AIR21 B2A B4P	3	91.50	6.09	0.85	249.87	7.165	0.87	0.00	0.00
4	128.00	KRD 9011461-B66A-B2A	3	132.20	6.51	0.87	312.04	7.613	0.87	0.00	0.00
5	128.00	Ericsson - KRY 112 114-1 Double	3	11.00	0.41	0.67	21.61	0.878	0.67	0.00	0.00
6	128.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	538.53	22.109	0.70	0.00	0.00
7	128.00	4449	3	70.00	1.65	0.67	136.90	2.178	0.67	0.00	0.00
8	128.00	HRK12 (Handrail Kit)	1	261.72	6.75	1.00	567.43	13.243	1.00	0.00	0.00
9	119.00	Ericsson - RRUS-11 - RRU	3	51.00	2.52	0.67	121.62	3.139	0.67	0.00	0.00
10	119.00	Ericsson - RRUS-32 B2 - RRU	3	53.00	2.74	0.67	125.30	3.675	0.67	0.00	0.00
11	119.00	Raycap - DC6-48-60-18-8F - SP	2	31.80	0.92	1.00	92.21	1.348	1.00	0.00	0.00
12	119.00	Low Profile Platform	1	1800.00	40.20	1.00	3334.75	73.105	1.00	0.00	0.00
13	119.00	Powerwave - 7770	6	35.00	5.50	0.77	163.94	6.517	0.79	0.00	0.00
14	119.00	Quintel - QS66512-2	3	111.00	8.13	0.92	320.88	9.378	0.93	0.00	0.00
15	119.00	Cci - HPA-65R-BUU-H6	3	51.00	9.66	0.83	285.26	10.984	0.85	0.00	0.00
16	119.00	Powerwave - LGP21401 - TMA	9	14.10	1.29	0.50	38.53	2.107	0.50	0.00	0.00
17	119.00	Powerwave - TT19-08BP-111-001 -	3	16.00	0.64	0.50	35.78	1.219	0.50	0.00	0.00
18	119.00	Kaelus - DBC0061F1V51-2 -	6	25.40	0.43	0.50	39.61	0.709	0.50	0.00	0.00
19	119.00	Ericsson - RRUS 32 B30 - RRU	3	60.00	2.74	0.67	141.85	3.675	0.67	0.00	0.00
20	119.00	Site Pro HRK12 Handrail Kit	1	261.72	6.75	1.00	565.21	13.196	1.00	0.00	0.00
21	119.00	Site Pro PRK-1245L Platform	1	464.91	9.50	1.00	782.03	19.220	1.00	0.00	0.00
		Totals:	**62**	**9,115.35**			**20,296.18**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	128.00	(13) 1 5/8" Coax	0.00	Inside
0.00	119.00	(12) 1 5/8" Coax	0.00	Inside
0.00	119.00	(2) 1/2" Fiber	0.00	Inside
0.00	119.00	(1) 2" Innerduct	0.00	Inside
0.00	119.00	(4) 3/4" DC	0.00	Inside

Shaft Section Properties

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

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Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.3125	51.510	50.780	16816.7	27.65	164.83	68.9	643.0	0.0
5.00		0.3125	50.335	49.614	15685.4	26.99	161.07	69.7	613.8	854.0
10.00		0.3125	49.160	48.449	14606.0	26.33	157.31	70.4	585.2	834.2
15.00		0.3125	47.986	47.284	13577.3	25.67	153.55	71.2	557.3	814.4
20.00		0.3125	46.811	46.119	12598.1	25.00	149.79	72.0	530.1	794.6
25.00		0.3125	45.636	44.954	11667.1	24.34	146.03	72.8	503.5	774.7
30.00		0.3125	44.461	43.788	10783.1	23.68	142.28	73.6	477.7	754.9
35.00		0.3125	43.286	42.623	9945.0	23.01	138.52	74.3	452.5	735.1
40.00		0.3125	42.111	41.458	9151.5	22.35	134.76	75.1	428.0	715.3
45.00		0.3125	40.937	40.293	8401.3	21.69	131.00	75.9	404.2	695.4
48.00	Bot - Section 2	0.3125	40.232	39.593	7971.5	21.29	128.74	76.4	390.3	407.8
50.00		0.3125	39.762	39.127	7693.3	21.02	127.24	76.7	381.1	540.0
53.25	Top - Section 1	0.3125	39.623	38.990	7612.5	20.95	126.79	0.0	0.0	863.9
55.00		0.3125	39.212	38.582	7376.1	20.71	125.48	77.0	370.5	231.0
60.00		0.3125	38.037	37.417	6727.8	20.05	121.72	77.8	348.4	646.5
65.00		0.3125	36.862	36.252	6118.6	19.39	117.96	78.6	326.9	626.7
70.00		0.3125	35.688	35.086	5547.3	18.73	114.20	79.4	306.2	606.9
75.00		0.3125	34.513	33.921	5012.8	18.06	110.44	80.2	286.1	587.0
80.00		0.3125	33.338	32.756	4513.8	17.40	106.68	80.9	266.7	567.2
85.00		0.3125	32.163	31.591	4049.0	16.74	102.92	81.7	248.0	547.4
90.00		0.3125	30.988	30.425	3617.3	16.07	99.16	82.5	229.9	527.6
95.00		0.3125	29.813	29.260	3217.4	15.41	95.40	82.5	212.6	507.7
97.75	Bot - Section 3	0.3125	29.167	28.619	3010.6	15.05	93.34	82.5	203.3	270.8
100.00		0.3125	28.639	28.095	2848.1	14.75	91.64	82.5	195.9	349.7
101.50	Top - Section 2	0.1875	28.661	16.945	1735.7	25.54	152.86	0.0	0.0	229.5
105.00		0.1875	27.839	16.455	1589.6	24.77	148.47	72.3	112.5	198.9
110.00		0.1875	26.664	15.756	1395.5	23.66	142.21	73.6	103.1	274.0
115.00		0.1875	25.489	15.057	1217.8	22.56	135.94	74.9	94.1	262.1
119.00		0.1875	24.549	14.498	1087.1	21.68	130.93	75.9	87.2	201.1
120.00		0.1875	24.314	14.358	1056.0	21.45	129.68	76.2	85.5	49.1
125.00		0.1875	23.139	13.659	909.1	20.35	123.41	77.5	77.4	238.3
128.00		0.1875	22.435	13.239	827.9	19.69	119.65	78.2	72.7	137.3
129.00	Top - Section 3	0.1875	22.200	13.100	801.9	19.47	118.40	78.5	71.1	44.8
129.00	Bot - Section 4	0.1875	22.200	13.100	801.9	19.47	118.40	78.5	71.1	
130.00		0.1875	21.965	12.960	776.5	19.25	117.14	78.8	69.6	44.3
135.00		0.1875	20.790	12.261	657.5	18.14	110.88	80.1	62.3	214.5
138.50		0.1875	19.967	11.771	581.9	17.37	106.49	81.0	57.4	143.1
139.00		0.1875	19.850	11.701	571.6	17.26	105.87	81.1	56.7	20.0
										16310.0

Wind Loading - Shaft

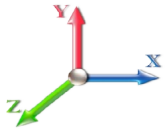
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	14.724	16.20	339.15	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	14.724	16.20	331.41	0.650	0.000	5.00	21.545	14.00	362.9	0.0	1024.9
10.00		1.00	0.70	14.724	16.20	323.68	0.650	0.000	5.00	21.048	13.68	354.5	0.0	1001.1
15.00		1.00	0.70	14.724	16.20	315.94	0.650	0.000	5.00	20.551	13.36	346.2	0.0	977.3
20.00		1.00	0.70	14.724	16.20	308.21	0.650	0.000	5.00	20.054	13.04	337.8	0.0	953.5
25.00		1.00	0.70	14.724	16.20	300.47	0.650	0.000	5.00	19.557	12.71	329.4	0.0	929.7
30.00		1.00	0.70	14.736	16.21	292.86	0.650	0.000	5.00	19.060	12.39	321.3	0.0	905.9
35.00		1.00	0.73	15.400	16.94	291.47	0.650	0.000	5.00	18.563	12.07	327.0	0.0	882.1
40.00		1.00	0.76	15.999	17.60	289.02	0.650	0.000	5.00	18.066	11.74	330.7	0.0	858.3
45.00		1.00	0.79	16.546	18.20	285.73	0.650	0.000	5.00	17.569	11.42	332.6	0.0	834.5
48.00	Bot - Section 2	1.00	0.80	16.854	18.54	283.41	0.650	0.000	3.00	10.303	6.70	198.6	0.0	489.3
50.00		1.00	0.81	17.052	18.76	281.74	0.650	0.000	2.00	6.875	4.47	134.1	0.0	647.9
53.25	Top - Section 1	1.00	0.83	17.362	19.10	278.82	0.650	0.000	3.25	11.002	7.15	218.5	0.0	1036.7
55.00		1.00	0.83	17.523	19.28	281.65	0.650	0.000	1.75	5.837	3.79	117.0	0.0	277.2
60.00		1.00	0.85	17.964	19.76	276.63	0.650	0.000	5.00	16.342	10.62	335.8	0.0	775.8
65.00		1.00	0.87	18.380	20.22	271.17	0.650	0.000	5.00	15.845	10.30	333.2	0.0	752.0
70.00		1.00	0.89	18.773	20.65	265.32	0.650	0.000	5.00	15.348	9.98	329.6	0.0	728.2
75.00		1.00	0.91	19.147	21.06	259.13	0.650	0.000	5.00	14.851	9.65	325.3	0.0	704.5
80.00		1.00	0.93	19.503	21.45	252.62	0.650	0.000	5.00	14.354	9.33	320.2	0.0	680.7
85.00		1.00	0.94	19.844	21.83	245.84	0.650	0.000	5.00	13.857	9.01	314.6	0.0	656.9
90.00		1.00	0.96	20.170	22.19	238.80	0.650	0.000	5.00	13.359	8.68	308.3	0.0	633.1
95.00		1.00	0.97	20.484	22.53	231.53	0.650	0.000	5.00	12.862	8.36	301.4	0.0	609.3
97.75	Bot - Section 3	1.00	0.98	20.652	22.72	227.44	0.650	0.000	2.75	6.862	4.46	162.1	0.0	325.0
100.00		1.00	0.99	20.787	22.87	224.04	0.650	0.000	2.25	5.574	3.62	132.6	0.0	419.6
101.50	Top - Section 2	1.00	0.99	20.875	22.96	221.76	0.650	0.000	1.50	3.660	2.38	87.4	0.0	275.4
105.00		1.00	1.00	21.079	23.19	219.31	0.650	0.000	3.50	8.367	5.44	201.8	0.0	238.7
110.00		1.00	1.02	21.361	23.50	211.45	0.650	0.000	5.00	11.530	7.49	281.8	0.0	328.8
115.00		1.00	1.03	21.634	23.80	203.43	0.650	0.000	5.00	11.033	7.17	273.1	0.0	314.6
119.00	Appurtenance(s)	1.00	1.04	21.846	24.03	196.88	0.650	0.000	4.00	8.468	5.50	211.6	0.0	241.4
120.00		1.00	1.04	21.898	24.09	195.23	0.650	0.000	1.00	2.067	1.34	51.8	0.0	58.9
125.00		1.00	1.05	22.155	24.37	186.89	0.650	0.000	5.00	10.039	6.53	254.4	0.0	286.0
128.00	Appurtenance(s)	1.00	1.06	22.306	24.54	181.81	0.650	0.000	3.00	5.785	3.76	147.6	0.0	164.8
129.00	Top - Section 3	1.00	1.06	22.356	24.59	180.10	0.650	0.000	1.00	1.888	1.23	48.3	0.0	53.8
130.00		1.00	1.07	22.405	24.65	178.39	0.650	0.000	1.00	1.869	1.21	47.9	0.0	53.2
135.00		1.00	1.08	22.648	24.91	169.77	0.650	0.000	5.00	9.045	5.88	234.3	0.0	257.5
138.50	Appurtenance(s)	1.00	1.08	22.814	25.10	163.65	0.650	0.000	3.50	6.035	3.92	157.5	0.0	171.7
139.00		1.00	1.09	22.838	25.12	162.77	0.650	0.000	0.50	0.842	0.55	22.0	0.0	24.0
								Totals:	**139.00**			**8,593.3**		**19,572.0**

Discrete Appurtenance Forces

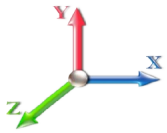
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	138.50	Low Profile Platform	1	22.814	25.095	1.00	1.00	37.20	2160.00	0.000	0.000	1493.68	0.00	0.00
2	128.00	Low Profile Platform	1	22.306	24.536	1.00	1.00	33.40	1980.00	0.000	0.000	1311.23	0.00	0.00
3	128.00	Ericsson - AIR21 B2A B4P	3	22.306	24.536	0.64	0.75	11.70	329.40	0.000	0.000	459.40	0.00	0.00
4	128.00	KRD 9011461-B66A-B2A	3	22.306	24.536	0.65	0.75	12.74	475.92	0.000	0.000	500.28	0.00	0.00
5	128.00	Ericsson - KRY 112 114-1	3	22.306	24.536	0.50	0.75	0.62	39.60	0.000	0.000	24.26	0.00	0.00
6	128.00	APXVAARR24_43-U-NA2	3	22.306	24.536	0.52	0.75	31.88	460.80	0.000	0.000	1251.48	0.00	0.00
7	128.00	4449	3	22.306	24.536	0.50	0.75	2.49	252.00	0.000	0.000	97.65	0.00	0.00
8	128.00	HRK12 (Handrail Kit)	1	22.306	24.536	1.00	1.00	6.75	314.06	0.000	0.000	264.99	0.00	0.00
9	119.00	Ericsson - RRUS-11 -	3	21.846	24.031	0.54	0.80	4.05	183.60	0.000	0.000	155.80	0.00	0.00
10	119.00	Site Pro PRK-1245L	1	21.846	24.031	1.00	1.00	9.50	557.89	0.000	0.000	365.27	0.00	0.00
11	119.00	Site Pro HRK12 Handrail	1	21.846	24.031	1.00	1.00	6.75	314.06	0.000	0.000	259.53	0.00	0.00
12	119.00	Ericsson - RRUS 32 B30 -	3	21.846	24.031	0.54	0.80	4.41	216.00	0.000	0.000	169.40	0.00	0.00
13	119.00	Kaelus -	6	21.846	24.031	0.40	0.80	1.03	182.88	0.000	0.000	39.68	0.00	0.00
14	119.00	Powerwave -	3	21.846	24.031	0.40	0.80	0.77	57.60	0.000	0.000	29.53	0.00	0.00
15	119.00	Powerwave - LGP21401 -	9	21.846	24.031	0.40	0.80	4.64	152.28	0.000	0.000	178.56	0.00	0.00
16	119.00	Cci - HPA-65R-BUU-H6	3	21.846	24.031	0.67	0.80	19.34	183.60	0.000	0.000	743.43	0.00	0.00
17	119.00	Quintel - QS66512-2	3	21.846	24.031	0.73	0.80	17.91	399.60	0.000	0.000	688.70	0.00	0.00
18	119.00	Powerwave - 7770	6	21.846	24.031	0.61	0.80	20.22	252.00	0.000	0.000	777.53	0.00	0.00
19	119.00	Low Profile Platform	1	21.846	24.031	1.00	1.00	40.20	2160.00	0.000	0.000	1545.65	0.00	0.00
20	119.00	Raycap -	2	21.846	24.031	0.80	0.80	1.47	76.32	0.000	0.000	56.60	0.00	0.00
21	119.00	Ericsson - RRUS-32 B2 -	3	21.846	24.031	0.54	0.80	4.41	190.80	0.000	0.000	169.40	0.00	0.00
							Totals:		**10,938.42**			**10,582.06**		

Total Applied Force Summary

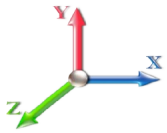
Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

TES Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		362.91	1193.88	0.00	0.00
10.00		354.54	1170.09	0.00	0.00
15.00		346.17	1146.30	0.00	0.00
20.00		337.79	1122.51	0.00	0.00
25.00		329.42	1098.72	0.00	0.00
30.00		321.32	1074.93	0.00	0.00
35.00		327.03	1051.14	0.00	0.00
40.00		330.65	1027.35	0.00	0.00
45.00		332.56	1003.56	0.00	0.00
48.00		198.65	590.71	0.00	0.00
50.00		134.11	715.56	0.00	0.00
53.25		218.52	1146.54	0.00	0.00
55.00		117.01	336.31	0.00	0.00
60.00		335.84	944.84	0.00	0.00
65.00		333.16	921.05	0.00	0.00
70.00		329.61	897.26	0.00	0.00
75.00		325.28	873.47	0.00	0.00
80.00		320.25	849.68	0.00	0.00
85.00		314.56	825.89	0.00	0.00
90.00		308.27	802.10	0.00	0.00
95.00		301.42	778.31	0.00	0.00
97.75		162.13	417.93	0.00	0.00
100.00		132.56	495.64	0.00	0.00
101.50		87.41	326.15	0.00	0.00
105.00		201.75	356.99	0.00	0.00
110.00		281.75	497.85	0.00	0.00
115.00		273.05	483.57	0.00	0.00
119.00	(44) attachments	5390.72	5303.22	0.00	0.00
120.00		51.79	75.14	0.00	0.00
125.00		254.44	367.12	0.00	0.00
128.00	(17) attachments	4056.91	4065.21	0.00	0.00
129.00		48.30	53.78	0.00	0.00
130.00		47.89	53.20	0.00	0.00
135.00		234.34	257.46	0.00	0.00
138.50	(1) attachments	1651.20	2331.73	0.00	0.00
139.00		22.01	23.96	0.00	0.00
	Totals:	**19,175.32**	**34,679.12**	**0.00**	**0.00**

Calculated Forces

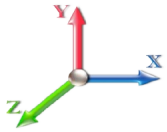
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.65	-19.23	0.00	-1990.4	0.00	1990.46	3147.71	1573.86	6633.45	3321.65	0.00	0.000	0.000	0.610
5.00	-33.40	-18.96	0.00	-1894.3	0.00	1894.33	3110.30	1555.15	6403.28	3206.40	0.09	-0.164	0.000	0.602
10.00	-32.18	-18.69	0.00	-1799.5	0.00	1799.54	3071.25	1535.62	6173.46	3091.32	0.35	-0.332	0.000	0.593
15.00	-30.98	-18.43	0.00	-1706.0	0.00	1706.08	3030.56	1515.28	5944.24	2976.54	0.79	-0.503	0.000	0.584
20.00	-29.81	-18.17	0.00	-1613.9	0.00	1613.92	2988.24	1494.12	5715.85	2862.17	1.41	-0.676	0.000	0.574
25.00	-28.66	-17.92	0.00	-1523.0	0.00	1523.05	2944.28	1472.14	5488.53	2748.34	2.21	-0.854	0.000	0.564
30.00	-27.53	-17.67	0.00	-1433.4	0.00	1433.45	2898.69	1449.34	5262.51	2635.17	3.20	-1.034	0.000	0.554
35.00	-26.43	-17.41	0.00	-1345.1	0.00	1345.11	2851.46	1425.73	5038.05	2522.77	4.38	-1.217	0.000	0.543
40.00	-25.35	-17.13	0.00	-1258.0	0.00	1258.09	2802.60	1401.30	4815.37	2411.26	5.76	-1.403	0.000	0.531
45.00	-24.32	-16.84	0.00	-1172.4	0.00	1172.41	2752.10	1376.05	4594.71	2300.77	7.33	-1.592	0.000	0.519
48.00	-23.70	-16.67	0.00	-1121.8	0.00	1121.89	2721.01	1360.51	4463.39	2235.01	8.37	-1.709	0.000	0.511
50.00	-22.96	-16.55	0.00	-1088.5	0.00	1088.56	2699.97	1349.98	4376.32	2191.41	9.10	-1.788	0.000	0.505
53.25	-21.79	-16.33	0.00	-1034.7	0.00	1034.77	2693.71	1346.85	4350.71	2178.59	10.36	-1.915	0.000	0.483
55.00	-21.43	-16.25	0.00	-1006.1	0.00	1006.19	2675.00	1337.50	4274.96	2140.66	11.08	-1.985	0.000	0.478
60.00	-20.44	-15.95	0.00	-924.93	0.00	924.93	2620.47	1310.24	4060.32	2033.18	13.26	-2.171	0.000	0.463
65.00	-19.48	-15.64	0.00	-845.18	0.00	845.18	2564.30	1282.15	3848.53	1927.13	15.63	-2.359	0.000	0.446
70.00	-18.55	-15.34	0.00	-766.96	0.00	766.96	2506.50	1253.25	3639.84	1822.63	18.20	-2.546	0.000	0.428
75.00	-17.64	-15.03	0.00	-690.27	0.00	690.27	2447.06	1223.53	3434.48	1719.79	20.97	-2.733	0.000	0.409
80.00	-16.76	-14.72	0.00	-615.13	0.00	615.13	2385.98	1192.99	3232.68	1618.74	23.93	-2.918	0.000	0.387
85.00	-15.91	-14.41	0.00	-541.52	0.00	541.52	2323.27	1161.64	3034.69	1519.60	27.08	-3.100	0.000	0.363
90.00	-15.08	-14.11	0.00	-469.45	0.00	469.45	2258.93	1129.46	2840.75	1422.49	30.43	-3.278	0.000	0.337
95.00	-14.29	-13.79	0.00	-398.91	0.00	398.91	2173.88	1086.94	2628.05	1315.98	33.95	-3.449	0.000	0.310
97.75	-13.87	-13.63	0.00	-360.98	0.00	360.98	2126.27	1063.14	2513.60	1258.67	35.96	-3.541	0.000	0.293
100.00	-13.37	-13.48	0.00	-330.32	0.00	330.32	2087.31	1043.66	2421.85	1212.73	37.65	-3.614	0.000	0.279
101.50	-13.03	-13.39	0.00	-310.11	0.00	310.11	1088.23	544.12	1274.83	638.36	38.79	-3.662	0.000	0.498
105.00	-12.65	-13.20	0.00	-263.25	0.00	263.25	1070.27	535.14	1217.34	609.58	41.51	-3.767	0.000	0.444
110.00	-12.13	-12.92	0.00	-197.27	0.00	197.27	1043.23	521.61	1135.83	568.76	45.57	-3.973	0.000	0.359
115.00	-11.64	-12.64	0.00	-132.66	0.00	132.66	1014.55	507.27	1055.24	528.40	49.83	-4.141	0.000	0.263
119.00	-6.74	-6.89	0.00	-82.08	0.00	82.08	990.42	495.21	991.60	496.54	53.34	-4.241	0.000	0.172
120.00	-6.66	-6.83	0.00	-75.20	0.00	75.20	984.23	492.11	975.83	488.64	54.23	-4.262	0.000	0.161
125.00	-6.31	-6.56	0.00	-41.03	0.00	41.03	952.28	476.14	897.82	449.58	58.74	-4.340	0.000	0.098
128.00	-2.56	-2.21	0.00	-21.35	0.00	21.35	932.32	466.16	851.79	426.53	61.47	-4.369	0.000	0.053
129.00	-2.51	-2.15	0.00	-19.15	0.00	19.15	925.54	462.77	836.59	418.92	62.39	-4.376	0.000	0.048
129.00	-2.51	-2.15	0.00	-19.15	0.00	19.15	925.54	462.77	836.59	418.92	62.39	-4.376	0.000	0.048
130.00	-2.46	-2.10	0.00	-16.99	0.00	16.99	918.69	459.34	821.46	411.34	63.30	-4.383	0.000	0.044
135.00	-2.22	-1.85	0.00	-6.48	0.00	6.48	883.47	441.73	746.98	374.05	67.90	-4.404	0.000	0.020
138.50	-0.02	-0.02	0.00	-0.01	0.00	0.01	857.84	428.92	696.10	348.57	71.13	-4.409	0.000	0.000
139.00	0.00	-0.02	0.00	0.00	0.00	0.00	854.11	427.06	688.92	344.97	71.59	-4.409	0.000	0.000

Wind Loading - Shaft

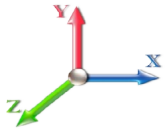
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	14.724	16.20	339.15	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	14.724	16.20	331.41	0.650	0.000	5.00	21.545	14.00	362.9	0.0	768.6
10.00		1.00	0.70	14.724	16.20	323.68	0.650	0.000	5.00	21.048	13.68	354.5	0.0	750.8
15.00		1.00	0.70	14.724	16.20	315.94	0.650	0.000	5.00	20.551	13.36	346.2	0.0	733.0
20.00		1.00	0.70	14.724	16.20	308.21	0.650	0.000	5.00	20.054	13.04	337.8	0.0	715.1
25.00		1.00	0.70	14.724	16.20	300.47	0.650	0.000	5.00	19.557	12.71	329.4	0.0	697.3
30.00		1.00	0.70	14.736	16.21	292.86	0.650	0.000	5.00	19.060	12.39	321.3	0.0	679.4
35.00		1.00	0.73	15.400	16.94	291.47	0.650	0.000	5.00	18.563	12.07	327.0	0.0	661.6
40.00		1.00	0.76	15.999	17.60	289.02	0.650	0.000	5.00	18.066	11.74	330.7	0.0	643.7
45.00		1.00	0.79	16.546	18.20	285.73	0.650	0.000	5.00	17.569	11.42	332.6	0.0	625.9
48.00	Bot - Section 2	1.00	0.80	16.854	18.54	283.41	0.650	0.000	3.00	10.303	6.70	198.6	0.0	367.0
50.00		1.00	0.81	17.052	18.76	281.74	0.650	0.000	2.00	6.875	4.47	134.1	0.0	486.0
53.25	Top - Section 1	1.00	0.83	17.362	19.10	278.82	0.650	0.000	3.25	11.002	7.15	218.5	0.0	777.5
55.00		1.00	0.83	17.523	19.28	281.65	0.650	0.000	1.75	5.837	3.79	117.0	0.0	207.9
60.00		1.00	0.85	17.964	19.76	276.63	0.650	0.000	5.00	16.342	10.62	335.8	0.0	581.9
65.00		1.00	0.87	18.380	20.22	271.17	0.650	0.000	5.00	15.845	10.30	333.2	0.0	564.0
70.00		1.00	0.89	18.773	20.65	265.32	0.650	0.000	5.00	15.348	9.98	329.6	0.0	546.2
75.00		1.00	0.91	19.147	21.06	259.13	0.650	0.000	5.00	14.851	9.65	325.3	0.0	528.3
80.00		1.00	0.93	19.503	21.45	252.62	0.650	0.000	5.00	14.354	9.33	320.2	0.0	510.5
85.00		1.00	0.94	19.844	21.83	245.84	0.650	0.000	5.00	13.857	9.01	314.6	0.0	492.7
90.00		1.00	0.96	20.170	22.19	238.80	0.650	0.000	5.00	13.359	8.68	308.3	0.0	474.8
95.00		1.00	0.97	20.484	22.53	231.53	0.650	0.000	5.00	12.862	8.36	301.4	0.0	457.0
97.75	Bot - Section 3	1.00	0.98	20.652	22.72	227.44	0.650	0.000	2.75	6.862	4.46	162.1	0.0	243.7
100.00		1.00	0.99	20.787	22.87	224.04	0.650	0.000	2.25	5.574	3.62	132.6	0.0	314.7
101.50	Top - Section 2	1.00	0.99	20.875	22.96	221.76	0.650	0.000	1.50	3.660	2.38	87.4	0.0	206.6
105.00		1.00	1.00	21.079	23.19	219.31	0.650	0.000	3.50	8.367	5.44	201.8	0.0	179.0
110.00		1.00	1.02	21.361	23.50	211.45	0.650	0.000	5.00	11.530	7.49	281.8	0.0	246.6
115.00		1.00	1.03	21.634	23.80	203.43	0.650	0.000	5.00	11.033	7.17	273.1	0.0	235.9
119.00	Appurtenance(s)	1.00	1.04	21.846	24.03	196.88	0.650	0.000	4.00	8.468	5.50	211.6	0.0	181.0
120.00		1.00	1.04	21.898	24.09	195.23	0.650	0.000	1.00	2.067	1.34	51.8	0.0	44.2
125.00		1.00	1.05	22.155	24.37	186.89	0.650	0.000	5.00	10.039	6.53	254.4	0.0	214.5
128.00	Appurtenance(s)	1.00	1.06	22.306	24.54	181.81	0.650	0.000	3.00	5.785	3.76	147.6	0.0	123.6
129.00	Top - Section 3	1.00	1.06	22.356	24.59	180.10	0.650	0.000	1.00	1.888	1.23	48.3	0.0	40.3
130.00		1.00	1.07	22.405	24.65	178.39	0.650	0.000	1.00	1.869	1.21	47.9	0.0	39.9
135.00		1.00	1.08	22.648	24.91	169.77	0.650	0.000	5.00	9.045	5.88	234.3	0.0	193.1
138.50	Appurtenance(s)	1.00	1.08	22.814	25.10	163.65	0.650	0.000	3.50	6.035	3.92	157.5	0.0	128.8
139.00		1.00	1.09	22.838	25.12	162.77	0.650	0.000	0.50	0.842	0.55	22.0	0.0	18.0
								Totals:	**139.00**			**8,593.3**		**14,679.0**

Discrete Appurtenance Forces

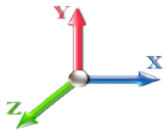
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	138.50	Low Profile Platform	1	22.814	25.095	1.00	1.00	37.20	1620.00	0.000	0.000	1493.68	0.00	0.00
2	128.00	Low Profile Platform	1	22.306	24.536	1.00	1.00	33.40	1485.00	0.000	0.000	1311.23	0.00	0.00
3	128.00	Ericsson - AIR21 B2A B4P	3	22.306	24.536	0.64	0.75	11.70	247.05	0.000	0.000	459.40	0.00	0.00
4	128.00	KRD 9011461-B66A-B2A	3	22.306	24.536	0.65	0.75	12.74	356.94	0.000	0.000	500.28	0.00	0.00
5	128.00	Ericsson - KRY 112 114-1	3	22.306	24.536	0.50	0.75	0.62	29.70	0.000	0.000	24.26	0.00	0.00
6	128.00	APXVAARR24_43-U-NA2	3	22.306	24.536	0.52	0.75	31.88	345.60	0.000	0.000	1251.48	0.00	0.00
7	128.00	4449	3	22.306	24.536	0.50	0.75	2.49	189.00	0.000	0.000	97.65	0.00	0.00
8	128.00	HRK12 (Handrail Kit)	1	22.306	24.536	1.00	1.00	6.75	235.55	0.000	0.000	264.99	0.00	0.00
9	119.00	Ericsson - RRUS-11 -	3	21.846	24.031	0.54	0.80	4.05	137.70	0.000	0.000	155.80	0.00	0.00
10	119.00	Site Pro PRK-1245L	1	21.846	24.031	1.00	1.00	9.50	418.42	0.000	0.000	365.27	0.00	0.00
11	119.00	Site Pro HRK12 Handrail	1	21.846	24.031	1.00	1.00	6.75	235.55	0.000	0.000	259.53	0.00	0.00
12	119.00	Ericsson - RRUS 32 B30 -	3	21.846	24.031	0.54	0.80	4.41	162.00	0.000	0.000	169.40	0.00	0.00
13	119.00	Kaelus -	6	21.846	24.031	0.40	0.80	1.03	137.16	0.000	0.000	39.68	0.00	0.00
14	119.00	Powerwave -	3	21.846	24.031	0.40	0.80	0.77	43.20	0.000	0.000	29.53	0.00	0.00
15	119.00	Powerwave - LGP21401 -	9	21.846	24.031	0.40	0.80	4.64	114.21	0.000	0.000	178.56	0.00	0.00
16	119.00	Cci - HPA-65R-BUU-H6	3	21.846	24.031	0.67	0.80	19.34	137.70	0.000	0.000	743.43	0.00	0.00
17	119.00	Quintel - QS66512-2	3	21.846	24.031	0.73	0.80	17.91	299.70	0.000	0.000	688.70	0.00	0.00
18	119.00	Powerwave - 7770	6	21.846	24.031	0.61	0.80	20.22	189.00	0.000	0.000	777.53	0.00	0.00
19	119.00	Low Profile Platform	1	21.846	24.031	1.00	1.00	40.20	1620.00	0.000	0.000	1545.65	0.00	0.00
20	119.00	Raycap -	2	21.846	24.031	0.80	0.80	1.47	57.24	0.000	0.000	56.60	0.00	0.00
21	119.00	Ericsson - RRUS-32 B2 -	3	21.846	24.031	0.54	0.80	4.41	143.10	0.000	0.000	169.40	0.00	0.00
							Totals:		**8,203.81**			**10,582.06**		

Total Applied Force Summary

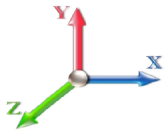
Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

TES Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		362.91	895.41	0.00	0.00
10.00		354.54	877.57	0.00	0.00
15.00		346.17	859.72	0.00	0.00
20.00		337.79	841.88	0.00	0.00
25.00		329.42	824.04	0.00	0.00
30.00		321.32	806.19	0.00	0.00
35.00		327.03	788.35	0.00	0.00
40.00		330.65	770.51	0.00	0.00
45.00		332.56	752.67	0.00	0.00
48.00		198.65	443.04	0.00	0.00
50.00		134.11	536.67	0.00	0.00
53.25		218.52	859.91	0.00	0.00
55.00		117.01	252.24	0.00	0.00
60.00		335.84	708.63	0.00	0.00
65.00		333.16	690.79	0.00	0.00
70.00		329.61	672.95	0.00	0.00
75.00		325.28	655.10	0.00	0.00
80.00		320.25	637.26	0.00	0.00
85.00		314.56	619.42	0.00	0.00
90.00		308.27	601.58	0.00	0.00
95.00		301.42	583.73	0.00	0.00
97.75		162.13	313.45	0.00	0.00
100.00		132.56	371.73	0.00	0.00
101.50		87.41	244.61	0.00	0.00
105.00		201.75	267.74	0.00	0.00
110.00		281.75	373.39	0.00	0.00
115.00		273.05	362.68	0.00	0.00
119.00	(44) attachments	5390.72	3977.41	0.00	0.00
120.00		51.79	56.35	0.00	0.00
125.00		254.44	275.34	0.00	0.00
128.00	(17) attachments	4056.91	3048.91	0.00	0.00
129.00		48.30	40.33	0.00	0.00
130.00		47.89	39.90	0.00	0.00
135.00		234.34	193.09	0.00	0.00
138.50	(1) attachments	1651.20	1748.79	0.00	0.00
139.00		22.01	17.97	0.00	0.00
	Totals:	**19,175.32**	**26,009.34**	**0.00**	**0.00**

Calculated Forces

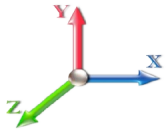
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.98	-19.21	0.00	-1967.1	0.00	1967.18	3147.71	1573.86	6633.45	3321.65	0.00	0.000	0.000	0.601
5.00	-25.03	-18.92	0.00	-1871.1	0.00	1871.12	3110.30	1555.15	6403.28	3206.40	0.09	-0.162	0.000	0.592
10.00	-24.10	-18.63	0.00	-1776.5	0.00	1776.53	3071.25	1535.62	6173.46	3091.32	0.35	-0.328	0.000	0.583
15.00	-23.19	-18.35	0.00	-1683.3	0.00	1683.37	3030.56	1515.28	5944.24	2976.54	0.78	-0.496	0.000	0.573
20.00	-22.30	-18.07	0.00	-1591.6	0.00	1591.63	2988.24	1494.12	5715.85	2862.17	1.39	-0.668	0.000	0.564
25.00	-21.42	-17.79	0.00	-1501.2	0.00	1501.29	2944.28	1472.14	5488.53	2748.34	2.19	-0.842	0.000	0.554
30.00	-20.57	-17.52	0.00	-1412.3	0.00	1412.32	2898.69	1449.34	5262.51	2635.17	3.16	-1.020	0.000	0.543
35.00	-19.73	-17.25	0.00	-1324.7	0.00	1324.70	2851.46	1425.73	5038.05	2522.77	4.33	-1.201	0.000	0.532
40.00	-18.91	-16.96	0.00	-1238.4	0.00	1238.47	2802.60	1401.30	4815.37	2411.26	5.68	-1.384	0.000	0.521
45.00	-18.13	-16.65	0.00	-1153.6	0.00	1153.68	2752.10	1376.05	4594.71	2300.77	7.23	-1.570	0.000	0.508
48.00	-17.66	-16.47	0.00	-1103.7	0.00	1103.72	2721.01	1360.51	4463.39	2235.01	8.26	-1.684	0.000	0.500
50.00	-17.10	-16.35	0.00	-1070.7	0.00	1070.78	2699.97	1349.98	4376.32	2191.41	8.98	-1.762	0.000	0.495
53.25	-16.22	-16.13	0.00	-1017.6	0.00	1017.64	2693.71	1346.85	4350.71	2178.59	10.22	-1.888	0.000	0.473
55.00	-15.94	-16.04	0.00	-989.40	0.00	989.40	2675.00	1337.50	4274.96	2140.66	10.93	-1.956	0.000	0.468
60.00	-15.19	-15.73	0.00	-909.18	0.00	909.18	2620.47	1310.24	4060.32	2033.18	13.07	-2.140	0.000	0.453
65.00	-14.46	-15.42	0.00	-830.53	0.00	830.53	2564.30	1282.15	3848.53	1927.13	15.41	-2.323	0.000	0.437
70.00	-13.76	-15.11	0.00	-753.43	0.00	753.43	2506.50	1253.25	3639.84	1822.63	17.95	-2.508	0.000	0.419
75.00	-13.07	-14.79	0.00	-677.91	0.00	677.91	2447.06	1223.53	3434.48	1719.79	20.67	-2.691	0.000	0.400
80.00	-12.40	-14.48	0.00	-603.95	0.00	603.95	2385.98	1192.99	3232.68	1618.74	23.59	-2.873	0.000	0.378
85.00	-11.76	-14.17	0.00	-531.55	0.00	531.55	2323.27	1161.64	3034.69	1519.60	26.69	-3.052	0.000	0.355
90.00	-11.13	-13.86	0.00	-460.70	0.00	460.70	2258.93	1129.46	2840.75	1422.49	29.98	-3.226	0.000	0.329
95.00	-10.54	-13.55	0.00	-391.38	0.00	391.38	2173.88	1086.94	2628.05	1315.98	33.45	-3.394	0.000	0.302
97.75	-10.22	-13.39	0.00	-354.11	0.00	354.11	2126.27	1063.14	2513.60	1258.67	35.43	-3.484	0.000	0.286
100.00	-9.84	-13.24	0.00	-323.99	0.00	323.99	2087.31	1043.66	2421.85	1212.73	37.09	-3.556	0.000	0.272
101.50	-9.58	-13.15	0.00	-304.13	0.00	304.13	1088.23	544.12	1274.83	638.36	38.21	-3.604	0.000	0.486
105.00	-9.29	-12.96	0.00	-258.10	0.00	258.10	1070.27	535.14	1217.34	609.58	40.89	-3.706	0.000	0.433
110.00	-8.90	-12.68	0.00	-193.31	0.00	193.31	1043.23	521.61	1135.83	568.76	44.88	-3.908	0.000	0.349
115.00	-8.53	-12.40	0.00	-129.91	0.00	129.91	1014.55	507.27	1055.24	528.40	49.07	-4.072	0.000	0.255
119.00	-4.94	-6.74	0.00	-80.30	0.00	80.30	990.42	495.21	991.60	496.54	52.52	-4.171	0.000	0.167
120.00	-4.88	-6.69	0.00	-73.55	0.00	73.55	984.23	492.11	975.83	488.64	53.40	-4.191	0.000	0.156
125.00	-4.62	-6.42	0.00	-40.09	0.00	40.09	952.28	476.14	897.82	449.58	57.83	-4.267	0.000	0.094
128.00	-1.88	-2.15	0.00	-20.82	0.00	20.82	932.32	466.16	851.79	426.53	60.52	-4.296	0.000	0.051
129.00	-1.85	-2.10	0.00	-18.66	0.00	18.66	925.54	462.77	836.59	418.92	61.42	-4.303	0.000	0.047
129.00	-1.85	-2.10	0.00	-18.66	0.00	18.66	925.54	462.77	836.59	418.92	61.42	-4.303	0.000	0.047
130.00	-1.81	-2.05	0.00	-16.57	0.00	16.57	918.69	459.34	821.46	411.34	62.32	-4.309	0.000	0.042
135.00	-1.64	-1.80	0.00	-6.32	0.00	6.32	883.47	441.73	746.98	374.05	66.84	-4.330	0.000	0.019
138.50	-0.02	-0.02	0.00	-0.01	0.00	0.01	857.84	428.92	696.10	348.57	70.01	-4.335	0.000	0.000
139.00	0.00	-0.02	0.00	0.00	0.00	0.00	854.11	427.06	688.92	344.97	70.47	-4.335	0.000	0.000

Wind Loading - Shaft

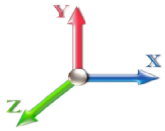
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.68	0.00	1.200	1.242	5.00	22.580	27.10	126.9	401.3	1426.2
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	5.00	22.157	26.59	124.5	421.0	1422.1
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.386	5.00	21.706	26.05	121.9	428.7	1406.0
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	5.00	21.243	25.49	119.3	431.1	1384.6
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.459	5.00	20.773	24.93	116.7	430.4	1360.1
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	5.00	20.298	24.36	114.1	427.6	1333.5
35.00		1.00	0.73	4.451	4.90	0.00	1.200	1.509	5.00	19.820	23.78	116.5	423.3	1305.5
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	5.00	19.340	23.21	118.1	418.0	1276.3
45.00		1.00	0.79	4.783	5.26	0.00	1.200	1.547	5.00	18.858	22.63	119.1	411.7	1246.2
48.00	Bot - Section 2	1.00	0.80	4.872	5.36	0.00	1.200	1.557	3.00	11.081	13.30	71.3	244.5	733.9
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	2.00	7.396	8.88	48.1	164.3	812.3
53.25	Top - Section 1	1.00	0.83	5.018	5.52	0.00	1.200	1.574	3.25	11.854	14.22	78.5	263.9	1300.6
55.00		1.00	0.83	5.065	5.57	0.00	1.200	1.579	1.75	6.298	7.56	42.1	141.2	418.3
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	5.00	17.669	21.20	121.1	395.2	1171.0
65.00		1.00	0.87	5.313	5.84	0.00	1.200	1.605	5.00	17.182	20.62	120.5	386.7	1138.7
70.00		1.00	0.89	5.426	5.97	0.00	1.200	1.617	5.00	16.695	20.03	119.6	377.8	1106.0
75.00		1.00	0.91	5.534	6.09	0.00	1.200	1.628	5.00	16.208	19.45	118.4	368.5	1073.0
80.00		1.00	0.93	5.637	6.20	0.00	1.200	1.639	5.00	15.719	18.86	117.0	359.0	1039.6
85.00		1.00	0.94	5.736	6.31	0.00	1.200	1.649	5.00	15.231	18.28	115.3	349.1	1006.0
90.00		1.00	0.96	5.830	6.41	0.00	1.200	1.658	5.00	14.741	17.69	113.4	339.0	972.1
95.00		1.00	0.97	5.921	6.51	0.00	1.200	1.667	5.00	14.252	17.10	111.4	328.7	937.9
97.75	Bot - Section 3	1.00	0.98	5.970	6.57	0.00	1.200	1.672	2.75	7.629	9.15	60.1	177.6	502.6
100.00		1.00	0.99	6.008	6.61	0.00	1.200	1.676	2.25	6.203	7.44	49.2	144.9	564.5
101.50	Top - Section 2	1.00	0.99	6.034	6.64	0.00	1.200	1.678	1.50	4.080	4.90	32.5	95.7	371.1
105.00		1.00	1.00	6.093	6.70	0.00	1.200	1.684	3.50	9.349	11.22	75.2	217.9	456.6
110.00		1.00	1.02	6.174	6.79	0.00	1.200	1.692	5.00	12.940	15.53	105.5	300.4	629.2
115.00		1.00	1.03	6.253	6.88	0.00	1.200	1.699	5.00	12.449	14.94	102.8	289.3	603.8
119.00	Appurtenance(s)	1.00	1.04	6.315	6.95	0.00	1.200	1.705	4.00	9.605	11.53	80.1	224.2	465.6
120.00		1.00	1.04	6.330	6.96	0.00	1.200	1.707	1.00	2.352	2.82	19.7	55.6	114.5
125.00		1.00	1.05	6.404	7.04	0.00	1.200	1.714	5.00	11.467	13.76	96.9	266.6	552.6
128.00	Appurtenance(s)	1.00	1.06	6.448	7.09	0.00	1.200	1.718	3.00	6.644	7.97	56.5	155.8	320.6
129.00	Top - Section 3	1.00	1.06	6.462	7.11	0.00	1.200	1.719	1.00	2.175	2.61	18.6	51.5	105.3
130.00		1.00	1.07	6.476	7.12	0.00	1.200	1.720	1.00	2.155	2.59	18.4	51.0	104.2
135.00		1.00	1.08	6.546	7.20	0.00	1.200	1.727	5.00	10.484	12.58	90.6	243.4	500.8
138.50	Appurtenance(s)	1.00	1.08	6.594	7.25	0.00	1.200	1.731	3.50	7.045	8.45	61.3	164.6	336.3
139.00		1.00	1.09	6.601	7.26	0.00	1.200	1.732	0.50	0.987	1.18	8.6	23.4	47.4
								Totals:	**139.00**			**3,129.6**		**29,544.9**

Discrete Appurtenance Forces

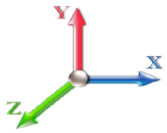
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	138.50	Low Profile Platform	1	6.594	7.254	1.00	1.00	66.83	3718.21	0.000	0.000	484.75	0.00	0.00
2	128.00	Low Profile Platform	1	6.448	7.092	1.00	1.00	59.79	3247.15	0.000	0.000	424.06	0.00	0.00
3	128.00	Ericsson - AIR21 B2A B4P	3	6.448	7.092	0.65	0.75	14.01	691.41	0.000	0.000	99.36	0.00	0.00
4	128.00	KRD 9011461-B66A-B2A	3	6.448	7.092	0.65	0.75	14.90	1015.43	0.000	0.000	105.69	0.00	0.00
5	128.00	Ericsson - KRY 112 114-1	3	6.448	7.092	0.50	0.75	1.32	62.13	0.000	0.000	9.38	0.00	0.00
6	128.00	APXVAARR24_43-U-NA2	3	6.448	7.092	0.52	0.75	34.82	1692.40	0.000	0.000	246.97	0.00	0.00
7	128.00	4449	3	6.448	7.092	0.50	0.75	3.28	452.70	0.000	0.000	23.29	0.00	0.00
8	128.00	HRK12 (Handrail Kit)	1	6.448	7.092	1.00	1.00	13.24	881.49	0.000	0.000	93.92	0.00	0.00
9	119.00	Ericsson - RRUS-11 -	3	6.315	6.946	0.54	0.80	5.05	347.46	0.000	0.000	35.06	0.00	0.00
10	119.00	Site Pro PRK-1245L	1	6.315	6.946	1.00	1.00	19.22	779.92	0.000	0.000	133.50	0.00	0.00
11	119.00	Site Pro HRK12 Handrail	1	6.315	6.946	1.00	1.00	13.20	879.27	0.000	0.000	91.66	0.00	0.00
12	119.00	Ericsson - RRUS 32 B30 -	3	6.315	6.946	0.54	0.80	5.91	408.76	0.000	0.000	41.04	0.00	0.00
13	119.00	Kaelus -	6	6.315	6.946	0.40	0.80	1.70	247.12	0.000	0.000	11.81	0.00	0.00
14	119.00	Powerwave -	3	6.315	6.946	0.40	0.80	1.46	99.53	0.000	0.000	10.16	0.00	0.00
15	119.00	Powerwave - LGP21401 -	9	6.315	6.946	0.40	0.80	7.58	308.24	0.000	0.000	52.68	0.00	0.00
16	119.00	Cci - HPA-65R-BUU-H6	3	6.315	6.946	0.68	0.80	22.33	714.18	0.000	0.000	155.10	0.00	0.00
17	119.00	Quintel - QS66512-2	3	6.315	6.946	0.74	0.80	20.82	872.34	0.000	0.000	144.61	0.00	0.00
18	119.00	Powerwave - 7770	6	6.315	6.946	0.63	0.80	24.74	1235.66	0.000	0.000	171.86	0.00	0.00
19	119.00	Low Profile Platform	1	6.315	6.946	1.00	1.00	73.10	3994.75	0.000	0.000	507.79	0.00	0.00
20	119.00	Raycap -	2	6.315	6.946	0.80	0.80	2.16	161.74	0.000	0.000	14.98	0.00	0.00
21	119.00	Ericsson - RRUS-32 B2 -	3	6.315	6.946	0.54	0.80	5.91	355.21	0.000	0.000	41.04	0.00	0.00
							Totals:		**22,165.10**			**2,898.73**		

Total Applied Force Summary

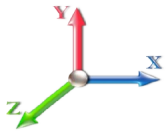
Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		126.85	1595.18	0.00	0.00
10.00		124.48	1591.12	0.00	0.00
15.00		121.94	1575.02	0.00	0.00
20.00		119.34	1553.60	0.00	0.00
25.00		116.70	1529.08	0.00	0.00
30.00		114.13	1502.52	0.00	0.00
35.00		116.46	1474.48	0.00	0.00
40.00		118.06	1445.31	0.00	0.00
45.00		119.06	1415.25	0.00	0.00
48.00		71.26	835.26	0.00	0.00
50.00		48.12	879.89	0.00	0.00
53.25		78.53	1410.44	0.00	0.00
55.00		42.10	477.47	0.00	0.00
60.00		121.10	1340.07	0.00	0.00
65.00		120.49	1307.76	0.00	0.00
70.00		119.58	1275.06	0.00	0.00
75.00		118.40	1242.01	0.00	0.00
80.00		116.97	1208.65	0.00	0.00
85.00		115.32	1175.00	0.00	0.00
90.00		113.45	1141.10	0.00	0.00
95.00		111.39	1106.97	0.00	0.00
97.75		60.11	595.51	0.00	0.00
100.00		49.19	640.56	0.00	0.00
101.50		32.50	421.80	0.00	0.00
105.00		75.19	574.89	0.00	0.00
110.00		105.46	798.22	0.00	0.00
115.00		102.76	772.85	0.00	0.00
119.00	(44) attachments	1491.37	11004.99	0.00	0.00
120.00		19.65	130.74	0.00	0.00
125.00		96.93	633.74	0.00	0.00
128.00	(17) attachments	1059.22	8411.96	0.00	0.00
129.00		18.55	105.25	0.00	0.00
130.00		18.42	104.22	0.00	0.00
135.00		90.59	500.85	0.00	0.00
138.50	(1) attachments	546.08	4054.54	0.00	0.00
139.00		8.60	47.36	0.00	0.00
	Totals:	**6,028.36**	**55,878.72**	**0.00**	**0.00**

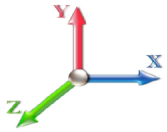
Calculated Forces

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-55.88	-6.05	0.00	-628.99	0.00	628.99	3147.71	1573.86	6633.45	3321.65	0.00	0.000	0.000	0.207
5.00	-54.28	-5.98	0.00	-598.72	0.00	598.72	3110.30	1555.15	6403.28	3206.40	0.03	-0.052	0.000	0.204
10.00	-52.68	-5.90	0.00	-568.84	0.00	568.84	3071.25	1535.62	6173.46	3091.32	0.11	-0.105	0.000	0.201
15.00	-51.10	-5.82	0.00	-539.35	0.00	539.35	3030.56	1515.28	5944.24	2976.54	0.25	-0.159	0.000	0.198
20.00	-49.54	-5.74	0.00	-510.25	0.00	510.25	2988.24	1494.12	5715.85	2862.17	0.45	-0.214	0.000	0.195
25.00	-48.01	-5.67	0.00	-481.52	0.00	481.52	2944.28	1472.14	5488.53	2748.34	0.70	-0.270	0.000	0.192
30.00	-46.50	-5.59	0.00	-453.18	0.00	453.18	2898.69	1449.34	5262.51	2635.17	1.01	-0.327	0.000	0.188
35.00	-45.02	-5.51	0.00	-425.21	0.00	425.21	2851.46	1425.73	5038.05	2522.77	1.39	-0.385	0.000	0.184
40.00	-43.57	-5.43	0.00	-397.64	0.00	397.64	2802.60	1401.30	4815.37	2411.26	1.82	-0.444	0.000	0.180
45.00	-42.15	-5.34	0.00	-370.49	0.00	370.49	2752.10	1376.05	4594.71	2300.77	2.32	-0.503	0.000	0.176
48.00	-41.31	-5.28	0.00	-354.49	0.00	354.49	2721.01	1360.51	4463.39	2235.01	2.65	-0.540	0.000	0.174
50.00	-40.43	-5.25	0.00	-343.93	0.00	343.93	2699.97	1349.98	4376.32	2191.41	2.88	-0.565	0.000	0.172
53.25	-39.02	-5.17	0.00	-326.88	0.00	326.88	2693.71	1346.85	4350.71	2178.59	3.28	-0.605	0.000	0.165
55.00	-38.54	-5.15	0.00	-317.83	0.00	317.83	2675.00	1337.50	4274.96	2140.66	3.50	-0.627	0.000	0.163
60.00	-37.19	-5.06	0.00	-292.06	0.00	292.06	2620.47	1310.24	4060.32	2033.18	4.19	-0.686	0.000	0.158
65.00	-35.88	-4.96	0.00	-266.79	0.00	266.79	2564.30	1282.15	3848.53	1927.13	4.94	-0.745	0.000	0.152
70.00	-34.60	-4.85	0.00	-242.01	0.00	242.01	2506.50	1253.25	3639.84	1822.63	5.75	-0.805	0.000	0.147
75.00	-33.36	-4.75	0.00	-217.74	0.00	217.74	2447.06	1223.53	3434.48	1719.79	6.63	-0.863	0.000	0.140
80.00	-32.15	-4.65	0.00	-193.98	0.00	193.98	2385.98	1192.99	3232.68	1618.74	7.56	-0.922	0.000	0.133
85.00	-30.97	-4.54	0.00	-170.74	0.00	170.74	2323.27	1161.64	3034.69	1519.60	8.56	-0.979	0.000	0.126
90.00	-29.83	-4.44	0.00	-148.01	0.00	148.01	2258.93	1129.46	2840.75	1422.49	9.62	-1.035	0.000	0.117
95.00	-28.72	-4.33	0.00	-125.81	0.00	125.81	2173.88	1086.94	2628.05	1315.98	10.73	-1.089	0.000	0.109
97.75	-28.12	-4.27	0.00	-113.91	0.00	113.91	2126.27	1063.14	2513.60	1258.67	11.37	-1.118	0.000	0.104
100.00	-27.48	-4.22	0.00	-104.30	0.00	104.30	2087.31	1043.66	2421.85	1212.73	11.90	-1.142	0.000	0.099
101.50	-27.06	-4.19	0.00	-97.98	0.00	97.98	1088.23	544.12	1274.83	638.36	12.26	-1.157	0.000	0.178
105.00	-26.48	-4.12	0.00	-83.32	0.00	83.32	1070.27	535.14	1217.34	609.58	13.12	-1.190	0.000	0.161
110.00	-25.68	-4.03	0.00	-62.70	0.00	62.70	1043.23	521.61	1135.83	568.76	14.40	-1.255	0.000	0.135
115.00	-24.91	-3.93	0.00	-42.56	0.00	42.56	1014.55	507.27	1055.24	528.40	15.75	-1.309	0.000	0.105
119.00	-13.94	-2.19	0.00	-26.85	0.00	26.85	990.42	495.21	991.60	496.54	16.86	-1.341	0.000	0.068
120.00	-13.81	-2.17	0.00	-24.67	0.00	24.67	984.23	492.11	975.83	488.64	17.14	-1.348	0.000	0.065
125.00	-13.18	-2.06	0.00	-13.83	0.00	13.83	952.28	476.14	897.82	449.58	18.57	-1.374	0.000	0.045
128.00	-4.79	-0.80	0.00	-7.66	0.00	7.66	932.32	466.16	851.79	426.53	19.44	-1.384	0.000	0.023
129.00	-4.69	-0.78	0.00	-6.86	0.00	6.86	925.54	462.77	836.59	418.92	19.73	-1.386	0.000	0.021
129.00	-4.69	-0.78	0.00	-6.86	0.00	6.86	925.54	462.77	836.59	418.92	19.73	-1.386	0.000	0.021
130.00	-4.59	-0.76	0.00	-6.08	0.00	6.08	918.69	459.34	821.46	411.34	20.02	-1.389	0.000	0.020
135.00	-4.09	-0.65	0.00	-2.30	0.00	2.30	883.47	441.73	746.98	374.05	21.47	-1.396	0.000	0.011
138.50	-0.05	-0.01	0.00	0.00	0.00	0.00	857.84	428.92	696.10	348.57	22.50	-1.398	0.000	0.000
139.00	0.00	-0.01	0.00	0.00	0.00	0.00	854.11	427.06	688.92	344.97	22.65	-1.398	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 20

IES Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.22		**Ss**	0.21
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.11		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.35		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		854.05	0.00	0.03	0.02	20.20	
10.00		834.22	0.01	0.05	0.03	27.80	
15.00		814.40	0.02	0.07	0.04	30.76	
20.00		794.57	0.04	0.07	0.04	31.75	
25.00		774.75	0.06	0.07	0.04	31.98	
30.00		754.92	0.09	0.07	0.04	32.00	
35.00		735.10	0.12	0.07	0.03	31.97	
40.00		715.27	0.16	0.07	0.03	31.80	
45.00		695.45	0.20	0.06	0.02	31.16	
48.00	Bot - Section 2	407.75	0.23	0.06	0.02	18.10	
50.00		539.96	0.24	0.06	0.02	23.61	
53.25	Top - Section 1	863.90	0.28	0.05	0.01	36.05	
55.00		230.96	0.30	0.05	0.01	9.26	
60.00		646.52	0.35	0.03	0.01	21.08	
65.00		626.69	0.41	0.01	0.01	12.74	
70.00		606.87	0.48	-0.01	0.01	2.24	
75.00		587.04	0.55	-0.03	0.01	-8.68	
80.00		567.22	0.63	-0.06	0.02	-17.69	
85.00		547.39	0.71	-0.09	0.03	-23.14	
90.00		527.57	0.79	-0.11	0.05	-24.52	
95.00		507.74	0.88	-0.12	0.08	-22.10	
97.75	Bot - Section 3	270.81	0.93	-0.12	0.10	-10.54	
100.00		349.65	0.98	-0.11	0.12	-11.75	
101.50	Top - Section 2	229.53	1.01	-0.11	0.14	-6.73	
105.00		198.89	1.08	-0.08	0.17	-3.37	
110.00		274.02	1.18	-0.01	0.24	1.77	
115.00		262.13	1.29	0.11	0.33	9.57	
119.00	Appurtenance(s)	4306.6	1.39	0.26	0.42	281.77	
120.00		49.09	1.41	0.30	0.44	3.60	
125.00		238.34	1.53	0.57	0.58	27.92	
128.00	Appurtenance(s)	3347.1	1.60	0.79	0.67	491.39	
129.00	Top - Section 3	44.81	1.63	0.87	0.71	7.05	
130.00		44.34	1.65	0.95	0.74	7.45	
135.00		214.55	1.78	1.46	0.95	48.54	
138.50	Appurtenance(s)	1943.1	1.88	1.91	1.11	527.41	
139.00		19.97	1.89	1.98	1.14	5.55	
	Totals:	**25,425.4**				**1,676.0**	**Total Wind:** **19,175.3**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.22			**Ss**	0.21
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.11			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.35	**SA**	0.04	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.68	-1.81	0.00	-207.54	0.00	207.54	3147.71	1573.86	6633.45	3321.65		0.00	0.00	0.073
5.00	-33.48	-1.80	0.00	-198.49	0.00	198.49	3110.30	1555.15	6403.28	3206.40		0.01	-0.02	0.073
10.00	-32.31	-1.78	0.00	-189.50	0.00	189.50	3071.25	1535.62	6173.46	3091.32		0.04	-0.03	0.072
15.00	-31.17	-1.76	0.00	-180.59	0.00	180.59	3030.56	1515.28	5944.24	2976.54		0.08	-0.05	0.071
20.00	-30.04	-1.74	0.00	-171.80	0.00	171.80	2988.24	1494.12	5715.85	2862.17		0.15	-0.07	0.070
25.00	-28.94	-1.71	0.00	-163.12	0.00	163.12	2944.28	1472.14	5488.53	2748.34		0.23	-0.09	0.069
30.00	-27.87	-1.69	0.00	-154.56	0.00	154.56	2898.69	1449.34	5262.51	2635.17		0.34	-0.11	0.068
35.00	-26.82	-1.66	0.00	-146.12	0.00	146.12	2851.46	1425.73	5038.05	2522.77		0.46	-0.13	0.067
40.00	-25.79	-1.64	0.00	-137.80	0.00	137.80	2802.60	1401.30	4815.37	2411.26		0.61	-0.15	0.066
45.00	-24.79	-1.61	0.00	-129.62	0.00	129.62	2752.10	1376.05	4594.71	2300.77		0.78	-0.17	0.065
48.00	-24.19	-1.60	0.00	-124.78	0.00	124.78	2721.01	1360.51	4463.39	2235.01		0.89	-0.18	0.065
50.00	-23.48	-1.57	0.00	-121.59	0.00	121.59	2699.97	1349.98	4376.32	2191.41		0.97	-0.19	0.064
53.25	-22.33	-1.54	0.00	-116.47	0.00	116.47	2693.71	1346.85	4350.71	2178.59		1.10	-0.21	0.062
55.00	-22.00	-1.53	0.00	-113.78	0.00	113.78	2675.00	1337.50	4274.96	2140.66		1.18	-0.21	0.061
60.00	-21.05	-1.52	0.00	-106.11	0.00	106.11	2620.47	1310.24	4060.32	2033.18		1.42	-0.24	0.060
65.00	-20.13	-1.51	0.00	-98.52	0.00	98.52	2564.30	1282.15	3848.53	1927.13		1.67	-0.26	0.059
70.00	-19.23	-1.51	0.00	-90.98	0.00	90.98	2506.50	1253.25	3639.84	1822.63		1.96	-0.28	0.058
75.00	-18.36	-1.51	0.00	-83.44	0.00	83.44	2447.06	1223.53	3434.48	1719.79		2.26	-0.30	0.056
80.00	-17.51	-1.51	0.00	-75.88	0.00	75.88	2385.98	1192.99	3232.68	1618.74		2.59	-0.32	0.054
85.00	-16.68	-1.52	0.00	-68.31	0.00	68.31	2323.27	1161.64	3034.69	1519.60		2.94	-0.35	0.052
90.00	-15.88	-1.52	0.00	-60.73	0.00	60.73	2258.93	1129.46	2840.75	1422.49		3.32	-0.37	0.050
95.00	-15.10	-1.52	0.00	-53.14	0.00	53.14	2173.88	1086.94	2628.05	1315.98		3.71	-0.39	0.047
97.75	-14.68	-1.52	0.00	-48.97	0.00	48.97	2126.27	1063.14	2513.60	1258.67		3.94	-0.40	0.046
100.00	-14.18	-1.52	0.00	-45.56	0.00	45.56	2087.31	1043.66	2421.85	1212.73		4.14	-0.41	0.044
101.50	-13.86	-1.52	0.00	-43.29	0.00	43.29	1088.23	544.12	1274.83	638.36		4.27	-0.42	0.081
105.00	-13.50	-1.52	0.00	-37.98	0.00	37.98	1070.27	535.14	1217.34	609.58		4.58	-0.44	0.075
110.00	-13.00	-1.52	0.00	-30.39	0.00	30.39	1043.23	521.61	1135.83	568.76		5.06	-0.47	0.066
115.00	-12.52	-1.51	0.00	-22.80	0.00	22.80	1014.55	507.27	1055.24	528.40		5.56	-0.49	0.055
119.00	-7.22	-1.18	0.00	-16.75	0.00	16.75	990.42	495.21	991.60	496.54		5.98	-0.51	0.041
120.00	-7.14	-1.18	0.00	-15.57	0.00	15.57	984.23	492.11	975.83	488.64		6.09	-0.52	0.039
125.00	-6.77	-1.15	0.00	-9.67	0.00	9.67	952.28	476.14	897.82	449.58		6.64	-0.53	0.029
128.00	-2.71	-0.62	0.00	-6.21	0.00	6.21	932.32	466.16	851.79	426.53		6.98	-0.54	0.017
129.00	-2.66	-0.61	0.00	-5.59	0.00	5.59	925.54	462.77	836.59	418.92		7.09	-0.54	0.016
129.00	-2.66	-0.61	0.00	-5.59	0.00	5.59	925.54	462.77	836.59	418.92		7.09	-0.54	0.016
130.00	-2.61	-0.61	0.00	-4.98	0.00	4.98	918.69	459.34	821.46	411.34		7.21	-0.54	0.015
135.00	-2.35	-0.56	0.00	-1.95	0.00	1.95	883.47	441.73	746.98	374.05		7.78	-0.55	0.008
138.50	-0.02	-0.01	0.00	0.00	0.00	0.00	857.84	428.92	696.10	348.57		8.18	-0.55	0.000
139.00	0.00	-0.01	0.00	0.00	0.00	0.00	854.11	427.06	688.92	344.97		8.24	-0.55	0.000

Seismic Segment Forces (Factored)

Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 22

IES Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.22		**Ss**	0.21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.11		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.35		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		854.05	0.00	0.03	0.02	20.20	
10.00		834.22	0.01	0.05	0.03	27.80	
15.00		814.40	0.02	0.07	0.04	30.76	
20.00		794.57	0.04	0.07	0.04	31.75	
25.00		774.75	0.06	0.07	0.04	31.98	
30.00		754.92	0.09	0.07	0.04	32.00	
35.00		735.10	0.12	0.07	0.03	31.97	
40.00		715.27	0.16	0.07	0.03	31.80	
45.00		695.45	0.20	0.06	0.02	31.16	
48.00	Bot - Section 2	407.75	0.23	0.06	0.02	18.10	
50.00		539.96	0.24	0.06	0.02	23.61	
53.25	Top - Section 1	863.90	0.28	0.05	0.01	36.05	
55.00		230.96	0.30	0.05	0.01	9.26	
60.00		646.52	0.35	0.03	0.01	21.08	
65.00		626.69	0.41	0.01	0.01	12.74	
70.00		606.87	0.48	-0.01	0.01	2.24	
75.00		587.04	0.55	-0.03	0.01	-8.68	
80.00		567.22	0.63	-0.06	0.02	-17.69	
85.00		547.39	0.71	-0.09	0.03	-23.14	
90.00		527.57	0.79	-0.11	0.05	-24.52	
95.00		507.74	0.88	-0.12	0.08	-22.10	
97.75	Bot - Section 3	270.81	0.93	-0.12	0.10	-10.54	
100.00		349.65	0.98	-0.11	0.12	-11.75	
101.50	Top - Section 2	229.53	1.01	-0.11	0.14	-6.73	
105.00		198.89	1.08	-0.08	0.17	-3.37	
110.00		274.02	1.18	-0.01	0.24	1.77	
115.00		262.13	1.29	0.11	0.33	9.57	
119.00	Appurtenance(s)	4306.6	1.39	0.26	0.42	281.77	
120.00		49.09	1.41	0.30	0.44	3.60	
125.00		238.34	1.53	0.57	0.58	27.92	
128.00	Appurtenance(s)	3347.1	1.60	0.79	0.67	491.39	
129.00	Top - Section 3	44.81	1.63	0.87	0.71	7.05	
130.00		44.34	1.65	0.95	0.74	7.45	
135.00		214.55	1.78	1.46	0.95	48.54	
138.50	Appurtenance(s)	1943.1	1.88	1.91	1.11	527.41	
139.00		19.97	1.89	1.98	1.14	5.55	
	Totals:	**25,425.4**				**1,676.0**	**Total Wind:** **19,175.3**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.22			**Ss**	0.21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.11			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.35	**SA**	0.04	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-26.01	-1.81	0.00	-204.94	0.00	204.94	3147.71	1573.86	6633.45	3321.65		0.00	0.00	0.070
5.00	-25.11	-1.80	0.00	-195.90	0.00	195.90	3110.30	1555.15	6403.28	3206.40		0.01	-0.02	0.069
10.00	-24.24	-1.77	0.00	-186.93	0.00	186.93	3071.25	1535.62	6173.46	3091.32		0.04	-0.03	0.068
15.00	-23.37	-1.75	0.00	-178.05	0.00	178.05	3030.56	1515.28	5944.24	2976.54		0.08	-0.05	0.068
20.00	-22.53	-1.72	0.00	-169.30	0.00	169.30	2988.24	1494.12	5715.85	2862.17		0.15	-0.07	0.067
25.00	-21.71	-1.70	0.00	-160.68	0.00	160.68	2944.28	1472.14	5488.53	2748.34		0.23	-0.09	0.066
30.00	-20.90	-1.67	0.00	-152.18	0.00	152.18	2898.69	1449.34	5262.51	2635.17		0.33	-0.11	0.065
35.00	-20.11	-1.65	0.00	-143.82	0.00	143.82	2851.46	1425.73	5038.05	2522.77		0.46	-0.13	0.064
40.00	-19.34	-1.62	0.00	-135.59	0.00	135.59	2802.60	1401.30	4815.37	2411.26		0.60	-0.15	0.063
45.00	-18.59	-1.59	0.00	-127.50	0.00	127.50	2752.10	1376.05	4594.71	2300.77		0.77	-0.17	0.062
48.00	-18.14	-1.58	0.00	-122.72	0.00	122.72	2721.01	1360.51	4463.39	2235.01		0.88	-0.18	0.062
50.00	-17.61	-1.55	0.00	-119.57	0.00	119.57	2699.97	1349.98	4376.32	2191.41		0.95	-0.19	0.061
53.25	-16.75	-1.52	0.00	-114.52	0.00	114.52	2693.71	1346.85	4350.71	2178.59		1.09	-0.20	0.059
55.00	-16.50	-1.51	0.00	-111.87	0.00	111.87	2675.00	1337.50	4274.96	2140.66		1.16	-0.21	0.058
60.00	-15.79	-1.49	0.00	-104.31	0.00	104.31	2620.47	1310.24	4060.32	2033.18		1.40	-0.23	0.057
65.00	-15.10	-1.48	0.00	-96.84	0.00	96.84	2564.30	1282.15	3848.53	1927.13		1.65	-0.25	0.056
70.00	-14.42	-1.48	0.00	-89.43	0.00	89.43	2506.50	1253.25	3639.84	1822.63		1.93	-0.27	0.055
75.00	-13.77	-1.49	0.00	-82.01	0.00	82.01	2447.06	1223.53	3434.48	1719.79		2.23	-0.30	0.053
80.00	-13.13	-1.49	0.00	-74.58	0.00	74.58	2385.98	1192.99	3232.68	1618.74		2.55	-0.32	0.052
85.00	-12.51	-1.49	0.00	-67.14	0.00	67.14	2323.27	1161.64	3034.69	1519.60		2.90	-0.34	0.050
90.00	-11.91	-1.49	0.00	-59.70	0.00	59.70	2258.93	1129.46	2840.75	1422.49		3.27	-0.36	0.047
95.00	-11.32	-1.49	0.00	-52.25	0.00	52.25	2173.88	1086.94	2628.05	1315.98		3.66	-0.39	0.045
97.75	-11.01	-1.49	0.00	-48.16	0.00	48.16	2126.27	1063.14	2513.60	1258.67		3.88	-0.40	0.043
100.00	-10.64	-1.49	0.00	-44.81	0.00	44.81	2087.31	1043.66	2421.85	1212.73		4.07	-0.41	0.042
101.50	-10.39	-1.49	0.00	-42.57	0.00	42.57	1088.23	544.12	1274.83	638.36		4.20	-0.41	0.076
105.00	-10.12	-1.49	0.00	-37.36	0.00	37.36	1070.27	535.14	1217.34	609.58		4.51	-0.43	0.071
110.00	-9.75	-1.49	0.00	-29.91	0.00	29.91	1043.23	521.61	1135.83	568.76		4.98	-0.46	0.062
115.00	-9.39	-1.48	0.00	-22.46	0.00	22.46	1014.55	507.27	1055.24	528.40		5.47	-0.49	0.052
119.00	-5.41	-1.17	0.00	-16.53	0.00	16.53	990.42	495.21	991.60	496.54		5.89	-0.50	0.039
120.00	-5.35	-1.16	0.00	-15.37	0.00	15.37	984.23	492.11	975.83	488.64		5.99	-0.51	0.037
125.00	-5.08	-1.13	0.00	-9.55	0.00	9.55	952.28	476.14	897.82	449.58		6.54	-0.52	0.027
128.00	-2.03	-0.61	0.00	-6.15	0.00	6.15	932.32	466.16	851.79	426.53		6.87	-0.53	0.017
129.00	-1.99	-0.61	0.00	-5.53	0.00	5.53	925.54	462.77	836.59	418.92		6.98	-0.53	0.015
129.00	-1.99	-0.61	0.00	-5.53	0.00	5.53	925.54	462.77	836.59	418.92		6.98	-0.53	0.015
130.00	-1.95	-0.60	0.00	-4.93	0.00	4.93	918.69	459.34	821.46	411.34		7.09	-0.54	0.014
135.00	-1.76	-0.55	0.00	-1.93	0.00	1.93	883.47	441.73	746.98	374.05		7.66	-0.54	0.007
138.50	-0.02	-0.01	0.00	0.00	0.00	0.00	857.84	428.92	696.10	348.57		8.06	-0.54	0.000
139.00	0.00	-0.01	0.00	0.00	0.00	0.00	854.11	427.06	688.92	344.97		8.11	-0.54	0.000

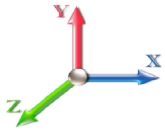
Wind Loading - Shaft

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.74	218.81	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	213.82	0.650	0.000	5.00	21.545	14.00	94.4	0.0	854.0
10.00		1.00	0.70	6.129	6.74	208.83	0.650	0.000	5.00	21.048	13.68	92.2	0.0	834.2
15.00		1.00	0.70	6.129	6.74	203.83	0.650	0.000	5.00	20.551	13.36	90.1	0.0	814.4
20.00		1.00	0.70	6.129	6.74	198.84	0.650	0.000	5.00	20.054	13.04	87.9	0.0	794.6
25.00		1.00	0.70	6.129	6.74	193.85	0.650	0.000	5.00	19.557	12.71	85.7	0.0	774.7
30.00		1.00	0.70	6.134	6.75	188.94	0.650	0.000	5.00	19.060	12.39	83.6	0.0	754.9
35.00		1.00	0.73	6.410	7.05	188.05	0.650	0.000	5.00	18.563	12.07	85.1	0.0	735.1
40.00		1.00	0.76	6.659	7.33	186.47	0.650	0.000	5.00	18.066	11.74	86.0	0.0	715.3
45.00		1.00	0.79	6.887	7.58	184.34	0.650	0.000	5.00	17.569	11.42	86.5	0.0	695.4
48.00	Bot - Section 2	1.00	0.80	7.015	7.72	182.84	0.650	0.000	3.00	10.303	6.70	51.7	0.0	407.8
50.00		1.00	0.81	7.098	7.81	181.76	0.650	0.000	2.00	6.875	4.47	34.9	0.0	540.0
53.25	Top - Section 1	1.00	0.83	7.227	7.95	179.88	0.650	0.000	3.25	11.002	7.15	56.8	0.0	863.9
55.00		1.00	0.83	7.294	8.02	181.71	0.650	0.000	1.75	5.837	3.79	30.4	0.0	231.0
60.00		1.00	0.85	7.477	8.22	178.47	0.650	0.000	5.00	16.342	10.62	87.4	0.0	646.5
65.00		1.00	0.87	7.650	8.42	174.95	0.650	0.000	5.00	15.845	10.30	86.7	0.0	626.7
70.00		1.00	0.89	7.814	8.60	171.17	0.650	0.000	5.00	15.348	9.98	85.7	0.0	606.9
75.00		1.00	0.91	7.969	8.77	167.18	0.650	0.000	5.00	14.851	9.65	84.6	0.0	587.0
80.00		1.00	0.93	8.118	8.93	162.98	0.650	0.000	5.00	14.354	9.33	83.3	0.0	567.2
85.00		1.00	0.94	8.260	9.09	158.61	0.650	0.000	5.00	13.857	9.01	81.8	0.0	547.4
90.00		1.00	0.96	8.396	9.24	154.07	0.650	0.000	5.00	13.359	8.68	80.2	0.0	527.6
95.00		1.00	0.97	8.526	9.38	149.37	0.650	0.000	5.00	12.862	8.36	78.4	0.0	507.7
97.75	Bot - Section 3	1.00	0.98	8.596	9.46	146.73	0.650	0.000	2.75	6.862	4.46	42.2	0.0	270.8
100.00		1.00	0.99	8.652	9.52	144.54	0.650	0.000	2.25	5.574	3.62	34.5	0.0	349.7
101.50	Top - Section 2	1.00	0.99	8.689	9.56	143.07	0.650	0.000	1.50	3.660	2.38	22.7	0.0	229.5
105.00		1.00	1.00	8.774	9.65	141.49	0.650	0.000	3.50	8.367	5.44	52.5	0.0	198.9
110.00		1.00	1.02	8.891	9.78	136.42	0.650	0.000	5.00	11.530	7.49	73.3	0.0	274.0
115.00		1.00	1.03	9.005	9.91	131.24	0.650	0.000	5.00	11.033	7.17	71.0	0.0	262.1
119.00	Appurtenance(s)	1.00	1.04	9.093	10.00	127.02	0.650	0.000	4.00	8.468	5.50	55.1	0.0	201.1
120.00		1.00	1.04	9.115	10.03	125.96	0.650	0.000	1.00	2.067	1.34	13.5	0.0	49.1
125.00		1.00	1.05	9.222	10.14	120.57	0.650	0.000	5.00	10.039	6.53	66.2	0.0	238.3
128.00	Appurtenance(s)	1.00	1.06	9.284	10.21	117.30	0.650	0.000	3.00	5.785	3.76	38.4	0.0	137.3
129.00	Top - Section 3	1.00	1.06	9.305	10.24	116.20	0.650	0.000	1.00	1.888	1.23	12.6	0.0	44.8
130.00		1.00	1.07	9.326	10.26	115.09	0.650	0.000	1.00	1.869	1.21	12.5	0.0	44.3
135.00		1.00	1.08	9.427	10.37	109.53	0.650	0.000	5.00	9.045	5.88	61.0	0.0	214.5
138.50	Appurtenance(s)	1.00	1.08	9.496	10.45	105.58	0.650	0.000	3.50	6.035	3.92	41.0	0.0	143.1
139.00		1.00	1.09	9.506	10.46	105.01	0.650	0.000	0.50	0.842	0.55	5.7	0.0	20.0
								Totals:	**139.00**			**2,235.5**		**16,310.0**

Discrete Appurtenance Forces

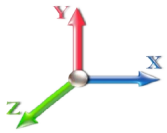
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	138.50	Low Profile Platform	1	9.496	10.446	1.00	1.00	37.20	1800.00	0.000	0.000	388.57	0.00	0.00
2	128.00	Low Profile Platform	1	9.284	10.213	1.00	1.00	33.40	1650.00	0.000	0.000	341.11	0.00	0.00
3	128.00	Ericsson - AIR21 B2A B4P	3	9.284	10.213	0.64	0.75	11.70	274.50	0.000	0.000	119.51	0.00	0.00
4	128.00	KRD 9011461-B66A-B2A	3	9.284	10.213	0.65	0.75	12.74	396.60	0.000	0.000	130.15	0.00	0.00
5	128.00	Ericsson - KRY 112 114-1	3	9.284	10.213	0.50	0.75	0.62	33.00	0.000	0.000	6.31	0.00	0.00
6	128.00	APXVAARR24_43-U-NA2	3	9.284	10.213	0.52	0.75	31.88	384.00	0.000	0.000	325.57	0.00	0.00
7	128.00	4449	3	9.284	10.213	0.50	0.75	2.49	210.00	0.000	0.000	25.40	0.00	0.00
8	128.00	HRK12 (Handrail Kit)	1	9.284	10.213	1.00	1.00	6.75	261.72	0.000	0.000	68.94	0.00	0.00
9	119.00	Ericsson - RRUS-11 -	3	9.093	10.002	0.54	0.80	4.05	153.00	0.000	0.000	40.53	0.00	0.00
10	119.00	Site Pro PRK-1245L	1	9.093	10.002	1.00	1.00	9.50	464.91	0.000	0.000	95.02	0.00	0.00
11	119.00	Site Pro HRK12 Handrail	1	9.093	10.002	1.00	1.00	6.75	261.72	0.000	0.000	67.52	0.00	0.00
12	119.00	Ericsson - RRUS 32 B30 -	3	9.093	10.002	0.54	0.80	4.41	180.00	0.000	0.000	44.07	0.00	0.00
13	119.00	Kaelus -	6	9.093	10.002	0.40	0.80	1.03	152.40	0.000	0.000	10.32	0.00	0.00
14	119.00	Powerwave -	3	9.093	10.002	0.40	0.80	0.77	48.00	0.000	0.000	7.68	0.00	0.00
15	119.00	Powerwave - LGP21401 -	9	9.093	10.002	0.40	0.80	4.64	126.90	0.000	0.000	46.45	0.00	0.00
16	119.00	Cci - HPA-65R-BUU-H6	3	9.093	10.002	0.67	0.80	19.34	153.00	0.000	0.000	193.40	0.00	0.00
17	119.00	Quintel - QS66512-2	3	9.093	10.002	0.73	0.80	17.91	333.00	0.000	0.000	179.16	0.00	0.00
18	119.00	Powerwave - 7770	6	9.093	10.002	0.61	0.80	20.22	210.00	0.000	0.000	202.27	0.00	0.00
19	119.00	Low Profile Platform	1	9.093	10.002	1.00	1.00	40.20	1800.00	0.000	0.000	402.09	0.00	0.00
20	119.00	Raycap -	2	9.093	10.002	0.80	0.80	1.47	63.60	0.000	0.000	14.72	0.00	0.00
21	119.00	Ericsson - RRUS-32 B2 -	3	9.093	10.002	0.54	0.80	4.41	159.00	0.000	0.000	44.07	0.00	0.00
							Totals:		**9,115.35**			**2,752.88**		

Total Applied Force Summary

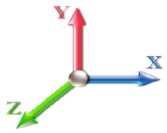
Structure:	CT13060-A-SBA		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		94.41	994.90	0.00	0.00
10.00		92.23	975.07	0.00	0.00
15.00		90.05	955.25	0.00	0.00
20.00		87.88	935.42	0.00	0.00
25.00		85.70	915.60	0.00	0.00
30.00		83.59	895.77	0.00	0.00
35.00		85.08	875.95	0.00	0.00
40.00		86.02	856.12	0.00	0.00
45.00		86.51	836.30	0.00	0.00
48.00		51.68	492.26	0.00	0.00
50.00		34.89	596.30	0.00	0.00
53.25		56.85	955.45	0.00	0.00
55.00		30.44	280.26	0.00	0.00
60.00		87.37	787.37	0.00	0.00
65.00		86.67	767.54	0.00	0.00
70.00		85.75	747.72	0.00	0.00
75.00		84.62	727.89	0.00	0.00
80.00		83.31	708.07	0.00	0.00
85.00		81.83	688.24	0.00	0.00
90.00		80.19	668.42	0.00	0.00
95.00		78.41	648.59	0.00	0.00
97.75		42.18	348.28	0.00	0.00
100.00		34.48	413.04	0.00	0.00
101.50		22.74	271.79	0.00	0.00
105.00		52.49	297.49	0.00	0.00
110.00		73.30	414.87	0.00	0.00
115.00		71.03	402.98	0.00	0.00
119.00	(44) attachments	1402.37	4419.35	0.00	0.00
120.00		13.47	62.61	0.00	0.00
125.00		66.19	305.94	0.00	0.00
128.00	(17) attachments	1055.39	3387.67	0.00	0.00
129.00		12.56	44.81	0.00	0.00
130.00		12.46	44.34	0.00	0.00
135.00		60.96	214.55	0.00	0.00
138.50	(1) attachments	429.55	1943.11	0.00	0.00
139.00		5.72	19.97	0.00	0.00
	Totals:	**4,988.38**	**28,899.26**	**0.00**	**0.00**

Calculated Forces

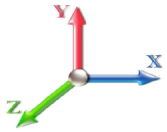
Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-28.90	-5.00	0.00	-514.08	0.00	514.08	3147.71	1573.86	6633.45	3321.65	0.00	0.000	0.000	0.164
5.00	-27.90	-4.92	0.00	-489.09	0.00	489.09	3110.30	1555.15	6403.28	3206.40	0.02	-0.042	0.000	0.162
10.00	-26.92	-4.85	0.00	-464.47	0.00	464.47	3071.25	1535.62	6173.46	3091.32	0.09	-0.086	0.000	0.159
15.00	-25.96	-4.78	0.00	-440.22	0.00	440.22	3030.56	1515.28	5944.24	2976.54	0.20	-0.130	0.000	0.156
20.00	-25.02	-4.71	0.00	-416.32	0.00	416.32	2988.24	1494.12	5715.85	2862.17	0.36	-0.175	0.000	0.154
25.00	-24.10	-4.64	0.00	-392.77	0.00	392.77	2944.28	1472.14	5488.53	2748.34	0.57	-0.220	0.000	0.151
30.00	-23.20	-4.57	0.00	-369.57	0.00	369.57	2898.69	1449.34	5262.51	2635.17	0.83	-0.267	0.000	0.148
35.00	-22.33	-4.50	0.00	-346.72	0.00	346.72	2851.46	1425.73	5038.05	2522.77	1.13	-0.314	0.000	0.145
40.00	-21.47	-4.43	0.00	-324.22	0.00	324.22	2802.60	1401.30	4815.37	2411.26	1.49	-0.362	0.000	0.142
45.00	-20.63	-4.35	0.00	-302.08	0.00	302.08	2752.10	1376.05	4594.71	2300.77	1.89	-0.411	0.000	0.139
48.00	-20.13	-4.30	0.00	-289.03	0.00	289.03	2721.01	1360.51	4463.39	2235.01	2.16	-0.441	0.000	0.137
50.00	-19.54	-4.27	0.00	-280.43	0.00	280.43	2699.97	1349.98	4376.32	2191.41	2.35	-0.461	0.000	0.135
53.25	-18.58	-4.22	0.00	-266.54	0.00	266.54	2693.71	1346.85	4350.71	2178.59	2.67	-0.494	0.000	0.129
55.00	-18.30	-4.19	0.00	-259.17	0.00	259.17	2675.00	1337.50	4274.96	2140.66	2.86	-0.512	0.000	0.128
60.00	-17.51	-4.11	0.00	-238.20	0.00	238.20	2620.47	1310.24	4060.32	2033.18	3.42	-0.560	0.000	0.124
65.00	-16.74	-4.03	0.00	-217.63	0.00	217.63	2564.30	1282.15	3848.53	1927.13	4.03	-0.608	0.000	0.119
70.00	-15.99	-3.95	0.00	-197.47	0.00	197.47	2506.50	1253.25	3639.84	1822.63	4.70	-0.656	0.000	0.115
75.00	-15.26	-3.87	0.00	-177.70	0.00	177.70	2447.06	1223.53	3434.48	1719.79	5.41	-0.704	0.000	0.110
80.00	-14.55	-3.79	0.00	-158.34	0.00	158.34	2385.98	1192.99	3232.68	1618.74	6.17	-0.752	0.000	0.104
85.00	-13.86	-3.71	0.00	-139.39	0.00	139.39	2323.27	1161.64	3034.69	1519.60	6.99	-0.799	0.000	0.098
90.00	-13.19	-3.63	0.00	-120.83	0.00	120.83	2258.93	1129.46	2840.75	1422.49	7.85	-0.845	0.000	0.091
95.00	-12.54	-3.55	0.00	-102.67	0.00	102.67	2173.88	1086.94	2628.05	1315.98	8.76	-0.889	0.000	0.084
97.75	-12.19	-3.51	0.00	-92.90	0.00	92.90	2126.27	1063.14	2513.60	1258.67	9.27	-0.912	0.000	0.080
100.00	-11.77	-3.47	0.00	-85.00	0.00	85.00	2087.31	1043.66	2421.85	1212.73	9.71	-0.931	0.000	0.076
101.50	-11.50	-3.45	0.00	-79.80	0.00	79.80	1088.23	544.12	1274.83	638.36	10.00	-0.944	0.000	0.136
105.00	-11.20	-3.40	0.00	-67.73	0.00	67.73	1070.27	535.14	1217.34	609.58	10.71	-0.970	0.000	0.122
110.00	-10.79	-3.33	0.00	-50.74	0.00	50.74	1043.23	521.61	1135.83	568.76	11.75	-1.023	0.000	0.100
115.00	-10.38	-3.25	0.00	-34.11	0.00	34.11	1014.55	507.27	1055.24	528.40	12.85	-1.067	0.000	0.075
119.00	-5.99	-1.77	0.00	-21.09	0.00	21.09	990.42	495.21	991.60	496.54	13.76	-1.093	0.000	0.049
120.00	-5.93	-1.76	0.00	-19.32	0.00	19.32	984.23	492.11	975.83	488.64	13.98	-1.098	0.000	0.046
125.00	-5.62	-1.69	0.00	-10.53	0.00	10.53	952.28	476.14	897.82	449.58	15.15	-1.118	0.000	0.029
128.00	-2.26	-0.57	0.00	-5.47	0.00	5.47	932.32	466.16	851.79	426.53	15.85	-1.125	0.000	0.015
129.00	-2.21	-0.55	0.00	-4.91	0.00	4.91	925.54	462.77	836.59	418.92	16.09	-1.127	0.000	0.014
129.00	-2.21	-0.55	0.00	-4.91	0.00	4.91	925.54	462.77	836.59	418.92	16.09	-1.127	0.000	0.014
130.00	-2.17	-0.54	0.00	-4.36	0.00	4.36	918.69	459.34	821.46	411.34	16.32	-1.129	0.000	0.013
135.00	-1.95	-0.47	0.00	-1.66	0.00	1.66	883.47	441.73	746.98	374.05	17.51	-1.134	0.000	0.007
138.50	-0.02	-0.01	0.00	0.00	0.00	0.00	857.84	428.92	696.10	348.57	18.34	-1.136	0.000	0.000
139.00	0.00	-0.01	0.00	0.00	0.00	0.00	854.11	427.06	688.92	344.97	18.46	-1.136	0.000	0.000

Final Analysis Summary

Structure:	CT13060-A-SBA	**Code:**	EIA/TIA-222-G	7/2/2019	
Site Name:	Newtown 2	**Exposure:**	B		
Height:	139.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 93 mph Wind	19.2	0.00	34.65	0.00	0.00	1990.46
0.9D + 1.6W 93 mph Wind	19.2	0.00	25.98	0.00	0.00	1967.18
1.2D + 1.0Di + 1.0Wi 50 mph Wind	6.1	0.00	55.88	0.00	0.00	628.99
1.2D + 1.0E	1.8	0.00	34.68	0.00	0.00	207.54
0.9D + 1.0E	1.8	0.00	26.01	0.00	0.00	204.94
1.0D + 1.0W 60 mph Wind	5.0	0.00	28.90	0.00	0.00	514.08

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 93 mph Wind	-34.65	-19.23	0.00	-1990.4	0.00	-1990.4	3147.71	1573.8	6633.45	3321.65	0.00	0.610
0.9D + 1.6W 93 mph Wind	-25.98	-19.21	0.00	-1967.1	0.00	-1967.1	3147.71	1573.8	6633.45	3321.65	0.00	0.601
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-55.88	-6.05	0.00	-628.99	0.00	-628.99	3147.71	1573.8	6633.45	3321.65	0.00	0.207
1.2D + 1.0E	-13.86	-1.52	0.00	-43.29	0.00	-43.29	1088.23	544.12	1274.83	638.36	101.50	0.081
0.9D + 1.0E	-10.39	-1.49	0.00	-42.57	0.00	-42.57	1088.23	544.12	1274.83	638.36	101.50	0.076
1.0D + 1.0W 60 mph Wind	-28.90	-5.00	0.00	-514.08	0.00	-514.08	3147.71	1573.8	6633.45	3321.65	0.00	0.164

Base Plate Summary

Structure:	CT13060-A-SB		**Code:**	EIA/TIA-222-G	7/2/2019
Site Name:	Newtown 2		**Exposure:**	B	
Height:	139.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Tower Engineering Solutions

Reactions		Base Plate		Anchor Bolts	
Original Design		**Yield (ksi):**	60.00	**Bolt Circle:**	58.00
Moment (kip-ft):	1882.00	**Width (in):**	56.00	**Number Bolts:**	12.00
Axial (kip):	32.90	**Style:**	Clipped	**Bolt Type:**	2.25" 18J
Shear (kip):	17.20	**Polygon Sides:**	4.00	**Bolt Diameter (in):**	2.25
Analysis		**Clip Length (in):**	10.00	**Yield (ksi):**	75.00
Moment (kip-ft):	1990.46	**Effective Len (in):**	10.31	**Ultimate (ksi):**	100.00
Axial (kip):	55.88	**Moment (kip-in):**	460.56	**Arrangement:**	Clustered
Shear (kip):	19.23	**Allow Stress (ksi):**	81.00	**Cluster Dist (in):**	6.00
		Applied Stress (ksi):	0.00	**Start Angle (deg):**	45.00
Moment Design %:	105.76	**Stress Ratio:**	0.44	Compression	
				Force (kip):	141.93
				Allowable (kip):	260.00
				Ratio:	0.56
				Tension	
				Force (kip):	132.62
				Allowable (kip):	260.00
				Ratio:	0.52

Monopole Mat Foundation Design

				Date
				7/2/2019
	Customer Name:	T-Mobile	**EIA/TIA Standard:**	EIA-222-G
	Site Name:		**Structure Height (Ft.):**	139
	Site Number:	CT13060-A-SBA	**Engineer Name:**	J. Chen
	Engr. Number:	77994	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

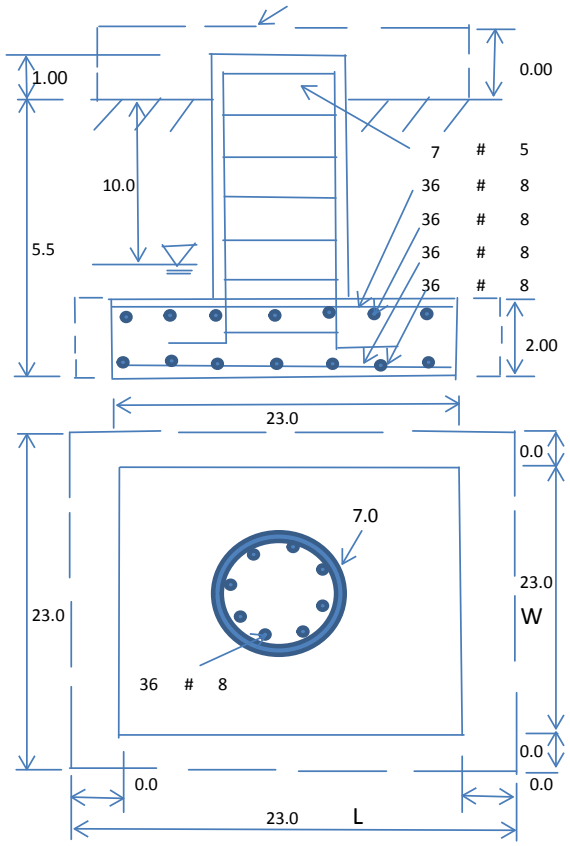
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	55.9	Shear Force (Kips):	19.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	1990.5
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	23	Width of Pad (ft.):	23
Final Length of pad (ft)	23.0	Final width of pad (ft):	23.0



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	36	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	36	Qty. of Rebar in Pad (W):	36	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	36	Qty. of Rebar in Pad (W):	36	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	10.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:			1.00	

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	1716.80	Total Dry Soil Weight (Kips):	188.85
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	188.85	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1231.18	Total Dry Concrete Weight (Kips):	184.68
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	184.68	Total Vertical Load on Base (Kips):	429.43

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1959	<	Allowable Factored Soil Bearing (psf):	9000	0.22	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	4508.8	>	Design Factored Momont (kips-ft):	2115	0.47	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.13	OK!				

Check the capacities of Reinforceing Concrete:

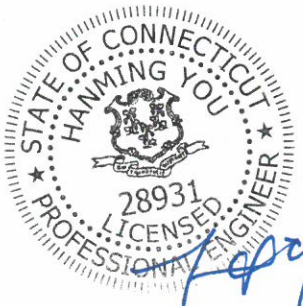
Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	4845.7	>	Design Factored Moment (Mu, Kips-F	2076.9	0.43	OK!
Calculated Shear Capacity (Kips):	734.1	>	Design Factored Shear (Kips):	19.2	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	1535.8	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9747.6	>	Design Factored Axial Load (Pu Kips):	55.9	0.01	OK!
Moment & Axial Strength Combination:	0.43	OK!	Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.005		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	536.8	>	One-Way Factored Shear (L-D. Kips):	164.0	0.31	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	536.8	>	One-Way Factored Shear (W-D., Kips)	164.0	0.31	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	516.0	>	One-Way Factored Shear (C-C, Kips):	157.8	0.31	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0050	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0050		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	2507.2	>	Moment at Bottom (L-Dir. K-Ft):	758.7	0.30	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	2507.2	>	Moment at Bottom (W-Dir. K-Ft):	758.7	0.30	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	3500.6	>	Moment at Bottom (C-C Dir. K-Ft):	1073.0	0.31	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0050	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0050		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	2507.2	>	Moment at the top (L-Dir K-Ft):	283.8	0.11	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	2507.2	>	Moment at the top (W-Dir K-Ft):	283.8	0.11	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	3500.6	>	Moment at the top (C-C Dir. K-Ft):	267.3	0.08	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	796.2	k-ft.	Max. factored shear stress v_{u_CD}:		1.5	Psi
Max. factored shear stress v_{u_AB}:	12.4	Psi	Factored shear Strength ϕv_n:		189.7	Psi
Max. factored shear stress v_u:	12.4	Psi	Check Usage of Punching Shear Capacity:		0.07	OK!

EXHIBIT 8

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Post-Mod Antenna Mount Analysis Report

Existing 139-Ft Monopole Tower
Customer Name: SBA Communications Corp
Customer Site Number: CT13060-A-SBA
Customer Site Name: Newtown 2
Carrier Name: T-Mobile (App#: 116939, V1)
Carrier Site ID / Name: CT11259F / Newtown
Site Location: 3 Edmund Road
Newtown, Connecticut
Fairfield County
Latitude: 41.420899
Longitude: -73.298102



Analysis Result:

Max Structural Usage: 58.5% [Pass]

Report Prepared By: Ishwor Dhakal

7/25/19

Introduction

The purpose of this report is to summarize the analysis results on the (1) Low profile platform at 127.00' elevation including the proposed modifications to support the proposed antenna configuration. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount mapping by Full Metal Services dated 04/25/2019.
Antenna Loading	SBA, Application #: 116939, v1.
Existing Modification	N/A.
Proposed Modification	TES Project No. 81228

Analysis Criteria

Wind Speed Used in the Analysis: V_{ULT} = 120 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 93 mph (3-Sec. Gust)
Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent
Operational Wind Speed: 60 mph +0" Radial ice
Standard/Codes: ANSI/TIA-222-G / 2015 IBC / 2018 CSBC
Exposure Category: B
Structure Class: II
Topographic Category: 1
Crest Height (Ft): 0

The site is a Risk Category II structure per table 1604.5 of the IBC. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

Mount Information

(1) Low profile platform at 127.00' elevation.

Proposed Modifications

(1) Metrosite Support Rail Center Pipe Kit: MS-HRCP-35
(1) Metrosite Support Rail w/ End Connection: MS-HRECP-35
(3) Metrosite Mount Pipes: PST2375-8

Final Antenna Configuration

3 Ericsson Air 21 B2A/B4P
3 Ericsson Air 32 KRD901146-1_B66A_B2A
3 RFS APXVAARR24_43-U-NA20
3 Ericsson KRY 112 144/1
3 Ericsson Radio 4449 B71+B12

Any proposed antennas not currently installed should be mounted such that the centers of the antennas do not exceed 0.5 ft vertically from the center of the Low profile platform.

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration after the proposed modification is successfully completed. The maximum structural usage is 58.5%, which occurs in the mount pipe. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

1. Mount Photos Before Modification
2. Antenna Placement Diagram
3. Mount Mapping Information
4. Analysis Calculations

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.

2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.

4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.

5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.

7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.

9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.


04.25.2019 17:03


04.25.2019 17:14

Structure: CT13060-A-SBA - Newtown 2

Sector: A

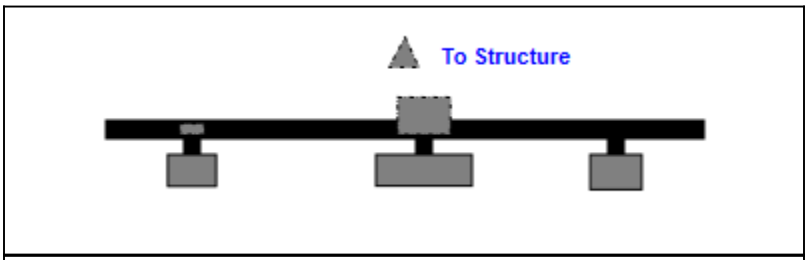
Structure Type: Monopole

Mount Elev: 127.00

7/16/2019

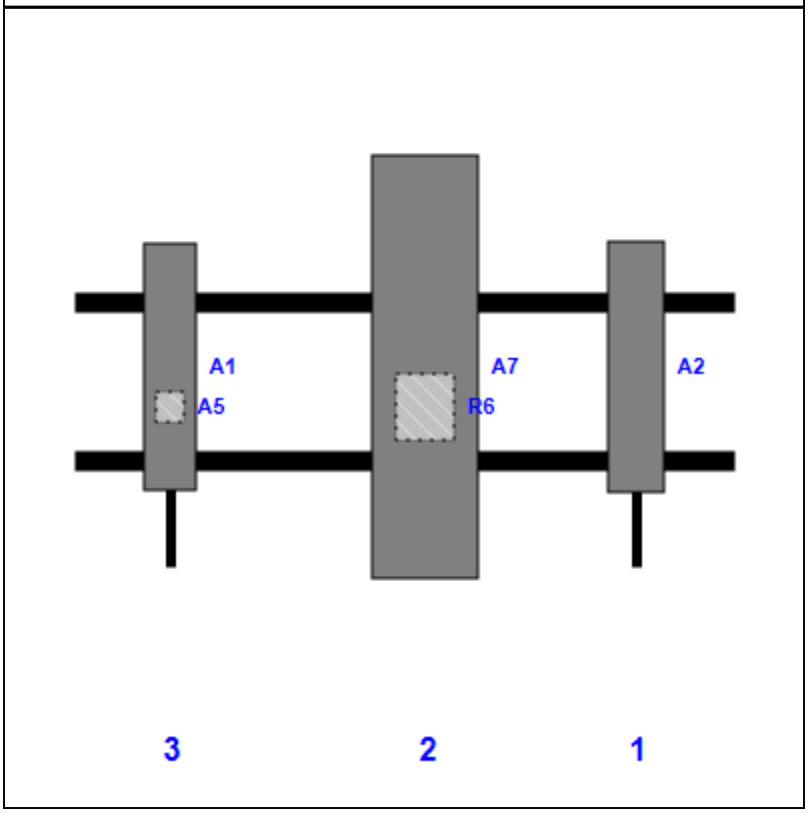
Tower Engineering Solutions

Plan View



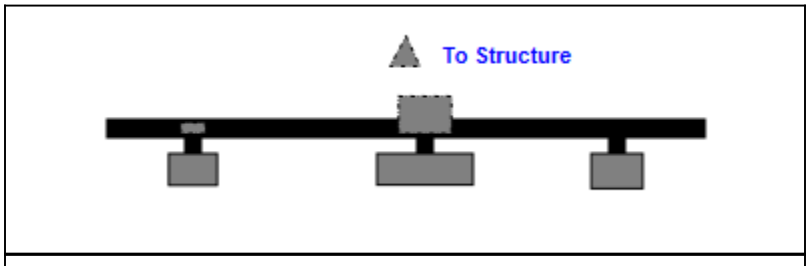
Front View

Looking Toward Structure



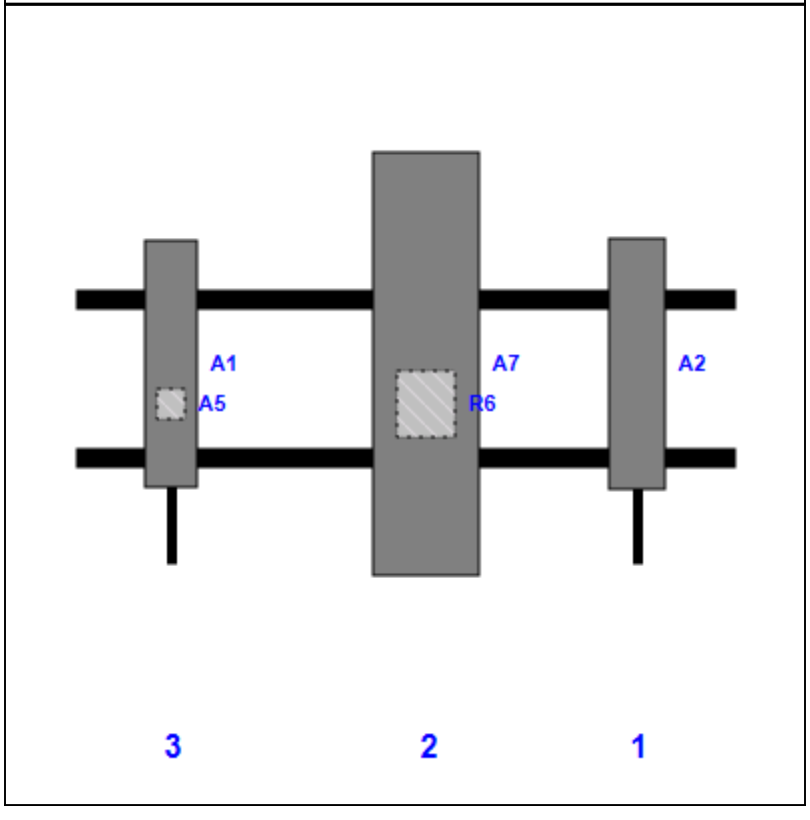
Ref #	Model	Height (in)	Width (in)	H Dist From Left	Pipe #	Pipe Pos V	Antenna Pos	Center Ant From Top	Antenna H Offset
A2	Air 32	56.60	12.90	128.00	1	a	Front	27.00	0.00
A7	APXVAARR24_43-U-NA20	95.90	24.00	80.00	2	a	Front	27.00	0.00
R6	Radio 4449 B71+B12	15.00	13.20	80.00	2	a	Behind	36.00	0.00
A1	Air 21 B2A/B4P	56.00	12.10	22.00	3	a	Front	27.00	0.00
A5	KRY 112 144/1	6.90	6.10	22.00	3	a	Behind	36.00	0.00

Plan View



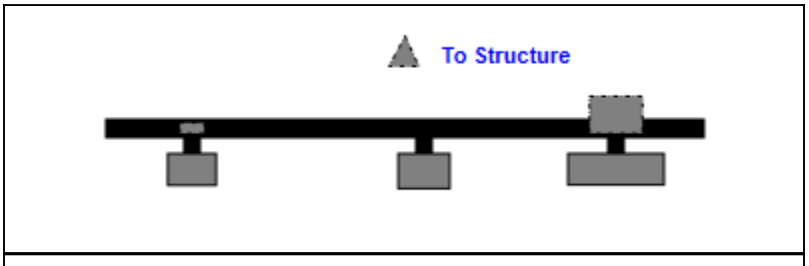
Front View

Looking Toward Structure



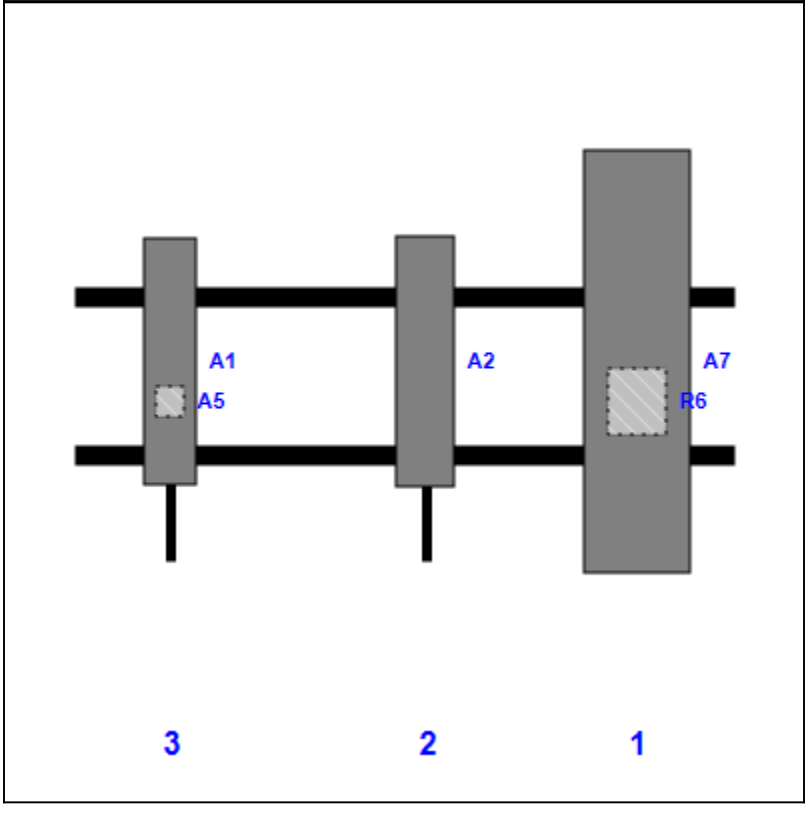
Ref #	Model	Height (in)	Width (in)	H Dist From Left	Pipe #	Pipe Pos V	Antenna Pos	Center Ant From Top	Antenna H Offset
A2	Air 32	56.60	12.90	128.00	1	a	Front	27.00	0.00
A7	APXVAARR24_43-U-NA20	95.90	24.00	80.00	2	a	Front	27.00	0.00
R6	Radio 4449 B71+B12	15.00	13.20	80.00	2	a	Behind	36.00	0.00
A1	Air 21 B2A/B4P	56.00	12.10	22.00	3	a	Front	27.00	0.00
A5	KRY 112 144/1	6.90	6.10	22.00	3	a	Behind	36.00	0.00

Plan View



Front View

Looking Toward Structure

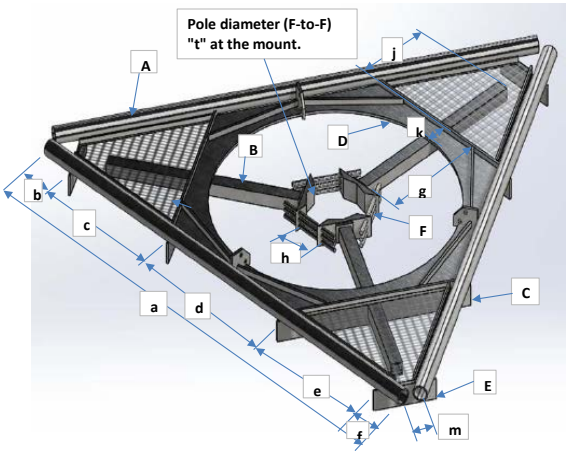


Ref #	Model	Height (in)	Width (in)	H Dist From Left	Pipe #	Pipe Pos V	Antenna Pos	Center Ant From Top	Antenna H Offset
A7	APXVAARR24_43-U-NA20	95.90	24.00	128.00	1	a	Front	27.00	0.00
R6	Radio 4449 B71+B12	15.00	13.20	128.00	1	a	Behind	36.00	0.00
A2	Air 32	56.60	12.90	80.00	2	a	Front	27.00	0.00
A1	Air 21 B2A/B4P	56.00	12.10	22.00	3	a	Front	27.00	0.00
A5	KRY 112 144/1	6.90	6.10	22.00	3	a	Behind	36.00	0.00

Antenna Mount Type "MT-D" Mapping Form (PATENT PENDING)

FCC # 1250706

Tower Owner:	SBA Communications	**Mapping Date:**	4/25/19
Site Name:	Newtown 2	**Structure Type:**	Monopole
Site Number or ID:	CT13060-A-SBA	**Structure Height (Ft.):**	140
Mapping Contractor:	Full Metal Tower Services	**Mount Height (Ft.):**	128.6



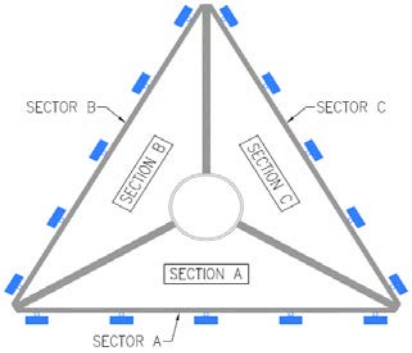
Geometries (Unit: inches)									
a	150	**e**	35	**j**	12	**o**	N/A	**s**	N/A
b	15	**f**	15	**k**	6	**p**	N/A	**t**	19
c	35	**g**	32	**m**	10	**q**	N/A	**u ***	48
d	50	**h**	24	**n**	N/A	**r**	N/A	**v ***	72

Members/Bolts (Unit: inches) * - See Ant. Layout for "u", "v" and member "K" (pipe)

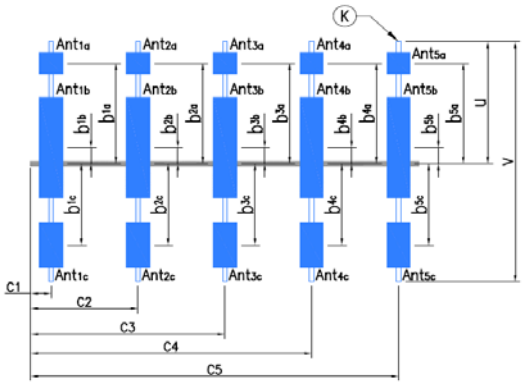
Items	Member	Lx (O.D.)	Ly (I.D.)	T	Items	Member	Lx (O.D.)	Ly (I.D.)	T
A	3.5 OD x 0.216 Pipe	3.5	3.068	0.216	**F**	3/4" Bolt		24	
B	Tubing 4x4x1/4	4	4	0.25	**G**				
C	3/8" Thick. Plate	0	0	0.375	**H**				
D	1/4" Thick. Plate	0	0	0.25	**J**				
E	3/8" Thick. Plate	0	0	0.375	**K* (pipe)**	2.375 OD x 0.154 Pipe	2.375	2.067	0.154

Distance from top of main platform member to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.)	N/A
Distance from top of main platform member to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.)	8.5'

Please enter the infomation below if members can't be found from the drop down lists



Climbing ladder is Located at Section A, at 0° Degree Azimuth

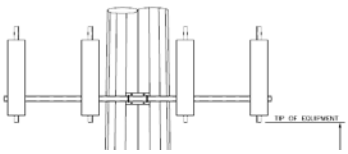


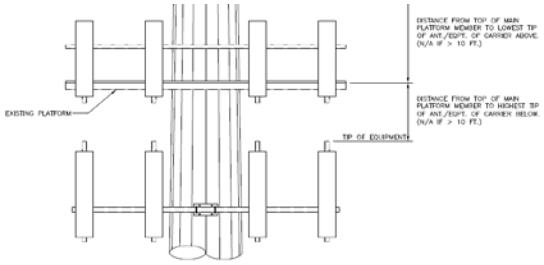
Antenna Layout

Ants. Items	Enter antenna model. If not labled, enter "Unknown". If no antenna at specified location, enter "N/A". If antennas and the locations are the same on all three sectors, only enter one sector. Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Mounting Locations (Unit: inches) Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (In.)	Horiz. offset (Use "-" if Ant. is inside)	Horiz. offset "C_1, C_2, C_3, C_4, C_5" (in.)	Photos of antennas Photo Numbers
Sector A									
Ant_{1a}									
Ant_{1b}	Antenna A	12	8	56	1/2" (1)	+10"	7.5	22	
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	Antenna B	13	9	57	1/2" (2)	+11"	8	128	
Ant_{2c}	TMA A	7	3.5	12	1/2" (2)	+12"	N/A	128	
Ant_{3a}									
Ant_{3b}									
Ant_{3c}									
Ant_{4a}									
Ant_{4b}									
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Are Ant same as sector A?	Yes	**Antennas on Sector B are the same as Sector A**							
Are Ant same as sector A/B?	No	**Sector C**							
Ant_{1a}									
Ant_{1b}	Antenna B	13	9	57	1/2" (2)	+11"	8	70	
Ant_{1c}	TMA A	7	3.5	12	1/2" (2)	+12"	N/A	70	
Ant_{2a}									
Ant_{2b}	Antenna A	12	8	56	1/2" (1)	+10"	7.5	128	

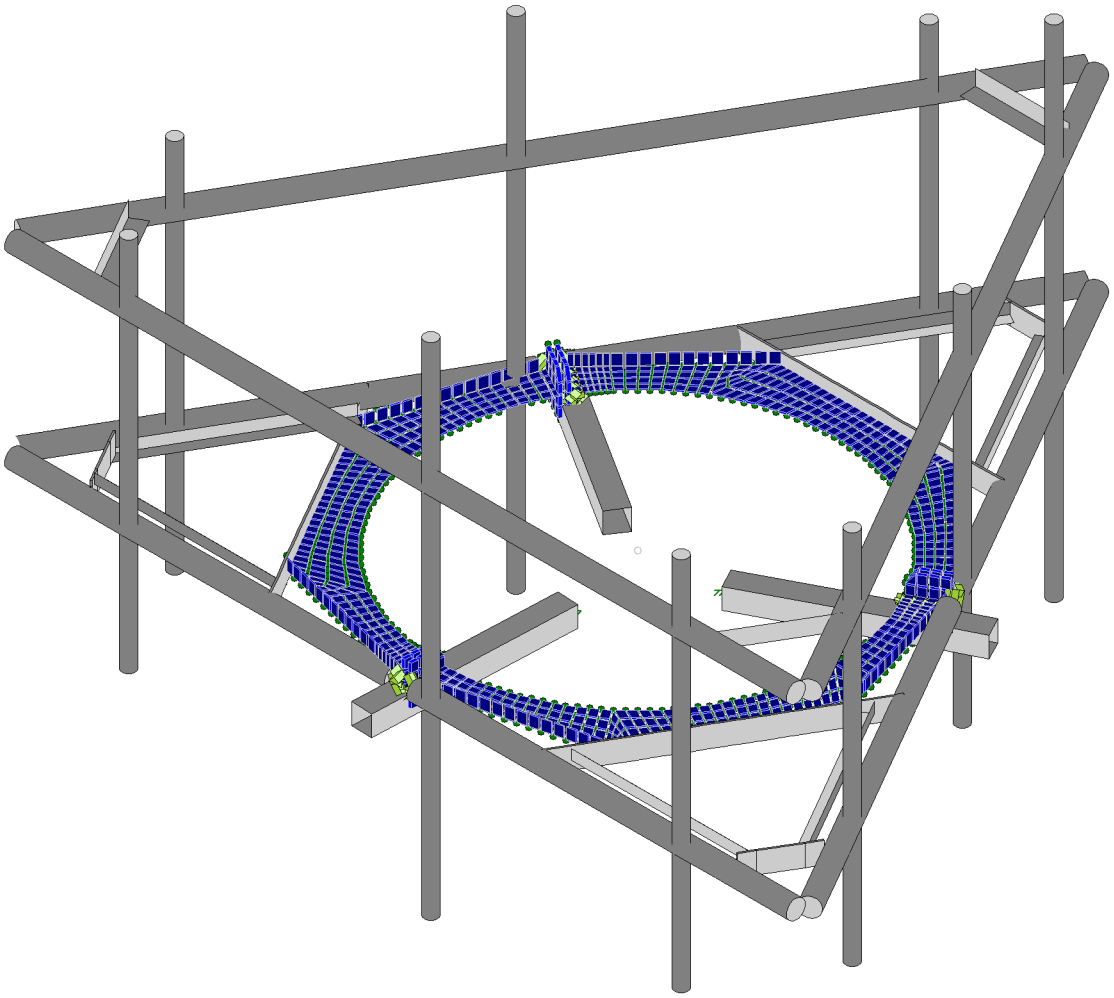
Azimuth (Degree) of Each Sector and Climbing Information

Sector A:	340°	Deg	
Sector B:	110°	Deg	
Sector C:	230°	Deg	
Climbing	0°	Deg	Located at Section A
Climbing Facility	Corrosion Type:		Minor corrosion observed
	Access:		Climbing path was unobstructed.
	Condition:		N/A

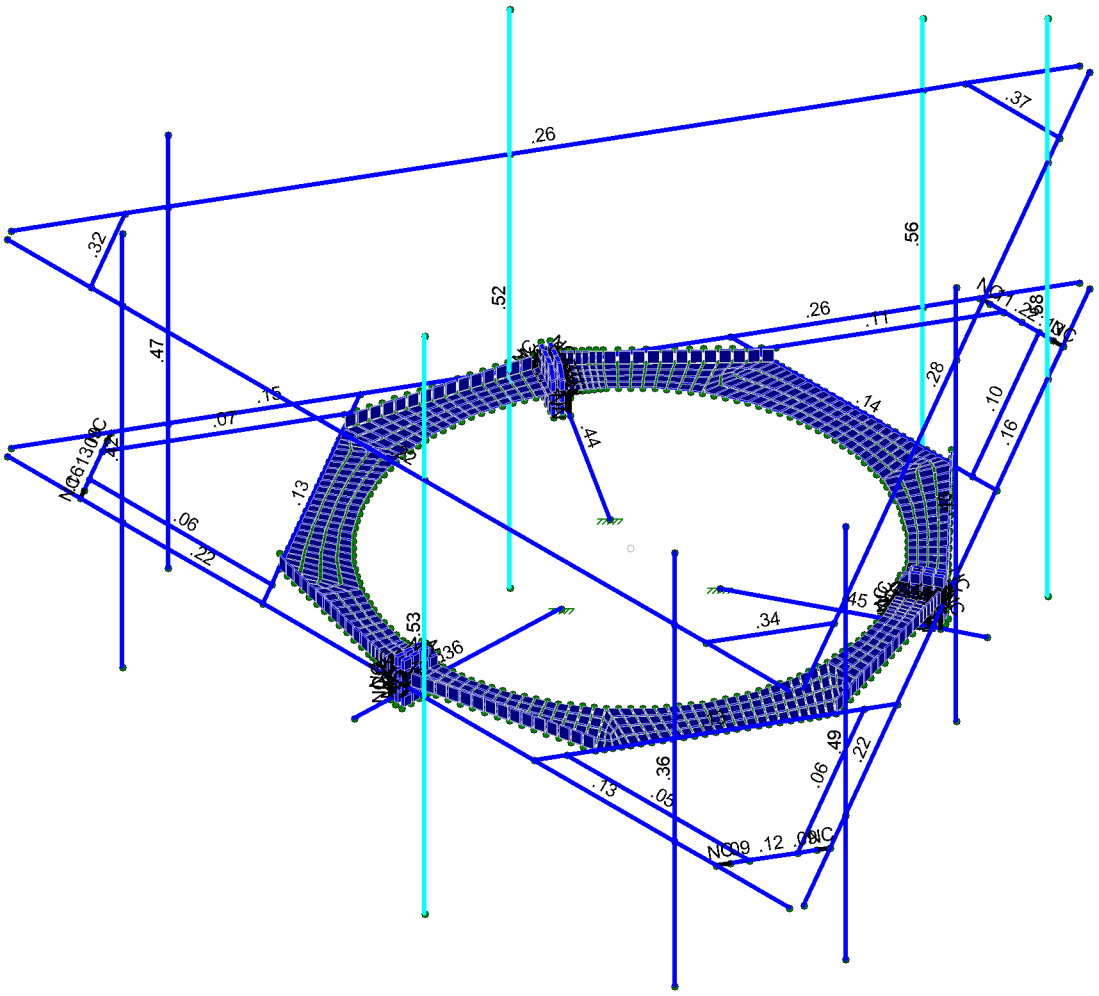




Ant_{2c}									
Ant_{3a}									
Ant_{3b}									
Ant_{3c}									
Ant_{4a}									
Ant_{4b}									
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									

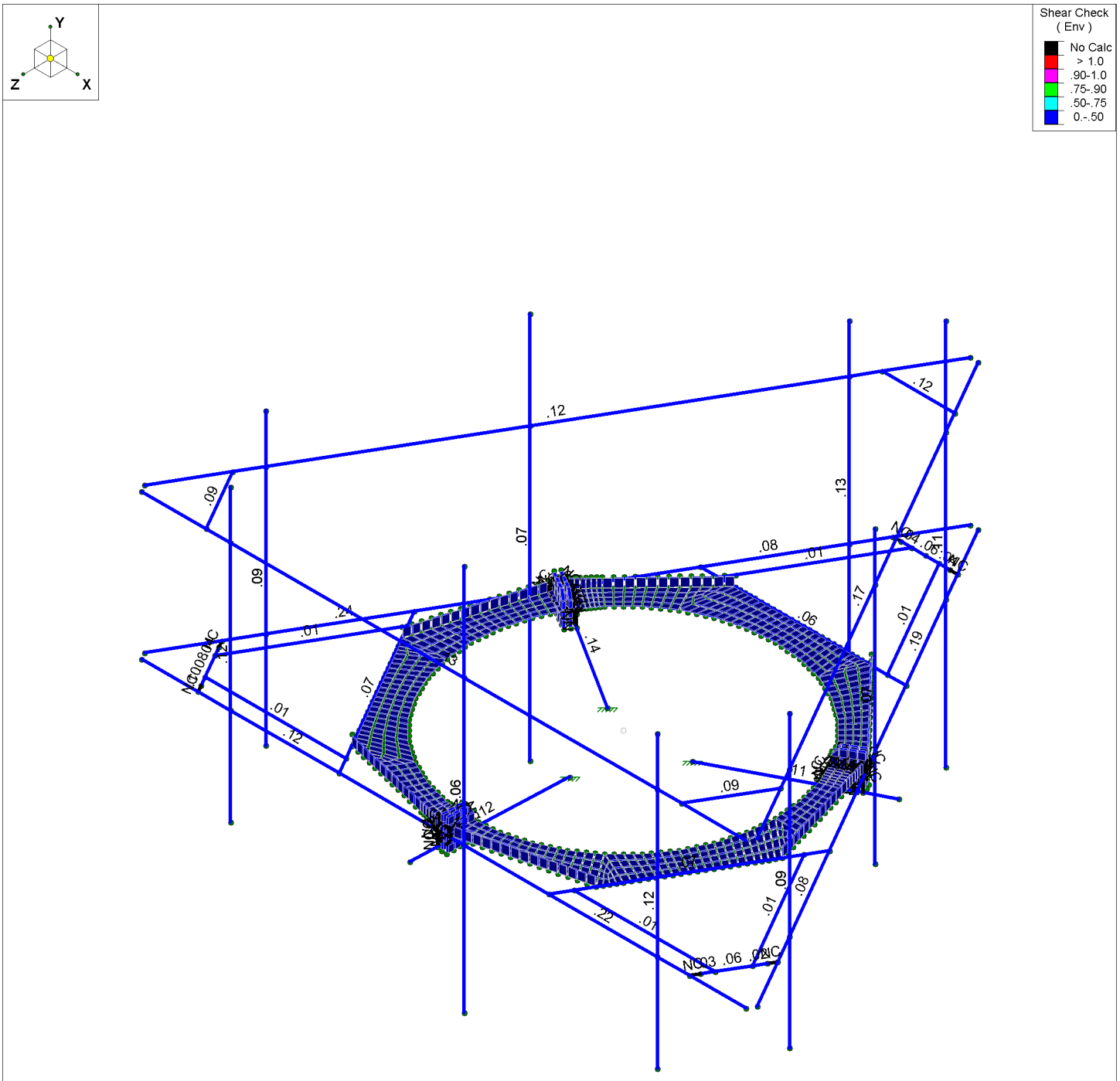


Tower Engineering Solutio...	CT13060-A-SBA_MT_LO_Loads Only_G	SK - 1
		July 16, 2019 at 3:44 PM
TES Project No. 81228		CT13060-A-SBA_81228_G_RISA_L...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT13060-A-SBA_MT_LO_Loads Only_G	SK - 2
		July 16, 2019 at 3:45 PM
TES Project No. 81228		CT13060-A-SBA_81228_G_RISA_L...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT13060-A-SBA_MT_LO_Loads Only_G	SK - 3
		July 16, 2019 at 3:46 PM
TES Project No. 81228		CT13060-A-SBA_81228_G_RISA_L...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					24			
2	Antenna Di	None					24			
3	Antenna W Front	None					24			
4	Antenna Wi Front	None					24			
5	Antenna W Side	None					24			
6	Antenna Wi Side	None					24			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					3	
10	Structure Di	None						42	3	
11	Structure W Front	None						42		
12	Structure Wi Front	None						42		
13	Structure W Side	None						42		
14	Structure Wi Side	None						42		
15	BLC 9 Transient Area...	None						36		
16	BLC 10 Transient Are...	None						36		

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.6W (Front)	Yes	Y		1	1.2	9	1.2	3	1.6	11	1.6												
2	1.2D+1.6W (Back)	Yes	Y		1	1.2	9	1.2	3	-1.6	11	-1.6												
3	1.2D+1.6W (Left)	Yes	Y		1	1.2	9	1.2	5	1.6	13	1.6												
4	1.2D+1.6W (Right)	Yes	Y		1	1.2	9	1.2	5	-1.6	13	-1.6												
5	1.2D+1.0Di+1.0Wi (...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	12	1								
6	1.2D+1.0Di+1.0Wi (...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	12	-1								
7	1.2D+1.0Di+1.0Wi (...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	1	14	1								
8	1.2D+1.0Di+1.0Wi (...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	-1	14	-1								
9	1.2D+1.5L1+.16W (...	Yes	Y		1	1.2	9	1.2	7	1.5	3	.16	11	.16										
10	1.2D+1.5L2+.16W (...	Yes	Y		1	1.2	9	1.2	8	1.5	3	.16	11	.16										
11	1.4D	Yes	Y		1	1.4	9	1.4																

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-6.25	0	3.704857	0	
2	N2	6.25	0	3.704857	0	
3	CG	0	0	0	0	
4	N4	-5.083	0	3.704857	0	
5	N5	-2.167	0	3.704857	0	
6	N6	2.167	0	3.704857	0	
7	N7	5.083	0	3.704857	0	
8	N8	6.3335	0	3.56023	0	
9	N9	0.0835	0	-7.265087	0	
10	N11	5.75	0	2.549579	0	
11	N12	4.292	0	0.024249	0	
12	N13	2.125	0	-3.729106	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
13	N14	0.667	0	-6.254436	0	
14	N15	-0.0835	0	-7.265087	0	
15	N16	-6.3335	0	3.56023	0	
16	N18	-0.667	0	-6.254436	0	
17	N19	-2.125	0	-3.729106	0	
18	N20	-4.292	0	0.024249	0	
19	N21	-5.75	0	2.549579	0	
20	N22	-5.275258	0	3.371857	0	
21	N23	-2.359258	0	3.371857	0	
22	N24	5.275258	0	3.371857	0	
23	N25	2.359258	0	3.371857	0	
24	N25A	5.557743	0	2.882579	0	
25	N26	4.099743	0	0.357249	0	
26	N27	0.282485	0	-6.254436	0	
27	N28	1.740485	0	-3.729106	0	
28	N30	-0.282485	0	-6.254436	0	
29	N31	-1.740485	0	-3.729106	0	
30	N32	-5.557743	0	2.882579	0	
31	N33	-4.099743	0	0.357249	0	
32	N34	-0.052083	0	3.704857	0	
33	N89	-2.525758	0	3.083471	0	
34	N93	2.525758	0	3.083471	0	
35	N92A	-5e-14	0	-3.729106	0	
36	N93A	-2e-14	0	-3.146106	0	
37	N117	-2.724607	0	1.573053	0	
38	N119	-2.410057	0	2.022278	0	
39	N121	-2.022278	0	2.410057	0	
40	N123	-1.573053	0	2.724607	0	
41	N125	-1.076031	0	2.956372	0	
42	N127	-0.546315	0	3.098309	0	
43	N129	-0.052083	0	3.146106	0	
44	N131	0.546315	0	3.098309	0	
45	N133	1.076031	0	2.956372	0	
46	N135	1.573053	0	2.724607	0	
47	N137	2.022278	0	2.410057	0	
48	N139	2.410057	0	2.022278	0	
49	N141	2.724607	0	1.573053	0	
50	N134	-3.2295	0	1.864553	0	
51	N137A	-2.9795	0	2.297565	0	
52	N138	-2.7295	0	2.730578	0	
53	N140	3.2295	0	1.864553	0	
54	N141A	2.9795	0	2.297565	0	
55	N142	2.7295	0	2.730578	0	
56	N143B	-1.894318	0	3.238817	0	
57	N144A	-1.262879	0	3.394164	0	
58	N145A	-0.631439	0	3.54951	0	
59	N146	0.631439	0	3.54951	0	
60	N147A	1.262879	0	3.394164	0	
61	N148	1.894318	0	3.238817	0	
62	N163A	-0.273158	0	3.122207	0	
63	N164	-0.317303	0	3.626794	0	
64	N200	-4e-14	0	-3.583356	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
65	N204	-4e-14	0	-3.437606	0	
66	N208	-4e-14	0	-3.291856	0	
67	N407	2.850831	0	1.645928	0	
68	N411	2.977054	0	1.718803	0	
69	N415	3.103277	0	1.791678	0	
70	N419	2.64597	0	1.685359	0	
71	N420	2.567332	0	1.797665	0	
72	N421	2.488694	0	1.909971	0	
73	N422	2.776227	0	1.757221	0	
74	N423	2.701624	0	1.868514	0	
75	N424	2.627021	0	1.979807	0	
76	N425	2.552418	0	2.0911	0	
77	N426	2.906485	0	1.829082	0	
78	N427	2.835916	0	1.939362	0	
79	N428	2.765347	0	2.049642	0	
80	N429	2.694778	0	2.159922	0	
81	N430	3.036743	0	1.900944	0	
82	N431	2.970208	0	2.010211	0	
83	N432	2.903674	0	2.119477	0	
84	N433	2.837139	0	2.228744	0	
85	N434	3.167	0	1.972806	0	
86	N435	3.1045	0	2.081059	0	
87	N436	3.042	0	2.189312	0	
88	N437	2.313112	0	2.119222	0	
89	N438	2.216167	0	2.216167	0	
90	N439	2.119222	0	2.313112	0	
91	N440	2.464084	0	2.190871	0	
92	N441	2.37575	0	2.290643	0	
93	N442	2.287417	0	2.390415	0	
94	N443	2.199083	0	2.490187	0	
95	N444	2.615056	0	2.262521	0	
96	N445	2.535334	0	2.365119	0	
97	N446	2.455611	0	2.467718	0	
98	N447	2.375889	0	2.570317	0	
99	N448	2.766028	0	2.33417	0	
100	N449	2.694917	0	2.439596	0	
101	N450	2.623806	0	2.545022	0	
102	N451	2.552695	0	2.650448	0	
103	N452	2.917	0	2.405819	0	
104	N453	2.8545	0	2.514072	0	
105	N454	2.792	0	2.622325	0	
106	N455	2.399888	0	2.915117	0	
107	N456	2.274018	0	2.746764	0	
108	N457	2.148148	0	2.57841	0	
109	N458	2.367898	0	3.122307	0	
110	N459	2.253416	0	2.963904	0	
111	N460	2.138935	0	2.805501	0	
112	N461	2.024453	0	2.647098	0	
113	N462	1.909971	0	2.488694	0	
114	N463	2.210038	0	3.161144	0	
115	N464	2.106945	0	3.012691	0	
116	N465	2.003852	0	2.864238	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
117	N466	1.900758	0	2.715785	0	
118	N467	1.797665	0	2.567332	0	
119	N468	2.052178	0	3.199981	0	
120	N469	1.960473	0	3.061478	0	
121	N470	1.868769	0	2.922975	0	
122	N471	1.777064	0	2.784472	0	
123	N472	1.685359	0	2.64597	0	
124	N473	1.814002	0	3.110265	0	
125	N474	1.733686	0	2.981712	0	
126	N475	1.653369	0	2.85316	0	
127	N476	1.736458	0	3.277654	0	
128	N477	1.664543	0	3.153877	0	
129	N478	1.592628	0	3.030101	0	
130	N479	1.520713	0	2.906325	0	
131	N480	1.448797	0	2.782549	0	
132	N481	1.578599	0	3.31649	0	
133	N482	1.515084	0	3.19749	0	
134	N483	1.45157	0	3.07849	0	
135	N484	1.388056	0	2.95949	0	
136	N485	1.324542	0	2.84049	0	
137	N486	1.420739	0	3.355327	0	
138	N487	1.365626	0	3.241103	0	
139	N488	1.310513	0	3.126879	0	
140	N489	1.2554	0	3.012655	0	
141	N490	1.200287	0	2.898431	0	
142	N491	1.216167	0	3.284716	0	
143	N492	1.169455	0	3.175268	0	
144	N493	1.122743	0	3.06582	0	
145	N494	1.105019	0	3.433	0	
146	N495	1.064665	0	3.322714	0	
147	N496	1.024311	0	3.212428	0	
148	N497	0.983957	0	3.102142	0	
149	N498	0.943602	0	2.991856	0	
150	N499	0.947159	0	3.471837	0	
151	N500	0.913163	0	3.360713	0	
152	N501	0.879166	0	3.249589	0	
153	N502	0.84517	0	3.138465	0	
154	N503	0.811173	0	3.027341	0	
155	N504	0.789299	0	3.510674	0	
156	N505	0.761661	0	3.398712	0	
157	N506	0.734022	0	3.286749	0	
158	N507	0.706383	0	3.174787	0	
159	N508	0.678744	0	3.062825	0	
160	N509	0.610158	0	3.43671	0	
161	N510	0.588877	0	3.32391	0	
162	N511	0.567596	0	3.211109	0	
163	N512	0.409737	0	3.110258	0	
164	N513	0.273158	0	3.122207	0	
165	N514	0.136579	0	3.134156	0	
166	N515	0.425697	0	3.22978	0	
167	N516	0.283798	0	3.248451	0	
168	N517	0.141899	0	3.267122	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
169	N518	-0.052083	0	3.285793	0	
170	N519	0.441658	0	3.349303	0	
171	N520	0.294439	0	3.374696	0	
172	N521	0.147219	0	3.400088	0	
173	N522	-0.052083	0	3.425481	0	
174	N523	0.457619	0	3.468825	0	
175	N524	0.305079	0	3.50094	0	
176	N525	0.15254	0	3.533054	0	
177	N526	-0.052083	0	3.565169	0	
178	N527	0.47358	0	3.588347	0	
179	N528	0.31572	0	3.627184	0	
180	N529	0.15786	0	3.66602	0	
181	N530	-0.678744	0	3.062825	0	
182	N531	-0.811173	0	3.027341	0	
183	N532	-0.943602	0	2.991856	0	
184	N533	-0.567596	0	3.211109	0	
185	N534	-0.706383	0	3.174787	0	
186	N535	-0.84517	0	3.138465	0	
187	N536	-0.983957	0	3.102142	0	
188	N537	-1.122743	0	3.06582	0	
189	N538	-0.588877	0	3.32391	0	
190	N539	-0.734022	0	3.286749	0	
191	N540	-0.879166	0	3.249589	0	
192	N541	-1.024311	0	3.212428	0	
193	N542	-1.169455	0	3.175268	0	
194	N543	-0.610158	0	3.43671	0	
195	N544	-0.761661	0	3.398712	0	
196	N545	-0.913163	0	3.360713	0	
197	N546	-1.064665	0	3.322714	0	
198	N547	-1.216167	0	3.284716	0	
199	N548	-0.789299	0	3.510674	0	
200	N549	-0.947159	0	3.471837	0	
201	N550	-1.105019	0	3.433	0	
202	N551	-1.448797	0	2.782549	0	
203	N552	-1.324542	0	2.84049	0	
204	N553	-1.200287	0	2.898431	0	
205	N554	-1.653369	0	2.85316	0	
206	N555	-1.520713	0	2.906325	0	
207	N556	-1.388056	0	2.95949	0	
208	N557	-1.2554	0	3.012655	0	
209	N558	-1.733686	0	2.981712	0	
210	N559	-1.592628	0	3.030101	0	
211	N560	-1.45157	0	3.07849	0	
212	N561	-1.310513	0	3.126879	0	
213	N562	-1.814002	0	3.110265	0	
214	N563	-1.664543	0	3.153877	0	
215	N564	-1.515084	0	3.19749	0	
216	N565	-1.365626	0	3.241103	0	
217	N566	-1.736458	0	3.277654	0	
218	N567	-1.578599	0	3.31649	0	
219	N568	-1.420739	0	3.355327	0	
220	N569	-1.685359	0	2.64597	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
221	N570	-1.797665	0	2.567332	0	
222	N571	-1.909971	0	2.488694	0	
223	N572	-1.811229	0	2.814323	0	
224	N573	-1.908193	0	2.733289	0	
225	N574	-2.005156	0	2.652255	0	
226	N575	-2.10212	0	2.571221	0	
227	N576	-2.199083	0	2.490187	0	
228	N577	-2.049405	0	2.904039	0	
229	N578	-2.131026	0	2.820609	0	
230	N579	-2.212647	0	2.737178	0	
231	N580	-2.294268	0	2.653748	0	
232	N581	-2.375889	0	2.570317	0	
233	N582	-2.287581	0	2.993755	0	
234	N583	-2.35386	0	2.907928	0	
235	N584	-2.420138	0	2.822101	0	
236	N585	-2.486416	0	2.736275	0	
237	N586	-2.552695	0	2.650448	0	
238	N587	-2.576693	0	2.995247	0	
239	N588	-2.627629	0	2.907024	0	
240	N589	-2.678565	0	2.818801	0	
241	N590	-2.119222	0	2.313112	0	
242	N591	-2.216167	0	2.216167	0	
243	N592	-2.313112	0	2.119222	0	
244	N593	-2.287417	0	2.390415	0	
245	N594	-2.37575	0	2.290643	0	
246	N595	-2.464084	0	2.190871	0	
247	N596	-2.552418	0	2.0911	0	
248	N597	-2.455611	0	2.467718	0	
249	N598	-2.535334	0	2.365119	0	
250	N599	-2.615056	0	2.262521	0	
251	N600	-2.694778	0	2.159922	0	
252	N601	-2.623806	0	2.545022	0	
253	N602	-2.694917	0	2.439596	0	
254	N603	-2.766028	0	2.33417	0	
255	N604	-2.837139	0	2.228744	0	
256	N605	-2.792	0	2.622325	0	
257	N606	-2.8545	0	2.514072	0	
258	N607	-2.917	0	2.405819	0	
259	N608	-2.488694	0	1.909971	0	
260	N609	-2.567332	0	1.797665	0	
261	N610	-2.64597	0	1.685359	0	
262	N611	-2.627021	0	1.979807	0	
263	N612	-2.701624	0	1.868514	0	
264	N613	-2.776227	0	1.757221	0	
265	N614	-2.850831	0	1.645928	0	
266	N615	-2.765347	0	2.049642	0	
267	N616	-2.835916	0	1.939362	0	
268	N617	-2.906485	0	1.829082	0	
269	N618	-2.977054	0	1.718803	0	
270	N619	-2.903674	0	2.119477	0	
271	N620	-2.970208	0	2.010211	0	
272	N621	-3.036743	0	1.900944	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
273	N622	-3.103277	0	1.791678	0	
274	N623	-3.042	0	2.189312	0	
275	N624	-3.1045	0	2.081059	0	
276	N625	-3.167	0	1.972806	0	
277	N794	-0.478026	0	3.104284	0	
278	N795	-0.409737	0	3.110258	0	
279	N796	-0.341447	0	3.116233	0	
280	N797	-0.496746	0	3.220421	0	
281	N798	-0.425895	0	3.229732	0	
282	N799	-0.355045	0	3.239043	0	
283	N800	-0.284194	0	3.248354	0	
284	N801	-0.515466	0	3.336557	0	
285	N802	-0.442054	0	3.349205	0	
286	N803	-0.368642	0	3.361853	0	
287	N804	-0.295231	0	3.374501	0	
288	N805	-0.534186	0	3.452694	0	
289	N806	-0.458213	0	3.468679	0	
290	N807	-0.38224	0	3.484663	0	
291	N808	-0.306267	0	3.500647	0	
292	N809	-0.552905	0	3.568831	0	
293	N810	-0.474371	0	3.588152	0	
294	N811	-0.395837	0	3.607473	0	
295	N812	-0.204868	0	3.128182	0	
296	N813	-0.136579	0	3.134156	0	
297	N815	-0.213146	0	3.257714	0	
298	N816	-0.142097	0	3.267074	0	
299	N818	-0.221423	0	3.387246	0	
300	N819	-0.147615	0	3.399991	0	
301	N821	-0.2297	0	3.516778	0	
302	N822	-0.153133	0	3.532908	0	
303	N824	-0.237978	0	3.64631	0	
304	N825	-0.158652	0	3.665826	0	
305	N899	2.627629	0	2.907024	0	
306	N900	2.425845	0	2.741368	0	
307	N901	-2.210038	0	3.161144	0	
308	N902	-1.99771	0	3.015632	0	
309	N903B	2.79063	-.333	-1.45271	0	
310	N911	-2.023557	0	2.959835	0	
311	N912A	-2.195728	0	3.041071	0	
312	N913A	-2.367898	0	3.122307	0	
313	N914A	-2.103874	0	3.088388	0	
314	N915A	-1.838463	0	2.906498	0	
315	N916A	-1.865698	0	2.998672	0	
316	N917	-1.958938	0	3.099326	0	
317	N918	-2.052178	0	3.199981	0	
318	N919	2.576693	0	2.995247	0	
319	N920	2.463312	0	2.869657	0	
320	N921	2.526737	0	2.824196	0	
321	N922A	2.349931	0	2.744066	0	
322	N923A	2.678565	0	2.818801	0	
323	N924A	2.539716	0	2.737322	0	
324	N925A	2.400867	0	2.655843	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
325	N926A	2.274507	0	2.617127	0	
326	N952A	0.052084	0	3.704857	0	
327	N953A	0.052084	0	3.146106	0	
328	N954A	0.052084	0	3.285793	0	
329	N955A	0.052084	0	3.425481	0	
330	N956A	0.052084	0	3.565169	0	
331	N952B	-0.052083	0.333333	3.704857	0	
332	N955B	-0.052083	0.333333	3.285793	0	
333	N956B	-0.052083	0.333333	3.425481	0	
334	N957A	-0.052083	0.333333	3.565169	0	
335	N958	0.052084	0.333333	3.704857	0	
336	N960	0.052084	0.333333	3.285793	0	
337	N961	0.052084	0.333333	3.425481	0	
338	N962	0.052084	0.333333	3.565169	0	
339	N963	-0.052083	-0.333333	3.704857	0	
340	N964	-0.052083	-0.333333	3.146106	0	
341	N966	-0.052083	-0.333333	3.285793	0	
342	N967	-0.052083	-0.333333	3.425481	0	
343	N968	-0.052083	-0.333333	3.565169	0	
344	N969	0.052084	-0.333333	3.704857	0	
345	N970	0.052084	-0.333333	3.146106	0	
346	N971	0.052084	-0.333333	3.285793	0	
347	N972	0.052084	-0.333333	3.425481	0	
348	N973	0.052084	-0.333333	3.565169	0	
349	N976	-0.052083	-0.166666	3.704857	0	
350	N977	-0.052083	-0.166666	3.146106	0	
351	N979	-0.052083	-0.166666	3.285793	0	
352	N980	-0.052083	-0.166666	3.425481	0	
353	N981	-0.052083	-0.166666	3.565169	0	
354	N982	0.052084	-0.166666	3.704857	0	
355	N983	0.052084	-0.166666	3.146106	0	
356	N984	0.052084	-0.166666	3.285793	0	
357	N985	0.052084	-0.166666	3.425481	0	
358	N986	0.052084	-0.166666	3.565169	0	
359	N992	-0.052083	0.166667	3.704857	0	
360	N993	-0.052083	0.166667	3.146106	0	
361	N995	-0.052083	0.166667	3.285793	0	
362	N996	-0.052083	0.166667	3.425481	0	
363	N997	-0.052083	0.166667	3.565169	0	
364	N998	0.052084	0.166667	3.704857	0	
365	N999	0.052084	0.166667	3.146106	0	
366	N1000	0.052084	0.166667	3.285793	0	
367	N1001	0.052084	0.166667	3.425481	0	
368	N1002	0.052084	0.166667	3.565169	0	
369	N426A	3.234542	0	-1.807323	0	
370	N427A	3.933243	0	0.645635	0	
371	N428A	1.407485	0	-3.729106	0	
372	N430A	2.956372	0	1.076031	0	
373	N431A	3.098309	0	0.546315	0	
374	N432A	3.146106	0	-4.2e-13	0	
375	N433A	3.098309	0	-0.546315	0	
376	N434A	2.956372	0	-1.076031	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
377	N435A	2.750649	0	-1.527948	0	
378	N436A	2.410057	0	-2.022278	0	
379	N437A	2.022278	0	-2.410057	0	
380	N438A	1.573053	0	-2.724607	0	
381	N439A	1.076031	0	-2.956372	0	
382	N440A	0.546315	0	-3.098309	0	
383	N443A	3.4795	0	1.43154	0	
384	N444A	3.7295	0	0.998527	0	
385	N446A	0.5	0	-3.729106	0	
386	N447A	1	0	-3.729106	0	
387	N448A	3.752057	0	0.021119	0	
388	N449A	3.570871	0	-0.603397	0	
389	N450A	3.389686	0	-1.227913	0	
390	N451A	2.758246	0	-2.321598	0	
391	N452A	2.307993	0	-2.790767	0	
392	N453A	1.857739	0	-3.259936	0	
393	N454A	2.84049	0	-1.324542	0	
394	N455A	3.299547	0	-1.538604	0	
395	N459A	0.136579	0	-3.134156	0	
396	N460A	0.273158	0	-3.122207	0	
397	N461A	0.409737	0	-3.110258	0	
398	N462A	0.133684	0	-3.282894	0	
399	N463A	0.267368	0	-3.273932	0	
400	N464A	0.401052	0	-3.26497	0	
401	N465A	0.534737	0	-3.256008	0	
402	N466A	0.130789	0	-3.431631	0	
403	N467A	0.261579	0	-3.425656	0	
404	N468A	0.392368	0	-3.419682	0	
405	N469A	0.523158	0	-3.413707	0	
406	N470A	0.127895	0	-3.580368	0	
407	N471A	0.255789	0	-3.577381	0	
408	N472A	0.383684	0	-3.574394	0	
409	N473A	0.511579	0	-3.571406	0	
410	N474A	0.125	0	-3.729106	0	
411	N475A	0.25	0	-3.729106	0	
412	N476A	0.375	0	-3.729106	0	
413	N477A	0.678744	0	-3.062825	0	
414	N478A	0.811173	0	-3.027341	0	
415	N479A	0.943602	0	-2.991856	0	
416	N480A	0.665308	0	-3.229395	0	
417	N481A	0.79588	0	-3.202782	0	
418	N482A	0.926452	0	-3.176169	0	
419	N483A	1.057024	0	-3.149556	0	
420	N484A	0.651872	0	-3.395965	0	
421	N485A	0.780587	0	-3.378223	0	
422	N486A	0.909301	0	-3.360481	0	
423	N487A	1.038016	0	-3.342739	0	
424	N488A	0.638436	0	-3.562535	0	
425	N489A	0.765293	0	-3.553664	0	
426	N490A	0.892151	0	-3.544793	0	
427	N491A	1.019008	0	-3.535922	0	
428	N492A	0.625	0	-3.729106	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
429	N493A	0.75	0	-3.729106	0	
430	N494A	0.875	0	-3.729106	0	
431	N495A	1.324622	0	-3.535922	0	
432	N496A	1.241758	0	-3.342739	0	
433	N497A	1.158895	0	-3.149556	0	
434	N498A	1.520048	0	-3.611813	0	
435	N499A	1.440108	0	-3.433468	0	
436	N500A	1.360168	0	-3.255122	0	
437	N501A	1.280227	0	-3.076777	0	
438	N502A	1.200287	0	-2.898431	0	
439	N503A	1.632612	0	-3.494521	0	
440	N504A	1.555594	0	-3.331013	0	
441	N505A	1.478577	0	-3.167505	0	
442	N506A	1.40156	0	-3.003998	0	
443	N507A	1.324542	0	-2.84049	0	
444	N508A	1.745175	0	-3.377229	0	
445	N509A	1.671081	0	-3.228559	0	
446	N510A	1.596986	0	-3.079889	0	
447	N511A	1.522892	0	-2.931219	0	
448	N512A	1.448797	0	-2.782549	0	
449	N513A	1.786567	0	-3.126104	0	
450	N514A	1.715396	0	-2.992272	0	
451	N515A	1.644224	0	-2.85844	0	
452	N516A	1.970302	0	-3.142644	0	
453	N517A	1.899066	0	-3.018475	0	
454	N518A	1.827831	0	-2.894307	0	
455	N519A	1.756595	0	-2.770138	0	
456	N520A	1.685359	0	-2.64597	0	
457	N521A	2.082866	0	-3.025352	0	
458	N522A	2.011566	0	-2.910847	0	
459	N523A	1.940265	0	-2.796342	0	
460	N524A	1.868965	0	-2.681837	0	
461	N525A	1.797665	0	-2.567332	0	
462	N526A	2.195429	0	-2.908059	0	
463	N527A	2.124065	0	-2.803218	0	
464	N528A	2.0527	0	-2.698377	0	
465	N529A	1.981336	0	-2.593536	0	
466	N530A	1.909971	0	-2.488694	0	
467	N531A	2.236564	0	-2.695589	0	
468	N532A	2.165135	0	-2.600412	0	
469	N533A	2.093706	0	-2.505234	0	
470	N534A	2.420556	0	-2.673475	0	
471	N535A	2.345223	0	-2.583384	0	
472	N536A	2.269889	0	-2.493293	0	
473	N537A	2.194556	0	-2.403203	0	
474	N538A	2.119222	0	-2.313112	0	
475	N539A	2.53312	0	-2.556182	0	
476	N540A	2.453881	0	-2.471179	0	
477	N541A	2.374643	0	-2.386175	0	
478	N542A	2.295405	0	-2.301171	0	
479	N543A	2.216167	0	-2.216167	0	
480	N544A	2.645683	0	-2.43889	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
481	N545A	2.56254	0	-2.358973	0	
482	N546A	2.479397	0	-2.279056	0	
483	N547A	2.396255	0	-2.199139	0	
484	N548A	2.313112	0	-2.119222	0	
485	N549A	2.671199	0	-2.246768	0	
486	N550A	2.584152	0	-2.171938	0	
487	N551A	2.497104	0	-2.097108	0	
488	N552A	2.488694	0	-1.909971	0	
489	N553A	2.567332	0	-1.797665	0	
490	N554A	2.64597	0	-1.685359	0	
491	N555A	2.584223	0	-1.983555	0	
492	N556A	2.671342	0	-1.870002	0	
493	N557A	2.758461	0	-1.756449	0	
494	N558A	2.871622	0	-1.597792	0	
495	N559A	2.679752	0	-2.057138	0	
496	N560A	2.775353	0	-1.942339	0	
497	N561A	2.870953	0	-1.82754	0	
498	N562A	2.992595	0	-1.667635	0	
499	N563A	2.775281	0	-2.130722	0	
500	N564A	2.879363	0	-2.014676	0	
501	N565A	2.983445	0	-1.89863	0	
502	N566A	3.113569	0	-1.737479	0	
503	N567A	2.87081	0	-2.204305	0	
504	N568A	2.983373	0	-2.087013	0	
505	N569A	3.095937	0	-1.969721	0	
506	N570A	2.991856	0	-0.943602	0	
507	N571A	3.027341	0	-0.811173	0	
508	N572A	3.062825	0	-0.678744	0	
509	N573A	3.064701	0	-1.114002	0	
510	N574A	3.102638	0	-0.975648	0	
511	N575A	3.140575	0	-0.837294	0	
512	N576A	3.178512	0	-0.69894	0	
513	N577A	3.21645	0	-0.560586	0	
514	N578A	3.173029	0	-1.151972	0	
515	N579A	3.213419	0	-1.007693	0	
516	N580A	3.25381	0	-0.863414	0	
517	N581A	3.2942	0	-0.719135	0	
518	N582A	3.33459	0	-0.574856	0	
519	N583A	3.281357	0	-1.189942	0	
520	N584A	3.324201	0	-1.039738	0	
521	N585A	3.367044	0	-0.889534	0	
522	N586A	3.409888	0	-0.73933	0	
523	N587A	3.452731	0	-0.589126	0	
524	N588A	3.434982	0	-1.071784	0	
525	N589A	3.480279	0	-0.915655	0	
526	N590A	3.525575	0	-0.759526	0	
527	N591A	3.134156	0	-0.136579	0	
528	N592A	3.122207	0	-0.273158	0	
529	N593A	3.110258	0	-0.409737	0	
530	N594A	3.297593	0	0.00528	0	
531	N595A	3.277307	0	-0.136187	0	
532	N596A	3.257022	0	-0.277653	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
533	N597A	3.236736	0	-0.419119	0	
534	N598A	3.449081	0	0.01056	0	
535	N599A	3.420459	0	-0.135794	0	
536	N600A	3.391836	0	-0.282148	0	
537	N601A	3.363213	0	-0.428502	0	
538	N602A	3.600569	0	0.015839	0	
539	N603A	3.56361	0	-0.135402	0	
540	N604A	3.52665	0	-0.286644	0	
541	N605A	3.48969	0	-0.437885	0	
542	N606A	3.706761	0	-0.13501	0	
543	N607A	3.661464	0	-0.291139	0	
544	N608A	3.616168	0	-0.447268	0	
545	N609A	3.134156	0	0.136579	0	
546	N610A	3.122207	0	0.273158	0	
547	N611A	3.110258	0	0.409737	0	
548	N612A	3.34289	0	0.161409	0	
549	N613A	3.321194	0	0.285899	0	
550	N614A	3.299498	0	0.410389	0	
551	N615A	3.277803	0	0.534879	0	
552	N616A	3.256107	0	0.659368	0	
553	N617A	3.539674	0	0.322818	0	
554	N618A	3.508232	0	0.435218	0	
555	N619A	3.476789	0	0.547619	0	
556	N620A	3.445347	0	0.66002	0	
557	N621A	3.413905	0	0.772421	0	
558	N622A	3.736458	0	0.484226	0	
559	N623A	3.695269	0	0.584538	0	
560	N624A	3.65408	0	0.68485	0	
561	N625A	3.612891	0	0.785162	0	
562	N626	3.571702	0	0.885474	0	
563	N627	3.882307	0	0.733858	0	
564	N628	3.831371	0	0.822081	0	
565	N629	3.780436	0	0.910304	0	
566	N630	3.062825	0	0.678744	0	
567	N631	3.027341	0	0.811173	0	
568	N632	2.991856	0	0.943602	0	
569	N633	3.213869	0	0.785754	0	
570	N634	3.171631	0	0.912139	0	
571	N635	3.129392	0	1.038524	0	
572	N636	3.087154	0	1.164909	0	
573	N637	3.364913	0	0.892763	0	
574	N638	3.31592	0	1.013104	0	
575	N639	3.266928	0	1.133445	0	
576	N640	3.217936	0	1.253786	0	
577	N641	3.515956	0	0.999772	0	
578	N642	3.46021	0	1.114069	0	
579	N643	3.404464	0	1.228366	0	
580	N644	3.348718	0	1.342663	0	
581	N645	3.667	0	1.106781	0	
582	N646	3.6045	0	1.215034	0	
583	N647	3.542	0	1.323287	0	
584	N648	2.898431	0	1.200287	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
585	N649	2.84049	0	1.324542	0	
586	N650	2.782549	0	1.448797	0	
587	N651	3.028073	0	1.285163	0	
588	N652	2.968992	0	1.405418	0	
589	N653	2.909911	0	1.525673	0	
590	N655	3.157716	0	1.37004	0	
591	N656	3.097495	0	1.486294	0	
592	N657	3.037274	0	1.602549	0	
593	N659	3.287358	0	1.454917	0	
594	N660	3.225998	0	1.56717	0	
595	N661	3.164637	0	1.679424	0	
596	N663	3.417	0	1.539793	0	
597	N664	3.3545	0	1.648046	0	
598	N665	3.292	0	1.7563	0	
599	N666	2.927402	0	-1.138159	0	
600	N667	2.898431	0	-1.200287	0	
601	N668	2.86946	0	-1.262414	0	
602	N669	3.037339	0	-1.180016	0	
603	N670	3.009977	0	-1.24603	0	
604	N671	2.982616	0	-1.312044	0	
605	N672	2.955254	0	-1.378058	0	
606	N673	3.147276	0	-1.221872	0	
607	N674	3.121524	0	-1.291773	0	
608	N675	3.095771	0	-1.361673	0	
609	N676	3.070019	0	-1.431573	0	
610	N677	3.257214	0	-1.263729	0	
611	N678	3.23307	0	-1.337516	0	
612	N679	3.208927	0	-1.411302	0	
613	N680	3.184783	0	-1.485089	0	
614	N681	3.367151	0	-1.305586	0	
615	N682	3.344617	0	-1.383258	0	
616	N683	3.322082	0	-1.460931	0	
617	N684	2.811519	0	-1.38667	0	
618	N685	2.782549	0	-1.448797	0	
619	N686	2.927836	0	-1.444267	0	
620	N687	2.900417	0	-1.510477	0	
621	N688	3.044152	0	-1.501865	0	
622	N689	3.018286	0	-1.572157	0	
623	N690	3.160469	0	-1.559463	0	
624	N691	3.136155	0	-1.633837	0	
625	N692	3.276786	0	-1.61706	0	
626	N693	3.254024	0	-1.695516	0	
627	N694	1.203743	0	-3.729106	0	
628	N695	1.161172	0	-3.471528	0	
629	N696	3.84265	0	0.333377	0	
630	N697	3.610468	0	0.222251	0	
631	N698	3.575071	0	0.272534	0	
632	N699	3.731509	0	0.38102	0	
633	N700	3.887946	0	0.489506	0	
634	N701	3.726559	0	0.277814	0	
635	N702	3.436332	0	0.138907	0	
636	N703	3.529775	0	0.116405	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
637	N704	3.663564	0	0.146827	0	
638	N705	3.797353	0	0.177248	0	
639	N706	1.305614	0	-3.729106	0	
640	N707	1.253539	0	-3.568119	0	
641	N708	1.182457	0	-3.600317	0	
642	N709	1.201465	0	-3.407133	0	
643	N710	1.101871	0	-3.729106	0	
644	N711	1.100733	0	-3.568119	0	
645	N712	1.099594	0	-3.407133	0	
646	N713	1.129244	0	-3.278344	0	
647	N714	3.182458	0	-1.897535	0	
648	N715	2.698565	0	-1.618159	0	
649	N716	2.819539	0	-1.688003	0	
650	N717	2.940512	0	-1.757847	0	
651	N718	3.061485	0	-1.827691	0	
652	N719	3.234542	0.333333	-1.807323	0	
653	N720	2.871622	0.333333	-1.597792	0	
654	N721	2.992595	0.333333	-1.667635	0	
655	N722	3.113569	0.333333	-1.737479	0	
656	N723	3.182458	0.333333	-1.897535	0	
657	N724	2.819539	0.333333	-1.688003	0	
658	N725	2.940512	0.333333	-1.757847	0	
659	N726	3.061485	0.333333	-1.827691	0	
660	N727	3.234542	-0.333333	-1.807323	0	
661	N728	2.750649	-0.333333	-1.527948	0	
662	N729	2.871622	-0.333333	-1.597792	0	
663	N730	2.992595	-0.333333	-1.667635	0	
664	N731	3.113569	-0.333333	-1.737479	0	
665	N732	3.182458	-0.333333	-1.897535	0	
666	N733	2.698565	-0.333333	-1.618159	0	
667	N734	2.819539	-0.333333	-1.688003	0	
668	N735	2.940512	-0.333333	-1.757847	0	
669	N736	3.061485	-0.333333	-1.827691	0	
670	N737	3.234542	-0.166666	-1.807323	0	
671	N738	2.750649	-0.166666	-1.527948	0	
672	N739	2.871622	-0.166666	-1.597792	0	
673	N740	2.992595	-0.166666	-1.667635	0	
674	N741	3.113569	-0.166666	-1.737479	0	
675	N742	3.182458	-0.166666	-1.897535	0	
676	N743	2.698565	-0.166666	-1.618159	0	
677	N744	2.819539	-0.166666	-1.688003	0	
678	N745	2.940512	-0.166666	-1.757847	0	
679	N746	3.061485	-0.166666	-1.827691	0	
680	N747	3.234542	0.166667	-1.807323	0	
681	N748	2.750649	0.166667	-1.527948	0	
682	N749	2.871622	0.166667	-1.597792	0	
683	N750	2.992595	0.166667	-1.667635	0	
684	N751	3.113569	0.166667	-1.737479	0	
685	N752	3.182458	0.166667	-1.897535	0	
686	N753	2.698565	0.166667	-1.618159	0	
687	N754	2.819539	0.166667	-1.688003	0	
688	N755	2.940512	0.166667	-1.757847	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
689	N756	3.061485	0.166667	-1.827691	0	
690	N760	-3.182459	0	-1.897534	0	
691	N761	-1.407485	0	-3.729106	0	
692	N762	-3.933243	0	0.645635	0	
693	N764	-0.546315	0	-3.098309	0	
694	N765	-1.076031	0	-2.956372	0	
695	N766	-1.573053	0	-2.724607	0	
696	N767	-2.022278	0	-2.410057	0	
697	N768	-2.410057	0	-2.022278	0	
698	N769	-2.698566	0	-1.618158	0	
699	N770	-2.956372	0	-1.076031	0	
700	N771	-3.098309	0	-0.546315	0	
701	N772	-3.146106	0	1e-14	0	
702	N773	-3.098309	0	0.546315	0	
703	N774	-2.956372	0	1.076031	0	
704	N777	-0.5	0	-3.729106	0	
705	N778	-1	0	-3.729106	0	
706	N780	-3.4795	0	1.43154	0	
707	N781	-3.7295	0	0.998527	0	
708	N782	-1.857739	0	-3.259936	0	
709	N783	-2.307993	0	-2.790767	0	
710	N784	-2.758246	0	-2.321598	0	
711	N785	-3.389686	0	-1.227913	0	
712	N786	-3.570871	0	-0.603397	0	
713	N787	-3.752057	0	0.021119	0	
714	N788	-2.567332	0	-1.797665	0	
715	N789	-2.982244	0	-2.08819	0	
716	N793	-2.782549	0	1.448797	0	
717	N794A	-2.84049	0	1.324542	0	
718	N795A	-2.898431	0	1.200287	0	
719	N796A	-2.909911	0	1.525673	0	
720	N797A	-2.968992	0	1.405418	0	
721	N798A	-3.028073	0	1.285163	0	
722	N799A	-3.087154	0	1.164909	0	
723	N800A	-3.037274	0	1.602549	0	
724	N801A	-3.097495	0	1.486294	0	
725	N802A	-3.157716	0	1.37004	0	
726	N803A	-3.217936	0	1.253786	0	
727	N804A	-3.164637	0	1.679424	0	
728	N805A	-3.225998	0	1.56717	0	
729	N806A	-3.287358	0	1.454917	0	
730	N807A	-3.348718	0	1.342663	0	
731	N808A	-3.292	0	1.7563	0	
732	N809A	-3.3545	0	1.648046	0	
733	N810A	-3.417	0	1.539793	0	
734	N811A	-2.991856	0	0.943602	0	
735	N812A	-3.027341	0	0.811173	0	
736	N813A	-3.062825	0	0.678744	0	
737	N814	-3.129392	0	1.038524	0	
738	N815A	-3.171631	0	0.912139	0	
739	N816A	-3.213869	0	0.785754	0	
740	N817	-3.256107	0	0.659368	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
741	N818A	-3.266928	0	1.133445	0	
742	N819A	-3.31592	0	1.013104	0	
743	N820	-3.364913	0	0.892763	0	
744	N821A	-3.413905	0	0.772421	0	
745	N822A	-3.404464	0	1.228366	0	
746	N823	-3.46021	0	1.114069	0	
747	N824A	-3.515956	0	0.999772	0	
748	N825A	-3.571702	0	0.885474	0	
749	N826	-3.542	0	1.323287	0	
750	N827	-3.6045	0	1.215034	0	
751	N828	-3.667	0	1.106781	0	
752	N829	-3.724509	0	0.620805	0	
753	N830	-3.515776	0	0.595975	0	
754	N831	-3.307043	0	0.571145	0	
755	N832	-3.887946	0	0.489506	0	
756	N833	-3.693524	0	0.469564	0	
757	N834	-3.499102	0	0.449621	0	
758	N835	-3.30468	0	0.429679	0	
759	N836	-3.110258	0	0.409737	0	
760	N837	-3.84265	0	0.333377	0	
761	N838	-3.662539	0	0.318322	0	
762	N839	-3.482429	0	0.303267	0	
763	N840	-3.302318	0	0.288213	0	
764	N841	-3.122207	0	0.273158	0	
765	N842	-3.797353	0	0.177248	0	
766	N843	-3.631554	0	0.167081	0	
767	N844	-3.465755	0	0.156913	0	
768	N845	-3.299956	0	0.146746	0	
769	N846	-3.134156	0	0.136579	0	
770	N847	-3.600569	0	0.015839	0	
771	N848	-3.449081	0	0.01056	0	
772	N849	-3.297593	0	0.00528	0	
773	N850	-3.706761	0	-0.13501	0	
774	N851	-3.56361	0	-0.135402	0	
775	N852	-3.420459	0	-0.135794	0	
776	N853	-3.277307	0	-0.136187	0	
777	N854	-3.134156	0	-0.136579	0	
778	N855	-3.661464	0	-0.291139	0	
779	N856	-3.52665	0	-0.286644	0	
780	N857	-3.391836	0	-0.282148	0	
781	N858	-3.257022	0	-0.277653	0	
782	N859	-3.122207	0	-0.273158	0	
783	N860	-3.616168	0	-0.447268	0	
784	N861	-3.48969	0	-0.437885	0	
785	N862	-3.363213	0	-0.428502	0	
786	N863	-3.236736	0	-0.419119	0	
787	N864	-3.110258	0	-0.409737	0	
788	N865	-3.452731	0	-0.589126	0	
789	N866	-3.33459	0	-0.574856	0	
790	N867	-3.21645	0	-0.560586	0	
791	N868	-3.525575	0	-0.759526	0	
792	N869	-3.409888	0	-0.73933	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
793	N870	-3.2942	0	-0.719135	0	
794	N871	-3.178512	0	-0.69894	0	
795	N872	-3.062825	0	-0.678744	0	
796	N873	-3.480279	0	-0.915655	0	
797	N874	-3.367044	0	-0.889534	0	
798	N875	-3.25381	0	-0.863414	0	
799	N876	-3.140575	0	-0.837294	0	
800	N877	-3.027341	0	-0.811173	0	
801	N878	-3.434982	0	-1.071784	0	
802	N879	-3.324201	0	-1.039738	0	
803	N880	-3.213419	0	-1.007693	0	
804	N881	-3.102638	0	-0.975648	0	
805	N882	-2.991856	0	-0.943602	0	
806	N883	-3.281357	0	-1.189942	0	
807	N884	-3.173029	0	-1.151972	0	
808	N885	-3.064701	0	-1.114002	0	
809	N886	-2.898431	0	-1.200287	0	
810	N887	-2.84049	0	-1.324542	0	
811	N888	-2.782549	0	-1.448797	0	
812	N889	-3.009921	0	-1.246225	0	
813	N890	-2.955141	0	-1.378449	0	
814	N891	-2.900361	0	-1.510673	0	
815	N892	-2.819539	0	-1.688002	0	
816	N893	-3.12141	0	-1.292164	0	
817	N894	-3.069791	0	-1.432356	0	
818	N895	-3.018173	0	-1.572548	0	
819	N896	-2.940512	0	-1.757846	0	
820	N897	-3.2329	0	-1.338103	0	
821	N898	-3.184442	0	-1.486263	0	
822	N899C	-3.135985	0	-1.634424	0	
823	N900B	-3.061486	0	-1.82769	0	
824	N901B	-3.344389	0	-1.384042	0	
825	N902B	-3.299093	0	-1.540171	0	
826	N903	-3.253797	0	-1.6963	0	
827	N904	-2.313112	0	-2.119222	0	
828	N905A	-2.216167	0	-2.216167	0	
829	N906A	-2.119222	0	-2.313112	0	
830	N907	-2.497104	0	-2.097108	0	
831	N908	-2.396255	0	-2.199139	0	
832	N909	-2.295405	0	-2.301171	0	
833	N910	-2.194556	0	-2.403203	0	
834	N911A	-2.093706	0	-2.505234	0	
835	N912B	-2.584152	0	-2.171938	0	
836	N913B	-2.479397	0	-2.279056	0	
837	N914B	-2.374643	0	-2.386175	0	
838	N915B	-2.269889	0	-2.493293	0	
839	N916B	-2.165135	0	-2.600412	0	
840	N917A	-2.671199	0	-2.246768	0	
841	N918A	-2.56254	0	-2.358973	0	
842	N919A	-2.453881	0	-2.471179	0	
843	N920A	-2.345223	0	-2.583384	0	
844	N921A	-2.236564	0	-2.695589	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
845	N922B	-2.645683	0	-2.43889	0	
846	N923B	-2.53312	0	-2.556182	0	
847	N924B	-2.420556	0	-2.673475	0	
848	N925B	-1.685359	0	-2.64597	0	
849	N926B	-1.797665	0	-2.567332	0	
850	N927	-1.909971	0	-2.488694	0	
851	N928	-1.644224	0	-2.85844	0	
852	N929	-1.756595	0	-2.770138	0	
853	N930	-1.868965	0	-2.681837	0	
854	N931	-1.981336	0	-2.593536	0	
855	N932	-1.715396	0	-2.992272	0	
856	N933	-1.827831	0	-2.894307	0	
857	N934	-1.940265	0	-2.796342	0	
858	N935	-2.0527	0	-2.698377	0	
859	N936	-1.786567	0	-3.126104	0	
860	N937	-1.899066	0	-3.018475	0	
861	N938	-2.011566	0	-2.910847	0	
862	N939	-2.124065	0	-2.803218	0	
863	N940	-1.970302	0	-3.142644	0	
864	N941	-2.082866	0	-3.025352	0	
865	N942	-2.195429	0	-2.908059	0	
866	N943	-1.448797	0	-2.782549	0	
867	N944	-1.324542	0	-2.84049	0	
868	N945	-1.200287	0	-2.898431	0	
869	N946	-1.531661	0	-2.975732	0	
870	N947	-1.413002	0	-3.019188	0	
871	N948	-1.294342	0	-3.062644	0	
872	N949	-1.175683	0	-3.1061	0	
873	N950	-1.057024	0	-3.149556	0	
874	N951A	-1.490269	0	-3.226856	0	
875	N952C	-1.377206	0	-3.255827	0	
876	N953B	-1.264142	0	-3.284798	0	
877	N954B	-1.151079	0	-3.313768	0	
878	N955C	-1.038016	0	-3.342739	0	
879	N956C	-1.448877	0	-3.477981	0	
880	N957B	-1.34141	0	-3.492466	0	
881	N958A	-1.233942	0	-3.506952	0	
882	N959	-1.126475	0	-3.521437	0	
883	N960A	-1.019008	0	-3.535922	0	
884	N961A	-1.305614	0	-3.729106	0	
885	N962A	-1.203743	0	-3.729106	0	
886	N963A	-1.101871	0	-3.729106	0	
887	N964A	-0.943602	0	-2.991856	0	
888	N965	-0.811173	0	-3.027341	0	
889	N966A	-0.678744	0	-3.062825	0	
890	N967A	-0.926452	0	-3.176169	0	
891	N968A	-0.79588	0	-3.202782	0	
892	N969A	-0.665308	0	-3.229395	0	
893	N970A	-0.534737	0	-3.256008	0	
894	N971A	-0.909301	0	-3.360481	0	
895	N972A	-0.780587	0	-3.378223	0	
896	N973A	-0.651872	0	-3.395965	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
897	N974	-0.523158	0	-3.413707	0	
898	N975	-0.892151	0	-3.544793	0	
899	N976A	-0.765293	0	-3.553664	0	
900	N977A	-0.638436	0	-3.562535	0	
901	N978	-0.511579	0	-3.571406	0	
902	N979A	-0.875	0	-3.729106	0	
903	N980A	-0.75	0	-3.729106	0	
904	N981A	-0.625	0	-3.729106	0	
905	N982A	-0.409737	0	-3.110258	0	
906	N983A	-0.273158	0	-3.122207	0	
907	N984A	-0.136579	0	-3.134156	0	
908	N985A	-0.401052	0	-3.26497	0	
909	N986A	-0.267368	0	-3.273932	0	
910	N987	-0.133684	0	-3.282894	0	
911	N989	-0.392368	0	-3.419682	0	
912	N990	-0.261579	0	-3.425656	0	
913	N991	-0.130789	0	-3.431631	0	
914	N993A	-0.383684	0	-3.574394	0	
915	N994	-0.255789	0	-3.577381	0	
916	N995A	-0.127895	0	-3.580368	0	
917	N997A	-0.375	0	-3.729106	0	
918	N998A	-0.25	0	-3.729106	0	
919	N999A	-0.125	0	-3.729106	0	
920	N1000A	-2.449376	0	-1.966125	0	
921	N1001A	-2.488694	0	-1.909971	0	
922	N1002A	-2.528013	0	-1.853818	0	
923	N1003	-2.540593	0	-2.040405	0	
924	N1004	-2.584082	0	-1.983702	0	
925	N1005	-2.627571	0	-1.926999	0	
926	N1006	-2.67106	0	-1.870296	0	
927	N1007	-2.631811	0	-2.114685	0	
928	N1008	-2.67947	0	-2.057433	0	
929	N1009	-2.727129	0	-2.00018	0	
930	N1010	-2.774788	0	-1.942928	0	
931	N1011	-2.723028	0	-2.188965	0	
932	N1012	-2.774858	0	-2.131163	0	
933	N1013	-2.826687	0	-2.073361	0	
934	N1014	-2.878516	0	-2.015559	0	
935	N1015	-2.814246	0	-2.263246	0	
936	N1016	-2.870245	0	-2.204894	0	
937	N1017	-2.926245	0	-2.146542	0	
938	N1018	-2.606651	0	-1.741512	0	
939	N1019	-2.64597	0	-1.685359	0	
940	N1020	-2.71469	0	-1.813446	0	
941	N1021	-2.75832	0	-1.756597	0	
942	N1022	-2.822729	0	-1.885381	0	
943	N1023	-2.870671	0	-1.827834	0	
944	N1024	-2.930769	0	-1.957315	0	
945	N1025	-2.983022	0	-1.899072	0	
946	N1026	-3.038808	0	-2.029249	0	
947	N1027	-3.095372	0	-1.970309	0	
948	N1028	-3.831371	0	0.822081	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
949	N1029	-3.587017	0	0.730159	0	
950	N1030	-1.632612	0	-3.494521	0	
951	N1031	-1.612759	0	-3.237883	0	
952	N1032	-1.551514	0	-3.23237	0	
953	N1033	-1.535781	0	-3.422091	0	
954	N1034	-1.520048	0	-3.611813	0	
955	N1035	-1.622685	0	-3.366202	0	
956	N1036	-1.597869	0	-3.045405	0	
957	N1037	-1.664077	0	-3.115077	0	
958	N1038	-1.704626	0	-3.246153	0	
959	N1039	-1.745175	0	-3.377229	0	
960	N1040	-3.882307	0	0.733858	0	
961	N1041	-3.716852	0	0.698463	0	
962	N1042	-3.709194	0	0.77612	0	
963	N1043	-3.551397	0	0.663067	0	
964	N1044	-3.780436	0	0.910304	0	
965	N1045	-3.640448	0	0.830797	0	
966	N1046	-3.500461	0	0.75129	0	
967	N1047	-3.403752	0	0.661218	0	
968	N1048	-3.234542	0	-1.807322	0	
969	N1049	-2.750649	0	-1.527947	0	
970	N1050	-2.871623	0	-1.597791	0	
971	N1051	-2.992596	0	-1.667635	0	
972	N1052	-3.113569	0	-1.737479	0	
973	N1053	-3.182459	0.333333	-1.897534	0	
974	N1054	-2.819539	0.333333	-1.688002	0	
975	N1055	-2.940512	0.333333	-1.757846	0	
976	N1056	-3.061486	0.333333	-1.82769	0	
977	N1057	-3.234542	0.333333	-1.807322	0	
978	N1058	-2.871623	0.333333	-1.597791	0	
979	N1059	-2.992596	0.333333	-1.667635	0	
980	N1060	-3.113569	0.333333	-1.737479	0	
981	N1061	-3.182459	-0.333333	-1.897534	0	
982	N1062	-2.698566	-0.333333	-1.618158	0	
983	N1063	-2.819539	-0.333333	-1.688002	0	
984	N1064	-2.940512	-0.333333	-1.757846	0	
985	N1065	-3.061486	-0.333333	-1.82769	0	
986	N1066	-3.234542	-0.333333	-1.807322	0	
987	N1067	-2.750649	-0.333333	-1.527947	0	
988	N1068	-2.871623	-0.333333	-1.597791	0	
989	N1069	-2.992596	-0.333333	-1.667635	0	
990	N1070	-3.113569	-0.333333	-1.737479	0	
991	N1071	-3.182459	-0.166666	-1.897534	0	
992	N1072	-2.698566	-0.166666	-1.618158	0	
993	N1073	-2.819539	-0.166666	-1.688002	0	
994	N1074	-2.940512	-0.166666	-1.757846	0	
995	N1075	-3.061486	-0.166666	-1.82769	0	
996	N1076	-3.234542	-0.166666	-1.807322	0	
997	N1077	-2.750649	-0.166666	-1.527947	0	
998	N1078	-2.871623	-0.166666	-1.597791	0	
999	N1079	-2.992596	-0.166666	-1.667635	0	
1000	N1080	-3.113569	-0.166666	-1.737479	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1001	N1081	-3.182459	0.166667	-1.897534	0	
1002	N1082	-2.698566	0.166667	-1.618158	0	
1003	N1083	-2.819539	0.166667	-1.688002	0	
1004	N1084	-2.940512	0.166667	-1.757846	0	
1005	N1085	-3.061486	0.166667	-1.82769	0	
1006	N1086	-3.234542	0.166667	-1.807322	0	
1007	N1087	-2.750649	0.166667	-1.527947	0	
1008	N1088	-2.871623	0.166667	-1.597791	0	
1009	N1089	-2.992596	0.166667	-1.667635	0	
1010	N1090	-3.113569	0.166667	-1.737479	0	
1011	N1066A	-2.525758	0.208333	3.083471	0	
1012	N1067A	2.525758	0.208333	3.083471	0	
1013	N1068A	-1.894318	0.208333	3.238817	0	
1014	N1069A	-1.262879	0.208333	3.394164	0	
1015	N1070A	-0.631439	0.208333	3.54951	0	
1016	N1071A	0.631439	0.208333	3.54951	0	
1017	N1072A	1.262879	0.208333	3.394164	0	
1018	N1073A	1.894318	0.208333	3.238817	0	
1019	N1074A	-0.317303	0.208333	3.626794	0	
1020	N1075A	2.367898	0.208333	3.122307	0	
1021	N1076A	2.210038	0.208333	3.161144	0	
1022	N1077A	2.052178	0.208333	3.199981	0	
1023	N1078A	1.736458	0.208333	3.277654	0	
1024	N1079A	1.578599	0.208333	3.31649	0	
1025	N1080A	1.420739	0.208333	3.355327	0	
1026	N1081A	1.105019	0.208333	3.433	0	
1027	N1082A	0.947159	0.208333	3.471837	0	
1028	N1083A	0.789299	0.208333	3.510674	0	
1029	N1084A	0.47358	0.208333	3.588347	0	
1030	N1085A	0.31572	0.208333	3.627184	0	
1031	N1086A	0.15786	0.208333	3.66602	0	
1032	N1087A	-0.789299	0.208333	3.510674	0	
1033	N1088A	-0.947159	0.208333	3.471837	0	
1034	N1089A	-1.105019	0.208333	3.433	0	
1035	N1090A	-1.736458	0.208333	3.277654	0	
1036	N1091	-1.578599	0.208333	3.31649	0	
1037	N1092	-1.420739	0.208333	3.355327	0	
1038	N1093	-0.552905	0.208333	3.568831	0	
1039	N1094	-0.474371	0.208333	3.588152	0	
1040	N1095	-0.395837	0.208333	3.607473	0	
1041	N1096	-0.237978	0.208333	3.64631	0	
1042	N1097	-0.158652	0.208333	3.665826	0	
1043	N1098	-2.210038	0.208333	3.161144	0	
1044	N1099	-2.367898	0.208333	3.122307	0	
1045	N1100	-2.052178	0.208333	3.199981	0	
1046	N1136	3.933243	0.208333	0.645635	0	
1047	N1137	1.407485	0.208333	-3.729106	0	
1048	N1138	3.752057	0.208333	0.021119	0	
1049	N1139	3.570871	0.208333	-0.603397	0	
1050	N1140	3.389686	0.208333	-1.227913	0	
1051	N1141	2.758246	0.208333	-2.321598	0	
1052	N1142	2.307993	0.208333	-2.790767	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1053	N1143	1.857739	0.208333	-3.259936	0	
1054	N1144	3.299547	0.208333	-1.538604	0	
1055	N1145	1.520048	0.208333	-3.611813	0	
1056	N1146	1.632612	0.208333	-3.494521	0	
1057	N1147	1.745175	0.208333	-3.377229	0	
1058	N1148	1.970302	0.208333	-3.142644	0	
1059	N1149	2.082866	0.208333	-3.025352	0	
1060	N1150	2.195429	0.208333	-2.908059	0	
1061	N1151	2.420556	0.208333	-2.673475	0	
1062	N1152	2.53312	0.208333	-2.556182	0	
1063	N1153	2.645683	0.208333	-2.43889	0	
1064	N1154	2.87081	0.208333	-2.204305	0	
1065	N1155	2.983373	0.208333	-2.087013	0	
1066	N1156	3.095937	0.208333	-1.969721	0	
1067	N1157	3.434982	0.208333	-1.071784	0	
1068	N1158	3.480279	0.208333	-0.915655	0	
1069	N1159	3.525575	0.208333	-0.759526	0	
1070	N1160	3.706761	0.208333	-0.13501	0	
1071	N1161	3.661464	0.208333	-0.291139	0	
1072	N1162	3.616168	0.208333	-0.447268	0	
1073	N1163	3.367151	0.208333	-1.305586	0	
1074	N1164	3.344617	0.208333	-1.383258	0	
1075	N1165	3.322082	0.208333	-1.460931	0	
1076	N1166	3.276786	0.208333	-1.61706	0	
1077	N1167	3.254024	0.208333	-1.695516	0	
1078	N1168	3.84265	0.208333	0.333377	0	
1079	N1169	3.887946	0.208333	0.489506	0	
1080	N1170	3.797353	0.208333	0.177248	0	
1081	N1206	-1.407485	0.208333	-3.729106	0	
1082	N1207	-3.933243	0.208333	0.645635	0	
1083	N1208	-1.857739	0.208333	-3.259936	0	
1084	N1209	-2.307993	0.208333	-2.790767	0	
1085	N1210	-2.758246	0.208333	-2.321598	0	
1086	N1211	-3.389686	0.208333	-1.227913	0	
1087	N1212	-3.570871	0.208333	-0.603397	0	
1088	N1213	-3.752057	0.208333	0.021119	0	
1089	N1214	-2.982244	0.208333	-2.08819	0	
1090	N1215	-3.887946	0.208333	0.489506	0	
1091	N1216	-3.84265	0.208333	0.333377	0	
1092	N1217	-3.797353	0.208333	0.177248	0	
1093	N1218	-3.706761	0.208333	-0.13501	0	
1094	N1219	-3.661464	0.208333	-0.291139	0	
1095	N1220	-3.616168	0.208333	-0.447268	0	
1096	N1221	-3.525575	0.208333	-0.759526	0	
1097	N1222	-3.480279	0.208333	-0.915655	0	
1098	N1223	-3.434982	0.208333	-1.071784	0	
1099	N1224	-3.344389	0.208333	-1.384042	0	
1100	N1225	-3.299093	0.208333	-1.540171	0	
1101	N1226	-3.253797	0.208333	-1.6963	0	
1102	N1227	-2.645683	0.208333	-2.43889	0	
1103	N1228	-2.53312	0.208333	-2.556182	0	
1104	N1229	-2.420556	0.208333	-2.673475	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1105	N1230	-1.970302	0.208333	-3.142644	0	
1106	N1231	-2.082866	0.208333	-3.025352	0	
1107	N1232	-2.195429	0.208333	-2.908059	0	
1108	N1233	-2.814246	0.208333	-2.263246	0	
1109	N1234	-2.870245	0.208333	-2.204894	0	
1110	N1235	-2.926245	0.208333	-2.146542	0	
1111	N1236	-3.038808	0.208333	-2.029249	0	
1112	N1237	-3.095372	0.208333	-1.970309	0	
1113	N1238	-1.632612	0.208333	-3.494521	0	
1114	N1239	-1.520048	0.208333	-3.611813	0	
1115	N1240	-1.745175	0.208333	-3.377229	0	
1116	N1171	-0.507185	0	-6.254436	0	
1117	N1172	0.507185	0	-6.254436	0	
1118	N1175	-5.162908	0	3.566453	0	
1119	N1176	-5.670093	0	2.687983	0	
1120	N1179	5.670093	0	2.687983	0	
1121	N1180	5.162908	0	3.566453	0	
1122	N1145B	-4e-14	0	-6.254436	0	
1123	N1172A	2.79063	-0.083333	-1.45271	0	
1124	N1196	-0.177083	0	3.704857	0	
1125	N1200A	0.177083	0	3.704857	0	
1126	N1203	3.297042	0	-1.69907	0	
1127	N1204	3.119959	0	-2.005787	0	
1128	N1210A	-3.119959	0	-2.005787	0	
1129	N1211A	-3.297042	0	-1.69907	0	
1130	N1158A	2.908869	-.333	-1.514261	0	
1131	N1159A	2.908869	-0.083333	-1.514261	0	
1132	N1160A	3.026841	-.333	-1.575674	0	
1133	N1161A	3.026841	-0.083333	-1.575674	0	
1134	N1164A	3.14508	-.333	-1.637225	0	
1135	N1165A	3.14508	-0.083333	-1.637225	0	
1136	N1168A	3.263052	-.333	-1.698637	0	
1137	N1169A	3.263052	-0.083333	-1.698637	0	
1138	N1167A	-2.653399	-.333	-1.690402	0	
1139	N1184	-2.653399	-0.083333	-1.690402	0	
1140	N1185	-2.765823	-.333	-1.762024	0	
1141	N1186	-2.765823	-0.083333	-1.762024	0	
1142	N1187	-2.877994	-.333	-1.833484	0	
1143	N1188	-2.877994	-0.083333	-1.833484	0	
1144	N1189	-2.990418	-.333	-1.905106	0	
1145	N1190	-2.990418	-0.083333	-1.905106	0	
1146	N1191	-3.102589	-.333	-1.976567	0	
1147	N1192	-3.102589	-0.083333	-1.976567	0	
1148	N1194	-0.137231	-.333	3.143112	0	
1149	N1211B	-0.137231	-0.083333	3.143112	0	
1150	N1212A	-0.143046	-.333	3.276285	0	
1151	N1213A	-0.143046	-0.083333	3.276285	0	
1152	N1214A	-0.148847	-.333	3.409158	0	
1153	N1215A	-0.148847	-0.083333	3.409158	0	
1154	N1216A	-0.154662	-.333	3.542331	0	
1155	N1217A	-0.154662	-0.083333	3.542331	0	
1156	N1218A	-0.160463	-.333	3.675205	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1157	N1219A	-0.160463	-0.083333	3.675205	0	
1158	N1164B	0.942301	-.333	-0.490531	0	
1159	N1166B	3.751555	-0.333333	-1.952936	0	
1160	N1164C	-0.895963	-.333	-0.570791	0	
1161	N1165C	-3.56707	-0.333333	-2.272474	0	
1162	N1166A	-0.046338	-.333	1.061322	0	
1163	N1167B	-0.184485	-0.333333	4.22541	0	
1164	N1164D	4.41667	0	3.704857	0	
1165	N1165B	0.4167	0	3.704857	0	
1166	N1166C	-4.41667	0	3.704857	0	
1167	N1167C	4.41667	4	3.704857	0	
1168	N1168B	0.4167	5	3.704857	0	
1169	N1169B	-4.41667	4	3.704857	0	
1170	N1170A	4.41667	-2	3.704857	0	
1171	N1171A	0.4167	-3	3.704857	0	
1172	N1172B	-4.41667	-2	3.704857	0	
1173	N1173	1.000165	5	-5.677377	0	
1174	N1174	3.00015	4	-2.213301	0	
1175	N1175A	5.416835	4	1.97252	0	
1176	N1176A	1.000165	-3	-5.677377	0	
1177	N1177	3.00015	-2	-2.213301	0	
1178	N1178	5.416835	-2	1.97252	0	
1179	N1179A	-5.416835	4	1.97252	0	
1180	N1180A	-3.41685	5	-1.491556	0	
1181	N1181	-1.000165	4	-5.677377	0	
1182	N1182	-5.416835	-2	1.97252	0	
1183	N1183	-3.41685	-3	-1.491556	0	
1184	N1184A	-1.000165	-2	-5.677377	0	
1185	N1185A	5.416835	0	1.97252	0	
1186	N1186A	3.00015	0	-2.213301	0	
1187	N1187A	1.000165	0	-5.677377	0	
1188	N1188A	-1.000165	0	-5.677377	0	
1189	N1189A	-3.41685	0	-1.491556	0	
1190	N1190A	-5.416835	0	1.97252	0	
1191	N1191A	-6.25	3	3.704857	0	
1192	N1192A	6.25	3	3.704857	0	
1193	N1193	6.3335	3	3.56023	0	
1194	N1194A	0.0835	3	-7.265087	0	
1195	N1195	-0.0835	3	-7.265087	0	
1196	N1196A	-6.3335	3	3.56023	0	
1197	N1197	-4.41667	3	3.704857	0	
1198	N1198	0.4167	3	3.704857	0	
1199	N1199	4.41667	3	3.704857	0	
1200	N1200	5.416835	3	1.97252	0	
1201	N1201	3.00015	3	-2.213301	0	
1202	N1202	1.000165	3	-5.677377	0	
1203	N1203A	-1.000165	3	-5.677377	0	
1204	N1204A	-3.41685	3	-1.491556	0	
1205	N1205	-5.416835	3	1.97252	0	
1206	N1206A	-4.91667	3	3.704857	0	
1207	N1207A	4.91667	3	3.704857	0	
1208	N1208A	5.666835	3	2.405533	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1209	N1209A	0.750165	3	-6.11039	0	
1210	N1210B	-0.750165	3	-6.11039	0	
1211	N1211C	-5.666835	3	2.405533	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipes 1	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Footrails	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Plan Bracing	PL3/8x4	Beam	RECT	A36 Gr.36	Typical	1.5	.018	2	.066
4	Handrails	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
5	Grating Angle	L2x2x4	Beam	Single Angle	A36 Gr.36	Typical	.944	.346	.346	.021
6	Standoff Arm	HSS4x4x6	Beam	SquareTube	A500 Gr.B Rect	Typical	4.78	10.3	10.3	17.5
7	Plate Bracing2	PL3/8x4	Beam	RECT	A36 Gr.36	Typical	1.5	.018	2	.066
8	MP 2	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
9	HR End Conn	L3x3x4	Beam	Pipe	A36 Gr.36	Typical	1.44	1.23	1.23	.031

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
3	A992	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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N1196			Footrails	Beam	Pipe	A53 Gr.B	Typical
2	M5	N20	N5			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
3	M7	N6	N12			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
4	M8	N1171	N30			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
5	M9	N13	N19			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
6	M10	N22	N23		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
7	M11	N24	N25			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
8	M12	N25A	N26		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
9	M13	N27	N28			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
10	M14	N30	N31		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
11	M15	N32	N33			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
12	M16	N1200A	N2			Footrails	Beam	Pipe	A53 Gr.B	Typical
13	M46A	N996	N1001			RIGID	None	None	RIGID	Typical
14	M47A	N980	N985			RIGID	None	None	RIGID	Typical
15	M48A	N979	N984			RIGID	None	None	RIGID	Typical
16	M54B	N8	N1203			Footrails	Beam	Pipe	A53 Gr.B	Typical
17	M55B	N1204	N9			Footrails	Beam	Pipe	A53 Gr.B	Typical
18	M56B	N750	N755			RIGID	None	None	RIGID	Typical
19	M57B	N740	N745			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
20	M58A	N739	N744			RIGID	None	None	RIGID	Typical
21	M68	N15	N1210A			Footrails	Beam	Pipe	A53 Gr.B	Typical
22	M69	N1211A	N16			Footrails	Beam	Pipe	A53 Gr.B	Typical
23	M70	N1084	N1089			RIGID	None	None	RIGID	Typical
24	M71	N1074	N1079			RIGID	None	None	RIGID	Typical
25	M72	N1073	N1078			RIGID	None	None	RIGID	Typical
26	M55A	N18	N1171			RIGID	None	None	RIGID	Typical
27	M56A	N14	N1172			RIGID	None	None	RIGID	Typical
28	M55C	N1175	N22			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
29	M56C	N4	N1175			RIGID	None	None	RIGID	Typical
30	M57A	N21	N1176			RIGID	None	None	RIGID	Typical
31	M58B	N1179	N25A			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
32	M59	N11	N1179			RIGID	None	None	RIGID	Typical
33	M60	N7	N1180			RIGID	None	None	RIGID	Typical
34	M64	N32	N1176			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
35	M65	N30	N27			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
36	M66	N27	N1172			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
37	M67	N25A	N24			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
38	M68A	N24	N1180			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
39	M69A	N22	N32			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
40	M67A	N1172A	N903B			RIGID	None	None	RIGID	Typical
41	M115	N992	N1196			RIGID	None	None	RIGID	Typical
42	M116	N1196	N976			RIGID	None	None	RIGID	Typical
43	M117	N998	N1200A			RIGID	None	None	RIGID	Typical
44	M118	N1200A	N982			RIGID	None	None	RIGID	Typical
45	M119	N747	N1203			RIGID	None	None	RIGID	Typical
46	M120	N1203	N737			RIGID	None	None	RIGID	Typical
47	M121	N752	N1204			RIGID	None	None	RIGID	Typical
48	M122	N1204	N742			RIGID	None	None	RIGID	Typical
49	M123	N1081	N1210A			RIGID	None	None	RIGID	Typical
50	M124	N1210A	N1071			RIGID	None	None	RIGID	Typical
51	M125	N1086	N1211A			RIGID	None	None	RIGID	Typical
52	M126	N1211A	N1076			RIGID	None	None	RIGID	Typical
53	M127	N1196	N34			RIGID	None	None	RIGID	Typical
54	M128	N1200A	N952A			RIGID	None	None	RIGID	Typical
55	M129	N1203	N426A			RIGID	None	None	RIGID	Typical
56	M130	N1204	N714			RIGID	None	None	RIGID	Typical
57	M131	N1210A	N760			RIGID	None	None	RIGID	Typical
58	M132	N1211A	N1048			RIGID	None	None	RIGID	Typical
59	M102A	N1159A	N1158A			RIGID	None	None	RIGID	Typical
60	M103A	N1161A	N1160A			RIGID	None	None	RIGID	Typical
61	M105A	N1165A	N1164A			RIGID	None	None	RIGID	Typical
62	M107A	N1169A	N1168A			RIGID	None	None	RIGID	Typical
63	M108A	N684	N1172A			RIGID	None	None	RIGID	Typical
64	M109A	N1172A	N685			RIGID	None	None	RIGID	Typical
65	M110A	N1172A	N435A			RIGID	None	None	RIGID	Typical
66	M111A	N1159A	N686			RIGID	None	None	RIGID	Typical
67	M112	N1159A	N687			RIGID	None	None	RIGID	Typical
68	M113	N1159A	N558A			RIGID	None	None	RIGID	Typical
69	M114	N1161A	N688			RIGID	None	None	RIGID	Typical
70	M115A	N1161A	N689			RIGID	None	None	RIGID	Typical
71	M116A	N1161A	N562A			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
72	M117A	N1165A	N690			RIGID	None	None	RIGID	Typical
73	M118A	N1165A	N691			RIGID	None	None	RIGID	Typical
74	M119A	N1165A	N566A			RIGID	None	None	RIGID	Typical
75	M120A	N1169A	N692			RIGID	None	None	RIGID	Typical
76	M121A	N1169A	N693			RIGID	None	None	RIGID	Typical
77	M122A	N1169A	N426A			RIGID	None	None	RIGID	Typical
78	M124A	N1184	N1167A			RIGID	None	None	RIGID	Typical
79	M125A	N1186	N1185			RIGID	None	None	RIGID	Typical
80	M126A	N1188	N1187			RIGID	None	None	RIGID	Typical
81	M128A	N1190	N1189			RIGID	None	None	RIGID	Typical
82	M130A	N1192	N1191			RIGID	None	None	RIGID	Typical
83	M131A	N1018	N1184			RIGID	None	None	RIGID	Typical
84	M132A	N1184	N1019			RIGID	None	None	RIGID	Typical
85	M133	N1184	N769			RIGID	None	None	RIGID	Typical
86	M134	N1186	N1020			RIGID	None	None	RIGID	Typical
87	M135	N1186	N1021			RIGID	None	None	RIGID	Typical
88	M136	N1186	N892			RIGID	None	None	RIGID	Typical
89	M137	N1188	N1022			RIGID	None	None	RIGID	Typical
90	M138	N1188	N1023			RIGID	None	None	RIGID	Typical
91	M139	N1188	N896			RIGID	None	None	RIGID	Typical
92	M140	N1190	N1024			RIGID	None	None	RIGID	Typical
93	M141	N1190	N1025			RIGID	None	None	RIGID	Typical
94	M142	N1190	N900B			RIGID	None	None	RIGID	Typical
95	M143	N1192	N1026			RIGID	None	None	RIGID	Typical
96	M144	N1192	N1027			RIGID	None	None	RIGID	Typical
97	M145	N1192	N760			RIGID	None	None	RIGID	Typical
98	M147	N1211B	N1194			RIGID	None	None	RIGID	Typical
99	M148	N1213A	N1212A			RIGID	None	None	RIGID	Typical
100	M149	N1215A	N1214A			RIGID	None	None	RIGID	Typical
101	M151	N1217A	N1216A			RIGID	None	None	RIGID	Typical
102	M153	N1219A	N1218A			RIGID	None	None	RIGID	Typical
103	M154	N812	N1211B			RIGID	None	None	RIGID	Typical
104	M155	N1211B	N813			RIGID	None	None	RIGID	Typical
105	M156	N1211B	N129			RIGID	None	None	RIGID	Typical
106	M157	N1213A	N815			RIGID	None	None	RIGID	Typical
107	M158	N1213A	N816			RIGID	None	None	RIGID	Typical
108	M159	N1213A	N518			RIGID	None	None	RIGID	Typical
109	M160	N1215A	N818			RIGID	None	None	RIGID	Typical
110	M161	N1215A	N819			RIGID	None	None	RIGID	Typical
111	M162	N1215A	N522			RIGID	None	None	RIGID	Typical
112	M163	N1217A	N821			RIGID	None	None	RIGID	Typical
113	M164	N1217A	N822			RIGID	None	None	RIGID	Typical
114	M165	N1217A	N526			RIGID	None	None	RIGID	Typical
115	M166	N1219A	N824			RIGID	None	None	RIGID	Typical
116	M167	N1219A	N825			RIGID	None	None	RIGID	Typical
117	M168	N1219A	N34			RIGID	None	None	RIGID	Typical
118	M127B	N1164B	N1166B			HSS4x4x4	Beam	SquareTube	A500 Gr.B...	Typical
119	M125B	N1164C	N1165C			HSS4x4x4	Beam	SquareTube	A500 Gr.B...	Typical
120	M126B	N1166A	N1167B			HSS4x4x4	Beam	SquareTube	A500 Gr.B...	Typical
121	MP3A	N1169B	N1172B			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
122	MP2A	N1168B	N1171A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
123	MP1A	N1167C	N1170A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
124	MP3C	N1175A	N1178			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
125	MP2C	N1174	N1177			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
126	MP1C	N1173	N1176A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
127	MP3B	N1181	N1184A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
128	MP2B	N1180A	N1183			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
129	MP1B	N1179A	N1182			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
130	M130B	N1191A	N1192A			Handrails	Beam	Pipe	A53 Gr.B	Typical
131	M131B	N1193	N1194A			Handrails	Beam	Pipe	A53 Gr.B	Typical
132	M132B	N1195	N1196A			Handrails	Beam	Pipe	A53 Gr.B	Typical
133	M133A	N1206A	N1211C			HR End Conn	Beam	Pipe	A36 Gr.36	Typical
134	M134A	N1208A	N1207A			HR End Conn	Beam	Pipe	A36 Gr.36	Typical
135	M135A	N1210B	N1209A			HR End Conn	Beam	Pipe	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
1	M1						Yes			None
2	M5						Yes			None
3	M7						Yes			None
4	M8						Yes			None
5	M9						Yes			None
6	M10						Yes			None
7	M11						Yes			None
8	M12						Yes			None
9	M13						Yes			None
10	M14						Yes			None
11	M15						Yes			None
12	M16						Yes			None
13	M46A						Yes			None
14	M47A						Yes			None
15	M48A						Yes			None
16	M54B						Yes			None
17	M55B						Yes			None
18	M56B						Yes			None
19	M57B						Yes			None
20	M58A						Yes			None
21	M68						Yes			None
22	M69						Yes			None
23	M70						Yes			None
24	M71						Yes			None
25	M72						Yes			None
26	M55A						Yes			None
27	M56A						Yes			None
28	M55C						Yes			None
29	M56C						Yes			None
30	M57A						Yes			None
31	M58B						Yes			None
32	M59						Yes			None
33	M60						Yes			None
34	M64						Yes			None
35	M65						Yes			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
36	M66						Yes			None
37	M67						Yes			None
38	M68A						Yes			None
39	M69A						Yes			None
40	M67A						Yes			None
41	M115						Yes			None
42	M116						Yes			None
43	M117						Yes			None
44	M118						Yes			None
45	M119						Yes			None
46	M120						Yes			None
47	M121						Yes			None
48	M122						Yes			None
49	M123						Yes			None
50	M124						Yes			None
51	M125						Yes			None
52	M126						Yes			None
53	M127						Yes			None
54	M128						Yes			None
55	M129						Yes			None
56	M130						Yes			None
57	M131						Yes			None
58	M132						Yes			None
59	M102A						Yes			None
60	M103A						Yes			None
61	M105A						Yes			None
62	M107A						Yes			None
63	M108A						Yes			None
64	M109A						Yes			None
65	M110A						Yes			None
66	M111A						Yes			None
67	M112						Yes			None
68	M113						Yes			None
69	M114						Yes			None
70	M115A						Yes			None
71	M116A						Yes			None
72	M117A						Yes			None
73	M118A						Yes			None
74	M119A						Yes			None
75	M120A						Yes			None
76	M121A						Yes			None
77	M122A						Yes			None
78	M124A						Yes			None
79	M125A						Yes			None
80	M126A						Yes			None
81	M128A						Yes			None
82	M130A						Yes			None
83	M131A						Yes			None
84	M132A						Yes			None
85	M133						Yes			None
86	M134						Yes			None
87	M135						Yes			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
88	M136						Yes			None
89	M137						Yes			None
90	M138						Yes			None
91	M139						Yes			None
92	M140						Yes			None
93	M141						Yes			None
94	M142						Yes			None
95	M143						Yes			None
96	M144						Yes			None
97	M145						Yes			None
98	M147						Yes			None
99	M148						Yes			None
100	M149						Yes			None
101	M151						Yes			None
102	M153						Yes			None
103	M154						Yes			None
104	M155						Yes			None
105	M156						Yes			None
106	M157						Yes			None
107	M158						Yes			None
108	M159						Yes			None
109	M160						Yes			None
110	M161						Yes			None
111	M162						Yes			None
112	M163						Yes			None
113	M164						Yes			None
114	M165						Yes			None
115	M166						Yes			None
116	M167						Yes			None
117	M168						Yes			None
118	M127B						Yes			None
119	M125B						Yes			None
120	M126B						Yes			None
121	MP3A						Yes			None
122	MP2A						Yes			None
123	MP1A						Yes			None
124	MP3C						Yes			None
125	MP2C						Yes			None
126	MP1C						Yes			None
127	MP3B						Yes			None
128	MP2B						Yes			None
129	MP1B						Yes			None
130	M130B						Yes			None
131	M131B						Yes			None
132	M132B						Yes			None
133	M133A						Yes			None
134	M134A						Yes			None
135	M135A						Yes			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Footrails	6.073			Lbyy			1	1		Lateral
2	M5	Plan Bracing	4.25	Segment	Segment	Lbyy			.65	.65		Lateral
3	M7	Plan Bracing	4.25	Segment	Segment	Lbyy			.65	.65		Lateral
4	M8	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
5	M9	Plan Bracing	4.25	Segment	Segment	Lbyy			.65	.65		Lateral
6	M10	Grating Angle	2.916			Lbyy			.65	.65		Lateral
7	M11	Grating Angle	2.916			Lbyy			.65	.65		Lateral
8	M12	Grating Angle	2.916			Lbyy			.65	.65		Lateral
9	M13	Grating Angle	2.916			Lbyy			.65	.65		Lateral
10	M14	Grating Angle	2.916			Lbyy			.65	.65		Lateral
11	M15	Grating Angle	2.916			Lbyy			.65	.65		Lateral
12	M16	Footrails	6.073			Lbyy			1	1		Lateral
13	M54B	Footrails	6.073			Lbyy			1	1		Lateral
14	M55B	Footrails	6.073			Lbyy			1	1		Lateral
15	M68	Footrails	6.073			Lbyy			1	1		Lateral
16	M69	Footrails	6.073			Lbyy			1	1		Lateral
17	M55C	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
18	M58B	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
19	M64	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
20	M65	Plate Bracin...	.565			Lbyy			.65	.65		Lateral
21	M66	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
22	M67	Plate Bracin...	.565			Lbyy			.65	.65		Lateral
23	M68A	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
24	M69A	Plate Bracin...	.565			Lbyy			.65	.65		Lateral
25	M127B	HSS4x4x4	3.167			Lbyy			2.1	2.1		Lateral
26	M125B	HSS4x4x4	3.167			Lbyy			2.1	2.1		Lateral
27	M126B	HSS4x4x4	3.167			Lbyy			2.1	2.1		Lateral
28	MP3A	Mount Pipe...	6			Lbyy						Lateral
29	MP2A	Mount Pipe...	8			Lbyy						Lateral
30	MP1A	Mount Pipe...	6			Lbyy						Lateral
31	MP3C	Mount Pipe...	6			Lbyy						Lateral
32	MP2C	Mount Pipe...	6			Lbyy						Lateral
33	MP1C	Mount Pipe...	8			Lbyy						Lateral
34	MP3B	Mount Pipe...	6			Lbyy						Lateral
35	MP2B	Mount Pipe...	8			Lbyy						Lateral
36	MP1B	Mount Pipe...	6			Lbyy						Lateral
37	M130B	Handrails	12.5			Lbyy						Lateral
38	M131B	Handrails	12.5			Lbyy						Lateral
39	M132B	Handrails	12.5			Lbyy						Lateral
40	M133A	HR End Conn	1.5			Lbyy						Lateral
41	M134A	HR End Conn	1.5			Lbyy						Lateral
42	M135A	HR End Conn	1.5			Lbyy						Lateral

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
No Data to Print ...			

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-45.75	0
2	MP3A	Y	-45.75	4.5
3	MP3B	Y	-45.75	0
4	MP3B	Y	-45.75	4.5
5	MP3C	Y	-45.75	0
6	MP3C	Y	-45.75	4.5
7	MP1A	Y	-66.1	0
8	MP1A	Y	-66.1	4.5
9	MP1B	Y	-66.1	0
10	MP1B	Y	-66.1	4.5
11	MP2C	Y	-66.1	0
12	MP2C	Y	-66.1	4.5
13	MP1C	Y	-64	0
14	MP1C	Y	-64	6
15	MP2A	Y	-64	0
16	MP2A	Y	-64	6
17	MP2B	Y	-64	0
18	MP2B	Y	-64	6
19	MP3A	Y	-11	3
20	MP3B	Y	-11	3
21	MP3C	Y	-11	3
22	MP1C	Y	-70	3
23	MP2A	Y	-70	3
24	MP2B	Y	-70	3

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-82.784	0
2	MP3A	Y	-82.784	4.5
3	MP3B	Y	-82.784	0
4	MP3B	Y	-82.784	4.5
5	MP3C	Y	-82.784	0
6	MP3C	Y	-82.784	4.5
7	MP1A	Y	-89.834	0
8	MP1A	Y	-89.834	4.5
9	MP1B	Y	-89.834	0
10	MP1B	Y	-89.834	4.5
11	MP2C	Y	-89.834	0
12	MP2C	Y	-89.834	4.5
13	MP1C	Y	-205.085	0
14	MP1C	Y	-205.085	6
15	MP2A	Y	-205.085	0
16	MP2A	Y	-205.085	6
17	MP2B	Y	-205.085	0
18	MP2B	Y	-205.085	6
19	MP3A	Y	-15.894	3
20	MP3B	Y	-15.894	3
21	MP3C	Y	-15.894	3
22	MP1C	Y	-66.835	3
23	MP2A	Y	-66.835	3

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP2B	Y	-66.835	3

Member Point Loads (BLC 3 : Antenna W Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-74.546	0
2	MP3A	Z	-74.546	4.5
3	MP3B	Z	-58.207	0
4	MP3B	Z	-58.207	4.5
5	MP3C	Z	-58.207	0
6	MP3C	Z	-58.207	4.5
7	MP1A	Z	-79.687	0
8	MP1A	Z	-79.687	4.5
9	MP1B	Z	-63.184	0
10	MP1B	Z	-63.184	4.5
11	MP2C	Z	-63.184	0
12	MP2C	Z	-63.184	4.5
13	MP1C	Z	-137.12	0
14	MP1C	Z	-137.12	6
15	MP2A	Z	-247.753	0
16	MP2A	Z	-247.753	6
17	MP2B	Z	-137.12	0
18	MP2B	Z	-137.12	6
19	MP3A	Z	-5.019	3
20	MP3B	Z	-2.683	3
21	MP3C	Z	-2.683	3
22	MP1C	Z	-23.583	3
23	MP2A	Z	-30.296	3
24	MP2B	Z	-23.583	3

Member Point Loads (BLC 4 : Antenna Wi Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-25.362	0
2	MP3A	Z	-25.362	4.5
3	MP3B	Z	-20.359	0
4	MP3B	Z	-20.359	4.5
5	MP3C	Z	-20.359	0
6	MP3C	Z	-20.359	4.5
7	MP1A	Z	-26.932	0
8	MP1A	Z	-26.932	4.5
9	MP1B	Z	-21.89	0
10	MP1B	Z	-21.89	4.5
11	MP2C	Z	-21.89	0
12	MP2C	Z	-21.89	4.5
13	MP1C	Z	-45.4	0
14	MP1C	Z	-45.4	6
15	MP2A	Z	-78.221	0
16	MP2A	Z	-78.221	6
17	MP2B	Z	-45.4	0
18	MP2B	Z	-45.4	6
19	MP3A	Z	-2.211	3
20	MP3B	Z	-1.542	3

Member Point Loads (BLC 4 : Antenna Wi Front) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP3C	Z	-1.542	3
22	MP1C	Z	-9.359	3
23	MP2A	Z	-11.559	3
24	MP2B	Z	-9.359	3

Member Point Loads (BLC 5 : Antenna W Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	52.76	0
2	MP3A	X	52.76	4.5
3	MP3B	X	69.1	0
4	MP3B	X	69.1	4.5
5	MP3C	X	69.1	0
6	MP3C	X	69.1	4.5
7	MP1A	X	57.682	0
8	MP1A	X	57.682	4.5
9	MP1B	X	74.186	0
10	MP1B	X	74.186	4.5
11	MP2C	X	74.186	0
12	MP2C	X	74.186	4.5
13	MP1C	X	210.876	0
14	MP1C	X	210.876	6
15	MP2A	X	100.243	0
16	MP2A	X	100.243	6
17	MP2B	X	210.876	0
18	MP2B	X	210.876	6
19	MP3A	X	3.809	3
20	MP3B	X	8.48	3
21	MP3C	X	8.48	3
22	MP1C	X	37.411	3
23	MP2A	X	28.46	3
24	MP2B	X	37.411	3

Member Point Loads (BLC 6 : Antenna Wi Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	18.692	0
2	MP3A	X	18.692	4.5
3	MP3B	X	23.694	0
4	MP3B	X	23.694	4.5
5	MP3C	X	23.694	0
6	MP3C	X	23.694	4.5
7	MP1A	X	20.209	0
8	MP1A	X	20.209	4.5
9	MP1B	X	25.252	0
10	MP1B	X	25.252	4.5
11	MP2C	X	25.252	0
12	MP2C	X	25.252	4.5
13	MP1C	X	67.281	0
14	MP1C	X	67.281	6
15	MP2A	X	34.46	0
16	MP2A	X	34.46	6
17	MP2B	X	67.281	0

Member Point Loads (BLC 6 : Antenna Wi Side) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2B	X	67.281	6
19	MP3A	X	2.638	3
20	MP3B	X	3.976	3
21	MP3C	X	3.976	3
22	MP1C	X	14.434	3
23	MP2A	X	11.501	3
24	MP2B	X	14.434	3

Member Point Loads (BLC 7 : Service Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	0

Member Point Loads (BLC 8 : Service Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%50

Member Distributed Loads (BLC 10 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-10.939	-10.939	0	%100
2	M5	Y	-10.423	-10.423	0	%100
3	M7	Y	-10.423	-10.423	0	%100
4	M8	Y	-10.423	-10.423	0	%100
5	M9	Y	-10.423	-10.423	0	%100
6	M10	Y	-7.631	-7.631	0	%100
7	M11	Y	-7.631	-7.631	0	%100
8	M12	Y	-7.631	-7.631	0	%100
9	M13	Y	-7.631	-7.631	0	%100
10	M14	Y	-7.631	-7.631	0	%100
11	M15	Y	-7.631	-7.631	0	%100
12	M16	Y	-10.939	-10.939	0	%100
13	M54B	Y	-10.939	-10.939	0	%100
14	M55B	Y	-10.939	-10.939	0	%100
15	M68	Y	-10.939	-10.939	0	%100
16	M69	Y	-10.939	-10.939	0	%100
17	M55C	Y	-10.423	-10.423	0	%100
18	M58B	Y	-10.423	-10.423	0	%100
19	M64	Y	-10.423	-10.423	0	%100
20	M65	Y	-10.423	-10.423	0	%100
21	M66	Y	-10.423	-10.423	0	%100
22	M67	Y	-10.423	-10.423	0	%100
23	M68A	Y	-10.423	-10.423	0	%100
24	M69A	Y	-10.423	-10.423	0	%100
25	M127B	Y	-15.263	-15.263	0	%100
26	M125B	Y	-15.263	-15.263	0	%100
27	M126B	Y	-15.263	-15.263	0	%100
28	MP3A	Y	-8.58	-8.58	0	%100
29	MP2A	Y	-8.58	-8.58	0	%100
30	MP1A	Y	-8.58	-8.58	0	%100
31	MP3C	Y	-8.58	-8.58	0	%100

Member Distributed Loads (BLC 10 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
32	MP2C	Y	-8.58	-8.58	0	%100
33	MP1C	Y	-8.58	-8.58	0	%100
34	MP3B	Y	-8.58	-8.58	0	%100
35	MP2B	Y	-8.58	-8.58	0	%100
36	MP1B	Y	-8.58	-8.58	0	%100
37	M130B	Y	-10.939	-10.939	0	%100
38	M131B	Y	-10.939	-10.939	0	%100
39	M132B	Y	-10.939	-10.939	0	%100
40	M133A	Y	-10.301	-10.301	0	%100
41	M134A	Y	-10.301	-10.301	0	%100
42	M135A	Y	-10.301	-10.301	0	%100

Member Distributed Loads (BLC 11 : Structure W Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-8.569	-8.569	0	%100
2	M5	PZ	-16.321	-16.321	0	%100
3	M7	PZ	-16.321	-16.321	0	%100
4	M8	PZ	-16.321	-16.321	0	%100
5	M9	PZ	-16.321	-16.321	0	%100
6	M10	PZ	-8.161	-8.161	0	%100
7	M11	PZ	-8.161	-8.161	0	%100
8	M12	PZ	-8.161	-8.161	0	%100
9	M13	PZ	-8.161	-8.161	0	%100
10	M14	PZ	-8.161	-8.161	0	%100
11	M15	PZ	-8.161	-8.161	0	%100
12	M16	PZ	-8.569	-8.569	0	%100
13	M54B	PZ	-8.569	-8.569	0	%100
14	M55B	PZ	-8.569	-8.569	0	%100
15	M68	PZ	-8.569	-8.569	0	%100
16	M69	PZ	-8.569	-8.569	0	%100
17	M55C	PZ	-16.321	-16.321	0	%100
18	M58B	PZ	-16.321	-16.321	0	%100
19	M64	PZ	-16.321	-16.321	0	%100
20	M65	PZ	-16.321	-16.321	0	%100
21	M66	PZ	-16.321	-16.321	0	%100
22	M67	PZ	-16.321	-16.321	0	%100
23	M68A	PZ	-16.321	-16.321	0	%100
24	M69A	PZ	-16.321	-16.321	0	%100
25	M127B	PZ	-16.321	-16.321	0	%100
26	M125B	PZ	-16.321	-16.321	0	%100
27	M126B	PZ	-16.321	-16.321	0	%100
28	MP3A	PZ	-5.814	-5.814	0	%100
29	MP2A	PZ	-5.814	-5.814	0	%100
30	MP1A	PZ	-5.814	-5.814	0	%100
31	MP3C	PZ	-5.814	-5.814	0	%100
32	MP2C	PZ	-5.814	-5.814	0	%100
33	MP1C	PZ	-5.814	-5.814	0	%100
34	MP3B	PZ	-5.814	-5.814	0	%100
35	MP2B	PZ	-5.814	-5.814	0	%100
36	MP1B	PZ	-5.814	-5.814	0	%100
37	M130B	PZ	-8.569	-8.569	0	%100

Member Distributed Loads (BLC 11 : Structure W Front) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
38	M131B	PZ	-8.569	-8.569	0	%100
39	M132B	PZ	-8.569	-8.569	0	%100
40	M133A	PZ	-12.241	-12.241	0	%100
41	M134A	PZ	-12.241	-12.241	0	%100
42	M135A	PZ	-12.241	-12.241	0	%100

Member Distributed Loads (BLC 12 : Structure Wi Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-4.906	-4.906	0	%100
2	M5	PZ	-7.147	-7.147	0	%100
3	M7	PZ	-7.147	-7.147	0	%100
4	M8	PZ	-7.147	-7.147	0	%100
5	M9	PZ	-7.147	-7.147	0	%100
6	M10	PZ	-4.788	-4.788	0	%100
7	M11	PZ	-4.788	-4.788	0	%100
8	M12	PZ	-4.788	-4.788	0	%100
9	M13	PZ	-4.788	-4.788	0	%100
10	M14	PZ	-4.788	-4.788	0	%100
11	M15	PZ	-4.788	-4.788	0	%100
12	M16	PZ	-4.906	-4.906	0	%100
13	M54B	PZ	-4.906	-4.906	0	%100
14	M55B	PZ	-4.906	-4.906	0	%100
15	M68	PZ	-4.906	-4.906	0	%100
16	M69	PZ	-4.906	-4.906	0	%100
17	M55C	PZ	-7.147	-7.147	0	%100
18	M58B	PZ	-7.147	-7.147	0	%100
19	M64	PZ	-7.147	-7.147	0	%100
20	M65	PZ	-7.147	-7.147	0	%100
21	M66	PZ	-7.147	-7.147	0	%100
22	M67	PZ	-7.147	-7.147	0	%100
23	M68A	PZ	-7.147	-7.147	0	%100
24	M69A	PZ	-7.147	-7.147	0	%100
25	M127B	PZ	-7.147	-7.147	0	%100
26	M125B	PZ	-7.147	-7.147	0	%100
27	M126B	PZ	-7.147	-7.147	0	%100
28	MP3A	PZ	-4.11	-4.11	0	%100
29	MP2A	PZ	-4.11	-4.11	0	%100
30	MP1A	PZ	-4.11	-4.11	0	%100
31	MP3C	PZ	-4.11	-4.11	0	%100
32	MP2C	PZ	-4.11	-4.11	0	%100
33	MP1C	PZ	-4.11	-4.11	0	%100
34	MP3B	PZ	-4.11	-4.11	0	%100
35	MP2B	PZ	-4.11	-4.11	0	%100
36	MP1B	PZ	-4.11	-4.11	0	%100
37	M130B	PZ	-4.906	-4.906	0	%100
38	M131B	PZ	-4.906	-4.906	0	%100
39	M132B	PZ	-4.906	-4.906	0	%100
40	M133A	PZ	-5.967	-5.967	0	%100
41	M134A	PZ	-5.967	-5.967	0	%100
42	M135A	PZ	-5.967	-5.967	0	%100

Member Distributed Loads (BLC 13 : Structure W Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	8.569	8.569	0	%100
2	M5	PX	16.321	16.321	0	%100
3	M7	PX	16.321	16.321	0	%100
4	M8	PX	16.321	16.321	0	%100
5	M9	PX	16.321	16.321	0	%100
6	M10	PX	8.161	8.161	0	%100
7	M11	PX	8.161	8.161	0	%100
8	M12	PX	8.161	8.161	0	%100
9	M13	PX	8.161	8.161	0	%100
10	M14	PX	8.161	8.161	0	%100
11	M15	PX	8.161	8.161	0	%100
12	M16	PX	8.569	8.569	0	%100
13	M54B	PX	8.569	8.569	0	%100
14	M55B	PX	8.569	8.569	0	%100
15	M68	PX	8.569	8.569	0	%100
16	M69	PX	8.569	8.569	0	%100
17	M55C	PX	16.321	16.321	0	%100
18	M58B	PX	16.321	16.321	0	%100
19	M64	PX	16.321	16.321	0	%100
20	M65	PX	16.321	16.321	0	%100
21	M66	PX	16.321	16.321	0	%100
22	M67	PX	16.321	16.321	0	%100
23	M68A	PX	16.321	16.321	0	%100
24	M69A	PX	16.321	16.321	0	%100
25	M127B	PX	16.321	16.321	0	%100
26	M125B	PX	16.321	16.321	0	%100
27	M126B	PX	16.321	16.321	0	%100
28	MP3A	PX	5.814	5.814	0	%100
29	MP2A	PX	5.814	5.814	0	%100
30	MP1A	PX	5.814	5.814	0	%100
31	MP3C	PX	5.814	5.814	0	%100
32	MP2C	PX	5.814	5.814	0	%100
33	MP1C	PX	5.814	5.814	0	%100
34	MP3B	PX	5.814	5.814	0	%100
35	MP2B	PX	5.814	5.814	0	%100
36	MP1B	PX	5.814	5.814	0	%100
37	M130B	PX	8.569	8.569	0	%100
38	M131B	PX	8.569	8.569	0	%100
39	M132B	PX	8.569	8.569	0	%100
40	M133A	PX	12.241	12.241	0	%100
41	M134A	PX	12.241	12.241	0	%100
42	M135A	PX	12.241	12.241	0	%100

Member Distributed Loads (BLC 14 : Structure Wi Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	4.906	4.906	0	%100
2	M5	PX	7.147	7.147	0	%100
3	M7	PX	7.147	7.147	0	%100
4	M8	PX	7.147	7.147	0	%100
5	M9	PX	7.147	7.147	0	%100
6	M10	PX	4.788	4.788	0	%100

Member Distributed Loads (BLC 14 : Structure Wi Side) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	M11	PX	4.788	4.788	0	%100
8	M12	PX	4.788	4.788	0	%100
9	M13	PX	4.788	4.788	0	%100
10	M14	PX	4.788	4.788	0	%100
11	M15	PX	4.788	4.788	0	%100
12	M16	PX	4.906	4.906	0	%100
13	M54B	PX	4.906	4.906	0	%100
14	M55B	PX	4.906	4.906	0	%100
15	M68	PX	4.906	4.906	0	%100
16	M69	PX	4.906	4.906	0	%100
17	M55C	PX	7.147	7.147	0	%100
18	M58B	PX	7.147	7.147	0	%100
19	M64	PX	7.147	7.147	0	%100
20	M65	PX	7.147	7.147	0	%100
21	M66	PX	7.147	7.147	0	%100
22	M67	PX	7.147	7.147	0	%100
23	M68A	PX	7.147	7.147	0	%100
24	M69A	PX	7.147	7.147	0	%100
25	M127B	PX	7.147	7.147	0	%100
26	M125B	PX	7.147	7.147	0	%100
27	M126B	PX	7.147	7.147	0	%100
28	MP3A	PX	4.11	4.11	0	%100
29	MP2A	PX	4.11	4.11	0	%100
30	MP1A	PX	4.11	4.11	0	%100
31	MP3C	PX	4.11	4.11	0	%100
32	MP2C	PX	4.11	4.11	0	%100
33	MP1C	PX	4.11	4.11	0	%100
34	MP3B	PX	4.11	4.11	0	%100
35	MP2B	PX	4.11	4.11	0	%100
36	MP1B	PX	4.11	4.11	0	%100
37	M130B	PX	4.906	4.906	0	%100
38	M131B	PX	4.906	4.906	0	%100
39	M132B	PX	4.906	4.906	0	%100
40	M133A	PX	5.967	5.967	0	%100
41	M134A	PX	5.967	5.967	0	%100
42	M135A	PX	5.967	5.967	0	%100

Member Distributed Loads (BLC 15 : BLC 9 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M5	Y	-.673	-5.13	.425	1.558
2	M5	Y	-5.13	-5.137	1.558	2.692
3	M5	Y	-5.137	-.673	2.692	3.825
4	M10	Y	-1.884	-3.796	0	.583
5	M10	Y	-3.796	-3.434	.583	1.166
6	M10	Y	-3.434	-2.559	1.166	1.75
7	M10	Y	-2.559	-3.446	1.75	2.333
8	M15	Y	-.706	-3.153	0	.583
9	M15	Y	-3.153	-3.2	.583	1.166
10	M15	Y	-3.2	-2.495	1.166	1.75
11	M15	Y	-2.495	-3.437	1.75	2.333
12	M69A	Y	-.945	-.945	0	.565

Member Distributed Loads (BLC 15 : BLC 9 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	M9	Y	-.673	-5.137	.425	1.558
14	M9	Y	-5.137	-5.13	1.558	2.692
15	M9	Y	-5.13	-.673	2.692	3.825
16	M13	Y	-1.884	-3.796	0	.583
17	M13	Y	-3.796	-3.434	.583	1.166
18	M13	Y	-3.434	-2.559	1.166	1.75
19	M13	Y	-2.559	-3.446	1.75	2.333
20	M14	Y	-.706	-3.153	0	.583
21	M14	Y	-3.153	-3.2	.583	1.166
22	M14	Y	-3.2	-2.495	1.166	1.75
23	M14	Y	-2.495	-3.437	1.75	2.333
24	M65	Y	-.945	-.945	0	.565
25	M7	Y	-.672	-5.132	.425	1.558
26	M7	Y	-5.132	-5.138	1.558	2.692
27	M7	Y	-5.138	-.672	2.692	3.825
28	M11	Y	-.706	-3.154	0	.583
29	M11	Y	-3.154	-3.2	.583	1.166
30	M11	Y	-3.2	-2.492	1.166	1.75
31	M11	Y	-2.492	-3.429	1.75	2.333
32	M12	Y	-1.886	-3.797	0	.583
33	M12	Y	-3.797	-3.435	.583	1.166
34	M12	Y	-3.435	-2.56	1.166	1.75
35	M12	Y	-2.56	-3.447	1.75	2.333
36	M67	Y	-.943	-.943	0	.565

Member Distributed Loads (BLC 16 : BLC 10 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M5	Y	-1.64	-12.507	.425	1.558
2	M5	Y	-12.507	-12.524	1.558	2.692
3	M5	Y	-12.524	-1.64	2.692	3.825
4	M10	Y	-4.593	-9.255	0	.583
5	M10	Y	-9.255	-8.373	.583	1.166
6	M10	Y	-8.373	-6.239	1.166	1.75
7	M10	Y	-6.239	-8.4	1.75	2.333
8	M15	Y	-1.72	-7.688	0	.583
9	M15	Y	-7.688	-7.802	.583	1.166
10	M15	Y	-7.802	-6.082	1.166	1.75
11	M15	Y	-6.082	-8.379	1.75	2.333
12	M69A	Y	-2.305	-2.305	0	.565
13	M9	Y	-1.64	-12.524	.425	1.558
14	M9	Y	-12.524	-12.507	1.558	2.692
15	M9	Y	-12.507	-1.64	2.692	3.825
16	M13	Y	-4.593	-9.255	0	.583
17	M13	Y	-9.255	-8.373	.583	1.166
18	M13	Y	-8.373	-6.239	1.166	1.75
19	M13	Y	-6.239	-8.4	1.75	2.333
20	M14	Y	-1.72	-7.688	0	.583
21	M14	Y	-7.688	-7.802	.583	1.166
22	M14	Y	-7.802	-6.082	1.166	1.75
23	M14	Y	-6.082	-8.379	1.75	2.333
24	M65	Y	-2.305	-2.305	0	.565

Member Distributed Loads (BLC 16 : BLC 10 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M7	Y	-1.639	-12.512	.425	1.558
26	M7	Y	-12.512	-12.527	1.558	2.692
27	M7	Y	-12.527	-1.639	2.692	3.825
28	M11	Y	-1.722	-7.689	0	.583
29	M11	Y	-7.689	-7.802	.583	1.166
30	M11	Y	-7.802	-6.075	1.166	1.75
31	M11	Y	-6.075	-8.36	1.75	2.333
32	M12	Y	-4.597	-9.258	0	.583
33	M12	Y	-9.258	-8.373	.583	1.166
34	M12	Y	-8.373	-6.24	1.166	1.75
35	M12	Y	-6.24	-8.404	1.75	2.333
36	M67	Y	-2.298	-2.298	0	.565

Member Area Loads (BLC 9 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N32	N22	N23	N33	Y	Two Way	-.005
2	N30	N27	N28	N31	Y	Two Way	-.005
3	N26	N25A	N24	N25	Y	Two Way	-.005

Member Area Loads (BLC 10 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N32	N22	N23	N33	Y	Two Way	-.013
2	N30	N27	N28	N31	Y	Two Way	-.013
3	N26	N25A	N24	N25	Y	Two Way	-.013

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	N1164B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N1164C	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N1166A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1164B	max	2863.28	4	2694.227	7	1025.904	1	2.651	5	1.789	3	5.184	3
2		min	-1065.627	3	81.606	4	-1842.18	2	-.705	2	-1.693	4	-1.701	4
3	N1164C	max	1017.115	4	2987.237	8	1135.691	1	3.862	5	2.015	3	1.147	3
4		min	-2637.702	3	297.725	3	-2298.051	2	-.972	2	-1.915	4	-5.098	8
5	N1166A	max	988.483	4	2641.2	6	2929.606	5	1.904	1	1.237	4	1.031	3
6		min	-1165.531	3	.815	1	-807.794	2	-5.643	2	-1.108	3	-1.336	4
7	Totals:	max	4868.878	4	7640.721	5	4948.045	1						
8		min	-4868.861	3	3118.782	2	-4948.025	2						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1	M1	1	max	0	1	0	1	0	1	0	1	0	1	0	1
2			min	0	1	-750	9	0	1	0	1	0	1	0	1
3		2	max	300.147	7	97.185	2	191.486	5	.508	9	.041	1	.671	9
4			min	28.027	4	-312.605	9	-33.295	2	-.1	1	-.035	2	-.105	2
5		3	max	698.575	7	170.123	1	156.338	2	.225	2	.14	7	.339	4
6			min	-213.164	4	-403.284	2	-108.948	1	-.354	1	-.045	4	-.546	10
7		4	max	513.139	7	210.948	1	183.858	4	.09	9	.118	6	.726	9
8			min	-108.312	1	-513.779	10	-327.928	3	-.325	5	-.041	1	-.266	3
9		5	max	513.139	7	198.115	1	183.858	4	.09	9	.265	4	1.236	2
10			min	-108.312	1	-526.612	10	-327.928	3	-.325	5	-.405	3	-.462	1
11	M5	1	max	320.858	2	145.008	1	86.262	1	.018	1	.015	2	.306	1
12			min	-424.885	1	-95.268	2	-94.619	2	-.015	2	-.013	1	-.272	2
13		2	max	1316.671	3	117.664	1	.285	1	.005	1	0	7	.164	1
14			min	-451.01	4	-114.059	2	-.199	2	-.002	2	0	4	-.164	2
15		3	max	1915.034	7	96.764	1	1.512	4	.004	1	.001	7	.056	5
16			min	-378.699	4	-133.998	2	-.783	8	-.004	2	0	4	-.044	9
17		4	max	973.823	1	76.707	1	.485	4	.002	1	0	5	.147	2
18			min	-394.837	2	-148.767	2	-1.635	7	-.005	2	0	2	-.063	1
19		5	max	259.462	4	62.472	10	119.348	1	.011	4	.022	1	.259	2
20			min	-484.759	3	-82.105	2	-114.584	2	-.013	3	-.021	2	-.129	1
21	M7	1	max	324.296	1	105.511	2	81.896	2	.013	4	.016	1	.207	2
22			min	-411.029	2	-68.692	1	-96.889	1	-.01	3	-.013	2	-.199	1
23		2	max	1278.573	5	79.697	2	.536	4	.005	2	0	5	.107	2
24			min	-349.282	2	-83.642	3	-.464	3	-.002	1	0	2	-.12	1
25		3	max	1818.962	8	62.059	2	.719	2	.004	2	.001	8	.048	9
26			min	-316.584	3	-106.189	1	-1.343	3	-.004	1	0	3	-.01	1
27		4	max	772.089	8	42.827	2	.124	3	.002	2	0	8	.151	5
28			min	-187.125	3	-124.893	1	-1.508	8	-.006	1	0	3	-.04	2
29		5	max	314.183	2	43.382	2	80.59	2	.014	2	.018	4	.232	1
30			min	-547.444	1	-83.662	1	-83.459	1	-.017	1	-.017	3	-.087	2
31	M8	1	max	315.949	6	220.914	3	17.328	3	.008	3	.038	4	.081	2
32			min	-51.977	1	-178.084	4	-193.534	8	-.008	4	-.018	3	-.106	1
33		2	max	315.949	6	220.57	3	17.328	3	.008	3	.03	4	.078	2
34			min	-51.977	1	-178.428	4	-193.534	8	-.008	4	-.017	3	-.106	1
35		3	max	315.949	6	220.226	3	17.328	3	.008	3	.022	4	.074	2
36			min	-51.977	1	-178.772	4	-193.534	8	-.008	4	-.016	3	-.105	1
37		4	max	315.949	6	219.882	3	17.328	3	.008	3	.013	4	.071	2
38			min	-51.977	1	-179.116	4	-193.534	8	-.008	4	-.015	3	-.104	1
39		5	max	315.949	6	219.538	3	17.328	3	.008	3	.005	4	.068	2
40			min	-51.977	1	-179.461	4	-193.534	8	-.008	4	-.014	7	-.103	1
41	M9	1	max	480.967	4	129.463	3	148.443	3	.016	3	.027	4	.245	3
42			min	-567.444	3	-94.716	4	-162.621	4	-.013	4	-.024	3	-.27	4
43		2	max	1277.141	6	103.359	3	.479	2	.006	3	0	6	.12	3
44			min	-402.612	1	-111.722	4	-.402	1	-.002	4	0	1	-.162	4
45		3	max	1857.163	6	84.184	3	.284	3	.005	3	.001	6	.028	9
46			min	-507.001	1	-134.726	4	-1.632	2	-.005	4	0	1	-.021	1
47		4	max	987.596	3	63.835	3	.426	1	.003	3	0	7	.151	4
48			min	-459.798	4	-151.87	4	-1.642	6	-.006	4	0	4	-.078	3
49		5	max	389.739	3	38.586	3	146.424	3	.015	3	.023	3	.256	4
50			min	-619.167	4	-72.065	4	-147.054	4	-.017	4	-.023	4	-.129	3
51	M10	1	max	79.434	2	2.062	4	33.395	7	.001	2	.033	2	.011	1
52			min	-208.966	1	-15.745	7	4.352	4	-.001	1	-.024	1	-.016	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
53		2	max	79.434	2	5.351	1	17.007	7	.001	2	.03	2	.017	10
54			min	-208.966	1	-16.091	2	-1.102	4	-.001	1	-.019	1	-.006	2
55		3	max	79.434	2	14.87	1	4.874	3	.001	2	.02	2	.026	7
56			min	-208.966	1	-25.609	2	-6.911	4	-.001	1	-.013	1	-.006	4
57		4	max	79.434	2	24.388	1	-.426	3	.001	2	.009	3	.029	7
58			min	-208.966	1	-35.127	2	-19.693	8	-.001	1	-.011	9	-.012	4
59		5	max	79.434	2	33.907	1	-3.819	3	.001	2	.007	1	.035	3
60			min	-208.966	1	-44.646	2	-29.835	8	-.001	1	-.025	6	-.02	4
61	M11	1	max	99.054	2	34.232	8	15.968	3	.001	1	.024	4	.02	4
62			min	-260.752	1	4.561	3	-24.586	4	0	2	-.022	3	-.016	3
63		2	max	99.054	2	20.087	8	15.968	3	.001	1	.024	2	.004	2
64			min	-260.752	1	-.153	3	-24.586	4	0	2	-.018	1	-.018	5
65		3	max	99.054	2	6.298	4	15.968	3	.001	1	.019	2	0	3
66			min	-260.752	1	-5.691	3	-24.586	4	0	2	-.014	1	-.027	5
67		4	max	99.054	2	1.062	4	18.29	1	.001	1	.006	2	.013	3
68			min	-260.752	1	-15.62	7	-26.494	2	0	2	-.008	1	-.032	8
69		5	max	99.054	2	-2.328	4	27.808	1	.001	1	.001	1	.028	3
70			min	-260.752	1	-25.75	7	-36.012	2	0	2	-.019	6	-.044	4
71	M12	1	max	47.863	1	6.481	2	34.056	5	0	1	.034	1	.01	4
72			min	-168.1	6	-20.259	5	5.806	2	-.001	2	-.022	2	-.017	3
73		2	max	51.984	1	8.861	2	17.664	5	0	1	.03	1	.016	4
74			min	-169.64	2	-21.488	1	.351	2	-.001	2	-.017	2	-.009	3
75		3	max	56.106	1	11.24	2	3.767	1	0	1	.021	1	.025	8
76			min	-173.762	2	-23.868	1	-5.459	2	-.001	2	-.013	2	-.002	2
77		4	max	60.228	1	15.747	4	-1.534	1	0	1	.009	1	.031	5
78			min	-177.884	2	-27.996	3	-18.659	6	-.001	2	-.011	2	-.012	2
79		5	max	64.349	1	22.885	4	-4.927	1	0	1	.011	4	.043	1
80			min	-182.005	2	-35.135	3	-28.802	6	-.001	2	-.028	3	-.027	2
81	M13	1	max	132.78	3	33.669	7	15.144	4	.001	4	.048	3	.037	3
82			min	-291.944	4	7.504	1	-23.188	3	0	3	-.045	4	-.037	4
83		2	max	136.901	3	17.281	7	22.283	4	.001	4	.04	3	.018	3
84			min	-296.066	4	2.05	1	-30.327	3	0	3	-.032	4	-.03	4
85		3	max	141.023	3	2.952	2	29.422	4	.001	4	.025	3	0	1
86			min	-300.187	4	-3.759	1	-37.466	3	0	3	-.019	4	-.03	8
87		4	max	145.145	3	-2.348	2	36.56	4	.001	4	.004	3	.005	1
88			min	-304.309	4	-18.11	8	-44.605	3	0	3	-.005	4	-.032	6
89		5	max	149.266	3	-5.742	2	43.699	4	.001	4	.01	4	.03	4
90			min	-308.431	4	-28.252	8	-51.743	3	0	3	-.024	3	-.046	3
91	M14	1	max	130.883	4	13.261	3	29.716	6	.001	4	.051	4	.033	3
92			min	-252.508	3	-25.744	4	2.301	1	-.001	3	-.04	3	-.041	4
93		2	max	135.004	4	20.4	3	15.574	6	.001	4	.042	4	.026	3
94			min	-256.629	3	-32.883	4	-2.412	1	-.001	3	-.03	3	-.02	4
95		3	max	139.126	4	27.539	3	5.649	2	.001	4	.027	4	.021	7
96			min	-260.751	3	-40.022	4	-7.951	1	-.001	3	-.02	3	.002	1
97		4	max	143.247	4	34.677	3	.409	2	.001	4	.006	4	.026	8
98			min	-264.873	3	-47.161	4	-20.161	5	-.001	3	-.009	3	-.01	3
99		5	max	147.369	4	41.816	3	-2.982	2	.001	4	.004	3	.051	4
100			min	-268.994	3	-54.3	4	-30.295	5	-.001	3	-.028	8	-.036	3
101	M15	1	max	80.724	4	34.845	5	14.169	2	.001	2	.036	1	.023	1
102			min	-240.486	7	5.947	4	-24.775	1	0	1	-.031	2	-.016	2
103		2	max	76.602	4	20.702	5	16.549	2	.001	2	.029	1	.012	9
104			min	-238.974	7	1.233	4	-27.154	1	0	1	-.021	2	-.013	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
105		3	max	72.48	4	5.129	3	18.928	2	.001	2	.018	1	.005	9
106			min	-237.463	7	-4.305	4	-29.534	1	0	1	-.013	2	-.026	7
107		4	max	68.359	4	-.111	3	21.308	2	.001	2	.004	1	.013	2
108			min	-235.951	7	-14.467	6	-31.914	1	0	1	-.008	9	-.034	5
109		5	max	64.237	4	-3.501	3	23.687	2	.001	2	0	2	.03	2
110			min	-234.44	7	-24.601	6	-34.293	1	0	1	-.021	5	-.049	1
111	M16	1	max	1363.497	4	1905.437	6	652.008	1	.704	5	.099	1	.696	2
112			min	-879.478	3	115.733	1	-494.332	2	-.254	2	-.081	2	-.307	1
113		2	max	712.911	4	356.399	2	220.406	2	.27	8	.164	4	.2	2
114			min	-337.419	3	-192.854	1	-183.811	1	-.05	3	-.071	3	-.146	1
115		3	max	803.682	4	239.826	2	124.669	1	.33	1	.123	4	.228	3
116			min	-372.255	3	-135.881	1	-155.822	2	-.151	2	-.05	3	-.368	4
117		4	max	332.957	8	149.462	1	-2.387	2	.1	9	.034	3	.114	1
118			min	-77.554	3	-94.769	2	-205.162	5	-.089	2	-.019	4	-.085	2
119		5	max	0	1	0	1	0	1	0	1	0	1	0	1
120			min	0	1	0	1	0	1	0	1	0	1	0	1
121	M46A	1	max	145.569	4	759.938	6	2557.724	1	0	1	.034	2	.042	2
122			min	-3179.17	7	32.578	1	-2254.093	2	0	1	-.293	5	-.048	1
123		2	max	145.569	4	759.938	6	2557.724	1	0	1	-.025	2	.028	2
124			min	-3179.17	7	32.578	1	-2254.093	2	0	1	-.265	5	-.049	1
125		3	max	145.569	4	759.938	6	2557.724	1	0	1	-.084	2	.015	2
126			min	-3179.17	7	32.578	1	-2254.093	2	0	1	-.238	5	-.052	5
127		4	max	145.569	4	759.938	6	2557.724	1	0	1	-.042	1	.001	2
128			min	-3179.17	7	32.578	1	-2254.093	2	0	1	-.232	6	-.069	5
129		5	max	145.569	4	759.938	6	2557.724	1	0	1	.025	1	-.012	2
130			min	-3179.17	7	32.578	1	-2254.093	2	0	1	-.237	6	-.085	5
131	M47A	1	max	3015.461	2	367.999	2	1163.38	2	0	1	.096	2	.024	5
132			min	-2306.598	1	-446.174	1	-604.657	1	0	1	-.09	1	.002	2
133		2	max	3015.461	2	367.999	2	1163.38	2	0	1	.126	2	.028	5
134			min	-2306.598	1	-446.174	1	-604.657	1	0	1	-.106	1	-.008	2
135		3	max	3015.461	2	367.999	2	1163.38	2	0	1	.157	2	.037	1
136			min	-2306.598	1	-446.174	1	-604.657	1	0	1	-.122	1	-.017	2
137		4	max	3015.461	2	367.999	2	1163.38	2	0	1	.187	2	.048	1
138			min	-2306.598	1	-446.174	1	-604.657	1	0	1	-.137	1	-.027	2
139		5	max	3015.461	2	367.999	2	1163.38	2	0	1	.217	2	.06	1
140			min	-2306.598	1	-446.174	1	-604.657	1	0	1	-.153	1	-.036	2
141	M48A	1	max	1943.218	8	1226.947	7	435.628	2	0	1	.013	3	.036	3
142			min	88.467	3	225.616	4	-307.871	1	0	1	-.059	8	-.067	4
143		2	max	1943.218	8	1226.947	7	435.628	2	0	1	.013	3	.017	3
144			min	88.467	3	225.616	4	-307.871	1	0	1	-.054	8	-.083	8
145		3	max	1943.218	8	1226.947	7	435.628	2	0	1	.015	2	-.003	3
146			min	88.467	3	225.616	4	-307.871	1	0	1	-.051	5	-.111	8
147		4	max	1943.218	8	1226.947	7	435.628	2	0	1	.026	2	-.023	3
148			min	88.467	3	225.616	4	-307.871	1	0	1	-.056	1	-.14	8
149		5	max	1943.218	8	1226.947	7	435.628	2	0	1	.038	2	-.042	3
150			min	88.467	3	225.616	4	-307.871	1	0	1	-.064	1	-.168	8
151	M54B	1	max	0	1	.019	2	.002	1	0	1	0	1	0	1
152			min	0	1	0	8	0	7	0	1	0	1	0	1
153		2	max	293.357	8	90.826	1	186.591	4	.07	3	.046	4	.079	2
154			min	34.69	3	-142.127	2	-66.854	3	-.066	4	-.045	3	-.055	1
155		3	max	847.838	1	71.268	4	159.975	1	.141	1	.143	5	.401	2
156			min	-319.935	2	-357.81	7	-106.336	2	-.26	2	-.032	3	-.552	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
157		4	max	664.087	5	87.464	4	200.809	2	-.068	1	.127	5	.587	3
158			min	-241.735	2	-434.777	7	-351.13	1	-.314	8	-.039	2	-.26	4
159		5	max	667.312	5	74.631	4	195.605	2	-.068	1	.277	3	1.196	3
160			min	-250.748	2	-464.218	7	-345.926	1	-.314	8	-.424	4	-.383	4
161	M55B	1	max	1305.674	2	1927.69	7	318.851	2	.634	4	.132	4	.914	1
162			min	-752.311	1	45.417	4	-163.532	1	-.258	3	-.117	3	-.406	2
163		2	max	772.583	2	453.933	3	289.398	3	.181	2	.213	3	.227	7
164			min	-346.314	1	-222.688	4	-249.436	4	-.048	1	-.123	4	-.083	4
165		3	max	824.863	3	327.237	7	232.697	4	.255	4	.116	6	.287	4
166			min	-341.937	4	-139.396	4	-261.245	3	-.103	3	-.039	1	-.452	3
167		4	max	338.075	6	219.417	4	131.694	3	.152	4	.11	4	.181	4
168			min	-108.099	1	-183.812	3	-282.865	4	-.192	3	-.092	3	-.177	3
169		5	max	0	1	.004	7	0	5	0	1	0	1	0	1
170			min	0	1	-.024	1	-.004	3	0	1	0	1	0	1
171	M56B	1	max	697.83	2	766.945	7	1988.58	2	0	1	.006	1	.056	3
172			min	-4206.378	5	-179.178	4	-1903.816	1	0	3	-.283	6	-.062	4
173		2	max	697.83	2	766.945	7	1988.58	2	0	1	-.043	1	.037	3
174			min	-4206.378	5	-179.178	4	-1903.816	1	0	3	-.273	6	-.058	4
175		3	max	697.83	2	766.945	7	1988.58	2	0	1	-.087	9	.018	3
176			min	-4206.378	5	-179.178	4	-1903.816	1	0	3	-.264	6	-.053	4
177		4	max	697.83	2	766.945	7	1988.58	2	0	1	-.057	4	0	3
178			min	-4206.378	5	-179.178	4	-1903.816	1	0	3	-.273	7	-.067	8
179		5	max	697.83	2	766.945	7	1988.58	2	0	1	-.007	4	-.018	1
180			min	-4206.378	5	-179.178	4	-1903.816	1	0	3	-.289	7	-.082	6
181	M57B	1	max	3245.232	1	501.569	3	1276.194	7	0	3	.117	1	.016	6
182			min	-2169.199	2	-618.458	4	-518.731	4	0	5	-.099	2	.002	1
183		2	max	3245.232	1	501.569	3	1276.194	7	0	3	.146	1	.025	4
184			min	-2169.199	2	-618.458	4	-518.731	4	0	5	-.109	2	-.01	3
185		3	max	3245.232	1	501.569	3	1276.194	7	0	3	.174	1	.041	4
186			min	-2169.199	2	-618.458	4	-518.731	4	0	5	-.118	2	-.023	3
187		4	max	3245.232	1	501.569	3	1276.194	7	0	3	.202	1	.057	4
188			min	-2169.199	2	-618.458	4	-518.731	4	0	5	-.128	2	-.036	3
189		5	max	3245.232	1	501.569	3	1276.194	7	0	3	.231	1	.073	4
190			min	-2169.199	2	-618.458	4	-518.731	4	0	5	-.137	2	-.049	3
191	M58A	1	max	2125.606	6	1375.487	8	668.509	3	0	6	.019	1	.044	1
192			min	-159.372	1	166.316	3	-480.837	4	0	3	-.062	6	-.076	2
193		2	max	2125.606	6	1375.487	8	668.509	3	0	6	.025	1	.025	1
194			min	-159.372	1	166.316	3	-480.837	4	0	3	-.06	2	-.09	6
195		3	max	2125.606	6	1375.487	8	668.509	3	0	6	.031	1	.005	1
196			min	-159.372	1	166.316	3	-480.837	4	0	3	-.062	2	-.122	6
197		4	max	2125.606	6	1375.487	8	668.509	3	0	6	.038	1	-.015	1
198			min	-159.372	1	166.316	3	-480.837	4	0	3	-.063	2	-.154	6
199		5	max	2125.606	6	1375.487	8	668.509	3	0	6	.044	1	-.034	1
200			min	-159.372	1	166.316	3	-480.837	4	0	3	-.065	2	-.186	6
201	M68	1	max	0	1	.027	1	.004	4	0	1	0	1	0	1
202			min	0	1	-.005	8	0	9	0	1	0	1	0	1
203		2	max	319.71	6	164.809	4	180.275	6	.093	1	.05	3	.119	3
204			min	-15.814	1	-233.114	3	-50.884	1	-.077	2	-.048	4	-.095	4
205		3	max	914.429	4	138.131	3	224.782	4	.216	4	.161	2	.396	3
206			min	-370.185	3	-465.75	8	-174.033	3	-.334	3	-.066	1	-.519	4
207		4	max	741.041	4	164.739	3	221.057	3	-.015	4	.166	4	.699	5
208			min	-311.373	3	-530.132	8	-369.975	4	-.288	7	-.087	3	-.295	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
209		5	max	750.054	4	151.906	3	211.516	1	-.015	4	.341	1	1.465	5
210			min	-320.386	3	-559.573	8	-361.468	2	-.288	7	-.489	2	-.288	2
211	M69	1	max	1491.657	1	2104.875	5	635.687	3	.738	7	.11	2	.821	4
212			min	-949.795	2	318.807	2	-469.897	4	-.273	4	-.095	1	-.392	3
213		2	max	764.431	1	355.819	1	233.834	1	.301	7	.184	1	.31	9
214			min	-344.337	2	-168.622	2	-187.462	2	-.053	9	-.081	2	-.178	3
215		3	max	893.18	1	250.454	9	132.379	2	.276	2	.126	5	.345	2
216			min	-413.776	2	-85.826	2	-172.709	1	-.101	1	-.044	2	-.502	1
217		4	max	348.266	7	486.749	9	7.371	4	.117	3	.05	2	.186	9
218			min	-80.297	4	-68.583	4	-188.902	7	-.101	4	-.04	1	-.078	4
219		5	max	0	1	.002	9	0	8	0	1	0	1	0	1
220			min	0	1	-.019	2	-.002	1	0	1	0	1	0	1
221	M70	1	max	571.737	3	905.803	5	2603.812	3	0	7	.052	4	.042	1
222			min	-3663.558	8	-73.547	2	-2345.605	4	0	1	-.31	7	-.044	2
223		2	max	571.737	3	905.803	5	2603.812	3	0	7	-.009	4	.025	1
224			min	-3663.558	8	-73.547	2	-2345.605	4	0	1	-.286	7	-.042	2
225		3	max	571.737	3	905.803	5	2603.812	3	0	7	-.07	4	.007	1
226			min	-3663.558	8	-73.547	2	-2345.605	4	0	1	-.261	7	-.046	6
227		4	max	571.737	3	905.803	5	2603.812	3	0	7	-.063	3	-.004	4
228			min	-3663.558	8	-73.547	2	-2345.605	4	0	1	-.251	8	-.066	7
229		5	max	571.737	3	905.803	5	2603.812	3	0	7	.005	3	-.014	4
230			min	-3663.558	8	-73.547	2	-2345.605	4	0	1	-.26	8	-.087	7
231	M71	1	max	3399.908	4	322.905	1	1163.366	4	0	5	.117	4	.021	6
232			min	-2495.745	3	-402.482	2	-553.247	3	0	8	-.105	3	0	10
233		2	max	3399.908	4	322.905	1	1163.366	4	0	5	.148	4	.024	6
234			min	-2495.745	3	-402.482	2	-553.247	3	0	8	-.12	3	-.003	1
235		3	max	3399.908	4	322.905	1	1163.366	4	0	5	.178	4	.03	2
236			min	-2495.745	3	-402.482	2	-553.247	3	0	8	-.134	3	-.012	1
237		4	max	3399.908	4	322.905	1	1163.366	4	0	5	.208	4	.04	2
238			min	-2495.745	3	-402.482	2	-553.247	3	0	8	-.148	3	-.02	1
239		5	max	3399.908	4	322.905	1	1163.366	4	0	5	.238	4	.051	2
240			min	-2495.745	3	-402.482	2	-553.247	3	0	8	-.163	3	-.029	1
241	M72	1	max	2087.888	7	1348.676	6	415.817	1	0	8	.015	4	.047	2
242			min	-253.595	4	205.337	1	-284.569	2	0	4	-.061	7	-.078	1
243		2	max	2087.888	7	1348.676	6	415.817	1	0	8	.024	4	.025	2
244			min	-253.595	4	205.337	1	-284.569	2	0	4	-.06	3	-.089	5
245		3	max	2087.888	7	1348.676	6	415.817	1	0	8	.033	4	.005	4
246			min	-253.595	4	205.337	1	-284.569	2	0	4	-.066	3	-.121	7
247		4	max	2087.888	7	1348.676	6	415.817	1	0	8	.041	4	-.009	4
248			min	-253.595	4	205.337	1	-284.569	2	0	4	-.071	3	-.154	7
249		5	max	2087.888	7	1348.676	6	415.817	1	0	8	.05	4	-.022	4
250			min	-253.595	4	205.337	1	-284.569	2	0	4	-.076	3	-.187	7
251	M55A	1	max	315.948	6	220.914	3	17.245	3	.008	3	.065	8	.09	2
252			min	-51.978	1	-178.081	4	-193.326	8	-.008	4	-.021	3	-.109	1
253		2	max	315.948	6	220.914	3	17.245	3	.008	3	.057	8	.088	2
254			min	-51.978	1	-178.081	4	-193.326	8	-.008	4	-.02	3	-.108	1
255		3	max	315.948	6	220.914	3	17.245	3	.008	3	.05	4	.085	2
256			min	-51.978	1	-178.081	4	-193.326	8	-.008	4	-.019	3	-.108	1
257		4	max	315.948	6	220.914	3	17.245	3	.008	3	.044	4	.083	2
258			min	-51.978	1	-178.081	4	-193.326	8	-.008	4	-.019	3	-.107	1
259		5	max	315.948	6	220.914	3	17.245	3	.008	3	.038	4	.081	2
260			min	-51.978	1	-178.081	4	-193.326	8	-.008	4	-.018	3	-.106	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
261	M56A	1	max	361.102	6	208.098	4	179.21	2	.006	3	.017	4	.181	4
262			min	-97.557	3	-196.03	3	-59.064	1	-.009	4	-.052	7	-.225	3
263		2	max	361.102	6	208.098	4	179.21	2	.006	3	.017	4	.173	4
264			min	-97.557	3	-196.03	3	-59.064	1	-.009	4	-.047	3	-.217	3
265		3	max	361.102	6	208.098	4	179.21	2	.006	3	.017	4	.164	4
266			min	-97.557	3	-196.03	3	-59.064	1	-.009	4	-.042	3	-.209	3
267		4	max	361.102	6	208.098	4	179.21	2	.006	3	.016	4	.156	4
268			min	-97.557	3	-196.03	3	-59.064	1	-.009	4	-.037	3	-.201	3
269		5	max	361.102	6	208.098	4	179.21	2	.006	3	.016	4	.148	4
270			min	-97.557	3	-196.03	3	-59.064	1	-.009	4	-.032	3	-.194	3
271	M55C	1	max	316.551	5	107.135	1	-27.742	4	.008	10	.027	6	.102	1
272			min	-21.648	2	-451.717	9	-169.119	7	-.023	9	-.001	1	-.527	9
273		2	max	316.725	5	106.791	1	-28.842	4	.008	10	.018	6	.096	1
274			min	-22.283	2	-452.061	9	-168.818	7	-.023	9	-.004	1	-.502	9
275		3	max	316.899	5	106.447	1	-29.942	4	.008	10	.012	2	.09	1
276			min	-22.918	2	-452.405	9	-168.517	7	-.023	9	-.007	1	-.477	9
277		4	max	317.073	5	106.103	1	-31.043	4	.008	10	.008	2	.084	1
278			min	-23.553	2	-452.749	9	-168.216	7	-.023	9	-.011	1	-.451	9
279		5	max	317.246	5	105.759	1	-32.143	4	.008	10	.004	2	.079	1
280			min	-24.188	2	-453.093	9	-167.915	7	-.023	9	-.014	5	-.426	9
281	M56C	1	max	316.551	5	107.12	1	-27.742	4	.008	10	.054	7	.12	1
282			min	-21.645	2	-451.674	9	-168.945	7	-.023	9	.004	4	-.6	9
283		2	max	316.551	5	107.12	1	-27.742	4	.008	10	.047	7	.115	1
284			min	-21.645	2	-451.674	9	-168.945	7	-.023	9	.003	4	-.582	9
285		3	max	316.551	5	107.12	1	-27.742	4	.008	10	.04	7	.111	1
286			min	-21.645	2	-451.674	9	-168.945	7	-.023	9	.002	4	-.563	9
287		4	max	316.551	5	107.12	1	-27.742	4	.008	10	.033	7	.107	1
288			min	-21.645	2	-451.674	9	-168.945	7	-.023	9	0	4	-.545	9
289		5	max	316.551	5	107.12	1	-27.742	4	.008	10	.027	6	.102	1
290			min	-21.645	2	-451.674	9	-168.945	7	-.023	9	-.001	1	-.527	9
291	M57A	1	max	340.82	7	472.869	9	203.709	5	.006	1	.02	2	.136	3
292			min	-55.554	4	-80.85	4	-50.245	4	-.008	2	-.063	5	-.117	4
293		2	max	340.82	7	472.869	9	203.709	5	.006	1	.018	2	.13	3
294			min	-55.554	4	-80.85	4	-50.245	4	-.008	2	-.055	5	-.114	4
295		3	max	340.82	7	472.869	9	203.709	5	.006	1	.017	2	.125	3
296			min	-55.554	4	-80.85	4	-50.245	4	-.008	2	-.047	5	-.111	4
297		4	max	340.82	7	472.869	9	203.709	5	.006	1	.016	2	.119	3
298			min	-55.554	4	-80.85	4	-50.245	4	-.008	2	-.039	1	-.107	4
299		5	max	340.82	7	472.869	9	203.709	5	.006	1	.014	2	.114	3
300			min	-55.554	4	-80.85	4	-50.245	4	-.008	2	-.032	1	-.104	4
301	M58B	1	max	305.968	8	129.507	2	-26.047	2	.005	4	.031	5	.07	4
302			min	-49.558	3	-103.624	1	-177.791	5	-.006	3	-.006	2	-.08	3
303		2	max	306.142	8	129.163	2	-26.414	2	.005	4	.021	5	.067	4
304			min	-50.193	3	-103.968	1	-177.69	5	-.006	3	-.007	2	-.078	3
305		3	max	306.316	8	128.819	2	-26.781	2	.005	4	.014	1	.064	4
306			min	-50.828	3	-104.312	1	-177.59	5	-.006	3	-.009	2	-.077	3
307		4	max	306.49	8	128.475	2	-27.147	2	.005	4	.008	1	.061	4
308			min	-51.463	3	-104.656	1	-177.49	5	-.006	3	-.01	2	-.075	3
309		5	max	306.664	8	128.131	2	-27.514	2	.005	4	.003	1	.058	4
310			min	-52.099	3	-105	1	-177.389	5	-.006	3	-.012	6	-.073	3
311	M59	1	max	305.968	8	129.503	2	-26.082	2	.005	4	.059	5	.079	4
312			min	-49.56	3	-103.63	1	-177.604	5	-.006	3	-.001	2	-.084	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
313		2	max	305.968	8	129.503	2	-26.082	2	.005	4	.052	5	.077	4
314			min	-49.56	3	-103.63	1	-177.604	5	-.006	3	-.002	2	-.083	3
315		3	max	305.968	8	129.503	2	-26.082	2	.005	4	.045	5	.074	4
316			min	-49.56	3	-103.63	1	-177.604	5	-.006	3	-.003	2	-.082	3
317		4	max	305.968	8	129.503	2	-26.082	2	.005	4	.038	5	.072	4
318			min	-49.56	3	-103.63	1	-177.604	5	-.006	3	-.005	2	-.081	3
319		5	max	305.968	8	129.503	2	-26.082	2	.005	4	.031	5	.07	4
320			min	-49.56	3	-103.63	1	-177.604	5	-.006	3	-.006	2	-.08	3
321	M60	1	max	337.666	8	138.049	1	199.946	4	.005	2	.028	3	.114	9
322			min	-22.84	3	-107.568	2	-76.363	3	-.007	1	-.063	4	-.106	2
323		2	max	337.666	8	138.049	1	199.946	4	.005	2	.025	3	.109	9
324			min	-22.84	3	-107.568	2	-76.363	3	-.007	1	-.055	4	-.101	2
325		3	max	337.666	8	138.049	1	199.946	4	.005	2	.021	3	.104	9
326			min	-22.84	3	-107.568	2	-76.363	3	-.007	1	-.048	4	-.097	2
327		4	max	337.666	8	138.049	1	199.946	4	.005	2	.018	3	.099	9
328			min	-22.84	3	-107.568	2	-76.363	3	-.007	1	-.04	4	-.093	2
329		5	max	337.666	8	138.049	1	199.946	4	.005	2	.015	3	.094	9
330			min	-22.84	3	-107.568	2	-76.363	3	-.007	1	-.032	4	-.088	2
331	M64	1	max	341.515	7	82.222	4	203.494	5	.006	1	.009	4	.082	3
332			min	-58.094	4	-471.502	9	-45.846	4	-.008	2	-.021	3	-.171	9
333		2	max	341.341	7	81.878	4	203.594	5	.006	1	.006	4	.09	3
334			min	-57.459	4	-471.846	9	-46.946	4	-.008	2	-.011	3	-.144	9
335		3	max	341.168	7	81.534	4	203.695	5	.006	1	.014	1	.098	3
336			min	-56.824	4	-472.19	9	-48.047	4	-.008	2	-.011	2	-.118	9
337		4	max	340.994	7	81.19	4	203.795	5	.006	1	.023	1	.106	3
338			min	-56.188	4	-472.534	9	-49.147	4	-.008	2	-.012	2	-.1	4
339		5	max	340.82	7	80.846	4	203.895	5	.006	1	.032	1	.114	3
340			min	-55.553	4	-472.878	9	-50.247	4	-.008	2	-.014	2	-.104	4
341	M65	1	max	254.782	6	215.841	3	229.241	3	.012	3	.07	4	.07	2
342			min	-75.368	1	-194.594	4	-251.705	4	-.014	4	-.066	3	-.106	1
343		2	max	254.782	6	214.816	3	229.241	3	.012	3	.034	4	.064	2
344			min	-75.368	1	-195.619	4	-251.705	4	-.014	4	-.033	3	-.103	1
345		3	max	254.782	6	213.791	3	229.241	3	.012	3	0	1	.059	2
346			min	-75.368	1	-196.645	4	-251.705	4	-.014	4	-.003	6	-.101	1
347		4	max	254.782	6	212.766	3	229.24	3	.012	3	.032	3	.077	4
348			min	-75.368	1	-197.662	4	-251.686	4	-.014	4	-.037	4	-.124	3
349		5	max	254.782	6	211.741	3	229.24	3	.012	3	.064	3	.105	4
350			min	-75.368	1	-198.688	4	-251.686	4	-.014	4	-.072	4	-.154	3
351	M66	1	max	361.102	6	197.402	3	176.589	6	.006	3	.005	1	.101	4
352			min	-97.558	3	-206.744	4	-53.185	1	-.009	4	-.016	2	-.149	3
353		2	max	361.102	6	197.058	3	176.991	6	.006	3	.011	3	.113	4
354			min	-97.558	3	-207.088	4	-54.652	1	-.009	4	-.015	4	-.16	3
355		3	max	361.102	6	196.714	3	177.392	6	.006	3	.018	3	.124	4
356			min	-97.558	3	-207.432	4	-56.119	1	-.009	4	-.015	4	-.171	3
357		4	max	361.102	6	196.37	3	177.88	2	.006	3	.025	3	.136	4
358			min	-97.558	3	-207.776	4	-57.586	1	-.009	4	-.016	4	-.182	3
359		5	max	361.102	6	196.026	3	179.347	2	.006	3	.032	3	.148	4
360			min	-97.558	3	-208.12	4	-59.053	1	-.009	4	-.016	4	-.194	3
361	M67	1	max	241.413	8	122.758	2	112.606	2	.013	2	.037	1	.059	4
362			min	-44.943	3	-120.072	1	-135.414	1	-.015	1	-.032	2	-.075	3
363		2	max	241.85	8	121.733	2	111.684	2	.013	2	.018	1	.054	4
364			min	-46.54	3	-121.097	1	-134.492	1	-.015	1	-.016	2	-.07	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
365		3	max	242.287	8	120.708	2	110.762	2	.013	2	0	3	.048	4
366			min	-48.137	3	-122.122	1	-133.57	1	-.015	1	-.002	8	-.064	3
367		4	max	242.724	8	119.683	2	109.84	2	.013	2	.015	2	.053	9
368			min	-49.734	3	-123.147	1	-132.648	1	-.015	1	-.02	1	-.059	3
369		5	max	243.161	8	118.659	2	108.918	2	.013	2	.03	2	.068	9
370			min	-51.331	3	-124.172	1	-131.726	1	-.015	1	-.038	1	-.069	2
371	M68A	1	max	337.338	5	108.944	2	195.72	4	.005	2	.008	2	.067	9
372			min	-20.3	3	-136.69	1	-71.953	3	-.007	1	-.02	1	-.064	2
373		2	max	337.164	5	108.6	2	196.82	4	.005	2	.009	2	.074	9
374			min	-20.935	3	-137.034	1	-73.053	3	-.007	1	-.014	1	-.07	2
375		3	max	337.318	8	108.256	2	197.921	4	.005	2	.011	2	.081	9
376			min	-21.57	3	-137.378	1	-74.153	3	-.007	1	-.009	1	-.076	2
377		4	max	337.492	8	107.912	2	199.021	4	.005	2	.02	4	.087	9
378			min	-22.206	3	-137.722	1	-75.253	3	-.007	1	-.011	3	-.082	2
379		5	max	337.665	8	107.568	2	200.121	4	.005	2	.032	4	.094	9
380			min	-22.841	3	-138.066	1	-76.354	3	-.007	1	-.015	3	-.088	2
381	M69A	1	max	240.324	7	94.191	1	129.496	1	.014	1	.038	2	.084	1
382			min	-33.955	4	-457.079	9	-137.789	2	-.017	9	-.038	1	-.423	9
383		2	max	239.887	7	93.165	1	130.418	1	.014	1	.019	2	.071	1
384			min	-32.358	4	-458.104	9	-138.711	2	-.017	9	-.019	1	-.358	9
385		3	max	239.45	7	92.14	1	131.34	1	.014	1	0	9	.058	1
386			min	-30.761	4	-459.13	9	-139.633	2	-.017	9	-.003	7	-.294	9
387		4	max	239.013	7	91.115	1	132.262	1	.014	1	.018	1	.069	3
388			min	-29.164	4	-460.155	9	-140.555	2	-.017	9	-.021	2	-.229	9
389		5	max	238.576	7	90.089	1	133.185	1	.014	1	.036	1	.087	3
390			min	-27.567	4	-461.18	9	-141.477	2	-.017	9	-.041	2	-.164	9
391	M67A	1	max	1431.24	8	3940.652	4	2507.286	1	.251	1	.282	1	.276	3
392			min	98.572	3	-3134.456	3	-2981.333	2	-.184	2	-.203	2	-.393	4
393		2	max	1431.24	8	3940.652	4	2507.286	1	.251	1	.438	1	.471	3
394			min	98.572	3	-3134.456	3	-2981.333	2	-.184	2	-.389	2	-.639	4
395		3	max	1431.24	8	3940.652	4	2507.286	1	.251	1	.595	1	.667	3
396			min	98.572	3	-3134.456	3	-2981.333	2	-.184	2	-.575	2	-.885	4
397		4	max	1431.24	8	3940.652	4	2507.286	1	.251	1	.751	1	.863	3
398			min	98.572	3	-3134.456	3	-2981.333	2	-.184	2	-.761	2	-1.131	4
399		5	max	1431.24	8	3940.652	4	2507.286	1	.251	1	.908	1	1.058	3
400			min	98.572	3	-3134.456	3	-2981.333	2	-.184	2	-.947	2	-1.377	4
401	M115	1	max	-92.043	4	19.026	1	340.594	1	.095	6	0	1	.053	6
402			min	-424.332	7	-917.279	6	-725.578	2	-.002	1	-.07	6	.005	1
403		2	max	-92.043	4	19.026	1	340.594	1	.095	6	.018	1	.101	6
404			min	-424.332	7	-917.279	6	-725.578	2	-.002	1	-.101	6	.004	1
405		3	max	-92.043	4	19.026	1	340.594	1	.095	6	.036	1	.148	6
406			min	-424.332	7	-917.279	6	-725.578	2	-.002	1	-.132	6	.003	1
407		4	max	-92.043	4	19.026	1	340.594	1	.095	6	.054	1	.196	6
408			min	-424.332	7	-917.279	6	-725.578	2	-.002	1	-.168	2	.002	1
409		5	max	-92.043	4	19.026	1	340.594	1	.095	6	.071	1	.244	6
410			min	-424.332	7	-917.279	6	-725.578	2	-.002	1	-.206	2	0	1
411	M116	1	max	174.697	3	685.706	2	1016.368	2	.065	2	.18	1	.193	2
412			min	-238.12	4	-370.523	1	-732.251	1	-.038	1	-.258	2	-.105	1
413		2	max	174.697	3	685.706	2	1016.368	2	.065	2	.141	1	.157	2
414			min	-238.12	4	-370.523	1	-732.251	1	-.038	1	-.205	2	-.086	1
415		3	max	174.697	3	685.706	2	1016.368	2	.065	2	.103	1	.122	2
416			min	-238.12	4	-370.523	1	-732.251	1	-.038	1	-.152	2	-.067	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
417		4	max	174.697	3	685.706	2	1016.368	2	.065	2	.065	1	.086	2
418			min	-238.12	4	-370.523	1	-732.251	1	-.038	1	-.099	2	-.047	1
419		5	max	174.697	3	685.706	2	1016.368	2	.065	2	.027	1	.05	2
420			min	-238.12	4	-370.523	1	-732.251	1	-.038	1	-.046	2	-.028	1
421	M117	1	max	410.116	1	364.346	1	2380.49	1	.046	1	.121	2	.077	6
422			min	-1469.465	6	-1256.116	2	-912.291	2	-.164	2	-.033	1	-.014	1
423		2	max	410.116	1	364.346	1	2380.49	1	.046	1	.207	7	.139	6
424			min	-1469.465	6	-1256.116	2	-912.291	2	-.164	2	.053	4	-.033	1
425		3	max	410.116	1	364.346	1	2380.49	1	.046	1	.324	5	.203	2
426			min	-1469.465	6	-1256.116	2	-912.291	2	-.164	2	.026	2	-.052	1
427		4	max	410.116	1	364.346	1	2380.49	1	.046	1	.445	5	.268	2
428			min	-1469.465	6	-1256.116	2	-912.291	2	-.164	2	-.022	2	-.071	1
429		5	max	410.116	1	364.346	1	2380.49	1	.046	1	.566	5	.333	2
430			min	-1469.465	6	-1256.116	2	-912.291	2	-.164	2	-.069	2	-.09	1
431	M118	1	max	1512.335	2	1361.941	2	589.255	2	.061	1	.467	5	.357	2
432			min	-509.054	1	-615.222	1	-1898.521	5	-.172	2	.004	2	-.162	1
433		2	max	1512.335	2	1361.941	2	589.255	2	.061	1	.368	5	.286	2
434			min	-509.054	1	-615.222	1	-1898.521	5	-.172	2	.035	2	-.13	1
435		3	max	1512.335	2	1361.941	2	589.255	2	.061	1	.269	5	.215	2
436			min	-509.054	1	-615.222	1	-1898.521	5	-.172	2	.065	2	-.098	1
437		4	max	1512.335	2	1361.941	2	589.255	2	.061	1	.181	7	.144	2
438			min	-509.054	1	-615.222	1	-1898.521	5	-.172	2	.049	4	-.066	1
439		5	max	1512.335	2	1361.941	2	589.255	2	.061	1	.127	2	.073	2
440			min	-509.054	1	-615.222	1	-1898.521	5	-.172	2	-.044	1	-.034	1
441	M119	1	max	-48.632	2	-70.556	2	327.516	4	.111	5	-.003	2	.064	5
442			min	-505.88	5	-1043.469	5	-830.7	7	.003	2	-.082	5	.002	2
443		2	max	-48.632	2	-70.556	2	327.516	4	.111	5	.014	2	.119	5
444			min	-505.88	5	-1043.469	5	-830.7	7	.003	2	-.125	5	.006	2
445		3	max	-48.632	2	-70.556	2	327.516	4	.111	5	.03	2	.173	5
446			min	-505.88	5	-1043.469	5	-830.7	7	.003	2	-.168	5	.01	2
447		4	max	-48.632	2	-70.556	2	327.516	4	.111	5	.046	2	.227	5
448			min	-505.88	5	-1043.469	5	-830.7	7	.003	2	-.212	5	.013	2
449		5	max	-48.632	2	-70.556	2	327.516	4	.111	5	.062	2	.282	5
450			min	-505.88	5	-1043.469	5	-830.7	7	.003	2	-.255	5	.017	2
451	M120	1	max	253.631	1	665.973	1	1326.913	1	.072	1	.216	2	.191	1
452			min	-285.306	2	-283.668	2	-905.616	2	-.037	2	-.329	1	-.084	2
453		2	max	253.631	1	665.973	1	1326.913	1	.072	1	.169	2	.156	1
454			min	-285.306	2	-283.668	2	-905.616	2	-.037	2	-.26	1	-.069	2
455		3	max	253.631	1	665.973	1	1326.913	1	.072	1	.122	2	.121	1
456			min	-285.306	2	-283.668	2	-905.616	2	-.037	2	-.191	1	-.054	2
457		4	max	253.631	1	665.973	1	1326.913	1	.072	1	.075	2	.087	1
458			min	-285.306	2	-283.668	2	-905.616	2	-.037	2	-.122	1	-.04	2
459		5	max	253.631	1	665.973	1	1326.913	1	.072	1	.028	2	.052	1
460			min	-285.306	2	-283.668	2	-905.616	2	-.037	2	-.053	1	-.025	2
461	M121	1	max	463.288	2	641.99	2	2055.918	2	.07	2	.167	5	.103	5
462			min	-1901.691	5	-1791.495	5	-775.637	1	-.225	5	-.052	2	-.016	2
463		2	max	463.288	2	641.99	2	2055.918	2	.07	2	.226	8	.196	5
464			min	-1901.691	5	-1791.495	5	-775.637	1	-.225	5	.035	3	-.049	2
465		3	max	463.288	2	641.99	2	2055.918	2	.07	2	.317	8	.29	5
466			min	-1901.691	5	-1791.495	5	-775.637	1	-.225	5	-.004	3	-.083	2
467		4	max	463.288	2	641.99	2	2055.918	2	.07	2	.407	8	.383	5
468			min	-1901.691	5	-1791.495	5	-775.637	1	-.225	5	-.042	3	-.116	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
469		5	max	463.288	2	641.99	2	2055.918	2	.07	2	.497	8	.476	5
470			min	-1901.691	5	-1791.495	5	-775.637	1	-.225	5	-.08	3	-.15	2
471	M122	1	max	1823.216	5	1636.642	1	794.429	3	.055	2	.409	8	.431	1
472			min	-338.585	2	-680.048	2	-1796.114	4	-.214	5	-.055	3	-.183	2
473		2	max	1823.216	5	1636.642	1	794.429	3	.055	2	.337	8	.346	1
474			min	-338.585	2	-680.048	2	-1796.114	4	-.214	5	-.013	3	-.147	2
475		3	max	1823.216	5	1636.642	1	794.429	3	.055	2	.265	8	.261	1
476			min	-338.585	2	-680.048	2	-1796.114	4	-.214	5	.028	3	-.112	2
477		4	max	1823.216	5	1636.642	1	794.429	3	.055	2	.201	5	.176	1
478			min	-338.585	2	-680.048	2	-1796.114	4	-.214	5	.039	2	-.076	2
479		5	max	1823.216	5	1636.642	1	794.429	3	.055	2	.159	5	.091	1
480			min	-338.585	2	-680.048	2	-1796.114	4	-.214	5	-.041	2	-.041	2
481	M123	1	max	-77.864	3	-1.643	3	375.81	3	.113	8	0	3	.06	8
482			min	-491.241	8	-1087.081	8	-819.719	9	-.002	3	-.083	8	.004	3
483		2	max	-77.864	3	-1.643	3	375.81	3	.113	8	.02	3	.117	8
484			min	-491.241	8	-1087.081	8	-819.719	9	-.002	3	-.112	8	.004	3
485		3	max	-77.864	3	-1.643	3	375.81	3	.113	8	.04	3	.174	8
486			min	-491.241	8	-1087.081	8	-819.719	9	-.002	3	-.141	8	.004	3
487		4	max	-77.864	3	-1.643	3	375.81	3	.113	8	.059	3	.23	8
488			min	-491.241	8	-1087.081	8	-819.719	9	-.002	3	-.182	9	.004	3
489		5	max	-77.864	3	-1.643	3	375.81	3	.113	8	.079	3	.287	8
490			min	-491.241	8	-1087.081	8	-819.719	9	-.002	3	-.224	9	.004	3
491	M124	1	max	182.459	4	746.222	4	1298.519	4	.073	4	.246	3	.212	4
492			min	-249.859	3	-380.954	3	-1033.801	3	-.042	3	-.323	4	-.11	3
493		2	max	182.459	4	746.222	4	1298.519	4	.073	4	.192	3	.173	4
494			min	-249.859	3	-380.954	3	-1033.801	3	-.042	3	-.256	4	-.09	3
495		3	max	182.459	4	746.222	4	1298.519	4	.073	4	.138	3	.134	4
496			min	-249.859	3	-380.954	3	-1033.801	3	-.042	3	-.188	4	-.07	3
497		4	max	182.459	4	746.222	4	1298.519	4	.073	4	.085	3	.095	4
498			min	-249.859	3	-380.954	3	-1033.801	3	-.042	3	-.121	4	-.05	3
499		5	max	182.459	4	746.222	4	1298.519	4	.073	4	.031	3	.056	4
500			min	-249.859	3	-380.954	3	-1033.801	3	-.042	3	-.053	4	-.03	3
501	M125	1	max	517.599	3	589.316	3	2536.519	3	.071	3	.146	4	.089	8
502			min	-1715.821	8	-1555.135	4	-1014.779	4	-.198	4	-.052	3	-.015	3
503		2	max	517.599	3	589.316	3	2536.519	3	.071	3	.231	6	.164	8
504			min	-1715.821	8	-1555.135	4	-1014.779	4	-.198	4	.047	1	-.046	3
505		3	max	517.599	3	589.316	3	2536.519	3	.071	3	.348	7	.239	4
506			min	-1715.821	8	-1555.135	4	-1014.779	4	-.198	4	.041	4	-.076	3
507		4	max	517.599	3	589.316	3	2536.519	3	.071	3	.476	7	.32	4
508			min	-1715.821	8	-1555.135	4	-1014.779	4	-.198	4	-.012	4	-.107	3
509		5	max	517.599	3	589.316	3	2536.519	3	.071	3	.604	7	.401	4
510			min	-1715.821	8	-1555.135	4	-1014.779	4	-.198	4	-.065	4	-.138	3
511	M126	1	max	1654.841	8	1503.296	4	603.734	4	.056	3	.504	7	.399	4
512			min	-449.807	3	-674.038	3	-1979.145	7	-.183	8	.006	4	-.183	3
513		2	max	1654.841	8	1503.296	4	603.734	4	.056	3	.401	7	.321	4
514			min	-449.807	3	-674.038	3	-1979.145	7	-.183	8	.037	4	-.148	3
515		3	max	1654.841	8	1503.296	4	603.734	4	.056	3	.298	7	.243	4
516			min	-449.807	3	-674.038	3	-1979.145	7	-.183	8	.069	4	-.113	3
517		4	max	1654.841	8	1503.296	4	603.734	4	.056	3	.205	8	.165	4
518			min	-449.807	3	-674.038	3	-1979.145	7	-.183	8	.056	3	-.078	3
519		5	max	1654.841	8	1503.296	4	603.734	4	.056	3	.135	8	.086	4
520			min	-449.807	3	-674.038	3	-1979.145	7	-.183	8	-.041	3	-.043	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
521	M127	1	max	1152.245	7	355.871	1	605.207	4	.282	2	.165	4	.905	9
522			min	328.806	4	-1052.217	2	-637.149	3	-.414	1	-.376	3	-.357	1
523		2	max	1152.245	7	355.871	1	605.207	4	.282	2	.184	4	.927	9
524			min	328.806	4	-1052.217	2	-637.149	3	-.414	1	-.396	3	-.368	1
525		3	max	1152.245	7	355.871	1	605.207	4	.282	2	.202	4	.948	9
526			min	328.806	4	-1052.217	2	-637.149	3	-.414	1	-.416	3	-.38	1
527		4	max	1152.245	7	355.871	1	605.207	4	.282	2	.221	4	.969	9
528			min	328.806	4	-1052.217	2	-637.149	3	-.414	1	-.436	3	-.391	1
529		5	max	1152.245	7	355.871	1	605.207	4	.282	2	.24	4	.99	9
530			min	328.806	4	-1052.217	2	-637.149	3	-.414	1	-.456	3	-.402	1
531	M128	1	max	1200.554	4	-263.26	1	102.72	3	0	5	.062	4	.014	3
532			min	-575.697	3	-946.507	6	-211.01	4	0	2	-.041	3	-.076	8
533		2	max	1200.554	4	-263.26	1	102.72	3	0	5	.056	4	.022	3
534			min	-575.697	3	-946.507	6	-211.01	4	0	2	-.038	3	-.048	4
535		3	max	1200.554	4	-263.26	1	102.72	3	0	5	.049	4	.035	2
536			min	-575.697	3	-946.507	6	-211.01	4	0	2	-.035	3	-.038	1
537		4	max	1200.554	4	-263.26	1	102.72	3	0	5	.043	4	.049	2
538			min	-575.697	3	-946.507	6	-211.01	4	0	2	-.031	3	-.03	1
539		5	max	1200.554	4	-263.26	1	102.72	3	0	5	.036	4	.064	2
540			min	-575.697	3	-946.507	6	-211.01	4	0	2	-.028	3	-.022	1
541	M129	1	max	1265.369	5	204.959	4	792.54	2	.281	1	.263	3	.895	3
542			min	233.401	2	-1071.553	7	-886.281	1	-.379	2	-.472	4	-.393	4
543		2	max	1265.369	5	204.959	4	792.54	2	.281	1	.266	3	.925	3
544			min	233.401	2	-1071.553	7	-886.281	1	-.379	2	-.478	4	-.4	4
545		3	max	1265.369	5	204.959	4	792.54	2	.281	1	.269	3	.954	3
546			min	233.401	2	-1071.553	7	-886.281	1	-.379	2	-.485	4	-.406	4
547		4	max	1265.369	5	204.959	4	792.54	2	.281	1	.272	3	.984	3
548			min	233.401	2	-1071.553	7	-886.281	1	-.379	2	-.491	4	-.413	4
549		5	max	1265.369	5	204.959	4	792.54	2	.281	1	.276	3	1.014	3
550			min	233.401	2	-1071.553	7	-886.281	1	-.379	2	-.497	4	-.419	4
551	M130	1	max	1259.242	2	-232.007	4	93.433	1	0	6	.062	3	.037	1
552			min	-585.111	1	-912.288	7	-209.16	2	0	1	-.038	4	-.074	2
553		2	max	1259.242	2	-232.007	4	93.433	1	0	6	.058	3	.046	1
554			min	-585.111	1	-912.288	7	-209.16	2	0	1	-.038	4	-.061	2
555		3	max	1259.242	2	-232.007	4	93.433	1	0	6	.055	3	.056	1
556			min	-585.111	1	-912.288	7	-209.16	2	0	1	-.039	4	-.049	2
557		4	max	1259.242	2	-232.007	4	93.433	1	0	6	.052	3	.065	1
558			min	-585.111	1	-912.288	7	-209.16	2	0	1	-.039	4	-.036	2
559		5	max	1259.242	2	-232.007	4	93.433	1	0	6	.049	3	.082	5
560			min	-585.111	1	-912.288	7	-209.16	2	0	1	-.04	4	-.023	2
561	M131	1	max	1407.609	8	241.561	3	863.468	3	.322	4	.272	1	1.061	5
562			min	182.488	3	-1222.211	8	-911.671	4	-.448	3	-.494	2	-.398	2
563		2	max	1407.609	8	241.561	3	863.468	3	.322	4	.286	1	1.098	5
564			min	182.488	3	-1222.211	8	-911.671	4	-.448	3	-.51	2	-.398	2
565		3	max	1407.609	8	241.561	3	863.468	3	.322	4	.3	1	1.134	5
566			min	182.488	3	-1222.211	8	-911.671	4	-.448	3	-.525	2	-.398	2
567		4	max	1407.609	8	241.561	3	863.468	3	.322	4	.314	1	1.17	5
568			min	182.488	3	-1222.211	8	-911.671	4	-.448	3	-.541	2	-.399	2
569		5	max	1407.609	8	241.561	3	863.468	3	.322	4	.328	1	1.206	5
570			min	182.488	3	-1222.211	8	-911.671	4	-.448	3	-.556	2	-.399	2
571	M132	1	max	1185.581	1	-268.605	2	116.515	2	0	7	.075	1	.02	4
572			min	-523.543	2	-1066.154	5	-226.379	1	0	4	-.051	2	-.083	7

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
573		2	max	1185.581	1	-268.605	2	116.515	2	0	7	.068	1	.033	4
574			min	-523.543	2	-1066.154	5	-226.379	1	0	4	-.047	2	-.059	3
575		3	max	1185.581	1	-268.605	2	116.515	2	0	7	.06	1	.046	4
576			min	-523.543	2	-1066.154	5	-226.379	1	0	4	-.043	2	-.048	3
577		4	max	1185.581	1	-268.605	2	116.515	2	0	7	.053	1	.058	4
578			min	-523.543	2	-1066.154	5	-226.379	1	0	4	-.04	2	-.036	3
579		5	max	1185.581	1	-268.605	2	116.515	2	0	7	.046	1	.071	4
580			min	-523.543	2	-1066.154	5	-226.379	1	0	4	-.036	2	-.025	3
581	M102A	1	max	313.271	7	300.122	1	233.081	4	.098	8	.229	5	.011	2
582			min	-35.448	4	-159.523	2	-803.968	7	.004	3	-.045	2	-.134	5
583		2	max	313.271	7	300.122	1	233.081	4	.098	8	.195	1	.021	2
584			min	-35.448	4	-159.523	2	-803.968	7	.004	3	-.081	2	-.148	5
585		3	max	313.271	7	300.122	1	233.081	4	.098	8	.197	1	.031	2
586			min	-35.448	4	-159.523	2	-803.968	7	.004	3	-.117	2	-.162	5
587		4	max	313.271	7	300.122	1	233.081	4	.098	8	.2	1	.041	2
588			min	-35.448	4	-159.523	2	-803.968	7	.004	3	-.153	2	-.176	5
589		5	max	313.271	7	300.122	1	233.081	4	.098	8	.202	1	.051	2
590			min	-35.448	4	-159.523	2	-803.968	7	.004	3	-.189	2	-.19	5
591	M103A	1	max	301.857	3	309.003	3	317.04	2	.133	5	.27	5	.048	2
592			min	-362.078	4	-164.864	4	-656.12	1	.036	2	-.095	2	-.156	5
593		2	max	301.857	3	309.003	3	317.04	2	.133	5	.233	5	.038	2
594			min	-362.078	4	-164.864	4	-656.12	1	.036	2	-.075	2	-.165	5
595		3	max	301.857	3	309.003	3	317.04	2	.133	5	.197	5	.029	2
596			min	-362.078	4	-164.864	4	-656.12	1	.036	2	-.055	2	-.174	5
597		4	max	301.857	3	309.003	3	317.04	2	.133	5	.161	5	.02	4
598			min	-362.078	4	-164.864	4	-656.12	1	.036	2	-.035	2	-.183	7
599		5	max	301.857	3	309.003	3	317.04	2	.133	5	.124	5	.03	4
600			min	-362.078	4	-164.864	4	-656.12	1	.036	2	-.015	2	-.197	7
601	M105A	1	max	337.517	3	393.136	3	428.031	2	.148	7	.099	1	.016	2
602			min	-319.616	4	-182.696	4	-534.571	1	-.024	4	-.049	2	-.05	5
603		2	max	337.517	3	393.136	3	428.031	2	.148	7	.085	3	.015	4
604			min	-319.616	4	-182.696	4	-534.571	1	-.024	4	-.041	4	-.067	7
605		3	max	337.517	3	393.136	3	428.031	2	.148	7	.082	3	.026	4
606			min	-319.616	4	-182.696	4	-534.571	1	-.024	4	-.045	4	-.087	7
607		4	max	337.517	3	393.136	3	428.031	2	.148	7	.079	3	.038	4
608			min	-319.616	4	-182.696	4	-534.571	1	-.024	4	-.049	4	-.107	7
609		5	max	337.517	3	393.136	3	428.031	2	.148	7	.076	3	.049	4
610			min	-319.616	4	-182.696	4	-534.571	1	-.024	4	-.053	4	-.131	3
611	M107A	1	max	939.896	7	1256.875	3	1110.442	3	.422	4	.114	4	.597	3
612			min	-266.293	4	-772.202	4	-480.84	4	-.178	3	-.789	7	-.381	4
613		2	max	939.896	7	1256.875	3	1110.442	3	.422	4	.084	4	.519	3
614			min	-266.293	4	-772.202	4	-480.84	4	-.178	3	-.733	7	-.333	4
615		3	max	939.896	7	1256.875	3	1110.442	3	.422	4	.054	4	.44	3
616			min	-266.293	4	-772.202	4	-480.84	4	-.178	3	-.677	7	-.285	4
617		4	max	939.896	7	1256.875	3	1110.442	3	.422	4	.024	4	.362	3
618			min	-266.293	4	-772.202	4	-480.84	4	-.178	3	-.622	7	-.237	4
619		5	max	939.896	7	1256.875	3	1110.442	3	.422	4	-.006	4	.283	3
620			min	-266.293	4	-772.202	4	-480.84	4	-.178	3	-.566	7	-.189	4
621	M108A	1	max	1063.764	4	1395.34	4	1235.772	3	.007	3	.009	3	0	4
622			min	-514.445	3	-854.808	3	-2015.368	4	-.003	4	-.004	4	0	3
623		2	max	1063.764	4	1395.34	4	1235.772	3	.007	3	.043	3	.023	3
624			min	-514.445	3	-854.808	3	-2015.368	4	-.003	4	-.059	4	-.037	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
625		3	max	1063.764	4	1395.34	4	1235.772	3	.007	3	.076	3	.046	3
626			min	-514.445	3	-854.808	3	-2015.368	4	-.003	4	-.113	4	-.075	4
627		4	max	1063.764	4	1395.34	4	1235.772	3	.007	3	.11	3	.07	3
628			min	-514.445	3	-854.808	3	-2015.368	4	-.003	4	-.168	4	-.113	4
629		5	max	1063.764	4	1395.34	4	1235.772	3	.007	3	.143	3	.093	3
630			min	-514.445	3	-854.808	3	-2015.368	4	-.003	4	-.223	4	-.15	4
631	M109A	1	max	256.749	3	670.944	4	203.731	2	0	1	.011	1	.064	4
632			min	-174.78	4	-519.004	3	-137.252	1	0	2	-.017	2	-.058	3
633		2	max	256.749	3	670.944	4	203.731	2	0	1	.008	1	.05	4
634			min	-174.78	4	-519.004	3	-137.252	1	0	2	-.013	2	-.047	3
635		3	max	256.749	3	670.944	4	203.731	2	0	1	.005	1	.036	4
636			min	-174.78	4	-519.004	3	-137.252	1	0	2	-.008	2	-.036	3
637		4	max	256.749	3	670.944	4	203.731	2	0	1	.003	4	.021	4
638			min	-174.78	4	-519.004	3	-137.252	1	0	2	-.005	3	-.025	3
639		5	max	256.749	3	670.944	4	203.731	2	0	1	0	4	.007	4
640			min	-174.78	4	-519.004	3	-137.252	1	0	2	-.001	3	-.014	3
641	M110A	1	max	1604.61	6	698.66	4	2329.048	2	.022	6	.259	1	.105	5
642			min	79.907	1	-625.198	3	-2158.276	1	-.001	1	-.259	2	-.037	2
643		2	max	1604.61	6	698.66	4	2329.048	2	.022	6	.194	1	.099	5
644			min	79.907	1	-625.198	3	-2158.276	1	-.001	1	-.19	2	-.027	2
645		3	max	1604.61	6	698.66	4	2329.048	2	.022	6	.13	1	.093	5
646			min	79.907	1	-625.198	3	-2158.276	1	-.001	1	-.12	2	-.017	2
647		4	max	1604.61	6	698.66	4	2329.048	2	.022	6	.066	1	.086	5
648			min	79.907	1	-625.198	3	-2158.276	1	-.001	1	-.051	2	-.006	2
649		5	max	1604.61	6	698.66	4	2329.048	2	.022	6	.022	6	.081	7
650			min	79.907	1	-625.198	3	-2158.276	1	-.001	1	.001	1	.002	4
651	M111A	1	max	423.46	8	-27.389	3	-82.113	2	.015	3	.062	8	-.002	3
652			min	4.654	2	-478.321	8	-627.607	5	-.007	4	-.008	3	-.05	8
653		2	max	423.46	8	-27.389	3	-82.113	2	.015	3	.044	8	-.001	3
654			min	4.654	2	-478.321	8	-627.607	5	-.007	4	-.01	3	-.037	8
655		3	max	423.46	8	-27.389	3	-82.113	2	.015	3	.031	4	0	3
656			min	4.654	2	-478.321	8	-627.607	5	-.007	4	-.012	3	-.024	8
657		4	max	423.46	8	-27.389	3	-82.113	2	.015	3	.019	4	0	3
658			min	4.654	2	-478.321	8	-627.607	5	-.007	4	-.015	3	-.01	8
659		5	max	423.46	8	-27.389	3	-82.113	2	.015	3	.008	4	.003	5
660			min	4.654	2	-478.321	8	-627.607	5	-.007	4	-.017	3	0	2
661	M112	1	max	38.033	4	167.625	3	77.227	1	0	1	.016	4	-.003	4
662			min	-66.419	3	-209.868	4	-181.336	2	0	2	-.008	3	-.02	7
663		2	max	38.033	4	167.625	3	77.227	1	0	1	.012	4	.002	4
664			min	-66.419	3	-209.868	4	-181.336	2	0	2	-.007	3	-.02	7
665		3	max	38.033	4	167.625	3	77.227	1	0	1	.009	4	.006	4
666			min	-66.419	3	-209.868	4	-181.336	2	0	2	-.005	3	-.02	7
667		4	max	38.033	4	167.625	3	77.227	1	0	1	.005	4	.01	4
668			min	-66.419	3	-209.868	4	-181.336	2	0	2	-.003	3	-.023	3
669		5	max	38.033	4	167.625	3	77.227	1	0	1	.001	4	.015	4
670			min	-66.419	3	-209.868	4	-181.336	2	0	2	-.002	3	-.027	3
671	M113	1	max	1275.254	6	-165.602	3	182.39	3	.049	5	.046	4	.209	7
672			min	172.43	1	-689.903	8	-225.539	4	.01	2	-.02	3	-.08	4
673		2	max	1275.254	6	-165.602	3	182.39	3	.049	5	.039	4	.229	7
674			min	172.43	1	-689.903	8	-225.539	4	.01	2	-.015	3	-.068	4
675		3	max	1275.254	6	-165.602	3	182.39	3	.049	5	.032	4	.248	7
676			min	172.43	1	-689.903	8	-225.539	4	.01	2	-.009	3	-.057	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
677		4	max	1275.254	6	-165.602	3	182.39	3	.049	5	.025	4	.268	7
678			min	172.43	1	-689.903	8	-225.539	4	.01	2	-.003	3	-.046	4
679		5	max	1275.254	6	-165.602	3	182.39	3	.049	5	.019	8	.287	7
680			min	172.43	1	-689.903	8	-225.539	4	.01	2	.002	3	-.035	4
681	M114	1	max	409.017	3	679.964	4	264.241	4	.014	3	.044	3	.078	4
682			min	-558.195	4	-553.075	3	-534.373	3	-.006	4	-.024	4	-.062	3
683		2	max	409.017	3	679.964	4	264.241	4	.014	3	.029	3	.059	4
684			min	-558.195	4	-553.075	3	-534.373	3	-.006	4	-.016	4	-.046	3
685		3	max	409.017	3	679.964	4	264.241	4	.014	3	.014	3	.04	4
686			min	-558.195	4	-553.075	3	-534.373	3	-.006	4	-.009	4	-.03	3
687		4	max	409.017	3	679.964	4	264.241	4	.014	3	.003	2	.021	4
688			min	-558.195	4	-553.075	3	-534.373	3	-.006	4	-.005	1	-.015	3
689		5	max	409.017	3	679.964	4	264.241	4	.014	3	.006	4	.002	8
690			min	-558.195	4	-553.075	3	-534.373	3	-.006	4	-.016	3	0	3
691	M115A	1	max	65.623	4	70.586	1	178.964	3	0	1	.019	4	.008	4
692			min	-49.804	3	-109.489	2	-212.307	4	0	2	-.017	3	-.022	3
693		2	max	65.623	4	70.586	1	178.964	3	0	1	.015	4	.009	4
694			min	-49.804	3	-109.489	2	-212.307	4	0	2	-.013	3	-.023	3
695		3	max	65.623	4	70.586	1	178.964	3	0	1	.01	4	.01	4
696			min	-49.804	3	-109.489	2	-212.307	4	0	2	-.009	3	-.023	3
697		4	max	65.623	4	70.586	1	178.964	3	0	1	.006	4	.011	4
698			min	-49.804	3	-109.489	2	-212.307	4	0	2	-.006	3	-.023	3
699		5	max	65.623	4	70.586	1	178.964	3	0	1	.001	4	.013	4
700			min	-49.804	3	-109.489	2	-212.307	4	0	2	-.002	3	-.023	3
701	M116A	1	max	968.506	3	237.545	2	58.239	6	.115	5	.062	4	.324	5
702			min	-886.428	4	-365.718	1	-55.741	1	.008	2	-.013	3	-.098	2
703		2	max	968.506	3	237.545	2	58.239	6	.115	5	.062	4	.332	5
704			min	-886.428	4	-365.718	1	-55.741	1	.008	2	-.013	3	-.106	2
705		3	max	968.506	3	237.545	2	58.239	6	.115	5	.062	4	.339	5
706			min	-886.428	4	-365.718	1	-55.741	1	.008	2	-.013	3	-.113	2
707		4	max	968.506	3	237.545	2	58.239	6	.115	5	.062	4	.347	5
708			min	-886.428	4	-365.718	1	-55.741	1	.008	2	-.013	3	-.121	2
709		5	max	968.506	3	237.545	2	58.239	6	.115	5	.061	4	.355	5
710			min	-886.428	4	-365.718	1	-55.741	1	.008	2	-.013	3	-.129	2
711	M117A	1	max	845.673	3	1119.464	4	611.22	4	.018	7	.077	3	.131	4
712			min	-988.911	4	-757.747	3	-816.536	3	-.003	4	-.067	4	-.08	3
713		2	max	845.673	3	1119.464	4	611.22	4	.018	7	.053	3	.098	4
714			min	-988.911	4	-757.747	3	-816.536	3	-.003	4	-.049	4	-.059	3
715		3	max	845.673	3	1119.464	4	611.22	4	.018	7	.03	3	.066	4
716			min	-988.911	4	-757.747	3	-816.536	3	-.003	4	-.032	4	-.037	3
717		4	max	845.673	3	1119.464	4	611.22	4	.018	7	.007	3	.034	4
718			min	-988.911	4	-757.747	3	-816.536	3	-.003	4	-.014	4	-.015	3
719		5	max	845.673	3	1119.464	4	611.22	4	.018	7	.003	4	.011	7
720			min	-988.911	4	-757.747	3	-816.536	3	-.003	4	-.019	7	.002	4
721	M118A	1	max	63.97	2	178.296	1	203.944	2	0	1	.026	4	.012	4
722			min	-53.715	1	-152.882	2	-308.409	1	0	2	-.017	3	-.021	3
723		2	max	63.97	2	178.296	1	203.944	2	0	1	.019	4	.011	4
724			min	-53.715	1	-152.882	2	-308.409	1	0	2	-.013	3	-.021	3
725		3	max	63.97	2	178.296	1	203.944	2	0	1	.013	4	.01	4
726			min	-53.715	1	-152.882	2	-308.409	1	0	2	-.009	3	-.02	3
727		4	max	63.97	2	178.296	1	203.944	2	0	1	.007	4	.008	4
728			min	-53.715	1	-152.882	2	-308.409	1	0	2	-.005	3	-.019	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
729		5	max	63.97	2	178.296	1	203.944	2	0	1	0	4	.007	4
730			min	-53.715	1	-152.882	2	-308.409	1	0	2	-.001	3	-.018	3
731	M119A	1	max	922.48	3	371.513	4	216.324	4	.097	5	.078	5	.155	5
732			min	-1157.546	4	-364.884	3	-264.444	3	0	2	0	2	-.03	2
733		2	max	922.48	3	371.513	4	216.324	4	.097	5	.076	5	.155	5
734			min	-1157.546	4	-364.884	3	-264.444	3	0	2	.003	2	-.033	2
735		3	max	922.48	3	371.513	4	216.324	4	.097	5	.074	5	.154	5
736			min	-1157.546	4	-364.884	3	-264.444	3	0	2	.006	2	-.037	2
737		4	max	922.48	3	371.513	4	216.324	4	.097	5	.072	5	.153	5
738			min	-1157.546	4	-364.884	3	-264.444	3	0	2	.009	2	-.04	2
739		5	max	922.48	3	371.513	4	216.324	4	.097	5	.07	5	.153	5
740			min	-1157.546	4	-364.884	3	-264.444	3	0	2	.012	2	-.043	2
741	M120A	1	max	2198.151	3	2893.762	5	789.631	4	.013	7	.075	3	.357	5
742			min	-774.483	4	482.426	2	-719.12	3	-.002	4	-.093	4	.061	2
743		2	max	2198.151	3	2893.762	5	789.631	4	.013	7	.054	3	.272	5
744			min	-774.483	4	482.426	2	-719.12	3	-.002	4	-.07	4	.047	2
745		3	max	2198.151	3	2893.762	5	789.631	4	.013	7	.033	3	.187	5
746			min	-774.483	4	482.426	2	-719.12	3	-.002	4	-.047	4	.032	2
747		4	max	2198.151	3	2893.762	5	789.631	4	.013	7	.012	3	.102	5
748			min	-774.483	4	482.426	2	-719.12	3	-.002	4	-.024	4	.018	2
749		5	max	2198.151	3	2893.762	5	789.631	4	.013	7	0	4	.017	7
750			min	-774.483	4	482.426	2	-719.12	3	-.002	4	-.013	7	.002	4
751	M121A	1	max	-314.887	4	108.711	3	655.104	7	0	4	0	4	0	3
752			min	-3663.164	7	-327.103	8	-2.262	4	0	7	-.055	7	-.034	8
753		2	max	-314.887	4	108.711	3	655.104	7	0	4	0	4	-.002	3
754			min	-3663.164	7	-327.103	8	-2.262	4	0	7	-.042	7	-.027	8
755		3	max	-314.887	4	108.711	3	655.104	7	0	4	0	4	-.003	2
756			min	-3663.164	7	-327.103	8	-2.262	4	0	7	-.028	7	-.021	5
757		4	max	-314.887	4	108.711	3	655.104	7	0	4	0	4	-.002	2
758			min	-3663.164	7	-327.103	8	-2.262	4	0	7	-.014	7	-.015	5
759		5	max	-314.887	4	108.711	3	655.104	7	0	4	0	2	.002	4
760			min	-3663.164	7	-327.103	8	-2.262	4	0	7	0	1	-.009	7
761	M122A	1	max	-.902	3	2306.411	7	1249.923	1	.625	4	.413	1	.374	4
762			min	-1231.006	8	265.406	4	-988.873	2	-.502	3	-.188	2	-.69	3
763		2	max	-.902	3	2306.411	7	1249.923	1	.625	4	.456	1	.364	4
764			min	-1231.006	8	265.406	4	-988.873	2	-.502	3	-.223	2	-.743	3
765		3	max	-.902	3	2306.411	7	1249.923	1	.625	4	.5	1	.355	4
766			min	-1231.006	8	265.406	4	-988.873	2	-.502	3	-.257	2	-.796	3
767		4	max	-.902	3	2306.411	7	1249.923	1	.625	4	.544	1	.346	4
768			min	-1231.006	8	265.406	4	-988.873	2	-.502	3	-.292	2	-.848	3
769		5	max	-.902	3	2306.411	7	1249.923	1	.625	4	.588	1	.337	4
770			min	-1231.006	8	265.406	4	-988.873	2	-.502	3	-.327	2	-.901	3
771	M124A	1	max	1580.933	6	2941.02	4	2924.976	1	.29	4	.237	1	.29	3
772			min	274.681	1	-3894.326	3	-3183.997	2	-.208	3	-.361	2	-.289	4
773		2	max	1580.933	6	2941.02	4	2924.976	1	.29	4	.42	1	.533	3
774			min	274.681	1	-3894.326	3	-3183.997	2	-.208	3	-.559	2	-.473	4
775		3	max	1580.933	6	2941.02	4	2924.976	1	.29	4	.602	1	.776	3
776			min	274.681	1	-3894.326	3	-3183.997	2	-.208	3	-.758	2	-.656	4
777		4	max	1580.933	6	2941.02	4	2924.976	1	.29	4	.785	1	1.019	3
778			min	274.681	1	-3894.326	3	-3183.997	2	-.208	3	-.957	2	-.84	4
779		5	max	1580.933	6	2941.02	4	2924.976	1	.29	4	.967	1	1.262	3
780			min	274.681	1	-3894.326	3	-3183.997	2	-.208	3	-1.156	2	-1.023	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
781	M125A	1	max	367.096	5	157.666	2	451.386	3	.182	8	.043	3	.05	3
782			min	-40.252	2	-819.609	5	-324.881	4	-.029	9	-.204	8	-.127	4
783		2	max	367.096	5	157.666	2	451.386	3	.182	8	.071	3	.071	3
784			min	-40.252	2	-819.609	5	-324.881	4	-.029	9	-.203	4	-.113	4
785		3	max	367.096	5	157.666	2	451.386	3	.182	8	.099	3	.091	3
786			min	-40.252	2	-819.609	5	-324.881	4	-.029	9	-.223	4	-.099	4
787		4	max	367.096	5	157.666	2	451.386	3	.182	8	.127	3	.112	3
788			min	-40.252	2	-819.609	5	-324.881	4	-.029	9	-.244	4	-.085	4
789		5	max	367.096	5	157.666	2	451.386	3	.182	8	.156	3	.133	3
790			min	-40.252	2	-819.609	5	-324.881	4	-.029	9	-.264	4	-.071	4
791	M126A	1	max	200.256	1	298.798	3	224.413	4	.22	8	.094	3	.07	3
792			min	-258.234	2	-664.517	4	-217.182	3	.004	9	-.243	4	-.155	4
793		2	max	200.256	1	298.798	3	224.413	4	.22	8	.08	3	.051	3
794			min	-258.234	2	-664.517	4	-217.182	3	.004	9	-.229	4	-.113	4
795		3	max	200.256	1	298.798	3	224.413	4	.22	8	.066	3	.032	3
796			min	-258.234	2	-664.517	4	-217.182	3	.004	9	-.221	8	-.074	9
797		4	max	200.256	1	298.798	3	224.413	4	.22	8	.053	3	.014	3
798			min	-258.234	2	-664.517	4	-217.182	3	.004	9	-.218	8	-.047	9
799		5	max	200.256	1	298.798	3	224.413	4	.22	8	.039	3	.028	1
800			min	-258.234	2	-664.517	4	-217.182	3	.004	9	-.214	8	-.022	2
801	M128A	1	max	330.513	4	302.492	3	303.542	2	.222	8	.037	3	.041	3
802			min	-336.966	3	-498.776	4	-466.187	1	-.045	3	-.086	9	-.063	4
803		2	max	330.513	4	302.492	3	303.542	2	.222	8	.018	3	.022	3
804			min	-336.966	3	-498.776	4	-466.187	1	-.045	3	-.088	9	-.042	9
805		3	max	330.513	4	302.492	3	303.542	2	.222	8	.025	2	.019	2
806			min	-336.966	3	-498.776	4	-466.187	1	-.045	3	-.091	5	-.029	9
807		4	max	330.513	4	302.492	3	303.542	2	.222	8	.044	2	.031	4
808			min	-336.966	3	-498.776	4	-466.187	1	-.045	3	-.114	1	-.016	9
809		5	max	330.513	4	302.492	3	303.542	2	.222	8	.063	2	.062	4
810			min	-336.966	3	-498.776	4	-466.187	1	-.045	3	-.143	1	-.035	3
811	M130A	1	max	1087.372	8	1028.747	3	683.274	2	.432	2	.967	5	.739	5
812			min	-234.781	3	-573.155	4	-1555.475	1	-.163	1	-.318	2	-.026	2
813		2	max	1087.372	8	1028.747	3	683.274	2	.432	2	.873	5	.689	5
814			min	-234.781	3	-573.155	4	-1555.475	1	-.163	1	-.275	2	.001	2
815		3	max	1087.372	8	1028.747	3	683.274	2	.432	2	.778	5	.64	5
816			min	-234.781	3	-573.155	4	-1555.475	1	-.163	1	-.232	2	.028	2
817		4	max	1087.372	8	1028.747	3	683.274	2	.432	2	.683	5	.591	5
818			min	-234.781	3	-573.155	4	-1555.475	1	-.163	1	-.19	2	.055	2
819		5	max	1087.372	8	1028.747	3	683.274	2	.432	2	.588	5	.55	8
820			min	-234.781	3	-573.155	4	-1555.475	1	-.163	1	-.147	2	.064	3
821	M131A	1	max	1200.187	2	1520.124	2	1109.078	1	.007	5	.009	5	0	2
822			min	-664.005	1	-1012.162	1	-1934.805	2	-.002	2	-.003	2	0	1
823		2	max	1200.187	2	1520.124	2	1109.078	1	.007	5	.038	1	.028	1
824			min	-664.005	1	-1012.162	1	-1934.805	2	-.002	2	-.055	2	-.04	2
825		3	max	1200.187	2	1520.124	2	1109.078	1	.007	5	.068	1	.055	1
826			min	-664.005	1	-1012.162	1	-1934.805	2	-.002	2	-.107	2	-.082	2
827		4	max	1200.187	2	1520.124	2	1109.078	1	.007	5	.098	1	.082	1
828			min	-664.005	1	-1012.162	1	-1934.805	2	-.002	2	-.16	2	-.123	2
829		5	max	1200.187	2	1520.124	2	1109.078	1	.007	5	.129	1	.11	1
830			min	-664.005	1	-1012.162	1	-1934.805	2	-.002	2	-.212	2	-.164	2
831	M132A	1	max	198.411	1	530.532	2	273.747	1	0	4	.014	2	.048	2
832			min	-109.569	2	-383.159	1	-158.985	2	0	3	-.024	1	-.043	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
833		2	max	198.411	1	530.532	2	273.747	1	0	4	.01	2	.037	2
834			min	-109.569	2	-383.159	1	-158.985	2	0	3	-.018	1	-.035	1
835		3	max	198.411	1	530.532	2	273.747	1	0	4	.007	2	.026	2
836			min	-109.569	2	-383.159	1	-158.985	2	0	3	-.012	1	-.027	1
837		4	max	198.411	1	530.532	2	273.747	1	0	4	.004	2	.015	2
838			min	-109.569	2	-383.159	1	-158.985	2	0	3	-.006	1	-.019	1
839		5	max	198.411	1	530.532	2	273.747	1	0	4	0	3	.004	3
840			min	-109.569	2	-383.159	1	-158.985	2	0	3	0	4	-.011	8
841	M133	1	max	2028.789	7	760.689	2	2929.467	3	.038	7	.347	4	.107	2
842			min	169.776	4	-777.704	1	-2801.99	4	-.006	9	-.335	3	-.058	1
843		2	max	2028.789	7	760.689	2	2929.467	3	.038	7	.263	4	.094	9
844			min	169.776	4	-777.704	1	-2801.99	4	-.006	9	-.247	3	-.035	1
845		3	max	2028.789	7	760.689	2	2929.467	3	.038	7	.18	4	.084	9
846			min	169.776	4	-777.704	1	-2801.99	4	-.006	9	-.16	3	-.012	1
847		4	max	2028.789	7	760.689	2	2929.467	3	.038	7	.096	4	.075	9
848			min	169.776	4	-777.704	1	-2801.99	4	-.006	9	-.073	3	0	3
849		5	max	2028.789	7	760.689	2	2929.467	3	.038	7	.039	5	.069	8
850			min	169.776	4	-777.704	1	-2801.99	4	-.006	9	-.004	9	.003	3
851	M134	1	max	452.123	6	-43.327	1	-26.74	3	.014	5	.083	6	-.004	1
852			min	-2.376	3	-513.256	6	-879.752	8	-.004	2	.004	1	-.054	6
853		2	max	452.123	6	-43.327	1	-26.74	3	.014	5	.059	6	-.002	1
854			min	-2.376	3	-513.256	6	-879.752	8	-.004	2	0	1	-.04	6
855		3	max	452.123	6	-43.327	1	-26.74	3	.014	5	.036	6	-.001	1
856			min	-2.376	3	-513.256	6	-879.752	8	-.004	2	-.006	1	-.026	6
857		4	max	452.123	6	-43.327	1	-26.74	3	.014	5	.017	2	0	1
858			min	-2.376	3	-513.256	6	-879.752	8	-.004	2	-.01	1	-.011	6
859		5	max	452.123	6	-43.327	1	-26.74	3	.014	5	.005	2	.003	8
860			min	-2.376	3	-513.256	6	-879.752	8	-.004	2	-.017	5	0	3
861	M135	1	max	21.385	2	138.724	4	84.23	4	0	4	.019	3	-.004	2
862			min	-48.704	1	-180.906	3	-216.784	3	0	3	-.009	4	-.022	5
863		2	max	21.385	2	138.724	4	84.23	4	0	4	.014	3	-.002	2
864			min	-48.704	1	-180.906	3	-216.784	3	0	3	-.007	4	-.021	5
865		3	max	21.385	2	138.724	4	84.23	4	0	4	.01	3	.002	3
866			min	-48.704	1	-180.906	3	-216.784	3	0	3	-.005	4	-.021	8
867		4	max	21.385	2	138.724	4	84.23	4	0	4	.005	3	.006	3
868			min	-48.704	1	-180.906	3	-216.784	3	0	3	-.003	4	-.021	8
869		5	max	21.385	2	138.724	4	84.23	4	0	4	0	3	.01	3
870			min	-48.704	1	-180.906	3	-216.784	3	0	3	-.002	4	-.022	4
871	M136	1	max	1397.917	5	-175.384	4	223.246	9	.08	8	.085	8	.194	4
872			min	201.28	2	-745.336	7	-275.294	4	0	3	-.052	9	-.088	3
873		2	max	1397.917	5	-175.384	4	223.246	9	.08	8	.078	8	.202	9
874			min	201.28	2	-745.336	7	-275.294	4	0	3	-.045	9	-.077	3
875		3	max	1397.917	5	-175.384	4	223.246	9	.08	8	.07	8	.211	9
876			min	201.28	2	-745.336	7	-275.294	4	0	3	-.038	9	-.065	3
877		4	max	1397.917	5	-175.384	4	223.246	9	.08	8	.063	8	.229	8
878			min	201.28	2	-745.336	7	-275.294	4	0	3	-.031	9	-.054	3
879		5	max	1397.917	5	-175.384	4	223.246	9	.08	8	.056	8	.25	8
880			min	201.28	2	-745.336	7	-275.294	4	0	3	-.024	9	-.042	3
881	M137	1	max	393.818	1	617.991	2	200.349	2	.016	8	.052	5	.071	2
882			min	-522.426	2	-521.512	1	-610.49	5	-.005	3	-.02	2	-.058	1
883		2	max	393.818	1	617.991	2	200.349	2	.016	8	.035	5	.053	2
884			min	-522.426	2	-521.512	1	-610.49	5	-.005	3	-.014	2	-.043	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
885		3	max	393.818	1	617.991	2	200.349	2	.016	8	.018	1	.036	2
886			min	-522.426	2	-521.512	1	-610.49	5	-.005	3	-.009	2	-.028	1
887		4	max	393.818	1	617.991	2	200.349	2	.016	8	.002	1	.019	2
888			min	-522.426	2	-521.512	1	-610.49	5	-.005	3	-.005	9	-.014	1
889		5	max	393.818	1	617.991	2	200.349	2	.016	8	.005	3	.002	7
890			min	-522.426	2	-521.512	1	-610.49	5	-.005	3	-.017	8	.001	4
891	M138	1	max	43.796	3	112.38	4	183.379	1	0	4	.021	2	.005	2
892			min	-23.963	4	-146.024	3	-244.594	2	0	3	-.017	1	-.021	5
893		2	max	43.796	3	112.38	4	183.379	1	0	4	.016	2	.005	2
894			min	-23.963	4	-146.024	3	-244.594	2	0	3	-.013	1	-.02	5
895		3	max	43.796	3	112.38	4	183.379	1	0	4	.011	2	.005	2
896			min	-23.963	4	-146.024	3	-244.594	2	0	3	-.009	1	-.02	5
897		4	max	43.796	3	112.38	4	183.379	1	0	4	.006	2	.007	3
898			min	-23.963	4	-146.024	3	-244.594	2	0	3	-.005	1	-.02	4
899		5	max	43.796	3	112.38	4	183.379	1	0	4	0	3	.011	3
900			min	-23.963	4	-146.024	3	-244.594	2	0	3	-.002	4	-.022	4
901	M139	1	max	802.8	4	333.733	3	187.882	9	.139	8	.111	8	.259	4
902			min	-680.679	3	-489.945	4	-212.048	4	.006	3	-.037	9	-.084	3
903		2	max	802.8	4	333.733	3	187.882	9	.139	8	.105	6	.275	4
904			min	-680.679	3	-489.945	4	-212.048	4	.006	3	-.031	9	-.095	3
905		3	max	802.8	4	333.733	3	187.882	9	.139	8	.101	6	.29	4
906			min	-680.679	3	-489.945	4	-212.048	4	.006	3	-.025	9	-.105	3
907		4	max	802.8	4	333.733	3	187.882	9	.139	8	.097	6	.306	4
908			min	-680.679	3	-489.945	4	-212.048	4	.006	3	-.019	9	-.116	3
909		5	max	802.8	4	333.733	3	187.882	9	.139	8	.093	6	.322	4
910			min	-680.679	3	-489.945	4	-212.048	4	.006	3	-.013	9	-.127	3
911	M140	1	max	817.887	1	1023.93	2	540.27	2	.022	8	.079	1	.12	2
912			min	-918.528	2	-681.945	1	-824.959	1	-.003	3	-.061	2	-.071	1
913		2	max	817.887	1	1023.93	2	540.27	2	.022	8	.055	1	.09	2
914			min	-918.528	2	-681.945	1	-824.959	1	-.003	3	-.046	2	-.052	1
915		3	max	817.887	1	1023.93	2	540.27	2	.022	8	.031	1	.061	2
916			min	-918.528	2	-681.945	1	-824.959	1	-.003	3	-.03	2	-.032	1
917		4	max	817.887	1	1023.93	2	540.27	2	.022	8	.008	1	.032	2
918			min	-918.528	2	-681.945	1	-824.959	1	-.003	3	-.015	2	-.012	1
919		5	max	817.887	1	1023.93	2	540.27	2	.022	8	.003	3	.013	8
920			min	-918.528	2	-681.945	1	-824.959	1	-.003	3	-.023	8	.001	3
921	M141	1	max	74.04	3	206.118	4	220.4	1	0	4	.029	2	.012	2
922			min	-56.031	4	-175.92	3	-348.1	2	0	3	-.019	1	-.021	1
923		2	max	74.04	3	206.118	4	220.4	1	0	4	.022	2	.01	2
924			min	-56.031	4	-175.92	3	-348.1	2	0	3	-.015	1	-.02	1
925		3	max	74.04	3	206.118	4	220.4	1	0	4	.015	2	.007	2
926			min	-56.031	4	-175.92	3	-348.1	2	0	3	-.01	1	-.018	1
927		4	max	74.04	3	206.118	4	220.4	1	0	4	.008	2	.005	2
928			min	-56.031	4	-175.92	3	-348.1	2	0	3	-.006	1	-.018	5
929		5	max	74.04	3	206.118	4	220.4	1	0	4	0	3	.007	3
930			min	-56.031	4	-175.92	3	-348.1	2	0	3	-.001	4	-.019	8
931	M142	1	max	885.848	4	326.945	2	234.704	3	.121	8	.136	8	.126	9
932			min	-1110.562	3	-388.235	1	-340.376	4	-.011	3	-.035	3	-.023	1
933		2	max	885.848	4	326.945	2	234.704	3	.121	8	.128	8	.123	9
934			min	-1110.562	3	-388.235	1	-340.376	4	-.011	3	-.027	3	-.01	1
935		3	max	885.848	4	326.945	2	234.704	3	.121	8	.12	8	.121	9
936			min	-1110.562	3	-388.235	1	-340.376	4	-.011	3	-.019	3	-.018	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
937		4	max	885.848	4	326.945	2	234.704	3	.121	8	.112	8	.125	8
938			min	-1110.562	3	-388.235	1	-340.376	4	-.011	3	-.012	3	-.029	3
939		5	max	885.848	4	326.945	2	234.704	3	.121	8	.104	8	.132	8
940			min	-1110.562	3	-388.235	1	-340.376	4	-.011	3	-.004	3	-.039	3
941	M143	1	max	2550.506	5	3310.229	8	766.241	2	.016	5	.077	1	.409	8
942			min	-654.265	2	368.976	3	-730.523	1	0	2	-.091	2	.044	3
943		2	max	2550.506	5	3310.229	8	766.241	2	.016	5	.055	1	.312	8
944			min	-654.265	2	368.976	3	-730.523	1	0	2	-.069	2	.033	3
945		3	max	2550.506	5	3310.229	8	766.241	2	.016	5	.034	1	.215	8
946			min	-654.265	2	368.976	3	-730.523	1	0	2	-.047	2	.022	3
947		4	max	2550.506	5	3310.229	8	766.241	2	.016	5	.012	1	.118	8
948			min	-654.265	2	368.976	3	-730.523	1	0	2	-.024	2	.011	3
949		5	max	2550.506	5	3310.229	8	766.241	2	.016	5	.001	3	.021	8
950			min	-654.265	2	368.976	3	-730.523	1	0	2	-.016	8	0	3
951	M144	1	max	-49.823	3	88.286	1	704.608	8	0	2	-.003	3	0	1
952			min	-4452.001	8	-331.796	6	40.571	3	0	8	-.06	8	-.036	6
953		2	max	-49.823	3	88.286	1	704.608	8	0	2	-.002	3	-.002	1
954			min	-4452.001	8	-331.796	6	40.571	3	0	8	-.045	8	-.029	6
955		3	max	-49.823	3	88.286	1	704.608	8	0	2	-.001	3	-.001	3
956			min	-4452.001	8	-331.796	6	40.571	3	0	8	-.03	8	-.022	8
957		4	max	-49.823	3	88.286	1	704.608	8	0	2	0	3	0	3
958			min	-4452.001	8	-331.796	6	40.571	3	0	8	-.015	8	-.016	8
959		5	max	-49.823	3	88.286	1	704.608	8	0	2	0	3	.002	3
960			min	-4452.001	8	-331.796	6	40.571	3	0	8	0	4	-.011	8
961	M145	1	max	-254.915	4	2791.37	8	1298.422	4	.523	2	.512	4	.425	2
962			min	-1425.179	7	212.523	3	-1089.152	3	-.392	1	-.263	3	-.855	1
963		2	max	-254.915	4	2791.37	8	1298.422	4	.523	2	.557	4	.412	2
964			min	-1425.179	7	212.523	3	-1089.152	3	-.392	1	-.301	3	-.91	1
965		3	max	-254.915	4	2791.37	8	1298.422	4	.523	2	.602	4	.398	2
966			min	-1425.179	7	212.523	3	-1089.152	3	-.392	1	-.339	3	-.968	5
967		4	max	-254.915	4	2791.37	8	1298.422	4	.523	2	.648	4	.384	2
968			min	-1425.179	7	212.523	3	-1089.152	3	-.392	1	-.377	3	-1.064	5
969		5	max	-254.915	4	2791.37	8	1298.422	4	.523	2	.693	4	.371	2
970			min	-1425.179	7	212.523	3	-1089.152	3	-.392	1	-.415	3	-1.16	5
971	M147	1	max	1487.257	5	2378.855	4	4145.793	1	.186	3	.356	1	.283	3
972			min	258.648	2	-2278.465	3	-3050.326	2	-.122	4	-.28	2	-.166	4
973		2	max	1487.257	5	2378.855	4	4145.793	1	.186	3	.614	1	.425	3
974			min	258.648	2	-2278.465	3	-3050.326	2	-.122	4	-.47	2	-.314	4
975		3	max	1487.257	5	2378.855	4	4145.793	1	.186	3	.873	1	.567	3
976			min	258.648	2	-2278.465	3	-3050.326	2	-.122	4	-.66	2	-.463	4
977		4	max	1487.257	5	2378.855	4	4145.793	1	.186	3	1.132	1	.71	3
978			min	258.648	2	-2278.465	3	-3050.326	2	-.122	4	-.851	2	-.611	4
979		5	max	1487.257	5	2378.855	4	4145.793	1	.186	3	1.391	1	.852	3
980			min	258.648	2	-2278.465	3	-3050.326	2	-.122	4	-1.041	2	-.76	4
981	M148	1	max	323.261	8	556.293	8	506.608	6	.194	9	.027	1	.217	2
982			min	-9.148	3	-167.473	3	-52.611	1	.024	1	-.022	2	-.068	1
983		2	max	323.261	8	556.293	8	506.608	6	.194	9	.037	5	.204	2
984			min	-9.148	3	-167.473	3	-52.611	1	.024	1	.005	2	-.079	1
985		3	max	323.261	8	556.293	8	506.608	6	.194	9	.064	8	.192	2
986			min	-9.148	3	-167.473	3	-52.611	1	.024	1	.016	3	-.09	1
987		4	max	323.261	8	556.293	8	506.608	6	.194	9	.095	6	.179	2
988			min	-9.148	3	-167.473	3	-52.611	1	.024	1	.017	1	-.1	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
989		5	max	323.261	8	556.293	8	506.608	6	.194	9	.127	6	.18	3
990			min	-9.148	3	-167.473	3	-52.611	1	.024	1	.014	1	-.125	4
991	M149	1	max	202.484	2	436.702	2	501.933	2	.218	9	.018	1	.263	2
992			min	-263.453	1	-273.28	1	-228.297	1	.021	1	-.016	2	-.105	1
993		2	max	202.484	2	436.702	2	501.933	2	.218	9	.024	6	.235	2
994			min	-263.453	1	-273.28	1	-228.297	1	.021	1	.003	1	-.088	1
995		3	max	202.484	2	436.702	2	501.933	2	.218	9	.05	6	.208	2
996			min	-263.453	1	-273.28	1	-228.297	1	.021	1	-.011	1	-.071	1
997		4	max	202.484	2	436.702	2	501.933	2	.218	9	.078	2	.181	2
998			min	-263.453	1	-273.28	1	-228.297	1	.021	1	-.025	1	-.054	1
999		5	max	202.484	2	436.702	2	501.933	2	.218	9	.109	2	.16	6
1000			min	-263.453	1	-273.28	1	-228.297	1	.021	1	-.039	1	-.037	1
1001	M151	1	max	339.806	2	415.579	3	374.193	2	.202	9	.018	1	.102	2
1002			min	-351.067	1	-454.774	4	-153.791	1	-.067	1	-.016	2	-.058	1
1003		2	max	339.806	2	415.579	3	374.193	2	.202	9	.019	8	.095	2
1004			min	-351.067	1	-454.774	4	-153.791	1	-.067	1	.005	3	-.049	1
1005		3	max	339.806	2	415.579	3	374.193	2	.202	9	.038	6	.088	2
1006			min	-351.067	1	-454.774	4	-153.791	1	-.067	1	-.002	1	-.04	1
1007		4	max	339.806	2	415.579	3	374.193	2	.202	9	.058	6	.082	2
1008			min	-351.067	1	-454.774	4	-153.791	1	-.067	1	-.011	1	-.031	1
1009		5	max	339.806	2	415.579	3	374.193	2	.202	9	.078	6	.091	4
1010			min	-351.067	1	-454.774	4	-153.791	1	-.067	1	-.021	1	-.038	3
1011	M153	1	max	977.821	2	646.729	1	929.557	2	.358	7	.357	1	.298	1
1012			min	-381.26	1	-1421.937	2	-928.487	1	-.077	4	-.214	2	-1.008	9
1013		2	max	977.821	2	646.729	1	929.557	2	.358	7	.299	1	.257	1
1014			min	-381.26	1	-1421.937	2	-928.487	1	-.077	4	-.156	2	-.92	9
1015		3	max	977.821	2	646.729	1	929.557	2	.358	7	.241	1	.217	1
1016			min	-381.26	1	-1421.937	2	-928.487	1	-.077	4	-.098	2	-.832	9
1017		4	max	977.821	2	646.729	1	929.557	2	.358	7	.203	5	.177	1
1018			min	-381.26	1	-1421.937	2	-928.487	1	-.077	4	-.04	2	-.744	9
1019		5	max	977.821	2	646.729	1	929.557	2	.358	7	.187	5	.136	1
1020			min	-381.26	1	-1421.937	2	-928.487	1	-.077	4	.018	2	-.655	9
1021	M154	1	max	1058.577	3	1284.97	3	560.187	4	.007	2	.008	2	0	7
1022			min	-533.198	4	-768.02	4	-1381.531	3	-.003	1	-.004	1	0	4
1023		2	max	1058.577	3	1284.97	3	560.187	4	.007	2	.021	2	.021	4
1024			min	-533.198	4	-768.02	4	-1381.531	3	-.003	1	-.039	1	-.034	3
1025		3	max	1058.577	3	1284.97	3	560.187	4	.007	2	.035	4	.042	4
1026			min	-533.198	4	-768.02	4	-1381.531	3	-.003	1	-.075	3	-.069	3
1027		4	max	1058.577	3	1284.97	3	560.187	4	.007	2	.051	4	.063	4
1028			min	-533.198	4	-768.02	4	-1381.531	3	-.003	1	-.112	3	-.104	3
1029		5	max	1058.577	3	1284.97	3	560.187	4	.007	2	.066	4	.083	4
1030			min	-533.198	4	-768.02	4	-1381.531	3	-.003	1	-.15	3	-.139	3
1031	M155	1	max	237.441	2	620.807	1	256.352	4	0	2	.014	3	.059	1
1032			min	-164.07	1	-449.917	2	-171.642	3	0	1	-.022	4	-.051	2
1033		2	max	237.441	2	620.807	1	256.352	4	0	2	.011	3	.046	1
1034			min	-164.07	1	-449.917	2	-171.642	3	0	1	-.016	4	-.042	2
1035		3	max	237.441	2	620.807	1	256.352	4	0	2	.007	3	.033	1
1036			min	-164.07	1	-449.917	2	-171.642	3	0	1	-.011	4	-.032	2
1037		4	max	237.441	2	620.807	1	256.352	4	0	2	.003	3	.02	1
1038			min	-164.07	1	-449.917	2	-171.642	3	0	1	-.006	4	-.023	2
1039		5	max	237.441	2	620.807	1	256.352	4	0	2	0	1	.007	1
1040			min	-164.07	1	-449.917	2	-171.642	3	0	1	0	2	-.013	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1041	M156	1	max	1787.189	5	617.936	3	2392.311	1	.042	9	.265	2	.11	3
1042			min	201.486	2	-561.243	9	-2133.907	2	0	3	-.274	1	-.054	4
1043		2	max	1787.189	5	617.936	3	2392.311	1	.042	9	.202	2	.092	3
1044			min	201.486	2	-561.243	9	-2133.907	2	0	3	-.202	1	-.038	4
1045		3	max	1787.189	5	617.936	3	2392.311	1	.042	9	.138	2	.075	7
1046			min	201.486	2	-561.243	9	-2133.907	2	0	3	-.131	1	-.021	4
1047		4	max	1787.189	5	617.936	3	2392.311	1	.042	9	.075	2	.068	7
1048			min	201.486	2	-561.243	9	-2133.907	2	0	3	-.06	1	-.004	4
1049		5	max	1787.189	5	617.936	3	2392.311	1	.042	9	.042	9	.065	6
1050			min	201.486	2	-561.243	9	-2133.907	2	0	3	0	3	-.002	1
1051	M157	1	max	384.69	7	-66.659	4	-177.999	4	.015	2	.072	9	-.006	4
1052			min	26.226	4	-438.477	7	-755.411	9	-.007	1	.011	4	-.046	7
1053		2	max	384.69	7	-66.659	4	-177.999	4	.015	2	.051	9	-.004	4
1054			min	26.226	4	-438.477	7	-755.411	9	-.007	1	.006	4	-.034	7
1055		3	max	384.69	7	-66.659	4	-177.999	4	.015	2	.03	9	-.003	4
1056			min	26.226	4	-438.477	7	-755.411	9	-.007	1	.001	4	-.022	7
1057		4	max	384.69	7	-66.659	4	-177.999	4	.015	2	.013	1	0	4
1058			min	26.226	4	-438.477	7	-755.411	9	-.007	1	-.007	2	-.01	7
1059		5	max	384.69	7	-66.659	4	-177.999	4	.015	2	.008	1	.002	7
1060			min	26.226	4	-438.477	7	-755.411	9	-.007	1	-.017	2	.001	1
1061	M158	1	max	29.922	1	174.043	2	99.69	2	0	2	.02	1	-.004	1
1062			min	-55.915	2	-223.532	1	-224.171	1	0	1	-.01	2	-.019	6
1063		2	max	29.922	1	174.043	2	99.69	2	0	2	.015	1	0	1
1064			min	-55.915	2	-223.532	1	-224.171	1	0	1	-.008	2	-.019	6
1065		3	max	29.922	1	174.043	2	99.69	2	0	2	.011	1	.006	1
1066			min	-55.915	2	-223.532	1	-224.171	1	0	1	-.006	2	-.018	2
1067		4	max	29.922	1	174.043	2	99.69	2	0	2	.006	1	.01	1
1068			min	-55.915	2	-223.532	1	-224.171	1	0	1	-.004	2	-.022	2
1069		5	max	29.922	1	174.043	2	99.69	2	0	2	.001	1	.015	1
1070			min	-55.915	2	-223.532	1	-224.171	1	0	1	-.002	2	-.026	2
1071	M159	1	max	1252.923	8	-123.515	2	59.639	4	.078	9	.115	9	.212	2
1072			min	190.797	3	-667.782	5	-351.442	9	.005	1	.006	1	-.113	1
1073		2	max	1252.923	8	-123.515	2	59.639	4	.078	9	.104	9	.215	2
1074			min	190.797	3	-667.782	5	-351.442	9	.005	1	.006	1	-.101	1
1075		3	max	1252.923	8	-123.515	2	59.639	4	.078	9	.093	9	.219	2
1076			min	190.797	3	-667.782	5	-351.442	9	.005	1	.006	1	-.089	1
1077		4	max	1252.923	8	-123.515	2	59.639	4	.078	9	.082	9	.223	2
1078			min	190.797	3	-667.782	5	-351.442	9	.005	1	.006	1	-.077	1
1079		5	max	1252.923	8	-123.515	2	59.639	4	.078	9	.071	9	.227	2
1080			min	190.797	3	-667.782	5	-351.442	9	.005	1	.002	3	-.065	1
1081	M160	1	max	267.438	2	525.287	1	279.718	1	.015	2	.055	9	.06	1
1082			min	-425.731	1	-389.256	2	-594.467	9	-.007	1	-.024	1	-.043	2
1083		2	max	267.438	2	525.287	1	279.718	1	.015	2	.038	9	.046	1
1084			min	-425.731	1	-389.256	2	-594.467	9	-.007	1	-.016	1	-.032	2
1085		3	max	267.438	2	525.287	1	279.718	1	.015	2	.022	9	.031	1
1086			min	-425.731	1	-389.256	2	-594.467	9	-.007	1	-.008	1	-.021	2
1087		4	max	267.438	2	525.287	1	279.718	1	.015	2	.005	9	.016	1
1088			min	-425.731	1	-389.256	2	-594.467	9	-.007	1	-.004	3	-.01	2
1089		5	max	267.438	2	525.287	1	279.718	1	.015	2	.008	1	.002	8
1090			min	-425.731	1	-389.256	2	-594.467	9	-.007	1	-.017	2	0	3
1091	M161	1	max	56.709	1	70.595	2	137.487	4	0	2	.015	3	.005	1
1092			min	-38.473	2	-109.617	1	-184.595	3	0	1	-.012	4	-.018	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1093		2	max	56.709	1	70.595	2	137.487	4	0	2	.011	3	.007	1
1094			min	-38.473	2	-109.617	1	-184.595	3	0	1	-.009	4	-.019	2
1095		3	max	56.709	1	70.595	2	137.487	4	0	2	.007	3	.009	1
1096			min	-38.473	2	-109.617	1	-184.595	3	0	1	-.006	4	-.021	2
1097		4	max	56.709	1	70.595	2	137.487	4	0	2	.003	3	.012	1
1098			min	-38.473	2	-109.617	1	-184.595	3	0	1	-.003	4	-.022	2
1099		5	max	56.709	1	70.595	2	137.487	4	0	2	.001	1	.014	1
1100			min	-38.473	2	-109.617	1	-184.595	3	0	1	-.002	2	-.024	2
1101	M162	1	max	986.988	2	356.852	1	124.649	1	.108	7	.137	9	.227	7
1102			min	-955.378	1	-448.56	2	-318.373	9	.025	4	.009	3	-.052	4
1103		2	max	986.988	2	356.852	1	124.649	1	.108	7	.127	9	.232	2
1104			min	-955.378	1	-448.56	2	-318.373	9	.025	4	.011	3	-.062	1
1105		3	max	986.988	2	356.852	1	124.649	1	.108	7	.116	9	.247	2
1106			min	-955.378	1	-448.56	2	-318.373	9	.025	4	.012	3	-.073	1
1107		4	max	986.988	2	356.852	1	124.649	1	.108	7	.106	9	.261	2
1108			min	-955.378	1	-448.56	2	-318.373	9	.025	4	.012	2	-.085	1
1109		5	max	986.988	2	356.852	1	124.649	1	.108	7	.096	9	.275	2
1110			min	-955.378	1	-448.56	2	-318.373	9	.025	4	.008	2	-.096	1
1111	M163	1	max	604.487	2	860.254	1	490.29	1	.018	2	.061	2	.099	1
1112			min	-766.436	1	-484.166	2	-691.514	2	-.006	1	-.051	1	-.048	2
1113		2	max	604.487	2	860.254	1	490.29	1	.018	2	.041	2	.075	1
1114			min	-766.436	1	-484.166	2	-691.514	2	-.006	1	-.037	1	-.034	2
1115		3	max	604.487	2	860.254	1	490.29	1	.018	2	.021	2	.05	1
1116			min	-766.436	1	-484.166	2	-691.514	2	-.006	1	-.022	1	-.02	2
1117		4	max	604.487	2	860.254	1	490.29	1	.018	2	.005	4	.028	5
1118			min	-766.436	1	-484.166	2	-691.514	2	-.006	1	-.012	3	-.006	2
1119		5	max	604.487	2	860.254	1	490.29	1	.018	2	.006	1	.01	6
1120			min	-766.436	1	-484.166	2	-691.514	2	-.006	1	-.019	2	0	1
1121	M164	1	max	61.445	1	129.98	3	181.969	4	0	2	.024	3	.007	3
1122			min	-46.007	2	-109.494	4	-292.352	3	0	1	-.015	4	-.015	4
1123		2	max	61.445	1	129.98	3	181.969	4	0	2	.018	3	.005	1
1124			min	-46.007	2	-109.494	4	-292.352	3	0	1	-.012	4	-.014	2
1125		3	max	61.445	1	129.98	3	181.969	4	0	2	.012	3	.006	1
1126			min	-46.007	2	-109.494	4	-292.352	3	0	1	-.008	4	-.016	2
1127		4	max	61.445	1	129.98	3	181.969	4	0	2	.006	3	.008	1
1128			min	-46.007	2	-109.494	4	-292.352	3	0	1	-.004	4	-.018	2
1129		5	max	61.445	1	129.98	3	181.969	4	0	2	0	1	.009	1
1130			min	-46.007	2	-109.494	4	-292.352	3	0	1	-.001	2	-.02	2
1131	M165	1	max	1009.501	2	469.556	1	311.779	1	.092	6	.133	9	.128	3
1132			min	-1303.555	1	-454.806	2	-363.455	2	0	1	-.036	1	-.044	4
1133		2	max	1009.501	2	469.556	1	311.779	1	.092	6	.122	9	.12	3
1134			min	-1303.555	1	-454.806	2	-363.455	2	0	1	-.026	1	-.037	4
1135		3	max	1009.501	2	469.556	1	311.779	1	.092	6	.112	9	.116	7
1136			min	-1303.555	1	-454.806	2	-363.455	2	0	1	-.015	1	-.029	4
1137		4	max	1009.501	2	469.556	1	311.779	1	.092	6	.101	9	.112	7
1138			min	-1303.555	1	-454.806	2	-363.455	2	0	1	-.005	1	-.022	4
1139		5	max	1009.501	2	469.556	1	311.779	1	.092	6	.091	9	.111	6
1140			min	-1303.555	1	-454.806	2	-363.455	2	0	1	.005	1	-.026	1
1141	M166	1	max	2185.077	2	2673.245	7	513.01	3	.013	6	.045	4	.328	7
1142			min	-832.853	1	734.268	1	-436.839	4	-.003	1	-.063	3	.086	1
1143		2	max	2185.077	2	2673.245	7	513.01	3	.013	6	.032	4	.25	6
1144			min	-832.853	1	734.268	1	-436.839	4	-.003	1	-.048	3	.064	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1145		3	max	2185.077	2	2673.245	7	513.01	3	.013	6	.019	4	.172	6
1146			min	-832.853	1	734.268	1	-436.839	4	-.003	1	-.033	3	.043	1
1147		4	max	2185.077	2	2673.245	7	513.01	3	.013	6	.006	4	.094	6
1148			min	-832.853	1	734.268	1	-436.839	4	-.003	1	-.018	3	.021	1
1149		5	max	2185.077	2	2673.245	7	513.01	3	.013	6	.002	1	.016	6
1150			min	-832.853	1	734.268	1	-436.839	4	-.003	1	-.012	6	0	1
1151	M167	1	max	212.286	1	16.65	2	582.927	6	0	1	.003	1	-.005	4
1152			min	-3525.162	6	-300.043	5	-37.469	1	0	9	-.049	6	-.032	7
1153		2	max	212.286	1	16.65	2	582.927	6	0	1	.003	1	-.004	4
1154			min	-3525.162	6	-300.043	5	-37.469	1	0	9	-.037	6	-.025	7
1155		3	max	212.286	1	16.65	2	582.927	6	0	1	.002	1	-.004	4
1156			min	-3525.162	6	-300.043	5	-37.469	1	0	9	-.025	6	-.019	7
1157		4	max	212.286	1	16.65	2	582.927	6	0	1	.001	1	-.002	1
1158			min	-3525.162	6	-300.043	5	-37.469	1	0	9	-.013	6	-.013	6
1159		5	max	212.286	1	16.65	2	582.927	6	0	1	0	1	.003	1
1160			min	-3525.162	6	-300.043	5	-37.469	1	0	9	0	2	-.009	2
1161	M168	1	max	-90.031	2	2244.747	6	896.455	3	.514	1	.306	9	.348	3
1162			min	-1273.469	5	29.602	1	-725.305	4	-.363	2	-.095	1	-.677	4
1163		2	max	-90.031	2	2244.747	6	896.455	3	.514	1	.326	2	.329	3
1164			min	-1273.469	5	29.602	1	-725.305	4	-.363	2	-.11	1	-.726	9
1165		3	max	-90.031	2	2244.747	6	896.455	3	.514	1	.346	2	.31	3
1166			min	-1273.469	5	29.602	1	-725.305	4	-.363	2	-.124	1	-.797	9
1167		4	max	-90.031	2	2244.747	6	896.455	3	.514	1	.367	2	.29	3
1168			min	-1273.469	5	29.602	1	-725.305	4	-.363	2	-.139	1	-.869	9
1169		5	max	-90.031	2	2244.747	6	896.455	3	.514	1	.389	3	.273	1
1170			min	-1273.469	5	29.602	1	-725.305	4	-.363	2	-.157	4	-.94	9
1171	M127B	1	max	2850.74	8	2700.859	7	1321.887	4	.924	1	1.789	3	5.644	7
1172			min	-569.444	3	78.375	4	-1216.025	2	-.984	2	-1.693	4	-1.496	4
1173		2	max	2848.422	8	2677.056	7	1317.479	4	.924	1	.83	3	3.849	3
1174			min	-560.975	3	66.657	4	-1209.032	3	-.984	2	-.648	4	-1.553	4
1175		3	max	2846.104	8	2653.254	7	1313.071	4	.924	1	.438	1	2.314	3
1176			min	-552.507	3	54.939	4	-1204.623	3	-.984	2	-.172	2	-1.601	4
1177		4	max	1308.714	1	1260.705	3	1706.28	3	.011	4	.6	4	.232	3
1178			min	-941.428	2	-572.609	4	-922.303	4	-.478	7	-.433	3	-.245	4
1179		5	max	0	1	.003	6	.002	3	0	1	0	1	0	1
1180			min	0	1	-.017	3	-.002	2	0	1	0	1	0	1
1181	M125B	1	max	2834.54	7	2994.951	8	1466.391	2	1.087	2	2.015	3	6.242	8
1182			min	-351.615	4	295.494	3	-1354.711	1	-1.342	1	-1.915	4	-.974	3
1183		2	max	2831.976	7	2971.148	8	1451.684	2	1.087	2	1.04	3	3.88	8
1184			min	-342.246	4	283.776	3	-1340.004	1	-1.342	1	-.856	4	-1.203	3
1185		3	max	2829.412	7	2947.346	8	1436.977	2	1.087	2	.564	2	2.211	4
1186			min	-332.876	4	272.057	3	-1325.297	1	-1.342	1	-.293	1	-1.423	3
1187		4	max	1614.751	4	1289.548	4	2143.016	1	.043	3	.649	2	.159	1
1188			min	-1260.313	3	-557.26	3	-1128.534	2	-.707	8	-.481	1	-.177	2
1189		5	max	0	1	.003	6	.002	1	0	1	0	1	0	1
1190			min	0	1	-.018	4	-.004	3	0	1	0	1	0	1
1191	M126B	1	max	2936.778	5	2647.365	6	1119.723	3	1.102	3	1.237	4	5.662	2
1192			min	-805.821	2	-3.594	1	-1029.186	4	-1.242	4	-1.108	3	-1.913	1
1193		2	max	2936.532	5	2623.562	6	1099.086	3	1.102	3	.43	4	4.079	2
1194			min	-804.92	2	-15.312	1	-1008.549	4	-1.242	4	-.229	3	-1.906	1
1195		3	max	2936.285	5	2599.759	6	1078.449	3	1.102	3	.633	3	2.505	2
1196			min	-804.019	2	-27.031	1	-987.913	4	-1.242	4	-.36	4	-1.889	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1197		4	max	1366.906	2	1337.658	2	1789.695	4	.109	1	.522	3	.205	2
1198			min	-1099.898	1	-717.004	1	-988.125	3	-.636	9	-.35	4	-.233	1
1199		5	max	0	1	0	3	0	8	0	1	0	1	0	1
1200			min	0	1	-.002	2	0	1	0	1	0	1	0	1
1201	MP3A	1	max	137.684	6	84.766	4	119.962	1	0	1	0	1	0	1
1202			min	54.9	1	-84.674	3	-119.962	2	0	1	0	1	0	1
1203		2	max	398.933	2	193.556	1	131.134	9	.116	2	.098	1	.244	1
1204			min	-388.526	1	-460.079	2	-3.283	2	-.104	1	-.14	2	-.499	2
1205		3	max	418.381	2	193.556	1	133.333	9	.116	2	.227	1	.303	9
1206			min	-369.079	1	-460.079	2	-25.268	2	-.104	1	-.155	2	-.047	1
1207		4	max	-6.247	1	14.12	3	14.172	2	0	1	.011	1	.011	3
1208			min	-19.117	6	-14.181	4	-14.14	1	0	1	-.011	2	-.011	4
1209		5	max	0	1	.166	3	.217	2	0	1	0	1	0	1
1210			min	0	1	-.31	8	-.186	1	0	1	0	1	0	1
1211	MP2A	1	max	281.885	5	160.997	4	398.174	1	0	1	0	1	0	1
1212			min	76.8	2	-161.009	3	-398.146	2	0	1	0	1	0	1
1213		2	max	1138.749	6	392.454	4	416.78	1	.032	1	.815	1	.563	4
1214			min	109.872	1	-283.772	3	-416.752	2	-.021	2	-.815	2	-.456	3
1215		3	max	1315.073	6	456.596	4	383.412	1	.032	1	.598	1	.175	3
1216			min	202.202	1	-347.914	3	-270.282	2	-.021	2	-.452	2	-.286	4
1217		4	max	-8.33	3	18.784	3	18.794	2	0	1	.019	1	.019	3
1218			min	-25.489	5	-18.703	4	-18.691	1	0	1	-.019	2	-.019	4
1219		5	max	0	1	.451	7	.551	6	0	1	0	1	0	1
1220			min	0	1	-.097	4	-.085	1	0	1	0	1	0	1
1221	MP1A	1	max	169.154	5	92.667	4	128.52	1	0	1	0	1	0	1
1222			min	79.32	2	-92.824	3	-128.528	2	0	1	0	1	0	1
1223		2	max	222.521	2	370.007	2	153.511	7	.104	1	.112	1	.44	2
1224			min	-396.265	1	-160.91	1	18.552	4	-.131	2	-.203	2	-.219	1
1225		3	max	228.769	2	379.903	4	158.12	5	.104	1	.235	1	.066	3
1226			min	-390.018	1	-173.385	3	18.552	4	-.131	2	-.161	2	-.157	4
1227		4	max	-6.247	3	14.239	3	14.247	2	0	1	.011	1	.011	3
1228			min	-19.117	5	-14.17	4	-14.218	1	0	1	-.011	2	-.011	4
1229		5	max	0	1	.304	7	.293	2	0	1	0	1	0	1
1230			min	0	1	-.216	4	-.264	1	0	1	0	1	0	1
1231	MP3C	1	max	137.684	7	111.09	4	93.423	1	0	1	0	1	0	1
1232			min	54.9	4	-111.157	3	-93.486	2	0	1	0	1	0	1
1233		2	max	251.361	1	303.774	5	518.223	1	.06	3	.298	2	.311	1
1234			min	-254.939	2	-32.832	2	-281.049	2	-.052	4	-.542	1	-.127	2
1235		3	max	270.809	1	303.774	5	536.47	1	.06	3	.246	1	.018	3
1236			min	-235.491	2	-32.832	2	-299.296	2	-.052	4	-.134	2	-.182	8
1237		4	max	-6.247	3	14.191	3	14.142	2	0	1	.011	1	.011	3
1238			min	-19.117	5	-14.13	4	-14.114	1	0	1	-.011	2	-.011	4
1239		5	max	0	1	.317	7	.188	2	0	1	0	1	0	1
1240			min	0	1	-.175	4	-.16	1	0	1	0	1	0	1
1241	MP2C	1	max	169.154	5	119.586	4	101.717	1	0	1	0	1	0	1
1242			min	79.32	1	-119.57	3	-101.658	2	0	1	0	1	0	1
1243		2	max	1274.082	7	381.512	4	276.068	1	.035	2	.349	2	.171	1
1244			min	158.095	4	-350.292	3	-440.684	2	-.021	1	-.276	1	-.178	3
1245		3	max	1293.199	7	395.467	4	290.023	1	.035	2	.149	1	.358	3
1246			min	164.343	4	-364.247	3	-454.638	2	-.021	1	-.322	2	-.413	4
1247		4	max	-6.247	4	14.16	3	14.103	2	0	1	.011	1	.011	3
1248			min	-19.117	5	-14.118	4	-14.254	1	0	1	-.011	2	-.011	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1249		5	max	0	1	.206	3	.149	2	0	1	0	1	0	1
1250			min	0	1	-.163	4	-.592	5	0	1	0	1	0	1
1251	MP1C	1	max	281.885	6	338.552	4	220.481	1	0	1	0	1	0	1
1252			min	76.8	2	-338.489	3	-220.251	2	0	1	0	1	0	1
1253		2	max	307.375	6	357.158	4	239.087	1	.055	4	.82	3	.696	3
1254			min	-556.227	4	-249.487	3	-459.43	7	-.078	3	-.459	2	-.696	4
1255		3	max	390.234	3	298.542	4	173.71	4	.055	4	.059	1	.264	3
1256			min	-463.897	4	-327.95	3	-459.43	7	-.078	3	-.22	6	-.271	4
1257		4	max	-8.33	2	18.766	3	18.772	2	0	1	.019	1	.019	3
1258			min	-25.489	6	-18.773	4	-18.895	1	0	1	-.019	2	-.019	4
1259		5	max	0	1	.16	3	.166	2	0	1	0	1	0	1
1260			min	0	1	-.186	8	-.882	5	0	1	0	1	0	1
1261	MP3B	1	max	137.684	5	111.051	4	93.643	1	0	1	0	1	0	1
1262			min	54.9	1	-111.093	3	-93.518	2	0	1	0	1	0	1
1263		2	max	487.079	4	359.585	4	215.991	3	.098	4	.645	4	.291	4
1264			min	-469.953	3	-256.578	3	-529.215	4	-.091	3	-.362	3	-.165	3
1265		3	max	506.527	4	387.108	4	215.991	3	.098	4	-.031	1	.23	3
1266			min	-450.505	3	-284.101	3	-529.215	4	-.091	3	-.268	6	-.258	4
1267		4	max	-6.247	1	14.135	3	14.127	2	0	1	.011	1	.011	3
1268			min	-19.117	6	-14.134	4	-14.226	1	0	1	-.011	2	-.011	4
1269		5	max	0	1	.181	3	.173	2	0	1	0	1	0	1
1270			min	0	1	-.179	4	-.528	5	0	1	0	1	0	1
1271	MP2B	1	max	281.885	5	338.837	4	220.25	1	0	1	0	1	0	1
1272			min	76.8	4	-338.834	3	-220.235	2	0	1	0	1	0	1
1273		2	max	1309.061	8	357.443	4	422.112	1	.045	3	.483	2	.696	3
1274			min	215.904	3	-357.44	3	-372.625	2	-.034	4	-.545	1	-.696	4
1275		3	max	1485.386	8	270.777	4	478.45	1	.045	3	.355	1	.511	3
1276			min	308.234	3	-430.562	3	-428.963	2	-.034	4	-.319	2	-.323	4
1277		4	max	-8.33	3	18.698	3	18.724	2	0	1	.019	1	.019	3
1278			min	-25.489	5	-18.843	4	-18.717	1	0	1	-.019	2	-.019	4
1279		5	max	0	1	.092	3	.118	2	0	1	0	1	0	1
1280			min	0	1	-.804	8	-.129	5	0	1	0	1	0	1
1281	MP1B	1	max	169.154	5	119.717	4	101.504	1	0	1	0	1	0	1
1282			min	79.32	2	-119.592	3	-101.622	2	0	1	0	1	0	1
1283		2	max	149.595	1	17.375	2	487.909	1	.089	3	.33	2	.108	2
1284			min	-349.531	9	-287.738	5	-320.662	2	-.111	4	-.519	1	-.311	1
1285		3	max	155.842	1	17.375	2	501.863	1	.089	3	.224	1	.183	3
1286			min	-343.284	9	-287.738	5	-334.616	2	-.111	4	-.161	2	-.075	4
1287		4	max	-6.247	2	14.217	3	14.215	2	0	1	.011	1	.011	3
1288			min	-19.117	8	-14.291	4	-14.18	1	0	1	-.011	2	-.011	4
1289		5	max	0	1	.263	3	.261	2	0	1	0	1	0	1
1290			min	0	1	-.359	8	-.225	1	0	1	0	1	0	1
1291	M130B	1	max	0	1	0	1	0	1	0	1	0	1	0	1
1292			min	0	1	0	1	0	1	0	1	0	1	0	1
1293		2	max	46.405	1	63.969	4	86.253	1	.436	1	.219	1	.112	4
1294			min	-478.995	9	-302.727	7	-146.759	2	-.405	2	-.196	2	-.225	3
1295		3	max	46.405	1	37.555	4	43.41	1	.436	1	.422	1	.907	2
1296			min	-478.995	9	-363.324	7	-103.917	2	-.405	2	-.588	2	-.228	1
1297		4	max	24.456	1	417.172	8	159.31	2	.431	2	.25	1	.214	2
1298			min	-364.034	9	-29.359	3	-100.282	1	-.48	1	-.27	2	-.254	1
1299		5	max	0	1	0	1	0	1	0	1	0	1	0	1
1300			min	0	1	0	1	0	1	0	1	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1301	M131B	1	max	0	1	.024	3	.008	3	0	1	0	1	0	1
1302			min	0	1	-.001	5	-.005	1	0	1	0	1	0	1
1303		2	max	-3.198	9	92.933	2	9.898	1	.247	4	.194	2	.182	3
1304			min	-610.483	7	-412.757	5	-86.349	6	-.224	3	-.145	1	-.291	4
1305		3	max	-1.343	9	66.518	2	20.609	1	.247	4	.02	4	1.216	5
1306			min	-617.122	7	-473.354	5	-90.182	6	-.224	3	-.196	7	-.169	2
1307		4	max	26.133	2	600.673	7	99.893	4	.002	1	.302	4	.354	1
1308			min	-446.848	5	-95.711	4	-46.892	3	-.098	8	-.318	3	-.406	2
1309		5	max	0	1	.007	3	.006	3	0	1	0	1	0	1
1310			min	0	1	-.033	1	-.004	1	0	1	0	1	0	1
1311	M132B	1	max	0	1	.029	1	.003	1	0	1	0	1	0	1
1312			min	0	1	-.006	4	-.008	4	0	1	0	1	0	1
1313		2	max	-64.708	2	110.147	3	39.283	3	.322	3	.226	3	.194	1
1314			min	-628.32	5	-400.152	8	-99.035	4	-.29	4	-.185	4	-.312	2
1315		3	max	-46.156	2	83.733	3	7.151	3	.322	3	.299	3	1.198	8
1316			min	-634.958	5	-460.75	8	-78.683	5	-.29	4	-.444	4	-.395	3
1317		4	max	-145.894	3	544.758	5	118.712	4	.346	4	.222	3	.254	4
1318			min	-433.821	8	-100.747	2	-59.973	3	-.398	3	-.221	4	-.28	3
1319		5	max	0	1	.002	9	.005	1	0	1	0	1	0	1
1320			min	0	1	-.026	4	-.015	4	0	1	0	1	0	1
1321	M133A	1	max	106.626	3	562.499	2	244.335	4	.015	1	.309	1	.294	2
1322			min	-275.988	4	-497.166	1	-224.824	3	-.014	2	-.333	2	-.497	1
1323		2	max	103.445	3	560.293	2	238.825	4	.015	1	.235	1	.091	2
1324			min	-272.807	4	-499.372	1	-219.314	3	-.014	2	-.238	2	-.317	5
1325		3	max	100.264	3	558.088	2	233.316	4	.015	1	.188	3	-.046	4
1326			min	-269.626	4	-501.577	1	-213.805	3	-.014	2	-.171	4	-.297	7
1327		4	max	97.083	3	555.882	2	227.806	4	.015	1	.2	3	.076	1
1328			min	-266.445	4	-503.783	1	-208.604	2	-.014	2	-.164	4	-.338	6
1329		5	max	94.965	1	553.677	2	224.923	1	.015	1	.212	3	.27	1
1330			min	-269.585	2	-505.988	1	-210.441	2	-.014	2	-.16	4	-.518	2
1331	M134A	1	max	122.214	1	522.756	1	274.642	2	.015	2	.191	4	.26	1
1332			min	-298.2	2	-436.449	2	-228.304	1	-.014	1	-.244	3	-.469	2
1333		2	max	119.033	1	520.551	1	272.806	2	.015	2	.163	4	.062	1
1334			min	-295.019	2	-438.655	2	-226.467	1	-.014	1	-.182	3	-.31	6
1335		3	max	115.852	1	518.345	1	270.969	2	.015	2	.183	1	-.055	3
1336			min	-291.838	2	-440.86	2	-224.631	1	-.014	1	-.17	2	-.295	8
1337		4	max	112.672	1	516.14	1	269.133	2	.015	2	.261	1	.097	2
1338			min	-288.657	2	-443.066	2	-222.794	1	-.014	1	-.215	2	-.344	5
1339		5	max	109.491	1	513.934	1	267.296	2	.015	2	.339	1	.286	2
1340			min	-285.476	2	-445.271	2	-220.958	1	-.014	1	-.262	2	-.528	1
1341	M135A	1	max	78.726	2	772.112	4	370.615	3	.017	3	.202	2	.32	4
1342			min	-253.813	5	-668.444	3	-329.066	4	-.016	4	-.247	1	-.526	3
1343		2	max	78.726	2	769.906	4	370.615	3	.017	3	.183	2	.028	4
1344			min	-253.813	5	-670.649	3	-329.066	4	-.016	4	-.191	1	-.311	7
1345		3	max	78.726	2	767.701	4	370.615	3	.017	3	.166	2	.026	3
1346			min	-253.813	5	-672.855	3	-329.066	4	-.016	4	-.137	1	-.328	8
1347		4	max	78.726	2	765.495	4	370.615	3	.017	3	.15	2	.303	3
1348			min	-253.813	5	-675.06	3	-329.066	4	-.016	4	-.086	1	-.553	4
1349		5	max	78.726	2	763.29	4	370.615	3	.017	3	.238	4	.581	3
1350			min	-253.813	5	-677.266	3	-329.066	4	-.016	4	-.142	3	-.843	4

Envelope Joint Displacements

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1	N1	max	.017	3	.267	3	.05	2	7.288e-03	2	3.562e-04	2	9.521e-03	9
2		min	-.025	4	-.548	9	-.059	1	-6.264e-03	1	-3.726e-04	1	-5.473e-03	3
3	N2	max	.017	3	.269	4	.054	2	7.065e-03	2	2.207e-04	1	5.093e-03	4
4		min	-.023	4	-.482	3	-.044	1	-6.395e-03	1	-4.662e-04	2	-6.709e-03	3
5	CG	max	0	1	0	1	0	1	0	1	0	1	0	1
6		min	0	1	0	1	0	1	0	1	0	1	0	1
7	N4	max	.017	3	.191	3	.045	2	7.288e-03	2	3.483e-04	2	8.404e-03	9
8		min	-.025	4	-.419	9	-.054	1	-6.264e-03	1	-3.647e-04	1	-5.477e-03	3
9	N5	max	.016	3	.092	1	.027	2	5.961e-03	2	3.573e-04	2	6.007e-03	9
10		min	-.025	4	-.207	2	-.031	1	-4.308e-03	1	-8.127e-04	1	-3.131e-03	3
11	N6	max	.017	3	.087	1	.029	2	6.16e-03	2	4.365e-04	1	3.298e-03	4
12		min	-.022	4	-.211	2	-.027	1	-4.585e-03	1	-3.149e-04	2	-5.57e-03	3
13	N7	max	.017	3	.198	4	.048	2	7.065e-03	2	2.128e-04	1	5.098e-03	4
14		min	-.023	4	-.388	3	-.041	1	-6.395e-03	1	-4.583e-04	2	-6.704e-03	3
15	N8	max	.026	3	.285	4	.048	2	6.27e-03	2	4.786e-04	1	5.8e-03	4
16		min	-.028	4	-.504	3	-.039	1	-5.342e-03	1	-4.616e-04	2	-7.777e-03	3
17	N9	max	.097	3	.304	2	.033	2	5.008e-03	2	7.828e-04	4	5.88e-03	4
18		min	-.084	4	-.59	1	-.035	1	-7.802e-03	1	-1.052e-03	3	-5.781e-03	3
19	N11	max	.029	3	.235	4	.044	2	6.266e-03	2	4.766e-04	1	5.803e-03	4
20		min	-.031	4	-.429	3	-.035	1	-5.346e-03	1	-4.596e-04	2	-7.775e-03	3
21	N12	max	.031	3	.112	4	.035	2	3.767e-03	2	-1.591e-06	3	4.512e-03	4
22		min	-.029	4	-.228	3	-.027	1	-2.47e-03	1	-5.907e-04	8	-7.385e-03	3
23	N13	max	.047	3	.098	2	.034	2	4.094e-03	2	9.13e-04	4	3.688e-03	4
24		min	-.042	4	-.248	1	-.032	1	-7.968e-03	1	-7.957e-04	3	-3.79e-03	3
25	N14	max	.084	3	.242	2	.034	2	5.012e-03	2	7.769e-04	4	5.878e-03	4
26		min	-.075	4	-.494	1	-.034	1	-7.798e-03	1	-1.046e-03	3	-5.783e-03	3
27	N15	max	.097	3	.312	2	.03	2	5.621e-03	2	1.052e-03	4	6.033e-03	4
28		min	-.087	4	-.602	1	-.035	1	-8.797e-03	1	-1.045e-03	3	-6.077e-03	3
29	N16	max	.02	3	.286	3	.042	2	6.258e-03	2	4.038e-04	2	7.983e-03	4
30		min	-.028	4	-.509	4	-.054	1	-5.358e-03	1	-6.849e-04	1	-6.293e-03	3
31	N18	max	.084	3	.243	2	.032	2	5.626e-03	2	1.046e-03	4	6.036e-03	4
32		min	-.074	4	-.495	1	-.037	1	-8.793e-03	1	-1.04e-03	3	-6.075e-03	3
33	N19	max	.048	3	.087	2	.032	2	4.017e-03	2	5.853e-04	4	3.591e-03	4
34		min	-.042	4	-.23	5	-.039	1	-8.042e-03	1	-1.027e-03	3	-3.464e-03	3
35	N20	max	.031	3	.116	3	.03	2	3.967e-03	2	3.009e-04	2	7.818e-03	4
36		min	-.031	4	-.249	4	-.037	1	-2.907e-03	1	-1.948e-04	1	-4.991e-03	3
37	N21	max	.025	3	.239	3	.039	2	6.253e-03	2	4.018e-04	2	7.981e-03	4
38		min	-.03	4	-.439	4	-.049	1	-5.362e-03	1	-6.829e-04	1	-6.296e-03	3
39	N22	max	.018	3	.205	3	.045	2	7.208e-03	2	3.088e-04	4	7.424e-03	4
40		min	-.025	4	-.419	9	-.054	1	-6.172e-03	1	-7.138e-04	3	-5.484e-03	3
41	N23	max	.018	3	.079	1	.027	2	5.278e-03	2	5.723e-04	2	6.543e-03	9
42		min	-.025	4	-.194	2	-.032	1	-3.847e-03	1	-9.144e-04	1	-3.918e-03	3
43	N24	max	.018	3	.209	4	.048	2	7.001e-03	2	5.559e-04	4	5.189e-03	4
44		min	-.024	4	-.4	3	-.041	1	-6.274e-03	1	-6.265e-04	3	-6.873e-03	3
45	N25	max	.018	3	.073	1	.03	2	5.553e-03	2	8.765e-04	1	4.012e-03	4
46		min	-.024	4	-.196	2	-.027	1	-4.069e-03	1	-7.593e-04	2	-6.13e-03	3
47	N25A	max	.027	3	.224	4	.044	2	6.354e-03	2	3.058e-04	4	5.631e-03	4
48		min	-.03	4	-.418	3	-.035	1	-5.456e-03	1	-7.36e-04	3	-7.583e-03	3
49	N26	max	.029	3	.106	4	.034	2	4.213e-03	2	6.565e-04	1	4.455e-03	4
50		min	-.029	4	-.221	3	-.028	1	-2.898e-03	1	-9.435e-04	2	-7.029e-03	3
51	N27	max	.084	3	.243	2	.035	2	5.088e-03	2	3.851e-04	3	5.964e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
52		min	-.075	4	-.495	1	-.035	1	-8.028e-03	1	-4.5e-04	4	-5.903e-03	3
53	N28	max	.047	3	.099	2	.035	2	4.536e-03	2	1.498e-03	4	3.388e-03	4
54		min	-.042	4	-.247	1	-.033	1	-8.206e-03	1	-1.402e-03	3	-3.527e-03	3
55	N30	max	.084	3	.243	2	.032	2	5.544e-03	2	2.205e-04	3	6.051e-03	4
56		min	-.074	4	-.495	1	-.035	1	-8.716e-03	1	-7.103e-04	8	-6.067e-03	3
57	N31	max	.048	3	.088	2	.032	2	4.451e-03	2	1.352e-03	4	3.301e-03	4
58		min	-.041	4	-.23	5	-.038	1	-8.299e-03	1	-1.676e-03	3	-3.319e-03	3
59	N32	max	.024	3	.225	3	.038	2	6.406e-03	2	4.003e-04	4	7.971e-03	4
60		min	-.029	4	-.425	4	-.049	1	-5.486e-03	1	-4.454e-04	3	-6.239e-03	3
61	N33	max	.031	3	.108	3	.029	2	4.262e-03	2	7.685e-04	2	7.591e-03	4
62		min	-.031	4	-.239	4	-.037	1	-3.295e-03	1	-6.892e-04	1	-4.986e-03	3
63	N34	max	.016	3	.061	1	.024	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
64		min	-.025	4	-.131	2	-.013	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
65	N89	max	.02	3	.068	1	.027	2	4.906e-03	2	1.283e-04	4	5.799e-03	4
66		min	-.024	4	-.184	2	-.034	1	-3.698e-03	1	-9.465e-04	7	-3.396e-03	3
67	N93	max	.019	3	.061	1	.031	2	5.244e-03	2	6.79e-04	4	3.576e-03	4
68		min	-.027	4	-.183	2	-.029	1	-3.763e-03	1	-3.352e-04	3	-5.676e-03	3
69	N92A	max	.047	3	.095	2	.04	2	4.371e-03	2	2.198e-04	4	2.657e-03	4
70		min	-.041	4	-.239	5	-.036	1	-7.372e-03	1	-4.343e-04	3	-2.981e-03	3
71	N93A	max	.044	3	.064	2	.04	2	4.44e-03	2	0	1	2.037e-03	4
72		min	-.04	4	-.191	5	-.036	1	-7.283e-03	1	0	1	-2.351e-03	3
73	N117	max	.031	3	.049	3	.027	2	3.373e-03	2	0	1	5.939e-03	4
74		min	-.029	4	-.155	4	-.035	1	-2.732e-03	1	0	1	-4.015e-03	3
75	N119	max	.029	3	.039	3	.027	2	3.635e-03	2	0	1	5.658e-03	4
76		min	-.028	4	-.141	4	-.033	1	-3.071e-03	1	0	1	-3.591e-03	3
77	N121	max	.026	3	.032	1	.027	2	4.024e-03	2	0	1	5.335e-03	4
78		min	-.026	4	-.127	2	-.03	1	-3.418e-03	1	0	1	-2.971e-03	3
79	N123	max	.023	3	.038	1	.026	2	4.535e-03	2	0	1	5.227e-03	4
80		min	-.025	4	-.122	2	-.027	1	-3.626e-03	1	0	1	-2.575e-03	3
81	N125	max	.021	3	.041	1	.025	2	5.324e-03	2	0	1	4.966e-03	4
82		min	-.024	4	-.112	2	-.022	1	-3.612e-03	1	0	1	-2.148e-03	3
83	N127	max	.019	3	.041	1	.024	2	6.213e-03	2	0	1	4.214e-03	4
84		min	-.024	4	-.098	2	-.017	1	-3.425e-03	1	0	1	-1.756e-03	3
85	N129	max	.018	3	.039	1	.024	2	5.907e-03	2	4.57e-05	2	2.679e-03	4
86		min	-.023	4	-.091	2	-.013	1	-3.129e-03	1	-5.353e-04	5	-2.262e-03	3
87	N131	max	.019	3	.039	1	.026	2	6.922e-03	2	0	1	2.212e-03	4
88		min	-.027	4	-.101	2	-.018	1	-3.861e-03	1	0	1	-5.354e-03	3
89	N133	max	.019	3	.039	1	.028	2	5.909e-03	2	0	1	2.514e-03	4
90		min	-.028	4	-.116	2	-.023	1	-3.976e-03	1	0	1	-5.535e-03	3
91	N135	max	.02	3	.035	1	.029	2	5.007e-03	2	0	1	2.724e-03	4
92		min	-.029	4	-.125	2	-.026	1	-3.877e-03	1	0	1	-5.381e-03	3
93	N137	max	.021	3	.034	4	.03	2	4.413e-03	2	0	1	3.126e-03	4
94		min	-.03	4	-.133	3	-.028	1	-3.501e-03	1	0	1	-5.278e-03	3
95	N139	max	.023	3	.045	4	.03	2	4.024e-03	2	0	1	3.619e-03	4
96		min	-.031	4	-.149	3	-.03	1	-2.989e-03	1	0	1	-5.302e-03	3
97	N141	max	.024	3	.053	4	.031	2	3.728e-03	2	0	1	3.939e-03	4
98		min	-.031	4	-.157	3	-.03	1	-2.545e-03	1	0	1	-5.436e-03	3
99	N134	max	.03	3	.076	3	.028	2	3.882e-03	2	2.45e-04	4	6.178e-03	4
100		min	-.028	4	-.197	4	-.037	1	-3.181e-03	1	-4.531e-04	3	-4.123e-03	3
101	N137A	max	.027	3	.067	3	.028	2	4.113e-03	2	2.761e-04	4	5.965e-03	4
102		min	-.027	4	-.185	4	-.036	1	-3.343e-03	1	-6.258e-04	3	-3.887e-03	3
103	N138	max	.023	3	.057	3	.027	2	4.481e-03	2	2.857e-04	4	5.823e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
104		min	-.025	4	-.177	9	-.035	1	-3.528e-03	1	-7.33e-04	3	-3.618e-03	3
105	N140	max	.023	3	.081	4	.031	2	4.25e-03	2	4.181e-05	4	3.996e-03	4
106		min	-.031	4	-.198	3	-.03	1	-3.008e-03	1	-2.838e-04	7	-5.63e-03	3
107	N141A	max	.022	3	.074	4	.031	2	4.53e-03	2	2.29e-04	4	3.856e-03	4
108		min	-.031	4	-.193	3	-.03	1	-3.252e-03	1	-2.881e-04	3	-5.541e-03	3
109	N142	max	.02	3	.066	4	.031	2	4.887e-03	2	3.746e-04	4	3.695e-03	4
110		min	-.029	4	-.186	3	-.03	1	-3.522e-03	1	-3.152e-04	3	-5.562e-03	3
111	N143B	max	.018	3	.066	1	.026	2	4.733e-03	2	2.331e-04	4	5.288e-03	4
112		min	-.024	4	-.165	2	-.029	1	-3.689e-03	1	-9.112e-04	7	-3.065e-03	3
113	N144A	max	.017	3	.063	1	.025	2	5.35e-03	2	1.737e-04	4	4.887e-03	4
114		min	-.023	4	-.148	2	-.024	1	-3.553e-03	1	-1.009e-03	5	-2.84e-03	3
115	N145A	max	.016	3	.06	1	.024	2	6.229e-03	2	7.877e-05	2	4.287e-03	4
116		min	-.024	4	-.135	2	-.017	1	-3.338e-03	1	-9.159e-04	5	-2.311e-03	3
117	N146	max	.017	3	.061	1	.027	2	7.072e-03	2	8.47e-04	4	2.916e-03	4
118		min	-.023	4	-.142	2	-.019	1	-3.863e-03	1	-3.579e-04	3	-5.446e-03	3
119	N147A	max	.017	3	.063	1	.028	2	6.09e-03	2	8.077e-04	4	3.25e-03	4
120		min	-.024	4	-.156	2	-.024	1	-3.993e-03	1	-3.792e-04	3	-5.426e-03	3
121	N148	max	.018	3	.063	1	.03	2	5.297e-03	2	6.456e-04	4	3.325e-03	4
122		min	-.026	4	-.17	2	-.028	1	-3.977e-03	1	-3.548e-04	3	-5.435e-03	3
123	N163A	max	.018	3	.04	1	.024	2	6.108e-03	2	0	1	2.987e-03	4
124		min	-.023	4	-.092	2	-.015	1	-3.221e-03	1	0	1	-2.082e-03	3
125	N164	max	.016	3	.06	1	.024	2	6.379e-03	2	-6.333e-05	2	4.578e-03	9
126		min	-.024	4	-.13	2	-.015	1	-3.285e-03	1	-7.188e-04	5	-1.823e-03	3
127	N200	max	.046	3	.087	2	.04	2	4.415e-03	2	0	1	2.509e-03	4
128		min	-.041	4	-.227	5	-.036	1	-7.325e-03	1	0	1	-2.833e-03	3
129	N204	max	.046	3	.079	2	.04	2	4.434e-03	2	0	1	2.367e-03	4
130		min	-.04	4	-.215	5	-.036	1	-7.301e-03	1	0	1	-2.686e-03	3
131	N208	max	.045	3	.072	2	.04	2	4.437e-03	2	0	1	2.209e-03	4
132		min	-.04	4	-.203	5	-.036	1	-7.291e-03	1	0	1	-2.525e-03	3
133	N407	max	.024	3	.06	4	.031	2	3.865e-03	2	0	1	3.968e-03	4
134		min	-.031	4	-.167	3	-.03	1	-2.682e-03	1	0	1	-5.475e-03	3
135	N411	max	.024	3	.067	4	.031	2	3.992e-03	2	0	1	3.995e-03	4
136		min	-.031	4	-.177	3	-.03	1	-2.807e-03	1	0	1	-5.514e-03	3
137	N415	max	.023	3	.074	4	.031	2	4.116e-03	2	0	1	4.006e-03	4
138		min	-.031	4	-.188	3	-.03	1	-2.913e-03	1	0	1	-5.56e-03	3
139	N419	max	.024	3	.051	4	.031	2	3.793e-03	2	0	1	3.868e-03	4
140		min	-.032	4	-.155	3	-.03	1	-2.649e-03	1	0	1	-5.388e-03	3
141	N420	max	.023	3	.049	4	.031	2	3.862e-03	2	0	1	3.797e-03	4
142		min	-.031	4	-.153	3	-.03	1	-2.755e-03	1	0	1	-5.353e-03	3
143	N421	max	.023	3	.047	4	.03	2	3.934e-03	2	0	1	3.716e-03	4
144		min	-.031	4	-.151	3	-.03	1	-2.863e-03	1	0	1	-5.324e-03	3
145	N422	max	.023	3	.058	4	.031	2	3.923e-03	2	0	1	3.911e-03	4
146		min	-.031	4	-.165	3	-.03	1	-2.766e-03	1	0	1	-5.433e-03	3
147	N423	max	.023	3	.056	4	.031	2	3.99e-03	2	0	1	3.848e-03	4
148		min	-.031	4	-.163	3	-.03	1	-2.857e-03	1	0	1	-5.398e-03	3
149	N424	max	.023	3	.054	4	.031	2	4.067e-03	2	0	1	3.779e-03	4
150		min	-.031	4	-.161	3	-.03	1	-2.956e-03	1	0	1	-5.372e-03	3
151	N425	max	.022	3	.052	4	.031	2	4.149e-03	2	0	1	3.705e-03	4
152		min	-.031	4	-.159	3	-.03	1	-3.059e-03	1	0	1	-5.353e-03	3
153	N426	max	.023	3	.065	4	.031	2	4.052e-03	2	0	1	3.948e-03	4
154		min	-.031	4	-.176	3	-.03	1	-2.882e-03	1	0	1	-5.476e-03	3
155	N427	max	.023	3	.063	4	.031	2	4.118e-03	2	0	1	3.897e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
156		min	-.031	4	-.174	3	-.03	1	-2.961e-03	1	0	1	-5.444e-03	3
157	N428	max	.023	3	.061	4	.031	2	4.19e-03	2	0	1	3.842e-03	4
158		min	-.031	4	-.172	3	-.03	1	-3.045e-03	1	0	1	-5.42e-03	3
159	N429	max	.022	3	.059	4	.031	2	4.269e-03	2	0	1	3.781e-03	4
160		min	-.031	4	-.17	3	-.03	1	-3.132e-03	1	0	1	-5.403e-03	3
161	N430	max	.023	3	.072	4	.031	2	4.176e-03	2	0	1	3.968e-03	4
162		min	-.031	4	-.186	3	-.03	1	-2.979e-03	1	0	1	-5.525e-03	3
163	N431	max	.023	3	.07	4	.031	2	4.243e-03	2	0	1	3.927e-03	4
164		min	-.031	4	-.185	3	-.03	1	-3.049e-03	1	0	1	-5.496e-03	3
165	N432	max	.022	3	.068	4	.031	2	4.314e-03	2	0	1	3.882e-03	4
166		min	-.031	4	-.183	3	-.03	1	-3.121e-03	1	0	1	-5.475e-03	3
167	N433	max	.022	3	.066	4	.031	2	4.391e-03	2	0	1	3.835e-03	4
168		min	-.031	4	-.181	3	-.03	1	-3.196e-03	1	0	1	-5.46e-03	3
169	N434	max	.023	3	.079	4	.031	2	4.313e-03	2	9.089e-05	4	3.964e-03	4
170		min	-.031	4	-.197	3	-.03	1	-3.066e-03	1	-2.596e-04	3	-5.598e-03	3
171	N435	max	.022	3	.077	4	.031	2	4.381e-03	2	1.387e-04	4	3.93e-03	4
172		min	-.031	4	-.195	3	-.03	1	-3.127e-03	1	-2.698e-04	3	-5.572e-03	3
173	N436	max	.022	3	.076	4	.031	2	4.453e-03	2	1.848e-04	4	3.894e-03	4
174		min	-.031	4	-.194	3	-.03	1	-3.189e-03	1	-2.793e-04	3	-5.553e-03	3
175	N437	max	.022	3	.042	4	.03	2	4.109e-03	2	0	1	3.504e-03	4
176		min	-.031	4	-.145	3	-.029	1	-3.111e-03	1	0	1	-5.284e-03	3
177	N438	max	.022	3	.039	4	.03	2	4.198e-03	2	0	1	3.373e-03	4
178		min	-.031	4	-.141	3	-.029	1	-3.234e-03	1	0	1	-5.268e-03	3
179	N439	max	.022	3	.037	4	.03	2	4.295e-03	2	0	1	3.251e-03	4
180		min	-.031	4	-.137	3	-.029	1	-3.359e-03	1	0	1	-5.268e-03	3
181	N440	max	.022	3	.049	4	.03	2	4.222e-03	2	0	1	3.611e-03	4
182		min	-.031	4	-.156	3	-.03	1	-3.155e-03	1	0	1	-5.335e-03	3
183	N441	max	.022	3	.047	4	.03	2	4.306e-03	2	0	1	3.509e-03	4
184		min	-.031	4	-.153	3	-.029	1	-3.258e-03	1	0	1	-5.323e-03	3
185	N442	max	.021	3	.044	4	.03	2	4.399e-03	2	0	1	3.384e-03	4
186		min	-.03	4	-.15	3	-.029	1	-3.369e-03	1	0	1	-5.306e-03	3
187	N443	max	.021	3	.042	4	.03	2	4.501e-03	2	0	1	3.254e-03	4
188		min	-.03	4	-.147	3	-.029	1	-3.474e-03	1	0	1	-5.289e-03	3
189	N444	max	.022	3	.057	4	.031	2	4.343e-03	2	0	1	3.71e-03	4
190		min	-.031	4	-.168	3	-.03	1	-3.215e-03	1	0	1	-5.388e-03	3
191	N445	max	.021	3	.054	4	.031	2	4.421e-03	2	0	1	3.626e-03	4
192		min	-.03	4	-.165	3	-.03	1	-3.302e-03	1	0	1	-5.374e-03	3
193	N446	max	.021	3	.052	4	.03	2	4.506e-03	2	0	1	3.539e-03	4
194		min	-.03	4	-.162	3	-.029	1	-3.39e-03	1	0	1	-5.367e-03	3
195	N447	max	.021	3	.05	4	.03	2	4.594e-03	2	0	1	3.435e-03	4
196		min	-.029	4	-.16	3	-.029	1	-3.491e-03	1	0	1	-5.357e-03	3
197	N448	max	.022	3	.064	4	.031	2	4.466e-03	2	0	1	3.783e-03	4
198		min	-.03	4	-.179	3	-.03	1	-3.269e-03	1	0	1	-5.449e-03	3
199	N449	max	.021	3	.062	4	.031	2	4.546e-03	2	0	1	3.725e-03	4
200		min	-.03	4	-.177	3	-.03	1	-3.344e-03	1	0	1	-5.443e-03	3
201	N450	max	.021	3	.06	4	.031	2	4.63e-03	2	0	1	3.651e-03	4
202		min	-.03	4	-.175	3	-.03	1	-3.421e-03	1	0	1	-5.435e-03	3
203	N451	max	.02	3	.058	4	.031	2	4.719e-03	2	0	1	3.563e-03	4
204		min	-.029	4	-.173	3	-.03	1	-3.488e-03	1	0	1	-5.425e-03	3
205	N452	max	.021	3	.072	4	.031	2	4.612e-03	2	2.705e-04	4	3.817e-03	4
206		min	-.03	4	-.191	3	-.03	1	-3.318e-03	1	-2.962e-04	3	-5.535e-03	3
207	N453	max	.021	3	.07	4	.031	2	4.699e-03	2	3.087e-04	4	3.776e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
208		min	-.03	4	-.19	3	-.03	1	-3.384e-03	1	-3.033e-04	3	-5.536e-03	3
209	N454	max	.021	3	.068	4	.031	2	4.791e-03	2	3.44e-04	4	3.734e-03	4
210		min	-.029	4	-.188	3	-.03	1	-3.452e-03	1	-3.097e-04	3	-5.544e-03	3
211	N455	max	.019	3	.053	4	.03	2	4.935e-03	2	0	1	3.061e-03	4
212		min	-.028	4	-.169	3	-.029	1	-3.674e-03	1	0	1	-5.252e-03	3
213	N456	max	.02	3	.047	4	.03	2	4.761e-03	2	0	1	3.308e-03	4
214		min	-.029	4	-.157	3	-.029	1	-3.66e-03	1	0	1	-5.361e-03	3
215	N457	max	.021	3	.041	4	.03	2	4.598e-03	2	0	1	3.17e-03	4
216		min	-.03	4	-.145	3	-.029	1	-3.564e-03	1	0	1	-5.286e-03	3
217	N458	max	.019	3	.061	1	.03	2	5.056e-03	2	1.045e-04	4	2.621e-03	4
218		min	-.027	4	-.18	2	-.029	1	-3.909e-03	1	-2.822e-04	3	-5.106e-03	3
219	N459	max	.019	3	.053	1	.03	2	4.959e-03	2	0	1	3.189e-03	4
220		min	-.028	4	-.166	2	-.029	1	-3.821e-03	1	0	1	-5.356e-03	3
221	N460	max	.02	3	.045	1	.03	2	4.827e-03	2	0	1	3.093e-03	4
222		min	-.028	4	-.153	2	-.029	1	-3.723e-03	1	0	1	-5.286e-03	3
223	N461	max	.02	3	.037	4	.03	2	4.682e-03	2	0	1	3.099e-03	4
224		min	-.029	4	-.139	2	-.028	1	-3.684e-03	1	0	1	-5.316e-03	3
225	N462	max	.021	3	.031	4	.03	2	4.539e-03	2	0	1	2.952e-03	4
226		min	-.03	4	-.128	3	-.028	1	-3.602e-03	1	0	1	-5.267e-03	3
227	N463	max	.018	3	.062	1	.03	2	5.124e-03	2	6.379e-04	4	3.376e-03	4
228		min	-.026	4	-.176	2	-.029	1	-3.884e-03	1	-3.47e-04	3	-5.499e-03	3
229	N464	max	.019	3	.054	1	.03	2	5.011e-03	2	0	1	3.04e-03	4
230		min	-.027	4	-.164	2	-.029	1	-3.884e-03	1	0	1	-5.292e-03	3
231	N465	max	.02	3	.046	1	.03	2	4.907e-03	2	0	1	3.073e-03	4
232		min	-.028	4	-.151	2	-.028	1	-3.835e-03	1	0	1	-5.323e-03	3
233	N466	max	.02	3	.038	1	.03	2	4.804e-03	2	0	1	2.961e-03	4
234		min	-.029	4	-.138	2	-.028	1	-3.756e-03	1	0	1	-5.304e-03	3
235	N467	max	.021	3	.03	1	.03	2	4.668e-03	2	0	1	2.887e-03	4
236		min	-.03	4	-.126	2	-.027	1	-3.724e-03	1	0	1	-5.316e-03	3
237	N468	max	.018	3	.062	1	.03	2	5.165e-03	2	3.525e-04	4	2.939e-03	4
238		min	-.026	4	-.173	2	-.028	1	-3.982e-03	1	-3.194e-04	3	-5.233e-03	3
239	N469	max	.019	3	.055	1	.03	2	5.1e-03	2	0	1	3.137e-03	4
240		min	-.027	4	-.161	2	-.028	1	-3.944e-03	1	0	1	-5.359e-03	3
241	N470	max	.019	3	.047	1	.03	2	5.031e-03	2	0	1	3.006e-03	4
242		min	-.028	4	-.149	2	-.028	1	-3.891e-03	1	0	1	-5.328e-03	3
243	N471	max	.02	3	.04	1	.029	2	4.939e-03	2	0	1	2.915e-03	4
244		min	-.029	4	-.137	2	-.027	1	-3.849e-03	1	0	1	-5.342e-03	3
245	N472	max	.021	3	.032	1	.029	2	4.824e-03	2	0	1	2.774e-03	4
246		min	-.029	4	-.125	2	-.027	1	-3.799e-03	1	0	1	-5.332e-03	3
247	N473	max	.019	3	.056	1	.03	2	5.237e-03	2	0	1	3.083e-03	4
248		min	-.027	4	-.159	2	-.028	1	-3.979e-03	1	0	1	-5.342e-03	3
249	N474	max	.019	3	.049	1	.029	2	5.174e-03	2	0	1	3.001e-03	4
250		min	-.027	4	-.148	2	-.027	1	-3.95e-03	1	0	1	-5.363e-03	3
251	N475	max	.02	3	.042	1	.029	2	5.106e-03	2	0	1	2.86e-03	4
252		min	-.028	4	-.136	2	-.027	1	-3.903e-03	1	0	1	-5.366e-03	3
253	N476	max	.018	3	.063	1	.029	2	5.444e-03	2	5.412e-04	4	3.118e-03	4
254		min	-.025	4	-.167	2	-.027	1	-4.025e-03	1	-3.474e-04	3	-5.306e-03	3
255	N477	max	.018	3	.056	1	.029	2	5.397e-03	2	0	1	3.12e-03	4
256		min	-.026	4	-.156	2	-.027	1	-4.006e-03	1	0	1	-5.384e-03	3
257	N478	max	.019	3	.049	1	.029	2	5.349e-03	2	0	1	2.967e-03	4
258		min	-.027	4	-.145	2	-.026	1	-3.975e-03	1	0	1	-5.385e-03	3
259	N479	max	.019	3	.043	1	.029	2	5.282e-03	2	0	1	2.82e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
260		min	-.028	4	-.134	2	-.026	1	-3.947e-03	1	0	1	-5.405e-03	3
261	N480	max	.02	3	.036	1	.029	2	5.208e-03	2	0	1	2.654e-03	4
262		min	-.029	4	-.123	2	-.026	1	-3.923e-03	1	0	1	-5.421e-03	3
263	N481	max	.018	3	.063	1	.029	2	5.635e-03	2	7.171e-04	4	3.302e-03	4
264		min	-.025	4	-.163	2	-.026	1	-4.012e-03	1	-3.681e-04	3	-5.419e-03	3
265	N482	max	.018	3	.056	1	.029	2	5.594e-03	2	0	1	3.094e-03	4
266		min	-.026	4	-.153	2	-.026	1	-4.015e-03	1	0	1	-5.388e-03	3
267	N483	max	.019	3	.05	1	.029	2	5.547e-03	2	0	1	2.946e-03	4
268		min	-.027	4	-.142	2	-.026	1	-3.996e-03	1	0	1	-5.415e-03	3
269	N484	max	.019	3	.043	1	.029	2	5.49e-03	2	0	1	2.776e-03	4
270		min	-.028	4	-.131	2	-.025	1	-3.969e-03	1	0	1	-5.439e-03	3
271	N485	max	.02	3	.037	1	.029	2	5.417e-03	2	0	1	2.614e-03	4
272		min	-.029	4	-.121	2	-.025	1	-3.955e-03	1	0	1	-5.465e-03	3
273	N486	max	.018	3	.063	1	.029	2	5.86e-03	2	6.976e-04	4	3.192e-03	4
274		min	-.024	4	-.16	2	-.025	1	-4.024e-03	1	-3.695e-04	3	-5.35e-03	3
275	N487	max	.018	3	.057	1	.029	2	5.815e-03	2	0	1	3.092e-03	4
276		min	-.025	4	-.15	2	-.025	1	-4.015e-03	1	0	1	-5.417e-03	3
277	N488	max	.019	3	.05	1	.029	2	5.773e-03	2	0	1	2.918e-03	4
278		min	-.026	4	-.139	2	-.025	1	-3.999e-03	1	0	1	-5.439e-03	3
279	N489	max	.019	3	.044	1	.028	2	5.72e-03	2	0	1	2.741e-03	4
280		min	-.027	4	-.129	2	-.024	1	-3.983e-03	1	0	1	-5.472e-03	3
281	N490	max	.02	3	.038	1	.028	2	5.645e-03	2	0	1	2.564e-03	4
282		min	-.028	4	-.119	2	-.024	1	-3.971e-03	1	0	1	-5.503e-03	3
283	N491	max	.018	3	.057	1	.028	2	6.059e-03	2	0	1	3.062e-03	4
284		min	-.025	4	-.146	2	-.024	1	-4.003e-03	1	0	1	-5.425e-03	3
285	N492	max	.018	3	.051	1	.028	2	6.019e-03	2	0	1	2.886e-03	4
286		min	-.026	4	-.136	2	-.024	1	-3.995e-03	1	0	1	-5.46e-03	3
287	N493	max	.019	3	.045	1	.028	2	5.971e-03	2	0	1	2.703e-03	4
288		min	-.027	4	-.126	2	-.023	1	-3.982e-03	1	0	1	-5.498e-03	3
289	N494	max	.017	3	.062	1	.028	2	6.37e-03	2	8.147e-04	4	3.169e-03	4
290		min	-.024	4	-.153	2	-.023	1	-3.984e-03	1	-3.814e-04	3	-5.369e-03	3
291	N495	max	.018	3	.056	1	.028	2	6.321e-03	2	0	1	3.014e-03	4
292		min	-.025	4	-.143	2	-.023	1	-3.983e-03	1	0	1	-5.444e-03	3
293	N496	max	.018	3	.051	1	.028	2	6.276e-03	2	0	1	2.825e-03	4
294		min	-.026	4	-.133	2	-.023	1	-3.976e-03	1	0	1	-5.479e-03	3
295	N497	max	.019	3	.045	1	.028	2	6.225e-03	2	0	1	2.63e-03	4
296		min	-.027	4	-.123	2	-.022	1	-3.969e-03	1	0	1	-5.517e-03	3
297	N498	max	.019	3	.039	1	.028	2	6.186e-03	2	0	1	2.434e-03	4
298		min	-.028	4	-.112	2	-.022	1	-3.971e-03	1	0	1	-5.561e-03	3
299	N499	max	.017	3	.062	1	.028	2	6.607e-03	2	8.656e-04	4	3.127e-03	4
300		min	-.023	4	-.149	2	-.022	1	-3.936e-03	1	-3.776e-04	3	-5.44e-03	3
301	N500	max	.017	3	.056	1	.028	2	6.589e-03	2	0	1	2.948e-03	4
302		min	-.024	4	-.139	2	-.022	1	-3.952e-03	1	0	1	-5.443e-03	3
303	N501	max	.018	3	.05	1	.027	2	6.543e-03	2	0	1	2.75e-03	4
304		min	-.025	4	-.129	2	-.021	1	-3.95e-03	1	0	1	-5.482e-03	3
305	N502	max	.018	3	.045	1	.027	2	6.493e-03	2	0	1	2.55e-03	4
306		min	-.026	4	-.119	2	-.021	1	-3.948e-03	1	0	1	-5.524e-03	3
307	N503	max	.019	3	.039	1	.027	2	6.444e-03	2	0	1	2.355e-03	4
308		min	-.028	4	-.108	2	-.021	1	-3.951e-03	1	0	1	-5.557e-03	3
309	N504	max	.017	3	.062	1	.027	2	6.904e-03	2	8.538e-04	4	3.047e-03	4
310		min	-.023	4	-.146	2	-.021	1	-3.919e-03	1	-3.766e-04	3	-5.349e-03	3
311	N505	max	.017	3	.056	1	.027	2	6.862e-03	2	0	1	2.863e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
312		min	-.024	4	-.136	2	-.02	1	-3.918e-03	1	0	1	-5.44e-03	3
313	N506	max	.018	3	.05	1	.027	2	6.807e-03	2	0	1	2.671e-03	4
314		min	-.025	4	-.125	2	-.02	1	-3.912e-03	1	0	1	-5.472e-03	3
315	N507	max	.018	3	.045	1	.027	2	6.738e-03	2	0	1	2.468e-03	4
316		min	-.026	4	-.115	2	-.02	1	-3.906e-03	1	0	1	-5.486e-03	3
317	N508	max	.019	3	.039	1	.027	2	6.712e-03	2	0	1	2.271e-03	4
318		min	-.027	4	-.104	2	-.02	1	-3.929e-03	1	0	1	-5.515e-03	3
319	N509	max	.017	3	.056	1	.027	2	7.104e-03	2	0	1	2.779e-03	4
320		min	-.024	4	-.132	2	-.019	1	-3.871e-03	1	0	1	-5.408e-03	3
321	N510	max	.018	3	.05	1	.026	2	7.021e-03	2	0	1	2.589e-03	4
322		min	-.025	4	-.121	2	-.019	1	-3.856e-03	1	0	1	-5.405e-03	3
323	N511	max	.018	3	.045	1	.026	2	6.947e-03	2	0	1	2.409e-03	4
324		min	-.026	4	-.111	2	-.019	1	-3.855e-03	1	0	1	-5.394e-03	3
325	N512	max	.019	3	.039	1	.026	2	7.044e-03	2	0	1	2.217e-03	4
326		min	-.027	4	-.095	2	-.017	1	-3.783e-03	1	0	1	-4.988e-03	3
327	N513	max	.018	3	.038	1	.025	2	6.833e-03	2	0	1	2.379e-03	4
328		min	-.026	4	-.092	2	-.016	1	-3.594e-03	1	0	1	-4.265e-03	3
329	N514	max	.018	3	.038	1	.025	2	6.467e-03	2	0	1	2.891e-03	4
330		min	-.026	4	-.09	2	-.015	1	-3.581e-03	1	0	1	-3.188e-03	3
331	N515	max	.018	3	.044	1	.026	2	6.936e-03	2	0	1	2.372e-03	4
332		min	-.026	4	-.106	2	-.017	1	-3.733e-03	1	0	1	-5.127e-03	3
333	N516	max	.018	3	.044	1	.025	2	6.713e-03	2	0	1	2.5e-03	4
334		min	-.025	4	-.102	2	-.016	1	-3.598e-03	1	0	1	-4.617e-03	3
335	N517	max	.018	3	.044	1	.025	2	6.092e-03	2	0	1	2.777e-03	4
336		min	-.025	4	-.1	2	-.015	1	-3.392e-03	1	0	1	-3.674e-03	3
337	N518	max	.017	3	.044	1	.024	2	5.943e-03	2	5.459e-05	2	2.742e-03	4
338		min	-.024	4	-.101	2	-.013	1	-3.173e-03	1	-5.771e-04	5	-2.297e-03	3
339	N519	max	.018	3	.05	1	.026	2	7.127e-03	2	0	1	2.532e-03	4
340		min	-.024	4	-.117	2	-.017	1	-3.785e-03	1	0	1	-5.294e-03	3
341	N520	max	.017	3	.049	1	.025	2	6.864e-03	2	0	1	2.547e-03	4
342		min	-.024	4	-.113	2	-.016	1	-3.613e-03	1	0	1	-4.936e-03	3
343	N521	max	.017	3	.049	1	.025	2	6.554e-03	2	0	1	2.843e-03	4
344		min	-.024	4	-.11	2	-.015	1	-3.459e-03	1	0	1	-4.195e-03	3
345	N522	max	.017	3	.05	1	.024	2	5.965e-03	2	6.13e-05	2	2.788e-03	4
346		min	-.024	4	-.111	2	-.013	1	-3.202e-03	1	-6.126e-04	5	-2.307e-03	3
347	N523	max	.017	3	.055	1	.026	2	7.288e-03	2	0	1	2.67e-03	4
348		min	-.023	4	-.128	2	-.018	1	-3.828e-03	1	0	1	-5.346e-03	3
349	N524	max	.017	3	.055	1	.025	2	7.293e-03	2	0	1	2.645e-03	4
350		min	-.023	4	-.124	2	-.016	1	-3.754e-03	1	0	1	-5.248e-03	3
351	N525	max	.017	3	.055	1	.025	2	6.871e-03	2	0	1	2.753e-03	4
352		min	-.023	4	-.121	2	-.015	1	-3.704e-03	1	0	1	-4.496e-03	3
353	N526	max	.016	3	.055	1	.024	2	5.978e-03	2	6.428e-05	2	2.837e-03	4
354		min	-.024	4	-.121	2	-.013	1	-3.223e-03	1	-6.429e-04	5	-2.306e-03	3
355	N527	max	.017	3	.061	1	.026	2	7.281e-03	2	8.008e-04	4	2.856e-03	4
356		min	-.022	4	-.139	2	-.018	1	-3.845e-03	1	-3.591e-04	3	-5.256e-03	3
357	N528	max	.016	3	.061	1	.025	2	7.304e-03	2	7.496e-04	4	2.653e-03	4
358		min	-.022	4	-.136	2	-.016	1	-3.834e-03	1	-3.246e-04	3	-5.437e-03	3
359	N529	max	.016	3	.061	1	.025	2	6.648e-03	2	7.199e-04	1	2.708e-03	4
360		min	-.022	4	-.132	2	-.015	1	-3.644e-03	1	-3.537e-04	2	-4.923e-03	3
361	N530	max	.019	3	.04	1	.024	2	6.033e-03	2	0	1	4.54e-03	4
362		min	-.024	4	-.101	2	-.018	1	-3.493e-03	1	0	1	-1.806e-03	3
363	N531	max	.02	3	.04	1	.025	2	5.805e-03	2	0	1	4.733e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
364		min	-.024	4	-.104	2	-.019	1	-3.54e-03	1	0	1	-1.912e-03	3
365	N532	max	.02	3	.041	1	.025	2	5.57e-03	2	0	1	4.866e-03	4
366		min	-.024	4	-.108	2	-.021	1	-3.58e-03	1	0	1	-2.025e-03	3
367	N533	max	.018	3	.045	1	.024	2	6.163e-03	2	0	1	4.253e-03	4
368		min	-.024	4	-.107	2	-.017	1	-3.388e-03	1	0	1	-1.898e-03	3
369	N534	max	.019	3	.045	1	.024	2	6.014e-03	2	0	1	4.521e-03	4
370		min	-.024	4	-.11	2	-.018	1	-3.455e-03	1	0	1	-1.972e-03	3
371	N535	max	.019	3	.046	1	.025	2	5.8e-03	2	0	1	4.701e-03	4
372		min	-.024	4	-.113	2	-.02	1	-3.511e-03	1	0	1	-2.084e-03	3
373	N536	max	.019	3	.046	1	.025	2	5.567e-03	2	0	1	4.832e-03	4
374		min	-.024	4	-.117	2	-.021	1	-3.557e-03	1	0	1	-2.207e-03	3
375	N537	max	.02	3	.046	1	.025	2	5.338e-03	2	0	1	4.931e-03	4
376		min	-.024	4	-.121	2	-.022	1	-3.593e-03	1	0	1	-2.323e-03	3
377	N538	max	.017	3	.05	1	.024	2	6.216e-03	2	0	1	4.291e-03	4
378		min	-.024	4	-.116	2	-.017	1	-3.367e-03	1	0	1	-2.031e-03	3
379	N539	max	.018	3	.05	1	.025	2	6.038e-03	2	0	1	4.505e-03	4
380		min	-.024	4	-.119	2	-.018	1	-3.431e-03	1	0	1	-2.14e-03	3
381	N540	max	.018	3	.051	1	.025	2	5.81e-03	2	0	1	4.67e-03	4
382		min	-.024	4	-.122	2	-.02	1	-3.489e-03	1	0	1	-2.264e-03	3
383	N541	max	.018	3	.051	1	.025	2	5.574e-03	2	0	1	4.797e-03	4
384		min	-.024	4	-.126	2	-.021	1	-3.54e-03	1	0	1	-2.384e-03	3
385	N542	max	.019	3	.052	1	.025	2	5.346e-03	2	0	1	4.905e-03	4
386		min	-.024	4	-.13	2	-.023	1	-3.583e-03	1	0	1	-2.496e-03	3
387	N543	max	.017	3	.055	1	.024	2	6.278e-03	2	0	1	4.286e-03	4
388		min	-.024	4	-.125	2	-.017	1	-3.353e-03	1	0	1	-2.176e-03	3
389	N544	max	.017	3	.055	1	.025	2	6.056e-03	2	0	1	4.483e-03	4
390		min	-.024	4	-.128	2	-.019	1	-3.411e-03	1	0	1	-2.311e-03	3
391	N545	max	.017	3	.056	1	.025	2	5.817e-03	2	0	1	4.631e-03	4
392		min	-.024	4	-.132	2	-.02	1	-3.469e-03	1	0	1	-2.44e-03	3
393	N546	max	.017	3	.056	1	.025	2	5.576e-03	2	0	1	4.77e-03	4
394		min	-.024	4	-.135	2	-.022	1	-3.523e-03	1	0	1	-2.562e-03	3
395	N547	max	.018	3	.057	1	.025	2	5.349e-03	2	0	1	4.873e-03	4
396		min	-.024	4	-.139	2	-.023	1	-3.573e-03	1	0	1	-2.655e-03	3
397	N548	max	.016	3	.06	1	.025	2	6.043e-03	2	1.101e-04	2	4.411e-03	4
398		min	-.024	4	-.137	2	-.019	1	-3.386e-03	1	-9.684e-04	5	-2.459e-03	3
399	N549	max	.016	3	.061	1	.025	2	5.804e-03	2	1.211e-04	2	4.617e-03	4
400		min	-.024	4	-.141	2	-.02	1	-3.44e-03	1	-1.013e-03	5	-2.614e-03	3
401	N550	max	.016	3	.062	1	.025	2	5.575e-03	2	1.445e-04	4	4.708e-03	4
402		min	-.023	4	-.144	2	-.022	1	-3.498e-03	1	-9.953e-04	5	-2.698e-03	3
403	N551	max	.023	3	.039	1	.026	2	4.703e-03	2	0	1	5.125e-03	4
404		min	-.025	4	-.12	2	-.026	1	-3.645e-03	1	0	1	-2.398e-03	3
405	N552	max	.022	3	.04	1	.026	2	4.889e-03	2	0	1	5.097e-03	4
406		min	-.025	4	-.117	2	-.024	1	-3.646e-03	1	0	1	-2.331e-03	3
407	N553	max	.022	3	.04	1	.025	2	5.087e-03	2	0	1	5.041e-03	4
408		min	-.024	4	-.114	2	-.023	1	-3.636e-03	1	0	1	-2.241e-03	3
409	N554	max	.022	3	.045	1	.026	2	4.602e-03	2	0	1	5.099e-03	4
410		min	-.025	4	-.133	2	-.027	1	-3.639e-03	1	0	1	-2.567e-03	3
411	N555	max	.021	3	.045	1	.026	2	4.746e-03	2	0	1	5.145e-03	4
412		min	-.025	4	-.13	2	-.026	1	-3.645e-03	1	0	1	-2.587e-03	3
413	N556	max	.021	3	.046	1	.026	2	4.919e-03	2	0	1	5.07e-03	4
414		min	-.024	4	-.127	2	-.025	1	-3.64e-03	1	0	1	-2.476e-03	3
415	N557	max	.02	3	.046	1	.025	2	5.12e-03	2	0	1	5.017e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
416		min	-.024	4	-.124	2	-.024	1	-3.622e-03	1	0	1	-2.409e-03	3
417	N558	max	.021	3	.052	1	.026	2	4.635e-03	2	0	1	5.216e-03	4
418		min	-.024	4	-.144	2	-.028	1	-3.661e-03	1	0	1	-2.825e-03	3
419	N559	max	.02	3	.052	1	.026	2	4.78e-03	2	0	1	5.088e-03	4
420		min	-.024	4	-.14	2	-.027	1	-3.659e-03	1	0	1	-2.671e-03	3
421	N560	max	.02	3	.052	1	.026	2	4.942e-03	2	0	1	5.071e-03	4
422		min	-.024	4	-.137	2	-.026	1	-3.644e-03	1	0	1	-2.653e-03	3
423	N561	max	.019	3	.052	1	.026	2	5.133e-03	2	0	1	4.986e-03	4
424		min	-.024	4	-.133	2	-.024	1	-3.619e-03	1	0	1	-2.568e-03	3
425	N562	max	.02	3	.059	1	.026	2	4.69e-03	2	0	1	5.149e-03	4
426		min	-.024	4	-.155	2	-.029	1	-3.685e-03	1	0	1	-2.842e-03	3
427	N563	max	.019	3	.059	1	.026	2	4.8e-03	2	0	1	5.146e-03	4
428		min	-.024	4	-.151	2	-.027	1	-3.671e-03	1	0	1	-2.865e-03	3
429	N564	max	.019	3	.058	1	.026	2	4.958e-03	2	0	1	5.034e-03	4
430		min	-.024	4	-.147	2	-.026	1	-3.649e-03	1	0	1	-2.768e-03	3
431	N565	max	.018	3	.058	1	.026	2	5.14e-03	2	0	1	4.984e-03	4
432		min	-.024	4	-.143	2	-.025	1	-3.615e-03	1	0	1	-2.743e-03	3
433	N566	max	.018	3	.065	1	.026	2	4.824e-03	2	2.94e-04	4	5.039e-03	4
434		min	-.023	4	-.161	2	-.028	1	-3.67e-03	1	-8.385e-04	3	-2.836e-03	3
435	N567	max	.017	3	.064	1	.026	2	4.974e-03	2	2.261e-04	4	5.106e-03	4
436		min	-.023	4	-.157	2	-.027	1	-3.64e-03	1	-9.62e-04	7	-2.982e-03	3
437	N568	max	.017	3	.063	1	.026	2	5.146e-03	2	2.356e-04	4	4.917e-03	4
438		min	-.023	4	-.152	2	-.025	1	-3.601e-03	1	-9.343e-04	7	-2.827e-03	3
439	N569	max	.024	3	.037	1	.026	2	4.384e-03	2	0	1	5.112e-03	4
440		min	-.025	4	-.123	2	-.028	1	-3.595e-03	1	0	1	-2.497e-03	3
441	N570	max	.025	3	.035	1	.026	2	4.25e-03	2	0	1	5.287e-03	4
442		min	-.026	4	-.125	2	-.029	1	-3.55e-03	1	0	1	-2.765e-03	3
443	N571	max	.025	3	.034	1	.027	2	4.134e-03	2	0	1	5.308e-03	4
444		min	-.026	4	-.126	2	-.03	1	-3.491e-03	1	0	1	-2.858e-03	3
445	N572	max	.022	3	.046	1	.026	2	4.47e-03	2	0	1	5.129e-03	4
446		min	-.025	4	-.138	2	-.029	1	-3.621e-03	1	0	1	-2.672e-03	3
447	N573	max	.023	3	.044	1	.027	2	4.36e-03	2	0	1	5.345e-03	4
448		min	-.025	4	-.138	2	-.029	1	-3.586e-03	1	0	1	-2.94e-03	3
449	N574	max	.024	3	.042	1	.027	2	4.259e-03	2	0	1	5.28e-03	4
450		min	-.025	4	-.139	2	-.03	1	-3.541e-03	1	0	1	-2.901e-03	3
451	N575	max	.025	3	.04	1	.027	2	4.17e-03	2	0	1	5.314e-03	4
452		min	-.026	4	-.139	2	-.031	1	-3.486e-03	1	0	1	-2.991e-03	3
453	N576	max	.025	3	.038	1	.027	2	4.087e-03	2	0	1	5.414e-03	4
454		min	-.026	4	-.139	2	-.032	1	-3.427e-03	1	0	1	-3.159e-03	3
455	N577	max	.022	3	.054	1	.027	2	4.46e-03	2	0	1	5.392e-03	4
456		min	-.025	4	-.154	2	-.031	1	-3.641e-03	1	0	1	-3.088e-03	3
457	N578	max	.022	3	.051	1	.027	2	4.381e-03	2	0	1	5.181e-03	4
458		min	-.025	4	-.153	2	-.031	1	-3.602e-03	1	0	1	-2.86e-03	3
459	N579	max	.023	3	.049	1	.027	2	4.321e-03	2	0	1	5.279e-03	4
460		min	-.025	4	-.152	2	-.032	1	-3.557e-03	1	0	1	-3.003e-03	3
461	N580	max	.024	3	.047	1	.027	2	4.248e-03	2	0	1	5.418e-03	4
462		min	-.025	4	-.151	2	-.032	1	-3.508e-03	1	0	1	-3.194e-03	3
463	N581	max	.025	3	.044	1	.027	2	4.173e-03	2	0	1	5.516e-03	4
464		min	-.026	4	-.15	2	-.033	1	-3.458e-03	1	0	1	-3.339e-03	3
465	N582	max	.021	3	.061	1	.027	2	4.529e-03	2	0	1	4.975e-03	4
466		min	-.024	4	-.169	2	-.032	1	-3.651e-03	1	0	1	-2.614e-03	3
467	N583	max	.022	3	.058	1	.027	2	4.515e-03	2	0	1	5.32e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
468		min	-.025	4	-.167	2	-.033	1	-3.62e-03	1	0	1	-3.038e-03	3
469	N584	max	.022	3	.056	1	.027	2	4.444e-03	2	0	1	5.506e-03	4
470		min	-.025	4	-.165	2	-.033	1	-3.579e-03	1	0	1	-3.277e-03	3
471	N585	max	.023	3	.053	1	.027	2	4.367e-03	2	0	1	5.596e-03	4
472		min	-.025	4	-.163	2	-.034	1	-3.536e-03	1	0	1	-3.405e-03	3
473	N586	max	.024	3	.05	1	.027	2	4.294e-03	2	0	1	5.666e-03	4
474		min	-.026	4	-.163	9	-.034	1	-3.493e-03	1	0	1	-3.512e-03	3
475	N587	max	.021	3	.065	1	.027	2	4.786e-03	2	3.069e-04	4	5.789e-03	4
476		min	-.024	4	-.181	2	-.034	1	-3.653e-03	1	-7.641e-04	3	-3.446e-03	3
477	N588	max	.022	3	.062	1	.027	2	4.676e-03	2	2.883e-04	4	5.795e-03	4
478		min	-.025	4	-.178	2	-.034	1	-3.61e-03	1	-7.575e-04	3	-3.505e-03	3
479	N589	max	.022	3	.059	1	.027	2	4.575e-03	2	2.859e-04	4	5.806e-03	4
480		min	-.025	4	-.176	9	-.035	1	-3.569e-03	1	-7.468e-04	3	-3.561e-03	3
481	N590	max	.027	3	.03	3	.027	2	3.909e-03	2	0	1	5.418e-03	4
482		min	-.027	4	-.127	2	-.031	1	-3.331e-03	1	0	1	-3.139e-03	3
483	N591	max	.027	3	.033	3	.027	2	3.812e-03	2	0	1	5.501e-03	4
484		min	-.027	4	-.132	4	-.032	1	-3.246e-03	1	0	1	-3.301e-03	3
485	N592	max	.028	3	.036	3	.027	2	3.721e-03	2	0	1	5.579e-03	4
486		min	-.027	4	-.136	4	-.033	1	-3.159e-03	1	0	1	-3.449e-03	3
487	N593	max	.026	3	.037	3	.027	2	3.99e-03	2	0	1	5.502e-03	4
488		min	-.026	4	-.139	9	-.032	1	-3.356e-03	1	0	1	-3.308e-03	3
489	N594	max	.027	3	.04	3	.027	2	3.898e-03	2	0	1	5.584e-03	4
490		min	-.027	4	-.143	4	-.033	1	-3.282e-03	1	0	1	-3.449e-03	3
491	N595	max	.028	3	.043	3	.027	2	3.815e-03	2	0	1	5.659e-03	4
492		min	-.027	4	-.148	4	-.034	1	-3.21e-03	1	0	1	-3.579e-03	3
493	N596	max	.028	3	.046	3	.027	2	3.745e-03	2	0	1	5.729e-03	4
494		min	-.027	4	-.152	4	-.034	1	-3.142e-03	1	0	1	-3.696e-03	3
495	N597	max	.025	3	.045	3	.027	2	4.083e-03	2	0	1	5.603e-03	4
496		min	-.026	4	-.152	9	-.033	1	-3.397e-03	1	0	1	-3.474e-03	3
497	N598	max	.026	3	.047	3	.027	2	4.e-03	2	0	1	5.675e-03	4
498		min	-.026	4	-.155	4	-.034	1	-3.335e-03	1	0	1	-3.591e-03	3
499	N599	max	.027	3	.05	3	.027	2	3.924e-03	2	0	1	5.738e-03	4
500		min	-.027	4	-.159	4	-.034	1	-3.276e-03	1	0	1	-3.694e-03	3
501	N600	max	.028	3	.053	3	.027	2	3.855e-03	2	0	1	5.798e-03	4
502		min	-.027	4	-.163	4	-.035	1	-3.218e-03	1	0	1	-3.787e-03	3
503	N601	max	.025	3	.052	3	.027	2	4.204e-03	2	0	1	5.723e-03	4
504		min	-.026	4	-.165	9	-.034	1	-3.44e-03	1	0	1	-3.61e-03	3
505	N602	max	.026	3	.055	3	.027	2	4.119e-03	2	0	1	5.774e-03	4
506		min	-.026	4	-.167	4	-.035	1	-3.387e-03	1	0	1	-3.698e-03	3
507	N603	max	.027	3	.057	3	.027	2	4.041e-03	2	0	1	5.823e-03	4
508		min	-.027	4	-.171	4	-.035	1	-3.335e-03	1	0	1	-3.778e-03	3
509	N604	max	.027	3	.06	3	.027	2	3.97e-03	2	0	1	5.874e-03	4
510		min	-.027	4	-.174	4	-.036	1	-3.284e-03	1	0	1	-3.854e-03	3
511	N605	max	.024	3	.06	3	.027	2	4.375e-03	2	2.847e-04	4	5.851e-03	4
512		min	-.026	4	-.179	9	-.035	1	-3.48e-03	1	-7.123e-04	3	-3.688e-03	3
513	N606	max	.025	3	.062	3	.028	2	4.279e-03	2	2.831e-04	4	5.884e-03	4
514		min	-.026	4	-.18	9	-.036	1	-3.433e-03	1	-6.879e-04	3	-3.756e-03	3
515	N607	max	.026	3	.065	3	.028	2	4.192e-03	2	2.802e-04	4	5.922e-03	4
516		min	-.026	4	-.182	4	-.036	1	-3.387e-03	1	-6.592e-04	3	-3.823e-03	3
517	N608	max	.03	3	.041	3	.027	2	3.548e-03	2	0	1	5.728e-03	4
518		min	-.028	4	-.145	4	-.034	1	-2.976e-03	1	0	1	-3.713e-03	3
519	N609	max	.03	3	.044	3	.027	2	3.481e-03	2	0	1	5.794e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
520		min	-.028	4	-.148	4	-.034	1	-2.894e-03	1	0	1	-3.819e-03	3
521	N610	max	.031	3	.046	3	.027	2	3.422e-03	2	0	1	5.862e-03	4
522		min	-.029	4	-.152	4	-.035	1	-2.812e-03	1	0	1	-3.916e-03	3
523	N611	max	.029	3	.048	3	.027	2	3.668e-03	2	0	1	5.79e-03	4
524		min	-.028	4	-.156	4	-.035	1	-3.067e-03	1	0	1	-3.793e-03	3
525	N612	max	.03	3	.051	3	.027	2	3.601e-03	2	0	1	5.853e-03	4
526		min	-.028	4	-.159	4	-.035	1	-2.993e-03	1	0	1	-3.886e-03	3
527	N613	max	.03	3	.053	3	.027	2	3.546e-03	2	0	1	5.921e-03	4
528		min	-.028	4	-.162	4	-.035	1	-2.925e-03	1	0	1	-3.975e-03	3
529	N614	max	.031	3	.055	3	.027	2	3.505e-03	2	0	1	5.991e-03	4
530		min	-.029	4	-.166	4	-.036	1	-2.863e-03	1	0	1	-4.058e-03	3
531	N615	max	.029	3	.055	3	.027	2	3.784e-03	2	0	1	5.854e-03	4
532		min	-.027	4	-.166	4	-.035	1	-3.155e-03	1	0	1	-3.871e-03	3
533	N616	max	.029	3	.058	3	.027	2	3.723e-03	2	0	1	5.913e-03	4
534		min	-.028	4	-.17	4	-.036	1	-3.095e-03	1	0	1	-3.95e-03	3
535	N617	max	.03	3	.06	3	.027	2	3.67e-03	2	0	1	5.976e-03	4
536		min	-.028	4	-.173	4	-.036	1	-3.038e-03	1	0	1	-4.026e-03	3
537	N618	max	.031	3	.062	3	.028	2	3.628e-03	2	0	1	6.042e-03	4
538		min	-.029	4	-.176	4	-.036	1	-2.985e-03	1	0	1	-4.098e-03	3
539	N619	max	.028	3	.062	3	.028	2	3.902e-03	2	0	1	5.925e-03	4
540		min	-.027	4	-.177	4	-.036	1	-3.232e-03	1	0	1	-3.925e-03	3
541	N620	max	.029	3	.065	3	.028	2	3.841e-03	2	0	1	5.98e-03	4
542		min	-.028	4	-.18	4	-.036	1	-3.181e-03	1	0	1	-3.993e-03	3
543	N621	max	.03	3	.067	3	.028	2	3.789e-03	2	0	1	6.038e-03	4
544		min	-.028	4	-.183	4	-.036	1	-3.133e-03	1	0	1	-4.059e-03	3
545	N622	max	.03	3	.069	3	.028	2	3.746e-03	2	0	1	6.101e-03	4
546		min	-.028	4	-.186	4	-.037	1	-3.088e-03	1	0	1	-4.122e-03	3
547	N623	max	.028	3	.069	3	.028	2	4.043e-03	2	2.705e-04	4	6.012e-03	4
548		min	-.027	4	-.188	4	-.036	1	-3.3e-03	1	-5.882e-04	3	-3.949e-03	3
549	N624	max	.028	3	.071	3	.028	2	3.981e-03	2	2.634e-04	4	6.063e-03	4
550		min	-.027	4	-.191	4	-.037	1	-3.258e-03	1	-5.468e-04	3	-4.01e-03	3
551	N625	max	.029	3	.074	3	.028	2	3.927e-03	2	2.549e-04	4	6.118e-03	4
552		min	-.028	4	-.194	4	-.037	1	-3.219e-03	1	-5.017e-04	3	-4.067e-03	3
553	N794	max	.019	3	.04	1	.024	2	6.267e-03	2	0	1	3.971e-03	4
554		min	-.024	4	-.096	2	-.016	1	-3.383e-03	1	0	1	-1.763e-03	3
555	N795	max	.018	3	.04	1	.024	2	6.276e-03	2	0	1	3.686e-03	4
556		min	-.023	4	-.094	2	-.016	1	-3.337e-03	1	0	1	-1.816e-03	3
557	N796	max	.018	3	.04	1	.024	2	6.281e-03	2	0	1	3.357e-03	4
558		min	-.023	4	-.093	2	-.015	1	-3.283e-03	1	0	1	-1.914e-03	3
559	N797	max	.018	3	.045	1	.024	2	6.177e-03	2	0	1	4.068e-03	4
560		min	-.024	4	-.105	2	-.016	1	-3.351e-03	1	0	1	-1.881e-03	3
561	N798	max	.018	3	.045	1	.024	2	6.151e-03	2	0	1	3.82e-03	4
562		min	-.024	4	-.103	2	-.016	1	-3.31e-03	1	0	1	-1.904e-03	3
563	N799	max	.018	3	.045	1	.024	2	6.039e-03	2	0	1	3.498e-03	4
564		min	-.024	4	-.102	2	-.015	1	-3.261e-03	1	0	1	-1.984e-03	3
565	N800	max	.018	3	.045	1	.024	2	6.146e-03	2	0	1	3.178e-03	4
566		min	-.024	4	-.101	2	-.015	1	-3.254e-03	1	0	1	-2.091e-03	3
567	N801	max	.017	3	.05	1	.024	2	6.266e-03	2	0	1	4.152e-03	4
568		min	-.024	4	-.114	2	-.016	1	-3.335e-03	1	0	1	-1.986e-03	3
569	N802	max	.017	3	.05	1	.024	2	6.244e-03	2	0	1	3.991e-03	4
570		min	-.024	4	-.113	2	-.016	1	-3.305e-03	1	0	1	-1.962e-03	3
571	N803	max	.017	3	.05	1	.024	2	6.176e-03	2	0	1	3.743e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
572		min	-.024	4	-.111	2	-.015	1	-3.275e-03	1	0	1	-1.992e-03	3
573	N804	max	.017	3	.05	1	.024	2	5.974e-03	2	0	1	3.271e-03	4
574		min	-.024	4	-.11	2	-.015	1	-3.27e-03	1	0	1	-2.132e-03	3
575	N805	max	.017	3	.055	1	.024	2	6.36e-03	2	0	1	4.197e-03	4
576		min	-.024	4	-.124	2	-.017	1	-3.327e-03	1	0	1	-2.102e-03	3
577	N806	max	.017	3	.055	1	.024	2	6.474e-03	2	0	1	4.045e-03	4
578		min	-.024	4	-.122	2	-.016	1	-3.31e-03	1	0	1	-2.053e-03	3
579	N807	max	.017	3	.055	1	.024	2	6.449e-03	2	0	1	3.973e-03	4
580		min	-.024	4	-.121	2	-.015	1	-3.291e-03	1	0	1	-1.986e-03	3
581	N808	max	.017	3	.055	1	.024	2	6.467e-03	2	0	1	3.682e-03	4
582		min	-.024	4	-.12	2	-.015	1	-3.295e-03	1	0	1	-2.034e-03	3
583	N809	max	.016	3	.06	1	.024	2	6.346e-03	2	6.665e-05	2	4.101e-03	4
584		min	-.024	4	-.133	2	-.017	1	-3.323e-03	1	-8.629e-04	5	-2.244e-03	3
585	N810	max	.016	3	.06	1	.024	2	6.348e-03	2	2.967e-05	2	4.147e-03	4
586		min	-.024	4	-.132	2	-.016	1	-3.307e-03	1	-8.18e-04	5	-2.108e-03	3
587	N811	max	.016	3	.06	1	.024	2	6.542e-03	2	3.652e-05	2	3.722e-03	4
588		min	-.024	4	-.131	2	-.016	1	-3.304e-03	1	-7.566e-04	5	-2.161e-03	3
589	N812	max	.018	3	.039	1	.024	2	5.907e-03	2	4.57e-05	2	2.679e-03	4
590		min	-.023	4	-.091	2	-.014	1	-3.129e-03	1	-5.353e-04	5	-2.262e-03	3
591	N813	max	.018	3	.039	1	.024	2	5.907e-03	2	4.57e-05	2	2.679e-03	4
592		min	-.023	4	-.091	2	-.014	1	-3.129e-03	1	-5.353e-04	5	-2.262e-03	3
593	N815	max	.018	3	.044	1	.024	2	5.943e-03	2	5.459e-05	2	2.742e-03	4
594		min	-.024	4	-.101	2	-.014	1	-3.173e-03	1	-5.771e-04	5	-2.297e-03	3
595	N816	max	.017	3	.044	1	.024	2	5.943e-03	2	5.459e-05	2	2.742e-03	4
596		min	-.024	4	-.1	2	-.014	1	-3.173e-03	1	-5.771e-04	5	-2.297e-03	3
597	N818	max	.017	3	.05	1	.024	2	5.965e-03	2	6.13e-05	2	2.788e-03	4
598		min	-.024	4	-.11	2	-.014	1	-3.202e-03	1	-6.126e-04	5	-2.307e-03	3
599	N819	max	.017	3	.05	1	.024	2	5.965e-03	2	6.13e-05	2	2.788e-03	4
600		min	-.024	4	-.11	2	-.014	1	-3.202e-03	1	-6.126e-04	5	-2.307e-03	3
601	N821	max	.017	3	.055	1	.024	2	5.978e-03	2	6.428e-05	2	2.837e-03	4
602		min	-.024	4	-.12	2	-.014	1	-3.223e-03	1	-6.429e-04	5	-2.306e-03	3
603	N822	max	.017	3	.055	1	.024	2	5.978e-03	2	6.428e-05	2	2.837e-03	4
604		min	-.024	4	-.12	2	-.014	1	-3.223e-03	1	-6.429e-04	5	-2.306e-03	3
605	N824	max	.016	3	.06	1	.024	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
606		min	-.025	4	-.129	2	-.015	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
607	N825	max	.016	3	.06	1	.024	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
608		min	-.025	4	-.13	2	-.014	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
609	N899	max	.019	3	.063	4	.031	2	5.057e-03	2	4.138e-04	4	3.628e-03	4
610		min	-.028	4	-.184	3	-.03	1	-3.638e-03	1	-3.222e-04	3	-5.605e-03	3
611	N900	max	.02	3	.053	4	.03	2	4.782e-03	2	0	1	3.372e-03	4
612		min	-.029	4	-.167	3	-.029	1	-3.568e-03	1	0	1	-5.366e-03	3
613	N901	max	.019	3	.067	1	.027	2	4.665e-03	2	2.014e-04	4	5.489e-03	4
614		min	-.024	4	-.175	2	-.032	1	-3.695e-03	1	-8.919e-04	7	-3.17e-03	3
615	N902	max	.02	3	.058	1	.027	2	4.546e-03	2	0	1	5.253e-03	4
616		min	-.024	4	-.157	2	-.03	1	-3.671e-03	1	0	1	-2.932e-03	3
617	N903B	max	.01	3	.032	4	.019	3	2.07e-03	2	5.298e-04	4	3.092e-03	4
618		min	-.009	4	-.086	3	-.016	4	-3.337e-03	1	-8.771e-04	3	-5.789e-03	3
619	N911	max	.021	3	.056	1	.027	2	4.521e-03	2	0	1	5.14e-03	4
620		min	-.024	4	-.156	2	-.03	1	-3.661e-03	1	0	1	-2.795e-03	3
621	N912A	max	.02	3	.062	1	.027	2	4.556e-03	2	0	1	5.387e-03	4
622		min	-.024	4	-.167	2	-.032	1	-3.673e-03	1	0	1	-3.082e-03	3
623	N913A	max	.02	3	.068	1	.027	2	4.629e-03	2	3.893e-04	4	4.979e-03	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
624		min	-.024	4	-.179	2	-.033	1	-3.682e-03	1	-6.597e-04	3	-2.436e-03	3
625	N914A	max	.02	3	.063	1	.027	2	4.608e-03	2	0	1	5.167e-03	4
626		min	-.024	4	-.166	2	-.031	1	-3.691e-03	1	0	1	-2.823e-03	3
627	N915A	max	.021	3	.051	1	.026	2	4.522e-03	2	0	1	5.291e-03	4
628		min	-.025	4	-.144	2	-.029	1	-3.646e-03	1	0	1	-2.909e-03	3
629	N916A	max	.021	3	.055	1	.026	2	4.595e-03	2	0	1	5.171e-03	4
630		min	-.024	4	-.151	2	-.029	1	-3.671e-03	1	0	1	-2.814e-03	3
631	N917	max	.02	3	.061	1	.027	2	4.609e-03	2	0	1	5.237e-03	4
632		min	-.024	4	-.16	2	-.03	1	-3.686e-03	1	0	1	-2.934e-03	3
633	N918	max	.019	3	.067	1	.027	2	4.644e-03	2	3.39e-04	4	5.062e-03	4
634		min	-.024	4	-.17	2	-.031	1	-3.694e-03	1	-7.683e-04	3	-2.718e-03	3
635	N919	max	.019	3	.061	4	.031	2	5.148e-03	2	4.151e-04	4	3.599e-03	4
636		min	-.028	4	-.182	3	-.03	1	-3.699e-03	1	-3.263e-04	3	-5.636e-03	3
637	N920	max	.02	3	.056	4	.03	2	4.925e-03	2	0	1	3.384e-03	4
638		min	-.028	4	-.172	3	-.029	1	-3.619e-03	1	0	1	-5.424e-03	3
639	N921	max	.02	3	.058	4	.031	2	4.901e-03	2	0	1	3.528e-03	4
640		min	-.028	4	-.175	3	-.03	1	-3.588e-03	1	0	1	-5.489e-03	3
641	N922A	max	.02	3	.05	4	.03	2	4.765e-03	2	0	1	3.248e-03	4
642		min	-.029	4	-.162	3	-.029	1	-3.61e-03	1	0	1	-5.306e-03	3
643	N923A	max	.02	3	.064	4	.031	2	4.971e-03	2	3.963e-04	4	3.66e-03	4
644		min	-.028	4	-.185	3	-.03	1	-3.579e-03	1	-3.189e-04	3	-5.58e-03	3
645	N924A	max	.02	3	.058	4	.031	2	4.809e-03	2	0	1	3.551e-03	4
646		min	-.029	4	-.174	3	-.03	1	-3.537e-03	1	0	1	-5.459e-03	3
647	N925A	max	.02	3	.051	4	.03	2	4.686e-03	2	0	1	3.375e-03	4
648		min	-.029	4	-.163	3	-.029	1	-3.534e-03	1	0	1	-5.341e-03	3
649	N926A	max	.021	3	.046	4	.03	2	4.633e-03	2	0	1	3.333e-03	4
650		min	-.029	4	-.154	3	-.029	1	-3.563e-03	1	0	1	-5.342e-03	3
651	N952A	max	.016	3	.062	1	.024	2	6.157e-03	2	7.948e-04	1	3.048e-03	4
652		min	-.022	4	-.132	2	-.014	1	-3.597e-03	1	-3.614e-04	2	-4.747e-03	3
653	N953A	max	.018	3	.038	1	.024	2	6.118e-03	2	7.649e-04	4	3.305e-03	4
654		min	-.026	4	-.091	2	-.014	1	-3.489e-03	1	-3.442e-04	3	-2.796e-03	3
655	N954A	max	.018	3	.044	1	.024	2	6.083e-03	2	6.31e-04	4	3.326e-03	4
656		min	-.025	4	-.101	2	-.014	1	-3.477e-03	1	-3.682e-04	3	-2.685e-03	3
657	N955A	max	.017	3	.05	1	.024	2	6.122e-03	2	6.741e-04	1	2.933e-03	4
658		min	-.024	4	-.111	2	-.014	1	-3.487e-03	1	-3.252e-04	2	-2.802e-03	3
659	N956A	max	.017	3	.056	1	.024	2	6.147e-03	2	7.172e-04	1	2.946e-03	4
660		min	-.023	4	-.122	2	-.014	1	-3.476e-03	1	-3.896e-04	2	-3.935e-03	3
661	N952B	max	.026	3	.061	1	.048	2	0	1	-3.637e-04	1	2.729e-03	4
662		min	-.036	4	-.131	2	-.026	1	0	1	-2.185e-03	6	-3.146e-03	3
663	N955B	max	.029	3	.045	1	.048	2	0	1	6.709e-05	7	2.978e-03	4
664		min	-.036	4	-.101	2	-.026	1	0	1	-9.433e-05	9	-3.35e-03	3
665	N956B	max	.029	3	.05	1	.048	2	0	1	-1.263e-04	1	2.967e-03	4
666		min	-.036	4	-.111	2	-.026	1	0	1	-9.639e-04	6	-2.853e-03	3
667	N957A	max	.028	3	.055	1	.048	2	0	1	7.812e-05	1	2.928e-03	4
668		min	-.036	4	-.121	2	-.026	1	0	1	-1.087e-03	6	-3.015e-03	3
669	N958	max	.034	3	.062	1	.049	2	0	1	3.139e-03	6	3.097e-03	4
670		min	-.034	4	-.132	2	-.028	1	0	1	1.41e-04	1	-3.455e-03	3
671	N960	max	.029	3	.044	1	.049	2	0	1	1.037e-03	5	2.833e-03	4
672		min	-.037	4	-.101	2	-.028	1	0	1	9.668e-05	2	-2.885e-03	3
673	N961	max	.03	3	.05	1	.049	2	0	1	1.908e-03	6	3.036e-03	4
674		min	-.036	4	-.111	2	-.028	1	0	1	4.242e-04	1	-3.569e-03	3
675	N962	max	.032	3	.056	1	.049	2	0	1	1.79e-03	7	2.905e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
676		min	-.035	4	-.122	2	-.028	1	0	1	4.054e-04	1	-3.55e-03	3
677	N963	max	.006	3	.061	1	0	3	0	1	1.485e-03	2	3.096e-03	4
678		min	-.013	4	-.131	2	0	8	0	1	-1.26e-03	1	-3.049e-03	3
679	N964	max	.006	3	.039	1	0	3	0	1	3.292e-04	4	2.674e-03	4
680		min	-.013	4	-.091	2	0	8	0	1	-5.571e-04	3	-3.336e-03	3
681	N966	max	.005	3	.044	1	0	3	0	1	1.773e-04	4	2.754e-03	4
682		min	-.013	4	-.101	2	0	8	0	1	-3.826e-04	3	-3.146e-03	3
683	N967	max	.005	3	.05	1	0	3	0	1	5.099e-04	2	2.743e-03	4
684		min	-.013	4	-.111	2	0	4	0	1	-3.609e-04	1	-2.897e-03	3
685	N968	max	.005	3	.055	1	0	3	0	1	7.388e-04	2	2.927e-03	4
686		min	-.013	4	-.121	2	0	4	0	1	-6.475e-04	1	-2.992e-03	3
687	N969	max	0	1	.062	1	0	3	0	1	1.784e-03	1	2.602e-03	4
688		min	-.016	8	-.132	2	0	4	0	1	-3.134e-03	2	-3.523e-03	3
689	N970	max	.007	3	.038	1	0	3	0	1	4.421e-05	4	2.871e-03	4
690		min	-.013	4	-.091	2	0	4	0	1	-5.765e-04	7	-3.116e-03	3
691	N971	max	.006	3	.044	1	0	3	0	1	2.08e-04	4	2.938e-03	4
692		min	-.013	4	-.101	2	0	4	0	1	-6.062e-04	3	-3.044e-03	3
693	N972	max	.004	3	.05	1	0	3	0	1	6.982e-04	1	2.921e-03	4
694		min	-.013	8	-.111	2	0	4	0	1	-1.668e-03	2	-3.779e-03	3
695	N973	max	.002	3	.056	1	0	3	0	1	9.692e-04	1	2.874e-03	4
696		min	-.014	8	-.122	2	0	4	0	1	-1.752e-03	2	-3.663e-03	3
697	N976	max	.011	3	.061	1	.012	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
698		min	-.019	4	-.131	2	-.007	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
699	N977	max	.013	3	.039	1	.012	2	0	1	-3.151e-04	2	2.228e-03	4
700		min	-.018	4	-.091	2	-.007	1	0	1	-9.379e-04	5	-2.873e-03	3
701	N979	max	.012	3	.044	1	.012	2	0	1	1.953e-04	4	2.768e-03	4
702		min	-.018	4	-.101	2	-.007	1	0	1	-4.056e-04	3	-3.267e-03	3
703	N980	max	.011	3	.05	1	.012	2	0	1	1.832e-04	4	2.878e-03	4
704		min	-.018	4	-.111	2	-.007	1	0	1	-4.119e-04	3	-3.247e-03	3
705	N981	max	.011	3	.055	1	.012	2	0	1	1.014e-03	2	3.017e-03	4
706		min	-.018	4	-.121	2	-.007	1	0	1	-1.117e-03	1	-2.91e-03	3
707	N982	max	.007	3	.062	1	.012	2	6.157e-03	2	7.948e-04	1	3.048e-03	4
708		min	-.016	4	-.132	2	-.007	1	-3.597e-03	1	-3.614e-04	2	-4.747e-03	3
709	N983	max	.013	3	.038	1	.012	2	0	1	6.301e-04	4	3.449e-03	4
710		min	-.019	4	-.091	2	-.007	1	0	1	-4.782e-04	3	-2.919e-03	3
711	N984	max	.012	3	.044	1	.012	2	0	1	1.953e-04	4	2.768e-03	4
712		min	-.018	4	-.101	2	-.007	1	0	1	-4.056e-04	3	-3.267e-03	3
713	N985	max	.011	3	.05	1	.012	2	0	1	1.832e-04	4	2.878e-03	4
714		min	-.018	4	-.111	2	-.007	1	0	1	-4.119e-04	3	-3.247e-03	3
715	N986	max	.009	3	.056	1	.012	2	0	1	1.652e-03	1	2.763e-03	4
716		min	-.017	4	-.122	2	-.007	1	0	1	-2.685e-03	2	-3.756e-03	3
717	N992	max	.021	3	.061	1	.036	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
718		min	-.031	4	-.131	2	-.02	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
719	N993	max	.023	3	.039	1	.036	2	0	1	4.087e-04	2	3.14e-03	4
720		min	-.029	4	-.091	2	-.02	1	0	1	-7.576e-04	1	-2.919e-03	3
721	N995	max	.023	3	.045	1	.036	2	0	1	2.818e-04	2	3.088e-03	4
722		min	-.03	4	-.101	2	-.02	1	0	1	-6.306e-04	1	-3.097e-03	3
723	N996	max	.023	3	.05	1	.036	2	0	1	6.849e-04	1	2.886e-03	4
724		min	-.03	4	-.111	2	-.02	1	0	1	-4.002e-04	2	-3.228e-03	3
725	N997	max	.022	3	.055	1	.036	2	0	1	-4.978e-04	4	2.823e-03	4
726		min	-.03	4	-.121	2	-.02	1	0	1	-1.959e-03	7	-2.981e-03	3
727	N998	max	.026	3	.062	1	.037	2	6.157e-03	2	7.948e-04	1	3.048e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
728		min	-.028	4	-.132	2	-.021	1	-3.597e-03	1	-3.614e-04	2	-4.747e-03	3
729	N999	max	.024	3	.038	1	.037	2	0	1	8.69e-04	8	2.896e-03	4
730		min	-.032	4	-.091	2	-.021	1	0	1	-2.851e-04	3	-2.558e-03	3
731	N1000	max	.023	3	.044	1	.037	2	0	1	9.106e-04	8	2.858e-03	4
732		min	-.031	4	-.101	2	-.021	1	0	1	-1.672e-04	3	-2.792e-03	3
733	N1001	max	.023	3	.05	1	.037	2	0	1	6.849e-04	1	2.886e-03	4
734		min	-.03	4	-.111	2	-.021	1	0	1	-4.002e-04	2	-3.228e-03	3
735	N1002	max	.024	3	.056	1	.037	2	0	1	2.67e-03	6	3.111e-03	4
736		min	-.029	4	-.122	2	-.021	1	0	1	2.377e-04	1	-3.668e-03	3
737	N426A	max	.037	3	.048	4	.03	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
738		min	-.023	4	-.122	3	-.029	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
739	N427A	max	.026	3	.101	4	.033	2	3.9e-03	2	-2.568e-04	4	4.167e-03	4
740		min	-.029	4	-.215	3	-.027	1	-2.585e-03	1	-8.069e-04	6	-6.474e-03	3
741	N428A	max	.047	3	.098	2	.039	2	4.208e-03	2	7.104e-04	4	3.158e-03	4
742		min	-.042	4	-.246	1	-.034	1	-7.802e-03	1	-3.801e-04	3	-3.337e-03	3
743	N430A	max	.025	3	.057	4	.031	2	3.503e-03	2	0	1	4.152e-03	4
744		min	-.031	4	-.157	3	-.03	1	-2.133e-03	1	0	1	-5.686e-03	3
745	N431A	max	.026	3	.057	4	.031	2	3.293e-03	2	0	1	4.271e-03	4
746		min	-.029	4	-.151	3	-.03	1	-1.671e-03	1	0	1	-6.022e-03	3
747	N432A	max	.027	3	.054	4	.03	2	3.244e-03	2	0	1	4.251e-03	4
748		min	-.026	4	-.138	3	-.03	1	-1.527e-03	1	0	1	-6.438e-03	3
749	N433A	max	.028	3	.048	4	.03	2	3.068e-03	2	0	1	3.932e-03	4
750		min	-.024	4	-.12	3	-.03	1	-1.621e-03	1	0	1	-6.93e-03	3
751	N434A	max	.031	3	.039	4	.028	2	2.683e-03	2	0	1	3.359e-03	4
752		min	-.022	4	-.098	3	-.029	1	-2.126e-03	1	0	1	-7.124e-03	3
753	N435A	max	.034	3	.03	4	.026	2	2.07e-03	2	5.298e-04	4	3.092e-03	4
754		min	-.022	4	-.085	3	-.028	1	-3.337e-03	1	-8.771e-04	3	-5.789e-03	3
755	N436A	max	.038	3	.021	2	.032	2	3.078e-03	2	0	1	3.224e-03	4
756		min	-.027	4	-.098	5	-.031	1	-8.299e-03	5	0	1	-4.287e-03	3
757	N437A	max	.041	3	.037	2	.036	2	3.706e-03	2	0	1	3.168e-03	4
758		min	-.032	4	-.132	5	-.032	1	-8.266e-03	1	0	1	-3.299e-03	3
759	N438A	max	.043	3	.05	2	.038	2	4.017e-03	2	0	1	2.998e-03	4
760		min	-.036	4	-.159	5	-.033	1	-7.871e-03	1	0	1	-2.615e-03	3
761	N439A	max	.044	3	.058	2	.04	2	4.252e-03	2	0	1	2.622e-03	4
762		min	-.038	4	-.179	5	-.035	1	-7.566e-03	1	0	1	-2.307e-03	3
763	N440A	max	.044	3	.063	2	.041	2	4.416e-03	2	0	1	2.239e-03	4
764		min	-.039	4	-.19	5	-.035	1	-7.373e-03	1	0	1	-2.29e-03	3
765	N443A	max	.024	3	.088	4	.032	2	4.049e-03	2	-1.127e-04	2	4.097e-03	4
766		min	-.031	4	-.204	3	-.029	1	-2.806e-03	1	-4.368e-04	5	-5.822e-03	3
767	N444A	max	.025	3	.095	4	.032	2	3.929e-03	2	-1.583e-04	2	4.15e-03	4
768		min	-.03	4	-.21	3	-.028	1	-2.658e-03	1	-5.573e-04	8	-6.118e-03	3
769	N446A	max	.047	3	.096	2	.041	2	4.373e-03	2	3.069e-04	4	2.741e-03	4
770		min	-.041	4	-.242	5	-.035	1	-7.461e-03	1	-3.743e-04	3	-3.032e-03	3
771	N447A	max	.047	3	.098	2	.04	2	4.303e-03	2	4.075e-04	4	2.931e-03	4
772		min	-.042	4	-.245	1	-.035	1	-7.617e-03	1	-3.569e-04	3	-3.164e-03	3
773	N448A	max	.027	3	.086	4	.032	2	3.425e-03	2	-2.123e-04	3	4.278e-03	4
774		min	-.027	4	-.185	3	-.028	1	-2.176e-03	1	-7.746e-04	8	-6.362e-03	3
775	N449A	max	.029	3	.07	4	.032	2	3.078e-03	2	-2.402e-04	3	3.986e-03	4
776		min	-.023	4	-.157	3	-.029	1	-2.366e-03	1	-8.662e-04	8	-6.662e-03	3
777	N450A	max	.032	3	.056	4	.031	2	2.671e-03	2	1.352e-05	1	3.385e-03	4
778		min	-.021	4	-.134	3	-.029	1	-2.592e-03	1	-8.285e-04	6	-6.998e-03	3
779	N451A	max	.04	3	.031	2	.029	2	3.555e-03	2	1.011e-03	4	3.208e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
780		min	-.031	4	-.136	5	-.03	1	-8.326e-03	1	-5.324e-04	3	-4.657e-03	3
781	N452A	max	.043	3	.055	2	.034	2	4.09e-03	2	8.129e-04	4	3.266e-03	4
782		min	-.036	4	-.171	5	-.031	1	-8.01e-03	1	-3.942e-04	3	-3.951e-03	3
783	N453A	max	.045	3	.078	2	.037	2	4.258e-03	2	6.311e-04	4	3.269e-03	4
784		min	-.039	4	-.208	5	-.033	1	-7.744e-03	1	-3.505e-04	3	-3.316e-03	3
785	N454A	max	.032	3	.034	4	.027	2	2.201e-03	2	0	1	3.152e-03	4
786		min	-.021	4	-.089	3	-.028	1	-3.092e-03	1	0	1	-6.193e-03	3
787	N455A	max	.034	3	.051	4	.031	2	2.658e-03	2	3.717e-04	4	3.09e-03	4
788		min	-.022	4	-.125	3	-.03	1	-2.246e-03	1	-8.734e-04	3	-7.139e-03	3
789	N459A	max	.044	3	.064	2	.041	2	4.447e-03	2	0	1	2.066e-03	4
790		min	-.039	4	-.191	5	-.036	1	-7.297e-03	1	0	1	-2.324e-03	3
791	N460A	max	.044	3	.063	2	.041	2	4.446e-03	2	0	1	2.11e-03	4
792		min	-.039	4	-.191	5	-.036	1	-7.317e-03	1	0	1	-2.308e-03	3
793	N461A	max	.044	3	.063	2	.041	2	4.437e-03	2	0	1	2.164e-03	4
794		min	-.039	4	-.19	5	-.035	1	-7.341e-03	1	0	1	-2.293e-03	3
795	N462A	max	.045	3	.071	2	.041	2	4.444e-03	2	0	1	2.229e-03	4
796		min	-.04	4	-.203	5	-.036	1	-7.305e-03	1	0	1	-2.505e-03	3
797	N463A	max	.045	3	.071	2	.041	2	4.444e-03	2	0	1	2.262e-03	4
798		min	-.04	4	-.203	5	-.036	1	-7.325e-03	1	0	1	-2.492e-03	3
799	N464A	max	.045	3	.071	2	.041	2	4.437e-03	2	0	1	2.311e-03	4
800		min	-.04	4	-.203	5	-.035	1	-7.349e-03	1	0	1	-2.49e-03	3
801	N465A	max	.045	3	.071	2	.041	2	4.421e-03	2	0	1	2.373e-03	4
802		min	-.04	4	-.203	5	-.035	1	-7.377e-03	1	0	1	-2.496e-03	3
803	N466A	max	.046	3	.079	2	.041	2	4.441e-03	2	0	1	2.385e-03	4
804		min	-.04	4	-.215	5	-.036	1	-7.316e-03	1	0	1	-2.676e-03	3
805	N467A	max	.046	3	.079	2	.041	2	4.443e-03	2	0	1	2.413e-03	4
806		min	-.04	4	-.215	5	-.036	1	-7.335e-03	1	0	1	-2.672e-03	3
807	N468A	max	.046	3	.08	2	.041	2	4.438e-03	2	0	1	2.451e-03	4
808		min	-.04	4	-.216	5	-.035	1	-7.358e-03	1	0	1	-2.675e-03	3
809	N469A	max	.046	3	.08	2	.041	2	4.427e-03	2	0	1	2.5e-03	4
810		min	-.04	4	-.216	5	-.035	1	-7.386e-03	1	0	1	-2.685e-03	3
811	N470A	max	.046	3	.087	2	.041	2	4.423e-03	2	0	1	2.524e-03	4
812		min	-.041	4	-.227	5	-.036	1	-7.34e-03	1	0	1	-2.831e-03	3
813	N471A	max	.046	3	.088	2	.041	2	4.426e-03	2	0	1	2.546e-03	4
814		min	-.041	4	-.228	5	-.036	1	-7.358e-03	1	0	1	-2.834e-03	3
815	N472A	max	.046	3	.088	2	.041	2	4.424e-03	2	0	1	2.577e-03	4
816		min	-.041	4	-.228	5	-.035	1	-7.382e-03	1	0	1	-2.843e-03	3
817	N473A	max	.046	3	.088	2	.041	2	4.417e-03	2	0	1	2.617e-03	4
818		min	-.041	4	-.229	5	-.035	1	-7.409e-03	1	0	1	-2.858e-03	3
819	N474A	max	.047	3	.095	2	.041	2	4.378e-03	2	2.384e-04	4	2.668e-03	4
820		min	-.041	4	-.24	5	-.036	1	-7.388e-03	1	-4.148e-04	3	-2.986e-03	3
821	N475A	max	.047	3	.096	2	.041	2	4.381e-03	2	2.594e-04	4	2.685e-03	4
822		min	-.041	4	-.24	5	-.036	1	-7.408e-03	1	-3.984e-04	3	-2.997e-03	3
823	N476A	max	.047	3	.096	2	.041	2	4.379e-03	2	2.823e-04	4	2.71e-03	4
824		min	-.041	4	-.241	5	-.035	1	-7.432e-03	1	-3.849e-04	3	-3.012e-03	3
825	N477A	max	.044	3	.062	2	.041	2	4.385e-03	2	0	1	2.316e-03	4
826		min	-.039	4	-.187	5	-.035	1	-7.412e-03	1	0	1	-2.276e-03	3
827	N478A	max	.044	3	.06	2	.04	2	4.338e-03	2	0	1	2.406e-03	4
828		min	-.038	4	-.184	5	-.035	1	-7.45e-03	1	0	1	-2.273e-03	3
829	N479A	max	.044	3	.059	2	.04	2	4.293e-03	2	0	1	2.505e-03	4
830		min	-.038	4	-.182	5	-.035	1	-7.5e-03	1	0	1	-2.281e-03	3
831	N480A	max	.045	3	.07	2	.041	2	4.395e-03	2	0	1	2.432e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
832		min	-.039	4	-.201	5	-.035	1	-7.409e-03	1	0	1	-2.486e-03	3
833	N481A	max	.045	3	.07	2	.041	2	4.36e-03	2	0	1	2.505e-03	4
834		min	-.039	4	-.199	5	-.035	1	-7.445e-03	1	0	1	-2.489e-03	3
835	N482A	max	.045	3	.069	2	.04	2	4.309e-03	2	0	1	2.593e-03	4
836		min	-.039	4	-.197	5	-.035	1	-7.481e-03	1	0	1	-2.502e-03	3
837	N483A	max	.044	3	.068	2	.04	2	4.243e-03	2	0	1	2.69e-03	4
838		min	-.039	4	-.195	5	-.035	1	-7.51e-03	1	0	1	-2.533e-03	3
839	N484A	max	.045	3	.079	2	.041	2	4.408e-03	2	0	1	2.55e-03	4
840		min	-.04	4	-.215	5	-.035	1	-7.415e-03	1	0	1	-2.688e-03	3
841	N485A	max	.045	3	.079	2	.041	2	4.378e-03	2	0	1	2.611e-03	4
842		min	-.04	4	-.214	5	-.035	1	-7.445e-03	1	0	1	-2.697e-03	3
843	N486A	max	.045	3	.078	2	.04	2	4.34e-03	2	0	1	2.682e-03	4
844		min	-.04	4	-.213	5	-.035	1	-7.478e-03	1	0	1	-2.716e-03	3
845	N487A	max	.045	3	.078	2	.04	2	4.301e-03	2	0	1	2.764e-03	4
846		min	-.04	4	-.212	5	-.035	1	-7.515e-03	1	0	1	-2.734e-03	3
847	N488A	max	.046	3	.088	2	.041	2	4.404e-03	2	0	1	2.66e-03	4
848		min	-.041	4	-.229	5	-.035	1	-7.439e-03	1	0	1	-2.871e-03	3
849	N489A	max	.046	3	.088	2	.041	2	4.383e-03	2	0	1	2.711e-03	4
850		min	-.041	4	-.229	5	-.035	1	-7.471e-03	1	0	1	-2.891e-03	3
851	N490A	max	.046	3	.088	2	.04	2	4.35e-03	2	0	1	2.771e-03	4
852		min	-.041	4	-.228	5	-.035	1	-7.502e-03	1	0	1	-2.913e-03	3
853	N491A	max	.046	3	.088	2	.04	2	4.294e-03	2	0	1	2.836e-03	4
854		min	-.041	4	-.228	5	-.035	1	-7.526e-03	1	0	1	-2.948e-03	3
855	N492A	max	.047	3	.097	2	.041	2	4.361e-03	2	3.324e-04	4	2.779e-03	4
856		min	-.042	4	-.243	5	-.035	1	-7.493e-03	1	-3.665e-04	3	-3.057e-03	3
857	N493A	max	.047	3	.097	2	.041	2	4.346e-03	2	3.581e-04	4	2.823e-03	4
858		min	-.042	4	-.243	1	-.035	1	-7.53e-03	1	-3.613e-04	3	-3.087e-03	3
859	N494A	max	.047	3	.097	2	.04	2	4.325e-03	2	3.837e-04	4	2.874e-03	4
860		min	-.042	4	-.244	1	-.035	1	-7.57e-03	1	-3.581e-04	3	-3.123e-03	3
861	N495A	max	.046	3	.089	2	.039	2	3.986e-03	2	0	1	3.034e-03	4
862		min	-.041	4	-.229	5	-.034	1	-7.501e-03	1	0	1	-2.998e-03	3
863	N496A	max	.045	3	.079	2	.04	2	4.249e-03	2	0	1	2.922e-03	4
864		min	-.04	4	-.212	5	-.034	1	-7.578e-03	1	0	1	-2.817e-03	3
865	N497A	max	.044	3	.069	2	.04	2	4.199e-03	2	0	1	2.781e-03	4
866		min	-.039	4	-.195	5	-.034	1	-7.539e-03	1	0	1	-2.588e-03	3
867	N498A	max	.047	3	.093	2	.039	2	3.825e-03	2	2.168e-04	4	3.185e-03	4
868		min	-.041	4	-.236	1	-.034	1	-7.535e-03	1	-3.99e-04	3	-2.928e-03	3
869	N499A	max	.046	3	.084	2	.039	2	4.176e-03	2	0	1	3.096e-03	4
870		min	-.04	4	-.221	5	-.034	1	-7.623e-03	1	0	1	-2.968e-03	3
871	N500A	max	.045	3	.075	2	.039	2	4.126e-03	2	0	1	2.983e-03	4
872		min	-.039	4	-.205	5	-.034	1	-7.566e-03	1	0	1	-2.808e-03	3
873	N501A	max	.044	3	.066	2	.039	2	4.211e-03	2	0	1	2.857e-03	4
874		min	-.038	4	-.189	5	-.034	1	-7.624e-03	1	0	1	-2.584e-03	3
875	N502A	max	.043	3	.056	2	.04	2	4.146e-03	2	0	1	2.728e-03	4
876		min	-.037	4	-.174	5	-.034	1	-7.609e-03	1	0	1	-2.348e-03	3
877	N503A	max	.046	3	.088	2	.038	2	4.236e-03	2	6.287e-04	4	3.223e-03	4
878		min	-.041	4	-.227	5	-.033	1	-7.704e-03	1	-3.494e-04	3	-3.19e-03	3
879	N504A	max	.045	3	.08	2	.038	2	4.108e-03	2	0	1	3.149e-03	4
880		min	-.04	4	-.212	5	-.034	1	-7.612e-03	1	0	1	-2.968e-03	3
881	N505A	max	.045	3	.071	2	.039	2	4.177e-03	2	0	1	3.045e-03	4
882		min	-.039	4	-.198	5	-.034	1	-7.655e-03	1	0	1	-2.818e-03	3
883	N506A	max	.044	3	.063	2	.039	2	4.12e-03	2	0	1	2.935e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
884		min	-.038	4	-.183	5	-.034	1	-7.662e-03	1	0	1	-2.637e-03	3
885	N507A	max	.043	3	.054	2	.039	2	4.139e-03	2	0	1	2.827e-03	4
886		min	-.037	4	-.169	5	-.034	1	-7.707e-03	1	0	1	-2.398e-03	3
887	N508A	max	.045	3	.083	2	.038	2	4.057e-03	2	3.976e-04	4	3.249e-03	4
888		min	-.04	4	-.217	5	-.033	1	-7.621e-03	1	-3.713e-04	3	-3.104e-03	3
889	N509A	max	.045	3	.075	2	.038	2	4.196e-03	2	0	1	3.187e-03	4
890		min	-.039	4	-.204	5	-.033	1	-7.693e-03	1	0	1	-3.044e-03	3
891	N510A	max	.044	3	.068	2	.038	2	4.129e-03	2	0	1	3.103e-03	4
892		min	-.038	4	-.19	5	-.033	1	-7.7e-03	1	0	1	-2.897e-03	3
893	N511A	max	.043	3	.06	2	.039	2	4.114e-03	2	0	1	3.009e-03	4
894		min	-.037	4	-.177	5	-.034	1	-7.752e-03	1	0	1	-2.707e-03	3
895	N512A	max	.043	3	.052	2	.039	2	4.055e-03	2	0	1	2.916e-03	4
896		min	-.036	4	-.164	5	-.034	1	-7.771e-03	1	0	1	-2.492e-03	3
897	N513A	max	.044	3	.071	2	.037	2	4.154e-03	2	0	1	3.221e-03	4
898		min	-.038	4	-.196	5	-.033	1	-7.728e-03	1	0	1	-3.147e-03	3
899	N514A	max	.044	3	.064	2	.038	2	4.134e-03	2	0	1	3.149e-03	4
900		min	-.037	4	-.183	5	-.033	1	-7.782e-03	1	0	1	-2.995e-03	3
901	N515A	max	.043	3	.057	2	.038	2	4.06e-03	2	0	1	3.074e-03	4
902		min	-.037	4	-.171	5	-.033	1	-7.82e-03	1	0	1	-2.829e-03	3
903	N516A	max	.044	3	.072	2	.036	2	4.149e-03	2	5.515e-04	4	3.284e-03	4
904		min	-.039	4	-.198	5	-.032	1	-7.738e-03	1	-3.658e-04	3	-3.39e-03	3
905	N517A	max	.044	3	.066	2	.037	2	4.167e-03	2	0	1	3.239e-03	4
906		min	-.038	4	-.187	5	-.033	1	-7.813e-03	1	0	1	-3.277e-03	3
907	N518A	max	.043	3	.059	2	.037	2	4.085e-03	2	0	1	3.182e-03	4
908		min	-.037	4	-.175	5	-.033	1	-7.853e-03	1	0	1	-3.128e-03	3
909	N519A	max	.043	3	.053	2	.037	2	4.021e-03	2	0	1	3.117e-03	4
910		min	-.036	4	-.164	5	-.033	1	-7.915e-03	1	0	1	-2.948e-03	3
911	N520A	max	.042	3	.047	2	.038	2	3.943e-03	2	0	1	3.059e-03	4
912		min	-.035	4	-.152	5	-.033	1	-7.967e-03	1	0	1	-2.756e-03	3
913	N521A	max	.044	3	.067	2	.035	2	4.217e-03	2	7.018e-04	4	3.283e-03	4
914		min	-.038	4	-.189	5	-.032	1	-7.854e-03	1	-3.626e-04	3	-3.59e-03	3
915	N522A	max	.043	3	.061	2	.036	2	4.116e-03	2	0	1	3.254e-03	4
916		min	-.037	4	-.178	5	-.032	1	-7.878e-03	1	0	1	-3.439e-03	3
917	N523A	max	.043	3	.055	2	.036	2	4.045e-03	2	0	1	3.204e-03	4
918		min	-.036	4	-.167	5	-.032	1	-7.944e-03	1	0	1	-3.278e-03	3
919	N524A	max	.042	3	.049	2	.037	2	3.955e-03	2	0	1	3.152e-03	4
920		min	-.035	4	-.156	5	-.033	1	-8.006e-03	1	0	1	-3.104e-03	3
921	N525A	max	.042	3	.044	2	.037	2	3.883e-03	2	0	1	3.105e-03	4
922		min	-.034	4	-.145	5	-.033	1	-8.067e-03	1	0	1	-2.913e-03	3
923	N526A	max	.043	3	.061	2	.035	2	4.116e-03	2	7.001e-04	4	3.289e-03	4
924		min	-.037	4	-.18	5	-.032	1	-7.883e-03	1	-3.812e-04	3	-3.767e-03	3
925	N527A	max	.043	3	.056	2	.035	2	4.072e-03	2	0	1	3.257e-03	4
926		min	-.036	4	-.17	5	-.032	1	-7.971e-03	1	0	1	-3.617e-03	3
927	N528A	max	.042	3	.051	2	.036	2	3.977e-03	2	0	1	3.22e-03	4
928		min	-.035	4	-.159	5	-.032	1	-8.03e-03	1	0	1	-3.46e-03	3
929	N529A	max	.042	3	.046	2	.036	2	3.886e-03	2	0	1	3.179e-03	4
930		min	-.034	4	-.149	5	-.032	1	-8.102e-03	1	0	1	-3.284e-03	3
931	N530A	max	.041	3	.04	2	.037	2	3.802e-03	2	0	1	3.14e-03	4
932		min	-.033	4	-.138	5	-.033	1	-8.166e-03	1	0	1	-3.087e-03	3
933	N531A	max	.042	3	.051	2	.034	2	3.991e-03	2	0	1	3.258e-03	4
934		min	-.035	4	-.161	5	-.031	1	-8.046e-03	1	0	1	-3.821e-03	3
935	N532A	max	.042	3	.046	2	.035	2	3.898e-03	2	0	1	3.229e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
936		min	-.034	4	-.151	5	-.032	1	-8.12e-03	1	0	1	-3.66e-03	3
937	N533A	max	.041	3	.042	2	.035	2	3.8e-03	2	0	1	3.197e-03	4
938		min	-.033	4	-.142	5	-.032	1	-8.194e-03	1	0	1	-3.489e-03	3
939	N534A	max	.042	3	.049	2	.033	2	3.963e-03	2	8.487e-04	4	3.273e-03	4
940		min	-.035	4	-.162	5	-.031	1	-8.034e-03	1	-4.257e-04	3	-4.208e-03	3
941	N535A	max	.042	3	.045	2	.033	2	3.891e-03	2	0	1	3.251e-03	4
942		min	-.034	4	-.153	5	-.031	1	-8.143e-03	1	0	1	-4.023e-03	3
943	N536A	max	.041	3	.041	2	.034	2	3.787e-03	2	0	1	3.23e-03	4
944		min	-.033	4	-.143	5	-.031	1	-8.212e-03	1	0	1	-3.859e-03	3
945	N537A	max	.041	3	.037	2	.034	2	3.681e-03	2	0	1	3.207e-03	4
946		min	-.032	4	-.133	5	-.032	1	-8.283e-03	1	0	1	-3.683e-03	3
947	N538A	max	.04	3	.033	2	.035	2	3.578e-03	2	0	1	3.189e-03	4
948		min	-.031	4	-.123	5	-.032	1	-8.366e-03	1	0	1	-3.512e-03	3
949	N539A	max	.042	3	.043	2	.031	2	3.865e-03	2	9.306e-04	4	3.234e-03	4
950		min	-.034	4	-.154	5	-.03	1	-8.185e-03	1	-4.528e-04	3	-4.342e-03	3
951	N540A	max	.041	3	.04	2	.032	2	3.761e-03	2	0	1	3.245e-03	4
952		min	-.033	4	-.144	5	-.031	1	-8.213e-03	1	0	1	-4.244e-03	3
953	N541A	max	.041	3	.036	2	.033	2	3.65e-03	2	0	1	3.231e-03	4
954		min	-.032	4	-.134	5	-.031	1	-8.283e-03	1	0	1	-4.075e-03	3
955	N542A	max	.04	3	.033	2	.034	2	3.541e-03	2	0	1	3.215e-03	4
956		min	-.031	4	-.124	5	-.031	1	-8.357e-03	1	0	1	-3.899e-03	3
957	N543A	max	.04	3	.029	2	.034	2	3.437e-03	2	0	1	3.204e-03	4
958		min	-.03	4	-.115	5	-.032	1	-8.427e-03	5	0	1	-3.732e-03	3
959	N544A	max	.041	3	.037	2	.03	2	3.698e-03	2	9.627e-04	4	3.263e-03	4
960		min	-.032	4	-.145	5	-.03	1	-8.14e-03	1	-4.973e-04	3	-4.664e-03	3
961	N545A	max	.041	3	.034	2	.031	2	3.61e-03	2	0	1	3.239e-03	4
962		min	-.031	4	-.135	5	-.03	1	-8.282e-03	1	0	1	-4.46e-03	3
963	N546A	max	.04	3	.031	2	.032	2	3.5e-03	2	0	1	3.228e-03	4
964		min	-.03	4	-.126	5	-.031	1	-8.334e-03	1	0	1	-4.298e-03	3
965	N547A	max	.04	3	.028	2	.033	2	3.376e-03	2	0	1	3.221e-03	4
966		min	-.03	4	-.116	5	-.031	1	-8.36e-03	5	0	1	-4.132e-03	3
967	N548A	max	.039	3	.025	2	.033	2	3.277e-03	2	0	1	3.218e-03	4
968		min	-.029	4	-.106	5	-.031	1	-8.484e-03	5	0	1	-3.984e-03	3
969	N549A	max	.04	3	.029	2	.03	2	3.449e-03	2	0	1	3.233e-03	4
970		min	-.03	4	-.127	5	-.03	1	-8.298e-03	1	0	1	-4.677e-03	3
971	N550A	max	.039	3	.026	2	.031	2	3.319e-03	2	0	1	3.23e-03	4
972		min	-.029	4	-.117	5	-.03	1	-8.295e-03	5	0	1	-4.524e-03	3
973	N551A	max	.039	3	.024	2	.032	2	3.212e-03	2	0	1	3.226e-03	4
974		min	-.028	4	-.108	5	-.03	1	-8.298e-03	5	0	1	-4.377e-03	3
975	N552A	max	.038	3	.019	4	.032	2	2.883e-03	2	0	1	3.234e-03	4
976		min	-.026	4	-.09	7	-.03	1	-7.724e-03	1	0	1	-4.675e-03	3
977	N553A	max	.037	3	.022	4	.031	2	2.678e-03	2	0	1	3.215e-03	4
978		min	-.024	4	-.085	7	-.03	1	-6.573e-03	1	0	1	-5.102e-03	3
979	N554A	max	.036	3	.025	4	.03	2	2.83e-03	2	0	1	3.246e-03	4
980		min	-.023	4	-.083	7	-.03	1	-4.943e-03	1	0	1	-5.655e-03	3
981	N555A	max	.038	3	.023	4	.031	2	3.002e-03	2	0	1	3.218e-03	4
982		min	-.027	4	-.1	7	-.03	1	-7.834e-03	1	0	1	-4.576e-03	3
983	N556A	max	.037	3	.026	4	.03	2	2.882e-03	2	0	1	3.219e-03	4
984		min	-.025	4	-.094	7	-.03	1	-6.985e-03	1	0	1	-4.817e-03	3
985	N557A	max	.036	3	.03	4	.029	2	2.718e-03	2	0	1	3.253e-03	4
986		min	-.024	4	-.091	7	-.029	1	-5.33e-03	1	0	1	-5.104e-03	3
987	N558A	max	.035	3	.035	4	.027	2	2.119e-03	2	4.306e-04	4	3.133e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
988		min	-.022	4	-.094	3	-.029	1	-3.363e-03	1	-8.058e-04	3	-5.838e-03	3
989	N559A	max	.039	3	.026	4	.03	2	3.166e-03	2	0	1	3.223e-03	4
990		min	-.028	4	-.109	7	-.03	1	-8.146e-03	5	0	1	-4.685e-03	3
991	N560A	max	.038	3	.03	4	.029	2	2.977e-03	2	0	1	3.206e-03	4
992		min	-.026	4	-.103	7	-.029	1	-7.467e-03	1	0	1	-4.754e-03	3
993	N561A	max	.037	3	.034	4	.029	2	2.943e-03	2	0	1	3.198e-03	4
994		min	-.025	4	-.099	3	-.029	1	-6.278e-03	1	0	1	-5.152e-03	3
995	N562A	max	.035	3	.039	4	.028	2	2.141e-03	2	3.508e-04	4	3.161e-03	4
996		min	-.023	4	-.103	3	-.029	1	-3.354e-03	1	-7.498e-04	3	-5.877e-03	3
997	N563A	max	.039	3	.03	4	.029	2	3.263e-03	2	0	1	3.241e-03	4
998		min	-.029	4	-.119	7	-.029	1	-8.297e-03	5	0	1	-4.849e-03	3
999	N564A	max	.038	3	.034	4	.029	2	3.173e-03	2	0	1	3.219e-03	4
1000		min	-.027	4	-.113	7	-.029	1	-8.099e-03	5	0	1	-4.909e-03	3
1001	N565A	max	.038	3	.038	4	.028	2	3.032e-03	2	0	1	3.315e-03	4
1002		min	-.026	4	-.109	3	-.029	1	-6.828e-03	1	0	1	-5.124e-03	3
1003	N566A	max	.036	3	.043	4	.029	2	2.161e-03	2	2.912e-04	4	3.182e-03	4
1004		min	-.023	4	-.113	3	-.029	1	-3.327e-03	1	-7.114e-04	3	-5.918e-03	3
1005	N567A	max	.04	3	.034	4	.029	2	3.364e-03	2	1.016e-03	4	3.286e-03	4
1006		min	-.029	4	-.129	7	-.029	1	-8.081e-03	1	-5.882e-04	3	-5.019e-03	3
1007	N568A	max	.039	3	.038	4	.028	2	3.269e-03	2	1.033e-03	4	3.213e-03	4
1008		min	-.028	4	-.123	7	-.029	1	-8.508e-03	5	-6.189e-04	3	-4.719e-03	3
1009	N569A	max	.038	3	.043	4	.027	2	3.066e-03	2	1.047e-03	4	3.338e-03	4
1010		min	-.027	4	-.119	3	-.029	1	-7.264e-03	1	-6.968e-04	3	-4.697e-03	3
1011	N570A	max	.03	3	.041	4	.029	2	2.828e-03	2	0	1	3.516e-03	4
1012		min	-.022	4	-.103	3	-.029	1	-1.892e-03	1	0	1	-7.207e-03	3
1013	N571A	max	.029	3	.043	4	.029	2	2.926e-03	2	0	1	3.665e-03	4
1014		min	-.022	4	-.108	3	-.03	1	-1.767e-03	1	0	1	-7.157e-03	3
1015	N572A	max	.029	3	.045	4	.029	2	3.003e-03	2	0	1	3.802e-03	4
1016		min	-.023	4	-.114	3	-.03	1	-1.681e-03	1	0	1	-7.061e-03	3
1017	N573A	max	.031	3	.044	4	.029	2	2.694e-03	2	0	1	3.358e-03	4
1018		min	-.021	4	-.107	3	-.029	1	-2.22e-03	1	0	1	-7.059e-03	3
1019	N574A	max	.03	3	.046	4	.029	2	2.816e-03	2	0	1	3.512e-03	4
1020		min	-.022	4	-.112	3	-.029	1	-2.054e-03	1	0	1	-7.125e-03	3
1021	N575A	max	.029	3	.048	4	.03	2	2.913e-03	2	0	1	3.668e-03	4
1022		min	-.022	4	-.117	3	-.029	1	-1.947e-03	1	0	1	-7.076e-03	3
1023	N576A	max	.029	3	.051	4	.03	2	2.993e-03	2	0	1	3.813e-03	4
1024		min	-.023	4	-.123	3	-.029	1	-1.874e-03	1	0	1	-6.978e-03	3
1025	N577A	max	.029	3	.053	4	.03	2	3.061e-03	2	0	1	3.939e-03	4
1026		min	-.024	4	-.129	3	-.029	1	-1.818e-03	1	0	1	-6.858e-03	3
1027	N578A	max	.031	3	.048	4	.03	2	2.692e-03	2	0	1	3.356e-03	4
1028		min	-.021	4	-.116	3	-.029	1	-2.339e-03	1	0	1	-7.076e-03	3
1029	N579A	max	.03	3	.05	4	.03	2	2.8e-03	2	0	1	3.518e-03	4
1030		min	-.022	4	-.121	3	-.029	1	-2.226e-03	1	0	1	-7.079e-03	3
1031	N580A	max	.03	3	.053	4	.03	2	2.897e-03	2	0	1	3.68e-03	4
1032		min	-.022	4	-.126	3	-.029	1	-2.136e-03	1	0	1	-7.008e-03	3
1033	N581A	max	.029	3	.056	4	.031	2	2.982e-03	2	0	1	3.827e-03	4
1034		min	-.023	4	-.132	3	-.029	1	-2.065e-03	1	0	1	-6.903e-03	3
1035	N582A	max	.029	3	.059	4	.031	2	3.059e-03	2	0	1	3.957e-03	4
1036		min	-.023	4	-.139	3	-.029	1	-2.006e-03	1	0	1	-6.789e-03	3
1037	N583A	max	.031	3	.052	4	.031	2	2.673e-03	2	0	1	3.363e-03	4
1038		min	-.021	4	-.125	3	-.029	1	-2.492e-03	1	0	1	-7.074e-03	3
1039	N584A	max	.03	3	.055	4	.031	2	2.783e-03	2	0	1	3.532e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1040		min	-.022	4	-.13	3	-.029	1	-2.4e-03	1	0	1	-7.027e-03	3
1041	N585A	max	.03	3	.058	4	.031	2	2.878e-03	2	0	1	3.694e-03	4
1042		min	-.022	4	-.136	3	-.029	1	-2.323e-03	1	0	1	-6.936e-03	3
1043	N586A	max	.029	3	.061	4	.031	2	2.975e-03	2	0	1	3.844e-03	4
1044		min	-.023	4	-.142	3	-.029	1	-2.251e-03	1	0	1	-6.832e-03	3
1045	N587A	max	.029	3	.064	4	.031	2	3.055e-03	2	0	1	3.973e-03	4
1046		min	-.023	4	-.148	3	-.029	1	-2.179e-03	1	0	1	-6.72e-03	3
1047	N588A	max	.031	3	.059	4	.032	2	2.743e-03	2	-8.567e-05	1	3.541e-03	4
1048		min	-.022	4	-.139	3	-.029	1	-2.561e-03	1	-8.488e-04	6	-6.935e-03	3
1049	N589A	max	.03	3	.062	4	.032	2	2.876e-03	2	-1.594e-04	1	3.701e-03	4
1050		min	-.022	4	-.145	3	-.029	1	-2.495e-03	1	-8.725e-04	6	-6.86e-03	3
1051	N590A	max	.029	3	.066	4	.032	2	2.94e-03	2	-2.213e-04	1	3.848e-03	4
1052		min	-.023	4	-.151	3	-.029	1	-2.405e-03	1	-8.413e-04	8	-6.756e-03	3
1053	N591A	max	.028	3	.053	4	.03	2	3.168e-03	2	0	1	4.195e-03	4
1054		min	-.026	4	-.133	3	-.03	1	-1.459e-03	1	0	1	-6.556e-03	3
1055	N592A	max	.028	3	.051	4	.03	2	3.161e-03	2	0	1	4.121e-03	4
1056		min	-.025	4	-.129	3	-.03	1	-1.515e-03	1	0	1	-6.67e-03	3
1057	N593A	max	.028	3	.049	4	.03	2	3.118e-03	2	0	1	4.041e-03	4
1058		min	-.024	4	-.124	3	-.03	1	-1.55e-03	1	0	1	-6.796e-03	3
1059	N594A	max	.027	3	.062	4	.031	2	3.202e-03	2	0	1	4.215e-03	4
1060		min	-.027	4	-.15	3	-.029	1	-1.622e-03	1	0	1	-6.389e-03	3
1061	N595A	max	.028	3	.06	4	.031	2	3.222e-03	2	0	1	4.198e-03	4
1062		min	-.026	4	-.145	3	-.029	1	-1.69e-03	1	0	1	-6.511e-03	3
1063	N596A	max	.028	3	.058	4	.031	2	3.161e-03	2	0	1	4.13e-03	4
1064		min	-.025	4	-.139	3	-.029	1	-1.69e-03	1	0	1	-6.623e-03	3
1065	N597A	max	.028	3	.056	4	.03	2	3.122e-03	2	0	1	4.044e-03	4
1066		min	-.024	4	-.134	3	-.029	1	-1.752e-03	1	0	1	-6.742e-03	3
1067	N598A	max	.027	3	.07	4	.031	2	3.289e-03	2	0	1	4.289e-03	4
1068		min	-.027	4	-.162	3	-.029	1	-1.846e-03	1	0	1	-6.399e-03	3
1069	N599A	max	.028	3	.067	4	.031	2	3.211e-03	2	0	1	4.206e-03	4
1070		min	-.026	4	-.156	3	-.029	1	-1.819e-03	1	0	1	-6.464e-03	3
1071	N600A	max	.028	3	.064	4	.031	2	3.189e-03	2	0	1	4.153e-03	4
1072		min	-.025	4	-.15	3	-.029	1	-1.887e-03	1	0	1	-6.572e-03	3
1073	N601A	max	.028	3	.062	4	.031	2	3.122e-03	2	0	1	4.062e-03	4
1074		min	-.024	4	-.144	3	-.029	1	-1.932e-03	1	0	1	-6.677e-03	3
1075	N602A	max	.027	3	.078	4	.032	2	3.303e-03	2	0	1	4.256e-03	4
1076		min	-.027	4	-.174	3	-.028	1	-1.953e-03	1	0	1	-6.352e-03	3
1077	N603A	max	.028	3	.074	4	.032	2	3.269e-03	2	0	1	4.247e-03	4
1078		min	-.026	4	-.167	3	-.029	1	-2.006e-03	1	0	1	-6.442e-03	3
1079	N604A	max	.028	3	.071	4	.032	2	3.188e-03	2	0	1	4.165e-03	4
1080		min	-.025	4	-.16	3	-.029	1	-2.029e-03	1	0	1	-6.516e-03	3
1081	N605A	max	.028	3	.068	4	.032	2	3.14e-03	2	0	1	4.086e-03	4
1082		min	-.024	4	-.154	3	-.029	1	-2.115e-03	1	0	1	-6.619e-03	3
1083	N606A	max	.028	3	.082	4	.032	2	3.212e-03	2	-1.11e-04	3	4.222e-03	4
1084		min	-.026	4	-.178	3	-.028	1	-2.033e-03	1	-7.023e-04	8	-6.4e-03	3
1085	N607A	max	.028	3	.078	4	.032	2	3.259e-03	2	-1.962e-04	3	4.185e-03	4
1086		min	-.025	4	-.171	3	-.028	1	-2.243e-03	1	-8.269e-04	8	-6.484e-03	3
1087	N608A	max	.028	3	.074	4	.032	2	3.104e-03	2	-1.663e-04	3	4.086e-03	4
1088		min	-.024	4	-.164	3	-.028	1	-2.224e-03	1	-8.058e-04	8	-6.56e-03	3
1089	N609A	max	.027	3	.055	4	.031	2	3.164e-03	2	0	1	4.242e-03	4
1090		min	-.027	4	-.141	3	-.03	1	-1.414e-03	1	0	1	-6.3e-03	3
1091	N610A	max	.027	3	.056	4	.031	2	3.268e-03	2	0	1	4.301e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1092		min	-.028	4	-.145	3	-.03	1	-1.555e-03	1	0	1	-6.227e-03	3
1093	N611A	max	.027	3	.057	4	.031	2	3.274e-03	2	0	1	4.296e-03	4
1094		min	-.028	4	-.148	3	-.03	1	-1.596e-03	1	0	1	-6.128e-03	3
1095	N612A	max	.027	3	.066	4	.031	2	3.23e-03	2	0	1	4.249e-03	4
1096		min	-.027	4	-.158	3	-.029	1	-1.659e-03	1	0	1	-6.278e-03	3
1097	N613A	max	.027	3	.066	4	.031	2	3.369e-03	2	0	1	4.305e-03	4
1098		min	-.028	4	-.16	3	-.029	1	-1.807e-03	1	0	1	-6.235e-03	3
1099	N614A	max	.027	3	.066	4	.031	2	3.319e-03	2	0	1	4.279e-03	4
1100		min	-.028	4	-.162	3	-.029	1	-1.748e-03	1	0	1	-6.144e-03	3
1101	N615A	max	.026	3	.066	4	.031	2	3.354e-03	2	0	1	4.252e-03	4
1102		min	-.029	4	-.164	3	-.029	1	-1.817e-03	1	0	1	-6.053e-03	3
1103	N616A	max	.026	3	.067	4	.031	2	3.433e-03	2	0	1	4.237e-03	4
1104		min	-.029	4	-.166	3	-.029	1	-1.944e-03	1	0	1	-5.977e-03	3
1105	N617A	max	.027	3	.078	4	.032	2	3.456e-03	2	0	1	4.329e-03	4
1106		min	-.028	4	-.177	3	-.029	1	-2.014e-03	1	0	1	-6.247e-03	3
1107	N618A	max	.027	3	.077	4	.032	2	3.307e-03	2	0	1	4.262e-03	4
1108		min	-.028	4	-.178	3	-.029	1	-1.826e-03	1	0	1	-6.151e-03	3
1109	N619A	max	.026	3	.077	4	.032	2	3.415e-03	2	0	1	4.223e-03	4
1110		min	-.029	4	-.179	3	-.029	1	-1.966e-03	1	0	1	-6.073e-03	3
1111	N620A	max	.026	3	.076	4	.031	2	3.524e-03	2	0	1	4.217e-03	4
1112		min	-.029	4	-.18	3	-.029	1	-2.111e-03	1	0	1	-6.015e-03	3
1113	N621A	max	.026	3	.076	4	.031	2	3.59e-03	2	0	1	4.214e-03	4
1114		min	-.03	4	-.18	3	-.029	1	-2.206e-03	1	0	1	-5.962e-03	3
1115	N622A	max	.026	3	.089	4	.032	2	3.221e-03	2	0	1	4.174e-03	4
1116		min	-.029	4	-.196	3	-.028	1	-1.76e-03	1	0	1	-6.172e-03	3
1117	N623A	max	.026	3	.088	4	.032	2	3.538e-03	2	0	1	4.16e-03	4
1118		min	-.029	4	-.196	3	-.028	1	-2.16e-03	1	0	1	-6.131e-03	3
1119	N624A	max	.026	3	.087	4	.032	2	3.666e-03	2	0	1	4.185e-03	4
1120		min	-.029	4	-.195	3	-.028	1	-2.32e-03	1	0	1	-6.098e-03	3
1121	N625A	max	.026	3	.086	4	.032	2	3.718e-03	2	0	1	4.195e-03	4
1122		min	-.03	4	-.195	3	-.028	1	-2.389e-03	1	0	1	-6.055e-03	3
1123	N626	max	.026	3	.085	4	.032	2	3.762e-03	2	0	1	4.195e-03	4
1124		min	-.03	4	-.195	3	-.029	1	-2.451e-03	1	0	1	-6.005e-03	3
1125	N627	max	.026	3	.099	4	.032	2	3.899e-03	2	-1.386e-04	3	4.162e-03	4
1126		min	-.029	4	-.214	3	-.028	1	-2.598e-03	1	-5.773e-04	8	-6.369e-03	3
1127	N628	max	.026	3	.098	4	.032	2	3.905e-03	2	-1.646e-04	3	4.159e-03	4
1128		min	-.03	4	-.212	3	-.028	1	-2.616e-03	1	-5.879e-04	8	-6.277e-03	3
1129	N629	max	.026	3	.096	4	.032	2	3.915e-03	2	-1.673e-04	2	4.155e-03	4
1130		min	-.03	4	-.211	3	-.028	1	-2.636e-03	1	-5.759e-04	8	-6.194e-03	3
1131	N630	max	.026	3	.057	4	.031	2	3.343e-03	2	0	1	4.251e-03	4
1132		min	-.029	4	-.153	3	-.03	1	-1.784e-03	1	0	1	-5.927e-03	3
1133	N631	max	.026	3	.057	4	.031	2	3.396e-03	2	0	1	4.225e-03	4
1134		min	-.03	4	-.154	3	-.03	1	-1.902e-03	1	0	1	-5.843e-03	3
1135	N632	max	.026	3	.057	4	.031	2	3.446e-03	2	0	1	4.192e-03	4
1136		min	-.03	4	-.156	3	-.03	1	-2.015e-03	1	0	1	-5.765e-03	3
1137	N633	max	.026	3	.066	4	.031	2	3.489e-03	2	0	1	4.222e-03	4
1138		min	-.03	4	-.167	3	-.03	1	-2.042e-03	1	0	1	-5.903e-03	3
1139	N634	max	.026	3	.066	4	.031	2	3.541e-03	2	0	1	4.202e-03	4
1140		min	-.03	4	-.167	3	-.03	1	-2.139e-03	1	0	1	-5.83e-03	3
1141	N635	max	.025	3	.065	4	.031	2	3.593e-03	2	0	1	4.177e-03	4
1142		min	-.03	4	-.168	3	-.03	1	-2.237e-03	1	0	1	-5.761e-03	3
1143	N636	max	.025	3	.065	4	.031	2	3.646e-03	2	0	1	4.145e-03	4

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	-.031	4	-.169	3	-.03	1	-2.334e-03	1	0	1	-5.697e-03	3
1145	N637	max	.026	3	.075	4	.031	2	3.643e-03	2	0	1	4.207e-03	4
1146		min	-.03	4	-.18	3	-.029	1	-2.289e-03	1	0	1	-5.9e-03	3
1147	N638	max	.025	3	.074	4	.031	2	3.688e-03	2	0	1	4.193e-03	4
1148		min	-.03	4	-.18	3	-.029	1	-2.365e-03	1	0	1	-5.838e-03	3
1149	N639	max	.025	3	.073	4	.031	2	3.733e-03	2	0	1	4.172e-03	4
1150		min	-.031	4	-.181	3	-.029	1	-2.439e-03	1	0	1	-5.777e-03	3
1151	N640	max	.025	3	.072	4	.031	2	3.779e-03	2	0	1	4.145e-03	4
1152		min	-.031	4	-.181	3	-.029	1	-2.513e-03	1	0	1	-5.718e-03	3
1153	N641	max	.025	3	.084	4	.032	2	3.796e-03	2	0	1	4.189e-03	4
1154		min	-.03	4	-.194	3	-.029	1	-2.504e-03	1	0	1	-5.94e-03	3
1155	N642	max	.025	3	.083	4	.032	2	3.83e-03	2	0	1	4.176e-03	4
1156		min	-.031	4	-.193	3	-.029	1	-2.556e-03	1	0	1	-5.876e-03	3
1157	N643	max	.025	3	.081	4	.031	2	3.867e-03	2	0	1	4.157e-03	4
1158		min	-.031	4	-.193	3	-.029	1	-2.61e-03	1	0	1	-5.813e-03	3
1159	N644	max	.025	3	.08	4	.031	2	3.909e-03	2	0	1	4.134e-03	4
1160		min	-.031	4	-.192	3	-.029	1	-2.667e-03	1	0	1	-5.755e-03	3
1161	N645	max	.025	3	.093	4	.032	2	3.951e-03	2	-1.467e-04	2	4.142e-03	4
1162		min	-.031	4	-.208	3	-.028	1	-2.689e-03	1	-5.302e-04	8	-6.033e-03	3
1163	N646	max	.025	3	.091	4	.032	2	3.978e-03	2	-1.351e-04	2	4.13e-03	4
1164		min	-.031	4	-.207	3	-.028	1	-2.724e-03	1	-5.025e-04	5	-5.955e-03	3
1165	N647	max	.025	3	.089	4	.032	2	4.011e-03	2	-1.236e-04	2	4.115e-03	4
1166		min	-.031	4	-.205	3	-.029	1	-2.763e-03	1	-4.719e-04	5	-5.885e-03	3
1167	N648	max	.025	3	.056	4	.031	2	3.551e-03	2	0	1	4.104e-03	4
1168		min	-.031	4	-.157	3	-.03	1	-2.234e-03	1	0	1	-5.61e-03	3
1169	N649	max	.025	3	.055	4	.031	2	3.603e-03	2	0	1	4.054e-03	4
1170		min	-.031	4	-.157	3	-.03	1	-2.334e-03	1	0	1	-5.546e-03	3
1171	N650	max	.024	3	.054	4	.031	2	3.658e-03	2	0	1	4.e-03	4
1172		min	-.031	4	-.157	3	-.03	1	-2.433e-03	1	0	1	-5.489e-03	3
1173	N651	max	.025	3	.064	4	.031	2	3.689e-03	2	0	1	4.108e-03	4
1174		min	-.031	4	-.169	3	-.03	1	-2.412e-03	1	0	1	-5.633e-03	3
1175	N652	max	.024	3	.062	4	.031	2	3.739e-03	2	0	1	4.064e-03	4
1176		min	-.031	4	-.168	3	-.03	1	-2.496e-03	1	0	1	-5.573e-03	3
1177	N653	max	.024	3	.061	4	.031	2	3.798e-03	2	0	1	4.018e-03	4
1178		min	-.031	4	-.168	3	-.03	1	-2.587e-03	1	0	1	-5.52e-03	3
1179	N655	max	.025	3	.071	4	.031	2	3.823e-03	2	0	1	4.113e-03	4
1180		min	-.031	4	-.18	3	-.03	1	-2.58e-03	1	0	1	-5.659e-03	3
1181	N656	max	.024	3	.07	4	.031	2	3.873e-03	2	0	1	4.077e-03	4
1182		min	-.031	4	-.179	3	-.03	1	-2.652e-03	1	0	1	-5.605e-03	3
1183	N657	max	.024	3	.068	4	.031	2	3.929e-03	2	0	1	4.038e-03	4
1184		min	-.031	4	-.178	3	-.03	1	-2.727e-03	1	0	1	-5.556e-03	3
1185	N659	max	.024	3	.079	4	.031	2	3.952e-03	2	0	1	4.107e-03	4
1186		min	-.031	4	-.191	3	-.029	1	-2.723e-03	1	0	1	-5.698e-03	3
1187	N660	max	.024	3	.077	4	.031	2	4.001e-03	2	0	1	4.076e-03	4
1188		min	-.031	4	-.19	3	-.029	1	-2.782e-03	1	0	1	-5.646e-03	3
1189	N661	max	.024	3	.075	4	.031	2	4.055e-03	2	0	1	4.043e-03	4
1190		min	-.031	4	-.189	3	-.03	1	-2.846e-03	1	0	1	-5.6e-03	3
1191	N663	max	.024	3	.086	4	.031	2	4.092e-03	2	-9.659e-05	4	4.076e-03	4
1192		min	-.031	4	-.202	3	-.029	1	-2.852e-03	1	-3.975e-04	5	-5.764e-03	3
1193	N664	max	.024	3	.084	4	.031	2	4.14e-03	2	-5.3e-05	4	4.052e-03	4
1194		min	-.031	4	-.201	3	-.029	1	-2.901e-03	1	-3.576e-04	7	-5.713e-03	3
1195	N665	max	.023	3	.083	4	.031	2	4.193e-03	2	-6.736e-06	4	4.026e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1196		min	-.031	4	-.199	3	-.029	1	-2.953e-03	1	-3.218e-04	7	-5.669e-03	3
1197	N666	max	.031	3	.038	4	.028	2	2.584e-03	2	0	1	3.281e-03	4
1198		min	-.021	4	-.095	3	-.029	1	-2.303e-03	1	0	1	-7.001e-03	3
1199	N667	max	.031	3	.037	4	.028	2	2.472e-03	2	0	1	3.219e-03	4
1200		min	-.021	4	-.093	3	-.029	1	-2.524e-03	1	0	1	-6.811e-03	3
1201	N668	max	.032	3	.035	4	.027	2	2.338e-03	2	0	1	3.158e-03	4
1202		min	-.021	4	-.09	3	-.029	1	-2.804e-03	1	0	1	-6.58e-03	3
1203	N669	max	.031	3	.042	4	.029	2	2.621e-03	2	0	1	3.29e-03	4
1204		min	-.021	4	-.104	3	-.029	1	-2.325e-03	1	0	1	-6.948e-03	3
1205	N670	max	.032	3	.041	4	.028	2	2.527e-03	2	0	1	3.234e-03	4
1206		min	-.021	4	-.102	3	-.029	1	-2.484e-03	1	0	1	-6.763e-03	3
1207	N671	max	.032	3	.04	4	.028	2	2.413e-03	2	0	1	3.196e-03	4
1208		min	-.021	4	-.099	3	-.029	1	-2.699e-03	1	0	1	-6.459e-03	3
1209	N672	max	.033	3	.038	4	.028	2	2.263e-03	2	0	1	3.182e-03	4
1210		min	-.021	4	-.098	3	-.029	1	-2.991e-03	1	0	1	-6.326e-03	3
1211	N673	max	.032	3	.046	4	.03	2	2.632e-03	2	0	1	3.281e-03	4
1212		min	-.021	4	-.113	3	-.029	1	-2.407e-03	1	0	1	-7.024e-03	3
1213	N674	max	.032	3	.045	4	.029	2	2.573e-03	2	0	1	3.224e-03	4
1214		min	-.021	4	-.111	3	-.029	1	-2.477e-03	1	0	1	-6.902e-03	3
1215	N675	max	.033	3	.044	4	.029	2	2.487e-03	2	0	1	3.189e-03	4
1216		min	-.021	4	-.108	3	-.029	1	-2.622e-03	1	0	1	-6.688e-03	3
1217	N676	max	.033	3	.043	4	.029	2	2.347e-03	2	0	1	3.217e-03	4
1218		min	-.022	4	-.106	3	-.029	1	-2.934e-03	1	0	1	-6.223e-03	3
1219	N677	max	.032	3	.05	4	.03	2	2.628e-03	2	0	1	3.28e-03	4
1220		min	-.021	4	-.122	3	-.029	1	-2.518e-03	1	0	1	-7.079e-03	3
1221	N678	max	.032	3	.049	4	.03	2	2.555e-03	2	0	1	3.208e-03	4
1222		min	-.021	4	-.12	3	-.029	1	-2.607e-03	1	0	1	-7.071e-03	3
1223	N679	max	.033	3	.048	4	.03	2	2.534e-03	2	0	1	3.15e-03	4
1224		min	-.022	4	-.118	3	-.029	1	-2.59e-03	1	0	1	-7.005e-03	3
1225	N680	max	.034	3	.047	4	.03	2	2.43e-03	2	0	1	3.14e-03	4
1226		min	-.022	4	-.116	3	-.029	1	-2.803e-03	1	0	1	-6.831e-03	3
1227	N681	max	.032	3	.055	4	.031	2	2.579e-03	2	6.818e-05	1	3.312e-03	4
1228		min	-.021	4	-.131	3	-.029	1	-2.678e-03	1	-7.939e-04	6	-6.98e-03	3
1229	N682	max	.033	3	.053	4	.031	2	2.6e-03	2	1.281e-04	1	3.237e-03	4
1230		min	-.022	4	-.129	3	-.03	1	-2.545e-03	1	-7.761e-04	6	-7.015e-03	3
1231	N683	max	.034	3	.052	4	.031	2	2.411e-03	2	1.854e-04	4	3.19e-03	4
1232		min	-.022	4	-.127	3	-.03	1	-2.894e-03	1	-7.256e-04	6	-6.895e-03	3
1233	N684	max	.032	3	.033	4	.027	2	2.07e-03	2	5.298e-04	4	3.092e-03	4
1234		min	-.021	4	-.087	3	-.028	1	-3.337e-03	1	-8.771e-04	3	-5.789e-03	3
1235	N685	max	.033	3	.032	4	.026	2	2.07e-03	2	5.298e-04	4	3.092e-03	4
1236		min	-.021	4	-.086	3	-.028	1	-3.337e-03	1	-8.771e-04	3	-5.789e-03	3
1237	N686	max	.033	3	.037	4	.028	2	2.119e-03	2	4.306e-04	4	3.133e-03	4
1238		min	-.021	4	-.096	3	-.029	1	-3.363e-03	1	-8.058e-04	3	-5.838e-03	3
1239	N687	max	.034	3	.036	4	.028	2	2.119e-03	2	4.306e-04	4	3.133e-03	4
1240		min	-.022	4	-.095	3	-.029	1	-3.363e-03	1	-8.058e-04	3	-5.838e-03	3
1241	N688	max	.034	3	.041	4	.029	2	2.141e-03	2	3.508e-04	4	3.161e-03	4
1242		min	-.022	4	-.105	3	-.029	1	-3.354e-03	1	-7.498e-04	3	-5.877e-03	3
1243	N689	max	.035	3	.04	4	.028	2	2.141e-03	2	3.508e-04	4	3.161e-03	4
1244		min	-.022	4	-.104	3	-.029	1	-3.354e-03	1	-7.498e-04	3	-5.877e-03	3
1245	N690	max	.034	3	.046	4	.03	2	2.161e-03	2	2.912e-04	4	3.182e-03	4
1246		min	-.022	4	-.114	3	-.029	1	-3.327e-03	1	-7.114e-04	3	-5.918e-03	3
1247	N691	max	.035	3	.045	4	.029	2	2.161e-03	2	2.912e-04	4	3.182e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1248		min	-.022	4	-.113	3	-.029	1	-3.327e-03	1	-7.114e-04	3	-5.918e-03	3
1249	N692	max	.035	3	.05	4	.031	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
1250		min	-.022	4	-.123	3	-.03	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
1251	N693	max	.036	3	.049	4	.03	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
1252		min	-.023	4	-.122	3	-.029	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
1253	N694	max	.047	3	.098	2	.04	2	4.255e-03	2	4.409e-04	4	3.036e-03	4
1254		min	-.042	4	-.246	1	-.034	1	-7.7e-03	1	-3.582e-04	3	-3.243e-03	3
1255	N695	max	.046	3	.085	2	.04	2	4.197e-03	2	0	1	2.903e-03	4
1256		min	-.04	4	-.223	5	-.034	1	-7.529e-03	1	0	1	-2.925e-03	3
1257	N696	max	.027	3	.093	4	.032	2	3.615e-03	2	-2.774e-04	3	4.269e-03	4
1258		min	-.028	4	-.2	3	-.028	1	-2.248e-03	1	-7.467e-04	8	-6.329e-03	3
1259	N697	max	.027	3	.08	4	.032	2	3.359e-03	2	0	1	4.31e-03	4
1260		min	-.028	4	-.18	3	-.028	1	-1.931e-03	1	0	1	-6.29e-03	3
1261	N698	max	.027	3	.079	4	.032	2	3.323e-03	2	0	1	4.234e-03	4
1262		min	-.028	4	-.178	3	-.028	1	-1.865e-03	1	0	1	-6.216e-03	3
1263	N699	max	.027	3	.088	4	.032	2	3.472e-03	2	0	1	4.322e-03	4
1264		min	-.028	4	-.193	3	-.028	1	-2.067e-03	1	0	1	-6.295e-03	3
1265	N700	max	.026	3	.097	4	.032	2	3.118e-03	2	2.041e-06	3	4.201e-03	4
1266		min	-.029	4	-.208	3	-.027	1	-1.569e-03	1	-3.75e-04	8	-6.33e-03	3
1267	N701	max	.027	3	.087	4	.032	2	3.363e-03	2	0	1	4.231e-03	4
1268		min	-.028	4	-.19	3	-.028	1	-1.939e-03	1	0	1	-6.262e-03	3
1269	N702	max	.027	3	.071	4	.031	2	3.341e-03	2	0	1	4.319e-03	4
1270		min	-.027	4	-.164	3	-.029	1	-1.855e-03	1	0	1	-6.334e-03	3
1271	N703	max	.027	3	.075	4	.032	2	3.312e-03	2	0	1	4.26e-03	4
1272		min	-.027	4	-.171	3	-.029	1	-1.875e-03	1	0	1	-6.307e-03	3
1273	N704	max	.027	3	.082	4	.032	2	3.352e-03	2	0	1	4.308e-03	4
1274		min	-.027	4	-.182	3	-.028	1	-1.966e-03	1	0	1	-6.324e-03	3
1275	N705	max	.027	3	.09	4	.032	2	3.236e-03	2	-6.605e-05	3	4.253e-03	4
1276		min	-.027	4	-.193	3	-.028	1	-1.829e-03	1	-5.645e-04	8	-6.313e-03	3
1277	N706	max	.047	3	.098	2	.039	2	4.23e-03	2	4.35e-04	4	3.095e-03	4
1278		min	-.042	4	-.246	1	-.034	1	-7.748e-03	1	-3.551e-04	3	-3.288e-03	3
1279	N707	max	.046	3	.09	2	.039	2	4.155e-03	2	0	1	2.993e-03	4
1280		min	-.041	4	-.232	5	-.034	1	-7.579e-03	1	0	1	-3.064e-03	3
1281	N708	max	.046	3	.091	2	.04	2	4.241e-03	2	0	1	2.959e-03	4
1282		min	-.041	4	-.234	5	-.034	1	-7.608e-03	1	0	1	-3.08e-03	3
1283	N709	max	.046	3	.082	2	.04	2	4.164e-03	2	0	1	2.912e-03	4
1284		min	-.04	4	-.218	5	-.034	1	-7.517e-03	1	0	1	-2.854e-03	3
1285	N710	max	.047	3	.098	2	.04	2	4.279e-03	2	4.258e-04	4	2.981e-03	4
1286		min	-.042	4	-.245	1	-.034	1	-7.656e-03	1	-3.572e-04	3	-3.201e-03	3
1287	N711	max	.046	3	.09	2	.04	2	4.27e-03	2	0	1	2.898e-03	4
1288		min	-.041	4	-.231	5	-.034	1	-7.566e-03	1	0	1	-3.016e-03	3
1289	N712	max	.046	3	.081	2	.04	2	4.235e-03	2	0	1	2.837e-03	4
1290		min	-.04	4	-.217	5	-.034	1	-7.509e-03	1	0	1	-2.825e-03	3
1291	N713	max	.045	3	.075	2	.04	2	4.272e-03	2	0	1	2.808e-03	4
1292		min	-.039	4	-.206	5	-.034	1	-7.546e-03	1	0	1	-2.701e-03	3
1293	N714	max	.038	3	.047	4	.027	2	3.232e-03	2	9.015e-04	4	3.654e-03	4
1294		min	-.026	4	-.121	3	-.028	1	-6.615e-03	1	-4.83e-04	3	-4.892e-03	3
1295	N715	max	.035	3	.027	4	.03	2	3.041e-03	2	9.42e-04	4	3.215e-03	4
1296		min	-.022	4	-.083	7	-.03	1	-4.247e-03	1	-5.274e-04	3	-5.79e-03	3
1297	N716	max	.036	3	.032	4	.029	2	3.024e-03	2	8.966e-04	4	3.196e-03	4
1298		min	-.023	4	-.092	3	-.029	1	-4.086e-03	1	-6.451e-04	3	-5.822e-03	3
1299	N717	max	.036	3	.037	4	.028	2	2.511e-03	2	1.028e-03	4	3.442e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1300		min	-.024	4	-.102	3	-.029	1	-4.04e-03	1	-6.925e-04	3	-5.837e-03	3
1301	N718	max	.037	3	.042	4	.027	2	2.842e-03	2	1.141e-03	4	3.517e-03	4
1302		min	-.025	4	-.112	3	-.029	1	-5.531e-03	1	-8.322e-04	3	-5.277e-03	3
1303	N719	max	.06	3	.048	4	.039	2	1.853e-03	2	-6.037e-05	4	1.419e-03	1
1304		min	-.036	4	-.122	3	-.044	1	-2.458e-03	1	-2.558e-03	7	-1.07e-03	2
1305	N720	max	.057	3	.035	4	.038	2	2.36e-03	2	8.206e-04	4	1.718e-03	1
1306		min	-.035	4	-.094	3	-.046	1	-2.976e-03	1	-7.04e-04	3	-1.363e-03	2
1307	N721	max	.058	3	.039	4	.038	2	2.131e-03	2	4.636e-04	4	1.302e-03	1
1308		min	-.035	4	-.103	3	-.046	1	-2.255e-03	1	-1.234e-03	3	-1.23e-03	2
1309	N722	max	.059	3	.043	4	.038	2	2.177e-03	2	5.207e-04	4	1.443e-03	1
1310		min	-.036	4	-.113	3	-.045	1	-2.499e-03	1	-1.387e-03	3	-1.257e-03	2
1311	N723	max	.058	3	.047	4	.039	2	2.505e-03	2	4.189e-03	5	1.812e-03	1
1312		min	-.04	4	-.121	3	-.053	1	-3.139e-03	1	-3.021e-04	2	-1.446e-03	2
1313	N724	max	.059	3	.032	4	.039	2	2.126e-03	2	1.304e-03	8	1.393e-03	1
1314		min	-.036	4	-.092	3	-.046	1	-2.412e-03	1	-4.015e-04	3	-1.227e-03	2
1315	N725	max	.059	3	.037	4	.039	2	2.488e-03	2	2.517e-03	5	1.902e-03	1
1316		min	-.037	4	-.102	3	-.047	1	-3.295e-03	1	9.239e-05	2	-1.437e-03	2
1317	N726	max	.058	3	.042	4	.039	2	2.361e-03	2	2.394e-03	5	1.882e-03	1
1318		min	-.039	4	-.112	3	-.05	1	-3.26e-03	1	1.312e-05	2	-1.363e-03	2
1319	N727	max	.013	3	.048	4	.023	3	2.446e-03	2	1.755e-03	1	1.542e-03	1
1320		min	-.01	4	-.122	3	-.018	4	-2.671e-03	1	-1.349e-03	2	-1.412e-03	2
1321	N728	max	.012	3	.03	4	.021	3	2.019e-03	2	6.123e-04	4	1.665e-03	1
1322		min	-.009	4	-.085	3	-.015	4	-2.884e-03	1	-8.771e-04	3	-1.166e-03	2
1323	N729	max	.013	3	.035	4	.023	3	2.116e-03	2	6.1e-04	4	1.578e-03	1
1324		min	-.009	4	-.094	3	-.016	4	-2.733e-03	1	-8.282e-04	3	-1.222e-03	2
1325	N730	max	.013	3	.039	4	.023	3	1.932e-03	2	6.871e-04	1	1.324e-03	1
1326		min	-.01	4	-.103	3	-.017	4	-2.293e-03	1	-4.66e-04	2	-1.116e-03	2
1327	N731	max	.013	3	.043	4	.024	3	2.19e-03	2	9.322e-04	1	1.44e-03	1
1328		min	-.01	4	-.113	3	-.017	4	-2.494e-03	1	-7.459e-04	2	-1.265e-03	2
1329	N732	max	.017	3	.047	4	.03	3	1.918e-03	2	1.692e-03	2	1.748e-03	1
1330		min	-.011	4	-.121	3	-.019	4	-3.027e-03	1	-3.446e-03	1	-1.107e-03	2
1331	N733	max	.012	3	.027	4	.021	3	2.149e-03	2	4.337e-04	4	1.506e-03	1
1332		min	-.009	4	-.083	7	-.015	4	-2.609e-03	1	-8.765e-04	3	-1.241e-03	2
1333	N734	max	.013	3	.032	4	.022	3	2.229e-03	2	5.453e-04	4	1.482e-03	1
1334		min	-.009	4	-.092	3	-.016	4	-2.567e-03	1	-9.928e-04	3	-1.287e-03	2
1335	N735	max	.014	3	.037	4	.024	3	2.387e-03	2	6.814e-04	4	2.016e-03	1
1336		min	-.01	4	-.102	3	-.017	4	-3.491e-03	1	-1.913e-03	7	-1.378e-03	2
1337	N736	max	.016	3	.042	4	.027	3	2.301e-03	2	8.665e-04	2	1.92e-03	1
1338		min	-.01	4	-.112	3	-.018	4	-3.325e-03	1	-1.865e-03	1	-1.329e-03	2
1339	N737	max	.025	3	.048	4	.026	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
1340		min	-.017	4	-.122	3	-.023	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
1341	N738	max	.023	3	.03	4	.022	2	1.456e-03	2	4.188e-04	4	1.301e-03	1
1342		min	-.015	4	-.085	3	-.021	1	-2.253e-03	1	-1.177e-03	3	-8.407e-04	2
1343	N739	max	.023	3	.034	4	.023	2	2.069e-03	2	5.254e-04	4	1.601e-03	1
1344		min	-.016	4	-.094	3	-.021	1	-2.773e-03	1	-7.392e-04	3	-1.195e-03	2
1345	N740	max	.024	3	.039	4	.023	2	2.26e-03	2	5.042e-04	4	1.653e-03	1
1346		min	-.016	4	-.103	3	-.02	1	-2.863e-03	1	-7.367e-04	3	-1.305e-03	2
1347	N741	max	.024	3	.043	4	.024	2	2.275e-03	2	1.285e-03	1	1.4e-03	1
1348		min	-.016	4	-.113	3	-.022	1	-2.425e-03	1	-1.25e-03	2	-1.313e-03	2
1349	N742	max	.028	3	.047	4	.025	3	3.232e-03	2	9.015e-04	4	3.654e-03	4
1350		min	-.018	4	-.121	3	-.02	4	-6.615e-03	1	-4.83e-04	3	-4.892e-03	3
1351	N743	max	.024	3	.027	4	.023	2	2.791e-03	2	7.902e-04	4	1.482e-03	1

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1352		min	-.016	4	-.083	7	-.021	1	-2.567e-03	1	-6.655e-04	3	-1.611e-03	2
1353	N744	max	.024	3	.032	4	.023	2	2.069e-03	2	5.254e-04	4	1.601e-03	1
1354		min	-.016	4	-.092	3	-.021	1	-2.773e-03	1	-7.392e-04	3	-1.195e-03	2
1355	N745	max	.025	3	.037	4	.023	2	2.26e-03	2	5.042e-04	4	1.653e-03	1
1356		min	-.017	4	-.102	3	-.02	1	-2.863e-03	1	-7.367e-04	3	-1.305e-03	2
1357	N746	max	.026	3	.042	4	.022	3	2.172e-03	2	1.487e-03	2	1.956e-03	1
1358		min	-.017	4	-.112	3	-.018	4	-3.389e-03	1	-2.854e-03	1	-1.254e-03	2
1359	N747	max	.049	3	.048	4	.035	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
1360		min	-.029	4	-.122	3	-.036	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
1361	N748	max	.046	3	.03	4	.031	2	2.453e-03	2	8.236e-04	1	1.445e-03	1
1362		min	-.028	4	-.085	3	-.036	1	-2.503e-03	1	-1.095e-03	2	-1.416e-03	2
1363	N749	max	.046	3	.035	4	.032	2	2.431e-03	2	6.767e-04	1	1.563e-03	1
1364		min	-.028	4	-.094	3	-.037	1	-2.707e-03	1	-9.569e-04	2	-1.404e-03	2
1365	N750	max	.047	3	.039	4	.033	2	2.257e-03	2	1.237e-03	4	1.636e-03	1
1366		min	-.029	4	-.103	3	-.037	1	-2.834e-03	1	-9.446e-04	3	-1.303e-03	2
1367	N751	max	.048	3	.043	4	.034	2	1.932e-03	2	-1.702e-04	4	1.325e-03	1
1368		min	-.029	4	-.113	3	-.037	1	-2.296e-03	1	-2.222e-03	7	-1.115e-03	2
1369	N752	max	.047	3	.047	4	.033	2	3.232e-03	2	9.015e-04	4	3.654e-03	4
1370		min	-.033	4	-.121	3	-.042	1	-6.615e-03	1	-4.83e-04	3	-4.892e-03	3
1371	N753	max	.047	3	.027	4	.035	2	2.136e-03	2	1.026e-03	4	1.18e-03	1
1372		min	-.029	4	-.083	7	-.038	1	-2.044e-03	1	-4.436e-04	3	-1.233e-03	2
1373	N754	max	.047	3	.032	4	.034	2	2.137e-03	2	1.061e-03	4	1.337e-03	1
1374		min	-.03	4	-.092	3	-.038	1	-2.315e-03	1	-3.993e-04	3	-1.234e-03	2
1375	N755	max	.048	3	.037	4	.033	2	2.257e-03	2	1.237e-03	4	1.636e-03	1
1376		min	-.03	4	-.102	3	-.037	1	-2.834e-03	1	-9.446e-04	3	-1.303e-03	2
1377	N756	max	.048	3	.042	4	.033	2	2.582e-03	2	3.519e-03	5	1.976e-03	1
1378		min	-.032	4	-.112	3	-.04	1	-3.422e-03	1	-1.389e-04	2	-1.491e-03	2
1379	N760	max	.027	3	.04	3	.025	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
1380		min	-.033	4	-.125	8	-.04	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
1381	N761	max	.048	3	.09	2	.033	2	4.002e-03	2	2.309e-04	4	3.064e-03	4
1382		min	-.041	4	-.231	5	-.035	1	-7.554e-03	1	-9.525e-04	7	-3.198e-03	3
1383	N762	max	.033	3	.102	3	.028	2	3.958e-03	2	4.774e-04	7	7.123e-03	4
1384		min	-.031	4	-.23	4	-.037	1	-2.993e-03	1	9.902e-05	4	-4.555e-03	3
1385	N764	max	.043	3	.06	2	.038	2	4.331e-03	2	0	1	1.972e-03	4
1386		min	-.04	4	-.184	5	-.036	1	-7.264e-03	1	0	1	-2.462e-03	3
1387	N765	max	.041	3	.053	2	.035	2	4.041e-03	2	0	1	1.993e-03	4
1388		min	-.039	4	-.169	5	-.035	1	-7.242e-03	1	0	1	-2.594e-03	3
1389	N766	max	.039	3	.043	2	.032	2	3.752e-03	2	0	1	2.275e-03	4
1390		min	-.039	4	-.149	5	-.035	1	-7.341e-03	1	0	1	-2.734e-03	3
1391	N767	max	.035	3	.031	2	.029	2	3.209e-03	2	0	1	2.924e-03	4
1392		min	-.037	4	-.125	5	-.035	1	-7.31e-03	1	0	1	-2.729e-03	3
1393	N768	max	.029	3	.018	2	.026	2	2.453e-03	2	0	1	4.014e-03	4
1394		min	-.035	4	-.099	5	-.035	1	-6.719e-03	5	0	1	-2.637e-03	3
1395	N769	max	.023	3	.025	3	.025	2	2.431e-03	2	8.682e-04	4	4.896e-03	4
1396		min	-.031	4	-.09	8	-.036	1	-4.619e-03	1	-1.218e-03	3	-2.462e-03	3
1397	N770	max	.028	3	.038	3	.026	2	3.486e-03	2	0	1	8.43e-03	4
1398		min	-.032	4	-.105	4	-.038	1	-2.457e-03	1	0	1	-3.743e-03	3
1399	N771	max	.031	3	.049	3	.027	2	3.584e-03	2	0	1	7.908e-03	4
1400		min	-.032	4	-.131	4	-.038	1	-2.04e-03	1	0	1	-4.322e-03	3
1401	N772	max	.033	3	.055	3	.027	2	3.491e-03	2	0	1	7.2e-03	4
1402		min	-.032	4	-.15	4	-.038	1	-1.831e-03	1	0	1	-4.572e-03	3
1403	N773	max	.033	3	.056	3	.027	2	3.337e-03	2	0	1	6.675e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1404		min	-.031	4	-.16	4	-.037	1	-1.983e-03	1	0	1	-4.556e-03	3
1405	N774	max	.033	3	.054	3	.027	2	3.274e-03	2	0	1	6.267e-03	4
1406		min	-.03	4	-.162	4	-.037	1	-2.386e-03	1	0	1	-4.332e-03	3
1407	N777	max	.047	3	.093	2	.039	2	4.297e-03	2	1.786e-04	4	2.688e-03	4
1408		min	-.041	4	-.236	5	-.036	1	-7.351e-03	1	-5.298e-04	3	-3.002e-03	3
1409	N778	max	.047	3	.091	2	.036	2	4.151e-03	2	1.85e-04	4	2.842e-03	4
1410		min	-.041	4	-.233	5	-.035	1	-7.404e-03	1	-6.505e-04	7	-3.086e-03	3
1411	N780	max	.032	3	.085	3	.028	2	3.785e-03	2	1.977e-04	4	6.452e-03	4
1412		min	-.029	4	-.209	4	-.037	1	-3.057e-03	1	-2.549e-04	3	-4.314e-03	3
1413	N781	max	.033	3	.094	3	.028	2	3.825e-03	2	1.503e-04	4	6.786e-03	4
1414		min	-.03	4	-.22	4	-.037	1	-2.99e-03	1	-8.76e-05	3	-4.454e-03	3
1415	N782	max	.044	3	.068	2	.03	2	3.956e-03	2	2.215e-04	4	2.803e-03	4
1416		min	-.04	4	-.194	5	-.035	1	-7.239e-03	1	-8.892e-04	7	-2.943e-03	3
1417	N783	max	.039	3	.046	2	.027	2	3.573e-03	2	3.172e-04	4	3.396e-03	4
1418		min	-.039	4	-.16	5	-.035	1	-7.047e-03	1	-1.016e-03	7	-2.758e-03	3
1419	N784	max	.033	3	.028	3	.025	2	2.745e-03	2	5.421e-04	4	4.243e-03	4
1420		min	-.037	4	-.133	8	-.036	1	-6.696e-03	5	-1.17e-03	3	-2.574e-03	3
1421	N785	max	.027	3	.056	3	.028	2	3.512e-03	2	7.021e-04	7	8.466e-03	4
1422		min	-.032	4	-.146	4	-.038	1	-3.111e-03	1	-1.433e-06	4	-3.961e-03	3
1423	N786	max	.031	3	.073	3	.028	2	3.633e-03	2	6.186e-04	7	7.728e-03	4
1424		min	-.032	4	-.174	4	-.037	1	-2.965e-03	1	8.548e-06	4	-4.447e-03	3
1425	N787	max	.033	3	.088	3	.028	2	3.742e-03	2	4.089e-04	7	7.147e-03	4
1426		min	-.032	4	-.203	4	-.037	1	-2.719e-03	1	7.585e-05	4	-4.652e-03	3
1427	N788	max	.026	3	.021	3	.025	2	2.381e-03	2	0	1	4.81e-03	4
1428		min	-.033	4	-.091	8	-.035	1	-5.09e-03	1	0	1	-2.52e-03	3
1429	N789	max	.03	3	.034	3	.025	2	2.219e-03	2	6.596e-04	4	4.12e-03	4
1430		min	-.035	4	-.126	8	-.038	1	-7.182e-03	5	-1.185e-03	3	-2.557e-03	3
1431	N793	max	.032	3	.05	3	.027	2	3.325e-03	2	0	1	6.017e-03	4
1432		min	-.029	4	-.157	4	-.036	1	-2.641e-03	1	0	1	-4.104e-03	3
1433	N794A	max	.032	3	.051	3	.027	2	3.297e-03	2	0	1	6.094e-03	4
1434		min	-.03	4	-.159	4	-.036	1	-2.559e-03	1	0	1	-4.184e-03	3
1435	N795A	max	.032	3	.053	3	.027	2	3.278e-03	2	0	1	6.175e-03	4
1436		min	-.03	4	-.16	4	-.036	1	-2.474e-03	1	0	1	-4.259e-03	3
1437	N796A	max	.031	3	.057	3	.027	2	3.46e-03	2	0	1	6.06e-03	4
1438		min	-.029	4	-.168	4	-.036	1	-2.789e-03	1	0	1	-4.132e-03	3
1439	N797A	max	.032	3	.059	3	.027	2	3.427e-03	2	0	1	6.134e-03	4
1440		min	-.029	4	-.17	4	-.036	1	-2.717e-03	1	0	1	-4.203e-03	3
1441	N798A	max	.032	3	.06	3	.028	2	3.41e-03	2	0	1	6.213e-03	4
1442		min	-.03	4	-.172	4	-.037	1	-2.65e-03	1	0	1	-4.27e-03	3
1443	N799A	max	.033	3	.062	3	.028	2	3.407e-03	2	0	1	6.294e-03	4
1444		min	-.03	4	-.174	4	-.037	1	-2.588e-03	1	0	1	-4.329e-03	3
1445	N800A	max	.031	3	.064	3	.028	2	3.587e-03	2	0	1	6.108e-03	4
1446		min	-.029	4	-.178	4	-.036	1	-2.926e-03	1	0	1	-4.164e-03	3
1447	N801A	max	.032	3	.066	3	.028	2	3.556e-03	2	0	1	6.178e-03	4
1448		min	-.029	4	-.181	4	-.037	1	-2.87e-03	1	0	1	-4.226e-03	3
1449	N802A	max	.032	3	.068	3	.028	2	3.537e-03	2	0	1	6.251e-03	4
1450		min	-.029	4	-.183	4	-.037	1	-2.817e-03	1	0	1	-4.285e-03	3
1451	N803A	max	.032	3	.07	3	.028	2	3.53e-03	2	0	1	6.327e-03	4
1452		min	-.03	4	-.185	4	-.037	1	-2.767e-03	1	0	1	-4.338e-03	3
1453	N804A	max	.031	3	.071	3	.028	2	3.707e-03	2	0	1	6.164e-03	4
1454		min	-.029	4	-.189	4	-.037	1	-3.042e-03	1	0	1	-4.181e-03	3
1455	N805A	max	.031	3	.073	3	.028	2	3.677e-03	2	0	1	6.232e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1456		min	-.029	4	-.192	4	-.037	1	-2.998e-03	1	0	1	-4.237e-03	3
1457	N806A	max	.032	3	.075	3	.028	2	3.658e-03	2	0	1	6.303e-03	4
1458		min	-.029	4	-.194	4	-.037	1	-2.958e-03	1	0	1	-4.29e-03	3
1459	N807A	max	.032	3	.078	3	.028	2	3.648e-03	2	0	1	6.377e-03	4
1460		min	-.03	4	-.197	4	-.037	1	-2.921e-03	1	0	1	-4.338e-03	3
1461	N808A	max	.03	3	.078	3	.028	2	3.845e-03	2	2.34e-04	4	6.241e-03	4
1462		min	-.028	4	-.2	4	-.037	1	-3.146e-03	1	-4.028e-04	3	-4.175e-03	3
1463	N809A	max	.031	3	.081	3	.028	2	3.816e-03	2	2.223e-04	4	6.308e-03	4
1464		min	-.029	4	-.203	4	-.037	1	-3.113e-03	1	-3.527e-04	3	-4.224e-03	3
1465	N810A	max	.031	3	.083	3	.028	2	3.796e-03	2	2.101e-04	4	6.378e-03	4
1466		min	-.029	4	-.206	4	-.037	1	-3.083e-03	1	-3.033e-04	3	-4.271e-03	3
1467	N811A	max	.033	3	.055	3	.027	2	3.273e-03	2	0	1	6.361e-03	4
1468		min	-.03	4	-.161	4	-.037	1	-2.279e-03	1	0	1	-4.397e-03	3
1469	N812A	max	.033	3	.055	3	.027	2	3.282e-03	2	0	1	6.452e-03	4
1470		min	-.031	4	-.161	4	-.037	1	-2.173e-03	1	0	1	-4.447e-03	3
1471	N813A	max	.033	3	.056	3	.027	2	3.306e-03	2	0	1	6.551e-03	4
1472		min	-.031	4	-.161	4	-.037	1	-2.078e-03	1	0	1	-4.495e-03	3
1473	N814	max	.033	3	.063	3	.028	2	3.4e-03	2	0	1	6.372e-03	4
1474		min	-.03	4	-.174	4	-.037	1	-2.503e-03	1	0	1	-4.379e-03	3
1475	N815A	max	.033	3	.064	3	.028	2	3.406e-03	2	0	1	6.456e-03	4
1476		min	-.03	4	-.175	4	-.037	1	-2.421e-03	1	0	1	-4.424e-03	3
1477	N816A	max	.033	3	.065	3	.028	2	3.416e-03	2	0	1	6.544e-03	4
1478		min	-.031	4	-.175	4	-.037	1	-2.332e-03	1	0	1	-4.46e-03	3
1479	N817	max	.033	3	.066	3	.028	2	3.436e-03	2	0	1	6.624e-03	4
1480		min	-.031	4	-.175	4	-.037	1	-2.255e-03	1	0	1	-4.477e-03	3
1481	N818A	max	.033	3	.071	3	.028	2	3.524e-03	2	0	1	6.401e-03	4
1482		min	-.03	4	-.187	4	-.037	1	-2.709e-03	1	0	1	-4.382e-03	3
1483	N819A	max	.033	3	.072	3	.028	2	3.526e-03	2	0	1	6.476e-03	4
1484		min	-.03	4	-.188	4	-.037	1	-2.646e-03	1	0	1	-4.419e-03	3
1485	N820	max	.033	3	.074	3	.028	2	3.54e-03	2	0	1	6.551e-03	4
1486		min	-.03	4	-.189	4	-.037	1	-2.592e-03	1	0	1	-4.448e-03	3
1487	N821A	max	.033	3	.075	3	.028	2	3.55e-03	2	0	1	6.636e-03	4
1488		min	-.031	4	-.191	4	-.037	1	-2.518e-03	1	0	1	-4.487e-03	3
1489	N822A	max	.032	3	.079	3	.028	2	3.643e-03	2	0	1	6.45e-03	4
1490		min	-.03	4	-.199	4	-.037	1	-2.882e-03	1	0	1	-4.38e-03	3
1491	N823	max	.033	3	.081	3	.028	2	3.648e-03	2	0	1	6.524e-03	4
1492		min	-.03	4	-.201	4	-.037	1	-2.846e-03	1	0	1	-4.415e-03	3
1493	N824A	max	.033	3	.083	3	.028	2	3.655e-03	2	0	1	6.599e-03	4
1494		min	-.03	4	-.203	4	-.037	1	-2.801e-03	1	0	1	-4.444e-03	3
1495	N825A	max	.033	3	.085	3	.028	2	3.673e-03	2	0	1	6.664e-03	4
1496		min	-.03	4	-.205	4	-.037	1	-2.766e-03	1	0	1	-4.443e-03	3
1497	N826	max	.032	3	.087	3	.028	2	3.782e-03	2	1.851e-04	4	6.53e-03	4
1498		min	-.03	4	-.212	4	-.037	1	-3.034e-03	1	-2.084e-04	3	-4.353e-03	3
1499	N827	max	.032	3	.09	3	.028	2	3.787e-03	2	1.729e-04	4	6.611e-03	4
1500		min	-.03	4	-.214	4	-.037	1	-3.015e-03	1	-1.647e-04	3	-4.389e-03	3
1501	N828	max	.033	3	.092	3	.028	2	3.801e-03	2	1.611e-04	4	6.696e-03	4
1502		min	-.03	4	-.217	4	-.037	1	-3.e-03	1	-1.237e-04	3	-4.422e-03	3
1503	N829	max	.033	3	.091	3	.028	2	3.625e-03	2	0	1	6.789e-03	4
1504		min	-.031	4	-.212	4	-.037	1	-2.467e-03	1	0	1	-4.364e-03	3
1505	N830	max	.033	3	.079	3	.028	2	3.597e-03	2	0	1	6.778e-03	4
1506		min	-.031	4	-.195	4	-.037	1	-2.461e-03	1	0	1	-4.551e-03	3
1507	N831	max	.033	3	.068	3	.028	2	3.465e-03	2	0	1	6.697e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1508		min	-.031	4	-.178	4	-.037	1	-2.225e-03	1	0	1	-4.493e-03	3
1509	N832	max	.033	3	.099	3	.028	2	3.477e-03	2	1.725e-04	4	6.981e-03	4
1510		min	-.031	4	-.223	4	-.037	1	-2.037e-03	1	-3.5e-04	3	-4.497e-03	3
1511	N833	max	.033	3	.088	3	.028	2	3.651e-03	2	0	1	6.922e-03	4
1512		min	-.031	4	-.207	4	-.037	1	-2.456e-03	1	0	1	-4.598e-03	3
1513	N834	max	.033	3	.077	3	.028	2	3.561e-03	2	0	1	6.817e-03	4
1514		min	-.031	4	-.19	4	-.037	1	-2.311e-03	1	0	1	-4.505e-03	3
1515	N835	max	.033	3	.067	3	.028	2	3.474e-03	2	0	1	6.825e-03	4
1516		min	-.031	4	-.174	4	-.037	1	-2.132e-03	1	0	1	-4.586e-03	3
1517	N836	max	.033	3	.056	3	.027	2	3.368e-03	2	0	1	6.771e-03	4
1518		min	-.031	4	-.158	4	-.037	1	-1.889e-03	1	0	1	-4.535e-03	3
1519	N837	max	.033	3	.095	3	.028	2	3.816e-03	2	4.045e-04	7	7.02e-03	4
1520		min	-.031	4	-.217	4	-.037	1	-2.728e-03	1	9.575e-05	4	-4.62e-03	3
1521	N838	max	.033	3	.085	3	.028	2	3.609e-03	2	0	1	6.952e-03	4
1522		min	-.031	4	-.201	4	-.037	1	-2.344e-03	1	0	1	-4.582e-03	3
1523	N839	max	.033	3	.075	3	.028	2	3.561e-03	2	0	1	6.945e-03	4
1524		min	-.031	4	-.186	4	-.037	1	-2.251e-03	1	0	1	-4.616e-03	3
1525	N840	max	.033	3	.065	3	.028	2	3.49e-03	2	0	1	6.915e-03	4
1526		min	-.031	4	-.17	4	-.037	1	-2.067e-03	1	0	1	-4.555e-03	3
1527	N841	max	.033	3	.055	3	.027	2	3.408e-03	2	0	1	6.919e-03	4
1528		min	-.031	4	-.155	4	-.037	1	-1.84e-03	1	0	1	-4.602e-03	3
1529	N842	max	.033	3	.092	3	.028	2	3.581e-03	2	1.242e-04	4	7.052e-03	4
1530		min	-.032	4	-.21	4	-.037	1	-2.331e-03	1	-8.82e-05	3	-4.603e-03	3
1531	N843	max	.033	3	.083	3	.028	2	3.644e-03	2	0	1	7.051e-03	4
1532		min	-.032	4	-.195	4	-.037	1	-2.423e-03	1	0	1	-4.653e-03	3
1533	N844	max	.033	3	.074	3	.028	2	3.576e-03	2	0	1	7.038e-03	4
1534		min	-.032	4	-.181	4	-.037	1	-2.243e-03	1	0	1	-4.597e-03	3
1535	N845	max	.033	3	.064	3	.027	2	3.513e-03	2	0	1	7.057e-03	4
1536		min	-.032	4	-.167	4	-.037	1	-2.044e-03	1	0	1	-4.6e-03	3
1537	N846	max	.033	3	.055	3	.027	2	3.448e-03	2	0	1	7.038e-03	4
1538		min	-.032	4	-.153	4	-.038	1	-1.814e-03	1	0	1	-4.571e-03	3
1539	N847	max	.033	3	.08	3	.028	2	3.631e-03	2	0	1	7.144e-03	4
1540		min	-.032	4	-.19	4	-.037	1	-2.436e-03	1	0	1	-4.622e-03	3
1541	N848	max	.033	3	.072	3	.028	2	3.589e-03	2	0	1	7.171e-03	4
1542		min	-.032	4	-.176	4	-.037	1	-2.27e-03	1	0	1	-4.619e-03	3
1543	N849	max	.033	3	.063	3	.027	2	3.543e-03	2	0	1	7.183e-03	4
1544		min	-.032	4	-.163	4	-.037	1	-2.07e-03	1	0	1	-4.572e-03	3
1545	N850	max	.033	3	.085	3	.028	2	3.62e-03	2	2.708e-04	7	7.246e-03	4
1546		min	-.032	4	-.196	4	-.037	1	-2.59e-03	1	6.837e-05	10	-4.611e-03	3
1547	N851	max	.033	3	.077	3	.028	2	3.642e-03	2	0	1	7.279e-03	4
1548		min	-.032	4	-.183	4	-.037	1	-2.514e-03	1	0	1	-4.62e-03	3
1549	N852	max	.033	3	.069	3	.028	2	3.601e-03	2	0	1	7.303e-03	4
1550		min	-.032	4	-.171	4	-.037	1	-2.314e-03	1	0	1	-4.576e-03	3
1551	N853	max	.033	3	.061	3	.027	2	3.561e-03	2	0	1	7.338e-03	4
1552		min	-.032	4	-.158	4	-.038	1	-2.092e-03	1	0	1	-4.554e-03	3
1553	N854	max	.032	3	.053	3	.027	2	3.526e-03	2	0	1	7.362e-03	4
1554		min	-.032	4	-.145	4	-.038	1	-1.856e-03	1	0	1	-4.525e-03	3
1555	N855	max	.032	3	.081	3	.028	2	3.688e-03	2	4.986e-04	7	7.393e-03	4
1556		min	-.032	4	-.189	4	-.037	1	-2.823e-03	1	4.284e-05	4	-4.594e-03	3
1557	N856	max	.032	3	.074	3	.028	2	3.632e-03	2	0	1	7.419e-03	4
1558		min	-.032	4	-.177	4	-.037	1	-2.579e-03	1	0	1	-4.563e-03	3
1559	N857	max	.032	3	.066	3	.028	2	3.605e-03	2	0	1	7.464e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1560		min	-.032	4	-.165	4	-.037	1	-2.369e-03	1	0	1	-4.538e-03	3
1561	N858	max	.032	3	.059	3	.027	2	3.579e-03	2	0	1	7.501e-03	4
1562		min	-.032	4	-.153	4	-.038	1	-2.142e-03	1	0	1	-4.498e-03	3
1563	N859	max	.032	3	.052	3	.027	2	3.553e-03	2	0	1	7.531e-03	4
1564		min	-.032	4	-.141	4	-.038	1	-1.905e-03	1	0	1	-4.48e-03	3
1565	N860	max	.031	3	.077	3	.028	2	3.615e-03	2	4.711e-04	7	7.539e-03	4
1566		min	-.032	4	-.181	4	-.037	1	-2.833e-03	1	3.125e-05	4	-4.517e-03	3
1567	N861	max	.032	3	.07	3	.028	2	3.628e-03	2	0	1	7.59e-03	4
1568		min	-.032	4	-.17	4	-.037	1	-2.664e-03	1	0	1	-4.506e-03	3
1569	N862	max	.032	3	.063	3	.027	2	3.608e-03	2	0	1	7.632e-03	4
1570		min	-.032	4	-.159	4	-.038	1	-2.445e-03	1	0	1	-4.466e-03	3
1571	N863	max	.032	3	.057	3	.027	2	3.589e-03	2	0	1	7.68e-03	4
1572		min	-.032	4	-.147	4	-.038	1	-2.208e-03	1	0	1	-4.434e-03	3
1573	N864	max	.032	3	.05	3	.027	2	3.573e-03	2	0	1	7.709e-03	4
1574		min	-.032	4	-.136	4	-.038	1	-1.962e-03	1	0	1	-4.41e-03	3
1575	N865	max	.031	3	.067	3	.028	2	3.612e-03	2	0	1	7.762e-03	4
1576		min	-.032	4	-.164	4	-.037	1	-2.752e-03	1	0	1	-4.417e-03	3
1577	N866	max	.031	3	.061	3	.027	2	3.601e-03	2	0	1	7.816e-03	4
1578		min	-.032	4	-.153	4	-.038	1	-2.525e-03	1	0	1	-4.386e-03	3
1579	N867	max	.031	3	.055	3	.027	2	3.593e-03	2	0	1	7.864e-03	4
1580		min	-.032	4	-.142	4	-.038	1	-2.292e-03	1	0	1	-4.348e-03	3
1581	N868	max	.03	3	.069	3	.028	2	3.579e-03	2	6.273e-04	7	7.894e-03	4
1582		min	-.032	4	-.167	4	-.037	1	-3.052e-03	1	-5.757e-06	4	-4.331e-03	3
1583	N869	max	.03	3	.063	3	.028	2	3.594e-03	2	0	1	7.961e-03	4
1584		min	-.032	4	-.157	4	-.037	1	-2.823e-03	1	0	1	-4.316e-03	3
1585	N870	max	.03	3	.057	3	.027	2	3.59e-03	2	0	1	8.008e-03	4
1586		min	-.032	4	-.146	4	-.038	1	-2.59e-03	1	0	1	-4.278e-03	3
1587	N871	max	.03	3	.051	3	.027	2	3.587e-03	2	0	1	8.055e-03	4
1588		min	-.032	4	-.135	4	-.038	1	-2.345e-03	1	0	1	-4.241e-03	3
1589	N872	max	.03	3	.046	3	.027	2	3.586e-03	2	0	1	8.117e-03	4
1590		min	-.032	4	-.125	4	-.038	1	-2.099e-03	1	0	1	-4.211e-03	3
1591	N873	max	.029	3	.065	3	.028	2	3.571e-03	2	7.056e-04	7	8.115e-03	4
1592		min	-.032	4	-.16	4	-.037	1	-3.083e-03	1	-1.109e-05	4	-4.224e-03	3
1593	N874	max	.029	3	.059	3	.027	2	3.57e-03	2	0	1	8.147e-03	4
1594		min	-.032	4	-.15	4	-.038	1	-2.9e-03	1	0	1	-4.19e-03	3
1595	N875	max	.029	3	.054	3	.027	2	3.572e-03	2	0	1	8.195e-03	4
1596		min	-.032	4	-.139	4	-.038	1	-2.659e-03	1	0	1	-4.151e-03	3
1597	N876	max	.029	3	.048	3	.027	2	3.575e-03	2	0	1	8.245e-03	4
1598		min	-.032	4	-.128	4	-.038	1	-2.411e-03	1	0	1	-4.115e-03	3
1599	N877	max	.03	3	.043	3	.026	2	3.575e-03	2	0	1	8.286e-03	4
1600		min	-.032	4	-.118	4	-.038	1	-2.174e-03	1	0	1	-4.084e-03	3
1601	N878	max	.028	3	.06	3	.028	2	3.527e-03	2	6.896e-04	7	8.243e-03	4
1602		min	-.032	4	-.153	4	-.038	1	-3.228e-03	1	-1.922e-05	4	-4.071e-03	3
1603	N879	max	.028	3	.055	3	.027	2	3.543e-03	2	0	1	8.337e-03	4
1604		min	-.032	4	-.143	4	-.038	1	-2.962e-03	1	0	1	-4.053e-03	3
1605	N880	max	.028	3	.05	3	.027	2	3.548e-03	2	0	1	8.368e-03	4
1606		min	-.032	4	-.132	4	-.038	1	-2.734e-03	1	0	1	-4.01e-03	3
1607	N881	max	.029	3	.045	3	.027	2	3.549e-03	2	0	1	8.373e-03	4
1608		min	-.032	4	-.122	4	-.038	1	-2.504e-03	1	0	1	-3.959e-03	3
1609	N882	max	.029	3	.04	3	.026	2	3.549e-03	2	0	1	8.436e-03	4
1610		min	-.032	4	-.111	4	-.038	1	-2.27e-03	1	0	1	-3.944e-03	3
1611	N883	max	.027	3	.052	3	.027	2	3.511e-03	2	0	1	8.478e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1612		min	-.032	4	-.136	4	-.038	1	-3.039e-03	1	0	1	-3.901e-03	3
1613	N884	max	.028	3	.047	3	.027	2	3.513e-03	2	0	1	8.448e-03	4
1614		min	-.032	4	-.125	4	-.038	1	-2.834e-03	1	0	1	-3.837e-03	3
1615	N885	max	.028	3	.042	3	.026	2	3.507e-03	2	0	1	8.431e-03	4
1616		min	-.032	4	-.115	4	-.038	1	-2.635e-03	1	0	1	-3.799e-03	3
1617	N886	max	.027	3	.034	3	.026	2	3.356e-03	2	0	1	8.191e-03	4
1618		min	-.032	4	-.097	4	-.038	1	-2.791e-03	1	0	1	-3.531e-03	3
1619	N887	max	.027	3	.031	3	.025	2	3.124e-03	2	0	1	7.364e-03	4
1620		min	-.032	4	-.091	8	-.038	1	-3.385e-03	1	0	1	-3.222e-03	3
1621	N888	max	.026	3	.028	3	.025	2	2.757e-03	2	0	1	6.217e-03	4
1622		min	-.032	4	-.09	8	-.038	1	-4.319e-03	1	0	1	-3.266e-03	3
1623	N889	max	.027	3	.039	3	.026	2	3.424e-03	2	0	1	8.16e-03	4
1624		min	-.032	4	-.107	4	-.038	1	-2.833e-03	1	0	1	-3.562e-03	3
1625	N890	max	.026	3	.036	3	.026	2	3.276e-03	2	0	1	7.522e-03	4
1626		min	-.032	4	-.101	8	-.038	1	-3.241e-03	1	0	1	-3.363e-03	3
1627	N891	max	.026	3	.032	3	.025	2	3.038e-03	2	0	1	6.157e-03	4
1628		min	-.032	4	-.098	8	-.038	1	-3.934e-03	1	0	1	-3.066e-03	3
1629	N892	max	.024	3	.029	3	.025	2	2.466e-03	2	8.064e-04	4	4.911e-03	4
1630		min	-.032	4	-.099	8	-.037	1	-4.683e-03	1	-1.184e-03	3	-2.502e-03	3
1631	N893	max	.027	3	.043	3	.027	2	3.466e-03	2	0	1	8.421e-03	4
1632		min	-.032	4	-.118	4	-.038	1	-2.934e-03	1	0	1	-3.682e-03	3
1633	N894	max	.026	3	.04	3	.026	2	3.376e-03	2	0	1	7.867e-03	4
1634		min	-.032	4	-.111	4	-.038	1	-3.151e-03	1	0	1	-3.43e-03	3
1635	N895	max	.025	3	.036	3	.026	2	3.15e-03	2	0	1	6.964e-03	4
1636		min	-.032	4	-.107	8	-.038	1	-3.819e-03	1	0	1	-3.248e-03	3
1637	N896	max	.025	3	.033	3	.025	2	2.483e-03	2	7.572e-04	4	4.899e-03	4
1638		min	-.032	4	-.107	8	-.038	1	-4.737e-03	1	-1.16e-03	3	-2.517e-03	3
1639	N897	max	.027	3	.048	3	.027	2	3.478e-03	2	0	1	8.553e-03	4
1640		min	-.032	4	-.128	4	-.038	1	-3.087e-03	1	0	1	-3.746e-03	3
1641	N898	max	.026	3	.044	3	.027	2	3.432e-03	2	0	1	8.478e-03	4
1642		min	-.032	4	-.121	4	-.038	1	-3.151e-03	1	0	1	-3.643e-03	3
1643	N899C	max	.025	3	.041	3	.027	2	3.256e-03	2	0	1	7.497e-03	4
1644		min	-.032	4	-.117	8	-.038	1	-3.6e-03	1	0	1	-3.494e-03	3
1645	N900B	max	.026	3	.036	3	.025	2	2.493e-03	2	7.19e-04	4	4.869e-03	4
1646		min	-.033	4	-.116	8	-.039	1	-4.797e-03	1	-1.144e-03	3	-2.525e-03	3
1647	N901B	max	.026	3	.052	3	.027	2	3.48e-03	2	6.322e-04	7	8.417e-03	4
1648		min	-.032	4	-.139	4	-.038	1	-3.338e-03	1	-4.796e-06	4	-3.783e-03	3
1649	N902B	max	.026	3	.049	3	.027	2	3.471e-03	2	5.993e-04	7	8.668e-03	4
1650		min	-.032	4	-.132	4	-.038	1	-2.969e-03	1	3.939e-05	4	-3.789e-03	3
1651	N903	max	.025	3	.045	3	.027	2	3.476e-03	2	5.143e-04	6	7.591e-03	4
1652		min	-.032	4	-.126	8	-.038	1	-3.285e-03	1	-3.823e-05	1	-3.486e-03	3
1653	N904	max	.031	3	.021	2	.026	2	2.636e-03	2	0	1	3.671e-03	4
1654		min	-.035	4	-.104	5	-.035	1	-7.118e-03	5	0	1	-2.669e-03	3
1655	N905A	max	.032	3	.024	2	.027	2	2.833e-03	2	0	1	3.394e-03	4
1656		min	-.036	4	-.111	5	-.035	1	-7.249e-03	5	0	1	-2.693e-03	3
1657	N906A	max	.033	3	.028	2	.028	2	3.022e-03	2	0	1	3.151e-03	4
1658		min	-.037	4	-.118	5	-.035	1	-7.282e-03	5	0	1	-2.712e-03	3
1659	N907	max	.03	3	.02	2	.025	2	2.526e-03	2	0	1	4.016e-03	4
1660		min	-.035	4	-.107	5	-.035	1	-6.717e-03	5	0	1	-2.618e-03	3
1661	N908	max	.032	3	.024	2	.026	2	2.714e-03	2	0	1	3.752e-03	4
1662		min	-.036	4	-.113	5	-.035	1	-7.015e-03	5	0	1	-2.652e-03	3
1663	N909	max	.033	3	.027	2	.027	2	2.918e-03	2	0	1	3.5e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1664		min	-.036	4	-.12	5	-.035	1	-7.119e-03	5	0	1	-2.682e-03	3
1665	N910	max	.035	3	.031	2	.027	2	3.117e-03	2	0	1	3.267e-03	4
1666		min	-.037	4	-.127	5	-.035	1	-7.186e-03	1	0	1	-2.709e-03	3
1667	N911A	max	.036	3	.035	2	.028	2	3.295e-03	2	0	1	3.057e-03	4
1668		min	-.038	4	-.134	5	-.035	1	-7.23e-03	1	0	1	-2.733e-03	3
1669	N912B	max	.031	3	.022	2	.025	2	2.59e-03	2	0	1	4.105e-03	4
1670		min	-.036	4	-.116	5	-.036	1	-6.784e-03	5	0	1	-2.603e-03	3
1671	N913B	max	.033	3	.026	2	.026	2	2.799e-03	2	0	1	3.867e-03	4
1672		min	-.036	4	-.122	5	-.035	1	-6.945e-03	5	0	1	-2.638e-03	3
1673	N914B	max	.034	3	.03	2	.026	2	3.013e-03	2	0	1	3.62e-03	4
1674		min	-.037	4	-.128	5	-.035	1	-7.032e-03	1	0	1	-2.673e-03	3
1675	N915B	max	.036	3	.034	2	.027	2	3.211e-03	2	0	1	3.39e-03	4
1676		min	-.038	4	-.135	5	-.035	1	-7.107e-03	1	0	1	-2.708e-03	3
1677	N916B	max	.037	3	.039	2	.028	2	3.389e-03	2	0	1	3.178e-03	4
1678		min	-.038	4	-.143	5	-.035	1	-7.159e-03	1	0	1	-2.741e-03	3
1679	N917A	max	.032	3	.025	3	.025	2	2.663e-03	2	0	1	4.231e-03	4
1680		min	-.036	4	-.124	8	-.036	1	-6.773e-03	5	0	1	-2.588e-03	3
1681	N918A	max	.034	3	.029	2	.025	2	2.891e-03	2	0	1	3.979e-03	4
1682		min	-.037	4	-.131	5	-.036	1	-6.853e-03	5	0	1	-2.625e-03	3
1683	N919A	max	.035	3	.033	2	.026	2	3.108e-03	2	0	1	3.739e-03	4
1684		min	-.037	4	-.137	5	-.035	1	-6.954e-03	1	0	1	-2.665e-03	3
1685	N920A	max	.037	3	.038	2	.027	2	3.308e-03	2	0	1	3.504e-03	4
1686		min	-.038	4	-.144	5	-.035	1	-7.037e-03	1	0	1	-2.708e-03	3
1687	N921A	max	.038	3	.043	2	.027	2	3.475e-03	2	0	1	3.288e-03	4
1688		min	-.038	4	-.152	5	-.035	1	-7.085e-03	1	0	1	-2.747e-03	3
1689	N922B	max	.035	3	.031	2	.025	2	2.97e-03	2	4.729e-04	4	4.075e-03	4
1690		min	-.037	4	-.139	5	-.036	1	-6.743e-03	1	-1.131e-03	3	-2.602e-03	3
1691	N923B	max	.036	3	.036	2	.025	2	3.197e-03	2	4.166e-04	4	3.83e-03	4
1692		min	-.038	4	-.146	5	-.035	1	-6.89e-03	1	-1.104e-03	3	-2.656e-03	3
1693	N924B	max	.038	3	.041	2	.026	2	3.378e-03	2	3.616e-04	4	3.605e-03	4
1694		min	-.038	4	-.153	5	-.035	1	-6.943e-03	1	-1.034e-03	3	-2.69e-03	3
1695	N925B	max	.038	3	.04	2	.031	2	3.604e-03	2	0	1	2.368e-03	4
1696		min	-.038	4	-.142	5	-.035	1	-7.324e-03	1	0	1	-2.723e-03	3
1697	N926B	max	.037	3	.037	2	.031	2	3.491e-03	2	0	1	2.538e-03	4
1698		min	-.038	4	-.136	5	-.035	1	-7.33e-03	1	0	1	-2.746e-03	3
1699	N927	max	.036	3	.034	2	.03	2	3.364e-03	2	0	1	2.705e-03	4
1700		min	-.038	4	-.13	5	-.035	1	-7.331e-03	1	0	1	-2.739e-03	3
1701	N928	max	.04	3	.05	2	.032	2	3.704e-03	2	0	1	2.412e-03	4
1702		min	-.039	4	-.16	5	-.035	1	-7.203e-03	1	0	1	-2.761e-03	3
1703	N929	max	.039	3	.046	2	.031	2	3.684e-03	2	0	1	2.537e-03	4
1704		min	-.039	4	-.153	5	-.035	1	-7.279e-03	1	0	1	-2.776e-03	3
1705	N930	max	.038	3	.042	2	.03	2	3.561e-03	2	0	1	2.668e-03	4
1706		min	-.038	4	-.146	5	-.035	1	-7.268e-03	1	0	1	-2.76e-03	3
1707	N931	max	.037	3	.039	2	.029	2	3.441e-03	2	0	1	2.852e-03	4
1708		min	-.038	4	-.14	5	-.035	1	-7.262e-03	1	0	1	-2.753e-03	3
1709	N932	max	.041	3	.056	2	.031	2	3.877e-03	2	0	1	2.538e-03	4
1710		min	-.039	4	-.172	5	-.035	1	-7.271e-03	1	0	1	-2.808e-03	3
1711	N933	max	.04	3	.051	2	.03	2	3.721e-03	2	0	1	2.651e-03	4
1712		min	-.039	4	-.164	5	-.035	1	-7.198e-03	1	0	1	-2.801e-03	3
1713	N934	max	.039	3	.047	2	.03	2	3.655e-03	2	0	1	2.802e-03	4
1714		min	-.039	4	-.157	5	-.035	1	-7.219e-03	1	0	1	-2.793e-03	3
1715	N935	max	.038	3	.043	2	.029	2	3.526e-03	2	0	1	2.974e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1716		min	-.038	4	-.15	5	-.035	1	-7.189e-03	1	0	1	-2.768e-03	3
1717	N936	max	.043	3	.062	2	.031	2	3.841e-03	2	0	1	2.665e-03	4
1718		min	-.04	4	-.183	5	-.035	1	-7.169e-03	1	0	1	-2.872e-03	3
1719	N937	max	.042	3	.057	2	.03	2	3.839e-03	2	0	1	2.764e-03	4
1720		min	-.04	4	-.175	5	-.035	1	-7.208e-03	1	0	1	-2.842e-03	3
1721	N938	max	.041	3	.052	2	.029	2	3.714e-03	2	0	1	2.906e-03	4
1722		min	-.039	4	-.167	5	-.035	1	-7.149e-03	1	0	1	-2.814e-03	3
1723	N939	max	.039	3	.047	2	.028	2	3.625e-03	2	0	1	3.088e-03	4
1724		min	-.039	4	-.159	5	-.035	1	-7.14e-03	1	0	1	-2.787e-03	3
1725	N940	max	.043	3	.063	2	.029	2	3.803e-03	2	2.262e-04	4	2.822e-03	4
1726		min	-.04	4	-.185	5	-.035	1	-7.108e-03	1	-7.884e-04	7	-2.837e-03	3
1727	N941	max	.042	3	.057	2	.028	2	3.827e-03	2	2.527e-04	4	3.033e-03	4
1728		min	-.04	4	-.177	5	-.035	1	-7.156e-03	1	-9.458e-04	7	-2.855e-03	3
1729	N942	max	.041	3	.052	2	.028	2	3.665e-03	2	2.76e-04	4	3.171e-03	4
1730		min	-.039	4	-.168	5	-.035	1	-7.056e-03	1	-9.225e-04	7	-2.777e-03	3
1731	N943	max	.04	3	.046	2	.033	2	3.729e-03	2	0	1	2.129e-03	4
1732		min	-.039	4	-.154	5	-.035	1	-7.219e-03	1	0	1	-2.676e-03	3
1733	N944	max	.04	3	.048	2	.034	2	3.924e-03	2	0	1	2.082e-03	4
1734		min	-.039	4	-.159	5	-.035	1	-7.307e-03	1	0	1	-2.67e-03	3
1735	N945	max	.041	3	.05	2	.035	2	3.986e-03	2	0	1	2.024e-03	4
1736		min	-.039	4	-.164	5	-.035	1	-7.278e-03	1	0	1	-2.63e-03	3
1737	N946	max	.041	3	.055	2	.033	2	3.796e-03	2	0	1	2.337e-03	4
1738		min	-.039	4	-.17	5	-.035	1	-7.177e-03	1	0	1	-2.755e-03	3
1739	N947	max	.042	3	.056	2	.033	2	3.983e-03	2	0	1	2.304e-03	4
1740		min	-.04	4	-.173	5	-.035	1	-7.301e-03	1	0	1	-2.774e-03	3
1741	N948	max	.042	3	.058	2	.034	2	3.964e-03	2	0	1	2.215e-03	4
1742		min	-.04	4	-.177	5	-.035	1	-7.227e-03	1	0	1	-2.719e-03	3
1743	N949	max	.043	3	.06	2	.035	2	3.998e-03	2	0	1	2.194e-03	4
1744		min	-.04	4	-.181	5	-.035	1	-7.196e-03	1	0	1	-2.707e-03	3
1745	N950	max	.043	3	.062	2	.036	2	4.08e-03	2	0	1	2.201e-03	4
1746		min	-.04	4	-.185	5	-.035	1	-7.213e-03	1	0	1	-2.708e-03	3
1747	N951A	max	.044	3	.066	2	.033	2	4.047e-03	2	0	1	2.49e-03	4
1748		min	-.04	4	-.19	5	-.035	1	-7.302e-03	1	0	1	-2.871e-03	3
1749	N952C	max	.044	3	.068	2	.034	2	3.901e-03	2	0	1	2.369e-03	4
1750		min	-.04	4	-.193	5	-.035	1	-7.135e-03	1	0	1	-2.786e-03	3
1751	N953B	max	.044	3	.069	2	.034	2	3.942e-03	2	0	1	2.404e-03	4
1752		min	-.04	4	-.195	5	-.035	1	-7.132e-03	1	0	1	-2.827e-03	3
1753	N954B	max	.044	3	.07	2	.035	2	4.038e-03	2	0	1	2.42e-03	4
1754		min	-.04	4	-.198	5	-.035	1	-7.181e-03	1	0	1	-2.847e-03	3
1755	N955C	max	.045	3	.072	2	.036	2	4.119e-03	2	0	1	2.41e-03	4
1756		min	-.04	4	-.201	5	-.035	1	-7.216e-03	1	0	1	-2.838e-03	3
1757	N956C	max	.046	3	.078	2	.033	2	3.689e-03	2	0	1	2.479e-03	4
1758		min	-.041	4	-.211	5	-.035	1	-6.986e-03	1	0	1	-2.824e-03	3
1759	N957B	max	.046	3	.079	2	.034	2	3.867e-03	2	0	1	2.657e-03	4
1760		min	-.041	4	-.212	5	-.035	1	-7.124e-03	1	0	1	-2.98e-03	3
1761	N958A	max	.046	3	.079	2	.035	2	4.01e-03	2	0	1	2.669e-03	4
1762		min	-.041	4	-.214	5	-.035	1	-7.223e-03	1	0	1	-3.e-03	3
1763	N959	max	.046	3	.08	2	.035	2	4.095e-03	2	0	1	2.64e-03	4
1764		min	-.041	4	-.215	5	-.035	1	-7.264e-03	1	0	1	-2.983e-03	3
1765	N960A	max	.046	3	.081	2	.036	2	4.16e-03	2	0	1	2.617e-03	4
1766		min	-.041	4	-.217	5	-.035	1	-7.287e-03	1	0	1	-2.966e-03	3
1767	N961A	max	.048	3	.09	2	.034	2	4.036e-03	2	2.008e-04	4	3.e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1768		min	-.041	4	-.231	5	-.035	1	-7.498e-03	1	-6.601e-04	7	-3.167e-03	3
1769	N962A	max	.048	3	.09	2	.035	2	4.077e-03	2	1.962e-04	4	2.942e-03	4
1770		min	-.041	4	-.232	5	-.035	1	-7.46e-03	1	-6.794e-04	7	-3.137e-03	3
1771	N963A	max	.048	3	.091	2	.035	2	4.114e-03	2	1.902e-04	4	2.889e-03	4
1772		min	-.041	4	-.232	5	-.035	1	-7.428e-03	1	-6.686e-04	7	-3.111e-03	3
1773	N964A	max	.042	3	.054	2	.036	2	4.129e-03	2	0	1	1.971e-03	4
1774		min	-.04	4	-.173	5	-.035	1	-7.246e-03	1	0	1	-2.558e-03	3
1775	N965	max	.042	3	.056	2	.037	2	4.208e-03	2	0	1	1.966e-03	4
1776		min	-.04	4	-.176	5	-.036	1	-7.254e-03	1	0	1	-2.526e-03	3
1777	N966A	max	.043	3	.058	2	.038	2	4.275e-03	2	0	1	1.964e-03	4
1778		min	-.04	4	-.18	5	-.036	1	-7.26e-03	1	0	1	-2.492e-03	3
1779	N967A	max	.043	3	.064	2	.036	2	4.159e-03	2	0	1	2.181e-03	4
1780		min	-.04	4	-.188	5	-.036	1	-7.232e-03	1	0	1	-2.683e-03	3
1781	N968A	max	.044	3	.065	2	.037	2	4.231e-03	2	0	1	2.166e-03	4
1782		min	-.04	4	-.191	5	-.036	1	-7.247e-03	1	0	1	-2.653e-03	3
1783	N969A	max	.044	3	.067	2	.038	2	4.292e-03	2	0	1	2.161e-03	4
1784		min	-.04	4	-.194	5	-.036	1	-7.258e-03	1	0	1	-2.627e-03	3
1785	N970A	max	.044	3	.068	2	.038	2	4.34e-03	2	0	1	2.167e-03	4
1786		min	-.04	4	-.197	5	-.036	1	-7.264e-03	1	0	1	-2.607e-03	3
1787	N971A	max	.045	3	.073	2	.037	2	4.197e-03	2	0	1	2.385e-03	4
1788		min	-.04	4	-.203	5	-.036	1	-7.243e-03	1	0	1	-2.813e-03	3
1789	N972A	max	.045	3	.074	2	.037	2	4.259e-03	2	0	1	2.365e-03	4
1790		min	-.04	4	-.205	5	-.036	1	-7.259e-03	1	0	1	-2.787e-03	3
1791	N973A	max	.045	3	.075	2	.038	2	4.309e-03	2	0	1	2.352e-03	4
1792		min	-.04	4	-.208	5	-.036	1	-7.268e-03	1	0	1	-2.763e-03	3
1793	N974	max	.045	3	.076	2	.039	2	4.348e-03	2	0	1	2.347e-03	4
1794		min	-.04	4	-.21	5	-.036	1	-7.274e-03	1	0	1	-2.744e-03	3
1795	N975	max	.046	3	.082	2	.037	2	4.22e-03	2	0	1	2.58e-03	4
1796		min	-.041	4	-.218	5	-.036	1	-7.296e-03	1	0	1	-2.937e-03	3
1797	N976A	max	.046	3	.083	2	.037	2	4.269e-03	2	0	1	2.55e-03	4
1798		min	-.041	4	-.22	5	-.036	1	-7.299e-03	1	0	1	-2.911e-03	3
1799	N977A	max	.046	3	.084	2	.038	2	4.308e-03	2	0	1	2.527e-03	4
1800		min	-.041	4	-.221	5	-.036	1	-7.3e-03	1	0	1	-2.889e-03	3
1801	N978	max	.046	3	.085	2	.039	2	4.34e-03	2	0	1	2.513e-03	4
1802		min	-.041	4	-.223	5	-.036	1	-7.301e-03	1	0	1	-2.872e-03	3
1803	N979A	max	.047	3	.092	2	.037	2	4.194e-03	2	1.8e-04	4	2.791e-03	4
1804		min	-.041	4	-.233	5	-.036	1	-7.382e-03	1	-6.243e-04	7	-3.06e-03	3
1805	N980A	max	.047	3	.092	2	.037	2	4.232e-03	2	1.771e-04	4	2.749e-03	4
1806		min	-.041	4	-.234	5	-.036	1	-7.366e-03	1	-5.945e-04	7	-3.036e-03	3
1807	N981A	max	.047	3	.092	2	.038	2	4.267e-03	2	1.765e-04	4	2.714e-03	4
1808		min	-.041	4	-.235	5	-.036	1	-7.356e-03	1	-5.611e-04	7	-3.017e-03	3
1809	N982A	max	.043	3	.061	2	.039	2	4.375e-03	2	0	1	1.97e-03	4
1810		min	-.04	4	-.186	5	-.036	1	-7.266e-03	1	0	1	-2.422e-03	3
1811	N983A	max	.044	3	.062	2	.039	2	4.404e-03	2	0	1	1.984e-03	4
1812		min	-.04	4	-.188	5	-.036	1	-7.268e-03	1	0	1	-2.393e-03	3
1813	N984A	max	.044	3	.063	2	.04	2	4.426e-03	2	0	1	2.002e-03	4
1814		min	-.04	4	-.189	5	-.036	1	-7.273e-03	1	0	1	-2.367e-03	3
1815	N985A	max	.044	3	.069	2	.039	2	4.376e-03	2	0	1	2.16e-03	4
1816		min	-.04	4	-.198	5	-.036	1	-7.268e-03	1	0	1	-2.574e-03	3
1817	N986A	max	.044	3	.07	2	.04	2	4.404e-03	2	0	1	2.163e-03	4
1818		min	-.04	4	-.2	5	-.036	1	-7.273e-03	1	0	1	-2.548e-03	3
1819	N987	max	.045	3	.071	2	.04	2	4.424e-03	2	0	1	2.18e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1820		min	-.04	4	-.202	5	-.036	1	-7.28e-03	1	0	1	-2.532e-03	3
1821	N989	max	.045	3	.077	2	.039	2	4.38e-03	2	0	1	2.338e-03	4
1822		min	-.04	4	-.211	5	-.036	1	-7.277e-03	1	0	1	-2.72e-03	3
1823	N990	max	.045	3	.078	2	.04	2	4.404e-03	2	0	1	2.338e-03	4
1824		min	-.04	4	-.212	5	-.036	1	-7.282e-03	1	0	1	-2.702e-03	3
1825	N991	max	.045	3	.079	2	.04	2	4.422e-03	2	0	1	2.348e-03	4
1826		min	-.04	4	-.214	5	-.036	1	-7.29e-03	1	0	1	-2.691e-03	3
1827	N993A	max	.046	3	.085	2	.039	2	4.367e-03	2	0	1	2.499e-03	4
1828		min	-.041	4	-.224	5	-.036	1	-7.302e-03	1	0	1	-2.854e-03	3
1829	N994	max	.046	3	.086	2	.04	2	4.388e-03	2	0	1	2.495e-03	4
1830		min	-.041	4	-.225	5	-.036	1	-7.306e-03	1	0	1	-2.842e-03	3
1831	N995A	max	.046	3	.086	2	.04	2	4.404e-03	2	0	1	2.498e-03	4
1832		min	-.041	4	-.226	5	-.036	1	-7.313e-03	1	0	1	-2.835e-03	3
1833	N997A	max	.047	3	.093	2	.039	2	4.322e-03	2	1.838e-04	4	2.669e-03	4
1834		min	-.041	4	-.236	5	-.036	1	-7.35e-03	1	-5.042e-04	3	-2.99e-03	3
1835	N998A	max	.047	3	.094	2	.04	2	4.343e-03	2	1.923e-04	4	2.658e-03	4
1836		min	-.041	4	-.237	5	-.036	1	-7.353e-03	1	-4.796e-04	3	-2.983e-03	3
1837	N999A	max	.047	3	.094	2	.04	2	4.359e-03	2	2.042e-04	4	2.654e-03	4
1838		min	-.041	4	-.238	5	-.036	1	-7.36e-03	1	-4.562e-04	3	-2.98e-03	3
1839	N1000A	max	.028	3	.018	3	.025	2	2.378e-03	2	0	1	4.217e-03	4
1840		min	-.034	4	-.096	8	-.035	1	-6.382e-03	1	0	1	-2.617e-03	3
1841	N1001A	max	.028	3	.019	3	.025	2	2.336e-03	2	0	1	4.424e-03	4
1842		min	-.034	4	-.094	8	-.035	1	-6.028e-03	1	0	1	-2.594e-03	3
1843	N1002A	max	.027	3	.02	3	.025	2	2.32e-03	2	0	1	4.677e-03	4
1844		min	-.033	4	-.092	8	-.035	1	-5.618e-03	1	0	1	-2.562e-03	3
1845	N1003	max	.029	3	.021	3	.025	2	2.449e-03	2	0	1	4.134e-03	4
1846		min	-.035	4	-.105	8	-.035	1	-6.436e-03	5	0	1	-2.602e-03	3
1847	N1004	max	.029	3	.022	3	.025	2	2.4e-03	2	0	1	4.27e-03	4
1848		min	-.034	4	-.102	8	-.036	1	-6.107e-03	1	0	1	-2.582e-03	3
1849	N1005	max	.028	3	.023	3	.025	2	2.394e-03	2	0	1	4.398e-03	4
1850		min	-.034	4	-.101	8	-.036	1	-5.661e-03	1	0	1	-2.558e-03	3
1851	N1006	max	.027	3	.025	3	.025	2	2.409e-03	2	0	1	4.717e-03	4
1852		min	-.033	4	-.099	8	-.036	1	-5.322e-03	1	0	1	-2.534e-03	3
1853	N1007	max	.03	3	.024	3	.025	2	2.494e-03	2	0	1	4.213e-03	4
1854		min	-.035	4	-.113	8	-.036	1	-6.621e-03	5	0	1	-2.587e-03	3
1855	N1008	max	.03	3	.025	3	.025	2	2.421e-03	2	0	1	4.276e-03	4
1856		min	-.035	4	-.111	8	-.036	1	-6.363e-03	5	0	1	-2.576e-03	3
1857	N1009	max	.029	3	.026	3	.025	2	2.39e-03	2	0	1	4.373e-03	4
1858		min	-.034	4	-.109	8	-.036	1	-5.981e-03	1	0	1	-2.563e-03	3
1859	N1010	max	.028	3	.028	3	.025	2	2.447e-03	2	0	1	4.533e-03	4
1860		min	-.034	4	-.108	8	-.037	1	-5.317e-03	1	0	1	-2.576e-03	3
1861	N1011	max	.031	3	.026	3	.025	2	2.547e-03	2	0	1	4.322e-03	4
1862		min	-.036	4	-.122	8	-.036	1	-6.736e-03	5	0	1	-2.575e-03	3
1863	N1012	max	.031	3	.028	3	.025	2	2.448e-03	2	0	1	4.489e-03	4
1864		min	-.035	4	-.12	8	-.037	1	-6.605e-03	5	0	1	-2.562e-03	3
1865	N1013	max	.03	3	.03	3	.025	2	2.353e-03	2	0	1	4.475e-03	4
1866		min	-.035	4	-.118	8	-.037	1	-6.523e-03	5	0	1	-2.559e-03	3
1867	N1014	max	.029	3	.031	3	.025	2	2.344e-03	2	0	1	4.683e-03	4
1868		min	-.034	4	-.116	8	-.038	1	-6.028e-03	5	0	1	-2.562e-03	3
1869	N1015	max	.033	3	.029	3	.025	2	2.636e-03	2	5.768e-04	4	4.418e-03	4
1870		min	-.036	4	-.131	8	-.037	1	-6.526e-03	5	-1.169e-03	3	-2.556e-03	3
1871	N1016	max	.032	3	.031	3	.025	2	2.495e-03	2	6.097e-04	4	4.322e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1872		min	-.036	4	-.129	8	-.037	1	-6.699e-03	5	-1.18e-03	3	-2.555e-03	3
1873	N1017	max	.031	3	.033	3	.025	2	2.46e-03	2	6.387e-04	4	4.773e-03	4
1874		min	-.035	4	-.127	8	-.038	1	-6.106e-03	5	-1.161e-03	3	-2.537e-03	3
1875	N1018	max	.025	3	.023	3	.024	2	2.431e-03	2	8.682e-04	4	4.896e-03	4
1876		min	-.032	4	-.09	8	-.035	1	-4.619e-03	1	-1.218e-03	3	-2.462e-03	3
1877	N1019	max	.024	3	.024	3	.024	2	2.431e-03	2	8.682e-04	4	4.896e-03	4
1878		min	-.032	4	-.09	8	-.036	1	-4.619e-03	1	-1.218e-03	3	-2.462e-03	3
1879	N1020	max	.026	3	.026	3	.025	2	2.466e-03	2	8.064e-04	4	4.911e-03	4
1880		min	-.033	4	-.099	8	-.036	1	-4.683e-03	1	-1.184e-03	3	-2.502e-03	3
1881	N1021	max	.025	3	.027	3	.025	2	2.466e-03	2	8.064e-04	4	4.911e-03	4
1882		min	-.032	4	-.099	8	-.037	1	-4.683e-03	1	-1.184e-03	3	-2.502e-03	3
1883	N1022	max	.027	3	.029	3	.025	2	2.483e-03	2	7.572e-04	4	4.899e-03	4
1884		min	-.033	4	-.107	8	-.037	1	-4.737e-03	1	-1.16e-03	3	-2.517e-03	3
1885	N1023	max	.026	3	.031	3	.025	2	2.483e-03	2	7.572e-04	4	4.899e-03	4
1886		min	-.033	4	-.107	8	-.038	1	-4.737e-03	1	-1.16e-03	3	-2.517e-03	3
1887	N1024	max	.028	3	.033	3	.025	2	2.493e-03	2	7.19e-04	4	4.869e-03	4
1888		min	-.034	4	-.115	8	-.038	1	-4.797e-03	1	-1.144e-03	3	-2.525e-03	3
1889	N1025	max	.027	3	.034	3	.025	2	2.493e-03	2	7.19e-04	4	4.869e-03	4
1890		min	-.033	4	-.115	8	-.038	1	-4.797e-03	1	-1.144e-03	3	-2.525e-03	3
1891	N1026	max	.029	3	.036	3	.025	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
1892		min	-.034	4	-.124	8	-.039	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
1893	N1027	max	.028	3	.038	3	.025	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
1894		min	-.034	4	-.124	8	-.039	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
1895	N1028	max	.033	3	.098	3	.028	2	3.879e-03	2	1.364e-04	8	6.944e-03	4
1896		min	-.031	4	-.225	4	-.037	1	-2.983e-03	1	-3.98e-05	3	-4.5e-03	3
1897	N1029	max	.033	3	.084	3	.028	2	3.648e-03	2	0	1	6.714e-03	4
1898		min	-.031	4	-.204	4	-.037	1	-2.621e-03	1	0	1	-4.433e-03	3
1899	N1030	max	.046	3	.079	2	.032	2	3.999e-03	2	2.143e-04	4	2.769e-03	4
1900		min	-.041	4	-.212	5	-.035	1	-7.341e-03	1	-8.778e-04	7	-3.039e-03	3
1901	N1031	max	.044	3	.067	2	.032	2	3.947e-03	2	0	1	2.526e-03	4
1902		min	-.04	4	-.191	5	-.035	1	-7.233e-03	1	0	1	-2.857e-03	3
1903	N1032	max	.044	3	.067	2	.032	2	3.818e-03	2	0	1	2.507e-03	4
1904		min	-.04	4	-.191	5	-.035	1	-7.106e-03	1	0	1	-2.868e-03	3
1905	N1033	max	.045	3	.076	2	.033	2	4.027e-03	2	0	1	2.585e-03	4
1906		min	-.041	4	-.206	5	-.035	1	-7.313e-03	1	0	1	-2.908e-03	3
1907	N1034	max	.047	3	.084	2	.033	2	3.633e-03	2	2.044e-04	1	2.422e-03	4
1908		min	-.041	4	-.222	5	-.035	1	-7.09e-03	1	-4.769e-04	2	-2.759e-03	3
1909	N1035	max	.045	3	.073	2	.032	2	3.816e-03	2	0	1	2.607e-03	4
1910		min	-.04	4	-.202	5	-.035	1	-7.132e-03	1	0	1	-2.919e-03	3
1911	N1036	max	.042	3	.058	2	.032	2	3.955e-03	2	0	1	2.451e-03	4
1912		min	-.04	4	-.176	5	-.035	1	-7.3e-03	1	0	1	-2.809e-03	3
1913	N1037	max	.043	3	.061	2	.032	2	3.844e-03	2	0	1	2.55e-03	4
1914		min	-.04	4	-.182	5	-.035	1	-7.177e-03	1	0	1	-2.856e-03	3
1915	N1038	max	.044	3	.068	2	.031	2	3.937e-03	2	0	1	2.594e-03	4
1916		min	-.04	4	-.192	5	-.035	1	-7.23e-03	1	0	1	-2.873e-03	3
1917	N1039	max	.045	3	.074	2	.031	2	3.792e-03	2	2.027e-04	4	2.577e-03	4
1918		min	-.041	4	-.203	5	-.035	1	-7.118e-03	1	-6.305e-04	7	-2.842e-03	3
1919	N1040	max	.033	3	.1	3	.028	2	3.915e-03	2	1.298e-04	8	7.029e-03	4
1920		min	-.031	4	-.228	4	-.037	1	-2.985e-03	1	-3.76e-05	3	-4.525e-03	3
1921	N1041	max	.033	3	.091	3	.028	2	3.739e-03	2	0	1	6.805e-03	4
1922		min	-.031	4	-.213	4	-.037	1	-2.727e-03	1	0	1	-4.421e-03	3
1923	N1042	max	.033	3	.091	3	.028	2	3.768e-03	2	0	1	6.807e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1924		min	-.031	4	-.214	4	-.037	1	-2.824e-03	1	0	1	-4.459e-03	3
1925	N1043	max	.033	3	.082	3	.028	2	3.587e-03	2	0	1	6.723e-03	4
1926		min	-.031	4	-.199	4	-.037	1	-2.476e-03	1	0	1	-4.454e-03	3
1927	N1044	max	.033	3	.096	3	.028	2	3.849e-03	2	1.425e-04	4	6.863e-03	4
1928		min	-.03	4	-.223	4	-.037	1	-2.984e-03	1	-6.156e-05	3	-4.476e-03	3
1929	N1045	max	.033	3	.088	3	.028	2	3.723e-03	2	0	1	6.733e-03	4
1930		min	-.031	4	-.21	4	-.037	1	-2.801e-03	1	0	1	-4.45e-03	3
1931	N1046	max	.033	3	.08	3	.028	2	3.586e-03	2	0	1	6.668e-03	4
1932		min	-.031	4	-.197	4	-.037	1	-2.548e-03	1	0	1	-4.455e-03	3
1933	N1047	max	.033	3	.074	3	.028	2	3.534e-03	2	0	1	6.697e-03	4
1934		min	-.031	4	-.187	4	-.037	1	-2.41e-03	1	0	1	-4.523e-03	3
1935	N1048	max	.025	3	.043	3	.027	2	3.721e-03	2	6.458e-04	7	6.81e-03	4
1936		min	-.032	4	-.125	8	-.039	1	-3.803e-03	1	-6.674e-05	4	-3.414e-03	3
1937	N1049	max	.025	3	.027	3	.025	2	2.641e-03	2	5.949e-04	7	5.573e-03	4
1938		min	-.032	4	-.091	8	-.038	1	-4.81e-03	1	5.792e-05	4	-3.301e-03	3
1939	N1050	max	.025	3	.031	3	.025	2	2.585e-03	2	3.778e-04	6	5.465e-03	4
1940		min	-.032	4	-.099	8	-.038	1	-4.867e-03	1	-3.416e-05	1	-3.287e-03	3
1941	N1051	max	.025	3	.035	3	.026	2	2.806e-03	2	4.995e-04	6	5.377e-03	4
1942		min	-.032	4	-.108	8	-.038	1	-4.657e-03	1	-5.288e-05	1	-2.914e-03	3
1943	N1052	max	.025	3	.039	3	.026	2	3.323e-03	2	5.427e-04	2	6.21e-03	4
1944		min	-.032	4	-.117	8	-.038	1	-4.137e-03	1	-2.22e-04	1	-3.106e-03	3
1945	N1053	max	.037	3	.04	3	.036	2	2.588e-03	2	-5.722e-04	2	1.494e-03	2
1946		min	-.053	4	-.125	8	-.059	1	-2.432e-03	1	-2.387e-03	5	-1.404e-03	1
1947	N1054	max	.036	3	.029	3	.036	2	2.468e-03	2	7.387e-04	4	1.425e-03	2
1948		min	-.054	4	-.099	8	-.055	1	-2.314e-03	1	-6.65e-04	3	-1.336e-03	1
1949	N1055	max	.036	3	.033	3	.036	2	2.278e-03	2	6.596e-05	2	1.315e-03	2
1950		min	-.054	4	-.107	8	-.056	1	-2.595e-03	1	-1.116e-03	5	-1.498e-03	1
1951	N1056	max	.037	3	.036	3	.037	2	2.331e-03	2	-2.319e-05	2	1.346e-03	2
1952		min	-.054	4	-.116	8	-.057	1	-2.455e-03	1	-1.18e-03	5	-1.417e-03	1
1953	N1057	max	.038	3	.043	3	.041	2	2.533e-03	2	3.709e-03	8	1.462e-03	2
1954		min	-.058	4	-.125	8	-.054	1	-2.381e-03	1	-4.723e-04	3	-1.375e-03	1
1955	N1058	max	.037	3	.031	3	.036	2	2.193e-03	2	1.104e-03	6	1.266e-03	2
1956		min	-.054	4	-.099	8	-.056	1	-2.338e-03	1	1.033e-04	1	-1.35e-03	1
1957	N1059	max	.037	3	.035	3	.037	2	2.541e-03	2	2.272e-03	8	1.467e-03	2
1958		min	-.055	4	-.108	8	-.056	1	-2.227e-03	1	-9.89e-05	3	-1.286e-03	1
1959	N1060	max	.038	3	.039	3	.039	2	2.533e-03	2	2.152e-03	8	1.463e-03	2
1960		min	-.056	4	-.116	8	-.055	1	-2.119e-03	1	-1.463e-04	3	-1.224e-03	1
1961	N1061	max	.017	3	.04	3	.023	4	2.272e-03	2	2.282e-03	4	1.312e-03	2
1962		min	-.013	4	-.125	8	-.028	3	-2.491e-03	1	-1.946e-03	3	-1.438e-03	1
1963	N1062	max	.014	3	.025	3	.017	4	2.522e-03	2	1.002e-04	2	1.456e-03	2
1964		min	-.01	4	-.09	8	-.023	3	-2.113e-03	1	-3.458e-04	5	-1.22e-03	1
1965	N1063	max	.014	3	.029	3	.017	4	2.342e-03	2	3.156e-04	4	1.352e-03	2
1966		min	-.01	4	-.099	8	-.023	3	-2.172e-03	1	-5.193e-04	3	-1.254e-03	1
1967	N1064	max	.014	3	.033	3	.018	4	2.333e-03	2	1.127e-03	4	1.347e-03	2
1968		min	-.011	4	-.107	8	-.024	3	-2.401e-03	1	-9.288e-04	3	-1.386e-03	1
1969	N1065	max	.015	3	.036	3	.02	4	2.307e-03	2	1.411e-03	4	1.332e-03	2
1970		min	-.012	4	-.116	8	-.026	3	-2.445e-03	1	-1.257e-03	3	-1.411e-03	1
1971	N1066	max	.013	1	.043	3	.013	2	2.688e-03	2	1.514e-03	3	1.552e-03	2
1972		min	-.008	2	-.125	8	-.023	1	-2.046e-03	1	-3.038e-03	4	-1.181e-03	1
1973	N1067	max	.012	3	.027	3	.018	4	2.443e-03	2	2.854e-04	4	1.41e-03	2
1974		min	-.009	4	-.091	8	-.023	3	-2.415e-03	1	-7.234e-04	3	-1.394e-03	1
1975	N1068	max	.013	3	.031	3	.018	4	2.346e-03	2	5.676e-05	2	1.355e-03	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1976		min	-.009	4	-.099	8	-.024	3	-2.444e-03	1	-5.859e-04	5	-1.411e-03	1
1977	N1069	max	.013	3	.035	3	.017	4	2.737e-03	2	2.17e-04	3	1.58e-03	2
1978		min	-.009	4	-.108	8	-.024	3	-2.127e-03	1	-1.513e-03	8	-1.228e-03	1
1979	N1070	max	.013	1	.039	3	.015	4	2.672e-03	2	5.955e-04	3	1.542e-03	2
1980		min	-.008	2	-.117	8	-.024	3	-2.133e-03	1	-1.469e-03	4	-1.231e-03	1
1981	N1071	max	.022	3	.04	3	.02	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
1982		min	-.024	4	-.125	8	-.03	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
1983	N1072	max	.019	3	.025	3	.019	2	2.285e-03	2	4.59e-04	4	1.319e-03	2
1984		min	-.021	4	-.09	8	-.027	1	-1.91e-03	1	-1.211e-03	3	-1.103e-03	1
1985	N1073	max	.019	3	.029	3	.02	2	2.536e-03	2	3.071e-04	4	1.464e-03	2
1986		min	-.021	4	-.099	8	-.028	1	-2.276e-03	1	-5.192e-04	3	-1.314e-03	1
1987	N1074	max	.02	3	.033	3	.02	2	2.398e-03	2	3.101e-04	4	1.384e-03	2
1988		min	-.021	4	-.107	8	-.029	1	-2.246e-03	1	-5.413e-04	3	-1.297e-03	1
1989	N1075	max	.021	3	.036	3	.02	2	2.248e-03	2	1.765e-03	4	1.298e-03	2
1990		min	-.022	4	-.116	8	-.029	1	-2.538e-03	1	-1.796e-03	3	-1.465e-03	1
1991	N1076	max	.018	3	.043	3	.02	2	3.721e-03	2	6.458e-04	7	6.81e-03	4
1992		min	-.019	4	-.125	8	-.031	1	-3.803e-03	1	-6.674e-05	4	-3.414e-03	3
1993	N1077	max	.019	3	.027	3	.019	2	2.21e-03	2	2.266e-04	7	1.276e-03	2
1994		min	-.021	4	-.091	8	-.028	1	-2.87e-03	1	-4.543e-05	1	-1.657e-03	1
1995	N1078	max	.019	3	.031	3	.02	2	2.536e-03	2	3.071e-04	4	1.464e-03	2
1996		min	-.021	4	-.099	8	-.029	1	-2.276e-03	1	-5.192e-04	3	-1.314e-03	1
1997	N1079	max	.019	3	.035	3	.02	2	2.398e-03	2	3.101e-04	4	1.384e-03	2
1998		min	-.021	4	-.108	8	-.029	1	-2.246e-03	1	-5.413e-04	3	-1.297e-03	1
1999	N1080	max	.019	3	.039	3	.02	2	2.769e-03	2	1.318e-03	3	1.598e-03	2
2000		min	-.02	4	-.117	8	-.03	1	-2.047e-03	1	-2.497e-03	4	-1.182e-03	1
2001	N1081	max	.032	3	.04	3	.03	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
2002		min	-.043	4	-.125	8	-.049	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
2003	N1082	max	.029	3	.025	3	.03	2	2.184e-03	2	1.231e-03	4	1.261e-03	2
2004		min	-.042	4	-.09	8	-.045	1	-2.574e-03	1	-1.564e-03	3	-1.486e-03	1
2005	N1083	max	.03	3	.029	3	.03	2	2.285e-03	2	1.058e-03	4	1.319e-03	2
2006		min	-.042	4	-.099	8	-.046	1	-2.465e-03	1	-1.398e-03	3	-1.423e-03	1
2007	N1084	max	.031	3	.033	3	.031	2	2.39e-03	2	6.201e-04	2	1.38e-03	2
2008		min	-.043	4	-.107	8	-.047	1	-2.264e-03	1	-3.275e-04	1	-1.307e-03	1
2009	N1085	max	.031	3	.036	3	.031	2	2.459e-03	2	-4.299e-04	4	1.42e-03	2
2010		min	-.043	4	-.116	8	-.048	1	-2.539e-03	1	-2.191e-03	7	-1.466e-03	1
2011	N1086	max	.031	3	.043	3	.035	2	3.721e-03	2	6.458e-04	7	6.81e-03	4
2012		min	-.046	4	-.125	8	-.046	1	-3.803e-03	1	-6.674e-05	4	-3.414e-03	3
2013	N1087	max	.032	3	.027	3	.03	2	1.975e-03	2	8.215e-04	7	1.14e-03	2
2014		min	-.043	4	-.091	8	-.048	1	-2.481e-03	1	6.765e-05	4	-1.432e-03	1
2015	N1088	max	.031	3	.031	3	.031	2	2.115e-03	2	8.736e-04	7	1.221e-03	2
2016		min	-.043	4	-.099	8	-.047	1	-2.368e-03	1	2.051e-04	1	-1.367e-03	1
2017	N1089	max	.031	3	.035	3	.031	2	2.39e-03	2	6.201e-04	2	1.38e-03	2
2018		min	-.043	4	-.108	8	-.047	1	-2.264e-03	1	-3.275e-04	1	-1.307e-03	1
2019	N1090	max	.031	3	.039	3	.033	2	2.609e-03	2	3.15e-03	8	1.506e-03	2
2020		min	-.044	4	-.117	8	-.047	1	-2.268e-03	1	-3.472e-04	3	-1.309e-03	1
2021	N1066A	max	.027	3	.068	1	.039	2	5.205e-03	2	3.284e-04	4	1.28e-03	2
2022		min	-.037	4	-.184	2	-.043	1	-3.758e-03	1	-5.634e-04	3	-9.246e-04	1
2023	N1067A	max	.032	3	.061	1	.043	2	5.457e-03	2	1.28e-04	4	9.411e-04	1
2024		min	-.034	4	-.183	2	-.039	1	-3.825e-03	1	-3.111e-04	3	-1.343e-03	2
2025	N1068A	max	.026	3	.066	1	.038	2	5.317e-03	2	2.972e-04	4	1.308e-03	2
2026		min	-.036	4	-.165	2	-.039	1	-3.784e-03	1	-9.633e-04	7	-9.31e-04	1
2027	N1069A	max	.024	3	.063	1	.039	2	5.85e-03	2	1.477e-04	4	1.439e-03	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2028		min	-.036	4	-.148	2	-.033	1	-3.656e-03	1	-1.287e-03	7	-8.995e-04	1
2029	N1070A	max	.022	3	.06	1	.04	2	6.502e-03	2	-5.019e-05	2	1.6e-03	2
2030		min	-.035	4	-.135	2	-.026	1	-3.37e-03	1	-1.043e-03	5	-8.292e-04	1
2031	N1071A	max	.03	3	.061	1	.044	2	7.461e-03	2	1.103e-03	4	9.62e-04	1
2032		min	-.03	4	-.142	2	-.029	1	-3.91e-03	1	-3.586e-04	3	-1.836e-03	2
2033	N1072A	max	.031	3	.063	1	.044	2	6.544e-03	2	1.068e-03	4	9.945e-04	1
2034		min	-.032	4	-.156	2	-.034	1	-4.042e-03	1	-3.308e-04	3	-1.61e-03	2
2035	N1073A	max	.031	3	.063	1	.043	2	5.737e-03	2	6.332e-04	4	9.786e-04	1
2036		min	-.034	4	-.17	2	-.038	1	-3.978e-03	1	-3.472e-04	3	-1.412e-03	2
2037	N1074A	max	.021	3	.06	1	.04	2	6.146e-03	2	2.868e-04	2	1.512e-03	2
2038		min	-.034	4	-.13	2	-.023	1	-3.239e-03	1	-6.118e-04	1	-7.968e-04	1
2039	N1075A	max	.032	3	.062	1	.043	2	5.562e-03	2	4.501e-04	4	9.371e-04	1
2040		min	-.034	4	-.18	2	-.039	1	-3.809e-03	1	-3.475e-04	3	-1.368e-03	2
2041	N1076A	max	.032	3	.062	1	.043	2	5.562e-03	2	3.519e-04	4	9.538e-04	1
2042		min	-.034	4	-.176	2	-.039	1	-3.877e-03	1	-3.418e-04	3	-1.368e-03	2
2043	N1077A	max	.032	3	.062	1	.043	2	5.63e-03	2	6.219e-04	4	9.657e-04	1
2044		min	-.034	4	-.173	2	-.038	1	-3.925e-03	1	-3.608e-04	3	-1.385e-03	2
2045	N1078A	max	.031	3	.063	1	.043	2	5.894e-03	2	8.183e-04	4	9.871e-04	1
2046		min	-.033	4	-.167	2	-.037	1	-4.012e-03	1	-3.513e-04	3	-1.45e-03	2
2047	N1079A	max	.031	3	.063	1	.043	2	6.084e-03	2	8.738e-04	4	9.935e-04	1
2048		min	-.033	4	-.163	2	-.036	1	-4.038e-03	1	-3.415e-04	3	-1.497e-03	2
2049	N1080A	max	.031	3	.063	1	.043	2	6.3e-03	2	1.007e-03	4	9.955e-04	1
2050		min	-.033	4	-.16	2	-.036	1	-4.046e-03	1	-3.389e-04	3	-1.55e-03	2
2051	N1081A	max	.031	3	.062	1	.044	2	6.795e-03	2	1.148e-03	4	9.899e-04	1
2052		min	-.032	4	-.153	2	-.033	1	-4.024e-03	1	-3.25e-04	3	-1.672e-03	2
2053	N1082A	max	.031	3	.062	1	.044	2	7.052e-03	2	1.171e-03	4	9.825e-04	1
2054		min	-.031	4	-.149	2	-.032	1	-3.993e-03	1	-3.23e-04	3	-1.735e-03	2
2055	N1083A	max	.03	3	.062	1	.044	2	7.29e-03	2	1.171e-03	4	9.737e-04	1
2056		min	-.03	4	-.146	2	-.03	1	-3.958e-03	1	-3.276e-04	3	-1.793e-03	2
2057	N1084A	max	.03	3	.061	1	.044	2	7.557e-03	2	9.808e-04	4	9.571e-04	1
2058		min	-.029	4	-.139	2	-.027	1	-3.891e-03	1	-4.102e-04	3	-1.859e-03	2
2059	N1085A	max	.03	3	.061	1	.043	2	7.37e-03	2	8.303e-04	4	9.248e-04	1
2060		min	-.029	4	-.136	2	-.026	1	-3.759e-03	1	-4.542e-04	3	-1.813e-03	2
2061	N1086A	max	.029	3	.061	1	.042	2	7.895e-03	2	8.437e-04	1	9.566e-04	1
2062		min	-.028	4	-.132	2	-.024	1	-3.888e-03	1	-6.37e-04	2	-1.942e-03	2
2063	N1087A	max	.022	3	.06	1	.04	2	6.383e-03	2	-3.2e-05	4	1.57e-03	2
2064		min	-.035	4	-.138	2	-.027	1	-3.437e-03	1	-1.207e-03	7	-8.455e-04	1
2065	N1088A	max	.023	3	.061	1	.039	2	6.218e-03	2	3.038e-05	4	1.53e-03	2
2066		min	-.035	4	-.141	2	-.029	1	-3.515e-03	1	-1.287e-03	7	-8.648e-04	1
2067	N1089A	max	.023	3	.062	1	.039	2	6.032e-03	2	8.377e-05	4	1.484e-03	2
2068		min	-.035	4	-.144	2	-.031	1	-3.591e-03	1	-1.32e-03	7	-8.835e-04	1
2069	N1090A	max	.025	3	.065	1	.038	2	5.407e-03	2	2.428e-04	4	1.33e-03	2
2070		min	-.036	4	-.161	2	-.037	1	-3.775e-03	1	-1.114e-03	7	-9.287e-04	1
2071	N1091	max	.025	3	.064	1	.038	2	5.531e-03	2	2.365e-04	4	1.361e-03	2
2072		min	-.036	4	-.157	2	-.036	1	-3.749e-03	1	-1.155e-03	7	-9.223e-04	1
2073	N1092	max	.024	3	.063	1	.039	2	5.679e-03	2	1.841e-04	4	1.397e-03	2
2074		min	-.036	4	-.152	2	-.034	1	-3.71e-03	1	-1.257e-03	7	-9.128e-04	1
2075	N1093	max	.022	3	.06	1	.04	2	6.514e-03	2	1.558e-06	2	1.603e-03	2
2076		min	-.034	4	-.133	2	-.025	1	-3.341e-03	1	-9.263e-04	5	-8.22e-04	1
2077	N1094	max	.021	3	.059	1	.04	2	6.492e-03	2	8.958e-05	2	1.597e-03	2
2078		min	-.034	4	-.132	2	-.024	1	-3.314e-03	1	-7.739e-04	5	-8.154e-04	1
2079	N1095	max	.021	3	.059	1	.04	2	6.364e-03	2	1.751e-04	2	1.566e-03	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2080		min	-.034	4	-.131	2	-.024	1	-3.285e-03	1	-6.246e-04	1	-8.082e-04	1
2081	N1096	max	.021	3	.06	1	.04	2	6.722e-03	2	2.876e-04	2	1.654e-03	2
2082		min	-.034	4	-.13	2	-.023	1	-3.241e-03	1	-5.554e-04	1	-7.973e-04	1
2083	N1097	max	.021	3	.06	1	.039	2	6.54e-03	2	3.906e-04	2	1.609e-03	2
2084		min	-.034	4	-.129	2	-.022	1	-3.221e-03	1	-5.595e-04	1	-7.925e-04	1
2085	N1098	max	.026	3	.067	1	.039	2	5.256e-03	2	3.484e-04	4	1.293e-03	2
2086		min	-.037	4	-.175	2	-.041	1	-3.769e-03	1	-7.388e-04	3	-9.272e-04	1
2087	N1099	max	.027	3	.068	1	.039	2	5.307e-03	2	2.579e-04	4	1.306e-03	2
2088		min	-.037	4	-.179	2	-.042	1	-3.763e-03	1	-8.037e-04	7	-9.257e-04	1
2089	N1100	max	.026	3	.067	1	.038	2	5.271e-03	2	2.742e-04	4	1.297e-03	2
2090		min	-.037	4	-.17	2	-.04	1	-3.784e-03	1	-9.525e-04	7	-9.309e-04	1
2091	N1136	max	.042	3	.101	4	.041	2	1.09e-03	4	-2.426e-05	3	3.756e-03	4
2092		min	-.04	4	-.215	3	-.032	1	-1.532e-03	3	-4.749e-04	8	-5.281e-03	3
2093	N1137	max	.055	3	.098	2	.049	2	2.232e-03	2	2.484e-04	4	2.325e-03	2
2094		min	-.05	4	-.246	1	-.053	1	-3.865e-03	1	-4.411e-04	3	-4.027e-03	1
2095	N1138	max	.043	3	.086	4	.041	2	1.073e-03	4	-1.893e-04	2	3.699e-03	4
2096		min	-.037	4	-.185	3	-.033	1	-1.544e-03	3	-8.427e-04	8	-5.323e-03	3
2097	N1139	max	.045	3	.07	4	.04	2	9.881e-04	4	-3.972e-04	3	3.406e-03	4
2098		min	-.033	4	-.157	3	-.035	1	-1.657e-03	3	-1.141e-03	8	-5.711e-03	3
2099	N1140	max	.049	3	.056	4	.038	2	8.569e-04	4	-1.828e-04	1	2.953e-03	4
2100		min	-.03	4	-.134	3	-.036	1	-1.803e-03	3	-9.544e-04	6	-6.214e-03	3
2101	N1141	max	.052	3	.031	2	.038	2	1.645e-03	4	9.92e-04	4	1.715e-03	4
2102		min	-.039	4	-.136	5	-.05	1	-4.909e-03	7	-2.801e-04	3	-5.115e-03	7
2103	N1142	max	.053	3	.055	2	.044	2	1.884e-03	2	9.33e-04	6	1.963e-03	2
2104		min	-.044	4	-.171	5	-.051	1	-4.293e-03	5	-1.658e-04	1	-4.473e-03	5
2105	N1143	max	.053	3	.078	2	.047	2	2.189e-03	2	4.433e-04	6	2.281e-03	2
2106		min	-.047	4	-.208	5	-.052	1	-3.907e-03	1	-1.552e-04	1	-4.071e-03	1
2107	N1144	max	.051	3	.051	4	.037	2	8.359e-04	4	3.114e-04	1	2.881e-03	4
2108		min	-.03	4	-.125	3	-.036	1	-1.715e-03	3	-6.047e-04	2	-5.911e-03	3
2109	N1145	max	.054	3	.093	2	.049	2	2.144e-03	2	4.558e-04	4	2.234e-03	2
2110		min	-.049	4	-.236	1	-.053	1	-3.861e-03	1	-3.667e-04	3	-4.023e-03	1
2111	N1146	max	.054	3	.088	2	.048	2	2.21e-03	2	3.028e-04	4	2.303e-03	2
2112		min	-.049	4	-.227	5	-.052	1	-3.88e-03	1	-3.039e-04	3	-4.043e-03	1
2113	N1147	max	.053	3	.083	2	.048	2	2.197e-03	2	4.575e-04	4	2.289e-03	2
2114		min	-.048	4	-.217	5	-.052	1	-3.876e-03	1	-2.091e-04	3	-4.039e-03	1
2115	N1148	max	.053	3	.072	2	.047	2	2.136e-03	2	6.559e-04	6	2.226e-03	2
2116		min	-.047	4	-.198	5	-.052	1	-3.938e-03	1	-1.662e-04	1	-4.103e-03	1
2117	N1149	max	.053	3	.067	2	.046	2	2.074e-03	2	7.097e-04	6	2.162e-03	2
2118		min	-.046	4	-.189	5	-.052	1	-3.992e-03	1	-1.579e-04	1	-4.16e-03	1
2119	N1150	max	.053	3	.061	2	.045	2	1.985e-03	2	8.671e-04	6	2.069e-03	2
2120		min	-.045	4	-.18	5	-.051	1	-4.129e-03	5	-1.655e-04	1	-4.303e-03	5
2121	N1151	max	.053	3	.049	2	.043	2	1.768e-03	2	1.028e-03	6	1.843e-03	2
2122		min	-.043	4	-.162	5	-.051	1	-4.457e-03	5	-1.72e-04	1	-4.644e-03	5
2123	N1152	max	.053	3	.043	2	.041	2	1.645e-03	2	1.041e-03	6	1.714e-03	2
2124		min	-.042	4	-.154	5	-.051	1	-4.623e-03	5	-1.828e-04	1	-4.817e-03	5
2125	N1153	max	.053	3	.037	2	.04	2	1.642e-03	4	1.026e-03	2	1.711e-03	4
2126		min	-.04	4	-.145	5	-.05	1	-4.798e-03	7	-2.027e-04	1	-4.999e-03	7
2127	N1154	max	.052	3	.034	4	.037	2	1.662e-03	4	1.017e-03	4	1.732e-03	4
2128		min	-.038	4	-.129	7	-.05	1	-4.927e-03	7	-4.931e-04	3	-5.134e-03	7
2129	N1155	max	.051	3	.038	4	.036	2	1.627e-03	4	1.034e-03	4	1.695e-03	4
2130		min	-.036	4	-.123	7	-.049	1	-4.75e-03	7	-7.158e-04	3	-4.95e-03	7
2131	N1156	max	.05	3	.043	4	.035	2	1.677e-03	4	1.058e-03	4	1.748e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2132		min	-.035	4	-.119	3	-.048	1	-5.201e-03	7	-9.327e-04	3	-5.419e-03	7
2133	N1157	max	.048	3	.059	4	.038	2	8.824e-04	4	-3.614e-04	1	3.042e-03	4
2134		min	-.03	4	-.139	3	-.036	1	-1.774e-03	3	-1.089e-03	6	-6.114e-03	3
2135	N1158	max	.047	3	.062	4	.039	2	9.175e-04	4	-4.727e-04	1	3.162e-03	4
2136		min	-.031	4	-.145	3	-.035	1	-1.737e-03	3	-1.13e-03	6	-5.987e-03	3
2137	N1159	max	.046	3	.066	4	.039	2	9.539e-04	4	-4.735e-04	3	3.288e-03	4
2138		min	-.032	4	-.151	3	-.035	1	-1.696e-03	3	-1.166e-03	8	-5.846e-03	3
2139	N1160	max	.044	3	.082	4	.04	2	1.061e-03	4	-2.735e-04	2	3.657e-03	4
2140		min	-.036	4	-.178	3	-.033	1	-1.562e-03	3	-9.795e-04	8	-5.385e-03	3
2141	N1161	max	.044	3	.078	4	.04	2	1.042e-03	4	-2.868e-04	3	3.592e-03	4
2142		min	-.035	4	-.171	3	-.034	1	-1.588e-03	3	-1.022e-03	8	-5.475e-03	3
2143	N1162	max	.045	3	.074	4	.04	2	1.018e-03	4	-3.572e-04	3	3.509e-03	4
2144		min	-.034	4	-.164	3	-.034	1	-1.62e-03	3	-1.114e-03	8	-5.584e-03	3
2145	N1163	max	.05	3	.055	4	.038	2	8.486e-04	4	-6.063e-05	1	2.925e-03	4
2146		min	-.03	4	-.131	3	-.036	1	-1.807e-03	3	-8.513e-04	6	-6.227e-03	3
2147	N1164	max	.05	3	.053	4	.037	2	8.428e-04	4	7.707e-05	1	2.905e-03	4
2148		min	-.03	4	-.129	3	-.036	1	-1.802e-03	3	-7.056e-04	6	-6.212e-03	3
2149	N1165	max	.051	3	.052	4	.037	2	8.418e-04	4	2.259e-04	1	2.902e-03	4
2150		min	-.03	4	-.127	3	-.036	1	-1.772e-03	3	-6.456e-04	2	-6.107e-03	3
2151	N1166	max	.051	3	.05	4	.037	2	7.998e-04	4	3.844e-04	1	2.757e-03	4
2152		min	-.03	4	-.124	3	-.036	1	-1.849e-03	3	-6.193e-04	2	-6.373e-03	3
2153	N1167	max	.052	3	.049	4	.037	2	8.113e-04	4	4.501e-04	1	2.796e-03	4
2154		min	-.03	4	-.122	3	-.036	1	-1.812e-03	3	-5.838e-04	2	-6.245e-03	3
2155	N1168	max	.043	3	.093	4	.041	2	1.08e-03	4	-8.968e-05	3	3.724e-03	4
2156		min	-.039	4	-.2	3	-.033	1	-1.536e-03	3	-6.257e-04	8	-5.294e-03	3
2157	N1169	max	.042	3	.097	4	.041	2	1.064e-03	4	-1.914e-04	3	3.668e-03	4
2158		min	-.039	4	-.208	3	-.032	1	-1.536e-03	3	-6.79e-04	8	-5.295e-03	3
2159	N1170	max	.043	3	.09	4	.041	2	1.076e-03	4	-2.195e-04	2	3.707e-03	4
2160		min	-.038	4	-.193	3	-.033	1	-1.533e-03	3	-8.238e-04	8	-5.283e-03	3
2161	N1206	max	.055	3	.09	2	.043	2	1.958e-03	2	3.152e-04	4	3.575e-03	1
2162		min	-.048	4	-.231	5	-.053	1	-3.431e-03	1	-5.678e-04	7	-2.04e-03	2
2163	N1207	max	.044	3	.102	3	.037	2	1.198e-03	3	1.239e-04	4	6.011e-03	4
2164		min	-.048	4	-.23	4	-.043	1	-1.744e-03	4	-2.919e-04	3	-4.13e-03	3
2165	N1208	max	.051	3	.068	2	.04	2	1.865e-03	2	8.334e-05	4	3.54e-03	1
2166		min	-.047	4	-.194	5	-.053	1	-3.397e-03	1	-9.051e-04	6	-1.943e-03	2
2167	N1209	max	.046	3	.046	2	.036	2	1.538e-03	2	2.199e-05	4	4.02e-03	5
2168		min	-.047	4	-.161	5	-.052	1	-3.858e-03	5	-1.227e-03	7	-1.602e-03	2
2169	N1210	max	.04	3	.028	3	.032	2	1.351e-03	3	3.842e-04	4	4.596e-03	8
2170		min	-.047	4	-.133	8	-.053	1	-4.411e-03	8	-1.21e-03	3	-1.408e-03	3
2171	N1211	max	.037	3	.056	3	.036	2	9.805e-04	3	9.111e-04	7	7.359e-03	4
2172		min	-.053	4	-.146	4	-.046	1	-2.135e-03	4	1.335e-04	4	-3.38e-03	3
2173	N1212	max	.042	3	.073	3	.037	2	1.119e-03	3	9.469e-04	7	6.725e-03	4
2174		min	-.051	4	-.174	4	-.045	1	-1.951e-03	4	1.878e-04	2	-3.857e-03	3
2175	N1213	max	.044	3	.089	3	.037	2	1.197e-03	3	4.824e-04	5	6.177e-03	4
2176		min	-.05	4	-.203	4	-.043	1	-1.792e-03	4	4.621e-05	2	-4.124e-03	3
2177	N1214	max	.036	3	.034	3	.031	2	1.322e-03	3	9.13e-04	4	4.136e-03	8
2178		min	-.046	4	-.126	8	-.053	1	-3.97e-03	8	-1.177e-03	3	-1.378e-03	3
2179	N1215	max	.044	3	.099	3	.037	2	1.175e-03	3	2.981e-04	6	6.052e-03	4
2180		min	-.049	4	-.223	4	-.043	1	-1.756e-03	4	6.825e-06	3	-4.05e-03	3
2181	N1216	max	.045	3	.096	3	.037	2	1.198e-03	3	2.078e-04	8	6.074e-03	4
2182		min	-.049	4	-.217	4	-.043	1	-1.762e-03	4	-1.291e-04	3	-4.128e-03	3
2183	N1217	max	.045	3	.092	3	.037	2	1.194e-03	3	4.862e-04	5	6.097e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2184		min	-.049	4	-.21	4	-.043	1	-1.769e-03	4	6.276e-05	2	-4.117e-03	3
2185	N1218	max	.044	3	.085	3	.037	2	1.184e-03	3	6.867e-04	5	6.273e-03	4
2186		min	-.05	4	-.196	4	-.044	1	-1.82e-03	4	9.385e-05	2	-4.082e-03	3
2187	N1219	max	.044	3	.081	3	.037	2	1.17e-03	3	7.39e-04	5	6.407e-03	4
2188		min	-.05	4	-.189	4	-.044	1	-1.859e-03	4	1.079e-04	2	-4.033e-03	3
2189	N1220	max	.043	3	.077	3	.037	2	1.147e-03	3	8.864e-04	5	6.553e-03	4
2190		min	-.051	4	-.181	4	-.044	1	-1.901e-03	4	1.56e-04	2	-3.952e-03	3
2191	N1221	max	.041	3	.069	3	.037	2	1.086e-03	3	1.044e-03	7	6.9e-03	4
2192		min	-.052	4	-.167	4	-.045	1	-2.002e-03	4	2.364e-04	2	-3.744e-03	3
2193	N1222	max	.04	3	.065	3	.037	2	1.05e-03	3	1.06e-03	7	7.082e-03	4
2194		min	-.052	4	-.16	4	-.045	1	-2.055e-03	4	2.259e-04	4	-3.621e-03	3
2195	N1223	max	.038	3	.06	3	.037	2	1.015e-03	3	1.043e-03	7	7.248e-03	4
2196		min	-.053	4	-.153	4	-.045	1	-2.103e-03	4	2.001e-04	4	-3.499e-03	3
2197	N1224	max	.036	3	.052	3	.036	2	9.622e-04	3	7.007e-04	7	7.416e-03	4
2198		min	-.053	4	-.139	4	-.046	1	-2.152e-03	4	1.964e-05	4	-3.317e-03	3
2199	N1225	max	.035	3	.049	3	.036	2	9.216e-04	3	4.804e-04	7	7.207e-03	4
2200		min	-.053	4	-.132	4	-.046	1	-2.091e-03	4	-1.06e-04	4	-3.177e-03	3
2201	N1226	max	.034	3	.045	3	.036	2	9.344e-04	3	4.73e-04	3	7.681e-03	4
2202		min	-.053	4	-.126	8	-.046	1	-2.228e-03	4	-2.907e-04	4	-3.221e-03	3
2203	N1227	max	.041	3	.031	2	.032	2	1.377e-03	3	2.173e-04	4	4.504e-03	8
2204		min	-.047	4	-.139	5	-.053	1	-4.322e-03	8	-1.229e-03	7	-1.435e-03	3
2205	N1228	max	.043	3	.036	2	.033	2	1.402e-03	3	1.158e-04	4	4.351e-03	8
2206		min	-.048	4	-.146	5	-.053	1	-4.176e-03	8	-1.273e-03	7	-1.461e-03	3
2207	N1229	max	.045	3	.041	2	.035	2	1.422e-03	3	5.661e-05	4	4.171e-03	8
2208		min	-.047	4	-.153	5	-.052	1	-4.003e-03	8	-1.281e-03	7	-1.482e-03	3
2209	N1230	max	.05	3	.063	2	.039	2	1.812e-03	2	4.741e-05	4	3.626e-03	5
2210		min	-.047	4	-.185	5	-.053	1	-3.48e-03	5	-1.046e-03	7	-1.888e-03	2
2211	N1231	max	.049	3	.057	2	.038	2	1.736e-03	2	1.917e-05	4	3.743e-03	5
2212		min	-.047	4	-.177	5	-.053	1	-3.592e-03	5	-1.085e-03	6	-1.809e-03	2
2213	N1232	max	.048	3	.052	2	.037	2	1.647e-03	2	1.217e-05	4	3.874e-03	5
2214		min	-.047	4	-.168	5	-.052	1	-3.718e-03	5	-1.188e-03	7	-1.716e-03	2
2215	N1233	max	.039	3	.029	3	.031	2	1.339e-03	3	5.041e-04	4	4.588e-03	8
2216		min	-.047	4	-.131	8	-.053	1	-4.403e-03	8	-1.217e-03	3	-1.396e-03	3
2217	N1234	max	.038	3	.031	3	.031	2	1.33e-03	3	6.493e-04	4	4.542e-03	8
2218		min	-.047	4	-.129	8	-.053	1	-4.359e-03	8	-1.208e-03	3	-1.385e-03	3
2219	N1235	max	.037	3	.033	3	.031	2	1.323e-03	3	8.066e-04	4	4.38e-03	8
2220		min	-.046	4	-.127	8	-.053	1	-4.203e-03	8	-1.206e-03	3	-1.379e-03	3
2221	N1236	max	.036	3	.036	3	.031	2	1.311e-03	3	9.704e-04	4	4.814e-03	8
2222		min	-.045	4	-.124	8	-.053	1	-4.619e-03	8	-1.179e-03	3	-1.366e-03	3
2223	N1237	max	.035	3	.038	3	.031	2	1.294e-03	3	1.071e-03	4	4.577e-03	8
2224		min	-.045	4	-.123	8	-.053	1	-4.392e-03	8	-1.166e-03	3	-1.348e-03	3
2225	N1238	max	.053	3	.079	2	.042	2	1.914e-03	2	1.973e-04	4	3.558e-03	1
2226		min	-.047	4	-.212	5	-.053	1	-3.415e-03	1	-6.881e-04	7	-1.994e-03	2
2227	N1239	max	.054	3	.084	2	.042	2	1.847e-03	2	2.558e-04	4	3.525e-03	1
2228		min	-.048	4	-.222	5	-.053	1	-3.383e-03	1	-7.938e-04	7	-1.924e-03	2
2229	N1240	max	.052	3	.074	2	.041	2	1.882e-03	2	1.402e-04	4	3.523e-03	1
2230		min	-.047	4	-.203	5	-.053	1	-3.381e-03	1	-9.049e-04	7	-1.961e-03	2
2231	N1171	max	.084	3	.243	2	.032	2	5.626e-03	2	1.046e-03	4	6.036e-03	4
2232		min	-.074	4	-.495	1	-.036	1	-8.793e-03	1	-1.04e-03	3	-6.075e-03	3
2233	N1172	max	.084	3	.243	2	.034	2	5.012e-03	2	7.769e-04	4	5.878e-03	4
2234		min	-.075	4	-.494	1	-.034	1	-7.798e-03	1	-1.046e-03	3	-5.783e-03	3
2235	N1175	max	.017	3	.196	3	.045	2	7.288e-03	2	3.483e-04	2	8.404e-03	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2236		min	-.025	4	-.419	9	-.054	1	-6.264e-03	1	-3.647e-04	1	-5.477e-03	3
2237	N1176	max	.024	3	.233	3	.038	2	6.253e-03	2	4.018e-04	2	7.981e-03	4
2238		min	-.03	4	-.433	4	-.049	1	-5.362e-03	1	-6.829e-04	1	-6.296e-03	3
2239	N1179	max	.028	3	.231	4	.044	2	6.266e-03	2	4.766e-04	1	5.803e-03	4
2240		min	-.03	4	-.424	3	-.035	1	-5.346e-03	1	-4.596e-04	2	-7.775e-03	3
2241	N1180	max	.017	3	.202	4	.048	2	7.065e-03	2	2.128e-04	1	5.098e-03	4
2242		min	-.022	4	-.393	3	-.041	1	-6.395e-03	1	-4.583e-04	2	-6.704e-03	3
2243	N1145B	max	.084	3	.243	2	.034	2	5.316e-03	2	3.532e-03	3	6.032e-03	4
2244		min	-.074	4	-.495	1	-.035	1	-8.372e-03	1	-4.101e-03	4	-6.011e-03	3
2245	N1172A	max	.027	3	.032	4	.024	2	2.07e-03	2	5.298e-04	4	3.092e-03	4
2246		min	-.018	4	-.086	3	-.025	1	-3.337e-03	1	-8.771e-04	3	-5.789e-03	3
2247	N1196	max	.016	3	.062	1	.024	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
2248		min	-.025	4	-.133	2	-.014	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
2249	N1200A	max	.016	3	.062	1	.025	2	6.157e-03	2	7.948e-04	1	3.048e-03	4
2250		min	-.022	4	-.135	2	-.015	1	-3.597e-03	1	-3.614e-04	2	-4.747e-03	3
2251	N1203	max	.036	3	.051	4	.031	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
2252		min	-.023	4	-.125	3	-.03	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
2253	N1204	max	.038	3	.043	4	.027	2	3.232e-03	2	9.015e-04	4	3.654e-03	4
2254		min	-.027	4	-.122	3	-.029	1	-6.615e-03	1	-4.83e-04	3	-4.892e-03	3
2255	N1210A	max	.029	3	.038	3	.025	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
2256		min	-.034	4	-.127	8	-.039	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
2257	N1211A	max	.025	3	.047	3	.027	2	3.721e-03	2	6.458e-04	7	6.81e-03	4
2258		min	-.032	4	-.129	4	-.038	1	-3.803e-03	1	-6.674e-05	4	-3.414e-03	3
2259	N1158A	max	.011	3	.036	4	.02	3	2.119e-03	2	4.306e-04	4	3.133e-03	4
2260		min	-.009	4	-.096	3	-.016	4	-3.363e-03	1	-8.058e-04	3	-5.838e-03	3
2261	N1159A	max	.028	3	.036	4	.025	2	2.119e-03	2	4.306e-04	4	3.133e-03	4
2262		min	-.019	4	-.096	3	-.025	1	-3.363e-03	1	-8.058e-04	3	-5.838e-03	3
2263	N1160A	max	.011	3	.041	4	.021	3	2.141e-03	2	3.508e-04	4	3.161e-03	4
2264		min	-.01	4	-.105	3	-.017	4	-3.354e-03	1	-7.498e-04	3	-5.877e-03	3
2265	N1161A	max	.029	3	.041	4	.026	2	2.141e-03	2	3.508e-04	4	3.161e-03	4
2266		min	-.019	4	-.105	3	-.026	1	-3.354e-03	1	-7.498e-04	3	-5.877e-03	3
2267	N1164A	max	.012	3	.045	4	.022	3	2.161e-03	2	2.912e-04	4	3.182e-03	4
2268		min	-.01	4	-.114	3	-.017	4	-3.327e-03	1	-7.114e-04	3	-5.918e-03	3
2269	N1165A	max	.029	3	.045	4	.027	2	2.161e-03	2	2.912e-04	4	3.182e-03	4
2270		min	-.019	4	-.114	3	-.026	1	-3.327e-03	1	-7.114e-04	3	-5.918e-03	3
2271	N1168A	max	.012	3	.049	4	.023	3	2.187e-03	2	2.411e-04	4	3.205e-03	4
2272		min	-.01	4	-.123	3	-.017	4	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
2273	N1169A	max	.03	3	.049	4	.028	2	2.187e-03	2	2.411e-04	4	3.205e-03	4
2274		min	-.019	4	-.123	3	-.026	1	-3.298e-03	1	-6.817e-04	3	-5.96e-03	3
2275	N1167A	max	.014	3	.024	3	.019	4	2.431e-03	2	8.682e-04	4	4.896e-03	4
2276		min	-.012	4	-.091	8	-.021	3	-4.619e-03	1	-1.218e-03	3	-2.462e-03	3
2277	N1184	max	.022	3	.024	3	.022	2	2.431e-03	2	8.682e-04	4	4.896e-03	4
2278		min	-.027	4	-.091	8	-.031	1	-4.619e-03	1	-1.218e-03	3	-2.462e-03	3
2279	N1185	max	.015	3	.027	3	.02	4	2.466e-03	2	8.064e-04	4	4.911e-03	4
2280		min	-.013	4	-.099	8	-.023	3	-4.683e-03	1	-1.184e-03	3	-2.502e-03	3
2281	N1186	max	.023	3	.027	3	.022	2	2.466e-03	2	8.064e-04	4	4.911e-03	4
2282		min	-.027	4	-.099	8	-.032	1	-4.683e-03	1	-1.184e-03	3	-2.502e-03	3
2283	N1187	max	.016	3	.031	3	.021	4	2.483e-03	2	7.572e-04	4	4.899e-03	4
2284		min	-.013	4	-.108	8	-.024	3	-4.737e-03	1	-1.16e-03	3	-2.517e-03	3
2285	N1188	max	.024	3	.031	3	.023	2	2.483e-03	2	7.572e-04	4	4.899e-03	4
2286		min	-.028	4	-.108	8	-.033	1	-4.737e-03	1	-1.16e-03	3	-2.517e-03	3
2287	N1189	max	.017	3	.034	3	.022	4	2.493e-03	2	7.19e-04	4	4.869e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2288		min	-.014	4	-.116	8	-.026	3	-4.797e-03	1	-1.144e-03	3	-2.525e-03	3
2289	N1190	max	.025	3	.034	3	.023	2	2.493e-03	2	7.19e-04	4	4.869e-03	4
2290		min	-.029	4	-.116	8	-.034	1	-4.797e-03	1	-1.144e-03	3	-2.525e-03	3
2291	N1191	max	.018	3	.038	3	.023	4	2.511e-03	2	6.901e-04	4	4.832e-03	4
2292		min	-.015	4	-.124	8	-.028	3	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
2293	N1192	max	.026	3	.038	3	.023	2	2.511e-03	2	6.901e-04	4	4.832e-03	4
2294		min	-.029	4	-.124	8	-.034	1	-4.868e-03	1	-1.136e-03	3	-2.533e-03	3
2295	N1194	max	.009	3	.04	1	0	2	5.907e-03	2	4.57e-05	2	2.679e-03	4
2296		min	-.012	4	-.091	2	-.001	5	-3.129e-03	1	-5.353e-04	5	-2.262e-03	3
2297	N1211B	max	.015	3	.04	1	.018	2	5.907e-03	2	4.57e-05	2	2.679e-03	4
2298		min	-.02	4	-.091	2	-.01	1	-3.129e-03	1	-5.353e-04	5	-2.262e-03	3
2299	N1212A	max	.008	3	.045	1	0	2	5.943e-03	2	5.459e-05	2	2.742e-03	4
2300		min	-.013	4	-.101	2	-.001	5	-3.173e-03	1	-5.771e-04	5	-2.297e-03	3
2301	N1213A	max	.015	3	.045	1	.018	2	5.943e-03	2	5.459e-05	2	2.742e-03	4
2302		min	-.021	4	-.101	2	-.011	1	-3.173e-03	1	-5.771e-04	5	-2.297e-03	3
2303	N1214A	max	.008	3	.05	1	0	2	5.965e-03	2	6.13e-05	2	2.788e-03	4
2304		min	-.013	4	-.111	2	-.001	5	-3.202e-03	1	-6.126e-04	5	-2.307e-03	3
2305	N1215A	max	.015	3	.05	1	.018	2	5.965e-03	2	6.13e-05	2	2.788e-03	4
2306		min	-.021	4	-.111	2	-.011	1	-3.202e-03	1	-6.126e-04	5	-2.307e-03	3
2307	N1216A	max	.007	3	.055	1	0	2	5.978e-03	2	6.428e-05	2	2.837e-03	4
2308		min	-.013	4	-.121	2	-.001	5	-3.223e-03	1	-6.429e-04	5	-2.306e-03	3
2309	N1217A	max	.014	3	.055	1	.018	2	5.978e-03	2	6.428e-05	2	2.837e-03	4
2310		min	-.021	4	-.121	2	-.011	1	-3.223e-03	1	-6.429e-04	5	-2.306e-03	3
2311	N1218A	max	.007	3	.06	1	0	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
2312		min	-.013	4	-.13	2	-.001	5	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
2313	N1219A	max	.014	3	.06	1	.018	2	5.983e-03	2	6.766e-05	2	2.897e-03	4
2314		min	-.022	4	-.13	2	-.011	1	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
2315	N1164B	max	0	3	0	4	0	2	0	2	0	4	0	4
2316		min	0	4	0	7	0	1	0	5	0	3	0	3
2317	N1166B	max	.014	3	.067	4	.027	3	2.187e-03	2	2.413e-04	4	3.204e-03	4
2318		min	-.011	4	-.161	3	-.019	4	-3.298e-03	1	-6.818e-04	3	-5.961e-03	3
2319	N1164C	max	0	3	0	3	0	2	0	2	0	4	0	8
2320		min	0	4	0	8	0	1	0	5	0	3	0	3
2321	N1165C	max	.022	3	.052	3	.027	4	2.511e-03	2	6.903e-04	4	4.833e-03	4
2322		min	-.017	4	-.159	8	-.034	3	-4.869e-03	1	-1.136e-03	3	-2.533e-03	3
2323	N1166A	max	0	3	0	1	0	2	0	2	0	3	0	4
2324		min	0	4	0	6	0	5	0	1	0	4	0	3
2325	N1167B	max	.005	3	.082	1	0	2	5.983e-03	2	6.766e-05	2	2.898e-03	4
2326		min	-.015	8	-.17	2	-.002	5	-3.238e-03	1	-6.721e-04	5	-2.309e-03	3
2327	N1164D	max	.017	3	.157	4	.044	2	6.931e-03	2	2.428e-04	1	5.124e-03	4
2328		min	-.023	4	-.335	3	-.039	1	-6.269e-03	1	-4.682e-04	2	-6.688e-03	3
2329	N1165B	max	.016	3	.064	1	.026	2	6.295e-03	2	7.72e-04	4	3.203e-03	4
2330		min	-.022	4	-.142	2	-.017	1	-3.978e-03	1	-3.547e-04	3	-5.017e-03	3
2331	N1166C	max	.017	3	.147	3	.042	2	7.109e-03	2	3.976e-04	2	7.438e-03	9
2332		min	-.025	4	-.355	9	-.051	1	-6.113e-03	1	-4.2e-04	1	-5.431e-03	3
2333	N1167C	max	.374	3	.157	4	.533	2	1.282e-02	2	3.603e-03	2	4.759e-03	4
2334		min	-.35	4	-.334	3	-.543	1	-1.272e-02	1	-2.988e-03	1	-6.686e-03	3
2335	N1168B	max	.479	3	.063	1	1.014	2	2.409e-02	2	3.749e-04	2	8.582e-03	4
2336		min	-.475	4	-.143	2	-1.009	1	-2.444e-02	1	-3.042e-04	1	-8.736e-03	3
2337	N1169B	max	.349	3	.147	3	.528	2	1.225e-02	2	2.79e-03	1	6.269e-03	4
2338		min	-.369	4	-.355	9	-.54	1	-1.225e-02	1	-3.198e-03	2	-4.664e-03	3
2339	N1170A	max	.095	4	.157	4	.105	1	6.644e-03	2	2.428e-04	1	4.883e-03	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2340		min	-.139	3	-.335	3	-.116	2	-5.983e-03	1	-4.682e-04	2	-6.446e-03	3
2341	N1171A	max	.056	4	.064	1	.051	1	3.91e-03	2	7.72e-04	4	1.99e-03	4
2342		min	-.127	3	-.142	2	-.126	2	-1.597e-03	1	-3.547e-04	3	-3.801e-03	3
2343	N1172B	max	.166	9	.147	3	.09	1	6.834e-03	2	3.976e-04	2	7.434e-03	9
2344		min	-.109	3	-.356	9	-.123	2	-5.839e-03	1	-4.2e-04	1	-5.201e-03	3
2345	N1173	max	.739	3	.207	2	.579	2	1.206e-02	2	1.236e-03	3	1.642e-02	4
2346		min	-.759	4	-.439	1	-.669	1	-1.49e-02	1	-7.625e-04	4	-1.564e-02	3
2347	N1174	max	.54	3	.037	4	.417	2	7.082e-03	2	1.167e-03	4	1.11e-02	4
2348		min	-.527	4	-.131	7	-.457	1	-7.816e-03	1	-1.166e-03	3	-1.089e-02	3
2349	N1175A	max	.447	3	.206	4	.414	2	6.387e-03	2	1.802e-03	4	9.483e-03	4
2350		min	-.436	4	-.387	3	-.42	1	-5.282e-03	1	-2.053e-03	3	-1.065e-02	3
2351	N1176A	max	.065	4	.207	2	.199	1	3.504e-03	2	9.289e-04	4	3.458e-03	4
2352		min	-.053	3	-.439	1	-.099	2	-6.25e-03	1	-1.176e-03	3	-3.315e-03	3
2353	N1177	max	.061	4	.037	4	.136	5	3.358e-03	2	8.209e-04	4	3.69e-03	4
2354		min	-.073	3	-.129	7	-.053	2	-6.788e-03	1	-4.2e-04	3	-4.66e-03	3
2355	N1178	max	.1	4	.206	4	.088	1	5.902e-03	2	5.167e-04	1	5.505e-03	4
2356		min	-.149	3	-.386	3	-.1	2	-5.008e-03	1	-4.979e-04	2	-7.453e-03	3
2357	N1179A	max	.483	3	.211	3	.426	2	6.64e-03	2	3.589e-03	4	1.27e-02	4
2358		min	-.506	4	-.399	4	-.423	1	-5.197e-03	1	-3.172e-03	3	-1.116e-02	3
2359	N1180A	max	.869	3	.053	3	.594	2	1.185e-02	2	1.012e-03	4	1.995e-02	4
2360		min	-.891	4	-.142	4	-.623	1	-1.204e-02	1	-9.526e-04	3	-1.991e-02	3
2361	N1181	max	.531	3	.204	2	.405	2	6.934e-03	2	1.722e-03	3	8.791e-03	4
2362		min	-.526	4	-.434	1	-.447	1	-9.142e-03	1	-1.935e-03	4	-9.524e-03	3
2363	N1182	max	.153	4	.211	3	.077	1	5.916e-03	2	4.712e-04	2	7.628e-03	4
2364		min	-.116	3	-.398	4	-.106	2	-5.098e-03	1	-7.424e-04	1	-5.959e-03	3
2365	N1183	max	.166	8	.054	3	.051	1	2.432e-03	2	6.125e-04	7	5.022e-03	4
2366		min	-.047	3	-.141	4	-.086	9	-2.274e-03	1	-2.948e-05	4	-1.785e-03	3
2367	N1184A	max	.069	4	.204	2	.168	1	5.42e-03	2	1.116e-03	4	5.632e-03	4
2368		min	-.06	3	-.433	1	-.098	2	-8.543e-03	1	-1.11e-03	3	-5.679e-03	3
2369	N1185A	max	.03	3	.206	4	.043	2	6.143e-03	2	5.167e-04	1	5.768e-03	4
2370		min	-.033	4	-.386	3	-.033	1	-5.25e-03	1	-4.979e-04	2	-7.717e-03	3
2371	N1186A	max	.039	3	.037	4	.028	2	3.609e-03	2	8.209e-04	4	3.963e-03	4
2372		min	-.029	4	-.129	7	-.029	1	-7.042e-03	1	-4.2e-04	3	-4.933e-03	3
2373	N1187A	max	.077	3	.207	2	.035	2	5.012e-03	2	9.289e-04	4	5.55e-03	4
2374		min	-.069	4	-.439	1	-.034	1	-7.763e-03	1	-1.176e-03	3	-5.406e-03	3
2375	N1188A	max	.077	3	.204	2	.033	2	5.661e-03	2	1.116e-03	4	5.895e-03	4
2376		min	-.067	4	-.433	1	-.038	1	-8.786e-03	1	-1.11e-03	3	-5.942e-03	3
2377	N1189A	max	.027	3	.054	3	.028	2	3.938e-03	2	6.125e-04	7	7.117e-03	4
2378		min	-.032	4	-.141	4	-.038	1	-3.779e-03	1	-2.948e-05	4	-3.873e-03	3
2379	N1190A	max	.028	3	.211	3	.037	2	6.169e-03	2	4.712e-04	2	7.905e-03	4
2380		min	-.031	4	-.398	4	-.046	1	-5.35e-03	1	-7.424e-04	1	-6.234e-03	3
2381	N1191A	max	.295	3	.239	3	.312	2	1.119e-02	2	2.953e-03	1	5.772e-03	4
2382		min	-.295	4	-.456	4	-.33	1	-1.108e-02	1	-3.225e-03	2	-4.184e-03	3
2383	N1192A	max	.295	3	.25	4	.3	2	1.178e-02	2	3.695e-03	2	4.245e-03	4
2384		min	-.295	4	-.468	3	-.324	1	-1.146e-02	1	-3.158e-03	1	-6.063e-03	3
2385	N1193	max	.282	3	.304	4	.328	2	5.567e-03	2	1.915e-03	4	8.713e-03	4
2386		min	-.288	4	-.518	3	-.346	1	-4.514e-03	1	-2.004e-03	3	-9.977e-03	3
2387	N1194A	max	.386	3	.331	2	.316	2	7.544e-03	2	1.636e-03	3	8.645e-03	4
2388		min	-.395	4	-.622	1	-.335	1	-1.04e-02	1	-1.242e-03	4	-8.142e-03	3
2389	N1195	max	.382	3	.314	2	.315	2	6.439e-03	2	1.983e-03	3	7.676e-03	4
2390		min	-.384	4	-.594	1	-.33	1	-8.706e-03	1	-2.037e-03	4	-8.317e-03	3
2391	N1196A	max	.288	3	.316	3	.339	2	5.636e-03	2	3.678e-03	4	1.198e-02	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
2392		min	-.286	4	-.545	4	-.35	1	-4.376e-03	1	-3.362e-03	3	-1.031e-02	3
2393	N1197	max	.295	3	.147	3	.383	2	1.164e-02	2	2.79e-03	1	5.834e-03	4
2394		min	-.295	4	-.355	9	-.395	1	-1.165e-02	1	-3.198e-03	2	-4.23e-03	3
2395	N1198	max	.295	3	.063	1	.498	2	1.608e-02	2	3.749e-04	2	5.272e-03	4
2396		min	-.295	4	-.143	2	-.485	1	-1.643e-02	1	-3.042e-04	1	-5.425e-03	3
2397	N1199	max	.295	3	.157	4	.381	2	1.217e-02	2	3.603e-03	2	4.285e-03	4
2398		min	-.295	4	-.334	3	-.393	1	-1.207e-02	1	-2.988e-03	1	-6.211e-03	3
2399	N1200	max	.321	3	.206	4	.339	2	5.909e-03	2	1.802e-03	4	8.918e-03	4
2400		min	-.324	4	-.387	3	-.359	1	-4.804e-03	1	-2.053e-03	3	-1.009e-02	3
2401	N1201	max	.412	3	.037	4	.334	2	6.564e-03	2	1.167e-03	4	1.049e-02	4
2402		min	-.396	4	-.131	7	-.365	1	-7.297e-03	1	-1.166e-03	3	-1.028e-02	3
2403	N1202	max	.417	3	.207	2	.324	2	7.572e-03	2	1.236e-03	3	9.598e-03	4
2404		min	-.418	4	-.439	1	-.347	1	-1.041e-02	1	-7.625e-04	4	-8.818e-03	3
2405	N1203A	max	.419	3	.204	2	.323	2	6.456e-03	2	1.722e-03	3	8.226e-03	4
2406		min	-.423	4	-.434	1	-.339	1	-8.664e-03	1	-1.935e-03	4	-8.959e-03	3
2407	N1204A	max	.444	3	.053	3	.345	2	7.368e-03	2	1.012e-03	4	1.312e-02	4
2408		min	-.465	4	-.142	4	-.369	1	-7.554e-03	1	-9.526e-04	3	-1.308e-02	3
2409	N1205	max	.352	3	.211	3	.348	2	6.122e-03	2	3.589e-03	4	1.209e-02	4
2410		min	-.356	4	-.399	4	-.363	1	-4.679e-03	1	-3.172e-03	3	-1.055e-02	3
2411	N1206A	max	.295	3	.172	3	.364	2	1.119e-02	2	2.965e-03	1	5.765e-03	4
2412		min	-.295	4	-.382	9	-.378	1	-1.108e-02	1	-3.237e-03	2	-4.192e-03	3
2413	N1207A	max	.295	3	.182	4	.359	2	1.178e-02	2	3.707e-03	2	4.252e-03	4
2414		min	-.295	4	-.371	3	-.374	1	-1.146e-02	1	-3.17e-03	1	-6.056e-03	3
2415	N1208A	max	.31	3	.233	4	.337	2	5.561e-03	2	1.924e-03	4	8.717e-03	4
2416		min	-.315	4	-.422	3	-.355	1	-4.52e-03	1	-2.013e-03	3	-9.973e-03	3
2417	N1209A	max	.409	3	.241	2	.322	2	7.55e-03	2	1.645e-03	3	8.641e-03	4
2418		min	-.412	4	-.489	1	-.343	1	-1.039e-02	1	-1.25e-03	4	-8.146e-03	3
2419	N1210B	max	.409	3	.234	2	.321	2	6.445e-03	2	1.992e-03	3	7.68e-03	4
2420		min	-.412	4	-.477	1	-.336	1	-8.7e-03	1	-2.046e-03	4	-8.313e-03	3
2421	N1211C	max	.334	3	.239	3	.346	2	5.629e-03	2	3.687e-03	4	1.198e-02	4
2422		min	-.337	4	-.438	4	-.359	1	-4.382e-03	1	-3.371e-03	3	-1.031e-02	3

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LC	phi*Pnc...	phi*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	MP1C	PIPE_2.0	.585	2	3	.106	5		3	14916....	32130	1.872	1.872	1...	H1-1b
2	MP3B	PIPE_2.0	.558	1	4	.128	4		4	20866....	32130	1.872	1.872	2...	H1-1b
3	MP2A	PIPE_2.0	.535	5	1	.063	5		1	14916....	32130	1.872	1.872	2...	H1-1b
4	MP2B	PIPE_2.0	.517	5	3	.073	5		3	14916....	32130	1.872	1.872	1...	H1-1b
5	MP3C	PIPE_2.0	.492	1	1	.090	4		1	20866....	32130	1.872	1.872	2...	H1-1b
6	MP1B	PIPE_2.0	.469	1	1	.091	4		1	20866....	32130	1.872	1.872	2...	H1-1b
7	MP2C	PIPE_2.0	.455	4	3	.069	4		2	20866....	32130	1.872	1.872	2...	H1-1b
8	M127B	HSS4x4x4	.446	0	3	.114	0	y	3	115939...	139518	16.181	16.181	1...	H1-1b
9	M125B	HSS4x4x4	.440	0	4	.143	0	y	1	115939...	139518	16.181	16.181	1...	H1-1b
10	MP3A	PIPE_2.0	.419	4	9	.117	4		2	20866....	32130	1.872	1.872	2...	H1-1b
11	M135A	L3x3x4	.366	1.5	4	.120	0	y	4	44386....	46656	1.688	3.756	2...	H2-1
12	MP1A	PIPE_2.0	.360	1	2	.117	1		2	20866....	32130	1.872	1.872	2...	H1-1b
13	M126B	HSS4x4x4	.359	0	2	.121	0	y	4	115939...	139518	16.181	16.181	1...	H1-1b
14	M134A	L3x3x4	.344	1.5	1	.095	0	y	1	44386....	46656	1.688	3.756	2...	H2-1
15	M133A	L3x3x4	.317	0	1	.095	1.5	y	1	44386....	46656	1.688	3.756	2...	H2-1
16	M131B	PIPE_3.0	.277	6.771	7	.170	11.0...		4	28250....	65205	5.749	5.749	2...	H1-1b

Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LC	phi*Pnc...	phi*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
17	M68	PIPE_3.0	.260	6.073	5	.081	6.073		6	53523....	65205	5.749	5.749	2...	H1-1b
18	M132B	PIPE_3.0	.259	6.771	5	.120	1.432		3	28250....	65205	5.749	5.749	2...	H1-1b
19	M130B	PIPE_3.0	.224	6.771	2	.132	11.0...		1	28250....	65205	5.749	5.749	1...	H1-1b
20	M1	PIPE_3.0	.220	6.073	2	.117	1.771		9	53523....	65205	5.749	5.749	2...	H1-1b
21	M65	PL3/8x4	.218	.565	4	.058	.565	y	4	44539....	48600	.38	4.05	1...	H1-1b
22	M54B	PIPE_3.0	.216	6.073	3	.084	6.073		5	53523....	65205	5.749	5.749	2...	H1-1b
23	M55B	PIPE_3.0	.165	0	1	.189	0		6	53523....	65205	5.749	5.749	3...	H1-1b
24	M55C	PL3/8x4	.160	0	9	.103	.225	y	9	47933....	48600	.38	4.05	1...	H1-1b
25	M69	PIPE_3.0	.146	0	4	.243	0		7	53523....	65205	5.749	5.749	3...	H1-1b
26	M9	PL3/8x4	.144	.354	4	.065	4.25	y	4	46675....	48600	.38	4.05	1...	H1-1b
27	M66	PL3/8x4	.134	.225	3	.044	.225	y	4	47933....	48600	.38	4.05	1.1	H1-1b
28	M5	PL3/8x4	.131	.398	1	.071	0	y	1	47149....	48600	.38	4.05	2...	H1-1b
29	M69A	PL3/8x4	.127	0	2	.082	.565	y	9	44539....	48600	.38	4.05	1...	H1-1b
30	M16	PIPE_3.0	.125	0	2	.221	0		5	53523....	65205	5.749	5.749	2...	H1-1b
31	M7	PL3/8x4	.125	3.852	5	.065	4.25	y	1	47149....	48600	.38	4.05	2...	H1-1b
32	M67	PL3/8x4	.116	.565	1	.060	.565	y	1	44539....	48600	.38	4.05	2...	H1-1b
33	M8	PL3/8x4	.112	0	4	.041	0	y	3	47933....	48600	.38	4.05	1...	H1-1b
34	M14	L2x2x4	.105	0	4	.012	2.916	y	4	25500.22	30585.6	.691	1.577	2...	H2-1
35	M13	L2x2x4	.098	0	3	.012	2.916	z	4	25500.22	30585.6	.691	1.577	2...	H2-1
36	M68A	PL3/8x4	.095	.225	4	.032	.225	y	1	47933....	48600	.38	4.05	1...	H1-1b
37	M64	PL3/8x4	.094	.225	5	.043	.225	y	9	47933....	48600	.38	4.05	1...	H1-1b
38	M58B	PL3/8x4	.086	0	5	.022	.225	y	3	47933....	48600	.38	4.05	1...	H1-1b
39	M15	L2x2x4	.067	0	1	.009	2.916	z	2	25500.22	30585.6	.691	1.577	2...	H2-1
40	M10	L2x2x4	.060	0	2	.011	2.916	y	1	25500.22	30585.6	.691	1.577	2...	H2-1
41	M12	L2x2x4	.060	0	1	.008	2.916	y	1	25500.22	30585.6	.691	1.577	1...	H2-1
42	M11	L2x2x4	.053	2.916	8	.010	2.916	z	1	25500.22	30585.6	.691	1.577	1...	H2-1

EXHIBIT 9

MODIFICATION AND DESIGN
DRAWINGS FOR EXISTING ANTENNA MOUNTS
EXISTING MONOPOLE TOWER

PROPOSED CARRIER: T-MOBILE

TOWER OWNER: SBA / TOWER OWNER SITE #: CT13060-A

CARRIER SITE #/NAME: CT11259F / NEWTOWN

COORDINATES (LATITUDE: 41.420899°, LONGITUDE: -73.298102°)

PLEASE NOTE THIS SET OF DRAWINGS ARE FOR INSTALLATION AND ASSEMBLY ONLY. FABRICATION DETAIL DRAWINGS ARE NOT PROVIDED AND MUST BE COMPLETED BY THE STEEL FABRICATOR SELECTED. TES CAN PROVIDE THE FABRICATION DETAIL DRAWINGS FOR AN ADDITIONAL FEE.

SHEET	SHEET TITLE	REV
T-1	TITLE SHEET	0
BOM	BILL OF MATERIALS	0
GN-1	GENERAL NOTES	0
A-1	ANTENNA MOUNT MODIFICATION DETAILS	0
A-2	ANTENNA MOUNT PHOTOS	0
D-1	STANDARD DETAILS	0
MS-HRECP-35	METROSITE SUPPORT RAIL WITH END CONNECTION KIT	
MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT	

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE **TES** PROJECT NO. **77888**, DATED **06/21/2019**.

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BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
81228

CUSTOMER SITE NO:
CT13060-A-SBA

CUSTOMER SITE NAME:
NEWTOWN 2
3 EDMUND ROAD
NEWTOWN, CT 06470

STATE OF CONNECTICUT
HANMING YOU
28931
LICENSED
PROFESSIONAL ENGINEER

7/19/19

DRAWN BY: GA | CHECKED BY: ID/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/19/19

SHEET TITLE:
TITLE SHEET

SHEET NUMBER: T-1

REV #: 0

BILL OF MATERIALS

QUANTITY COUNTED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTIONS	SHEET LIST	PIECE WEIGHT (LBS)	WEIGHT (LB)	NOTES
			MATERIAL & HARDWARE				
1	1	MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT	A-1, MS-HRCP-35	23.0	23.0	Galvanized
1	1	MS-HRECP-35	METROSITE SUPPORT RAIL WITH END CONNECTION KIT	A-1, MS-HRECP-35	514.0	514.0	Galvanized
			FOLLOWING ITEMS ARE "CUSTOM" PARTS				
3	3	PST2375-8	2" PST (2.375" O.D. X 0.145" THK) X 8'-0" A53 GR-B 35KSI	A-1	30.00	90.0	GALVANIZED

ALL METROSITE PARTS ARE AVAILABLE FROM METROSITE, LLC.

180 IND PARK BLVD COMMERCE, GA 30529
OFFICE: (706) 335-7045
FAX: (706) 335-7056

NOTE: ALL MATERIALS, WHICH WEREN'T LISTED IN THIS SHEET, ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

TOTAL WEIGHT (LBS) = 627.0

TES

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BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
81228

CUSTOMER SITE NO:
CT13060-A-SBA
CUSTOMER SITE NAME:
NEWTOWN 2
3 EDMUND ROAD
NEWTOWN, CT 06470

DRAWN BY: GA | CHECKED BY: ID/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/19/19

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: BOM
REV #: 0

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE ANSI/TIA-222-G, ANSI/ASSP A10.48, 2018 CONNECTICUT STATE BUILDING CODE AND ANY OTHER GOVERNING BUILDING CODES AND OSHA SAFETY REGULATIONS.
2. ALL WORK INDICATED ON THE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TELECOMMUNICATIONS TOWER, POLE AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL MISCELLANEOUS PARTS (SUCH AS SHIMS), TEMPORARY SUPPORTS, AND GUYINGS, ETC., PER ANSI/ASSP A10.48, TO COMPLETE THE ASSEMBLY AS SHOWN IN THE DRAWINGS.
4. CONTRACTOR SHALL PROCEED WITH THE INSTALLATION WORK CAREFULLY SO THE WORK WILL NOT DAMAGE ANY EXISTING CABLE, EQUIPMENT OR THE STRUCTURE.
5. THE USE OF GAS TORCH OR WELDER, ARE NOT ALLOWED ON ANY TOWER STRUCTURE WITHOUT THE CONSENT OF THE TOWER OWNER.
6. GENERALLY THE CONTRACTOR IS RESPONSIBLE TO CONDUCT AN ONSITE VISIT SURVEY OF THE JOB SITE AFTER AWARD, AND REPORT ANY ISSUES WITH THE SITE TO **TES** BEFORE PROCEEDING CONSTRUCTION.
7. IT IS THE RESPONSIBILITY OF THE GC TO VERIFY THAT THERE IS NO INTERFERENCES (WITH SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.
8. PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-TESCONSTRUCTION@TESTOWER.US

FABRICATION

1. ALL STEEL SHALL MEET OR EXCEED THE MINIMUM STRENGTH AS SPECIFIED IN THE DRAWINGS. IF YIELD STRENGTH WAS NOT NOTED IN THE DRAWINGS, CONTRACTORS SHALL CONTACT TES FOR DIRECTION.
2. ALL FIELD CUT EDGES SHALL BE GROUND SMOOTH. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNO. (E70XX UNLESS NOTED OTHERWISE).
2. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING APPROX. 0.5" BEYOND THE PROPOSED FIELD WELD SURFACES.
3. ALL WELDS SHALL BE INSPECTED VISUALLY. A MINIMUM OF 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. 100% OF WELDS SHALL BE INSPECTED IF DEFECTS ARE FOUND.
4. WELD INSPECTIONS SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
5. AFTER INSPECTION, ALL FIELD WELDED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

1. ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS AS APPROVED BY THE RCSC.
2. FLANGE BOLTS SHALL BE TIGHTENED BY THE AISC "TURN-OF-THE-NUT" METHOD. THE FOLLOWING TABLE SHOULD BE USED FOR THE "TURN-OF-THE-NUT" TIGHTENING.
3. SPLICE BOLTS AND ALL OTHER BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION.
4. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
5. HB HOLLO-BOLT SHALL BE INSTALLED PER ICC ESR-3330 INSTRUCTIONS.

VERIFICATION AND INSPECTION

1. IF APPLICABLE, VERIFICATION INSPECTION TO BE PERFORMED SHALL BE IN ACCORDANCE TO IBC-2015 SECTION 1705 FOR STEEL CONSTRUCTION AND TABLE 1705.3 FOR CONCRETE CONSTRUCTION.

TABLE 8.2 NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING [a,b]

BOLT LENGTH [c]	DISPOSITION OF OUTER FACE OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 [d]	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS [d]
NOT MORE THAN $4d_b$	1/3 TURN	1/2 TURN	2/3 TURN
MORE THAN $4d_b$ BUT NOT MORE THAN $8d_b$	1/2 TURN	2/3 TURN	5/6 TURN
MORE THAN $8d_b$ BUT NOT MORE THAN $12d_b$	2/3 TURN	5/6 TURN	1 TURN

[a] NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

[b] APPLICABLE ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

[c] WHEN THE BOLT LENGTH EXCEEDS $12d_b$, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

[d] BEVELED WASHER NOT USED.

SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004 RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

INSTALLATION TORQUE REQUIRED FOR HOLLO BOLTS AND AJAX BOLTS:

1. HB12 HOLLO BOLT: 59 FT-LBS
2. HB16 HOLLO BOLT: 140 FT-LBS
3. HB20 HOLLO BOLT: 221 FT-LBS
4. M20 AJAX BOLT: 280 FT-LBS.

FIELD HOT WORK PLAN NOTES:

FOLLOWING GUIDELINES SHALL BE COMPLIED WITH:

1. CONTRACTOR'S RESPONSIBILITY TO COMPLETE A HOT WORK PLAN IF AWARDED PER CUSTOMER SPECIFICATIONS GUIDELINES FOR WELDING, CUTTING & SPARK PRODUCING WORK.
2. HAVE A FIRE PLAN APPROVED BY THE CUSTOMER AND THEIR SAFETY MANAGEMENT DEPT.
3. CONTRACTOR MUST OBTAIN THE CONTACT INFO OF THE LOCAL FIRE DEPARTMENT AND THE 911 ADDRESS OF THE TOWER SITE BEFORE CONSTRUCTION.
4. CONTRACTOR SHALL MAKE SURE THAT CELL PHONE COVERAGE IS AVAILABLE IN THE TOWER SITE. IF CELL COVERAGE IS NOT AVAILABLE, AN IMMEDIATE AVAILABLE MEANS OF DIRECT COMMUNICATION WITH THE FIRE DEPARTMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION START.
5. ALL CONSTRUCTION SHALL BE PERFORMED UNDER WIND SPEED LESS THAN 10 MPH ON THE GROUND LEVEL. IF WIND SPEED INCREASE, CONTRACTOR MUST DETERMINE IF CONSTRUCTION SHALL BE DISCONTINUED.
6. FIRE SUPPRESSION EQUIPMENT MUST BE MADE AVAILABLE ON SITE AND READY TO USE.
7. CONTRACTOR SHALL ASSIGN A FIRE WATCHER TO PERFORM FIRE-FIGHTING DUTIES.
8. ALL WELDERS SHALL BE AWS OR STATE CERTIFIED. THEY MUST ALSO BE EXPERIENCED IN WELDING ON GALVANIZED MATERIALS.
9. IF IT IS POSSIBLE, ALL EXISTING COAX NEAR WELDING AREA SHALL BE TEMPORARILY MOVED AWAY FROM THE WELDING AREA BEFORE WELDING THE PLATES.
10. PLEASE REPORT ANY FIELD ISSUE TO TES @ 972-483-0607.

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(800)-487-SITE

TES JOB NO:
81228

CUSTOMER SITE NO:
CT13060-A-SBA
CUSTOMER SITE NAME:
NEWTOWN 2
3 EDMUND ROAD
NEWTOWN, CT 06470

DRAWN BY: GA | CHECKED BY: ID/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/19/19

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER: GN-1
REV #: 0

SCOPE OF WORK

1. INSTALL NEW 2" PST (8'-0" LONG) ANTENNA MOUNT PIPE. (1) PER SECTOR AS SHOWN. SEE SHEET D-1 FOR DETAILS.
2. REPLACE EXISTING BENT PLATE CONNECTION WITH NEW CENTER PIPE KIT AT EXISTING BOTTOM HORIZONTAL FOR THE EXISTING VERTICAL MOUNT PIPE. (2) TOTAL. SEE SHEET MS-HRCP-35 FOR DETAILS.
3. INSTALL NEW SUPPORT RAIL WITH END CONNECTION KIT. SEE SHEET MS-HRECP-35 FOR DETAILS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

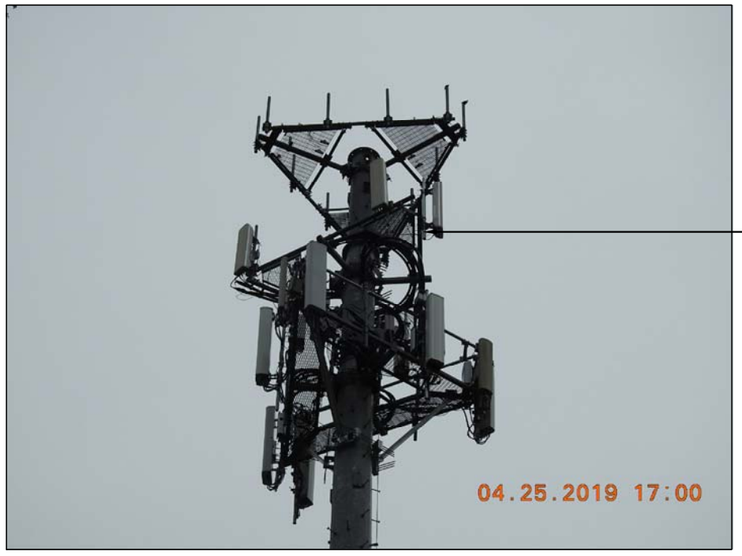
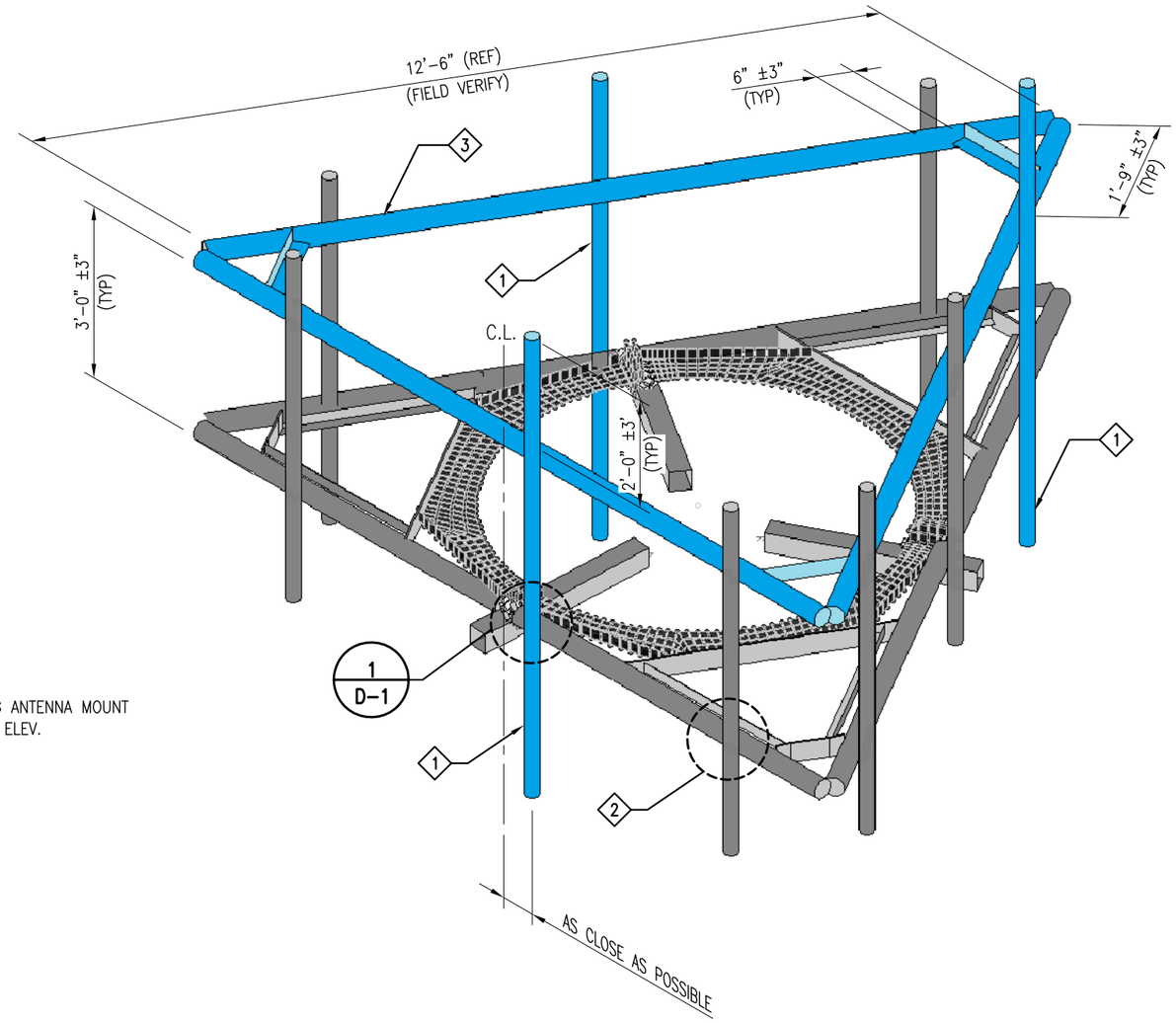


PHOTO 1



ISOMETRIC VIEW
EXISTING ANTENNA MOUNT @ 127' ELEV.

GC NOTE:
1. **IT IS THE RESPONSIBILITY OF THE GC TO VERIFY THAT THERE IS NO INTERFERENCES WITH (PORT HOLES, SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.**
2. **PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-TESCONSTRUCTION@TESTOWER.US**

NOTES:
1. TEMPORARILY RELOCATE ANY EXISTING COAX ATTACHED TO THE LEGS AND/OR ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.
2. WHEN FIELD CUTTING AND DRILLING ANGLES, USE SAME GAGE LINES AND EDGE DISTANCES AS INDICATED ON SHOP CUT AND DRILLED ENDS.
3. APPLY (2) COATS OF ZINC RICH GALVANIZING COMPOUND AS PER THE MANUFACTURER'S SPECIFICATIONS TO ALL FIELD CUT AND DRILLED AREAS.
4. **MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS.**

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	3	PST2375-8	2" PST (2.375" O.D. X 0.145" THK) X 8'-0" A53 GR-B 35KSI
2	1	MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT
3	1	MS-HRECP-35	METROSITE SUPPORT RAIL WITH END CONNECTION K

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TES JOB NO:
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CUSTOMER SITE NO:
CT13060-A-SBA
CUSTOMER SITE NAME:
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3 EDMUND ROAD
NEWTOWN, CT 06470

DRAWN BY: GA | CHECKED BY: ID/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/19/19

SHEET TITLE:
ANTENNA MOUNT MODIFICATION DETAILS

SHEET NUMBER: A-1
REV #: 0

PHOTO 1

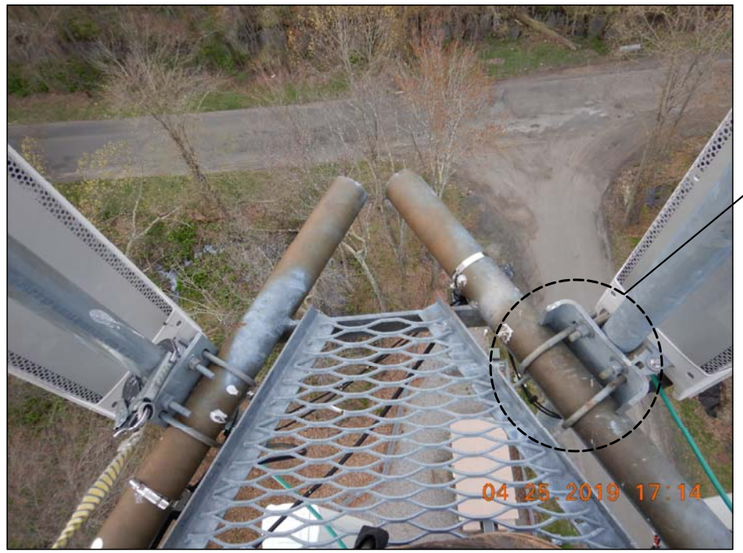

PHOTO 2

REPLACE EXISTING BENT PLATE CONNECTION WITH NEW CENTER PIPE KIT AT EXISTING BOTTOM HORIZONTAL FOR THE EXISTING VERTICAL MOUNT PIPE. (2) TOTAL. SEE SHEET MS-HRCP-35 FOR DETAILS.

PHOTO 3

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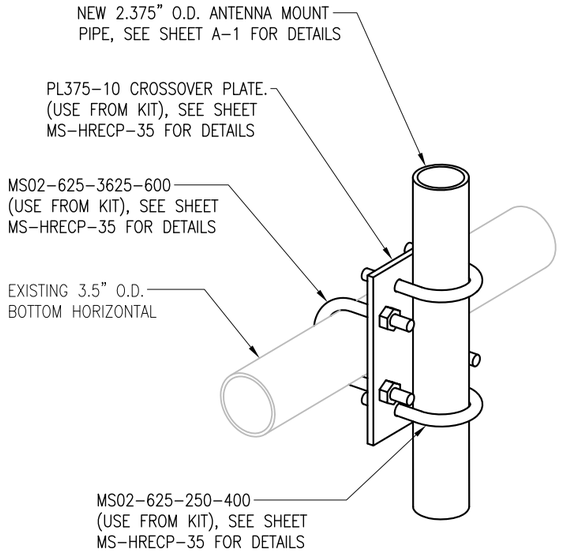
NEWTOWN, CT 06470

DRAWN BY: GA | CHECKED BY: ID/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/19/19

SHEET TITLE:
ANTENNA MOUNT PHOTOS

SHEET NUMBER: A-2
REV #: 0



1 / D-1 DETAIL

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
2. ALL HOLES ARE 11/16" DIA. U.N.O

TES
Tower Engineering Solutions
1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PH: (972) 483-0607

SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
81228

CUSTOMER SITE NO:
CT13060-A-SBA

CUSTOMER SITE NAME:
NEWTOWN 2

3 EDMUND ROAD
NEWTOWN, CT 06470

DRAWN BY: GA | CHECKED BY: ID/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/19/19

SHEET TITLE:

STANDARD DETAILS

SHEET NUMBER: D-1

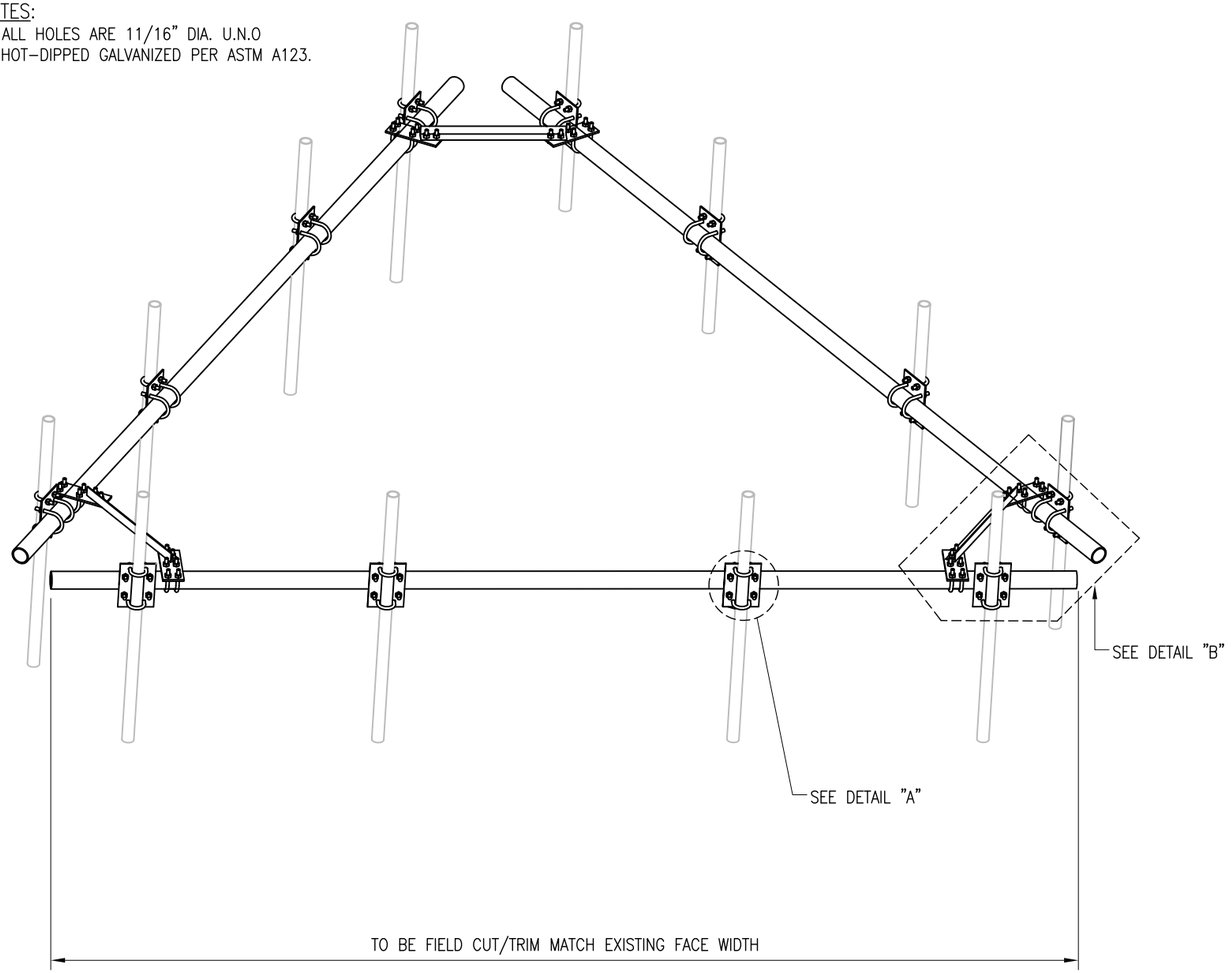
REV #: 0

THE FOLLOWING DRAWINGS ARE INCLUDED FOR REFERENCE ONLY
PLEASE REFER TO THE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION DETAILS

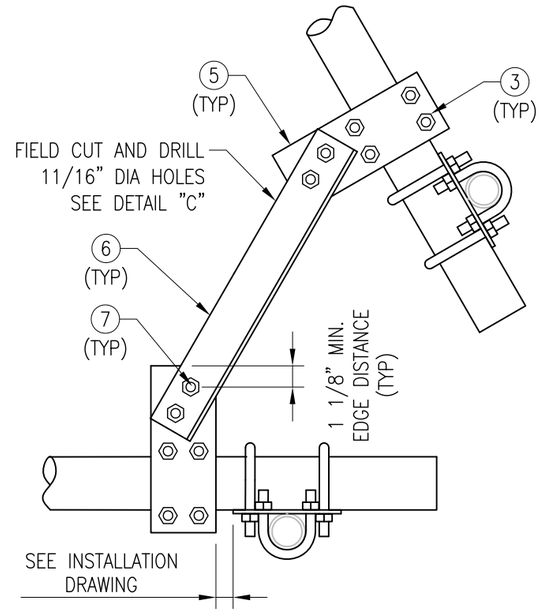
NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.

MS-HRECP-35

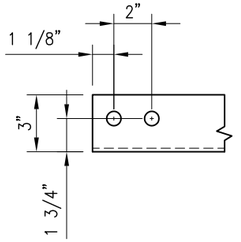
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	3PST-140	3" PST (3.50" O.D X .216" THICK) X 14'-0"	A53 GR-B	TAF-1	337.2
2	12	PL375-10	PL 3/8" X 7 1/8" X 10"	A36	TAF-1	92.4
3	36	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
4	24	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
5	6	PL375-11	PL 3/8" X 4 1/4" X 0'-11"	A36	TAF-1	30.2
6	3	AL-33C	L 3" X 3" X 1/4" X 3'-6"	A36	ECP-1	54.0
7	12	--	BOLT 5/8" X 2" A325 W/ HHN & LKW	A325	--	--
				GALVANIZED WT		514



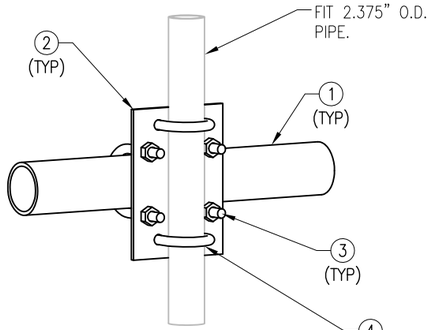
ELEVATION VIEW



DETAIL "B"



DETAIL "C"
11/16"ø HOLES FIELD DRILLED



DETAIL "A"

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH
STANDARD SHEET TOLERANCES
DECIMALS: .X ± 0.1, .XX ± 0.02, .XXX ± 0.005
ANGLES: ± 1°
FRACTIONS: ± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
MS-HRECP-35
SUPPORT RAIL WITH END CONNECTION KIT

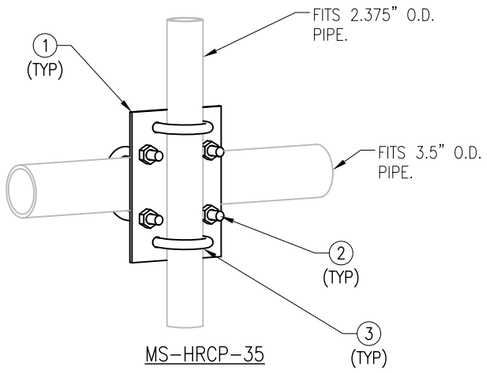
SIZE	DWG NO	REV
B	MS-HRECP-35	1

SCALE: -
SHEET 1 OF 1

NOTES:
1. 1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.

MS-HRCP-35

ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	PL375-10	PL 3/8" X 7 1/8" X 10"	A36	TAF-1	23.1
2	6	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
3	6	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
					GALVANIZED WT	23



THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
MS-HRCP-35
SUPPORT RAIL CENTER PIPE KIT

SIZE	DWG NO	REV
B	MS-HRCP-35	0

SCALE -
SHEET 1 OF 1

EXHIBIT 10

Transcom Engineering, Inc.

Wireless Network Design and Deployment

Radio Frequency Emissions Analysis Report

T-MOBILE Existing Facility

Site ID: CT11259F

CT259/OPTNewton_RL#1
3 Edmond Road
Newtown, CT 06470

May 21, 2019

Transcom Engineering Project Number: 737001-0051

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**4.63 %**

May 21, 2019

T-MOBILE
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 6009

Emissions Analysis for Site: **CT11259F – CT259/OPTNewton_RL#1**

Transcom Engineering, Inc ("Transcom") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **3 Edmond Road, Newtown, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 & 700 MHz bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed upgrades to the T-MOBILE antenna facility located at **3 Edmond Road, Newtown, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-MOBILE is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	2	60
GSM	1900 MHz (PCS)	1	15
UMTS	2100 MHz (AWS)	1	40
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Ericsson AIR32 B66A / B2A	127
A	2	Ericsson AIR21 B2A/B4P	127
A	3	RFS APXVAARR24_43-U-NA20	125
B	1	Ericsson AIR32 B66A / B2A	127
B	2	Ericsson AIR21 B2A/B4P	127
B	3	RFS APXVAARR24_43-U-NA20	125
C	1	Ericsson AIR32 B66A / B2A	127
C	2	Ericsson AIR21 B2A/B4P	127
C	3	RFS APXVAARR24_43-U-NA20	125

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	2.64
Antenna A2	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	2,139.75	0.52
Antenna A3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.47
						Sector A Composite MPE%	**4.63**
Antenna B1	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	2.64
Antenna B2	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	2,139.75	0.52
Antenna B3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.47
						Sector B Composite MPE%	**4.63**
Antenna C1	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	2.64
Antenna C2	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	2,139.75	0.52
Antenna C3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.47
						Sector C Composite MPE%	**4.63**

Table 3: T-MOBILE Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
T-MOBILE – Max Per Sector Value	**4.63 %**
Nextel	0.00 %
AT&T	0.00 %
Site Total MPE %:	**4.63 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	4.63 %
T-MOBILE Sector B Total:	4.63 %
T-MOBILE Sector C Total:	4.63 %
Site Total:	4.63 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (PCS) LTE	4	1,538.37	127	15.11	1900 MHz (PCS)	1000	1.51%
T-Mobile 2100 MHz (AWS) LTE	2	2,307.55	127	11.33	2100 MHz (AWS)	1000	1.13%
T-Mobile 1900 MHz (PCS) GSM	1	583.57	127	1.43	1900 MHz (PCS)	1000	0.14%
T-Mobile 2100 MHz (AWS) UMTS	1	1,556.18	127	3.82	2100 MHz (AWS)	1000	0.38%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	125	4.01	600 MHz	400	1.00%
T-Mobile 700 MHz LTE	2	432.54	125	2.20	700 MHz	467	0.47%
						Total:	**4.63%**

Table 6: T-MOBILE Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-MOBILE facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-MOBILE Sector	Power Density Value (%)
Sector A:	4.63 %
Sector B:	4.63 %
Sector C:	4.63 %
T-MOBILE Maximum Total (per sector):	4.63 %
Site Total:	4.63 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **4.63 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
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PO Box 1048
Sterling, MA 01564