Filed by:
Kri Pelletier, Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3804 - kpelletier@sbasite.com

July 19, 2019

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

RE: Notice of Exempt Modification
100 Tatnic Hill Road, Brooklyn, CT 06234
Latitude: 41.767160
Longitude: -71.971949
T-Mobile Site #: CT11512C_L600

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 140-foot level of the existing 175-foot Monopole Tower at 100 Tatnic Hill Road, Brooklyn, CT. The 175-foot tower is owned by SBA Towers, LLC. The property is owned by Benjamin and Sophie Davidson. T-Mobile now intends to replace three (3) antennas with three (3) new 600/700 MHz antennas. The new antennas would be installed at the 140-foot level of the tower.

Planned Modifications:

TOWER

Remove:
- (3) 1-5/8" lines

Remove and Replace:
- (3) Commscope - LNX-6515DS-VTM – Panel (Remove) -- (3) RFS APXVAARR24_43-U-NA20 600/700 MHz antennas (Replace)

Install New:
- (3) Ericsson Radio 4449 B71+B12
- (3) 1-5/8" fiber

Existing Equipment to Remain (including Entitlements):
- (3) RFS - APXV18-206516S-C-A20 – Panel
- (3) Kathrein - 782 11056 - Bias T
- (3) TMA
- (1) Platform w/Handrails (HRK CommScope P/N MT-195-12)
- (9) 1-5/8" lines

GROUND

Install New:

- Equipment inside existing 6201 cabinet

This facility was approved by the Town of Brooklyn's Planning and Zoning Commission on August 4, 1999. Approval was given under SPR-99-17 for the construction of a telecommunications facility. There were no 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 Brooklyn's First Selectman, Richard Ives, and Zoning Enforcement Officer, Martha Fraekel, 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.

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,

Kri Pelletier
Property Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581

508.251.0720 x3804 + T
508.366.2610 + F
kpelletier@sbasite.com

Attachments

cc: Richard Ives, First Selectman / with attachments
The Town of Brooklyn, 4 Wolf Den Road, Brooklyn, CT 06234
Martha Fraenkel, Zoning Enforcement Officer / with attachments
Town of Brooklyn, Clifford B. Green Memorial Center, 69 South Main Street, Suite 22, Brooklyn, CT 06234
Benjamin and Sophie Davidson / with attachments
18 Nicks Close, St Helens Tasmania 7216 Australia (SBA address on file for overnight international – Town address on file is SBA corporate offices)

EXHIBIT LIST

Exhibit 1	Check Copy	
Exhibit 2	Notification Receipts	
Exhibit 3	Property Card	
Exhibit 4	Property Map	
Exhibit 5	Original Zoning Approval	Town of Brooklyn P&Z Commission 8/4/99
Exhibit 6	Construction Drawings	B&T Group dated 7/17/19
Exhibit 7	Structural Analysis	TES dated 7/1/19
Exhibit 8	Mount Analysis	TES dated 7/19/19
Exhibit 9	EME Report	Transcom dated 6/11/19

EXHIBIT 1

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.
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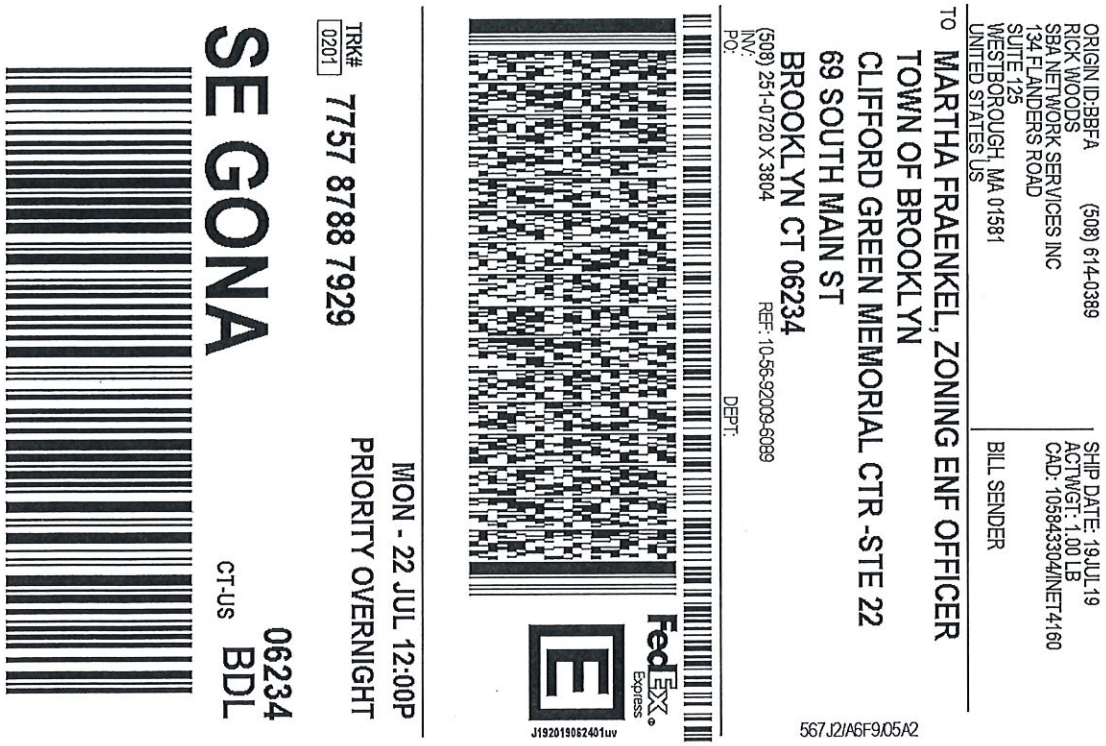
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you 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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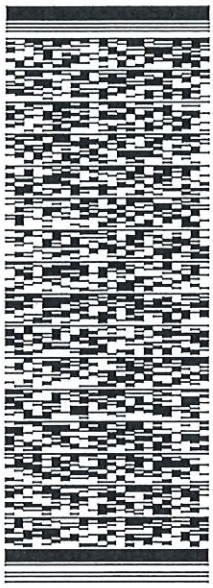
TRK# 0430 7757 8808 5357

XQ LSTX

PM

INTL PRIORITY

7216 SYD -AU



FedEx Express

J192019052402uv

ORIGIN ID:BBFA (508) 251-0720
KRI PELLETIER
SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581 US
SIGN: KRI PELLETIER

SHIP DATE: 19JUL19
ACTWGT: 2.00 LB
CAD: 105843304/INET4160

BILL SENDER
NO EEI 30.37(a)

TO BENJAMIN AND SOPHIE DAVIDSON

18 NICKS CLOSE

ST. HELENS TASMANIA 7216 (AU)

REF: 10-56-92009-6089

DEPT:

567J2IA6F9J05A2

5082510720 X 3804
INV:
PO:

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EXHIBIT 3

100 TATNIC HILL RD

Location	100 TATNIC HILL RD	**Mblu**	15/ / 16-5/ /
Acct#	00116805	**Owner**	DAVIDSON BENJAMIN & SOPHIE
Assessment	$193,800	**Appraisal**	$276,900
PID	1241	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$0	$276,900	$276,900
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$0	$193,800	$193,800

Owner of Record

Owner	DAVIDSON BENJAMIN & SOPHIE	**Sale Price**	$0
Co-Owner	C/O SBA TOWERS	**Certificate**	
Care Of		**Book & Page**	216/ 6
Address	ATTN: TAX DEPT CT01915-S 8051 CONGRESS AVE BOCA RATON, FL 33487-1307	**Sale Date**	09/09/1999
		Qualified	U

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
DAVIDSON BENJAMIN & SOPHIE	$0		216/ 6	09/09/1999
HALE NEWELL D	$0		112/ 259	04/29/1991

Building Information

Building 1 : Section 1

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

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo

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

Building Layout

(http://images.vgsi.com/photos/BrooklynCTPhotos//Sketches/12

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	1300
Description	VACANT
Zone	RA
Neighborhood	0050
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1.67
Frontage	
Depth	
Assessed Value	$193,800
Appraised Value	$276,900

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

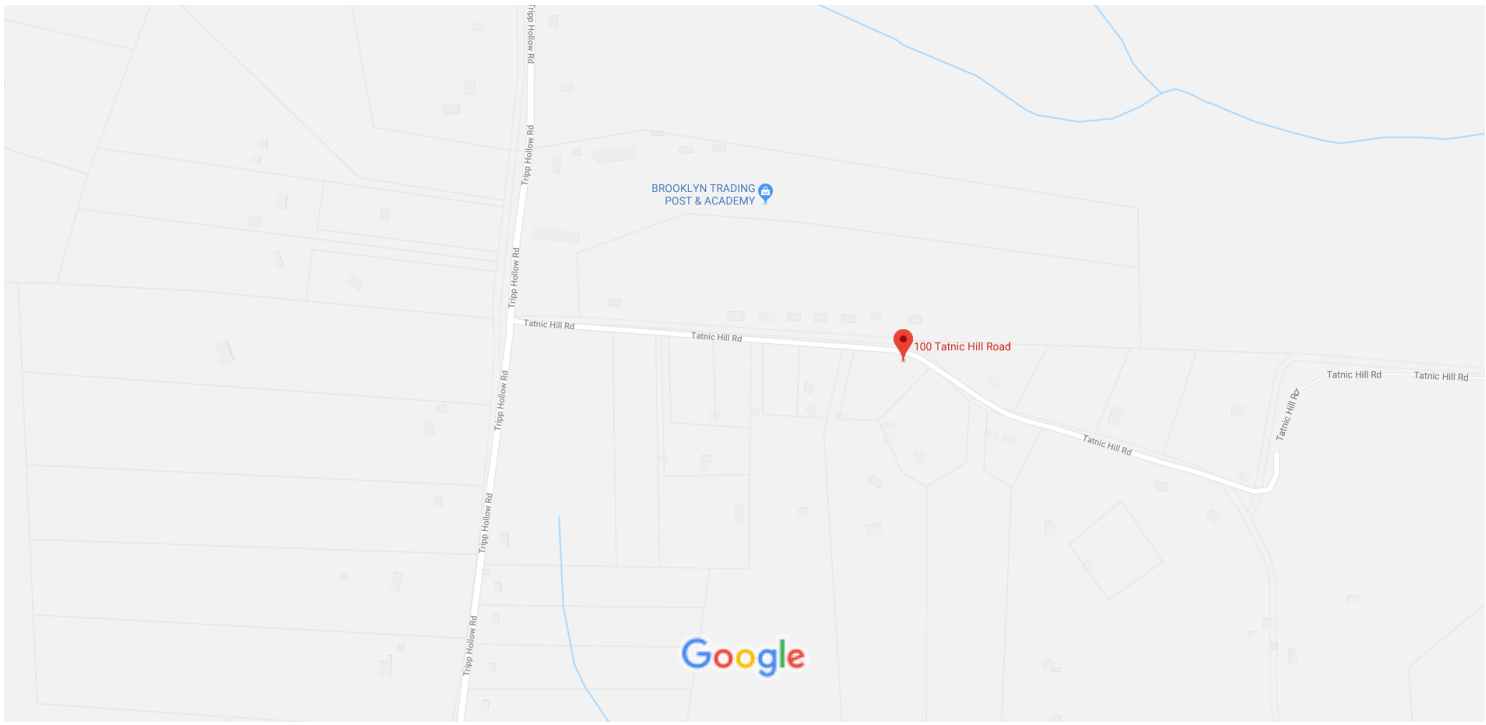
Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$0	$276,900	$276,900
2017	$0	$276,900	$276,900
2016	$0	$276,900	$276,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$0	$193,800	$193,800
2017	$0	$193,800	$193,800
2016	$0	$193,800	$193,800

EXHIBIT 4

Google Maps 100 Tatnic Hill Rd



Map data ©2019 200 ft

100 Tatnic Hill Rd

Brooklyn, CT 06234

Directions Save Nearby Send to your phone Share

Q2CG+39 Brooklyn, Connecticut

EXHIBIT 5

PLANNING AND ZONING COMMISSION
TOWN OF BROOKLYN
CONNECTICUT 06234

Norwich Bulletin Classified/Legals Department
Please run the following Legal Ad One Time Only:
Monday, August 9, 1999

(Bill to the Town of Brooklyn, Account #10089300)
Contact Chuck Dobrowski at 779-3411 with any question/problems
Thank you.)

Town of Brooklyn
Planning and Zoning Commission
Notice of Decision

At the Regular Meeting of the Brooklyn Planning and Zoning Commission held on August 4, 1999, the following decisions were rendered.

Zone Change Application 99-02 of Angela C. Revera, request for Zone Change at 207 Day Street, from R30 to RA. – APPLICATION WAS DENIED

SPR-99-17 of SBA Inc./Sprint PCS, construction of telecommunications facility at 130 Old Tatnic Hill Road, Map 15, Lot 16. – APPLICATION WAS APPROVED

SPR-99-18 of Nextel Communications, construction of telecommunications facility at Tatnic Hill Road, Map 14, Lot 10. – APPLICATION WAS WITHDRAWN

SD-99-06, Theodore Stever, Allen Hill Road, three lot subdivision. – APPLICATION WAS APPROVED WITH CONDITIONS

SPR99-19 Kenyon Oil Company, 409 Providence Road, construction of Convenience Store and Gas Station. – APPLICATION TABLED.

Madeline J. Adams

for Bruce Parsons
Chairman

EXHIBIT 6

SITE NAME: CT512/SBA - S BROOKLYN

130 TATNIC HILL ROAD
BROOKLYN, CT 06234

SITE NUMBER: CT11512C

SITE CONFIG: 67D04G

PROJECT NOTES

GENERAL NOTES:

THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T–MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.

THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC, ROUTINE MAINTENANCE AND THEREFORE, DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T–MOBILE NORTHEAST LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SPECIAL STRUCTURAL NOTES:

TOWER OWNER SHALL PROVIDE GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING ANTENNA SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE–BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.

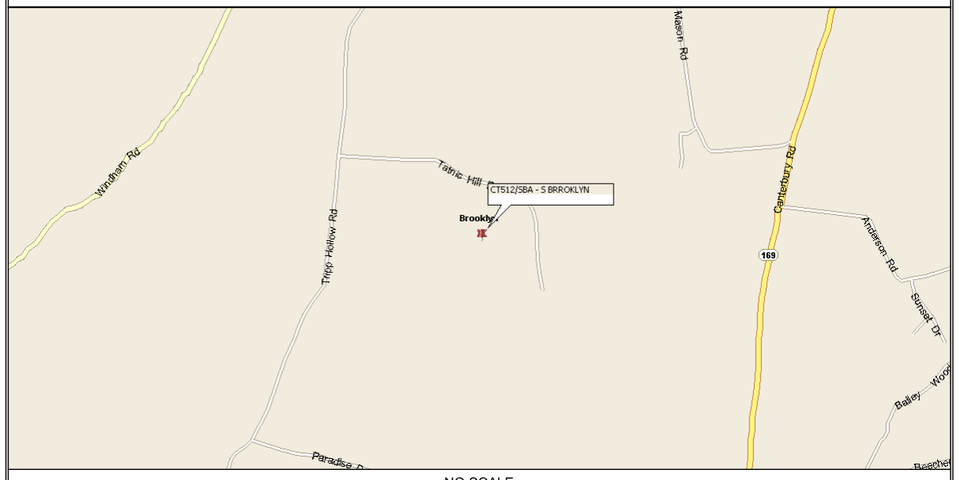
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND HAS DETERMINED THAT THE EXISTING ANTENNA MOUNT SHALL BE REPLACED OR MODIFIED TO ACCOMMODATE ANY ADDITIONAL EQUIPMENT LOAD. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

B+T GROUP ASSUMES THAT THE TOWER IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTIONS ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NO DETERIORATION TO ITS MEMBER CAPACITIES.

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS	LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS NOT PERMITTED	DIPLEXERS:	UNRESTRICTED
SECTOR B:	ACCESS NOT PERMITTED	RADIO CABINETS:	UNRESTRICTED
SECTOR C:	ACCESS NOT PERMITTED	PPC DISCONNECT:	UNRESTRICTED
RRH:	ACCESS NOT PERMITTED	MAIN CIRCUIT D/C:	UNRESTRICTED
TMA:	ACCESS NOT PERMITTED	NIU/T DEMARC:	UNRESTRICTED
GPS/LMU:	CAUTION: OSHA APPROVED PORTABLE 8' STEP–LADDER REQUIRED	OTHER/SPECIAL:	NONE

LOCATION MAP



NO SCALE

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY T–MOBILE EQUIPMENT MODERNIZATION
ZONING JURISDICTION: (TOWN OF BROOKLYN)	BASED ON INFORMATION PROVIDED BY T–MOBILE, REGULATORY COMPLIANCE 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 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).
SITE ADDRESS:	130 TATNIC HILL ROAD BROOKLYN, CT 06234
LATITUDE: LONGITUDE:	41.7672° N 71.9718° W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES & ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
TOWER OWNER:	SBA TOWERS, LLC.
SBA SITE ID:	CT01915–S
SBA SITE NAME:	SOUTH BROOKLYN
SBA REGIONAL SITE MANAGER:	STEPHEN ROTH (860) 539–4920 sroth@sbasite.com

APPROVALS

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

ACCEPTANCE DOES NOT CONSTITUTE APPROVAL OF DESIGN, CALCULATIONS, ANALYSIS, TEST METHODS OF MATERIALS DEVELOPED OR SELECTED BY THE SUBCONTRACTOR AND DOES NOT RELIEVE SUBCONTRACTOR FROM FULL COMPLIANCE WITH CONTRACTUAL OBLIGATIONS.

DRAWING INDEX

SHEET #	SHEET DESCRIPTION	REV. #
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C–3	DETAILS	3
RF–1	RFDS DIAGRAMS	3
E–1	GROUNDING DETAILS AND NOTES	3

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

811

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

T-MOBILE NORTHEAST, LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581

CT11512C

CT512/SBA - S BROOKLYN

130 TATNIC HILL ROAD
BROOKLYN, CT 06234

PROJECT NO:	136029.002.01
CHECKED BY:	FWP

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	6/24/19	STH	FOR REVIEW
1	7/2/19	STH	FOR REVIEW
2	7/3/19	STH	FOR REVIEW
3	7/17/19	JJD	FOR REVIEW

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/20

STATE OF CONNECTICUT
31627
LICENSED
PROFESSIONAL ENGINEER
7/17/19

SHEET NUMBER:	REVISION:
T-1	3

GROUNDING NOTES:

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI OR NFPA) LIGHTING PROTECTION CODE AND GENERAL COMPLIANCE WITH TELECORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATION OR ADVERSE FINDING TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GE'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 & 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BUS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDED FITTINGS OR BY BINDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20' OR MORE OF 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BAR TINNED COPPER GROUND WIRE, PER NEC 250.50.

GENERAL NOTES:

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

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

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

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

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

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

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

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

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS NOTED OTHERWISE, PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WETHER SHALL BE HOT DIPPED GALVANIZED. TOUCH-UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH UMTS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."

17. 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.

18. THE EXISTING CELL SITE IS 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.

19. SINCE THE CELL SITE IS ACTIVE, AL 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 ADVISED TO BE WORN TO ALERT IF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
    - BUILDING CODE: IBC 2015
    - ELECTRICAL CODE: NEC 2017

    SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

    AMERICAN CONCRETE INSTITUTE (ACI) 318;
    BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

    AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

    MANUAL OF STEEL CONSTRUCTION; ASD, FOURTEENTH EDITION

    TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G;
    STRUCTURAL STANDARDS FOR STEEL

    ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES;
    REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHOD OF CONSTRUCTION OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	GC	GENERAL CONTRACTOR	REF.	REFERENCE
AWG	AMERICAN WIRE GAUGE	MAX.	MAXIMUM	REQ.	REQUIRED
BCW	BARE COPPER WIRE	MGB	MASTER GROUND BAR	RF	RADIO FREQUENCY
BTS	BASE TRANSCEIVER STATION	MIN.	MINIMUM	T.B.D.	TO BE DETERMINED
(E)	EXISTING	(N)	PROPOSED	T.B.R.	TO BE REMOVED
EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE	T.B.R.R.	TO BE REMOVED AND REPLACED
EGR	EQUIPMENT GROUND RING	RE:	REFERENCE	(TYP)	TYPICAL

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BROOKLYN

130 TATNIC HILL ROAD
BROOKLYN, CT 06234

PROJECT NO:	136029.002.01
CHECKED BY:	FWP

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
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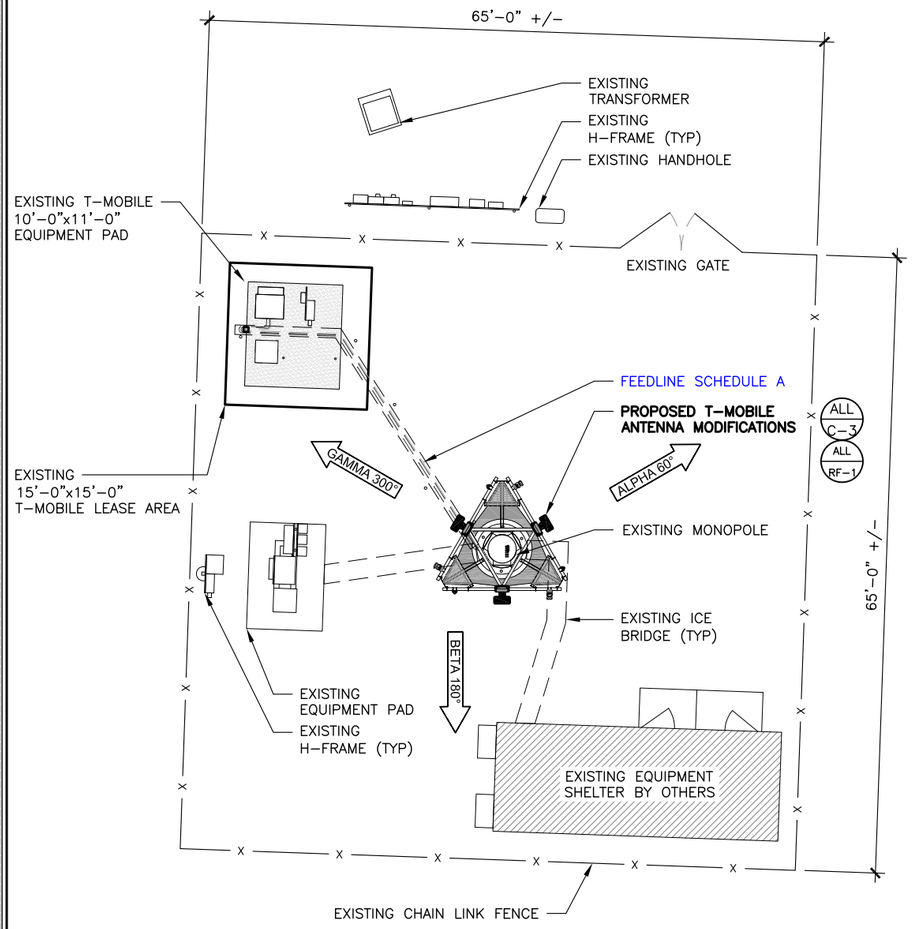
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/20

STATE OF CONNECTICUT 31627 LICENSED PROFESSIONAL ENGINEER
7/17/19

SHEET NUMBER: GN-1
REVISION: 3

SPECIAL PRE-CONSTRUCTION WORK NOTE:

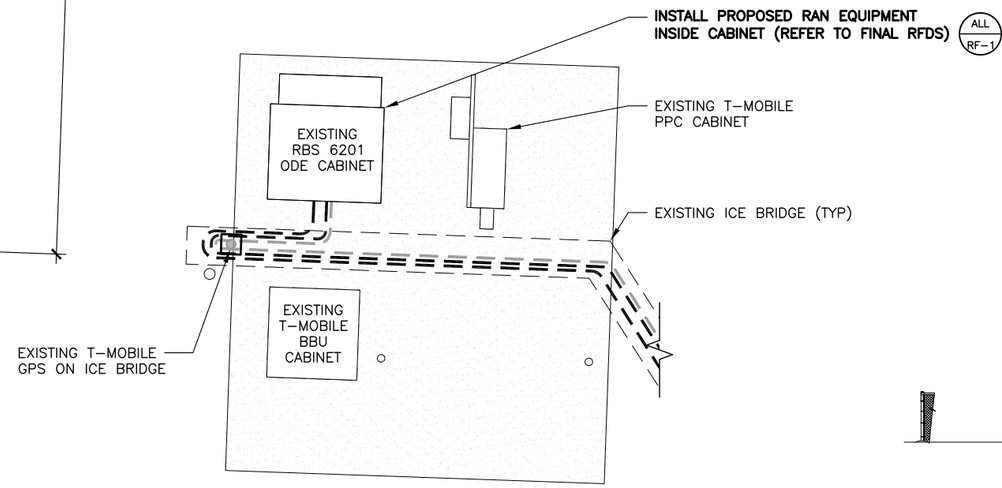
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

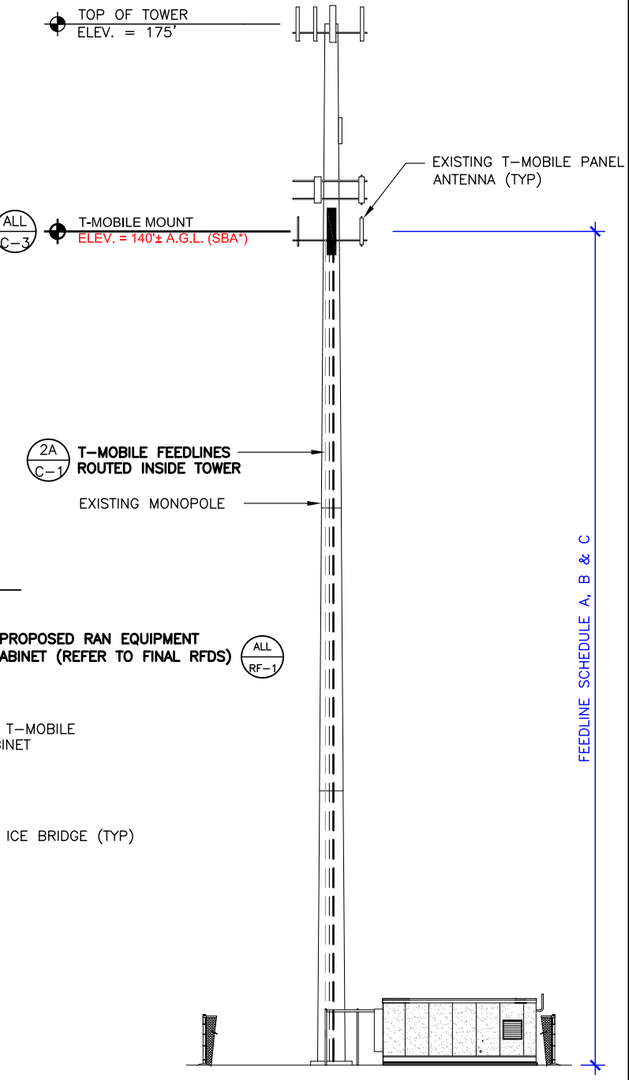


FEEDLINE SCHEDULE	FEEDLINE DESCRIPTION	LOCATION
A	EXISTING TO BE REMOVED: (3) 1 5/8" COAX	INSIDE POLE/FACE OF TOWER
B	EXISTING TO REMAIN: (9) 1 5/8" COAX	INSIDE POLE/FACE OF TOWER
C	PROPOSED: (3) 1 5/8" HCS FIBER	INSIDE POLE/FACE OF TOWER
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER		

2A CABLE SCHEDULE

SCALE: N.T.S.





1 OVERALL SITE PLAN

SCALE: 0' 8' 16' 32' 48'

11x17 SCALE: 1/16"=1'-0"
22x34 SCALE: 1/8"=1'-0"

N

2 EQUIPMENT PLAN

SCALE: 0' 1' 2' 4' 10'

11x17 SCALE: 1/4"=1'-0"
22x34 SCALE: 1/2"=1'-0"

3 ELEVATION DETAIL

SCALE: N.T.S.

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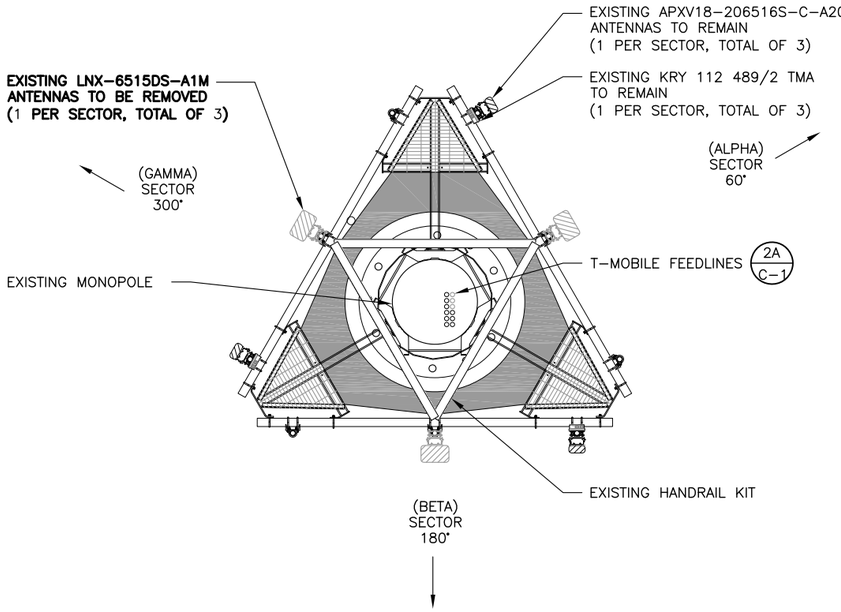
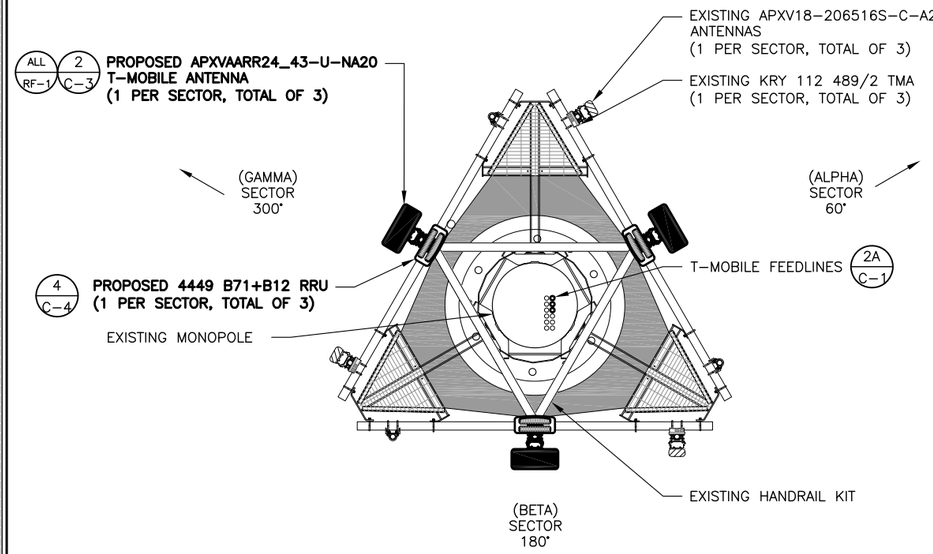


1 EXISTING ANTENNA PLAN

SCALE: 0' 1' 4' 8' 16'

11x17 SCALE: 3/16"=1'–0"
22x34 SCALE: 3/8"=1'–0"

N



2 PROPOSED ANTENNA PLAN

SCALE: 0' 1' 4' 8' 16'

11x17 SCALE: 3/16"=1'–0"
22x34 SCALE: 3/8"=1'–0"

N

NOTE:
AT TIME OF CONSTRUCTION, CONTRACTOR TO VERIFY AZIMUTHS OF EXISTING ANTENNAS. IF DIFFERENT FROM RFDS, PLEASE NOTIFY THE RF ENGINEER AND CONSTRUCTION MANAGER WITH ACTUAL AZIMUTH TO ENSURE T-MOBILE'S DATABASE IS ACCURATE AND UP-TO-DATE.

SPECIAL PRE-CONSTRUCTION WORK NOTE:

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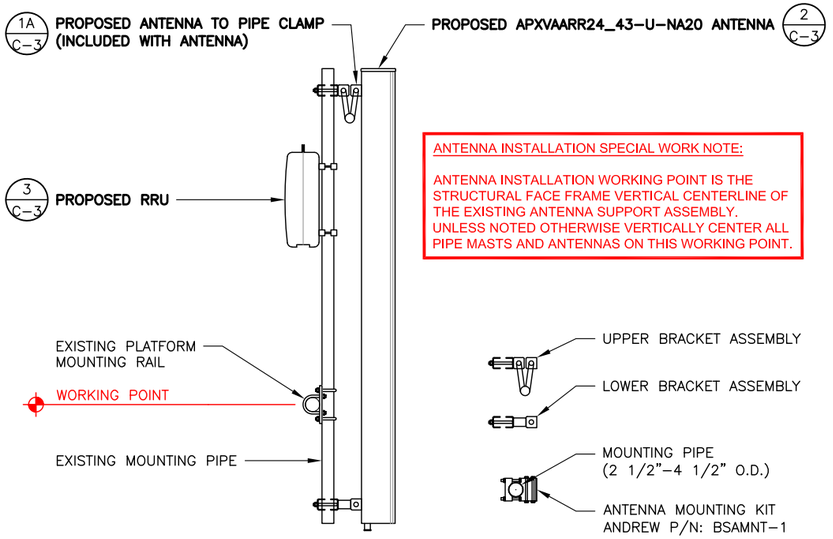


ANTENNA INSTALLATION SPECIAL WORK NOTE:

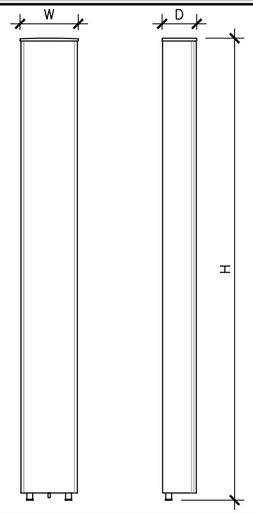
ANTENNA INSTALLATION WORKING POINT IS THE STRUCTURAL FACE FRAME VERTICAL CENTERLINE OF THE EXISTING ANTENNA SUPPORT ASSEMBLY. UNLESS NOTED OTHERWISE VERTICALLY CENTER ALL PIPE MASTS AND ANTENNAS ON THIS WORKING POINT.

1 PROPOSED L7/L6 ANTENNA & RRU MOUNTING DETAIL

SCALE: N.T.S.

1A L7/L6 ANTENNA MOUNTING BRACKET

SCALE: N.T.S.



L7/L6 ANTENNA SPECS	
MANUFACTURER	RFS
MODEL #	APXVAARR24_43-U-NA20
WIDTH	24"
DEPTH	8.7"
HEIGHT	95.9"
WEIGHT	128 LBS

2 L7/L6 ANTENNA DETAIL

SCALE: N.T.S.

SPECIAL PRE-CONSTRUCTION WORK NOTE:

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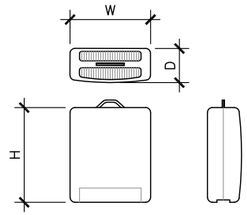

RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	4449 B71+B12
WIDTH	13.18"
DEPTH	9.25"
HEIGHT	15"
WEIGHT	74 LBS

3 REMOTE RADIO UNIT (RRU)

SCALE: N.T.S.

FINAL ANTENNA SCHEDULE - RFDS VERSION 1.1 DATED 5/8/19

SECTOR	TECH	ANTENNA MODEL	AZIMUTH	RAD CENTER	M-TILT	E-TILT	RADIOS/TMAS	CABLE TYPE	CABLE LENGTH
ALPHA	L19/G19	APXV18-206516S-C-A20	60°	140'	0°	2°	(1) KRY 112 489/2 TMA	(2) 1 5/8" COAX	190'
	L7/L6	**APXVAARR24_43-U-NA20**	**60°**	**140'**	**0°**	**2°/2°**	**(1) 4449 B71+B12**	**(1) 1 5/8" HCS FIBER**	**190'**
	-	-	-	-	-	-	-	-	-
BETA	L19/G19	APXV18-206516S-C-A20	180°	140'	0°	2°	(1) KRY 112 489/2 TMA	(2) 1 5/8" COAX	190'
	L7/L6	**APXVAARR24_43-U-NA20**	**180°**	**140'**	**0°**	**2°/2°**	**(1) 4449 B71+B12**	**(1) 1 5/8" HCS FIBER**	**190'**
	-	-	-	-	-	-	-	-	-
GAMMA	L19/G19	APXV18-206516S-C-A20	300°	140'	0°	2°	(1) KRY 112 489/2 TMA	(2) 1 5/8" COAX	190'
	L7/L6	**APXVAARR24_43-U-NA20**	**300°**	**140'**	**0°**	**2°/2°**	**(1) 4449 B71+B12**	**(1) 1 5/8" HCS FIBER**	**190'**
	-	-	-	-	-	-	-	-	-

4 FINAL ANTENNA SCHEDULE

SCALE: N.T.S.

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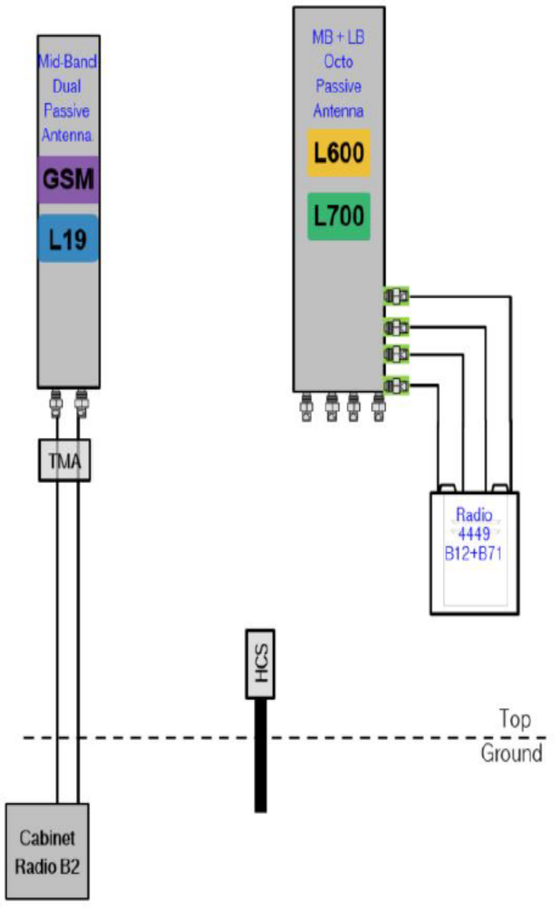

RF DESIGN GENERAL NOTE:

1. RF DESIGN BASED ON RFDS DATED 4/26/19 , GENERAL CONTRACTOR/TOWER CREW SHALL VERIFY THAT THE LATEST RFDS AND RAN WIRING DIAGRAM IS USED FOR EQUIPMENT INSTALLATION.
2. PRIOR TO INSTALLATION OF TOWER TOP EQUIPMENT, GENERAL CONTRACTOR/TOWER CREW SHALL VERIFY AZIMUTHS OF EXISTING ANTENNAS. DISCREPANCIES AND ACTUAL AZIMUTHS SHALL BE REPORTED IMMEDIATELY TO RF ENGINEER AND T-MOBILE CONSTRUCTION MANAGER.

RFDS FOOTNOTES:

1. INFORMATION IN BOLD RED TEXT IS PROVIDED BY A&E AND HIGHLIGHTS IMPORTANT DISCREPANCIES BETWEEN RFDS AND ACTUAL FIELD MEASUREMENTS OR SBA-PROVIDED RECORD INFORMATION.

* SBA-PROVIDED ANTENNA RAD AGL BASED ON COLOCATION APPLICATION AND STRUCTURAL ANALYSIS AND SHALL SUPERCEDE ANY CONFLICTING RFDS ANTENNA RAD AGL.

** HYBRID TRUNK FEEDLINE LENGTHS AS PROVIDED BY A&E BASED ON SCALED DIMENSIONS FROM RBS TO ANTENNA/RRU CONNECTIONS PLUS 20' FOR (2) 10' COILS EACH AT TOP AND BOTTOM TERMINATIONS. T-MOBILE CONSTRUCTION MANAGER SHALL CONFIRM ALL EQUIPMENT SCHEDULES, PART NUMBERS AND FEEDLINE/JUMPER LENGTHS BEFORE PREPARING A BILL OF MATERIALS.

5/8/2019 CT11512C_L600_1.1_draft_2019-05-08

RAN Template:	A&L Template:	Power System Template:
67D04G	67D04G_1DP+1OP	Custom

CT11512C_L600_1.1_draft

Section 5 - RAN Equipment

Existing RAN Equipment	
Template:	704G
Enclosure	1
Enclosure Type	RBS 6201 ODE
Baseband	DUL20, DUG20
Radio	RUS02 B2 (x6)

Proposed RAN Equipment	
Template:	67D04G
Enclosure	1
Enclosure Type	RBS 6201 ODE
Baseband	DUG20 (G1900); BB 6630 (L1900, L700, L600); BB 6630 (N600 (DARK))
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x3)
Radio	RUS01 B2 (x3) G1900; RUS01 B2 (x3) L1900

RAN Scope of Work:

*** RBS6201 ODE ***

Replace (1) DUS41 with (1) BB6630 for LTE,
Add (1) BB6630 for future 5G N600.

Remove all (6) RUS01 B12 from cabinet.

Add (3) 6X12 HCS
existing: (12) Coaxial Lines; No HCS
Remove (3) Coaxial Lines

Sector 2 (Existing) view from behind		
Address	Address: City, State: ,	Latitude: 41.7672740000 Longitude: -71.9718210000
Coverage Type	A - Outdoor Macro	
Antenna	1	2
Antenna Model	RFS - APXV18-206516S-C-A20 (Dual)	Andrew - LNX-6515DS-A1M (Dual)
Azimuth	180	180
M. Tilt	0	0
Height	140	140
Ports	P1	P2
Active Tech.	L1900, G1900	L700
Dark Tech.		
Restricted Tech.		
Decomm. Tech.		
E. Tilt	2	2
Cables		
TMAs		
Diplexers / Combiners		
Radio		
Sector Equipment		

Unconnected Equipment:

Cable: 1-5/8" Coax - 190 ft. | Cable: 1-5/8" Coax - 190 ft. | Cable: 1-5/8" Coax - 190 ft. | Cable: 1-5/8" Coax - 190 ft. | TMA: Generic Twin Style 1A - PCS

Scope of Work:

Sector 2 (Proposed) view from behind					
Coverage Type	A - Outdoor Macro				
Antenna	1	2			
Antenna Model	RFS - APXV18-206516S-C-A20 (Dual)	RFS - APXVAARR24_43-U-NA20 (Octo)			
Azimuth	180	180			
M. Tilt	0	0			
Height	140	140			
Ports	P1	P2	P3	P4	P5
Active Tech.	L1900, G1900	L700, L600	L700, L600		
Dark Tech.					
Restricted Tech.					
Decomm. Tech.					
E. Tilt	2	2	2		
Cables	1-5/8" Coax - 190 ft. (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMAs	Generic Twin Style 1A - PCS (AtAntenna)				
Diplexers / Combiners					
Radio		Radio 4449 B71+B12 (At Antenna)	SHARED Radio 4449 B71+B12 (At Antenna)		
Sector Equipment					

Unconnected Equipment:

Scope of Work:

Replace LB Dual in Position 2 with (1) LB/MB Octo.
Add (1) Radio 4449 B71+B12 for L600 and L700 to Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

Sector 3 (Proposed) view from behind					
Coverage Type	A - Outdoor Macro				
Antenna	1	2			
Antenna Model	RFS - APXV18-206516S-C-A20 (Dual)	RFS - APXVAARR24_43-U-NA20 (Octo)			
Azimuth	300	300			
M. Tilt	0	0			
Height	140	140			
Ports	P1	P2	P3	P4	P5
Active Tech.	L1900, G1900	L700, L600	L700, L600		
Dark Tech.					
Restricted Tech.					
Decomm. Tech.					
E. Tilt	2	2	2		
Cables	1-5/8" Coax - 190 ft. (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMAs	Generic Twin Style 1A - PCS (AtAntenna)				
Diplexers / Combiners					
Radio		Radio 4449 B71+B12 (At Antenna)	SHARED Radio 4449 B71+B12 (At Antenna)		
Sector Equipment					

Unconnected Equipment:

Scope of Work:

Replace LB Dual in Position 2 with (1) LB/MB Octo.
Add (1) Radio 4449 B71+B12 for L600 and L700 to Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

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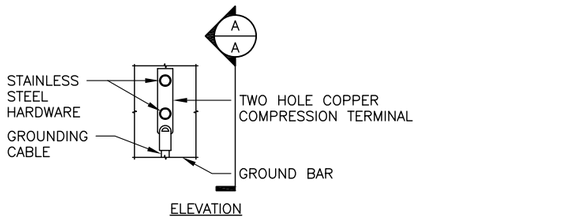
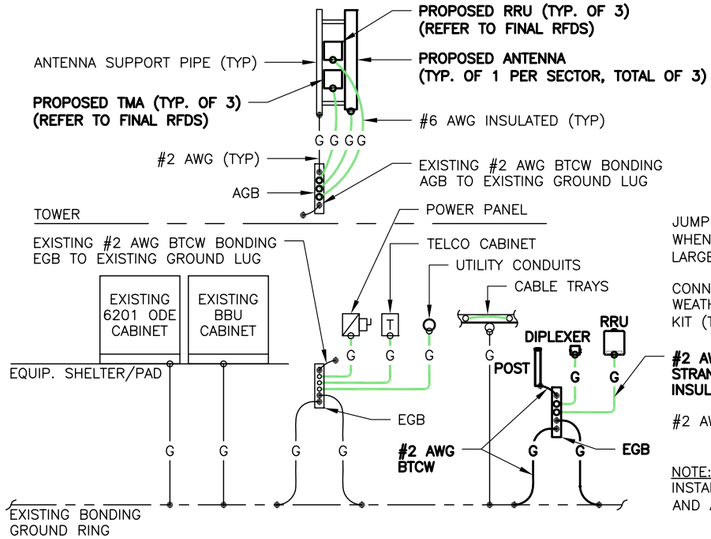
SHEET NUMBER: RF-1 | REVISION: 3

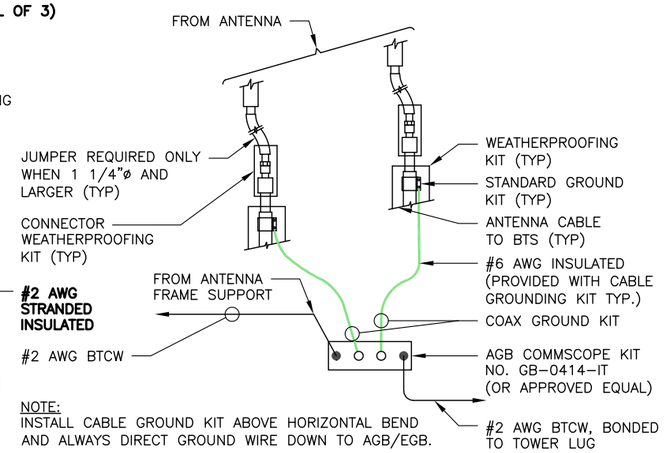


NOTE:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

1 TYPICAL GROUND BAR CONNECTION DETAIL
SCALE: N.T.S.

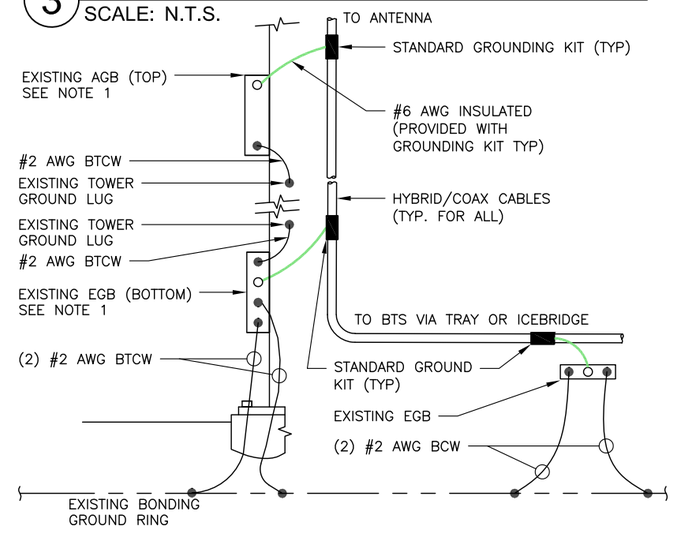


2 TYPICAL GROUNDING RISER DIAGRAM
SCALE: N.T.S.



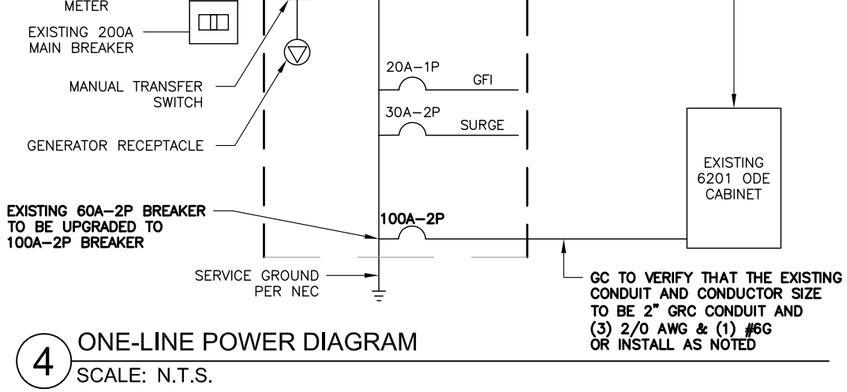
NOTE:
INSTALL CABLE GROUND KIT ABOVE HORIZONTAL BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO AGB/EGB.

3 TOWER TOP CABLE GROUNDING DETAIL
SCALE: N.T.S.



NOTE:
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER. ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

5 TOWER BOTTOM CABLE GROUNDING DETAIL
SCALE: N.T.S.



4 ONE-LINE POWER DIAGRAM
SCALE: N.T.S.

ELECTRICAL LEGEND

A	AMPERE
BTCW	BARE TINNED (SOLID) COPPER WIRE
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
KWH	KILOWATT – HOUR
PPC	POWER PROTECTION CABINET
V	VOLT
	5/8"x8' COPPER CLAD STAINLESS STEEL GROUND ROD
	GROUND
	EXOTHERMIC CONNECTION (CAD WELD) MECHANICAL CONNECTION
AGB/EGB	ANTENNA GROUND BAR/EQUIPMENT GROUND BAR
MGB	MASTER GROUND BAR
G	GROUND COPPER WIRE, SIZED AS NOTED
	EXPOSED WIRING, SIZE AS NOTED
	INSULATED WIRING, SIZE AS NOTED
	OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL

ELECTRICAL & 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 SPECIFICATIONS 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. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL 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 PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
11. GROUNDING SHALL COMPLY WITH NEC ART. 250.
12. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
13. 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.
14. 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.
15. 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 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
16. CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN BTS UNIT).
17. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
18. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. BOND ANTENNA EGB'S AND MGB TO WATER MAIN.
21. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
22. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
23. VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

B+T GRP
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T-MOBILE NORTHEAST, LLC
15 COMMERCE WAY, SUITE B
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SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581

CT11512C

CT512/SBA - S
BROOKLYN

130 TATNIC HILL ROAD
BROOKLYN, CT 06234

PROJECT NO:	136029.002.01
CHECKED BY:	FWP

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	6/24/19	STH	FOR REVIEW
1	7/2/19	STH	FOR REVIEW
2	7/3/19	STH	FOR REVIEW
3	7/17/19	JJD	FOR REVIEW

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/20

SHEET NUMBER:	REVISION:
E-1	3

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 175 ft SUMMIT Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01915-S

Customer Site Name: South Brooklyn

Carrier Name: T-Mobile (App#: 116844, V1)

Carrier Site ID / Name: CT11512C / South Brooklyn

Site Location: 100 Old Tatnic Hill Road

Brooklyn, Connecticut

Windham County

Latitude: 41.767160

Longitude: -71.971949

Analysis Result:

Max Structural Usage: 66.6% [Pass]

Max Foundation Usage: 44.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By : Dipika Dhungana

Introduction

The purpose of this report is to summarize the analysis results on the 175 ft SUMMIT 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	Tower Drawings prepared by Paul J. Ford and Company, Job # 29200-401 Dated 04/05/2000
Foundation Drawing	Foundation Drawings prepared by Paul J. Ford and Company, Job # 29200-401 Dated 04/05/2000
Geotechnical Report	Geotechnical Report prepared by FDH Engineering, Project # 1201186EG1 Dated 08/16/2012
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 = 130.0mph (3-Sec. Gust)/ Nominal Design Wind Speed Vasd = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1” 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 = 0.171, S_1 = 0.062

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	175.0	3	Antel - BXA-70063/6CF - Panel	(1) Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	Verizon
2		3	Antel - BXA-171085/12CF - Panel			
3		3	Antel - BXA-70080/6CF - Panel			
4		3	Antel - WBX065X19R050 - Panel			
5		3	Alcatel - RRH2x40-AWS - RRH			
6		6	RFS - FD9R6004/2C-3L - Diplexer			
7		1	RFS - DB-T1-6Z-8AB-0Z - Distribution Box			
8	157.0	3	RFS - APXVTM14-C-I20 - Panel	(1) LP Platform w/ handrail kit & v-brace kit [(1) SitePro PRK-1245L (1) SitePro HRK-14-U & (1) SitePro PRK-SFS-H-L]	(4) 1 1/4" Fiber	Sprint Nextel
9		3	Commscope - NNVV-65B-R4 - Panel			
10		3	ALU - 1900 MHz - RRU			
11		6	ALU - 800 MHz - RRU			
12		3	ALU - TD-RRH8x20-25 - RRU			
-	140.0	3	RFS - APXV18-206516S-C-A20 - Panel	(1) Platform w/Handrails (HRK CommScope P/N MT-195-12)	(12) 1 5/8"	T-Mobile
-		3	Commscope - LNX-6515DS-VTM - Panel			
-		3	Ericsson - KRY 112 144/1 - TMA			
-		3	Kathrein - 782 11056 - Bias T			
18	75.0	1	GPS	Direct	(1) 1/2"	Sprint Nextel

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
13	140.0	3	RFS APXV18-206516S-C-A20	Platform w/ Hand Rails Commscope MT-195-12	(9) 1 5/8" (3) 1 5/8"Fiber	T-Mobile
14		3	RFS APXVAARR24_43-U-NA20			
15		3	Ericsson KRY 112 489/2			
16		3	Ericsson Radio 4449 B71+B12			
17		3	Kathrein 782 11056			

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:	**66.6%**	**33.5%**	**65.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3527.0	28.2	85.5

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 1.2440 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 66.64% at 83.8ft

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn	**Exposure:**	B	
Height:	175.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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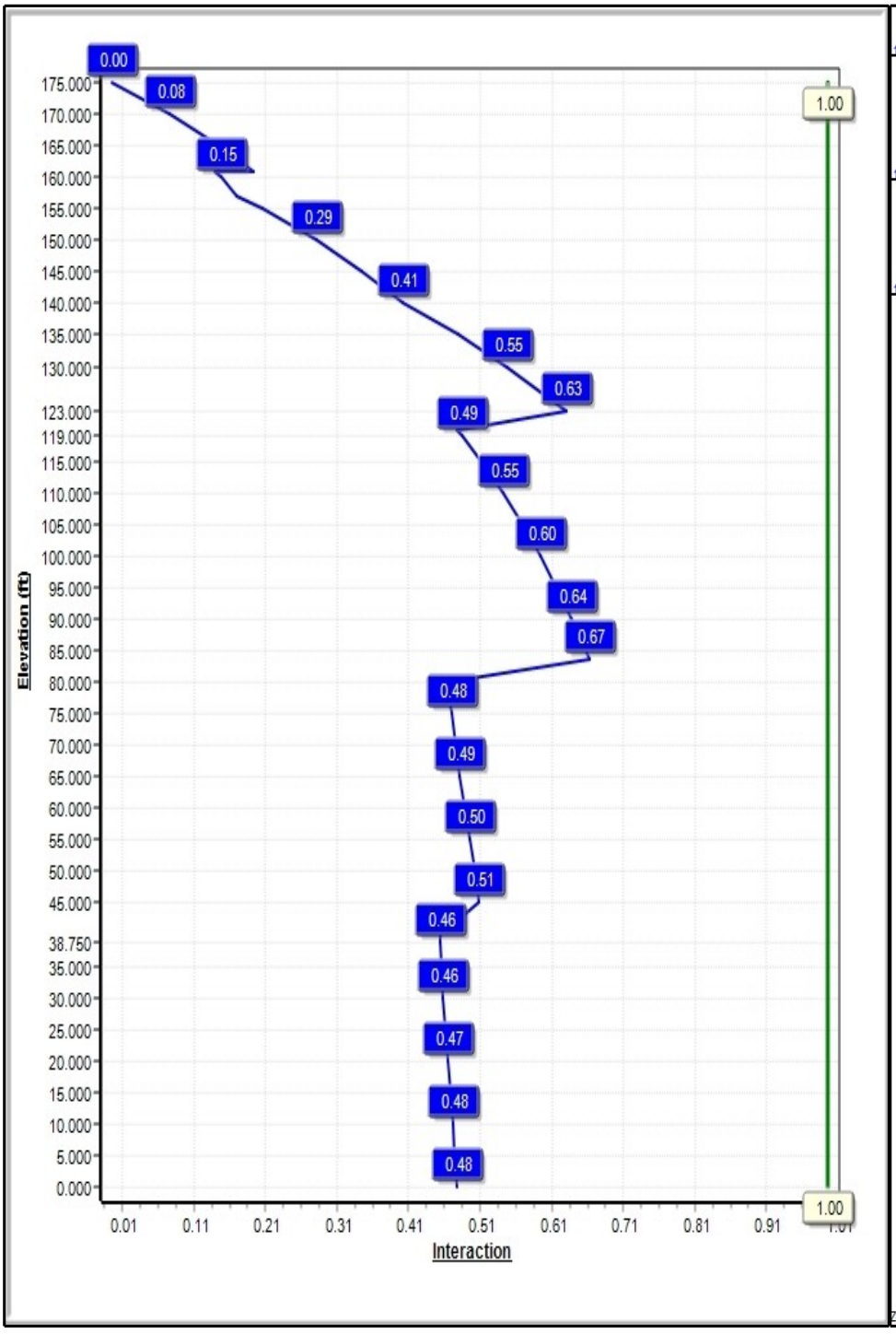
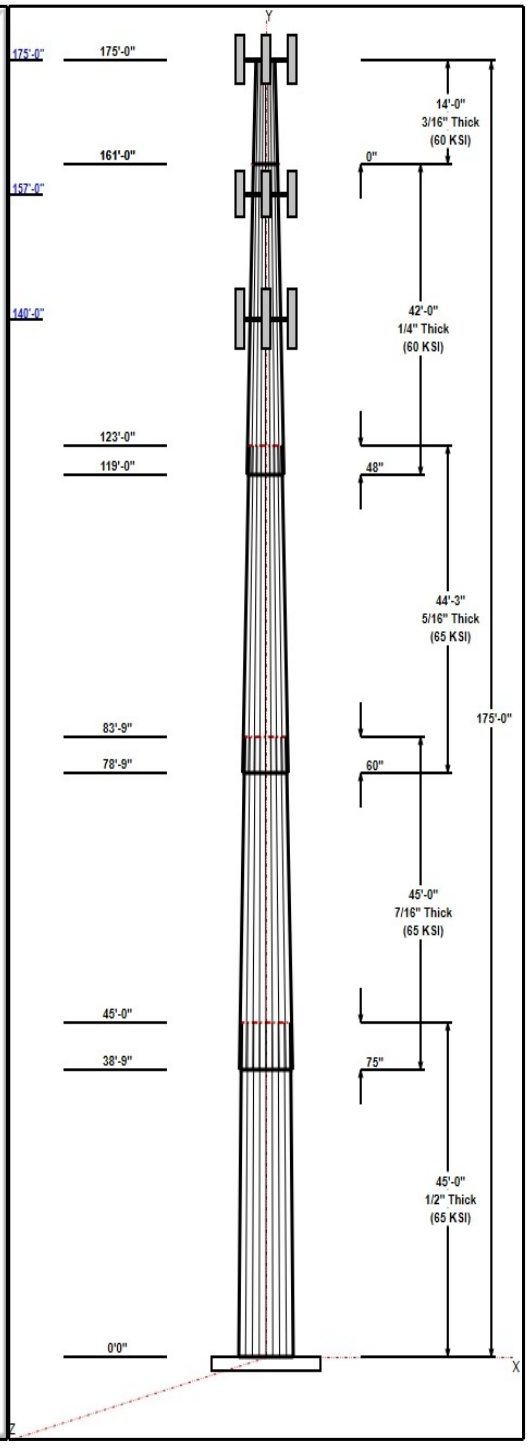
Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 101 mph Wind

Iterations: 25





Structure: CT01915-S-SBA

Type: Tapered
Site Name: South Brooklyn
Height: 175.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23000

7/1/2019

TES Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	45.00	46.68	57.03	0.500		0.23000	65
2	45.00	38.64	48.99	0.438	Slip	0.23000	65
3	44.25	30.24	40.42	0.313	Slip	0.23000	65
4	42.00	22.00	31.66	0.250	Slip	0.23000	60
5	14.00	18.78	22.00	0.188	Butt	0.23000	60

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
175.00	175.00	1	6' Lightning rod	
175.00	175.00	3	BXA-70063/6CF	Verizon
175.00	175.00	3	BXA-171085/12CF	Verizon
175.00	175.00	3	WBX065X19R050	Verizon
175.00	175.00	3	BXA-70080/6CF	Verizon
175.00	175.00	3	RRH2x40-AWS	Verizon
175.00	175.00	6	FD9R6004/2C-3L (3.1 lbs)	Verizon
175.00	175.00	1	DB-T1-6Z-8AB-0Z	Verizon
175.00	175.00	1	Low Profile Platform-flat	Verizon
157.00	157.00	1	Platform w/ Handrail +	Sprint Nextel
157.00	157.00	3	APXVTM14-C-I20	Sprint Nextel
157.00	157.00	3	NNVV-65B-R4	Sprint Nextel
157.00	157.00	3	ALU - 1900 MHz - RRU	Sprint Nextel
157.00	157.00	6	ALU - 800 MHz - RRU	Sprint Nextel
157.00	157.00	3	ALU - TD-RRH8x20-25 -	Sprint Nextel
140.00	140.00	3	4449	T-Mobile
140.00	140.00	3	APXV18-206516S-C-A20	T-Mobile
140.00	140.00	3	APXVAARR24_43-U-NA20	T-Mobile
140.00	140.00	3	KRY 112 489/2	T-Mobile
140.00	140.00	3	782 11056	T-Mobile
140.00	140.00	1	Platform w/ Hand Rails	T-Mobile
75.00	75.00	1	GPS	Sprint Nextel

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	175.00	Inside	1 5/8" Coax	Verizon
0.00	175.00	Inside	1 5/8" Hybrid	Verizon
0.00	157.00	Inside	1 1/4" Fiber	Sprint Nextel
0.00	140.00	Inside	1 5/8" Coax	T-Mobile
0.00	75.00	Inside	1/2" Coax	Sprint Nextel

Anchor Bolts

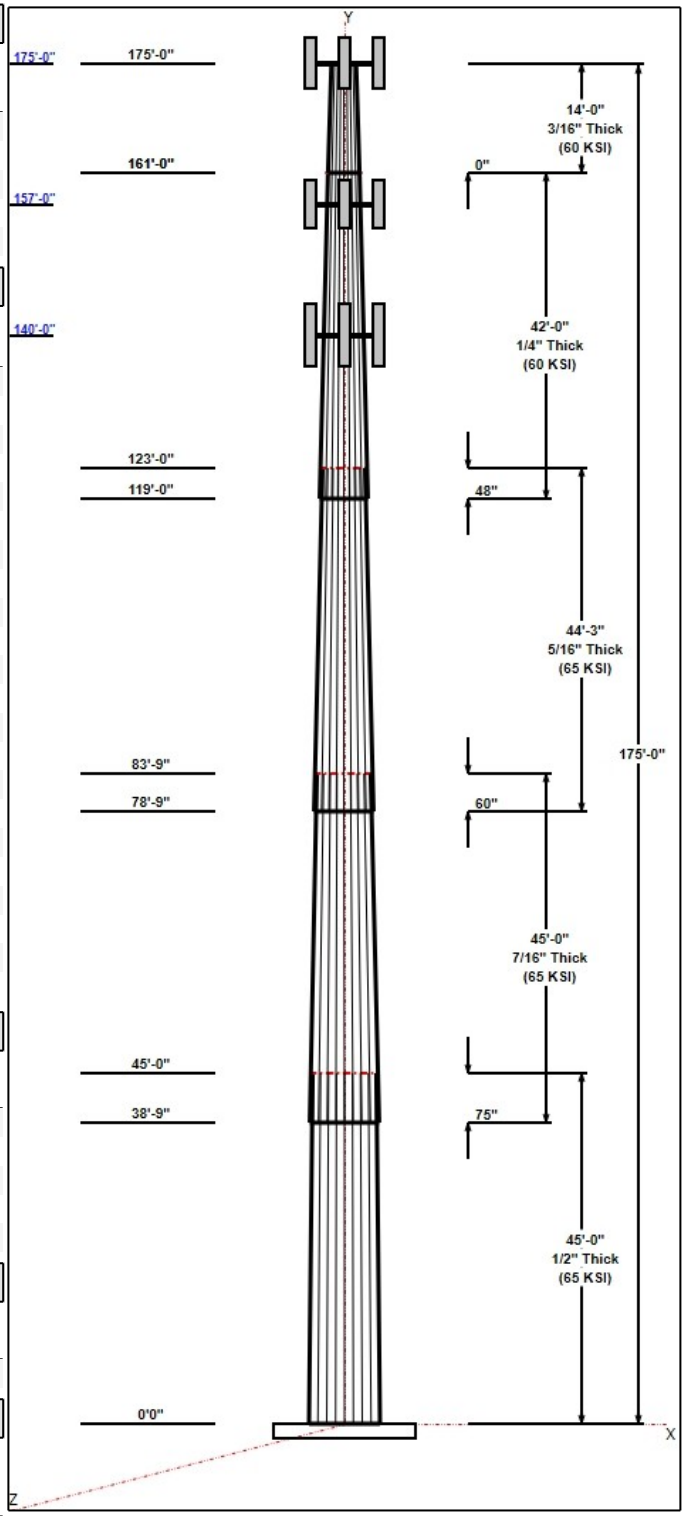
Qty	Specifications	Grade (ksi)	Arrangement
32	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.5000	68.0	50.0	Clipped

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)



1.2D + 1.6W 101 mph Wind	3527.0	28.2	51.9
0.9D + 1.6W 101 mph Wind	3487.7	28.2	38.9
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1042.7	8.1	85.5
1.2D + 1.0E	197.2	1.6	52.0
0.9D + 1.0E	194.9	1.6	39.0
1.0D + 1.0W 60 mph Wind	773.2	6.2	43.3

Structure: CT01915-S-SBA - Coax Line Placement

Type: Monopole
Site Name: South Brooklyn
Height: 175.00 (ft)

7/1/2019

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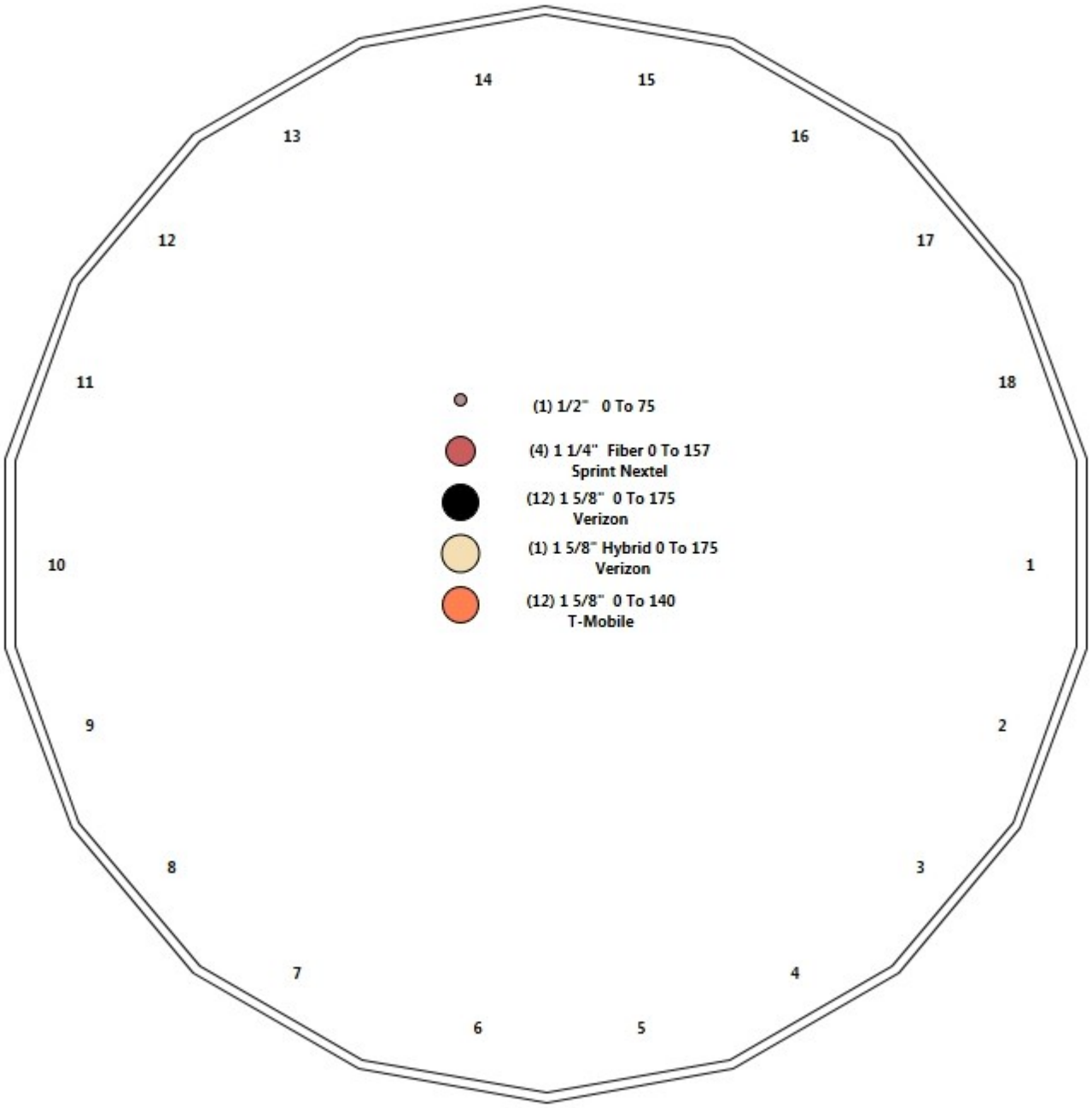

Shaft Properties

Structure:	CT01915-S-SBA		**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn		**Exposure:**	B	
Height:	175.00 (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

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	45.000	0.5000	65		0.00	12,479
2	18	45.000	0.4375	65	Slip	75.00	9,224
3	18	44.250	0.3125	65	Slip	60.00	5,229
4	18	42.000	0.2500	60	Slip	48.00	3,014
5	18	14.000	0.1875	60	Flange	0.00	573
					Total Shaft Weight:		**30,519**

	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	57.03	0.00	89.71	36220.24	18.70	114.06	46.68	45.00	73.29	19745.8	15.05	93.36	0.230000
2	48.99	38.75	67.42	20082.80	18.33	111.98	38.64	83.75	53.05	9783.25	14.16	88.33	0.230000
3	40.42	78.75	39.78	8083.32	21.39	129.34	30.24	123.00	29.68	3358.97	15.65	96.77	0.230000
4	31.66	119.0	24.92	3106.62	20.92	126.64	22.00	161.00	17.26	1031.48	14.11	88.00	0.230000
5	22.00	161.0	12.98	780.30	19.28	117.33	18.78	175.00	11.06	483.24	16.25	100.1	0.230000

Load Summary

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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	

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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	175.00	6' Lightning rod	1	6.50	0.38	1.00	55.65	1.853	1.00	0.00	0.00
2	175.00	BXA-70063/6CF	3	17.00	7.57	0.70	208.88	11.312	0.70	0.00	0.00
3	175.00	BXA-171085/12CF	3	15.00	4.78	0.84	144.86	7.988	0.84	0.00	0.00
4	175.00	WBX065X19R050	3	20.90	5.22	0.72	141.43	8.605	0.72	0.00	0.00
5	175.00	BXA-70080/6CF	3	18.00	5.84	0.88	188.52	9.069	0.88	0.00	0.00
6	175.00	RRH2x40-AWS	3	44.00	2.52	0.82	126.22	4.176	0.82	0.00	0.00
7	175.00	FD9R6004/2C-3L (3.1 lbs)	6	3.10	0.36	0.67	13.97	0.960	0.67	0.00	0.00
8	175.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	0.71	226.05	6.011	0.71	0.00	0.00
9	175.00	Low Profile Platform-flat	1	1200.00	25.00	1.00	2617.86	53.357	1.00	0.00	0.00
10	157.00	Platform w/ Handrail +	1	2800.00	54.00	1.00	6072.63	14.590	1.00	0.00	0.00
11	157.00	APXVTM14-C-I20	3	56.20	6.34	0.77	286.02	7.864	0.77	0.00	0.00
12	157.00	NNVV-65B-R4	3	84.70	12.27	0.74	503.26	14.220	0.74	0.00	0.00
13	157.00	ALU - 1900 MHz - RRU	3	60.00	2.77	0.75	171.76	4.469	0.75	0.00	0.00
14	157.00	ALU - 800 MHz - RRU	6	53.00	2.49	0.75	152.06	4.022	0.75	0.00	0.00
15	157.00	ALU - TD-RRH8x20-25 - RRU	3	70.00	4.05	0.75	228.65	5.168	0.75	0.00	0.00
16	140.00	4449	3	70.00	1.65	0.67	168.10	2.387	0.67	0.00	0.00
17	140.00	APXV18-206516S-C-A20	3	18.70	3.61	0.73	111.49	6.069	0.73	0.00	0.00
18	140.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	704.43	22.787	0.75	0.00	0.00
19	140.00	KRY 112 489/2	3	13.20	0.67	0.67	37.02	1.522	0.67	0.00	0.00
20	140.00	782 11056	3	1.80	0.13	0.78	5.08	0.517	0.78	0.00	0.00
21	140.00	Platform w/ Hand Rails (flat)	1	2000.00	40.00	1.00	4773.15	67.731	1.00	0.00	0.00
22	75.00	GPS	1	10.00	1.00	1.00	46.47	1.886	1.00	0.00	0.00
		Totals:	**60**	**8,224.50**			**23,865.17**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	175.00	(12) 1 5/8" Coax	0.00	Inside
0.00	175.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	157.00	(4) 1 1/4" Fiber	0.00	Inside
0.00	140.00	(12) 1 5/8" Coax	0.00	Inside
0.00	75.00	(1) 1/2" Coax	0.00	Inside

Shaft Section Properties

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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	

Tower Engineering Solutions

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		0.5000	57.030	89.710	36220.2	18.70	114.06	79.4	1250.	0.0
5.00		0.5000	55.880	87.885	34054.4	18.30	111.76	79.9	1200.	1510.8
10.00		0.5000	54.730	86.060	31976.7	17.89	109.46	80.4	1150.	1479.7
15.00		0.5000	53.580	84.235	29985.2	17.48	107.16	80.8	1102.	1448.7
20.00		0.5000	52.430	82.410	28078.2	17.08	104.86	81.3	1054.	1417.6
25.00		0.5000	51.280	80.585	26253.8	16.67	102.56	81.8	1008.	1386.6
30.00		0.5000	50.130	78.760	24510.2	16.27	100.26	82.3	963.0	1355.5
35.00		0.5000	48.980	76.935	22845.6	15.86	97.96	82.5	918.7	1324.5
38.75	Bot - Section 2	0.5000	48.117	75.566	21647.8	15.56	96.23	82.5	886.1	973.0
40.00		0.5000	47.830	75.110	21258.1	15.46	95.66	82.5	875.4	606.4
45.00	Top - Section 1	0.4375	47.555	65.426	18351.4	17.76	108.70	0.0	0.0	2389.1
50.00		0.4375	46.405	63.829	17040.2	17.29	106.07	81.1	723.3	1099.6
55.00		0.4375	45.255	62.232	15793.0	16.83	103.44	81.6	687.4	1072.4
60.00		0.4375	44.105	60.636	14608.2	16.37	100.81	82.2	652.4	1045.2
65.00		0.4375	42.955	59.039	13484.2	15.90	98.18	82.5	618.3	1018.1
70.00		0.4375	41.805	57.442	12419.4	15.44	95.55	82.5	585.1	990.9
75.00		0.4375	40.655	55.845	11412.2	14.97	92.93	82.5	552.9	963.7
78.75	Bot - Section 3	0.4375	39.792	54.647	10693.6	14.63	90.95	82.5	529.3	705.0
80.00		0.4375	39.505	54.248	10460.9	14.51	90.30	82.5	521.6	400.2
83.75	Top - Section 2	0.3125	39.267	38.637	7407.7	20.75	125.66	0.0	0.0	1183.1
85.00		0.3125	38.980	38.352	7244.9	20.58	124.74	77.2	366.1	163.7
90.00		0.3125	37.830	37.211	6617.5	19.93	121.06	78.0	344.5	642.8
95.00		0.3125	36.680	36.071	6027.5	19.29	117.38	78.7	323.7	623.4
100.00		0.3125	35.530	34.930	5473.6	18.64	113.70	79.5	303.4	604.0
105.00		0.3125	34.380	33.789	4954.7	17.99	110.02	80.2	283.9	584.6
110.00		0.3125	33.230	32.649	4469.7	17.34	106.34	81.0	264.9	565.2
115.00		0.3125	32.080	31.508	4017.4	16.69	102.66	81.8	246.7	545.8
119.00	Bot - Section 4	0.3125	31.160	30.596	3678.4	16.17	99.71	82.4	232.5	422.7
120.00		0.3125	30.930	30.368	3596.7	16.04	98.98	82.5	229.0	188.2
123.00	Top - Section 3	0.2500	30.740	24.193	2841.6	20.27	122.96	0.0	0.0	556.3
125.00		0.2500	30.280	23.828	2714.9	19.95	121.12	72.8	176.6	163.4
130.00		0.2500	29.130	22.915	2414.8	19.14	116.52	73.6	163.3	397.6
135.00		0.2500	27.980	22.003	2137.6	18.32	111.92	74.5	150.5	382.1
140.00		0.2500	26.830	21.090	1882.6	17.51	107.32	75.3	138.2	366.6
145.00		0.2500	25.680	20.178	1648.6	16.70	102.72	76.2	126.4	351.1
150.00		0.2500	24.530	19.265	1434.9	15.89	98.12	76.2	115.2	335.5
155.00		0.2500	23.380	18.353	1240.5	15.08	93.52	76.2	104.5	320.0
157.00		0.2500	22.920	17.988	1168.0	14.76	91.68	76.2	100.4	123.7
160.00		0.2500	22.230	17.441	1064.6	14.27	88.92	76.2	94.3	180.8
161.00	Top - Section 4	0.2500	22.000	17.258	1031.5	14.11	88.00	76.2	92.3	59.0
161.00	Bot - Section 5	0.1875	22.000	12.981	780.3	18.81	117.33	73.5	69.9	
165.00		0.1875	21.080	12.433	685.7	18.41	112.43	74.4	64.1	173.0
170.00		0.1875	19.930	11.749	578.6	17.33	106.29	75.5	57.2	205.7
175.00		0.1875	18.780	11.064	483.2	16.25	100.16	76.2	50.7	194.1
										30519.4

Wind Loading - Shaft

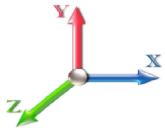
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 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	17.366	19.10	407.79	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	17.366	19.10	399.57	0.650	0.000	5.00	23.886	15.53	474.5	0.0	1812.9
10.00		1.00	0.70	17.366	19.10	391.35	0.650	0.000	5.00	23.399	15.21	464.9	0.0	1775.7
15.00		1.00	0.70	17.366	19.10	383.12	0.650	0.000	5.00	22.913	14.89	455.2	0.0	1738.4
20.00		1.00	0.70	17.366	19.10	374.90	0.650	0.000	5.00	22.426	14.58	445.5	0.0	1701.2
25.00		1.00	0.70	17.366	19.10	366.68	0.650	0.000	5.00	21.940	14.26	435.9	0.0	1663.9
30.00		1.00	0.70	17.381	19.12	358.61	0.650	0.000	5.00	21.453	13.94	426.6	0.0	1626.6
35.00		1.00	0.73	18.163	19.98	358.18	0.650	0.000	5.00	20.966	13.63	435.7	0.0	1589.4
38.75	Bot - Section 2	1.00	0.75	18.699	20.57	357.03	0.650	0.000	3.75	15.406	10.01	329.6	0.0	1167.6
40.00		1.00	0.76	18.870	20.76	356.51	0.650	0.000	1.25	5.167	3.36	111.5	0.0	727.7
45.00	Top - Section 1	1.00	0.79	19.516	21.47	353.84	0.650	0.000	5.00	20.364	13.24	454.6	0.0	2867.0
50.00		1.00	0.81	20.112	22.12	357.09	0.650	0.000	5.00	19.877	12.92	457.3	0.0	1319.5
55.00		1.00	0.83	20.667	22.73	353.02	0.650	0.000	5.00	19.390	12.60	458.5	0.0	1286.9
60.00		1.00	0.85	21.187	23.31	348.35	0.650	0.000	5.00	18.904	12.29	458.2	0.0	1254.3
65.00		1.00	0.87	21.678	23.85	343.17	0.650	0.000	5.00	18.417	11.97	456.7	0.0	1221.7
70.00		1.00	0.89	22.142	24.36	337.53	0.650	0.000	5.00	17.931	11.65	454.2	0.0	1189.1
75.00	Appurtenance(s)	1.00	0.91	22.582	24.84	331.50	0.650	0.000	5.00	17.444	11.34	450.7	0.0	1156.5
78.75	Bot - Section 3	1.00	0.92	22.899	25.19	326.74	0.650	0.000	3.75	12.764	8.30	334.4	0.0	846.0
80.00		1.00	0.93	23.003	25.30	325.11	0.650	0.000	1.25	4.260	2.77	112.1	0.0	480.2
83.75	Top - Section 2	1.00	0.94	23.306	25.64	320.10	0.650	0.000	3.75	12.597	8.19	335.9	0.0	1419.7
85.00		1.00	0.94	23.404	25.74	323.58	0.650	0.000	1.25	4.138	2.69	110.8	0.0	196.5
90.00		1.00	0.96	23.790	26.17	316.60	0.650	0.000	5.00	16.249	10.56	442.2	0.0	771.4
95.00		1.00	0.97	24.160	26.58	309.36	0.650	0.000	5.00	15.762	10.25	435.7	0.0	748.1
100.00		1.00	0.99	24.517	26.97	301.87	0.650	0.000	5.00	15.276	9.93	428.4	0.0	724.8
105.00		1.00	1.00	24.861	27.35	294.14	0.650	0.000	5.00	14.789	9.61	420.6	0.0	701.5
110.00		1.00	1.02	25.194	27.71	286.19	0.650	0.000	5.00	14.303	9.30	412.2	0.0	678.2
115.00		1.00	1.03	25.516	28.07	278.05	0.650	0.000	5.00	13.816	8.98	403.3	0.0	654.9
119.00	Bot - Section 4	1.00	1.04	25.766	28.34	271.40	0.650	0.000	4.00	10.703	6.96	315.5	0.0	507.2
120.00		1.00	1.04	25.828	28.41	269.72	0.650	0.000	1.00	2.669	1.74	78.9	0.0	225.9
123.00	Top - Section 3	1.00	1.05	26.011	28.61	264.63	0.650	0.000	3.00	7.891	5.13	234.8	0.0	667.5
125.00		1.00	1.05	26.131	28.74	265.59	0.650	0.000	2.00	5.163	3.36	154.4	0.0	196.1
130.00		1.00	1.07	26.425	29.07	256.94	0.650	0.000	5.00	12.568	8.17	379.9	0.0	477.2
135.00		1.00	1.08	26.712	29.38	248.13	0.650	0.000	5.00	12.081	7.85	369.2	0.0	458.5
140.00	Appurtenance(s)	1.00	1.09	26.991	29.69	239.17	0.650	0.000	5.00	11.595	7.54	358.0	0.0	439.9
145.00		1.00	1.10	27.263	29.99	230.07	0.650	0.000	5.00	11.108	7.22	346.5	0.0	421.3
150.00		1.00	1.11	27.528	30.28	220.84	0.650	0.000	5.00	10.622	6.90	334.5	0.0	402.7
155.00		1.00	1.12	27.787	30.57	211.47	0.650	0.000	5.00	10.135	6.59	322.2	0.0	384.0
157.00	Appurtenance(s)	1.00	1.12	27.889	30.68	207.69	0.650	0.000	2.00	3.918	2.55	125.0	0.0	148.4
160.00		1.00	1.13	28.040	30.84	201.98	0.650	0.000	3.00	5.731	3.73	183.8	0.0	217.0
161.00	Top - Section 4	1.00	1.13	28.090	30.90	200.07	0.650	0.000	1.00	1.871	1.22	60.1	0.0	70.8
165.00		1.00	1.14	28.288	31.12	192.38	0.650	0.000	4.00	7.291	4.74	235.9	0.0	207.5
170.00		1.00	1.15	28.530	31.38	182.66	0.650	0.000	5.00	8.676	5.64	283.2	0.0	246.9
175.00	Appurtenance(s)	1.00	1.16	28.768	31.64	172.84	0.650	0.000	5.00	8.189	5.32	269.5	0.0	232.9
								Totals:	**175.00**			**14,256.5**		**36,623.3**

Discrete Appurtenance Forces

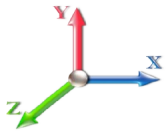
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 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	175.00	WBX065X19R050	3	28.768	31.644	0.72	1.00	11.28	75.24	0.000	0.000	570.88	0.00	0.00
2	175.00	6' Lightning rod	1	28.768	31.644	1.00	1.00	0.38	7.80	0.000	0.000	19.24	0.00	0.00
3	175.00	BXA-70063/6CF	3	28.768	31.644	0.70	1.00	15.90	61.20	0.000	0.000	804.88	0.00	0.00
4	175.00	BXA-171085/12CF	3	28.768	31.644	0.84	1.00	12.05	54.00	0.000	0.000	609.88	0.00	0.00
5	175.00	Low Profile Platform-flat	1	28.768	31.644	1.00	1.00	25.00	1440.00	0.000	0.000	1265.78	0.00	0.00
6	175.00	BXA-70080/6CF	3	28.768	31.644	0.88	1.00	15.42	64.80	0.000	0.000	780.61	0.00	0.00
7	175.00	RRH2x40-AWS	3	28.768	31.644	0.82	1.00	6.20	158.40	0.000	0.000	313.87	0.00	0.00
8	175.00	FD9R6004/2C-3L (3.1 lbs)	6	28.768	31.644	0.67	1.00	1.45	22.32	0.000	0.000	73.27	0.00	0.00
9	175.00	DB-T1-6Z-8AB-0Z	1	28.768	31.644	0.71	1.00	3.41	22.68	0.000	0.000	172.55	0.00	0.00
10	157.00	ALU - TD-RRH8x20-25 -	3	27.889	30.678	0.60	0.80	7.29	252.00	0.000	0.000	357.83	0.00	0.00
11	157.00	ALU - 800 MHz - RRU	6	27.889	30.678	0.60	0.80	8.96	381.60	0.000	0.000	440.00	0.00	0.00
12	157.00	ALU - 1900 MHz - RRU	3	27.889	30.678	0.60	0.80	4.99	216.00	0.000	0.000	244.74	0.00	0.00
13	157.00	NNVV-65B-R4	3	27.889	30.678	0.59	0.80	21.79	304.92	0.000	0.000	1069.64	0.00	0.00
14	157.00	APXVTM14-C-I20	3	27.889	30.678	0.62	0.80	11.72	202.32	0.000	0.000	575.10	0.00	0.00
15	157.00	Platform w/ Handrail +	1	27.889	30.678	1.00	1.00	54.00	3360.00	0.000	0.000	2650.59	0.00	0.00
16	140.00	Platform w/ Hand Rails	1	26.991	29.690	1.00	1.00	40.00	2400.00	0.000	0.000	1900.15	0.00	0.00
17	140.00	782 11056	3	26.991	29.690	0.58	0.75	0.23	6.48	0.000	0.000	10.84	0.00	0.00
18	140.00	KRY 112 489/2	3	26.991	29.690	0.50	0.75	1.01	47.52	0.000	0.000	47.98	0.00	0.00
19	140.00	APXVAARR24_43-U-NA2	3	26.991	29.690	0.52	0.75	31.88	460.80	0.000	0.000	1514.33	0.00	0.00
20	140.00	APXV18-206516S-C-A20	3	26.991	29.690	0.55	0.75	5.93	67.32	0.000	0.000	281.67	0.00	0.00
21	140.00	4449	3	26.991	29.690	0.50	0.75	2.49	252.00	0.000	0.000	118.16	0.00	0.00
22	75.00	GPS	1	22.582	24.841	1.00	1.00	1.00	12.00	0.000	0.000	39.74	0.00	0.00
							Totals:		**9,869.40**			**13,861.72**		

Total Applied Force Summary

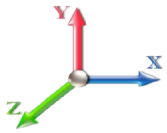
Structure:	CT01915-S-SBA		**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn		**Exposure:**	B	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 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		474.54	1986.11	0.00	0.00
10.00		464.87	1948.85	0.00	0.00
15.00		455.20	1911.59	0.00	0.00
20.00		445.54	1874.33	0.00	0.00
25.00		435.87	1837.07	0.00	0.00
30.00		426.56	1799.81	0.00	0.00
35.00		435.66	1762.55	0.00	0.00
38.75		329.56	1297.46	0.00	0.00
40.00		111.54	770.94	0.00	0.00
45.00		454.63	3040.11	0.00	0.00
50.00		457.33	1492.64	0.00	0.00
55.00		458.45	1460.04	0.00	0.00
60.00		458.20	1427.44	0.00	0.00
65.00		456.73	1394.84	0.00	0.00
70.00		454.18	1362.23	0.00	0.00
75.00	(1) attachments	490.40	1341.63	0.00	0.00
78.75		334.37	975.11	0.00	0.00
80.00		112.10	523.26	0.00	0.00
83.75		335.86	1548.84	0.00	0.00
85.00		110.80	239.53	0.00	0.00
90.00		442.22	943.58	0.00	0.00
95.00		435.66	920.29	0.00	0.00
100.00		428.45	897.00	0.00	0.00
105.00		420.62	873.71	0.00	0.00
110.00		412.23	850.42	0.00	0.00
115.00		403.29	827.14	0.00	0.00
119.00		315.47	644.94	0.00	0.00
120.00		78.87	260.30	0.00	0.00
123.00		234.81	770.85	0.00	0.00
125.00		154.35	264.97	0.00	0.00
130.00		379.94	649.37	0.00	0.00
135.00		369.19	630.74	0.00	0.00
140.00	(16) attachments	4231.15	3846.23	0.00	0.00
145.00		346.45	518.60	0.00	0.00
150.00		334.50	499.97	0.00	0.00
155.00		322.18	481.34	0.00	0.00
157.00	(19) attachments	5462.89	4904.16	0.00	0.00
160.00		183.83	265.89	0.00	0.00
161.00		60.14	87.14	0.00	0.00
165.00		235.94	272.73	0.00	0.00
170.00		283.16	328.34	0.00	0.00
175.00	(24) attachments	4880.46	2220.81	0.00	0.00
	Totals:	**28,118.24**	**51,952.88**	**0.00**	**0.00**

Calculated Forces

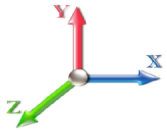
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 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	-51.92	-28.18	0.00	-3527.0	0.00	3527.01	6411.04	3205.52	14877.2	7449.66	0.00	0.000	0.000	0.482
5.00	-49.87	-27.82	0.00	-3386.1	0.00	3386.11	6318.35	3159.17	14361.2	7191.28	0.07	-0.136	0.000	0.479
10.00	-47.85	-27.47	0.00	-3247.0	0.00	3247.00	6224.09	3112.04	13850.5	6935.58	0.29	-0.274	0.000	0.476
15.00	-45.88	-27.12	0.00	-3109.6	0.00	3109.66	6128.26	3064.13	13345.4	6682.66	0.65	-0.416	0.000	0.473
20.00	-43.94	-26.77	0.00	-2974.0	0.00	2974.09	6030.87	3015.43	12846.2	6432.65	1.17	-0.560	0.000	0.470
25.00	-42.04	-26.42	0.00	-2840.2	0.00	2840.26	5931.91	2965.95	12352.9	6185.64	1.83	-0.707	0.000	0.466
30.00	-40.17	-26.07	0.00	-2708.1	0.00	2708.17	5831.38	2915.69	11865.8	5941.76	2.65	-0.858	0.000	0.463
35.00	-38.36	-25.70	0.00	-2577.8	0.00	2577.80	5715.88	2857.94	11358.6	5687.79	3.63	-1.011	0.000	0.460
38.75	-37.03	-25.40	0.00	-2481.4	0.00	2481.43	5614.19	2807.10	10956.1	5486.19	4.47	-1.129	0.000	0.459
40.00	-36.22	-25.33	0.00	-2449.6	0.00	2449.68	5580.30	2790.15	10823.5	5419.80	4.78	-1.170	0.000	0.459
45.00	-33.12	-24.91	0.00	-2323.0	0.00	2323.01	4741.11	2370.56	9166.15	4589.89	6.09	-1.329	0.000	0.513
50.00	-31.57	-24.51	0.00	-2198.4	0.00	2198.47	4656.71	2328.36	8781.22	4397.14	7.57	-1.492	0.000	0.507
55.00	-30.04	-24.10	0.00	-2075.9	0.00	2075.94	4570.75	2285.37	8401.44	4206.97	9.22	-1.671	0.000	0.500
60.00	-28.56	-23.69	0.00	-1955.4	0.00	1955.42	4483.21	2241.61	8027.05	4019.49	11.07	-1.852	0.000	0.493
65.00	-27.10	-23.28	0.00	-1836.9	0.00	1836.96	4386.28	2193.14	7644.63	3828.00	13.11	-2.037	0.000	0.486
70.00	-25.68	-22.86	0.00	-1720.5	0.00	1720.57	4267.64	2133.82	7234.64	3622.70	15.34	-2.224	0.000	0.481
75.00	-24.30	-22.38	0.00	-1606.2	0.00	1606.29	4149.01	2074.50	6835.94	3423.05	17.77	-2.415	0.000	0.475
78.75	-23.30	-22.05	0.00	-1522.3	0.00	1522.35	4060.03	2030.01	6544.34	3277.03	19.73	-2.561	0.000	0.470
80.00	-22.74	-21.95	0.00	-1494.7	0.00	1494.79	4030.37	2015.18	6448.55	3229.07	20.41	-2.611	0.000	0.469
83.75	-21.17	-21.58	0.00	-1412.4	0.00	1412.47	2677.54	1338.77	4285.17	2145.77	22.52	-2.760	0.000	0.666
85.00	-20.88	-21.52	0.00	-1385.4	0.00	1385.49	2664.37	1332.18	4232.36	2119.33	23.25	-2.810	0.000	0.662
90.00	-19.86	-21.12	0.00	-1277.9	0.00	1277.91	2610.69	1305.34	4022.76	2014.37	26.33	-3.072	0.000	0.642
95.00	-18.87	-20.72	0.00	-1172.3	0.00	1172.33	2555.44	1277.72	3815.94	1910.80	29.69	-3.335	0.000	0.621
100.00	-17.91	-20.32	0.00	-1068.7	0.00	1068.74	2498.62	1249.31	3612.11	1808.74	33.32	-3.600	0.000	0.598
105.00	-16.98	-19.92	0.00	-967.15	0.00	967.15	2440.24	1220.12	3411.50	1708.29	37.23	-3.864	0.000	0.573
110.00	-16.07	-19.52	0.00	-867.55	0.00	867.55	2380.29	1190.15	3214.34	1609.56	41.41	-4.128	0.000	0.546
115.00	-15.19	-19.12	0.00	-769.93	0.00	769.93	2318.78	1159.39	3020.85	1512.67	45.87	-4.388	0.000	0.516
119.00	-14.53	-18.79	0.00	-693.44	0.00	693.44	2268.44	1134.22	2868.85	1436.56	49.64	-4.596	0.000	0.489
120.00	-14.25	-18.72	0.00	-674.65	0.00	674.65	2255.69	1127.85	2831.25	1417.73	50.61	-4.648	0.000	0.482
123.00	-13.46	-18.45	0.00	-618.50	0.00	618.50	1577.63	788.82	1975.86	989.40	53.57	-4.802	0.000	0.634
125.00	-13.14	-18.32	0.00	-581.61	0.00	581.61	1561.09	780.55	1925.40	964.13	55.60	-4.904	0.000	0.612
130.00	-12.45	-17.94	0.00	-490.02	0.00	490.02	1518.76	759.38	1800.86	901.77	60.89	-5.184	0.000	0.552
135.00	-11.77	-17.57	0.00	-400.32	0.00	400.32	1475.03	737.52	1678.77	840.64	66.45	-5.447	0.000	0.485
140.00	-8.31	-13.01	0.00	-312.49	0.00	312.49	1429.92	714.96	1559.34	780.83	72.28	-5.684	0.000	0.406
145.00	-7.78	-12.64	0.00	-247.42	0.00	247.42	1383.42	691.71	1442.75	722.45	78.34	-5.895	0.000	0.348
150.00	-7.28	-12.28	0.00	-184.19	0.00	184.19	1321.23	660.61	1314.97	658.46	84.61	-6.081	0.000	0.286
155.00	-6.82	-11.92	0.00	-122.79	0.00	122.79	1258.65	629.32	1192.75	597.26	91.05	-6.234	0.000	0.211
157.00	-2.53	-5.96	0.00	-98.95	0.00	98.95	1233.62	616.81	1145.53	573.62	93.67	-6.284	0.000	0.175
160.00	-2.29	-5.75	0.00	-81.07	0.00	81.07	1196.07	598.03	1076.49	539.05	97.63	-6.350	0.000	0.152
161.00	-2.20	-5.68	0.00	-75.32	0.00	75.32	1183.55	591.78	1053.96	527.76	98.96	-6.371	0.000	0.145
161.00	-2.20	-5.68	0.00	-75.32	0.00	75.32	858.57	429.28	768.96	385.05	98.96	-6.371	0.000	0.198
165.00	-1.95	-5.42	0.00	-52.60	0.00	52.60	832.45	416.23	713.85	357.46	104.32	-6.442	0.000	0.150
170.00	-1.65	-5.10	0.00	-25.51	0.00	25.51	798.56	399.28	646.76	323.86	111.10	-6.523	0.000	0.081
175.00	0.00	-4.88	0.00	0.00	0.00	0.00	758.80	379.40	578.42	289.64	117.94	-6.554	0.000	0.000

Wind Loading - Shaft

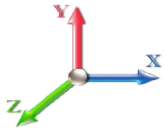
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

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	17.366	19.10	407.79	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	17.366	19.10	399.57	0.650	0.000	5.00	23.886	15.53	474.5	0.0	1359.7
10.00		1.00	0.70	17.366	19.10	391.35	0.650	0.000	5.00	23.399	15.21	464.9	0.0	1331.8
15.00		1.00	0.70	17.366	19.10	383.12	0.650	0.000	5.00	22.913	14.89	455.2	0.0	1303.8
20.00		1.00	0.70	17.366	19.10	374.90	0.650	0.000	5.00	22.426	14.58	445.5	0.0	1275.9
25.00		1.00	0.70	17.366	19.10	366.68	0.650	0.000	5.00	21.940	14.26	435.9	0.0	1247.9
30.00		1.00	0.70	17.381	19.12	358.61	0.650	0.000	5.00	21.453	13.94	426.6	0.0	1220.0
35.00		1.00	0.73	18.163	19.98	358.18	0.650	0.000	5.00	20.966	13.63	435.7	0.0	1192.0
38.75	Bot - Section 2	1.00	0.75	18.699	20.57	357.03	0.650	0.000	3.75	15.406	10.01	329.6	0.0	875.7
40.00		1.00	0.76	18.870	20.76	356.51	0.650	0.000	1.25	5.167	3.36	111.5	0.0	545.7
45.00	Top - Section 1	1.00	0.79	19.516	21.47	353.84	0.650	0.000	5.00	20.364	13.24	454.6	0.0	2150.2
50.00		1.00	0.81	20.112	22.12	357.09	0.650	0.000	5.00	19.877	12.92	457.3	0.0	989.6
55.00		1.00	0.83	20.667	22.73	353.02	0.650	0.000	5.00	19.390	12.60	458.5	0.0	965.2
60.00		1.00	0.85	21.187	23.31	348.35	0.650	0.000	5.00	18.904	12.29	458.2	0.0	940.7
65.00		1.00	0.87	21.678	23.85	343.17	0.650	0.000	5.00	18.417	11.97	456.7	0.0	916.3
70.00		1.00	0.89	22.142	24.36	337.53	0.650	0.000	5.00	17.931	11.65	454.2	0.0	891.8
75.00	Appurtenance(s)	1.00	0.91	22.582	24.84	331.50	0.650	0.000	5.00	17.444	11.34	450.7	0.0	867.4
78.75	Bot - Section 3	1.00	0.92	22.899	25.19	326.74	0.650	0.000	3.75	12.764	8.30	334.4	0.0	634.5
80.00		1.00	0.93	23.003	25.30	325.11	0.650	0.000	1.25	4.260	2.77	112.1	0.0	360.2
83.75	Top - Section 2	1.00	0.94	23.306	25.64	320.10	0.650	0.000	3.75	12.597	8.19	335.9	0.0	1064.8
85.00		1.00	0.94	23.404	25.74	323.58	0.650	0.000	1.25	4.138	2.69	110.8	0.0	147.4
90.00		1.00	0.96	23.790	26.17	316.60	0.650	0.000	5.00	16.249	10.56	442.2	0.0	578.5
95.00		1.00	0.97	24.160	26.58	309.36	0.650	0.000	5.00	15.762	10.25	435.7	0.0	561.1
100.00		1.00	0.99	24.517	26.97	301.87	0.650	0.000	5.00	15.276	9.93	428.4	0.0	543.6
105.00		1.00	1.00	24.861	27.35	294.14	0.650	0.000	5.00	14.789	9.61	420.6	0.0	526.1
110.00		1.00	1.02	25.194	27.71	286.19	0.650	0.000	5.00	14.303	9.30	412.2	0.0	508.7
115.00		1.00	1.03	25.516	28.07	278.05	0.650	0.000	5.00	13.816	8.98	403.3	0.0	491.2
119.00	Bot - Section 4	1.00	1.04	25.766	28.34	271.40	0.650	0.000	4.00	10.703	6.96	315.5	0.0	380.4
120.00		1.00	1.04	25.828	28.41	269.72	0.650	0.000	1.00	2.669	1.74	78.9	0.0	169.4
123.00	Top - Section 3	1.00	1.05	26.011	28.61	264.63	0.650	0.000	3.00	7.891	5.13	234.8	0.0	500.6
125.00		1.00	1.05	26.131	28.74	265.59	0.650	0.000	2.00	5.163	3.36	154.4	0.0	147.1
130.00		1.00	1.07	26.425	29.07	256.94	0.650	0.000	5.00	12.568	8.17	379.9	0.0	357.9
135.00		1.00	1.08	26.712	29.38	248.13	0.650	0.000	5.00	12.081	7.85	369.2	0.0	343.9
140.00	Appurtenance(s)	1.00	1.09	26.991	29.69	239.17	0.650	0.000	5.00	11.595	7.54	358.0	0.0	329.9
145.00		1.00	1.10	27.263	29.99	230.07	0.650	0.000	5.00	11.108	7.22	346.5	0.0	316.0
150.00		1.00	1.11	27.528	30.28	220.84	0.650	0.000	5.00	10.622	6.90	334.5	0.0	302.0
155.00		1.00	1.12	27.787	30.57	211.47	0.650	0.000	5.00	10.135	6.59	322.2	0.0	288.0
157.00	Appurtenance(s)	1.00	1.12	27.889	30.68	207.69	0.650	0.000	2.00	3.918	2.55	125.0	0.0	111.3
160.00		1.00	1.13	28.040	30.84	201.98	0.650	0.000	3.00	5.731	3.73	183.8	0.0	162.7
161.00	Top - Section 4	1.00	1.13	28.090	30.90	200.07	0.650	0.000	1.00	1.871	1.22	60.1	0.0	53.1
165.00		1.00	1.14	28.288	31.12	192.38	0.650	0.000	4.00	7.291	4.74	235.9	0.0	155.7
170.00		1.00	1.15	28.530	31.38	182.66	0.650	0.000	5.00	8.676	5.64	283.2	0.0	185.1
175.00	Appurtenance(s)	1.00	1.16	28.768	31.64	172.84	0.650	0.000	5.00	8.189	5.32	269.5	0.0	174.7
								Totals:	**175.00**			**14,256.5**		**27,467.4**

Discrete Appurtenance Forces

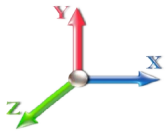
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

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	175.00	WBX065X19R050	3	28.768	31.644	0.72	1.00	11.28	56.43	0.000	0.000	570.88	0.00	0.00
2	175.00	6' Lightning rod	1	28.768	31.644	1.00	1.00	0.38	5.85	0.000	0.000	19.24	0.00	0.00
3	175.00	BXA-70063/6CF	3	28.768	31.644	0.70	1.00	15.90	45.90	0.000	0.000	804.88	0.00	0.00
4	175.00	BXA-171085/12CF	3	28.768	31.644	0.84	1.00	12.05	40.50	0.000	0.000	609.88	0.00	0.00
5	175.00	Low Profile Platform-flat	1	28.768	31.644	1.00	1.00	25.00	1080.00	0.000	0.000	1265.78	0.00	0.00
6	175.00	BXA-70080/6CF	3	28.768	31.644	0.88	1.00	15.42	48.60	0.000	0.000	780.61	0.00	0.00
7	175.00	RRH2x40-AWS	3	28.768	31.644	0.82	1.00	6.20	118.80	0.000	0.000	313.87	0.00	0.00
8	175.00	FD9R6004/2C-3L (3.1 lbs)	6	28.768	31.644	0.67	1.00	1.45	16.74	0.000	0.000	73.27	0.00	0.00
9	175.00	DB-T1-6Z-8AB-0Z	1	28.768	31.644	0.71	1.00	3.41	17.01	0.000	0.000	172.55	0.00	0.00
10	157.00	ALU - TD-RRH8x20-25 -	3	27.889	30.678	0.60	0.80	7.29	189.00	0.000	0.000	357.83	0.00	0.00
11	157.00	ALU - 800 MHz - RRU	6	27.889	30.678	0.60	0.80	8.96	286.20	0.000	0.000	440.00	0.00	0.00
12	157.00	ALU - 1900 MHz - RRU	3	27.889	30.678	0.60	0.80	4.99	162.00	0.000	0.000	244.74	0.00	0.00
13	157.00	NNVV-65B-R4	3	27.889	30.678	0.59	0.80	21.79	228.69	0.000	0.000	1069.64	0.00	0.00
14	157.00	APXVTM14-C-I20	3	27.889	30.678	0.62	0.80	11.72	151.74	0.000	0.000	575.10	0.00	0.00
15	157.00	Platform w/ Handrail +	1	27.889	30.678	1.00	1.00	54.00	2520.00	0.000	0.000	2650.59	0.00	0.00
16	140.00	Platform w/ Hand Rails	1	26.991	29.690	1.00	1.00	40.00	1800.00	0.000	0.000	1900.15	0.00	0.00
17	140.00	782 11056	3	26.991	29.690	0.58	0.75	0.23	4.86	0.000	0.000	10.84	0.00	0.00
18	140.00	KRY 112 489/2	3	26.991	29.690	0.50	0.75	1.01	35.64	0.000	0.000	47.98	0.00	0.00
19	140.00	APXVAARR24_43-U-NA2	3	26.991	29.690	0.52	0.75	31.88	345.60	0.000	0.000	1514.33	0.00	0.00
20	140.00	APXV18-206516S-C-A20	3	26.991	29.690	0.55	0.75	5.93	50.49	0.000	0.000	281.67	0.00	0.00
21	140.00	4449	3	26.991	29.690	0.50	0.75	2.49	189.00	0.000	0.000	118.16	0.00	0.00
22	75.00	GPS	1	22.582	24.841	1.00	1.00	1.00	9.00	0.000	0.000	39.74	0.00	0.00
							Totals:		**7,402.05**			**13,861.72**		

Total Applied Force Summary

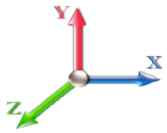
Structure:	CT01915-S-SBA		**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn		**Exposure:**	B	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

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		474.54	1489.58	0.00	0.00
10.00		464.87	1461.63	0.00	0.00
15.00		455.20	1433.69	0.00	0.00
20.00		445.54	1405.74	0.00	0.00
25.00		435.87	1377.80	0.00	0.00
30.00		426.56	1349.85	0.00	0.00
35.00		435.66	1321.91	0.00	0.00
38.75		329.56	973.09	0.00	0.00
40.00		111.54	578.21	0.00	0.00
45.00		454.63	2280.08	0.00	0.00
50.00		457.33	1119.48	0.00	0.00
55.00		458.45	1095.03	0.00	0.00
60.00		458.20	1070.58	0.00	0.00
65.00		456.73	1046.13	0.00	0.00
70.00		454.18	1021.67	0.00	0.00
75.00	(1) attachments	490.40	1006.22	0.00	0.00
78.75		334.37	731.33	0.00	0.00
80.00		112.10	392.45	0.00	0.00
83.75		335.86	1161.63	0.00	0.00
85.00		110.80	179.65	0.00	0.00
90.00		442.22	707.68	0.00	0.00
95.00		435.66	690.22	0.00	0.00
100.00		428.45	672.75	0.00	0.00
105.00		420.62	655.28	0.00	0.00
110.00		412.23	637.82	0.00	0.00
115.00		403.29	620.35	0.00	0.00
119.00		315.47	483.71	0.00	0.00
120.00		78.87	195.23	0.00	0.00
123.00		234.81	578.14	0.00	0.00
125.00		154.35	198.72	0.00	0.00
130.00		379.94	487.03	0.00	0.00
135.00		369.19	473.06	0.00	0.00
140.00	(16) attachments	4231.15	2884.67	0.00	0.00
145.00		346.45	388.95	0.00	0.00
150.00		334.50	374.98	0.00	0.00
155.00		322.18	361.01	0.00	0.00
157.00	(19) attachments	5462.89	3678.12	0.00	0.00
160.00		183.83	199.42	0.00	0.00
161.00		60.14	65.35	0.00	0.00
165.00		235.94	204.55	0.00	0.00
170.00		283.16	246.25	0.00	0.00
175.00	(24) attachments	4880.46	1665.60	0.00	0.00
	Totals:	**28,118.24**	**38,964.66**	**0.00**	**0.00**

Calculated Forces

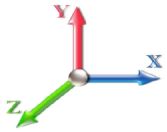
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

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	-38.93	-28.16	0.00	-3487.6	0.00	3487.68	6411.04	3205.52	14877.2	7449.66	0.00	0.000	0.000	0.474
5.00	-37.38	-27.78	0.00	-3346.8	0.00	3346.87	6318.35	3159.17	14361.2	7191.28	0.07	-0.134	0.000	0.471
10.00	-35.85	-27.39	0.00	-3207.9	0.00	3207.99	6224.09	3112.04	13850.5	6935.58	0.29	-0.271	0.000	0.468
15.00	-34.35	-27.01	0.00	-3071.0	0.00	3071.03	6128.26	3064.13	13345.4	6682.66	0.64	-0.411	0.000	0.465
20.00	-32.88	-26.64	0.00	-2935.9	0.00	2935.96	6030.87	3015.43	12846.2	6432.65	1.15	-0.553	0.000	0.462
25.00	-31.44	-26.27	0.00	-2802.7	0.00	2802.77	5931.91	2965.95	12352.9	6185.64	1.81	-0.699	0.000	0.458
30.00	-30.03	-25.90	0.00	-2671.4	0.00	2671.43	5831.38	2915.69	11865.8	5941.76	2.62	-0.847	0.000	0.455
35.00	-28.66	-25.51	0.00	-2541.9	0.00	2541.92	5715.88	2857.94	11358.6	5687.79	3.59	-0.998	0.000	0.452
38.75	-27.66	-25.20	0.00	-2446.2	0.00	2446.25	5614.19	2807.10	10956.1	5486.19	4.42	-1.115	0.000	0.451
40.00	-27.04	-25.13	0.00	-2414.7	0.00	2414.74	5580.30	2790.15	10823.5	5419.80	4.72	-1.155	0.000	0.450
45.00	-24.70	-24.69	0.00	-2289.1	0.00	2289.11	4741.11	2370.56	9166.15	4589.89	6.01	-1.312	0.000	0.504
50.00	-23.52	-24.28	0.00	-2165.6	0.00	2165.66	4656.71	2328.36	8781.22	4397.14	7.47	-1.472	0.000	0.498
55.00	-22.36	-23.86	0.00	-2044.2	0.00	2044.28	4570.75	2285.37	8401.44	4206.97	9.11	-1.648	0.000	0.491
60.00	-21.23	-23.43	0.00	-1924.9	0.00	1924.99	4483.21	2241.61	8027.05	4019.49	10.93	-1.827	0.000	0.484
65.00	-20.13	-23.01	0.00	-1807.8	0.00	1807.82	4386.28	2193.14	7644.63	3828.00	12.94	-2.009	0.000	0.477
70.00	-19.05	-22.58	0.00	-1692.7	0.00	1692.79	4267.64	2133.82	7234.64	3622.70	15.14	-2.193	0.000	0.472
75.00	-18.00	-22.10	0.00	-1579.9	0.00	1579.90	4149.01	2074.50	6835.94	3423.05	17.54	-2.381	0.000	0.466
78.75	-17.25	-21.76	0.00	-1497.0	0.00	1497.03	4060.03	2030.01	6544.34	3277.03	19.47	-2.525	0.000	0.461
80.00	-16.83	-21.66	0.00	-1469.8	0.00	1469.83	4030.37	2015.18	6448.55	3229.07	20.13	-2.574	0.000	0.459
83.75	-15.65	-21.30	0.00	-1388.5	0.00	1388.59	2677.54	1338.77	4285.17	2145.77	22.21	-2.720	0.000	0.653
85.00	-15.41	-21.22	0.00	-1361.9	0.00	1361.97	2664.37	1332.18	4232.36	2119.33	22.93	-2.770	0.000	0.649
90.00	-14.64	-20.81	0.00	-1255.8	0.00	1255.86	2610.69	1305.34	4022.76	2014.37	25.97	-3.027	0.000	0.629
95.00	-13.88	-20.40	0.00	-1151.8	0.00	1151.80	2555.44	1277.72	3815.94	1910.80	29.28	-3.285	0.000	0.608
100.00	-13.14	-19.99	0.00	-1049.8	0.00	1049.80	2498.62	1249.31	3612.11	1808.74	32.86	-3.545	0.000	0.586
105.00	-12.43	-19.59	0.00	-949.84	0.00	949.84	2440.24	1220.12	3411.50	1708.29	36.71	-3.805	0.000	0.561
110.00	-11.73	-19.19	0.00	-851.90	0.00	851.90	2380.29	1190.15	3214.34	1609.56	40.83	-4.064	0.000	0.534
115.00	-11.07	-18.78	0.00	-755.97	0.00	755.97	2318.78	1159.39	3020.85	1512.67	45.22	-4.320	0.000	0.505
119.00	-10.57	-18.45	0.00	-680.84	0.00	680.84	2268.44	1134.22	2868.85	1436.56	48.92	-4.523	0.000	0.479
120.00	-10.35	-18.38	0.00	-662.39	0.00	662.39	2255.69	1127.85	2831.25	1417.73	49.87	-4.575	0.000	0.472
123.00	-9.75	-18.12	0.00	-607.25	0.00	607.25	1577.63	788.82	1975.86	989.40	52.80	-4.726	0.000	0.620
125.00	-9.51	-17.98	0.00	-571.01	0.00	571.01	1561.09	780.55	1925.40	964.13	54.80	-4.826	0.000	0.599
130.00	-8.97	-17.60	0.00	-481.11	0.00	481.11	1518.76	759.38	1800.86	901.77	59.99	-5.101	0.000	0.540
135.00	-8.46	-17.23	0.00	-393.10	0.00	393.10	1475.03	737.52	1678.77	840.64	65.47	-5.359	0.000	0.474
140.00	-5.95	-12.76	0.00	-306.97	0.00	306.97	1429.92	714.96	1559.34	780.83	71.20	-5.592	0.000	0.398
145.00	-5.55	-12.40	0.00	-243.16	0.00	243.16	1383.42	691.71	1442.75	722.45	77.16	-5.799	0.000	0.341
150.00	-5.18	-12.04	0.00	-181.16	0.00	181.16	1321.23	660.61	1314.97	658.46	83.33	-5.982	0.000	0.279
155.00	-4.83	-11.69	0.00	-120.95	0.00	120.95	1258.65	629.32	1192.75	597.26	89.67	-6.132	0.000	0.207
157.00	-1.76	-5.87	0.00	-97.57	0.00	97.57	1233.62	616.81	1145.53	573.62	92.24	-6.182	0.000	0.172
160.00	-1.57	-5.66	0.00	-79.96	0.00	79.96	1196.07	598.03	1076.49	539.05	96.14	-6.247	0.000	0.150
161.00	-1.51	-5.60	0.00	-74.30	0.00	74.30	1183.55	591.78	1053.96	527.76	97.45	-6.268	0.000	0.142
161.00	-1.51	-5.60	0.00	-74.30	0.00	74.30	858.57	429.28	768.96	385.05	97.45	-6.268	0.000	0.195
165.00	-1.33	-5.34	0.00	-51.90	0.00	51.90	832.45	416.23	713.85	357.46	102.72	-6.337	0.000	0.147
170.00	-1.11	-5.04	0.00	-25.18	0.00	25.18	798.56	399.28	646.76	323.86	109.39	-6.417	0.000	0.079
175.00	0.00	-4.88	0.00	0.00	0.00	0.00	758.80	379.40	578.42	289.64	116.12	-6.448	0.000	0.000

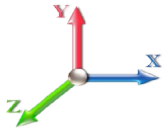
Wind Loading - Shaft

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



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	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	1.656	5.00	25.266	30.32	141.9	596.8	2409.8
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.775	5.00	24.878	29.85	139.8	628.2	2403.9
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.848	5.00	24.453	29.34	137.4	641.7	2380.1
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.902	5.00	24.011	28.81	134.9	647.4	2348.5
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.945	5.00	23.561	28.27	132.4	648.5	2312.4
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.981	5.00	23.104	27.72	129.9	646.6	2273.2
35.00		1.00	0.73	4.451	4.90	0.00	1.200	2.012	5.00	22.643	27.17	133.0	642.5	2231.9
38.75	Bot - Section 2	1.00	0.75	4.583	5.04	0.00	1.200	2.032	3.75	16.676	20.01	100.9	478.7	1646.3
40.00		1.00	0.76	4.625	5.09	0.00	1.200	2.039	1.25	5.592	6.71	34.1	162.0	889.6
45.00	Top - Section 1	1.00	0.79	4.783	5.26	0.00	1.200	2.063	5.00	22.083	26.50	139.4	641.1	3508.0
50.00		1.00	0.81	4.929	5.42	0.00	1.200	2.085	5.00	21.614	25.94	140.6	633.1	1952.6
55.00		1.00	0.83	5.065	5.57	0.00	1.200	2.105	5.00	21.144	25.37	141.4	624.3	1911.1
60.00		1.00	0.85	5.193	5.71	0.00	1.200	2.123	5.00	20.673	24.81	141.7	614.7	1868.9
65.00		1.00	0.87	5.313	5.84	0.00	1.200	2.140	5.00	20.201	24.24	141.7	604.4	1826.1
70.00		1.00	0.89	5.426	5.97	0.00	1.200	2.156	5.00	19.728	23.67	141.3	593.6	1782.6
75.00	Appurtenance(s)	1.00	0.91	5.534	6.09	0.00	1.200	2.171	5.00	19.253	23.10	140.7	582.2	1738.7
78.75	Bot - Section 3	1.00	0.92	5.612	6.17	0.00	1.200	2.182	3.75	14.127	16.95	104.7	430.1	1276.0
80.00		1.00	0.93	5.637	6.20	0.00	1.200	2.185	1.25	4.715	5.66	35.1	144.7	625.0
83.75	Top - Section 2	1.00	0.94	5.712	6.28	0.00	1.200	2.195	3.75	13.969	16.76	105.3	427.4	1847.1
85.00		1.00	0.94	5.736	6.31	0.00	1.200	2.198	1.25	4.596	5.52	34.8	141.7	338.2
90.00		1.00	0.96	5.830	6.41	0.00	1.200	2.211	5.00	18.092	21.71	139.2	554.3	1325.7
95.00		1.00	0.97	5.921	6.51	0.00	1.200	2.223	5.00	17.615	21.14	137.7	541.5	1289.6
100.00		1.00	0.99	6.008	6.61	0.00	1.200	2.234	5.00	17.138	20.57	135.9	528.3	1253.1
105.00		1.00	1.00	6.093	6.70	0.00	1.200	2.245	5.00	16.660	19.99	134.0	514.9	1216.4
110.00		1.00	1.02	6.174	6.79	0.00	1.200	2.256	5.00	16.183	19.42	131.9	501.2	1179.4
115.00		1.00	1.03	6.253	6.88	0.00	1.200	2.266	5.00	15.704	18.85	129.6	487.2	1142.2
119.00	Bot - Section 4	1.00	1.04	6.315	6.95	0.00	1.200	2.274	4.00	12.218	14.66	101.8	380.7	887.9
120.00		1.00	1.04	6.330	6.96	0.00	1.200	2.276	1.00	3.049	3.66	25.5	96.0	321.9
123.00	Top - Section 3	1.00	1.05	6.375	7.01	0.00	1.200	2.281	3.00	9.032	10.84	76.0	282.9	950.5
125.00		1.00	1.05	6.404	7.04	0.00	1.200	2.285	2.00	5.925	7.11	50.1	186.3	382.4
130.00		1.00	1.07	6.476	7.12	0.00	1.200	2.294	5.00	14.480	17.38	123.8	451.2	928.4
135.00		1.00	1.08	6.546	7.20	0.00	1.200	2.303	5.00	14.000	16.80	121.0	436.5	895.0
140.00	Appurtenance(s)	1.00	1.09	6.615	7.28	0.00	1.200	2.311	5.00	13.521	16.22	118.1	421.5	861.4
145.00		1.00	1.10	6.681	7.35	0.00	1.200	2.319	5.00	13.041	15.65	115.0	406.4	827.7
150.00		1.00	1.11	6.746	7.42	0.00	1.200	2.327	5.00	12.561	15.07	111.9	391.1	793.8
155.00		1.00	1.12	6.810	7.49	0.00	1.200	2.335	5.00	12.081	14.50	108.6	375.7	759.7
157.00	Appurtenance(s)	1.00	1.12	6.835	7.52	0.00	1.200	2.338	2.00	4.697	5.64	42.4	147.8	296.2
160.00		1.00	1.13	6.872	7.56	0.00	1.200	2.342	3.00	6.902	8.28	62.6	216.1	433.1
161.00	Top - Section 4	1.00	1.13	6.884	7.57	0.00	1.200	2.343	1.00	2.262	2.71	20.6	71.4	142.2
165.00		1.00	1.14	6.933	7.63	0.00	1.200	2.349	4.00	8.857	10.63	81.1	275.5	483.1
170.00		1.00	1.15	6.992	7.69	0.00	1.200	2.356	5.00	10.639	12.77	98.2	328.5	575.4
175.00	Appurtenance(s)	1.00	1.16	7.050	7.76	0.00	1.200	2.363	5.00	10.158	12.19	94.5	312.6	545.5
								Totals:	**175.00**			**4,510.2**		**55,060.6**

Discrete Appurtenance Forces

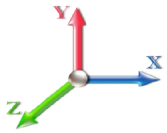
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

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 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	175.00	WBX065X19R050	3	7.050	7.755	0.72	1.00	18.59	360.33	0.000	0.000	144.14	0.00	0.00
2	175.00	6' Lightning rod	1	7.050	7.755	1.00	1.00	1.85	51.65	0.000	0.000	14.37	0.00	0.00
3	175.00	BXA-70063/6CF	3	7.050	7.755	0.70	1.00	23.76	515.04	0.000	0.000	184.23	0.00	0.00
4	175.00	BXA-171085/12CF	3	7.050	7.755	0.84	1.00	20.13	361.39	0.000	0.000	156.11	0.00	0.00
5	175.00	Low Profile Platform-flat	1	7.050	7.755	1.00	1.00	53.36	2557.86	0.000	0.000	413.80	0.00	0.00
6	175.00	BXA-70080/6CF	3	7.050	7.755	0.88	1.00	23.94	468.35	0.000	0.000	185.68	0.00	0.00
7	175.00	RRH2x40-AWS	3	7.050	7.755	0.82	1.00	10.27	352.87	0.000	0.000	79.66	0.00	0.00
8	175.00	FD9R6004/2C-3L (3.1 lbs)	6	7.050	7.755	0.67	1.00	3.86	73.73	0.000	0.000	29.94	0.00	0.00
9	175.00	DB-T1-6Z-8AB-0Z	1	7.050	7.755	0.71	1.00	4.27	229.83	0.000	0.000	33.10	0.00	0.00
10	157.00	ALU - TD-RRH8x20-25 -	3	6.835	7.518	0.60	0.80	9.30	727.95	0.000	0.000	69.93	0.00	0.00
11	157.00	ALU - 800 MHz - RRU	6	6.835	7.518	0.60	0.80	14.48	849.39	0.000	0.000	108.86	0.00	0.00
12	157.00	ALU - 1900 MHz - RRU	3	6.835	7.518	0.60	0.80	8.04	479.57	0.000	0.000	60.48	0.00	0.00
13	157.00	NNVV-65B-R4	3	6.835	7.518	0.59	0.80	25.26	1385.10	0.000	0.000	189.88	0.00	0.00
14	157.00	APXVTM14-C-I20	3	6.835	7.518	0.62	0.80	14.53	891.79	0.000	0.000	109.26	0.00	0.00
15	157.00	Platform w/ Handrail +	1	6.835	7.518	1.00	1.00	114.59	7932.63	0.000	0.000	861.54	0.00	0.00
16	140.00	Platform w/ Hand Rails	1	6.615	7.276	1.00	1.00	67.73	4573.15	0.000	0.000	492.83	0.00	0.00
17	140.00	782 11056	3	6.615	7.276	0.58	0.75	0.91	9.73	0.000	0.000	6.60	0.00	0.00
18	140.00	KRY 112 489/2	3	6.615	7.276	0.50	0.75	2.29	103.67	0.000	0.000	16.69	0.00	0.00
19	140.00	APXVAARR24_43-U-NA2	3	6.615	7.276	0.56	0.75	38.45	2190.09	0.000	0.000	279.79	0.00	0.00
20	140.00	APXV18-206516S-C-A20	3	6.615	7.276	0.55	0.75	9.97	285.69	0.000	0.000	72.54	0.00	0.00
21	140.00	4449	3	6.615	7.276	0.50	0.75	3.60	546.30	0.000	0.000	26.19	0.00	0.00
22	75.00	GPS	1	5.534	6.088	1.00	1.00	1.89	40.47	0.000	0.000	11.48	0.00	0.00
							Totals:		**24,986.57**			**3,547.09**		

Total Applied Force Summary

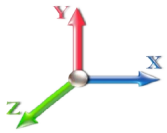
Structure:	CT01915-S-SBA		**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn		**Exposure:**	B	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

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 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		141.94	2582.95	0.00	0.00
10.00		139.76	2577.04	0.00	0.00
15.00		137.37	2553.29	0.00	0.00
20.00		134.89	2521.68	0.00	0.00
25.00		132.36	2485.53	0.00	0.00
30.00		129.91	2446.36	0.00	0.00
35.00		133.05	2405.03	0.00	0.00
38.75		100.88	1776.20	0.00	0.00
40.00		34.13	932.93	0.00	0.00
45.00		139.41	3681.17	0.00	0.00
50.00		140.63	2125.75	0.00	0.00
55.00		141.37	2084.30	0.00	0.00
60.00		141.70	2042.10	0.00	0.00
65.00		141.66	1999.23	0.00	0.00
70.00		141.30	1955.80	0.00	0.00
75.00	(1) attachments	152.13	1952.33	0.00	0.00
78.75		104.65	1405.18	0.00	0.00
80.00		35.09	668.01	0.00	0.00
83.75		105.32	1976.28	0.00	0.00
85.00		34.80	381.25	0.00	0.00
90.00		139.23	1497.92	0.00	0.00
95.00		137.67	1461.78	0.00	0.00
100.00		135.92	1425.33	0.00	0.00
105.00		133.99	1388.60	0.00	0.00
110.00		131.89	1351.60	0.00	0.00
115.00		129.63	1314.36	0.00	0.00
119.00		101.84	1025.65	0.00	0.00
120.00		25.47	356.34	0.00	0.00
123.00		76.00	1053.79	0.00	0.00
125.00		50.09	451.28	0.00	0.00
130.00		123.78	1100.59	0.00	0.00
135.00		120.98	1067.20	0.00	0.00
140.00	(16) attachments	1012.68	8742.25	0.00	0.00
145.00		115.01	925.00	0.00	0.00
150.00		111.86	891.09	0.00	0.00
155.00		108.59	857.03	0.00	0.00
157.00	(19) attachments	1442.33	12601.52	0.00	0.00
160.00		62.61	481.95	0.00	0.00
161.00		20.55	158.53	0.00	0.00
165.00		81.05	548.25	0.00	0.00
170.00		98.19	656.89	0.00	0.00
175.00	(24) attachments	1335.56	5597.99	0.00	0.00
	Totals:	**8,057.30**	**85,507.36**	**0.00**	**0.00**

Calculated Forces

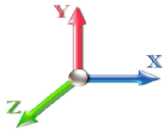
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

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 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	-85.50	-8.09	0.00	-1042.7	0.00	1042.75	6411.04	3205.52	14877.2	7449.66	0.00	0.000	0.000	0.153
5.00	-82.92	-8.00	0.00	-1002.3	0.00	1002.31	6318.35	3159.17	14361.2	7191.28	0.02	-0.040	0.000	0.153
10.00	-80.33	-7.92	0.00	-962.30	0.00	962.30	6224.09	3112.04	13850.5	6935.58	0.09	-0.081	0.000	0.152
15.00	-77.77	-7.83	0.00	-922.70	0.00	922.70	6128.26	3064.13	13345.4	6682.66	0.19	-0.123	0.000	0.151
20.00	-75.25	-7.75	0.00	-883.53	0.00	883.53	6030.87	3015.43	12846.2	6432.65	0.35	-0.166	0.000	0.150
25.00	-72.76	-7.67	0.00	-844.78	0.00	844.78	5931.91	2965.95	12352.9	6185.64	0.54	-0.210	0.000	0.149
30.00	-70.30	-7.58	0.00	-806.45	0.00	806.45	5831.38	2915.69	11865.8	5941.76	0.79	-0.254	0.000	0.148
35.00	-67.89	-7.48	0.00	-768.55	0.00	768.55	5715.88	2857.94	11358.6	5687.79	1.08	-0.300	0.000	0.147
38.75	-66.12	-7.40	0.00	-740.48	0.00	740.48	5614.19	2807.10	10956.1	5486.19	1.33	-0.335	0.000	0.147
40.00	-65.18	-7.40	0.00	-731.23	0.00	731.23	5580.30	2790.15	10823.5	5419.80	1.42	-0.348	0.000	0.147
45.00	-61.49	-7.28	0.00	-694.25	0.00	694.25	4741.11	2370.56	9166.15	4589.89	1.81	-0.395	0.000	0.164
50.00	-59.36	-7.18	0.00	-657.83	0.00	657.83	4656.71	2328.36	8781.22	4397.14	2.25	-0.444	0.000	0.162
55.00	-57.27	-7.08	0.00	-621.93	0.00	621.93	4570.75	2285.37	8401.44	4206.97	2.74	-0.497	0.000	0.160
60.00	-55.23	-6.97	0.00	-586.55	0.00	586.55	4483.21	2241.61	8027.05	4019.49	3.29	-0.552	0.000	0.158
65.00	-53.22	-6.86	0.00	-551.70	0.00	551.70	4386.28	2193.14	7644.63	3828.00	3.90	-0.607	0.000	0.156
70.00	-51.26	-6.75	0.00	-517.41	0.00	517.41	4267.64	2133.82	7234.64	3622.70	4.56	-0.664	0.000	0.155
75.00	-49.30	-6.61	0.00	-483.67	0.00	483.67	4149.01	2074.50	6835.94	3423.05	5.29	-0.721	0.000	0.153
78.75	-47.90	-6.52	0.00	-458.87	0.00	458.87	4060.03	2030.01	6544.34	3277.03	5.87	-0.765	0.000	0.152
80.00	-47.23	-6.50	0.00	-450.72	0.00	450.72	4030.37	2015.18	6448.55	3229.07	6.08	-0.780	0.000	0.151
83.75	-45.25	-6.39	0.00	-426.36	0.00	426.36	2677.54	1338.77	4285.17	2145.77	6.71	-0.825	0.000	0.216
85.00	-44.86	-6.38	0.00	-418.38	0.00	418.38	2664.37	1332.18	4232.36	2119.33	6.92	-0.840	0.000	0.214
90.00	-43.36	-6.28	0.00	-386.45	0.00	386.45	2610.69	1305.34	4022.76	2014.37	7.85	-0.919	0.000	0.208
95.00	-41.89	-6.18	0.00	-355.04	0.00	355.04	2555.44	1277.72	3815.94	1910.80	8.85	-0.999	0.000	0.202
100.00	-40.46	-6.07	0.00	-324.15	0.00	324.15	2498.62	1249.31	3612.11	1808.74	9.94	-1.079	0.000	0.195
105.00	-39.06	-5.97	0.00	-293.78	0.00	293.78	2440.24	1220.12	3411.50	1708.29	11.11	-1.159	0.000	0.188
110.00	-37.71	-5.86	0.00	-263.94	0.00	263.94	2380.29	1190.15	3214.34	1609.56	12.37	-1.239	0.000	0.180
115.00	-36.39	-5.75	0.00	-234.64	0.00	234.64	2318.78	1159.39	3020.85	1512.67	13.71	-1.319	0.000	0.171
119.00	-35.36	-5.64	0.00	-211.66	0.00	211.66	2268.44	1134.22	2868.85	1436.56	14.84	-1.382	0.000	0.163
120.00	-35.00	-5.63	0.00	-206.01	0.00	206.01	2255.69	1127.85	2831.25	1417.73	15.14	-1.398	0.000	0.161
123.00	-33.95	-5.55	0.00	-189.13	0.00	189.13	1577.63	788.82	1975.86	989.40	16.03	-1.445	0.000	0.213
125.00	-33.49	-5.52	0.00	-178.03	0.00	178.03	1561.09	780.55	1925.40	964.13	16.64	-1.476	0.000	0.206
130.00	-32.39	-5.42	0.00	-150.41	0.00	150.41	1518.76	759.38	1800.86	901.77	18.23	-1.562	0.000	0.188
135.00	-31.32	-5.31	0.00	-123.32	0.00	123.32	1475.03	737.52	1678.77	840.64	19.91	-1.643	0.000	0.168
140.00	-22.60	-4.07	0.00	-96.77	0.00	96.77	1429.92	714.96	1559.34	780.83	21.68	-1.716	0.000	0.140
145.00	-21.68	-3.95	0.00	-76.43	0.00	76.43	1383.42	691.71	1442.75	722.45	23.51	-1.781	0.000	0.121
150.00	-20.79	-3.83	0.00	-56.69	0.00	56.69	1321.23	660.61	1314.97	658.46	25.41	-1.839	0.000	0.102
155.00	-19.93	-3.70	0.00	-37.56	0.00	37.56	1258.65	629.32	1192.75	597.26	27.36	-1.886	0.000	0.079
157.00	-7.39	-1.85	0.00	-30.16	0.00	30.16	1233.62	616.81	1145.53	573.62	28.15	-1.901	0.000	0.059
160.00	-6.91	-1.77	0.00	-24.62	0.00	24.62	1196.07	598.03	1076.49	539.05	29.35	-1.921	0.000	0.051
161.00	-6.75	-1.74	0.00	-22.85	0.00	22.85	1183.55	591.78	1053.96	527.76	29.75	-1.927	0.000	0.049
161.00	-6.75	-1.74	0.00	-22.85	0.00	22.85	858.57	429.28	768.96	385.05	29.75	-1.927	0.000	0.067
165.00	-6.20	-1.65	0.00	-15.88	0.00	15.88	832.45	416.23	713.85	357.46	31.38	-1.949	0.000	0.052
170.00	-5.55	-1.53	0.00	-7.64	0.00	7.64	798.56	399.28	646.76	323.86	33.43	-1.973	0.000	0.031
175.00	0.00	-1.34	0.00	0.00	0.00	0.00	758.80	379.40	578.42	289.64	35.51	-1.983	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E					**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.18	**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10	**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33	**SA**	0.03	**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		1510.7	0.00	0.03	0.02	24.21	
10.00		1479.7	0.01	0.05	0.03	35.40	
15.00		1448.6	0.01	0.06	0.03	40.80	
20.00		1417.6	0.02	0.07	0.04	43.26	
25.00		1386.5	0.04	0.07	0.04	44.21	
30.00		1355.5	0.06	0.07	0.04	44.44	
35.00		1324.4	0.08	0.07	0.04	44.40	
38.75	Bot - Section 2	972.99	0.09	0.07	0.04	33.13	
40.00		606.38	0.10	0.07	0.04	20.75	
45.00	Top - Section 1	2389.1	0.12	0.07	0.03	83.41	
50.00		1099.5	0.15	0.07	0.03	39.04	
55.00		1072.4	0.19	0.06	0.02	38.39	
60.00		1045.2	0.22	0.06	0.02	37.11	
65.00		1018.0	0.26	0.05	0.02	34.84	
70.00		990.89	0.30	0.04	0.01	31.22	
75.00	Appurtenance(s)	973.73	0.35	0.03	0.01	26.16	
78.75	Bot - Section 3	704.96	0.38	0.02	0.01	15.45	
80.00		400.18	0.39	0.02	0.01	7.99	
83.75	Top - Section 2	1183.0	0.43	0.01	0.01	15.73	
85.00		163.74	0.45	0.00	0.01	1.77	
90.00		642.81	0.50	-0.02	0.01	0.00	
95.00		623.41	0.56	-0.04	0.01	-7.06	
100.00		604.00	0.62	-0.06	0.02	-13.07	
105.00		584.59	0.68	-0.08	0.03	-17.32	
110.00		565.19	0.75	-0.10	0.04	-19.47	
115.00		545.78	0.82	-0.11	0.06	-19.49	
119.00	Bot - Section 4	422.65	0.87	-0.12	0.08	-14.41	
120.00		188.22	0.89	-0.12	0.08	-6.27	
123.00	Top - Section 3	556.27	0.93	-0.12	0.10	-16.77	
125.00		163.40	0.96	-0.12	0.11	-4.46	
130.00		397.64	1.04	-0.10	0.15	-7.07	
135.00		382.12	1.12	-0.05	0.20	-1.80	
140.00	Appurtenance(s)	3061.6	1.21	0.01	0.26	36.29	
145.00		351.07	1.30	0.12	0.33	11.21	
150.00		335.54	1.39	0.26	0.42	18.64	
155.00		320.02	1.48	0.46	0.52	26.49	
157.00	Appurtenance(s)	4054.3	1.52	0.55	0.57	384.00	
160.00		180.83	1.58	0.72	0.64	20.56	
161.00	Top - Section 4	59.04	1.60	0.78	0.67	7.10	
165.00		172.96	1.68	1.05	0.78	25.66	
170.00		205.72	1.78	1.46	0.95	38.44	
175.00	Appurtenance(s)	1782.7	1.89	1.98	1.14	408.63	
	Totals:	**38,743.9**				**1,511.5**	**Total Wind:** **28,118.2**

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

Calculated Forces

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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**	0.18			**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33	**SA**	0.03			**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	-51.95	-1.64	0.00	-197.18	0.00	197.18	6411.04	3205.52	14877.2	7449.66		0.00	0.00	0.035
5.00	-49.97	-1.62	0.00	-188.97	0.00	188.97	6318.35	3159.17	14361.2	7191.28		0.00	-0.01	0.034
10.00	-48.02	-1.59	0.00	-180.85	0.00	180.85	6224.09	3112.04	13850.5	6935.58		0.02	-0.02	0.034
15.00	-46.11	-1.56	0.00	-172.88	0.00	172.88	6128.26	3064.13	13345.4	6682.66		0.04	-0.02	0.033
20.00	-44.23	-1.52	0.00	-165.08	0.00	165.08	6030.87	3015.43	12846.2	6432.65		0.06	-0.03	0.033
25.00	-42.39	-1.48	0.00	-157.47	0.00	157.47	5931.91	2965.95	12352.9	6185.64		0.10	-0.04	0.033
30.00	-40.59	-1.44	0.00	-150.06	0.00	150.06	5831.38	2915.69	11865.8	5941.76		0.15	-0.05	0.032
35.00	-38.83	-1.40	0.00	-142.84	0.00	142.84	5715.88	2857.94	11358.6	5687.79		0.20	-0.06	0.032
38.75	-37.53	-1.37	0.00	-137.59	0.00	137.59	5614.19	2807.10	10956.1	5486.19		0.25	-0.06	0.032
40.00	-36.76	-1.35	0.00	-135.88	0.00	135.88	5580.30	2790.15	10823.5	5419.80		0.27	-0.06	0.032
45.00	-33.72	-1.27	0.00	-129.12	0.00	129.12	4741.11	2370.56	9166.15	4589.89		0.34	-0.07	0.035
50.00	-32.23	-1.23	0.00	-122.76	0.00	122.76	4656.71	2328.36	8781.22	4397.14		0.42	-0.08	0.035
55.00	-30.77	-1.20	0.00	-116.59	0.00	116.59	4570.75	2285.37	8401.44	4206.97		0.51	-0.09	0.034
60.00	-29.34	-1.17	0.00	-110.59	0.00	110.59	4483.21	2241.61	8027.05	4019.49		0.62	-0.10	0.034
65.00	-27.95	-1.13	0.00	-104.77	0.00	104.77	4386.28	2193.14	7644.63	3828.00		0.73	-0.11	0.034
70.00	-26.58	-1.10	0.00	-99.11	0.00	99.11	4267.64	2133.82	7234.64	3622.70		0.85	-0.12	0.034
75.00	-25.24	-1.08	0.00	-93.59	0.00	93.59	4149.01	2074.50	6835.94	3423.05		0.99	-0.14	0.033
78.75	-24.27	-1.06	0.00	-89.54	0.00	89.54	4060.03	2030.01	6544.34	3277.03		1.10	-0.14	0.033
80.00	-23.74	-1.06	0.00	-88.21	0.00	88.21	4030.37	2015.18	6448.55	3229.07		1.14	-0.15	0.033
83.75	-22.20	-1.04	0.00	-84.25	0.00	84.25	2677.54	1338.77	4285.17	2145.77		1.26	-0.16	0.048
85.00	-21.96	-1.04	0.00	-82.95	0.00	82.95	2664.37	1332.18	4232.36	2119.33		1.30	-0.16	0.047
90.00	-21.01	-1.04	0.00	-77.75	0.00	77.75	2610.69	1305.34	4022.76	2014.37		1.47	-0.17	0.047
95.00	-20.09	-1.05	0.00	-72.53	0.00	72.53	2555.44	1277.72	3815.94	1910.80		1.66	-0.19	0.046
100.00	-19.19	-1.05	0.00	-67.30	0.00	67.30	2498.62	1249.31	3612.11	1808.74		1.87	-0.21	0.045
105.00	-18.32	-1.05	0.00	-62.06	0.00	62.06	2440.24	1220.12	3411.50	1708.29		2.10	-0.22	0.044
110.00	-17.47	-1.05	0.00	-56.80	0.00	56.80	2380.29	1190.15	3214.34	1609.56		2.34	-0.24	0.043
115.00	-16.64	-1.05	0.00	-51.54	0.00	51.54	2318.78	1159.39	3020.85	1512.67		2.60	-0.26	0.041
119.00	-16.00	-1.05	0.00	-47.32	0.00	47.32	2268.44	1134.22	2868.85	1436.56		2.83	-0.27	0.040
120.00	-15.74	-1.05	0.00	-46.27	0.00	46.27	2255.69	1127.85	2831.25	1417.73		2.88	-0.28	0.040
123.00	-14.97	-1.05	0.00	-43.11	0.00	43.11	1577.63	788.82	1975.86	989.40		3.06	-0.29	0.053
125.00	-14.70	-1.05	0.00	-41.00	0.00	41.00	1561.09	780.55	1925.40	964.13		3.18	-0.29	0.052
130.00	-14.05	-1.06	0.00	-35.73	0.00	35.73	1518.76	759.38	1800.86	901.77		3.50	-0.31	0.049
135.00	-13.42	-1.06	0.00	-30.45	0.00	30.45	1475.03	737.52	1678.77	840.64		3.84	-0.33	0.045
140.00	-9.57	-1.00	0.00	-25.17	0.00	25.17	1429.92	714.96	1559.34	780.83		4.20	-0.35	0.039
145.00	-9.05	-0.99	0.00	-20.16	0.00	20.16	1383.42	691.71	1442.75	722.45		4.58	-0.37	0.034
150.00	-8.55	-0.97	0.00	-15.22	0.00	15.22	1321.23	660.61	1314.97	658.46		4.97	-0.38	0.030
155.00	-8.07	-0.94	0.00	-10.37	0.00	10.37	1258.65	629.32	1192.75	597.26		5.38	-0.40	0.024
157.00	-3.17	-0.52	0.00	-8.49	0.00	8.49	1233.62	616.81	1145.53	573.62		5.55	-0.40	0.017
160.00	-2.91	-0.50	0.00	-6.92	0.00	6.92	1196.07	598.03	1076.49	539.05		5.80	-0.41	0.015
161.00	-2.82	-0.49	0.00	-6.42	0.00	6.42	1183.55	591.78	1053.96	527.76		5.89	-0.41	0.015
161.00	-2.82	-0.49	0.00	-6.42	0.00	6.42	858.57	429.28	768.96	385.05		5.89	-0.41	0.020
165.00	-2.55	-0.47	0.00	-4.45	0.00	4.45	832.45	416.23	713.85	357.46		6.23	-0.41	0.016
170.00	-2.22	-0.42	0.00	-2.12	0.00	2.12	798.56	399.28	646.76	323.86		6.67	-0.42	0.009
175.00	0.00	-0.41	0.00	0.00	0.00	0.00	758.80	379.40	578.42	289.64		7.12	-0.42	0.000

Seismic Segment Forces (Factored)

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E					**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.18	**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33	**SA**	0.03	**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		1510.7	0.00	0.03	0.02	24.21	
10.00		1479.7	0.01	0.05	0.03	35.40	
15.00		1448.6	0.01	0.06	0.03	40.80	
20.00		1417.6	0.02	0.07	0.04	43.26	
25.00		1386.5	0.04	0.07	0.04	44.21	
30.00		1355.5	0.06	0.07	0.04	44.44	
35.00		1324.4	0.08	0.07	0.04	44.40	
38.75	Bot - Section 2	972.99	0.09	0.07	0.04	33.13	
40.00		606.38	0.10	0.07	0.04	20.75	
45.00	Top - Section 1	2389.1	0.12	0.07	0.03	83.41	
50.00		1099.5	0.15	0.07	0.03	39.04	
55.00		1072.4	0.19	0.06	0.02	38.39	
60.00		1045.2	0.22	0.06	0.02	37.11	
65.00		1018.0	0.26	0.05	0.02	34.84	
70.00		990.89	0.30	0.04	0.01	31.22	
75.00	Appurtenance(s)	973.73	0.35	0.03	0.01	26.16	
78.75	Bot - Section 3	704.96	0.38	0.02	0.01	15.45	
80.00		400.18	0.39	0.02	0.01	7.99	
83.75	Top - Section 2	1183.0	0.43	0.01	0.01	15.73	
85.00		163.74	0.45	0.00	0.01	1.77	
90.00		642.81	0.50	-0.02	0.01	0.00	
95.00		623.41	0.56	-0.04	0.01	-7.06	
100.00		604.00	0.62	-0.06	0.02	-13.07	
105.00		584.59	0.68	-0.08	0.03	-17.32	
110.00		565.19	0.75	-0.10	0.04	-19.47	
115.00		545.78	0.82	-0.11	0.06	-19.49	
119.00	Bot - Section 4	422.65	0.87	-0.12	0.08	-14.41	
120.00		188.22	0.89	-0.12	0.08	-6.27	
123.00	Top - Section 3	556.27	0.93	-0.12	0.10	-16.77	
125.00		163.40	0.96	-0.12	0.11	-4.46	
130.00		397.64	1.04	-0.10	0.15	-7.07	
135.00		382.12	1.12	-0.05	0.20	-1.80	
140.00	Appurtenance(s)	3061.6	1.21	0.01	0.26	36.29	
145.00		351.07	1.30	0.12	0.33	11.21	
150.00		335.54	1.39	0.26	0.42	18.64	
155.00		320.02	1.48	0.46	0.52	26.49	
157.00	Appurtenance(s)	4054.3	1.52	0.55	0.57	384.00	
160.00		180.83	1.58	0.72	0.64	20.56	
161.00	Top - Section 4	59.04	1.60	0.78	0.67	7.10	
165.00		172.96	1.68	1.05	0.78	25.66	
170.00		205.72	1.78	1.46	0.95	38.44	
175.00	Appurtenance(s)	1782.7	1.89	1.98	1.14	408.63	
	Totals:	**38,743.9**				**1,511.5**	**Total Wind:** **28,118.2**

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

Calculated Forces

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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**	0.18			**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33	**SA**	0.03			**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	-38.96	-1.64	0.00	-194.88	0.00	194.88	6411.04	3205.52	14877.2	7449.66		0.00	0.00	0.032
5.00	-37.47	-1.62	0.00	-186.67	0.00	186.67	6318.35	3159.17	14361.2	7191.28		0.00	-0.01	0.032
10.00	-36.01	-1.59	0.00	-178.57	0.00	178.57	6224.09	3112.04	13850.5	6935.58		0.02	-0.02	0.032
15.00	-34.58	-1.55	0.00	-170.62	0.00	170.62	6128.26	3064.13	13345.4	6682.66		0.04	-0.02	0.031
20.00	-33.17	-1.51	0.00	-162.85	0.00	162.85	6030.87	3015.43	12846.2	6432.65		0.06	-0.03	0.031
25.00	-31.80	-1.47	0.00	-155.27	0.00	155.27	5931.91	2965.95	12352.9	6185.64		0.10	-0.04	0.030
30.00	-30.45	-1.43	0.00	-147.90	0.00	147.90	5831.38	2915.69	11865.8	5941.76		0.15	-0.05	0.030
35.00	-29.12	-1.39	0.00	-140.74	0.00	140.74	5715.88	2857.94	11358.6	5687.79		0.20	-0.06	0.030
38.75	-28.15	-1.36	0.00	-135.52	0.00	135.52	5614.19	2807.10	10956.1	5486.19		0.25	-0.06	0.030
40.00	-27.57	-1.34	0.00	-133.82	0.00	133.82	5580.30	2790.15	10823.5	5419.80		0.26	-0.06	0.030
45.00	-25.29	-1.26	0.00	-127.12	0.00	127.12	4741.11	2370.56	9166.15	4589.89		0.33	-0.07	0.033
50.00	-24.17	-1.22	0.00	-120.83	0.00	120.83	4656.71	2328.36	8781.22	4397.14		0.42	-0.08	0.033
55.00	-23.08	-1.19	0.00	-114.72	0.00	114.72	4570.75	2285.37	8401.44	4206.97		0.51	-0.09	0.032
60.00	-22.01	-1.15	0.00	-108.79	0.00	108.79	4483.21	2241.61	8027.05	4019.49		0.61	-0.10	0.032
65.00	-20.96	-1.12	0.00	-103.04	0.00	103.04	4386.28	2193.14	7644.63	3828.00		0.72	-0.11	0.032
70.00	-19.94	-1.09	0.00	-97.45	0.00	97.45	4267.64	2133.82	7234.64	3622.70		0.84	-0.12	0.032
75.00	-18.93	-1.06	0.00	-92.01	0.00	92.01	4149.01	2074.50	6835.94	3423.05		0.98	-0.13	0.031
78.75	-18.20	-1.05	0.00	-88.02	0.00	88.02	4060.03	2030.01	6544.34	3277.03		1.08	-0.14	0.031
80.00	-17.81	-1.04	0.00	-86.71	0.00	86.71	4030.37	2015.18	6448.55	3229.07		1.12	-0.14	0.031
83.75	-16.65	-1.02	0.00	-82.81	0.00	82.81	2677.54	1338.77	4285.17	2145.77		1.24	-0.15	0.045
85.00	-16.47	-1.02	0.00	-81.53	0.00	81.53	2664.37	1332.18	4232.36	2119.33		1.28	-0.16	0.045
90.00	-15.76	-1.03	0.00	-76.41	0.00	76.41	2610.69	1305.34	4022.76	2014.37		1.45	-0.17	0.044
95.00	-15.07	-1.03	0.00	-71.28	0.00	71.28	2555.44	1277.72	3815.94	1910.80		1.64	-0.19	0.043
100.00	-14.39	-1.03	0.00	-66.14	0.00	66.14	2498.62	1249.31	3612.11	1808.74		1.85	-0.20	0.042
105.00	-13.74	-1.03	0.00	-60.99	0.00	60.99	2440.24	1220.12	3411.50	1708.29		2.07	-0.22	0.041
110.00	-13.10	-1.03	0.00	-55.84	0.00	55.84	2380.29	1190.15	3214.34	1609.56		2.31	-0.24	0.040
115.00	-12.48	-1.03	0.00	-50.67	0.00	50.67	2318.78	1159.39	3020.85	1512.67		2.57	-0.25	0.039
119.00	-12.00	-1.03	0.00	-46.54	0.00	46.54	2268.44	1134.22	2868.85	1436.56		2.78	-0.27	0.038
120.00	-11.80	-1.03	0.00	-45.51	0.00	45.51	2255.69	1127.85	2831.25	1417.73		2.84	-0.27	0.037
123.00	-11.22	-1.03	0.00	-42.41	0.00	42.41	1577.63	788.82	1975.86	989.40		3.02	-0.28	0.050
125.00	-11.02	-1.03	0.00	-40.34	0.00	40.34	1561.09	780.55	1925.40	964.13		3.13	-0.29	0.049
130.00	-10.54	-1.04	0.00	-35.17	0.00	35.17	1518.76	759.38	1800.86	901.77		3.45	-0.31	0.046
135.00	-10.06	-1.04	0.00	-29.99	0.00	29.99	1475.03	737.52	1678.77	840.64		3.78	-0.33	0.043
140.00	-7.18	-0.98	0.00	-24.81	0.00	24.81	1429.92	714.96	1559.34	780.83		4.14	-0.35	0.037
145.00	-6.79	-0.97	0.00	-19.89	0.00	19.89	1383.42	691.71	1442.75	722.45		4.51	-0.36	0.032
150.00	-6.41	-0.95	0.00	-15.02	0.00	15.02	1321.23	660.61	1314.97	658.46		4.90	-0.38	0.028
155.00	-6.05	-0.93	0.00	-10.25	0.00	10.25	1258.65	629.32	1192.75	597.26		5.30	-0.39	0.022
157.00	-2.38	-0.52	0.00	-8.40	0.00	8.40	1233.62	616.81	1145.53	573.62		5.46	-0.39	0.017
160.00	-2.18	-0.49	0.00	-6.85	0.00	6.85	1196.07	598.03	1076.49	539.05		5.71	-0.40	0.015
161.00	-2.11	-0.49	0.00	-6.36	0.00	6.36	1183.55	591.78	1053.96	527.76		5.80	-0.40	0.014
161.00	-2.11	-0.49	0.00	-6.36	0.00	6.36	858.57	429.28	768.96	385.05		5.80	-0.40	0.019
165.00	-1.91	-0.46	0.00	-4.41	0.00	4.41	832.45	416.23	713.85	357.46		6.14	-0.41	0.015
170.00	-1.66	-0.42	0.00	-2.10	0.00	2.10	798.56	399.28	646.76	323.86		6.57	-0.41	0.009
175.00	0.00	-0.41	0.00	0.00	0.00	0.00	758.80	379.40	578.42	289.64		7.01	-0.42	0.000

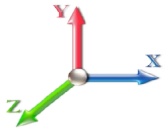
Wind Loading - Shaft

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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 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	6.129	6.74	242.25	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	237.37	0.650	0.000	5.00	23.886	15.53	104.7	0.0	1510.8
10.00		1.00	0.70	6.129	6.74	232.48	0.650	0.000	5.00	23.399	15.21	102.5	0.0	1479.7
15.00		1.00	0.70	6.129	6.74	227.60	0.650	0.000	5.00	22.913	14.89	100.4	0.0	1448.7
20.00		1.00	0.70	6.129	6.74	222.71	0.650	0.000	5.00	22.426	14.58	98.3	0.0	1417.6
25.00		1.00	0.70	6.129	6.74	217.83	0.650	0.000	5.00	21.940	14.26	96.1	0.0	1386.6
30.00		1.00	0.70	6.134	6.75	213.03	0.650	0.000	5.00	21.453	13.94	94.1	0.0	1355.5
35.00		1.00	0.73	6.410	7.05	212.78	0.650	0.000	5.00	20.966	13.63	96.1	0.0	1324.5
38.75	Bot - Section 2	1.00	0.75	6.599	7.26	212.10	0.650	0.000	3.75	15.406	10.01	72.7	0.0	973.0
40.00		1.00	0.76	6.659	7.33	211.79	0.650	0.000	1.25	5.167	3.36	24.6	0.0	606.4
45.00	Top - Section 1	1.00	0.79	6.887	7.58	210.20	0.650	0.000	5.00	20.364	13.24	100.3	0.0	2389.1
50.00		1.00	0.81	7.098	7.81	212.13	0.650	0.000	5.00	19.877	12.92	100.9	0.0	1099.6
55.00		1.00	0.83	7.294	8.02	209.71	0.650	0.000	5.00	19.390	12.60	101.1	0.0	1072.4
60.00		1.00	0.85	7.477	8.22	206.94	0.650	0.000	5.00	18.904	12.29	101.1	0.0	1045.2
65.00		1.00	0.87	7.650	8.42	203.86	0.650	0.000	5.00	18.417	11.97	100.7	0.0	1018.1
70.00		1.00	0.89	7.814	8.60	200.52	0.650	0.000	5.00	17.931	11.65	100.2	0.0	990.9
75.00	Appurtenance(s)	1.00	0.91	7.969	8.77	196.93	0.650	0.000	5.00	17.444	11.34	99.4	0.0	963.7
78.75	Bot - Section 3	1.00	0.92	8.081	8.89	194.10	0.650	0.000	3.75	12.764	8.30	73.8	0.0	705.0
80.00		1.00	0.93	8.118	8.93	193.13	0.650	0.000	1.25	4.260	2.77	24.7	0.0	400.2
83.75	Top - Section 2	1.00	0.94	8.225	9.05	190.16	0.650	0.000	3.75	12.597	8.19	74.1	0.0	1183.1
85.00		1.00	0.94	8.260	9.09	192.22	0.650	0.000	1.25	4.138	2.69	24.4	0.0	163.7
90.00		1.00	0.96	8.396	9.24	188.08	0.650	0.000	5.00	16.249	10.56	97.5	0.0	642.8
95.00		1.00	0.97	8.526	9.38	183.78	0.650	0.000	5.00	15.762	10.25	96.1	0.0	623.4
100.00		1.00	0.99	8.652	9.52	179.33	0.650	0.000	5.00	15.276	9.93	94.5	0.0	604.0
105.00		1.00	1.00	8.774	9.65	174.74	0.650	0.000	5.00	14.789	9.61	92.8	0.0	584.6
110.00		1.00	1.02	8.891	9.78	170.02	0.650	0.000	5.00	14.303	9.30	90.9	0.0	565.2
115.00		1.00	1.03	9.005	9.91	165.18	0.650	0.000	5.00	13.816	8.98	89.0	0.0	545.8
119.00	Bot - Section 4	1.00	1.04	9.093	10.00	161.23	0.650	0.000	4.00	10.703	6.96	69.6	0.0	422.7
120.00		1.00	1.04	9.115	10.03	160.23	0.650	0.000	1.00	2.669	1.74	17.4	0.0	188.2
123.00	Top - Section 3	1.00	1.05	9.179	10.10	157.21	0.650	0.000	3.00	7.891	5.13	51.8	0.0	556.3
125.00		1.00	1.05	9.222	10.14	157.78	0.650	0.000	2.00	5.163	3.36	34.0	0.0	163.4
130.00		1.00	1.07	9.326	10.26	152.64	0.650	0.000	5.00	12.568	8.17	83.8	0.0	397.6
135.00		1.00	1.08	9.427	10.37	147.41	0.650	0.000	5.00	12.081	7.85	81.4	0.0	382.1
140.00	Appurtenance(s)	1.00	1.09	9.525	10.48	142.08	0.650	0.000	5.00	11.595	7.54	79.0	0.0	366.6
145.00		1.00	1.10	9.621	10.58	136.68	0.650	0.000	5.00	11.108	7.22	76.4	0.0	351.1
150.00		1.00	1.11	9.715	10.69	131.19	0.650	0.000	5.00	10.622	6.90	73.8	0.0	335.5
155.00		1.00	1.12	9.806	10.79	125.63	0.650	0.000	5.00	10.135	6.59	71.1	0.0	320.0
157.00	Appurtenance(s)	1.00	1.12	9.842	10.83	123.38	0.650	0.000	2.00	3.918	2.55	27.6	0.0	123.7
160.00		1.00	1.13	9.896	10.89	119.99	0.650	0.000	3.00	5.731	3.73	40.5	0.0	180.8
161.00	Top - Section 4	1.00	1.13	9.913	10.90	118.85	0.650	0.000	1.00	1.871	1.22	13.3	0.0	59.0
165.00		1.00	1.14	9.983	10.98	114.28	0.650	0.000	4.00	7.291	4.74	52.0	0.0	173.0
170.00		1.00	1.15	10.069	11.08	108.51	0.650	0.000	5.00	8.676	5.64	62.5	0.0	205.7
175.00	Appurtenance(s)	1.00	1.16	10.152	11.17	102.67	0.650	0.000	5.00	8.189	5.32	59.4	0.0	194.1
								Totals:	**175.00**			**3,144.5**		**30,519.4**

Discrete Appurtenance Forces

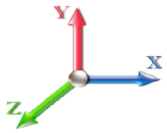
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 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	175.00	WBX065X19R050	3	10.152	11.168	0.72	1.00	11.28	62.70	0.000	0.000	125.92	0.00	0.00
2	175.00	6' Lightning rod	1	10.152	11.168	1.00	1.00	0.38	6.50	0.000	0.000	4.24	0.00	0.00
3	175.00	BXA-70063/6CF	3	10.152	11.168	0.70	1.00	15.90	51.00	0.000	0.000	177.53	0.00	0.00
4	175.00	BXA-171085/12CF	3	10.152	11.168	0.84	1.00	12.05	45.00	0.000	0.000	134.52	0.00	0.00
5	175.00	Low Profile Platform-flat	1	10.152	11.168	1.00	1.00	25.00	1200.00	0.000	0.000	279.19	0.00	0.00
6	175.00	BXA-70080/6CF	3	10.152	11.168	0.88	1.00	15.42	54.00	0.000	0.000	172.18	0.00	0.00
7	175.00	RRH2x40-AWS	3	10.152	11.168	0.82	1.00	6.20	132.00	0.000	0.000	69.23	0.00	0.00
8	175.00	FD9R6004/2C-3L (3.1 lbs)	6	10.152	11.168	0.67	1.00	1.45	18.60	0.000	0.000	16.16	0.00	0.00
9	175.00	DB-T1-6Z-8AB-0Z	1	10.152	11.168	0.71	1.00	3.41	18.90	0.000	0.000	38.06	0.00	0.00
10	157.00	ALU - TD-RRH8x20-25 -	3	9.842	10.827	0.60	0.80	7.29	210.00	0.000	0.000	78.93	0.00	0.00
11	157.00	ALU - 800 MHz - RRU	6	9.842	10.827	0.60	0.80	8.96	318.00	0.000	0.000	97.05	0.00	0.00
12	157.00	ALU - 1900 MHz - RRU	3	9.842	10.827	0.60	0.80	4.99	180.00	0.000	0.000	53.98	0.00	0.00
13	157.00	NNVV-65B-R4	3	9.842	10.827	0.59	0.80	21.79	254.10	0.000	0.000	235.93	0.00	0.00
14	157.00	APXVTM14-C-I20	3	9.842	10.827	0.62	0.80	11.72	168.60	0.000	0.000	126.85	0.00	0.00
15	157.00	Platform w/ Handrail +	1	9.842	10.827	1.00	1.00	54.00	2800.00	0.000	0.000	584.63	0.00	0.00
16	140.00	Platform w/ Hand Rails	1	9.525	10.478	1.00	1.00	40.00	2000.00	0.000	0.000	419.11	0.00	0.00
17	140.00	782 11056	3	9.525	10.478	0.58	0.75	0.23	5.40	0.000	0.000	2.39	0.00	0.00
18	140.00	KRY 112 489/2	3	9.525	10.478	0.50	0.75	1.01	39.60	0.000	0.000	10.58	0.00	0.00
19	140.00	APXVAARR24_43-U-NA2	3	9.525	10.478	0.52	0.75	31.88	384.00	0.000	0.000	334.01	0.00	0.00
20	140.00	APXV18-206516S-C-A20	3	9.525	10.478	0.55	0.75	5.93	56.10	0.000	0.000	62.13	0.00	0.00
21	140.00	4449	3	9.525	10.478	0.50	0.75	2.49	210.00	0.000	0.000	26.06	0.00	0.00
22	75.00	GPS	1	7.969	8.766	1.00	1.00	1.00	10.00	0.000	0.000	8.77	0.00	0.00
							Totals:		**8,224.50**			**3,057.43**		

Total Applied Force Summary

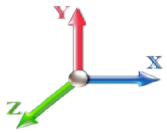
Structure:	CT01915-S-SBA		**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn		**Exposure:**	B	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 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		104.67	1655.09	0.00	0.00
10.00		102.53	1624.04	0.00	0.00
15.00		100.40	1592.99	0.00	0.00
20.00		98.27	1561.94	0.00	0.00
25.00		96.14	1530.89	0.00	0.00
30.00		94.09	1499.84	0.00	0.00
35.00		96.09	1468.79	0.00	0.00
38.75		72.69	1081.21	0.00	0.00
40.00		24.60	642.45	0.00	0.00
45.00		100.28	2533.43	0.00	0.00
50.00		100.87	1243.87	0.00	0.00
55.00		101.12	1216.70	0.00	0.00
60.00		101.06	1189.53	0.00	0.00
65.00		100.74	1162.36	0.00	0.00
70.00		100.18	1135.19	0.00	0.00
75.00	(1) attachments	108.17	1118.03	0.00	0.00
78.75		73.75	812.59	0.00	0.00
80.00		24.73	436.05	0.00	0.00
83.75		74.08	1290.70	0.00	0.00
85.00		24.44	199.61	0.00	0.00
90.00		97.54	786.31	0.00	0.00
95.00		96.09	766.91	0.00	0.00
100.00		94.50	747.50	0.00	0.00
105.00		92.78	728.09	0.00	0.00
110.00		90.92	708.69	0.00	0.00
115.00		88.95	689.28	0.00	0.00
119.00		69.58	537.45	0.00	0.00
120.00		17.40	216.92	0.00	0.00
123.00		51.79	642.37	0.00	0.00
125.00		34.05	220.80	0.00	0.00
130.00		83.80	541.14	0.00	0.00
135.00		81.43	525.62	0.00	0.00
140.00	(16) attachments	933.25	3205.19	0.00	0.00
145.00		76.42	432.17	0.00	0.00
150.00		73.78	416.64	0.00	0.00
155.00		71.06	401.12	0.00	0.00
157.00	(19) attachments	1204.93	4086.80	0.00	0.00
160.00		40.55	221.57	0.00	0.00
161.00		13.26	72.62	0.00	0.00
165.00		52.04	227.28	0.00	0.00
170.00		62.46	273.62	0.00	0.00
175.00	(24) attachments	1076.47	1850.67	0.00	0.00
	Totals:	**6,201.94**	**43,294.07**	**0.00**	**0.00**

Calculated Forces

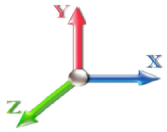
Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 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	-43.29	-6.21	0.00	-773.21	0.00	773.21	6411.04	3205.52	14877.2	7449.66	0.00	0.000	0.000	0.111
5.00	-41.63	-6.13	0.00	-742.15	0.00	742.15	6318.35	3159.17	14361.2	7191.28	0.02	-0.030	0.000	0.110
10.00	-40.01	-6.05	0.00	-711.50	0.00	711.50	6224.09	3112.04	13850.5	6935.58	0.06	-0.060	0.000	0.109
15.00	-38.41	-5.97	0.00	-681.27	0.00	681.27	6128.26	3064.13	13345.4	6682.66	0.14	-0.091	0.000	0.108
20.00	-36.85	-5.88	0.00	-651.44	0.00	651.44	6030.87	3015.43	12846.2	6432.65	0.26	-0.123	0.000	0.107
25.00	-35.31	-5.81	0.00	-622.02	0.00	622.02	5931.91	2965.95	12352.9	6185.64	0.40	-0.155	0.000	0.107
30.00	-33.81	-5.73	0.00	-592.99	0.00	592.99	5831.38	2915.69	11865.8	5941.76	0.58	-0.188	0.000	0.106
35.00	-32.34	-5.64	0.00	-564.36	0.00	564.36	5715.88	2857.94	11358.6	5687.79	0.80	-0.221	0.000	0.105
38.75	-31.26	-5.57	0.00	-543.21	0.00	543.21	5614.19	2807.10	10956.1	5486.19	0.98	-0.247	0.000	0.105
40.00	-30.61	-5.56	0.00	-536.24	0.00	536.24	5580.30	2790.15	10823.5	5419.80	1.05	-0.256	0.000	0.104
45.00	-28.07	-5.46	0.00	-508.45	0.00	508.45	4741.11	2370.56	9166.15	4589.89	1.33	-0.291	0.000	0.117
50.00	-26.83	-5.37	0.00	-481.13	0.00	481.13	4656.71	2328.36	8781.22	4397.14	1.66	-0.327	0.000	0.115
55.00	-25.61	-5.28	0.00	-454.27	0.00	454.27	4570.75	2285.37	8401.44	4206.97	2.02	-0.366	0.000	0.114
60.00	-24.42	-5.19	0.00	-427.86	0.00	427.86	4483.21	2241.61	8027.05	4019.49	2.43	-0.406	0.000	0.112
65.00	-23.25	-5.10	0.00	-401.91	0.00	401.91	4386.28	2193.14	7644.63	3828.00	2.87	-0.446	0.000	0.110
70.00	-22.11	-5.00	0.00	-376.42	0.00	376.42	4267.64	2133.82	7234.64	3622.70	3.36	-0.487	0.000	0.109
75.00	-20.99	-4.90	0.00	-351.40	0.00	351.40	4149.01	2074.50	6835.94	3423.05	3.89	-0.529	0.000	0.108
78.75	-20.18	-4.83	0.00	-333.03	0.00	333.03	4060.03	2030.01	6544.34	3277.03	4.32	-0.561	0.000	0.107
80.00	-19.74	-4.80	0.00	-327.00	0.00	327.00	4030.37	2015.18	6448.55	3229.07	4.47	-0.572	0.000	0.106
83.75	-18.45	-4.72	0.00	-308.98	0.00	308.98	2677.54	1338.77	4285.17	2145.77	4.93	-0.604	0.000	0.151
85.00	-18.25	-4.71	0.00	-303.08	0.00	303.08	2664.37	1332.18	4232.36	2119.33	5.09	-0.615	0.000	0.150
90.00	-17.46	-4.62	0.00	-279.54	0.00	279.54	2610.69	1305.34	4022.76	2014.37	5.77	-0.672	0.000	0.145
95.00	-16.69	-4.53	0.00	-256.44	0.00	256.44	2555.44	1277.72	3815.94	1910.80	6.50	-0.730	0.000	0.141
100.00	-15.94	-4.44	0.00	-233.79	0.00	233.79	2498.62	1249.31	3612.11	1808.74	7.30	-0.788	0.000	0.136
105.00	-15.21	-4.35	0.00	-211.58	0.00	211.58	2440.24	1220.12	3411.50	1708.29	8.15	-0.846	0.000	0.130
110.00	-14.49	-4.27	0.00	-189.81	0.00	189.81	2380.29	1190.15	3214.34	1609.56	9.07	-0.903	0.000	0.124
115.00	-13.80	-4.18	0.00	-168.47	0.00	168.47	2318.78	1159.39	3020.85	1512.67	10.05	-0.960	0.000	0.117
119.00	-13.26	-4.11	0.00	-151.76	0.00	151.76	2268.44	1134.22	2868.85	1436.56	10.87	-1.006	0.000	0.112
120.00	-13.05	-4.09	0.00	-147.65	0.00	147.65	2255.69	1127.85	2831.25	1417.73	11.08	-1.017	0.000	0.110
123.00	-12.40	-4.03	0.00	-135.38	0.00	135.38	1577.63	788.82	1975.86	989.40	11.73	-1.051	0.000	0.145
125.00	-12.18	-4.00	0.00	-127.31	0.00	127.31	1561.09	780.55	1925.40	964.13	12.18	-1.073	0.000	0.140
130.00	-11.64	-3.92	0.00	-107.29	0.00	107.29	1518.76	759.38	1800.86	901.77	13.34	-1.135	0.000	0.127
135.00	-11.11	-3.84	0.00	-87.67	0.00	87.67	1475.03	737.52	1678.77	840.64	14.56	-1.192	0.000	0.112
140.00	-7.92	-2.85	0.00	-68.47	0.00	68.47	1429.92	714.96	1559.34	780.83	15.83	-1.244	0.000	0.093
145.00	-7.49	-2.77	0.00	-54.24	0.00	54.24	1383.42	691.71	1442.75	722.45	17.16	-1.290	0.000	0.081
150.00	-7.07	-2.69	0.00	-40.40	0.00	40.40	1321.23	660.61	1314.97	658.46	18.54	-1.331	0.000	0.067
155.00	-6.67	-2.61	0.00	-26.97	0.00	26.97	1258.65	629.32	1192.75	597.26	19.95	-1.365	0.000	0.050
157.00	-2.61	-1.31	0.00	-21.75	0.00	21.75	1233.62	616.81	1145.53	573.62	20.52	-1.376	0.000	0.040
160.00	-2.39	-1.26	0.00	-17.82	0.00	17.82	1196.07	598.03	1076.49	539.05	21.39	-1.390	0.000	0.035
161.00	-2.32	-1.25	0.00	-16.56	0.00	16.56	1183.55	591.78	1053.96	527.76	21.68	-1.395	0.000	0.033
161.00	-2.32	-1.25	0.00	-16.56	0.00	16.56	858.57	429.28	768.96	385.05	21.68	-1.395	0.000	0.046
165.00	-2.10	-1.19	0.00	-11.57	0.00	11.57	832.45	416.23	713.85	357.46	22.86	-1.410	0.000	0.035
170.00	-1.82	-1.12	0.00	-5.61	0.00	5.61	798.56	399.28	646.76	323.86	24.35	-1.428	0.000	0.020
175.00	0.00	-1.08	0.00	0.00	0.00	0.00	758.80	379.40	578.42	289.64	25.85	-1.435	0.000	0.000

Final Analysis Summary

Structure:	CT01915-S-SBA	**Code:**	EIA/TIA-222-G	7/1/2019	
Site Name:	South Brooklyn	**Exposure:**	B		
Height:	175.00 (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 101 mph Wind	28.2	0.00	51.92	0.00	0.00	3527.01
0.9D + 1.6W 101 mph Wind	28.2	0.00	38.93	0.00	0.00	3487.68
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.1	0.00	85.50	0.00	0.00	1042.75
1.2D + 1.0E	1.6	0.00	51.95	0.00	0.00	197.18
0.9D + 1.0E	1.6	0.00	38.96	0.00	0.00	194.88
1.0D + 1.0W 60 mph Wind	6.2	0.00	43.29	0.00	0.00	773.21

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 101 mph Wind	-21.17	-21.58	0.00	-1412.4	0.00	-1412.4	2677.54	1338.7	4285.17	2145.77	83.75	0.666
0.9D + 1.6W 101 mph Wind	-15.65	-21.30	0.00	-1388.5	0.00	-1388.5	2677.54	1338.7	4285.17	2145.77	83.75	0.653
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-45.25	-6.39	0.00	-426.36	0.00	-426.36	2677.54	1338.7	4285.17	2145.77	83.75	0.216
1.2D + 1.0E	-14.97	-1.05	0.00	-43.11	0.00	-43.11	1577.63	788.82	1975.86	989.40	123.00	0.053
0.9D + 1.0E	-11.22	-1.03	0.00	-42.41	0.00	-42.41	1577.63	788.82	1975.86	989.40	123.00	0.050
1.0D + 1.0W 60 mph Wind	-18.45	-4.72	0.00	-308.98	0.00	-308.98	2677.54	1338.7	4285.17	2145.77	83.75	0.151

Base Plate Summary

Structure:	CT01915-S-SB		**Code:**	EIA/TIA-222-G	7/1/2019
Site Name:	South Brooklyn		**Exposure:**	B	
Height:	175.00 (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):**	50.00	**Bolt Circle:**	64.00
Moment (kip-ft):	3710.00	**Width (in):**	68.00	**Number Bolts:**	32.00
Axial (kip):	38.30	**Style:**	Clipped	**Bolt Type:**	2.25" 18J
Shear (kip):	29.70	**Polygon Sides:**	8.00	**Bolt Diameter (in):**	2.25
Analysis		**Clip Length (in):**	18.50	**Yield (ksi):**	75.00
Moment (kip-ft):	3527.01	**Effective Len (in):**	6.47	**Ultimate (ksi):**	100.00
Axial (kip):	85.50	**Moment (kip-in):**	297.40	**Arrangement:**	Clustered
Shear (kip):	28.18	**Allow Stress (ksi):**	67.50	**Cluster Dist (in):**	6.00
		Applied Stress (ksi):	0.00	**Start Angle (deg):**	45.00
Moment Design %:	95.07	**Stress Ratio:**	0.65	Compression	
				Force (kip):	85.34
				Allowable (kip):	260.00
				Ratio:	0.33
				Tension	
				Force (kip):	79.99
				Allowable (kip):	260.00
				Ratio:	0.31

Monopole Mat Foundation Design

				Date
				7/1/2019
Customer Name:	T-Mobile	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	175
Site Number:	CT01915-S-SBA	**Engineer Name:**	J. Chen
Engr. Number:	78005	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

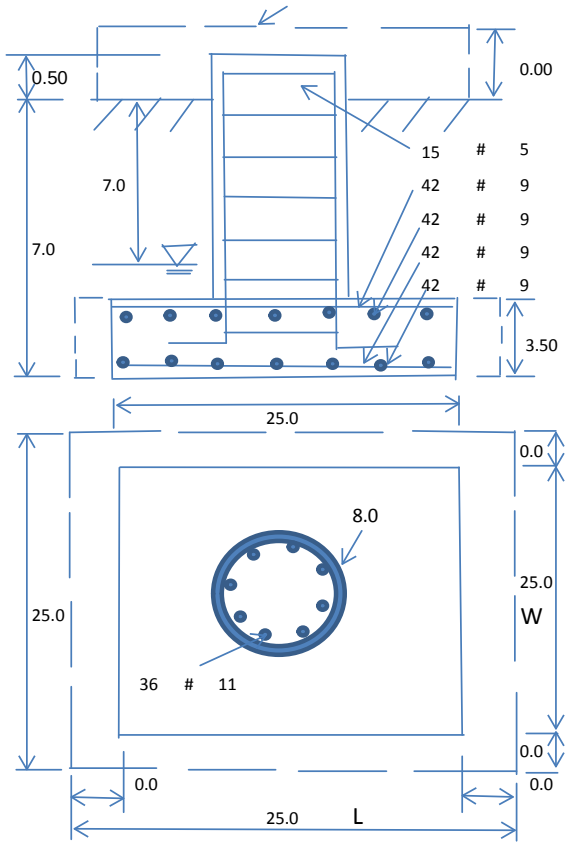
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	85.5	Shear Force (Kips):	28.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3527.0
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	7.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	3.50
Length of Pad (ft.):	25	Width of Pad (ft.):	25
Final Length of pad (ft)	25.0	Final width of pad (ft):	25.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	40	
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	36	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
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):	42	Qty. of Rebar in Pad (W):	42	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	42	Qty. of Rebar in Pad (W):	42	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	7.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	15000	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.:	Yes	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.):	2011.57	Total Dry Soil Weight (Kips):	251.45
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	251.45	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2388.56	Total Dry Concrete Weight (Kips):	358.28
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	358.28	Total Vertical Load on Base (Kips):	695.23

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	3066	<	Allowable Factored Soil Bearing (psf):	11250	0.27	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7928.2	>	Design Factored Momont (kips-ft):	3507	0.44	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.26	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):	1.56		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	10388.7	>	Design Factored Moment (Mu, Kips-F	3639.8	0.35	OK!
Calculated Shear Capacity (Kips):	912.1	>	Design Factored Shear (Kips):	28.2	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	3032.6	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9523.4	>	Design Factored Axial Load (Pu Kips):	85.5	0.01	OK!
Moment & Axial Strength Combination:	0.35	OK!	Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.008		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	947.4	>	One-Way Factored Shear (L-D. Kips):	275.8	0.29	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	947.4	>	One-Way Factored Shear (W-D., Kips)	275.8	0.29	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	793.9	>	One-Way Factored Shear (C-C, Kips):	253.5	0.32	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0036	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0036		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	6953.4	>	Moment at Bottom (L-Dir. K-Ft):	1675.8	0.24	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	6953.4	>	Moment at Bottom (W-Dir. K-Ft):	1675.8	0.24	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	9704.8	>	Moment at Bottom (C-C Dir. K-Ft):	2370.0	0.24	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0036	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0036		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	6953.4	>	Moment at the top (L-Dir K-Ft):	461.4	0.07	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	6953.4	>	Moment at the top (W-Dir K-Ft):	461.4	0.07	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	9704.8	>	Moment at the top (C-C Dir. K-Ft):	435.8	0.04	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1410.8	k-ft.	Max. factored shear stress v_{u_CD}:		0.3	Psi
Max. factored shear stress v_{u_AB}:	8.5	Psi	Factored shear Strength ϕv_n:		164.3	Psi
Max. factored shear stress v_u:	8.5	Psi	Check Usage of Punching Shear Capacity:		0.05	OK!

EXHIBIT 8

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

Antenna Mount Analysis Report

Existing 175-Ft Monopole Tower
Customer Name: SBA Communications Corp
Customer Site Number: CT01915-S-SBA
Customer Site Name: South Brooklyn
Carrier Name: T-Mobile (Application #: 116844, v1)
Carrier Site ID / Name: CT11512C / South Brooklyn
Site Location: 100 Old Tatnic Hill Road
Brooklyn, Connecticut
Windham County
Latitude: 41.767160
Longitude: -71.971949

7/19/19

Analysis Result:

Max Structural Usage: 61.1% [Pass]

Report Prepared By: Saurav Devkota

Introduction

The purpose of this report is to summarize the analysis results on the (1) Low Profile Platform at 140.00' elevation to support the proposed antenna configuration. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Mount Drawings	SkyleTower LLC, Dated 5/2/2019
Antenna Loading	SBA, Application #: 116844, v1
Modification Drawings	N/A

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 130.0mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 101 mph (3-Sec. Gust)
Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed: 60 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G
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 2015 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 140.00' elevation at azimuths 60/180/300.

Final Antenna Configuration

3 RFS APXV18-206516S-C-A20
3 RFS APXVAARR24_43-U-NA20
3 Ericsson KRY 112 489/2
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.

In addition to the proposed equipment loading, a 500 lb serviceability load was also considered in this analysis in accordance with TIA requirements.

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 61.1%, which occurs in the bracing plate. 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
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.

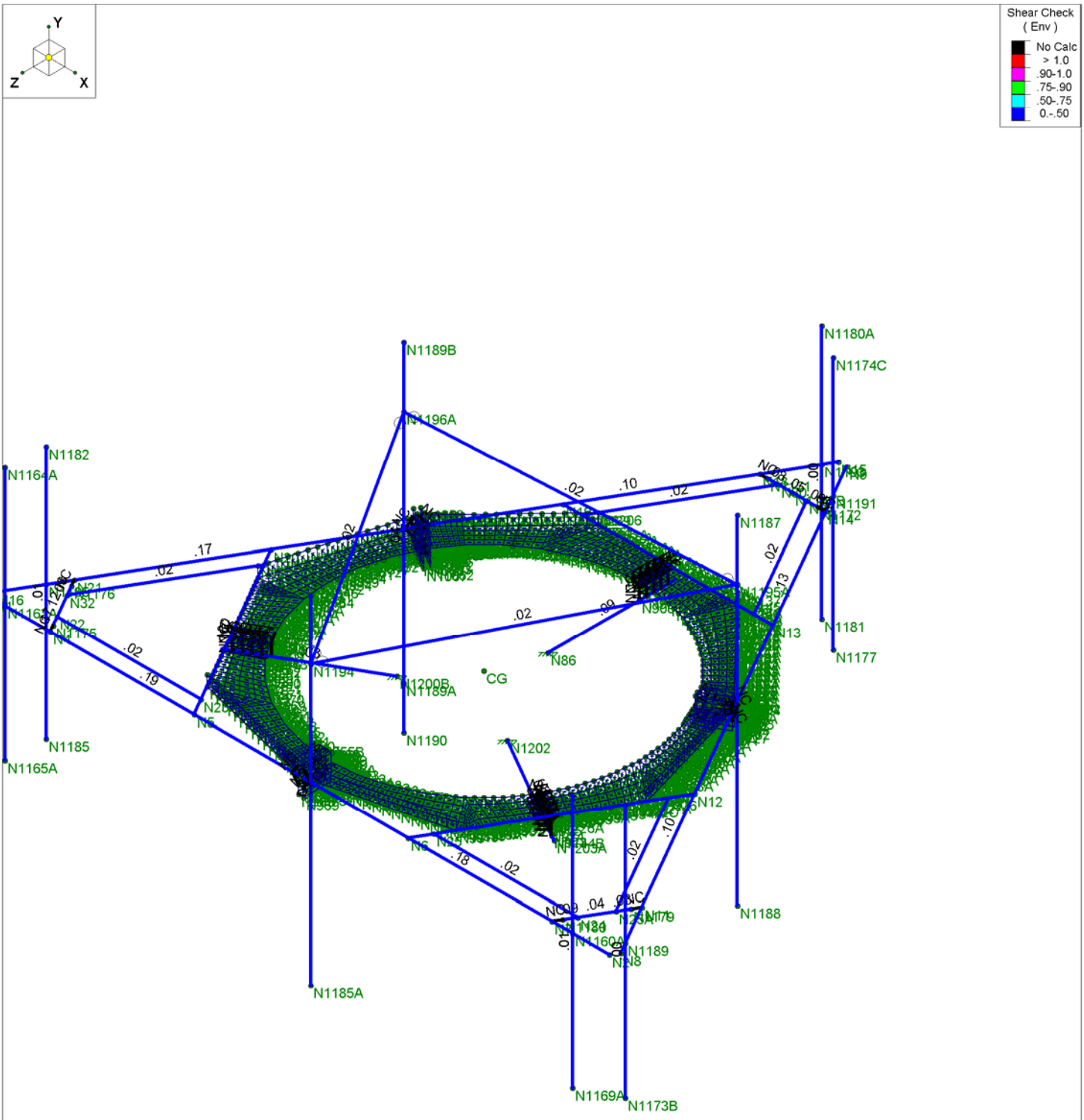
7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

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.


02.05.2019


02.05.2019



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

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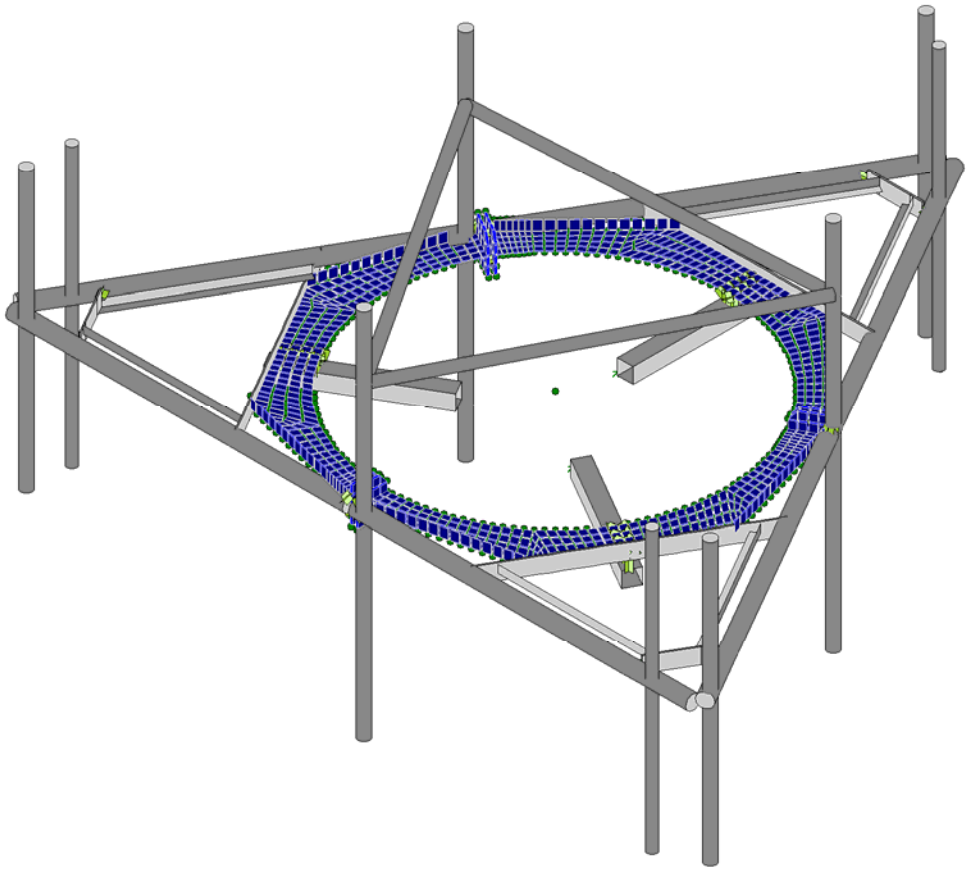

Tower Engineering Solutio...	CT01915-S-SBA_MT_LO_Loads Only_G	SK - 6
		June 20, 2019 at 2:16 PM
TES Project No. 77897		CT01915-S-SBA_77897_G_RISA_L...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					18			
2	Antenna Di	None					18			
3	Antenna W Front	None					18			
4	Antenna Wi Front	None					18			
5	Antenna W Side	None					18			
6	Antenna Wi Side	None					18			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					3	
10	Structure Di	None						39	3	
11	Structure W Front	None						39		
12	Structure Wi Front	None						39		
13	Structure W Side	None						39		
14	Structure Wi Side	None						39		
15	BLC 9 Transient Area...	None						33		
16	BLC 10 Transient Are...	None						33		

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	-7.291666	0	4.322333	0	
2	N2	7.291666	0	4.322333	0	
3	CG	0	0	0	0	
4	N4	-5.930166	0	4.322333	0	
5	N5	-2.528166	0	4.322333	0	
6	N6	2.528166	0	4.322333	0	
7	N7	5.930166	0	4.322333	0	
8	N8	7.389083	0	4.153601	0	
9	N9	0.097417	0	-8.475934	0	
10	N11	6.708333	0	2.974508	0	
11	N12	5.007333	0	0.02829	0	
12	N13	2.479167	0	-4.350623	0	
13	N14	0.778167	0	-7.296841	0	
14	N15	-0.097417	0	-8.475934	0	
15	N16	-7.389083	0	4.153601	0	
16	N18	-0.778167	0	-7.296841	0	
17	N19	-2.479167	0	-4.350623	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
18	N20	-5.007333	0	0.02829	0	
19	N21	-6.708333	0	2.974508	0	
20	N22	-6.154466	0	3.933833	0	
21	N23	-2.752467	0	3.933833	0	
22	N24	6.154466	0	3.933833	0	
23	N25	2.752467	0	3.933833	0	
24	N25A	6.484032	0	3.363008	0	
25	N26	4.783032	0	0.41679	0	
26	N27	0.329566	0	-7.296841	0	
27	N28	2.030566	0	-4.350623	0	
28	N30	-0.329566	0	-7.296841	0	
29	N31	-2.030566	0	-4.350623	0	
30	N32	-6.484032	0	3.363008	0	
31	N33	-4.783032	0	0.41679	0	
32	N34	-0.060763	0	4.322333	0	
33	N86	0	-0.3885	-1.50862	0	
34	N89	-2.946717	0	3.597382	0	
35	N93	2.946717	0	3.597382	0	
36	N92A	-6e-14	0	-4.350623	0	
37	N93A	-2e-14	0	-3.670456	0	
38	N117	-3.178708	0	1.835228	0	
39	N119	-2.811732	0	2.359324	0	
40	N121	-2.359324	0	2.811732	0	
41	N123	-1.835228	0	3.178708	0	
42	N125	-1.25537	0	3.4491	0	
43	N127	-0.637368	0	3.614694	0	
44	N129	-0.060763	0	3.670456	0	
45	N131	0.637368	0	3.614694	0	
46	N133	1.25537	0	3.4491	0	
47	N135	1.835228	0	3.178708	0	
48	N137	2.359324	0	2.811732	0	
49	N139	2.811732	0	2.359324	0	
50	N141	3.178708	0	1.835228	0	
51	N134	-3.76775	0	2.175311	0	
52	N137A	-3.476083	0	2.680493	0	
53	N138	-3.184416	0	3.185674	0	
54	N140	3.76775	0	2.175311	0	
55	N141A	3.476083	0	2.680493	0	
56	N142	3.184416	0	3.185674	0	
57	N143B	-2.210038	0	3.77862	0	
58	N144A	-1.473358	0	3.959857	0	
59	N145A	-0.736679	0	4.141095	0	
60	N146	0.736679	0	4.141095	0	
61	N147A	1.473358	0	3.959857	0	
62	N148	2.210038	0	3.77862	0	
63	N163A	-0.318684	0	3.642575	0	
64	N164	-0.370187	0	4.231259	0	
65	N200	-5e-14	0	-4.180581	0	
66	N204	-5e-14	0	-4.010539	0	
67	N208	-5e-14	0	-3.840498	0	
68	N407	3.325969	0	1.920249	0	
69	N411	3.473229	0	2.00527	0	
70	N415	3.620489	0	2.09029	0	
71	N419	3.086964	0	1.966252	0	
72	N420	2.99522	0	2.097276	0	
73	N421	2.903476	0	2.2283	0	
74	N422	3.238931	0	2.050091	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
75	N423	3.151894	0	2.179932	0	
76	N424	3.064857	0	2.309774	0	
77	N425	2.97782	0	2.439616	0	
78	N426	3.390899	0	2.133929	0	
79	N427	3.308568	0	2.262589	0	
80	N428	3.226238	0	2.391249	0	
81	N429	3.143908	0	2.519908	0	
82	N430	3.542866	0	2.217768	0	
83	N431	3.465242	0	2.345245	0	
84	N432	3.387619	0	2.472723	0	
85	N433	3.309995	0	2.6002	0	
86	N434	3.694833	0	2.301607	0	
87	N435	3.621916	0	2.427902	0	
88	N436	3.549	0	2.554197	0	
89	N437	2.69863	0	2.472426	0	
90	N438	2.585528	0	2.585528	0	
91	N439	2.472426	0	2.69863	0	
92	N440	2.874764	0	2.556016	0	
93	N441	2.771708	0	2.672417	0	
94	N442	2.668653	0	2.788817	0	
95	N443	2.565597	0	2.905218	0	
96	N444	3.050898	0	2.639607	0	
97	N445	2.957889	0	2.759306	0	
98	N446	2.864879	0	2.879005	0	
99	N447	2.77187	0	2.998703	0	
100	N448	3.227032	0	2.723198	0	
101	N449	3.144069	0	2.846195	0	
102	N450	3.061106	0	2.969192	0	
103	N451	2.978143	0	3.092189	0	
104	N452	3.403166	0	2.806788	0	
105	N453	3.33025	0	2.933083	0	
106	N454	3.257333	0	3.059379	0	
107	N455	2.799869	0	3.400969	0	
108	N456	2.65302	0	3.204557	0	
109	N457	2.506172	0	3.008145	0	
110	N458	2.762547	0	3.642691	0	
111	N459	2.628985	0	3.457888	0	
112	N460	2.495423	0	3.273084	0	
113	N461	2.361862	0	3.08828	0	
114	N462	2.2283	0	2.903476	0	
115	N463	2.578377	0	3.688001	0	
116	N464	2.458102	0	3.514806	0	
117	N465	2.337827	0	3.34161	0	
118	N466	2.217551	0	3.168415	0	
119	N467	2.097276	0	2.99522	0	
120	N468	2.394207	0	3.73331	0	
121	N469	2.287219	0	3.571724	0	
122	N470	2.18023	0	3.410137	0	
123	N471	2.073241	0	3.248551	0	
124	N472	1.966252	0	3.086964	0	
125	N473	2.116335	0	3.628642	0	
126	N474	2.022633	0	3.478664	0	
127	N475	1.92893	0	3.328686	0	
128	N476	2.025868	0	3.823929	0	
129	N477	1.941967	0	3.679523	0	
130	N478	1.858066	0	3.535118	0	
131	N479	1.774165	0	3.390712	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
132	N480	1.690263	0	3.246306	0	
133	N481	1.841698	0	3.869238	0	
134	N482	1.767598	0	3.730405	0	
135	N483	1.693498	0	3.591571	0	
136	N484	1.619399	0	3.452738	0	
137	N485	1.545299	0	3.313904	0	
138	N486	1.657528	0	3.914548	0	
139	N487	1.59323	0	3.781286	0	
140	N488	1.528931	0	3.648025	0	
141	N489	1.464633	0	3.514764	0	
142	N490	1.400334	0	3.381502	0	
143	N491	1.418861	0	3.832168	0	
144	N492	1.364364	0	3.704479	0	
145	N493	1.309867	0	3.57679	0	
146	N494	1.289189	0	4.005167	0	
147	N495	1.242109	0	3.8765	0	
148	N496	1.195029	0	3.747833	0	
149	N497	1.147949	0	3.619166	0	
150	N498	1.100869	0	3.490499	0	
151	N499	1.105019	0	4.050476	0	
152	N500	1.065356	0	3.920831	0	
153	N501	1.025694	0	3.791187	0	
154	N502	0.986031	0	3.661542	0	
155	N503	0.946369	0	3.531897	0	
156	N504	0.920849	0	4.095786	0	
157	N505	0.888604	0	3.965163	0	
158	N506	0.856359	0	3.83454	0	
159	N507	0.824114	0	3.703918	0	
160	N508	0.791868	0	3.573295	0	
161	N509	0.711851	0	4.009495	0	
162	N510	0.687024	0	3.877894	0	
163	N511	0.662196	0	3.746294	0	
164	N512	0.478026	0	3.628634	0	
165	N513	0.318684	0	3.642575	0	
166	N514	0.159342	0	3.656515	0	
167	N515	0.496647	0	3.768077	0	
168	N516	0.331098	0	3.78986	0	
169	N517	0.165549	0	3.811642	0	
170	N518	-0.060763	0	3.833425	0	
171	N519	0.515268	0	3.907519	0	
172	N520	0.343512	0	3.937144	0	
173	N521	0.171756	0	3.966769	0	
174	N522	-0.060763	0	3.996394	0	
175	N523	0.533889	0	4.046962	0	
176	N524	0.355926	0	4.084429	0	
177	N525	0.177963	0	4.121896	0	
178	N526	-0.060763	0	4.159363	0	
179	N527	0.552509	0	4.186404	0	
180	N528	0.36834	0	4.231714	0	
181	N529	0.18417	0	4.277023	0	
182	N530	-0.791868	0	3.573295	0	
183	N531	-0.946369	0	3.531897	0	
184	N532	-1.100869	0	3.490499	0	
185	N533	-0.662196	0	3.746294	0	
186	N534	-0.824114	0	3.703918	0	
187	N535	-0.986031	0	3.661542	0	
188	N536	-1.147949	0	3.619166	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
189	N537	-1.309867	0	3.57679	0	
190	N538	-0.687024	0	3.877894	0	
191	N539	-0.856359	0	3.83454	0	
192	N540	-1.025694	0	3.791187	0	
193	N541	-1.195029	0	3.747833	0	
194	N542	-1.364364	0	3.704479	0	
195	N543	-0.711851	0	4.009495	0	
196	N544	-0.888604	0	3.965163	0	
197	N545	-1.065356	0	3.920831	0	
198	N546	-1.242109	0	3.8765	0	
199	N547	-1.418861	0	3.832168	0	
200	N548	-0.920849	0	4.095786	0	
201	N549	-1.105019	0	4.050476	0	
202	N550	-1.289189	0	4.005167	0	
203	N551	-1.690263	0	3.246306	0	
204	N552	-1.545299	0	3.313904	0	
205	N553	-1.400334	0	3.381502	0	
206	N554	-1.92893	0	3.328686	0	
207	N555	-1.774165	0	3.390712	0	
208	N556	-1.619399	0	3.452738	0	
209	N557	-1.464633	0	3.514764	0	
210	N558	-2.022633	0	3.478664	0	
211	N559	-1.858066	0	3.535118	0	
212	N560	-1.693498	0	3.591571	0	
213	N561	-1.528931	0	3.648025	0	
214	N562	-2.116335	0	3.628642	0	
215	N563	-1.941967	0	3.679523	0	
216	N564	-1.767598	0	3.730405	0	
217	N565	-1.59323	0	3.781286	0	
218	N566	-2.025868	0	3.823929	0	
219	N567	-1.841698	0	3.869238	0	
220	N568	-1.657528	0	3.914548	0	
221	N569	-1.966252	0	3.086964	0	
222	N570	-2.097276	0	2.99522	0	
223	N571	-2.2283	0	2.903476	0	
224	N572	-2.1131	0	3.283377	0	
225	N573	-2.226224	0	3.188837	0	
226	N574	-2.339349	0	3.094297	0	
227	N575	-2.452473	0	2.999758	0	
228	N576	-2.565597	0	2.905218	0	
229	N577	-2.390972	0	3.388045	0	
230	N578	-2.486197	0	3.29071	0	
231	N579	-2.581421	0	3.193374	0	
232	N580	-2.676646	0	3.096039	0	
233	N581	-2.77187	0	2.998703	0	
234	N582	-2.668845	0	3.492713	0	
235	N583	-2.746169	0	3.392582	0	
236	N584	-2.823494	0	3.292451	0	
237	N585	-2.900819	0	3.19232	0	
238	N586	-2.978143	0	3.092189	0	
239	N587	-3.006142	0	3.494455	0	
240	N588	-3.065567	0	3.391528	0	
241	N589	-3.124992	0	3.288601	0	
242	N590	-2.472426	0	2.69863	0	
243	N591	-2.585528	0	2.585528	0	
244	N592	-2.69863	0	2.472426	0	
245	N593	-2.668653	0	2.788817	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
246	N594	-2.771708	0	2.672417	0	
247	N595	-2.874764	0	2.556016	0	
248	N596	-2.97782	0	2.439616	0	
249	N597	-2.864879	0	2.879005	0	
250	N598	-2.957889	0	2.759306	0	
251	N599	-3.050898	0	2.639607	0	
252	N600	-3.143908	0	2.519908	0	
253	N601	-3.061106	0	2.969192	0	
254	N602	-3.144069	0	2.846195	0	
255	N603	-3.227032	0	2.723198	0	
256	N604	-3.309995	0	2.6002	0	
257	N605	-3.257333	0	3.059379	0	
258	N606	-3.33025	0	2.933083	0	
259	N607	-3.403166	0	2.806788	0	
260	N608	-2.903476	0	2.2283	0	
261	N609	-2.99522	0	2.097276	0	
262	N610	-3.086964	0	1.966252	0	
263	N611	-3.064857	0	2.309774	0	
264	N612	-3.151894	0	2.179932	0	
265	N613	-3.238931	0	2.050091	0	
266	N614	-3.325969	0	1.920249	0	
267	N615	-3.226238	0	2.391249	0	
268	N616	-3.308568	0	2.262589	0	
269	N617	-3.390899	0	2.133929	0	
270	N618	-3.473229	0	2.00527	0	
271	N619	-3.387619	0	2.472723	0	
272	N620	-3.465242	0	2.345245	0	
273	N621	-3.542866	0	2.217768	0	
274	N622	-3.620489	0	2.09029	0	
275	N623	-3.549	0	2.554197	0	
276	N624	-3.621916	0	2.427902	0	
277	N625	-3.694833	0	2.301607	0	
278	N794	-0.557697	0	3.621664	0	
279	N795	-0.478026	0	3.628634	0	
280	N796	-0.398355	0	3.635604	0	
281	N797	-0.579537	0	3.757157	0	
282	N798	-0.496878	0	3.76802	0	
283	N799	-0.414219	0	3.778883	0	
284	N800	-0.33156	0	3.789746	0	
285	N801	-0.601377	0	3.89265	0	
286	N802	-0.51573	0	3.907406	0	
287	N803	-0.430083	0	3.922161	0	
288	N804	-0.344436	0	3.936917	0	
289	N805	-0.623216	0	4.028143	0	
290	N806	-0.534581	0	4.046791	0	
291	N807	-0.445946	0	4.06544	0	
292	N808	-0.357311	0	4.084088	0	
293	N809	-0.645056	0	4.163636	0	
294	N810	-0.553433	0	4.186177	0	
295	N811	-0.46181	0	4.208718	0	
296	N812	-0.239013	0	3.649545	0	
297	N813	-0.159342	0	3.656515	0	
298	N815	-0.24867	0	3.800666	0	
299	N816	-0.16578	0	3.811586	0	
300	N818	-0.258327	0	3.951786	0	
301	N819	-0.172218	0	3.966656	0	
302	N821	-0.267984	0	4.102907	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
303	N822	-0.178656	0	4.121726	0	
304	N824	-0.27764	0	4.254028	0	
305	N825	-0.185094	0	4.276796	0	
306	N899	3.065567	0	3.391528	0	
307	N900	2.830152	0	3.198263	0	
308	N901	-2.578377	0	3.688001	0	
309	N902	-2.330661	0	3.518237	0	
310	N902A	-6e-14	-0.3885	-4.350623	0	
311	N903B	-2e-14	-0.3885	-3.670456	0	
312	N904B	-5e-14	-0.3885	-4.180581	0	
313	N905	-5e-14	-0.3885	-4.010539	0	
314	N906	-5e-14	-0.3885	-3.840498	0	
315	N912	-3.76775	-0.3885	2.175311	0	
316	N913	-3.178708	-0.3885	1.835228	0	
317	N914	-3.620489	-0.3885	2.09029	0	
318	N915	-3.473229	-0.3885	2.00527	0	
319	N916	-3.325969	-0.3885	1.920249	0	
320	N922	3.76775	-0.3885	2.175311	0	
321	N923	3.178708	-0.3885	1.835228	0	
322	N924	3.620489	-0.3885	2.09029	0	
323	N925	3.473229	-0.3885	2.00527	0	
324	N926	3.325969	-0.3885	1.920249	0	
325	N911	-2.360817	0	3.453141	0	
326	N912A	-2.561682	0	3.547916	0	
327	N913A	-2.762547	0	3.642691	0	
328	N914A	-2.454519	0	3.603119	0	
329	N915A	-2.144874	0	3.390913	0	
330	N916A	-2.176647	0	3.49845	0	
331	N917	-2.285427	0	3.61588	0	
332	N918	-2.394207	0	3.73331	0	
333	N919	3.006142	0	3.494455	0	
334	N920	2.873864	0	3.347932	0	
335	N921	2.947859	0	3.294895	0	
336	N922A	2.741586	0	3.20141	0	
337	N923A	3.124992	0	3.288601	0	
338	N924A	2.963001	0	3.193542	0	
339	N925A	2.801011	0	3.098483	0	
340	N926A	2.653592	0	3.053314	0	
341	N952A	0.060765	0	4.322333	0	
342	N953A	0.060765	0	3.670456	0	
343	N954A	0.060765	0	3.833425	0	
344	N955A	0.060765	0	3.996394	0	
345	N956A	0.060765	0	4.159363	0	
346	N952B	-0.060763	0.388888	4.322333	0	
347	N955B	-0.060763	0.388888	3.833425	0	
348	N956B	-0.060763	0.388888	3.996394	0	
349	N957A	-0.060763	0.388888	4.159363	0	
350	N958	0.060765	0.388888	4.322333	0	
351	N960	0.060765	0.388888	3.833425	0	
352	N961	0.060765	0.388888	3.996394	0	
353	N962	0.060765	0.388888	4.159363	0	
354	N963	-0.060763	-0.388888	4.322333	0	
355	N964	-0.060763	-0.388888	3.670456	0	
356	N966	-0.060763	-0.388888	3.833425	0	
357	N967	-0.060763	-0.388888	3.996394	0	
358	N968	-0.060763	-0.388888	4.159363	0	
359	N969	0.060765	-0.388888	4.322333	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
360	N970	0.060765	-0.388888	3.670456	0	
361	N971	0.060765	-0.388888	3.833425	0	
362	N972	0.060765	-0.388888	3.996394	0	
363	N973	0.060765	-0.388888	4.159363	0	
364	N976	-0.060763	-0.194444	4.322333	0	
365	N977	-0.060763	-0.194444	3.670456	0	
366	N979	-0.060763	-0.194444	3.833425	0	
367	N980	-0.060763	-0.194444	3.996394	0	
368	N981	-0.060763	-0.194444	4.159363	0	
369	N982	0.060765	-0.194444	4.322333	0	
370	N983	0.060765	-0.194444	3.670456	0	
371	N984	0.060765	-0.194444	3.833425	0	
372	N985	0.060765	-0.194444	3.996394	0	
373	N986	0.060765	-0.194444	4.159363	0	
374	N992	-0.060763	0.194445	4.322333	0	
375	N993	-0.060763	0.194445	3.670456	0	
376	N995	-0.060763	0.194445	3.833425	0	
377	N996	-0.060763	0.194445	3.996394	0	
378	N997	-0.060763	0.194445	4.159363	0	
379	N998	0.060765	0.194445	4.322333	0	
380	N999	0.060765	0.194445	3.670456	0	
381	N1000	0.060765	0.194445	3.833425	0	
382	N1001	0.060765	0.194445	3.996394	0	
383	N1002	0.060765	0.194445	4.159363	0	
384	N426A	3.773632	0	-2.108544	0	
385	N427A	4.588783	0	0.753241	0	
386	N428A	1.642066	0	-4.350623	0	
387	N430A	3.4491	0	1.25537	0	
388	N431A	3.614694	0	0.637368	0	
389	N432A	3.670456	0	-4.9e-13	0	
390	N433A	3.614694	0	-0.637368	0	
391	N434A	3.4491	0	-1.25537	0	
392	N435A	3.20909	0	-1.782605	0	
393	N436A	2.811732	0	-2.359324	0	
394	N437A	2.359324	0	-2.811732	0	
395	N438A	1.835228	0	-3.178708	0	
396	N439A	1.25537	0	-3.4491	0	
397	N440A	0.637368	0	-3.614694	0	
398	N443A	4.059416	0	1.67013	0	
399	N444A	4.351083	0	1.164948	0	
400	N446A	0.583333	0	-4.350623	0	
401	N447A	1.166667	0	-4.350623	0	
402	N448A	4.377399	0	0.024639	0	
403	N449A	4.166016	0	-0.703963	0	
404	N450A	3.954633	0	-1.432565	0	
405	N451A	3.217954	0	-2.70853	0	
406	N452A	2.692658	0	-3.255894	0	
407	N453A	2.167362	0	-3.803259	0	
408	N454A	3.313904	0	-1.545299	0	
409	N455A	3.849472	0	-1.795038	0	
410	N459A	0.159342	0	-3.656515	0	
411	N460A	0.318684	0	-3.642575	0	
412	N461A	0.478026	0	-3.628634	0	
413	N462A	0.155965	0	-3.830042	0	
414	N463A	0.31193	0	-3.819587	0	
415	N464A	0.467894	0	-3.809131	0	
416	N465A	0.623859	0	-3.798676	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
417	N466A	0.152588	0	-4.003569	0	
418	N467A	0.305175	0	-3.996599	0	
419	N468A	0.457763	0	-3.989628	0	
420	N469A	0.610351	0	-3.982658	0	
421	N470A	0.14921	0	-4.177096	0	
422	N471A	0.298421	0	-4.173611	0	
423	N472A	0.447631	0	-4.170125	0	
424	N473A	0.596842	0	-4.16664	0	
425	N474A	0.145833	0	-4.350623	0	
426	N475A	0.291667	0	-4.350623	0	
427	N476A	0.4375	0	-4.350623	0	
428	N477A	0.791868	0	-3.573295	0	
429	N478A	0.946369	0	-3.531897	0	
430	N479A	1.100869	0	-3.490499	0	
431	N480A	0.776193	0	-3.767627	0	
432	N481A	0.928527	0	-3.736578	0	
433	N482A	1.08086	0	-3.70553	0	
434	N483A	1.233194	0	-3.674481	0	
435	N484A	0.760518	0	-3.961959	0	
436	N485A	0.910684	0	-3.94126	0	
437	N486A	1.060851	0	-3.920561	0	
438	N487A	1.211018	0	-3.899862	0	
439	N488A	0.744842	0	-4.156291	0	
440	N489A	0.892842	0	-4.145941	0	
441	N490A	1.040842	0	-4.135592	0	
442	N491A	1.188842	0	-4.125242	0	
443	N492A	0.729167	0	-4.350623	0	
444	N493A	0.875	0	-4.350623	0	
445	N494A	1.020833	0	-4.350623	0	
446	N495A	1.545392	0	-4.125242	0	
447	N496A	1.448718	0	-3.899862	0	
448	N497A	1.352044	0	-3.674481	0	
449	N498A	1.77339	0	-4.213782	0	
450	N499A	1.680126	0	-4.005712	0	
451	N500A	1.586862	0	-3.797642	0	
452	N501A	1.493598	0	-3.589572	0	
453	N502A	1.400334	0	-3.381502	0	
454	N503A	1.904714	0	-4.076941	0	
455	N504A	1.81486	0	-3.886181	0	
456	N505A	1.725006	0	-3.695422	0	
457	N506A	1.635153	0	-3.504663	0	
458	N507A	1.545299	0	-3.313904	0	
459	N508A	2.036038	0	-3.9401	0	
460	N509A	1.949594	0	-3.766651	0	
461	N510A	1.863151	0	-3.593203	0	
462	N511A	1.776707	0	-3.419755	0	
463	N512A	1.690263	0	-3.246306	0	
464	N513A	2.084328	0	-3.647121	0	
465	N514A	2.001295	0	-3.490983	0	
466	N515A	1.918261	0	-3.334846	0	
467	N516A	2.298686	0	-3.666418	0	
468	N517A	2.215577	0	-3.521554	0	
469	N518A	2.132469	0	-3.376691	0	
470	N519A	2.04936	0	-3.231828	0	
471	N520A	1.966252	0	-3.086964	0	
472	N521A	2.43001	0	-3.529576	0	
473	N522A	2.346826	0	-3.395987	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
474	N523A	2.263643	0	-3.262398	0	
475	N524A	2.180459	0	-3.128809	0	
476	N525A	2.097276	0	-2.99522	0	
477	N526A	2.561334	0	-3.392735	0	
478	N527A	2.478075	0	-3.270421	0	
479	N528A	2.394817	0	-3.148106	0	
480	N529A	2.311558	0	-3.025791	0	
481	N530A	2.2283	0	-2.903476	0	
482	N531A	2.609324	0	-3.144854	0	
483	N532A	2.525991	0	-3.033813	0	
484	N533A	2.442657	0	-2.922773	0	
485	N534A	2.823982	0	-3.119053	0	
486	N535A	2.736093	0	-3.013948	0	
487	N536A	2.648204	0	-2.908842	0	
488	N537A	2.560315	0	-2.803736	0	
489	N538A	2.472426	0	-2.69863	0	
490	N539A	2.955306	0	-2.982212	0	
491	N540A	2.862861	0	-2.883041	0	
492	N541A	2.770417	0	-2.78387	0	
493	N542A	2.677972	0	-2.684699	0	
494	N543A	2.585528	0	-2.585528	0	
495	N544A	3.08663	0	-2.845371	0	
496	N545A	2.98963	0	-2.752135	0	
497	N546A	2.89263	0	-2.658899	0	
498	N547A	2.79563	0	-2.565662	0	
499	N548A	2.69863	0	-2.472426	0	
500	N549A	3.116398	0	-2.621229	0	
501	N550A	3.014843	0	-2.533927	0	
502	N551A	2.913288	0	-2.446625	0	
503	N552A	2.903476	0	-2.2283	0	
504	N553A	2.99522	0	-2.097276	0	
505	N554A	3.086964	0	-1.966252	0	
506	N555A	3.014927	0	-2.314147	0	
507	N556A	3.116566	0	-2.181669	0	
508	N557A	3.218205	0	-2.049191	0	
509	N558A	3.350225	0	-1.86409	0	
510	N559A	3.126377	0	-2.399995	0	
511	N560A	3.237911	0	-2.266062	0	
512	N561A	3.349445	0	-2.13213	0	
513	N562A	3.491361	0	-1.945574	0	
514	N563A	3.237827	0	-2.485842	0	
515	N564A	3.359256	0	-2.350455	0	
516	N565A	3.480685	0	-2.215068	0	
517	N566A	3.632496	0	-2.027059	0	
518	N567A	3.349278	0	-2.571689	0	
519	N568A	3.480602	0	-2.434848	0	
520	N569A	3.611926	0	-2.298007	0	
521	N570A	3.490499	0	-1.100869	0	
522	N571A	3.531897	0	-0.946369	0	
523	N572A	3.573295	0	-0.791868	0	
524	N573A	3.575484	0	-1.299669	0	
525	N574A	3.619744	0	-1.138256	0	
526	N575A	3.664004	0	-0.976843	0	
527	N576A	3.708264	0	-0.81543	0	
528	N577A	3.752524	0	-0.654017	0	
529	N578A	3.701867	0	-1.343967	0	
530	N579A	3.748989	0	-1.175642	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
531	N580A	3.796111	0	-1.007316	0	
532	N581A	3.843233	0	-0.838991	0	
533	N582A	3.890355	0	-0.670665	0	
534	N583A	3.82825	0	-1.388266	0	
535	N584A	3.878234	0	-1.213028	0	
536	N585A	3.928218	0	-1.03779	0	
537	N586A	3.978202	0	-0.862552	0	
538	N587A	4.028186	0	-0.687314	0	
539	N588A	4.007479	0	-1.250414	0	
540	N589A	4.060325	0	-1.068264	0	
541	N590A	4.11317	0	-0.886113	0	
542	N591A	3.656515	0	-0.159342	0	
543	N592A	3.642575	0	-0.318684	0	
544	N593A	3.628634	0	-0.478026	0	
545	N594A	3.847192	0	0.00616	0	
546	N595A	3.823525	0	-0.158884	0	
547	N596A	3.799858	0	-0.323928	0	
548	N597A	3.776191	0	-0.488973	0	
549	N598A	4.023928	0	0.012319	0	
550	N599A	3.990534	0	-0.158427	0	
551	N600A	3.957141	0	-0.329173	0	
552	N601A	3.923748	0	-0.499919	0	
553	N602A	4.200664	0	0.018479	0	
554	N603A	4.157544	0	-0.157969	0	
555	N604A	4.114425	0	-0.334417	0	
556	N605A	4.071305	0	-0.510866	0	
557	N606A	4.324554	0	-0.157511	0	
558	N607A	4.271708	0	-0.339662	0	
559	N608A	4.218862	0	-0.521812	0	
560	N609A	3.656515	0	0.159342	0	
561	N610A	3.642575	0	0.318684	0	
562	N611A	3.628634	0	0.478026	0	
563	N612A	3.900038	0	0.18831	0	
564	N613A	3.874726	0	0.333548	0	
565	N614A	3.849414	0	0.478787	0	
566	N615A	3.824103	0	0.624025	0	
567	N616A	3.798791	0	0.769263	0	
568	N617A	4.129619	0	0.37662	0	
569	N618A	4.092937	0	0.507755	0	
570	N619A	4.056254	0	0.638889	0	
571	N620A	4.019571	0	0.770024	0	
572	N621A	3.982888	0	0.901158	0	
573	N622A	4.359201	0	0.564931	0	
574	N623A	4.311147	0	0.681961	0	
575	N624A	4.263093	0	0.798992	0	
576	N625A	4.215039	0	0.916023	0	
577	N626	4.166986	0	1.033053	0	
578	N627	4.529358	0	0.856168	0	
579	N628	4.469933	0	0.959095	0	
580	N629	4.410508	0	1.062022	0	
581	N630	3.573295	0	0.791868	0	
582	N631	3.531897	0	0.946369	0	
583	N632	3.490499	0	1.100869	0	
584	N633	3.749513	0	0.916712	0	
585	N634	3.700235	0	1.064161	0	
586	N635	3.650957	0	1.211611	0	
587	N636	3.601679	0	1.35906	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
588	N637	3.925731	0	1.041556	0	
589	N638	3.868573	0	1.181954	0	
590	N639	3.811416	0	1.322352	0	
591	N640	3.754258	0	1.46275	0	
592	N641	4.101949	0	1.1664	0	
593	N642	4.036911	0	1.299747	0	
594	N643	3.971874	0	1.433093	0	
595	N644	3.906837	0	1.56644	0	
596	N645	4.278166	0	1.291244	0	
597	N646	4.20525	0	1.417539	0	
598	N647	4.132333	0	1.543835	0	
599	N648	3.381502	0	1.400334	0	
600	N649	3.313904	0	1.545299	0	
601	N650	3.246306	0	1.690263	0	
602	N651	3.532752	0	1.499357	0	
603	N652	3.463824	0	1.639654	0	
604	N653	3.394896	0	1.779952	0	
605	N655	3.684001	0	1.59838	0	
606	N656	3.613744	0	1.73401	0	
607	N657	3.543486	0	1.86964	0	
608	N659	3.83525	0	1.697403	0	
609	N660	3.763663	0	1.828365	0	
610	N661	3.692076	0	1.959328	0	
611	N663	3.9865	0	1.796425	0	
612	N664	3.913583	0	1.922721	0	
613	N665	3.840666	0	2.049016	0	
614	N666	3.415301	0	-1.327852	0	
615	N667	3.381502	0	-1.400334	0	
616	N668	3.347703	0	-1.472817	0	
617	N669	3.543562	0	-1.376685	0	
618	N670	3.51164	0	-1.453701	0	
619	N671	3.479718	0	-1.530717	0	
620	N672	3.447796	0	-1.607734	0	
621	N673	3.671822	0	-1.425518	0	
622	N674	3.641777	0	-1.507068	0	
623	N675	3.611733	0	-1.588618	0	
624	N676	3.581688	0	-1.670169	0	
625	N677	3.800082	0	-1.47435	0	
626	N678	3.771915	0	-1.560435	0	
627	N679	3.743747	0	-1.646519	0	
628	N680	3.71558	0	-1.732603	0	
629	N681	3.928343	0	-1.523183	0	
630	N682	3.902052	0	-1.613801	0	
631	N683	3.875762	0	-1.70442	0	
632	N684	3.280105	0	-1.617781	0	
633	N685	3.246306	0	-1.690263	0	
634	N686	3.415808	0	-1.684978	0	
635	N687	3.38382	0	-1.762223	0	
636	N688	3.551511	0	-1.752176	0	
637	N689	3.521333	0	-1.834183	0	
638	N690	3.687213	0	-1.819373	0	
639	N691	3.658847	0	-1.906143	0	
640	N692	3.822916	0	-1.88657	0	
641	N693	3.796361	0	-1.978102	0	
642	N694	1.404366	0	-4.350623	0	
643	N695	1.354701	0	-4.050115	0	
644	N696	4.483091	0	0.38894	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
645	N697	4.212213	0	0.259293	0	
646	N698	4.170916	0	0.317957	0	
647	N699	4.353426	0	0.444524	0	
648	N700	4.535937	0	0.57109	0	
649	N701	4.347652	0	0.324117	0	
650	N702	4.009054	0	0.162058	0	
651	N703	4.11807	0	0.135806	0	
652	N704	4.274158	0	0.171298	0	
653	N705	4.430245	0	0.206789	0	
654	N706	1.523216	0	-4.350623	0	
655	N707	1.462463	0	-4.162805	0	
656	N708	1.379533	0	-4.200369	0	
657	N709	1.401709	0	-3.974988	0	
658	N710	1.285516	0	-4.350623	0	
659	N711	1.284188	0	-4.162805	0	
660	N712	1.282859	0	-3.974988	0	
661	N713	1.317452	0	-3.824735	0	
662	N714	3.712868	0	-2.21379	0	
663	N715	3.148326	0	-1.887852	0	
664	N716	3.289461	0	-1.969336	0	
665	N717	3.430597	0	-2.050821	0	
666	N718	3.571732	0	-2.132305	0	
667	N719	3.773632	0.388888	-2.108544	0	
668	N720	3.350225	0.388888	-1.86409	0	
669	N721	3.491361	0.388888	-1.945574	0	
670	N722	3.632496	0.388888	-2.027059	0	
671	N723	3.712868	0.388888	-2.21379	0	
672	N724	3.289461	0.388888	-1.969336	0	
673	N725	3.430597	0.388888	-2.050821	0	
674	N726	3.571732	0.388888	-2.132305	0	
675	N727	3.773632	-0.388888	-2.108544	0	
676	N728	3.20909	-0.388888	-1.782605	0	
677	N729	3.350225	-0.388888	-1.86409	0	
678	N730	3.491361	-0.388888	-1.945574	0	
679	N731	3.632496	-0.388888	-2.027059	0	
680	N732	3.712868	-0.388888	-2.21379	0	
681	N733	3.148326	-0.388888	-1.887852	0	
682	N734	3.289461	-0.388888	-1.969336	0	
683	N735	3.430597	-0.388888	-2.050821	0	
684	N736	3.571732	-0.388888	-2.132305	0	
685	N737	3.773632	-0.194444	-2.108544	0	
686	N738	3.20909	-0.194444	-1.782605	0	
687	N739	3.350225	-0.194444	-1.86409	0	
688	N740	3.491361	-0.194444	-1.945574	0	
689	N741	3.632496	-0.194444	-2.027059	0	
690	N742	3.712868	-0.194444	-2.21379	0	
691	N743	3.148326	-0.194444	-1.887852	0	
692	N744	3.289461	-0.194444	-1.969336	0	
693	N745	3.430597	-0.194444	-2.050821	0	
694	N746	3.571732	-0.194444	-2.132305	0	
695	N747	3.773632	0.194445	-2.108544	0	
696	N748	3.20909	0.194445	-1.782605	0	
697	N749	3.350225	0.194445	-1.86409	0	
698	N750	3.491361	0.194445	-1.945574	0	
699	N751	3.632496	0.194445	-2.027059	0	
700	N752	3.712868	0.194445	-2.21379	0	
701	N753	3.148326	0.194445	-1.887852	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
702	N754	3.289461	0.194445	-1.969336	0	
703	N755	3.430597	0.194445	-2.050821	0	
704	N756	3.571732	0.194445	-2.132305	0	
705	N760	-3.712868	0	-2.213789	0	
706	N761	-1.642066	0	-4.350623	0	
707	N762	-4.588783	0	0.753241	0	
708	N764	-0.637368	0	-3.614694	0	
709	N765	-1.25537	0	-3.4491	0	
710	N766	-1.835228	0	-3.178708	0	
711	N767	-2.359324	0	-2.811732	0	
712	N768	-2.811732	0	-2.359324	0	
713	N769	-3.148326	0	-1.887851	0	
714	N770	-3.4491	0	-1.25537	0	
715	N771	-3.614694	0	-0.637368	0	
716	N772	-3.670456	0	1e-14	0	
717	N773	-3.614694	0	0.637368	0	
718	N774	-3.4491	0	1.25537	0	
719	N777	-0.583333	0	-4.350623	0	
720	N778	-1.166667	0	-4.350623	0	
721	N780	-4.059416	0	1.67013	0	
722	N781	-4.351083	0	1.164948	0	
723	N782	-2.167362	0	-3.803259	0	
724	N783	-2.692658	0	-3.255894	0	
725	N784	-3.217954	0	-2.70853	0	
726	N785	-3.954633	0	-1.432565	0	
727	N786	-4.166016	0	-0.703963	0	
728	N787	-4.377399	0	0.024639	0	
729	N788	-2.99522	0	-2.097276	0	
730	N789	-3.479284	0	-2.436221	0	
731	N793	-3.246306	0	1.690263	0	
732	N794A	-3.313904	0	1.545299	0	
733	N795A	-3.381502	0	1.400334	0	
734	N796A	-3.394896	0	1.779952	0	
735	N797A	-3.463824	0	1.639654	0	
736	N798A	-3.532752	0	1.499357	0	
737	N799A	-3.601679	0	1.35906	0	
738	N800A	-3.543486	0	1.86964	0	
739	N801A	-3.613744	0	1.73401	0	
740	N802A	-3.684001	0	1.59838	0	
741	N803A	-3.754258	0	1.46275	0	
742	N804A	-3.692076	0	1.959328	0	
743	N805A	-3.763663	0	1.828365	0	
744	N806A	-3.83525	0	1.697403	0	
745	N807A	-3.906837	0	1.56644	0	
746	N808A	-3.840666	0	2.049016	0	
747	N809A	-3.913583	0	1.922721	0	
748	N810A	-3.9865	0	1.796425	0	
749	N811A	-3.490499	0	1.100869	0	
750	N812A	-3.531897	0	0.946369	0	
751	N813A	-3.573295	0	0.791868	0	
752	N814	-3.650957	0	1.211611	0	
753	N815A	-3.700235	0	1.064161	0	
754	N816A	-3.749513	0	0.916712	0	
755	N817	-3.798791	0	0.769263	0	
756	N818A	-3.811416	0	1.322352	0	
757	N819A	-3.868573	0	1.181954	0	
758	N820	-3.925731	0	1.041556	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
759	N821A	-3.982888	0	0.901158	0	
760	N822A	-3.971874	0	1.433093	0	
761	N823	-4.036911	0	1.299747	0	
762	N824A	-4.101949	0	1.1664	0	
763	N825A	-4.166986	0	1.033053	0	
764	N826	-4.132333	0	1.543835	0	
765	N827	-4.20525	0	1.417539	0	
766	N828	-4.278166	0	1.291244	0	
767	N829	-4.34526	0	0.724273	0	
768	N830	-4.101738	0	0.695304	0	
769	N831	-3.858216	0	0.666336	0	
770	N832	-4.535937	0	0.57109	0	
771	N833	-4.309111	0	0.547824	0	
772	N834	-4.082285	0	0.524558	0	
773	N835	-3.85546	0	0.501292	0	
774	N836	-3.628634	0	0.478026	0	
775	N837	-4.483091	0	0.38894	0	
776	N838	-4.272962	0	0.371376	0	
777	N839	-4.062833	0	0.353812	0	
778	N840	-3.852704	0	0.336248	0	
779	N841	-3.642575	0	0.318684	0	
780	N842	-4.430245	0	0.206789	0	
781	N843	-4.236813	0	0.194928	0	
782	N844	-4.04338	0	0.183066	0	
783	N845	-3.849948	0	0.171204	0	
784	N846	-3.656515	0	0.159342	0	
785	N847	-4.200664	0	0.018479	0	
786	N848	-4.023928	0	0.012319	0	
787	N849	-3.847192	0	0.00616	0	
788	N850	-4.324554	0	-0.157511	0	
789	N851	-4.157544	0	-0.157969	0	
790	N852	-3.990534	0	-0.158427	0	
791	N853	-3.823525	0	-0.158884	0	
792	N854	-3.656515	0	-0.159342	0	
793	N855	-4.271708	0	-0.339662	0	
794	N856	-4.114425	0	-0.334417	0	
795	N857	-3.957141	0	-0.329173	0	
796	N858	-3.799858	0	-0.323928	0	
797	N859	-3.642575	0	-0.318684	0	
798	N860	-4.218862	0	-0.521812	0	
799	N861	-4.071305	0	-0.510866	0	
800	N862	-3.923748	0	-0.499919	0	
801	N863	-3.776191	0	-0.488973	0	
802	N864	-3.628634	0	-0.478026	0	
803	N865	-4.028186	0	-0.687314	0	
804	N866	-3.890355	0	-0.670665	0	
805	N867	-3.752524	0	-0.654017	0	
806	N868	-4.11317	0	-0.886113	0	
807	N869	-3.978202	0	-0.862552	0	
808	N870	-3.843233	0	-0.838991	0	
809	N871	-3.708264	0	-0.81543	0	
810	N872	-3.573295	0	-0.791868	0	
811	N873	-4.060325	0	-1.068264	0	
812	N874	-3.928218	0	-1.03779	0	
813	N875	-3.796111	0	-1.007316	0	
814	N876	-3.664004	0	-0.976843	0	
815	N877	-3.531897	0	-0.946369	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
816	N878	-4.007479	0	-1.250414	0	
817	N879	-3.878234	0	-1.213028	0	
818	N880	-3.748989	0	-1.175642	0	
819	N881	-3.619744	0	-1.138256	0	
820	N882	-3.490499	0	-1.100869	0	
821	N883	-3.82825	0	-1.388266	0	
822	N884	-3.701867	0	-1.343967	0	
823	N885	-3.575484	0	-1.299669	0	
824	N886	-3.381502	0	-1.400334	0	
825	N887	-3.313904	0	-1.545299	0	
826	N888	-3.246306	0	-1.690263	0	
827	N889	-3.511574	0	-1.45393	0	
828	N890	-3.447664	0	-1.608191	0	
829	N891	-3.383754	0	-1.762452	0	
830	N892	-3.289462	0	-1.969335	0	
831	N893	-3.641645	0	-1.507525	0	
832	N894	-3.581423	0	-1.671082	0	
833	N895	-3.521201	0	-1.83464	0	
834	N896	-3.430597	0	-2.05082	0	
835	N897	-3.771716	0	-1.56112	0	
836	N898	-3.715182	0	-1.733974	0	
837	N899C	-3.658648	0	-1.906828	0	
838	N900B	-3.571733	0	-2.132304	0	
839	N901B	-3.901787	0	-1.614715	0	
840	N902B	-3.848941	0	-1.796865	0	
841	N903	-3.796096	0	-1.979016	0	
842	N904	-2.69863	0	-2.472426	0	
843	N905A	-2.585528	0	-2.585528	0	
844	N906A	-2.472426	0	-2.69863	0	
845	N907	-2.913288	0	-2.446625	0	
846	N908	-2.79563	0	-2.565662	0	
847	N909	-2.677972	0	-2.684699	0	
848	N910	-2.560315	0	-2.803736	0	
849	N911A	-2.442657	0	-2.922773	0	
850	N912B	-3.014843	0	-2.533927	0	
851	N913B	-2.89263	0	-2.658899	0	
852	N914B	-2.770417	0	-2.78387	0	
853	N915B	-2.648204	0	-2.908842	0	
854	N916B	-2.525991	0	-3.033813	0	
855	N917A	-3.116398	0	-2.621229	0	
856	N918A	-2.98963	0	-2.752135	0	
857	N919A	-2.862861	0	-2.883041	0	
858	N920A	-2.736093	0	-3.013948	0	
859	N921A	-2.609324	0	-3.144854	0	
860	N922B	-3.08663	0	-2.845371	0	
861	N923B	-2.955306	0	-2.982212	0	
862	N924B	-2.823982	0	-3.119053	0	
863	N925B	-1.966252	0	-3.086964	0	
864	N926B	-2.097276	0	-2.99522	0	
865	N927	-2.2283	0	-2.903476	0	
866	N928	-1.918261	0	-3.334846	0	
867	N929	-2.04936	0	-3.231828	0	
868	N930	-2.180459	0	-3.128809	0	
869	N931	-2.311558	0	-3.025791	0	
870	N932	-2.001295	0	-3.490983	0	
871	N933	-2.132469	0	-3.376691	0	
872	N934	-2.263643	0	-3.262398	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
873	N935	-2.394817	0	-3.148106	0	
874	N936	-2.084328	0	-3.647121	0	
875	N937	-2.215577	0	-3.521554	0	
876	N938	-2.346826	0	-3.395987	0	
877	N939	-2.478075	0	-3.270421	0	
878	N940	-2.298686	0	-3.666418	0	
879	N941	-2.43001	0	-3.529576	0	
880	N942	-2.561334	0	-3.392735	0	
881	N943	-1.690263	0	-3.246306	0	
882	N944	-1.545299	0	-3.313904	0	
883	N945	-1.400334	0	-3.381502	0	
884	N946	-1.786937	0	-3.471687	0	
885	N947	-1.648502	0	-3.522385	0	
886	N948	-1.510066	0	-3.573084	0	
887	N949	-1.37163	0	-3.623782	0	
888	N950	-1.233194	0	-3.674481	0	
889	N951A	-1.738647	0	-3.764665	0	
890	N952C	-1.60674	0	-3.798464	0	
891	N953B	-1.474833	0	-3.832263	0	
892	N954B	-1.342925	0	-3.866062	0	
893	N955C	-1.211018	0	-3.899862	0	
894	N956C	-1.690356	0	-4.057644	0	
895	N957B	-1.564978	0	-4.074544	0	
896	N958A	-1.439599	0	-4.091443	0	
897	N959	-1.314221	0	-4.108343	0	
898	N960A	-1.188842	0	-4.125242	0	
899	N961A	-1.523216	0	-4.350623	0	
900	N962A	-1.404366	0	-4.350623	0	
901	N963A	-1.285516	0	-4.350623	0	
902	N964A	-1.100869	0	-3.490499	0	
903	N965	-0.946369	0	-3.531897	0	
904	N966A	-0.791868	0	-3.573295	0	
905	N967A	-1.08086	0	-3.70553	0	
906	N968A	-0.928527	0	-3.736578	0	
907	N969A	-0.776193	0	-3.767627	0	
908	N970A	-0.623859	0	-3.798676	0	
909	N971A	-1.060851	0	-3.920561	0	
910	N972A	-0.910684	0	-3.94126	0	
911	N973A	-0.760518	0	-3.961959	0	
912	N974	-0.610351	0	-3.982658	0	
913	N975	-1.040842	0	-4.135592	0	
914	N976A	-0.892842	0	-4.145941	0	
915	N977A	-0.744842	0	-4.156291	0	
916	N978	-0.596842	0	-4.16664	0	
917	N979A	-1.020833	0	-4.350623	0	
918	N980A	-0.875	0	-4.350623	0	
919	N981A	-0.729167	0	-4.350623	0	
920	N982A	-0.478026	0	-3.628634	0	
921	N983A	-0.318684	0	-3.642575	0	
922	N984A	-0.159342	0	-3.656515	0	
923	N985A	-0.467894	0	-3.809131	0	
924	N986A	-0.31193	0	-3.819587	0	
925	N987	-0.155965	0	-3.830042	0	
926	N989	-0.457763	0	-3.989628	0	
927	N990	-0.305175	0	-3.996599	0	
928	N991	-0.152588	0	-4.003569	0	
929	N993A	-0.447631	0	-4.170125	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
930	N994	-0.298421	0	-4.173611	0	
931	N995A	-0.14921	0	-4.177096	0	
932	N997A	-0.4375	0	-4.350623	0	
933	N998A	-0.291667	0	-4.350623	0	
934	N999A	-0.145833	0	-4.350623	0	
935	N1000A	-2.857604	0	-2.293812	0	
936	N1001A	-2.903476	0	-2.2283	0	
937	N1002A	-2.949348	0	-2.162788	0	
938	N1003	-2.964025	0	-2.380472	0	
939	N1004	-3.014762	0	-2.314319	0	
940	N1005	-3.065499	0	-2.248165	0	
941	N1006	-3.116236	0	-2.182012	0	
942	N1007	-3.070445	0	-2.467132	0	
943	N1008	-3.126048	0	-2.400338	0	
944	N1009	-3.18165	0	-2.333543	0	
945	N1010	-3.237252	0	-2.266748	0	
946	N1011	-3.176866	0	-2.553793	0	
947	N1012	-3.237333	0	-2.486357	0	
948	N1013	-3.297801	0	-2.418921	0	
949	N1014	-3.358268	0	-2.351485	0	
950	N1015	-3.283286	0	-2.640453	0	
951	N1016	-3.348619	0	-2.572376	0	
952	N1017	-3.413952	0	-2.504298	0	
953	N1018	-3.041092	0	-2.031764	0	
954	N1019	-3.086964	0	-1.966252	0	
955	N1020	-3.167138	0	-2.115687	0	
956	N1021	-3.21804	0	-2.049362	0	
957	N1022	-3.293184	0	-2.199611	0	
958	N1023	-3.349116	0	-2.132473	0	
959	N1024	-3.41923	0	-2.283534	0	
960	N1025	-3.480191	0	-2.215583	0	
961	N1026	-3.545276	0	-2.367457	0	
962	N1027	-3.611267	0	-2.298694	0	
963	N1028	-4.469933	0	0.959095	0	
964	N1029	-4.184853	0	0.851852	0	
965	N1030	-1.904714	0	-4.076941	0	
966	N1031	-1.881552	0	-3.77753	0	
967	N1032	-1.810099	0	-3.771098	0	
968	N1033	-1.791744	0	-3.99244	0	
969	N1034	-1.77339	0	-4.213782	0	
970	N1035	-1.893133	0	-3.927235	0	
971	N1036	-1.86418	0	-3.552972	0	
972	N1037	-1.941423	0	-3.634257	0	
973	N1038	-1.98873	0	-3.787178	0	
974	N1039	-2.036038	0	-3.9401	0	
975	N1040	-4.529358	0	0.856168	0	
976	N1041	-4.336327	0	0.814873	0	
977	N1042	-4.327393	0	0.905474	0	
978	N1043	-4.143296	0	0.773578	0	
979	N1044	-4.410508	0	1.062022	0	
980	N1045	-4.247189	0	0.969263	0	
981	N1046	-4.083871	0	0.876505	0	
982	N1047	-3.971043	0	0.771421	0	
983	N1048	-3.773632	0	-2.108543	0	
984	N1049	-3.20909	0	-1.782604	0	
985	N1050	-3.350226	0	-1.864089	0	
986	N1051	-3.491361	0	-1.945573	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
987	N1052	-3.632497	0	-2.027058	0	
988	N1053	-3.712868	0.388888	-2.213789	0	
989	N1054	-3.289462	0.388888	-1.969335	0	
990	N1055	-3.430597	0.388888	-2.05082	0	
991	N1056	-3.571733	0.388888	-2.132304	0	
992	N1057	-3.773632	0.388888	-2.108543	0	
993	N1058	-3.350226	0.388888	-1.864089	0	
994	N1059	-3.491361	0.388888	-1.945573	0	
995	N1060	-3.632497	0.388888	-2.027058	0	
996	N1061	-3.712868	-0.388888	-2.213789	0	
997	N1062	-3.148326	-0.388888	-1.887851	0	
998	N1063	-3.289462	-0.388888	-1.969335	0	
999	N1064	-3.430597	-0.388888	-2.05082	0	
1000	N1065	-3.571733	-0.388888	-2.132304	0	
1001	N1066	-3.773632	-0.388888	-2.108543	0	
1002	N1067	-3.20909	-0.388888	-1.782604	0	
1003	N1068	-3.350226	-0.388888	-1.864089	0	
1004	N1069	-3.491361	-0.388888	-1.945573	0	
1005	N1070	-3.632497	-0.388888	-2.027058	0	
1006	N1071	-3.712868	-0.194444	-2.213789	0	
1007	N1072	-3.148326	-0.194444	-1.887851	0	
1008	N1073	-3.289462	-0.194444	-1.969335	0	
1009	N1074	-3.430597	-0.194444	-2.05082	0	
1010	N1075	-3.571733	-0.194444	-2.132304	0	
1011	N1076	-3.773632	-0.194444	-2.108543	0	
1012	N1077	-3.20909	-0.194444	-1.782604	0	
1013	N1078	-3.350226	-0.194444	-1.864089	0	
1014	N1079	-3.491361	-0.194444	-1.945573	0	
1015	N1080	-3.632497	-0.194444	-2.027058	0	
1016	N1081	-3.712868	0.194445	-2.213789	0	
1017	N1082	-3.148326	0.194445	-1.887851	0	
1018	N1083	-3.289462	0.194445	-1.969335	0	
1019	N1084	-3.430597	0.194445	-2.05082	0	
1020	N1085	-3.571733	0.194445	-2.132304	0	
1021	N1086	-3.773632	0.194445	-2.108543	0	
1022	N1087	-3.20909	0.194445	-1.782604	0	
1023	N1088	-3.350226	0.194445	-1.864089	0	
1024	N1089	-3.491361	0.194445	-1.945573	0	
1025	N1090	-3.632497	0.194445	-2.027058	0	
1026	N1066A	-2.946717	0.243055	3.597382	0	
1027	N1067A	2.946717	0.243055	3.597382	0	
1028	N1068A	-2.210038	0.243055	3.77862	0	
1029	N1069A	-1.473358	0.243055	3.959857	0	
1030	N1070A	-0.736679	0.243055	4.141095	0	
1031	N1071A	0.736679	0.243055	4.141095	0	
1032	N1072A	1.473358	0.243055	3.959857	0	
1033	N1073A	2.210038	0.243055	3.77862	0	
1034	N1074A	-0.370187	0.243055	4.231259	0	
1035	N1075A	2.762547	0.243055	3.642691	0	
1036	N1076A	2.578377	0.243055	3.688001	0	
1037	N1077A	2.394207	0.243055	3.73331	0	
1038	N1078A	2.025868	0.243055	3.823929	0	
1039	N1079A	1.841698	0.243055	3.869238	0	
1040	N1080A	1.657528	0.243055	3.914548	0	
1041	N1081A	1.289189	0.243055	4.005167	0	
1042	N1082A	1.105019	0.243055	4.050476	0	
1043	N1083A	0.920849	0.243055	4.095786	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1044	N1084A	0.552509	0.243055	4.186404	0	
1045	N1085A	0.36834	0.243055	4.231714	0	
1046	N1086A	0.18417	0.243055	4.277023	0	
1047	N1087A	-0.920849	0.243055	4.095786	0	
1048	N1088A	-1.105019	0.243055	4.050476	0	
1049	N1089A	-1.289189	0.243055	4.005167	0	
1050	N1090A	-2.025868	0.243055	3.823929	0	
1051	N1091	-1.841698	0.243055	3.869238	0	
1052	N1092	-1.657528	0.243055	3.914548	0	
1053	N1093	-0.645056	0.243055	4.163636	0	
1054	N1094	-0.553433	0.243055	4.186177	0	
1055	N1095	-0.46181	0.243055	4.208718	0	
1056	N1096	-0.27764	0.243055	4.254028	0	
1057	N1097	-0.185094	0.243055	4.276796	0	
1058	N1098	-2.578377	0.243055	3.688001	0	
1059	N1099	-2.762547	0.243055	3.642691	0	
1060	N1100	-2.394207	0.243055	3.73331	0	
1061	N1136	4.588783	0.243055	0.753241	0	
1062	N1137	1.642066	0.243055	-4.350623	0	
1063	N1138	4.377399	0.243055	0.024639	0	
1064	N1139	4.166016	0.243055	-0.703963	0	
1065	N1140	3.954633	0.243055	-1.432565	0	
1066	N1141	3.217954	0.243055	-2.70853	0	
1067	N1142	2.692658	0.243055	-3.255894	0	
1068	N1143	2.167362	0.243055	-3.803259	0	
1069	N1144	3.849472	0.243055	-1.795038	0	
1070	N1145	1.77339	0.243055	-4.213782	0	
1071	N1146	1.904714	0.243055	-4.076941	0	
1072	N1147	2.036038	0.243055	-3.9401	0	
1073	N1148	2.298686	0.243055	-3.666418	0	
1074	N1149	2.43001	0.243055	-3.529576	0	
1075	N1150	2.561334	0.243055	-3.392735	0	
1076	N1151	2.823982	0.243055	-3.119053	0	
1077	N1152	2.955306	0.243055	-2.982212	0	
1078	N1153	3.08663	0.243055	-2.845371	0	
1079	N1154	3.349278	0.243055	-2.571689	0	
1080	N1155	3.480602	0.243055	-2.434848	0	
1081	N1156	3.611926	0.243055	-2.298007	0	
1082	N1157	4.007479	0.243055	-1.250414	0	
1083	N1158	4.060325	0.243055	-1.068264	0	
1084	N1159	4.11317	0.243055	-0.886113	0	
1085	N1160	4.324554	0.243055	-0.157511	0	
1086	N1161	4.271708	0.243055	-0.339662	0	
1087	N1162	4.218862	0.243055	-0.521812	0	
1088	N1163	3.928343	0.243055	-1.523183	0	
1089	N1164	3.902052	0.243055	-1.613801	0	
1090	N1165	3.875762	0.243055	-1.70442	0	
1091	N1166	3.822916	0.243055	-1.88657	0	
1092	N1167	3.796361	0.243055	-1.978102	0	
1093	N1168	4.483091	0.243055	0.38894	0	
1094	N1169	4.535937	0.243055	0.57109	0	
1095	N1170	4.430245	0.243055	0.206789	0	
1096	N1206	-1.642066	0.243055	-4.350623	0	
1097	N1207	-4.588783	0.243055	0.753241	0	
1098	N1208	-2.167362	0.243055	-3.803259	0	
1099	N1209	-2.692658	0.243055	-3.255894	0	
1100	N1210	-3.217954	0.243055	-2.70853	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1101	N1211	-3.954633	0.243055	-1.432565	0	
1102	N1212	-4.166016	0.243055	-0.703963	0	
1103	N1213	-4.377399	0.243055	0.024639	0	
1104	N1214	-3.479284	0.243055	-2.436221	0	
1105	N1215	-4.535937	0.243055	0.57109	0	
1106	N1216	-4.483091	0.243055	0.38894	0	
1107	N1217	-4.430245	0.243055	0.206789	0	
1108	N1218	-4.324554	0.243055	-0.157511	0	
1109	N1219	-4.271708	0.243055	-0.339662	0	
1110	N1220	-4.218862	0.243055	-0.521812	0	
1111	N1221	-4.11317	0.243055	-0.886113	0	
1112	N1222	-4.060325	0.243055	-1.068264	0	
1113	N1223	-4.007479	0.243055	-1.250414	0	
1114	N1224	-3.901787	0.243055	-1.614715	0	
1115	N1225	-3.848941	0.243055	-1.796865	0	
1116	N1226	-3.796096	0.243055	-1.979016	0	
1117	N1227	-3.08663	0.243055	-2.845371	0	
1118	N1228	-2.955306	0.243055	-2.982212	0	
1119	N1229	-2.823982	0.243055	-3.119053	0	
1120	N1230	-2.298686	0.243055	-3.666418	0	
1121	N1231	-2.43001	0.243055	-3.529576	0	
1122	N1232	-2.561334	0.243055	-3.392735	0	
1123	N1233	-3.283286	0.243055	-2.640453	0	
1124	N1234	-3.348619	0.243055	-2.572376	0	
1125	N1235	-3.413952	0.243055	-2.504298	0	
1126	N1236	-3.545276	0.243055	-2.367457	0	
1127	N1237	-3.611267	0.243055	-2.298694	0	
1128	N1238	-1.904714	0.243055	-4.076941	0	
1129	N1239	-1.77339	0.243055	-4.213782	0	
1130	N1240	-2.036038	0.243055	-3.9401	0	
1131	N1171	-0.591716	0	-7.296841	0	
1132	N1172	0.591716	0	-7.296841	0	
1133	N1175	-6.023391	0	4.160861	0	
1134	N1176	-6.615107	0	3.135979	0	
1135	N1179	6.615107	0	3.135979	0	
1136	N1180	6.023391	0	4.160861	0	
1137	N1143B	-3.788861	-0.3885	2.1875	0	
1138	N1144B	3.788861	-0.3885	2.1875	0	
1139	N1145B	-5e-14	0	-7.296841	0	
1140	N1174	0	-0.388889	-4.525761	0	
1141	N1172A	-2e-14	-0.097222	-3.670456	0	
1142	N1173	-5e-14	-0.097222	-3.840498	0	
1143	N1174B	-5e-14	-0.097222	-4.010539	0	
1144	N1175B	-5e-14	-0.097222	-4.180581	0	
1145	N1176A	-6e-14	-0.097222	-4.350623	0	
1146	N1197	-3.178708	-0.097222	1.835228	0	
1147	N1198	-3.325969	-0.097222	1.920249	0	
1148	N1199	-3.473229	-0.097222	2.00527	0	
1149	N1200	-3.620489	-0.097222	2.09029	0	
1150	N1201	-3.76775	-0.097222	2.175311	0	
1151	N1222A	3.178708	-0.097222	1.835228	0	
1152	N1223A	3.325969	-0.097222	1.920249	0	
1153	N1224A	3.473229	-0.097222	2.00527	0	
1154	N1225A	3.620489	-0.097222	2.09029	0	
1155	N1226A	3.76775	-0.097222	2.175311	0	
1156	N1160A	6.416666	0	4.322333	0	
1157	N1163A	-6.999999	0	4.322333	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1158	N1164A	-6.999999	2.833	4.322333	0	
1159	N1165A	-6.999999	-3.1667	4.322333	0	
1160	N1166A	6.416666	2.833	4.322333	0	
1161	N1169A	6.416666	-3.1667	4.322333	0	
1162	N1172C	7.243249	2.833	3.901011	0	
1163	N1173B	7.243249	-3.1667	3.901011	0	
1164	N1174C	0.534917	2.833	-7.718162	0	
1165	N1177	0.534917	-3.1667	-7.718162	0	
1166	N1180A	-0.24325	2.833	-8.223343	0	
1167	N1181	-0.24325	-3.1667	-8.223343	0	
1168	N1182	-6.951583	2.833	3.395829	0	
1169	N1185	-6.951583	-3.1667	3.395829	0	
1170	N1189	7.243249	0	3.901011	0	
1171	N1191	0.534917	0	-7.718162	0	
1172	N1193	-0.24325	0	-8.223343	0	
1173	N1195	-6.951583	0	3.395829	0	
1174	N1196	-0.206597	0	4.322333	0	
1175	N1200A	0.206597	0	4.322333	0	
1176	N1203	3.846548	0	-1.982248	0	
1177	N1204	3.639951	0	-2.340084	0	
1178	N1210A	-3.639951	0	-2.340084	0	
1179	N1211A	-3.846548	0	-1.982248	0	
1180	N1200B	-1.306504	-0.3885	0.75431	0	
1181	N1201A	-3.919424	-0.388889	2.26288	0	
1182	N1202	1.306504	-0.3885	0.75431	0	
1183	N1203A	3.919424	-0.388889	2.26288	0	
1184	N1184	0.230001	3.83	4.322333	0	
1185	N1185A	0.230001	-4.1667	4.322333	0	
1186	N1189A	-3.85825	-3.1667	-1.96198	0	
1187	N1187	3.62825	3.83	-2.360353	0	
1188	N1188	3.62825	-4.1667	-2.360353	0	
1189	N1189B	-3.858251	3.83	-1.96198	0	
1190	N1190	-3.858251	-4.1667	-1.96198	0	
1191	N1191A	0.230001	0	4.322333	0	
1192	N1192	3.628249	0	-2.360353	0	
1193	N1193A	-3.85825	0	-1.96198	0	
1194	N1194	0.230001	2.4134	4.322333	0	
1195	N1195A	3.62825	2.4134	-2.360353	0	
1196	N1196A	-3.858251	2.4134	-1.96198	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipes...	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_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
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 Bracin...	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

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1A	1.5CU1.25X...	Beam	CU	A570 Gr.33	Typical	.131	.022	.052	5.4e-5

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	AL1A	AACS14X13.9	Beam	AA Channel	3003-H14	Typical	11.8	44.7	401	1.19

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

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A570 Gr.33	29500	11346	.3	.65	.49	33	52
2	A607 C1 Gr.55	29500	11346	.3	.65	.49	55	70

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density[...	Table B.4	kt	Ftu[ksi]	Fty[ksi]	Fcy[ksi]	Fsu[ksi]	Ct
1	3003-H14	10100	3787.5	.33	1.3	.173	Table B....	1	19	16	13	12	141
2	6061-T6	10100	3787.5	.33	1.3	.173	Table B....	1	38	35	35	24	141
3	6063-T5	10100	3787.5	.33	1.3	.173	Table B....	1	22	16	16	13	141
4	6063-T6	10100	3787.5	.33	1.3	.173	Table B....	1	30	25	25	19	141
5	5052-H34	10200	3787.5	.33	1.3	.173	Table B....	1	34	26	24	20	141
6	6061-T6 W	10100	3787.5	.33	1.3	.173	Table B....	1	24	15	15	15	141

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N34			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	N952A	N2			Footrails	Beam	Pipe	A53 Gr.B	Typical
13	M36	N86	N1174			HSS4x4x4	Beam	SquareTube	A500 Gr.B...	Typical
14	M44	N93A	N1172A			RIGID	None	None	RIGID	Typical
15	M45	N208	N1173			RIGID	None	None	RIGID	Typical
16	M46	N204	N1174B			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
17	M47	N200	N1175B			RIGID	None	None	RIGID	Typical
18	M48	N92A	N1176A			RIGID	None	None	RIGID	Typical
19	M46A	N996	N1001			RIGID	None	None	RIGID	Typical
20	M47A	N980	N985			RIGID	None	None	RIGID	Typical
21	M48A	N979	N984			RIGID	None	None	RIGID	Typical
22	M54B	N8	N426A			Footrails	Beam	Pipe	A53 Gr.B	Typical
23	M55B	N714	N9			Footrails	Beam	Pipe	A53 Gr.B	Typical
24	M56B	N750	N755			RIGID	None	None	RIGID	Typical
25	M57B	N740	N745			RIGID	None	None	RIGID	Typical
26	M58A	N739	N744			RIGID	None	None	RIGID	Typical
27	M68	N15	N760			Footrails	Beam	Pipe	A53 Gr.B	Typical
28	M69	N1048	N16			Footrails	Beam	Pipe	A53 Gr.B	Typical
29	M70	N1084	N1089			RIGID	None	None	RIGID	Typical
30	M71	N1074	N1079			RIGID	None	None	RIGID	Typical
31	M72	N1073	N1078			RIGID	None	None	RIGID	Typical
32	M55A	N18	N1171			RIGID	None	None	RIGID	Typical
33	M56A	N14	N1172			RIGID	None	None	RIGID	Typical
34	M55C	N1175	N22			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
35	M56C	N4	N1175			RIGID	None	None	RIGID	Typical
36	M57A	N21	N1176			RIGID	None	None	RIGID	Typical
37	M58B	N1179	N25A			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
38	M59	N11	N1179			RIGID	None	None	RIGID	Typical
39	M60	N7	N1180			RIGID	None	None	RIGID	Typical
40	M64	N32	N1176			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
41	M65	N30	N27			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
42	M66	N27	N1172			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
43	M67	N25A	N24			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
44	M68A	N24	N1180			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
45	M69A	N22	N32			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
46	M67A	N1172A	N903B			RIGID	None	None	RIGID	Typical
47	M68B	N1173	N906			RIGID	None	None	RIGID	Typical
48	M69B	N1174B	N905			RIGID	None	None	RIGID	Typical
49	M70A	N1175B	N904B			RIGID	None	None	RIGID	Typical
50	M71A	N1176A	N902A			RIGID	None	None	RIGID	Typical
51	M72A	N1172A	N984A			RIGID	None	None	RIGID	Typical
52	M73	N1172A	N459A			RIGID	None	None	RIGID	Typical
53	M74	N1173	N987			RIGID	None	None	RIGID	Typical
54	M75	N1173	N462A			RIGID	None	None	RIGID	Typical
55	M76	N1174B	N991			RIGID	None	None	RIGID	Typical
56	M77	N1174B	N466A			RIGID	None	None	RIGID	Typical
57	M78	N1175B	N995A			RIGID	None	None	RIGID	Typical
58	M79	N1175B	N470A			RIGID	None	None	RIGID	Typical
59	M80	N1176A	N999A			RIGID	None	None	RIGID	Typical
60	M81	N1176A	N474A			RIGID	None	None	RIGID	Typical
61	M72B	N117	N1197			RIGID	None	None	RIGID	Typical
62	M73A	N614	N1198			RIGID	None	None	RIGID	Typical
63	M74A	N618	N1199			RIGID	None	None	RIGID	Typical
64	M75A	N622	N1200			RIGID	None	None	RIGID	Typical
65	M76A	N134	N1201			RIGID	None	None	RIGID	Typical
66	M77A	N1197	N913			RIGID	None	None	RIGID	Typical
67	M78A	N1198	N916			RIGID	None	None	RIGID	Typical
68	M79A	N1199	N915			RIGID	None	None	RIGID	Typical
69	M80A	N1200	N914			RIGID	None	None	RIGID	Typical
70	M81A	N1201	N912			RIGID	None	None	RIGID	Typical
71	M82	N1197	N610			RIGID	None	None	RIGID	Typical
72	M83	N1197	N793			RIGID	None	None	RIGID	Typical
73	M84	N1198	N613			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
74	M85	N1198	N796A			RIGID	None	None	RIGID	Typical
75	M86	N1199	N617			RIGID	None	None	RIGID	Typical
76	M87	N1199	N800A			RIGID	None	None	RIGID	Typical
77	M88	N1200	N621			RIGID	None	None	RIGID	Typical
78	M89	N1200	N804A			RIGID	None	None	RIGID	Typical
79	M90	N1201	N625			RIGID	None	None	RIGID	Typical
80	M91	N1201	N808A			RIGID	None	None	RIGID	Typical
81	M92	N141	N1222A			RIGID	None	None	RIGID	Typical
82	M93	N407	N1223A			RIGID	None	None	RIGID	Typical
83	M94	N411	N1224A			RIGID	None	None	RIGID	Typical
84	M95	N415	N1225A			RIGID	None	None	RIGID	Typical
85	M96	N140	N1226A			RIGID	None	None	RIGID	Typical
86	M97	N1222A	N923			RIGID	None	None	RIGID	Typical
87	M98	N1223A	N926			RIGID	None	None	RIGID	Typical
88	M99	N1224A	N925			RIGID	None	None	RIGID	Typical
89	M100	N1225A	N924			RIGID	None	None	RIGID	Typical
90	M101	N1226A	N922			RIGID	None	None	RIGID	Typical
91	M102	N1222A	N650			RIGID	None	None	RIGID	Typical
92	M103	N1222A	N419			RIGID	None	None	RIGID	Typical
93	M104	N1223A	N653			RIGID	None	None	RIGID	Typical
94	M105	N1223A	N422			RIGID	None	None	RIGID	Typical
95	M106	N1224A	N657			RIGID	None	None	RIGID	Typical
96	M107	N1224A	N426			RIGID	None	None	RIGID	Typical
97	M108	N1225A	N661			RIGID	None	None	RIGID	Typical
98	M109	N1225A	N430			RIGID	None	None	RIGID	Typical
99	M110	N1226A	N665			RIGID	None	None	RIGID	Typical
100	M111	N1226A	N434			RIGID	None	None	RIGID	Typical
101	MP1A	N1166A	N1169A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
102	MP4A	N1164A	N1165A			MP 2	Beam	Pipe	A53 Gr.B	Typical
103	MP1C	N1174C	N1177			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
104	MP3C	N1172C	N1173B			MP 2	Beam	Pipe	A53 Gr.B	Typical
105	MP1B	N1182	N1185			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
106	MP3B	N1180A	N1181			MP 2	Beam	Pipe	A53 Gr.B	Typical
107	M115	N992	N1196			RIGID	None	None	RIGID	Typical
108	M116	N1196	N976			RIGID	None	None	RIGID	Typical
109	M117	N998	N1200A			RIGID	None	None	RIGID	Typical
110	M118	N1200A	N982			RIGID	None	None	RIGID	Typical
111	M119	N747	N1203			RIGID	None	None	RIGID	Typical
112	M120	N1203	N737			RIGID	None	None	RIGID	Typical
113	M121	N752	N1204			RIGID	None	None	RIGID	Typical
114	M122	N1204	N742			RIGID	None	None	RIGID	Typical
115	M123	N1081	N1210A			RIGID	None	None	RIGID	Typical
116	M124	N1210A	N1071			RIGID	None	None	RIGID	Typical
117	M125	N1086	N1211A			RIGID	None	None	RIGID	Typical
118	M126	N1211A	N1076			RIGID	None	None	RIGID	Typical
119	M125A	N1200B	N1201A			HSS4x4x4	Beam	SquareTube	A500 Gr.B...	Typical
120	M126A	N1202	N1203A			HSS4x4x4	Beam	SquareTube	A500 Gr.B...	Typical
121	MP2A	N1184	N1185A			MP 2	Beam	Pipe	A53 Gr.B	Typical
122	MP2C	N1187	N1188			MP 2	Beam	Pipe	A53 Gr.B	Typical
123	MP2B	N1189B	N1190			MP 2	Beam	Pipe	A53 Gr.B	Typical
124	M124A	N1196A	N1194			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
125	M125B	N1194	N1195A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
126	M126B	N1195A	N1196A			Mount Pipes 1	Beam	Pipe	A53 Gr.B	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	M36						Yes			None
14	M44						Yes			None
15	M45						Yes			None
16	M46						Yes			None
17	M47						Yes			None
18	M48						Yes			None
19	M46A						Yes			None
20	M47A						Yes			None
21	M48A						Yes			None
22	M54B						Yes			None
23	M55B						Yes			None
24	M56B						Yes			None
25	M57B						Yes			None
26	M58A						Yes			None
27	M68						Yes			None
28	M69						Yes			None
29	M70						Yes			None
30	M71						Yes			None
31	M72						Yes			None
32	M55A						Yes			None
33	M56A						Yes			None
34	M55C						Yes			None
35	M56C						Yes			None
36	M57A						Yes			None
37	M58B						Yes			None
38	M59						Yes			None
39	M60						Yes			None
40	M64						Yes			None
41	M65						Yes			None
42	M66						Yes			None
43	M67						Yes			None
44	M68A						Yes			None
45	M69A						Yes			None
46	M67A						Yes			None
47	M68B						Yes			None
48	M69B						Yes			None
49	M70A						Yes			None
50	M71A						Yes			None
51	M72A						Yes			None
52	M73						Yes			None
53	M74						Yes			None
54	M75						Yes			None
55	M76						Yes			None
56	M77						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 ...
57	M78						Yes			None
58	M79						Yes			None
59	M80						Yes			None
60	M81						Yes			None
61	M72B						Yes			None
62	M73A						Yes			None
63	M74A						Yes			None
64	M75A						Yes			None
65	M76A						Yes			None
66	M77A						Yes			None
67	M78A						Yes			None
68	M79A						Yes			None
69	M80A						Yes			None
70	M81A						Yes			None
71	M82						Yes			None
72	M83						Yes			None
73	M84						Yes			None
74	M85						Yes			None
75	M86						Yes			None
76	M87						Yes			None
77	M88						Yes			None
78	M89						Yes			None
79	M90						Yes			None
80	M91						Yes			None
81	M92						Yes			None
82	M93						Yes			None
83	M94						Yes			None
84	M95						Yes			None
85	M96						Yes			None
86	M97						Yes			None
87	M98						Yes			None
88	M99						Yes			None
89	M100						Yes			None
90	M101						Yes			None
91	M102						Yes			None
92	M103						Yes			None
93	M104						Yes			None
94	M105						Yes			None
95	M106						Yes			None
96	M107						Yes			None
97	M108						Yes			None
98	M109						Yes			None
99	M110						Yes			None
100	M111						Yes			None
101	MP1A						Yes			None
102	MP4A						Yes			None
103	MP1C						Yes			None
104	MP3C						Yes			None
105	MP1B						Yes			None
106	MP3B						Yes			None
107	M115						Yes			None
108	M116						Yes			None
109	M117						Yes			None
110	M118						Yes			None
111	M119						Yes			None
112	M120						Yes			None
113	M121						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 ...
114	M122						Yes			None
115	M123						Yes			None
116	M124						Yes			None
117	M125						Yes			None
118	M126						Yes			None
119	M125A						Yes			None
120	M126A						Yes			None
121	MP2A						Yes			None
122	MP2C						Yes			None
123	MP2B						Yes			None
124	M124A	BenPIN	BenPIN				Yes			None
125	M125B	BenPIN	BenPIN				Yes			None
126	M126B	BenPIN	BenPIN				Yes			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
1	M1	Footrails	7.231			Lbyy			1	1		Lateral
2	M5	Plan Bracing	4.958	Segment	Segment	Lbyy			.65	.65		Lateral
3	M7	Plan Bracing	4.958	Segment	Segment	Lbyy			.65	.65		Lateral
4	M8	Plate Bracin...	.262			Lbyy			.65	.65		Lateral
5	M9	Plan Bracing	4.958	Segment	Segment	Lbyy			.65	.65		Lateral
6	M10	Grating Angle	3.402			Lbyy			.65	.65		Lateral
7	M11	Grating Angle	3.402			Lbyy			.65	.65		Lateral
8	M12	Grating Angle	3.402			Lbyy			.65	.65		Lateral
9	M13	Grating Angle	3.402			Lbyy			.65	.65		Lateral
10	M14	Grating Angle	3.402			Lbyy			.65	.65		Lateral
11	M15	Grating Angle	3.402			Lbyy			.65	.65		Lateral
12	M16	Footrails	7.231			Lbyy			1	1		Lateral
13	M36	HSS4x4x4	3.017			Lbyy			2.1	2.1		Lateral
14	M54B	Footrails	7.231			Lbyy			1	1		Lateral
15	M55B	Footrails	7.231			Lbyy			1	1		Lateral
16	M68	Footrails	7.231			Lbyy			1	1		Lateral
17	M69	Footrails	7.231			Lbyy			1	1		Lateral
18	M55C	Plate Bracin...	.262			Lbyy			.65	.65		Lateral
19	M58B	Plate Bracin...	.262			Lbyy			.65	.65		Lateral
20	M64	Plate Bracin...	.262			Lbyy			.65	.65		Lateral
21	M65	Plate Bracin...	.659			Lbyy			.65	.65		Lateral
22	M66	Plate Bracin...	.262			Lbyy			.65	.65		Lateral
23	M67	Plate Bracin...	.659			Lbyy			.65	.65		Lateral
24	M68A	Plate Bracin...	.262			Lbyy			.65	.65		Lateral
25	M69A	Plate Bracin...	.659			Lbyy			.65	.65		Lateral
26	MP1A	Mount Pipe...	6			Lbyy						Lateral
27	MP4A	MP 2	6			Lbyy						Lateral
28	MP1C	Mount Pipe...	6			Lbyy						Lateral
29	MP3C	MP 2	6			Lbyy						Lateral
30	MP1B	Mount Pipe...	6			Lbyy						Lateral
31	MP3B	MP 2	6			Lbyy						Lateral
32	M125A	HSS4x4x4	3.017			Lbyy			2.1	2.1		Lateral
33	M126A	HSS4x4x4	3.017			Lbyy			2.1	2.1		Lateral
34	MP2A	MP 2	7.997			Lbyy						Lateral
35	MP2C	MP 2	7.997			Lbyy						Lateral
36	MP2B	MP 2	7.997			Lbyy						Lateral
37	M124A	Mount Pipe...	7.497			Lbyy						Lateral
38	M125B	Mount Pipe...	7.497			Lbyy						Lateral
39	M126B	Mount Pipe...	7.497			Lbyy						Lateral

Cold Formed Steel Design Parameters

Label	Shape	Lengt...	Lbyy[ft]	Lbzz[ft]	Lcomp t...	Lcomp ...	L-torque...	Kyy	Kzz	Cm-...	Cm-...	Cb	R	a[ft]	y sw...	z sw...
No Data to Print ...																

Aluminum Design Parameters

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
No Data to Print ...											

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	MP1A	Y	-9.35	1
2	MP1A	Y	-9.35	4.4
3	MP1B	Y	-9.35	1
4	MP1B	Y	-9.35	4.4
5	MP1C	Y	-9.35	1
6	MP1C	Y	-9.35	4.4
7	MP2A	Y	-64	0
8	MP2A	Y	-64	8
9	MP2B	Y	-64	0
10	MP2B	Y	-64	8
11	MP2C	Y	-64	0
12	MP2C	Y	-64	8
13	MP1A	Y	-15.4	3
14	MP1B	Y	-15.4	3
15	MP1C	Y	-15.4	3
16	MP2A	Y	-71	3
17	MP2B	Y	-71	3
18	MP2C	Y	-71	3

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-65.295	1
2	MP1A	Y	-65.295	4.4
3	MP1B	Y	-65.295	1
4	MP1B	Y	-65.295	4.4
5	MP1C	Y	-65.295	1
6	MP1C	Y	-65.295	4.4
7	MP2A	Y	-288.215	0
8	MP2A	Y	-288.215	8
9	MP2B	Y	-288.215	0
10	MP2B	Y	-288.215	8
11	MP2C	Y	-288.215	0
12	MP2C	Y	-288.215	8
13	MP1A	Y	-37.809	3
14	MP1B	Y	-37.809	3
15	MP1C	Y	-37.809	3
16	MP2A	Y	-110.416	3
17	MP2B	Y	-110.416	3
18	MP2C	Y	-110.416	3

Member Point Loads (BLC 3 : Antenna W Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Z	-53.59	1
2	MP1A	Z	-53.59	4.4
3	MP1B	Z	-35.992	1
4	MP1B	Z	-35.992	4.4
5	MP1C	Z	-35.992	1
6	MP1C	Z	-35.992	4.4
7	MP2A	Z	-300.462	0
8	MP2A	Z	-300.462	8
9	MP2B	Z	-166.292	0
10	MP2B	Z	-166.292	8
11	MP2C	Z	-166.292	0
12	MP2C	Z	-166.292	8
13	MP1A	Z	-14.251	3
14	MP1B	Z	-9.743	3
15	MP1C	Z	-9.743	3
16	MP2A	Z	-43.867	3
17	MP2B	Z	-34.384	3
18	MP2C	Z	-34.384	3

Member Point Loads (BLC 4 : Antenna Wi Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Z	-17.844	1
2	MP1A	Z	-17.844	4.4
3	MP1B	Z	-13.323	1
4	MP1B	Z	-13.323	4.4
5	MP1C	Z	-13.323	1
6	MP1C	Z	-13.323	4.4
7	MP2A	Z	-82.9	0
8	MP2A	Z	-82.9	8
9	MP2B	Z	-48.904	0
10	MP2B	Z	-48.904	8
11	MP2C	Z	-48.904	0
12	MP2C	Z	-48.904	8
13	MP1A	Z	-5.652	3
14	MP1B	Z	-4.718	3
15	MP1C	Z	-4.718	3
16	MP2A	Z	-15.125	3
17	MP2B	Z	-12.456	3
18	MP2C	Z	-12.456	3

Member Point Loads (BLC 5 : Antenna W Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	30.126	1
2	MP1A	X	30.126	4.4
3	MP1B	X	47.724	1
4	MP1B	X	47.724	4.4
5	MP1C	X	47.724	1
6	MP1C	X	47.724	4.4
7	MP2A	X	121.569	0
8	MP2A	X	121.569	8
9	MP2B	X	255.738	0
10	MP2B	X	255.738	8
11	MP2C	X	255.738	0
12	MP2C	X	255.738	8
13	MP1A	X	10.987	3
14	MP1B	X	16.998	3

Member Point Loads (BLC 5 : Antenna W Side) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP1C	X	16.998	3
16	MP2A	X	41.63	3
17	MP2B	X	54.274	3
18	MP2C	X	54.274	3

Member Point Loads (BLC 6 : Antenna Wi Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	11.816	1
2	MP1A	X	11.816	4.4
3	MP1B	X	16.337	1
4	MP1B	X	16.337	4.4
5	MP1C	X	16.337	1
6	MP1C	X	16.337	4.4
7	MP2A	X	37.572	0
8	MP2A	X	37.572	8
9	MP2B	X	71.568	0
10	MP2B	X	71.568	8
11	MP2C	X	71.568	0
12	MP2C	X	71.568	8
13	MP1A	X	5.876	3
14	MP1B	X	7.121	3
15	MP1C	X	7.121	3
16	MP2A	X	15.421	3
17	MP2B	X	18.98	3
18	MP2C	X	18.98	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	0

Member Distributed Loads (BLC 10 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-16.406	-16.406	0	%100
2	M5	Y	-16.171	-16.171	0	%100
3	M7	Y	-16.171	-16.171	0	%100
4	M8	Y	-16.171	-16.171	0	%100
5	M9	Y	-16.171	-16.171	0	%100
6	M10	Y	-11.343	-11.343	0	%100
7	M11	Y	-11.343	-11.343	0	%100
8	M12	Y	-11.343	-11.343	0	%100
9	M13	Y	-11.343	-11.343	0	%100
10	M14	Y	-11.343	-11.343	0	%100
11	M15	Y	-11.343	-11.343	0	%100
12	M16	Y	-16.406	-16.406	0	%100
13	M36	Y	-22.687	-22.687	0	%100
14	M54B	Y	-16.406	-16.406	0	%100
15	M55B	Y	-16.406	-16.406	0	%100
16	M68	Y	-16.406	-16.406	0	%100
17	M69	Y	-16.406	-16.406	0	%100
18	M55C	Y	-16.171	-16.171	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
19	M58B	Y	-16.171	-16.171	0	%100
20	M64	Y	-16.171	-16.171	0	%100
21	M65	Y	-16.171	-16.171	0	%100
22	M66	Y	-16.171	-16.171	0	%100
23	M67	Y	-16.171	-16.171	0	%100
24	M68A	Y	-16.171	-16.171	0	%100
25	M69A	Y	-16.171	-16.171	0	%100
26	MP1A	Y	-13.23	-13.23	0	%100
27	MP4A	Y	-14.642	-14.642	0	%100
28	MP1C	Y	-13.23	-13.23	0	%100
29	MP3C	Y	-14.642	-14.642	0	%100
30	MP1B	Y	-13.23	-13.23	0	%100
31	MP3B	Y	-14.642	-14.642	0	%100
32	M125A	Y	-22.687	-22.687	0	%100
33	M126A	Y	-22.687	-22.687	0	%100
34	MP2A	Y	-14.642	-14.642	0	%100
35	MP2C	Y	-14.642	-14.642	0	%100
36	MP2B	Y	-14.642	-14.642	0	%100
37	M124A	Y	-13.23	-13.23	0	%100
38	M125B	Y	-13.23	-13.23	0	%100
39	M126B	Y	-13.23	-13.23	0	%100

Member Distributed Loads (BLC 11 : Structure W Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-10.391	-10.391	0	%100
2	M5	PZ	-19.793	-19.793	0	%100
3	M7	PZ	-19.793	-19.793	0	%100
4	M8	PZ	-19.793	-19.793	0	%100
5	M9	PZ	-19.793	-19.793	0	%100
6	M10	PZ	-9.897	-9.897	0	%100
7	M11	PZ	-9.897	-9.897	0	%100
8	M12	PZ	-9.897	-9.897	0	%100
9	M13	PZ	-9.897	-9.897	0	%100
10	M14	PZ	-9.897	-9.897	0	%100
11	M15	PZ	-9.897	-9.897	0	%100
12	M16	PZ	-10.391	-10.391	0	%100
13	M36	PZ	-19.793	-19.793	0	%100
14	M54B	PZ	-10.391	-10.391	0	%100
15	M55B	PZ	-10.391	-10.391	0	%100
16	M68	PZ	-10.391	-10.391	0	%100
17	M69	PZ	-10.391	-10.391	0	%100
18	M55C	PZ	-19.793	-19.793	0	%100
19	M58B	PZ	-19.793	-19.793	0	%100
20	M64	PZ	-19.793	-19.793	0	%100
21	M65	PZ	-19.793	-19.793	0	%100
22	M66	PZ	-19.793	-19.793	0	%100
23	M67	PZ	-19.793	-19.793	0	%100
24	M68A	PZ	-19.793	-19.793	0	%100
25	M69A	PZ	-19.793	-19.793	0	%100
26	MP1A	PZ	-7.051	-7.051	0	%100
27	MP4A	PZ	-8.536	-8.536	0	%100
28	MP1C	PZ	-7.051	-7.051	0	%100
29	MP3C	PZ	-8.536	-8.536	0	%100
30	MP1B	PZ	-7.051	-7.051	0	%100
31	MP3B	PZ	-8.536	-8.536	0	%100
32	M125A	PZ	-19.793	-19.793	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
33	M126A	PZ	-19.793	-19.793	0	%100
34	MP2A	PZ	-8.536	-8.536	0	%100
35	MP2C	PZ	-8.536	-8.536	0	%100
36	MP2B	PZ	-8.536	-8.536	0	%100
37	M124A	PZ	-7.051	-7.051	0	%100
38	M125B	PZ	-7.051	-7.051	0	%100
39	M126B	PZ	-7.051	-7.051	0	%100

Member Distributed Loads (BLC 12 : Structure Wi Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-5.91	-5.91	0	%100
2	M5	PZ	-8.214	-8.214	0	%100
3	M7	PZ	-8.214	-8.214	0	%100
4	M8	PZ	-8.214	-8.214	0	%100
5	M9	PZ	-8.214	-8.214	0	%100
6	M10	PZ	-5.788	-5.788	0	%100
7	M11	PZ	-5.788	-5.788	0	%100
8	M12	PZ	-5.788	-5.788	0	%100
9	M13	PZ	-5.788	-5.788	0	%100
10	M14	PZ	-5.788	-5.788	0	%100
11	M15	PZ	-5.788	-5.788	0	%100
12	M16	PZ	-5.91	-5.91	0	%100
13	M36	PZ	-8.214	-8.214	0	%100
14	M54B	PZ	-5.91	-5.91	0	%100
15	M55B	PZ	-5.91	-5.91	0	%100
16	M68	PZ	-5.91	-5.91	0	%100
17	M69	PZ	-5.91	-5.91	0	%100
18	M55C	PZ	-8.214	-8.214	0	%100
19	M58B	PZ	-8.214	-8.214	0	%100
20	M64	PZ	-8.214	-8.214	0	%100
21	M65	PZ	-8.214	-8.214	0	%100
22	M66	PZ	-8.214	-8.214	0	%100
23	M67	PZ	-8.214	-8.214	0	%100
24	M68A	PZ	-8.214	-8.214	0	%100
25	M69A	PZ	-8.214	-8.214	0	%100
26	MP1A	PZ	-5.091	-5.091	0	%100
27	MP4A	PZ	-5.455	-5.455	0	%100
28	MP1C	PZ	-5.091	-5.091	0	%100
29	MP3C	PZ	-5.455	-5.455	0	%100
30	MP1B	PZ	-5.091	-5.091	0	%100
31	MP3B	PZ	-5.455	-5.455	0	%100
32	M125A	PZ	-8.214	-8.214	0	%100
33	M126A	PZ	-8.214	-8.214	0	%100
34	MP2A	PZ	-5.455	-5.455	0	%100
35	MP2C	PZ	-5.455	-5.455	0	%100
36	MP2B	PZ	-5.455	-5.455	0	%100
37	M124A	PZ	-5.091	-5.091	0	%100
38	M125B	PZ	-5.091	-5.091	0	%100
39	M126B	PZ	-5.091	-5.091	0	%100

Member Distributed Loads (BLC 13 : Structure W Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	10.391	10.391	0	%100
2	M5	PX	19.793	19.793	0	%100
3	M7	PX	19.793	19.793	0	%100
4	M8	PX	19.793	19.793	0	%100

Member Distributed Loads (BLC 13 : Structure W Side) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
5	M9	PX	19.793	19.793	0	%100
6	M10	PX	9.897	9.897	0	%100
7	M11	PX	9.897	9.897	0	%100
8	M12	PX	9.897	9.897	0	%100
9	M13	PX	9.897	9.897	0	%100
10	M14	PX	9.897	9.897	0	%100
11	M15	PX	9.897	9.897	0	%100
12	M16	PX	10.391	10.391	0	%100
13	M36	PX	19.793	19.793	0	%100
14	M54B	PX	10.391	10.391	0	%100
15	M55B	PX	10.391	10.391	0	%100
16	M68	PX	10.391	10.391	0	%100
17	M69	PX	10.391	10.391	0	%100
18	M55C	PX	19.793	19.793	0	%100
19	M58B	PX	19.793	19.793	0	%100
20	M64	PX	19.793	19.793	0	%100
21	M65	PX	19.793	19.793	0	%100
22	M66	PX	19.793	19.793	0	%100
23	M67	PX	19.793	19.793	0	%100
24	M68A	PX	19.793	19.793	0	%100
25	M69A	PX	19.793	19.793	0	%100
26	MP1A	PX	7.051	7.051	0	%100
27	MP4A	PX	8.536	8.536	0	%100
28	MP1C	PX	7.051	7.051	0	%100
29	MP3C	PX	8.536	8.536	0	%100
30	MP1B	PX	7.051	7.051	0	%100
31	MP3B	PX	8.536	8.536	0	%100
32	M125A	PX	19.793	19.793	0	%100
33	M126A	PX	19.793	19.793	0	%100
34	MP2A	PX	8.536	8.536	0	%100
35	MP2C	PX	8.536	8.536	0	%100
36	MP2B	PX	8.536	8.536	0	%100
37	M124A	PX	7.051	7.051	0	%100
38	M125B	PX	7.051	7.051	0	%100
39	M126B	PX	7.051	7.051	0	%100

Member Distributed Loads (BLC 14 : Structure Wi Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	5.91	5.91	0	%100
2	M5	PX	8.214	8.214	0	%100
3	M7	PX	8.214	8.214	0	%100
4	M8	PX	8.214	8.214	0	%100
5	M9	PX	8.214	8.214	0	%100
6	M10	PX	5.788	5.788	0	%100
7	M11	PX	5.788	5.788	0	%100
8	M12	PX	5.788	5.788	0	%100
9	M13	PX	5.788	5.788	0	%100
10	M14	PX	5.788	5.788	0	%100
11	M15	PX	5.788	5.788	0	%100
12	M16	PX	5.91	5.91	0	%100
13	M36	PX	8.214	8.214	0	%100
14	M54B	PX	5.91	5.91	0	%100
15	M55B	PX	5.91	5.91	0	%100
16	M68	PX	5.91	5.91	0	%100
17	M69	PX	5.91	5.91	0	%100
18	M55C	PX	8.214	8.214	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
19	M58B	PX	8.214	8.214	0	%100
20	M64	PX	8.214	8.214	0	%100
21	M65	PX	8.214	8.214	0	%100
22	M66	PX	8.214	8.214	0	%100
23	M67	PX	8.214	8.214	0	%100
24	M68A	PX	8.214	8.214	0	%100
25	M69A	PX	8.214	8.214	0	%100
26	MP1A	PX	5.091	5.091	0	%100
27	MP4A	PX	5.455	5.455	0	%100
28	MP1C	PX	5.091	5.091	0	%100
29	MP3C	PX	5.455	5.455	0	%100
30	MP1B	PX	5.091	5.091	0	%100
31	MP3B	PX	5.455	5.455	0	%100
32	M125A	PX	8.214	8.214	0	%100
33	M126A	PX	8.214	8.214	0	%100
34	MP2A	PX	5.455	5.455	0	%100
35	MP2C	PX	5.455	5.455	0	%100
36	MP2B	PX	5.455	5.455	0	%100
37	M124A	PX	5.091	5.091	0	%100
38	M125B	PX	5.091	5.091	0	%100
39	M126B	PX	5.091	5.091	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M5	Y	-.808	-5.966	.496	1.818
2	M5	Y	-5.966	-5.975	1.818	3.14
3	M5	Y	-5.975	-.808	3.14	4.463
4	M10	Y	-2.198	-4.427	0	.68
5	M10	Y	-4.427	-4.005	.68	1.361
6	M10	Y	-4.005	-2.993	1.361	2.041
7	M10	Y	-2.993	-4.039	2.041	2.722
8	M15	Y	-.823	-3.677	0	.68
9	M15	Y	-3.677	-3.733	.68	1.361
10	M15	Y	-3.733	-2.917	1.361	2.041
11	M15	Y	-2.917	-4.03	2.041	2.722
12	M69A	Y	-1.103	-1.103	0	.659
13	M9	Y	-.805	-5.903	.496	1.818
14	M9	Y	-5.903	-5.856	1.818	3.14
15	M9	Y	-5.856	-.805	3.14	4.463
16	M13	Y	-3.265	-3.295	0	1.361
17	M13	Y	-3.295	-3.325	1.361	2.722
18	M14	Y	-3.898	-4.017	0	.907
19	M14	Y	-4.017	-3.277	.907	1.814
20	M14	Y	-3.277	-1.676	1.814	2.722
21	M65	Y	-2.173	-2.173	0	.659
22	M7	Y	-.808	-5.969	.496	1.818
23	M7	Y	-5.969	-5.976	1.818	3.14
24	M7	Y	-5.976	-.808	3.14	4.463
25	M11	Y	-.824	-3.677	0	.68
26	M11	Y	-3.677	-3.733	.68	1.361
27	M11	Y	-3.733	-2.914	1.361	2.041
28	M11	Y	-2.914	-4.02	2.041	2.722
29	M12	Y	-2.2	-4.429	0	.68
30	M12	Y	-4.429	-4.006	.68	1.361
31	M12	Y	-4.006	-2.993	1.361	2.041
32	M12	Y	-2.993	-4.041	2.041	2.722

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
33	M67	Y	-1.1	-1.1	0	.659

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M5	Y	-2.401	-17.728	.496	1.818
2	M5	Y	-17.728	-17.753	1.818	3.14
3	M5	Y	-17.753	-2.401	3.14	4.463
4	M10	Y	-6.53	-13.154	0	.68
5	M10	Y	-13.154	-11.902	.68	1.361
6	M10	Y	-11.902	-8.892	1.361	2.041
7	M10	Y	-8.892	-12.002	2.041	2.722
8	M15	Y	-2.446	-10.927	0	.68
9	M15	Y	-10.927	-11.092	.68	1.361
10	M15	Y	-11.092	-8.669	1.361	2.041
11	M15	Y	-8.669	-11.973	2.041	2.722
12	M69A	Y	-3.277	-3.277	0	.659
13	M9	Y	-2.392	-17.539	.496	1.818
14	M9	Y	-17.539	-17.401	1.818	3.14
15	M9	Y	-17.401	-2.392	3.14	4.463
16	M13	Y	-9.7	-9.79	0	1.361
17	M13	Y	-9.79	-9.88	1.361	2.722
18	M14	Y	-11.584	-11.937	0	.907
19	M14	Y	-11.937	-9.736	.907	1.814
20	M14	Y	-9.736	-4.98	1.814	2.722
21	M65	Y	-6.458	-6.458	0	.659
22	M7	Y	-2.4	-17.736	.496	1.818
23	M7	Y	-17.736	-17.757	1.818	3.14
24	M7	Y	-17.757	-2.4	3.14	4.463
25	M11	Y	-2.448	-10.927	0	.68
26	M11	Y	-10.927	-11.091	.68	1.361
27	M11	Y	-11.091	-8.659	1.361	2.041
28	M11	Y	-8.659	-11.945	2.041	2.722
29	M12	Y	-6.537	-13.159	0	.68
30	M12	Y	-13.159	-11.903	.68	1.361
31	M12	Y	-11.903	-8.894	1.361	2.041
32	M12	Y	-8.894	-12.008	2.041	2.722
33	M67	Y	-3.267	-3.267	0	.659

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	-.015
2	N30	N27	N28	N31	Y	Two Way	-.015
3	N26	N25A	N24	N25	Y	Two Way	-.015

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	N86	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N1200B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N1202	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	N86	max	1774.627	4	2677.448	5	180.01	1	5.635	5	2.202	3	.465	3
2		min	-1773.301	3	570.374	9	-5698.807	6	.767	2	-2.201	4	-.418	4
3	N1200B	max	190.788	4	2667.469	8	2989.397	5	-.329	1	1.41	1	-.762	3
4		min	-4942.663	7	764.963	3	-657.462	2	-2.747	6	-1.408	2	-4.886	8
5	N1202	max	4914.95	8	2670.647	7	3032.22	5	-.298	9	1.647	2	4.806	7
6		min	-92.749	3	566.946	9	-855.169	2	-2.898	6	-1.647	1	.7	9
7	Totals:	max	4798.263	4	7944.542	5	4858.137	1						
8		min	-4798.264	3	2459.235	2	-4858.145	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 Mom...	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	118.754	2	-60.669	1	9.126	2	.493	9	.048	6	.875	9
4			min	-361.39	8	-309.285	6	-98.644	8	-.253	8	-.02	1	.098	2
5		3	max	118.754	2	-75.948	1	39.182	2	.493	9	.084	2	1.446	9
6			min	-361.39	8	-354.223	6	-106.097	5	-.253	8	-.164	5	.259	4
7		4	max	159.399	3	640.733	8	142.561	5	.867	9	.087	2	1.348	9
8			min	-283.573	4	146.629	3	-61.59	2	-.034	1	-.188	5	.115	4
9		5	max	151.511	2	134.361	8	26.626	8	0	8	.025	8	.035	9
10			min	-224.441	1	20.215	3	-8.095	1	0	3	-.009	3	-.029	8
11	M5	1	max	303.738	7	-294.813	1	51.702	1	-.011	4	.01	2	-.151	3
12			min	-150.126	4	-1099.461	6	-62.661	9	-.045	9	-.009	1	-.989	9
13		2	max	139.629	4	-305.74	1	-.01	1	.02	9	0	4	.72	8
14			min	-2775.862	7	-1101.274	6	-.761	6	-.004	4	0	7	.173	4
15		3	max	0	11	3.442	7	1.732	3	0	1	0	4	0	5
16			min	-1	3	.969	4	-1.732	4	0	1	0	3	0	4
17		4	max	168.295	2	1036.906	8	2.3	5	.004	2	0	2	.706	5
18			min	-2814.23	5	268.965	3	-.188	2	-.023	9	0	5	.103	2
19		5	max	275.493	5	1040.341	8	76.167	4	.044	8	.014	4	-.059	1
20			min	-124.954	2	258.502	3	-64.376	3	.011	3	-.012	3	-.652	8
21	M7	1	max	368.912	1	-32.81	9	58.932	2	-.004	9	.011	1	.267	9
22			min	-223.434	2	-1101.829	7	-66.815	1	-.043	5	-.01	2	-.703	7
23		2	max	135.059	2	-73.292	9	.159	4	.005	9	0	2	.723	5
24			min	-2764.385	5	-1102.153	7	-.803	7	-.004	2	0	5	.098	2
25		3	max	0	11	3.443	8	1.732	4	0	1	0	3	0	5
26			min	-1	4	.969	3	-1.732	3	0	1	0	4	0	3
27		4	max	134.448	3	1033.772	6	2.297	8	.004	2	0	3	.702	7
28			min	-2814.443	8	277.765	4	-.19	3	-.001	9	0	8	.071	9
29		5	max	258.726	8	1035.852	6	89.611	2	.044	6	.017	2	-.105	4
30			min	-80.732	3	258.98	4	-77.866	1	.011	1	-.015	1	-.65	6
31	M8	1	max	28.109	4	140.353	5	310.893	3	.006	3	.043	4	.26	5
32			min	-242.172	7	-.911	9	-182.157	4	-.021	8	-.063	3	.022	9
33		2	max	28.109	4	138.891	5	310.893	3	.006	3	.031	4	.25	5
34			min	-242.172	7	-1.312	9	-182.157	4	-.021	8	-.042	3	.022	9
35		3	max	28.109	4	137.43	5	310.893	3	.006	3	.019	4	.241	5
36			min	-242.172	7	-1.714	9	-182.157	4	-.021	8	-.022	3	.022	9

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 Mom...	LC
37		4	max	28.109	4	135.969	5	310.893	3	.006	3	.011	8	.232	5
38			min	-242.172	7	-2.115	9	-182.157	4	-.021	8	-.001	3	.022	9
39		5	max	28.109	4	134.508	5	310.893	3	.006	3	.026	7	.224	5
40			min	-242.172	7	-2.517	9	-182.157	4	-.021	8	-.005	4	.022	9
41	M9	1	max	329.021	4	-289.503	2	64.043	3	-.011	1	.012	4	-.143	4
42			min	-183.692	3	-1102.641	5	-72.189	4	-.043	8	-.011	3	-.695	8
43		2	max	135.873	1	-308.962	2	-.043	2	.001	9	0	3	.728	5
44			min	-2788.609	6	-1101.501	8	-.766	5	-.002	1	0	8	.068	9
45		3	max	0	1	-.961	1	2.309	1	0	1	0	1	0	8
46			min	-.001	6	-3.415	6	-2.309	2	0	1	0	2	0	1
47		4	max	124.718	1	1036.756	5	2.202	7	.003	1	0	4	.711	5
48			min	-2819.781	6	80.326	9	.243	4	-.003	9	0	7	.122	4
49		5	max	274.197	7	1044.748	5	84.457	3	.044	7	.015	3	.14	9
50			min	-117.806	4	45.609	9	-72.042	4	.005	9	-.014	4	-.647	5
51	M10	1	max	259.196	7	29.556	8	30	6	0	9	.016	2	.057	1
52			min	-50.162	4	-10.589	3	-19.586	9	-.002	6	-.042	5	-.057	2
53		2	max	259.196	7	29.758	5	8.799	2	0	9	.021	2	.042	1
54			min	-50.162	4	-11.905	2	-26.462	9	-.002	6	-.026	1	-.047	2
55		3	max	259.196	7	39.625	1	1.439	2	0	9	.013	2	.015	1
56			min	-50.162	4	-25.373	2	-33.822	9	-.002	6	-.025	9	-.062	9
57		4	max	259.196	7	53.093	1	-5.237	2	0	9	.003	1	-.012	4
58			min	-50.162	4	-38.84	2	-52.552	5	-.002	6	-.033	9	-.099	9
59		5	max	259.196	7	66.56	1	-9.313	2	0	9	.024	1	.009	2
60			min	-50.162	4	-52.307	2	-68.251	5	-.002	6	-.043	9	-.14	9
61	M11	1	max	267.639	8	26.901	6	25.979	7	.002	6	.029	2	.077	2
62			min	-52.899	3	-4.877	1	-7.98	2	0	9	-.046	1	-.078	1
63		2	max	267.639	8	11.387	2	35.415	1	.002	6	.029	2	.059	2
64			min	-52.899	3	-10.745	1	-21.448	2	0	9	-.033	1	-.056	1
65		3	max	267.639	8	4.395	2	48.882	1	.002	6	.016	2	.037	2
66			min	-52.899	3	-27.138	5	-34.915	2	0	9	-.017	1	-.022	1
67		4	max	267.639	8	-2.195	2	62.35	1	.002	6	.004	1	.064	8
68			min	-52.899	3	-51.575	5	-48.382	2	0	9	-.009	6	.005	3
69		5	max	267.639	8	-6.266	2	75.817	1	.002	6	.03	1	.124	5
70			min	-52.899	3	-67.255	5	-61.85	2	0	9	-.044	2	-.019	2
71	M12	1	max	249.869	8	32.987	2	29.746	5	0	2	.027	1	.072	2
72			min	-20.724	3	-18.862	1	-.294	2	-.002	7	-.046	2	-.073	1
73		2	max	252.001	8	36.354	2	7.647	1	0	2	.021	1	.049	2
74			min	-26.555	3	-22.229	1	-7.171	2	-.002	7	-.027	2	-.053	1
75		3	max	254.132	8	39.721	2	.286	1	0	2	.009	1	.019	2
76			min	-32.387	3	-25.596	1	-27.552	6	-.002	7	-.011	2	-.039	5
77		4	max	256.264	8	43.088	2	-6.391	1	0	2	.004	2	-.015	3
78			min	-38.218	3	-28.963	1	-52.294	6	-.002	7	-.012	5	-.068	8
79		5	max	258.396	8	47.9	4	-10.468	1	0	2	.016	2	-.004	3
80			min	-44.05	3	-33.653	3	-67.994	6	-.002	7	-.039	7	-.126	8
81	M13	1	max	264.236	6	28.362	7	27.649	8	.002	7	.025	3	.071	3
82			min	-47.921	1	-2.558	4	-8.633	3	0	4	-.042	4	-.073	4
83		2	max	266.368	6	9.31	3	32.667	4	.002	7	.025	3	.055	3
84			min	-53.752	1	-9.177	4	-18.733	3	0	4	-.029	4	-.052	4
85		3	max	268.499	6	2.671	3	42.767	4	.002	7	.014	3	.037	3
86			min	-59.584	1	-26.59	8	-28.834	3	0	4	-.014	4	-.022	4
87		4	max	270.631	6	-3.987	3	52.868	4	.002	7	.003	4	.064	6
88			min	-65.415	1	-51.265	8	-38.934	3	0	4	-.009	7	.007	1
89		5	max	272.763	6	-7.944	3	62.968	4	.002	7	.023	4	.122	8
90			min	-71.247	1	-66.549	8	-49.035	3	0	4	-.038	7	-.005	3
91	M14	1	max	256.986	6	28.9	7	30.155	8	0	9	.026	4	.073	3
92			min	-44.658	1	-10.545	4	-2.656	3	-.002	5	-.044	3	-.074	4
93		2	max	259.118	6	34.909	3	9.44	4	0	9	.025	4	.052	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 Mom...	LC
94			min	-50.49	1	-20.645	4	-9.97	3	-.002	5	-.03	3	-.056	4
95		3	max	261.25	6	45.01	3	2.37	4	0	9	.013	4	.019	3
96			min	-56.321	1	-30.746	4	-28.911	7	-.002	5	-.014	3	-.042	8
97		4	max	263.382	6	55.11	3	-3.683	4	0	9	.004	3	-.013	1
98			min	-62.153	1	-40.846	4	-51.485	7	-.002	5	-.013	8	-.071	6
99		5	max	265.513	6	65.211	3	-7.334	4	0	9	.025	3	.008	4
100			min	-67.984	1	-50.947	4	-65.706	7	-.002	5	-.042	8	-.131	7
101	M15	1	max	256.131	7	26.059	8	28.596	6	.002	8	.02	4	.056	4
102			min	-28.973	4	-15.343	9	-6.804	1	0	2	-.038	6	-.058	3
103		2	max	258.262	7	8.553	4	29.827	6	.002	8	.021	4	.046	9
104			min	-34.804	4	-21.211	9	-15.787	4	0	2	-.025	3	-.04	3
105		3	max	260.394	7	1.561	4	39.818	3	.002	8	.011	4	.072	9
106			min	-40.636	4	-28.203	9	-25.888	4	0	2	-.025	9	-.017	2
107		4	max	262.526	7	-5.034	4	49.918	3	.002	8	.005	3	.101	9
108			min	-46.467	4	-50.742	7	-35.988	4	0	2	-.034	9	.01	2
109		5	max	264.658	7	-9.107	4	60.019	3	.002	8	.023	3	.134	9
110			min	-52.299	4	-66.429	7	-46.089	4	0	2	-.046	9	-.011	4
111	M16	1	max	522.521	4	171.984	9	174.921	1	0	9	.037	3	.031	9
112			min	-598.514	3	-1.425	1	-161.597	2	0	5	-.029	4	-.033	8
113		2	max	138.01	4	42.473	9	138.893	2	.27	9	.098	2	.632	8
114			min	-266.442	7	-707.766	7	-214.859	1	-.502	7	-.185	1	.029	3
115		3	max	100.123	2	353.915	8	112.839	5	.129	5	.13	2	.961	8
116			min	-369.977	7	59.575	9	-54.083	2	.022	2	-.207	1	.168	9
117		4	max	100.123	2	308.977	8	102.156	5	.129	5	.059	2	.365	5
118			min	-369.977	7	44.295	9	-24.027	2	.022	2	-.039	1	.074	9
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	M36	1	max	5698.807	6	2693.227	5	1776.115	4	.418	4	2.202	3	5.635	5
122			min	-180.01	1	571.132	9	-1774.668	3	-.465	3	-2.201	4	.767	2
123		2	max	5698.807	6	2664.952	5	1752.227	4	.418	4	.872	3	3.614	5
124			min	-180.01	1	559.969	9	-1750.78	3	-.465	3	-.87	4	.203	2
125		3	max	5698.807	6	2636.676	5	1728.34	4	.418	4	.443	4	1.615	5
126			min	-180.01	1	548.805	9	-1726.893	3	-.465	3	-.439	3	-.354	2
127		4	max	3473.993	6	1623.13	5	415.362	3	.317	3	.81	4	.153	5
128			min	788.892	9	332.058	9	-360.411	4	-.34	4	-.807	3	-.032	2
129		5	max	0	1	0	1	0	1	0	1	0	1	0	1
130			min	0	1	0	1	0	1	0	1	0	1	0	1
131	M44	1	max	427.505	5	728.208	3	369.683	1	0	4	.033	5	0	4
132			min	88.087	9	-766.239	4	-341.715	2	0	3	.007	9	0	3
133		2	max	427.505	5	728.208	3	369.683	1	0	4	.037	5	.02	4
134			min	88.087	9	-766.239	4	-341.715	2	0	3	0	2	-.019	3
135		3	max	427.505	5	728.208	3	369.683	1	0	4	.042	5	.038	4
136			min	88.087	9	-766.239	4	-341.715	2	0	3	-.008	2	-.036	3
137		4	max	427.505	5	728.208	3	369.683	1	0	4	.046	5	.057	4
138			min	88.087	9	-766.239	4	-341.715	2	0	3	-.016	2	-.054	3
139		5	max	427.505	5	728.208	3	369.683	1	0	4	.05	5	.075	4
140			min	88.087	9	-766.239	4	-341.715	2	0	3	-.024	2	-.072	3
141	M45	1	max	50.751	5	164.354	3	44.532	2	0	4	.065	5	.002	4
142			min	10.58	9	-175.541	4	-148.833	5	0	3	.013	9	-.002	3
143		2	max	50.751	5	164.354	3	44.532	2	0	4	.061	8	.006	4
144			min	10.58	9	-175.541	4	-148.833	5	0	3	.014	9	-.005	3
145		3	max	50.751	5	164.354	3	44.532	2	0	4	.059	6	.01	4
146			min	10.58	9	-175.541	4	-148.833	5	0	3	.014	9	-.009	3
147		4	max	50.751	5	164.354	3	44.532	2	0	4	.056	6	.014	4
148			min	10.58	9	-175.541	4	-148.833	5	0	3	.012	1	-.013	3
149		5	max	50.751	5	164.354	3	44.532	2	0	4	.054	6	.019	4
150			min	10.58	9	-175.541	4	-148.833	5	0	3	.01	1	-.017	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 Mom...	LC
151	M46	1	max	40.436	5	28.903	4	43.382	2	0	4	.063	5	.001	4
152			min	8.326	9	-36.643	9	-97.67	5	0	3	.013	9	-.001	3
153		2	max	40.436	5	28.903	4	43.382	2	0	4	.061	5	.001	9
154			min	8.326	9	-36.643	9	-97.67	5	0	3	.013	9	0	3
155		3	max	40.436	5	28.903	4	43.382	2	0	4	.059	6	.002	9
156			min	8.326	9	-36.643	9	-97.67	5	0	3	.014	9	0	4
157		4	max	40.436	5	28.903	4	43.382	2	0	4	.058	6	.003	9
158			min	8.326	9	-36.643	9	-97.67	5	0	3	.014	9	0	4
159		5	max	40.436	5	28.903	4	43.382	2	0	4	.056	6	.004	9
160			min	8.326	9	-36.643	9	-97.67	5	0	3	.012	1	-.002	4
161	M47	1	max	9.781	6	100.805	4	35.671	2	0	4	.061	5	0	4
162			min	2.113	1	-104.367	3	-85.749	5	0	3	.013	9	0	3
163		2	max	9.781	6	100.805	4	35.671	2	0	4	.059	5	.002	3
164			min	2.113	1	-104.367	3	-85.749	5	0	3	.013	9	-.002	4
165		3	max	9.781	6	100.805	4	35.671	2	0	4	.058	6	.005	3
166			min	2.113	1	-104.367	3	-85.749	5	0	3	.013	9	-.004	4
167		4	max	9.781	6	100.805	4	35.671	2	0	4	.056	6	.007	3
168			min	2.113	1	-104.367	3	-85.749	5	0	3	.013	9	-.007	4
169		5	max	9.781	6	100.805	4	35.671	2	0	4	.055	6	.01	3
170			min	2.113	1	-104.367	3	-85.749	5	0	3	.012	1	-.009	4
171	M48	1	max	-68.55	9	726.692	4	216.608	6	0	4	.03	5	0	4
172			min	-336.639	5	-699.799	3	-35.68	1	0	3	.006	9	0	3
173		2	max	-68.55	9	726.692	4	216.608	6	0	4	.035	6	.017	3
174			min	-336.639	5	-699.799	3	-35.68	1	0	3	.008	9	-.018	4
175		3	max	-68.55	9	726.692	4	216.608	6	0	4	.04	6	.034	3
176			min	-336.639	5	-699.799	3	-35.68	1	0	3	.008	1	-.035	4
177		4	max	-68.55	9	726.692	4	216.608	6	0	4	.045	6	.051	3
178			min	-336.639	5	-699.799	3	-35.68	1	0	3	.007	1	-.053	4
179		5	max	-68.55	9	726.692	4	216.608	6	0	4	.05	6	.068	3
180			min	-336.639	5	-699.799	3	-35.68	1	0	3	.006	1	-.071	4
181	M46A	1	max	576.546	4	299.771	8	1618.94	9	0	1	.283	5	.031	9
182			min	-1551.817	9	-38.839	3	-19.965	3	0	1	-.111	9	-.055	6
183		2	max	576.546	4	299.771	8	1618.94	9	0	1	.294	5	.029	9
184			min	-1551.817	9	-38.839	3	-19.965	3	0	1	-.062	9	-.063	6
185		3	max	576.546	4	299.771	8	1618.94	9	0	1	.305	5	.028	9
186			min	-1551.817	9	-38.839	3	-19.965	3	0	1	-.012	9	-.071	6
187		4	max	576.546	4	299.771	8	1618.94	9	0	1	.316	5	.026	9
188			min	-1551.817	9	-38.839	3	-19.965	3	0	1	-.009	2	-.078	6
189		5	max	576.546	4	299.771	8	1618.94	9	0	1	.327	5	.025	9
190			min	-1551.817	9	-38.839	3	-19.965	3	0	1	-.005	2	-.087	8
191	M47A	1	max	1522.583	9	156.042	7	260.506	1	0	1	.185	9	.053	7
192			min	-1100.285	2	-454.031	9	-754.097	9	0	1	-.051	2	-.014	4
193		2	max	1522.583	9	156.042	7	260.506	1	0	1	.162	9	.049	7
194			min	-1100.285	2	-454.031	9	-754.097	9	0	1	-.061	2	-.013	4
195		3	max	1522.583	9	156.042	7	260.506	1	0	1	.14	9	.061	9
196			min	-1100.285	2	-454.031	9	-754.097	9	0	1	-.071	2	-.012	4
197		4	max	1522.583	9	156.042	7	260.506	1	0	1	.117	9	.075	9
198			min	-1100.285	2	-454.031	9	-754.097	9	0	1	-.081	2	-.011	4
199		5	max	1522.583	9	156.042	7	260.506	1	0	1	.094	9	.089	9
200			min	-1100.285	2	-454.031	9	-754.097	9	0	1	-.091	2	-.01	4
201	M48A	1	max	461.783	2	819.686	9	207.724	1	0	1	.083	9	.196	5
202			min	-2356.764	5	-122.296	1	-547.162	9	0	1	-.007	2	-.011	2
203		2	max	461.783	2	819.686	9	207.724	1	0	1	.066	9	.191	5
204			min	-2356.764	5	-122.296	1	-547.162	9	0	1	-.014	2	-.018	2
205		3	max	461.783	2	819.686	9	207.724	1	0	1	.064	5	.187	5
206			min	-2356.764	5	-122.296	1	-547.162	9	0	1	-.022	2	-.024	2
207		4	max	461.783	2	819.686	9	207.724	1	0	1	.063	5	.182	5

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 Mom...	LC
208			min	-2356.764	5	-122.296	1	-547.162	9	0	1	-.029	2	-.031	2
209		5	max	461.783	2	819.686	9	207.724	1	0	1	.066	1	.177	5
210			min	-2356.764	5	-122.296	1	-547.162	9	0	1	-.036	2	-.038	2
211	M54B	1	max	0	1	.003	7	0	2	0	1	0	1	0	1
212			min	0	1	-.003	5	0	4	0	1	0	1	0	1
213		2	max	218.15	1	-57.149	4	28.173	1	-.046	2	.049	7	.417	8
214			min	-397.59	2	-310.523	7	-103.712	6	-.255	7	-.027	4	.106	2
215		3	max	231.165	1	-72.428	4	35.687	1	-.046	2	.061	1	1.016	7
216			min	-410.604	2	-355.461	7	-106.383	6	-.255	7	-.158	6	.243	4
217		4	max	282.514	1	636.375	6	137.899	6	.338	6	.058	1	.745	5
218			min	-406.563	2	159.83	1	-46.202	1	.033	4	-.182	6	.124	2
219		5	max	243.536	1	133.433	6	26.919	8	0	6	.026	6	-.003	1
220			min	-316.824	2	23.912	1	-.32	9	0	1	-.011	1	-.029	6
221	M55B	1	max	652.229	3	65.467	7	156.452	4	0	3	.036	1	-.004	1
222			min	-728.056	4	1.689	4	-143.079	3	0	8	-.029	2	-.032	6
223		2	max	199.213	3	-173.253	2	126.272	3	-.074	4	.065	3	.622	6
224			min	-315.695	4	-705.288	5	-202.131	4	-.499	6	-.18	8	.099	1
225		3	max	222.608	3	354.49	6	111.893	8	.133	5	.105	3	.96	6
226			min	-404.696	4	87.834	4	-42.397	3	.031	9	-.182	4	.249	1
227		4	max	209.594	3	309.552	6	103.881	8	.133	5	.049	3	.362	8
228			min	-393.267	8	72.555	4	-19.855	3	.031	9	-.029	4	.092	3
229		5	max	0	1	.007	7	0	2	0	1	0	1	0	1
230			min	0	1	-.008	5	-.003	4	0	1	0	1	0	1
231	M56B	1	max	467.33	2	296.473	6	406.229	9	0	8	.279	6	-.007	2
232			min	-345.013	1	-32.966	1	-186.02	1	0	11	.013	3	-.054	5
233		2	max	467.33	2	296.473	6	406.229	9	0	8	.291	6	-.012	2
234			min	-345.013	1	-32.966	1	-186.02	1	0	11	.009	1	-.061	5
235		3	max	467.33	2	296.473	6	406.229	9	0	8	.304	6	-.018	2
236			min	-345.013	1	-32.966	1	-186.02	1	0	11	.003	1	-.068	7
237		4	max	467.33	2	296.473	6	406.229	9	0	8	.316	6	-.022	4
238			min	-345.013	1	-32.966	1	-186.02	1	0	11	-.002	1	-.077	7
239		5	max	467.33	2	296.473	6	406.229	9	0	8	.328	6	-.023	4
240			min	-345.013	1	-32.966	1	-186.02	1	0	11	-.008	1	-.085	6
241	M57B	1	max	72.437	4	166.451	5	63.775	4	0	5	.013	4	.052	5
242			min	-825.214	7	-93.848	9	-203.243	9	0	6	-.04	3	-.009	2
243		2	max	72.437	4	166.451	5	63.775	4	0	5	.015	4	.047	5
244			min	-825.214	7	-93.848	9	-203.243	9	0	6	-.044	3	-.008	2
245		3	max	72.437	4	166.451	5	63.775	4	0	5	.017	4	.042	8
246			min	-825.214	7	-93.848	9	-203.243	9	0	6	-.048	3	-.006	2
247		4	max	72.437	4	166.451	5	63.775	4	0	5	.019	4	.038	8
248			min	-825.214	7	-93.848	9	-203.243	9	0	6	-.053	3	-.005	2
249		5	max	72.437	4	166.451	5	63.775	4	0	5	.021	4	.033	8
250			min	-825.214	7	-93.848	9	-203.243	9	0	6	-.057	3	-.003	2
251	M58A	1	max	215.463	3	218.909	9	93.762	4	0	9	.064	8	.194	8
252			min	-2304.454	8	-24.578	4	-139.027	9	0	7	-.005	3	-.003	3
253		2	max	215.463	3	218.909	9	93.762	4	0	9	.063	8	.189	8
254			min	-2304.454	8	-24.578	4	-139.027	9	0	7	-.008	3	-.007	3
255		3	max	215.463	3	218.909	9	93.762	4	0	9	.062	8	.183	8
256			min	-2304.454	8	-24.578	4	-139.027	9	0	7	-.012	3	-.011	3
257		4	max	215.463	3	218.909	9	93.762	4	0	9	.061	8	.178	8
258			min	-2304.454	8	-24.578	4	-139.027	9	0	7	-.016	3	-.014	3
259		5	max	215.463	3	218.909	9	93.762	4	0	9	.06	8	.173	8
260			min	-2304.454	8	-24.578	4	-139.027	9	0	7	-.019	3	-.018	3
261	M68	1	max	0	1	.003	5	.001	3	0	1	0	1	0	1
262			min	0	1	-.003	8	0	2	0	1	0	1	0	1
263		2	max	225.787	4	-53.625	9	26.941	4	-.023	9	.045	5	.421	7
264			min	-405.264	3	-311.216	5	-101.81	7	-.259	5	-.02	2	.077	9

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 Mom...	LC
265		3	max	238.801	4	-68.905	9	49.483	4	-.023	9	.091	4	1.022	5
266			min	-418.278	3	-356.154	5	-109.822	7	-.259	5	-.167	7	.188	9
267		4	max	255.294	4	640.909	5	144.667	7	.331	6	.096	4	.74	6
268			min	-379.875	3	-38.809	9	-66.15	4	-.142	9	-.192	7	.162	4
269		5	max	283.182	4	131.374	5	27.66	4	0	5	.025	7	.029	9
270			min	-356.786	3	-63.185	9	-14.275	3	0	9	-.005	4	-.028	5
271	M69	1	max	664.624	1	65.843	8	119.357	3	0	4	.033	2	.029	9
272			min	-740.263	2	3.104	3	-106.248	4	0	7	-.025	1	-.032	5
273		2	max	220.218	1	-172.067	1	84.584	4	-.071	3	.079	4	1.268	9
274			min	-336.536	2	-703.846	6	-161.89	7	-.752	9	-.176	7	.05	2
275		3	max	194.316	1	565.738	9	105.489	7	.132	5	.094	4	1.367	9
276			min	-401.838	6	81.223	2	-34.835	4	.017	2	-.171	3	.214	2
277		4	max	181.301	1	550.459	9	101.476	6	.132	5	.051	4	.361	7
278			min	-397.212	6	65.943	2	-12.293	4	.017	2	-.031	3	.081	2
279		5	max	0	1	.007	7	.002	3	0	1	0	1	0	1
280			min	0	1	-.008	6	-.002	2	0	1	0	1	0	1
281	M70	1	max	453.915	1	295.919	5	400.317	7	0	5	.281	7	.025	9
282			min	-1416.389	9	-23.593	4	-320.714	9	0	8	-.009	4	-.056	8
283		2	max	453.915	1	295.919	5	400.317	7	0	5	.293	7	.024	9
284			min	-1416.389	9	-23.593	4	-320.714	9	0	8	-.012	4	-.063	8
285		3	max	453.915	1	295.919	5	400.317	7	0	5	.306	7	.024	9
286			min	-1416.389	9	-23.593	4	-320.714	9	0	8	-.015	9	-.071	8
287		4	max	453.915	1	295.919	5	400.317	7	0	5	.318	7	.024	9
288			min	-1416.389	9	-23.593	4	-320.714	9	0	8	-.025	9	-.078	8
289		5	max	453.915	1	295.919	5	400.317	7	0	5	.33	7	.023	9
290			min	-1416.389	9	-23.593	4	-320.714	9	0	8	-.035	9	-.086	8
291	M71	1	max	1345.054	9	151.657	8	243.545	3	0	6	.115	9	.061	9
292			min	-1042.067	4	12.023	1	-313.294	4	0	3	-.043	4	-.01	1
293		2	max	1345.054	9	151.657	8	243.545	3	0	6	.12	9	.059	9
294			min	-1042.067	4	12.023	1	-313.294	4	0	3	-.053	4	-.01	1
295		3	max	1345.054	9	151.657	8	243.545	3	0	6	.125	9	.057	9
296			min	-1042.067	4	12.023	1	-313.294	4	0	3	-.062	4	-.011	1
297		4	max	1345.054	9	151.657	8	243.545	3	0	6	.13	9	.055	9
298			min	-1042.067	4	12.023	1	-313.294	4	0	3	-.072	4	-.011	1
299		5	max	1345.054	9	151.657	8	243.545	3	0	6	.135	9	.053	9
300			min	-1042.067	4	12.023	1	-313.294	4	0	3	-.081	4	-.011	1
301	M72	1	max	311.927	4	187.324	6	157.081	3	0	7	.064	7	.194	7
302			min	-2321.813	7	-166.525	9	-185.478	4	0	5	-.005	4	-.003	4
303		2	max	311.927	4	187.324	6	157.081	3	0	7	.063	7	.189	7
304			min	-2321.813	7	-166.525	9	-185.478	4	0	5	-.011	4	-.007	4
305		3	max	311.927	4	187.324	6	157.081	3	0	7	.063	7	.184	7
306			min	-2321.813	7	-166.525	9	-185.478	4	0	5	-.016	4	-.012	4
307		4	max	311.927	4	187.324	6	157.081	3	0	7	.062	7	.179	7
308			min	-2321.813	7	-166.525	9	-185.478	4	0	5	-.022	4	-.016	4
309		5	max	311.927	4	187.324	6	157.081	3	0	7	.061	7	.173	7
310			min	-2321.813	7	-166.525	9	-185.478	4	0	5	-.028	4	-.021	4
311	M55A	1	max	28.114	4	140.383	5	311.165	3	.006	3	.077	4	.286	5
312			min	-242.174	7	-.911	9	-182.122	4	-.021	8	-.121	3	.022	9
313		2	max	28.114	4	140.383	5	311.165	3	.006	3	.068	4	.279	5
314			min	-242.174	7	-.911	9	-182.122	4	-.021	8	-.106	3	.022	9
315		3	max	28.114	4	140.383	5	311.165	3	.006	3	.06	4	.273	5
316			min	-242.174	7	-.911	9	-182.122	4	-.021	8	-.092	3	.022	9
317		4	max	28.114	4	140.383	5	311.165	3	.006	3	.051	4	.266	5
318			min	-242.174	7	-.911	9	-182.122	4	-.021	8	-.077	3	.022	9
319		5	max	28.114	4	140.383	5	311.165	3	.006	3	.043	4	.26	5
320			min	-242.174	7	-.911	9	-182.122	4	-.021	8	-.063	3	.022	9
321	M56A	1	max	13.966	4	23.105	9	171.804	3	.024	7	.119	4	.139	5

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 Mom...	LC
322			min	-246.478	5	-52.125	5	-302.343	4	-.006	4	-.075	3	.035	9
323		2	max	13.966	4	23.105	9	171.804	3	.024	7	.104	4	.142	5
324			min	-246.478	5	-52.125	5	-302.343	4	-.006	4	-.067	3	.034	9
325		3	max	13.966	4	23.105	9	171.804	3	.024	7	.09	4	.144	5
326			min	-246.478	5	-52.125	5	-302.343	4	-.006	4	-.059	3	.033	9
327		4	max	13.966	4	23.105	9	171.804	3	.024	7	.076	4	.146	5
328			min	-246.478	5	-52.125	5	-302.343	4	-.006	4	-.051	3	.032	9
329		5	max	13.966	4	23.105	9	171.804	3	.024	7	.062	4	.149	5
330			min	-246.478	5	-52.125	5	-302.343	4	-.006	4	-.042	3	.03	9
331	M55C	1	max	8.397	3	137.983	6	283.222	1	.004	1	.036	2	.258	5
332			min	-249.81	8	-493.884	9	-154.282	2	-.042	9	-.056	1	-.5	9
333		2	max	7.498	3	136.522	6	283.741	1	.004	1	.026	2	.249	5
334			min	-249.576	8	-494.286	9	-154.801	2	-.042	9	-.038	1	-.467	9
335		3	max	6.599	3	135.061	6	284.26	1	.004	1	.016	2	.241	5
336			min	-249.343	8	-494.687	9	-155.32	2	-.042	9	-.019	1	-.435	9
337		4	max	5.7	3	133.6	6	284.779	1	.004	1	.011	7	.232	5
338			min	-249.11	8	-495.089	9	-155.839	2	-.042	9	-.004	4	-.403	9
339		5	max	4.802	3	132.138	6	285.298	1	.004	1	.025	5	.224	5
340			min	-248.877	8	-495.49	9	-156.358	2	-.042	9	-.004	2	-.37	9
341	M56C	1	max	8.397	3	138.012	6	283.377	1	.004	1	.065	2	.283	8
342			min	-249.81	8	-493.903	9	-154.316	2	-.042	9	-.109	1	-.592	9
343		2	max	8.397	3	138.012	6	283.377	1	.004	1	.058	2	.277	8
344			min	-249.81	8	-493.903	9	-154.316	2	-.042	9	-.096	1	-.569	9
345		3	max	8.397	3	138.012	6	283.377	1	.004	1	.051	2	.27	5
346			min	-249.81	8	-493.903	9	-154.316	2	-.042	9	-.083	1	-.546	9
347		4	max	8.397	3	138.012	6	283.377	1	.004	1	.044	2	.264	5
348			min	-249.81	8	-493.903	9	-154.316	2	-.042	9	-.069	1	-.523	9
349		5	max	8.397	3	138.012	6	283.377	1	.004	1	.036	2	.258	5
350			min	-249.81	8	-493.903	9	-154.316	2	-.042	9	-.056	1	-.5	9
351	M57A	1	max	27.2	3	470.623	9	164.636	4	.023	8	.113	3	.147	9
352			min	-260.498	8	-54.255	6	-295.221	3	-.005	3	-.069	4	.02	2
353		2	max	27.2	3	470.623	9	164.636	4	.023	8	.099	3	.139	5
354			min	-260.498	8	-54.255	6	-295.221	3	-.005	3	-.061	4	.02	2
355		3	max	27.2	3	470.623	9	164.636	4	.023	8	.085	3	.142	5
356			min	-260.498	8	-54.255	6	-295.221	3	-.005	3	-.053	4	.021	2
357		4	max	27.2	3	470.623	9	164.636	4	.023	8	.071	3	.144	5
358			min	-260.498	8	-54.255	6	-295.221	3	-.005	3	-.046	4	.022	2
359		5	max	27.2	3	470.623	9	164.636	4	.023	8	.058	3	.146	5
360			min	-260.498	8	-54.255	6	-295.221	3	-.005	3	-.038	4	.022	2
361	M58B	1	max	49.389	1	139.449	7	271.832	6	.005	2	.033	1	.255	6
362			min	-254.941	6	2.526	4	-126.433	1	-.021	5	-.053	2	.061	2
363		2	max	48.49	1	137.988	7	271.697	6	.005	2	.025	1	.246	6
364			min	-254.707	6	2.125	4	-125.914	1	-.021	5	-.036	2	.06	2
365		3	max	47.591	1	136.527	7	271.562	6	.005	2	.017	1	.237	6
366			min	-254.474	6	1.724	4	-125.395	1	-.021	5	-.02	2	.058	2
367		4	max	46.693	1	135.066	7	271.428	6	.005	2	.011	5	.229	6
368			min	-254.241	6	1.322	4	-124.876	1	-.021	5	-.003	2	.056	3
369		5	max	45.794	1	133.605	7	271.293	6	.005	2	.025	6	.22	6
370			min	-254.008	6	.921	4	-124.357	1	-.021	5	-.002	3	.053	3
371	M59	1	max	49.387	1	139.466	7	272.104	6	.005	2	.057	1	.28	6
372			min	-254.941	6	2.53	4	-126.383	1	-.021	5	-.101	2	.064	2
373		2	max	49.387	1	139.466	7	272.104	6	.005	2	.051	1	.274	6
374			min	-254.941	6	2.53	4	-126.383	1	-.021	5	-.089	2	.063	2
375		3	max	49.387	1	139.466	7	272.104	6	.005	2	.045	1	.267	6
376			min	-254.941	6	2.53	4	-126.383	1	-.021	5	-.077	2	.062	2
377		4	max	49.387	1	139.466	7	272.104	6	.005	2	.039	1	.261	6
378			min	-254.941	6	2.53	4	-126.383	1	-.021	5	-.065	2	.062	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 Mom...	LC
379		5	max	49.387	1	139.466	7	272.104	6	.005	2	.033	1	.255	6
380			min	-254.941	6	2.53	4	-126.383	1	-.021	5	-.053	2	.061	2
381	M60	1	max	44.5	1	14.662	4	220.904	2	.024	6	.137	1	.141	5
382			min	-259.954	6	-55.605	7	-351.381	1	-.008	1	-.093	2	.024	2
383		2	max	44.5	1	14.662	4	220.904	2	.024	6	.12	1	.143	5
384			min	-259.954	6	-55.605	7	-351.381	1	-.008	1	-.082	2	.024	2
385		3	max	44.5	1	14.662	4	220.904	2	.024	6	.104	1	.145	5
386			min	-259.954	6	-55.605	7	-351.381	1	-.008	1	-.072	2	.023	2
387		4	max	44.5	1	14.662	4	220.904	2	.024	6	.088	1	.148	5
388			min	-259.954	6	-55.605	7	-351.381	1	-.008	1	-.062	2	.023	2
389		5	max	44.5	1	14.662	4	220.904	2	.024	6	.071	1	.15	5
390			min	-259.954	6	-55.605	7	-351.381	1	-.008	1	-.051	2	.023	2
391	M64	1	max	30.794	3	60.113	6	170.681	4	.023	8	.027	7	.16	5
392			min	-261.43	8	-469.022	9	-301.489	3	-.005	3	-.006	4	-.064	9
393		2	max	29.896	3	58.652	6	169.124	4	.023	8	.012	5	.157	5
394			min	-261.197	8	-469.423	9	-299.932	3	-.005	3	-.003	2	-.033	9
395		3	max	28.997	3	57.191	6	167.567	4	.023	8	.016	4	.153	5
396			min	-260.964	8	-469.825	9	-298.375	3	-.005	3	-.019	3	-.002	9
397		4	max	28.098	3	55.73	6	166.011	4	.023	8	.027	4	.15	5
398			min	-260.731	8	-470.226	9	-296.819	3	-.005	3	-.038	3	.023	2
399		5	max	27.199	3	54.268	6	164.454	4	.023	8	.038	4	.146	5
400			min	-260.498	8	-470.628	9	-295.262	3	-.005	3	-.058	3	.022	2
401	M65	1	max	49.864	2	106.161	5	197.079	3	.013	4	.066	4	.239	5
402			min	-163.306	5	-8.805	9	-197.159	4	-.012	3	-.064	3	.023	9
403		2	max	49.864	2	100.993	5	197.079	3	.013	4	.033	4	.222	5
404			min	-163.306	5	-10.244	9	-197.159	4	-.012	3	-.032	3	.024	9
405		3	max	49.864	2	95.825	5	197.09	3	.013	4	.002	6	.205	5
406			min	-163.306	5	-11.685	9	-197.163	4	-.012	3	0	1	.026	9
407		4	max	49.864	2	90.623	5	197.09	3	.013	4	.033	3	.19	5
408			min	-163.306	5	-13.124	9	-197.163	4	-.012	3	-.032	4	.028	9
409		5	max	49.864	2	85.455	5	197.09	3	.013	4	.066	3	.175	5
410			min	-163.306	5	-14.563	9	-197.163	4	-.012	3	-.064	4	.03	9
411	M66	1	max	13.969	4	57.992	5	171.609	3	.024	7	.027	8	.163	5
412			min	-246.478	5	-21.498	9	-302.367	4	-.006	4	-.004	1	.025	9
413		2	max	13.969	4	56.53	5	171.609	3	.024	7	.012	7	.16	5
414			min	-246.478	5	-21.899	9	-302.367	4	-.006	4	-.003	4	.026	9
415		3	max	13.969	4	55.069	5	171.609	3	.024	7	.02	3	.156	5
416			min	-246.478	5	-22.301	9	-302.367	4	-.006	4	-.023	4	.027	9
417		4	max	13.969	4	53.608	5	171.609	3	.024	7	.031	3	.152	5
418			min	-246.478	5	-22.702	9	-302.367	4	-.006	4	-.042	4	.029	9
419		5	max	13.969	4	52.147	5	171.609	3	.024	7	.042	3	.149	5
420			min	-246.478	5	-23.104	9	-302.367	4	-.006	4	-.062	4	.03	9
421	M67	1	max	117.363	1	103.723	6	210.584	2	.012	1	.071	1	.234	7
422			min	-195.154	2	-1.394	4	-211.139	1	-.011	2	-.069	2	.047	2
423		2	max	115.103	1	99.293	6	209.28	2	.012	1	.036	1	.217	7
424			min	-192.895	2	-2.62	4	-209.834	1	-.011	2	-.035	2	.045	2
425		3	max	112.844	1	94.863	6	207.975	2	.012	1	.003	5	.201	7
426			min	-190.635	2	-3.847	4	-208.529	1	-.011	2	0	2	.042	2
427		4	max	110.584	1	90.434	6	206.67	2	.012	1	.034	2	.186	5
428			min	-188.375	2	-5.074	4	-207.225	1	-.011	2	-.033	1	.04	2
429		5	max	108.324	1	86.004	6	205.366	2	.012	1	.068	2	.172	5
430			min	-186.115	2	-6.3	4	-205.92	1	-.011	2	-.067	1	.038	2
431	M68A	1	max	48.101	1	61.468	7	222.704	2	.024	6	.027	5	.165	5
432			min	-260.886	6	-13.053	4	-353.545	1	-.008	1	-.007	2	.021	2
433		2	max	47.202	1	60.007	7	222.185	2	.024	6	.012	6	.161	5
434			min	-260.653	6	-13.454	4	-353.026	1	-.008	1	-.003	3	.021	2
435		3	max	46.304	1	58.545	7	221.666	2	.024	6	.023	2	.157	5

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 Mom...	LC
436			min	-260.42	6	-13.856	4	-352.507	1	-.008	1	-.025	1	.022	2
437		4	max	45.405	1	57.084	7	221.147	2	.024	6	.037	2	.154	5
438			min	-260.187	6	-14.257	4	-351.988	1	-.008	1	-.048	1	.022	2
439		5	max	44.506	1	55.623	7	220.629	2	.024	6	.051	2	.15	5
440			min	-259.954	6	-14.659	4	-351.47	1	-.008	1	-.071	1	.023	2
441	M69A	1	max	109.117	3	102.949	8	157.974	4	.01	2	.052	3	.236	8
442			min	-186.596	4	-477.842	9	-158.272	3	-.027	9	-.051	4	-.362	9
443		2	max	106.858	3	98.517	8	154.06	4	.01	2	.027	3	.219	5
444			min	-184.336	4	-479.069	9	-154.358	3	-.027	9	-.025	4	-.284	9
445		3	max	104.598	3	94.084	8	150.146	4	.01	2	.005	9	.204	5
446			min	-182.076	4	-480.297	9	-150.444	3	-.027	9	0	2	-.205	9
447		4	max	102.338	3	89.652	8	149.38	1	.01	2	.026	1	.189	5
448			min	-179.817	4	-481.524	9	-148.897	2	-.027	9	-.025	2	-.125	9
449		5	max	100.079	3	85.22	8	150.684	1	.01	2	.051	1	.175	5
450			min	-177.557	4	-482.752	9	-150.201	2	-.027	9	-.049	2	-.046	9
451	M67A	1	max	986.164	5	2064.127	4	1126.025	1	.719	4	.135	1	.165	3
452			min	205.189	9	-2117.759	3	-2221.021	6	-.712	3	-.194	2	-.157	4
453		2	max	986.164	5	2064.127	4	1126.025	1	.719	4	.217	1	.319	3
454			min	205.189	9	-2117.759	3	-2221.021	6	-.712	3	-.356	2	-.307	4
455		3	max	986.164	5	2064.127	4	1126.025	1	.719	4	.299	1	.474	3
456			min	205.189	9	-2117.759	3	-2221.021	6	-.712	3	-.517	2	-.458	4
457		4	max	986.164	5	2064.127	4	1126.025	1	.719	4	.381	1	.628	3
458			min	205.189	9	-2117.759	3	-2221.021	6	-.712	3	-.679	2	-.608	4
459		5	max	986.164	5	2064.127	4	1126.025	1	.719	4	.463	1	.782	3
460			min	205.189	9	-2117.759	3	-2221.021	6	-.712	3	-.841	2	-.758	4
461	M68B	1	max	13.29	5	192.775	4	-217.785	9	.23	4	.077	5	.011	3
462			min	2.103	9	-193.492	3	-961.115	6	-.219	3	.014	9	-.011	4
463		2	max	13.29	5	192.775	4	-217.785	9	.23	4	.009	1	.025	3
464			min	2.103	9	-193.492	3	-961.115	6	-.219	3	-.007	2	-.025	4
465		3	max	13.29	5	192.775	4	-217.785	9	.23	4	-.01	1	.039	3
466			min	2.103	9	-193.492	3	-961.115	6	-.219	3	-.067	6	-.039	4
467		4	max	13.29	5	192.775	4	-217.785	9	.23	4	-.03	1	.053	3
468			min	2.103	9	-193.492	3	-961.115	6	-.219	3	-.137	6	-.053	4
469		5	max	13.29	5	192.775	4	-217.785	9	.23	4	-.049	1	.067	3
470			min	2.103	9	-193.492	3	-961.115	6	-.219	3	-.207	6	-.067	4
471	M69B	1	max	-4.062	9	86.375	3	-216.716	9	.156	4	.071	5	.002	4
472			min	-20.298	8	-87.22	4	-970.941	8	-.146	3	.013	9	-.003	3
473		2	max	-4.062	9	86.375	3	-216.716	9	.156	4	.006	1	.009	4
474			min	-20.298	8	-87.22	4	-970.941	8	-.146	3	-.007	2	-.009	3
475		3	max	-4.062	9	86.375	3	-216.716	9	.156	4	-.015	1	.015	4
476			min	-20.298	8	-87.22	4	-970.941	8	-.146	3	-.074	6	-.015	3
477		4	max	-4.062	9	86.375	3	-216.716	9	.156	4	-.035	9	.021	4
478			min	-20.298	8	-87.22	4	-970.941	8	-.146	3	-.144	6	-.022	3
479		5	max	-4.062	9	86.375	3	-216.716	9	.156	4	-.05	9	.028	4
480			min	-20.298	8	-87.22	4	-970.941	8	-.146	3	-.215	6	-.028	3
481	M70A	1	max	32.074	5	130.456	3	-210.883	9	.1	4	.067	5	.009	4
482			min	4.669	9	-131.079	4	-954.348	8	-.091	3	.012	9	-.009	3
483		2	max	32.074	5	130.456	3	-210.883	9	.1	4	.004	1	.018	4
484			min	4.669	9	-131.079	4	-954.348	8	-.091	3	-.006	2	-.018	3
485		3	max	32.074	5	130.456	3	-210.883	9	.1	4	-.017	1	.028	4
486			min	4.669	9	-131.079	4	-954.348	8	-.091	3	-.075	6	-.028	3
487		4	max	32.074	5	130.456	3	-210.883	9	.1	4	-.034	9	.037	4
488			min	4.669	9	-131.079	4	-954.348	8	-.091	3	-.145	6	-.037	3
489		5	max	32.074	5	130.456	3	-210.883	9	.1	4	-.049	9	.047	4
490			min	4.669	9	-131.079	4	-954.348	8	-.091	3	-.214	6	-.047	3
491	M71A	1	max	1553.093	5	416.001	3	-121.307	1	.063	4	.014	5	.228	4
492			min	317.82	9	-358.931	4	-583.776	6	-.058	3	-.002	2	-.188	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 Mom...	LC
493		2	max	1553.093	5	416.001	3	-121.307	1	.063	4	-.002	1	.254	4
494			min	317.82	9	-358.931	4	-583.776	6	-.058	3	-.031	6	-.219	3
495		3	max	1553.093	5	416.001	3	-121.307	1	.063	4	-.01	1	.28	4
496			min	317.82	9	-358.931	4	-583.776	6	-.058	3	-.074	6	-.249	3
497		4	max	1553.093	5	416.001	3	-121.307	1	.063	4	-.019	1	.307	4
498			min	317.82	9	-358.931	4	-583.776	6	-.058	3	-.116	6	-.279	3
499		5	max	1553.093	5	416.001	3	-121.307	1	.063	4	-.028	1	.333	4
500			min	317.82	9	-358.931	4	-583.776	6	-.058	3	-.159	6	-.31	3
501	M72A	1	max	3463.78	7	135.624	1	2585.104	3	.003	4	.345	4	.027	1
502			min	-162.201	4	-1795.159	6	-1855.634	4	-.024	7	-.474	3	-.334	6
503		2	max	3463.78	7	135.624	1	2585.104	3	.003	4	.259	4	.02	1
504			min	-162.201	4	-1795.159	6	-1855.634	4	-.024	7	-.353	3	-.25	6
505		3	max	3463.78	7	135.624	1	2585.104	3	.003	4	.172	4	.014	1
506			min	-162.201	4	-1795.159	6	-1855.634	4	-.024	7	-.232	3	-.166	6
507		4	max	3463.78	7	135.624	1	2585.104	3	.003	4	.085	4	.008	1
508			min	-162.201	4	-1795.159	6	-1855.634	4	-.024	7	-.111	3	-.082	6
509		5	max	3463.78	7	135.624	1	2585.104	3	.003	4	.014	7	.002	5
510			min	-162.201	4	-1795.159	6	-1855.634	4	-.024	7	-.002	4	0	9
511	M73	1	max	3447.581	8	145.456	1	1867.19	3	.027	8	.483	4	.028	1
512			min	-153.11	3	-1746.45	6	-2635.777	4	-.003	3	-.348	3	-.326	6
513		2	max	3447.581	8	145.456	1	1867.19	3	.027	8	.359	4	.021	1
514			min	-153.11	3	-1746.45	6	-2635.777	4	-.003	3	-.261	3	-.244	6
515		3	max	3447.581	8	145.456	1	1867.19	3	.027	8	.236	4	.015	1
516			min	-153.11	3	-1746.45	6	-2635.777	4	-.003	3	-.173	3	-.162	6
517		4	max	3447.581	8	145.456	1	1867.19	3	.027	8	.113	4	.008	1
518			min	-153.11	3	-1746.45	6	-2635.777	4	-.003	3	-.086	3	-.081	6
519		5	max	3447.581	8	145.456	1	1867.19	3	.027	8	.002	3	.001	3
520			min	-153.11	3	-1746.45	6	-2635.777	4	-.003	3	-.016	8	0	4
521	M74	1	max	2979.148	6	-13.369	1	888.754	3	.009	4	.094	4	0	1
522			min	18.947	1	-1874.08	6	-538.62	4	-.046	7	-.143	3	-.34	6
523		2	max	2979.148	6	-13.369	1	888.754	3	.009	4	.069	4	.001	1
524			min	18.947	1	-1874.08	6	-538.62	4	-.046	7	-.102	3	-.254	6
525		3	max	2979.148	6	-13.369	1	888.754	3	.009	4	.044	4	.002	1
526			min	18.947	1	-1874.08	6	-538.62	4	-.046	7	-.061	3	-.168	6
527		4	max	2979.148	6	-13.369	1	888.754	3	.009	4	.02	4	.002	1
528			min	18.947	1	-1874.08	6	-538.62	4	-.046	7	-.02	3	-.081	6
529		5	max	2979.148	6	-13.369	1	888.754	3	.009	4	.029	7	.005	5
530			min	18.947	1	-1874.08	6	-538.62	4	-.046	7	-.005	4	0	9
531	M75	1	max	2988.264	6	-14.708	1	512.341	3	.051	8	.149	4	0	1
532			min	19.364	1	-1884.374	6	-930.491	4	-.008	3	-.09	3	-.343	6
533		2	max	2988.264	6	-14.708	1	512.341	3	.051	8	.107	4	0	1
534			min	19.364	1	-1884.374	6	-930.491	4	-.008	3	-.066	3	-.256	6
535		3	max	2988.264	6	-14.708	1	512.341	3	.051	8	.064	4	.001	1
536			min	19.364	1	-1884.374	6	-930.491	4	-.008	3	-.043	3	-.169	6
537		4	max	2988.264	6	-14.708	1	512.341	3	.051	8	.021	4	.002	1
538			min	19.364	1	-1884.374	6	-930.491	4	-.008	3	-.019	3	-.083	6
539		5	max	2988.264	6	-14.708	1	512.341	3	.051	8	.005	3	.004	7
540			min	19.364	1	-1884.374	6	-930.491	4	-.008	3	-.032	8	.001	9
541	M76	1	max	813.492	6	-36.159	1	620.582	3	.009	4	.059	4	-.005	1
542			min	39.293	1	-550.743	6	-359.027	4	-.045	7	-.091	3	-.096	6
543		2	max	813.492	6	-36.159	1	620.582	3	.009	4	.043	4	-.003	1
544			min	39.293	1	-550.743	6	-359.027	4	-.045	7	-.063	3	-.071	6
545		3	max	813.492	6	-36.159	1	620.582	3	.009	4	.027	4	-.001	1
546			min	39.293	1	-550.743	6	-359.027	4	-.045	7	-.035	3	-.046	6
547		4	max	813.492	6	-36.159	1	620.582	3	.009	4	.011	4	0	1
548			min	39.293	1	-550.743	6	-359.027	4	-.045	7	-.007	3	-.021	6
549		5	max	813.492	6	-36.159	1	620.582	3	.009	4	.028	7	.004	8

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 Mom...	LC
550			min	39.293	1	-550.743	6	-359.027	4	-.045	7	-.006	4	0	9
551	M77	1	max	816.523	6	-38.03	1	335.315	3	.05	8	.098	4	-.005	1
552			min	44.039	1	-558.009	6	-669.196	8	-.008	3	-.056	3	-.098	6
553		2	max	816.523	6	-38.03	1	335.315	3	.05	8	.068	4	-.003	1
554			min	44.039	1	-558.009	6	-669.196	8	-.008	3	-.04	3	-.072	6
555		3	max	816.523	6	-38.03	1	335.315	3	.05	8	.038	4	-.002	1
556			min	44.039	1	-558.009	6	-669.196	8	-.008	3	-.025	3	-.047	6
557		4	max	816.523	6	-38.03	1	335.315	3	.05	8	.008	4	0	1
558			min	44.039	1	-558.009	6	-669.196	8	-.008	3	-.01	3	-.022	6
559		5	max	816.523	6	-38.03	1	335.315	3	.05	8	.005	3	.004	7
560			min	44.039	1	-558.009	6	-669.196	8	-.008	3	-.032	8	0	4
561	M78	1	max	65.281	1	604.033	6	430.763	7	.007	4	.032	4	.113	6
562			min	-905.491	6	-33.484	1	-203.613	4	-.043	7	-.056	3	-.004	1
563		2	max	65.281	1	604.033	6	430.763	7	.007	4	.023	4	.086	6
564			min	-905.491	6	-33.484	1	-203.613	4	-.043	7	-.037	3	-.002	1
565		3	max	65.281	1	604.033	6	430.763	7	.007	4	.014	4	.059	6
566			min	-905.491	6	-33.484	1	-203.613	4	-.043	7	-.018	3	0	1
567		4	max	65.281	1	604.033	6	430.763	7	.007	4	.01	8	.032	6
568			min	-905.491	6	-33.484	1	-203.613	4	-.043	7	0	3	0	1
569		5	max	65.281	1	604.033	6	430.763	7	.007	4	.028	7	.006	5
570			min	-905.491	6	-33.484	1	-203.613	4	-.043	7	-.004	4	0	9
571	M79	1	max	68.345	1	600.423	6	180.833	3	.048	8	.068	8	.112	6
572			min	-905.774	6	-36.573	1	-557.314	8	-.006	3	-.029	3	-.004	1
573		2	max	68.345	1	600.423	6	180.833	3	.048	8	.044	8	.086	6
574			min	-905.774	6	-36.573	1	-557.314	8	-.006	3	-.021	3	-.003	1
575		3	max	68.345	1	600.423	6	180.833	3	.048	8	.021	4	.059	6
576			min	-905.774	6	-36.573	1	-557.314	8	-.006	3	-.013	3	-.001	1
577		4	max	68.345	1	600.423	6	180.833	3	.048	8	.001	9	.032	6
578			min	-905.774	6	-36.573	1	-557.314	8	-.006	3	-.007	5	0	1
579		5	max	68.345	1	600.423	6	180.833	3	.048	8	.004	3	.006	5
580			min	-905.774	6	-36.573	1	-557.314	8	-.006	3	-.031	8	.001	9
581	M80	1	max	389.689	1	5754.053	6	407.794	7	.006	4	.01	4	2.961	6
582			min	-6990.51	6	99.218	1	-68.355	4	-.023	7	-.068	7	.604	9
583		2	max	389.689	1	5754.053	6	407.794	7	.006	4	.007	4	2.715	7
584			min	-6990.51	6	99.218	1	-68.355	4	-.023	7	-.051	7	.535	9
585		3	max	389.689	1	5754.053	6	407.794	7	.006	4	.004	4	2.477	7
586			min	-6990.51	6	99.218	1	-68.355	4	-.023	7	-.033	7	.466	9
587		4	max	389.689	1	5754.053	6	407.794	7	.006	4	0	4	2.239	7
588			min	-6990.51	6	99.218	1	-68.355	4	-.023	7	-.015	7	.397	9
589		5	max	389.689	1	5754.053	6	407.794	7	.006	4	.003	5	2.014	5
590			min	-6990.51	6	99.218	1	-68.355	4	-.023	7	-.002	4	.328	9
591	M81	1	max	407.127	1	5748.671	6	55.026	3	.028	8	.078	8	3.052	6
592			min	-6923.38	6	93.077	1	-474.754	8	-.006	3	-.008	3	.685	1
593		2	max	407.127	1	5748.671	6	55.026	3	.028	8	.058	8	2.8	6
594			min	-6923.38	6	93.077	1	-474.754	8	-.006	3	-.005	3	.681	1
595		3	max	407.127	1	5748.671	6	55.026	3	.028	8	.037	8	2.56	8
596			min	-6923.38	6	93.077	1	-474.754	8	-.006	3	-.003	3	.638	3
597		4	max	407.127	1	5748.671	6	55.026	3	.028	8	.016	6	2.323	8
598			min	-6923.38	6	93.077	1	-474.754	8	-.006	3	0	1	.568	9
599		5	max	407.127	1	5748.671	6	55.026	3	.028	8	.002	3	2.09	5
600			min	-6923.38	6	93.077	1	-474.754	8	-.006	3	-.005	5	.492	9
601	M72B	1	max	425.781	8	412.371	2	426.243	3	0	2	-.004	3	-.008	1
602			min	119.95	3	-371.534	1	-408.449	4	0	1	-.016	8	-.029	6
603		2	max	425.781	8	412.371	2	426.243	3	0	2	.006	3	.001	1
604			min	119.95	3	-371.534	1	-408.449	4	0	1	-.02	9	-.033	6
605		3	max	425.781	8	412.371	2	426.243	3	0	2	.016	3	.01	1
606			min	119.95	3	-371.534	1	-408.449	4	0	1	-.027	9	-.041	9

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 Mom...	LC
607		4	max	425.781	8	412.371	2	426.243	3	0	2	.027	3	.019	1
608			min	119.95	3	-371.534	1	-408.449	4	0	1	-.035	4	-.05	9
609		5	max	425.781	8	412.371	2	426.243	3	0	2	.037	3	.028	1
610			min	119.95	3	-371.534	1	-408.449	4	0	1	-.045	4	-.059	9
611	M73A	1	max	50.476	6	46.932	3	126.395	2	0	4	-.008	3	-.015	1
612			min	14.143	1	-170.326	9	-81.395	1	0	3	-.032	8	-.056	6
613		2	max	50.476	6	46.932	3	126.395	2	0	4	-.006	2	-.014	1
614			min	14.143	1	-170.326	9	-81.395	1	0	3	-.031	5	-.054	6
615		3	max	50.476	6	46.932	3	126.395	2	0	4	-.003	2	-.012	4
616			min	14.143	1	-170.326	9	-81.395	1	0	3	-.029	5	-.052	7
617		4	max	50.476	6	46.932	3	126.395	2	0	4	0	2	-.01	4
618			min	14.143	1	-170.326	9	-81.395	1	0	3	-.028	5	-.05	7
619		5	max	50.476	6	46.932	3	126.395	2	0	4	.003	2	-.007	4
620			min	14.143	1	-170.326	9	-81.395	1	0	3	-.027	5	-.048	7
621	M74A	1	max	40.253	8	19.627	1	71.655	9	0	4	-.008	3	-.015	1
622			min	11.391	3	-120.143	9	-32.789	3	0	3	-.032	8	-.055	6
623		2	max	40.253	8	19.627	1	71.655	9	0	4	-.009	1	-.016	1
624			min	11.391	3	-120.143	9	-32.789	3	0	3	-.03	6	-.053	8
625		3	max	40.253	8	19.627	1	71.655	9	0	4	-.007	4	-.015	4
626			min	11.391	3	-120.143	9	-32.789	3	0	3	-.029	7	-.052	5
627		4	max	40.253	8	19.627	1	71.655	9	0	4	-.006	4	-.013	2
628			min	11.391	3	-120.143	9	-32.789	3	0	3	-.028	7	-.05	5
629		5	max	40.253	8	19.627	1	71.655	9	0	4	-.004	4	-.012	2
630			min	11.391	3	-120.143	9	-32.789	3	0	3	-.027	7	-.049	5
631	M75A	1	max	16.373	9	39.435	1	72.088	1	0	4	-.008	3	-.015	1
632			min	1.602	4	-102.661	9	-49.684	2	0	3	-.031	8	-.053	8
633		2	max	16.373	9	39.435	1	72.088	1	0	4	-.007	1	-.015	2
634			min	1.602	4	-102.661	9	-49.684	2	0	3	-.03	6	-.051	8
635		3	max	16.373	9	39.435	1	72.088	1	0	4	-.006	1	-.013	2
636			min	1.602	4	-102.661	9	-49.684	2	0	3	-.029	6	-.05	5
637		4	max	16.373	9	39.435	1	72.088	1	0	4	-.004	1	-.011	2
638			min	1.602	4	-102.661	9	-49.684	2	0	3	-.029	6	-.049	5
639		5	max	16.373	9	39.435	1	72.088	1	0	4	-.002	1	-.01	2
640			min	1.602	4	-102.661	9	-49.684	2	0	3	-.028	6	-.048	5
641	M76A	1	max	-93.786	3	338.231	1	378.881	1	0	4	-.004	3	-.007	3
642			min	-335.037	8	-247.229	2	-460.092	2	0	3	-.015	8	-.026	8
643		2	max	-93.786	3	338.231	1	378.881	1	0	4	.005	1	-.002	2
644			min	-335.037	8	-247.229	2	-460.092	2	0	3	-.021	6	-.031	5
645		3	max	-93.786	3	338.231	1	378.881	1	0	4	.014	1	.004	2
646			min	-335.037	8	-247.229	2	-460.092	2	0	3	-.027	2	-.036	5
647		4	max	-93.786	3	338.231	1	378.881	1	0	4	.023	1	.01	2
648			min	-335.037	8	-247.229	2	-460.092	2	0	3	-.038	2	-.041	5
649		5	max	-93.786	3	338.231	1	378.881	1	0	4	.033	1	.016	2
650			min	-335.037	8	-247.229	2	-460.092	2	0	3	-.049	2	-.046	5
651	M77A	1	max	982.685	8	1059.412	4	1953.751	1	.535	2	.154	1	.164	3
652			min	280.287	3	-1982.681	3	-1361.174	2	-.53	1	-.117	2	-.117	4
653		2	max	982.685	8	1059.412	4	1953.751	1	.535	2	.296	1	.308	3
654			min	280.287	3	-1982.681	3	-1361.174	2	-.53	1	-.216	2	-.194	4
655		3	max	982.685	8	1059.412	4	1953.751	1	.535	2	.438	1	.453	3
656			min	280.287	3	-1982.681	3	-1361.174	2	-.53	1	-.316	2	-.271	4
657		4	max	982.685	8	1059.412	4	1953.751	1	.535	2	.58	1	.597	3
658			min	280.287	3	-1982.681	3	-1361.174	2	-.53	1	-.415	2	-.348	4
659		5	max	982.685	8	1059.412	4	1953.751	1	.535	2	.723	1	.741	3
660			min	280.287	3	-1982.681	3	-1361.174	2	-.53	1	-.514	2	-.425	4
661	M78A	1	max	13.47	8	-190.01	1	506.071	5	.171	2	-.003	1	-.014	3
662			min	-14.198	9	-842.578	6	34.235	2	-.161	1	-.04	6	-.066	8
663		2	max	13.47	8	-190.01	1	506.071	5	.171	2	.015	1	.007	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 Mom...	LC
664			min	-14.198	9	-842.578	6	34.235	2	-.161	1	-.016	2	-.013	9
665		3	max	13.47	8	-190.01	1	506.071	5	.171	2	.038	5	.059	7
666			min	-14.198	9	-842.578	6	34.235	2	-.161	1	-.014	2	.006	4
667		4	max	13.47	8	-190.01	1	506.071	5	.171	2	.075	5	.12	7
668			min	-14.198	9	-842.578	6	34.235	2	-.161	1	-.011	2	.021	1
669		5	max	13.47	8	-190.01	1	506.071	5	.171	2	.112	5	.181	6
670			min	-14.198	9	-842.578	6	34.235	2	-.161	1	-.009	2	.035	1
671	M79A	1	max	-4.751	4	-217.144	2	502.248	6	.115	2	-.007	3	-.015	1
672			min	-20.26	6	-845.694	5	83.358	1	-.106	1	-.036	8	-.061	6
673		2	max	-4.751	4	-217.144	2	502.248	6	.115	2	.007	3	.006	1
674			min	-20.26	6	-845.694	5	83.358	1	-.106	1	-.006	4	-.006	9
675		3	max	-4.751	4	-217.144	2	502.248	6	.115	2	.038	6	.064	5
676			min	-20.26	6	-845.694	5	83.358	1	-.106	1	0	1	.011	2
677		4	max	-4.751	4	-217.144	2	502.248	6	.115	2	.075	6	.126	5
678			min	-20.26	6	-845.694	5	83.358	1	-.106	1	.007	1	.027	2
679		5	max	-4.751	4	-217.144	2	502.248	6	.115	2	.111	6	.188	5
680			min	-20.26	6	-845.694	5	83.358	1	-.106	1	.013	1	.043	2
681	M80A	1	max	32.288	8	-199.776	2	499.446	6	.073	2	-.005	3	-.012	1
682			min	-7.206	9	-834.06	5	56.071	1	-.064	1	-.034	8	-.057	6
683		2	max	32.288	8	-199.776	2	499.446	6	.073	2	.011	2	.009	1
684			min	-7.206	9	-834.06	5	56.071	1	-.064	1	-.01	1	-.007	2
685		3	max	32.288	8	-199.776	2	499.446	6	.073	2	.041	6	.067	5
686			min	-7.206	9	-834.06	5	56.071	1	-.064	1	-.006	1	.008	2
687		4	max	32.288	8	-199.776	2	499.446	6	.073	2	.077	6	.128	5
688			min	-7.206	9	-834.06	5	56.071	1	-.064	1	-.002	1	.022	2
689		5	max	32.288	8	-199.776	2	499.446	6	.073	2	.114	6	.188	5
690			min	-7.206	9	-834.06	5	56.071	1	-.064	1	.002	1	.037	2
691	M81A	1	max	1546.089	8	13.231	2	312.817	2	.046	2	.131	2	.058	1
692			min	432.799	3	-596.061	5	-191.152	1	-.041	1	-.102	1	-.08	2
693		2	max	1546.089	8	13.231	2	312.817	2	.046	2	.154	2	.082	1
694			min	432.799	3	-596.061	5	-191.152	1	-.041	1	-.116	1	-.081	2
695		3	max	1546.089	8	13.231	2	312.817	2	.046	2	.177	2	.106	1
696			min	432.799	3	-596.061	5	-191.152	1	-.041	1	-.129	1	-.082	2
697		4	max	1546.089	8	13.231	2	312.817	2	.046	2	.2	2	.13	1
698			min	432.799	3	-596.061	5	-191.152	1	-.041	1	-.143	1	-.083	2
699		5	max	1546.089	8	13.231	2	312.817	2	.046	2	.223	2	.154	1
700			min	432.799	3	-596.061	5	-191.152	1	-.041	1	-.157	1	-.084	2
701	M82	1	max	3530.767	5	236.656	2	2383.755	1	0	2	.309	2	.046	2
702			min	-398.413	2	-1821.077	5	-1650.712	2	-.023	5	-.438	1	-.339	5
703		2	max	3530.767	5	236.656	2	2383.755	1	0	2	.232	2	.035	2
704			min	-398.413	2	-1821.077	5	-1650.712	2	-.023	5	-.326	1	-.254	5
705		3	max	3530.767	5	236.656	2	2383.755	1	0	2	.154	2	.024	2
706			min	-398.413	2	-1821.077	5	-1650.712	2	-.023	5	-.215	1	-.169	5
707		4	max	3530.767	5	236.656	2	2383.755	1	0	2	.077	2	.013	2
708			min	-398.413	2	-1821.077	5	-1650.712	2	-.023	5	-.103	1	-.084	5
709		5	max	3530.767	5	236.656	2	2383.755	1	0	2	.014	5	.002	6
710			min	-398.413	2	-1821.077	5	-1650.712	2	-.023	5	0	2	-.003	9
711	M83	1	max	3495.255	7	241.732	4	1127.727	4	.026	6	.348	3	.047	4
712			min	-315.594	4	-1770.41	7	-1896.985	3	0	1	-.213	4	-.33	7
713		2	max	3495.255	7	241.732	4	1127.727	4	.026	6	.26	3	.035	4
714			min	-315.594	4	-1770.41	7	-1896.985	3	0	1	-.161	4	-.247	7
715		3	max	3495.255	7	241.732	4	1127.727	4	.026	6	.171	3	.024	4
716			min	-315.594	4	-1770.41	7	-1896.985	3	0	1	-.108	4	-.165	7
717		4	max	3495.255	7	241.732	4	1127.727	4	.026	6	.082	3	.013	4
718			min	-315.594	4	-1770.41	7	-1896.985	3	0	1	-.055	4	-.082	7
719		5	max	3495.255	7	241.732	4	1127.727	4	.026	6	0	1	.002	4
720			min	-315.594	4	-1770.41	7	-1896.985	3	0	1	-.016	6	-.002	9

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 Mom...	LC
721	M84	1	max	2951.141	7	-66.663	4	761.151	1	.002	2	.074	2	-.01	4
722			min	108.874	4	-1857.215	7	-408.642	2	-.044	5	-.123	1	-.337	7
723		2	max	2951.141	7	-66.663	4	761.151	1	.002	2	.055	2	-.006	4
724			min	108.874	4	-1857.215	7	-408.642	2	-.044	5	-.088	1	-.252	7
725		3	max	2951.141	7	-66.663	4	761.151	1	.002	2	.036	2	-.003	4
726			min	108.874	4	-1857.215	7	-408.642	2	-.044	5	-.053	1	-.166	7
727		4	max	2951.141	7	-66.663	4	761.151	1	.002	2	.018	2	0	4
728			min	108.874	4	-1857.215	7	-408.642	2	-.044	5	-.018	1	-.081	7
729		5	max	2951.141	7	-66.663	4	761.151	1	.002	2	.028	5	.005	6
730			min	108.874	4	-1857.215	7	-408.642	2	-.044	5	-.001	2	-.003	9
731	M85	1	max	2968.115	7	-47.123	4	267.326	1	.05	6	.118	6	-.005	4
732			min	70.778	4	-1871.574	7	-809.835	6	-.002	1	-.048	1	-.34	7
733		2	max	2968.115	7	-47.123	4	267.326	1	.05	6	.081	6	-.003	4
734			min	70.778	4	-1871.574	7	-809.835	6	-.002	1	-.036	1	-.254	7
735		3	max	2968.115	7	-47.123	4	267.326	1	.05	6	.044	2	-.001	4
736			min	70.778	4	-1871.574	7	-809.835	6	-.002	1	-.023	1	-.168	7
737		4	max	2968.115	7	-47.123	4	267.326	1	.05	6	.015	3	.001	4
738			min	70.778	4	-1871.574	7	-809.835	6	-.002	1	-.013	4	-.082	7
739		5	max	2968.115	7	-47.123	4	267.326	1	.05	6	.001	1	.005	8
740			min	70.778	4	-1871.574	7	-809.835	6	-.002	1	-.031	6	-.002	9
741	M86	1	max	823.036	7	-21.328	4	516.831	5	.002	2	.043	2	-.002	4
742			min	-3.318	4	-553.838	7	-247.269	2	-.043	5	-.076	1	-.096	7
743		2	max	823.036	7	-21.328	4	516.831	5	.002	2	.032	2	-.001	4
744			min	-3.318	4	-553.838	7	-247.269	2	-.043	5	-.052	1	-.071	7
745		3	max	823.036	7	-21.328	4	516.831	5	.002	2	.021	2	0	4
746			min	-3.318	4	-553.838	7	-247.269	2	-.043	5	-.029	1	-.046	7
747		4	max	823.036	7	-21.328	4	516.831	5	.002	2	.01	2	0	4
748			min	-3.318	4	-553.838	7	-247.269	2	-.043	5	-.006	1	-.021	7
749		5	max	823.036	7	-21.328	4	516.831	5	.002	2	.028	5	.004	6
750			min	-3.318	4	-553.838	7	-247.269	2	-.043	5	-.002	2	0	9
751	M87	1	max	823.476	5	-45.989	2	181.01	1	.049	6	.083	6	-.007	4
752			min	17.879	2	-555.994	5	-630.733	6	-.002	1	-.031	1	-.097	5
753		2	max	823.476	5	-45.989	2	181.01	1	.049	6	.055	6	-.005	4
754			min	17.879	2	-555.994	5	-630.733	6	-.002	1	-.023	1	-.072	5
755		3	max	823.476	5	-45.989	2	181.01	1	.049	6	.027	2	-.002	4
756			min	17.879	2	-555.994	5	-630.733	6	-.002	1	-.015	1	-.047	5
757		4	max	823.476	5	-45.989	2	181.01	1	.049	6	.006	3	0	4
758			min	17.879	2	-555.994	5	-630.733	6	-.002	1	-.008	4	-.022	7
759		5	max	823.476	5	-45.989	2	181.01	1	.049	6	.001	1	.004	8
760			min	17.879	2	-555.994	5	-630.733	6	-.002	1	-.031	6	0	9
761	M88	1	max	-12.942	2	588.318	7	415.78	5	0	2	.021	2	.11	7
762			min	-883.285	5	23.317	4	-121.972	2	-.041	5	-.047	5	.007	4
763		2	max	-12.942	2	588.318	7	415.78	5	0	2	.016	2	.084	7
764			min	-883.285	5	23.317	4	-121.972	2	-.041	5	-.03	1	.006	4
765		3	max	-12.942	2	588.318	7	415.78	5	0	2	.01	2	.058	7
766			min	-883.285	5	23.317	4	-121.972	2	-.041	5	-.015	1	.005	4
767		4	max	-12.942	2	588.318	7	415.78	5	0	2	.01	6	.032	7
768			min	-883.285	5	23.317	4	-121.972	2	-.041	5	0	1	.003	4
769		5	max	-12.942	2	588.318	7	415.78	5	0	2	.027	5	.006	8
770			min	-883.285	5	23.317	4	-121.972	2	-.041	5	0	2	0	9
771	M89	1	max	56.933	4	595.142	7	85.331	1	.046	6	.065	6	.111	7
772			min	-901.2	7	-18.643	4	-532.34	6	0	1	-.015	1	0	4
773		2	max	56.933	4	595.142	7	85.331	1	.046	6	.041	6	.085	7
774			min	-901.2	7	-18.643	4	-532.34	6	0	1	-.011	1	0	4
775		3	max	56.933	4	595.142	7	85.331	1	.046	6	.017	7	.058	7
776			min	-901.2	7	-18.643	4	-532.34	6	0	1	-.007	1	0	4
777		4	max	56.933	4	595.142	7	85.331	1	.046	6	.001	3	.032	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 Mom...	LC
778			min	-901.2	7	-18.643	4	-532.34	6	0	1	-.009	9	.002	4
779		5	max	56.933	4	595.142	7	85.331	1	.046	6	0	1	.006	8
780			min	-901.2	7	-18.643	4	-532.34	6	0	1	-.03	6	.001	9
781	M90	1	max	-104.151	4	5668.513	7	407.019	5	.005	2	.008	2	2.971	5
782			min	-6849.758	7	380.413	4	-53.699	2	-.03	9	-.069	5	.621	2
783		2	max	-104.151	4	5668.513	7	407.019	5	.005	2	.006	2	2.725	5
784			min	-6849.758	7	380.413	4	-53.699	2	-.03	9	-.051	5	.593	2
785		3	max	-104.151	4	5668.513	7	407.019	5	.005	2	.004	2	2.48	5
786			min	-6849.758	7	380.413	4	-53.699	2	-.03	9	-.033	5	.564	2
787		4	max	-104.151	4	5668.513	7	407.019	5	.005	2	.001	2	2.234	5
788			min	-6849.758	7	380.413	4	-53.699	2	-.03	9	-.015	5	.535	2
789		5	max	-104.151	4	5668.513	7	407.019	5	.005	2	.013	9	2.008	8
790			min	-6849.758	7	380.413	4	-53.699	2	-.03	9	-.002	3	.507	2
791	M91	1	max	255.421	4	5708.48	7	17.416	4	.028	9	.078	7	3.055	7
792			min	-6871.504	7	223.669	4	-466.916	7	0	1	-.004	4	.63	4
793		2	max	255.421	4	5708.48	7	17.416	4	.028	9	.057	7	2.805	7
794			min	-6871.504	7	223.669	4	-466.916	7	0	1	-.003	4	.62	4
795		3	max	255.421	4	5708.48	7	17.416	4	.028	9	.037	7	2.555	7
796			min	-6871.504	7	223.669	4	-466.916	7	0	1	-.002	4	.61	4
797		4	max	255.421	4	5708.48	7	17.416	4	.028	9	.017	7	2.305	6
798			min	-6871.504	7	223.669	4	-466.916	7	0	1	-.002	4	.601	4
799		5	max	255.421	4	5708.48	7	17.416	4	.028	9	.002	1	2.077	6
800			min	-6871.504	7	223.669	4	-466.916	7	0	1	-.012	9	.578	1
801	M92	1	max	426.331	7	449.77	1	449.715	2	0	1	-.003	9	.028	7
802			min	87.958	9	-454.103	2	-496.492	1	0	2	-.017	7	.006	9
803		2	max	426.331	7	449.77	1	449.715	2	0	1	.006	2	.032	6
804			min	87.958	9	-454.103	2	-496.492	1	0	2	-.021	5	-.003	1
805		3	max	426.331	7	449.77	1	449.715	2	0	1	.017	2	.035	6
806			min	87.958	9	-454.103	2	-496.492	1	0	2	-.03	1	-.014	1
807		4	max	426.331	7	449.77	1	449.715	2	0	1	.028	2	.042	2
808			min	87.958	9	-454.103	2	-496.492	1	0	2	-.042	1	-.025	1
809		5	max	426.331	7	449.77	1	449.715	2	0	1	.039	2	.053	2
810			min	87.958	9	-454.103	2	-496.492	1	0	2	-.054	1	-.036	1
811	M93	1	max	50.629	7	136.498	7	141.288	2	0	1	-.006	9	.056	7
812			min	11	9	-40.069	9	-114.892	1	0	2	-.033	7	.012	9
813		2	max	50.629	7	136.498	7	141.288	2	0	1	-.005	2	.053	6
814			min	11	9	-40.069	9	-114.892	1	0	2	-.032	5	.013	9
815		3	max	50.629	7	136.498	7	141.288	2	0	1	-.002	2	.05	6
816			min	11	9	-40.069	9	-114.892	1	0	2	-.032	5	.012	1
817		4	max	50.629	7	136.498	7	141.288	2	0	1	.001	2	.048	8
818			min	11	9	-40.069	9	-114.892	1	0	2	-.031	5	.011	3
819		5	max	50.629	7	136.498	7	141.288	2	0	1	.005	2	.045	8
820			min	11	9	-40.069	9	-114.892	1	0	2	-.031	5	.008	3
821	M94	1	max	40.298	7	87.692	6	57.178	3	0	4	-.006	9	.055	7
822			min	8.351	9	-32.869	9	-41.346	4	0	3	-.032	7	.011	9
823		2	max	40.298	7	87.692	6	57.178	3	0	4	-.006	9	.053	7
824			min	8.351	9	-32.869	9	-41.346	4	0	3	-.031	6	.012	9
825		3	max	40.298	7	87.692	6	57.178	3	0	4	-.006	9	.051	5
826			min	8.351	9	-32.869	9	-41.346	4	0	3	-.031	8	.013	9
827		4	max	40.298	7	87.692	6	57.178	3	0	4	-.005	9	.049	5
828			min	8.351	9	-32.869	9	-41.346	4	0	3	-.03	8	.013	2
829		5	max	40.298	7	87.692	6	57.178	3	0	4	-.005	9	.048	5
830			min	8.351	9	-32.869	9	-41.346	4	0	3	-.03	8	.011	2
831	M95	1	max	9.857	5	80.629	6	71.103	1	0	4	-.006	9	.053	7
832			min	1.48	2	-44.736	1	-54.632	2	0	3	-.031	7	.011	9
833		2	max	9.857	5	80.629	6	71.103	1	0	4	-.006	9	.051	7
834			min	1.48	2	-44.736	1	-54.632	2	0	3	-.03	6	.012	9

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 Mom...	LC
835		3	max	9.857	5	80.629	6	71.103	1	0	4	-.006	1	.05	5
836			min	1.48	2	-44.736	1	-54.632	2	0	3	-.03	6	.012	9
837		4	max	9.857	5	80.629	6	71.103	1	0	4	-.004	1	.049	5
838			min	1.48	2	-44.736	1	-54.632	2	0	3	-.029	6	.01	2
839		5	max	9.857	5	80.629	6	71.103	1	0	4	-.002	1	.048	5
840			min	1.48	2	-44.736	1	-54.632	2	0	3	-.029	6	.008	2
841	M96	1	max	-69.195	9	273.515	2	467.65	1	0	4	-.003	9	.026	7
842			min	-335.678	7	-390.429	1	-503.854	2	0	3	-.015	7	.005	9
843		2	max	-69.195	9	273.515	2	467.65	1	0	4	.007	1	.032	5
844			min	-335.678	7	-390.429	1	-503.854	2	0	3	-.019	6	.001	2
845		3	max	-69.195	9	273.515	2	467.65	1	0	4	.018	1	.039	5
846			min	-335.678	7	-390.429	1	-503.854	2	0	3	-.029	2	-.005	2
847		4	max	-69.195	9	273.515	2	467.65	1	0	4	.03	1	.045	5
848			min	-335.678	7	-390.429	1	-503.854	2	0	3	-.041	2	-.012	2
849		5	max	-69.195	9	273.515	2	467.65	1	0	4	.041	1	.052	5
850			min	-335.678	7	-390.429	1	-503.854	2	0	3	-.053	2	-.019	2
851	M97	1	max	983.746	7	1979.658	8	2074.1	1	.597	1	.158	1	.11	3
852			min	202.6	9	-968.94	3	-1572.339	2	-.591	2	-.135	2	-.165	4
853		2	max	983.746	7	1979.658	8	2074.1	1	.597	1	.309	1	.18	3
854			min	202.6	9	-968.94	3	-1572.339	2	-.591	2	-.25	2	-.306	4
855		3	max	983.746	7	1979.658	8	2074.1	1	.597	1	.46	1	.251	3
856			min	202.6	9	-968.94	3	-1572.339	2	-.591	2	-.364	2	-.448	4
857		4	max	983.746	7	1979.658	8	2074.1	1	.597	1	.611	1	.321	3
858			min	202.6	9	-968.94	3	-1572.339	2	-.591	2	-.479	2	-.59	4
859		5	max	983.746	7	1979.658	8	2074.1	1	.597	1	.762	1	.392	3
860			min	202.6	9	-968.94	3	-1572.339	2	-.591	2	-.593	2	-.731	4
861	M98	1	max	13.336	6	843.57	6	508.452	5	.197	1	-.003	1	.067	7
862			min	.212	9	189.299	1	11.802	2	-.186	2	-.039	6	.012	9
863		2	max	13.336	6	843.57	6	508.452	5	.197	1	.017	1	.009	3
864			min	.212	9	189.299	1	11.802	2	-.186	2	-.018	2	-.007	4
865		3	max	13.336	6	843.57	6	508.452	5	.197	1	.039	5	-.006	1
866			min	.212	9	189.299	1	11.802	2	-.186	2	-.017	2	-.058	8
867		4	max	13.336	6	843.57	6	508.452	5	.197	1	.076	5	-.02	1
868			min	.212	9	189.299	1	11.802	2	-.186	2	-.017	2	-.119	6
869		5	max	13.336	6	843.57	6	508.452	5	.197	1	.113	5	-.034	1
870			min	.212	9	189.299	1	11.802	2	-.186	2	-.016	2	-.181	6
871	M99	1	max	-4.152	9	850.543	5	499.097	6	.135	1	-.006	9	.061	7
872			min	-20.294	7	196.115	9	82.831	1	-.125	2	-.035	7	.011	9
873		2	max	-4.152	9	850.543	5	499.097	6	.135	1	.006	2	.006	2
874			min	-20.294	7	196.115	9	82.831	1	-.125	2	-.005	1	-.007	1
875		3	max	-4.152	9	850.543	5	499.097	6	.135	1	.039	6	-.009	2
876			min	-20.294	7	196.115	9	82.831	1	-.125	2	0	1	-.065	5
877		4	max	-4.152	9	850.543	5	499.097	6	.135	1	.075	6	-.024	2
878			min	-20.294	7	196.115	9	82.831	1	-.125	2	.007	1	-.127	5
879		5	max	-4.152	9	850.543	5	499.097	6	.135	1	.111	6	-.039	2
880			min	-20.294	7	196.115	9	82.831	1	-.125	2	.013	1	-.188	5
881	M100	1	max	32.173	6	838.988	5	497.261	6	.088	1	-.004	9	.058	6
882			min	2.813	9	187.016	2	52.339	1	-.079	2	-.034	5	.012	9
883		2	max	32.173	6	838.988	5	497.261	6	.088	1	.013	2	.008	2
884			min	2.813	9	187.016	2	52.339	1	-.079	2	-.011	1	-.01	1
885		3	max	32.173	6	838.988	5	497.261	6	.088	1	.042	6	-.006	2
886			min	2.813	9	187.016	2	52.339	1	-.079	2	-.008	1	-.067	5
887		4	max	32.173	6	838.988	5	497.261	6	.088	1	.078	6	-.019	2
888			min	2.813	9	187.016	2	52.339	1	-.079	2	-.004	1	-.128	5
889		5	max	32.173	6	838.988	5	497.261	6	.088	1	.114	6	-.033	2
890			min	2.813	9	187.016	2	52.339	1	-.079	2	0	1	-.189	5
891	M101	1	max	1549.042	7	487.94	5	447.789	6	.055	1	.139	2	.083	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 Mom...	LC
892			min	320.817	9	-40.562	2	-129.155	1	-.05	2	-.176	1	-.099	1
893		2	max	1549.042	7	487.94	5	447.789	6	.055	1	.164	2	.086	2
894			min	320.817	9	-40.562	2	-129.155	1	-.05	2	-.185	1	-.121	1
895		3	max	1549.042	7	487.94	5	447.789	6	.055	1	.189	2	.089	2
896			min	320.817	9	-40.562	2	-129.155	1	-.05	2	-.195	1	-.143	1
897		4	max	1549.042	7	487.94	5	447.789	6	.055	1	.215	2	.092	2
898			min	320.817	9	-40.562	2	-129.155	1	-.05	2	-.204	1	-.165	1
899		5	max	1549.042	7	487.94	5	447.789	6	.055	1	.24	2	.095	2
900			min	320.817	9	-40.562	2	-129.155	1	-.05	2	-.213	1	-.188	5
901	M102	1	max	3491.848	8	205.018	3	1844.974	2	.002	1	.208	1	.04	3
902			min	-236.778	3	-1813.709	8	-1115.528	1	-.024	6	-.336	2	-.338	8
903		2	max	3491.848	8	205.018	3	1844.974	2	.002	1	.155	1	.03	3
904			min	-236.778	3	-1813.709	8	-1115.528	1	-.024	6	-.25	2	-.253	8
905		3	max	3491.848	8	205.018	3	1844.974	2	.002	1	.103	1	.021	3
906			min	-236.778	3	-1813.709	8	-1115.528	1	-.024	6	-.163	2	-.168	8
907		4	max	3491.848	8	205.018	3	1844.974	2	.002	1	.051	1	.011	3
908			min	-236.778	3	-1813.709	8	-1115.528	1	-.024	6	-.077	2	-.083	8
909		5	max	3491.848	8	205.018	3	1844.974	2	.002	1	.014	6	.002	7
910			min	-236.778	3	-1813.709	8	-1115.528	1	-.024	6	-.001	1	0	4
911	M103	1	max	3533.643	5	283.148	2	1847.504	2	.026	5	.481	1	.055	2
912			min	-492.95	2	-1778.272	5	-2617.818	1	0	2	-.345	2	-.332	5
913		2	max	3533.643	5	283.148	2	1847.504	2	.026	5	.358	1	.042	2
914			min	-492.95	2	-1778.272	5	-2617.818	1	0	2	-.259	2	-.249	5
915		3	max	3533.643	5	283.148	2	1847.504	2	.026	5	.236	1	.028	2
916			min	-492.95	2	-1778.272	5	-2617.818	1	0	2	-.172	2	-.165	5
917		4	max	3533.643	5	283.148	2	1847.504	2	.026	5	.113	1	.015	2
918			min	-492.95	2	-1778.272	5	-2617.818	1	0	2	-.086	2	-.082	5
919		5	max	3533.643	5	283.148	2	1847.504	2	.026	5	0	2	.002	2
920			min	-492.95	2	-1778.272	5	-2617.818	1	0	2	-.016	5	0	9
921	M104	1	max	2959.327	8	-51.284	3	724.852	2	.006	1	.066	1	-.006	3
922			min	79.132	3	-1861.35	8	-374.91	1	-.045	6	-.114	2	-.338	8
923		2	max	2959.327	8	-51.284	3	724.852	2	.006	1	.048	1	-.004	3
924			min	79.132	3	-1861.35	8	-374.91	1	-.045	6	-.081	2	-.252	8
925		3	max	2959.327	8	-51.284	3	724.852	2	.006	1	.031	1	-.002	3
926			min	79.132	3	-1861.35	8	-374.91	1	-.045	6	-.048	2	-.167	8
927		4	max	2959.327	8	-51.284	3	724.852	2	.006	1	.014	1	0	3
928			min	79.132	3	-1861.35	8	-374.91	1	-.045	6	-.014	2	-.081	8
929		5	max	2959.327	8	-51.284	3	724.852	2	.006	1	.028	6	.005	7
930			min	79.132	3	-1861.35	8	-374.91	1	-.045	6	-.003	1	.001	4
931	M105	1	max	2961.386	8	-65.777	3	463.621	2	.05	5	.143	1	-.01	3
932			min	101.895	3	-1867.685	8	-882.014	1	-.004	2	-.083	2	-.34	8
933		2	max	2961.386	8	-65.777	3	463.621	2	.05	5	.102	1	-.007	3
934			min	101.895	3	-1867.685	8	-882.014	1	-.004	2	-.062	2	-.254	8
935		3	max	2961.386	8	-65.777	3	463.621	2	.05	5	.062	1	-.004	3
936			min	101.895	3	-1867.685	8	-882.014	1	-.004	2	-.04	2	-.168	8
937		4	max	2961.386	8	-65.777	3	463.621	2	.05	5	.021	1	0	3
938			min	101.895	3	-1867.685	8	-882.014	1	-.004	2	-.019	2	-.082	8
939		5	max	2961.386	8	-65.777	3	463.621	2	.05	5	.002	2	.005	6
940			min	101.895	3	-1867.685	8	-882.014	1	-.004	2	-.031	5	0	9
941	M106	1	max	818.748	5	-49.368	3	530.567	2	.006	1	.045	1	-.007	3
942			min	22.136	2	-547.97	5	-269.458	1	-.044	6	-.077	2	-.095	5
943		2	max	818.748	5	-49.368	3	530.567	2	.006	1	.033	1	-.005	3
944			min	22.136	2	-547.97	5	-269.458	1	-.044	6	-.053	2	-.071	5
945		3	max	818.748	5	-49.368	3	530.567	2	.006	1	.021	1	-.002	3
946			min	22.136	2	-547.97	5	-269.458	1	-.044	6	-.029	2	-.046	8
947		4	max	818.748	5	-49.368	3	530.567	2	.006	1	.008	1	0	3
948			min	22.136	2	-547.97	5	-269.458	1	-.044	6	-.005	2	-.021	8

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 Mom...	LC
949		5	max	818.748	5	-49.368	3	530.567	2	.006	1	.028	6	.004	7
950			min	22.136	2	-547.97	5	-269.458	1	-.044	6	-.004	1	0	9
951	M107	1	max	826.11	8	-23.237	3	286.772	2	.049	5	.092	1	-.003	3
952			min	2.492	3	-560.988	8	-658.291	5	-.004	2	-.049	2	-.098	8
953		2	max	826.11	8	-23.237	3	286.772	2	.049	5	.064	1	-.002	3
954			min	2.492	3	-560.988	8	-658.291	5	-.004	2	-.036	2	-.073	8
955		3	max	826.11	8	-23.237	3	286.772	2	.049	5	.036	1	0	3
956			min	2.492	3	-560.988	8	-658.291	5	-.004	2	-.023	2	-.047	8
957		4	max	826.11	8	-23.237	3	286.772	2	.049	5	.008	1	0	3
958			min	2.492	3	-560.988	8	-658.291	5	-.004	2	-.01	2	-.022	8
959		5	max	826.11	8	-23.237	3	286.772	2	.049	5	.003	2	.004	6
960			min	2.492	3	-560.988	8	-658.291	5	-.004	2	-.031	5	0	9
961	M108	1	max	50.397	3	598.842	8	420.634	6	.004	1	.026	1	.112	8
962			min	-900.412	8	-15.412	3	-157.966	1	-.042	6	-.05	2	0	3
963		2	max	50.397	3	598.842	8	420.634	6	.004	1	.019	1	.085	8
964			min	-900.412	8	-15.412	3	-157.966	1	-.042	6	-.033	2	0	3
965		3	max	50.397	3	598.842	8	420.634	6	.004	1	.012	1	.059	8
966			min	-900.412	8	-15.412	3	-157.966	1	-.042	6	-.016	2	.001	3
967		4	max	50.397	3	598.842	8	420.634	6	.004	1	.01	7	.032	8
968			min	-900.412	8	-15.412	3	-157.966	1	-.042	6	0	9	.002	3
969		5	max	50.397	3	598.842	8	420.634	6	.004	1	.027	6	.006	7
970			min	-900.412	8	-15.412	3	-157.966	1	-.042	6	-.002	1	.001	9
971	M109	1	max	-6.909	2	585.318	8	147.554	2	.047	5	.068	5	.11	8
972			min	-883.384	5	17.663	3	-549.559	5	-.002	2	-.025	2	.005	3
973		2	max	-6.909	2	585.318	8	147.554	2	.047	5	.043	5	.084	8
974			min	-883.384	5	17.663	3	-549.559	5	-.002	2	-.018	2	.004	3
975		3	max	-6.909	2	585.318	8	147.554	2	.047	5	.02	1	.058	8
976			min	-883.384	5	17.663	3	-549.559	5	-.002	2	-.012	2	.004	3
977		4	max	-6.909	2	585.318	8	147.554	2	.047	5	.001	1	.031	8
978			min	-883.384	5	17.663	3	-549.559	5	-.002	2	-.008	6	.003	3
979		5	max	-6.909	2	585.318	8	147.554	2	.047	5	.001	2	.006	6
980			min	-883.384	5	17.663	3	-549.559	5	-.002	2	-.03	5	0	9
981	M110	1	max	222.046	3	5712.747	8	394.426	8	.003	1	.001	3	2.968	8
982			min	-6935.339	8	241.205	3	-10.278	1	-.023	6	-.067	8	.641	3
983		2	max	222.046	3	5712.747	8	394.426	8	.003	1	.001	3	2.717	8
984			min	-6935.339	8	241.205	3	-10.278	1	-.023	6	-.05	8	.63	3
985		3	max	222.046	3	5712.747	8	394.426	8	.003	1	.001	3	2.467	8
986			min	-6935.339	8	241.205	3	-10.278	1	-.023	6	-.032	8	.62	3
987		4	max	222.046	3	5712.747	8	394.426	8	.003	1	.001	3	2.23	6
988			min	-6935.339	8	241.205	3	-10.278	1	-.023	6	-.015	8	.593	9
989		5	max	222.046	3	5712.747	8	394.426	8	.003	1	.003	6	2.002	6
990			min	-6935.339	8	241.205	3	-10.278	1	-.023	6	-.002	1	.507	9
991	M111	1	max	-68.169	3	5663.094	8	67.65	2	.028	5	.079	5	3.058	5
992			min	-6788.824	8	374.178	3	-478.131	5	-.005	2	-.011	2	.613	2
993		2	max	-68.169	3	5663.094	8	67.65	2	.028	5	.058	5	2.813	5
994			min	-6788.824	8	374.178	3	-478.131	5	-.005	2	-.008	2	.585	2
995		3	max	-68.169	3	5663.094	8	67.65	2	.028	5	.038	5	2.567	5
996			min	-6788.824	8	374.178	3	-478.131	5	-.005	2	-.005	2	.556	2
997		4	max	-68.169	3	5663.094	8	67.65	2	.028	5	.017	5	2.322	5
998			min	-6788.824	8	374.178	3	-478.131	5	-.005	2	-.002	2	.505	9
999		5	max	-68.169	3	5663.094	8	67.65	2	.028	5	.002	4	2.082	7
1000			min	-6788.824	8	374.178	3	-478.131	5	-.005	2	-.005	7	.426	9
1001	MP1A	1	max	0	1	-.001	4	0	1	0	1	0	1	0	1
1002			min	0	1	-.444	7	-.35	6	0	1	0	1	0	1
1003		2	max	102.607	5	65.122	4	102.667	1	0	1	.056	1	.037	3
1004			min	17.467	1	-65.157	3	-102.694	2	0	1	-.056	2	-.037	4
1005		3	max	-41.12	1	98.625	3	141.057	2	0	1	.171	1	.118	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 Mom...	LC
1006			min	-181.714	5	-98.56	4	-141.006	1	0	1	-.171	2	-.118	4
1007		4	max	-6.247	1	16.944	3	16.914	2	0	1	.013	1	.013	3
1008			min	-26.091	5	-16.88	4	-16.863	1	0	1	-.013	2	-.013	4
1009		5	max	0	1	.633	8	.503	5	0	1	0	1	0	1
1010			min	0	1	.022	3	-.009	2	0	1	0	1	0	1
1011	MP4A	1	max	0	1	.212	8	-.007	3	0	1	0	1	0	1
1012			min	0	1	.013	2	-.125	9	0	1	0	1	0	1
1013		2	max	31.822	5	20.503	4	20.475	1	0	1	.015	1	.015	3
1014			min	9.861	9	-20.472	3	-20.492	2	0	1	-.015	2	-.015	4
1015		3	max	-19.722	9	40.951	3	40.974	2	0	1	.061	1	.061	3
1016			min	-63.645	5	-40.986	4	-40.955	1	0	1	-.061	2	-.061	4
1017		4	max	-9.861	9	20.466	3	20.489	2	0	1	.015	1	.015	3
1018			min	-31.822	5	-20.501	4	-20.47	1	0	1	-.015	2	-.015	4
1019		5	max	0	1	-.014	2	.14	9	0	1	0	1	0	1
1020			min	0	1	-.234	5	.004	2	0	1	0	1	0	1
1021	MP1C	1	max	0	1	.014	4	.558	5	0	1	0	1	0	1
1022			min	0	1	-.102	7	0	2	0	1	0	1	0	1
1023		2	max	102.607	5	93.295	4	74.553	1	0	1	.042	1	.051	3
1024			min	17.467	1	-93.301	3	-74.509	2	0	1	-.041	2	-.051	4
1025		3	max	-41.12	3	135.801	3	106.069	2	0	1	.132	1	.158	3
1026			min	-181.714	5	-135.79	4	-106.151	1	0	1	-.131	2	-.158	4
1027		4	max	-6.247	3	16.905	3	16.877	2	0	1	.013	1	.013	3
1028			min	-26.091	5	-16.893	4	-16.959	1	0	1	-.013	2	-.013	4
1029		5	max	0	1	.124	8	-.035	3	0	1	0	1	0	1
1030			min	0	1	-.018	3	-.79	6	0	1	0	1	0	1
1031	MP3C	1	max	0	1	-.011	9	-.006	4	0	1	0	1	0	1
1032			min	0	1	-.198	7	-.134	6	0	1	0	1	0	1
1033		2	max	31.822	6	20.473	4	20.477	1	0	1	.015	1	.015	3
1034			min	9.861	1	-20.502	3	-20.495	2	0	1	-.015	2	-.015	4
1035		3	max	-19.722	4	40.985	3	40.977	2	0	1	.061	1	.061	3
1036			min	-63.645	5	-40.952	4	-40.957	1	0	1	-.061	2	-.061	4
1037		4	max	-9.861	4	20.5	3	20.492	2	0	1	.015	1	.015	3
1038			min	-31.822	5	-20.467	4	-20.472	1	0	1	-.015	2	-.015	4
1039		5	max	0	1	.219	5	.146	7	0	1	0	1	0	1
1040			min	0	1	.012	9	.007	4	0	1	0	1	0	1
1041	MP1B	1	max	0	1	.514	8	.005	1	0	1	0	1	0	1
1042			min	0	1	.005	3	-.228	6	0	1	0	1	0	1
1043		2	max	102.607	5	93.317	4	74.514	1	0	1	.041	1	.051	3
1044			min	17.467	9	-93.276	3	-74.531	2	0	1	-.042	2	-.051	4
1045		3	max	-41.12	9	135.755	3	106.11	2	0	1	.131	1	.158	3
1046			min	-181.714	5	-135.831	4	-106.079	1	0	1	-.131	2	-.158	4
1047		4	max	-6.247	9	16.859	3	16.918	2	0	1	.013	1	.013	3
1048			min	-26.091	5	-16.935	4	-16.887	1	0	1	-.013	2	-.013	4
1049		5	max	0	1	-.012	4	.316	5	0	1	0	1	0	1
1050			min	0	1	-.747	7	-.005	2	0	1	0	1	0	1
1051	MP3B	1	max	0	1	.004	9	.241	5	0	1	0	1	0	1
1052			min	0	1	-.022	7	.01	2	0	1	0	1	0	1
1053		2	max	31.822	5	20.487	4	20.51	1	0	1	.015	1	.015	3
1054			min	9.861	1	-20.488	3	-20.475	2	0	1	-.015	2	-.015	4
1055		3	max	-19.722	2	40.969	3	40.955	2	0	1	.062	1	.061	3
1056			min	-63.645	5	-40.968	4	-40.994	1	0	1	-.061	2	-.061	4
1057		4	max	-9.861	2	20.484	3	20.47	2	0	1	.015	1	.015	3
1058			min	-31.822	5	-20.483	4	-20.509	1	0	1	-.015	2	-.015	4
1059		5	max	0	1	.019	7	-.015	2	0	1	0	1	0	1
1060			min	0	1	-.005	9	-.264	5	0	1	0	1	0	1
1061	M115	1	max	619.213	8	452.443	8	2250.958	9	.107	9	.051	8	.038	9
1062			min	-496.948	9	-972.722	9	-40.367	1	-.066	8	-.078	9	-.048	8

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 Mom...	LC
1063		2	max	619.213	8	452.443	8	2250.958	9	.107	9	.106	8	.097	9
1064			min	-496.948	9	-972.722	9	-40.367	1	-.066	8	.01	1	-.076	8
1065		3	max	619.213	8	452.443	8	2250.958	9	.107	9	.196	9	.156	9
1066			min	-496.948	9	-972.722	9	-40.367	1	-.066	8	.007	1	-.103	8
1067		4	max	619.213	8	452.443	8	2250.958	9	.107	9	.333	9	.215	9
1068			min	-496.948	9	-972.722	9	-40.367	1	-.066	8	.005	1	-.131	8
1069		5	max	619.213	8	452.443	8	2250.958	9	.107	9	.469	9	.274	9
1070			min	-496.948	9	-972.722	9	-40.367	1	-.066	8	.002	1	-.158	8
1071	M116	1	max	510.447	9	956.075	9	146.027	1	.099	9	.459	9	.282	9
1072			min	-698.206	8	-535.131	8	-2186.498	9	-.096	8	-.014	1	-.148	8
1073		2	max	510.447	9	956.075	9	146.027	1	.099	9	.327	9	.224	9
1074			min	-698.206	8	-535.131	8	-2186.498	9	-.096	8	-.006	1	-.115	8
1075		3	max	510.447	9	956.075	9	146.027	1	.099	9	.194	9	.166	9
1076			min	-698.206	8	-535.131	8	-2186.498	9	-.096	8	.003	1	-.083	8
1077		4	max	510.447	9	956.075	9	146.027	1	.099	9	.123	8	.108	9
1078			min	-698.206	8	-535.131	8	-2186.498	9	-.096	8	.009	3	-.05	8
1079		5	max	510.447	9	956.075	9	146.027	1	.099	9	.074	8	.05	9
1080			min	-698.206	8	-535.131	8	-2186.498	9	-.096	8	-.072	9	-.022	2
1081	M117	1	max	421.988	4	926.736	8	2168.954	9	.089	8	.077	9	.031	9
1082			min	-677.949	9	-678.458	9	115.556	3	-.105	9	-.069	8	-.053	8
1083		2	max	421.988	4	926.736	8	2168.954	9	.089	8	.209	9	.072	9
1084			min	-677.949	9	-678.458	9	115.556	3	-.105	9	-.039	4	-.109	8
1085		3	max	421.988	4	926.736	8	2168.954	9	.089	8	.34	9	.113	9
1086			min	-677.949	9	-678.458	9	115.556	3	-.105	9	-.019	4	-.166	8
1087		4	max	421.988	4	926.736	8	2168.954	9	.089	8	.472	9	.154	9
1088			min	-677.949	9	-678.458	9	115.556	3	-.105	9	0	4	-.222	8
1089		5	max	421.988	4	926.736	8	2168.954	9	.089	8	.604	9	.196	9
1090			min	-677.949	9	-678.458	9	115.556	3	-.105	9	.02	4	-.278	8
1091	M118	1	max	621.892	9	707.257	9	567.567	1	.098	8	.538	9	.224	9
1092			min	-338.982	8	-873.967	8	-1938.87	9	-.092	9	-.154	1	-.238	8
1093		2	max	621.892	9	707.257	9	567.567	1	.098	8	.421	9	.181	9
1094			min	-338.982	8	-873.967	8	-1938.87	9	-.092	9	-.119	1	-.185	8
1095		3	max	621.892	9	707.257	9	567.567	1	.098	8	.303	9	.138	9
1096			min	-338.982	8	-873.967	8	-1938.87	9	-.092	9	-.085	1	-.132	8
1097		4	max	621.892	9	707.257	9	567.567	1	.098	8	.185	9	.095	9
1098			min	-338.982	8	-873.967	8	-1938.87	9	-.092	9	-.05	1	-.079	8
1099		5	max	621.892	9	707.257	9	567.567	1	.098	8	.067	9	.052	9
1100			min	-338.982	8	-873.967	8	-1938.87	9	-.092	9	-.076	8	-.026	4
1101	M119	1	max	599.591	6	435.209	6	912.952	6	-.01	1	.049	6	0	1
1102			min	129.06	1	35.731	1	115.6	1	-.064	6	.009	1	-.048	6
1103		2	max	599.591	6	435.209	6	912.952	6	-.01	1	.105	6	-.002	1
1104			min	129.06	1	35.731	1	115.6	1	-.064	6	.016	1	-.075	6
1105		3	max	599.591	6	435.209	6	912.952	6	-.01	1	.16	6	-.004	1
1106			min	129.06	1	35.731	1	115.6	1	-.064	6	.023	1	-.101	6
1107		4	max	599.591	6	435.209	6	912.952	6	-.01	1	.216	6	-.006	1
1108			min	129.06	1	35.731	1	115.6	1	-.064	6	.03	1	-.128	6
1109		5	max	599.591	6	435.209	6	912.952	6	-.01	1	.271	6	-.008	1
1110			min	129.06	1	35.731	1	115.6	1	-.064	6	.037	1	-.154	6
1111	M120	1	max	-63.629	1	-20	1	-48.759	4	-.004	1	.269	6	-.011	1
1112			min	-688.462	6	-518.918	6	-806.145	6	-.095	6	.035	4	-.142	6
1113		2	max	-63.629	1	-20	1	-48.759	4	-.004	1	.22	6	-.01	1
1114			min	-688.462	6	-518.918	6	-806.145	6	-.095	6	.032	4	-.111	6
1115		3	max	-63.629	1	-20	1	-48.759	4	-.004	1	.171	6	-.009	1
1116			min	-688.462	6	-518.918	6	-806.145	6	-.095	6	.024	1	-.079	6
1117		4	max	-63.629	1	-20	1	-48.759	4	-.004	1	.122	6	-.008	1
1118			min	-688.462	6	-518.918	6	-806.145	6	-.095	6	.014	1	-.048	6
1119		5	max	-63.629	1	-20	1	-48.759	4	-.004	1	.073	6	0	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 Mom...	LC
1120			min	-688.462	6	-518.918	6	-806.145	6	-.095	6	.004	1	-.017	7
1121	M121	1	max	385.664	2	906.177	6	954.792	6	.086	6	.007	1	-.008	1
1122			min	-112.696	1	-53.491	1	-48.856	1	-.011	1	-.066	6	-.053	6
1123		2	max	385.664	2	906.177	6	954.792	6	.086	6	.019	9	-.005	1
1124			min	-112.696	1	-53.491	1	-48.856	1	-.011	1	-.024	2	-.108	6
1125		3	max	385.664	2	906.177	6	954.792	6	.086	6	.059	8	-.001	1
1126			min	-112.696	1	-53.491	1	-48.856	1	-.011	1	-.018	3	-.163	6
1127		4	max	385.664	2	906.177	6	954.792	6	.086	6	.116	8	.002	1
1128			min	-112.696	1	-53.491	1	-48.856	1	-.011	1	-.012	3	-.218	6
1129		5	max	385.664	2	906.177	6	954.792	6	.086	6	.173	8	.005	1
1130			min	-112.696	1	-53.491	1	-48.856	1	-.011	1	-.006	3	-.273	6
1131	M122	1	max	-102.367	3	-244.777	1	270.503	4	.097	6	.124	3	-.06	1
1132			min	-329.25	8	-851.244	6	-762.695	7	.028	1	-.092	4	-.23	6
1133		2	max	-102.367	3	-244.777	1	270.503	4	.097	6	.086	3	-.045	4
1134			min	-329.25	8	-851.244	6	-762.695	7	.028	1	-.075	4	-.179	6
1135		3	max	-102.367	3	-244.777	1	270.503	4	.097	6	.048	3	-.028	4
1136			min	-329.25	8	-851.244	6	-762.695	7	.028	1	-.059	4	-.127	6
1137		4	max	-102.367	3	-244.777	1	270.503	4	.097	6	.01	3	-.012	4
1138			min	-329.25	8	-851.244	6	-762.695	7	.028	1	-.043	4	-.075	6
1139		5	max	-102.367	3	-244.777	1	270.503	4	.097	6	-.022	1	.004	4
1140			min	-329.25	8	-851.244	6	-762.695	7	.028	1	-.074	6	-.024	7
1141	M123	1	max	602.756	5	427.597	5	887.145	7	.1	9	.05	5	.03	9
1142			min	-549.849	9	-738.056	9	-360.755	9	-.064	5	-.073	9	-.047	7
1143		2	max	602.756	5	427.597	5	887.145	7	.1	9	.102	5	.075	9
1144			min	-549.849	9	-738.056	9	-360.755	9	-.064	5	-.095	9	-.072	5
1145		3	max	602.756	5	427.597	5	887.145	7	.1	9	.155	5	.12	9
1146			min	-549.849	9	-738.056	9	-360.755	9	-.064	5	-.117	9	-.098	5
1147		4	max	602.756	5	427.597	5	887.145	7	.1	9	.207	7	.165	9
1148			min	-549.849	9	-738.056	9	-360.755	9	-.064	5	-.139	9	-.124	5
1149		5	max	602.756	5	427.597	5	887.145	7	.1	9	.261	7	.209	9
1150			min	-549.849	9	-738.056	9	-360.755	9	-.064	5	-.161	9	-.15	5
1151	M124	1	max	522.279	9	706.543	9	378.974	9	.082	9	.26	5	.218	9
1152			min	-676.377	5	-503.587	5	-803.458	8	-.091	5	-.152	9	-.14	5
1153		2	max	522.279	9	706.543	9	378.974	9	.082	9	.212	5	.175	9
1154			min	-676.377	5	-503.587	5	-803.458	8	-.091	5	-.129	9	-.109	5
1155		3	max	522.279	9	706.543	9	378.974	9	.082	9	.165	5	.132	9
1156			min	-676.377	5	-503.587	5	-803.458	8	-.091	5	-.106	9	-.079	5
1157		4	max	522.279	9	706.543	9	378.974	9	.082	9	.117	5	.089	9
1158			min	-676.377	5	-503.587	5	-803.458	8	-.091	5	-.083	9	-.048	5
1159		5	max	522.279	9	706.543	9	378.974	9	.082	9	.07	5	.046	9
1160			min	-676.377	5	-503.587	5	-803.458	8	-.091	5	-.06	9	-.019	4
1161	M125	1	max	342.374	1	892.351	5	954.603	7	.085	5	.068	9	.033	9
1162			min	-509.223	9	-764.166	9	-432.393	9	-.093	9	-.066	5	-.052	7
1163		2	max	342.374	1	892.351	5	954.603	7	.085	5	.042	9	.079	9
1164			min	-509.223	9	-764.166	9	-432.393	9	-.093	9	-.04	1	-.105	5
1165		3	max	342.374	1	892.351	5	954.603	7	.085	5	.063	6	.126	9
1166			min	-509.223	9	-764.166	9	-432.393	9	-.093	9	-.034	1	-.159	5
1167		4	max	342.374	1	892.351	5	954.603	7	.085	5	.119	6	.172	9
1168			min	-509.223	9	-764.166	9	-432.393	9	-.093	9	-.029	1	-.213	5
1169		5	max	342.374	1	892.351	5	954.603	7	.085	5	.175	6	.219	9
1170			min	-509.223	9	-764.166	9	-432.393	9	-.093	9	-.037	9	-.267	5
1171	M126	1	max	514.733	9	800.453	9	532.642	9	.095	5	.127	4	.24	9
1172			min	-332.25	8	-849.656	5	-780.415	8	-.092	9	-.094	3	-.232	5
1173		2	max	514.733	9	800.453	9	532.642	9	.095	5	.086	4	.191	9
1174			min	-332.25	8	-849.656	5	-780.415	8	-.092	9	-.074	3	-.18	5
1175		3	max	514.733	9	800.453	9	532.642	9	.095	5	.045	4	.142	9
1176			min	-332.25	8	-849.656	5	-780.415	8	-.092	9	-.055	3	-.128	5

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 Mom...	LC
1177		4	max	514.733	9	800.453	9	532.642	9	.095	5	.035	9	.094	9
1178			min	-332.25	8	-849.656	5	-780.415	8	-.092	9	-.036	3	-.077	5
1179		5	max	514.733	9	800.453	9	532.642	9	.095	5	.067	9	.045	9
1180			min	-332.25	8	-849.656	5	-780.415	8	-.092	9	-.073	5	-.025	5
1181	M125A	1	max	5626.189	7	2683.272	8	1220.175	2	.292	2	1.41	1	5.574	8
1182			min	75.914	4	766.085	3	-1219.854	1	-.336	1	-1.408	2	.921	3
1183		2	max	5623.507	7	2654.996	8	1202.26	2	.292	2	.497	1	3.561	8
1184			min	86.257	4	754.922	3	-1201.939	1	-.336	1	-.494	2	.348	3
1185		3	max	5620.824	7	2626.721	8	1184.344	2	.292	2	.406	2	1.828	9
1186			min	96.601	4	743.758	3	-1184.023	1	-.336	1	-.403	1	-.218	3
1187		4	max	3471.746	7	1616.291	8	357.27	1	.227	1	.608	2	.188	9
1188			min	941.948	4	451.417	3	-305.614	2	-.249	2	-.605	1	-.017	3
1189		5	max	0	1	.001	5	0	1	0	1	0	1	0	1
1190			min	0	1	-.003	4	0	3	0	1	0	1	0	1
1191	M126A	1	max	5611.792	8	2686.506	7	1388.954	1	.301	1	1.647	2	5.579	7
1192			min	127.024	3	567.632	9	-1386.963	2	-.348	2	-1.647	1	.756	9
1193		2	max	5609.109	8	2658.23	7	1371.039	1	.301	1	.608	2	3.563	7
1194			min	137.367	3	556.469	9	-1369.047	2	-.348	2	-.606	1	.332	9
1195		3	max	5606.426	8	2629.955	7	1353.123	1	.301	1	.421	1	1.569	7
1196			min	147.711	3	545.305	9	-1351.131	2	-.348	2	-.418	2	-.212	4
1197		4	max	3468.639	5	1618.455	7	341.894	2	.268	2	.674	1	.148	7
1198			min	819.756	9	331.088	9	-287.266	1	-.292	1	-.671	2	-.017	4
1199		5	max	0	1	.001	5	0	4	0	1	0	1	0	1
1200			min	0	1	-.003	3	0	5	0	1	0	1	0	1
1201	MP2A	1	max	365.015	5	195.355	4	481.816	1	0	1	0	1	0	1
1202			min	76.8	3	-195.314	3	-481.798	2	0	1	0	1	0	1
1203		2	max	537.893	5	364.522	4	529.795	1	0	1	.999	1	.551	3
1204			min	121.081	2	-355.772	3	-361.79	2	0	1	-.9	2	-.537	4
1205		3	max	-103.086	9	248.734	3	534.196	2	0	1	2.026	1	.885	3
1206			min	-449.844	5	-248.787	4	-534.026	1	0	1	-2.027	2	-.886	4
1207		4	max	-89.943	9	221.431	3	506.892	2	0	1	.986	1	.415	3
1208			min	-407.429	5	-221.484	4	-506.722	1	0	1	-.986	2	-.415	4
1209		5	max	-76.8	9	194.127	3	479.589	2	0	1	0	1	0	1
1210			min	-365.015	5	-194.18	4	-479.419	1	0	1	0	1	0	1
1211	MP2C	1	max	365.015	5	410.218	4	266.962	1	0	1	0	1	0	1
1212			min	76.8	1	-410.223	3	-267.007	2	0	1	0	1	0	1
1213		2	max	537.892	8	518.712	4	362.102	1	0	1	.609	1	.782	3
1214			min	121.111	3	-377.555	3	-454.037	2	0	1	-.646	2	-.874	4
1215		3	max	-103.086	1	462.897	3	320.116	2	0	1	1.171	1	1.742	3
1216			min	-449.844	5	-462.724	4	-320.155	1	0	1	-1.171	2	-1.741	4
1217		4	max	-89.943	1	435.594	3	292.812	2	0	1	.558	1	.844	3
1218			min	-407.429	5	-435.42	4	-292.852	1	0	1	-.558	2	-.843	4
1219		5	max	-76.8	1	408.291	3	265.509	2	0	1	0	1	0	1
1220			min	-365.015	5	-408.117	4	-265.549	1	0	1	0	1	0	1
1221	MP2B	1	max	365.015	6	410.191	4	266.999	1	0	1	0	1	0	1
1222			min	76.8	3	-410.227	3	-266.972	2	0	1	0	1	0	1
1223		2	max	537.883	6	365.644	4	375.133	1	0	1	.603	1	.868	3
1224			min	121.132	4	-515.549	3	-451.202	2	0	1	-.665	2	-.79	4
1225		3	max	-103.086	1	462.849	3	320.137	2	0	1	1.171	1	1.741	3
1226			min	-449.844	6	-462.975	4	-320.273	1	0	1	-1.171	2	-1.742	4
1227		4	max	-89.943	1	435.546	3	292.834	2	0	1	.558	1	.843	3
1228			min	-407.429	6	-435.671	4	-292.969	1	0	1	-.558	2	-.843	4
1229		5	max	-76.8	4	407.86	3	265.264	2	0	1	0	1	0	1
1230			min	-365.015	7	-407.967	4	-265.38	1	0	1	0	1	0	1
1231	M124A	1	max	30.899	1	65.207	5	29.716	3	.02	4	0	1	0	1
1232			min	-208.206	6	15.613	1	-29.716	4	-.031	3	0	1	0	1
1233		2	max	21.233	1	32.603	5	14.858	3	.02	4	.042	3	-.022	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 Mom...	LC
1234			min	-203.844	6	7.806	1	-14.858	4	-.031	3	-.042	4	-.092	5
1235		3	max	15.789	3	0	1	0	1	.02	4	.056	3	-.029	3
1236			min	-200.845	8	0	1	0	1	-.031	3	-.056	4	-.122	5
1237		4	max	25.454	3	-7.806	1	14.858	4	.02	4	.042	3	-.022	3
1238			min	-205.207	8	-32.603	5	-14.858	3	-.031	3	-.042	4	-.092	5
1239		5	max	35.12	3	-15.613	1	29.716	4	.02	4	0	1	0	1
1240			min	-209.569	8	-65.207	5	-29.716	3	-.031	3	0	1	0	1
1241	M125B	1	max	32.489	4	65.207	5	33.602	4	.022	4	0	1	0	1
1242			min	-209.962	7	15.613	1	-33.602	3	-.033	3	0	1	0	1
1243		2	max	23.946	4	32.603	5	16.801	4	.022	4	.047	4	-.022	3
1244			min	-206.106	7	7.806	1	-16.801	3	-.033	3	-.047	3	-.092	5
1245		3	max	15.402	4	0	1	0	1	.022	4	.063	4	-.029	3
1246			min	-202.251	7	0	1	0	1	-.033	3	-.063	3	-.122	5
1247		4	max	21.779	1	-7.806	1	16.801	3	.022	4	.047	4	-.022	3
1248			min	-204.602	6	-32.603	5	-16.801	4	-.033	3	-.047	3	-.092	5
1249		5	max	30.322	1	-15.613	1	33.602	3	.022	4	0	1	0	1
1250			min	-208.457	6	-65.207	5	-33.602	4	-.033	3	0	1	0	1
1251	M126B	1	max	5.901	2	65.207	5	42.172	2	.015	4	0	1	0	1
1252			min	-202.771	5	15.613	1	-42.172	1	-.026	3	0	1	0	1
1253		2	max	7.023	2	32.603	5	21.086	2	.015	4	.059	2	-.022	1
1254			min	-203.278	5	7.806	1	-21.086	1	-.026	3	-.059	1	-.092	5
1255		3	max	8.145	2	0	1	0	1	.015	4	.079	2	-.029	1
1256			min	-203.784	5	0	1	0	1	-.026	3	-.079	1	-.122	5
1257		4	max	9.267	2	-7.806	1	21.086	1	.015	4	.059	2	-.022	1
1258			min	-204.29	5	-32.603	5	-21.086	2	-.026	3	-.059	1	-.092	5
1259		5	max	10.389	2	-15.613	1	42.172	1	.015	4	0	1	0	1
1260			min	-204.797	5	-65.207	5	-42.172	2	-.026	3	0	1	0	1

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	.006	3	-.098	3	.044	2	1.343e-02	9	6.483e-04	2	2.009e-02	9
2		min	-.008	9	-1.119	9	-.047	1	5.786e-04	2	-7.498e-04	1	1.375e-03	2
3	N2	max	.005	3	-.081	4	.062	2	5.175e-03	6	1.049e-03	1	-1.055e-03	4
4		min	-.011	9	-.54	7	-.064	1	7.269e-04	4	-9.728e-04	2	-6.756e-03	7
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	.006	3	-.074	3	.034	2	1.343e-02	9	5.31e-04	2	1.852e-02	9
8		min	-.008	9	-.798	9	-.035	1	6.118e-04	2	-6.324e-04	1	1.318e-03	2
9	N5	max	.005	3	-.042	3	.02	2	9.626e-03	9	4.202e-04	7	9.089e-03	9
10		min	-.008	9	-.229	6	-.02	1	1.015e-03	2	-8.315e-06	2	-3.692e-04	2
11	N6	max	.005	3	-.04	9	.023	2	6.147e-03	6	-7.132e-05	2	8.243e-04	4
12		min	-.011	9	-.246	6	-.022	1	1.079e-03	2	-4.72e-04	8	-1.262e-03	9
13	N7	max	.005	3	-.064	4	.047	2	5.176e-03	6	9.666e-04	1	-1.029e-03	4
14		min	-.011	9	-.43	7	-.046	1	7.269e-04	4	-8.9e-04	2	-6.657e-03	7
15	N8	max	.036	1	-.086	4	.037	2	4.396e-03	6	6.875e-04	1	-1.138e-03	9
16		min	-.039	2	-.529	7	-.036	1	6.524e-04	4	-7.852e-04	2	-6.53e-03	7
17	N9	max	.069	3	-.062	2	.023	4	-1.073e-03	2	1.085e-03	4	4.178e-04	9
18		min	-.069	4	-.548	5	-.02	3	-8.544e-03	5	-1.01e-03	3	-1.262e-03	7
19	N11	max	.026	1	-.065	4	.031	2	4.252e-03	6	6.326e-04	1	-1.11e-03	9
20		min	-.028	2	-.415	7	-.031	1	6.037e-04	4	-7.304e-04	2	-6.452e-03	7
21	N12	max	.018	3	-.039	9	.019	2	-3.549e-04	9	4.56e-04	5	-6.1e-04	9
22		min	-.018	4	-.231	7	-.02	1	-2.237e-03	5	-2.016e-04	3	-5.066e-03	7
23	N13	max	.03	3	-.04	2	.017	2	1.715e-04	2	3.287e-05	1	-7.014e-04	9
24		min	-.028	4	-.248	5	-.016	1	-4.02e-03	5	-5.229e-04	7	-5.026e-03	7
25	N14	max	.055	3	-.049	2	.019	2	-1.053e-03	2	1.018e-03	4	4.054e-04	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
26		min	-.054	4	-.436	5	-.017	1	-8.458e-03	5	-9.436e-04	3	-1.316e-03	7
27	N15	max	.069	3	-.064	2	.023	3	-1.23e-03	2	9.46e-04	4	4.709e-04	9
28		min	-.067	4	-.537	5	-.021	4	-7.945e-03	5	-1.046e-03	3	-6.714e-04	7
29	N16	max	.036	3	-.1	3	.026	2	1.127e-02	9	5.994e-04	3	1.32e-02	9
30		min	-.034	4	-1.011	9	-.028	1	6.005e-04	3	-5.239e-04	4	1.689e-03	1
31	N18	max	.055	3	-.047	2	.015	3	-1.148e-03	2	8.461e-04	4	4.994e-04	9
32		min	-.053	4	-.421	5	-.013	4	-7.802e-03	5	-9.46e-04	3	-5.939e-04	7
33	N19	max	.029	3	-.03	9	.014	2	4.669e-05	2	4.631e-04	8	4.442e-03	8
34		min	-.03	4	-.232	5	-.013	1	-3.41e-03	5	-7.992e-05	3	1.087e-03	2
35	N20	max	.02	3	-.047	3	.015	2	3.959e-03	9	1.55e-04	4	1.012e-02	9
36		min	-.019	4	-.247	8	-.017	1	-2.541e-03	5	-5.129e-04	7	1.309e-03	2
37	N21	max	.028	3	-.078	3	.022	2	1.125e-02	9	5.327e-04	3	1.319e-02	9
38		min	-.027	4	-.744	9	-.024	1	5.79e-04	3	-4.572e-04	4	1.677e-03	1
39	N22	max	.006	3	-.074	3	.034	2	1.267e-02	9	1.126e-03	1	1.648e-02	9
40		min	-.009	9	-.785	9	-.035	1	2.344e-04	2	-9.663e-04	2	7.034e-04	2
41	N23	max	.006	3	-.035	3	.02	2	1.16e-02	9	4.148e-04	3	1.186e-02	9
42		min	-.01	9	-.203	6	-.019	1	1.824e-03	2	-5.127e-04	9	3.743e-04	2
43	N24	max	.006	3	-.063	4	.047	2	4.555e-03	7	1.192e-03	2	-2.866e-04	2
44		min	-.01	9	-.424	7	-.046	1	4.468e-04	2	-1.354e-03	1	-5.94e-03	5
45	N25	max	.006	3	-.029	9	.023	2	8.527e-03	7	4.969e-04	1	-9.553e-05	4
46		min	-.01	9	-.217	6	-.021	1	1.832e-03	2	-6.253e-04	2	-3.872e-03	7
47	N25A	max	.026	1	-.064	4	.031	2	4.046e-03	6	1.084e-03	2	-9.44e-04	9
48		min	-.027	2	-.417	7	-.031	1	5.941e-04	1	-9.274e-04	1	-5.499e-03	6
49	N26	max	.017	3	-.032	4	.019	2	-2.86e-05	9	6.613e-04	1	-1.977e-03	4
50		min	-.016	4	-.205	7	-.02	1	-8.458e-04	5	-5.889e-04	2	-8.646e-03	7
51	N27	max	.055	3	-.048	2	.018	2	-8.155e-04	3	9.081e-04	3	4.278e-04	9
52		min	-.054	4	-.43	5	-.017	1	-7.444e-03	8	-1.071e-03	4	-1.197e-03	7
53	N28	max	.03	3	-.032	2	.016	2	-9.796e-04	2	7.014e-04	4	-1.096e-03	9
54		min	-.028	4	-.219	5	-.016	1	-7.686e-03	5	-8.288e-04	3	-5.644e-03	7
55	N30	max	.055	3	-.047	2	.015	3	-7.928e-04	4	1.071e-03	3	4.814e-04	9
56		min	-.053	4	-.423	5	-.014	4	-6.928e-03	7	-9.086e-04	4	-7.886e-04	7
57	N31	max	.029	3	-.024	9	.013	2	-9.401e-04	2	7.035e-04	4	5.012e-03	8
58		min	-.029	4	-.206	5	-.014	1	-7.209e-03	5	-6.388e-04	3	1.017e-03	9
59	N32	max	.026	3	-.076	3	.022	2	1.126e-02	9	1.041e-03	4	1.321e-02	9
60		min	-.026	4	-.761	9	-.024	1	3.834e-04	1	-1.203e-03	3	1.112e-03	4
61	N33	max	.018	3	-.038	3	.015	2	5.031e-03	9	4.345e-04	9	1.408e-02	9
62		min	-.018	4	-.218	8	-.017	1	-1.227e-03	5	-5.495e-04	1	2.262e-03	4
63	N34	max	.005	3	-.04	9	.027	2	5.058e-03	9	9.921e-04	5	3.397e-03	9
64		min	-.008	9	-.264	6	-.04	1	-1.457e-04	2	-3.221e-04	2	-1.74e-03	7
65	N86	max	0	3	0	9	0	6	0	2	0	4	0	4
66		min	0	4	0	5	0	1	0	5	0	3	0	3
67	N89	max	.002	3	-.028	3	.019	2	8.752e-03	9	1.323e-03	5	7.044e-03	9
68		min	-.014	9	-.179	8	-.016	1	1.268e-03	3	-2.86e-04	2	-6.646e-04	3
69	N93	max	.007	7	-.022	9	.022	2	7.043e-03	7	2.428e-04	2	1.001e-03	4
70		min	-.007	9	-.19	6	-.018	1	1.405e-03	4	-1.357e-03	5	-1.239e-03	7
71	N92A	max	.03	3	-.006	2	.002	2	7.672e-05	2	2.985e-04	4	6.612e-04	4
72		min	-.029	4	-.126	5	-.02	5	-4.778e-03	5	-3.034e-04	3	-7.792e-04	3
73	N93A	max	.028	3	-.006	2	.001	2	6.25e-05	2	5.258e-04	4	9.115e-04	4
74		min	-.028	4	-.087	5	-.021	5	-4.736e-03	5	-5.3e-04	3	-1.014e-03	3
75	N117	max	.002	3	-.009	3	.019	2	2.275e-03	9	1.847e-04	2	4.155e-03	8
76		min	-.019	9	-.085	8	-.014	1	-2.828e-04	1	-1.897e-04	1	7.855e-05	3
77	N119	max	.001	3	-.014	3	.019	2	5.546e-03	6	0	1	5.187e-03	9
78		min	-.019	9	-.093	8	-.016	1	1.03e-03	3	0	1	-5.93e-04	3
79	N121	max	.001	3	-.023	1	.02	2	6.824e-03	6	0	1	4.994e-03	9
80		min	-.017	9	-.126	6	-.019	1	1.244e-03	3	0	1	-1.265e-03	3
81	N123	max	.002	3	-.034	1	.021	2	6.299e-03	6	0	1	5.09e-03	9
82		min	-.016	9	-.166	6	-.023	1	1.055e-03	3	0	1	-1.927e-03	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
83	N125	max	.002	3	-.041	1	.023	2	6.136e-03	9	0	1	5.073e-03	9
84		min	-.014	9	-.2	6	-.029	1	5.046e-04	2	0	1	-2.194e-03	6
85	N127	max	.003	3	-.025	9	.025	2	5.853e-03	9	0	1	4.904e-03	9
86		min	-.013	9	-.224	6	-.035	1	-1.831e-04	2	0	1	-2.051e-03	6
87	N129	max	.003	3	0	9	.027	2	4.978e-03	9	1.08e-03	5	2.836e-03	9
88		min	-.012	9	-.235	6	-.04	1	-1.782e-04	2	-3.005e-04	2	-9.747e-04	3
89	N131	max	.005	3	.003	9	.026	2	4.817e-03	9	0	1	2.059e-03	8
90		min	-.008	9	-.229	6	-.036	1	-1.902e-04	2	0	1	-1.829e-03	9
91	N133	max	.008	7	-.003	9	.024	2	5.059e-03	6	0	1	2.28e-03	8
92		min	-.007	9	-.205	6	-.03	1	5.215e-04	2	0	1	-1.768e-03	9
93	N135	max	.01	7	-.005	9	.023	2	6.729e-03	6	0	1	2.247e-03	8
94		min	-.006	9	-.171	6	-.025	1	1.277e-03	4	0	1	-1.288e-03	9
95	N137	max	.014	7	-.005	9	.022	2	7.337e-03	6	0	1	1.773e-03	4
96		min	-.004	9	-.13	6	-.021	1	1.105e-03	9	0	1	-9.334e-04	9
97	N139	max	.017	7	-.006	9	.022	2	5.859e-03	6	0	1	8.849e-04	4
98		min	-.003	2	-.095	6	-.018	1	1.369e-04	9	0	1	-2.015e-03	7
99	N141	max	.017	7	-.009	9	.022	2	2.596e-03	6	2.822e-04	1	-1.171e-05	4
100		min	-.002	2	-.085	7	-.016	1	-2.291e-04	1	-2.864e-04	2	-3.973e-03	7
101	N134	max	.001	3	-.011	3	.018	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
102		min	-.019	9	-.124	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3
103	N137A	max	0	3	-.013	3	.019	2	4.469e-03	9	4.728e-04	5	4.169e-03	9
104		min	-.018	9	-.129	8	-.013	1	5.443e-04	1	-6.915e-05	2	-3.085e-04	3
105	N138	max	.001	3	-.02	3	.019	2	6.936e-03	9	7.489e-04	5	5.188e-03	9
106		min	-.016	9	-.153	8	-.014	1	1.029e-03	3	-1.149e-04	2	-6.68e-04	3
107	N140	max	.017	7	-.011	9	.022	2	2.601e-03	6	2.029e-04	4	-3.234e-05	4
108		min	-.003	2	-.124	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
109	N141A	max	.015	7	-.011	9	.022	2	4.558e-03	6	-5.601e-07	2	4.767e-04	4
110		min	-.003	9	-.133	7	-.016	1	5.116e-04	9	-5.076e-04	5	-2.56e-03	7
111	N142	max	.011	7	-.015	9	.022	2	6.239e-03	6	4.853e-05	2	9.462e-04	4
112		min	-.005	9	-.16	7	-.017	1	1.191e-03	4	-7.832e-04	5	-1.333e-03	7
113	N143B	max	.003	3	-.041	3	.02	2	6.74e-03	9	1.102e-03	5	5.632e-03	9
114		min	-.012	9	-.203	6	-.021	1	1.067e-03	3	-2.271e-04	2	-9.573e-04	3
115	N144A	max	.004	3	-.049	1	.022	2	6.159e-03	9	1.112e-03	5	5.414e-03	9
116		min	-.011	9	-.225	6	-.027	1	3.853e-04	2	-2.717e-04	2	-1.039e-03	7
117	N145A	max	.005	3	-.054	1	.025	2	5.877e-03	9	9.972e-04	5	5.291e-03	9
118		min	-.009	9	-.245	6	-.034	1	-2.338e-04	2	-3.107e-04	2	-1.295e-03	6
119	N146	max	.004	3	-.03	9	.026	2	4.941e-03	9	2.108e-04	2	1.27e-03	4
120		min	-.01	9	-.249	6	-.035	1	-2.383e-04	2	-1.033e-03	5	-1.095e-03	9
121	N147A	max	.005	3	-.027	9	.024	2	4.833e-03	6	2.003e-04	2	1.397e-03	4
122		min	-.01	9	-.232	6	-.028	1	4.079e-04	2	-1.159e-03	5	-7.399e-04	9
123	N148	max	.005	3	-.025	9	.023	2	6.306e-03	6	1.721e-04	2	1.424e-03	4
124		min	-.009	9	-.212	6	-.022	1	1.178e-03	4	-1.161e-03	5	-6.573e-04	3
125	N163A	max	.003	3	-.009	9	.026	2	5.458e-03	9	0	1	3.935e-03	9
126		min	-.012	9	-.232	6	-.038	1	-3.047e-04	2	0	1	-1.398e-03	7
127	N164	max	.005	3	-.051	9	.026	2	5.759e-03	9	8.516e-04	5	5.048e-03	9
128		min	-.008	9	-.254	6	-.038	1	-3.693e-04	2	-2.93e-04	2	-1.425e-03	7
129	N200	max	.03	3	-.006	2	.002	2	7.28e-05	2	3.111e-04	4	7.182e-04	4
130		min	-.029	4	-.116	5	-.021	5	-4.78e-03	5	-3.159e-04	3	-8.322e-04	3
131	N204	max	.029	3	-.006	2	.001	2	6.93e-05	2	3.467e-04	4	7.833e-04	4
132		min	-.029	4	-.106	5	-.021	5	-4.774e-03	5	-3.515e-04	3	-8.933e-04	3
133	N208	max	.029	3	-.006	2	.001	2	6.592e-05	2	4.154e-04	4	8.532e-04	4
134		min	-.028	4	-.097	5	-.021	5	-4.76e-03	5	-4.2e-04	3	-9.592e-04	3
135	N407	max	.017	7	-.009	9	.022	2	2.604e-03	6	1.904e-04	1	-1.773e-05	4
136		min	-.003	2	-.095	7	-.016	1	-1.847e-04	1	-1.949e-04	2	-3.987e-03	7
137	N411	max	.017	7	-.01	9	.022	2	2.606e-03	6	1.88e-04	4	-2.432e-05	4
138		min	-.003	2	-.105	7	-.016	1	-1.336e-04	1	-1.928e-04	3	-3.993e-03	7
139	N415	max	.017	7	-.01	9	.022	2	2.605e-03	6	1.991e-04	4	-2.932e-05	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
140		min	-.003	2	-.115	7	-.016	1	-8.684e-05	1	-2.04e-04	3	-3.992e-03	7
141	N419	max	.017	7	-.008	9	.022	2	2.596e-03	6	2.822e-04	1	-1.171e-05	4
142		min	-.003	2	-.085	7	-.016	1	-2.291e-04	1	-2.864e-04	2	-3.973e-03	7
143	N420	max	.017	7	-.008	9	.022	2	3.958e-03	6	0	1	2.572e-04	4
144		min	-.003	2	-.086	7	-.016	1	-1.487e-04	9	0	1	-3.521e-03	7
145	N421	max	.017	7	-.007	9	.022	2	5.087e-03	6	0	1	5.657e-04	4
146		min	-.003	2	-.089	7	-.017	1	-4.734e-05	9	0	1	-2.821e-03	7
147	N422	max	.017	7	-.009	9	.022	2	2.604e-03	6	1.904e-04	1	-1.773e-05	4
148		min	-.003	2	-.095	7	-.016	1	-1.847e-04	1	-1.949e-04	2	-3.987e-03	7
149	N423	max	.017	7	-.008	9	.022	2	3.866e-03	6	0	1	2.735e-04	4
150		min	-.003	2	-.096	7	-.016	1	-4.366e-05	9	0	1	-3.348e-03	7
151	N424	max	.017	7	-.008	9	.022	2	4.697e-03	6	0	1	5.349e-04	4
152		min	-.003	2	-.099	7	-.017	1	5.076e-05	9	0	1	-2.707e-03	7
153	N425	max	.016	7	-.008	9	.022	2	5.438e-03	6	0	1	7.741e-04	4
154		min	-.003	2	-.104	7	-.017	1	2.139e-04	9	0	1	-2.129e-03	7
155	N426	max	.017	7	-.009	9	.022	2	2.606e-03	6	1.88e-04	4	-2.432e-05	4
156		min	-.003	2	-.105	7	-.016	1	-1.336e-04	1	-1.928e-04	3	-3.993e-03	7
157	N427	max	.017	7	-.009	9	.022	2	3.714e-03	6	0	1	2.1e-04	4
158		min	-.003	2	-.106	7	-.016	1	1.113e-05	9	0	1	-3.434e-03	7
159	N428	max	.016	7	-.009	9	.022	2	4.572e-03	6	0	1	4.432e-04	4
160		min	-.003	2	-.109	7	-.016	1	1.226e-04	9	0	1	-2.831e-03	7
161	N429	max	.016	7	-.009	9	.022	2	5.113e-03	6	0	1	6.612e-04	4
162		min	-.003	2	-.114	7	-.017	1	2.895e-04	9	0	1	-2.293e-03	7
163	N430	max	.017	7	-.01	9	.022	2	2.605e-03	6	1.991e-04	4	-2.932e-05	4
164		min	-.003	2	-.115	7	-.016	1	-8.684e-05	1	-2.04e-04	3	-3.992e-03	7
165	N431	max	.017	7	-.01	9	.022	2	3.773e-03	6	0	1	1.461e-04	4
166		min	-.003	2	-.116	7	-.016	1	4.363e-05	9	0	1	-3.563e-03	7
167	N432	max	.016	7	-.01	9	.022	2	4.328e-03	6	0	1	3.489e-04	4
168		min	-.003	2	-.119	7	-.016	1	2.048e-04	9	0	1	-2.988e-03	7
169	N433	max	.015	7	-.01	9	.022	2	4.911e-03	6	0	1	5.566e-04	4
170		min	-.003	2	-.123	7	-.016	1	3.872e-04	9	0	1	-2.448e-03	7
171	N434	max	.017	7	-.011	9	.022	2	2.601e-03	6	2.029e-04	4	-3.234e-05	4
172		min	-.003	2	-.125	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
173	N435	max	.017	7	-.01	9	.022	2	3.337e-03	6	8.659e-05	4	1.414e-04	4
174		min	-.003	2	-.126	7	-.016	1	1.14e-04	9	-3.246e-04	7	-3.493e-03	7
175	N436	max	.016	7	-.01	9	.022	2	3.981e-03	6	4.525e-05	4	3.153e-04	4
176		min	-.003	2	-.129	7	-.016	1	3.119e-04	9	-3.89e-04	7	-3.002e-03	7
177	N437	max	.016	7	-.006	9	.022	2	6.448e-03	6	0	1	1.167e-03	4
178		min	-.003	2	-.102	6	-.019	1	3.464e-04	9	0	1	-1.277e-03	7
179	N438	max	.015	7	-.005	9	.022	2	6.825e-03	6	0	1	1.429e-03	4
180		min	-.003	2	-.11	6	-.019	1	5.67e-04	9	0	1	-8.115e-04	9
181	N439	max	.015	7	-.005	9	.022	2	7.083e-03	6	0	1	1.62e-03	4
182		min	-.003	9	-.119	6	-.02	1	7.987e-04	9	0	1	-8.768e-04	9
183	N440	max	.015	7	-.007	9	.022	2	5.959e-03	6	0	1	1.023e-03	4
184		min	-.003	2	-.11	6	-.018	1	3.979e-04	9	0	1	-1.494e-03	7
185	N441	max	.015	7	-.007	9	.022	2	6.354e-03	6	0	1	1.247e-03	4
186		min	-.003	9	-.118	6	-.018	1	6.018e-04	9	0	1	-9.01e-04	7
187	N442	max	.014	7	-.008	9	.022	2	6.648e-03	6	0	1	1.472e-03	4
188		min	-.004	9	-.126	6	-.019	1	8.291e-04	9	0	1	-6.301e-04	9
189	N443	max	.013	7	-.008	9	.022	2	6.763e-03	6	0	1	1.667e-03	4
190		min	-.004	9	-.136	6	-.02	1	1.032e-03	9	0	1	-6.24e-04	9
191	N444	max	.015	7	-.009	9	.022	2	5.605e-03	6	0	1	8.78e-04	4
192		min	-.003	9	-.119	7	-.017	1	4.69e-04	9	0	1	-1.748e-03	7
193	N445	max	.014	7	-.009	9	.022	2	5.986e-03	6	0	1	1.091e-03	4
194		min	-.003	9	-.126	6	-.018	1	6.647e-04	9	0	1	-1.209e-03	7
195	N446	max	.013	7	-.01	9	.022	2	6.258e-03	6	0	1	1.275e-03	4
196		min	-.004	9	-.134	6	-.018	1	8.561e-04	9	0	1	-7.848e-04	3

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
197	N447	max	.012	7	-.011	9	.022	2	6.591e-03	6	0	1	1.448e-03	4
198		min	-.005	9	-.143	6	-.019	1	1.1e-03	9	0	1	-6.328e-04	3
199	N448	max	.015	7	-.01	9	.022	2	5.356e-03	6	0	1	7.465e-04	4
200		min	-.003	9	-.129	7	-.016	1	5.756e-04	9	0	1	-1.968e-03	7
201	N449	max	.014	7	-.011	9	.022	2	5.738e-03	6	0	1	9.24e-04	4
202		min	-.004	9	-.135	7	-.017	1	7.636e-04	9	0	1	-1.521e-03	7
203	N450	max	.013	7	-.012	9	.022	2	6.073e-03	6	0	1	1.101e-03	4
204		min	-.004	9	-.142	7	-.017	1	9.633e-04	9	0	1	-1.083e-03	7
205	N451	max	.012	7	-.013	9	.022	2	6.216e-03	6	0	1	1.273e-03	4
206		min	-.005	9	-.15	6	-.018	1	1.117e-03	9	0	1	-8.126e-04	3
207	N452	max	.014	7	-.011	9	.022	2	5.065e-03	6	1.613e-05	2	6.253e-04	4
208		min	-.004	9	-.138	7	-.016	1	7.129e-04	9	-6.043e-04	5	-2.161e-03	7
209	N453	max	.013	7	-.012	9	.022	2	5.512e-03	6	2.894e-05	2	7.559e-04	4
210		min	-.004	9	-.144	7	-.016	1	9.155e-04	9	-6.806e-04	5	-1.818e-03	7
211	N454	max	.012	7	-.014	9	.022	2	5.899e-03	6	3.965e-05	2	8.662e-04	4
212		min	-.005	9	-.152	7	-.016	1	1.107e-03	4	-7.404e-04	5	-1.535e-03	7
213	N455	max	.009	7	-.017	9	.022	2	6.565e-03	6	0	1	1.944e-03	4
214		min	-.007	9	-.174	6	-.019	1	1.225e-03	4	0	1	-5.195e-04	3
215	N456	max	.01	7	-.013	9	.022	2	6.927e-03	6	0	1	1.614e-03	4
216		min	-.006	9	-.16	6	-.019	1	1.415e-03	4	0	1	-5.134e-04	3
217	N457	max	.012	7	-.009	9	.022	2	6.82e-03	6	0	1	1.775e-03	4
218		min	-.005	9	-.145	6	-.02	1	1.227e-03	9	0	1	-5.94e-04	9
219	N458	max	.006	7	-.023	9	.022	2	7.798e-03	6	2.401e-04	4	2.533e-03	8
220		min	-.008	9	-.196	6	-.019	1	1.759e-03	4	-3.239e-04	3	-5.549e-04	3
221	N459	max	.008	7	-.018	9	.022	2	7.287e-03	6	0	1	1.712e-03	4
222		min	-.007	9	-.181	6	-.02	1	1.534e-03	4	0	1	-5.609e-04	3
223	N460	max	.01	7	-.014	9	.022	2	6.743e-03	6	0	1	1.871e-03	4
224		min	-.006	9	-.167	6	-.02	1	1.312e-03	4	0	1	-3.95e-04	9
225	N461	max	.011	7	-.009	9	.023	2	7.211e-03	6	0	1	1.807e-03	4
226		min	-.005	9	-.153	6	-.021	1	1.526e-03	4	0	1	-7.292e-04	9
227	N462	max	.013	7	-.005	9	.023	2	7.134e-03	6	0	1	1.963e-03	4
228		min	-.004	9	-.14	6	-.022	1	1.271e-03	9	0	1	-9.662e-04	9
229	N463	max	.006	7	-.024	9	.022	2	6.727e-03	6	1.969e-04	2	1.328e-03	4
230		min	-.008	9	-.201	6	-.02	1	1.299e-03	4	-1.243e-03	5	-7.82e-04	3
231	N464	max	.007	7	-.019	9	.022	2	6.986e-03	6	0	1	1.872e-03	4
232		min	-.007	9	-.188	6	-.021	1	1.408e-03	4	0	1	-4.882e-04	3
233	N465	max	.009	7	-.014	9	.023	2	7.101e-03	6	0	1	1.828e-03	4
234		min	-.006	9	-.175	6	-.021	1	1.461e-03	4	0	1	-5.393e-04	9
235	N466	max	.011	7	-.01	9	.023	2	6.901e-03	6	0	1	1.93e-03	4
236		min	-.006	9	-.162	6	-.022	1	1.371e-03	4	0	1	-7.752e-04	9
237	N467	max	.012	7	-.005	9	.023	2	7.3e-03	6	0	1	1.954e-03	4
238		min	-.005	9	-.15	6	-.023	1	1.515e-03	4	0	1	-1.099e-03	9
239	N468	max	.005	3	-.024	9	.023	2	7.077e-03	6	1.098e-05	4	1.988e-03	4
240		min	-.008	9	-.207	6	-.021	1	1.445e-03	2	-5.335e-04	7	-5.611e-04	3
241	N469	max	.007	7	-.02	9	.023	2	6.863e-03	6	0	1	1.707e-03	4
242		min	-.008	9	-.195	6	-.022	1	1.371e-03	4	0	1	-4.892e-04	3
243	N470	max	.008	7	-.015	9	.023	2	6.734e-03	6	0	1	1.853e-03	4
244		min	-.007	9	-.183	6	-.022	1	1.31e-03	4	0	1	-6.188e-04	9
245	N471	max	.01	7	-.01	9	.023	2	6.925e-03	6	0	1	1.897e-03	4
246		min	-.006	9	-.172	6	-.023	1	1.381e-03	4	0	1	-9.049e-04	9
247	N472	max	.011	7	-.005	9	.023	2	6.944e-03	6	0	1	2.205e-03	8
248		min	-.005	9	-.161	6	-.024	1	1.352e-03	4	0	1	-1.162e-03	9
249	N473	max	.006	7	-.02	9	.023	2	6.47e-03	6	0	1	1.759e-03	4
250		min	-.008	9	-.202	6	-.023	1	1.232e-03	4	0	1	-4.824e-04	9
251	N474	max	.007	7	-.015	9	.023	2	6.578e-03	6	0	1	1.787e-03	4
252		min	-.007	9	-.191	6	-.024	1	1.267e-03	4	0	1	-7.481e-04	9
253	N475	max	.009	7	-.01	9	.023	2	6.533e-03	6	0	1	1.969e-03	8

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
254		min	-.006	9	-.181	6	-.024	1	1.23e-03	4	0	1	-9.899e-04	9
255	N476	max	.005	3	-.026	9	.023	2	6.251e-03	6	6.933e-05	2	1.766e-03	4
256		min	-.009	9	-.217	6	-.024	1	1.035e-03	2	-7.98e-04	5	-5.245e-04	3
257	N477	max	.005	3	-.021	9	.023	2	6.157e-03	6	0	1	1.653e-03	4
258		min	-.008	9	-.208	6	-.024	1	1.04e-03	2	0	1	-6.362e-04	9
259	N478	max	.007	7	-.015	9	.023	2	6.138e-03	6	0	1	1.757e-03	4
260		min	-.007	9	-.198	6	-.025	1	1.078e-03	2	0	1	-8.547e-04	9
261	N479	max	.008	7	-.01	9	.023	2	6.262e-03	6	0	1	1.98e-03	8
262		min	-.007	9	-.189	6	-.026	1	1.148e-03	4	0	1	-1.132e-03	9
263	N480	max	.01	7	-.005	9	.023	2	6.292e-03	6	0	1	2.339e-03	8
264		min	-.006	9	-.18	6	-.026	1	1.124e-03	4	0	1	-1.414e-03	9
265	N481	max	.005	3	-.026	9	.023	2	5.626e-03	6	1.791e-04	2	1.434e-03	4
266		min	-.009	9	-.222	6	-.025	1	8.002e-04	2	-1.152e-03	5	-5.872e-04	9
267	N482	max	.005	3	-.021	9	.023	2	5.722e-03	6	0	1	1.642e-03	4
268		min	-.008	9	-.214	6	-.026	1	8.243e-04	2	0	1	-7.007e-04	9
269	N483	max	.006	7	-.015	9	.023	2	5.798e-03	6	0	1	1.692e-03	4
270		min	-.008	9	-.205	6	-.026	1	8.724e-04	2	0	1	-9.79e-04	9
271	N484	max	.008	7	-.01	9	.024	2	5.821e-03	6	0	1	2.006e-03	8
272		min	-.007	9	-.197	6	-.027	1	9.21e-04	2	0	1	-1.255e-03	9
273	N485	max	.009	7	-.004	9	.024	2	5.93e-03	6	0	1	2.319e-03	8
274		min	-.006	9	-.189	6	-.027	1	9.79e-04	2	0	1	-1.54e-03	9
275	N486	max	.005	3	-.027	9	.024	2	5.363e-03	6	1.334e-04	2	1.603e-03	4
276		min	-.009	9	-.227	6	-.027	1	6.15e-04	2	-9.68e-04	5	-4.755e-04	9
277	N487	max	.005	3	-.021	9	.024	2	5.325e-03	6	0	1	1.564e-03	4
278		min	-.009	9	-.219	6	-.027	1	6.215e-04	2	0	1	-8.264e-04	9
279	N488	max	.005	3	-.015	9	.024	2	5.344e-03	6	0	1	1.668e-03	8
280		min	-.008	9	-.212	6	-.028	1	6.523e-04	2	0	1	-1.082e-03	9
281	N489	max	.007	7	-.009	9	.024	2	5.429e-03	6	0	1	1.986e-03	8
282		min	-.007	9	-.204	6	-.028	1	7.019e-04	2	0	1	-1.369e-03	9
283	N490	max	.008	7	-.003	9	.024	2	5.492e-03	6	0	1	2.317e-03	8
284		min	-.007	9	-.197	6	-.029	1	7.495e-04	2	0	1	-1.659e-03	9
285	N491	max	.005	3	-.021	9	.024	2	4.89e-03	6	0	1	1.525e-03	4
286		min	-.009	9	-.225	6	-.029	1	4.183e-04	2	0	1	-8.922e-04	9
287	N492	max	.005	3	-.015	9	.024	2	4.945e-03	6	0	1	1.657e-03	8
288		min	-.008	9	-.218	6	-.029	1	4.488e-04	2	0	1	-1.176e-03	9
289	N493	max	.006	7	-.009	9	.024	2	4.982e-03	6	0	1	1.962e-03	8
290		min	-.008	9	-.211	6	-.03	1	4.832e-04	2	0	1	-1.464e-03	9
291	N494	max	.004	3	-.028	9	.024	2	4.481e-03	6	1.816e-04	2	1.476e-03	4
292		min	-.01	9	-.236	6	-.03	1	2.179e-04	2	-1.048e-03	5	-6.394e-04	9
293	N495	max	.005	3	-.021	9	.024	2	4.479e-03	6	0	1	1.462e-03	4
294		min	-.009	9	-.23	6	-.03	1	2.275e-04	2	0	1	-1.008e-03	9
295	N496	max	.005	3	-.015	9	.025	2	4.517e-03	6	0	1	1.674e-03	8
296		min	-.009	9	-.223	6	-.031	1	2.537e-04	2	0	1	-1.285e-03	9
297	N497	max	.005	3	-.008	9	.025	2	4.586e-03	6	0	1	1.975e-03	8
298		min	-.008	9	-.217	6	-.031	1	2.897e-04	2	0	1	-1.579e-03	9
299	N498	max	.007	7	-.001	9	.025	2	4.615e-03	6	0	1	2.281e-03	8
300		min	-.007	9	-.211	6	-.032	1	3.054e-04	2	0	1	-1.895e-03	9
301	N499	max	.004	3	-.028	9	.025	2	4.253e-03	9	2.165e-04	2	1.338e-03	4
302		min	-.01	9	-.24	6	-.032	1	4.822e-05	2	-1.127e-03	5	-9.161e-04	9
303	N500	max	.005	3	-.021	9	.025	2	4.238e-03	9	0	1	1.417e-03	4
304		min	-.01	9	-.234	6	-.032	1	4.966e-05	2	0	1	-1.067e-03	9
305	N501	max	.005	3	-.014	9	.025	2	4.188e-03	9	0	1	1.696e-03	8
306		min	-.009	9	-.229	6	-.032	1	7.435e-05	2	0	1	-1.364e-03	9
307	N502	max	.005	3	-.007	9	.025	2	4.177e-03	6	0	1	1.977e-03	8
308		min	-.008	9	-.223	6	-.033	1	1.015e-04	2	0	1	-1.673e-03	9
309	N503	max	.006	7	0	9	.025	2	4.231e-03	6	0	1	2.255e-03	8
310		min	-.008	9	-.217	6	-.033	1	1.247e-04	2	0	1	-1.963e-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
311	N504	max	.004	3	-.029	9	.025	2	4.678e-03	9	2.026e-04	2	1.377e-03	4
312		min	-.01	9	-.245	6	-.033	1	-1.242e-04	2	-1.031e-03	5	-7.356e-04	9
313	N505	max	.005	3	-.021	9	.025	2	4.62e-03	9	0	1	1.445e-03	8
314		min	-.01	9	-.239	6	-.034	1	-1.154e-04	2	0	1	-1.144e-03	9
315	N506	max	.005	3	-.014	9	.025	2	4.57e-03	9	0	1	1.692e-03	8
316		min	-.009	9	-.234	6	-.034	1	-9.202e-05	2	0	1	-1.421e-03	9
317	N507	max	.005	3	-.006	9	.026	2	4.501e-03	9	0	1	1.95e-03	8
318		min	-.009	9	-.229	6	-.034	1	-5.964e-05	2	0	1	-1.687e-03	9
319	N508	max	.006	7	.002	9	.026	2	4.452e-03	9	0	1	2.207e-03	8
320		min	-.008	9	-.223	6	-.035	1	-4.93e-05	2	0	1	-1.986e-03	9
321	N509	max	.005	3	-.021	9	.026	2	4.986e-03	9	0	1	1.453e-03	8
322		min	-.01	9	-.244	6	-.035	1	-2.537e-04	2	0	1	-1.145e-03	9
323	N510	max	.005	3	-.013	9	.026	2	4.916e-03	9	0	1	1.667e-03	8
324		min	-.009	9	-.239	6	-.036	1	-2.252e-04	2	0	1	-1.378e-03	9
325	N511	max	.005	3	-.005	9	.026	2	4.851e-03	9	0	1	1.849e-03	8
326		min	-.009	9	-.234	6	-.036	1	-2.02e-04	2	0	1	-1.614e-03	9
327	N512	max	.005	3	.005	9	.026	2	5.115e-03	9	0	1	1.717e-03	8
328		min	-.009	9	-.233	6	-.037	1	-3.001e-04	2	0	1	-1.384e-03	9
329	N513	max	.005	3	.006	9	.027	2	5.16e-03	9	0	1	1.047e-03	8
330		min	-.009	9	-.236	6	-.039	1	-2.939e-04	2	0	1	-6.139e-04	3
331	N514	max	.005	3	.005	9	.027	2	4.983e-03	9	0	1	1.232e-03	9
332		min	-.009	9	-.237	6	-.04	1	-2.896e-04	2	0	1	-1.121e-03	3
333	N515	max	.005	3	-.003	9	.026	2	5.027e-03	9	0	1	1.643e-03	8
334		min	-.009	9	-.238	6	-.037	1	-2.592e-04	2	0	1	-1.305e-03	9
335	N516	max	.005	3	-.003	9	.027	2	5.028e-03	9	0	1	1.103e-03	8
336		min	-.009	9	-.241	6	-.039	1	-2.664e-04	2	0	1	-5.704e-04	9
337	N517	max	.005	3	-.004	9	.027	2	4.702e-03	9	0	1	8.997e-04	4
338		min	-.009	9	-.243	6	-.04	1	-1.514e-04	2	0	1	-9.031e-04	3
339	N518	max	.004	3	-.01	9	.027	2	4.913e-03	9	7.675e-04	5	2.899e-03	9
340		min	-.011	9	-.242	6	-.04	1	-1.601e-04	2	-2.164e-04	2	-9.573e-04	3
341	N519	max	.005	3	-.012	9	.026	2	5.178e-03	9	0	1	1.551e-03	8
342		min	-.01	9	-.243	6	-.037	1	-3.206e-04	2	0	1	-1.279e-03	9
343	N520	max	.005	3	-.012	9	.027	2	5.119e-03	9	0	1	1.273e-03	8
344		min	-.01	9	-.247	6	-.038	1	-2.917e-04	2	0	1	-7.852e-04	9
345	N521	max	.005	3	-.013	9	.027	2	5.027e-03	9	0	1	1.028e-03	4
346		min	-.01	9	-.249	6	-.04	1	-2.451e-04	2	0	1	-7.924e-04	3
347	N522	max	.004	3	-.02	9	.027	2	4.962e-03	9	7.594e-04	5	2.274e-03	9
348		min	-.01	9	-.249	6	-.04	1	-1.776e-04	2	-2.809e-04	2	-1.148e-03	3
349	N523	max	.005	3	-.021	9	.026	2	5.285e-03	9	0	1	1.465e-03	8
350		min	-.01	9	-.248	6	-.037	1	-3.633e-04	2	0	1	-1.128e-03	9
351	N524	max	.005	3	-.021	9	.027	2	5.433e-03	9	0	1	1.319e-03	8
352		min	-.01	9	-.252	6	-.038	1	-4.127e-04	2	0	1	-9.98e-04	9
353	N525	max	.005	3	-.023	9	.027	2	5.112e-03	9	0	1	1.134e-03	4
354		min	-.01	9	-.255	6	-.04	1	-3.413e-04	2	0	1	-5.792e-04	3
355	N526	max	.005	3	-.03	9	.027	2	4.924e-03	9	6.311e-04	5	2.828e-03	9
356		min	-.009	9	-.256	6	-.04	1	-1.665e-04	2	-2.729e-04	2	-1.334e-03	7
357	N527	max	.004	3	-.03	9	.026	2	5.267e-03	9	1.911e-04	2	1.303e-03	4
358		min	-.01	9	-.253	6	-.037	1	-3.585e-04	2	-9.312e-04	5	-6.994e-04	9
359	N528	max	.004	3	-.031	9	.027	2	5.349e-03	9	1.813e-04	2	1.423e-03	8
360		min	-.011	9	-.257	6	-.038	1	-4.072e-04	2	-8.956e-04	5	-1.252e-03	9
361	N529	max	.005	3	-.032	9	.027	2	4.875e-03	9	1.696e-04	2	1.243e-03	4
362		min	-.011	9	-.261	6	-.04	1	-2.74e-04	2	-7.716e-04	5	-4.277e-04	3
363	N530	max	.003	3	-.031	9	.025	2	5.944e-03	9	0	1	5.058e-03	9
364		min	-.013	9	-.218	6	-.034	1	-3.976e-05	2	0	1	-2.156e-03	6
365	N531	max	.003	3	-.037	9	.024	2	6.006e-03	9	0	1	5.105e-03	9
366		min	-.014	9	-.212	6	-.032	1	1.219e-04	2	0	1	-2.186e-03	6
367	N532	max	.002	3	-.042	1	.023	2	6.068e-03	9	0	1	5.101e-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
368		min	-.014	9	-.206	6	-.03	1	2.997e-04	2	0	1	-2.202e-03	6
369	N533	max	.003	3	-.035	9	.025	2	5.822e-03	9	0	1	5.026e-03	9
370		min	-.012	9	-.229	6	-.035	1	-1.854e-04	2	0	1	-1.866e-03	6
371	N534	max	.003	3	-.042	9	.024	2	5.926e-03	9	0	1	5.127e-03	9
372		min	-.012	9	-.224	6	-.033	1	-5.641e-05	2	0	1	-1.932e-03	6
373	N535	max	.003	3	-.045	1	.024	2	5.999e-03	9	0	1	5.157e-03	9
374		min	-.013	9	-.218	6	-.032	1	1.017e-04	2	0	1	-1.947e-03	6
375	N536	max	.003	3	-.044	1	.023	2	6.07e-03	9	0	1	5.152e-03	9
376		min	-.013	9	-.212	6	-.03	1	2.8e-04	2	0	1	-1.933e-03	6
377	N537	max	.003	3	-.043	1	.023	2	6.144e-03	9	0	1	5.117e-03	9
378		min	-.013	9	-.206	6	-.028	1	4.695e-04	2	0	1	-1.92e-03	6
379	N538	max	.004	3	-.046	9	.025	2	5.851e-03	9	0	1	5.14e-03	9
380		min	-.011	9	-.234	6	-.035	1	-2.144e-04	2	0	1	-1.696e-03	6
381	N539	max	.004	3	-.048	1	.024	2	5.932e-03	9	0	1	5.196e-03	9
382		min	-.011	9	-.229	6	-.033	1	-8.564e-05	2	0	1	-1.713e-03	6
383	N540	max	.003	3	-.047	1	.024	2	6.003e-03	9	0	1	5.213e-03	9
384		min	-.012	9	-.224	6	-.031	1	7.214e-05	2	0	1	-1.699e-03	6
385	N541	max	.003	3	-.046	1	.023	2	6.07e-03	9	0	1	5.198e-03	9
386		min	-.012	9	-.218	6	-.03	1	2.449e-04	2	0	1	-1.679e-03	6
387	N542	max	.003	3	-.045	1	.023	2	6.154e-03	9	0	1	5.183e-03	9
388		min	-.012	9	-.212	6	-.028	1	4.323e-04	2	0	1	-1.645e-03	7
389	N543	max	.004	3	-.051	1	.025	2	5.885e-03	9	0	1	5.218e-03	9
390		min	-.01	9	-.24	6	-.035	1	-2.39e-04	2	0	1	-1.527e-03	6
391	N544	max	.004	3	-.05	1	.024	2	5.943e-03	9	0	1	5.258e-03	9
392		min	-.01	9	-.234	6	-.033	1	-1.087e-04	2	0	1	-1.489e-03	6
393	N545	max	.004	3	-.049	1	.024	2	6.006e-03	9	0	1	5.257e-03	9
394		min	-.011	9	-.229	6	-.031	1	4.689e-05	2	0	1	-1.469e-03	6
395	N546	max	.004	3	-.048	1	.023	2	6.078e-03	9	0	1	5.267e-03	9
396		min	-.011	9	-.224	6	-.029	1	2.189e-04	2	0	1	-1.421e-03	7
397	N547	max	.003	3	-.047	1	.022	2	6.163e-03	9	0	1	5.22e-03	9
398		min	-.011	9	-.218	6	-.027	1	4.013e-04	2	0	1	-1.445e-03	7
399	N548	max	.004	3	-.053	1	.024	2	5.954e-03	9	9.976e-04	5	5.257e-03	9
400		min	-.009	9	-.24	6	-.032	1	-1.051e-04	2	-2.95e-04	2	-1.347e-03	7
401	N549	max	.004	3	-.051	1	.023	2	5.997e-03	9	1.085e-03	5	5.364e-03	9
402		min	-.01	9	-.235	6	-.031	1	3.703e-05	2	-3.007e-04	2	-1.161e-03	7
403	N550	max	.004	3	-.05	1	.023	2	6.112e-03	9	1.01e-03	5	5.233e-03	9
404		min	-.01	9	-.23	6	-.029	1	2.155e-04	2	-2.628e-04	2	-1.32e-03	7
405	N551	max	.002	3	-.036	1	.022	2	6.389e-03	9	0	1	4.892e-03	9
406		min	-.015	9	-.175	6	-.025	1	1.013e-03	3	0	1	-2.254e-03	7
407	N552	max	.002	3	-.038	1	.022	2	6.248e-03	9	0	1	4.981e-03	9
408		min	-.015	9	-.183	6	-.026	1	9.184e-04	3	0	1	-2.206e-03	6
409	N553	max	.002	3	-.039	1	.022	2	6.222e-03	9	0	1	5.019e-03	9
410		min	-.015	9	-.192	6	-.027	1	7.311e-04	2	0	1	-2.22e-03	6
411	N554	max	.002	3	-.036	1	.021	2	6.28e-03	9	0	1	4.638e-03	9
412		min	-.015	9	-.175	6	-.023	1	1.029e-03	3	0	1	-2.182e-03	7
413	N555	max	.002	3	-.038	1	.021	2	6.324e-03	9	0	1	5.019e-03	9
414		min	-.015	9	-.183	6	-.024	1	9.937e-04	3	0	1	-1.856e-03	7
415	N556	max	.002	3	-.04	1	.022	2	6.313e-03	9	0	1	4.988e-03	9
416		min	-.014	9	-.191	6	-.025	1	8.981e-04	2	0	1	-1.977e-03	7
417	N557	max	.002	3	-.041	1	.022	2	6.216e-03	9	0	1	5.08e-03	9
418		min	-.014	9	-.199	6	-.027	1	6.769e-04	2	0	1	-1.918e-03	6
419	N558	max	.002	3	-.038	1	.021	2	6.695e-03	9	0	1	5.112e-03	9
420		min	-.014	9	-.184	6	-.022	1	1.139e-03	3	0	1	-1.448e-03	7
421	N559	max	.002	3	-.04	1	.021	2	6.416e-03	9	0	1	4.902e-03	9
422		min	-.014	9	-.191	6	-.023	1	1.005e-03	3	0	1	-1.813e-03	7
423	N560	max	.003	3	-.042	1	.022	2	6.34e-03	9	0	1	5.112e-03	9
424		min	-.013	9	-.199	6	-.025	1	8.405e-04	2	0	1	-1.64e-03	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
425	N561	max	.003	3	-.043	1	.022	2	6.243e-03	9	0	1	5.112e-03	9
426		min	-.013	9	-.205	6	-.026	1	6.315e-04	2	0	1	-1.694e-03	7
427	N562	max	.003	3	-.04	1	.021	2	6.59e-03	9	0	1	5.002e-03	9
428		min	-.013	9	-.194	6	-.021	1	1.048e-03	3	0	1	-1.54e-03	7
429	N563	max	.003	3	-.042	1	.021	2	6.599e-03	9	0	1	5.222e-03	9
430		min	-.013	9	-.2	6	-.023	1	1.013e-03	2	0	1	-1.314e-03	7
431	N564	max	.003	3	-.044	1	.021	2	6.387e-03	9	0	1	5.098e-03	9
432		min	-.012	9	-.206	6	-.024	1	7.949e-04	2	0	1	-1.52e-03	7
433	N565	max	.003	3	-.046	1	.022	2	6.275e-03	9	0	1	5.243e-03	9
434		min	-.012	9	-.213	6	-.026	1	5.985e-04	2	0	1	-1.379e-03	7
435	N566	max	.003	3	-.044	3	.021	2	6.688e-03	9	7.578e-04	5	4.995e-03	9
436		min	-.012	9	-.209	6	-.022	1	9.925e-04	2	-1.428e-04	2	-1.591e-03	7
437	N567	max	.003	3	-.046	1	.021	2	6.415e-03	9	1.098e-03	5	5.487e-03	9
438		min	-.011	9	-.214	6	-.024	1	7.715e-04	2	-2.408e-04	2	-9.278e-04	3
439	N568	max	.004	3	-.048	1	.022	2	6.344e-03	9	9.259e-04	5	5.143e-03	9
440		min	-.011	9	-.22	6	-.025	1	5.934e-04	2	-2.077e-04	2	-1.391e-03	7
441	N569	max	.001	3	-.031	1	.021	2	6.501e-03	6	0	1	4.539e-03	9
442		min	-.016	9	-.156	6	-.022	1	1.1e-03	3	0	1	-2.445e-03	7
443	N570	max	.001	3	-.028	1	.021	2	6.802e-03	6	0	1	5.072e-03	9
444		min	-.017	9	-.145	6	-.021	1	1.197e-03	3	0	1	-1.691e-03	7
445	N571	max	.001	3	-.026	1	.02	2	6.892e-03	6	0	1	5.028e-03	9
446		min	-.017	9	-.135	6	-.02	1	1.239e-03	3	0	1	-1.519e-03	7
447	N572	max	.002	3	-.034	1	.021	2	6.378e-03	6	0	1	4.534e-03	9
448		min	-.015	9	-.168	6	-.021	1	1.115e-03	3	0	1	-2.082e-03	7
449	N573	max	.002	3	-.031	1	.02	2	6.607e-03	6	0	1	5.12e-03	9
450		min	-.016	9	-.158	6	-.02	1	1.185e-03	3	0	1	-1.272e-03	7
451	N574	max	.001	3	-.029	1	.02	2	6.702e-03	6	0	1	4.692e-03	9
452		min	-.016	9	-.149	6	-.02	1	1.221e-03	3	0	1	-1.535e-03	7
453	N575	max	.001	3	-.026	1	.02	2	6.566e-03	6	0	1	4.624e-03	9
454		min	-.017	9	-.14	6	-.019	1	1.191e-03	3	0	1	-1.305e-03	7
455	N576	max	.001	3	-.024	1	.02	2	6.375e-03	6	0	1	4.754e-03	9
456		min	-.017	9	-.131	6	-.018	1	1.15e-03	3	0	1	-1.166e-03	3
457	N577	max	.002	3	-.033	3	.02	2	6.804e-03	9	0	1	5.25e-03	9
458		min	-.015	9	-.171	6	-.019	1	1.22e-03	3	0	1	-1.083e-03	3
459	N578	max	.002	3	-.03	3	.02	2	6.675e-03	9	0	1	4.288e-03	9
460		min	-.015	9	-.162	6	-.019	1	1.242e-03	3	0	1	-1.798e-03	7
461	N579	max	.002	3	-.028	3	.02	2	6.281e-03	6	0	1	4.401e-03	9
462		min	-.016	9	-.153	6	-.018	1	1.13e-03	3	0	1	-1.396e-03	7
463	N580	max	.001	3	-.025	3	.02	2	6.075e-03	6	0	1	4.628e-03	9
464		min	-.016	9	-.145	6	-.017	1	1.075e-03	3	0	1	-1.171e-03	3
465	N581	max	.001	3	-.022	3	.019	2	5.934e-03	6	0	1	4.722e-03	9
466		min	-.017	9	-.137	8	-.017	1	1.045e-03	3	0	1	-1.049e-03	3
467	N582	max	.002	3	-.03	3	.02	2	7.318e-03	9	0	1	3.823e-03	9
468		min	-.014	9	-.174	6	-.017	1	1.272e-03	3	0	1	-2.514e-03	7
469	N583	max	.002	3	-.028	3	.019	2	6.734e-03	9	0	1	4.677e-03	9
470		min	-.015	9	-.165	6	-.017	1	1.066e-03	3	0	1	-1.274e-03	7
471	N584	max	.002	3	-.025	3	.019	2	6.538e-03	9	0	1	4.992e-03	9
472		min	-.015	9	-.158	8	-.016	1	1.045e-03	3	0	1	-1.079e-03	3
473	N585	max	.001	3	-.023	3	.019	2	6.328e-03	9	0	1	5.005e-03	9
474		min	-.016	9	-.151	8	-.016	1	1.034e-03	3	0	1	-9.741e-04	3
475	N586	max	.001	3	-.021	3	.019	2	6.042e-03	9	0	1	4.926e-03	9
476		min	-.016	9	-.144	8	-.016	1	1.004e-03	3	0	1	-8.77e-04	3
477	N587	max	.002	3	-.026	3	.019	2	8.282e-03	9	7.373e-04	5	6.438e-03	9
478		min	-.014	9	-.172	8	-.016	1	1.21e-03	3	-1.088e-04	2	-7.02e-04	3
479	N588	max	.002	3	-.024	3	.019	2	7.837e-03	9	7.992e-04	5	5.951e-03	9
480		min	-.015	9	-.165	8	-.015	1	1.154e-03	3	-1.284e-04	2	-7.093e-04	3
481	N589	max	.002	3	-.022	3	.019	2	7.389e-03	9	7.766e-04	5	5.536e-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
482		min	-.015	9	-.159	8	-.015	1	1.094e-03	3	-1.217e-04	2	-6.984e-04	3
483	N590	max	.001	3	-.021	1	.02	2	6.689e-03	8	0	1	5.148e-03	9
484		min	-.018	9	-.116	6	-.018	1	1.234e-03	3	0	1	-1.143e-03	3
485	N591	max	0	3	-.018	1	.02	2	6.441e-03	8	0	1	5.256e-03	9
486		min	-.018	9	-.106	6	-.018	1	1.198e-03	3	0	1	-9.877e-04	3
487	N592	max	0	3	-.016	3	.019	2	6.096e-03	6	0	1	5.29e-03	9
488		min	-.019	9	-.099	8	-.017	1	1.14e-03	3	0	1	-8.046e-04	3
489	N593	max	.001	3	-.021	3	.02	2	6.183e-03	6	0	1	4.86e-03	9
490		min	-.017	9	-.122	6	-.017	1	1.116e-03	3	0	1	-1.034e-03	3
491	N594	max	.001	3	-.018	3	.019	2	5.935e-03	6	0	1	4.901e-03	9
492		min	-.018	9	-.114	8	-.016	1	1.071e-03	3	0	1	-8.802e-04	3
493	N595	max	0	3	-.016	3	.019	2	5.571e-03	6	0	1	4.851e-03	9
494		min	-.018	9	-.107	8	-.016	1	9.995e-04	3	0	1	-7.094e-04	3
495	N596	max	.001	3	-.014	3	.019	2	5.086e-03	6	0	1	4.732e-03	9
496		min	-.019	9	-.102	8	-.015	1	8.897e-04	1	0	1	-5.265e-04	3
497	N597	max	.001	3	-.02	3	.019	2	5.756e-03	6	0	1	4.737e-03	9
498		min	-.017	9	-.129	8	-.016	1	1.01e-03	3	0	1	-9.111e-04	3
499	N598	max	.001	3	-.017	3	.019	2	5.506e-03	6	0	1	4.67e-03	9
500		min	-.018	9	-.122	8	-.015	1	9.585e-04	3	0	1	-7.688e-04	3
501	N599	max	0	3	-.015	3	.019	2	5.173e-03	6	0	1	4.551e-03	9
502		min	-.018	9	-.116	8	-.015	1	8.86e-04	3	0	1	-6.169e-04	3
503	N600	max	0	3	-.013	3	.019	2	4.714e-03	6	0	1	4.401e-03	9
504		min	-.019	9	-.111	8	-.014	1	7.639e-04	1	0	1	-4.538e-04	3
505	N601	max	.001	3	-.019	3	.019	2	5.608e-03	9	0	1	4.747e-03	9
506		min	-.017	9	-.137	8	-.015	1	9.555e-04	3	0	1	-7.736e-04	3
507	N602	max	0	3	-.017	3	.019	2	5.201e-03	6	0	1	4.548e-03	9
508		min	-.017	9	-.13	8	-.015	1	8.897e-04	3	0	1	-6.581e-04	3
509	N603	max	0	3	-.015	3	.019	2	4.852e-03	6	0	1	4.35e-03	9
510		min	-.018	9	-.125	8	-.014	1	8.046e-04	3	0	1	-5.267e-04	3
511	N604	max	0	3	-.013	3	.019	2	4.45e-03	6	0	1	4.176e-03	9
512		min	-.018	9	-.12	8	-.014	1	6.786e-04	1	0	1	-3.813e-04	3
513	N605	max	.001	3	-.018	3	.019	2	6.36e-03	9	7.04e-04	5	4.831e-03	9
514		min	-.017	9	-.146	8	-.014	1	9.407e-04	3	-1.059e-04	2	-6.088e-04	3
515	N606	max	0	3	-.016	3	.019	2	5.759e-03	9	6.451e-04	5	4.545e-03	9
516		min	-.017	9	-.139	8	-.014	1	8.42e-04	3	-9.586e-05	2	-5.276e-04	3
517	N607	max	0	3	-.015	3	.019	2	5.128e-03	9	5.692e-04	5	4.324e-03	9
518		min	-.018	9	-.134	8	-.014	1	7.283e-04	1	-8.41e-05	2	-4.269e-04	3
519	N608	max	.001	3	-.012	3	.019	2	4.81e-03	6	0	1	4.992e-03	9
520		min	-.019	9	-.087	8	-.015	1	7.625e-04	1	0	1	-3.554e-04	3
521	N609	max	.002	3	-.01	3	.019	2	3.68e-03	6	0	1	4.636e-03	9
522		min	-.019	9	-.084	8	-.014	1	3.318e-04	1	0	1	-1.263e-04	3
523	N610	max	.002	3	-.01	3	.019	2	2.275e-03	9	1.847e-04	2	4.155e-03	8
524		min	-.019	9	-.084	8	-.013	1	-2.828e-04	1	-1.897e-04	1	7.855e-05	3
525	N611	max	.001	3	-.012	3	.019	2	4.373e-03	6	0	1	4.567e-03	9
526		min	-.019	9	-.097	8	-.014	1	6.177e-04	1	0	1	-3.432e-04	3
527	N612	max	.001	3	-.011	3	.019	2	3.545e-03	6	0	1	4.369e-03	9
528		min	-.019	9	-.094	8	-.014	1	3.077e-04	1	0	1	-1.463e-04	3
529	N613	max	.002	3	-.01	3	.019	2	2.293e-03	9	1.569e-04	4	4.176e-03	8
530		min	-.019	9	-.094	8	-.014	1	-2.478e-04	1	-1.621e-04	3	9.022e-05	3
531	N614	max	.002	3	-.01	3	.019	2	2.293e-03	9	1.569e-04	4	4.176e-03	8
532		min	-.019	9	-.095	8	-.014	1	-2.478e-04	1	-1.621e-04	3	9.022e-05	3
533	N615	max	.001	3	-.012	3	.019	2	4.206e-03	6	0	1	4.258e-03	9
534		min	-.019	9	-.107	8	-.014	1	5.795e-04	1	0	1	-2.848e-04	3
535	N616	max	.001	3	-.011	3	.019	2	3.361e-03	6	0	1	4.175e-03	9
536		min	-.019	9	-.104	8	-.014	1	2.552e-04	1	0	1	-1.003e-04	3
537	N617	max	.001	3	-.01	3	.019	2	2.306e-03	9	1.833e-04	4	4.189e-03	8
538		min	-.019	9	-.104	8	-.014	1	-2.071e-04	1	-1.887e-04	3	1.028e-04	3

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
539	N618	max	.002	3	-.01	3	.019	2	2.306e-03	9	1.833e-04	4	4.189e-03	8
540		min	-.019	9	-.105	8	-.014	1	-2.071e-04	1	-1.887e-04	3	1.028e-04	3
541	N619	max	0	3	-.012	3	.019	2	3.91e-03	6	0	1	4.052e-03	9
542		min	-.019	9	-.117	8	-.014	1	4.704e-04	1	0	1	-2.164e-04	3
543	N620	max	0	3	-.011	3	.019	2	3.386e-03	6	0	1	4.077e-03	9
544		min	-.019	9	-.114	8	-.014	1	2.896e-04	1	0	1	-5.077e-05	3
545	N621	max	.001	3	-.011	3	.019	2	2.315e-03	9	1.969e-04	4	4.194e-03	8
546		min	-.019	9	-.114	8	-.013	1	-1.706e-04	1	-2.023e-04	3	1.136e-04	3
547	N622	max	.001	3	-.011	3	.019	2	2.315e-03	9	1.969e-04	4	4.194e-03	8
548		min	-.019	9	-.115	8	-.014	1	-1.706e-04	1	-2.023e-04	3	1.136e-04	3
549	N623	max	0	3	-.012	3	.018	2	3.782e-03	9	3.5e-04	5	4.083e-03	9
550		min	-.019	9	-.126	8	-.013	1	3.399e-04	1	-6.866e-05	3	-1.759e-04	3
551	N624	max	0	3	-.012	3	.018	2	3.069e-03	9	2.801e-04	8	4.07e-03	9
552		min	-.019	9	-.124	8	-.013	1	1.16e-04	1	-1.102e-04	3	-2.951e-05	3
553	N625	max	0	3	-.011	3	.018	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
554		min	-.019	9	-.124	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3
555	N794	max	.003	3	-.021	9	.025	2	5.784e-03	9	0	1	4.752e-03	9
556		min	-.013	9	-.226	6	-.036	1	-2.414e-04	2	0	1	-1.963e-03	6
557	N795	max	.003	3	-.017	9	.026	2	5.698e-03	9	0	1	4.548e-03	9
558		min	-.013	9	-.229	6	-.037	1	-2.804e-04	2	0	1	-1.826e-03	6
559	N796	max	.003	3	-.013	9	.026	2	5.585e-03	9	0	1	4.278e-03	9
560		min	-.012	9	-.23	6	-.037	1	-3.002e-04	2	0	1	-1.632e-03	7
561	N797	max	.003	3	-.031	9	.025	2	5.748e-03	9	0	1	4.924e-03	9
562		min	-.012	9	-.232	6	-.036	1	-2.291e-04	2	0	1	-1.815e-03	6
563	N798	max	.003	3	-.027	9	.026	2	5.64e-03	9	0	1	4.776e-03	9
564		min	-.012	9	-.234	6	-.037	1	-2.571e-04	2	0	1	-1.727e-03	6
565	N799	max	.004	3	-.023	9	.026	2	5.502e-03	9	0	1	4.565e-03	9
566		min	-.011	9	-.236	6	-.037	1	-2.67e-04	2	0	1	-1.59e-03	6
567	N800	max	.004	3	-.019	9	.026	2	5.319e-03	9	0	1	4.277e-03	9
568		min	-.011	9	-.238	6	-.038	1	-2.502e-04	2	0	1	-1.426e-03	7
569	N801	max	.004	3	-.042	9	.025	2	5.789e-03	9	0	1	5.084e-03	9
570		min	-.011	9	-.237	6	-.036	1	-2.621e-04	2	0	1	-1.679e-03	6
571	N802	max	.004	3	-.038	9	.026	2	5.707e-03	9	0	1	4.999e-03	9
572		min	-.011	9	-.239	6	-.036	1	-2.961e-04	2	0	1	-1.636e-03	6
573	N803	max	.004	3	-.034	9	.026	2	5.58e-03	9	0	1	4.878e-03	9
574		min	-.011	9	-.241	6	-.037	1	-3.072e-04	2	0	1	-1.563e-03	6
575	N804	max	.004	3	-.03	9	.026	2	5.423e-03	9	0	1	4.674e-03	9
576		min	-.01	9	-.243	6	-.038	1	-3.025e-04	2	0	1	-1.449e-03	7
577	N805	max	.004	3	-.052	1	.025	2	5.848e-03	9	0	1	5.193e-03	9
578		min	-.01	9	-.242	6	-.035	1	-2.94e-04	2	0	1	-1.523e-03	6
579	N806	max	.004	3	-.048	9	.026	2	5.801e-03	9	0	1	5.159e-03	9
580		min	-.01	9	-.244	6	-.036	1	-3.349e-04	2	0	1	-1.532e-03	6
581	N807	max	.005	3	-.044	9	.026	2	5.754e-03	9	0	1	5.088e-03	9
582		min	-.01	9	-.247	6	-.037	1	-3.694e-04	2	0	1	-1.506e-03	6
583	N808	max	.005	3	-.04	9	.026	2	5.642e-03	9	0	1	5.037e-03	9
584		min	-.009	9	-.249	6	-.038	1	-3.702e-04	2	0	1	-1.462e-03	6
585	N809	max	.005	3	-.054	1	.025	2	5.847e-03	9	9.388e-04	5	5.247e-03	9
586		min	-.009	9	-.247	6	-.035	1	-2.773e-04	2	-3.012e-04	2	-1.396e-03	6
587	N810	max	.005	3	-.055	1	.025	2	5.822e-03	9	9.257e-04	5	5.199e-03	9
588		min	-.009	9	-.25	6	-.036	1	-3.224e-04	2	-3.031e-04	2	-1.379e-03	6
589	N811	max	.005	3	-.055	9	.026	2	5.757e-03	9	8.837e-04	5	5.256e-03	9
590		min	-.009	9	-.252	6	-.037	1	-3.393e-04	2	-2.957e-04	2	-1.432e-03	6
591	N812	max	.003	3	-.006	9	.027	2	5.267e-03	9	0	1	3.524e-03	9
592		min	-.012	9	-.234	6	-.039	1	-2.71e-04	2	0	1	-1.07e-03	7
593	N813	max	.003	3	-.003	9	.027	2	5.249e-03	9	0	1	3.182e-03	9
594		min	-.012	9	-.234	6	-.04	1	-2.455e-04	2	0	1	-8.318e-04	3
595	N815	max	.004	3	-.016	9	.027	2	5.15e-03	9	0	1	3.912e-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
596		min	-.011	9	-.24	6	-.039	1	-2.245e-04	2	0	1	-1.2e-03	7
597	N816	max	.004	3	-.013	9	.027	2	4.885e-03	9	0	1	3.357e-03	9
598		min	-.011	9	-.241	6	-.04	1	-1.485e-04	2	0	1	-9.622e-04	7
599	N818	max	.004	3	-.026	9	.027	2	5.173e-03	9	0	1	4.334e-03	9
600		min	-.01	9	-.245	6	-.039	1	-2.643e-04	2	0	1	-1.314e-03	7
601	N819	max	.004	3	-.023	9	.027	2	5.023e-03	9	0	1	3.925e-03	9
602		min	-.01	9	-.247	6	-.04	1	-2.567e-04	2	0	1	-1.046e-03	7
603	N821	max	.005	3	-.036	9	.026	2	5.526e-03	9	0	1	4.788e-03	9
604		min	-.009	9	-.251	6	-.039	1	-3.605e-04	2	0	1	-1.352e-03	7
605	N822	max	.005	3	-.033	9	.027	2	5.371e-03	9	0	1	4.216e-03	9
606		min	-.009	9	-.253	6	-.039	1	-2.937e-04	2	0	1	-1.267e-03	7
607	N824	max	.005	3	-.047	9	.026	2	5.586e-03	9	8.035e-04	5	5.343e-03	9
608		min	-.008	9	-.257	6	-.039	1	-3.202e-04	2	-2.854e-04	2	-1.461e-03	6
609	N825	max	.005	3	-.043	9	.027	2	5.218e-03	9	7.585e-04	5	4.524e-03	9
610		min	-.008	9	-.259	6	-.039	1	-2.254e-04	2	-2.905e-04	2	-1.449e-03	7
611	N899	max	.009	7	-.018	9	.022	2	6.679e-03	6	6.148e-05	2	1.025e-03	4
612		min	-.006	9	-.174	7	-.017	1	1.303e-03	4	-8.314e-04	5	-1.149e-03	7
613	N900	max	.01	7	-.014	9	.022	2	6.382e-03	6	0	1	1.548e-03	4
614		min	-.006	9	-.158	6	-.018	1	1.194e-03	4	0	1	-6.204e-04	3
615	N901	max	.002	3	-.035	3	.02	2	7.212e-03	9	1.162e-03	5	6.003e-03	9
616		min	-.013	9	-.192	6	-.018	1	1.142e-03	3	-2.388e-04	2	-9.072e-04	3
617	N902	max	.002	3	-.036	3	.02	2	6.991e-03	9	0	1	5.018e-03	9
618		min	-.014	9	-.182	6	-.02	1	1.227e-03	3	0	1	-1.352e-03	7
619	N902A	max	.026	3	-.006	2	.002	6	7.672e-05	2	2.985e-04	4	6.612e-04	4
620		min	-.026	4	-.126	5	0	1	-4.778e-03	5	-3.034e-04	3	-7.792e-04	3
621	N903B	max	.023	3	-.006	2	.002	6	6.25e-05	2	5.258e-04	4	9.115e-04	4
622		min	-.023	4	-.087	5	0	1	-4.736e-03	5	-5.3e-04	3	-1.014e-03	3
623	N904B	max	.026	3	-.006	2	.002	6	7.28e-05	2	3.111e-04	4	7.182e-04	4
624		min	-.026	4	-.116	5	0	1	-4.78e-03	5	-3.159e-04	3	-8.322e-04	3
625	N905	max	.025	3	-.006	2	.002	6	6.93e-05	2	3.467e-04	4	7.833e-04	4
626		min	-.025	4	-.106	5	0	1	-4.774e-03	5	-3.515e-04	3	-8.933e-04	3
627	N906	max	.024	3	-.006	2	.002	6	6.592e-05	2	4.154e-04	4	8.532e-04	4
628		min	-.024	4	-.097	5	0	1	-4.76e-03	5	-4.2e-04	3	-9.592e-04	3
629	N912	max	.007	2	-.011	3	.012	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
630		min	-.006	1	-.124	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3
631	N913	max	.007	2	-.009	3	.012	2	2.275e-03	9	1.847e-04	2	4.155e-03	8
632		min	-.006	1	-.085	8	-.012	1	-2.828e-04	1	-1.897e-04	1	7.855e-05	3
633	N914	max	.007	2	-.011	3	.012	2	2.315e-03	9	1.969e-04	4	4.194e-03	8
634		min	-.006	1	-.115	8	-.013	1	-1.706e-04	1	-2.023e-04	3	1.136e-04	3
635	N915	max	.007	2	-.01	3	.012	2	2.306e-03	9	1.833e-04	4	4.189e-03	8
636		min	-.006	1	-.105	8	-.013	1	-2.071e-04	1	-1.887e-04	3	1.028e-04	3
637	N916	max	.007	2	-.01	3	.012	2	2.293e-03	9	1.569e-04	4	4.176e-03	8
638		min	-.006	1	-.095	8	-.013	1	-2.478e-04	1	-1.621e-04	3	9.022e-05	3
639	N922	max	.008	1	-.011	9	.015	2	2.601e-03	6	2.029e-04	4	-3.234e-05	4
640		min	-.009	2	-.124	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
641	N923	max	.008	1	-.009	9	.014	2	2.596e-03	6	2.822e-04	1	-1.171e-05	4
642		min	-.009	2	-.085	7	-.015	1	-2.291e-04	1	-2.864e-04	2	-3.973e-03	7
643	N924	max	.008	1	-.01	9	.015	2	2.605e-03	6	1.991e-04	4	-2.932e-05	4
644		min	-.009	2	-.115	7	-.016	1	-8.684e-05	1	-2.04e-04	3	-3.992e-03	7
645	N925	max	.008	1	-.01	9	.015	2	2.606e-03	6	1.88e-04	4	-2.432e-05	4
646		min	-.009	2	-.105	7	-.015	1	-1.336e-04	1	-1.928e-04	3	-3.993e-03	7
647	N926	max	.008	1	-.009	9	.015	2	2.604e-03	6	1.904e-04	1	-1.773e-05	4
648		min	-.009	2	-.095	7	-.015	1	-1.847e-04	1	-1.949e-04	2	-3.987e-03	7
649	N911	max	.002	3	-.035	3	.02	2	6.518e-03	9	0	1	4.551e-03	9
650		min	-.014	9	-.177	6	-.019	1	1.08e-03	3	0	1	-1.864e-03	7
651	N912A	max	.002	3	-.033	3	.02	2	7.559e-03	9	0	1	5.328e-03	9
652		min	-.014	9	-.181	6	-.018	1	1.343e-03	3	0	1	-1.089e-03	3

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
653	N913A	max	.002	3	-.031	3	.019	2	8.478e-03	9	2.709e-04	4	4.48e-03	9
654		min	-.013	9	-.185	6	-.017	1	1.547e-03	3	-1.876e-04	3	-2.645e-03	7
655	N914A	max	.002	3	-.035	3	.02	2	6.943e-03	9	0	1	4.872e-03	9
656		min	-.013	9	-.187	6	-.019	1	1.126e-03	3	0	1	-1.68e-03	7
657	N915A	max	.002	3	-.036	1	.02	2	6.719e-03	9	0	1	5.16e-03	9
658		min	-.015	9	-.175	6	-.021	1	1.194e-03	3	0	1	-1.293e-03	7
659	N916A	max	.002	3	-.037	1	.02	2	6.532e-03	9	0	1	4.858e-03	9
660		min	-.014	9	-.183	6	-.021	1	1.069e-03	3	0	1	-1.662e-03	7
661	N917	max	.002	3	-.038	3	.02	2	7.01e-03	9	0	1	5.151e-03	9
662		min	-.013	9	-.19	6	-.02	1	1.201e-03	3	0	1	-1.292e-03	7
663	N918	max	.003	3	-.038	3	.02	2	7.304e-03	9	5.114e-04	5	4.788e-03	9
664		min	-.013	9	-.197	6	-.019	1	1.262e-03	3	-7.117e-05	2	-1.969e-03	7
665	N919	max	.008	7	-.02	9	.022	2	6.87e-03	7	4.175e-05	2	1.028e-03	4
666		min	-.007	9	-.182	6	-.018	1	1.354e-03	4	-7.761e-04	5	-1.156e-03	7
667	N920	max	.009	7	-.016	9	.022	2	6.398e-03	6	0	1	1.494e-03	4
668		min	-.006	9	-.17	6	-.018	1	1.163e-03	4	0	1	-6.675e-04	3
669	N921	max	.01	7	-.016	9	.022	2	6.467e-03	6	0	1	1.293e-03	4
670		min	-.006	9	-.166	6	-.018	1	1.21e-03	4	0	1	-7.731e-04	3
671	N922A	max	.01	7	-.013	9	.022	2	6.633e-03	6	0	1	1.73e-03	4
672		min	-.006	9	-.159	6	-.019	1	1.294e-03	4	0	1	-5.237e-04	3
673	N923A	max	.01	7	-.017	9	.022	2	6.469e-03	6	5.508e-05	2	9.989e-04	4
674		min	-.006	9	-.167	7	-.017	1	1.248e-03	4	-8.098e-04	5	-1.205e-03	7
675	N924A	max	.011	7	-.014	9	.022	2	6.312e-03	6	0	1	1.279e-03	4
676		min	-.005	9	-.158	6	-.018	1	1.175e-03	4	0	1	-7.858e-04	3
677	N925A	max	.011	7	-.012	9	.022	2	6.491e-03	6	0	1	1.556e-03	4
678		min	-.005	9	-.151	6	-.019	1	1.193e-03	9	0	1	-6.068e-04	3
679	N926A	max	.012	7	-.011	9	.022	2	6.838e-03	6	0	1	1.579e-03	4
680		min	-.005	9	-.148	6	-.019	1	1.263e-03	9	0	1	-5.256e-04	9
681	N952A	max	.005	3	-.035	9	.027	2	4.646e-03	9	1.013e-04	2	1.695e-03	4
682		min	-.011	9	-.264	6	-.041	1	-2.309e-04	2	-9.449e-04	5	-1.134e-03	3
683	N953A	max	.005	3	.002	9	.027	2	4.745e-03	9	1.828e-04	2	2.168e-03	9
684		min	-.009	9	-.236	6	-.041	1	-2.181e-04	2	-1.122e-03	5	-1.616e-03	7
685	N954A	max	.005	3	-.008	9	.027	2	4.668e-03	9	9.895e-05	2	2.274e-03	9
686		min	-.01	9	-.243	6	-.041	1	-1.994e-04	2	-7.877e-04	5	-1.57e-03	7
687	N955A	max	.005	3	-.017	9	.027	2	4.748e-03	9	1.677e-04	2	2.125e-03	9
688		min	-.01	9	-.25	6	-.041	1	-2.124e-04	2	-8.05e-04	5	-1.158e-03	3
689	N956A	max	.005	3	-.026	9	.027	2	4.682e-03	9	1.702e-04	2	1.408e-03	9
690		min	-.01	9	-.257	6	-.041	1	-2.027e-04	2	-6.531e-04	5	-1.143e-03	3
691	N952B	max	.011	3	-.04	9	.026	2	0	1	2.059e-03	8	2.534e-03	9
692		min	-.023	9	-.264	6	-.031	1	0	1	-1.013e-03	9	-1.218e-03	3
693	N955B	max	.01	3	-.01	9	.026	2	0	1	9.801e-04	5	2.133e-03	9
694		min	-.022	9	-.242	6	-.031	1	0	1	-5.784e-05	2	-1.264e-03	3
695	N956B	max	.01	3	-.02	9	.026	2	0	1	1.38e-03	5	2.742e-03	9
696		min	-.021	9	-.249	6	-.031	1	0	1	-1.414e-04	9	-1.305e-03	7
697	N957A	max	.011	3	-.03	9	.026	2	0	1	1.17e-03	5	2.574e-03	9
698		min	-.022	9	-.257	6	-.031	1	0	1	-2.076e-04	9	-1.288e-03	7
699	N958	max	.01	3	-.035	9	.026	2	0	1	1.392e-03	9	1.622e-03	9
700		min	-.016	9	-.264	6	-.031	1	0	1	-2.386e-03	8	-1.244e-03	3
701	N960	max	.01	3	-.008	9	.026	2	0	1	4.087e-04	9	2.553e-03	9
702		min	-.022	9	-.243	6	-.031	1	0	1	-9.442e-04	5	-1.108e-03	3
703	N961	max	.01	3	-.017	9	.026	2	0	1	9.574e-04	9	1.871e-03	9
704		min	-.02	9	-.25	6	-.031	1	0	1	-1.542e-03	8	-1.148e-03	3
705	N962	max	.01	3	-.026	9	.026	2	0	1	1.055e-03	9	2.036e-03	9
706		min	-.018	9	-.257	6	-.031	1	0	1	-1.319e-03	8	-1.105e-03	3
707	N963	max	.006	9	-.04	9	.028	2	0	1	2.204e-03	9	2.236e-03	9
708		min	-.006	8	-.264	6	-.05	1	0	1	-1.02e-03	2	-1.452e-03	7
709	N964	max	0	9	0	9	.028	2	0	1	5.652e-05	3	2.083e-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
710		min	-.003	8	-.235	6	-.05	1	0	1	-3.196e-04	8	-1.138e-03	3
711	N966	max	0	9	-.011	9	.028	2	0	1	1.313e-04	9	2.294e-03	9
712		min	-.004	8	-.242	6	-.05	1	0	1	-2.329e-04	4	-1.103e-03	3
713	N967	max	.001	9	-.02	9	.028	2	0	1	9.23e-04	9	2.675e-03	9
714		min	-.005	8	-.249	6	-.05	1	0	1	-6.312e-04	8	-1.135e-03	3
715	N968	max	.003	9	-.03	9	.028	2	0	1	1.186e-03	9	2.527e-03	9
716		min	-.006	8	-.256	6	-.05	1	0	1	-5.981e-04	2	-1.192e-03	3
717	N969	max	0	4	-.035	9	.028	2	0	1	9.298e-04	2	2.058e-03	9
718		min	-.005	9	-.264	6	-.05	1	0	1	-1.915e-03	9	-1.054e-03	3
719	N970	max	0	9	.002	9	.028	2	0	1	3.535e-04	1	2.166e-03	9
720		min	-.005	8	-.236	6	-.05	1	0	1	-2.129e-04	2	-1.244e-03	3
721	N971	max	0	9	-.008	9	.028	2	0	1	1.795e-04	1	2.335e-03	9
722		min	-.005	8	-.243	6	-.05	1	0	1	-1.037e-04	9	-1.25e-03	3
723	N972	max	0	1	-.017	9	.028	2	0	1	6.382e-04	8	1.562e-03	9
724		min	-.004	8	-.25	6	-.05	1	0	1	-8.08e-04	9	-1.165e-03	3
725	N973	max	0	1	-.026	9	.028	2	0	1	4.157e-04	2	1.915e-03	9
726		min	-.003	8	-.257	6	-.05	1	0	1	-1.042e-03	9	-1.177e-03	3
727	N976	max	.003	1	-.04	9	.028	2	5.058e-03	9	9.989e-04	5	3.41e-03	9
728		min	-.004	2	-.264	6	-.045	1	-1.456e-04	2	-3.23e-04	2	-1.744e-03	7
729	N977	max	.001	3	0	9	.028	2	0	1	7.441e-04	5	2.87e-03	9
730		min	-.005	9	-.235	6	-.045	1	0	1	-2.657e-04	2	-9.009e-04	3
731	N979	max	.002	3	-.011	9	.028	2	0	1	1.192e-04	3	2.053e-03	9
732		min	-.005	9	-.242	6	-.045	1	0	1	-1.288e-04	4	-1.184e-03	3
733	N980	max	.002	3	-.02	9	.028	2	0	1	1.216e-04	1	2.331e-03	9
734		min	-.005	9	-.249	6	-.045	1	0	1	-1.343e-04	2	-1.179e-03	3
735	N981	max	.002	3	-.03	9	.028	2	0	1	1.915e-03	9	2.578e-03	9
736		min	-.004	8	-.256	6	-.045	1	0	1	-8.872e-04	2	-1.358e-03	7
737	N982	max	.002	3	-.035	9	.028	2	4.646e-03	9	1.006e-04	2	1.702e-03	4
738		min	-.009	9	-.264	6	-.046	1	-2.308e-04	2	-9.499e-04	5	-1.133e-03	3
739	N983	max	.002	3	.002	9	.028	2	0	1	1.182e-04	2	1.948e-03	9
740		min	-.004	9	-.236	6	-.046	1	0	1	-7.629e-04	5	-1.992e-03	7
741	N984	max	.002	3	-.008	9	.028	2	0	1	1.192e-04	3	2.053e-03	9
742		min	-.005	9	-.243	6	-.046	1	0	1	-1.288e-04	4	-1.184e-03	3
743	N985	max	.002	3	-.017	9	.028	2	0	1	1.216e-04	1	2.331e-03	9
744		min	-.005	9	-.25	6	-.046	1	0	1	-1.343e-04	2	-1.179e-03	3
745	N986	max	.002	3	-.026	9	.028	2	0	1	8.309e-04	2	1.758e-03	9
746		min	-.007	9	-.257	6	-.046	1	0	1	-1.549e-03	9	-1.107e-03	3
747	N992	max	.008	3	-.04	9	.027	2	5.058e-03	9	9.989e-04	5	3.41e-03	9
748		min	-.016	9	-.264	6	-.036	1	-1.456e-04	2	-3.23e-04	2	-1.744e-03	7
749	N993	max	.006	3	0	9	.027	2	0	1	1.324e-03	5	2.341e-03	9
750		min	-.018	9	-.235	6	-.036	1	0	1	-2.969e-04	2	-1.235e-03	3
751	N995	max	.007	3	-.01	9	.027	2	0	1	1.369e-03	5	2.237e-03	9
752		min	-.017	9	-.242	6	-.036	1	0	1	-2.408e-04	2	-1.306e-03	3
753	N996	max	.007	3	-.02	9	.027	2	0	1	7.301e-04	9	2.348e-03	9
754		min	-.015	9	-.249	6	-.036	1	0	1	-1.03e-04	4	-1.191e-03	3
755	N997	max	.008	3	-.03	9	.027	2	0	1	1.887e-03	5	2.746e-03	9
756		min	-.016	9	-.256	6	-.036	1	0	1	-7.789e-04	9	-1.23e-03	3
757	N998	max	.007	3	-.035	9	.027	2	4.646e-03	9	1.006e-04	2	1.702e-03	4
758		min	-.013	9	-.264	6	-.036	1	-2.308e-04	2	-9.499e-04	5	-1.133e-03	3
759	N999	max	.008	3	.002	9	.027	2	0	1	2.179e-04	2	2.911e-03	9
760		min	-.015	9	-.236	6	-.036	1	0	1	-1.38e-03	5	-1.077e-03	3
761	N1000	max	.007	3	-.008	9	.027	2	0	1	1.713e-04	2	2.68e-03	9
762		min	-.016	9	-.243	6	-.036	1	0	1	-1.436e-03	5	-1.044e-03	3
763	N1001	max	.007	3	-.017	9	.027	2	0	1	7.301e-04	9	2.348e-03	9
764		min	-.015	9	-.25	6	-.036	1	0	1	-1.03e-04	4	-1.191e-03	3
765	N1002	max	.007	3	-.026	9	.027	2	0	1	9.766e-04	9	1.603e-03	9
766		min	-.014	9	-.257	6	-.036	1	0	1	-2.183e-03	8	-1.2e-03	3

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
767	N426A	max	.026	3	-.054	9	.023	2	-2.212e-04	9	1.007e-03	8	7.437e-04	9
768		min	-.038	4	-.263	7	-.017	1	-3.371e-03	5	-3.874e-04	3	-2.513e-03	7
769	N427A	max	.015	3	-.025	4	.02	2	-5.671e-04	2	1.356e-03	8	-8.35e-04	4
770		min	-.01	4	-.181	7	-.018	1	-2.635e-03	5	-4.303e-04	3	-5.645e-03	7
771	N428A	max	.03	3	-.025	2	.009	2	2.333e-04	2	2.236e-04	1	-1.284e-03	9
772		min	-.028	4	-.193	5	-.014	1	-4.653e-03	5	-1.348e-03	6	-5.674e-03	7
773	N430A	max	.015	7	-.011	4	.023	2	-4.308e-04	2	0	1	-5.849e-04	4
774		min	-.005	4	-.094	7	-.016	1	-1.272e-03	5	0	1	-5.78e-03	7
775	N431A	max	.015	3	-.022	4	.023	2	-1.574e-03	4	0	1	-3.562e-04	9
776		min	-.01	4	-.127	7	-.016	1	-4.278e-03	7	0	1	-5.482e-03	7
777	N432A	max	.017	3	-.034	4	.023	2	-1.391e-03	4	0	1	1.89e-04	9
778		min	-.016	4	-.166	7	-.016	1	-4.737e-03	7	0	1	-4.623e-03	7
779	N433A	max	.02	3	-.043	4	.023	2	-9.224e-04	9	0	1	7.678e-04	9
780		min	-.023	4	-.2	7	-.016	1	-4.304e-03	7	0	1	-3.277e-03	7
781	N434A	max	.023	3	-.049	4	.024	2	-4.516e-04	9	0	1	1.087e-03	9
782		min	-.03	4	-.223	7	-.016	1	-3.58e-03	5	0	1	-2.31e-03	5
783	N435A	max	.025	3	-.051	4	.024	2	7.098e-04	2	1.097e-03	8	4.211e-04	9
784		min	-.035	4	-.234	7	-.016	1	-1.945e-03	5	-3.684e-04	3	-3.308e-03	7
785	N436A	max	.026	3	-.053	4	.018	2	1.105e-03	9	0	1	2.236e-04	9
786		min	-.036	4	-.227	7	-.015	1	-7.454e-04	1	0	1	-4.061e-03	7
787	N437A	max	.027	3	-.05	4	.014	2	1.247e-03	2	0	1	-3.859e-04	9
788		min	-.034	4	-.203	7	-.014	1	-1.063e-03	5	0	1	-5.469e-03	7
789	N438A	max	.027	3	-.041	9	.01	2	1.221e-03	2	0	1	-1.176e-03	9
790		min	-.032	4	-.169	5	-.014	1	-1.972e-03	5	0	1	-6.837e-03	7
791	N439A	max	.028	3	-.026	2	.006	2	8.975e-04	2	0	1	-1.715e-03	9
792		min	-.03	4	-.13	5	-.014	5	-3.25e-03	5	0	1	-6.76e-03	7
793	N440A	max	.028	3	-.011	2	.003	2	2.681e-04	2	0	1	-9.564e-04	4
794		min	-.029	4	-.097	5	-.019	5	-4.707e-03	5	0	1	-4.185e-03	7
795	N443A	max	.017	7	-.012	4	.022	2	6.321e-04	2	5.183e-04	4	-3.093e-04	4
796		min	-.003	4	-.13	7	-.017	1	-6.685e-04	1	-2.583e-04	3	-4.784e-03	7
797	N444A	max	.014	7	-.017	4	.021	2	-2.201e-04	2	7.892e-04	8	-5.672e-04	4
798		min	-.006	4	-.154	7	-.018	1	-2.009e-03	5	-2.84e-04	3	-5.322e-03	7
799	N446A	max	.03	3	-.009	2	.003	2	2.176e-04	2	5.269e-05	1	-2.017e-04	4
800		min	-.029	4	-.135	5	-.019	5	-4.538e-03	5	-5.165e-04	6	-2.844e-03	7
801	N447A	max	.03	3	-.016	2	.006	2	3.557e-04	2	6.526e-05	1	-9.863e-04	4
802		min	-.028	4	-.162	5	-.015	5	-4.332e-03	5	-7.848e-04	6	-4.924e-03	7
803	N448A	max	.017	3	-.037	4	.021	2	-7.422e-04	2	1.133e-03	8	-1.025e-04	9
804		min	-.016	4	-.205	7	-.018	1	-3.546e-03	5	-3.572e-04	3	-4.93e-03	7
805	N449A	max	.02	3	-.044	9	.021	2	-4.752e-04	9	1.133e-03	8	5.537e-04	9
806		min	-.024	4	-.226	7	-.018	1	-3.261e-03	5	-3.585e-04	3	-3.714e-03	7
807	N450A	max	.023	3	-.049	9	.022	2	-2.656e-04	9	1.013e-03	8	9.907e-04	9
808		min	-.032	4	-.245	7	-.017	1	-2.946e-03	5	-3.734e-04	3	-2.571e-03	5
809	N451A	max	.027	3	-.051	9	.022	2	1.032e-03	2	1.872e-04	1	3.336e-04	9
810		min	-.035	4	-.248	7	-.016	1	-1.072e-03	5	-1.03e-03	6	-3.59e-03	7
811	N452A	max	.028	3	-.047	9	.017	2	9.568e-04	2	1.263e-04	1	-7.751e-05	9
812		min	-.032	4	-.23	7	-.015	1	-2.145e-03	5	-1.142e-03	6	-4.603e-03	7
813	N453A	max	.029	3	-.041	9	.012	2	7.471e-04	2	1.276e-04	1	-6.926e-04	9
814		min	-.029	4	-.213	5	-.014	1	-3.251e-03	5	-1.148e-03	6	-5.641e-03	7
815	N454A	max	.024	3	-.05	4	.024	2	-1.611e-05	2	0	1	9.294e-04	9
816		min	-.033	4	-.231	7	-.016	1	-2.924e-03	5	0	1	-2.347e-03	5
817	N455A	max	.025	3	-.052	9	.023	2	-2.333e-04	9	8.704e-04	8	1.022e-03	9
818		min	-.035	4	-.254	7	-.017	1	-2.948e-03	5	-3.677e-04	3	-2.319e-03	5
819	N459A	max	.028	3	-.006	2	.001	2	6.25e-05	2	5.258e-04	4	9.115e-04	4
820		min	-.028	4	-.086	5	-.02	5	-4.736e-03	5	-5.3e-04	3	-1.014e-03	3
821	N460A	max	.028	3	-.007	2	.002	2	2.617e-06	2	0	1	9.84e-05	4
822		min	-.028	4	-.087	5	-.02	5	-5.037e-03	5	0	1	-1.823e-03	7
823	N461A	max	.028	3	-.009	2	.002	2	9.286e-05	2	0	1	-5.207e-04	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
824		min	-.029	4	-.091	5	-.019	5	-5.009e-03	5	0	1	-3.126e-03	7
825	N462A	max	.029	3	-.006	2	.002	2	6.592e-05	2	4.154e-04	4	8.532e-04	4
826		min	-.028	4	-.096	5	-.021	5	-4.76e-03	5	-4.2e-04	3	-9.592e-04	3
827	N463A	max	.029	3	-.007	2	.002	2	6.497e-05	2	0	1	1.145e-04	4
828		min	-.028	4	-.097	5	-.02	5	-4.849e-03	5	0	1	-1.835e-03	7
829	N464A	max	.029	3	-.009	2	.002	2	1.626e-04	2	0	1	-3.542e-04	4
830		min	-.029	4	-.101	5	-.02	5	-4.718e-03	5	0	1	-2.856e-03	7
831	N465A	max	.029	3	-.011	2	.003	2	2.634e-04	2	0	1	-7.368e-04	4
832		min	-.029	4	-.106	5	-.019	5	-4.597e-03	5	0	1	-3.78e-03	7
833	N466A	max	.029	3	-.006	2	.002	2	6.93e-05	2	3.467e-04	4	7.833e-04	4
834		min	-.029	4	-.106	5	-.021	5	-4.774e-03	5	-3.515e-04	3	-8.933e-04	3
835	N467A	max	.029	3	-.007	2	.002	2	6.029e-05	2	0	1	2.061e-04	4
836		min	-.029	4	-.108	5	-.02	5	-4.851e-03	5	0	1	-1.668e-03	7
837	N468A	max	.029	3	-.008	2	.002	2	1.282e-04	2	0	1	-2.576e-04	4
838		min	-.029	4	-.111	5	-.02	5	-4.767e-03	5	0	1	-2.696e-03	7
839	N469A	max	.029	3	-.01	2	.003	2	2.428e-04	2	0	1	-5.354e-04	4
840		min	-.029	4	-.116	5	-.019	5	-4.578e-03	5	0	1	-3.431e-03	7
841	N470A	max	.03	3	-.006	2	.002	2	7.28e-05	2	3.111e-04	4	7.182e-04	4
842		min	-.029	4	-.117	5	-.021	5	-4.78e-03	5	-3.159e-04	3	-8.322e-04	3
843	N471A	max	.03	3	-.007	2	.002	2	1.423e-05	2	0	1	1.973e-04	4
844		min	-.029	4	-.118	5	-.02	5	-5.001e-03	5	0	1	-1.658e-03	7
845	N472A	max	.03	3	-.008	2	.002	2	1.129e-04	2	0	1	-8.053e-05	4
846		min	-.029	4	-.121	5	-.02	5	-4.784e-03	5	0	1	-2.421e-03	7
847	N473A	max	.03	3	-.009	2	.003	2	2.098e-04	2	0	1	-3.824e-04	4
848		min	-.029	4	-.125	5	-.019	5	-4.615e-03	5	0	1	-3.193e-03	7
849	N474A	max	.03	3	-.006	2	.002	2	7.672e-05	2	2.985e-04	4	6.612e-04	4
850		min	-.029	4	-.127	5	-.02	5	-4.778e-03	5	-3.034e-04	3	-7.792e-04	3
851	N475A	max	.03	3	-.007	2	.002	2	1.126e-04	2	9.411e-05	4	3.475e-04	4
852		min	-.029	4	-.128	5	-.02	5	-4.725e-03	5	-3.293e-04	7	-1.317e-03	7
853	N476A	max	.03	3	-.007	2	.002	2	1.655e-04	2	4.594e-05	1	5.975e-05	4
854		min	-.029	4	-.131	5	-.02	5	-4.627e-03	5	-3.957e-04	6	-2.122e-03	7
855	N477A	max	.028	3	-.015	2	.004	2	4.444e-04	2	0	1	-1.278e-03	4
856		min	-.029	4	-.103	5	-.018	5	-4.371e-03	5	0	1	-5.062e-03	7
857	N478A	max	.028	3	-.018	2	.005	2	6.355e-04	2	0	1	-1.5e-03	4
858		min	-.03	4	-.11	5	-.017	5	-3.939e-03	5	0	1	-5.751e-03	7
859	N479A	max	.028	3	-.022	2	.005	2	7.866e-04	2	0	1	-1.643e-03	4
860		min	-.03	4	-.12	5	-.016	5	-3.568e-03	5	0	1	-6.271e-03	7
861	N480A	max	.029	3	-.013	2	.004	2	4.144e-04	2	0	1	-1.024e-03	4
862		min	-.029	4	-.112	5	-.018	5	-4.314e-03	5	0	1	-4.545e-03	7
863	N481A	max	.028	3	-.016	2	.004	2	5.649e-04	2	0	1	-1.247e-03	4
864		min	-.029	4	-.119	5	-.017	5	-4.004e-03	5	0	1	-5.184e-03	7
865	N482A	max	.028	3	-.02	2	.005	2	7.271e-04	2	0	1	-1.428e-03	4
866		min	-.029	4	-.127	5	-.016	5	-3.627e-03	5	0	1	-5.748e-03	7
867	N483A	max	.028	3	-.023	2	.006	2	8.929e-04	2	0	1	-1.533e-03	4
868		min	-.03	4	-.137	5	-.015	5	-3.211e-03	5	0	1	-6.129e-03	7
869	N484A	max	.029	3	-.012	2	.004	2	3.674e-04	2	0	1	-8.018e-04	4
870		min	-.029	4	-.121	5	-.018	5	-4.358e-03	5	0	1	-4.127e-03	7
871	N485A	max	.029	3	-.015	2	.004	2	5.05e-04	2	0	1	-1.018e-03	4
872		min	-.029	4	-.128	5	-.017	5	-4.086e-03	5	0	1	-4.728e-03	7
873	N486A	max	.029	3	-.017	2	.005	2	6.343e-04	2	0	1	-1.185e-03	4
874		min	-.029	4	-.136	5	-.016	5	-3.811e-03	5	0	1	-5.205e-03	7
875	N487A	max	.029	3	-.02	2	.006	2	7.336e-04	2	0	1	-1.364e-03	4
876		min	-.029	4	-.144	5	-.015	5	-3.579e-03	5	0	1	-5.731e-03	7
877	N488A	max	.03	3	-.011	2	.003	2	3.149e-04	2	0	1	-6.11e-04	4
878		min	-.029	4	-.131	5	-.018	5	-4.426e-03	5	0	1	-3.818e-03	7
879	N489A	max	.03	3	-.013	2	.004	2	4.185e-04	2	0	1	-8.183e-04	4
880		min	-.029	4	-.137	5	-.017	5	-4.235e-03	5	0	1	-4.372e-03	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
881	N490A	max	.03	3	-.016	2	.005	2	5.234e-04	2	0	1	-1.008e-03	4
882		min	-.029	4	-.145	5	-.016	5	-4.026e-03	5	0	1	-4.885e-03	7
883	N491A	max	.029	3	-.018	2	.006	2	6.55e-04	2	0	1	-1.137e-03	4
884		min	-.029	4	-.153	5	-.015	5	-3.736e-03	5	0	1	-5.221e-03	7
885	N492A	max	.03	3	-.01	2	.003	2	2.688e-04	2	5.739e-05	1	-4.369e-04	4
886		min	-.029	4	-.14	5	-.018	5	-4.451e-03	5	-6.107e-04	6	-3.485e-03	7
887	N493A	max	.03	3	-.012	2	.004	2	3.123e-04	2	6.075e-05	1	-6.46e-04	4
888		min	-.029	4	-.147	5	-.017	5	-4.382e-03	5	-6.851e-04	6	-4.045e-03	7
889	N494A	max	.03	3	-.014	2	.005	2	3.45e-04	2	6.343e-05	1	-8.29e-04	4
890		min	-.028	4	-.154	5	-.016	5	-4.334e-03	5	-7.434e-04	6	-4.525e-03	7
891	N495A	max	.03	3	-.025	2	.008	2	1.131e-03	2	0	1	-1.404e-03	9
892		min	-.029	4	-.177	5	-.014	1	-2.528e-03	5	0	1	-6.344e-03	7
893	N496A	max	.029	3	-.025	2	.007	2	8.216e-04	2	0	1	-1.424e-03	9
894		min	-.029	4	-.161	5	-.014	1	-3.334e-03	5	0	1	-6.277e-03	7
895	N497A	max	.028	3	-.026	2	.007	2	9.838e-04	2	0	1	-1.509e-03	9
896		min	-.03	4	-.146	5	-.014	5	-2.951e-03	5	0	1	-6.355e-03	7
897	N498A	max	.03	3	-.029	2	.01	2	1.13e-03	2	1.693e-04	4	-1.557e-03	9
898		min	-.028	4	-.198	5	-.014	1	-2.436e-03	5	-2.527e-04	3	-7.847e-03	7
899	N499A	max	.029	3	-.029	2	.009	2	8.098e-04	2	0	1	-1.39e-03	9
900		min	-.029	4	-.183	5	-.014	1	-3.306e-03	5	0	1	-6.732e-03	7
901	N500A	max	.029	3	-.029	2	.008	2	1.072e-03	2	0	1	-1.344e-03	9
902		min	-.029	4	-.168	5	-.014	1	-2.666e-03	5	0	1	-6.454e-03	7
903	N501A	max	.028	3	-.03	2	.008	2	9.522e-04	2	0	1	-1.506e-03	9
904		min	-.03	4	-.154	5	-.014	1	-2.981e-03	5	0	1	-6.797e-03	7
905	N502A	max	.028	3	-.03	2	.007	2	1.12e-03	2	0	1	-1.613e-03	9
906		min	-.031	4	-.139	5	-.014	1	-2.624e-03	5	0	1	-6.896e-03	7
907	N503A	max	.029	3	-.033	2	.01	2	5.947e-04	2	1.637e-04	1	-9.676e-04	9
908		min	-.029	4	-.203	5	-.014	1	-3.782e-03	5	-1.232e-03	6	-5.814e-03	7
909	N504A	max	.029	3	-.033	2	.01	2	9.947e-04	2	0	1	-1.215e-03	9
910		min	-.029	4	-.189	5	-.014	1	-2.781e-03	5	0	1	-6.689e-03	7
911	N505A	max	.028	3	-.034	2	.009	2	9.757e-04	2	0	1	-1.304e-03	9
912		min	-.03	4	-.175	5	-.014	1	-2.845e-03	5	0	1	-6.771e-03	7
913	N506A	max	.028	3	-.034	2	.009	2	1.123e-03	2	0	1	-1.361e-03	9
914		min	-.03	4	-.162	5	-.014	1	-2.469e-03	5	0	1	-6.742e-03	7
915	N507A	max	.028	3	-.035	2	.008	2	1.1e-03	2	0	1	-1.535e-03	9
916		min	-.031	4	-.149	5	-.014	1	-2.571e-03	5	0	1	-7.13e-03	7
917	N508A	max	.029	3	-.037	2	.011	2	1.026e-03	2	-5.533e-06	1	-1.095e-03	9
918		min	-.029	4	-.208	5	-.014	1	-2.615e-03	5	-5.335e-04	6	-6.906e-03	7
919	N509A	max	.029	3	-.038	2	.011	2	8.994e-04	2	0	1	-1.033e-03	9
920		min	-.029	4	-.195	5	-.014	1	-2.965e-03	5	0	1	-6.442e-03	7
921	N510A	max	.028	3	-.038	2	.01	2	1.068e-03	2	0	1	-1.114e-03	9
922		min	-.03	4	-.183	5	-.014	1	-2.516e-03	5	0	1	-6.542e-03	7
923	N511A	max	.028	3	-.038	2	.01	2	1.1e-03	2	0	1	-1.244e-03	9
924		min	-.031	4	-.171	5	-.014	1	-2.423e-03	5	0	1	-6.804e-03	7
925	N512A	max	.027	3	-.038	9	.009	2	1.224e-03	2	0	1	-1.359e-03	9
926		min	-.031	4	-.159	5	-.014	1	-2.127e-03	5	0	1	-6.985e-03	7
927	N513A	max	.028	3	-.041	9	.012	2	1.009e-03	2	0	1	-8.578e-04	9
928		min	-.03	4	-.201	5	-.014	1	-2.585e-03	5	0	1	-6.212e-03	7
929	N514A	max	.028	3	-.041	9	.011	2	1.046e-03	2	0	1	-9.536e-04	9
930		min	-.03	4	-.191	5	-.014	1	-2.463e-03	5	0	1	-6.4e-03	7
931	N515A	max	.028	3	-.041	9	.011	2	1.162e-03	2	0	1	-1.042e-03	9
932		min	-.031	4	-.18	5	-.014	1	-2.131e-03	5	0	1	-6.529e-03	7
933	N516A	max	.028	3	-.043	9	.013	2	1.006e-03	2	3.928e-05	1	-6.671e-04	9
934		min	-.03	4	-.217	5	-.014	1	-2.489e-03	5	-7.91e-04	6	-6.031e-03	7
935	N517A	max	.028	3	-.043	9	.013	2	9.827e-04	2	0	1	-6.717e-04	9
936		min	-.03	4	-.207	5	-.014	1	-2.53e-03	5	0	1	-5.888e-03	7
937	N518A	max	.028	3	-.043	9	.012	2	1.1e-03	2	0	1	-7.577e-04	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
938		min	-.031	4	-.197	5	-.014	1	-2.183e-03	5	0	1	-6.059e-03	7
939	N519A	max	.028	3	-.043	9	.012	2	1.162e-03	2	0	1	-8.7e-04	9
940		min	-.032	4	-.187	5	-.014	1	-1.973e-03	5	0	1	-6.315e-03	7
941	N520A	max	.027	3	-.044	9	.011	2	1.266e-03	2	0	1	-9.656e-04	9
942		min	-.032	4	-.178	7	-.014	1	-1.666e-03	5	0	1	-6.518e-03	7
943	N521A	max	.028	3	-.044	9	.014	2	8.678e-04	2	1.169e-04	1	-3.786e-04	9
944		min	-.03	4	-.221	5	-.015	1	-2.708e-03	5	-1.137e-03	6	-5.181e-03	7
945	N522A	max	.028	3	-.045	9	.014	2	1.044e-03	2	0	1	-4.925e-04	9
946		min	-.031	4	-.212	5	-.014	1	-2.228e-03	5	0	1	-5.567e-03	7
947	N523A	max	.028	3	-.045	9	.013	2	1.103e-03	2	0	1	-5.824e-04	9
948		min	-.031	4	-.203	5	-.014	1	-2.01e-03	5	0	1	-5.774e-03	7
949	N524A	max	.027	3	-.046	9	.013	2	1.19e-03	2	0	1	-6.73e-04	9
950		min	-.032	4	-.195	7	-.014	1	-1.717e-03	5	0	1	-5.962e-03	7
951	N525A	max	.027	3	-.046	9	.012	2	1.258e-03	2	0	1	-7.732e-04	9
952		min	-.033	4	-.187	7	-.014	1	-1.489e-03	5	0	1	-6.212e-03	7
953	N526A	max	.028	3	-.046	9	.016	2	1.023e-03	2	7.564e-05	1	-2.82e-04	9
954		min	-.031	4	-.225	5	-.015	1	-2.17e-03	5	-9.55e-04	6	-5.2e-03	7
955	N527A	max	.028	3	-.046	9	.015	2	1.044e-03	2	0	1	-3.173e-04	9
956		min	-.031	4	-.217	7	-.015	1	-2.054e-03	5	0	1	-5.214e-03	7
957	N528A	max	.027	3	-.047	9	.014	2	1.126e-03	2	0	1	-3.953e-04	9
958		min	-.032	4	-.21	7	-.014	1	-1.768e-03	5	0	1	-5.396e-03	7
959	N529A	max	.027	3	-.047	9	.014	2	1.187e-03	2	0	1	-4.884e-04	9
960		min	-.033	4	-.202	7	-.014	1	-1.525e-03	5	0	1	-5.628e-03	7
961	N530A	max	.027	3	-.048	4	.013	2	1.263e-03	2	0	1	-5.789e-04	9
962		min	-.033	4	-.195	7	-.014	1	-1.261e-03	5	0	1	-5.847e-03	7
963	N531A	max	.028	3	-.047	9	.016	2	1.072e-03	2	0	1	-1.521e-04	9
964		min	-.032	4	-.223	7	-.015	1	-1.796e-03	5	0	1	-4.869e-03	7
965	N532A	max	.027	3	-.048	9	.015	2	1.127e-03	2	0	1	-2.27e-04	9
966		min	-.033	4	-.216	7	-.015	1	-1.564e-03	5	0	1	-5.06e-03	7
967	N533A	max	.027	3	-.049	9	.015	2	1.188e-03	2	0	1	-3.032e-04	9
968		min	-.033	4	-.21	7	-.015	1	-1.309e-03	5	0	1	-5.244e-03	7
969	N534A	max	.028	3	-.048	9	.018	2	1.045e-03	2	1.142e-04	1	4.78e-05	9
970		min	-.032	4	-.235	7	-.015	1	-1.748e-03	5	-1.034e-03	6	-4.438e-03	7
971	N535A	max	.027	3	-.049	9	.017	2	1.078e-03	2	0	1	-3.929e-06	9
972		min	-.033	4	-.228	7	-.015	1	-1.563e-03	5	0	1	-4.534e-03	7
973	N536A	max	.027	3	-.05	9	.017	2	1.133e-03	2	0	1	-7.207e-05	9
974		min	-.033	4	-.222	7	-.015	1	-1.32e-03	5	0	1	-4.714e-03	7
975	N537A	max	.027	3	-.051	9	.016	2	1.181e-03	2	0	1	-1.487e-04	9
976		min	-.034	4	-.216	7	-.015	1	-1.086e-03	5	0	1	-4.922e-03	7
977	N538A	max	.027	3	-.051	4	.015	2	1.236e-03	2	0	1	-2.117e-04	9
978		min	-.034	4	-.21	7	-.015	1	-8.272e-04	5	0	1	-5.101e-03	7
979	N539A	max	.027	3	-.049	9	.019	2	1.014e-03	2	1.522e-04	1	1.727e-04	9
980		min	-.033	4	-.239	7	-.015	1	-1.578e-03	5	-1.113e-03	6	-4.033e-03	7
981	N540A	max	.027	3	-.05	9	.018	2	1.088e-03	2	0	1	1.306e-04	9
982		min	-.034	4	-.233	7	-.015	1	-1.32e-03	5	0	1	-4.218e-03	7
983	N541A	max	.027	3	-.051	9	.018	2	1.129e-03	2	0	1	6.572e-05	9
984		min	-.034	4	-.227	7	-.015	1	-1.094e-03	5	0	1	-4.4e-03	7
985	N542A	max	.027	3	-.052	9	.017	2	1.167e-03	2	0	1	-1.081e-06	9
986		min	-.035	4	-.221	7	-.015	1	-8.675e-04	5	0	1	-4.583e-03	7
987	N543A	max	.027	3	-.052	4	.016	2	1.207e-03	2	0	1	-6.197e-05	9
988		min	-.035	4	-.216	7	-.015	1	-7.232e-04	1	0	1	-4.768e-03	7
989	N544A	max	.027	3	-.05	9	.02	2	1.054e-03	2	1.559e-04	1	3.03e-04	9
990		min	-.034	4	-.243	7	-.016	1	-1.311e-03	5	-1.022e-03	6	-3.797e-03	7
991	N545A	max	.027	3	-.051	9	.02	2	1.085e-03	2	0	1	2.463e-04	9
992		min	-.034	4	-.238	7	-.015	1	-1.092e-03	5	0	1	-3.921e-03	7
993	N546A	max	.027	3	-.052	9	.019	2	1.112e-03	2	0	1	1.919e-04	9
994		min	-.035	4	-.232	7	-.015	1	-8.929e-04	5	0	1	-4.079e-03	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
995	N547A	max	.027	3	-.054	4	.018	2	1.137e-03	2	0	1	1.314e-04	9
996		min	-.035	4	-.227	7	-.015	1	-7.472e-04	1	0	1	-4.263e-03	7
997	N548A	max	.027	3	-.052	4	.017	2	1.166e-03	2	0	1	8.157e-05	9
998		min	-.036	4	-.222	7	-.015	1	-7.1e-04	1	0	1	-4.43e-03	7
999	N549A	max	.027	3	-.052	9	.021	2	1.068e-03	2	0	1	3.456e-04	9
1000		min	-.035	4	-.242	7	-.016	1	-9.105e-04	5	0	1	-3.647e-03	7
1001	N550A	max	.027	3	-.054	9	.02	2	1.081e-03	2	0	1	2.981e-04	9
1002		min	-.035	4	-.237	7	-.015	1	-7.598e-04	1	0	1	-3.797e-03	7
1003	N551A	max	.027	3	-.054	4	.019	2	1.074e-03	2	0	1	2.534e-04	9
1004		min	-.036	4	-.232	7	-.015	1	-7.533e-04	1	0	1	-3.94e-03	7
1005	N552A	max	.026	3	-.053	4	.019	2	9.945e-04	9	0	1	3.686e-04	9
1006		min	-.037	4	-.231	7	-.015	1	-8.521e-04	1	0	1	-3.673e-03	7
1007	N553A	max	.026	3	-.053	4	.02	2	7.385e-04	9	0	1	5.09e-04	9
1008		min	-.037	4	-.234	7	-.015	1	-1.135e-03	5	0	1	-3.235e-03	7
1009	N554A	max	.026	3	-.052	4	.021	2	2.969e-04	9	0	1	6.55e-04	9
1010		min	-.037	4	-.235	7	-.016	1	-2.419e-03	5	0	1	-2.821e-03	7
1011	N555A	max	.026	3	-.055	4	.02	2	9.796e-04	9	0	1	3.445e-04	9
1012		min	-.036	4	-.236	7	-.015	1	-8.353e-04	1	0	1	-3.668e-03	7
1013	N556A	max	.026	3	-.055	4	.021	2	7.742e-04	9	0	1	4.38e-04	9
1014		min	-.037	4	-.24	7	-.016	1	-1.157e-03	5	0	1	-3.379e-03	7
1015	N557A	max	.026	3	-.054	4	.022	2	4.154e-04	2	0	1	5.177e-04	9
1016		min	-.037	4	-.242	7	-.016	1	-2.022e-03	5	0	1	-3.126e-03	7
1017	N558A	max	.025	3	-.053	4	.024	2	6.771e-04	2	7.959e-04	8	3.929e-04	9
1018		min	-.036	4	-.241	7	-.016	1	-1.933e-03	5	-3.374e-04	3	-3.331e-03	7
1019	N559A	max	.027	3	-.055	9	.021	2	1.007e-03	9	0	1	3.765e-04	9
1020		min	-.036	4	-.242	7	-.016	1	-7.802e-04	1	0	1	-3.551e-03	7
1021	N560A	max	.026	3	-.056	9	.022	2	8.623e-04	9	0	1	4.118e-04	9
1022		min	-.037	4	-.245	7	-.016	1	-9.64e-04	5	0	1	-3.389e-03	7
1023	N561A	max	.026	3	-.056	9	.023	2	5.856e-04	2	0	1	5.254e-04	9
1024		min	-.037	4	-.248	7	-.016	1	-1.749e-03	5	0	1	-3.043e-03	7
1025	N562A	max	.026	3	-.056	4	.024	2	3.086e-04	2	7.804e-04	8	5.777e-04	9
1026		min	-.037	4	-.248	7	-.016	1	-2.54e-03	5	-3.624e-04	3	-2.978e-03	7
1027	N563A	max	.027	3	-.053	9	.022	2	1.038e-03	2	0	1	4.095e-04	9
1028		min	-.036	4	-.247	7	-.016	1	-7.691e-04	5	0	1	-3.449e-03	7
1029	N564A	max	.027	3	-.054	9	.023	2	9.699e-04	9	0	1	4.437e-04	9
1030		min	-.036	4	-.251	7	-.016	1	-8.283e-04	5	0	1	-3.278e-03	7
1031	N565A	max	.026	3	-.055	9	.024	2	7.211e-04	2	0	1	4.495e-04	9
1032		min	-.037	4	-.254	7	-.017	1	-1.452e-03	5	0	1	-3.306e-03	7
1033	N566A	max	.026	3	-.055	9	.023	2	-2.974e-05	2	7.086e-04	4	6.775e-04	9
1034		min	-.038	4	-.256	7	-.017	1	-2.974e-03	5	-3.785e-04	3	-2.672e-03	7
1035	N567A	max	.027	3	-.052	9	.023	2	1.023e-03	2	1.968e-04	1	4.542e-04	9
1036		min	-.035	4	-.252	7	-.016	1	-1.002e-03	5	-9.348e-04	6	-3.368e-03	7
1037	N568A	max	.027	3	-.053	9	.024	2	1.05e-03	9	2.22e-04	1	3.575e-04	9
1038		min	-.036	4	-.256	7	-.017	1	-7.672e-04	5	-9.071e-04	6	-3.441e-03	7
1039	N569A	max	.027	3	-.054	9	.025	2	8.614e-04	2	2.525e-04	1	3.767e-04	9
1040		min	-.036	4	-.261	7	-.017	1	-1.215e-03	5	-7.942e-04	6	-3.461e-03	7
1041	N570A	max	.022	3	-.048	4	.024	2	-5.836e-04	9	0	1	1.049e-03	9
1042		min	-.028	4	-.218	7	-.016	1	-3.789e-03	5	0	1	-2.487e-03	5
1043	N571A	max	.021	3	-.046	4	.024	2	-6.937e-04	9	0	1	9.763e-04	9
1044		min	-.026	4	-.212	7	-.016	1	-3.956e-03	7	0	1	-2.708e-03	5
1045	N572A	max	.021	3	-.045	4	.024	2	-8.048e-04	9	0	1	8.851e-04	9
1046		min	-.025	4	-.206	7	-.016	1	-4.131e-03	7	0	1	-2.961e-03	7
1047	N573A	max	.023	3	-.05	4	.023	2	-4.115e-04	9	0	1	1.06e-03	9
1048		min	-.03	4	-.229	7	-.016	1	-3.427e-03	5	0	1	-2.377e-03	5
1049	N574A	max	.022	3	-.049	4	.023	2	-5.162e-04	9	0	1	1.017e-03	9
1050		min	-.028	4	-.223	7	-.016	1	-3.6e-03	5	0	1	-2.557e-03	5
1051	N575A	max	.021	3	-.047	4	.023	2	-6.142e-04	9	0	1	9.388e-04	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1052		min	-.027	4	-.218	7	-.017	1	-3.754e-03	5	0	1	-2.784e-03	5
1053	N576A	max	.021	3	-.045	4	.023	2	-7.123e-04	9	0	1	8.363e-04	9
1054		min	-.025	4	-.212	7	-.017	1	-3.902e-03	5	0	1	-3.069e-03	7
1055	N577A	max	.02	3	-.044	4	.023	2	-8.165e-04	9	0	1	7.198e-04	9
1056		min	-.023	4	-.206	7	-.017	1	-4.059e-03	5	0	1	-3.371e-03	7
1057	N578A	max	.023	3	-.051	4	.023	2	-3.655e-04	9	0	1	1.053e-03	9
1058		min	-.031	4	-.234	7	-.017	1	-3.274e-03	5	0	1	-2.417e-03	5
1059	N579A	max	.022	3	-.05	4	.023	2	-4.459e-04	9	0	1	9.956e-04	9
1060		min	-.029	4	-.229	7	-.017	1	-3.409e-03	5	0	1	-2.615e-03	5
1061	N580A	max	.022	3	-.048	4	.023	2	-5.286e-04	9	0	1	9.065e-04	9
1062		min	-.027	4	-.223	7	-.017	1	-3.544e-03	5	0	1	-2.861e-03	5
1063	N581A	max	.021	3	-.046	4	.022	2	-6.168e-04	9	0	1	8.003e-04	9
1064		min	-.025	4	-.218	7	-.017	1	-3.685e-03	5	0	1	-3.149e-03	7
1065	N582A	max	.02	3	-.044	4	.022	2	-7.084e-04	9	0	1	6.747e-04	9
1066		min	-.023	4	-.212	7	-.017	1	-3.822e-03	5	0	1	-3.473e-03	7
1067	N583A	max	.023	3	-.051	9	.022	2	-3.193e-04	9	0	1	1.039e-03	9
1068		min	-.031	4	-.239	7	-.017	1	-3.129e-03	5	0	1	-2.465e-03	5
1069	N584A	max	.022	3	-.05	9	.022	2	-3.75e-04	9	0	1	9.67e-04	9
1070		min	-.029	4	-.234	7	-.017	1	-3.219e-03	5	0	1	-2.686e-03	5
1071	N585A	max	.022	3	-.048	9	.022	2	-4.476e-04	9	0	1	8.72e-04	9
1072		min	-.027	4	-.229	7	-.017	1	-3.351e-03	5	0	1	-2.936e-03	7
1073	N586A	max	.021	3	-.047	9	.022	2	-5.194e-04	9	0	1	7.547e-04	9
1074		min	-.025	4	-.224	7	-.017	1	-3.46e-03	5	0	1	-3.254e-03	7
1075	N587A	max	.02	3	-.045	9	.022	2	-6.137e-04	9	0	1	6.315e-04	9
1076		min	-.023	4	-.219	7	-.017	1	-3.633e-03	5	0	1	-3.548e-03	7
1077	N588A	max	.023	3	-.048	9	.022	2	-3.327e-04	9	1.014e-03	8	9.247e-04	9
1078		min	-.03	4	-.24	7	-.017	1	-3.119e-03	5	-3.596e-04	3	-2.76e-03	5
1079	N589A	max	.022	3	-.047	9	.022	2	-3.48e-04	9	1.102e-03	8	8.139e-04	9
1080		min	-.028	4	-.235	7	-.017	1	-3.074e-03	5	-3.685e-04	3	-3.064e-03	7
1081	N590A	max	.021	3	-.046	9	.021	2	-4.636e-04	9	1.029e-03	8	7.067e-04	9
1082		min	-.026	4	-.23	7	-.018	1	-3.382e-03	5	-3.414e-04	3	-3.325e-03	7
1083	N591A	max	.018	3	-.036	4	.023	2	-1.351e-03	9	0	1	3.585e-04	9
1084		min	-.018	4	-.175	7	-.016	1	-4.925e-03	7	0	1	-4.253e-03	7
1085	N592A	max	.019	3	-.039	4	.023	2	-1.188e-03	9	0	1	5.15e-04	9
1086		min	-.02	4	-.183	7	-.016	1	-4.667e-03	7	0	1	-3.88e-03	7
1087	N593A	max	.019	3	-.041	4	.023	2	-1.064e-03	9	0	1	6.376e-04	9
1088		min	-.021	4	-.192	7	-.016	1	-4.523e-03	7	0	1	-3.603e-03	7
1089	N594A	max	.017	3	-.034	4	.022	2	-1.352e-03	9	0	1	2.329e-04	9
1090		min	-.016	4	-.176	7	-.017	1	-4.827e-03	5	0	1	-4.327e-03	7
1091	N595A	max	.018	3	-.037	4	.022	2	-1.166e-03	9	0	1	3.096e-04	9
1092		min	-.018	4	-.184	7	-.017	1	-4.469e-03	5	0	1	-4.305e-03	7
1093	N596A	max	.019	3	-.039	4	.023	2	-1.076e-03	9	0	1	4.566e-04	9
1094		min	-.02	4	-.191	7	-.017	1	-4.45e-03	5	0	1	-3.987e-03	7
1095	N597A	max	.019	3	-.042	4	.023	2	-9.369e-04	9	0	1	5.938e-04	9
1096		min	-.021	4	-.199	7	-.017	1	-4.23e-03	5	0	1	-3.68e-03	7
1097	N598A	max	.017	3	-.035	4	.022	2	-1.138e-03	9	0	1	3.259e-05	9
1098		min	-.016	4	-.185	7	-.017	1	-4.333e-03	5	0	1	-4.923e-03	7
1099	N599A	max	.018	3	-.038	4	.022	2	-1.077e-03	9	0	1	2.793e-04	9
1100		min	-.018	4	-.192	7	-.017	1	-4.408e-03	5	0	1	-4.292e-03	7
1101	N600A	max	.019	3	-.04	4	.022	2	-9.27e-04	9	0	1	3.975e-04	9
1102		min	-.02	4	-.199	7	-.017	1	-4.132e-03	5	0	1	-4.11e-03	7
1103	N601A	max	.019	3	-.042	4	.022	2	-8.267e-04	9	0	1	5.481e-04	9
1104		min	-.021	4	-.206	7	-.017	1	-4.02e-03	5	0	1	-3.763e-03	7
1105	N602A	max	.017	3	-.036	4	.021	2	-1.024e-03	2	0	1	6.842e-05	9
1106		min	-.016	4	-.195	7	-.018	1	-4.234e-03	5	0	1	-4.576e-03	7
1107	N603A	max	.018	3	-.038	4	.021	2	-8.999e-04	9	0	1	1.524e-04	9
1108		min	-.018	4	-.201	7	-.017	1	-4.018e-03	5	0	1	-4.606e-03	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1109	N604A	max	.019	3	-.041	4	.021	2	-8.302e-04	9	0	1	3.538e-04	9
1110		min	-.02	4	-.207	7	-.017	1	-4.006e-03	5	0	1	-4.137e-03	7
1111	N605A	max	.019	3	-.043	4	.021	2	-6.979e-04	9	0	1	4.818e-04	9
1112		min	-.022	4	-.213	7	-.017	1	-3.739e-03	5	0	1	-3.907e-03	7
1113	N606A	max	.018	3	-.039	4	.021	2	-8.827e-04	9	7.897e-04	8	1.219e-04	9
1114		min	-.018	4	-.21	7	-.018	1	-4.247e-03	5	-2.744e-04	3	-4.467e-03	7
1115	N607A	max	.019	3	-.041	9	.021	2	-6.274e-04	9	1.125e-03	8	2.354e-04	9
1116		min	-.02	4	-.215	7	-.018	1	-3.457e-03	5	-3.515e-04	3	-4.389e-03	7
1117	N608A	max	.019	3	-.043	9	.021	2	-6.51e-04	9	9.512e-04	8	4.299e-04	9
1118		min	-.022	4	-.221	7	-.018	1	-3.764e-03	5	-3.121e-04	3	-3.937e-03	7
1119	N609A	max	.017	3	-.031	4	.023	2	-1.636e-03	4	0	1	1.339e-04	9
1120		min	-.015	4	-.156	7	-.016	1	-5.258e-03	7	0	1	-4.553e-03	7
1121	N610A	max	.016	3	-.028	4	.023	2	-1.557e-03	4	0	1	-1.164e-04	9
1122		min	-.013	4	-.146	7	-.016	1	-4.741e-03	7	0	1	-5.196e-03	7
1123	N611A	max	.016	3	-.025	4	.023	2	-1.597e-03	4	0	1	-2.439e-04	9
1124		min	-.012	4	-.136	7	-.016	1	-4.612e-03	7	0	1	-5.372e-03	7
1125	N612A	max	.017	3	-.031	4	.022	2	-1.445e-03	2	0	1	5.43e-05	9
1126		min	-.014	4	-.168	7	-.017	1	-4.87e-03	5	0	1	-4.647e-03	7
1127	N613A	max	.016	3	-.029	4	.022	2	-1.332e-03	2	0	1	-1.748e-04	9
1128		min	-.013	4	-.159	7	-.017	1	-4.277e-03	5	0	1	-5.252e-03	7
1129	N614A	max	.016	3	-.026	4	.022	2	-1.455e-03	2	0	1	-2.322e-04	9
1130		min	-.012	4	-.15	7	-.017	1	-4.532e-03	5	0	1	-5.215e-03	7
1131	N615A	max	.015	3	-.023	4	.022	2	-1.402e-03	2	0	1	-2.973e-04	9
1132		min	-.011	4	-.141	7	-.017	1	-4.25e-03	5	0	1	-5.22e-03	7
1133	N616A	max	.015	3	-.02	4	.022	2	-1.237e-03	2	0	1	-3.873e-04	9
1134		min	-.009	4	-.132	7	-.016	1	-3.697e-03	5	0	1	-5.321e-03	7
1135	N617A	max	.016	3	-.029	4	.021	2	-1.097e-03	2	0	1	-3.102e-04	9
1136		min	-.013	4	-.172	7	-.017	1	-3.988e-03	5	0	1	-5.425e-03	7
1137	N618A	max	.016	3	-.026	4	.021	2	-1.367e-03	2	0	1	-2.613e-04	9
1138		min	-.012	4	-.163	7	-.017	1	-4.743e-03	5	0	1	-5.054e-03	7
1139	N619A	max	.015	3	-.024	4	.022	2	-1.239e-03	2	0	1	-2.752e-04	9
1140		min	-.01	4	-.154	7	-.017	1	-4.2e-03	5	0	1	-4.935e-03	7
1141	N620A	max	.015	3	-.021	4	.022	2	-1.064e-03	2	0	1	-3.488e-04	9
1142		min	-.009	4	-.146	7	-.017	1	-3.6e-03	5	0	1	-5.044e-03	7
1143	N621A	max	.014	3	-.019	4	.022	2	-8.928e-04	2	0	1	-4.024e-04	4
1144		min	-.008	4	-.139	7	-.017	1	-3.104e-03	5	0	1	-5.171e-03	7
1145	N622A	max	.015	3	-.027	4	.021	2	-1.432e-03	2	0	1	-2.994e-04	9
1146		min	-.011	4	-.176	7	-.018	1	-5.328e-03	5	0	1	-4.654e-03	7
1147	N623A	max	.015	3	-.024	4	.021	2	-1.049e-03	2	0	1	-3.373e-04	4
1148		min	-.01	4	-.167	7	-.018	1	-3.929e-03	5	0	1	-4.686e-03	7
1149	N624A	max	.015	3	-.022	4	.021	2	-8.57e-04	2	0	1	-4.011e-04	4
1150		min	-.009	4	-.159	7	-.017	1	-3.305e-03	5	0	1	-4.96e-03	7
1151	N625A	max	.014	3	-.02	4	.021	2	-7.147e-04	2	0	1	-4.331e-04	4
1152		min	-.008	4	-.152	7	-.017	1	-2.921e-03	5	0	1	-5.122e-03	7
1153	N626	max	.014	3	-.018	4	.021	2	-5.535e-04	2	0	1	-4.451e-04	4
1154		min	-.007	4	-.146	7	-.017	1	-2.529e-03	5	0	1	-5.208e-03	7
1155	N627	max	.014	3	-.023	4	.02	2	-5.155e-04	2	7.756e-04	8	-7.504e-04	4
1156		min	-.009	4	-.174	7	-.018	1	-2.578e-03	5	-2.686e-04	3	-5.544e-03	7
1157	N628	max	.014	3	-.021	4	.021	2	-4.378e-04	2	8.378e-04	8	-6.834e-04	4
1158		min	-.008	4	-.167	7	-.018	1	-2.445e-03	5	-2.9e-04	3	-5.472e-03	7
1159	N629	max	.014	3	-.019	4	.021	2	-3.397e-04	2	8.16e-04	8	-6.221e-04	4
1160		min	-.007	4	-.16	7	-.018	1	-2.257e-03	5	-2.871e-04	3	-5.396e-03	7
1161	N630	max	.015	3	-.018	4	.023	2	-1.421e-03	2	0	1	-4.889e-04	9
1162		min	-.009	4	-.116	7	-.016	1	-3.687e-03	5	0	1	-5.669e-03	7
1163	N631	max	.014	3	-.016	4	.023	2	-1.177e-03	2	0	1	-5.647e-04	4
1164		min	-.008	4	-.107	7	-.016	1	-2.992e-03	5	0	1	-5.792e-03	7
1165	N632	max	.014	7	-.013	4	.023	2	-8.604e-04	2	0	1	-5.947e-04	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1166		min	-.007	4	-.1	7	-.016	1	-2.203e-03	5	0	1	-5.862e-03	7
1167	N633	max	.014	3	-.017	4	.022	2	-1.047e-03	2	0	1	-4.699e-04	4
1168		min	-.008	4	-.123	7	-.016	1	-3.112e-03	5	0	1	-5.441e-03	7
1169	N634	max	.014	7	-.015	4	.022	2	-8.003e-04	2	0	1	-4.986e-04	4
1170		min	-.007	4	-.115	7	-.016	1	-2.461e-03	5	0	1	-5.538e-03	7
1171	N635	max	.015	7	-.013	4	.022	2	-4.876e-04	2	0	1	-5.078e-04	4
1172		min	-.006	4	-.108	7	-.016	1	-1.734e-03	5	0	1	-5.55e-03	7
1173	N636	max	.016	7	-.011	4	.022	2	-1.118e-04	2	0	1	-4.925e-04	4
1174		min	-.005	4	-.103	7	-.016	1	-9.967e-04	1	0	1	-5.463e-03	7
1175	N637	max	.014	7	-.017	4	.022	2	-6.842e-04	2	0	1	-4.308e-04	4
1176		min	-.007	4	-.13	7	-.017	1	-2.549e-03	5	0	1	-5.293e-03	7
1177	N638	max	.015	7	-.014	4	.022	2	-4.376e-04	2	0	1	-4.467e-04	4
1178		min	-.006	4	-.123	7	-.017	1	-1.961e-03	5	0	1	-5.352e-03	7
1179	N639	max	.016	7	-.013	4	.022	2	-1.533e-04	2	0	1	-4.487e-04	4
1180		min	-.005	4	-.117	7	-.016	1	-1.322e-03	5	0	1	-5.348e-03	7
1181	N640	max	.016	7	-.011	4	.022	2	1.844e-04	2	0	1	-4.228e-04	4
1182		min	-.004	4	-.112	7	-.016	1	-8.861e-04	1	0	1	-5.242e-03	7
1183	N641	max	.014	7	-.016	4	.022	2	-3.563e-04	2	0	1	-4.427e-04	4
1184		min	-.006	4	-.138	7	-.017	1	-2.076e-03	5	0	1	-5.25e-03	7
1185	N642	max	.015	7	-.014	4	.022	2	-1.269e-04	2	0	1	-4.317e-04	4
1186		min	-.005	4	-.132	7	-.017	1	-1.565e-03	5	0	1	-5.245e-03	7
1187	N643	max	.016	7	-.013	4	.022	2	1.402e-04	2	0	1	-4.102e-04	4
1188		min	-.004	4	-.126	7	-.017	1	-9.827e-04	5	0	1	-5.189e-03	7
1189	N644	max	.017	7	-.011	4	.022	2	4.294e-04	2	0	1	-3.847e-04	4
1190		min	-.003	4	-.121	7	-.017	1	-7.876e-04	1	0	1	-5.103e-03	7
1191	N645	max	.015	7	-.016	4	.021	2	-4.638e-05	2	7.454e-04	8	-5.037e-04	4
1192		min	-.005	4	-.147	7	-.017	1	-1.632e-03	5	-2.798e-04	3	-5.22e-03	7
1193	N646	max	.016	7	-.014	4	.021	2	1.552e-04	2	6.875e-04	8	-4.415e-04	4
1194		min	-.004	4	-.14	7	-.017	1	-1.177e-03	5	-2.745e-04	3	-5.101e-03	7
1195	N647	max	.016	7	-.013	4	.022	2	3.821e-04	2	6.127e-04	8	-3.775e-04	4
1196		min	-.004	4	-.135	7	-.017	1	-8.319e-04	1	-2.677e-04	3	-4.957e-03	7
1197	N648	max	.016	7	-.01	4	.022	2	1.161e-04	2	0	1	-5.359e-04	4
1198		min	-.004	4	-.088	7	-.016	1	-8.521e-04	1	0	1	-5.566e-03	7
1199	N649	max	.017	7	-.009	4	.022	2	1.354e-03	6	0	1	-3.621e-04	4
1200		min	-.003	4	-.085	7	-.016	1	-5.504e-04	1	0	1	-4.954e-03	7
1201	N650	max	.018	7	-.009	4	.022	2	2.596e-03	6	2.822e-04	1	-1.171e-05	4
1202		min	-.002	4	-.084	7	-.016	1	-2.291e-04	1	-2.864e-04	2	-3.973e-03	7
1203	N651	max	.017	7	-.01	4	.022	2	3.182e-04	2	0	1	-4.056e-04	4
1204		min	-.004	4	-.098	7	-.016	1	-7.711e-04	1	0	1	-5.152e-03	7
1205	N652	max	.017	7	-.009	4	.022	2	1.292e-03	6	0	1	-2.965e-04	4
1206		min	-.003	4	-.095	7	-.016	1	-5.223e-04	1	0	1	-4.768e-03	7
1207	N653	max	.017	7	-.009	4	.022	2	2.604e-03	6	1.904e-04	1	-1.773e-05	4
1208		min	-.002	2	-.094	7	-.016	1	-1.847e-04	1	-1.949e-04	2	-3.987e-03	7
1209	N655	max	.017	7	-.01	4	.022	2	5.291e-04	2	0	1	-3.848e-04	4
1210		min	-.003	4	-.108	7	-.016	1	-6.84e-04	1	0	1	-5.089e-03	7
1211	N656	max	.017	7	-.01	4	.022	2	1.49e-03	6	0	1	-2.593e-04	4
1212		min	-.002	2	-.105	7	-.016	1	-4.423e-04	1	0	1	-4.668e-03	7
1213	N657	max	.017	7	-.01	4	.022	2	2.606e-03	6	1.88e-04	4	-2.432e-05	4
1214		min	-.002	2	-.104	7	-.016	1	-1.336e-04	1	-1.928e-04	3	-3.993e-03	7
1215	N659	max	.017	7	-.011	4	.022	2	8.084e-04	6	0	1	-3.296e-04	4
1216		min	-.003	4	-.117	7	-.016	1	-5.869e-04	1	0	1	-4.925e-03	7
1217	N660	max	.017	7	-.01	4	.022	2	1.603e-03	6	0	1	-2.879e-04	4
1218		min	-.002	2	-.115	7	-.016	1	-3.76e-04	1	0	1	-4.77e-03	7
1219	N661	max	.017	7	-.01	4	.022	2	2.605e-03	6	1.991e-04	4	-2.932e-05	4
1220		min	-.002	2	-.114	7	-.016	1	-8.684e-05	1	-2.04e-04	3	-3.992e-03	7
1221	N663	max	.017	7	-.011	4	.022	2	1.034e-03	6	4.394e-04	4	-2.314e-04	4
1222		min	-.002	2	-.127	7	-.016	1	-4.825e-04	1	-2.454e-04	3	-4.569e-03	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1223	N664	max	.017	7	-.011	4	.022	2	1.797e-03	6	3.815e-04	4	-1.445e-04	4
1224		min	-.002	2	-.125	7	-.016	1	-2.747e-04	1	-2.316e-04	3	-4.317e-03	7
1225	N665	max	.017	7	-.011	4	.022	2	2.601e-03	6	2.029e-04	4	-3.234e-05	4
1226		min	-.002	2	-.124	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
1227	N666	max	.023	3	-.049	4	.024	2	-3.742e-04	9	0	1	1.086e-03	9
1228		min	-.031	4	-.226	7	-.016	1	-3.457e-03	5	0	1	-2.246e-03	5
1229	N667	max	.023	3	-.05	4	.024	2	-2.872e-04	9	0	1	1.062e-03	9
1230		min	-.031	4	-.228	7	-.016	1	-3.314e-03	5	0	1	-2.227e-03	5
1231	N668	max	.024	3	-.05	4	.024	2	-1.858e-04	9	0	1	1.01e-03	9
1232		min	-.032	4	-.229	7	-.016	1	-3.141e-03	5	0	1	-2.256e-03	5
1233	N669	max	.023	3	-.05	4	.024	2	-3.583e-04	9	0	1	1.061e-03	9
1234		min	-.031	4	-.231	7	-.016	1	-3.344e-03	5	0	1	-2.318e-03	5
1235	N670	max	.024	3	-.051	4	.024	2	-2.968e-04	9	0	1	1.042e-03	9
1236		min	-.032	4	-.233	7	-.016	1	-3.243e-03	5	0	1	-2.289e-03	5
1237	N671	max	.024	3	-.051	4	.024	2	-2.24e-04	9	0	1	9.997e-04	9
1238		min	-.033	4	-.235	7	-.016	1	-3.121e-03	5	0	1	-2.303e-03	5
1239	N672	max	.024	3	-.052	4	.024	2	-1.396e-04	9	0	1	9.25e-04	9
1240		min	-.034	4	-.237	7	-.016	1	-2.975e-03	5	0	1	-2.374e-03	5
1241	N673	max	.023	3	-.052	4	.023	2	-3.282e-04	9	0	1	1.066e-03	9
1242		min	-.032	4	-.236	7	-.017	1	-3.212e-03	5	0	1	-2.338e-03	5
1243	N674	max	.024	3	-.052	4	.023	2	-2.864e-04	9	0	1	1.063e-03	9
1244		min	-.032	4	-.239	7	-.017	1	-3.141e-03	5	0	1	-2.287e-03	5
1245	N675	max	.024	3	-.053	4	.023	2	-2.413e-04	9	0	1	1.037e-03	9
1246		min	-.033	4	-.241	7	-.017	1	-3.062e-03	5	0	1	-2.271e-03	5
1247	N676	max	.024	3	-.054	4	.023	2	-1.802e-04	9	0	1	9.877e-04	9
1248		min	-.034	4	-.243	7	-.017	1	-2.962e-03	5	0	1	-2.297e-03	5
1249	N677	max	.024	3	-.052	9	.023	2	-2.892e-04	9	0	1	1.062e-03	9
1250		min	-.032	4	-.242	7	-.017	1	-3.071e-03	5	0	1	-2.375e-03	5
1251	N678	max	.024	3	-.052	9	.023	2	-2.698e-04	9	0	1	1.075e-03	9
1252		min	-.033	4	-.244	7	-.017	1	-3.038e-03	5	0	1	-2.3e-03	5
1253	N679	max	.024	3	-.053	9	.023	2	-2.393e-04	9	0	1	1.071e-03	9
1254		min	-.034	4	-.246	7	-.017	1	-2.988e-03	5	0	1	-2.255e-03	5
1255	N680	max	.025	3	-.053	9	.023	2	-2.201e-04	9	0	1	1.041e-03	9
1256		min	-.035	4	-.248	7	-.017	1	-2.94e-03	5	0	1	-2.25e-03	5
1257	N681	max	.024	3	-.05	9	.022	2	-2.757e-04	9	9.552e-04	8	1.023e-03	9
1258		min	-.033	4	-.247	7	-.017	1	-2.991e-03	5	-3.666e-04	3	-2.459e-03	5
1259	N682	max	.024	3	-.051	9	.022	2	-2.475e-04	9	9.425e-04	8	1.032e-03	9
1260		min	-.034	4	-.249	7	-.017	1	-2.939e-03	5	-3.702e-04	3	-2.399e-03	5
1261	N683	max	.025	3	-.051	9	.022	2	-2.691e-04	9	9.016e-04	8	1.044e-03	9
1262		min	-.034	4	-.252	7	-.017	1	-2.952e-03	5	-3.672e-04	3	-2.339e-03	5
1263	N684	max	.024	3	-.05	4	.024	2	2.08e-04	2	0	1	7.969e-04	9
1264		min	-.034	4	-.232	7	-.016	1	-2.65e-03	5	0	1	-2.524e-03	5
1265	N685	max	.025	3	-.051	4	.024	2	4.878e-04	2	0	1	5.833e-04	9
1266		min	-.034	4	-.233	7	-.016	1	-2.298e-03	5	0	1	-2.955e-03	7
1267	N686	max	.025	3	-.052	4	.024	2	-2.631e-05	2	0	1	8.2e-04	9
1268		min	-.034	4	-.239	7	-.016	1	-2.798e-03	5	0	1	-2.52e-03	5
1269	N687	max	.025	3	-.053	4	.024	2	1.344e-04	2	0	1	6.88e-04	9
1270		min	-.035	4	-.24	7	-.016	1	-2.63e-03	5	0	1	-2.763e-03	7
1271	N688	max	.025	3	-.054	4	.023	2	-1.04e-04	9	0	1	9.115e-04	9
1272		min	-.035	4	-.245	7	-.017	1	-2.837e-03	5	0	1	-2.355e-03	5
1273	N689	max	.025	3	-.055	4	.024	2	3.866e-05	2	0	1	8.166e-04	9
1274		min	-.036	4	-.246	7	-.016	1	-2.614e-03	5	0	1	-2.509e-03	7
1275	N690	max	.025	3	-.054	9	.023	2	-1.559e-04	9	0	1	9.674e-04	9
1276		min	-.036	4	-.251	7	-.017	1	-2.859e-03	5	0	1	-2.31e-03	5
1277	N691	max	.025	3	-.054	9	.023	2	-1.123e-04	9	0	1	8.307e-04	9
1278		min	-.036	4	-.253	7	-.017	1	-2.848e-03	5	0	1	-2.474e-03	5
1279	N692	max	.025	3	-.053	9	.023	2	-3.15e-04	9	8.234e-04	8	9.977e-04	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1280		min	-.036	4	-.256	7	-.017	1	-2.97e-03	5	-3.655e-04	3	-2.344e-03	5
1281	N693	max	.026	3	-.053	9	.023	2	-2.194e-04	9	7.796e-04	8	8.59e-04	9
1282		min	-.037	4	-.259	7	-.017	1	-2.999e-03	5	-3.717e-04	3	-2.376e-03	5
1283	N694	max	.03	3	-.02	2	.007	2	3.379e-04	2	6.871e-05	1	-1.188e-03	4
1284		min	-.028	4	-.177	5	-.014	1	-4.396e-03	5	-8.311e-04	6	-5.405e-03	7
1285	N695	max	.029	3	-.022	2	.007	2	8.607e-04	2	0	1	-1.324e-03	4
1286		min	-.029	4	-.16	5	-.014	5	-3.242e-03	5	0	1	-5.701e-03	7
1287	N696	max	.016	3	-.031	4	.02	2	-7.435e-04	2	1.196e-03	8	-4.498e-04	9
1288		min	-.013	4	-.193	7	-.018	1	-3.337e-03	5	-3.813e-04	3	-5.291e-03	7
1289	N697	max	.017	3	-.032	4	.021	2	-1.135e-03	2	0	1	-2.185e-04	9
1290		min	-.014	4	-.183	7	-.017	1	-4.356e-03	5	0	1	-5.21e-03	7
1291	N698	max	.016	3	-.03	4	.021	2	-1.238e-03	2	0	1	-6.607e-05	9
1292		min	-.013	4	-.178	7	-.017	1	-4.569e-03	5	0	1	-4.578e-03	7
1293	N699	max	.016	3	-.029	4	.021	2	-1.035e-03	2	0	1	-5.127e-04	9
1294		min	-.012	4	-.182	7	-.018	1	-4.093e-03	5	0	1	-5.648e-03	7
1295	N700	max	.015	3	-.028	4	.02	2	-1.487e-03	3	2.397e-04	4	-5.851e-04	9
1296		min	-.011	4	-.187	7	-.018	1	-5.806e-03	5	-1.566e-04	3	-5.209e-03	7
1297	N701	max	.016	3	-.031	4	.021	2	-1.113e-03	2	0	1	-1.936e-04	9
1298		min	-.013	4	-.188	7	-.018	1	-4.433e-03	5	0	1	-4.704e-03	7
1299	N702	max	.017	3	-.032	4	.022	2	-1.195e-03	2	0	1	-1.083e-04	9
1300		min	-.015	4	-.176	7	-.017	1	-4.298e-03	5	0	1	-5.203e-03	7
1301	N703	max	.017	3	-.033	4	.021	2	-1.156e-03	2	0	1	2.254e-05	9
1302		min	-.015	4	-.184	7	-.017	1	-4.397e-03	5	0	1	-4.64e-03	7
1303	N704	max	.017	3	-.034	4	.021	2	-1.046e-03	2	0	1	-1.777e-04	9
1304		min	-.015	4	-.191	7	-.018	1	-4.254e-03	5	0	1	-5.134e-03	7
1305	N705	max	.017	3	-.034	4	.02	2	-1.164e-03	9	5.491e-04	8	-2.15e-04	9
1306		min	-.014	4	-.199	7	-.018	1	-4.876e-03	5	-2.264e-04	3	-4.884e-03	7
1307	N706	max	.03	3	-.023	2	.008	2	2.985e-04	2	4.59e-05	1	-1.263e-03	4
1308		min	-.028	4	-.185	5	-.014	1	-4.496e-03	5	-7.757e-04	6	-5.566e-03	7
1309	N707	max	.03	3	-.023	2	.008	2	8.082e-04	2	0	1	-1.304e-03	9
1310		min	-.029	4	-.172	5	-.014	1	-3.335e-03	5	0	1	-5.678e-03	7
1311	N708	max	.03	3	-.021	2	.007	2	6.279e-04	2	0	1	-1.234e-03	4
1312		min	-.029	4	-.168	5	-.014	1	-3.774e-03	5	0	1	-5.504e-03	7
1313	N709	max	.029	3	-.024	2	.007	2	9.622e-04	2	0	1	-1.428e-03	9
1314		min	-.029	4	-.161	5	-.014	1	-2.993e-03	5	0	1	-6.136e-03	7
1315	N710	max	.03	3	-.018	2	.007	2	3.58e-04	2	6.704e-05	1	-1.095e-03	4
1316		min	-.028	4	-.17	5	-.014	5	-4.339e-03	5	-8.105e-04	6	-5.191e-03	7
1317	N711	max	.03	3	-.02	2	.006	2	6.475e-04	2	0	1	-1.174e-03	4
1318		min	-.029	4	-.16	5	-.014	5	-3.745e-03	5	0	1	-5.333e-03	7
1319	N712	max	.029	3	-.021	2	.006	2	8.438e-04	2	0	1	-1.367e-03	4
1320		min	-.029	4	-.152	5	-.014	5	-3.298e-03	5	0	1	-5.788e-03	7
1321	N713	max	.029	3	-.023	2	.007	2	8.083e-04	2	0	1	-1.477e-03	9
1322		min	-.029	4	-.149	5	-.014	5	-3.393e-03	5	0	1	-6.126e-03	7
1323	N714	max	.026	3	-.054	9	.026	2	9.472e-04	2	1.889e-04	1	4.514e-04	9
1324		min	-.037	4	-.264	7	-.018	1	-1.705e-03	5	-9.583e-04	6	-3.511e-03	7
1325	N715	max	.026	3	-.051	4	.021	2	3.957e-05	9	1.963e-04	1	7.084e-04	9
1326		min	-.038	4	-.235	7	-.016	1	-3.173e-03	5	-1.126e-03	6	-2.566e-03	7
1327	N716	max	.026	3	-.054	4	.023	2	4.336e-05	9	1.814e-04	1	6.715e-04	9
1328		min	-.037	4	-.242	7	-.016	1	-3.17e-03	5	-8.07e-04	6	-2.642e-03	7
1329	N717	max	.026	3	-.056	9	.024	2	3.42e-04	2	2.498e-04	1	6.171e-04	9
1330		min	-.037	4	-.249	7	-.016	1	-2.503e-03	5	-8.27e-04	6	-2.986e-03	7
1331	N718	max	.026	3	-.055	9	.025	2	6.474e-04	2	3.667e-04	1	5.132e-04	9
1332		min	-.037	4	-.256	7	-.017	1	-2.105e-03	5	-7.174e-04	2	-3.272e-03	7
1333	N719	max	.029	3	-.054	9	.022	2	5.246e-04	2	2.052e-03	6	4.982e-04	1
1334		min	-.035	4	-.263	7	-.025	1	-8.629e-04	1	1.422e-04	3	-3.029e-04	2
1335	N720	max	.028	3	-.053	4	.026	2	5.108e-04	2	1.011e-03	8	4.712e-04	5
1336		min	-.032	4	-.241	7	-.023	1	-8.162e-04	5	-2.325e-04	3	-2.949e-04	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1337	N721	max	.029	3	-.056	4	.025	2	2.945e-04	2	1.397e-03	8	6.237e-04	5
1338		min	-.033	4	-.248	7	-.024	1	-1.08e-03	5	-4.465e-05	3	-1.7e-04	2
1339	N722	max	.029	3	-.055	9	.024	2	2.814e-04	2	1.189e-03	8	6.119e-04	5
1340		min	-.034	4	-.256	7	-.024	1	-1.06e-03	5	-4.205e-05	3	-1.625e-04	2
1341	N723	max	.03	3	-.054	9	.03	2	5.415e-04	2	2.394e-04	1	4.146e-04	1
1342		min	-.032	4	-.264	7	-.024	1	-7.182e-04	1	-2.419e-03	6	-3.126e-04	2
1343	N724	max	.029	3	-.054	4	.024	2	5.09e-04	2	1.654e-04	1	4.244e-04	1
1344		min	-.033	4	-.242	7	-.023	1	-7.35e-04	1	-9.837e-04	6	-2.939e-04	2
1345	N725	max	.029	3	-.056	9	.025	2	8.107e-04	2	2.135e-04	1	4.139e-04	1
1346		min	-.033	4	-.249	7	-.023	1	-7.17e-04	1	-1.573e-03	6	-4.681e-04	2
1347	N726	max	.03	3	-.055	9	.027	2	7.318e-04	2	2.014e-04	1	4.074e-04	1
1348		min	-.033	4	-.256	7	-.024	1	-7.057e-04	1	-1.342e-03	6	-4.225e-04	2
1349	N727	max	.024	3	-.054	9	.028	6	7.693e-05	2	4.686e-04	4	6.843e-04	5
1350		min	-.042	4	-.263	7	-.01	1	-1.185e-03	5	-9.834e-04	3	-4.441e-05	2
1351	N728	max	.022	3	-.051	4	.026	6	5.975e-04	2	2.131e-04	1	4.268e-04	1
1352		min	-.041	4	-.234	7	-.009	1	-7.392e-04	1	-3.84e-04	2	-3.45e-04	2
1353	N729	max	.022	3	-.053	4	.026	6	6.099e-04	2	2.279e-04	4	4.158e-04	1
1354		min	-.041	4	-.241	7	-.009	1	-7.201e-04	1	-3.413e-04	3	-3.521e-04	2
1355	N730	max	.023	3	-.056	4	.027	6	2.725e-04	2	1.625e-04	4	5.391e-04	5
1356		min	-.041	4	-.248	7	-.009	1	-9.338e-04	5	-6.295e-04	6	-1.573e-04	2
1357	N731	max	.023	3	-.055	9	.028	6	3.018e-04	2	4.074e-04	4	5.547e-04	5
1358		min	-.041	4	-.256	7	-.01	1	-9.608e-04	5	-6.656e-04	3	-1.743e-04	2
1359	N732	max	.023	3	-.054	9	.025	6	8.557e-04	2	6.495e-04	7	4.276e-04	1
1360		min	-.042	4	-.264	7	-.011	1	-7.407e-04	1	5.684e-05	2	-4.941e-04	2
1361	N733	max	.023	3	-.051	4	.027	6	3.494e-04	2	4.848e-04	4	5.587e-04	5
1362		min	-.041	4	-.235	7	-.009	1	-9.677e-04	5	-3.441e-04	3	-2.017e-04	2
1363	N734	max	.023	3	-.054	4	.027	6	3.659e-04	2	3.621e-04	4	5.589e-04	5
1364		min	-.041	4	-.242	7	-.009	1	-9.681e-04	5	-2.572e-04	3	-2.112e-04	2
1365	N735	max	.023	3	-.056	9	.026	6	6.617e-04	2	6.495e-04	8	4.033e-04	1
1366		min	-.041	4	-.249	7	-.009	1	-6.985e-04	1	1.004e-05	3	-3.82e-04	2
1367	N736	max	.023	3	-.055	9	.025	6	7.06e-04	2	3.742e-04	1	4.375e-04	1
1368		min	-.042	4	-.256	7	-.01	1	-7.577e-04	1	-6.611e-05	2	-4.076e-04	2
1369	N737	max	.025	3	-.054	9	.024	2	-2.228e-04	9	1.013e-03	8	7.446e-04	9
1370		min	-.04	4	-.263	7	-.013	1	-3.375e-03	5	-3.867e-04	3	-2.51e-03	7
1371	N738	max	.024	3	-.051	4	.023	2	1.036e-03	2	7.723e-04	8	4.101e-04	1
1372		min	-.038	4	-.234	7	-.012	1	-7.104e-04	1	-3.729e-04	3	-5.983e-04	2
1373	N739	max	.024	3	-.053	4	.023	2	4.679e-04	2	2.941e-04	4	4.364e-04	1
1374		min	-.039	4	-.241	7	-.013	1	-7.56e-04	1	-3.038e-04	3	-2.702e-04	2
1375	N740	max	.024	3	-.056	4	.023	2	4.855e-04	2	2.973e-04	4	4.419e-04	1
1376		min	-.039	4	-.248	7	-.013	1	-7.655e-04	1	-3.1e-04	3	-2.804e-04	2
1377	N741	max	.025	3	-.055	9	.024	2	1.174e-04	2	5.099e-04	4	6.441e-04	5
1378		min	-.039	4	-.256	7	-.013	1	-1.116e-03	5	-8.773e-04	3	-6.778e-05	2
1379	N742	max	.024	3	-.054	9	.024	2	9.528e-04	2	1.783e-04	1	4.493e-04	9
1380		min	-.039	4	-.264	7	-.014	1	-1.696e-03	5	-9.603e-04	6	-3.516e-03	7
1381	N743	max	.024	3	-.051	4	.022	2	1.924e-04	3	1.947e-04	1	9.546e-04	8
1382		min	-.039	4	-.235	7	-.012	1	-1.653e-03	8	-7.767e-04	6	-1.111e-04	3
1383	N744	max	.024	3	-.054	4	.022	2	4.679e-04	2	2.941e-04	4	4.364e-04	1
1384		min	-.039	4	-.242	7	-.013	1	-7.56e-04	1	-3.038e-04	3	-2.702e-04	2
1385	N745	max	.025	3	-.056	9	.023	2	4.855e-04	2	2.973e-04	4	4.419e-04	1
1386		min	-.039	4	-.249	7	-.013	1	-7.655e-04	1	-3.1e-04	3	-2.804e-04	2
1387	N746	max	.025	3	-.055	9	.023	2	8.418e-04	2	5.482e-04	1	4.171e-04	1
1388		min	-.039	4	-.256	7	-.014	1	-7.225e-04	1	-1.33e-04	2	-4.86e-04	2
1389	N747	max	.027	3	-.054	9	.022	2	-2.228e-04	9	1.013e-03	8	7.446e-04	9
1390		min	-.037	4	-.263	7	-.021	1	-3.375e-03	5	-3.867e-04	3	-2.51e-03	7
1391	N748	max	.027	3	-.051	4	.026	2	5.062e-04	2	1.34e-03	8	4.549e-04	1
1392		min	-.033	4	-.234	7	-.019	1	-7.878e-04	1	-3.605e-04	3	-2.922e-04	2
1393	N749	max	.027	3	-.053	4	.025	2	4.104e-04	2	1.386e-03	8	5.662e-04	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1394		min	-.034	4	-.241	7	-.02	1	-9.806e-04	5	-3.221e-04	3	-2.369e-04	2
1395	N750	max	.027	3	-.056	4	.024	2	5.02e-04	2	2.786e-04	4	4.497e-04	1
1396		min	-.035	4	-.248	7	-.02	1	-7.79e-04	1	-2.523e-04	3	-2.899e-04	2
1397	N751	max	.027	3	-.055	9	.023	2	3.655e-04	2	1.882e-03	8	5.626e-04	5
1398		min	-.036	4	-.256	7	-.02	1	-9.744e-04	5	3.038e-05	3	-2.11e-04	2
1399	N752	max	.028	3	-.054	9	.028	2	9.528e-04	2	1.783e-04	1	4.493e-04	9
1400		min	-.034	4	-.264	7	-.021	1	-1.696e-03	5	-9.603e-04	6	-3.516e-03	7
1401	N753	max	.027	3	-.051	4	.022	2	5.595e-04	2	1.78e-04	1	4.335e-04	1
1402		min	-.036	4	-.235	7	-.019	1	-7.509e-04	1	-1.376e-03	6	-3.23e-04	2
1403	N754	max	.027	3	-.054	4	.023	2	6.565e-04	2	1.713e-04	1	4.145e-04	1
1404		min	-.035	4	-.242	7	-.02	1	-7.179e-04	1	-1.444e-03	6	-3.79e-04	2
1405	N755	max	.027	3	-.056	9	.024	2	5.02e-04	2	2.786e-04	4	4.497e-04	1
1406		min	-.035	4	-.249	7	-.02	1	-7.79e-04	1	-2.523e-04	3	-2.899e-04	2
1407	N756	max	.028	3	-.055	9	.026	2	7.173e-04	2	3.045e-04	1	4.073e-04	1
1408		min	-.035	4	-.256	7	-.02	1	-7.055e-04	1	-2.227e-03	6	-4.141e-04	2
1409	N760	max	.038	3	-.029	9	.021	2	7.808e-04	2	9.312e-04	6	4.037e-03	8
1410		min	-.027	4	-.262	5	-.013	1	-8.144e-04	1	-4.236e-05	1	8.909e-04	4
1411	N761	max	.029	3	-.019	2	.007	2	2.834e-04	2	1.278e-03	6	5.035e-03	8
1412		min	-.029	4	-.183	5	-.012	1	-3.732e-03	5	-8.633e-05	1	8.217e-04	9
1413	N762	max	.011	3	-.03	3	.016	2	2.221e-03	9	5.039e-04	4	1.014e-02	9
1414		min	-.016	4	-.191	8	-.015	1	-2.828e-03	5	-1.413e-03	7	1.278e-03	3
1415	N764	max	.03	3	-.009	9	.002	2	2.585e-04	2	0	1	3.879e-03	8
1416		min	-.028	4	-.095	5	-.019	5	-4.525e-03	5	0	1	-5.858e-05	9
1417	N765	max	.031	3	-.009	9	.005	2	8.426e-04	2	0	1	6.442e-03	5
1418		min	-.027	4	-.127	5	-.015	5	-2.699e-03	5	0	1	3.963e-04	9
1419	N766	max	.032	3	-.01	9	.008	2	9.464e-04	2	0	1	6.409e-03	5
1420		min	-.027	4	-.167	5	-.012	1	-1.72e-03	5	0	1	6.908e-04	9
1421	N767	max	.035	3	-.008	9	.011	2	9.076e-04	2	0	1	5.352e-03	5
1422		min	-.027	4	-.199	5	-.012	1	-1.92e-03	9	0	1	8.223e-04	2
1423	N768	max	.037	3	-.004	9	.015	2	7.232e-04	4	0	1	4.212e-03	8
1424		min	-.027	4	-.223	5	-.012	1	-2.408e-03	9	0	1	5.76e-04	2
1425	N769	max	.04	3	-.007	9	.017	2	2.46e-04	2	1.035e-03	6	3.35e-03	9
1426		min	-.027	4	-.232	5	-.013	1	-2.238e-03	5	-6.443e-05	1	6.041e-04	2
1427	N770	max	.031	3	-.031	9	.02	2	1.661e-03	9	0	1	5.603e-03	9
1428		min	-.024	4	-.226	8	-.013	1	-3.502e-03	5	0	1	-8.394e-05	2
1429	N771	max	.024	3	-.046	3	.019	2	1.484e-03	9	0	1	6.333e-03	9
1430		min	-.021	4	-.204	8	-.013	1	-4.418e-03	5	0	1	2.724e-04	2
1431	N772	max	.017	3	-.037	3	.019	2	1.079e-03	9	0	1	6.865e-03	9
1432		min	-.019	4	-.171	8	-.014	1	-5.167e-03	5	0	1	5.394e-04	3
1433	N773	max	.011	3	-.023	3	.019	2	1.468e-03	9	0	1	6.673e-03	9
1434		min	-.016	4	-.13	8	-.013	1	-4.462e-03	5	0	1	7.364e-04	3
1435	N774	max	.006	3	-.012	3	.019	2	2.576e-03	9	0	1	6.031e-03	8
1436		min	-.017	9	-.096	8	-.013	1	-1.51e-03	5	0	1	7.165e-04	3
1437	N777	max	.029	3	-.007	2	.002	2	2.221e-04	2	4.602e-04	6	2.291e-03	8
1438		min	-.029	4	-.132	5	-.019	5	-4.345e-03	5	1.983e-05	3	5.505e-05	3
1439	N778	max	.029	3	-.013	2	.004	2	3.691e-04	2	7.283e-04	6	4.299e-03	8
1440		min	-.029	4	-.155	5	-.015	5	-3.789e-03	5	1.282e-05	1	5.217e-04	9
1441	N780	max	.003	3	-.013	3	.018	2	1.342e-03	9	2.653e-04	4	5.826e-03	9
1442		min	-.019	9	-.133	8	-.014	1	-8.19e-04	1	-5.64e-04	7	4.949e-04	3
1443	N781	max	.007	3	-.021	3	.017	2	1.219e-03	9	2.956e-04	4	8.096e-03	9
1444		min	-.017	9	-.161	8	-.015	1	-2.344e-03	5	-8.358e-04	7	8.855e-04	3
1445	N782	max	.03	3	-.021	9	.01	2	6.539e-04	2	1.063e-03	6	5.445e-03	8
1446		min	-.028	4	-.205	5	-.012	1	-2.637e-03	5	-3.039e-05	1	1.09e-03	9
1447	N783	max	.032	3	-.023	9	.014	2	7.384e-04	2	1.064e-03	6	4.614e-03	8
1448		min	-.027	4	-.226	5	-.012	1	-1.719e-03	5	-3.282e-05	1	7.627e-04	2
1449	N784	max	.035	3	-.024	9	.018	2	7.117e-04	2	9.504e-04	6	3.764e-03	8
1450		min	-.027	4	-.244	5	-.013	1	-1.983e-03	9	-7.238e-05	1	6.301e-04	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1451	N785	max	.033	3	-.057	3	.018	2	2.387e-03	9	4.023e-04	4	5.952e-03	9
1452		min	-.025	4	-.247	8	-.015	1	-2.795e-03	5	-1.074e-03	7	-5.77e-05	2
1453	N786	max	.025	3	-.05	3	.017	2	2.146e-03	9	3.841e-04	4	6.622e-03	9
1454		min	-.021	4	-.231	8	-.015	1	-3.169e-03	5	-1.197e-03	7	4.542e-04	2
1455	N787	max	.017	3	-.041	3	.017	2	1.978e-03	9	3.927e-04	4	7.564e-03	9
1456		min	-.018	4	-.213	8	-.015	1	-3.534e-03	5	-1.207e-03	7	7.533e-04	3
1457	N788	max	.039	3	-.003	9	.016	2	5.063e-04	2	0	1	3.612e-03	8
1458		min	-.027	4	-.23	5	-.013	1	-1.584e-03	9	0	1	5.459e-04	2
1459	N789	max	.037	3	-.025	9	.019	2	6.681e-04	2	8.148e-04	6	3.62e-03	8
1460		min	-.027	4	-.253	5	-.013	1	-2.021e-03	9	-9.553e-05	1	6.894e-04	2
1461	N793	max	.002	3	-.009	3	.019	2	2.275e-03	9	1.847e-04	2	4.155e-03	8
1462		min	-.019	9	-.085	8	-.014	1	-2.828e-04	1	-1.897e-04	1	7.855e-05	3
1463	N794A	max	.004	3	-.009	3	.019	2	2.722e-03	9	0	1	5.121e-03	8
1464		min	-.019	9	-.086	8	-.014	1	-6.902e-04	1	0	1	4.446e-04	3
1465	N795A	max	.005	3	-.01	3	.019	2	2.748e-03	9	0	1	5.76e-03	8
1466		min	-.018	9	-.09	8	-.014	1	-1.064e-03	1	0	1	6.397e-04	3
1467	N796A	max	.002	3	-.01	3	.019	2	2.293e-03	9	1.569e-04	4	4.176e-03	8
1468		min	-.019	9	-.095	8	-.014	1	-2.478e-04	1	-1.621e-04	3	9.022e-05	3
1469	N797A	max	.003	3	-.01	3	.019	2	2.378e-03	9	0	1	4.962e-03	8
1470		min	-.019	9	-.096	8	-.014	1	-6.556e-04	1	0	1	3.917e-04	3
1471	N798A	max	.004	3	-.011	3	.019	2	2.336e-03	9	0	1	5.369e-03	8
1472		min	-.018	9	-.1	8	-.014	1	-9.601e-04	1	0	1	5.151e-04	3
1473	N799A	max	.005	3	-.012	3	.019	2	2.195e-03	9	0	1	5.727e-03	8
1474		min	-.018	9	-.105	8	-.014	1	-1.23e-03	1	0	1	6.279e-04	3
1475	N800A	max	.002	3	-.01	3	.019	2	2.306e-03	9	1.833e-04	4	4.189e-03	8
1476		min	-.019	9	-.105	8	-.014	1	-2.071e-04	1	-1.887e-04	3	1.028e-04	3
1477	N801A	max	.003	3	-.01	3	.019	2	2.168e-03	9	0	1	4.877e-03	8
1478		min	-.019	9	-.106	8	-.014	1	-5.611e-04	1	0	1	3.608e-04	3
1479	N802A	max	.003	3	-.011	3	.019	2	2.004e-03	9	0	1	5.327e-03	8
1480		min	-.019	9	-.11	8	-.014	1	-8.491e-04	1	0	1	5.062e-04	3
1481	N803A	max	.004	3	-.013	3	.019	2	1.862e-03	9	0	1	5.528e-03	8
1482		min	-.018	9	-.115	8	-.014	1	-1.084e-03	1	0	1	5.669e-04	3
1483	N804A	max	.002	3	-.011	3	.019	2	2.315e-03	9	1.969e-04	4	4.194e-03	8
1484		min	-.019	9	-.115	8	-.014	1	-1.706e-04	1	-2.023e-04	3	1.136e-04	3
1485	N805A	max	.002	3	-.011	3	.019	2	1.993e-03	9	0	1	5.e-03	8
1486		min	-.019	9	-.116	8	-.014	1	-4.894e-04	1	0	1	4.049e-04	3
1487	N806A	max	.003	3	-.012	3	.018	2	1.716e-03	9	0	1	5.195e-03	8
1488		min	-.019	9	-.119	8	-.014	1	-7.259e-04	1	0	1	4.631e-04	3
1489	N807A	max	.004	3	-.013	3	.018	2	1.519e-03	9	0	1	5.448e-03	9
1490		min	-.018	9	-.124	8	-.014	1	-9.562e-04	1	0	1	5.475e-04	3
1491	N808A	max	.002	3	-.011	3	.018	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
1492		min	-.019	9	-.125	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3
1493	N809A	max	.002	3	-.011	3	.018	2	1.913e-03	9	2.344e-04	4	4.695e-03	9
1494		min	-.019	9	-.126	8	-.014	1	-3.862e-04	1	-4.076e-04	3	2.675e-04	3
1495	N810A	max	.003	3	-.012	3	.018	2	1.584e-03	9	2.499e-04	4	5.259e-03	9
1496		min	-.019	9	-.129	8	-.014	1	-6.138e-04	1	-4.651e-04	3	3.857e-04	3
1497	N811A	max	.007	3	-.014	3	.019	2	2.357e-03	9	0	1	6.176e-03	8
1498		min	-.017	9	-.102	8	-.013	1	-2.432e-03	5	0	1	7.551e-04	3
1499	N812A	max	.008	3	-.017	3	.019	2	2.045e-03	9	0	1	6.141e-03	8
1500		min	-.016	9	-.11	8	-.013	1	-3.244e-03	5	0	1	7.41e-04	3
1501	N813A	max	.01	3	-.02	3	.019	2	1.79e-03	9	0	1	6.304e-03	9
1502		min	-.016	4	-.12	8	-.013	1	-3.878e-03	5	0	1	7.255e-04	3
1503	N814	max	.006	3	-.014	3	.019	2	2.032e-03	9	0	1	5.862e-03	8
1504		min	-.017	9	-.111	8	-.014	1	-2.02e-03	5	0	1	6.648e-04	3
1505	N815A	max	.007	3	-.017	3	.019	2	1.859e-03	9	0	1	5.909e-03	8
1506		min	-.017	9	-.118	8	-.014	1	-2.727e-03	5	0	1	6.802e-04	3
1507	N816A	max	.009	3	-.019	3	.019	2	1.594e-03	9	0	1	6.198e-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
1508		min	-.016	9	-.127	8	-.014	1	-3.406e-03	5	0	1	6.702e-04	3
1509	N817	max	.01	3	-.022	3	.018	2	1.378e-03	9	0	1	6.359e-03	9
1510		min	-.016	4	-.137	8	-.014	1	-3.948e-03	5	0	1	6.208e-04	3
1511	N818A	max	.005	3	-.014	3	.018	2	1.736e-03	9	0	1	5.684e-03	8
1512		min	-.018	9	-.12	8	-.014	1	-1.643e-03	5	0	1	6.155e-04	3
1513	N819A	max	.006	3	-.016	3	.018	2	1.596e-03	9	0	1	6.019e-03	9
1514		min	-.017	9	-.127	8	-.014	1	-2.297e-03	5	0	1	6.361e-04	3
1515	N820	max	.008	3	-.019	3	.018	2	1.509e-03	9	0	1	6.358e-03	9
1516		min	-.017	9	-.135	8	-.014	1	-2.847e-03	5	0	1	6.412e-04	3
1517	N821A	max	.009	3	-.021	3	.018	2	1.32e-03	9	0	1	6.742e-03	9
1518		min	-.016	9	-.144	8	-.014	1	-3.423e-03	5	0	1	6.792e-04	3
1519	N822A	max	.005	3	-.014	3	.018	2	1.402e-03	9	0	1	5.944e-03	9
1520		min	-.018	9	-.129	8	-.014	1	-1.345e-03	5	0	1	5.988e-04	3
1521	N823	max	.006	3	-.016	3	.018	2	1.335e-03	9	0	1	6.41e-03	9
1522		min	-.018	9	-.136	8	-.014	1	-1.917e-03	5	0	1	6.422e-04	3
1523	N824A	max	.007	3	-.018	3	.018	2	1.26e-03	9	0	1	6.841e-03	9
1524		min	-.017	9	-.143	8	-.014	1	-2.465e-03	5	0	1	6.785e-04	3
1525	N825A	max	.008	3	-.021	3	.017	2	1.274e-03	9	0	1	7.083e-03	9
1526		min	-.016	9	-.152	8	-.014	1	-2.903e-03	5	0	1	6.62e-04	3
1527	N826	max	.004	3	-.014	3	.018	2	1.183e-03	9	2.765e-04	4	6.391e-03	9
1528		min	-.018	9	-.139	8	-.014	1	-1.045e-03	5	-6.596e-04	7	5.945e-04	3
1529	N827	max	.005	3	-.016	3	.017	2	1.109e-03	9	2.846e-04	4	6.955e-03	9
1530		min	-.018	9	-.145	8	-.014	1	-1.562e-03	5	-7.349e-04	7	6.9e-04	3
1531	N828	max	.006	3	-.018	3	.017	2	1.117e-03	9	2.909e-04	4	7.517e-03	9
1532		min	-.017	9	-.153	8	-.014	1	-1.999e-03	5	-7.938e-04	7	7.84e-04	3
1533	N829	max	.011	3	-.028	3	.017	2	5.563e-04	9	0	1	7.229e-03	9
1534		min	-.016	4	-.175	8	-.015	1	-4.524e-03	5	0	1	5.447e-04	3
1535	N830	max	.011	3	-.026	3	.018	2	1.117e-03	9	0	1	7.303e-03	9
1536		min	-.016	4	-.161	8	-.014	1	-4.029e-03	5	0	1	7.424e-04	3
1537	N831	max	.011	3	-.025	3	.018	2	1.184e-03	9	0	1	6.516e-03	9
1538		min	-.016	4	-.145	8	-.014	1	-4.28e-03	5	0	1	5.999e-04	3
1539	N832	max	.012	3	-.033	3	.016	2	-8.779e-05	9	1.057e-04	4	8.431e-03	9
1540		min	-.016	4	-.197	8	-.015	1	-5.938e-03	5	-1.892e-04	3	8.677e-04	3
1541	N833	max	.012	3	-.031	3	.017	2	8.702e-04	9	0	1	8.07e-03	9
1542		min	-.016	4	-.182	8	-.015	1	-4.464e-03	5	0	1	8.839e-04	3
1543	N834	max	.012	3	-.029	3	.018	2	9.695e-04	9	0	1	6.877e-03	9
1544		min	-.017	4	-.168	8	-.014	1	-4.529e-03	5	0	1	5.792e-04	3
1545	N835	max	.012	3	-.028	3	.018	2	1.089e-03	9	0	1	7.008e-03	9
1546		min	-.017	4	-.154	8	-.014	1	-4.648e-03	5	0	1	7.192e-04	3
1547	N836	max	.013	3	-.027	3	.019	2	1.259e-03	9	0	1	6.568e-03	9
1548		min	-.017	4	-.14	8	-.013	1	-4.895e-03	5	0	1	5.915e-04	3
1549	N837	max	.014	3	-.036	3	.016	2	2.053e-03	9	4.364e-04	4	8.273e-03	9
1550		min	-.017	4	-.202	8	-.015	1	-3.414e-03	5	-1.294e-03	7	9.061e-04	3
1551	N838	max	.014	3	-.034	3	.017	2	9.353e-04	9	0	1	7.522e-03	9
1552		min	-.017	4	-.189	8	-.015	1	-4.699e-03	5	0	1	7.2e-04	3
1553	N839	max	.014	3	-.033	3	.018	2	9.574e-04	9	0	1	7.305e-03	9
1554		min	-.017	4	-.175	8	-.014	1	-4.714e-03	5	0	1	7.237e-04	3
1555	N840	max	.014	3	-.031	3	.018	2	1.068e-03	9	0	1	6.781e-03	9
1556		min	-.017	4	-.163	8	-.014	1	-4.858e-03	5	0	1	5.841e-04	3
1557	N841	max	.014	3	-.03	3	.019	2	1.124e-03	9	0	1	6.963e-03	9
1558		min	-.017	4	-.15	8	-.013	1	-5.124e-03	5	0	1	6.597e-04	3
1559	N842	max	.015	3	-.039	3	.016	2	7.633e-04	9	2.075e-04	4	7.703e-03	9
1560		min	-.018	4	-.208	8	-.015	1	-5.002e-03	5	-5.785e-04	7	7.576e-04	3
1561	N843	max	.015	3	-.037	3	.017	2	1.267e-03	9	0	1	7.533e-03	9
1562		min	-.018	4	-.195	8	-.015	1	-4.38e-03	5	0	1	7.495e-04	3
1563	N844	max	.015	3	-.036	3	.018	2	1.113e-03	9	0	1	7.064e-03	9
1564		min	-.018	4	-.183	8	-.014	1	-4.679e-03	5	0	1	6.204e-04	3

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1565	N845	max	.016	3	-.035	3	.018	2	1.065e-03	9	0	1	7.004e-03	9
1566		min	-.018	4	-.172	8	-.014	1	-4.934e-03	5	0	1	6.276e-04	3
1567	N846	max	.016	3	-.033	3	.019	2	1.061e-03	9	0	1	6.801e-03	9
1568		min	-.018	4	-.16	8	-.014	1	-5.221e-03	5	0	1	5.468e-04	3
1569	N847	max	.017	3	-.04	3	.017	2	1.313e-03	9	0	1	7.192e-03	9
1570		min	-.018	4	-.202	8	-.015	1	-4.372e-03	5	0	1	6.353e-04	3
1571	N848	max	.017	3	-.039	3	.018	2	1.234e-03	9	0	1	7.096e-03	9
1572		min	-.018	4	-.191	8	-.014	1	-4.577e-03	5	0	1	6.252e-04	3
1573	N849	max	.017	3	-.038	3	.018	2	1.165e-03	9	0	1	6.852e-03	9
1574		min	-.018	4	-.181	8	-.014	1	-4.839e-03	5	0	1	5.466e-04	3
1575	N850	max	.019	3	-.044	3	.017	2	1.316e-03	9	2.732e-04	4	7.167e-03	9
1576		min	-.019	4	-.217	8	-.015	1	-4.282e-03	5	-8.41e-04	7	6.356e-04	3
1577	N851	max	.019	3	-.043	3	.017	2	1.538e-03	9	0	1	7.095e-03	9
1578		min	-.019	4	-.208	8	-.015	1	-4.107e-03	5	0	1	6.141e-04	3
1579	N852	max	.019	3	-.041	3	.018	2	1.377e-03	9	0	1	6.874e-03	9
1580		min	-.019	4	-.198	8	-.014	1	-4.416e-03	5	0	1	5.432e-04	3
1581	N853	max	.019	3	-.04	3	.019	2	1.255e-03	9	0	1	6.822e-03	9
1582		min	-.019	4	-.188	8	-.014	1	-4.727e-03	5	0	1	5.281e-04	3
1583	N854	max	.019	3	-.039	3	.019	2	1.153e-03	9	0	1	6.707e-03	9
1584		min	-.019	4	-.179	8	-.013	1	-5.041e-03	5	0	1	4.701e-04	3
1585	N855	max	.021	3	-.046	3	.017	2	2.035e-03	9	3.795e-04	4	7.041e-03	9
1586		min	-.02	4	-.222	8	-.015	1	-3.4e-03	5	-1.194e-03	7	6.152e-04	3
1587	N856	max	.021	3	-.045	3	.017	2	1.616e-03	9	0	1	6.838e-03	9
1588		min	-.02	4	-.213	8	-.015	1	-3.976e-03	5	0	1	5.369e-04	3
1589	N857	max	.021	3	-.044	3	.018	2	1.496e-03	9	0	1	6.775e-03	9
1590		min	-.02	4	-.204	8	-.014	1	-4.249e-03	5	0	1	5.167e-04	3
1591	N858	max	.021	3	-.043	3	.019	2	1.379e-03	9	0	1	6.654e-03	9
1592		min	-.02	4	-.196	8	-.014	1	-4.543e-03	5	0	1	4.725e-04	3
1593	N859	max	.021	3	-.042	3	.019	2	1.251e-03	9	0	1	6.624e-03	9
1594		min	-.02	4	-.188	8	-.013	1	-4.858e-03	5	0	1	4.492e-04	3
1595	N860	max	.023	3	-.048	3	.017	2	1.687e-03	9	3.207e-04	4	6.743e-03	9
1596		min	-.021	4	-.227	8	-.015	1	-3.702e-03	5	-1.007e-03	7	5.332e-04	3
1597	N861	max	.023	3	-.047	3	.018	2	1.774e-03	9	0	1	6.699e-03	9
1598		min	-.021	4	-.219	8	-.015	1	-3.748e-03	5	0	1	5.075e-04	3
1599	N862	max	.023	3	-.046	3	.018	2	1.631e-03	9	0	1	6.585e-03	9
1600		min	-.021	4	-.211	8	-.014	1	-4.036e-03	5	0	1	4.679e-04	3
1601	N863	max	.023	3	-.045	3	.019	2	1.492e-03	9	0	1	6.538e-03	9
1602		min	-.02	4	-.203	8	-.014	1	-4.345e-03	5	0	1	4.51e-04	3
1603	N864	max	.022	3	-.044	3	.019	2	1.366e-03	9	0	1	6.469e-03	9
1604		min	-.02	4	-.196	8	-.013	1	-4.651e-03	5	0	1	4.133e-04	2
1605	N865	max	.025	3	-.049	3	.018	2	1.856e-03	9	0	1	6.497e-03	9
1606		min	-.021	4	-.224	8	-.015	1	-3.572e-03	5	0	1	3.939e-04	2
1607	N866	max	.025	3	-.048	3	.018	2	1.735e-03	9	0	1	6.449e-03	9
1608		min	-.021	4	-.217	8	-.014	1	-3.841e-03	5	0	1	3.519e-04	2
1609	N867	max	.024	3	-.047	3	.019	2	1.62e-03	9	0	1	6.377e-03	9
1610		min	-.021	4	-.21	8	-.014	1	-4.114e-03	5	0	1	3.117e-04	2
1611	N868	max	.027	3	-.052	3	.017	2	1.93e-03	9	3.576e-04	4	6.371e-03	9
1612		min	-.022	4	-.235	8	-.015	1	-3.236e-03	5	-1.085e-03	7	3.02e-04	2
1613	N869	max	.027	3	-.051	3	.018	2	1.965e-03	9	0	1	6.347e-03	9
1614		min	-.022	4	-.228	8	-.014	1	-3.39e-03	5	0	1	2.468e-04	2
1615	N870	max	.027	3	-.05	3	.019	2	1.837e-03	9	0	1	6.279e-03	9
1616		min	-.022	4	-.222	8	-.014	1	-3.655e-03	5	0	1	2.104e-04	2
1617	N871	max	.026	3	-.049	3	.019	2	1.702e-03	9	0	1	6.231e-03	9
1618		min	-.022	4	-.216	8	-.014	1	-3.94e-03	5	0	1	1.814e-04	2
1619	N872	max	.026	3	-.048	3	.02	2	1.584e-03	9	0	1	6.172e-03	9
1620		min	-.022	4	-.21	8	-.013	1	-4.211e-03	5	0	1	1.348e-04	2
1621	N873	max	.029	3	-.054	3	.018	2	2.268e-03	9	3.952e-04	4	6.266e-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
1622		min	-.023	4	-.239	8	-.015	1	-2.943e-03	5	-1.164e-03	7	1.57e-04	2
1623	N874	max	.029	3	-.053	3	.018	2	2.021e-03	9	0	1	6.172e-03	9
1624		min	-.023	4	-.233	8	-.014	1	-3.233e-03	5	0	1	1.189e-04	2
1625	N875	max	.029	3	-.052	3	.019	2	1.902e-03	9	0	1	6.124e-03	9
1626		min	-.023	4	-.227	8	-.014	1	-3.491e-03	5	0	1	8.787e-05	2
1627	N876	max	.028	3	-.051	3	.019	2	1.786e-03	9	0	1	6.073e-03	9
1628		min	-.023	4	-.221	8	-.014	1	-3.75e-03	5	0	1	6.082e-05	2
1629	N877	max	.028	3	-.043	9	.02	2	1.653e-03	9	0	1	6.022e-03	9
1630		min	-.023	4	-.216	8	-.013	1	-4.009e-03	5	0	1	3.235e-05	2
1631	N878	max	.031	3	-.056	3	.018	2	2.058e-03	9	3.82e-04	4	6.023e-03	9
1632		min	-.024	4	-.243	8	-.015	1	-2.888e-03	5	-1.068e-03	7	6.098e-05	2
1633	N879	max	.031	3	-.054	3	.018	2	2.093e-03	9	0	1	6.023e-03	9
1634		min	-.024	4	-.238	8	-.014	1	-3.082e-03	5	0	1	1.982e-06	2
1635	N880	max	.031	3	-.053	9	.019	2	1.975e-03	9	0	1	5.965e-03	9
1636		min	-.024	4	-.232	8	-.014	1	-3.308e-03	5	0	1	-1.762e-05	2
1637	N881	max	.03	3	-.045	9	.019	2	1.83e-03	9	0	1	5.891e-03	9
1638		min	-.023	4	-.227	8	-.013	1	-3.555e-03	5	0	1	-2.526e-05	2
1639	N882	max	.03	3	-.036	9	.02	2	1.69e-03	9	0	1	5.861e-03	9
1640		min	-.023	4	-.221	8	-.013	1	-3.792e-03	5	0	1	-5.353e-05	2
1641	N883	max	.033	3	-.054	9	.019	2	2.123e-03	9	0	1	5.855e-03	9
1642		min	-.025	4	-.242	8	-.014	1	-2.933e-03	5	0	1	-7.794e-05	2
1643	N884	max	.033	3	-.046	9	.019	2	1.993e-03	9	0	1	5.762e-03	9
1644		min	-.024	4	-.237	8	-.014	1	-3.136e-03	5	0	1	-7.877e-05	2
1645	N885	max	.032	3	-.038	9	.019	2	1.857e-03	9	0	1	5.689e-03	9
1646		min	-.024	4	-.232	8	-.013	1	-3.317e-03	5	0	1	-7.194e-05	2
1647	N886	max	.033	3	-.023	9	.02	2	1.488e-03	9	0	1	5.237e-03	9
1648		min	-.025	4	-.23	8	-.013	1	-3.092e-03	5	0	1	-1.609e-05	2
1649	N887	max	.035	3	-.017	9	.02	2	1.153e-03	9	0	1	4.605e-03	9
1650		min	-.025	4	-.233	8	-.012	1	-2.471e-03	5	0	1	1.976e-04	2
1651	N888	max	.036	3	-.012	9	.02	2	7.058e-04	9	0	1	3.981e-03	9
1652		min	-.026	4	-.234	8	-.012	1	-1.504e-03	5	0	1	4.56e-04	4
1653	N889	max	.034	3	-.031	9	.019	2	1.776e-03	9	0	1	5.3e-03	9
1654		min	-.025	4	-.235	8	-.013	1	-3.048e-03	5	0	1	-1.076e-05	2
1655	N890	max	.035	3	-.024	9	.02	2	1.577e-03	9	0	1	4.769e-03	9
1656		min	-.026	4	-.238	8	-.013	1	-2.584e-03	5	0	1	2.062e-04	2
1657	N891	max	.037	3	-.018	9	.02	2	1.139e-03	9	0	1	3.928e-03	9
1658		min	-.026	4	-.24	8	-.013	1	-1.968e-03	5	0	1	5.025e-04	4
1659	N892	max	.039	3	-.012	9	.018	2	2.481e-04	9	7.505e-04	6	3.312e-03	9
1660		min	-.027	4	-.24	5	-.013	1	-2.259e-03	5	-1.118e-04	1	6.005e-04	2
1661	N893	max	.034	3	-.038	9	.019	2	2.019e-03	9	0	1	5.527e-03	9
1662		min	-.025	4	-.241	8	-.014	1	-2.933e-03	5	0	1	-7.651e-05	2
1663	N894	max	.036	3	-.03	9	.019	2	1.921e-03	9	0	1	4.993e-03	9
1664		min	-.026	4	-.244	8	-.013	1	-2.685e-03	5	0	1	1.013e-04	2
1665	N895	max	.038	3	-.023	9	.019	2	1.512e-03	9	0	1	4.329e-03	9
1666		min	-.027	4	-.247	8	-.013	1	-2.035e-03	5	0	1	3.629e-04	4
1667	N896	max	.039	3	-.018	9	.019	2	5.62e-04	2	7.265e-04	6	3.491e-03	8
1668		min	-.027	4	-.247	5	-.013	1	-1.629e-03	5	-9.635e-05	1	6.924e-04	4
1669	N897	max	.035	3	-.045	9	.019	2	2.143e-03	9	0	1	5.668e-03	9
1670		min	-.025	4	-.246	8	-.014	1	-2.829e-03	5	0	1	-1.169e-04	2
1671	N898	max	.037	3	-.037	9	.019	2	2.203e-03	9	0	1	5.429e-03	9
1672		min	-.026	4	-.25	8	-.014	1	-2.651e-03	5	0	1	-5.645e-05	2
1673	N899C	max	.039	3	-.029	9	.019	2	1.704e-03	9	0	1	4.695e-03	9
1674		min	-.027	4	-.253	8	-.014	1	-2.41e-03	5	0	1	2.619e-04	4
1675	N900B	max	.039	3	-.023	9	.02	2	6.895e-04	2	6.131e-04	6	3.747e-03	8
1676		min	-.027	4	-.254	5	-.013	1	-1.099e-03	5	-1.401e-04	1	7.878e-04	4
1677	N901B	max	.036	3	-.053	9	.018	2	2.083e-03	9	3.904e-04	4	5.649e-03	9
1678		min	-.026	4	-.251	8	-.014	1	-2.669e-03	5	-9.736e-04	7	-4.304e-05	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1679	N902B	max	.037	3	-.044	9	.019	2	2.516e-03	9	4.001e-04	4	5.696e-03	9
1680		min	-.027	4	-.255	8	-.014	1	-2.799e-03	5	-9.423e-04	7	-1.181e-04	2
1681	N903	max	.039	3	-.036	9	.019	2	2.112e-03	9	4.101e-04	4	4.798e-03	9
1682		min	-.027	4	-.259	8	-.014	1	-2.656e-03	5	-8.238e-04	7	2.629e-04	4
1683	N904	max	.037	3	-.005	9	.014	2	7.642e-04	2	0	1	4.501e-03	8
1684		min	-.027	4	-.217	5	-.012	1	-2.399e-03	9	0	1	6.126e-04	2
1685	N905A	max	.036	3	-.006	9	.013	2	8.167e-04	2	0	1	4.771e-03	8
1686		min	-.027	4	-.211	5	-.012	1	-2.277e-03	9	0	1	6.651e-04	2
1687	N906A	max	.035	3	-.007	9	.012	2	8.65e-04	2	0	1	5.049e-03	8
1688		min	-.027	4	-.205	5	-.012	1	-2.115e-03	9	0	1	7.328e-04	2
1689	N907	max	.037	3	-.009	9	.015	2	7.067e-04	2	0	1	4.106e-03	8
1690		min	-.027	4	-.228	5	-.012	1	-2.294e-03	9	0	1	5.955e-04	2
1691	N908	max	.036	3	-.01	9	.015	2	7.595e-04	2	0	1	4.362e-03	8
1692		min	-.027	4	-.223	5	-.012	1	-2.259e-03	9	0	1	6.248e-04	2
1693	N909	max	.035	3	-.011	9	.014	2	8.047e-04	2	0	1	4.624e-03	8
1694		min	-.027	4	-.217	5	-.012	1	-2.129e-03	9	0	1	6.706e-04	2
1695	N910	max	.035	3	-.011	9	.013	2	8.42e-04	2	0	1	4.897e-03	8
1696		min	-.027	4	-.211	5	-.012	1	-1.96e-03	9	0	1	7.354e-04	2
1697	N911A	max	.034	3	-.012	9	.012	2	8.766e-04	2	0	1	5.177e-03	8
1698		min	-.027	4	-.206	5	-.012	1	-1.776e-03	9	0	1	8.196e-04	2
1699	N912B	max	.036	3	-.014	9	.016	2	7.191e-04	2	0	1	3.985e-03	8
1700		min	-.027	4	-.233	5	-.013	1	-2.214e-03	9	0	1	6.067e-04	2
1701	N913B	max	.036	3	-.015	9	.015	2	7.607e-04	2	0	1	4.215e-03	8
1702		min	-.027	4	-.228	5	-.012	1	-2.127e-03	9	0	1	6.286e-04	2
1703	N914B	max	.035	3	-.015	9	.014	2	7.939e-04	2	0	1	4.47e-03	8
1704		min	-.027	4	-.223	5	-.012	1	-1.981e-03	9	0	1	6.7e-04	2
1705	N915B	max	.034	3	-.015	9	.013	2	8.25e-04	2	0	1	4.733e-03	8
1706		min	-.027	4	-.218	5	-.012	1	-1.809e-03	9	0	1	7.294e-04	2
1707	N916B	max	.033	3	-.016	9	.012	2	8.44e-04	2	0	1	5.007e-03	8
1708		min	-.027	4	-.212	5	-.012	1	-1.639e-03	9	0	1	8.07e-04	2
1709	N917A	max	.036	3	-.019	9	.017	2	7.286e-04	2	0	1	3.874e-03	8
1710		min	-.027	4	-.239	5	-.013	1	-2.114e-03	9	0	1	6.203e-04	2
1711	N918A	max	.035	3	-.019	9	.016	2	7.557e-04	2	0	1	4.077e-03	8
1712		min	-.027	4	-.234	5	-.013	1	-1.99e-03	9	0	1	6.323e-04	2
1713	N919A	max	.034	3	-.019	9	.015	2	7.833e-04	2	0	1	4.328e-03	8
1714		min	-.027	4	-.229	5	-.012	1	-1.832e-03	9	0	1	6.713e-04	2
1715	N920A	max	.033	3	-.019	9	.014	2	7.968e-04	2	0	1	4.576e-03	8
1716		min	-.027	4	-.224	5	-.012	1	-1.67e-03	9	0	1	7.222e-04	2
1717	N921A	max	.033	3	-.019	9	.013	2	8.219e-04	2	0	1	4.865e-03	8
1718		min	-.027	4	-.219	5	-.012	1	-1.497e-03	9	0	1	8.015e-04	2
1719	N922B	max	.035	3	-.024	9	.017	2	7.544e-04	2	9.502e-04	6	4.018e-03	8
1720		min	-.027	4	-.239	5	-.013	1	-1.842e-03	9	-5.218e-05	1	6.609e-04	2
1721	N923B	max	.034	3	-.023	9	.016	2	7.378e-04	2	1.035e-03	6	4.14e-03	8
1722		min	-.027	4	-.235	5	-.013	1	-1.707e-03	9	-5.005e-05	1	6.587e-04	2
1723	N924B	max	.033	3	-.023	9	.015	2	7.9e-04	2	9.637e-04	6	4.529e-03	8
1724		min	-.027	4	-.23	5	-.012	1	-1.52e-03	9	-2.536e-05	1	7.517e-04	2
1725	N925B	max	.033	3	-.009	9	.009	2	9.984e-04	2	0	1	6.385e-03	5
1726		min	-.027	4	-.175	5	-.012	1	-1.408e-03	9	0	1	8.235e-04	9
1727	N926B	max	.033	3	-.009	9	.009	2	9.793e-04	2	0	1	5.973e-03	5
1728		min	-.027	4	-.183	5	-.012	1	-1.566e-03	9	0	1	8.861e-04	9
1729	N927	max	.034	3	-.009	9	.01	2	9.468e-04	2	0	1	5.708e-03	5
1730		min	-.027	4	-.191	5	-.012	1	-1.738e-03	9	0	1	9.376e-04	2
1731	N928	max	.032	3	-.013	9	.008	2	1.039e-03	2	0	1	6.328e-03	5
1732		min	-.027	4	-.176	5	-.012	1	-1.426e-03	5	0	1	8.769e-04	9
1733	N929	max	.032	3	-.013	9	.009	2	9.248e-04	2	0	1	6.007e-03	5
1734		min	-.027	4	-.184	5	-.012	1	-1.582e-03	5	0	1	9.217e-04	9
1735	N930	max	.033	3	-.012	9	.01	2	9.334e-04	2	0	1	5.831e-03	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1736		min	-.027	4	-.191	5	-.012	1	-1.446e-03	9	0	1	1.039e-03	9
1737	N931	max	.033	3	-.012	9	.011	2	9.035e-04	2	0	1	5.482e-03	5
1738		min	-.027	4	-.199	5	-.012	1	-1.615e-03	9	0	1	9.184e-04	2
1739	N932	max	.031	3	-.016	9	.009	2	8.004e-04	2	0	1	6.167e-03	5
1740		min	-.028	4	-.186	5	-.012	1	-2.207e-03	5	0	1	1.005e-03	9
1741	N933	max	.031	3	-.016	9	.01	2	9.273e-04	2	0	1	5.919e-03	5
1742		min	-.027	4	-.192	5	-.012	1	-1.619e-03	5	0	1	1.072e-03	9
1743	N934	max	.032	3	-.016	9	.011	2	8.697e-04	2	0	1	5.587e-03	5
1744		min	-.027	4	-.199	5	-.012	1	-1.597e-03	5	0	1	1.009e-03	2
1745	N935	max	.033	3	-.016	9	.011	2	8.734e-04	2	0	1	5.316e-03	8
1746		min	-.027	4	-.206	5	-.012	1	-1.474e-03	9	0	1	9.081e-04	2
1747	N936	max	.03	3	-.019	9	.009	2	8.725e-04	2	0	1	5.884e-03	5
1748		min	-.028	4	-.195	5	-.012	1	-1.972e-03	5	0	1	1.074e-03	9
1749	N937	max	.031	3	-.019	9	.01	2	7.876e-04	2	0	1	5.711e-03	5
1750		min	-.028	4	-.201	5	-.012	1	-2.103e-03	5	0	1	1.109e-03	2
1751	N938	max	.031	3	-.019	9	.011	2	8.56e-04	2	0	1	5.468e-03	8
1752		min	-.028	4	-.207	5	-.012	1	-1.7e-03	5	0	1	1.007e-03	2
1753	N939	max	.032	3	-.019	9	.012	2	8.133e-04	2	0	1	5.13e-03	8
1754		min	-.027	4	-.213	5	-.012	1	-1.633e-03	5	0	1	8.845e-04	2
1755	N940	max	.03	3	-.022	9	.011	2	8.5e-04	2	7.294e-04	6	5.819e-03	5
1756		min	-.028	4	-.211	5	-.012	1	-1.882e-03	5	2.631e-05	1	1.176e-03	2
1757	N941	max	.031	3	-.022	9	.012	2	7.064e-04	2	1.056e-03	6	5.107e-03	8
1758		min	-.028	4	-.216	5	-.012	1	-2.208e-03	5	-2.517e-05	1	9.278e-04	2
1759	N942	max	.031	3	-.022	9	.013	2	8.187e-04	2	8.874e-04	6	5.15e-03	8
1760		min	-.028	4	-.221	5	-.012	1	-1.661e-03	5	7.192e-07	1	9.296e-04	2
1761	N943	max	.032	3	-.009	9	.007	2	1.115e-03	2	0	1	6.827e-03	5
1762		min	-.027	4	-.156	5	-.012	1	-1.4e-03	5	0	1	6.681e-04	9
1763	N944	max	.031	3	-.009	9	.006	2	9.149e-04	2	0	1	6.702e-03	5
1764		min	-.027	4	-.146	5	-.013	5	-2.217e-03	5	0	1	5.473e-04	9
1765	N945	max	.031	3	-.009	9	.006	2	8.904e-04	2	0	1	6.678e-03	5
1766		min	-.027	4	-.136	5	-.014	5	-2.436e-03	5	0	1	4.833e-04	9
1767	N946	max	.031	3	-.013	9	.008	2	1.021e-03	2	0	1	6.515e-03	5
1768		min	-.028	4	-.169	5	-.012	1	-1.69e-03	5	0	1	8.476e-04	9
1769	N947	max	.031	3	-.012	9	.007	2	8.023e-04	2	0	1	6.305e-03	5
1770		min	-.028	4	-.159	5	-.012	1	-2.511e-03	5	0	1	6.905e-04	9
1771	N948	max	.031	3	-.012	9	.006	2	8.872e-04	2	0	1	6.503e-03	5
1772		min	-.028	4	-.15	5	-.013	5	-2.354e-03	5	0	1	6.687e-04	9
1773	N949	max	.03	3	-.011	9	.005	2	8.727e-04	2	0	1	6.253e-03	5
1774		min	-.028	4	-.141	5	-.014	5	-2.505e-03	5	0	1	5.584e-04	9
1775	N950	max	.03	3	-.011	9	.005	2	7.768e-04	2	0	1	5.81e-03	5
1776		min	-.028	4	-.133	5	-.015	5	-2.877e-03	5	0	1	4.275e-04	9
1777	N951A	max	.03	3	-.016	9	.007	2	6.927e-04	2	0	1	6.101e-03	5
1778		min	-.028	4	-.173	5	-.012	1	-2.83e-03	5	0	1	8.45e-04	9
1779	N952C	max	.03	3	-.015	9	.007	2	9.424e-04	2	0	1	6.568e-03	5
1780		min	-.028	4	-.164	5	-.012	1	-2.133e-03	5	0	1	8.937e-04	9
1781	N953B	max	.03	3	-.014	9	.006	2	9.189e-04	2	0	1	6.034e-03	5
1782		min	-.028	4	-.155	5	-.013	5	-2.304e-03	5	0	1	6.99e-04	9
1783	N954B	max	.03	3	-.013	9	.005	2	8.137e-04	2	0	1	5.559e-03	5
1784		min	-.028	4	-.147	5	-.014	5	-2.702e-03	5	0	1	5.42e-04	9
1785	N955C	max	.03	3	-.012	9	.005	2	7.096e-04	2	0	1	5.182e-03	8
1786		min	-.028	4	-.139	5	-.015	5	-3.068e-03	5	0	1	4.319e-04	9
1787	N956C	max	.029	3	-.018	9	.007	2	1.104e-03	2	0	1	6.847e-03	5
1788		min	-.029	4	-.177	5	-.012	1	-1.511e-03	5	0	1	1.135e-03	9
1789	N957B	max	.029	3	-.016	9	.006	2	9.015e-04	2	0	1	5.657e-03	8
1790		min	-.029	4	-.168	5	-.012	5	-2.24e-03	5	0	1	7.708e-04	9
1791	N958A	max	.029	3	-.015	9	.006	2	7.461e-04	2	0	1	5.255e-03	8
1792		min	-.029	4	-.16	5	-.013	5	-2.793e-03	5	0	1	6.282e-04	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1793	N959	max	.029	3	-.015	9	.005	2	6.518e-04	2	0	1	4.999e-03	8
1794		min	-.029	4	-.153	5	-.014	5	-3.131e-03	5	0	1	5.402e-04	9
1795	N960A	max	.029	3	-.014	9	.005	2	5.709e-04	2	0	1	4.696e-03	8
1796		min	-.029	4	-.147	5	-.015	5	-3.409e-03	5	0	1	4.542e-04	9
1797	N961A	max	.029	3	-.017	2	.006	2	3.361e-04	2	7.159e-04	6	4.927e-03	8
1798		min	-.029	4	-.175	5	-.013	5	-3.678e-03	5	2.646e-05	1	7.525e-04	9
1799	N962A	max	.029	3	-.016	2	.006	2	3.614e-04	2	7.761e-04	6	4.768e-03	8
1800		min	-.029	4	-.168	5	-.014	5	-3.688e-03	5	1.019e-05	1	6.794e-04	9
1801	N963A	max	.029	3	-.014	2	.005	2	3.728e-04	2	7.547e-04	6	4.559e-03	8
1802		min	-.029	4	-.162	5	-.015	5	-3.722e-03	5	1.149e-05	1	6.025e-04	9
1803	N964A	max	.03	3	-.009	9	.004	2	7.173e-04	2	0	1	6.008e-03	5
1804		min	-.027	4	-.117	5	-.016	5	-3.166e-03	5	0	1	2.73e-04	9
1805	N965	max	.03	3	-.009	9	.004	2	5.744e-04	2	0	1	5.443e-03	5
1806		min	-.027	4	-.108	5	-.017	5	-3.634e-03	5	0	1	1.589e-04	9
1807	N966A	max	.03	3	-.009	9	.003	2	4.166e-04	2	0	1	4.761e-03	5
1808		min	-.028	4	-.1	5	-.018	5	-4.107e-03	5	0	1	4.906e-05	9
1809	N967A	max	.03	3	-.01	9	.004	2	6.599e-04	2	0	1	5.347e-03	5
1810		min	-.028	4	-.124	5	-.016	5	-3.282e-03	5	0	1	2.999e-04	9
1811	N968A	max	.03	3	-.01	9	.003	2	5.255e-04	2	0	1	4.807e-03	5
1812		min	-.028	4	-.116	5	-.017	5	-3.705e-03	5	0	1	1.841e-04	9
1813	N969A	max	.03	3	-.01	9	.003	2	3.888e-04	2	0	1	4.165e-03	8
1814		min	-.028	4	-.109	5	-.018	5	-4.096e-03	5	0	1	7.733e-05	9
1815	N970A	max	.029	3	-.009	2	.002	2	2.575e-04	2	0	1	3.418e-03	8
1816		min	-.028	4	-.104	5	-.019	5	-4.44e-03	5	0	1	-2.374e-05	9
1817	N971A	max	.03	3	-.012	9	.004	2	5.899e-04	2	0	1	4.754e-03	8
1818		min	-.028	4	-.131	5	-.016	5	-3.46e-03	5	0	1	3.179e-04	9
1819	N972A	max	.029	3	-.011	9	.003	2	4.714e-04	2	0	1	4.263e-03	8
1820		min	-.028	4	-.124	5	-.017	5	-3.819e-03	5	0	1	2.126e-04	9
1821	N973A	max	.029	3	-.01	2	.003	2	3.534e-04	2	0	1	3.696e-03	8
1822		min	-.028	4	-.118	5	-.018	5	-4.15e-03	5	0	1	1.092e-04	9
1823	N974	max	.029	3	-.008	2	.002	2	2.43e-04	2	0	1	3.012e-03	8
1824		min	-.029	4	-.113	5	-.019	5	-4.433e-03	5	0	1	6.048e-06	9
1825	N975	max	.029	3	-.012	2	.004	2	4.891e-04	2	0	1	4.316e-03	8
1826		min	-.029	4	-.139	5	-.016	5	-3.682e-03	5	0	1	3.567e-04	9
1827	N976A	max	.029	3	-.01	2	.003	2	4.033e-04	2	0	1	3.86e-03	8
1828		min	-.029	4	-.133	5	-.017	5	-3.945e-03	5	0	1	2.558e-04	9
1829	N977A	max	.029	3	-.009	2	.003	2	3.127e-04	2	0	1	3.315e-03	8
1830		min	-.029	4	-.127	5	-.018	5	-4.202e-03	5	0	1	1.502e-04	9
1831	N978	max	.029	3	-.007	2	.002	2	2.172e-04	2	0	1	2.708e-03	8
1832		min	-.029	4	-.122	5	-.019	5	-4.461e-03	5	0	1	4.008e-05	9
1833	N979A	max	.029	3	-.011	2	.004	2	3.494e-04	2	6.85e-04	6	3.912e-03	8
1834		min	-.029	4	-.148	5	-.017	5	-3.898e-03	5	1.446e-05	1	4.171e-04	9
1835	N980A	max	.029	3	-.009	2	.003	2	3.161e-04	2	6.279e-04	6	3.449e-03	8
1836		min	-.029	4	-.142	5	-.018	5	-4.032e-03	5	1.675e-05	1	3.063e-04	9
1837	N981A	max	.029	3	-.008	2	.003	2	2.727e-04	2	5.54e-04	6	2.908e-03	8
1838		min	-.029	4	-.136	5	-.018	5	-4.183e-03	5	1.962e-05	1	1.892e-04	9
1839	N982A	max	.029	3	-.008	2	.002	2	1.026e-04	2	0	1	2.833e-03	8
1840		min	-.028	4	-.089	5	-.02	5	-4.902e-03	5	0	1	-1.629e-04	9
1841	N983A	max	.029	3	-.006	2	.002	2	2.113e-05	2	0	1	1.506e-03	8
1842		min	-.028	4	-.086	5	-.02	5	-4.994e-03	5	0	1	-2.486e-04	9
1843	N984A	max	.028	3	-.006	2	.001	2	6.25e-05	2	5.258e-04	4	9.115e-04	4
1844		min	-.028	4	-.085	5	-.021	5	-4.736e-03	5	-5.3e-04	3	-1.014e-03	3
1845	N985A	max	.029	3	-.007	2	.002	2	1.654e-04	2	0	1	2.503e-03	8
1846		min	-.028	4	-.099	5	-.02	5	-4.624e-03	5	0	1	-1.256e-04	9
1847	N986A	max	.029	3	-.006	2	.002	2	7.816e-05	2	0	1	1.469e-03	8
1848		min	-.028	4	-.096	5	-.02	5	-4.801e-03	5	0	1	-2.071e-04	9
1849	N987	max	.029	3	-.006	2	.001	2	6.592e-05	2	4.154e-04	4	8.532e-04	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1850		min	-.028	4	-.096	5	-.021	5	-4.76e-03	5	-4.2e-04	3	-9.592e-04	3
1851	N989	max	.029	3	-.007	2	.002	2	1.39e-04	2	0	1	2.29e-03	8
1852		min	-.029	4	-.109	5	-.02	5	-4.684e-03	5	0	1	-9.844e-05	9
1853	N990	max	.029	3	-.006	2	.001	2	7.402e-05	2	0	1	1.261e-03	8
1854		min	-.029	4	-.106	5	-.02	5	-4.813e-03	5	0	1	-2.983e-04	3
1855	N991	max	.029	3	-.006	2	.001	2	6.93e-05	2	3.467e-04	4	7.833e-04	4
1856		min	-.029	4	-.106	5	-.021	5	-4.774e-03	5	-3.515e-04	3	-8.933e-04	3
1857	N993A	max	.029	3	-.006	2	.002	2	1.262e-04	2	0	1	1.956e-03	8
1858		min	-.029	4	-.119	5	-.02	5	-4.7e-03	5	0	1	-7.722e-05	9
1859	N994	max	.029	3	-.006	2	.002	2	3.587e-05	2	0	1	1.209e-03	8
1860		min	-.029	4	-.116	5	-.02	5	-4.962e-03	5	0	1	-3.061e-04	3
1861	N995A	max	.03	3	-.006	2	.001	2	7.28e-05	2	3.111e-04	4	7.182e-04	4
1862		min	-.029	4	-.116	5	-.021	5	-4.78e-03	5	-3.159e-04	3	-8.322e-04	3
1863	N997A	max	.03	3	-.006	2	.002	2	1.7e-04	2	3.494e-04	8	1.596e-03	8
1864		min	-.029	4	-.128	5	-.02	5	-4.504e-03	5	-5.593e-05	3	-1.986e-04	3
1865	N998A	max	.03	3	-.006	2	.002	2	1.166e-04	2	2.831e-04	8	8.755e-04	4
1866		min	-.029	4	-.126	5	-.02	5	-4.665e-03	5	-1.073e-04	3	-4.769e-04	3
1867	N999A	max	.03	3	-.006	2	.001	2	7.672e-05	2	2.985e-04	4	6.612e-04	4
1868		min	-.029	4	-.126	5	-.021	5	-4.778e-03	5	-3.034e-04	3	-7.792e-04	3
1869	N1000A	max	.038	3	-.004	9	.015	2	6.829e-04	4	0	1	4.062e-03	8
1870		min	-.027	4	-.225	5	-.012	1	-2.341e-03	9	0	1	5.618e-04	2
1871	N1001A	max	.038	3	-.003	9	.015	2	6.243e-04	4	0	1	3.917e-03	8
1872		min	-.027	4	-.227	5	-.012	1	-2.191e-03	9	0	1	5.529e-04	2
1873	N1002A	max	.039	3	-.003	9	.016	2	5.659e-04	2	0	1	3.769e-03	8
1874		min	-.027	4	-.228	5	-.012	1	-1.943e-03	9	0	1	5.475e-04	2
1875	N1003	max	.037	3	-.009	9	.016	2	6.749e-04	2	0	1	3.998e-03	8
1876		min	-.027	4	-.23	5	-.013	1	-2.257e-03	9	0	1	5.87e-04	2
1877	N1004	max	.038	3	-.008	9	.016	2	6.386e-04	2	0	1	3.889e-03	8
1878		min	-.027	4	-.232	5	-.013	1	-2.152e-03	9	0	1	5.825e-04	2
1879	N1005	max	.038	3	-.008	9	.017	2	5.993e-04	2	0	1	3.781e-03	8
1880		min	-.027	4	-.234	5	-.013	1	-1.956e-03	9	0	1	5.821e-04	2
1881	N1006	max	.038	3	-.008	9	.017	2	5.558e-04	2	0	1	3.682e-03	8
1882		min	-.027	4	-.236	5	-.013	1	-1.64e-03	9	0	1	5.878e-04	2
1883	N1007	max	.037	3	-.014	9	.017	2	6.947e-04	2	0	1	3.886e-03	8
1884		min	-.027	4	-.236	5	-.013	1	-2.225e-03	9	0	1	6.023e-04	2
1885	N1008	max	.037	3	-.014	9	.017	2	6.666e-04	2	0	1	3.793e-03	8
1886		min	-.027	4	-.238	5	-.013	1	-2.189e-03	9	0	1	6.015e-04	2
1887	N1009	max	.038	3	-.014	9	.017	2	6.347e-04	2	0	1	3.712e-03	8
1888		min	-.027	4	-.24	5	-.013	1	-2.083e-03	9	0	1	6.044e-04	2
1889	N1010	max	.038	3	-.014	9	.018	2	6.011e-04	2	0	1	3.632e-03	8
1890		min	-.027	4	-.242	5	-.013	1	-1.874e-03	9	0	1	6.097e-04	2
1891	N1011	max	.036	3	-.019	9	.017	2	7.089e-04	2	0	1	3.773e-03	8
1892		min	-.027	4	-.241	5	-.013	1	-2.159e-03	9	0	1	6.163e-04	2
1893	N1012	max	.037	3	-.019	9	.018	2	6.902e-04	2	0	1	3.701e-03	8
1894		min	-.027	4	-.243	5	-.013	1	-2.188e-03	9	0	1	6.223e-04	2
1895	N1013	max	.037	3	-.019	9	.018	2	6.652e-04	2	0	1	3.63e-03	8
1896		min	-.027	4	-.245	5	-.013	1	-2.169e-03	9	0	1	6.314e-04	2
1897	N1014	max	.038	3	-.02	9	.019	2	6.331e-04	2	0	1	3.584e-03	8
1898		min	-.027	4	-.247	5	-.013	1	-2.114e-03	9	0	1	6.438e-04	2
1899	N1015	max	.036	3	-.025	9	.018	2	7.149e-04	2	8.949e-04	6	3.742e-03	8
1900		min	-.027	4	-.246	5	-.013	1	-2.04e-03	9	-7.398e-05	1	6.475e-04	2
1901	N1016	max	.036	3	-.025	9	.018	2	6.949e-04	2	8.833e-04	6	3.661e-03	8
1902		min	-.027	4	-.249	5	-.013	1	-2.053e-03	9	-8.294e-05	1	6.499e-04	2
1903	N1017	max	.037	3	-.025	9	.019	2	6.816e-04	2	8.441e-04	6	3.644e-03	8
1904		min	-.027	4	-.251	5	-.013	1	-2.135e-03	9	-8.722e-05	1	6.637e-04	2
1905	N1018	max	.039	3	-.003	9	.016	2	4.294e-04	2	0	1	3.449e-03	8
1906		min	-.027	4	-.231	5	-.013	1	-1.094e-03	5	0	1	5.475e-04	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1907	N1019	max	.039	3	-.004	9	.017	2	2.764e-04	2	0	1	3.322e-03	8
1908		min	-.027	4	-.232	5	-.013	1	-1.701e-03	5	0	1	5.822e-04	2
1909	N1020	max	.039	3	-.009	9	.017	2	5.026e-04	2	0	1	3.591e-03	8
1910		min	-.027	4	-.237	5	-.013	1	-1.219e-03	9	0	1	6.057e-04	2
1911	N1021	max	.039	3	-.01	9	.018	2	4.795e-04	2	0	1	3.532e-03	8
1912		min	-.027	4	-.239	5	-.013	1	-1.327e-03	5	0	1	6.373e-04	2
1913	N1022	max	.038	3	-.014	9	.018	2	5.793e-04	2	0	1	3.547e-03	8
1914		min	-.027	4	-.244	5	-.013	1	-1.494e-03	9	0	1	6.131e-04	2
1915	N1023	max	.039	3	-.015	9	.019	2	5.279e-04	2	0	1	3.411e-03	8
1916		min	-.027	4	-.245	5	-.013	1	-1.085e-03	5	0	1	6.064e-04	2
1917	N1024	max	.038	3	-.02	9	.019	2	5.91e-04	2	0	1	3.537e-03	8
1918		min	-.027	4	-.249	5	-.013	1	-1.863e-03	9	0	1	6.613e-04	2
1919	N1025	max	.038	3	-.021	9	.019	2	5.733e-04	2	0	1	3.6e-03	8
1920		min	-.027	4	-.251	5	-.013	1	-1.324e-03	9	0	1	7.278e-04	2
1921	N1026	max	.038	3	-.026	9	.02	2	6.295e-04	2	7.688e-04	6	3.67e-03	8
1922		min	-.027	4	-.255	5	-.013	1	-2.191e-03	9	-9.841e-05	1	7.088e-04	2
1923	N1027	max	.038	3	-.026	9	.02	2	6.538e-04	2	7.27e-04	6	3.701e-03	8
1924		min	-.027	4	-.258	5	-.013	1	-1.45e-03	9	-1.117e-04	1	7.441e-04	2
1925	N1028	max	.009	3	-.025	3	.017	2	1.569e-03	9	3.025e-04	4	9.048e-03	9
1926		min	-.016	9	-.176	8	-.015	1	-2.726e-03	5	-8.827e-04	7	1.058e-03	3
1927	N1029	max	.009	3	-.024	3	.017	2	1.172e-03	9	0	1	7.059e-03	9
1928		min	-.016	9	-.159	8	-.014	1	-3.574e-03	5	0	1	6.063e-04	3
1929	N1030	max	.029	3	-.021	9	.008	2	5.606e-04	2	1.123e-03	6	5.443e-03	8
1930		min	-.029	4	-.194	5	-.012	1	-3.061e-03	5	-4.961e-05	1	9.117e-04	9
1931	N1031	max	.03	3	-.017	9	.008	2	7.761e-04	2	0	1	6.306e-03	5
1932		min	-.028	4	-.184	5	-.012	1	-2.463e-03	5	0	1	1.018e-03	9
1933	N1032	max	.03	3	-.017	9	.008	2	9.96e-04	2	0	1	6.18e-03	5
1934		min	-.028	4	-.178	5	-.012	1	-1.807e-03	5	0	1	9.203e-04	9
1935	N1033	max	.029	3	-.018	9	.008	2	6.183e-04	2	0	1	6.278e-03	5
1936		min	-.029	4	-.183	5	-.012	1	-2.987e-03	5	0	1	1.027e-03	9
1937	N1034	max	.029	3	-.02	9	.008	2	9.52e-04	2	2.699e-04	4	7.536e-03	5
1938		min	-.029	4	-.188	5	-.012	1	-1.755e-03	5	-1.869e-04	3	1.409e-03	9
1939	N1035	max	.03	3	-.019	9	.008	2	9.039e-04	2	0	1	6.106e-03	5
1940		min	-.028	4	-.189	5	-.012	1	-1.996e-03	5	0	1	1.026e-03	9
1941	N1036	max	.031	3	-.015	9	.008	2	7.642e-04	2	0	1	6.28e-03	5
1942		min	-.028	4	-.177	5	-.012	1	-2.467e-03	5	0	1	9.067e-04	9
1943	N1037	max	.03	3	-.017	9	.008	2	9.15e-04	2	0	1	6.069e-03	5
1944		min	-.028	4	-.185	5	-.012	1	-1.94e-03	5	0	1	9.628e-04	9
1945	N1038	max	.03	3	-.019	9	.009	2	7.546e-04	2	0	1	6.172e-03	5
1946		min	-.028	4	-.192	5	-.012	1	-2.451e-03	5	0	1	1.084e-03	9
1947	N1039	max	.03	3	-.021	9	.009	2	8.899e-04	2	4.944e-04	6	6.573e-03	5
1948		min	-.028	4	-.2	5	-.012	1	-1.933e-03	5	5.613e-05	1	1.265e-03	9
1949	N1040	max	.01	3	-.027	3	.016	2	1.853e-03	9	2.749e-04	4	9.567e-03	9
1950		min	-.015	9	-.183	8	-.015	1	-2.814e-03	5	-8.256e-04	7	1.161e-03	3
1951	N1041	max	.01	3	-.026	3	.017	2	1.325e-03	9	0	1	7.653e-03	9
1952		min	-.015	4	-.171	8	-.015	1	-3.507e-03	5	0	1	6.82e-04	3
1953	N1042	max	.009	3	-.024	3	.017	2	1.419e-03	9	0	1	7.932e-03	9
1954		min	-.016	9	-.167	8	-.015	1	-3.127e-03	5	0	1	7.893e-04	3
1955	N1043	max	.01	3	-.025	3	.017	2	8.675e-04	9	0	1	6.96e-03	9
1956		min	-.016	4	-.16	8	-.014	1	-4.088e-03	5	0	1	6.019e-04	3
1957	N1044	max	.008	3	-.023	3	.017	2	1.357e-03	9	2.992e-04	4	8.557e-03	9
1958		min	-.016	9	-.168	8	-.015	1	-2.571e-03	5	-8.617e-04	7	9.66e-04	3
1959	N1045	max	.008	3	-.022	3	.017	2	1.368e-03	9	0	1	7.484e-03	9
1960		min	-.016	9	-.159	8	-.015	1	-2.993e-03	5	0	1	7.139e-04	3
1961	N1046	max	.009	3	-.023	3	.018	2	1.103e-03	9	0	1	6.824e-03	9
1962		min	-.016	9	-.152	8	-.014	1	-3.622e-03	5	0	1	6.157e-04	3
1963	N1047	max	.01	3	-.024	3	.018	2	1.24e-03	9	0	1	6.906e-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
1964		min	-.016	4	-.148	8	-.014	1	-3.861e-03	5	0	1	7.03e-04	3
1965	N1048	max	.041	3	-.032	9	.019	2	1.341e-03	9	3.716e-04	4	4.07e-03	9
1966		min	-.028	4	-.262	5	-.014	1	-2.612e-03	5	-9.995e-04	7	4.675e-04	4
1967	N1049	max	.037	3	-.01	9	.02	2	8.948e-04	2	3.955e-04	4	3.807e-03	8
1968		min	-.027	4	-.233	8	-.012	1	-1.16e-03	1	-1.167e-03	7	5.869e-04	4
1969	N1050	max	.038	3	-.015	9	.02	2	8.579e-04	2	3.201e-04	4	3.843e-03	8
1970		min	-.027	4	-.24	8	-.013	1	-1.169e-03	1	-8.349e-04	7	6.169e-04	4
1971	N1051	max	.039	3	-.021	9	.019	2	5.8e-04	2	4.108e-04	4	3.521e-03	9
1972		min	-.027	4	-.248	5	-.013	1	-1.663e-03	5	-8.575e-04	7	6.564e-04	4
1973	N1052	max	.04	3	-.026	9	.019	2	9.313e-04	9	4.956e-04	4	3.79e-03	9
1974		min	-.028	4	-.255	5	-.014	1	-2.157e-03	5	-8.461e-04	3	5.665e-04	4
1975	N1053	max	.033	3	-.029	9	.024	2	1.406e-03	9	2.001e-03	7	8.119e-04	9
1976		min	-.031	4	-.262	5	-.018	1	-4.577e-04	1	-1.277e-03	9	-2.643e-04	1
1977	N1054	max	.034	3	-.012	9	.021	2	1.976e-03	9	9.65e-04	6	1.141e-03	9
1978		min	-.03	4	-.24	5	-.019	1	-5.494e-04	1	-1.527e-04	9	-3.172e-04	1
1979	N1055	max	.034	3	-.018	9	.022	2	1.462e-03	9	1.334e-03	7	8.443e-04	9
1980		min	-.031	4	-.247	5	-.019	1	-3.522e-04	1	-7.404e-04	9	-2.033e-04	1
1981	N1056	max	.033	3	-.023	9	.023	2	1.601e-03	9	1.129e-03	7	9.241e-04	9
1982		min	-.031	4	-.254	5	-.018	1	-3.718e-04	1	-7.965e-04	9	-2.147e-04	1
1983	N1057	max	.036	3	-.032	9	.021	2	2.111e-03	9	9.4e-04	9	1.219e-03	9
1984		min	-.03	4	-.262	5	-.022	1	-6.793e-04	1	-2.359e-03	7	-3.922e-04	1
1985	N1058	max	.033	3	-.015	9	.022	2	1.649e-03	9	2.814e-04	4	9.522e-04	9
1986		min	-.03	4	-.24	8	-.018	1	-4.8e-04	1	-9.969e-04	7	-2.771e-04	1
1987	N1059	max	.034	3	-.021	9	.022	2	2.146e-03	9	2.847e-04	9	1.239e-03	9
1988		min	-.03	4	-.248	5	-.019	1	-7.693e-04	1	-1.546e-03	7	-4.442e-04	1
1989	N1060	max	.035	3	-.026	9	.022	2	2.026e-03	9	3.67e-04	9	1.17e-03	9
1990		min	-.03	4	-.255	5	-.021	1	-6.73e-04	1	-1.31e-03	7	-3.886e-04	1
1991	N1061	max	.045	3	-.029	9	.018	6	1.723e-03	9	1.677e-03	9	9.948e-04	9
1992		min	-.024	4	-.262	5	-.009	1	-3.305e-04	1	-7.735e-04	1	-1.908e-04	1
1993	N1062	max	.044	3	-.007	9	.02	6	1.817e-03	9	2.176e-04	4	1.049e-03	9
1994		min	-.024	4	-.232	5	-.006	1	-5.741e-04	1	-3.887e-04	3	-3.315e-04	1
1995	N1063	max	.044	3	-.012	9	.019	6	1.835e-03	9	1.602e-04	2	1.059e-03	9
1996		min	-.024	4	-.24	5	-.007	1	-5.687e-04	1	-2.736e-04	1	-3.284e-04	1
1997	N1064	max	.044	3	-.018	9	.019	6	1.352e-03	9	6.112e-04	9	7.804e-04	9
1998		min	-.024	4	-.247	5	-.007	1	-3.278e-04	1	-6.234e-04	5	-1.893e-04	1
1999	N1065	max	.045	3	-.023	9	.018	6	1.556e-03	9	8.477e-04	9	8.983e-04	9
2000		min	-.024	4	-.254	5	-.008	1	-3.833e-04	1	-4.998e-04	1	-2.213e-04	1
2001	N1066	max	.045	3	-.032	9	.021	6	1.883e-03	9	1.111e-03	4	1.087e-03	9
2002		min	-.026	4	-.262	5	-.006	1	-6.696e-04	1	-2.026e-03	9	-3.866e-04	1
2003	N1067	max	.044	3	-.01	9	.018	6	1.749e-03	9	3.156e-04	2	1.01e-03	9
2004		min	-.024	4	-.233	8	-.007	1	-4.565e-04	1	-1.751e-04	1	-2.636e-04	1
2005	N1068	max	.044	3	-.015	9	.019	6	1.8e-03	9	2.424e-04	2	1.039e-03	9
2006		min	-.024	4	-.24	8	-.007	1	-4.553e-04	1	-2.709e-04	9	-2.629e-04	1
2007	N1069	max	.044	3	-.021	9	.019	6	2.228e-03	9	6.705e-04	8	1.286e-03	9
2008		min	-.024	4	-.248	5	-.007	1	-6.957e-04	1	-9.55e-04	9	-4.017e-04	1
2009	N1070	max	.044	3	-.026	9	.02	6	2.041e-03	9	6.518e-04	4	1.178e-03	9
2010		min	-.025	4	-.255	5	-.007	1	-6.723e-04	1	-1.159e-03	9	-3.881e-04	1
2011	N1071	max	.042	3	-.029	9	.019	2	7.82e-04	2	9.365e-04	6	4.04e-03	8
2012		min	-.025	4	-.262	5	-.011	1	-8.114e-04	1	-3.896e-05	1	8.92e-04	4
2013	N1072	max	.042	3	-.007	9	.017	2	1.481e-03	9	7.278e-04	6	8.548e-04	9
2014		min	-.026	4	-.232	5	-.009	1	-7.152e-04	3	-1.414e-04	1	-4.129e-04	3
2015	N1073	max	.042	3	-.012	9	.017	2	1.77e-03	9	1.931e-04	2	1.022e-03	9
2016		min	-.026	4	-.24	5	-.01	1	-5.143e-04	1	-2.028e-04	1	-2.969e-04	1
2017	N1074	max	.042	3	-.018	9	.018	2	1.818e-03	9	1.927e-04	2	1.05e-03	9
2018		min	-.026	4	-.247	5	-.01	1	-5.027e-04	1	-2.055e-04	1	-2.901e-04	1
2019	N1075	max	.042	3	-.023	9	.018	2	1.465e-03	9	1.362e-03	9	8.461e-04	9
2020		min	-.026	4	-.254	5	-.011	1	-2.917e-04	1	-6.673e-04	1	-1.684e-04	1

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2021	N1076	max	.043	3	-.032	9	.018	2	1.349e-03	9	3.642e-04	4	4.075e-03	9
2022		min	-.027	4	-.262	5	-.01	1	-2.622e-03	5	-1.003e-03	7	4.657e-04	4
2023	N1077	max	.041	3	-.01	9	.018	2	2.178e-03	9	3.43e-04	4	1.257e-03	9
2024		min	-.025	4	-.233	8	-.009	1	-3.841e-04	1	-8.092e-04	7	-2.217e-04	1
2025	N1078	max	.041	3	-.015	9	.018	2	1.77e-03	9	1.931e-04	2	1.022e-03	9
2026		min	-.025	4	-.24	8	-.01	1	-5.143e-04	1	-2.028e-04	1	-2.969e-04	1
2027	N1079	max	.042	3	-.021	9	.018	2	1.818e-03	9	1.927e-04	2	1.05e-03	9
2028		min	-.026	4	-.248	5	-.01	1	-5.027e-04	1	-2.055e-04	1	-2.901e-04	1
2029	N1080	max	.042	3	-.026	9	.018	2	2.126e-03	9	1.045e-03	4	1.228e-03	9
2030		min	-.026	4	-.255	5	-.01	1	-7.25e-04	1	-1.746e-03	9	-4.186e-04	1
2031	N1081	max	.035	3	-.029	9	.023	2	7.82e-04	2	9.365e-04	6	4.04e-03	8
2032		min	-.029	4	-.262	5	-.015	1	-8.114e-04	1	-3.896e-05	1	8.92e-04	4
2033	N1082	max	.038	3	-.007	9	.018	2	2.084e-03	9	1.269e-03	6	1.203e-03	9
2034		min	-.029	4	-.232	5	-.016	1	-5.498e-04	1	-2.699e-05	1	-3.175e-04	1
2035	N1083	max	.037	3	-.012	9	.019	2	2.004e-03	9	1.315e-03	6	1.157e-03	9
2036		min	-.029	4	-.24	5	-.016	1	-5.034e-04	1	4.334e-06	1	-2.906e-04	1
2037	N1084	max	.037	3	-.018	9	.02	2	1.817e-03	9	2.537e-04	2	1.049e-03	9
2038		min	-.029	4	-.247	5	-.016	1	-5.123e-04	1	-2.938e-04	9	-2.959e-04	1
2039	N1085	max	.036	3	-.023	9	.021	2	1.342e-03	9	1.845e-03	7	7.746e-04	9
2040		min	-.029	4	-.254	5	-.016	1	-3.639e-04	1	-9.795e-04	9	-2.101e-04	1
2041	N1086	max	.039	3	-.032	9	.02	2	1.349e-03	9	3.642e-04	4	4.075e-03	9
2042		min	-.029	4	-.262	5	-.019	1	-2.622e-03	5	-1.003e-03	7	4.657e-04	4
2043	N1087	max	.034	3	-.01	9	.022	2	1.641e-03	9	4.159e-04	4	9.476e-04	9
2044		min	-.028	4	-.233	8	-.015	1	-4.626e-04	1	-1.424e-03	7	-2.671e-04	1
2045	N1088	max	.036	3	-.015	9	.021	2	1.661e-03	9	3.824e-04	4	9.592e-04	9
2046		min	-.028	4	-.24	8	-.016	1	-5.414e-04	1	-1.483e-03	7	-3.126e-04	1
2047	N1089	max	.036	3	-.021	9	.021	2	1.817e-03	9	2.537e-04	2	1.049e-03	9
2048		min	-.029	4	-.248	5	-.016	1	-5.123e-04	1	-2.938e-04	9	-2.959e-04	1
2049	N1090	max	.037	3	-.026	9	.021	2	2.231e-03	9	6.526e-04	9	1.288e-03	9
2050		min	-.029	4	-.255	5	-.017	1	-7.83e-04	1	-2.184e-03	7	-4.521e-04	1
2051	N1066A	max	.006	3	-.028	3	.032	9	8.81e-03	9	8.383e-04	9	2.168e-03	9
2052		min	-.03	9	-.179	8	-.011	1	1.046e-03	3	-2.099e-05	3	2.573e-04	3
2053	N1067A	max	.008	3	-.022	9	.034	6	6.86e-03	7	4.073e-05	4	-2.673e-04	4
2054		min	-.008	4	-.19	6	-.012	1	1.087e-03	4	-5.593e-04	7	-1.688e-03	7
2055	N1068A	max	.006	3	-.041	3	.024	2	7.759e-03	9	1.082e-03	5	1.909e-03	9
2056		min	-.028	9	-.203	6	-.016	1	8.149e-04	3	1.079e-04	2	2.005e-04	3
2057	N1069A	max	.006	3	-.049	1	.023	2	7.091e-03	9	1.44e-03	5	1.744e-03	9
2058		min	-.026	9	-.225	6	-.023	1	1.52e-04	2	-2.853e-06	2	3.741e-05	2
2059	N1070A	max	.007	3	-.054	1	.024	2	6.752e-03	9	1.22e-03	5	1.661e-03	9
2060		min	-.024	9	-.245	6	-.029	1	-4.371e-04	2	-1.791e-04	2	-1.075e-04	2
2061	N1071A	max	.005	3	-.03	9	.025	2	4.812e-03	9	6.681e-05	2	1.062e-04	2
2062		min	-.009	4	-.249	6	-.03	1	-4.316e-04	2	-1.295e-03	5	-1.184e-03	9
2063	N1072A	max	.006	3	-.027	9	.025	2	4.422e-03	7	2.252e-05	9	-4.501e-05	2
2064		min	-.009	4	-.232	6	-.024	1	1.83e-04	2	-1.577e-03	5	-1.088e-03	7
2065	N1073A	max	.007	3	-.025	9	.026	2	6.003e-03	7	-1.446e-04	9	-2.059e-04	4
2066		min	-.008	4	-.212	6	-.017	1	8.371e-04	4	-1.23e-03	5	-1.477e-03	7
2067	N1074A	max	.007	3	-.051	9	.025	2	6.517e-03	9	8.836e-04	5	1.603e-03	9
2068		min	-.024	9	-.254	6	-.032	1	-5.133e-04	2	-2.939e-04	2	-1.263e-04	2
2069	N1075A	max	.008	3	-.023	9	.032	6	6.545e-03	7	-2.974e-05	2	-2.345e-04	4
2070		min	-.008	4	-.196	6	-.013	1	9.531e-04	4	-1.136e-03	5	-1.61e-03	7
2071	N1076A	max	.007	3	-.024	9	.03	6	6.648e-03	7	-1.271e-04	4	-2.537e-04	4
2072		min	-.008	4	-.201	6	-.014	1	1.031e-03	4	-8.906e-04	5	-1.635e-03	7
2073	N1077A	max	.007	3	-.024	9	.028	6	6.192e-03	7	-1.13e-04	2	-2.145e-04	4
2074		min	-.008	4	-.207	6	-.016	1	8.721e-04	4	-1.365e-03	5	-1.523e-03	7
2075	N1078A	max	.007	3	-.026	9	.026	2	5.573e-03	7	-1.217e-04	2	-1.748e-04	4
2076		min	-.008	4	-.217	6	-.019	1	7.107e-04	4	-1.515e-03	5	-1.371e-03	7
2077	N1079A	max	.006	3	-.026	9	.026	2	5.246e-03	7	-6.209e-05	9	-1.435e-04	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2078		min	-.008	4	-.222	6	-.02	1	5.833e-04	2	-1.463e-03	5	-1.291e-03	7
2079	N1080A	max	.006	3	-.027	9	.025	2	4.812e-03	7	-3.836e-05	9	-9.225e-05	2
2080		min	-.008	4	-.227	6	-.022	1	3.75e-04	2	-1.619e-03	5	-1.184e-03	7
2081	N1081A	max	.006	3	-.028	9	.025	2	4.008e-03	7	5.258e-05	9	8.336e-07	2
2082		min	-.009	4	-.236	6	-.026	1	-3.388e-06	2	-1.626e-03	5	-9.86e-04	7
2083	N1082A	max	.005	3	-.028	9	.025	2	4.215e-03	9	8.7e-05	9	4.208e-05	2
2084		min	-.009	4	-.24	6	-.027	1	-1.71e-04	2	-1.542e-03	5	-1.037e-03	9
2085	N1083A	max	.005	3	-.029	9	.025	2	4.547e-03	9	8.342e-05	9	7.879e-05	2
2086		min	-.009	4	-.245	6	-.029	1	-3.203e-04	2	-1.476e-03	5	-1.119e-03	9
2087	N1084A	max	.005	3	-.03	9	.025	2	4.991e-03	9	1.232e-04	2	1.274e-04	2
2088		min	-.01	4	-.253	6	-.032	1	-5.18e-04	2	-1.091e-03	5	-1.228e-03	9
2089	N1085A	max	.005	3	-.031	9	.026	2	4.908e-03	9	1.753e-04	2	1.194e-04	2
2090		min	-.01	4	-.257	6	-.033	1	-4.853e-04	2	-8.687e-04	5	-1.207e-03	9
2091	N1086A	max	.005	3	-.032	9	.026	2	5.366e-03	9	2.386e-04	2	1.598e-04	2
2092		min	-.01	4	-.262	6	-.034	1	-6.496e-04	2	-7.554e-04	5	-1.32e-03	9
2093	N1087A	max	.007	3	-.053	1	.024	2	6.833e-03	9	1.366e-03	5	1.681e-03	9
2094		min	-.025	9	-.24	6	-.028	1	-3.298e-04	2	-1.36e-04	2	-8.115e-05	2
2095	N1088A	max	.007	3	-.051	1	.024	2	6.909e-03	9	1.418e-03	5	1.7e-03	9
2096		min	-.025	9	-.235	6	-.026	1	-1.904e-04	2	-8.53e-05	2	-4.685e-05	2
2097	N1089A	max	.007	3	-.05	1	.023	2	6.993e-03	9	1.491e-03	5	1.72e-03	9
2098		min	-.026	9	-.23	6	-.024	1	-2.919e-05	2	-5.416e-05	2	-7.182e-06	2
2099	N1090A	max	.006	3	-.044	3	.024	2	7.529e-03	9	1.35e-03	5	1.852e-03	9
2100		min	-.027	9	-.209	6	-.017	1	7.334e-04	2	5.04e-05	2	1.804e-04	2
2101	N1091	max	.006	3	-.046	1	.023	2	7.331e-03	9	1.309e-03	5	1.804e-03	9
2102		min	-.027	9	-.214	6	-.019	1	5.353e-04	2	6.398e-05	2	1.317e-04	2
2103	N1092	max	.006	3	-.048	1	.023	2	7.211e-03	9	1.473e-03	5	1.774e-03	9
2104		min	-.026	9	-.22	6	-.021	1	3.406e-04	2	1.291e-05	2	8.379e-05	2
2105	N1093	max	.007	3	-.054	1	.024	2	6.709e-03	9	1.152e-03	5	1.651e-03	9
2106		min	-.024	9	-.247	6	-.03	1	-4.752e-04	2	-2.106e-04	2	-1.169e-04	2
2107	N1094	max	.007	3	-.055	1	.025	2	6.652e-03	9	1.054e-03	5	1.637e-03	9
2108		min	-.024	9	-.25	6	-.031	1	-5.003e-04	2	-2.373e-04	2	-1.231e-04	2
2109	N1095	max	.007	3	-.055	9	.025	2	6.594e-03	9	9.663e-04	5	1.622e-03	9
2110		min	-.024	9	-.252	6	-.032	1	-5.13e-04	2	-2.685e-04	2	-1.262e-04	2
2111	N1096	max	.007	3	-.047	9	.025	2	6.468e-03	9	8.314e-04	5	1.591e-03	9
2112		min	-.023	9	-.257	6	-.033	1	-5.254e-04	2	-3.139e-04	2	-1.293e-04	2
2113	N1097	max	.007	3	-.043	9	.026	2	6.809e-03	9	8.095e-04	9	1.675e-03	9
2114		min	-.023	9	-.259	6	-.034	1	-6.481e-04	2	-3.387e-04	2	-1.594e-04	2
2115	N1098	max	.006	3	-.035	3	.028	9	8.631e-03	9	9.014e-04	9	2.123e-03	9
2116		min	-.029	9	-.192	6	-.013	1	9.876e-04	3	1.159e-04	3	2.43e-04	3
2117	N1099	max	.006	3	-.032	3	.03	9	8.71e-03	9	1.082e-03	9	2.143e-03	9
2118		min	-.029	9	-.185	6	-.012	1	9.029e-04	3	-3.359e-05	2	2.221e-04	3
2119	N1100	max	.006	3	-.038	3	.026	9	8.034e-03	9	1.216e-03	5	1.977e-03	9
2120		min	-.028	9	-.198	6	-.014	1	8.555e-04	3	5.268e-05	2	2.105e-04	3
2121	N1136	max	.027	7	-.025	4	.017	2	-2.571e-04	9	4.777e-04	4	-8.861e-04	9
2122		min	-.008	4	-.181	7	-.023	1	-1.821e-03	7	-1.537e-04	3	-6.278e-03	7
2123	N1137	max	.036	3	-.025	2	.011	2	-5.797e-04	2	-3.138e-05	4	-6.041e-04	2
2124		min	-.023	4	-.193	5	-.021	5	-4.982e-03	5	-5.458e-04	7	-5.191e-03	5
2125	N1138	max	.021	3	-.037	4	.018	2	-9.371e-05	9	1.117e-03	8	-3.23e-04	9
2126		min	-.015	4	-.205	7	-.022	1	-1.593e-03	7	-8.31e-05	3	-5.492e-03	7
2127	N1139	max	.022	3	-.044	9	.019	2	1.061e-04	9	1.46e-03	8	3.657e-04	9
2128		min	-.023	4	-.226	7	-.022	1	-1.243e-03	7	-1.41e-04	3	-4.284e-03	7
2129	N1140	max	.024	3	-.049	9	.021	2	2.351e-04	9	1.234e-03	8	8.105e-04	9
2130		min	-.03	4	-.245	7	-.021	1	-9.293e-04	5	-2.769e-04	3	-3.203e-03	5
2131	N1141	max	.03	3	-.051	9	.025	2	5.979e-04	9	1.452e-04	1	6.23e-04	9
2132		min	-.032	4	-.248	7	-.018	1	-2.304e-03	5	-1.3e-03	6	-2.401e-03	5
2133	N1142	max	.031	3	-.047	9	.02	2	2.302e-04	9	-4.127e-05	1	2.399e-04	9
2134		min	-.029	4	-.23	7	-.018	1	-3.284e-03	5	-1.567e-03	6	-3.422e-03	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2135	N1143	max	.034	3	-.041	9	.015	2	-3.17e-04	9	-1.264e-04	1	-3.303e-04	9
2136		min	-.025	4	-.213	5	-.019	1	-4.385e-03	5	-1.229e-03	6	-4.569e-03	5
2137	N1144	max	.025	3	-.052	9	.021	2	2.437e-04	9	9.039e-04	8	8.399e-04	9
2138		min	-.034	4	-.254	7	-.021	1	-8.718e-04	5	-3.738e-04	3	-3.005e-03	5
2139	N1145	max	.036	3	-.029	2	.012	2	-4.99e-04	2	-5.545e-06	1	-5.2e-04	2
2140		min	-.023	4	-.198	5	-.02	5	-4.755e-03	5	-1.135e-03	6	-4.955e-03	5
2141	N1146	max	.035	3	-.033	2	.013	2	-5.304e-04	2	-1.38e-04	1	-5.527e-04	2
2142		min	-.024	4	-.203	5	-.019	1	-4.834e-03	5	-8.951e-04	6	-5.037e-03	5
2143	N1147	max	.034	3	-.038	2	.014	2	-4.055e-04	2	-7.062e-05	1	-4.225e-04	2
2144		min	-.025	4	-.208	5	-.019	1	-4.512e-03	5	-1.361e-03	6	-4.702e-03	5
2145	N1148	max	.033	3	-.043	9	.016	2	-1.628e-04	9	-7.856e-05	1	-1.696e-04	9
2146		min	-.026	4	-.217	5	-.018	1	-4.084e-03	5	-1.507e-03	6	-4.255e-03	5
2147	N1149	max	.033	3	-.044	9	.017	2	-3.181e-05	9	-9.56e-05	1	-3.315e-05	9
2148		min	-.027	4	-.221	5	-.018	1	-3.859e-03	5	-1.456e-03	6	-4.021e-03	5
2149	N1150	max	.032	3	-.046	9	.018	2	1.059e-04	9	-5.246e-05	1	1.103e-04	9
2150		min	-.028	4	-.225	5	-.018	1	-3.556e-03	5	-1.608e-03	6	-3.705e-03	5
2151	N1151	max	.031	3	-.048	9	.021	2	3.469e-04	9	5.4e-06	1	3.615e-04	9
2152		min	-.03	4	-.235	7	-.018	1	-2.996e-03	5	-1.615e-03	6	-3.122e-03	5
2153	N1152	max	.031	3	-.049	9	.022	2	4.506e-04	9	3.761e-05	1	4.696e-04	9
2154		min	-.031	4	-.239	7	-.018	1	-2.729e-03	5	-1.534e-03	6	-2.844e-03	5
2155	N1153	max	.03	3	-.05	9	.023	2	5.367e-04	9	9.29e-05	1	5.593e-04	9
2156		min	-.032	4	-.243	7	-.018	1	-2.492e-03	5	-1.473e-03	6	-2.596e-03	5
2157	N1154	max	.03	3	-.052	9	.026	2	6.302e-04	9	2.173e-04	1	6.566e-04	9
2158		min	-.033	4	-.252	7	-.019	1	-2.207e-03	5	-1.106e-03	6	-2.3e-03	5
2159	N1155	max	.029	3	-.053	9	.027	2	6.143e-04	9	2.721e-04	1	6.402e-04	9
2160		min	-.033	4	-.256	7	-.019	1	-2.183e-03	5	-8.91e-04	6	-2.275e-03	5
2161	N1156	max	.029	3	-.054	9	.028	2	7.092e-04	9	3.311e-04	1	7.39e-04	9
2162		min	-.034	4	-.261	7	-.019	1	-1.985e-03	5	-7.827e-04	6	-2.068e-03	5
2163	N1157	max	.023	3	-.048	9	.021	2	2.146e-04	9	1.38e-03	8	7.395e-04	9
2164		min	-.029	4	-.24	7	-.021	1	-9.88e-04	5	-2.412e-04	3	-3.406e-03	5
2165	N1158	max	.023	3	-.047	9	.02	2	1.849e-04	9	1.432e-03	8	6.374e-04	9
2166		min	-.027	4	-.235	7	-.021	1	-1.061e-03	5	-2.002e-04	3	-3.656e-03	5
2167	N1159	max	.023	3	-.046	9	.02	2	1.481e-04	9	1.507e-03	8	5.106e-04	9
2168		min	-.025	4	-.23	7	-.022	1	-1.147e-03	7	-1.787e-04	3	-3.952e-03	7
2169	N1160	max	.021	3	-.039	4	.018	2	-4.045e-05	9	1.38e-03	8	-1.394e-04	9
2170		min	-.017	4	-.21	7	-.022	1	-1.514e-03	7	-1.243e-04	3	-5.22e-03	7
2171	N1161	max	.022	3	-.041	9	.019	2	1.273e-05	9	1.336e-03	8	4.389e-05	9
2172		min	-.019	4	-.215	7	-.022	1	-1.425e-03	7	-1.02e-04	3	-4.911e-03	7
2173	N1162	max	.022	3	-.043	9	.019	2	5.971e-05	9	1.496e-03	8	2.058e-04	9
2174		min	-.021	4	-.221	7	-.022	1	-1.339e-03	7	-1.365e-04	3	-4.614e-03	7
2175	N1163	max	.024	3	-.05	9	.021	2	2.41e-04	9	1.168e-03	8	8.307e-04	9
2176		min	-.031	4	-.247	7	-.021	1	-9.08e-04	5	-3.038e-04	3	-3.13e-03	5
2177	N1164	max	.025	3	-.051	9	.021	2	2.44e-04	9	1.071e-03	8	8.409e-04	9
2178		min	-.032	4	-.249	7	-.021	1	-8.911e-04	5	-3.266e-04	3	-3.071e-03	5
2179	N1165	max	.025	3	-.051	9	.021	2	2.44e-04	9	9.851e-04	8	8.41e-04	9
2180		min	-.033	4	-.252	7	-.021	1	-8.812e-04	5	-3.526e-04	3	-3.037e-03	5
2181	N1166	max	.026	3	-.053	9	.021	2	2.498e-04	9	8.525e-04	8	8.611e-04	9
2182		min	-.035	4	-.256	7	-.021	1	-8.54e-04	5	-3.898e-04	3	-2.943e-03	5
2183	N1167	max	.026	3	-.053	9	.021	2	2.714e-04	9	8.269e-04	8	9.355e-04	9
2184		min	-.035	4	-.259	7	-.021	1	-8.329e-04	5	-4.095e-04	3	-2.871e-03	5
2185	N1168	max	.024	7	-.031	4	.017	2	-2.144e-04	9	8.281e-04	8	-7.389e-04	9
2186		min	-.011	4	-.193	7	-.023	1	-1.753e-03	7	-8.538e-05	3	-6.042e-03	7
2187	N1169	max	.026	7	-.028	4	.017	2	-2.252e-04	9	1.056e-03	8	-7.762e-04	9
2188		min	-.009	4	-.187	7	-.023	1	-1.665e-03	7	-2.253e-04	3	-5.738e-03	7
2189	N1170	max	.022	7	-.034	4	.018	2	-1.443e-04	9	1.253e-03	8	-4.974e-04	9
2190		min	-.013	4	-.199	7	-.023	1	-1.638e-03	7	-1.401e-04	3	-5.645e-03	7
2191	N1206	max	.024	3	-.019	2	.009	2	-4.614e-04	2	3.767e-04	8	4.76e-03	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2192		min	-.035	4	-.182	5	-.019	5	-4.568e-03	5	-3.968e-05	3	4.808e-04	2
2193	N1207	max	.008	3	-.03	3	.014	2	-3.855e-04	3	1.058e-04	4	7.599e-03	9
2194		min	-.041	9	-.191	8	-.021	1	-2.205e-03	9	-8.275e-04	9	1.329e-03	3
2195	N1208	max	.026	3	-.021	9	.012	2	-2.539e-04	2	1.054e-03	6	4.166e-03	5
2196		min	-.033	4	-.205	5	-.015	1	-3.998e-03	5	1.915e-04	1	2.645e-04	2
2197	N1209	max	.029	3	-.023	9	.016	2	-4.227e-05	2	1.391e-03	6	3.25e-03	5
2198		min	-.031	4	-.226	5	-.014	1	-3.119e-03	5	5.659e-05	9	4.405e-05	2
2199	N1210	max	.033	3	-.024	9	.02	2	1.719e-05	2	1.175e-03	6	2.379e-03	5
2200		min	-.03	4	-.244	5	-.014	1	-2.283e-03	5	-2.169e-05	1	-1.791e-05	2
2201	N1211	max	.032	3	-.057	3	.018	2	-7.087e-06	2	2.925e-04	4	4.825e-03	9
2202		min	-.025	4	-.247	8	-.019	1	-1.4e-03	9	-1.335e-03	7	2.443e-05	2
2203	N1212	max	.024	3	-.05	3	.017	2	-1.369e-04	2	1.465e-04	4	5.572e-03	9
2204		min	-.026	9	-.231	8	-.02	1	-1.617e-03	9	-1.614e-03	7	4.719e-04	2
2205	N1213	max	.015	3	-.041	3	.015	2	-3.115e-04	3	7.436e-05	4	6.597e-03	9
2206		min	-.033	9	-.213	8	-.021	1	-1.914e-03	9	-1.277e-03	7	1.074e-03	3
2207	N1214	max	.034	3	-.025	9	.021	2	-1.209e-05	2	8.563e-04	6	2.266e-03	9
2208		min	-.03	4	-.253	5	-.014	1	-2.174e-03	9	-1.376e-04	1	1.26e-05	2
2209	N1215	max	.009	3	-.033	3	.014	2	-3.631e-04	3	2.48e-04	4	7.606e-03	9
2210		min	-.039	9	-.197	8	-.021	1	-2.207e-03	9	-1.192e-03	7	1.252e-03	3
2211	N1216	max	.011	3	-.036	3	.014	2	-3.732e-04	3	7.411e-05	4	7.45e-03	9
2212		min	-.037	9	-.202	8	-.021	1	-2.161e-03	9	-9.433e-04	7	1.286e-03	3
2213	N1217	max	.013	3	-.039	3	.015	2	-3.283e-04	3	1.595e-04	4	6.839e-03	9
2214		min	-.035	9	-.208	8	-.021	1	-1.984e-03	9	-1.416e-03	7	1.131e-03	3
2215	N1218	max	.017	3	-.044	3	.016	2	-2.789e-04	3	1.316e-04	4	6.227e-03	9
2216		min	-.031	9	-.217	8	-.02	1	-1.807e-03	9	-1.56e-03	7	9.613e-04	3
2217	N1219	max	.019	3	-.046	3	.016	2	-2.347e-04	2	9.894e-05	4	6.025e-03	9
2218		min	-.03	9	-.222	8	-.02	1	-1.748e-03	9	-1.504e-03	7	8.089e-04	2
2219	N1220	max	.021	3	-.048	3	.016	2	-1.838e-04	2	1.463e-04	4	5.76e-03	9
2220		min	-.028	9	-.227	8	-.02	1	-1.671e-03	9	-1.658e-03	7	6.334e-04	2
2221	N1221	max	.026	3	-.052	3	.017	2	-9.318e-05	2	1.909e-04	4	5.363e-03	9
2222		min	-.024	9	-.235	8	-.02	1	-1.556e-03	9	-1.662e-03	7	3.212e-04	2
2223	N1222	max	.028	3	-.054	3	.017	2	-5.454e-05	2	2.106e-04	4	5.186e-03	9
2224		min	-.024	4	-.239	8	-.019	1	-1.504e-03	9	-1.578e-03	7	1.88e-04	2
2225	N1223	max	.03	3	-.056	3	.018	2	-2.47e-05	2	2.563e-04	4	5.011e-03	9
2226		min	-.025	4	-.243	8	-.019	1	-1.454e-03	9	-1.513e-03	7	8.513e-05	2
2227	N1224	max	.034	3	-.053	9	.018	2	-5.463e-06	2	3.549e-04	4	4.671e-03	9
2228		min	-.026	4	-.251	8	-.019	1	-1.355e-03	9	-1.136e-03	7	1.883e-05	2
2229	N1225	max	.036	3	-.044	9	.018	2	-2.456e-05	2	4.094e-04	4	4.383e-03	9
2230		min	-.027	4	-.255	8	-.019	1	-1.272e-03	9	-9.18e-04	7	8.465e-05	2
2231	N1226	max	.037	3	-.036	9	.018	2	2.95e-05	2	4.701e-04	4	4.63e-03	9
2232		min	-.028	4	-.259	8	-.018	1	-1.343e-03	9	-8.705e-04	9	-1.017e-04	2
2233	N1227	max	.032	3	-.024	9	.019	2	2.075e-05	2	1.315e-03	7	2.549e-03	5
2234		min	-.03	4	-.239	5	-.014	1	-2.446e-03	5	-2.211e-05	9	-2.162e-05	2
2235	N1228	max	.031	3	-.023	9	.018	2	1.251e-05	2	1.368e-03	7	2.761e-03	5
2236		min	-.03	4	-.235	5	-.014	1	-2.65e-03	5	-1.372e-05	9	-1.304e-05	2
2237	N1229	max	.03	3	-.023	9	.017	2	-9.632e-06	2	1.439e-03	7	2.998e-03	5
2238		min	-.031	4	-.23	5	-.014	1	-2.877e-03	5	2.359e-05	9	1.004e-05	2
2239	N1230	max	.026	3	-.022	9	.013	2	-1.938e-04	2	1.311e-03	6	3.961e-03	5
2240		min	-.032	4	-.211	5	-.015	1	-3.801e-03	5	1.64e-04	1	2.02e-04	2
2241	N1231	max	.027	3	-.022	9	.014	2	-1.311e-04	2	1.269e-03	6	3.726e-03	5
2242		min	-.032	4	-.216	5	-.015	1	-3.576e-03	5	1.327e-04	9	1.366e-04	2
2243	N1232	max	.028	3	-.022	9	.015	2	-8.678e-05	2	1.425e-03	6	3.5e-03	5
2244		min	-.031	4	-.221	5	-.015	1	-3.359e-03	5	1.081e-04	9	9.043e-05	2
2245	N1233	max	.033	3	-.025	9	.02	2	1.001e-05	2	1.111e-03	6	2.318e-03	5
2246		min	-.03	4	-.246	5	-.014	1	-2.225e-03	5	-5.418e-05	1	-1.043e-05	2
2247	N1234	max	.034	3	-.025	9	.02	2	2.025e-06	2	1.018e-03	6	2.272e-03	5
2248		min	-.03	4	-.249	5	-.014	1	-2.18e-03	5	-8.397e-05	1	-2.11e-06	2

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2249	N1235	max	.034	3	-.025	9	.021	2	-8.071e-06	2	9.352e-04	6	2.274e-03	9
2250		min	-.03	4	-.251	5	-.014	1	-2.182e-03	9	-1.147e-04	1	8.41e-06	2
2251	N1236	max	.034	3	-.026	9	.022	2	-3.583e-06	2	8.067e-04	6	2.279e-03	9
2252		min	-.03	4	-.255	5	-.014	1	-2.187e-03	9	-1.541e-04	1	3.734e-06	2
2253	N1237	max	.035	3	-.026	9	.022	2	-7.446e-06	2	7.84e-04	6	2.516e-03	9
2254		min	-.03	4	-.258	5	-.014	1	-2.415e-03	9	-1.796e-04	1	7.759e-06	2
2255	N1238	max	.025	3	-.021	9	.01	2	-4.091e-04	2	7.71e-04	6	4.583e-03	5
2256		min	-.034	4	-.194	5	-.017	5	-4.398e-03	5	1.701e-04	3	4.263e-04	2
2257	N1239	max	.024	3	-.02	9	.01	2	-3.571e-04	2	9.907e-04	6	4.355e-03	5
2258		min	-.035	4	-.188	5	-.018	5	-4.179e-03	5	7.727e-05	1	3.721e-04	2
2259	N1240	max	.025	3	-.021	9	.011	2	-3.037e-04	2	1.186e-03	6	4.284e-03	5
2260		min	-.033	4	-.2	5	-.016	1	-4.111e-03	5	1.52e-04	1	3.165e-04	2
2261	N1171	max	.055	3	-.047	2	.017	3	-1.148e-03	2	8.461e-04	4	4.994e-04	9
2262		min	-.053	4	-.422	5	-.015	4	-7.802e-03	5	-9.46e-04	3	-5.939e-04	7
2263	N1172	max	.055	3	-.048	2	.019	2	-1.053e-03	2	1.018e-03	4	4.054e-04	9
2264		min	-.054	4	-.434	5	-.018	1	-8.458e-03	5	-9.436e-04	3	-1.316e-03	7
2265	N1175	max	.005	3	-.074	3	.034	2	1.343e-02	9	5.31e-04	2	1.852e-02	9
2266		min	-.008	9	-.793	9	-.036	1	6.118e-04	2	-6.324e-04	1	1.318e-03	2
2267	N1176	max	.029	3	-.077	3	.022	2	1.125e-02	9	5.327e-04	3	1.319e-02	9
2268		min	-.028	4	-.751	9	-.023	1	5.79e-04	3	-4.572e-04	4	1.677e-03	1
2269	N1179	max	.027	1	-.064	4	.03	2	4.252e-03	6	6.326e-04	1	-1.11e-03	9
2270		min	-.029	2	-.416	7	-.03	1	6.037e-04	4	-7.304e-04	2	-6.452e-03	7
2271	N1180	max	.005	3	-.064	4	.048	2	5.176e-03	6	9.666e-04	1	-1.029e-03	4
2272		min	-.011	9	-.427	7	-.048	1	7.269e-04	4	-8.9e-04	2	-6.657e-03	7
2273	N1143B	max	.007	2	-.011	3	.012	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
2274		min	-.006	1	-.126	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3
2275	N1144B	max	.008	1	-.011	9	.015	2	2.601e-03	6	2.029e-04	4	-3.234e-05	4
2276		min	-.009	2	-.126	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
2277	N1145B	max	.055	3	-.047	2	.016	2	-9.291e-04	2	4.769e-03	3	4.566e-04	9
2278		min	-.053	4	-.426	5	-.015	1	-7.146e-03	5	-4.771e-03	4	-1.009e-03	7
2279	N1174	max	.027	3	-.006	2	.002	6	7.671e-05	2	2.985e-04	4	6.612e-04	4
2280		min	-.027	4	-.136	5	0	1	-4.778e-03	5	-3.035e-04	3	-7.792e-04	3
2281	N1172A	max	.027	3	-.006	2	.001	2	6.25e-05	2	5.258e-04	4	9.115e-04	4
2282		min	-.027	4	-.087	5	-.015	5	-4.736e-03	5	-5.3e-04	3	-1.014e-03	3
2283	N1173	max	.028	3	-.006	2	.001	2	6.592e-05	2	4.154e-04	4	8.532e-04	4
2284		min	-.027	4	-.097	5	-.015	5	-4.76e-03	5	-4.2e-04	3	-9.592e-04	3
2285	N1174B	max	.028	3	-.006	2	.001	2	6.93e-05	2	3.467e-04	4	7.833e-04	4
2286		min	-.028	4	-.106	5	-.015	5	-4.774e-03	5	-3.515e-04	3	-8.933e-04	3
2287	N1175B	max	.029	3	-.006	2	.001	2	7.28e-05	2	3.111e-04	4	7.182e-04	4
2288		min	-.028	4	-.116	5	-.015	5	-4.78e-03	5	-3.159e-04	3	-8.322e-04	3
2289	N1176A	max	.029	3	-.006	2	.001	2	7.672e-05	2	2.985e-04	4	6.612e-04	4
2290		min	-.029	4	-.126	5	-.015	5	-4.778e-03	5	-3.034e-04	3	-7.792e-04	3
2291	N1197	max	.002	2	-.009	3	.017	2	2.275e-03	9	1.847e-04	2	4.155e-03	8
2292		min	-.014	9	-.085	8	-.013	1	-2.828e-04	1	-1.897e-04	1	7.855e-05	3
2293	N1198	max	.002	2	-.01	3	.017	2	2.293e-03	9	1.569e-04	4	4.176e-03	8
2294		min	-.014	9	-.095	8	-.013	1	-2.478e-04	1	-1.621e-04	3	9.022e-05	3
2295	N1199	max	.002	2	-.01	3	.017	2	2.306e-03	9	1.833e-04	4	4.189e-03	8
2296		min	-.014	9	-.105	8	-.013	1	-2.071e-04	1	-1.887e-04	3	1.028e-04	3
2297	N1200	max	.002	2	-.011	3	.017	2	2.315e-03	9	1.969e-04	4	4.194e-03	8
2298		min	-.014	9	-.115	8	-.013	1	-1.706e-04	1	-2.023e-04	3	1.136e-04	3
2299	N1201	max	.002	2	-.011	3	.017	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
2300		min	-.014	9	-.124	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3
2301	N1222A	max	.013	5	-.009	9	.02	2	2.596e-03	6	2.822e-04	1	-1.171e-05	4
2302		min	-.004	2	-.085	7	-.016	1	-2.291e-04	1	-2.864e-04	2	-3.973e-03	7
2303	N1223A	max	.013	5	-.009	9	.02	2	2.604e-03	6	1.904e-04	1	-1.773e-05	4
2304		min	-.004	2	-.095	7	-.016	1	-1.847e-04	1	-1.949e-04	2	-3.987e-03	7
2305	N1224A	max	.013	5	-.01	9	.02	2	2.606e-03	6	1.88e-04	4	-2.432e-05	4

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2306		min	-.004	2	-.105	7	-.016	1	-1.336e-04	1	-1.928e-04	3	-3.993e-03	7
2307	N1225A	max	.013	5	-.01	9	.02	2	2.605e-03	6	1.991e-04	4	-2.932e-05	4
2308		min	-.004	2	-.115	7	-.016	1	-8.684e-05	1	-2.04e-04	3	-3.992e-03	7
2309	N1226A	max	.013	5	-.011	9	.02	2	2.601e-03	6	2.029e-04	4	-3.234e-05	4
2310		min	-.004	2	-.124	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
2311	N1160A	max	.005	3	-.07	4	.052	2	5.175e-03	6	1.045e-03	1	-1.053e-03	4
2312		min	-.011	9	-.469	7	-.052	1	7.269e-04	4	-9.687e-04	2	-6.75e-03	7
2313	N1163A	max	.006	3	-.093	3	.042	2	1.343e-02	9	6.482e-04	2	2.002e-02	9
2314		min	-.008	9	-1.049	9	-.045	1	5.786e-04	2	-7.496e-04	1	1.375e-03	2
2315	N1164A	max	-.041	3	-.093	3	.455	9	1.341e-02	9	6.482e-04	2	2.002e-02	9
2316		min	-.689	9	-1.049	9	-.009	1	7.427e-04	3	-7.496e-04	1	1.325e-03	3
2317	N1165A	max	.752	9	-.093	3	.029	2	1.346e-02	9	6.482e-04	2	2.001e-02	9
2318		min	.049	2	-1.049	9	-.512	9	2.692e-04	2	-7.496e-04	1	1.375e-03	2
2319	N1166A	max	.239	7	-.07	4	.204	6	5.676e-03	6	1.045e-03	1	1.718e-04	4
2320		min	-.004	4	-.469	7	-.053	1	-4.268e-04	1	-9.687e-04	2	-7.156e-03	7
2321	N1169A	max	-.034	3	-.07	4	.068	2	5.447e-03	5	1.045e-03	1	-7.882e-04	3
2322		min	-.262	8	-.469	7	-.219	5	-7.157e-04	2	-9.687e-04	2	-6.82e-03	8
2323	N1172C	max	.227	7	-.081	4	.164	6	4.487e-03	6	6.875e-04	1	-1.138e-03	9
2324		min	.012	2	-.505	7	-.007	1	6.525e-04	4	-7.852e-04	2	-6.621e-03	7
2325	N1173B	max	-.034	1	-.081	4	.009	2	4.348e-03	7	6.875e-04	1	-1.138e-03	9
2326		min	-.257	8	-.505	7	-.172	5	6.426e-04	2	-7.852e-04	2	-6.505e-03	5
2327	N1174C	max	.118	3	-.054	2	.02	2	3.098e-04	2	1.082e-03	4	1.576e-03	4
2328		min	-.1	4	-.476	5	-.304	5	-8.973e-03	5	-1.007e-03	3	-2.094e-03	3
2329	N1177	max	.091	3	-.054	2	.327	6	-1.455e-03	1	1.082e-03	4	1.122e-03	3
2330		min	-.11	4	-.476	5	.047	3	-8.491e-03	6	-1.007e-03	3	-1.639e-03	4
2331	N1180A	max	.076	3	-.06	2	-.021	2	-1.009e-03	2	9.459e-04	4	4.71e-04	9
2332		min	-.07	4	-.512	5	-.273	5	-8.038e-03	5	-1.046e-03	3	-7.602e-04	7
2333	N1181	max	.07	3	-.06	2	.306	7	-1.539e-03	2	9.459e-04	4	4.708e-04	9
2334		min	-.072	4	-.512	5	.043	4	-7.816e-03	5	-1.046e-03	3	-5.473e-04	7
2335	N1182	max	.017	3	-.086	3	.382	9	1.114e-02	9	5.964e-04	3	1.321e-02	9
2336		min	-.459	9	-.839	9	-.041	1	-7.544e-04	1	-5.209e-04	4	3.682e-05	3
2337	N1185	max	.492	9	-.086	3	.032	2	1.139e-02	9	5.964e-04	3	1.319e-02	9
2338		min	-.007	4	-.839	9	-.43	9	-4.668e-04	2	-5.209e-04	4	2.896e-04	4
2339	N1189	max	.033	1	-.081	4	.036	2	4.396e-03	6	6.875e-04	1	-1.138e-03	9
2340		min	-.036	2	-.505	7	-.035	1	6.524e-04	4	-7.852e-04	2	-6.529e-03	7
2341	N1191	max	.06	3	-.054	2	.02	2	-1.071e-03	2	1.082e-03	4	4.168e-04	9
2342		min	-.059	4	-.476	5	-.018	1	-8.538e-03	5	-1.007e-03	3	-1.265e-03	7
2343	N1193	max	.066	3	-.06	2	.021	3	-1.23e-03	2	9.459e-04	4	4.709e-04	9
2344		min	-.064	4	-.512	5	-.019	4	-7.945e-03	5	-1.046e-03	3	-6.713e-04	7
2345	N1195	max	.031	3	-.086	3	.024	2	1.127e-02	9	5.964e-04	3	1.32e-02	9
2346		min	-.03	4	-.839	9	-.025	1	5.987e-04	3	-5.209e-04	4	1.688e-03	1
2347	N1196	max	.005	3	-.046	9	.027	2	5.058e-03	9	9.989e-04	5	3.41e-03	9
2348		min	-.008	9	-.261	6	-.039	1	-1.456e-04	2	-3.23e-04	2	-1.744e-03	7
2349	N1200A	max	.005	3	-.034	9	.027	2	4.646e-03	9	1.006e-04	2	1.702e-03	4
2350		min	-.011	9	-.263	6	-.04	1	-2.308e-04	2	-9.499e-04	5	-1.133e-03	3
2351	N1203	max	.026	3	-.053	9	.023	2	-2.228e-04	9	1.013e-03	8	7.446e-04	9
2352		min	-.037	4	-.26	7	-.017	1	-3.375e-03	5	-3.867e-04	3	-2.51e-03	7
2353	N1204	max	.027	3	-.053	9	.025	2	9.528e-04	2	1.783e-04	1	4.493e-04	9
2354		min	-.037	4	-.263	7	-.017	1	-1.696e-03	5	-9.603e-04	6	-3.516e-03	7
2355	N1210A	max	.038	3	-.027	9	.02	2	7.82e-04	2	9.365e-04	6	4.04e-03	8
2356		min	-.027	4	-.259	5	-.013	1	-8.114e-04	1	-3.896e-05	1	8.92e-04	4
2357	N1211A	max	.039	3	-.037	9	.019	2	1.349e-03	9	3.642e-04	4	4.075e-03	9
2358		min	-.028	4	-.261	8	-.015	1	-2.622e-03	5	-1.003e-03	7	4.657e-04	4
2359	N1200B	max	0	7	0	3	0	2	0	6	0	2	0	8
2360		min	0	4	0	8	0	5	0	1	0	1	0	3
2361	N1201A	max	.007	2	-.011	3	.012	2	2.319e-03	9	2.016e-04	4	4.193e-03	8
2362		min	-.006	1	-.134	8	-.013	1	-1.401e-04	1	-2.072e-04	3	1.222e-04	3

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
2363	N1202	max	0	3	0	9	0	2	0	6	0	1	0	9
2364		min	0	8	0	7	0	5	0	9	0	2	0	7
2365	N1203A	max	.008	1	-.011	4	.015	2	2.601e-03	6	2.029e-04	4	-3.235e-05	4
2366		min	-.009	2	-.134	7	-.016	1	-8.3e-05	9	-2.079e-04	3	-3.985e-03	7
2367	N1184	max	.347	3	-.034	9	.437	2	1.365e-02	2	1.055e-04	2	1.064e-02	4
2368		min	-.374	4	-.264	6	-.439	1	-1.388e-02	1	-9.547e-04	5	-1.014e-02	3
2369	N1185A	max	.216	3	-.034	9	.662	2	2.064e-02	1	1.055e-04	2	6.787e-03	3
2370		min	-.189	4	-.264	6	-.768	1	-1.877e-02	2	-9.547e-04	5	-6.201e-03	4
2371	N1189A	max	.42	3	-.038	9	.237	2	8.168e-03	1	3.66e-04	4	1.587e-02	3
2372		min	-.357	4	-.262	8	-.177	1	-9.612e-03	2	-1.007e-03	7	-1.454e-02	4
2373	N1187	max	.45	3	-.053	9	.421	2	1.189e-02	2	1.764e-04	1	1.328e-02	4
2374		min	-.438	4	-.263	7	-.396	1	-1.135e-02	1	-9.635e-04	6	-1.333e-02	3
2375	N1188	max	.519	3	-.053	9	.334	2	9.164e-03	1	1.764e-04	1	1.503e-02	3
2376		min	-.625	4	-.263	7	-.304	1	-9.601e-03	2	-9.635e-04	6	-1.695e-02	4
2377	N1189B	max	.447	3	-.038	9	.392	2	1.147e-02	2	3.66e-04	4	1.295e-02	4
2378		min	-.432	4	-.262	8	-.415	1	-1.18e-02	1	-1.007e-03	7	-1.339e-02	3
2379	N1190	max	.618	3	-.038	9	.357	2	8.746e-03	1	3.66e-04	4	1.675e-02	3
2380		min	-.539	4	-.262	8	-.28	1	-1.019e-02	2	-1.007e-03	7	-1.542e-02	4
2381	N1191A	max	.005	3	-.033	9	.027	2	4.604e-03	9	1.055e-04	2	1.72e-03	4
2382		min	-.011	9	-.263	6	-.039	1	-2.425e-04	2	-9.547e-04	5	-1.132e-03	3
2383	N1192	max	.027	3	-.053	9	.025	2	9.697e-04	2	1.764e-04	1	4.555e-04	9
2384		min	-.036	4	-.262	7	-.017	1	-1.668e-03	5	-9.635e-04	6	-3.516e-03	7
2385	N1193A	max	.039	3	-.038	9	.019	2	1.365e-03	9	3.66e-04	4	4.096e-03	9
2386		min	-.027	4	-.261	8	-.015	1	-2.638e-03	5	-1.007e-03	7	4.543e-04	4
2387	N1194	max	.18	3	-.034	9	.216	2	1.156e-02	2	1.055e-04	2	9.776e-03	4
2388		min	-.198	4	-.264	6	-.214	1	-1.178e-02	1	-9.547e-04	5	-9.274e-03	3
2389	N1195A	max	.232	3	-.053	9	.225	2	1.072e-02	2	1.764e-04	1	1.149e-02	4
2390		min	-.222	4	-.263	7	-.209	1	-1.017e-02	1	-9.635e-04	6	-1.154e-02	3
2391	N1196A	max	.229	3	-.038	9	.204	2	1.03e-02	2	3.66e-04	4	1.116e-02	4
2392		min	-.221	4	-.262	8	-.22	1	-1.062e-02	1	-1.007e-03	7	-1.16e-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 y...	phi*Mn z...	Cb	Eqn
1	M7	PL3/8x4	.611	2.324	5	.223	4.132	y	8	48318.3...	48600	.38	4.05	2....	H1-1b
2	M9	PL3/8x4	.611	2.324	8	.224	4.132	y	7	48318.3...	48600	.38	4.05	2....	H1-1b
3	M5	PL3/8x4	.607	2.324	7	.302	4.132	y	9	48318.3...	48600	.38	4.05	2....	H1-1b
4	MP2A	PIPE_2.5	.589	3.832	2	.041	3.748		1	30051.44	50715	3.596	3.596	2....	H1-1b
5	MP2C	PIPE_2.5	.523	3.748	4	.041	3.748		4	30051.44	50715	3.596	3.596	1....	H1-1b
6	MP2B	PIPE_2.5	.520	3.748	3	.041	3.748		3	30051.44	50715	3.596	3.596	1....	H1-1b
7	M36	HSS4x4x4	.387	0	7	.085	0	y	7	117940....	139518	16.181	16.181	2....	H1-1b
8	M126A	HSS4x4x4	.385	0	6	.083	0	y	6	117940....	139518	16.181	16.181	2....	H1-1b
9	M125A	HSS4x4x4	.383	0	6	.082	0	y	5	117940....	139518	16.181	16.181	2....	H1-1b
10	M69	PIPE_3.0	.352	2.486	9	.170	2.41		9	49286.1...	65205	5.749	5.749	1....	H1-1b
11	M1	PIPE_3.0	.318	4.745	9	.193	4.821		9	49286.1...	65205	5.749	5.749	1....	H1-1b
12	M68	PIPE_3.0	.257	4.745	7	.098	4.821		7	49286.1...	65205	5.749	5.749	1....	H1-1b
13	M54B	PIPE_3.0	.255	4.745	6	.100	4.821		6	49286.1...	65205	5.749	5.749	1....	H1-1b
14	M55B	PIPE_3.0	.247	2.486	8	.135	2.41		8	49286.1...	65205	5.749	5.749	1....	H1-1b
15	M16	PIPE_3.0	.246	2.486	5	.179	.151		9	49286.1...	65205	5.749	5.749	1....	H1-1b
16	M68A	PL3/8x4	.213	.262	1	.088	0	y	6	47695.67	48600	.38	4.05	1....	H1-1b
17	M67	PL3/8x4	.213	0	1	.044	0	y	1	43158.5...	48600	.38	4.016	1....	H1-1b
18	M8	PL3/8x4	.197	0	7	.082	0	y	8	47695.67	48600	.38	4.05	1....	H1-1b
19	M55C	PL3/8x4	.192	0	5	.172	.262	y	9	47695.67	48600	.38	4.05	1....	H1-1b
20	M65	PL3/8x4	.192	.659	3	.046	0	y	4	43158.5...	48600	.38	4.05	1....	H1-1b
21	M58B	PL3/8x4	.188	0	6	.082	0	y	5	47695.67	48600	.38	4.05	1....	H1-1b
22	M66	PL3/8x4	.180	.262	4	.087	0	y	7	47695.67	48600	.38	4.05	1....	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 y...	phi*Mn z...	Cb	Eqn
23	M64	PL3/8x4	.171	.262	3	.085	0	y	8	47695.67	48600	.38	4.05	1....	H1-1b
24	M69A	PL3/8x4	.163	.659	1	.121	.659	y	9	43158.5...	48600	.38	3.939	1....	H1-1b
25	M10	L2x2x4	.157	3.402	9	.021	3.402	z	8	23879.5...	30585.6	.691	1.577	1....	H2-1
26	M15	L2x2x4	.156	3.402	9	.018	3.402	y	5	23879.5...	30585.6	.691	1.577	1....	H2-1
27	M12	L2x2x4	.136	3.402	5	.021	3.402	z	7	23879.5...	30585.6	.691	1.577	1....	H2-1
28	M14	L2x2x4	.136	3.402	8	.021	3.402	z	5	23879.5...	30585.6	.691	1.577	1....	H2-1
29	M13	L2x2x4	.127	3.402	7	.018	3.402	y	5	23879.5...	30585.6	.691	1.577	1....	H2-1
30	M11	L2x2x4	.127	3.402	6	.018	3.402	y	5	23879.5...	30585.6	.691	1.577	1....	H2-1
31	MP1A	PIPE_2.0	.107	2.812	2	.015	2.875		2	20867.6...	32130	1.872	1.872	1....	H1-1b
32	MP1B	PIPE_2.0	.098	2.812	4	.014	2.875		4	20867.6...	32130	1.872	1.872	1....	H1-1b
33	MP1C	PIPE_2.0	.098	2.812	3	.014	2.875		3	20867.6...	32130	1.872	1.872	1....	H1-1b
34	M126B	PIPE_2.0	.071	3.749	5	.017	0		3	16377.1...	32130	1.872	1.872	1....	H1-1b
35	M125B	PIPE_2.0	.070	3.749	7	.024	0		3	16377.1...	32130	1.872	1.872	1....	H1-1b
36	M124A	PIPE_2.0	.070	3.749	8	.022	0		3	16377.1...	32130	1.872	1.872	1....	H1-1b
37	MP3B	PIPE_2.5	.019	2.875	1	.003	2.875		1	37774.93	50715	3.596	3.596	1	H1-1b
38	MP4A	PIPE_2.5	.019	2.875	4	.003	2.875		4	37774.93	50715	3.596	3.596	1....	H1-1b
39	MP3C	PIPE_2.5	.019	2.875	3	.003	2.875		3	37774.93	50715	3.596	3.596	1....	H1-1b

Envelope AISI S100-10: LRFD Cold Formed Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC	Shea...	Loc[...	Dir	LC	phi*Pn...	phi*Tn...	phi*M...	phi*M...	Cb	Cmyy	Cmzz	Eqn
No Data to Print ...																

Envelope AA ADM1-10: ASD - Building Aluminum Code Checks

Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	Pnc/O...	Pnt/Om...	Mny/O...	Mnz/O...	Vny/O...	Vnz/O...	Cb	Eqn
No Data to Print ...																

EXHIBIT 9

Transcom Engineering, Inc.
Wireless Network Design and Deployment

Radio Frequency Emissions Analysis Report

T-MOBILE Existing Facility

Site ID: CT11512C

CT512/SBA - S Brooklyn
130 Tatnic Hill Road (Map 15 Lot 16-5)
Brooklyn, CT 06234

June 11, 2019

Transcom Engineering Project Number: 737001-0089

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**6.51 %**

June 11, 2019

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

Emissions Analysis for Site: **CT11512C – CT512/SBA - S Brooklyn**

Transcom Engineering, Inc ("Transcom") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **130 Tatnic Hill Road (Map 15 Lot 16-5), Brooklyn, 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 MHz & 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 **130 Tatnic Hill Road (Map 15 Lot 16-5), Brooklyn, 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
GSM	1900 MHz (PCS)	1	15
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 MHz, 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	RFS APXV18-206516S-C-A20	140
A	2	RFS APXVAARR24_43-U-NA20	140
B	1	RFS APXV18-206516S-C-A20	140
B	2	RFS APXVAARR24_43-U-NA20	140
C	1	RFS APXV18-206516S-C-A20	140
C	2	RFS APXVAARR24_43-U-NA20	140

Table 2: Antenna Data

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

Cable losses were factored in the calculations for this site. Since all **1900 MHz (PCS)** radios are ground mounted the following cable loss values were used. For each ground mounted **1900 MHz (PCS)** radio there was **1.96 dB** of cable loss calculated into the system gains / losses for this site. These values were calculated based upon the manufacturers specifications for **190 feet** of **1-5/8”** coax.

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	RFS APXV18-206516S-C-A20	1900 MHz (PCS)	16.3	5	175	4,753.77	0.95
Antenna A2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.16
						Sector A Composite MPE%	**2.11**
Antenna B1	RFS APXV18-206516S-C-A20	1900 MHz (PCS)	16.3	5	175	4,753.77	0.95
Antenna B2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.16
						Sector B Composite MPE%	**2.11**
Antenna C1	RFS APXV18-206516S-C-A20	1900 MHz (PCS)	16.3	5	175	4,753.77	0.95
Antenna C2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.16
						Sector C Composite MPE%	**2.11**

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	**2.11 %**
Sprint	2.42 %
Nextel	0.26 %
Verizon Wireless	1.72 %
Site Total MPE %:	**6.51 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	2.11 %
T-MOBILE Sector B Total:	2.11 %
T-MOBILE Sector C Total:	2.11 %
Site Total:	6.51 %

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	1,086.58	140	8.70	1900 MHz (PCS)	1000	0.87%
T-Mobile 1900 MHz (PCS) GSM	1	407.47	140	0.82	1900 MHz (PCS)	1000	0.08%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	140	3.16	600 MHz	400	0.79%
T-Mobile 700 MHz LTE	2	432.54	140	1.73	700 MHz	467	0.37%
						Total:	**2.11%**

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:	2.11 %
Sector B:	2.11 %
Sector C:	2.11 %
T-MOBILE Maximum Total (per sector):	2.11 %
Site Total:	6.51 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.51 %** 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.

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