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

March 15, 2022

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

RE: Notice of Exempt Modification
203 Davis Rd., Chaplin, CT 06235-2333
Latitude: 41.793486
Longitude: -72.160178
Sprint, now a part of T-Mobile USA #: CTHA809A_Sprint Keep

Dear Ms. Bachman:

Sprint, now a part of T-Mobile USA, hereinafter referred to as "Sprint/T-Mobile" currently maintains six (6) antennas at the 165-foot level of the existing 175-foot Monopole Tower at **203 Davis Rd., Chaplin, CT**. The 175-foot tower is owned by SBA Properties, LLC. The property is owned by the Truman J. Pearl. Sprint/T-Mobile now intends to remove the six (6) existing antennas and replace with six (6) new L700/L600/1900/2100 MHz antennas, as well as, install three (3) additional 2500 MHz antennas for a total of nine (9) antennas. All the antennas will be installed at the 165-foot level of the Tower.

- **The new antennas support 5G services and would be installed at the 165-foot level of the tower**.

Planned Modifications:

TOWER

Remove:

- N/A

Remove and Replace:

- (3) RFS APXVTM14-C-I20 antennas (remove) – (3) Commscope VV-65A-R1 antennas (replace)
- (3) Commscope NNVV-65B-R4 antennas (remove) – (3) RFS APXVAALL24_43-U-NA20 Antennas (replace)
- (1) Nudd T-Arm (remove) – (1) low profile platform (SitePro RMQP-4096-HK) (replace)
- (3) ALU 1900 MHz RRUs (remove) – (3) Ericsson 4460 B25+B66 RRUs (replace)
- (3) ALU 800 MHz RRUs (remove) – (3) Ericsson 4480 B71+B85 RRUs (replace)

Install New:

- (3) Ericsson AIR6449 B41 2500 MHz antennas
- (1) Platform Reinforcement Kit (PRK-1245L)
- (1) V-brace Kit (PRK-SFS-H-L)
- (3) Tie-Back Kit (SitePro SPTB)
- (3) TD-RRH8x20-25 RRUs
- (3) 1.9" fiber

Existing Equipment to Remain:

- N/A

Entitlements:

- (4) 1-1/4" coax

GROUND

Install New:

- (1) GPS antenna to Existing Ice Bridge
- (1) 1" RGS conduit fo DC power to RAC24 cabinet
- (1) 2" RGS conduit for AAV to RAC24 cabinet
- (1) Purcell RAC24 cabinet to existing H-Frame
- (1) T-Mobile Ericsson 6160 Equip. Cabinet
- (1) Slackbox
- (1) 2" RGS conduit w/LBs for DC power
- (2) 2" RGS conduit for alarm & Spare
- (1) T-Mobile Ericsson B160 Battery Cabinet
- (1) 2" RGS conduit for power from existing PPC
- T-Mobile breakers within existing PPC Cabinet

Remain:

- (1) 15' x 25' concrete pad
- (1) Sprint PPC & Telco Cabinet
- (1) Ice Canopy

Remove:

- GPS mounted to existing Ice Bridge (replace w/new GPS antenna)
- ½" coax for GPS antenna

The telecommunications facility was originally approved by the Town of Chaplin's Planning and Zoning Commission on September 2, 1999 under application# PZ9937SPA, For the construction of a telecommunications tower located at 203 David Rd. in Chaplin, CT. There were no other stipulations set forth by the Town of Chaplin. 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 Chaplin's First Selectman, Juan Roman III, , Joseph Smith, Building Official, as well as the property owner, Truman J. Pearl. (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,

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

Attachments

cc: Juan Roman III, First Selectman / with attachments
Town of Chaplin, 495 Phoenixville Rd., Chaplin, CT 06235
Joseph Smith, Building Official / with attachments
Town of Chaplin, 495 Phoenixville Rd., Chaplin, CT 06235
Truman J. Pearl / Owner
203 Davis Rd., Chaplin, CT 06235 (SBA Address on file)

EXHIBIT LIST

Exhibit 1	Check Copy	x
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	Town of Chaplin application# PZ9937SPA 9/2/99
Exhibit 6	Construction Drawings	Chappell 12/3/21
Exhibit 7	Structural Analysis	TES 2/9/22
Exhibit 8	Mount Analysis	TES 2/3/22
Exhibit 8	EME Report	Centerline 2/22/22

EXHIBIT 1

Copy of Check

EXHIBIT 2

Mailing Labels

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

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

FedEx

FedEx® Tracking Track Another Shipment Help

776302247443

ADD NICKNAME

ON TIME

Scheduled delivery:
Wednesday, March 16, 2022 before 10:30 am

PICKED UP
WESTBOROUGH, MA

GET STATUS UPDATES

FROM
SBA COMMUNICATIONS CORPORATION
Theresa Mercado
49 Montclair Avenue
NUTLEY, NJ US 07110
973-766-2835

TO
Melanie A. Bachman Exec. Dir
Connecticut Siting Council
Ten Franklin Square
NEW BRITAIN, CT US 06051
508-251-0720

MANAGE DELIVERY

Travel History | Shipment Facts

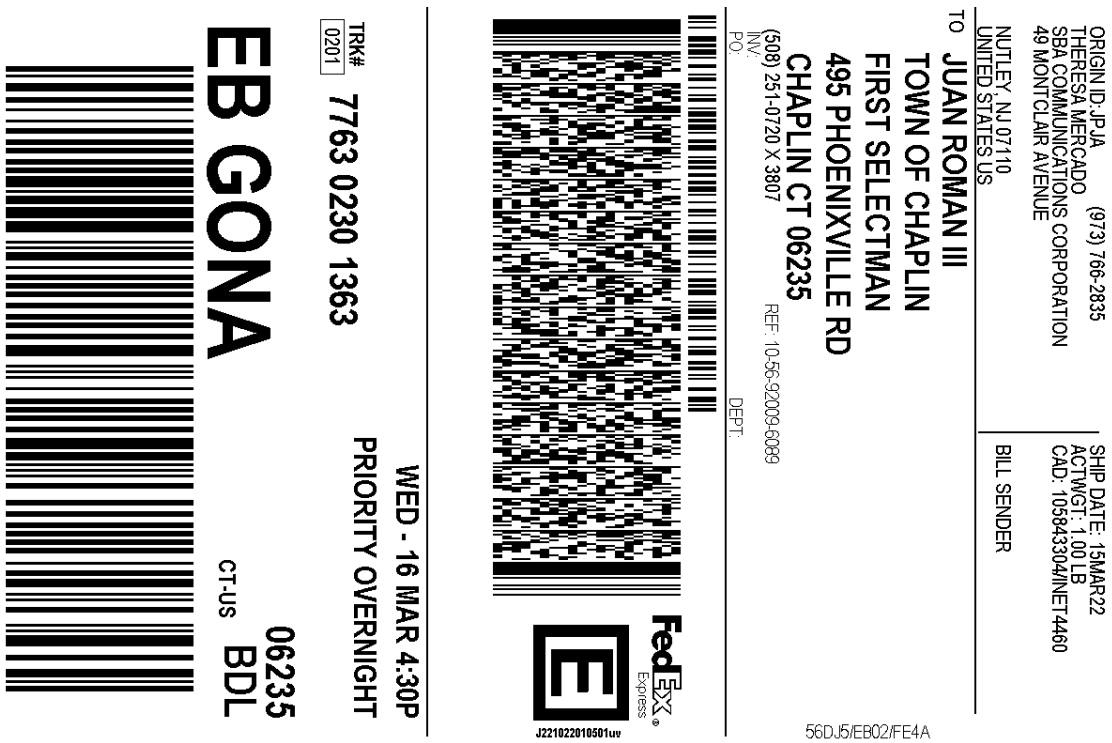
Travel History

TIME ZONE
Local Scan Time

Tuesday, March 15, 2022		
3:13 PM	WESTBOROUGH, MA	Picked up Tendered at FedEx Office
12:11 PM		Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER 776302247443	**SERVICE** FedEx Priority Overnight	**WEIGHT** 2 lbs / 0.91 kgs
TOTAL PIECES 1	**TOTAL SHIPMENT WEIGHT** 2 lbs / 0.91 kgs	**TERMS** Shipper
SHIPPER REFERENCE 10-56-92009-6089	**PACKAGING** FedEx Pak	**SPECIAL HANDLING SECTION** Deliver Weekday
ACTUAL PICK UP 3/15/22	**SHIPMENT-FACTS.COD-DETAIL** $0.00	**STANDARD TRANSIT** 3/16/22 before 10:30 am



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776302301363

ADD NICKNAME

ON TIME

Scheduled delivery:
Wednesday, March 16, 2022 before 4:30 pm

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WESTBOROUGH, MA

GET STATUS UPDATES

FROM
SBA COMMUNICATIONS CORPORATION
Theresa Mercado
49 Montclair Avenue
NUTLEY, NJ US 07110
973-766-2835

TO
Juan Roman III
Town of Chaplin
First Selectman
495 Phoenixville Rd
CHAPLIN, CT US 06235
508-251-0720

MANAGE DELIVERY

Travel History | Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Tuesday, March 15, 2022		
3:13 PM	WESTBOROUGH, MA	Picked up Tendered at FedEx Office
12:14 PM		Shipment information sent to FedEx

Shipment Facts

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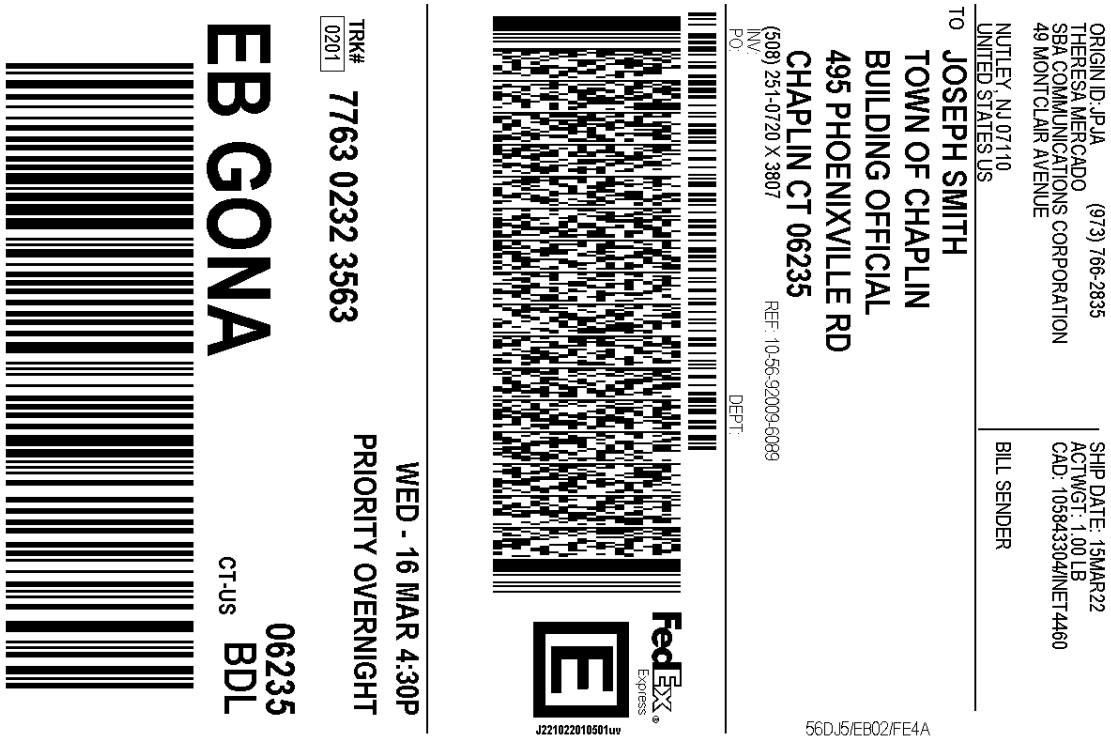
TOTAL PIECES 1	**TOTAL SHIPMENT WEIGHT** 0.5 lbs / 0.23 kgs	**TERMS** Shipper
SHIPPER REFERENCE 10-56-92009-6089	**PACKAGING** FedEx Envelope	**SPECIAL HANDLING SECTION** Deliver Weekday
ACTUAL PICK UP 3/15/22	**SHIPMENT-FACTS.COD-DETAIL** $0.00	**STANDARD TRANSIT** 3/16/22 before 4:30 pm



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776302323563

ADD NICKNAME

ON TIME

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Wednesday, March 16, 2022 before 4:30 pm

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WESTBOROUGH, MA

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FROM
SBA COMMUNICATIONS CORPORATION
Theresa Mercado
49 Montclair Avenue
NUTLEY, NJ US 07110
973-766-2835

TO
Joseph Smith
Town of Chaplin
Building Official
495 Phoenixville Rd
CHAPLIN, CT US 06235
508-251-0720

MANAGE DELIVERY

Travel History | Shipment Facts

Travel History

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Local Scan Time

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Shipment Facts

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TOTAL PIECES 1	**TOTAL SHIPMENT WEIGHT** 0.5 lbs / 0.23 kgs	**TERMS** Shipper
SHIPPER REFERENCE 10-56-92009-6089	**PACKAGING** FedEx Envelope	**SPECIAL HANDLING SECTION** Deliver Weekday
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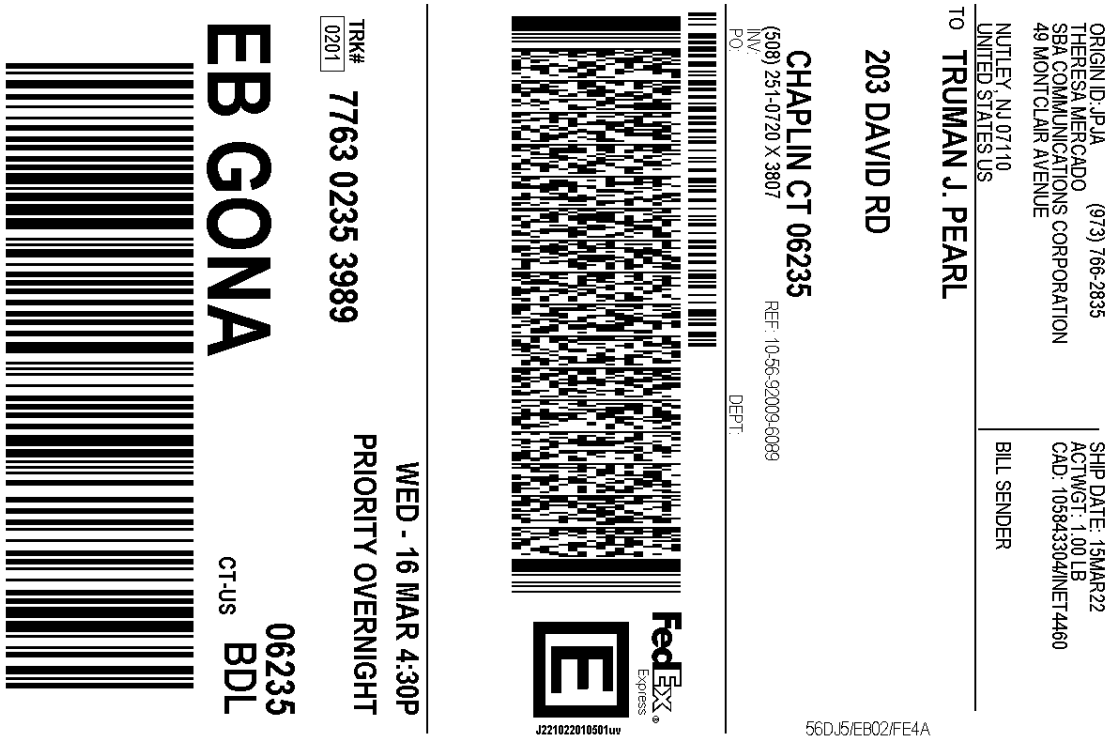

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FROM
SBA COMMUNICATIONS CORPORATION
Theresa Mercado
49 Montclair Avenue
NUTLEY, NJ US 07110
973-766-2835

TO
Truman J. Pearl
203 David Rd
CHAPLIN, CT US 06235
508-251-0720

MANAGE DELIVERY

Travel History | Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Tuesday, March 15, 2022		
3:13 PM	WESTBOROUGH, MA	Picked up Tendered at FedEx Office
12:17 PM		Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER 776302353989	**SERVICE** FedEx Priority Overnight	**WEIGHT** 0.5 lbs / 0.23 kgs
TOTAL PIECES 1	**TOTAL SHIPMENT WEIGHT** 0.5 lbs / 0.23 kgs	**TERMS** Shipper
SHIPPER REFERENCE 10-56-92009-6089	**PACKAGING** FedEx Envelope	**SPECIAL HANDLING SECTION** Deliver Weekday
ACTUAL PICK UP 3/15/22	**SHIPMENT-FACTS.COD-DETAIL** $0.00	**STANDARD TRANSIT** 3/16/22 before 4:30 pm

EXHIBIT 3

Property Card

Property Location: 203 DAVIS RD | **MAP ID:** 57/ 29/ 1/ / | **Bldg Name:** | **State Use:** 101

Vision ID: 783 | **Account #** P000791 | **Bldg #:** 1 of 1 | **Sec #:** 1 of 1 | **Card** 1 of 1 | **Print Date:** 12/11/2018 15:07

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
PEARL TRUMAN J				
203 DAVIS RD				
CHAPLIN, CT 06235				
Additional Owners:				

SUPPLEMENTAL DATA

Other ID:	57-29-1
Census Tr.	
Survey #	
DV Map #	
GIS ID:	
DV Lot #	
Call Back	X
ASSOC PID#	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
RES LAND	1-1	38,100	26,700
RES EXCES	1-2	13,200	9,200
DWELLING	1-3	129,100	90,400
RES OUTBL	1-4	28,500	20,000
	Total	208,900	146,300

6024
CHAPLIN, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
PEARL TRUMAN J	51/ 677			V	0	00

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2017	1-1	26,700	2012	1-1	50,300	2008	1-1	50,300
2017	1-2	11,900	2012	1-2	16,400	2008	1-2	16,400
2017	1-3	88,600	2012	1-3	99,500	2008	1-3	101,900
2017	1-4	20,000	2012	1-4	20,000	2008	1-4	20,000
	Total:	147,200		Total:	186,200		Total:	188,600

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	129,100
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	28,500
Appraised Land Value (Bldg)	51,300
Special Land Value	0
Total Appraised Parcel Value	208,900
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	**208,900**

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

NOTES

2013-REMOVED CELL SITE
ASSESSED ON CELL PRC PER LEASE
2016-ADJ ACREAGE PER BOUNDARY LINE
SURVEY AGREEMENT
CELL TOWER LAND LEASE VALUE= 1500 X 12=
18,000-(10% EXP)=16,200/.09 CAP= 180,000

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
1882	10/09/2007			50,000		0		EQUIPMENT BLDG

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
04/24/2018			JW	41	Change - Field Review
03/17/2017			AO	45	Change - Value Change To
01/14/2014			AO	43	Change - Reinspection Rer
05/18/2008			JR	11	Viewed
05/18/2008			JR	11	Viewed

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing: Spec Use	Special Pricing: Spec Calc	S Adj Fact	Adj. Unit Price	Land Value
1	101	Single Family					2.00	AC	34,344.00	0.5833	7	1.0000	0.95		0.00	ROAD CONDITION			1.00		38,100
1	101	Single Family					4.26	AC	3,100.00	1.0000	0	1.0000	1.00		0.00				1.00		13,200

Total Card Land Units: 6.26 AC | Parcel Total Land Area: 6.26 AC | Total Land Value: 51,300

Property Location: 203 DAVIS RD **MAP ID:** 57/ 29/ 1/ / **Bldg Name:** **State Use:** 101

Vision ID: 783 **Account #** P000791 **Bldg #:** 1 of 1 **Sec #:** 1 of 1 **Card** 1 of 1 **Print Date:** 12/11/2018 15:07

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	04		Cape Cod
Model	01		Residential
Grade	03		C
Stories	1.7		
Occupancy	1		
Exterior Wall 1	14		Wood Shingle
Exterior Wall 2			
Roof Structure	03		Gable
Roof Cover	03		Asphalt Shingl
Interior Wall 1	05		Drywall
Interior Wall 2			
Interior Flr 1	12		Hardwood
Interior Flr 2	14		Carpet
Heat Fuel	02		Oil
Heat Type	05		Hot Water
AC Type	01		None
Total Bedrooms	03		3 Bedrooms
Total Bthrms	2		2 Full
Total Half Baths	1		
Xtra Fix			
Total Rooms	6		
Bath Style	02		Average
Kitchen Style	02		Average
Fireplace	1		
Gas Fireplace			
Whirlpool Tubs			
Fin Bsmt SF			
Fin Bsmt Qual			

CONSTRUCTION DETAIL (CONTINUED)

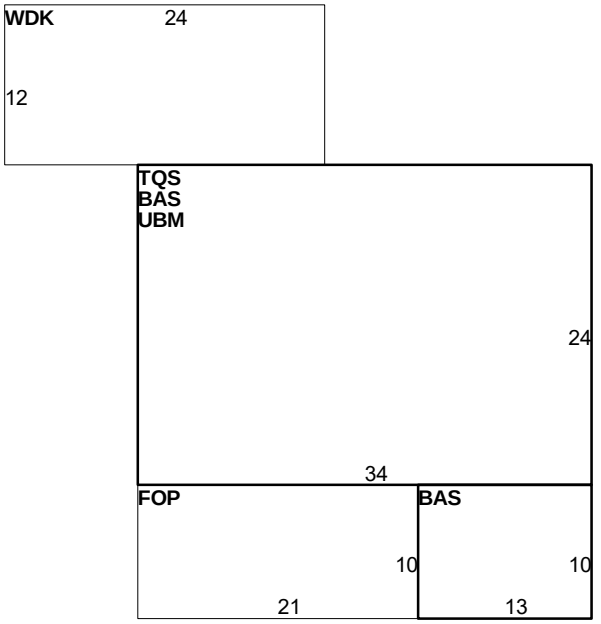
Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
101	Single Family	100

COST/MARKET VALUATION

Adj. Base Rate:	94.72
AYB	1987
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	22
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	78
Apprais Val	129,100
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
CNP	Canopy			L	420	25.00	1986		0		50	5,300
GAR1	Garage		Frame	L	360	30.00	1986		0		70	7,600
GAR1	Garage		Frame	L	420	30.00	2000		0		70	8,800
SHD1	Shed		Frame	L	540	18.00	2000		0		70	6,800

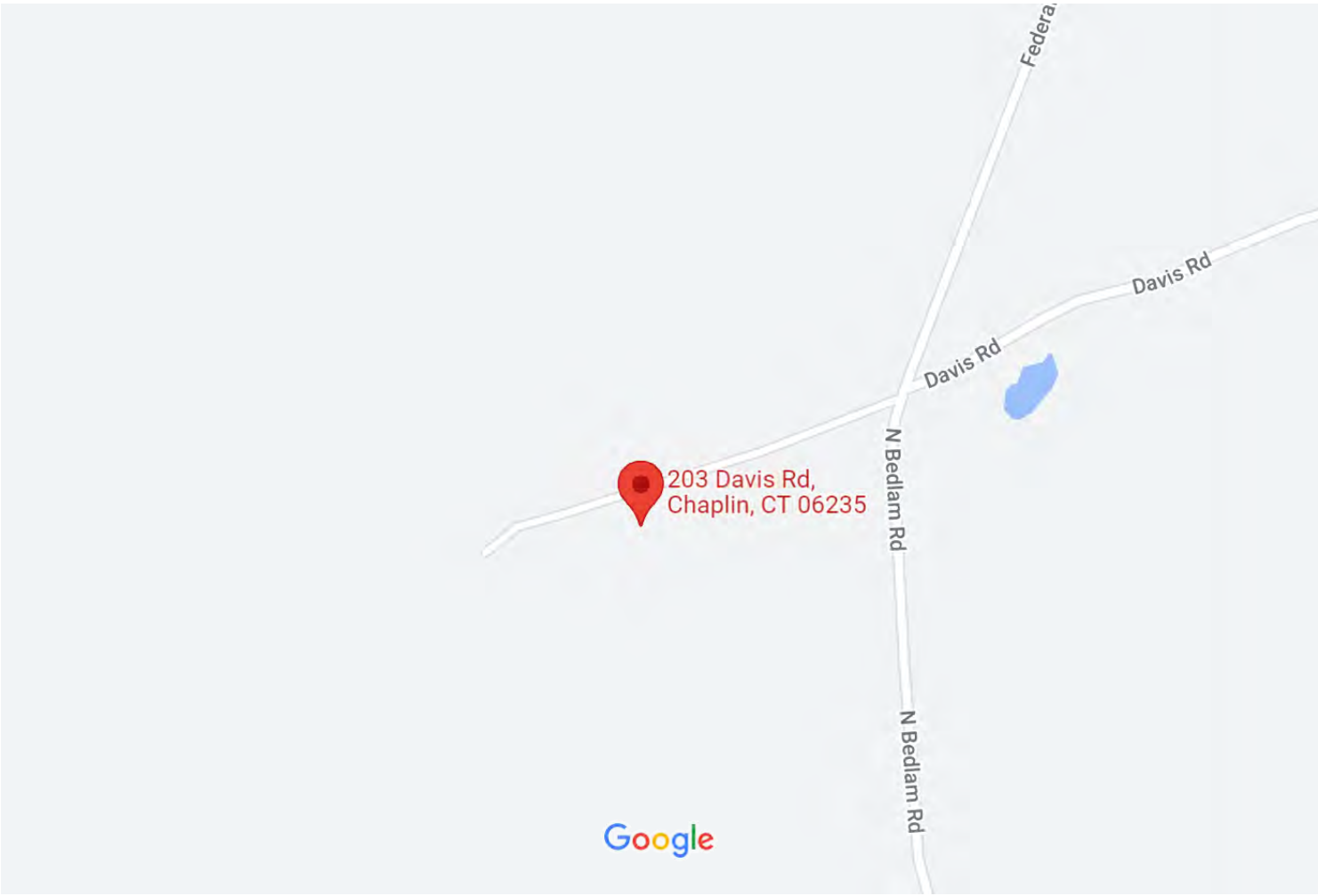
BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	946	946			
FOP	Framed Open Porch	0	210			
TQS	Three Quarter Story	571	816			
UBM	Basement	0	816			
WDK	Wood Deck	0	288			
	Ttl. Gross Liv/Lease Area:	1,517	3,076			

EXHIBIT 4

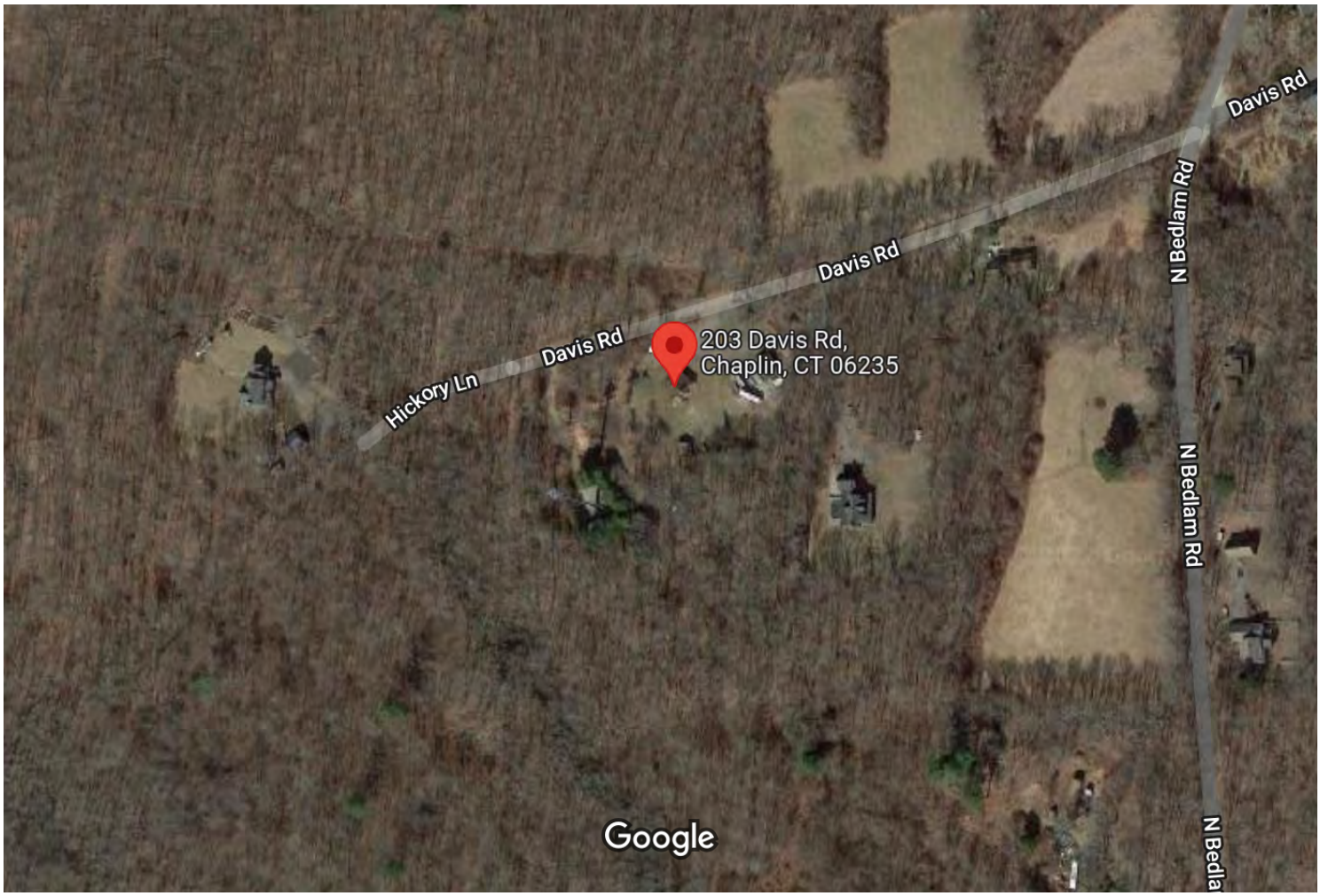
Property Map

Google Maps 203 Davis Rd



Map data ©2022 500 ft

Google Maps 203 Davis Rd



Imagery ©2022 Maxar Technologies, USDA Farm Service Agency, Map data ©2022 200 ft

EXHIBIT 5

Zoning Documents

SITE ID #10125-056 SITE NAME: North Chaplin

CT03113-5

JOB COST #003113

ZONING/PERMITTING COMPLETION FORM

Zoning Classification for Site: RAR

Special Relief (setback, height variance, special use permit, wetlands permit etc.):

Special Permit

* Date of Zoning Decision: 07/13/00

Summary of zoning conditions **(Include details of any conditions relative to time restrictions, expiration dates, renewal obligations, monetary obligations, performance obligation, inspection fees).**

See attached. SBA must appear not more than every 5 years to review Compliance.

Submitted by: Esther McNany Title: Territory Manager

Territory Manager Approval:

* Attach a copy of the Zoning decision and forward to the Regional Compliance Manager as soon as possible, after the decision.

TOWN of CHAPLIN

CONNECTICUT 06235

INCORPORATED, 1822

PLANNING and ZONING
COMMISSION

Wendell Davis
Cranmore, Fitzgerald and Meaney
49 Wethersfield Avenue
Hartford, Connecticut 06114-1102

Dear Mr. Davis,

The Planning and Zoning Commission voted on July 13, 2000 to approve the application of SBA, Inc. for a wireless telecommunications tower at 203 Davis Road Extension with the following condition: that the applicant appear before the Commission not more than every 5 years for the purposes of reviewing compliance with the conditions of the special Permit, as per section 12.9 of the Chaplin PZC Zoning Regulations for Wireless Communications Towers, Antennas and Facilities. I have enclosed a copy of the minutes reflecting the vote on the action taken. I can be reached at 860-455-0073 on Monday, Tuesday, Thursday or Friday mornings if you require any more information.

Sincerely,

Jennifer Nelson

Jennifer Nelson
Clerk, Chaplin Planning and Zoning

PLANNING AND ZONING COMMISSION
CHAPLIN, CONNECTICUT

MINUTES - REGULAR MEETING
July 13, 2000

The regular meeting of the Chaplin Planning and Zoning Commission was called to order at 9:30 P.M. Regular members present were Paul Peifer, Michael Jenkins, David Garceau, Irene Schein, Randy Godaire. Also present were alternate members Scott Welden and Kitty Leshay. Unable to attend was commission member Gerald Robinson.

3. **Seat Alternate:**
   Scott Welden was seated for Gerald Robinson.

4. **Approval of Minutes:**
   Bruce Raymond moved to approve the minutes of 6/8/00. Irene Schein seconded the motion and it passed unanimously.

   Approval of the minutes of 6/29/00 was tabled until next month.

5. **Citizens Having New Business:**
   First Selectman Boomer requested the commission add discussion and action of the discontinuance of Tutko Road and Nutmeg Lane to the next month's agenda. Mr. Boomer will notify the abutting owners of Tutko Road of pending consideration.

6. **Old Business:**
   A. Comprehensive Town Plan of Development:
   The commission discussed the draft that was presented at the meeting of June 29th. The next meeting has not yet been formalized. A public hearing will tentatively be planned for the fall.

7. **New Business:**
   A. Discuss and Act on Special Permit Application for 42 Chaplin Street:
   Bruce Raymond disqualified himself from this discussion. Mr. Peifer recommended the application be denied without prejudice since the hearing cannot be tabled. **Scott Welden moved to deny the application without prejudice. Irene Schein seconded the motion and it passed with the following vote:**
   YES: P. Peifer, I. Schein, S. Welden, D. Garceau, R. Godaire and M. Jenkins
   ABSTAIN: B. Raymond

   B. Discuss and Act on Special Permit Application for a Wireless Communications Tower at 203 Davis Road Ext.:
   David Garceau moved to approve the application a special permit filed by SBA, Inc

RECEIVED July 20, 2000
CHAPLIN, 12:45pm
TOWN CLERK

and NEXTEL Communications for a wireless telecommunications tower at 203 Davis Road Ext. Michael Jenkins seconded the motion. After a brief discussion, **Scott Welden moved to amend the motion to include the following condition: that the applicant appear before the Commission not more than every 5 years for the purposes of reviewing compliance with the conditions of the Special Permit, as per section 12.9 of the Chaplin PZC Zoning Regulations for Wireless Communications Towers, Antennas and Facilities. David Garceau seconded the motion to amend to motion and it passed unanimously.**
The motion, as amended, to approve the special permit application passed unanimously.

C. Zoning Officer Report:
Raymond Murphy submitted the following permits:

- 554 Phoenixville Road, Frank and Melanie Landon, 27' Round Above-Ground Pool, $20 fee;
- 82 Miller Road, Gary and Kathryn Sprague, accessory apartment, 35'x23'8", $20 fee;
- 151 So. Bear Hill Road, Waldemar and Anna Szkutnik, 33'x18' Above-Ground Pool, $20 fee;
- 161 Palmer Road, Donald and Holly Neborsky, 26'x28' garage, $20 fee;
- 5 Carefree Lane, Brent Benson, 10'x20' deck, $20 fee

The sign for the repair shop on Tower Hill Road was covered up. Mr. Murphy will talk to the owner of The Hot Dog House about the signs along the roadways and will determine whose property the picnic tables are on. Mr. Murphy will also investigate all the signage along Route 6 and will consistently enforce Chaplin regulations regarding signage.

D. Correspondence:
The following was received this month:

- Claitor's Law Books Catalog;
- Brochure from The Center for Research and Public Policy;
- Munilaw Brochure for CD-ROM Zoning Maps, Subdivision and Zoning Regulations for all cities and towns;
- Notice from Windham Regional Planning Commission, RE: Retail Floor Area/Parking requirements in Mansfield;
- Connecticut Bar Association - P&Z Newsletter

E. Items Pro Re Nata:
New legislation has been passed that says if the commission does not tape the decision making process for a hearing that was recorded on magnetic tape, then an audience member may tape that proceeding and submit it in court as valid evidence.

There will be a site walk of Tutko Road on July 25, 2000 at 7:00 P.M.

Recorded by: Jennifer Nelson

SITE ID #4275-004 SITE NAME: N. Stonington 2

CTO 1493-S

JOB COST #001493

ZONING/PERMITTING COMPLETION FORM

Zoning Classification for Site:GC-60

Special Relief (setback, height variance, special use permit, wetlands permit etc.):

Special Use Permit

* Date of Zoning Decision: 9/2/99

Summary of zoning conditions **(Include details of any conditions relative to time restrictions, expiration dates, renewal obligations, monetary obligations, performance obligation, inspection fees).**

See attached conditions

Submitted by: Esther McNany Title: Territory Manager

Territory Manager Approval:

* Attach a copy of the Zoning decision and forward to the Regional Compliance Manager as soon as possible, after the decision.

TOWN OF STONINGTON
The Planning and Zoning Commission
152 Elm Street, P.O. Box 352
Stonington, Connecticut 06378
(860) 535-5095

September 7, 1999

Sprint Spectrum LP
9 Barnes Industrial Rd.
Wallingford, CT 06492

Dear Sir:

The Planning and Zoning Commission at their meeting of September 2, 1999 voted to APPROVE your application - **#PZ9937SPA SPRINT SPECTRUM LP** - Application for the construction of a 150 ft. monopole telecommunications tower. Property located at 49 Stonington Rd. Assessor's Map 75 Block 1 Lot 2A Zone GC-60. Your application was approved with the following stipulations:

1) General cleanup of debris and removal of any fuel tanks of any type from the site prior to any construction beginning on the property.
2) The corrections shall be made on the final site plan as noted in the Planning Director's memo dated 9/1/99
3) The illegal storage of vehicles and heavy equipment shall cease until site plan approval for the property is obtained from the Commission.

Please schedule an appointment with the Planning Office to review the final plans which have incorporated all the above stipulations and/or changes and <u>have been listed on the site plan</u>. Please bring to the Planning and Zoning Office for the Chairman's signature one (1) set of bluelines. If you require a signed copy of the site plan for your files, please provide the Planning office with the additional copy.

If you have any questions, please feel free to contact the Planning Office.

Sincerely,

Edward C. Donnelly

Edward Donnelly, AICP
Planning Director

EXHIBIT 6

Construction Drawings

SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

CTHA809A

203 DAVIS ROAD
CHAPLIN, CT 06235
WINDHAM COUNTY

SITE NO.: CTHA809A
CARRIER SITE ID: CT33XC569

RF DESIGN GUIDELINE: 67E5A998E 6160

SCOPE OF WORK

REMOVE:
- 6 SPRINT ANTENNAS
- 12 SPRINT RRHS
- 1 SPRINT GPS
- ALL SPRINT CABLES
- 2 SPRINT CABINETS
- 1 FIBER DISTRIBUTION BOX

INSTALL:
- 9 ANTENNAS
- 6 RRUs
- 1 6160 CABINET
- 1 B160 CABINET
- 1 RAC24 CABINET
- 2 HYBRID CABLES
- FURNISH AND INSTALL FIBER SLACKBOX
- FURNISH AND INSTALL POWER RELAY
- GPS ANTENNA

SITE NOTES

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

APPROVALS

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

T-MOBILE TECHNICIAN SITE SAFETY NOTES

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

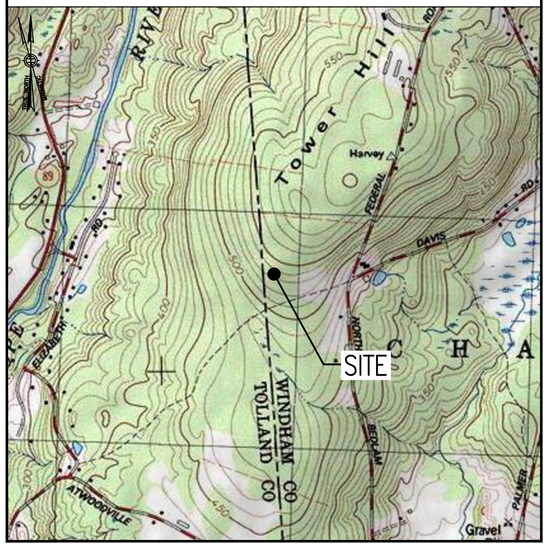
GENERAL NOTES

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

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

VICINITY MAP

SCALE: 1" = 1000'-0"



DIRECTIONS

TURN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 EAST. TURN LEFT TO MERGE ONTO I-495 NORTH. TAKE EXIT 33B TO MERGE ONTO I-95 SOUTH. TAKE EXIT 6 FOR I-295 SOUTH. TAKE EXIT 9C-A FOR US-6 WEST. TURN RIGHT ONTO CT-198 NORTH. TURN LEFT ONTO BEDLAM ROAD. TURN RIGHT ONTO NORTH BEDLAM ROAD. TURN LEFT ONTO DAVIS ROAD. SITE WILL BE ON THE LEFT.

SHEET INDEX

SHT. NO.	DESCRIPTION	VER.
T-1	TITLE SHEET	3
GN-1	GENERAL NOTES	3
A-1	COMPOUND & EQUIPMENT PLANS	3
A-2	TOWER ELEVATION & ANTENNA PLANS	3
A-3	SITE DETAILS	3
A-4	ANTENNA & FEEDLINE CHARTS	3
E-1	ELECTRIC & GROUNDING DETAILS	3

DO NOT SCALE DRAWINGS

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

PROJECT SUMMARY

SITE NUMBER:	CTHA809A
SBA SITE NUMBER:	CT03113-S
SBA SITE NAME:	NORTH CHAPLIN
SITE ADDRESS:	203 DAVIS ROAD CHAPLIN, CT 06235
PROPERTY OWNER:	PEARL TRUMAN J. 203 DAVIS ROAD CHAPLIN, CT 06235
TOWER OWNER:	SBA TOWERS, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	WINDHAM COUNTY
ZONING DISTRICT:	RESIDENTIAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	175'
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SRoth@sbasite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.793486° N41°47'36.55" LONGITUDE: -72.160178° W72°09'36.64"

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

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

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil ·Structural ·Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
10/3/21

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	12/03/21	REVISED CONSTRUCTION	JRV
2	12/01/21	REVISED CONSTRUCTION	JRV
1	08/30/21	ISSUED FOR CONSTRUCTION	JRV
0	08/24/21	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTHA809A

SITE ADDRESS:
203 DAVIS ROAD
CHAPLIN, CT 06235

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.278

GENERAL NOTES:

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

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

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

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

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

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

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

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

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER
   OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....¾ IN.
   BEAMS AND COLUMNS .....1½ IN.

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

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

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

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

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

STRUCTURAL STEEL NOTES:

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

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

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

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

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

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

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

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

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

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

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

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

COMPACTION EQUIPMENT:

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

CONSTRUCTION NOTES:

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

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

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

ELECTRICAL INSTALLATION NOTES:

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

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

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

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

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

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

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

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

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

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

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

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

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

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

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

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

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

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

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

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

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

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

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

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

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

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25937
LICENSED
PROFESSIONAL CIVIL ENGINEER

2/3/21

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	12/03/21	REVISED CONSTRUCTION	JRV
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1	08/30/21	ISSUED FOR CONSTRUCTION	JRV
0	08/24/21	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTHA809A

SITE ADDRESS:
203 DAVIS ROAD
CHAPLIN, CT 06235

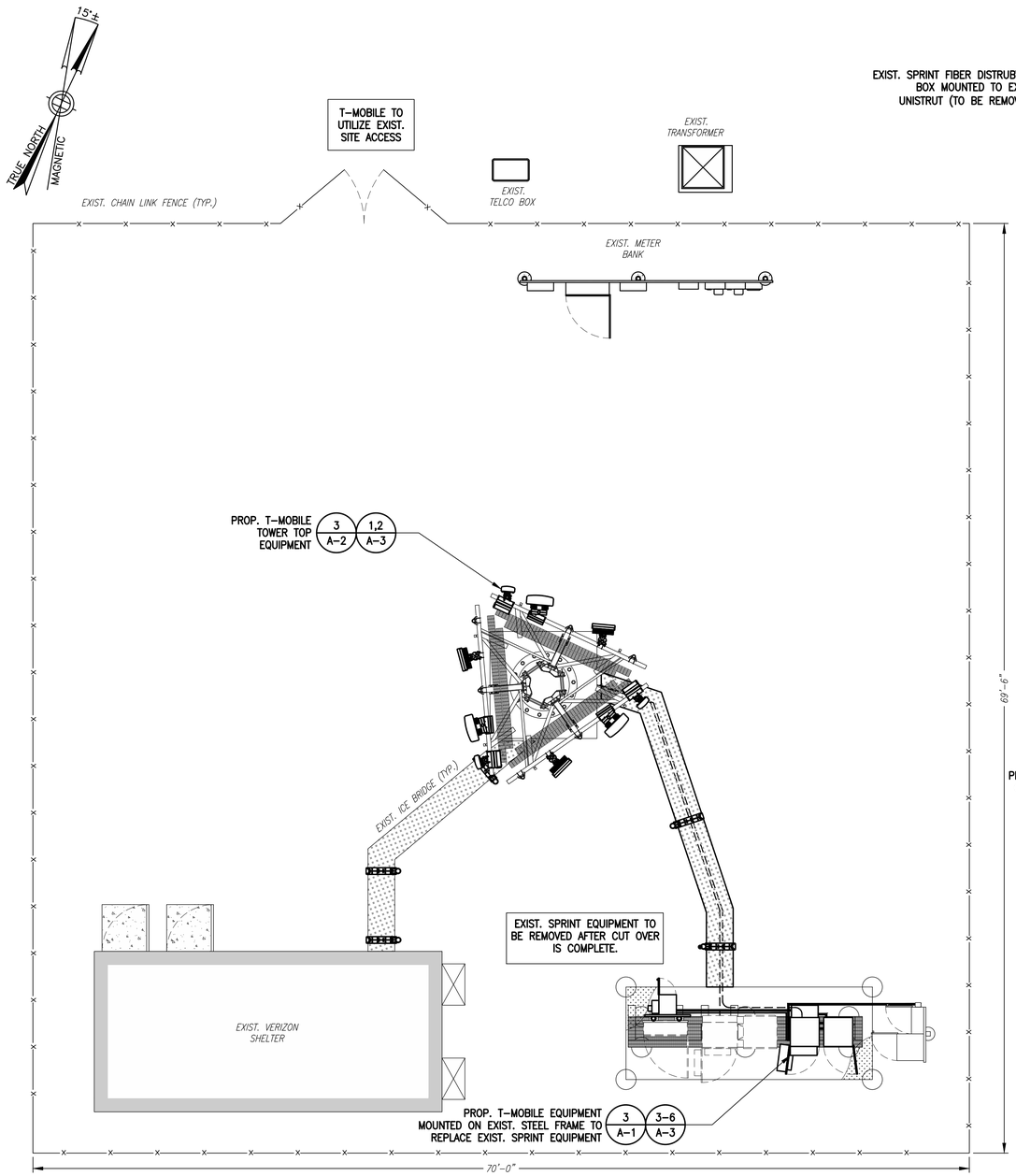
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

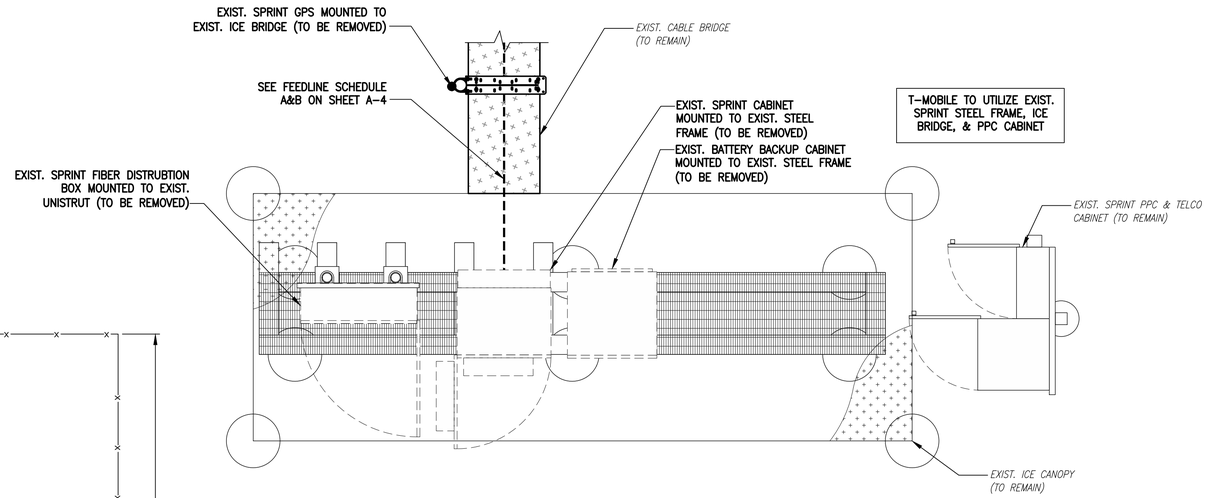
1815.278

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

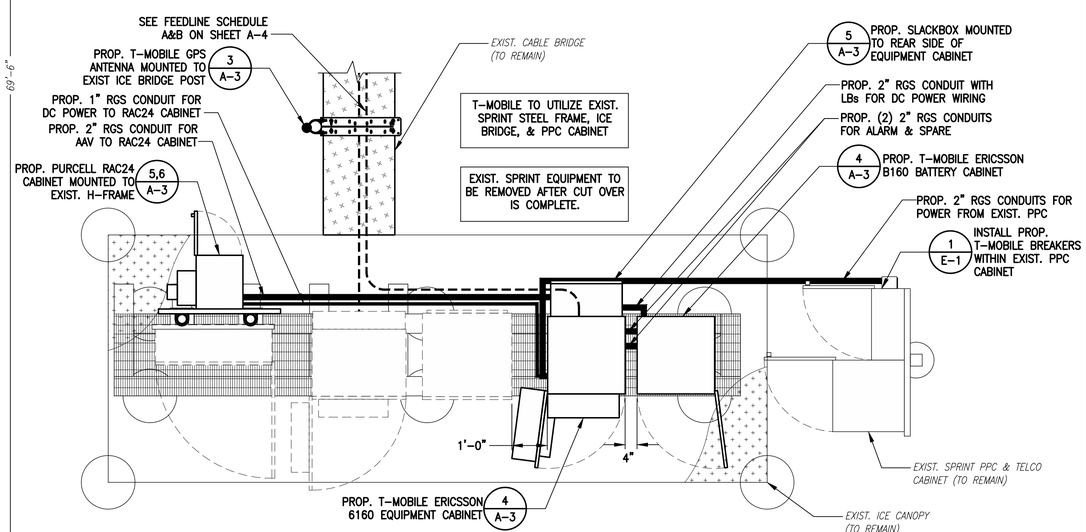
SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).



COMPOUND PLAN
1 A-1
SCALE: 1" = 5'-0"
0 5'-0" 10'-0 15'-0"



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



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

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COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
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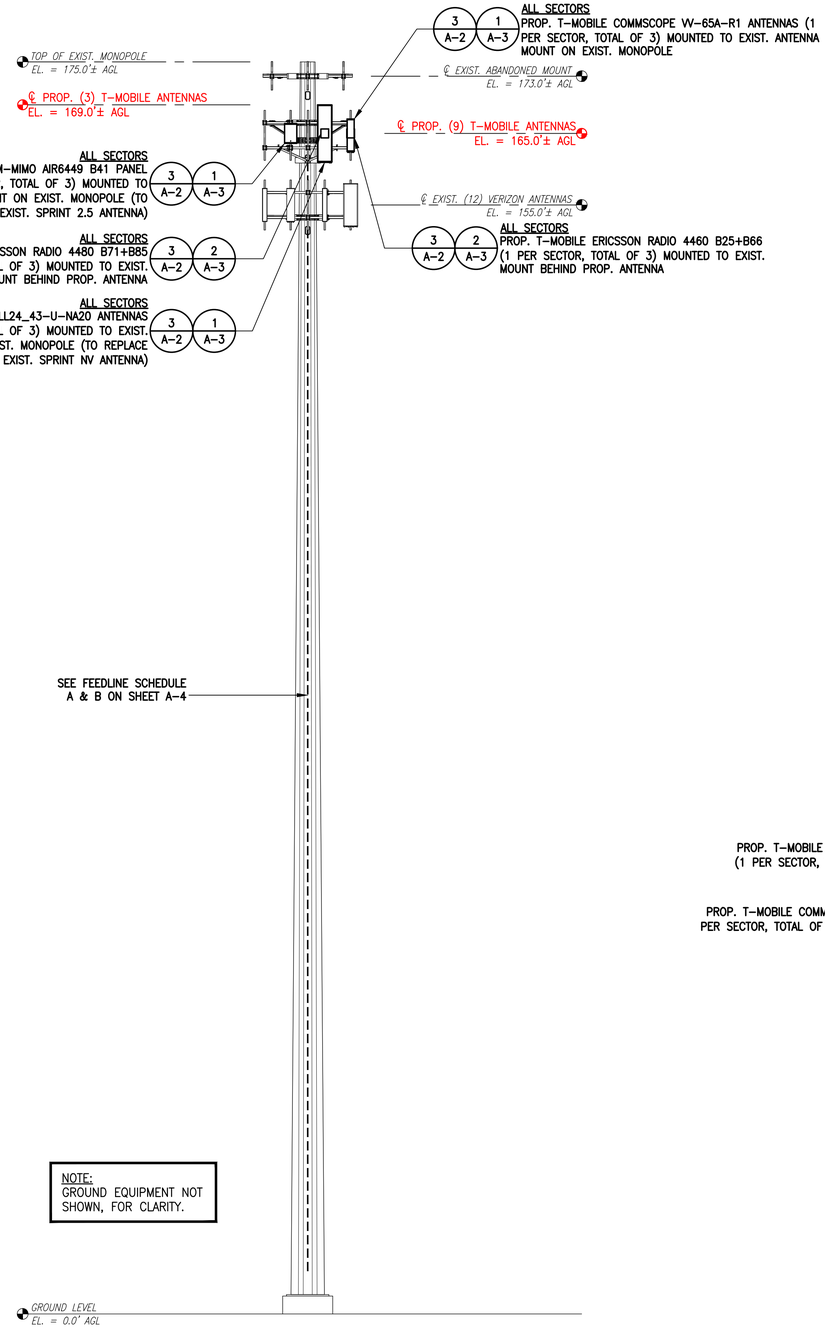


TOWER ELEVATION (1 / A-2)
SCALE: 1" = 10'
0 5' 10' 20' 30'

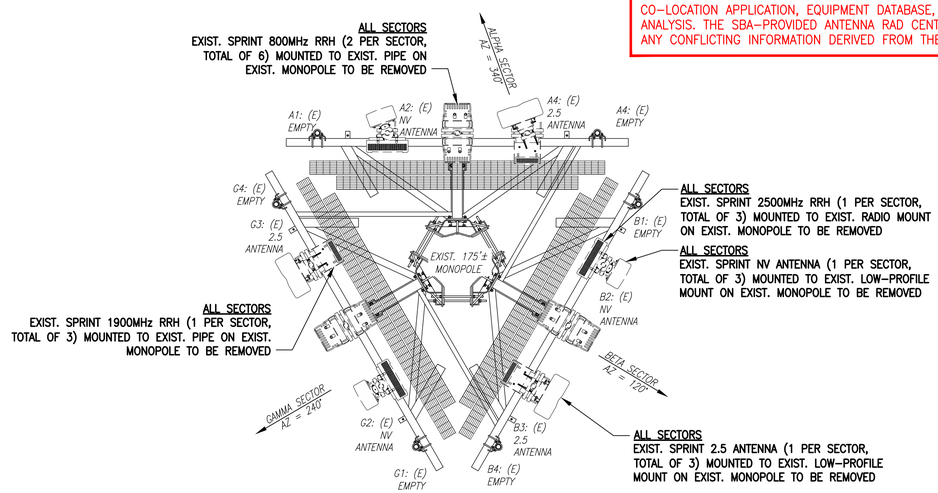
NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

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

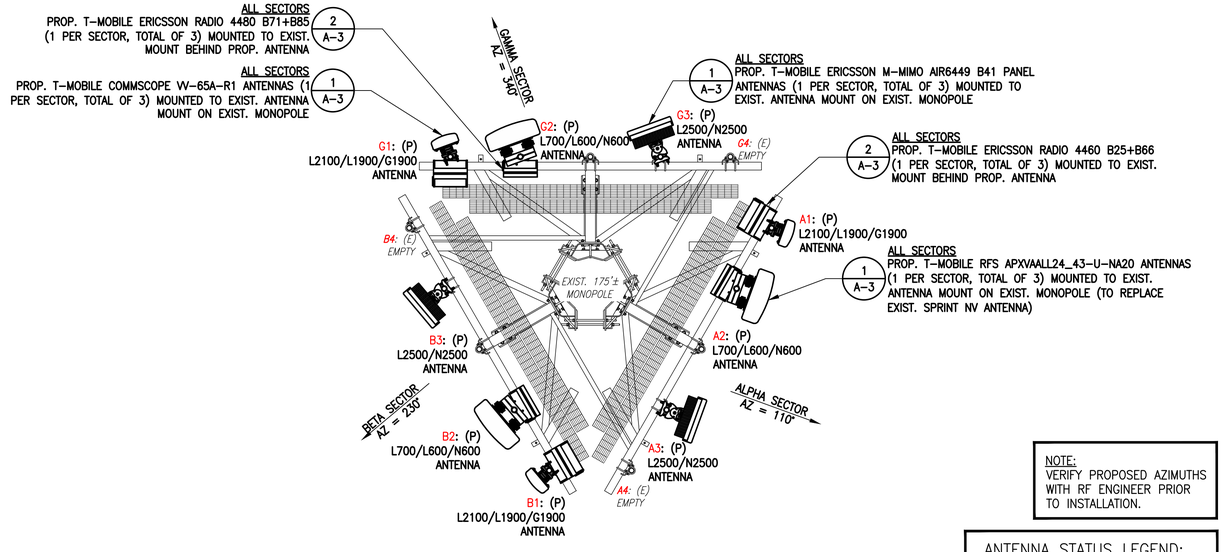
SPECIAL TOWER TOP EQUIPMENT INSTALLATION WORK NOTE (SAFETY-CLIMB ALIGNMENT REQUIREMENTS):
GENERAL CONTRACTOR SHALL ORIENT PROPOSED PLATFORM REINFORCEMENT KIT RING-MOUNTS SO THAT EXISTING SAFETY CLIMB CABLE IS NOT OBSTRUCTED/RE-ROUTED FROM VERTICAL ALIGNMENT AND IS NOT IN PHYSICAL CONTACT WITH EXISTING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

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS:)
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE T-MOBILE RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SPA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHES)

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



EXISTING ANTENNA PLAN (2 / A-2)
SCALE: 3/8" = 1'-0"
0 2'-8" 5'-4" 8'-0"



PROPOSED ANTENNA PLAN (3 / A-2)
SCALE: 3/8" = 1'-0"
0 2'-8" 5'-4" 8'-0"

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

ANTENNA STATUS LEGEND:

EMPTY – EMPTY PIPE

(E) – EXISTING
(P) – INSTALL
(F) – FUTURE

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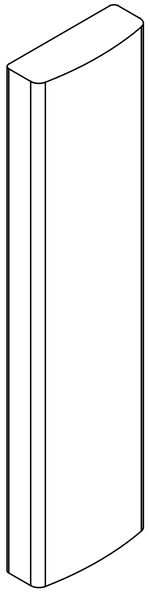
SHEET TITLE
TOWER ELEVATION & ANTENNA PLANS

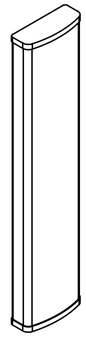
SHEET NUMBER
A-2

1815.278

CONTRACTOR NOTE:
ALL EXISTING T-MOBILE EQUIPMENT, ANTENNAS, CABLES, & ALL ASSOCIATED HARDWARE TO BE REMOVED AFTER CONSTRUCTION IS COMPLETE.



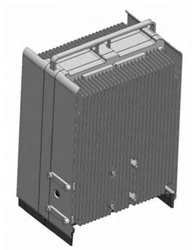
RFS APXVAALL24_43-U-NA20 ANTENNA
DIMENSIONS: 95.9"H x 24.0"W x 8.5"D
WEIGHT: 122.8 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3



COMMSCOPE VV-65A-R1 ANTENNA
DIMENSIONS: 54.7"H x 12.1"W x 4.6"D
WEIGHT: 23.8 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON M-MIMO AIR6449 B41 ANTENNA
DIMENSIONS: 33.1"H x 20.5"W x 8.3"D
WEIGHT: 103.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

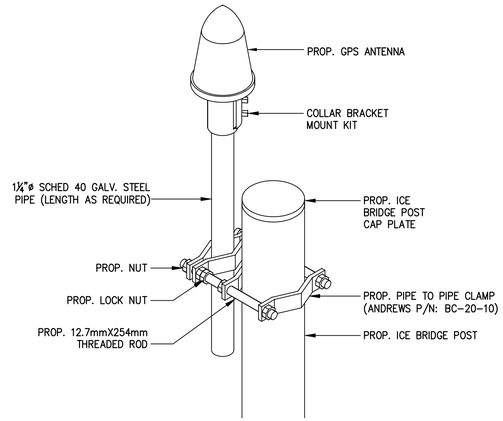
ANTENNA DETAILS
SCALE: N.T.S.
1 / A-3



ERICSSON RADIO 4460 B25+B66
DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
WEIGHT: 104.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

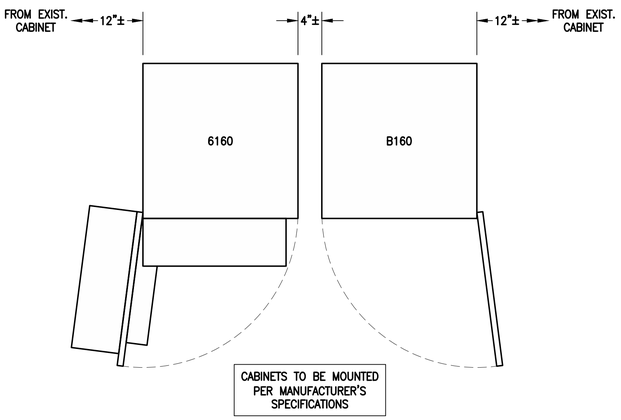
ERICSSON RADIO 4480 B71+B85
DIMENSIONS: 19.2"H x 15.1"W x 7.5"D
WEIGHT: 92.6 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO DETAILS
SCALE: N.T.S.
2 / A-3



NOTE:
THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1"-1¼" DIAMETER GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.

GPS ANTENNA MOUNTING DETAIL
SCALE: N.T.S.
3 / A-3



ERICSSON 6160 SITE SUPPORT CABINET
DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
QUANTITY: TOTAL OF 1

ERICSSON B160 BATTERY CABINET
DIMENSIONS: 63.25"H x 26.0"W x 26.0"D
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL
SCALE: N.T.S.
4 / A-3

PURCELL SITE SUPPORT CABINET RAC24
DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
TOTAL OF 1

SLACKBOX
DIMENSIONS: 24.0"H x 24.0"W x 12.0"D
QUANTITY: TOTAL OF 1

SSC DETAILS
SCALE: N.T.S.
5 / A-3

T-MOBILE NORTHEAST LLC
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SBA COMMUNICATIONS CORP.
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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25937
LICENSED PROFESSIONAL CIVIL ENGINEER
12/3/21

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	12/03/21	REVISED CONSTRUCTION	JRV
2	12/01/21	REVISED CONSTRUCTION	JRV
1	08/30/21	ISSUED FOR CONSTRUCTION	JRV
0	08/24/21	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTHA809A

SITE ADDRESS:
203 DAVIS ROAD
CHAPLIN, CT 06235

SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

1815.278

FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 COMMSCOPE VV-65A-R1	165'± AGL	110°	0°	2°	L2100/L1900/G1900	RADIO 4460 B25+B66	(3) 2" (6x24) HCS FIBER CABLES
	A2 RFS APXVAALL24_43-U-NA20	165'± AGL	110°	0°	2°	L700/L600/N600	RADIO 4480 B71+B85	
	A3 ERICSSON M-MIMO AIR6449 B41	165'± AGL	110°	0°	2°	L2500/N2500	–	
	A4 EMPTY PIPE	–	–	–	–	–	–	
BETA	B1 COMMSCOPE VV-65A-R1	165'± AGL	230°	0°	2°	L2100/L1900/G1900	RADIO 4460 B25+B66	
	B2 RFS APXVAALL24_43-U-NA20	165'± AGL	230°	0°	2°	L700/L600/N600	RADIO 4480 B71+B85	
	B3 ERICSSON M-MIMO AIR6449 B41	165'± AGL	230°	0°	2°	L2500/N2500	–	
	B4 EMPTY PIPE	–	–	–	–	–	–	
GAMMA	G1 COMMSCOPE VV-65A-R1	165'± AGL	340°	0°	2°	L2100/L1900/G1900	RADIO 4460 B25+B66	
	G2 RFS APXVAALL24_43-U-NA20	165'± AGL	340°	0°	2°	L700/L600/N600	RADIO 4480 B71+B85	
	G3 ERICSSON M-MIMO AIR6449 B41	165'± AGL	340°	0°	2°	L2500/N2500	–	
	G4 EMPTY PIPE	–	–	–	–	–	–	

CABLE NOTE: ALL SPRINT CABLES AND ASSOCIATED HARDWARE TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV1 – 10/14/21

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES	LOCATION
A	*EXISTING TO REMAIN:* *NONE* *EXISTING TO BE REMOVED:* *SPRINT CABLES AND ASSOCIATED HARDWARE TO BE REMOVED* *(1) ½" COAX CABLE FOR GPS ANTENNA*	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (3) 2" (6x24) HCS FIBER CABLES (1) ½" COAX CABLE FOR GPS ANTENNA	

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

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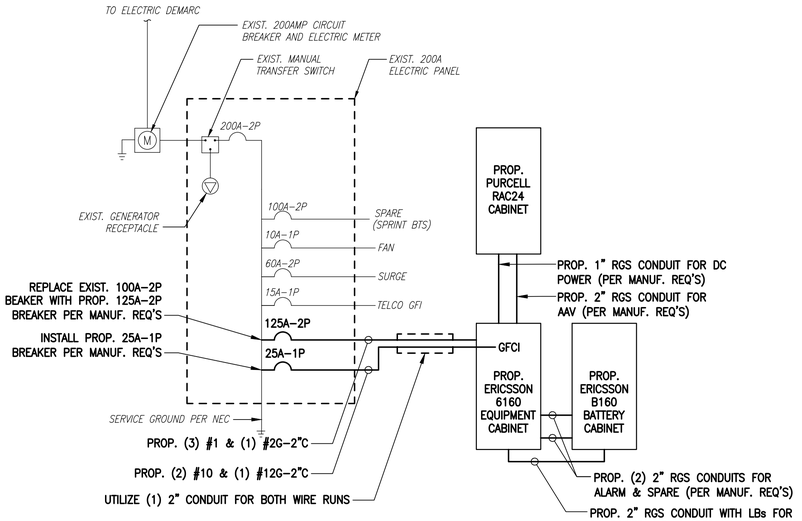
CHAPLIN, CT 06235

SHEET TITLE
ANTENNA & FEEDLINE CHARTS

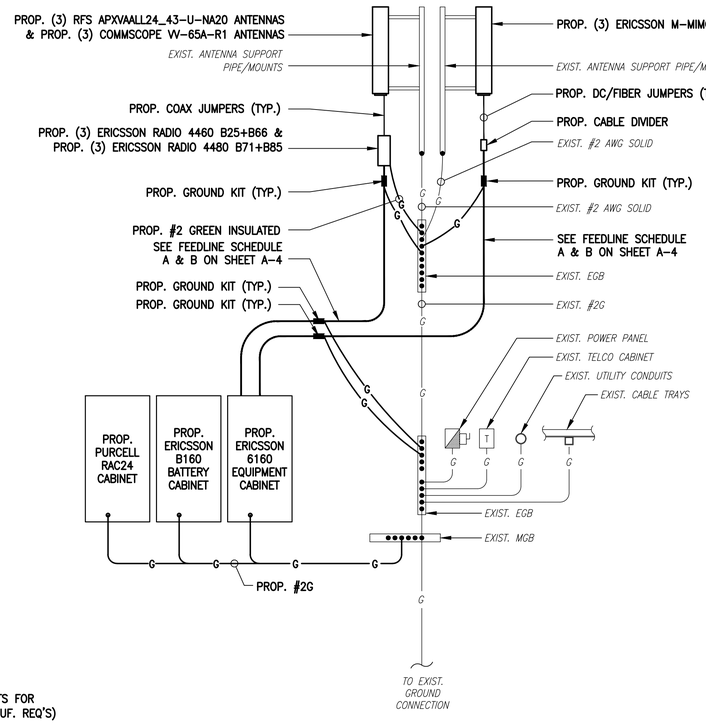
SHEET NUMBER
A-4

1815.278



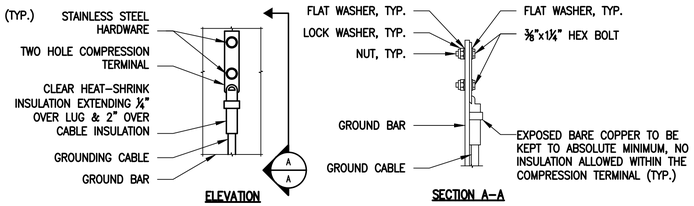
ONE LINE DIAGRAM

SCALE: NOT TO SCALE — 1 / E-1



GROUNDING RISER DIAGRAM

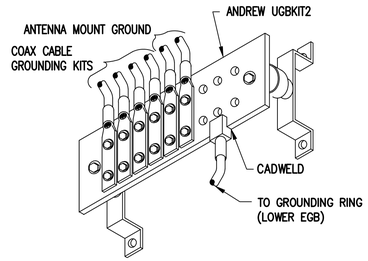
SCALE: NOT TO SCALE — 2 / E-1



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

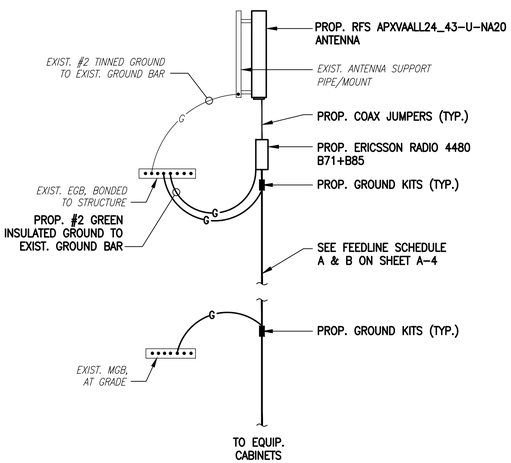
TYPICAL GROUND BAR CONNECTIONS DETAIL

SCALE: NOT TO SCALE — 3 / E-1

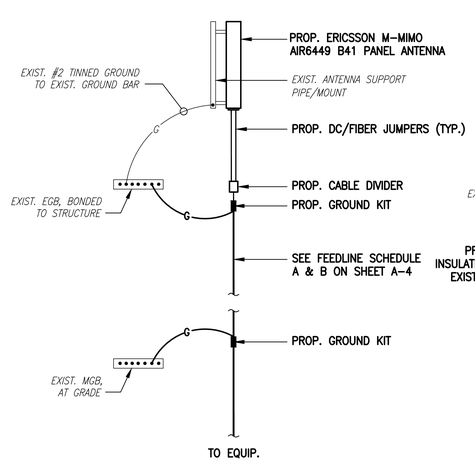


GROUND BAR (EGB)

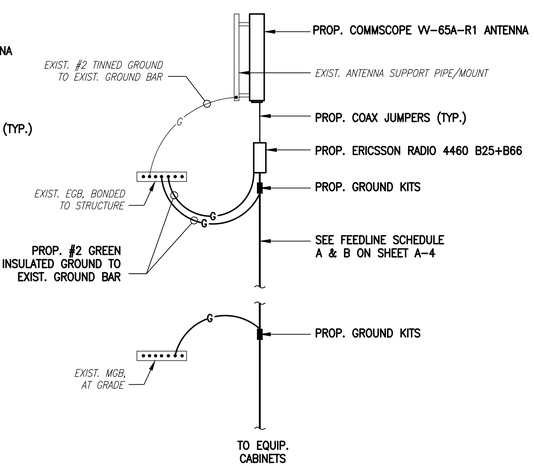
SCALE: NOT TO SCALE — 5 / E-1



L700/L600/N600 ANTENNA



L2500/N2500 ANTENNA



L2100/L1900/G1900 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL

SCALE: NOT TO SCALE — 4 / E-1

ELECTRICAL AND GROUNDING NOTES

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

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SITE NUMBER:
CTHA809A

SITE ADDRESS:
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CHAPLIN, CT 06235

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.278

EXHIBIT 7

Structural Analysis

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 Nudd Corporation Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT03113-S
Customer Site Name: North Chaplin
Carrier Name: T-Mobile Sprint (App#: 160153-2)
Carrier Site ID / Name: CTHA809A / CT33XC569 / Mansfield Center
Site Location: 203 Davis Road
Chaplin, Connecticut
Windham County
Latitude: 41.793486
Longitude: -72.160178

Analysis Result:

Max Structural Usage: 66.9% [Pass]
Max Foundation Usage: 47.0% [Pass]
Additional Usage Caused by New Mount: +0.2%

Report Prepared By: Bishal Pandit

Introduction

The purpose of this report is to summarize the analysis results on the 175 ft Nudd Corporation 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 Fred A. Nudd Corporation Project # 7678; 10125-056 Dated 07/2000
Foundation Drawing	Foundation Drawings prepared by Fred A. Nudd Corporation Project # 7678; 10125-056 Dated 07/2000
Geotechnical Report	Geotechnical Report prepared by FDH, Project # 1206274EG1 Dated 08/20/2012
Modification Drawings	N/A
Mount Analysis	TES, Project# 110564, Dated: 02/03/2022

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** 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 V_{ult} = 130 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 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:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.173, 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	173.0	-	-	Low Profile Platform (Abandoned)	-	Nextel
-	165.0	3	RFS APXVTM14-C-I20	Low Profile Platform w/ Site Pro PRK-1245L, PRK-SFS-H-L, & SPTB	(4) 1-1/4" Hybrid	Sprint Nextel
-		3	Commscope NNVV-65B-R4			
-		3	ALU 1900 MHz			
-		6	ALU 800 MHz			
-		3	ALU TD-RRH8x20-25			
7	153.0	2	Antel LPA-80080-6CF-EDIN - Panel	Low Profile Platform w/ Modification [Support Rail w/ End Connection] & (3) Commscope BSAMNT-SBS-2-2	(6) 1 5/8" (2) 1 5/8" Fiber	Verizon
8		4	Antel LPA-80063/6CF_5 - Panel			
9		6	Andrew JAHH-65B-R3B - Panel			
10		3	Samsung MT6407-77A			
11		3	Commscope CBC78T-DS-43-2X			
12		3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A)			
13		3	Samsung B5/B13 RRH-BR04C (RFV01U-D2A)			
14		2	RFS DB-T1-6Z-8AB-0Z			

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
1	165.0	3	Commscope VV-65A-R1 - Panel	SitePro1 RMQP-4096-HK (Platform w/ Handrails & Kickers)	(3) 1.9" Fiber	T-Mobile Sprint
2		3	RFS APXVAALL24_43-U-NA20 - Panel			
3		3	Ericsson AIR6449 B41 - Panel			
4		3	Ericsson 4460 B25 + B66 - RRU			
5		3	Ericsson 4480 B71 + B85 - RRU			
6		3	ALU TD-RRH8x20-25 - RRU			

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:	**50.6%**	**37.9%**	**66.9%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3799.1	30.8	54.1

.

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 TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.9360 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 TIA-222 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 ANSI/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 50.56% at 0.0ft

Structure:	CT03113-S-SBA	**Code:**	EIA/TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Gh:**	1.1		
Base Elev:	0.000 (ft)			Page: 1	

Dead Load Factor:	1.20	**Iterations:**	23
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 101 mph Wind

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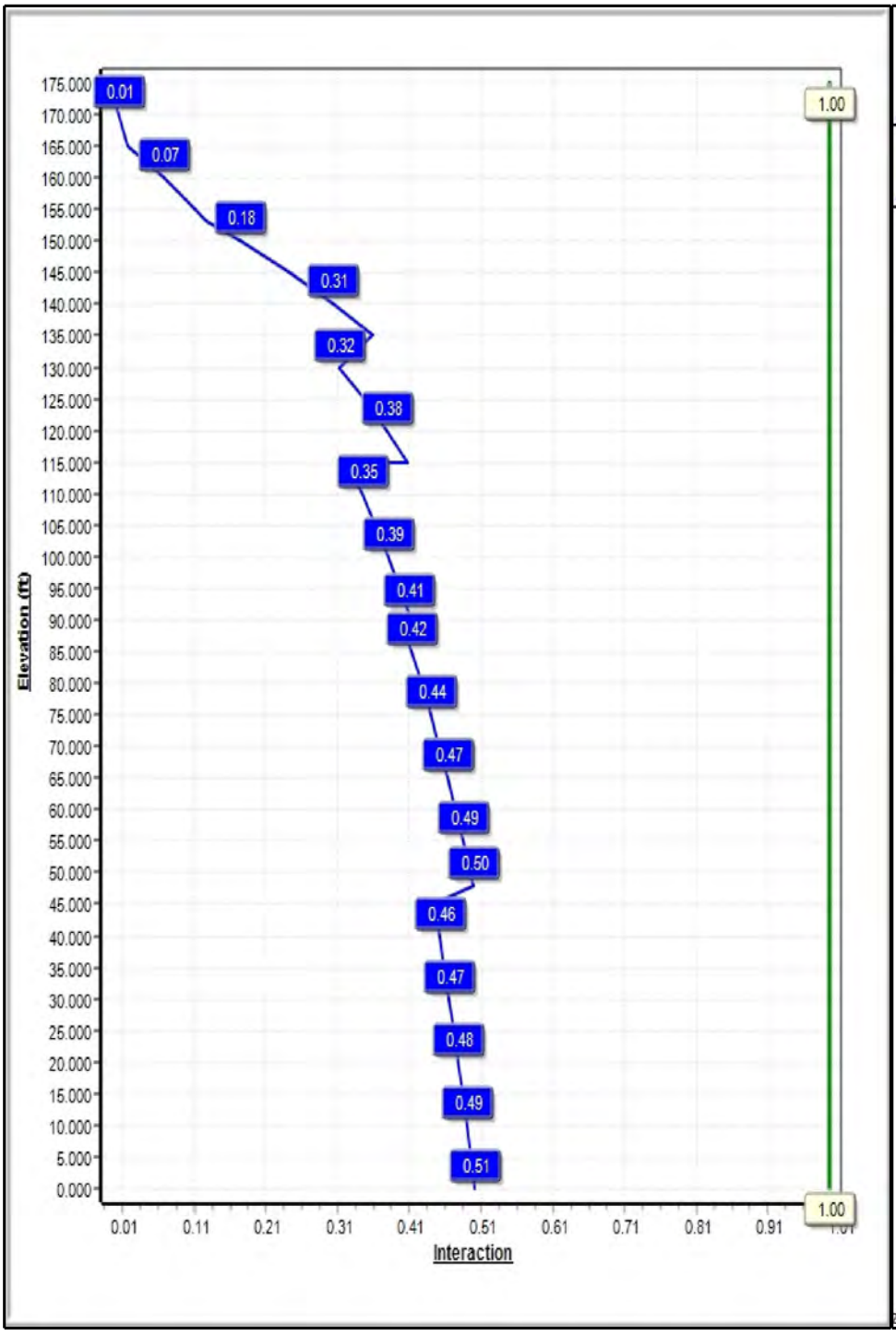
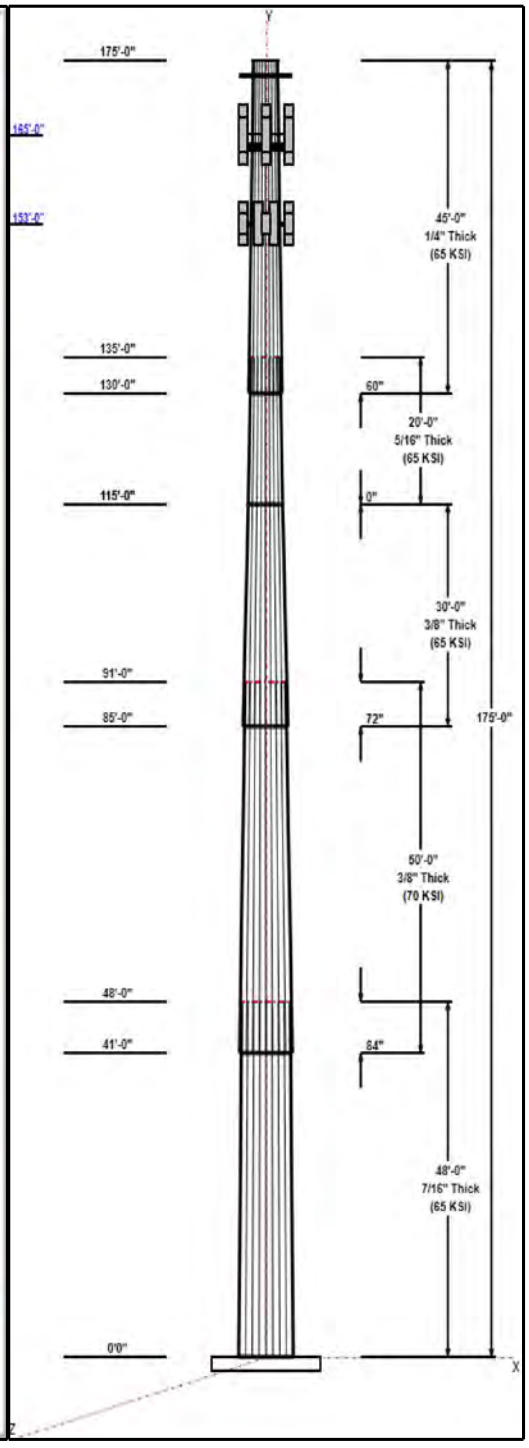




Structure: CT03113-S-SBA

Type: Tapered
Site Name: North Chaplin
Height: 175.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.24286

2/8/2022

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	52.84	64.50	0.438		0.24286	65
2	50.00	43.15	55.29	0.375	Slip	0.24286	70
3	30.00	38.07	45.36	0.375	Slip	0.24286	65
4	20.00	33.21	38.07	0.313	Butt	0.24286	65
5	45.00	24.00	34.93	0.250	Slip	0.24286	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
173.00	173.00	1	Low Profile Platform	Nextel
165.00	165.00	3	ALU TD-RRH8x20-25	T-Mobile Sprint
165.00	165.00	3	VV-65A-R1	T-Mobile Sprint
165.00	165.00	3	APXVAALL24_43-U-NA20	T-Mobile Sprint
165.00	165.00	3	AIR6449 B41	T-Mobile Sprint
165.00	165.00	3	4460 B25 + B66	T-Mobile Sprint
165.00	165.00	3	4480 B71 + B85	T-Mobile Sprint
165.00	165.00	1	RMQP-4096-HK	T-Mobile Sprint
153.00	153.00	6	JAHH-65B-R3B	Verizon
153.00	153.00	4	Antel LPA-80063/6CF	Verizon
153.00	153.00	2	Antel LPA-80080/6CF	Verizon
153.00	153.00	2	RFS DB-T1-6Z-8AB-0Z -	Verizon
153.00	153.00	3	MT6407-77A	Verizon
153.00	153.00	3	Bsamnt-sbs-2-2	Verizon
153.00	153.00	3	CBC78T-DS-43	Verizon
153.00	153.00	3	B2/B66A RRH-BR049	Verizon
153.00	153.00	3	B5/B13 RRH-BR04C	Verizon
153.00	153.00	1	Low Profile Platform	Verizon
153.00	153.00	1	MS-HRECP	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	165.00	Inside	1.9" Fiber	T-Mobile Sprint
0.00	155.00	Inside	1 5/8" Coax	Verizon
0.00	155.00	Inside	1 5/8" Fiber	Verizon

Anchor Bolts

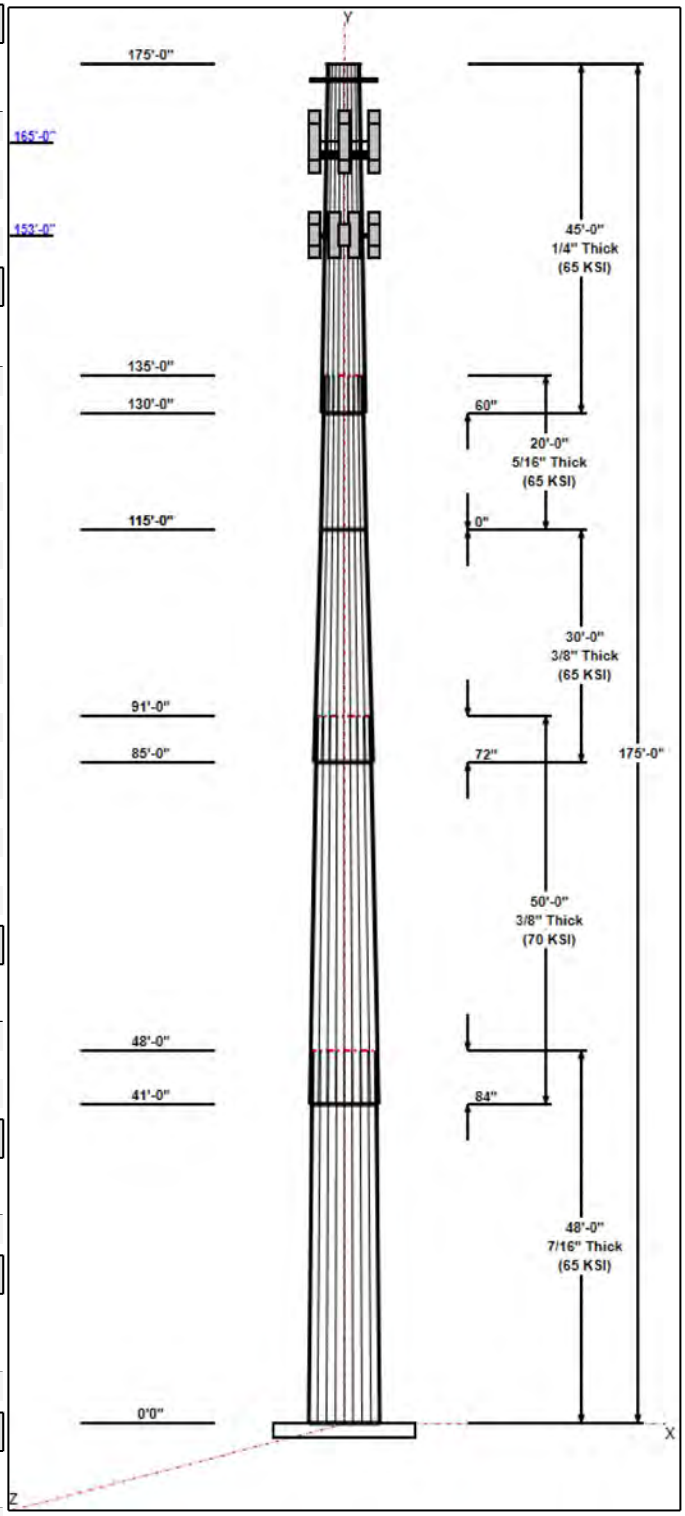
Qty	Specifications	Grade (ksi)	Arrangement
29	2.00" A687	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	64.0	50.0	Polygon

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	3799.1	30.8	54.1
0.9D + 1.6W 101 mph Wind	3764.6	30.8	40.6
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1056.6	8.5	90.9
1.2D + 1.0E	272.1	2.1	54.1
0.9D + 1.0E	269.5	2.1	40.6



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1.0D + 1.0W 60 mph Wind	833.4	6.8	45.1

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Structure: CT03113-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Chaplin
Height: 175.00 (ft)

2/8/2022

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Shaft Properties

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.4375	65		0.00	13,207
2	18	50.000	0.3750	70	Slip	84.00	9,891
3	18	30.000	0.3750	65	Slip	72.00	5,023
4	18	20.000	0.3125	65	Flange	0.00	2,385
5	18	45.000	0.2500	65	Slip	60.00	3,550
					Total Shaft Weight:		**34,056**

	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	64.50	0.00	88.96	46124.76	24.59	147.43	52.84	48.00	72.77	25249.3	19.89	120.7	0.242857
2	55.29	41.00	65.36	24906.71	24.59	147.45	43.15	91.00	50.91	11769.1	18.88	115.0	0.242857
3	45.36	85.00	53.54	13686.62	19.92	120.95	38.07	115.00	44.87	8055.20	16.49	101.5	0.242857
4	38.07	115.0	37.45	6746.11	20.07	121.83	33.21	135.00	32.63	4463.27	17.33	106.2	0.242857
5	34.93	130.0	27.52	4180.88	23.22	139.71	24.00	175.00	18.84	1343.00	15.52	96.00	0.242857

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Load Summary

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

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	173.00	Low Profile Platform (Abandoned)	1	1200.00	25.00	1.00	2616.23	53.325	1.00	0.00	0.00
2	165.00	ALU TD-RRH8x20-25	3	70.00	4.05	0.67	229.65	5.174	0.67	0.00	0.00
3	165.00	VV-65A-R1	3	23.81	7.90	0.74	224.91	7.372	0.74	0.00	0.00
4	165.00	APXVAALL24_43-U-NA20	3	122.80	20.24	0.73	723.66	22.831	0.73	0.00	0.00
5	165.00	AIR6449 B41	3	103.00	5.65	0.71	287.58	6.929	0.71	0.00	0.00
6	165.00	4460 B25 + B66	3	104.00	2.85	0.67	196.35	3.758	0.67	0.00	0.00
7	165.00	4480 B71 + B85	3	93.00	2.85	0.67	189.83	3.758	0.67	0.00	0.00
8	165.00	RMQP-4096-HK	1	2449.00	46.00	1.00	5900.97	89.226	1.00	0.00	0.00
9	153.00	JAHH-65B-R3B	6	63.30	9.11	0.83	389.30	10.945	0.83	0.00	0.00
10	153.00	Antel LPA-80063/6CF	4	27.00	9.59	0.94	430.82	11.444	0.94	0.00	0.00
11	153.00	Antel LPA-80080/6CF	2	21.00	8.62	1.70	298.66	10.411	1.70	0.00	0.00
12	153.00	RFS DB-T1-6Z-8AB-0Z - DC SS	2	44.00	4.80	0.67	369.82	6.053	0.67	0.00	0.00
13	153.00	MT6407-77A	3	79.40	4.69	0.70	250.60	5.976	0.70	0.00	0.00
14	153.00	Bsamnt-sbs-2-2	3	67.46	0.80	1.00	193.29	1.919	1.00	0.00	0.00
15	153.00	CBC78T-DS-43	3	10.40	0.37	0.67	42.76	0.775	0.67	0.00	0.00
16	153.00	B2/B66A RRH-BR049	3	84.40	1.87	0.67	195.21	2.661	0.67	0.00	0.00
17	153.00	B5/B13 RRH-BR04C (RFV01U-D2A)	3	70.30	1.87	0.67	171.16	2.661	0.67	0.00	0.00
18	153.00	Low Profile Platform	1	1500.00	22.00	1.00	4001.95	50.752	1.00	0.00	0.00
19	153.00	MS-HRECP	1	514.00	12.25	1.00	1328.93	28.244	1.00	0.00	0.00
		Totals:	**51**	**8,766.51**			**27,359.14**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	165.00	(3) 1.9" Fiber	0.00	Inside
0.00	155.00	(6) 1 5/8" Coax	0.00	Inside
0.00	155.00	(2) 1 5/8" Fiber	0.00	Inside

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Shaft Section Properties

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

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		0.4375	64.500	88.956	46124.8	24.59	147.43	72.5	1408.	0.0
5.00		0.4375	63.286	87.269	43551.3	24.10	144.65	73.1	1355.	1499.1
10.00		0.4375	62.071	85.583	41075.4	23.61	141.88	73.6	1303.	1470.4
15.00		0.4375	60.857	83.897	38695.2	23.12	139.10	74.2	1252.	1441.8
20.00		0.4375	59.643	82.211	36408.7	22.63	136.33	74.8	1202.	1413.1
25.00		0.4375	58.429	80.525	34214.2	22.14	133.55	75.4	1153.	1384.4
30.00		0.4375	57.214	78.839	32109.6	21.65	130.78	75.9	1105.	1355.7
35.00		0.4375	56.000	77.153	30093.2	21.16	128.00	76.5	1058.	1327.0
40.00		0.4375	54.786	75.467	28163.0	20.67	125.22	77.1	1012.	1298.3
41.00	Bot - Section 2	0.4375	54.543	75.129	27787.1	20.57	124.67	77.2	1003.	256.2
45.00		0.4375	53.571	73.780	26317.1	20.18	122.45	77.7	967.6	1895.2
48.00	Top - Section 1	0.3750	53.593	63.340	22664.6	23.79	142.91	0.0	0.0	1399.0
50.00		0.3750	53.107	62.762	22049.7	23.56	141.62	78.2	817.8	429.1
55.00		0.3750	51.893	61.317	20561.2	22.99	138.38	79.0	780.4	1055.5
60.00		0.3750	50.679	59.872	19141.3	22.42	135.14	79.7	743.9	1030.9
65.00		0.3750	49.464	58.426	17788.4	21.85	131.90	80.5	708.3	1006.4
70.00		0.3750	48.250	56.981	16500.7	21.28	128.67	81.2	673.6	981.8
75.00		0.3750	47.036	55.536	15276.7	20.71	125.43	82.0	639.7	957.2
80.00		0.3750	45.821	54.091	14114.8	20.13	122.19	82.7	606.7	932.6
85.00	Bot - Section 3	0.3750	44.607	52.645	13013.4	19.56	118.95	83.5	574.6	908.0
90.00		0.3750	43.393	51.200	11970.8	18.99	115.71	84.2	543.4	1782.0
91.00	Top - Section 2	0.3750	43.900	51.804	12399.2	19.23	117.07	0.0	0.0	350.5
95.00		0.3750	42.929	50.648	11587.3	18.77	114.48	79.3	531.6	697.2
100.00		0.3750	41.714	49.202	10623.4	18.20	111.24	80.0	501.6	849.4
105.00		0.3750	40.500	47.757	9714.5	17.63	108.00	80.7	472.4	824.8
110.00		0.3750	39.286	46.312	8859.0	17.06	104.76	81.3	444.2	800.2
115.00	Top - Section 3	0.3750	38.071	44.867	8055.2	16.49	101.52	82.0	416.7	775.6
115.00	Bot - Section 4	0.3125	38.071	37.451	6746.1	19.79	121.83	77.8	349.0	
120.00		0.3125	36.857	36.246	6116.0	19.39	117.94	78.6	326.8	626.9
125.00		0.3125	35.643	35.042	5526.4	18.70	114.06	79.4	305.4	606.4
130.00	Bot - Section 5	0.3125	34.429	33.838	4975.9	18.02	110.17	80.2	284.7	586.0
135.00	Top - Section 4	0.2500	33.714	26.553	3756.9	22.37	134.86	0.0	0.0	1025.4
140.00		0.2500	32.500	25.589	3362.6	21.51	130.00	76.1	203.8	443.6
145.00		0.2500	31.286	24.626	2996.9	20.66	125.14	77.1	188.7	427.2
150.00		0.2500	30.071	23.662	2658.7	19.80	120.29	78.1	174.1	410.8
153.00		0.2500	29.343	23.084	2468.6	19.29	117.37	78.7	165.7	238.6
155.00		0.2500	28.857	22.699	2347.0	18.94	115.43	79.1	160.2	155.8
160.00		0.2500	27.643	21.735	2060.6	18.09	110.57	80.1	146.8	378.0
165.00		0.2500	26.429	20.772	1798.5	17.23	105.71	81.1	134.0	361.6
170.00		0.2500	25.214	19.808	1559.7	16.37	100.86	82.1	121.8	345.2
173.00		0.2500	24.486	19.230	1427.1	15.86	97.94	82.5	114.8	199.3
175.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	129.6
										34056.0

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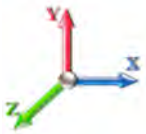
Wind Loading - Shaft

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	17.366	19.10	461.21	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	452.53	0.650	0.000	5.00	27.033	17.57	537.1	0.0	1799.0
10.00		1.00	0.70	17.366	19.10	443.84	0.650	0.000	5.00	26.519	17.24	526.8	0.0	1764.5
15.00		1.00	0.70	17.366	19.10	435.16	0.650	0.000	5.00	26.005	16.90	516.6	0.0	1730.1
20.00		1.00	0.70	17.366	19.10	426.48	0.650	0.000	5.00	25.491	16.57	506.4	0.0	1695.7
25.00		1.00	0.70	17.366	19.10	417.79	0.650	0.000	5.00	24.978	16.24	496.2	0.0	1661.3
30.00		1.00	0.70	17.381	19.12	409.28	0.650	0.000	5.00	24.464	15.90	486.4	0.0	1626.8
35.00		1.00	0.73	18.163	19.98	409.52	0.650	0.000	5.00	23.950	15.57	497.7	0.0	1592.4
40.00		1.00	0.76	18.870	20.76	408.35	0.650	0.000	5.00	23.436	15.23	505.9	0.0	1558.0
41.00	Bot - Section 2	1.00	0.77	19.003	20.90	407.98	0.650	0.000	1.00	4.626	3.01	100.6	0.0	307.5
45.00		1.00	0.79	19.516	21.47	406.08	0.650	0.000	4.00	18.551	12.06	414.2	0.0	2274.3
48.00	Top - Section 1	1.00	0.80	19.879	21.87	404.27	0.650	0.000	3.00	13.697	8.90	311.5	0.0	1678.8
50.00		1.00	0.81	20.112	22.12	408.66	0.650	0.000	2.00	9.029	5.87	207.7	0.0	514.9
55.00		1.00	0.83	20.667	22.73	404.79	0.650	0.000	5.00	22.212	14.44	525.2	0.0	1266.6
60.00		1.00	0.85	21.187	23.31	400.27	0.650	0.000	5.00	21.699	14.10	525.9	0.0	1237.1
65.00		1.00	0.87	21.678	23.85	395.17	0.650	0.000	5.00	21.185	13.77	525.4	0.0	1207.6
70.00		1.00	0.89	22.142	24.36	389.57	0.650	0.000	5.00	20.671	13.44	523.6	0.0	1178.1
75.00		1.00	0.91	22.582	24.84	383.53	0.650	0.000	5.00	20.157	13.10	520.7	0.0	1148.6
80.00		1.00	0.93	23.003	25.30	377.09	0.650	0.000	5.00	19.644	12.77	516.9	0.0	1119.1
85.00	Bot - Section 3	1.00	0.94	23.404	25.74	370.29	0.650	0.000	5.00	19.130	12.43	512.2	0.0	1089.6
90.00		1.00	0.96	23.790	26.17	363.16	0.650	0.000	5.00	18.933	12.31	515.3	0.0	2138.4
91.00	Top - Section 2	1.00	0.96	23.865	26.25	361.70	0.650	0.000	1.00	3.725	2.42	101.7	0.0	420.6
95.00		1.00	0.97	24.160	26.58	362.06	0.650	0.000	4.00	14.695	9.55	406.1	0.0	836.7
100.00		1.00	0.99	24.517	26.97	354.41	0.650	0.000	5.00	17.906	11.64	502.2	0.0	1019.3
105.00		1.00	1.00	24.861	27.35	346.50	0.650	0.000	5.00	17.392	11.30	494.7	0.0	989.8
110.00		1.00	1.02	25.194	27.71	338.35	0.650	0.000	5.00	16.878	10.97	486.5	0.0	960.3
115.00	Top - Section 3	1.00	1.03	25.516	28.07	329.98	0.650	0.000	5.00	16.365	10.64	477.7	0.0	930.8
120.00		1.00	1.04	25.828	28.41	321.40	0.650	0.000	5.00	15.851	10.30	468.3	0.0	752.3
125.00		1.00	1.05	26.131	28.74	312.63	0.650	0.000	5.00	15.337	9.97	458.5	0.0	727.7
130.00	Bot - Section 5	1.00	1.07	26.425	29.07	303.68	0.650	0.000	5.00	14.823	9.64	448.1	0.0	703.1
135.00	Top - Section 4	1.00	1.08	26.712	29.38	294.55	0.650	0.000	5.00	14.521	9.44	443.7	0.0	1230.5
140.00		1.00	1.09	26.991	29.69	289.72	0.650	0.000	5.00	14.007	9.10	432.5	0.0	532.3
145.00		1.00	1.10	27.263	29.99	280.30	0.650	0.000	5.00	13.494	8.77	420.8	0.0	512.6
150.00		1.00	1.11	27.528	30.28	270.72	0.650	0.000	5.00	12.980	8.44	408.8	0.0	492.9
153.00	Appurtenance(s)	1.00	1.12	27.684	30.45	264.91	0.650	0.000	3.00	7.541	4.90	238.8	0.0	286.3
155.00		1.00	1.12	27.787	30.57	261.01	0.650	0.000	2.00	4.925	3.20	156.6	0.0	186.9
160.00		1.00	1.13	28.040	30.84	251.17	0.650	0.000	5.00	11.952	7.77	383.4	0.0	453.6
165.00	Appurtenance(s)	1.00	1.14	28.288	31.12	241.19	0.650	0.000	5.00	11.439	7.44	370.2	0.0	433.9
170.00		1.00	1.15	28.530	31.38	231.09	0.650	0.000	5.00	10.925	7.10	356.6	0.0	414.3
173.00	Appurtenance(s)	1.00	1.16	28.673	31.54	224.98	0.650	0.000	3.00	6.308	4.10	206.9	0.0	239.1
175.00		1.00	1.16	28.768	31.64	220.88	0.650	0.000	2.00	4.103	2.67	135.0	0.0	155.5
								Totals:	**175.00**			**16,669.6**		**40,867.2**

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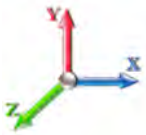
Discrete Appurtenance Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	173.00	Low Profile Platform	1	28.673	31.541	1.00	1.00	25.00	1440.00	0.000	0.000	1261.63	0.00	0.00
2	165.00	RMQP-4096-HK	1	28.288	31.117	1.00	1.00	46.00	2938.80	0.000	0.000	2290.20	0.00	0.00
3	165.00	4480 B71 + B85	3	28.288	31.117	0.50	0.75	4.30	334.80	0.000	0.000	213.90	0.00	0.00
4	165.00	4460 B25 + B66	3	28.288	31.117	0.50	0.75	4.30	374.40	0.000	0.000	213.90	0.00	0.00
5	165.00	AIR6449 B41	3	28.288	31.117	0.53	0.75	9.03	370.80	0.000	0.000	449.37	0.00	0.00
6	165.00	APXVAALL24_43-U-NA20	3	28.288	31.117	0.55	0.75	33.24	442.08	0.000	0.000	1655.13	0.00	0.00
7	165.00	VV-65A-R1	3	28.288	31.117	0.55	0.75	13.15	85.72	0.000	0.000	654.87	0.00	0.00
8	165.00	ALU TD-RRH8x20-25	3	28.288	31.117	0.50	0.75	6.11	252.00	0.000	0.000	303.97	0.00	0.00
9	153.00	MS-HRECP	1	27.684	30.453	1.00	1.00	12.25	616.80	0.000	0.000	596.87	0.00	0.00
10	153.00	JAHH-65B-R3B	6	27.684	30.453	0.66	0.80	36.29	455.76	0.000	0.000	1768.42	0.00	0.00
11	153.00	Low Profile Platform	1	27.684	30.453	1.00	1.00	22.00	1800.00	0.000	0.000	1071.94	0.00	0.00
12	153.00	B5/B13 RRH-BR04C	3	27.684	30.453	0.54	0.80	3.01	253.08	0.000	0.000	146.51	0.00	0.00
13	153.00	B2/B66A RRH-BR049	3	27.684	30.453	0.54	0.80	3.01	303.84	0.000	0.000	146.51	0.00	0.00
14	153.00	CBC78T-DS-43	3	27.684	30.453	0.54	0.80	0.59	37.44	0.000	0.000	28.99	0.00	0.00
15	153.00	Bsamnt-sbs-2-2	3	27.684	30.453	1.00	1.00	2.40	242.86	0.000	0.000	116.94	0.00	0.00
16	153.00	MT6407-77A	3	27.684	30.453	0.56	0.80	7.88	285.84	0.000	0.000	383.91	0.00	0.00
17	153.00	RFS DB-T1-6Z-8AB-0Z -	2	27.684	30.453	0.54	0.80	5.15	105.60	0.000	0.000	250.72	0.00	0.00
18	153.00	Antel LPA-80080/6CF	2	27.684	30.453	1.36	0.80	23.45	50.40	0.000	0.000	1142.41	0.00	0.00
19	153.00	Antel LPA-80063/6CF	4	27.684	30.453	0.75	0.80	28.85	129.60	0.000	0.000	1405.54	0.00	0.00
							Totals:		**10,519.81**			**14,101.73**		

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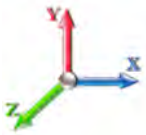
Total Applied Force Summary

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		537.06	1885.44	0.00	0.00
10.00		526.85	1851.02	0.00	0.00
15.00		516.64	1816.59	0.00	0.00
20.00		506.44	1782.17	0.00	0.00
25.00		496.23	1747.74	0.00	0.00
30.00		486.43	1713.32	0.00	0.00
35.00		497.66	1678.89	0.00	0.00
40.00		505.92	1644.47	0.00	0.00
41.00		100.56	324.76	0.00	0.00
45.00		414.16	2343.44	0.00	0.00
48.00		311.50	1730.73	0.00	0.00
50.00		207.74	549.51	0.00	0.00
55.00		525.18	1353.12	0.00	0.00
60.00		525.94	1323.61	0.00	0.00
65.00		525.37	1294.10	0.00	0.00
70.00		523.60	1264.60	0.00	0.00
75.00		520.75	1235.09	0.00	0.00
80.00		516.92	1205.58	0.00	0.00
85.00		512.20	1176.08	0.00	0.00
90.00		515.29	2224.88	0.00	0.00
91.00		101.70	437.89	0.00	0.00
95.00		406.15	905.87	0.00	0.00
100.00		502.21	1105.78	0.00	0.00
105.00		494.65	1076.27	0.00	0.00
110.00		486.46	1046.76	0.00	0.00
115.00		477.68	1017.26	0.00	0.00
120.00		468.35	838.80	0.00	0.00
125.00		458.48	814.21	0.00	0.00
130.00		448.12	789.62	0.00	0.00
135.00		443.74	1316.99	0.00	0.00
140.00		432.51	618.77	0.00	0.00
145.00		420.85	599.09	0.00	0.00
150.00		408.77	579.42	0.00	0.00
153.00	(31) attachments	7297.60	4619.43	0.00	0.00
155.00		156.55	221.54	0.00	0.00
160.00		383.41	489.44	0.00	0.00
165.00	(19) attachments	6151.52	5268.36	0.00	0.00
170.00		356.58	414.26	0.00	0.00
173.00	(1) attachments	1468.55	1679.11	0.00	0.00
175.00		135.02	155.47	0.00	0.00
	Totals:	**30,771.36**	**54,139.51**	**0.00**	**0.00**

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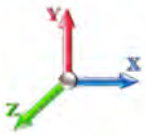
Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-54.11	-30.83	0.00	-3799.1	0.00	3799.14	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.506
5.00	-52.16	-30.39	0.00	-3645.0	0.00	3645.01	5738.32	2869.16	14832.1	7427.08	0.06	-0.115	0.000	0.500
10.00	-50.25	-29.96	0.00	-3493.0	0.00	3493.05	5671.78	2835.89	14374.9	7198.15	0.25	-0.231	0.000	0.494
15.00	-48.38	-29.54	0.00	-3343.2	0.00	3343.24	5603.50	2801.75	13920.1	6970.40	0.55	-0.350	0.000	0.488
20.00	-46.54	-29.12	0.00	-3195.5	0.00	3195.55	5533.47	2766.74	13467.8	6743.96	0.98	-0.470	0.000	0.482
25.00	-44.73	-28.70	0.00	-3049.9	0.00	3049.97	5461.70	2730.85	13018.5	6518.96	1.54	-0.592	0.000	0.476
30.00	-42.96	-28.29	0.00	-2906.4	0.00	2906.47	5388.18	2694.09	12572.3	6295.53	2.23	-0.716	0.000	0.470
35.00	-41.23	-27.86	0.00	-2765.0	0.00	2765.03	5312.91	2656.45	12129.5	6073.81	3.04	-0.841	0.000	0.463
40.00	-39.56	-27.38	0.00	-2625.7	0.00	2625.74	5235.89	2617.95	11690.4	5853.93	3.99	-0.969	0.000	0.456
41.00	-39.20	-27.32	0.00	-2598.3	0.00	2598.36	5220.28	2610.14	11603.1	5810.18	4.20	-0.995	0.000	0.455
45.00	-36.82	-26.92	0.00	-2489.0	0.00	2489.08	5157.13	2578.57	11255.3	5636.01	5.08	-1.099	0.000	0.449
48.00	-35.07	-26.62	0.00	-2408.3	0.00	2408.32	4442.55	2221.27	9722.51	4868.48	5.80	-1.179	0.000	0.503
50.00	-34.48	-26.46	0.00	-2355.0	0.00	2355.09	4418.96	2209.48	9582.00	4798.12	6.30	-1.232	0.000	0.499
55.00	-33.07	-25.99	0.00	-2222.8	0.00	2222.81	4358.62	2179.31	9231.98	4622.85	7.67	-1.380	0.000	0.489
60.00	-31.69	-25.51	0.00	-2092.8	0.00	2092.87	4296.32	2148.16	8884.00	4448.60	9.20	-1.529	0.000	0.478
65.00	-30.35	-25.03	0.00	-1965.3	0.00	1965.32	4232.08	2116.04	8538.34	4275.52	10.88	-1.680	0.000	0.467
70.00	-29.03	-24.55	0.00	-1840.1	0.00	1840.17	4165.88	2082.94	8195.31	4103.74	12.72	-1.832	0.000	0.456
75.00	-27.75	-24.06	0.00	-1717.4	0.00	1717.45	4097.73	2048.86	7855.19	3933.43	14.72	-1.986	0.000	0.444
80.00	-26.50	-23.57	0.00	-1597.1	0.00	1597.16	4027.63	2013.81	7518.28	3764.73	16.89	-2.140	0.000	0.431
85.00	-25.28	-23.08	0.00	-1479.3	0.00	1479.32	3955.57	1977.79	7184.87	3597.77	19.21	-2.295	0.000	0.418
90.00	-23.05	-22.51	0.00	-1363.9	0.00	1363.91	3881.56	1940.78	6855.26	3432.73	21.70	-2.450	0.000	0.403
91.00	-22.58	-22.42	0.00	-1341.4	0.00	1341.40	3673.04	1836.52	6564.12	3286.94	22.21	-2.483	0.000	0.414
95.00	-21.64	-22.03	0.00	-1251.7	0.00	1251.71	3615.55	1807.77	6315.94	3162.67	24.35	-2.608	0.000	0.402
100.00	-20.51	-21.53	0.00	-1141.5	0.00	1141.58	3542.12	1771.06	6009.55	3009.24	27.16	-2.755	0.000	0.385
105.00	-19.40	-21.03	0.00	-1033.9	0.00	1033.94	3466.93	1733.47	5707.67	2858.08	30.12	-2.901	0.000	0.368
110.00	-18.33	-20.53	0.00	-928.80	0.00	928.80	3390.01	1695.00	5410.56	2709.30	33.23	-3.044	0.000	0.348
115.00	-17.29	-20.04	0.00	-826.13	0.00	826.13	3311.33	1655.67	5118.49	2563.05	36.50	-3.185	0.000	0.328
115.00	-17.29	-20.04	0.00	-826.13	0.00	826.13	2622.08	1311.04	4066.54	2036.29	36.50	-3.185	0.000	0.413
120.00	-16.43	-19.57	0.00	-725.91	0.00	725.91	2564.05	1282.02	3847.60	1926.66	39.91	-3.322	0.000	0.383
125.00	-15.60	-19.11	0.00	-628.05	0.00	628.05	2504.27	1252.13	3631.97	1818.69	43.47	-3.480	0.000	0.352
130.00	-14.79	-18.65	0.00	-532.52	0.00	532.52	2442.74	1221.37	3419.91	1712.49	47.19	-3.629	0.000	0.317
135.00	-13.46	-18.15	0.00	-439.28	0.00	439.28	1794.51	897.26	2468.50	1236.09	51.07	-3.768	0.000	0.363
140.00	-12.83	-17.71	0.00	-348.52	0.00	348.52	1752.60	876.30	2322.71	1163.08	55.08	-3.893	0.000	0.307
145.00	-12.23	-17.27	0.00	-259.98	0.00	259.98	1708.93	854.47	2178.91	1091.08	59.23	-4.022	0.000	0.246
150.00	-11.66	-16.84	0.00	-173.63	0.00	173.63	1663.52	831.76	2037.37	1020.20	63.50	-4.125	0.000	0.178
153.00	-7.57	-9.23	0.00	-123.12	0.00	123.12	1635.44	817.72	1953.63	978.27	66.11	-4.173	0.000	0.131
155.00	-7.36	-9.06	0.00	-104.66	0.00	104.66	1616.36	808.18	1898.33	950.58	67.86	-4.199	0.000	0.115
160.00	-6.89	-8.65	0.00	-59.35	0.00	59.35	1567.46	783.73	1762.08	882.35	72.28	-4.249	0.000	0.072
165.00	-2.10	-2.12	0.00	-16.11	0.00	16.11	1516.81	758.40	1628.87	815.65	76.74	-4.275	0.000	0.021
170.00	-1.71	-1.74	0.00	-5.50	0.00	5.50	1464.41	732.20	1498.97	750.60	81.22	-4.283	0.000	0.009
173.00	-0.14	-0.15	0.00	-0.29	0.00	0.29	1428.72	714.36	1419.33	710.72	83.91	-4.285	0.000	0.001
175.00	0.00	-0.13	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	85.71	-4.285	0.000	0.000

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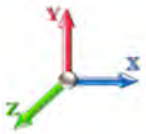
Wind Loading - Shaft

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	17.366	19.10	461.21	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	452.53	0.650	0.000	5.00	27.033	17.57	537.1	0.0	1349.2
10.00		1.00	0.70	17.366	19.10	443.84	0.650	0.000	5.00	26.519	17.24	526.8	0.0	1323.4
15.00		1.00	0.70	17.366	19.10	435.16	0.650	0.000	5.00	26.005	16.90	516.6	0.0	1297.6
20.00		1.00	0.70	17.366	19.10	426.48	0.650	0.000	5.00	25.491	16.57	506.4	0.0	1271.8
25.00		1.00	0.70	17.366	19.10	417.79	0.650	0.000	5.00	24.978	16.24	496.2	0.0	1245.9
30.00		1.00	0.70	17.381	19.12	409.28	0.650	0.000	5.00	24.464	15.90	486.4	0.0	1220.1
35.00		1.00	0.73	18.163	19.98	409.52	0.650	0.000	5.00	23.950	15.57	497.7	0.0	1194.3
40.00		1.00	0.76	18.870	20.76	408.35	0.650	0.000	5.00	23.436	15.23	505.9	0.0	1168.5
41.00	Bot - Section 2	1.00	0.77	19.003	20.90	407.98	0.650	0.000	1.00	4.626	3.01	100.6	0.0	230.6
45.00		1.00	0.79	19.516	21.47	406.08	0.650	0.000	4.00	18.551	12.06	414.2	0.0	1705.7
48.00	Top - Section 1	1.00	0.80	19.879	21.87	404.27	0.650	0.000	3.00	13.697	8.90	311.5	0.0	1259.1
50.00		1.00	0.81	20.112	22.12	408.66	0.650	0.000	2.00	9.029	5.87	207.7	0.0	386.2
55.00		1.00	0.83	20.667	22.73	404.79	0.650	0.000	5.00	22.212	14.44	525.2	0.0	950.0
60.00		1.00	0.85	21.187	23.31	400.27	0.650	0.000	5.00	21.699	14.10	525.9	0.0	927.9
65.00		1.00	0.87	21.678	23.85	395.17	0.650	0.000	5.00	21.185	13.77	525.4	0.0	905.7
70.00		1.00	0.89	22.142	24.36	389.57	0.650	0.000	5.00	20.671	13.44	523.6	0.0	883.6
75.00		1.00	0.91	22.582	24.84	383.53	0.650	0.000	5.00	20.157	13.10	520.7	0.0	861.5
80.00		1.00	0.93	23.003	25.30	377.09	0.650	0.000	5.00	19.644	12.77	516.9	0.0	839.3
85.00	Bot - Section 3	1.00	0.94	23.404	25.74	370.29	0.650	0.000	5.00	19.130	12.43	512.2	0.0	817.2
90.00		1.00	0.96	23.790	26.17	363.16	0.650	0.000	5.00	18.933	12.31	515.3	0.0	1603.8
91.00	Top - Section 2	1.00	0.96	23.865	26.25	361.70	0.650	0.000	1.00	3.725	2.42	101.7	0.0	315.4
95.00		1.00	0.97	24.160	26.58	362.06	0.650	0.000	4.00	14.695	9.55	406.1	0.0	627.5
100.00		1.00	0.99	24.517	26.97	354.41	0.650	0.000	5.00	17.906	11.64	502.2	0.0	764.5
105.00		1.00	1.00	24.861	27.35	346.50	0.650	0.000	5.00	17.392	11.30	494.7	0.0	742.3
110.00		1.00	1.02	25.194	27.71	338.35	0.650	0.000	5.00	16.878	10.97	486.5	0.0	720.2
115.00	Top - Section 3	1.00	1.03	25.516	28.07	329.98	0.650	0.000	5.00	16.365	10.64	477.7	0.0	698.1
120.00		1.00	1.04	25.828	28.41	321.40	0.650	0.000	5.00	15.851	10.30	468.3	0.0	564.2
125.00		1.00	1.05	26.131	28.74	312.63	0.650	0.000	5.00	15.337	9.97	458.5	0.0	545.8
130.00	Bot - Section 5	1.00	1.07	26.425	29.07	303.68	0.650	0.000	5.00	14.823	9.64	448.1	0.0	527.4
135.00	Top - Section 4	1.00	1.08	26.712	29.38	294.55	0.650	0.000	5.00	14.521	9.44	443.7	0.0	922.9
140.00		1.00	1.09	26.991	29.69	289.72	0.650	0.000	5.00	14.007	9.10	432.5	0.0	399.2
145.00		1.00	1.10	27.263	29.99	280.30	0.650	0.000	5.00	13.494	8.77	420.8	0.0	384.5
150.00		1.00	1.11	27.528	30.28	270.72	0.650	0.000	5.00	12.980	8.44	408.8	0.0	369.7
153.00	Appurtenance(s)	1.00	1.12	27.684	30.45	264.91	0.650	0.000	3.00	7.541	4.90	238.8	0.0	214.7
155.00		1.00	1.12	27.787	30.57	261.01	0.650	0.000	2.00	4.925	3.20	156.6	0.0	140.2
160.00		1.00	1.13	28.040	30.84	251.17	0.650	0.000	5.00	11.952	7.77	383.4	0.0	340.2
165.00	Appurtenance(s)	1.00	1.14	28.288	31.12	241.19	0.650	0.000	5.00	11.439	7.44	370.2	0.0	325.4
170.00		1.00	1.15	28.530	31.38	231.09	0.650	0.000	5.00	10.925	7.10	356.6	0.0	310.7
173.00	Appurtenance(s)	1.00	1.16	28.673	31.54	224.98	0.650	0.000	3.00	6.308	4.10	206.9	0.0	179.3
175.00		1.00	1.16	28.768	31.64	220.88	0.650	0.000	2.00	4.103	2.67	135.0	0.0	116.6
								Totals:	**175.00**			**16,669.6**		**30,650.4**

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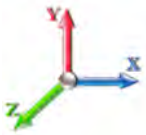
Discrete Appurtenance Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	173.00	Low Profile Platform	1	28.673	31.541	1.00	1.00	25.00	1080.00	0.000	0.000	1261.63	0.00	0.00
2	165.00	RMQP-4096-HK	1	28.288	31.117	1.00	1.00	46.00	2204.10	0.000	0.000	2290.20	0.00	0.00
3	165.00	4480 B71 + B85	3	28.288	31.117	0.50	0.75	4.30	251.10	0.000	0.000	213.90	0.00	0.00
4	165.00	4460 B25 + B66	3	28.288	31.117	0.50	0.75	4.30	280.80	0.000	0.000	213.90	0.00	0.00
5	165.00	AIR6449 B41	3	28.288	31.117	0.53	0.75	9.03	278.10	0.000	0.000	449.37	0.00	0.00
6	165.00	APXVAALL24_43-U-NA20	3	28.288	31.117	0.55	0.75	33.24	331.56	0.000	0.000	1655.13	0.00	0.00
7	165.00	VV-65A-R1	3	28.288	31.117	0.55	0.75	13.15	64.29	0.000	0.000	654.87	0.00	0.00
8	165.00	ALU TD-RRH8x20-25	3	28.288	31.117	0.50	0.75	6.11	189.00	0.000	0.000	303.97	0.00	0.00
9	153.00	MS-HRECP	1	27.684	30.453	1.00	1.00	12.25	462.60	0.000	0.000	596.87	0.00	0.00
10	153.00	JAHH-65B-R3B	6	27.684	30.453	0.66	0.80	36.29	341.82	0.000	0.000	1768.42	0.00	0.00
11	153.00	Low Profile Platform	1	27.684	30.453	1.00	1.00	22.00	1350.00	0.000	0.000	1071.94	0.00	0.00
12	153.00	B5/B13 RRH-BR04C	3	27.684	30.453	0.54	0.80	3.01	189.81	0.000	0.000	146.51	0.00	0.00
13	153.00	B2/B66A RRH-BR049	3	27.684	30.453	0.54	0.80	3.01	227.88	0.000	0.000	146.51	0.00	0.00
14	153.00	CBC78T-DS-43	3	27.684	30.453	0.54	0.80	0.59	28.08	0.000	0.000	28.99	0.00	0.00
15	153.00	Bsamnt-sbs-2-2	3	27.684	30.453	1.00	1.00	2.40	182.14	0.000	0.000	116.94	0.00	0.00
16	153.00	MT6407-77A	3	27.684	30.453	0.56	0.80	7.88	214.38	0.000	0.000	383.91	0.00	0.00
17	153.00	RFS DB-T1-6Z-8AB-0Z -	2	27.684	30.453	0.54	0.80	5.15	79.20	0.000	0.000	250.72	0.00	0.00
18	153.00	Antel LPA-80080/6CF	2	27.684	30.453	1.36	0.80	23.45	37.80	0.000	0.000	1142.41	0.00	0.00
19	153.00	Antel LPA-80063/6CF	4	27.684	30.453	0.75	0.80	28.85	97.20	0.000	0.000	1405.54	0.00	0.00
							Totals:		**7,889.86**			**14,101.73**		

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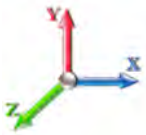
Total Applied Force Summary

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		537.06	1414.08	0.00	0.00
10.00		526.85	1388.26	0.00	0.00
15.00		516.64	1362.44	0.00	0.00
20.00		506.44	1336.63	0.00	0.00
25.00		496.23	1310.81	0.00	0.00
30.00		486.43	1284.99	0.00	0.00
35.00		497.66	1259.17	0.00	0.00
40.00		505.92	1233.35	0.00	0.00
41.00		100.56	243.57	0.00	0.00
45.00		414.16	1757.58	0.00	0.00
48.00		311.50	1298.05	0.00	0.00
50.00		207.74	412.13	0.00	0.00
55.00		525.18	1014.84	0.00	0.00
60.00		525.94	992.71	0.00	0.00
65.00		525.37	970.58	0.00	0.00
70.00		523.60	948.45	0.00	0.00
75.00		520.75	926.32	0.00	0.00
80.00		516.92	904.19	0.00	0.00
85.00		512.20	882.06	0.00	0.00
90.00		515.29	1668.66	0.00	0.00
91.00		101.70	328.42	0.00	0.00
95.00		406.15	679.40	0.00	0.00
100.00		502.21	829.33	0.00	0.00
105.00		494.65	807.20	0.00	0.00
110.00		486.46	785.07	0.00	0.00
115.00		477.68	762.94	0.00	0.00
120.00		468.35	629.10	0.00	0.00
125.00		458.48	610.66	0.00	0.00
130.00		448.12	592.22	0.00	0.00
135.00		443.74	987.75	0.00	0.00
140.00		432.51	464.07	0.00	0.00
145.00		420.85	449.32	0.00	0.00
150.00		408.77	434.57	0.00	0.00
153.00	(31) attachments	7297.60	3464.57	0.00	0.00
155.00		156.55	166.15	0.00	0.00
160.00		383.41	367.08	0.00	0.00
165.00	(19) attachments	6151.52	3951.27	0.00	0.00
170.00		356.58	310.69	0.00	0.00
173.00	(1) attachments	1468.55	1259.33	0.00	0.00
175.00		135.02	116.61	0.00	0.00
	Totals:	**30,771.36**	**40,604.63**	**0.00**	**0.00**

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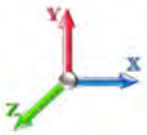
Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-40.57	-30.81	0.00	-3764.6	0.00	3764.63	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.499
5.00	-39.10	-30.35	0.00	-3610.5	0.00	3610.57	5738.32	2869.16	14832.1	7427.08	0.06	-0.114	0.000	0.493
10.00	-37.65	-29.90	0.00	-3458.8	0.00	3458.82	5671.78	2835.89	14374.9	7198.15	0.24	-0.229	0.000	0.487
15.00	-36.23	-29.45	0.00	-3309.3	0.00	3309.34	5603.50	2801.75	13920.1	6970.40	0.55	-0.346	0.000	0.481
20.00	-34.84	-29.01	0.00	-3162.1	0.00	3162.10	5533.47	2766.74	13467.8	6743.96	0.97	-0.465	0.000	0.475
25.00	-33.47	-28.57	0.00	-3017.0	0.00	3017.07	5461.70	2730.85	13018.5	6518.96	1.53	-0.586	0.000	0.469
30.00	-32.13	-28.14	0.00	-2874.2	0.00	2874.23	5388.18	2694.09	12572.3	6295.53	2.21	-0.709	0.000	0.463
35.00	-30.82	-27.69	0.00	-2733.5	0.00	2733.55	5312.91	2656.45	12129.5	6073.81	3.01	-0.833	0.000	0.456
40.00	-29.56	-27.20	0.00	-2595.1	0.00	2595.11	5235.89	2617.95	11690.4	5853.93	3.95	-0.959	0.000	0.449
41.00	-29.28	-27.13	0.00	-2567.9	0.00	2567.90	5220.28	2610.14	11603.1	5810.18	4.16	-0.985	0.000	0.448
45.00	-27.49	-26.73	0.00	-2459.3	0.00	2459.38	5157.13	2578.57	11255.3	5636.01	5.03	-1.088	0.000	0.442
48.00	-26.17	-26.42	0.00	-2379.1	0.00	2379.19	4442.55	2221.27	9722.51	4868.48	5.74	-1.166	0.000	0.495
50.00	-25.72	-26.25	0.00	-2326.3	0.00	2326.35	4418.96	2209.48	9582.00	4798.12	6.24	-1.219	0.000	0.491
55.00	-24.65	-25.77	0.00	-2195.1	0.00	2195.10	4358.62	2179.31	9231.98	4622.85	7.59	-1.365	0.000	0.481
60.00	-23.60	-25.28	0.00	-2066.2	0.00	2066.27	4296.32	2148.16	8884.00	4448.60	9.10	-1.512	0.000	0.470
65.00	-22.58	-24.78	0.00	-1939.8	0.00	1939.89	4232.08	2116.04	8538.34	4275.52	10.77	-1.661	0.000	0.459
70.00	-21.59	-24.29	0.00	-1815.9	0.00	1815.97	4165.88	2082.94	8195.31	4103.74	12.59	-1.811	0.000	0.448
75.00	-20.62	-23.79	0.00	-1694.5	0.00	1694.53	4097.73	2048.86	7855.19	3933.43	14.56	-1.963	0.000	0.436
80.00	-19.67	-23.30	0.00	-1575.5	0.00	1575.58	4027.63	2013.81	7518.28	3764.73	16.70	-2.115	0.000	0.424
85.00	-18.75	-22.80	0.00	-1459.1	0.00	1459.10	3955.57	1977.79	7184.87	3597.77	19.00	-2.268	0.000	0.410
90.00	-17.06	-22.24	0.00	-1345.1	0.00	1345.10	3881.56	1940.78	6855.26	3432.73	21.46	-2.421	0.000	0.396
91.00	-16.71	-22.15	0.00	-1322.8	0.00	1322.86	3673.04	1836.52	6564.12	3286.94	21.97	-2.453	0.000	0.407
95.00	-16.00	-21.75	0.00	-1234.2	0.00	1234.25	3615.55	1807.77	6315.94	3162.67	24.08	-2.577	0.000	0.395
100.00	-15.14	-21.25	0.00	-1125.4	0.00	1125.48	3542.12	1771.06	6009.55	3009.24	26.85	-2.721	0.000	0.378
105.00	-14.31	-20.75	0.00	-1019.2	0.00	1019.23	3466.93	1733.47	5707.67	2858.08	29.78	-2.865	0.000	0.361
110.00	-13.50	-20.26	0.00	-915.46	0.00	915.46	3390.01	1695.00	5410.56	2709.30	32.85	-3.007	0.000	0.342
115.00	-12.71	-19.77	0.00	-814.15	0.00	814.15	3311.33	1655.67	5118.49	2563.05	36.08	-3.146	0.000	0.322
115.00	-12.71	-19.77	0.00	-814.15	0.00	814.15	2622.08	1311.04	4066.54	2036.29	36.08	-3.146	0.000	0.405
120.00	-12.06	-19.30	0.00	-715.28	0.00	715.28	2564.05	1282.02	3847.60	1926.66	39.44	-3.281	0.000	0.376
125.00	-11.43	-18.84	0.00	-618.78	0.00	618.78	2504.27	1252.13	3631.97	1818.69	42.96	-3.436	0.000	0.345
130.00	-10.82	-18.38	0.00	-524.58	0.00	524.58	2442.74	1221.37	3419.91	1712.49	46.64	-3.583	0.000	0.311
135.00	-9.82	-17.90	0.00	-432.68	0.00	432.68	1794.51	897.26	2468.50	1236.09	50.46	-3.720	0.000	0.356
140.00	-9.35	-17.46	0.00	-343.18	0.00	343.18	1752.60	876.30	2322.71	1163.08	54.43	-3.843	0.000	0.301
145.00	-8.90	-17.02	0.00	-255.90	0.00	255.90	1708.93	854.47	2178.91	1091.08	58.52	-3.970	0.000	0.240
150.00	-8.47	-16.60	0.00	-170.78	0.00	170.78	1663.52	831.76	2037.37	1020.20	62.73	-4.071	0.000	0.173
153.00	-5.53	-9.07	0.00	-120.99	0.00	120.99	1635.44	817.72	1953.63	978.27	65.31	-4.118	0.000	0.127
155.00	-5.37	-8.91	0.00	-102.84	0.00	102.84	1616.36	808.18	1898.33	950.58	67.04	-4.144	0.000	0.112
160.00	-5.03	-8.50	0.00	-58.30	0.00	58.30	1567.46	783.73	1762.08	882.35	71.40	-4.193	0.000	0.069
165.00	-1.54	-2.08	0.00	-15.78	0.00	15.78	1516.81	758.40	1628.87	815.65	75.81	-4.218	0.000	0.020
170.00	-1.25	-1.70	0.00	-5.39	0.00	5.39	1464.41	732.20	1498.97	750.60	80.22	-4.227	0.000	0.008
173.00	-0.11	-0.14	0.00	-0.29	0.00	0.29	1428.72	714.36	1419.33	710.72	82.88	-4.228	0.000	0.000
175.00	0.00	-0.13	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	84.65	-4.228	0.000	0.000

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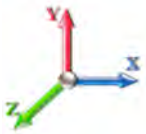
Wind Loading - Shaft

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	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	28.413	34.10	159.6	673.7	2472.7
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.775	5.00	27.998	33.60	157.3	709.8	2474.4
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.848	5.00	27.546	33.05	154.7	726.0	2456.1
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.902	5.00	27.077	32.49	152.1	733.3	2429.0
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.945	5.00	26.599	31.92	149.4	735.6	2396.9
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.981	5.00	26.115	31.34	146.8	734.5	2361.3
35.00		1.00	0.73	4.451	4.90	0.00	1.200	2.012	5.00	25.627	30.75	150.6	731.0	2323.4
40.00		1.00	0.76	4.625	5.09	0.00	1.200	2.039	5.00	25.135	30.16	153.4	725.6	2283.6
41.00	Bot - Section 2	1.00	0.77	4.657	5.12	0.00	1.200	2.044	1.00	4.966	5.96	30.5	144.9	452.3
45.00		1.00	0.79	4.783	5.26	0.00	1.200	2.063	4.00	19.926	23.91	125.8	582.8	2857.1
48.00	Top - Section 1	1.00	0.80	4.872	5.36	0.00	1.200	2.076	3.00	14.736	17.68	94.8	434.4	2113.2
50.00		1.00	0.81	4.929	5.42	0.00	1.200	2.085	2.00	9.724	11.67	63.3	288.3	803.2
55.00		1.00	0.83	5.065	5.57	0.00	1.200	2.105	5.00	23.966	28.76	160.2	711.8	1978.5
60.00		1.00	0.85	5.193	5.71	0.00	1.200	2.123	5.00	23.468	28.16	160.9	702.1	1939.3
65.00		1.00	0.87	5.313	5.84	0.00	1.200	2.140	5.00	22.969	27.56	161.1	691.7	1899.3
70.00		1.00	0.89	5.426	5.97	0.00	1.200	2.156	5.00	22.468	26.96	160.9	680.7	1858.8
75.00		1.00	0.91	5.534	6.09	0.00	1.200	2.171	5.00	21.967	26.36	160.5	669.0	1817.7
80.00		1.00	0.93	5.637	6.20	0.00	1.200	2.185	5.00	21.465	25.76	159.7	656.9	1776.0
85.00	Bot - Section 3	1.00	0.94	5.736	6.31	0.00	1.200	2.198	5.00	20.962	25.15	158.7	644.4	1734.0
90.00		1.00	0.96	5.830	6.41	0.00	1.200	2.211	5.00	20.776	24.93	159.9	641.8	2780.2
91.00	Top - Section 2	1.00	0.96	5.849	6.43	0.00	1.200	2.214	1.00	4.094	4.91	31.6	127.8	548.4
95.00		1.00	0.97	5.921	6.51	0.00	1.200	2.223	4.00	16.177	19.41	126.4	502.8	1339.5
100.00		1.00	0.99	6.008	6.61	0.00	1.200	2.234	5.00	19.768	23.72	156.8	614.9	1634.2
105.00		1.00	1.00	6.093	6.70	0.00	1.200	2.245	5.00	19.263	23.12	154.9	601.0	1590.8
110.00		1.00	1.02	6.174	6.79	0.00	1.200	2.256	5.00	18.758	22.51	152.9	586.8	1547.1
115.00	Top - Section 3	1.00	1.03	6.253	6.88	0.00	1.200	2.266	5.00	18.253	21.90	150.7	572.3	1503.1
120.00		1.00	1.04	6.330	6.96	0.00	1.200	2.276	5.00	17.747	21.30	148.3	557.6	1309.9
125.00		1.00	1.05	6.404	7.04	0.00	1.200	2.285	5.00	17.241	20.69	145.7	542.6	1270.3
130.00	Bot - Section 5	1.00	1.07	6.476	7.12	0.00	1.200	2.294	5.00	16.735	20.08	143.1	527.4	1230.5
135.00	Top - Section 4	1.00	1.08	6.546	7.20	0.00	1.200	2.303	5.00	16.440	19.73	142.1	519.2	1749.7
140.00		1.00	1.09	6.615	7.28	0.00	1.200	2.311	5.00	15.933	19.12	139.1	503.6	1035.9
145.00		1.00	1.10	6.681	7.35	0.00	1.200	2.319	5.00	15.426	18.51	136.1	487.9	1000.5
150.00		1.00	1.11	6.746	7.42	0.00	1.200	2.327	5.00	14.919	17.90	132.9	471.9	964.9
153.00	Appurtenance(s)	1.00	1.12	6.785	7.46	0.00	1.200	2.332	3.00	8.707	10.45	78.0	277.4	563.7
155.00		1.00	1.12	6.810	7.49	0.00	1.200	2.335	2.00	5.703	6.84	51.3	182.3	369.3
160.00		1.00	1.13	6.872	7.56	0.00	1.200	2.342	5.00	13.904	16.68	126.1	439.6	893.2
165.00	Appurtenance(s)	1.00	1.14	6.933	7.63	0.00	1.200	2.349	5.00	13.396	16.08	122.6	423.1	857.1
170.00		1.00	1.15	6.992	7.69	0.00	1.200	2.356	5.00	12.888	15.47	119.0	406.6	820.8
173.00	Appurtenance(s)	1.00	1.16	7.027	7.73	0.00	1.200	2.360	3.00	7.489	8.99	69.5	237.9	477.1
175.00		1.00	1.16	7.050	7.76	0.00	1.200	2.363	2.00	4.891	5.87	45.5	155.9	311.4
								Totals:	**175.00**			**5,192.7**		**62,224.3**

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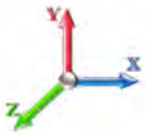
Discrete Appurtenance Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	173.00	Low Profile Platform	1	7.027	7.730	1.00	1.00	53.32	2556.23	0.000	0.000	412.19	0.00	0.00
2	165.00	RMQP-4096-HK	1	6.933	7.626	1.00	1.00	89.23	5600.77	0.000	0.000	680.43	0.00	0.00
3	165.00	4480 B71 + B85	3	6.933	7.626	0.50	0.75	5.67	574.29	0.000	0.000	43.20	0.00	0.00
4	165.00	4460 B25 + B66	3	6.933	7.626	0.50	0.75	5.67	585.46	0.000	0.000	43.20	0.00	0.00
5	165.00	AIR6449 B41	3	6.933	7.626	0.53	0.75	11.07	829.43	0.000	0.000	84.42	0.00	0.00
6	165.00	APXVAALL24_43-U-NA20	3	6.933	7.626	0.55	0.75	37.50	2244.65	0.000	0.000	285.97	0.00	0.00
7	165.00	VV-65A-R1	3	6.933	7.626	0.55	0.75	12.28	689.02	0.000	0.000	93.61	0.00	0.00
8	165.00	ALU TD-RRH8x20-25	3	6.933	7.626	0.50	0.75	7.80	730.96	0.000	0.000	59.48	0.00	0.00
9	153.00	MS-HRECP	1	6.785	7.463	1.00	1.00	28.24	616.80	0.000	0.000	210.79	0.00	0.00
10	153.00	JAHH-65B-R3B	6	6.785	7.463	0.66	0.80	43.60	2411.77	0.000	0.000	325.43	0.00	0.00
11	153.00	Low Profile Platform	1	6.785	7.463	1.00	1.00	50.75	4036.95	0.000	0.000	378.77	0.00	0.00
12	153.00	B5/B13 RRH-BR04C	3	6.785	7.463	0.54	0.80	4.28	555.66	0.000	0.000	31.93	0.00	0.00
13	153.00	B2/B66A RRH-BR049	3	6.785	7.463	0.54	0.80	4.28	636.28	0.000	0.000	31.93	0.00	0.00
14	153.00	CBC78T-DS-43	3	6.785	7.463	0.54	0.80	1.25	134.53	0.000	0.000	9.30	0.00	0.00
15	153.00	Bsamnt-sbs-2-2	3	6.785	7.463	1.00	1.00	5.76	-128.27	0.000	0.000	42.97	0.00	0.00
16	153.00	MT6407-77A	3	6.785	7.463	0.56	0.80	10.04	799.43	0.000	0.000	74.92	0.00	0.00
17	153.00	RFS DB-T1-6Z-8AB-0Z -	2	6.785	7.463	0.54	0.80	6.49	743.04	0.000	0.000	48.43	0.00	0.00
18	153.00	Antel LPA-80080/6CF	2	6.785	7.463	1.36	0.80	28.32	605.73	0.000	0.000	211.34	0.00	0.00
19	153.00	Antel LPA-80063/6CF	4	6.785	7.463	0.75	0.80	34.42	1744.88	0.000	0.000	256.90	0.00	0.00
							Totals:		**25,967.60**			**3,325.22**		

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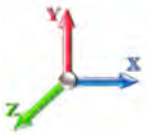
Total Applied Force Summary

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		159.62	2559.14	0.00	0.00
10.00		157.29	2560.87	0.00	0.00
15.00		154.75	2542.59	0.00	0.00
20.00		152.11	2515.51	0.00	0.00
25.00		149.43	2483.35	0.00	0.00
30.00		146.83	2447.82	0.00	0.00
35.00		150.58	2409.88	0.00	0.00
40.00		153.44	2370.10	0.00	0.00
41.00		30.53	469.64	0.00	0.00
45.00		125.80	2926.27	0.00	0.00
48.00		94.76	2165.10	0.00	0.00
50.00		63.26	837.78	0.00	0.00
55.00		160.24	2064.94	0.00	0.00
60.00		160.85	2025.73	0.00	0.00
65.00		161.07	1985.81	0.00	0.00
70.00		160.93	1945.25	0.00	0.00
75.00		160.47	1904.13	0.00	0.00
80.00		159.72	1862.52	0.00	0.00
85.00		158.71	1820.46	0.00	0.00
90.00		159.89	2866.70	0.00	0.00
91.00		31.61	565.73	0.00	0.00
95.00		126.43	1408.70	0.00	0.00
100.00		156.78	1720.71	0.00	0.00
105.00		154.93	1677.27	0.00	0.00
110.00		152.88	1633.55	0.00	0.00
115.00		150.66	1589.55	0.00	0.00
120.00		148.28	1396.36	0.00	0.00
125.00		145.75	1356.80	0.00	0.00
130.00		143.06	1317.01	0.00	0.00
135.00		142.06	1836.19	0.00	0.00
140.00		139.12	1122.39	0.00	0.00
145.00		136.05	1086.95	0.00	0.00
150.00		132.86	1051.35	0.00	0.00
153.00	(31) attachments	1700.70	12772.37	0.00	0.00
155.00		51.27	403.87	0.00	0.00
160.00		126.12	928.99	0.00	0.00
165.00	(19) attachments	1412.90	12147.48	0.00	0.00
170.00		118.95	820.83	0.00	0.00
173.00	(1) attachments	481.65	3033.29	0.00	0.00
175.00		45.51	311.42	0.00	0.00
	Totals:	**8,517.88**	**90,944.39**	**0.00**	**0.00**

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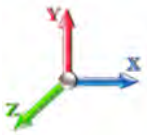
Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-90.94	-8.54	0.00	-1056.6	0.00	1056.60	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.154
5.00	-88.38	-8.43	0.00	-1013.8	0.00	1013.88	5738.32	2869.16	14832.1	7427.08	0.02	-0.032	0.000	0.152
10.00	-85.81	-8.32	0.00	-971.72	0.00	971.72	5671.78	2835.89	14374.9	7198.15	0.07	-0.064	0.000	0.150
15.00	-83.27	-8.21	0.00	-930.11	0.00	930.11	5603.50	2801.75	13920.1	6970.40	0.15	-0.097	0.000	0.148
20.00	-80.75	-8.10	0.00	-889.05	0.00	889.05	5533.47	2766.74	13467.8	6743.96	0.27	-0.131	0.000	0.146
25.00	-78.26	-7.99	0.00	-848.54	0.00	848.54	5461.70	2730.85	13018.5	6518.96	0.43	-0.165	0.000	0.145
30.00	-75.81	-7.88	0.00	-808.57	0.00	808.57	5388.18	2694.09	12572.3	6295.53	0.62	-0.199	0.000	0.143
35.00	-73.39	-7.77	0.00	-769.15	0.00	769.15	5312.91	2656.45	12129.5	6073.81	0.85	-0.234	0.000	0.140
40.00	-71.02	-7.63	0.00	-730.30	0.00	730.30	5235.89	2617.95	11690.4	5853.93	1.11	-0.270	0.000	0.138
41.00	-70.55	-7.62	0.00	-722.67	0.00	722.67	5220.28	2610.14	11603.1	5810.18	1.17	-0.277	0.000	0.138
45.00	-67.62	-7.51	0.00	-692.18	0.00	692.18	5157.13	2578.57	11255.3	5636.01	1.41	-0.306	0.000	0.136
48.00	-65.45	-7.43	0.00	-669.65	0.00	669.65	4442.55	2221.27	9722.51	4868.48	1.61	-0.328	0.000	0.152
50.00	-64.61	-7.39	0.00	-654.79	0.00	654.79	4418.96	2209.48	9582.00	4798.12	1.75	-0.343	0.000	0.151
55.00	-62.54	-7.26	0.00	-617.85	0.00	617.85	4358.62	2179.31	9231.98	4622.85	2.13	-0.384	0.000	0.148
60.00	-60.51	-7.13	0.00	-581.54	0.00	581.54	4296.32	2148.16	8884.00	4448.60	2.56	-0.425	0.000	0.145
65.00	-58.52	-7.00	0.00	-545.89	0.00	545.89	4232.08	2116.04	8538.34	4275.52	3.03	-0.467	0.000	0.142
70.00	-56.57	-6.86	0.00	-510.91	0.00	510.91	4165.88	2082.94	8195.31	4103.74	3.54	-0.510	0.000	0.138
75.00	-54.67	-6.72	0.00	-476.60	0.00	476.60	4097.73	2048.86	7855.19	3933.43	4.10	-0.552	0.000	0.135
80.00	-52.80	-6.58	0.00	-442.99	0.00	442.99	4027.63	2013.81	7518.28	3764.73	4.70	-0.595	0.000	0.131
85.00	-50.98	-6.44	0.00	-410.06	0.00	410.06	3955.57	1977.79	7184.87	3597.77	5.34	-0.638	0.000	0.127
90.00	-48.11	-6.27	0.00	-377.84	0.00	377.84	3881.56	1940.78	6855.26	3432.73	6.03	-0.681	0.000	0.122
91.00	-47.54	-6.25	0.00	-371.57	0.00	371.57	3673.04	1836.52	6564.12	3286.94	6.18	-0.690	0.000	0.126
95.00	-46.13	-6.14	0.00	-346.55	0.00	346.55	3615.55	1807.77	6315.94	3162.67	6.77	-0.725	0.000	0.122
100.00	-44.41	-5.99	0.00	-315.85	0.00	315.85	3542.12	1771.06	6009.55	3009.24	7.55	-0.765	0.000	0.118
105.00	-42.73	-5.84	0.00	-285.89	0.00	285.89	3466.93	1733.47	5707.67	2858.08	8.37	-0.806	0.000	0.112
110.00	-41.09	-5.70	0.00	-256.67	0.00	256.67	3390.01	1695.00	5410.56	2709.30	9.24	-0.845	0.000	0.107
115.00	-39.50	-5.55	0.00	-228.19	0.00	228.19	3311.33	1655.67	5118.49	2563.05	10.15	-0.884	0.000	0.101
115.00	-39.50	-5.55	0.00	-228.19	0.00	228.19	2622.08	1311.04	4066.54	2036.29	10.15	-0.884	0.000	0.127
120.00	-38.10	-5.40	0.00	-200.45	0.00	200.45	2564.05	1282.02	3847.60	1926.66	11.09	-0.922	0.000	0.119
125.00	-36.75	-5.26	0.00	-173.43	0.00	173.43	2504.27	1252.13	3631.97	1818.69	12.08	-0.965	0.000	0.110
130.00	-35.43	-5.12	0.00	-147.11	0.00	147.11	2442.74	1221.37	3419.91	1712.49	13.12	-1.007	0.000	0.100
135.00	-33.59	-4.97	0.00	-121.50	0.00	121.50	1794.51	897.26	2468.50	1236.09	14.19	-1.045	0.000	0.117
140.00	-32.47	-4.83	0.00	-96.65	0.00	96.65	1752.60	876.30	2322.71	1163.08	15.31	-1.080	0.000	0.102
145.00	-31.38	-4.69	0.00	-72.51	0.00	72.51	1708.93	854.47	2178.91	1091.08	16.46	-1.116	0.000	0.085
150.00	-30.33	-4.55	0.00	-49.05	0.00	49.05	1663.52	831.76	2037.37	1020.20	17.64	-1.145	0.000	0.066
153.00	-17.60	-2.59	0.00	-35.41	0.00	35.41	1635.44	817.72	1953.63	978.27	18.37	-1.158	0.000	0.047
155.00	-17.19	-2.54	0.00	-30.22	0.00	30.22	1616.36	808.18	1898.33	950.58	18.85	-1.166	0.000	0.042
160.00	-16.27	-2.40	0.00	-17.53	0.00	17.53	1567.46	783.73	1762.08	882.35	20.08	-1.180	0.000	0.030
165.00	-4.15	-0.73	0.00	-5.56	0.00	5.56	1516.81	758.40	1628.87	815.65	21.32	-1.188	0.000	0.010
170.00	-3.33	-0.60	0.00	-1.89	0.00	1.89	1464.41	732.20	1498.97	750.60	22.57	-1.191	0.000	0.005
173.00	-0.31	-0.05	0.00	-0.10	0.00	0.10	1428.72	714.36	1419.33	710.72	23.32	-1.192	0.000	0.000
175.00	0.00	-0.05	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	23.82	-1.192	0.000	0.000

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Seismic Segment Forces (Factored)

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

Load Case:	1.2D + 1.0E							**Iterations**	21
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)**	0.36		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1499.1	0.00	0.03	0.02	23.11	
10.00		1470.4	0.01	0.05	0.03	34.17	
15.00		1441.7	0.01	0.06	0.03	39.64	
20.00		1413.0	0.02	0.07	0.04	42.22	
25.00		1384.3	0.04	0.07	0.04	43.30	
30.00		1355.7	0.06	0.07	0.04	43.65	
35.00		1327.0	0.08	0.07	0.04	43.71	
40.00		1298.3	0.10	0.07	0.04	43.67	
41.00	Bot - Section 2	256.22	0.10	0.07	0.04	8.65	
45.00		1895.2	0.12	0.07	0.03	65.04	
48.00	Top - Section 1	1399.0	0.14	0.07	0.03	48.52	
50.00		429.10	0.15	0.07	0.03	14.97	
55.00		1055.5	0.19	0.06	0.02	37.12	
60.00		1030.9	0.22	0.06	0.02	35.94	
65.00		1006.3	0.26	0.05	0.02	33.84	
70.00		981.77	0.30	0.04	0.01	30.46	
75.00		957.18	0.35	0.03	0.01	25.51	
80.00		932.59	0.39	0.02	0.01	18.82	
85.00	Bot - Section 3	908.00	0.45	0.00	0.01	10.56	
90.00		1782.0	0.50	-0.02	0.01	2.66	
91.00	Top - Section 2	350.50	0.51	-0.02	0.01	-0.23	
95.00		697.24	0.56	-0.04	0.01	-6.42	
100.00		849.42	0.62	-0.06	0.02	-16.26	
105.00		824.83	0.68	-0.08	0.03	-22.29	
110.00		800.24	0.75	-0.10	0.04	-25.59	
115.00	Top - Section 3	775.65	0.82	-0.11	0.06	-25.97	
120.00		626.94	0.89	-0.12	0.08	-19.67	
125.00		606.45	0.96	-0.12	0.11	-15.53	
130.00	Bot - Section 5	585.96	1.04	-0.10	0.15	-9.51	
135.00	Top - Section 4	1025.4	1.12	-0.05	0.20	-3.35	
140.00		443.57	1.21	0.01	0.26	5.89	
145.00		427.18	1.30	0.12	0.33	14.28	
150.00		410.79	1.39	0.26	0.42	23.49	
153.00	Appurtenance(s)	3806.2	1.44	0.37	0.48	278.64	
155.00		155.79	1.48	0.46	0.52	13.18	
160.00		378.00	1.58	0.72	0.64	43.78	
165.00	Appurtenance(s)	4360.4	1.68	1.05	0.78	657.54	
170.00		345.22	1.78	1.46	0.95	65.48	
173.00	Appurtenance(s)	1399.2	1.85	1.76	1.06	300.67	
175.00		129.56	1.89	1.98	1.14	30.12	
	Totals:	**42,822.5**				**1,933.8**	**Total Wind:** **30,771.4**

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Calculated Forces

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

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Load Case:	1.2D + 1.0E							**Iterations**	21
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)**	0.36		**SA**	0.04	**Seismic Importance Factor**		1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-54.14	-2.08	0.00	-272.10	0.00	272.10	5803.10	2901.55	15291.3	7657.05	0.00	0.00	0.045	
5.00	-52.25	-2.07	0.00	-261.69	0.00	261.69	5738.32	2869.16	14832.1	7427.08	0.00	-0.01	0.044	
10.00	-50.40	-2.04	0.00	-251.36	0.00	251.36	5671.78	2835.89	14374.9	7198.15	0.02	-0.02	0.044	
15.00	-48.59	-2.01	0.00	-241.17	0.00	241.17	5603.50	2801.75	13920.1	6970.40	0.04	-0.03	0.043	
20.00	-46.80	-1.97	0.00	-231.14	0.00	231.14	5533.47	2766.74	13467.8	6743.96	0.07	-0.03	0.043	
25.00	-45.05	-1.93	0.00	-221.29	0.00	221.29	5461.70	2730.85	13018.5	6518.96	0.11	-0.04	0.042	
30.00	-43.34	-1.89	0.00	-211.63	0.00	211.63	5388.18	2694.09	12572.3	6295.53	0.16	-0.05	0.042	
35.00	-41.66	-1.86	0.00	-202.16	0.00	202.16	5312.91	2656.45	12129.5	6073.81	0.22	-0.06	0.041	
40.00	-40.02	-1.81	0.00	-192.88	0.00	192.88	5235.89	2617.95	11690.4	5853.93	0.29	-0.07	0.041	
41.00	-39.69	-1.81	0.00	-191.07	0.00	191.07	5220.28	2610.14	11603.1	5810.18	0.30	-0.07	0.040	
45.00	-37.35	-1.74	0.00	-183.83	0.00	183.83	5157.13	2578.57	11255.3	5636.01	0.37	-0.08	0.040	
48.00	-35.62	-1.70	0.00	-178.60	0.00	178.60	4442.55	2221.27	9722.51	4868.48	0.42	-0.09	0.045	
50.00	-35.07	-1.69	0.00	-175.21	0.00	175.21	4418.96	2209.48	9582.00	4798.12	0.46	-0.09	0.044	
55.00	-33.72	-1.65	0.00	-166.78	0.00	166.78	4358.62	2179.31	9231.98	4622.85	0.56	-0.10	0.044	
60.00	-32.39	-1.62	0.00	-158.52	0.00	158.52	4296.32	2148.16	8884.00	4448.60	0.67	-0.11	0.043	
65.00	-31.10	-1.59	0.00	-150.42	0.00	150.42	4232.08	2116.04	8538.34	4275.52	0.79	-0.12	0.043	
70.00	-29.83	-1.56	0.00	-142.46	0.00	142.46	4165.88	2082.94	8195.31	4103.74	0.93	-0.14	0.042	
75.00	-28.60	-1.54	0.00	-134.65	0.00	134.65	4097.73	2048.86	7855.19	3933.43	1.07	-0.15	0.041	
80.00	-27.39	-1.52	0.00	-126.95	0.00	126.95	4027.63	2013.81	7518.28	3764.73	1.23	-0.16	0.041	
85.00	-26.21	-1.52	0.00	-119.32	0.00	119.32	3955.57	1977.79	7184.87	3597.77	1.41	-0.17	0.040	
90.00	-23.99	-1.51	0.00	-111.74	0.00	111.74	3881.56	1940.78	6855.26	3432.73	1.59	-0.18	0.039	
91.00	-23.55	-1.51	0.00	-110.23	0.00	110.23	3673.04	1836.52	6564.12	3286.94	1.63	-0.19	0.040	
95.00	-22.65	-1.51	0.00	-104.19	0.00	104.19	3615.55	1807.77	6315.94	3162.67	1.79	-0.20	0.039	
100.00	-21.54	-1.51	0.00	-96.62	0.00	96.62	3542.12	1771.06	6009.55	3009.24	2.01	-0.21	0.038	
105.00	-20.46	-1.51	0.00	-89.06	0.00	89.06	3466.93	1733.47	5707.67	2858.08	2.23	-0.22	0.037	
110.00	-19.42	-1.51	0.00	-81.49	0.00	81.49	3390.01	1695.00	5410.56	2709.30	2.47	-0.23	0.036	
115.00	-18.40	-1.51	0.00	-73.92	0.00	73.92	3311.33	1655.67	5118.49	2563.05	2.73	-0.25	0.034	
115.00	-18.40	-1.51	0.00	-73.92	0.00	73.92	2622.08	1311.04	4066.54	2036.29	2.73	-0.25	0.043	
120.00	-17.56	-1.51	0.00	-66.35	0.00	66.35	2564.05	1282.02	3847.60	1926.66	2.99	-0.26	0.041	
125.00	-16.74	-1.51	0.00	-58.78	0.00	58.78	2504.27	1252.13	3631.97	1818.69	3.27	-0.27	0.039	
130.00	-15.95	-1.51	0.00	-51.20	0.00	51.20	2442.74	1221.37	3419.91	1712.49	3.56	-0.29	0.036	
135.00	-14.64	-1.51	0.00	-43.63	0.00	43.63	1794.51	897.26	2468.50	1236.09	3.87	-0.30	0.043	
140.00	-14.02	-1.51	0.00	-36.07	0.00	36.07	1752.60	876.30	2322.71	1163.08	4.20	-0.31	0.039	
145.00	-13.42	-1.49	0.00	-28.55	0.00	28.55	1708.93	854.47	2178.91	1091.08	4.53	-0.33	0.034	
150.00	-12.84	-1.47	0.00	-21.09	0.00	21.09	1663.52	831.76	2037.37	1020.20	4.88	-0.34	0.028	
153.00	-8.22	-1.16	0.00	-16.70	0.00	16.70	1635.44	817.72	1953.63	978.27	5.10	-0.35	0.022	
155.00	-8.00	-1.15	0.00	-14.38	0.00	14.38	1616.36	808.18	1898.33	950.58	5.25	-0.35	0.020	
160.00	-7.51	-1.10	0.00	-8.64	0.00	8.64	1567.46	783.73	1762.08	882.35	5.62	-0.36	0.015	
165.00	-2.25	-0.41	0.00	-3.14	0.00	3.14	1516.81	758.40	1628.87	815.65	5.99	-0.36	0.005	
170.00	-1.83	-0.34	0.00	-1.09	0.00	1.09	1464.41	732.20	1498.97	750.60	6.37	-0.36	0.003	
173.00	-0.16	-0.03	0.00	-0.06	0.00	0.06	1428.72	714.36	1419.33	710.72	6.60	-0.36	0.000	
175.00	0.00	-0.03	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	6.75	-0.36	0.000	

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Seismic Segment Forces (Factored)

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

Load Case:	0.9D + 1.0E							**Iterations**	21
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)**	0.36		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1499.1	0.00	0.03	0.02	23.11	
10.00		1470.4	0.01	0.05	0.03	34.17	
15.00		1441.7	0.01	0.06	0.03	39.64	
20.00		1413.0	0.02	0.07	0.04	42.22	
25.00		1384.3	0.04	0.07	0.04	43.30	
30.00		1355.7	0.06	0.07	0.04	43.65	
35.00		1327.0	0.08	0.07	0.04	43.71	
40.00		1298.3	0.10	0.07	0.04	43.67	
41.00	Bot - Section 2	256.22	0.10	0.07	0.04	8.65	
45.00		1895.2	0.12	0.07	0.03	65.04	
48.00	Top - Section 1	1399.0	0.14	0.07	0.03	48.52	
50.00		429.10	0.15	0.07	0.03	14.97	
55.00		1055.5	0.19	0.06	0.02	37.12	
60.00		1030.9	0.22	0.06	0.02	35.94	
65.00		1006.3	0.26	0.05	0.02	33.84	
70.00		981.77	0.30	0.04	0.01	30.46	
75.00		957.18	0.35	0.03	0.01	25.51	
80.00		932.59	0.39	0.02	0.01	18.82	
85.00	Bot - Section 3	908.00	0.45	0.00	0.01	10.56	
90.00		1782.0	0.50	-0.02	0.01	2.66	
91.00	Top - Section 2	350.50	0.51	-0.02	0.01	-0.23	
95.00		697.24	0.56	-0.04	0.01	-6.42	
100.00		849.42	0.62	-0.06	0.02	-16.26	
105.00		824.83	0.68	-0.08	0.03	-22.29	
110.00		800.24	0.75	-0.10	0.04	-25.59	
115.00	Top - Section 3	775.65	0.82	-0.11	0.06	-25.97	
120.00		626.94	0.89	-0.12	0.08	-19.67	
125.00		606.45	0.96	-0.12	0.11	-15.53	
130.00	Bot - Section 5	585.96	1.04	-0.10	0.15	-9.51	
135.00	Top - Section 4	1025.4	1.12	-0.05	0.20	-3.35	
140.00		443.57	1.21	0.01	0.26	5.89	
145.00		427.18	1.30	0.12	0.33	14.28	
150.00		410.79	1.39	0.26	0.42	23.49	
153.00	Appurtenance(s)	3806.2	1.44	0.37	0.48	278.64	
155.00		155.79	1.48	0.46	0.52	13.18	
160.00		378.00	1.58	0.72	0.64	43.78	
165.00	Appurtenance(s)	4360.4	1.68	1.05	0.78	657.54	
170.00		345.22	1.78	1.46	0.95	65.48	
173.00	Appurtenance(s)	1399.2	1.85	1.76	1.06	300.67	
175.00		129.56	1.89	1.98	1.14	30.12	
	Totals:	**42,822.5**				**1,933.8**	**Total Wind:** **30,771.4**

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Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

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Load Case: 0.9D + 1.0E

Iterations 21

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)**	0.36	**SA**	0.04			**Seismic Importance Factor**	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-40.60	-2.08	0.00	-269.46	0.00	269.46	5803.10	2901.55	15291.3	7657.05		0.00	0.00	0.042
5.00	-39.19	-2.06	0.00	-259.06	0.00	259.06	5738.32	2869.16	14832.1	7427.08		0.00	-0.01	0.042
10.00	-37.80	-2.03	0.00	-248.74	0.00	248.74	5671.78	2835.89	14374.9	7198.15		0.02	-0.02	0.041
15.00	-36.44	-2.00	0.00	-238.57	0.00	238.57	5603.50	2801.75	13920.1	6970.40		0.04	-0.02	0.041
20.00	-35.10	-1.96	0.00	-228.58	0.00	228.58	5533.47	2766.74	13467.8	6743.96		0.07	-0.03	0.040
25.00	-33.79	-1.92	0.00	-218.77	0.00	218.77	5461.70	2730.85	13018.5	6518.96		0.11	-0.04	0.040
30.00	-32.51	-1.88	0.00	-209.15	0.00	209.15	5388.18	2694.09	12572.3	6295.53		0.16	-0.05	0.039
35.00	-31.25	-1.84	0.00	-199.74	0.00	199.74	5312.91	2656.45	12129.5	6073.81		0.22	-0.06	0.039
40.00	-30.01	-1.80	0.00	-190.52	0.00	190.52	5235.89	2617.95	11690.4	5853.93		0.28	-0.07	0.038
41.00	-29.77	-1.79	0.00	-188.72	0.00	188.72	5220.28	2610.14	11603.1	5810.18		0.30	-0.07	0.038
45.00	-28.01	-1.73	0.00	-181.54	0.00	181.54	5157.13	2578.57	11255.3	5636.01		0.36	-0.08	0.038
48.00	-26.71	-1.68	0.00	-176.35	0.00	176.35	4442.55	2221.27	9722.51	4868.48		0.41	-0.08	0.042
50.00	-26.30	-1.67	0.00	-172.98	0.00	172.98	4418.96	2209.48	9582.00	4798.12		0.45	-0.09	0.042
55.00	-25.29	-1.64	0.00	-164.63	0.00	164.63	4358.62	2179.31	9231.98	4622.85		0.55	-0.10	0.041
60.00	-24.29	-1.60	0.00	-156.45	0.00	156.45	4296.32	2148.16	8884.00	4448.60		0.66	-0.11	0.041
65.00	-23.32	-1.57	0.00	-148.43	0.00	148.43	4232.08	2116.04	8538.34	4275.52		0.78	-0.12	0.040
70.00	-22.37	-1.54	0.00	-140.57	0.00	140.57	4165.88	2082.94	8195.31	4103.74		0.92	-0.13	0.040
75.00	-21.45	-1.52	0.00	-132.85	0.00	132.85	4097.73	2048.86	7855.19	3933.43		1.06	-0.15	0.039
80.00	-20.54	-1.50	0.00	-125.25	0.00	125.25	4027.63	2013.81	7518.28	3764.73		1.22	-0.16	0.038
85.00	-19.66	-1.50	0.00	-117.73	0.00	117.73	3955.57	1977.79	7184.87	3597.77		1.39	-0.17	0.038
90.00	-17.99	-1.49	0.00	-110.25	0.00	110.25	3881.56	1940.78	6855.26	3432.73		1.58	-0.18	0.037
91.00	-17.66	-1.49	0.00	-108.76	0.00	108.76	3673.04	1836.52	6564.12	3286.94		1.61	-0.18	0.038
95.00	-16.98	-1.49	0.00	-102.80	0.00	102.80	3615.55	1807.77	6315.94	3162.67		1.77	-0.19	0.037
100.00	-16.15	-1.49	0.00	-95.34	0.00	95.34	3542.12	1771.06	6009.55	3009.24		1.98	-0.21	0.036
105.00	-15.35	-1.49	0.00	-87.88	0.00	87.88	3466.93	1733.47	5707.67	2858.08		2.21	-0.22	0.035
110.00	-14.56	-1.49	0.00	-80.41	0.00	80.41	3390.01	1695.00	5410.56	2709.30		2.44	-0.23	0.034
115.00	-13.80	-1.49	0.00	-72.95	0.00	72.95	3311.33	1655.67	5118.49	2563.05		2.69	-0.24	0.033
115.00	-13.80	-1.49	0.00	-72.95	0.00	72.95	2622.08	1311.04	4066.54	2036.29		2.69	-0.24	0.041
120.00	-13.17	-1.49	0.00	-65.49	0.00	65.49	2564.05	1282.02	3847.60	1926.66		2.95	-0.26	0.039
125.00	-12.56	-1.49	0.00	-58.02	0.00	58.02	2504.27	1252.13	3631.97	1818.69		3.23	-0.27	0.037
130.00	-11.96	-1.49	0.00	-50.55	0.00	50.55	2442.74	1221.37	3419.91	1712.49		3.52	-0.28	0.034
135.00	-10.98	-1.49	0.00	-43.09	0.00	43.09	1794.51	897.26	2468.50	1236.09		3.83	-0.30	0.041
140.00	-10.51	-1.48	0.00	-35.63	0.00	35.63	1752.60	876.30	2322.71	1163.08		4.15	-0.31	0.037
145.00	-10.06	-1.47	0.00	-28.21	0.00	28.21	1708.93	854.47	2178.91	1091.08		4.48	-0.32	0.032
150.00	-9.63	-1.45	0.00	-20.86	0.00	20.86	1663.52	831.76	2037.37	1020.20		4.82	-0.34	0.026
153.00	-6.16	-1.15	0.00	-16.52	0.00	16.52	1635.44	817.72	1953.63	978.27		5.04	-0.34	0.021
155.00	-6.00	-1.13	0.00	-14.22	0.00	14.22	1616.36	808.18	1898.33	950.58		5.18	-0.35	0.019
160.00	-5.63	-1.09	0.00	-8.55	0.00	8.55	1567.46	783.73	1762.08	882.35		5.55	-0.35	0.013
165.00	-1.68	-0.41	0.00	-3.11	0.00	3.11	1516.81	758.40	1628.87	815.65		5.92	-0.36	0.005
170.00	-1.37	-0.34	0.00	-1.08	0.00	1.08	1464.41	732.20	1498.97	750.60		6.29	-0.36	0.002
173.00	-0.12	-0.03	0.00	-0.06	0.00	0.06	1428.72	714.36	1419.33	710.72		6.52	-0.36	0.000
175.00	0.00	-0.03	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38		6.67	-0.36	0.000

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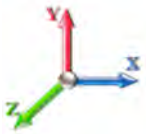
Wind Loading - Shaft

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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 22

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	273.99	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	268.83	0.650	0.000	5.00	27.033	17.57	118.5	0.0	1499.1
10.00		1.00	0.70	6.129	6.74	263.67	0.650	0.000	5.00	26.519	17.24	116.2	0.0	1470.4
15.00		1.00	0.70	6.129	6.74	258.51	0.650	0.000	5.00	26.005	16.90	114.0	0.0	1441.8
20.00		1.00	0.70	6.129	6.74	253.35	0.650	0.000	5.00	25.491	16.57	111.7	0.0	1413.1
25.00		1.00	0.70	6.129	6.74	248.19	0.650	0.000	5.00	24.978	16.24	109.5	0.0	1384.4
30.00		1.00	0.70	6.134	6.75	243.14	0.650	0.000	5.00	24.464	15.90	107.3	0.0	1355.7
35.00		1.00	0.73	6.410	7.05	243.28	0.650	0.000	5.00	23.950	15.57	109.8	0.0	1327.0
40.00		1.00	0.76	6.659	7.33	242.59	0.650	0.000	5.00	23.436	15.23	111.6	0.0	1298.3
41.00	Bot - Section 2	1.00	0.77	6.706	7.38	242.36	0.650	0.000	1.00	4.626	3.01	22.2	0.0	256.2
45.00		1.00	0.79	6.887	7.58	241.23	0.650	0.000	4.00	18.551	12.06	91.4	0.0	1895.2
48.00	Top - Section 1	1.00	0.80	7.015	7.72	240.16	0.650	0.000	3.00	13.697	8.90	68.7	0.0	1399.0
50.00		1.00	0.81	7.098	7.81	242.77	0.650	0.000	2.00	9.029	5.87	45.8	0.0	429.1
55.00		1.00	0.83	7.294	8.02	240.47	0.650	0.000	5.00	22.212	14.44	115.8	0.0	1055.5
60.00		1.00	0.85	7.477	8.22	237.78	0.650	0.000	5.00	21.699	14.10	116.0	0.0	1030.9
65.00		1.00	0.87	7.650	8.42	234.75	0.650	0.000	5.00	21.185	13.77	115.9	0.0	1006.4
70.00		1.00	0.89	7.814	8.60	231.43	0.650	0.000	5.00	20.671	13.44	115.5	0.0	981.8
75.00		1.00	0.91	7.969	8.77	227.84	0.650	0.000	5.00	20.157	13.10	114.9	0.0	957.2
80.00		1.00	0.93	8.118	8.93	224.01	0.650	0.000	5.00	19.644	12.77	114.0	0.0	932.6
85.00	Bot - Section 3	1.00	0.94	8.260	9.09	219.97	0.650	0.000	5.00	19.130	12.43	113.0	0.0	908.0
90.00		1.00	0.96	8.396	9.24	215.74	0.650	0.000	5.00	18.933	12.31	113.7	0.0	1782.0
91.00	Top - Section 2	1.00	0.96	8.422	9.26	214.87	0.650	0.000	1.00	3.725	2.42	22.4	0.0	350.5
95.00		1.00	0.97	8.526	9.38	215.09	0.650	0.000	4.00	14.695	9.55	89.6	0.0	697.2
100.00		1.00	0.99	8.652	9.52	210.54	0.650	0.000	5.00	17.906	11.64	110.8	0.0	849.4
105.00		1.00	1.00	8.774	9.65	205.84	0.650	0.000	5.00	17.392	11.30	109.1	0.0	824.8
110.00		1.00	1.02	8.891	9.78	201.00	0.650	0.000	5.00	16.878	10.97	107.3	0.0	800.2
115.00	Top - Section 3	1.00	1.03	9.005	9.91	196.03	0.650	0.000	5.00	16.365	10.64	105.4	0.0	775.6
120.00		1.00	1.04	9.115	10.03	190.93	0.650	0.000	5.00	15.851	10.30	103.3	0.0	626.9
125.00		1.00	1.05	9.222	10.14	185.72	0.650	0.000	5.00	15.337	9.97	101.1	0.0	606.4
130.00	Bot - Section 5	1.00	1.07	9.326	10.26	180.40	0.650	0.000	5.00	14.823	9.64	98.8	0.0	586.0
135.00	Top - Section 4	1.00	1.08	9.427	10.37	174.98	0.650	0.000	5.00	14.521	9.44	97.9	0.0	1025.4
140.00		1.00	1.09	9.525	10.48	172.11	0.650	0.000	5.00	14.007	9.10	95.4	0.0	443.6
145.00		1.00	1.10	9.621	10.58	166.51	0.650	0.000	5.00	13.494	8.77	92.8	0.0	427.2
150.00		1.00	1.11	9.715	10.69	160.83	0.650	0.000	5.00	12.980	8.44	90.2	0.0	410.8
153.00	Appurtenance(s)	1.00	1.12	9.770	10.75	157.37	0.650	0.000	3.00	7.541	4.90	52.7	0.0	238.6
155.00		1.00	1.12	9.806	10.79	155.06	0.650	0.000	2.00	4.925	3.20	34.5	0.0	155.8
160.00		1.00	1.13	9.896	10.89	149.21	0.650	0.000	5.00	11.952	7.77	84.6	0.0	378.0
165.00	Appurtenance(s)	1.00	1.14	9.983	10.98	143.28	0.650	0.000	5.00	11.439	7.44	81.6	0.0	361.6
170.00		1.00	1.15	10.069	11.08	137.28	0.650	0.000	5.00	10.925	7.10	78.6	0.0	345.2
173.00	Appurtenance(s)	1.00	1.16	10.119	11.13	133.65	0.650	0.000	3.00	6.308	4.10	45.6	0.0	199.3
175.00		1.00	1.16	10.152	11.17	131.21	0.650	0.000	2.00	4.103	2.67	29.8	0.0	129.6
								Totals:	**175.00**			**3,676.8**		**34,056.0**

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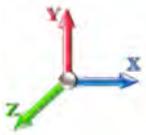
Discrete Appurtenance Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	173.00	Low Profile Platform	1	10.119	11.131	1.00	1.00	25.00	1200.00	0.000	0.000	278.27	0.00	0.00
2	165.00	RMQP-4096-HK	1	9.983	10.981	1.00	1.00	46.00	2449.00	0.000	0.000	505.14	0.00	0.00
3	165.00	4480 B71 + B85	3	9.983	10.981	0.50	0.75	4.30	279.00	0.000	0.000	47.18	0.00	0.00
4	165.00	4460 B25 + B66	3	9.983	10.981	0.50	0.75	4.30	312.00	0.000	0.000	47.18	0.00	0.00
5	165.00	AIR6449 B41	3	9.983	10.981	0.53	0.75	9.03	309.00	0.000	0.000	99.12	0.00	0.00
6	165.00	APXVAALL24_43-U-NA20	3	9.983	10.981	0.55	0.75	33.24	368.40	0.000	0.000	365.07	0.00	0.00
7	165.00	VV-65A-R1	3	9.983	10.981	0.55	0.75	13.15	71.43	0.000	0.000	144.44	0.00	0.00
8	165.00	ALU TD-RRH8x20-25	3	9.983	10.981	0.50	0.75	6.11	210.00	0.000	0.000	67.05	0.00	0.00
9	153.00	MS-HRECP	1	9.770	10.747	1.00	1.00	12.25	514.00	0.000	0.000	131.65	0.00	0.00
10	153.00	JAHH-65B-R3B	6	9.770	10.747	0.66	0.80	36.29	379.80	0.000	0.000	390.05	0.00	0.00
11	153.00	Low Profile Platform	1	9.770	10.747	1.00	1.00	22.00	1500.00	0.000	0.000	236.43	0.00	0.00
12	153.00	B5/B13 RRH-BR04C	3	9.770	10.747	0.54	0.80	3.01	210.90	0.000	0.000	32.32	0.00	0.00
13	153.00	B2/B66A RRH-BR049	3	9.770	10.747	0.54	0.80	3.01	253.20	0.000	0.000	32.32	0.00	0.00
14	153.00	CBC78T-DS-43	3	9.770	10.747	0.54	0.80	0.59	31.20	0.000	0.000	6.39	0.00	0.00
15	153.00	Bsamnt-sbs-2-2	3	9.770	10.747	1.00	1.00	2.40	202.38	0.000	0.000	25.79	0.00	0.00
16	153.00	MT6407-77A	3	9.770	10.747	0.56	0.80	7.88	238.20	0.000	0.000	84.68	0.00	0.00
17	153.00	RFS DB-T1-6Z-8AB-0Z -	2	9.770	10.747	0.54	0.80	5.15	88.00	0.000	0.000	55.30	0.00	0.00
18	153.00	Antel LPA-80080/6CF	2	9.770	10.747	1.36	0.80	23.45	42.00	0.000	0.000	251.98	0.00	0.00
19	153.00	Antel LPA-80063/6CF	4	9.770	10.747	0.75	0.80	28.85	108.00	0.000	0.000	310.02	0.00	0.00
							Totals:		**8,766.51**			**3,110.37**		

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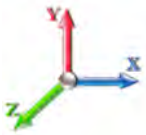
Total Applied Force Summary

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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		118.46	1571.20	0.00	0.00
10.00		116.21	1542.51	0.00	0.00
15.00		113.95	1513.83	0.00	0.00
20.00		111.70	1485.14	0.00	0.00
25.00		109.45	1456.45	0.00	0.00
30.00		107.29	1427.76	0.00	0.00
35.00		109.77	1399.08	0.00	0.00
40.00		111.59	1370.39	0.00	0.00
41.00		22.18	270.64	0.00	0.00
45.00		91.35	1952.87	0.00	0.00
48.00		68.71	1442.28	0.00	0.00
50.00		45.82	457.92	0.00	0.00
55.00		115.84	1127.60	0.00	0.00
60.00		116.01	1103.01	0.00	0.00
65.00		115.88	1078.42	0.00	0.00
70.00		115.49	1053.83	0.00	0.00
75.00		114.86	1029.24	0.00	0.00
80.00		114.02	1004.65	0.00	0.00
85.00		112.97	980.06	0.00	0.00
90.00		113.65	1854.07	0.00	0.00
91.00		22.43	364.91	0.00	0.00
95.00		89.58	754.89	0.00	0.00
100.00		110.77	921.48	0.00	0.00
105.00		109.10	896.89	0.00	0.00
110.00		107.30	872.30	0.00	0.00
115.00		105.36	847.71	0.00	0.00
120.00		103.30	699.00	0.00	0.00
125.00		101.13	678.51	0.00	0.00
130.00		98.84	658.02	0.00	0.00
135.00		97.87	1097.50	0.00	0.00
140.00		95.40	515.64	0.00	0.00
145.00		92.83	499.24	0.00	0.00
150.00		90.16	482.85	0.00	0.00
153.00	(31) attachments	1609.61	3849.52	0.00	0.00
155.00		34.53	184.62	0.00	0.00
160.00		84.57	407.87	0.00	0.00
165.00	(19) attachments	1356.82	4390.30	0.00	0.00
170.00		78.65	345.22	0.00	0.00
173.00	(1) attachments	323.91	1399.26	0.00	0.00
175.00		29.78	129.56	0.00	0.00
	Totals:	**6,787.13**	**45,116.26**	**0.00**	**0.00**

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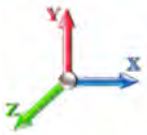
Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-G	2/8/2022	
Site Name:	North Chaplin	**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	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	-45.11	-6.80	0.00	-833.43	0.00	833.43	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.117
5.00	-43.54	-6.70	0.00	-799.45	0.00	799.45	5738.32	2869.16	14832.1	7427.08	0.01	-0.025	0.000	0.115
10.00	-42.00	-6.60	0.00	-765.97	0.00	765.97	5671.78	2835.89	14374.9	7198.15	0.05	-0.051	0.000	0.114
15.00	-40.48	-6.50	0.00	-732.97	0.00	732.97	5603.50	2801.75	13920.1	6970.40	0.12	-0.077	0.000	0.112
20.00	-38.99	-6.41	0.00	-700.47	0.00	700.47	5533.47	2766.74	13467.8	6743.96	0.22	-0.103	0.000	0.111
25.00	-37.53	-6.31	0.00	-668.44	0.00	668.44	5461.70	2730.85	13018.5	6518.96	0.34	-0.130	0.000	0.109
30.00	-36.10	-6.22	0.00	-636.89	0.00	636.89	5388.18	2694.09	12572.3	6295.53	0.49	-0.157	0.000	0.108
35.00	-34.70	-6.12	0.00	-605.80	0.00	605.80	5312.91	2656.45	12129.5	6073.81	0.67	-0.184	0.000	0.106
40.00	-33.33	-6.01	0.00	-575.20	0.00	575.20	5235.89	2617.95	11690.4	5853.93	0.88	-0.212	0.000	0.105
41.00	-33.06	-6.00	0.00	-569.19	0.00	569.19	5220.28	2610.14	11603.1	5810.18	0.92	-0.218	0.000	0.104
45.00	-31.10	-5.91	0.00	-545.20	0.00	545.20	5157.13	2578.57	11255.3	5636.01	1.11	-0.241	0.000	0.103
48.00	-29.66	-5.84	0.00	-527.47	0.00	527.47	4442.55	2221.27	9722.51	4868.48	1.27	-0.258	0.000	0.115
50.00	-29.20	-5.81	0.00	-515.78	0.00	515.78	4418.96	2209.48	9582.00	4798.12	1.38	-0.270	0.000	0.114
55.00	-28.07	-5.70	0.00	-486.75	0.00	486.75	4358.62	2179.31	9231.98	4622.85	1.68	-0.302	0.000	0.112
60.00	-26.96	-5.59	0.00	-458.25	0.00	458.25	4296.32	2148.16	8884.00	4448.60	2.02	-0.335	0.000	0.109
65.00	-25.88	-5.49	0.00	-430.28	0.00	430.28	4232.08	2116.04	8538.34	4275.52	2.39	-0.368	0.000	0.107
70.00	-24.82	-5.38	0.00	-402.85	0.00	402.85	4165.88	2082.94	8195.31	4103.74	2.79	-0.401	0.000	0.104
75.00	-23.79	-5.27	0.00	-375.96	0.00	375.96	4097.73	2048.86	7855.19	3933.43	3.23	-0.435	0.000	0.101
80.00	-22.79	-5.16	0.00	-349.61	0.00	349.61	4027.63	2013.81	7518.28	3764.73	3.70	-0.469	0.000	0.099
85.00	-21.80	-5.05	0.00	-323.80	0.00	323.80	3955.57	1977.79	7184.87	3597.77	4.21	-0.503	0.000	0.096
90.00	-19.95	-4.93	0.00	-298.54	0.00	298.54	3881.56	1940.78	6855.26	3432.73	4.76	-0.537	0.000	0.092
91.00	-19.58	-4.91	0.00	-293.61	0.00	293.61	3673.04	1836.52	6564.12	3286.94	4.87	-0.544	0.000	0.095
95.00	-18.83	-4.82	0.00	-273.97	0.00	273.97	3615.55	1807.77	6315.94	3162.67	5.34	-0.571	0.000	0.092
100.00	-17.90	-4.71	0.00	-249.85	0.00	249.85	3542.12	1771.06	6009.55	3009.24	5.95	-0.603	0.000	0.088
105.00	-17.01	-4.60	0.00	-226.29	0.00	226.29	3466.93	1733.47	5707.67	2858.08	6.60	-0.635	0.000	0.084
110.00	-16.13	-4.49	0.00	-203.28	0.00	203.28	3390.01	1695.00	5410.56	2709.30	7.28	-0.667	0.000	0.080
115.00	-15.28	-4.39	0.00	-180.80	0.00	180.80	3311.33	1655.67	5118.49	2563.05	8.00	-0.698	0.000	0.075
115.00	-15.28	-4.39	0.00	-180.80	0.00	180.80	2622.08	1311.04	4066.54	2036.29	8.00	-0.698	0.000	0.095
120.00	-14.58	-4.28	0.00	-158.87	0.00	158.87	2564.05	1282.02	3847.60	1926.66	8.75	-0.728	0.000	0.088
125.00	-13.90	-4.18	0.00	-137.45	0.00	137.45	2504.27	1252.13	3631.97	1818.69	9.53	-0.762	0.000	0.081
130.00	-13.25	-4.08	0.00	-116.54	0.00	116.54	2442.74	1221.37	3419.91	1712.49	10.34	-0.795	0.000	0.073
135.00	-12.15	-3.97	0.00	-96.13	0.00	96.13	1794.51	897.26	2468.50	1236.09	11.19	-0.825	0.000	0.085
140.00	-11.63	-3.88	0.00	-76.26	0.00	76.26	1752.60	876.30	2322.71	1163.08	12.07	-0.853	0.000	0.072
145.00	-11.13	-3.78	0.00	-56.88	0.00	56.88	1708.93	854.47	2178.91	1091.08	12.98	-0.881	0.000	0.059
150.00	-10.65	-3.69	0.00	-37.97	0.00	37.97	1663.52	831.76	2037.37	1020.20	13.91	-0.903	0.000	0.044
153.00	-6.83	-2.02	0.00	-26.91	0.00	26.91	1635.44	817.72	1953.63	978.27	14.49	-0.914	0.000	0.032
155.00	-6.64	-1.98	0.00	-22.87	0.00	22.87	1616.36	808.18	1898.33	950.58	14.87	-0.919	0.000	0.028
160.00	-6.23	-1.89	0.00	-12.97	0.00	12.97	1567.46	783.73	1762.08	882.35	15.84	-0.930	0.000	0.019
165.00	-1.87	-0.46	0.00	-3.51	0.00	3.51	1516.81	758.40	1628.87	815.65	16.82	-0.936	0.000	0.006
170.00	-1.52	-0.38	0.00	-1.20	0.00	1.20	1464.41	732.20	1498.97	750.60	17.80	-0.938	0.000	0.003
173.00	-0.13	-0.03	0.00	-0.06	0.00	0.06	1428.72	714.36	1419.33	710.72	18.39	-0.938	0.000	0.000
175.00	0.00	-0.03	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	18.78	-0.938	0.000	0.000

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Final Analysis Summary

Structure:	CT03113-S-SBA		**Code:**	TIA-222-G	2/8/2022
Site Name:	North Chaplin		**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

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	30.8	0.00	54.11	0.00	0.00	3799.14
0.9D + 1.6W 101 mph Wind	30.8	0.00	40.57	0.00	0.00	3764.63
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.5	0.00	90.94	0.00	0.00	1056.60
1.2D + 1.0E	2.1	0.00	54.14	0.00	0.00	272.10
0.9D + 1.0E	2.1	0.00	40.60	0.00	0.00	269.46
1.0D + 1.0W 60 mph Wind	6.8	0.00	45.11	0.00	0.00	833.43

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	-54.11	-30.83	0.00	-3799.1	0.00	-3799.1	5803.10	2901.5	15291.3	7657.05	0.00	0.506
0.9D + 1.6W 101 mph Wind	-40.57	-30.81	0.00	-3764.6	0.00	-3764.6	5803.10	2901.5	15291.3	7657.05	0.00	0.499
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-90.94	-8.54	0.00	-1056.6	0.00	-1056.6	5803.10	2901.5	15291.3	7657.05	0.00	0.154
1.2D + 1.0E	-54.14	-2.08	0.00	-272.10	0.00	-272.10	5803.10	2901.5	15291.3	7657.05	0.00	0.045
0.9D + 1.0E	-26.71	-1.68	0.00	-176.35	0.00	-176.35	4442.55	2221.2	9722.51	4868.48	48.00	0.042
1.0D + 1.0W 60 mph Wind	-45.11	-6.80	0.00	-833.43	0.00	-833.43	5803.10	2901.5	15291.3	7657.05	0.00	0.117

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Monopole Mat Foundation Design

				Date
				2/8/2022
	Customer Name:	T-Mobile Sprint	**TIA Standard:**	TIA-222-G
	Site Name:		**Structure Height (Ft.):**	175
	Site Number:	CT03113-S-SBA	**Engineer Name:**	J. Tibbetts
	Engr. Number:	123642	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

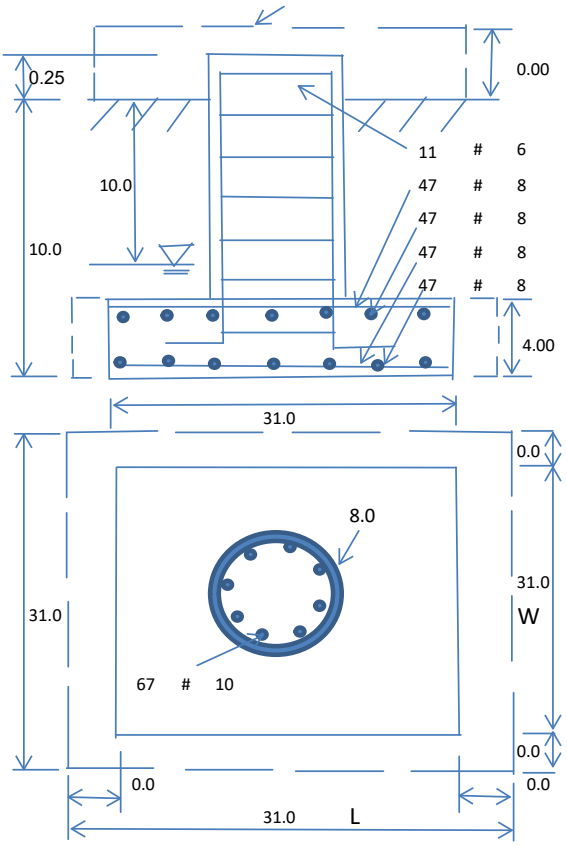
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	54.1	Shear Force (Kips):	30.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3799.1
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	10.0
Pier Height A. G. (ft.):	0.25	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	31	Width of Pad (ft.):	31
Final Length of pad (ft)	31.0	Final width of pad (ft):	31.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	10	Tie / Stirrup Size #:	6	
Qty. of Vertical Rebars:	67	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	47	Qty. of Rebar in Pad (W):	47	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	47	Qty. of Rebar in Pad (W):	47	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	135.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	10.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	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.):	5464.41	Total Dry Soil Weight (Kips):	737.69
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	737.69	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4158.16	Total Dry Concrete Weight (Kips):	623.72
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	623.72	Total Vertical Load on Base (Kips):	1415.52

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2443	<	Allowable Factored Soil Bearing (psf):	22500	0.11	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	19830.3	>	Design Factored Momont (kips-ft):	3370	0.17	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	5.88	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):	1.27		Tie / Stirrup Area (sq. in./each):	0.44		
Calculated Moment Capacity (Mn,Kips-Ft):	15037.0	>	Design Factored Moment (Mu, Kips-F	3991.6	0.27	OK!
Calculated Shear Capacity (Kips):	932.6	>	Design Factored Shear (Kips):	30.8	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	4594.9	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9485.1	>	Design Factored Axial Load (Pu Kips):	54.1	0.01	OK!
Moment & Axial Strength Combination:	0.27	OK!	Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.012		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	1360.0	>	One-Way Factored Shear (L-D. Kips):	437.8	0.32	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1360.0	>	One-Way Factored Shear (W-D., Kips)	437.8	0.32	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1247.0	>	One-Way Factored Shear (C-C, Kips):	365.0	0.29	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0022	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0022		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	7239.1	>	Moment at Bottom (L-Dir. K-Ft):	3390.8	0.47	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	7239.1	>	Moment at Bottom (W-Dir. K-Ft):	3390.8	0.47	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	10175.7	>	Moment at Bottom (C-C Dir. K-Ft):	4795.3	0.47	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0022	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0022		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	7239.1	>	Moment at the top (L-Dir K-Ft):	589.4	0.08	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	7239.1	>	Moment at the top (W-Dir K-Ft):	589.4	0.08	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	10175.7	>	Moment at the top (C-C Dir. K-Ft):	551.6	0.05	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1519.6	k-ft.	Max. factored shear stress v_{u_CD}:		2.1	Psi
Max. factored shear stress v_{u_AB}:	6.2	Psi	Factored shear Strength ϕv_n:		164.3	Psi
Max. factored shear stress v_u:	6.2	Psi	Check Usage of Punching Shear Capacity:		0.04	OK!

EXHIBIT 8

Mount Analysis

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 Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT03113-S-SBA

Customer Site Name: North Chaplin

Carrier Name: T-Mobile Sprint (App#: 160153, V#2)

Carrier Site ID / Name: CT33XC569 / Mansfield Center

Site Location: 203 Davis Road

Chaplin, Connecticut

Windham County

Latitude: 41.793486

Longitude: -72.160178

Exp. 01/31/2024

02/03/2022

Analysis Result:

Max Structural Usage: 99.7% [Pass]

Report Prepared By: Saroj Dangol

Note: The proposed (1) Site Pro RMQP-4096-HK is not currently installed on the tower. The proposed mount was assumed to be installed per the manufacturer's instructions, and it is assumed that it can be installed properly on the tower. TES cannot verify that the proposed mounts will fit properly and is not liable for any fit-up issues during installation.

Introduction

The purpose of this report is to summarize the analysis results on the (1) Platform w/ Support Rail at 165.00' 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	Mount spec from SBA Application #: 160153, v2 [Sitepro RMQP-4096-HK]
Antenna Loading	SBA Application #: 160153, v2 dated 01/24/2022
Modification Drawings	N/A

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 175 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 110 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 / 2015 IBC
Exposure Category: B
Structure Class: II
Topographic Category: 1
Crest Height (Ft): 101

The site is a Risk Category II structure per IBC Table 1604.5. 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) Platform w/ Support Rail at 165.00' elevation

Final Antenna Configuration

3 Commscope VV-65A-R1
3 RFS APXVAALL24_43-U-NA20
3 Ericsson AIR6449 B41
3 Ericsson 4460 B25 + B66
3 Ericsson 4480 B71 + B85
3 Alcatel-Lucent TD-RRH8x20-25

All of the equipment's to be installed in such a way that vertical eccentricity should be exceed 6" from center line of mount.

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 99.7%, which occurs in the support rail member. 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.

Note: The proposed (1) Site Pro RMQP-4096-HK is not currently installed on the tower. The proposed mount was assumed to be installed per the manufacturer's instructions, and it is assumed that it can be installed properly on the tower. TES cannot verify that the proposed mounts will fit properly and is not liable for any fit-up issues during installation.

Attachments

1. Mount Drawing
2. Antenna Placement Diagram
3. 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.

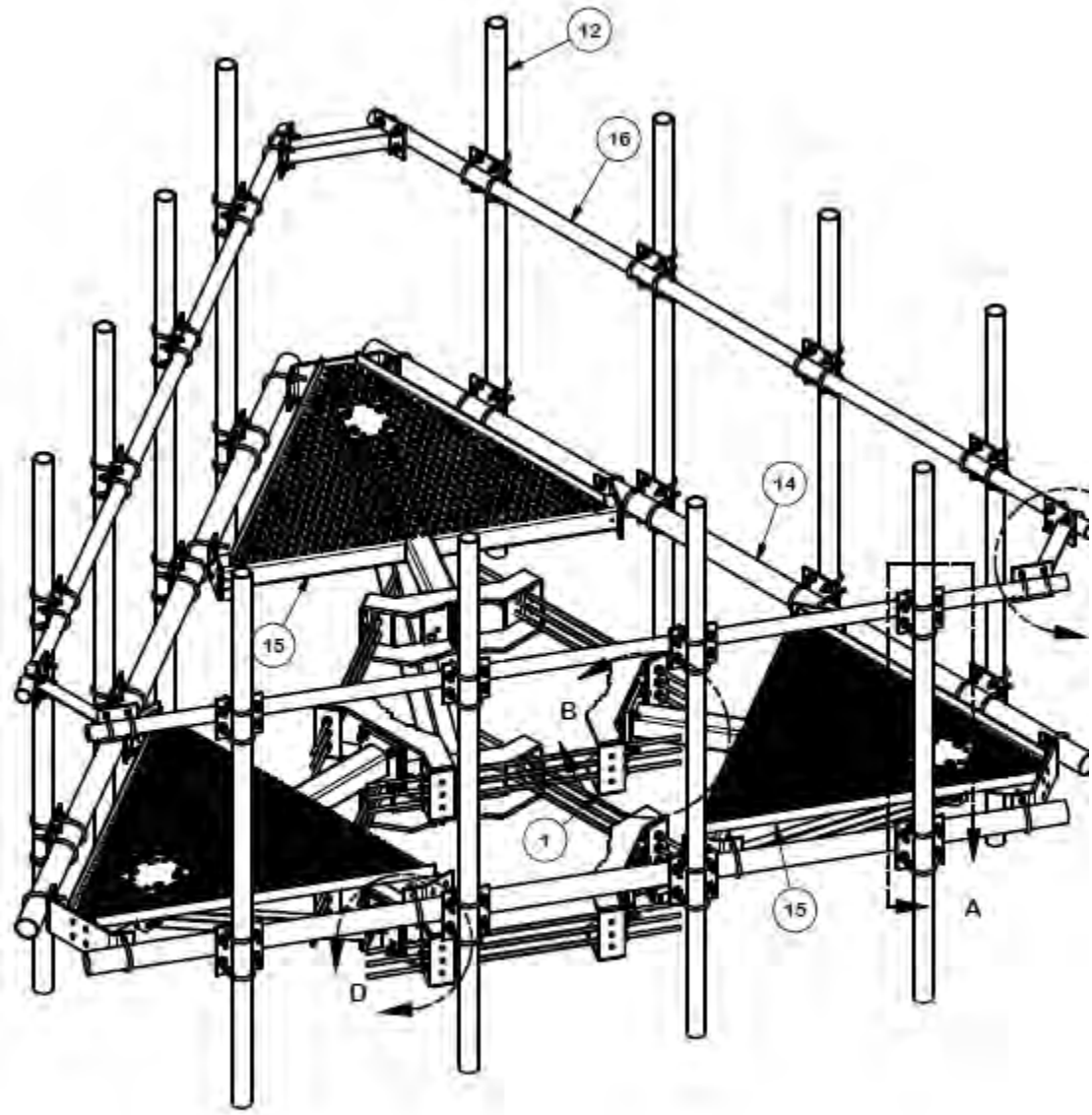
5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

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.



Sitepro RMQP-4096-HK

Structure: CT03113-S-SBA - North Chaplin

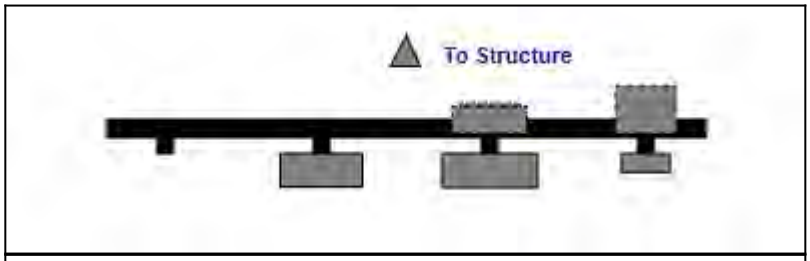
Sector: **A**

Structure Type: Monopole

Mount Elev: 165.00

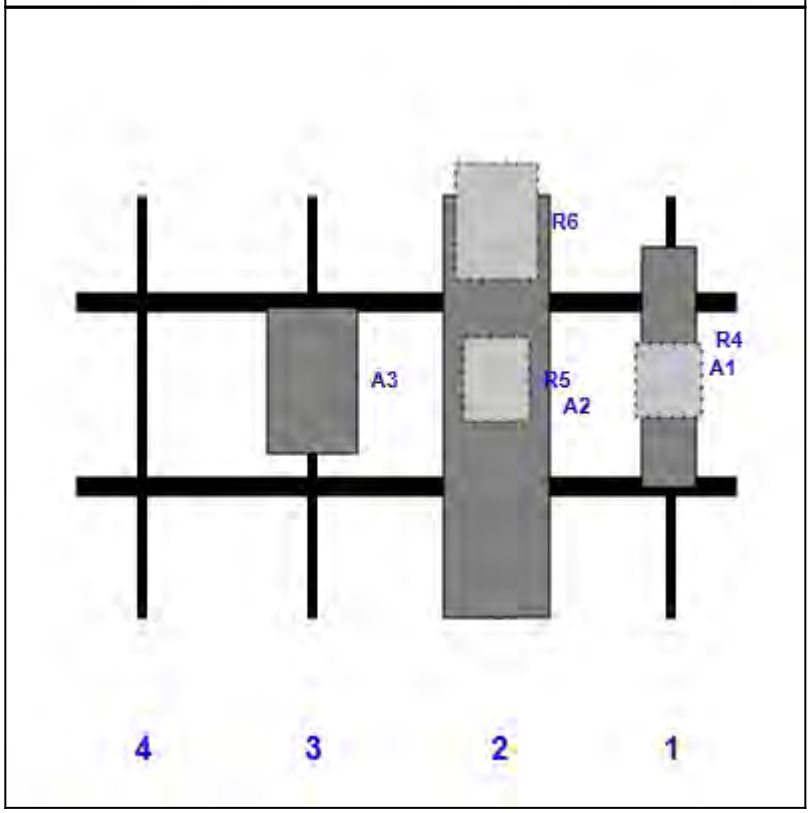
2/3/2022

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	VV-65A-R1	54.72	12.08	135.00	1	a	Front	39.00			
R4	4460 B25 + B66	17.00	15.10	135.00	1	a	Behind	42.00			
A2	APXVAALL24_43-U-NA20	95.90	24.00	96.00	2	a	Front	48.00			
R5	4480 B71 + B85	19.20	15.10	96.00	2	a	Behind	42.00			
R6	TD-RRH8x20-25	26.10	18.60	96.00	2	a	Behind	6.00			
A3	AIR6449 B41	33.10	20.50	54.00	3	a	Front	42.00			

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Structure: CT03113-S-SBA - North Chaplin

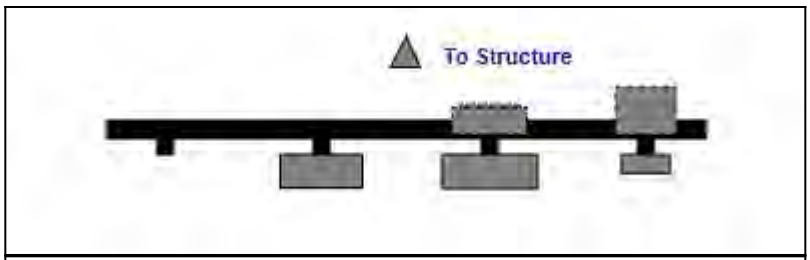
Sector: **B**

Structure Type: Monopole

Mount Elev: 165.00

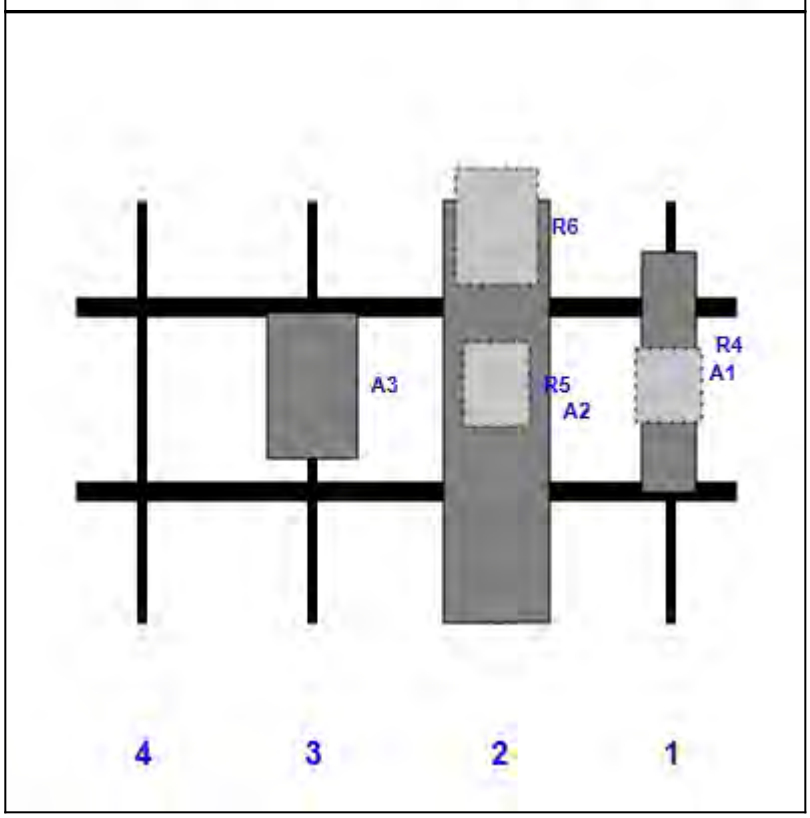
2/3/2022

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	VV-65A-R1	54.72	12.08	135.00	1	a	Front	39.00			
R4	4460 B25 + B66	17.00	15.10	135.00	1	a	Behind	42.00			
A2	APXVAALL24_43-U-NA20	95.90	24.00	96.00	2	a	Front	48.00			
R5	4480 B71 + B85	19.20	15.10	96.00	2	a	Behind	42.00			
R6	TD-RRH8x20-25	26.10	18.60	96.00	2	a	Behind	6.00			
A3	AIR6449 B41	33.10	20.50	54.00	3	a	Front	42.00			

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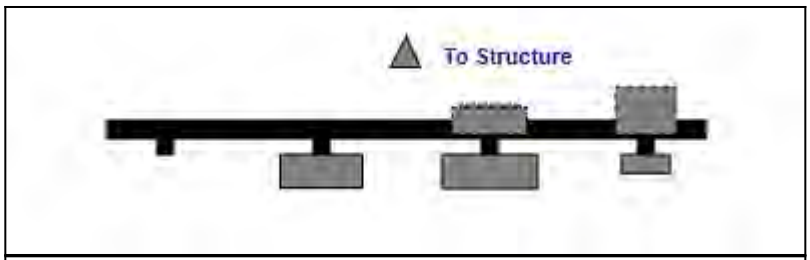
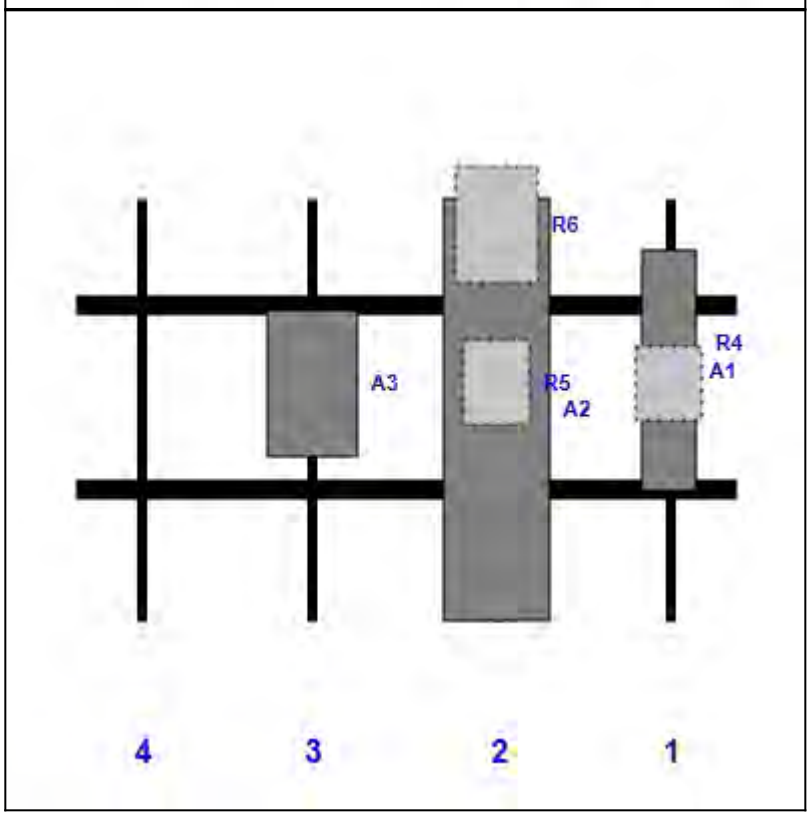
Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	VV-65A-R1	54.72	12.08	135.00	1	a	Front	39.00			
R4	4460 B25 + B66	17.00	15.10	135.00	1	a	Behind	42.00			
A2	APXVAALL24_43-U-NA20	95.90	24.00	96.00	2	a	Front	48.00			
R5	4480 B71 + B85	19.20	15.10	96.00	2	a	Behind	42.00			
R6	TD-RRH8x20-25	26.10	18.60	96.00	2	a	Behind	6.00			
A3	AIR6449 B41	33.10	20.50	54.00	3	a	Front	42.00			

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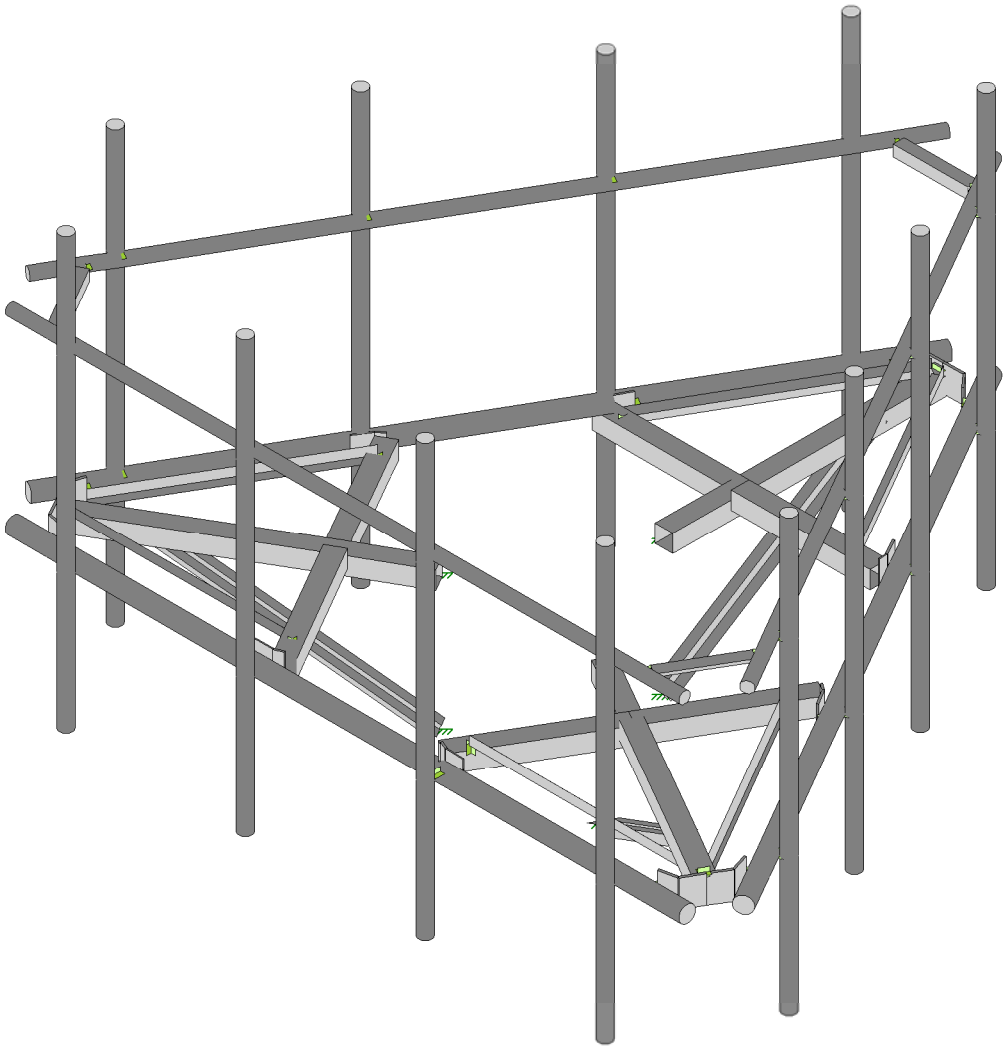
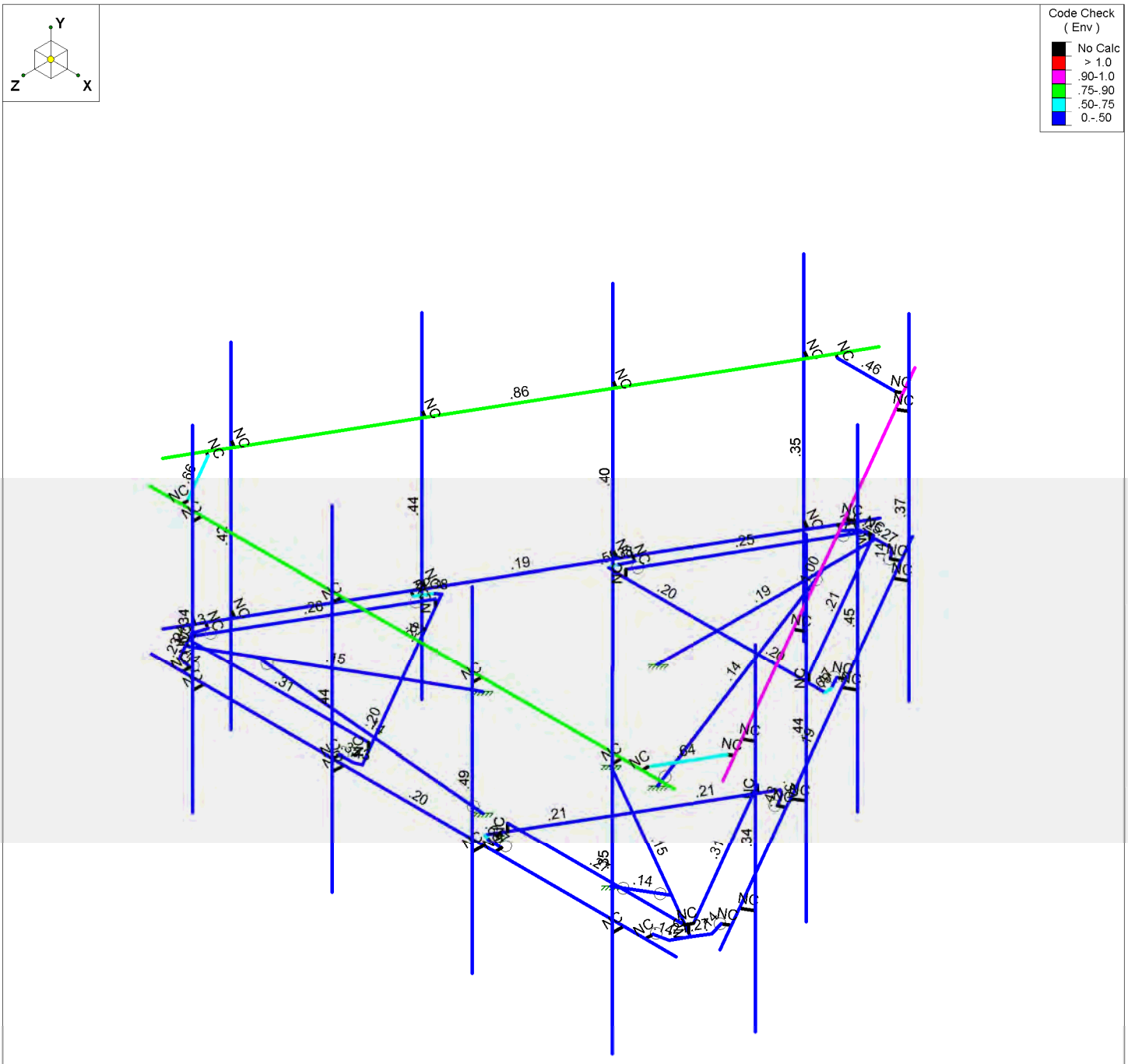
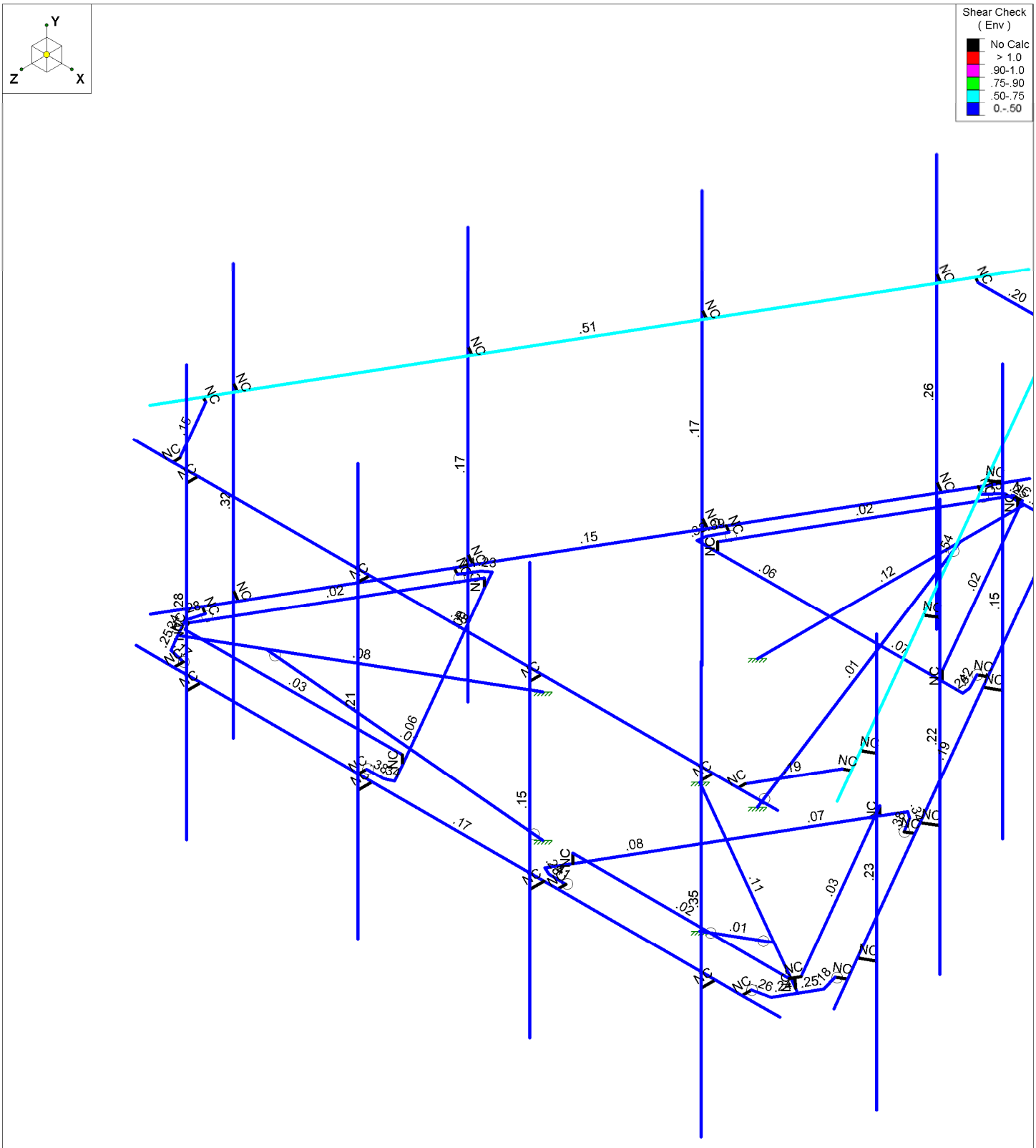


Tower Engineering Solutio...	CT03113-S-SBA_MT_LO_Loads Only_G	SK - 1
		Feb 3, 2022 at 11:49 AM
TES Project No. 110564		CT03113-S-SBA_110564_G_RISA_...



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

Tower Engineering Solutio...	CT03113-S-SBA_MT_LO_Loads Only_G	SK - 2
		Feb 3, 2022 at 11:49 AM
TES Project No. 110564		CT03113-S-SBA_110564_G_RISA_...



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

Tower Engineering Solutio...	CT03113-S-SBA_MT_LO_Loads Only_G	SK - 3
		Feb 3, 2022 at 11:50 AM
TES Project No. 110564		CT03113-S-SBA_110564_G_RISA_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Antenna D	None					27			
2	Antenna Di	None					27			
3	Antenna W Front	None					27			
4	Antenna Wi Front	None					27			
5	Antenna W Side	None					27			
6	Antenna Wi Side	None					27			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					5	
10	Structure Di	None						63	5	
11	Structure W Front	None						63		
12	Structure Wi Front	None						63		
13	Structure W Side	None						63		
14	Structure Wi Side	None						63		
15	BLC 9 Transient Area Loads	None						33		
16	BLC 10 Transient Area Loa...	None						33		

Load Combinations

	Description	S...	P...	SRSS	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
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 (F...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	12	1								
6	1.2D+1.0Di+1.0Wi (B...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	12	-1								
7	1.2D+1.0Di+1.0Wi (L...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	1	14	1								
8	1.2D+1.0Di+1.0Wi (...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	-1	14	-1								
9	1.2D+1.5L1+.16W (...	Yes	Y		1	1.2	9	1.2	7	1.5	3	.16	11	.16										
10	1.2D+1.5L2+.16W (...	Yes	Y		1	1.2	9	1.2	8	1.5	3	.16	11	.16										
11	1.4D	Yes	Y		1	1.4	9	1.4																

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-6.248693	0	4.052255	0	
2	N2	6.251307	0	4.052255	0	
3	N3	0	0	0	0	
4	N4	-1.525645	0	0.880833	0	
5	N5	0.001306	0	-1.760626	0	
6	N6	1.525423	0	0.879222	0	
7	N7	5.518027	0	4.052255	0	
8	N8	1.934693	0	4.052255	0	
9	N9	-1.932785	0	4.052255	0	
10	N10	-5.516118	0	4.052255	0	
11	N11	-6.267414	0	2.750973	0	
12	N12	-4.475747	0	-0.352284	0	
13	N13	-2.542008	0	-3.701619	0	
14	N14	-0.750341	0	-6.804876	0	
15	N15	0.750819	0	-6.80406	0	
16	N16	2.542485	0	-3.700803	0	
17	N17	4.476224	0	-0.351469	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
18	N18	6.267891	0	2.75179	0	
19	N19	-3e-14	0	-3.17336	0	
20	N20	2.180513	0	-3.17336	0	
21	N21	-2.178604	0	-3.17336	0	
22	N22	-3e-14	0	-6.948466	0	
23	N23	.375	0	-6.948466	0	
24	N24	-.375	0	-6.948466	0	
25	N25	2.58	0	-3.17336	0	
26	N26	-2.58	0	-3.17336	0	
27	N27	2.748854	0	1.585571	0	
28	N28	6.018192	0	3.473123	0	
29	N29	-2.74678	0	1.585856	0	
30	N30	-6.016118	0	3.473409	0	
31	N31	-1.525645	-2.5	0.880833	0	
32	N32	0.001306	-2.5	-1.760626	0	
33	N33	1.525423	-2.5	0.879222	0	
34	N34	-4.933586	0	2.848409	0	
35	N35	-2e-14	0	-5.698466	0	
36	N36	4.93566	0	2.848123	0	
37	N37	-6.248693	3.5	4.098255	0	
38	N38	6.251307	3.5	4.098255	0	
39	N39	5.491469	3.5	4.098255	0	
40	N40	-5.48956	3.5	4.098255	0	
41	N41	-4.998693	5.5	4.328256	0	
42	N42	-4.998693	-2.5	4.328256	0	
43	N43	5.001307	5.5	4.328256	0	
44	N44	5.001307	-2.5	4.328256	0	
45	N45	-1.665693	5.5	4.328256	0	
46	N46	-1.665693	-2.5	4.328256	0	
47	N47	1.668306	5.5	4.328256	0	
48	N48	1.668306	-2.5	4.328256	0	
49	N49	6.247726	5.5	2.164868	0	
50	N50	6.247726	-2.5	2.164868	0	
51	N51	1.247726	5.5	-6.495386	0	
52	N52	1.247726	-2.5	-6.495386	0	
53	N53	4.581226	5.5	-0.721595	0	
54	N54	4.581226	-2.5	-0.721595	0	
55	N55	2.914226	5.5	-3.608924	0	
56	N56	2.914226	-2.5	-3.608924	0	
57	N57	-1.249032	5.5	-6.493123	0	
58	N58	-1.249032	-2.5	-6.493123	0	
59	N59	-6.249032	5.5	2.167131	0	
60	N60	-6.249032	-2.5	2.167131	0	
61	N61	-2.915532	5.5	-3.606661	0	
62	N62	-2.915532	-2.5	-3.606661	0	
63	N63	-4.582532	5.5	-0.719332	0	
64	N64	-4.582532	-2.5	-0.719332	0	
65	N65	6.009184	0	2.303696	0	
66	N66	1.009184	0	-6.356558	0	
67	N67	4.342684	0	-0.582766	0	
68	N68	2.675684	0	-3.470095	0	
69	N69	-1.010006	0	-6.355124	0	
70	N70	-6.010006	0	2.30513	0	
71	N71	-2.676506	0	-3.468661	0	
72	N72	-4.343506	0	-0.581332	0	
73	N73	-4.998693	0	4.052255	0	
74	N74	5.001307	0	4.052255	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
75	N75	-1.665693	0	4.052255	0	
76	N76	1.668306	0	4.052255	0	
77	N77	6.633707	0	3.385402	0	
78	N78	0.383707	0	-7.439915	0	
79	N79	-0.385005	0	-7.437658	0	
80	N80	-6.635005	0	3.38766	0	
81	N81	6.673544	3.5	3.362403	0	
82	N82	0.423544	3.5	-7.462915	0	
83	N83	-0.424841	3.5	-7.460657	0	
84	N84	-6.674841	3.5	3.36466	0	
85	N85	-4.998693	3.5	4.328256	0	
86	N86	-4.998693	0	4.328256	0	
87	N87	5.001307	0	4.328256	0	
88	N88	-1.665693	0	4.328256	0	
89	N89	1.668306	0	4.328256	0	
90	N90	5.001307	3.5	4.328256	0	
91	N91	-1.665693	3.5	4.328256	0	
92	N92	1.668306	3.5	4.328256	0	
93	N93	6.247726	3.5	2.164868	0	
94	N94	6.247726	0	2.164868	0	
95	N95	1.247726	0	-6.495386	0	
96	N96	4.581226	0	-0.721595	0	
97	N97	2.914226	0	-3.608924	0	
98	N98	1.247726	3.5	-6.495386	0	
99	N99	4.581226	3.5	-0.721595	0	
100	N100	2.914226	3.5	-3.608924	0	
101	N101	-1.249032	3.5	-6.493123	0	
102	N102	-1.249032	0	-6.493123	0	
103	N103	-6.249032	0	2.167131	0	
104	N104	-2.915532	0	-3.606661	0	
105	N105	-4.582532	0	-0.719332	0	
106	N106	-6.249032	3.5	2.167131	0	
107	N107	-2.915532	3.5	-3.606661	0	
108	N108	-4.582532	3.5	-0.719332	0	
109	N109	-4.998693	3.5	4.098255	0	
110	N110	5.001307	3.5	4.098255	0	
111	N111	-1.665693	3.5	4.098255	0	
112	N112	1.668306	3.5	4.098255	0	
113	N113	6.048542	3.5	2.279867	0	
114	N114	1.048542	3.5	-6.380387	0	
115	N115	4.382042	3.5	-0.606596	0	
116	N116	2.715042	3.5	-3.493924	0	
117	N117	-1.049844	3.5	-6.378122	0	
118	N118	-6.049844	3.5	2.282133	0	
119	N119	-2.716344	3.5	-3.491659	0	
120	N120	-4.383344	3.5	-0.60433	0	
121	N121	5.491469	3.5	3.968255	0	
122	N122	-5.48956	3.5	3.968255	0	
123	N123	0.80346	3.5	-6.80488	0	
124	N124	6.293975	3.5	2.70497	0	
125	N125	0.690875	3.5	-6.739879	0	
126	N126	6.181389	3.5	2.769971	0	
127	N127	-6.294925	3.5	2.706626	0	
128	N128	-0.80441	3.5	-6.803225	0	
129	N129	-6.182344	3.5	2.771625	0	
130	N130	-0.691829	3.5	-6.738226	0	
131	N131	5.518027	0	3.872255	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
132	N132	-5.516118	0	3.872255	0	
133	N133	0.594458	0	-6.714879	0	
134	N134	6.111531	0	2.840971	0	
135	N135	-6.112485	0	2.842624	0	
136	N136	-0.595413	0	-6.713226	0	
137	N137	1.934693	0	3.892255	0	
138	N138	-1.932785	0	3.892255	0	
139	N139	2.403445	0	-3.621621	0	
140	N140	4.337184	0	-0.272287	0	
141	N141	-4.338139	0	-0.270634	0	
142	N142	-2.4044	0	-3.619968	0	
143	N143	2.561452	0	-3.327946	0	
144	N144	-2.561452	0	-3.327946	0	
145	N145	2.180513	0.1745	-3.17336	0	
146	N146	-2.178604	0.1745	-3.17336	0	
147	N147	-3e-14	0	-6.823466	0	
148	N148	-3e-14	0.1745	-6.823466	0	
149	N149	0.0835	0.1745	-6.823466	0	
150	N150	-0.0835	0.1745	-6.823466	0	
151	N151	-3.838172	0	-0.3017	0	
152	N152	-1.658612	0	3.473406	0	
153	N153	-6.205048	0	3.149473	0	
154	N154	-5.830048	0	3.798993	0	
155	N155	-4.03821	0	-0.647666	0	
156	N156	-1.45821	0	3.821026	0	
157	N157	-4.162812	0	-0.554309	0	
158	N158	-1.60136	0	3.882255	0	
159	N159	-3.838467	0.1745	-0.3017	0	
160	N160	-1.658908	0.1745	3.473406	0	
161	N161	-5.909291	0	3.411733	0	
162	N162	-5.909291	0.1745	3.411733	0	
163	N163	-5.951045	0.1745	3.33942	0	
164	N164	-5.867545	0.1745	3.484046	0	
165	N165	1.657955	0	3.475059	0	
166	N166	3.837513	0	-0.300047	0	
167	N167	5.830048	0	3.798993	0	
168	N168	6.205048	0	3.149473	0	
169	N169	1.45821	0	3.821026	0	
170	N170	4.03821	0	-0.647666	0	
171	N171	1.60136	0	3.882255	0	
172	N172	4.162812	0	-0.554309	0	
173	N173	1.657954	0.1745	3.475059	0	
174	N174	3.837512	0.1745	-0.300047	0	
175	N175	5.91186	0	3.411733	0	
176	N176	5.909295	0.1745	3.411733	0	
177	N177	5.867545	0.1745	3.484046	0	
178	N178	5.951045	0.1745	3.33942	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Footrails	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Grating Angles	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
3	Handrails	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Standoff Arm	HSS4X4X4	Beam	SquareTube	A500 Gr.46	Typical	3.37	7.8	7.8	12.8
5	Plan Bracing	HSS4X4X4	Beam	SquareTube	A500 Gr.46	Typical	3.37	7.8	7.8	12.8

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
6	Kickers	LL2.5x2.5x3x3	Beam	Double Angle (...	A36 Gr.36	Typical	1.8	2.46	1.07	.023
7	Mount Pipes	PIPE 2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	Footrail Connection Plates	PL1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
9	Plan Bracing Connection...	PL3/8x6	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
10	Handrail Corner Braces	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026

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	58	1.2
3	A992	29000	11154	.3	.65	.49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.2	58	1.1
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.5	58	1.2
7	Q235	29000	11154	.3	.65	.49	34	1.5	58	1.2
8	J429-Gr5	29000	11154	.3	.65	.49	92	1.5	120	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N30	N4			Standoff Arm	Beam	SquareTube	A500 Gr.46	Typical
2	M2	N28	N6			Standoff Arm	Beam	SquareTube	A500 Gr.46	Typical
3	M3	N22	N24			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
4	M4	N22	N23			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
5	M5	N26	N144			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
6	M6	N144	N142			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
7	M7	N25	N143			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
8	M8	N143	N139			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
9	M9	N149	N145			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N150	N146		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
11	M11	N24	N136			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
12	M12	N23	N133			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
13	M13	N22	N5			Standoff Arm	Beam	SquareTube	A500 Gr.46	Typical
14	M14	N26	N19			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
15	M15	N19	N25			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
16	M16	N77	N78			Footrails	Beam	Pipe	A53 Gr.B	Typical
17	M17	N79	N80			Footrails	Beam	Pipe	A53 Gr.B	Typical
18	M18	N1	N2			Footrails	Beam	Pipe	A53 Gr.B	Typical
19	M19	N31	N34			Kickers	Beam	Double Angle (...	A36 Gr.36	Typical
20	M20	N32	N35			Kickers	Beam	Double Angle (...	A36 Gr.36	Typical
21	M21	N33	N36			Kickers	Beam	Double Angle (...	A36 Gr.36	Typical
22	M22	N37	N38			Handrails	Beam	Pipe	A53 Gr.B	Typical
23	M23	N81	N82			Handrails	Beam	Pipe	A53 Gr.B	Typical
24	M24	N83	N84			Handrails	Beam	Pipe	A53 Gr.B	Typical
25	M25	N130	N125		180	Handrail Corn...	Beam	Single Angle	A36 Gr.36	Typical
26	MP4A	N41	N42			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
27	MP1A	N43	N44			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
28	MP3A	N45	N46			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
29	MP2A	N47	N48			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
30	MP4C	N49	N50			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
31	MP1C	N51	N52			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
32	MP3C	N53	N54			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
33	MP2C	N55	N56			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
34	MP4B	N57	N58			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
35	MP1B	N59	N60			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
36	MP3B	N61	N62			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
37	MP2B	N63	N64			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
38	M38	N74	N87			RIGID	None	None	RIGID	Typical
39	M39	N76	N89			RIGID	None	None	RIGID	Typical
40	M40	N75	N88			RIGID	None	None	RIGID	Typical
41	M41	N73	N86			RIGID	None	None	RIGID	Typical
42	M42	N66	N95			RIGID	None	None	RIGID	Typical
43	M43	N68	N97			RIGID	None	None	RIGID	Typical
44	M44	N67	N96			RIGID	None	None	RIGID	Typical
45	M45	N65	N94			RIGID	None	None	RIGID	Typical
46	M46	N70	N103			RIGID	None	None	RIGID	Typical
47	M47	N72	N105			RIGID	None	None	RIGID	Typical
48	M48	N71	N104			RIGID	None	None	RIGID	Typical
49	M49	N69	N102			RIGID	None	None	RIGID	Typical
50	M50	N110	N90			RIGID	None	None	RIGID	Typical
51	M51	N112	N92			RIGID	None	None	RIGID	Typical
52	M52	N111	N91			RIGID	None	None	RIGID	Typical
53	M53	N109	N85			RIGID	None	None	RIGID	Typical
54	M54	N114	N98			RIGID	None	None	RIGID	Typical
55	M55	N116	N100			RIGID	None	None	RIGID	Typical
56	M56	N115	N99			RIGID	None	None	RIGID	Typical
57	M57	N113	N93			RIGID	None	None	RIGID	Typical
58	M58	N118	N106			RIGID	None	None	RIGID	Typical
59	M59	N120	N108			RIGID	None	None	RIGID	Typical
60	M60	N119	N107			RIGID	None	None	RIGID	Typical
61	M61	N117	N101			RIGID	None	None	RIGID	Typical
62	M62	N39	N121			RIGID	None	None	RIGID	Typical
63	M63	N40	N122			RIGID	None	None	RIGID	Typical
64	M64	N123	N125			RIGID	None	None	RIGID	Typical
65	M65	N124	N126			RIGID	None	None	RIGID	Typical
66	M66	N127	N129			RIGID	None	None	RIGID	Typical
67	M67	N128	N130			RIGID	None	None	RIGID	Typical
68	M68	N122	N129		180	Handrail Corn...	Beam	Single Angle	A36 Gr.36	Typical
69	M69	N126	N121		180	Handrail Corn...	Beam	Single Angle	A36 Gr.36	Typical
70	M70	N10	N132			RIGID	None	None	RIGID	Typical
71	M71	N7	N131			RIGID	None	None	RIGID	Typical
72	M72	N18	N134			RIGID	None	None	RIGID	Typical
73	M73	N15	N133			RIGID	None	None	RIGID	Typical
74	M74	N14	N136			RIGID	None	None	RIGID	Typical
75	M75	N11	N135			RIGID	None	None	RIGID	Typical
76	M76	N8	N137			RIGID	None	None	RIGID	Typical
77	M77	N9	N138			RIGID	None	None	RIGID	Typical
78	M78	N16	N139			RIGID	None	None	RIGID	Typical
79	M79	N17	N140			RIGID	None	None	RIGID	Typical
80	M80	N12	N141			RIGID	None	None	RIGID	Typical
81	M81	N13	N142			RIGID	None	None	RIGID	Typical
82	M82	N21	N146			RIGID	None	None	RIGID	Typical
83	M83	N20	N145			RIGID	None	None	RIGID	Typical
84	M84	N147	N148			RIGID	None	None	RIGID	Typical
85	M85	N149	N150			RIGID	None	None	RIGID	Typical
86	M86	N30	N154			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
87	M87	N30	N153			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
88	M88	N156	N158			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
89	M89	N158	N138			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
90	M90	N155	N157			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
91	M91	N157	N141			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
92	M92	N163	N159			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
93	M93	N164	N160		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
94	M94	N154	N132			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
95	M95	N153	N135			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
96	M96	N156	N29			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
97	M97	N29	N155			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
98	M98	N152	N160			RIGID	None	None	RIGID	Typical
99	M99	N151	N159			RIGID	None	None	RIGID	Typical
100	M100	N161	N162			RIGID	None	None	RIGID	Typical
101	M101	N163	N164			RIGID	None	None	RIGID	Typical
102	M102	N28	N168			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
103	M103	N28	N167			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
104	M104	N170	N172			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
105	M105	N172	N140			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
106	M106	N169	N171			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
107	M107	N171	N137			Plan Bracing ...	Beam	RECT	A36 Gr.36	Typical
108	M108	N177	N173			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
109	M109	N178	N174		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
110	M110	N168	N134			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
111	M111	N167	N131			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
112	M112	N170	N27			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
113	M113	N27	N169			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
114	M114	N166	N174			RIGID	None	None	RIGID	Typical
115	M115	N165	N173			RIGID	None	None	RIGID	Typical
116	M116	N175	N176			RIGID	None	None	RIGID	Typical
117	M117	N177	N178			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15						Yes				None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M19	BenPIN	BenPIN				Yes				None
20	M20	BenPIN	BenPIN				Yes				None
21	M21	BenPIN	BenPIN				Yes				None
22	M22						Yes				None
23	M23						Yes				None
24	M24						Yes				None
25	M25						Yes				None
26	MP4A						Yes				None
27	MP1A						Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
28	MP3A						Yes				None
29	MP2A						Yes				None
30	MP4C						Yes				None
31	MP1C						Yes				None
32	MP3C						Yes				None
33	MP2C						Yes				None
34	MP4B						Yes				None
35	MP1B						Yes				None
36	MP3B						Yes				None
37	MP2B						Yes				None
38	M38						Yes	** NA **			None
39	M39						Yes	** NA **			None
40	M40						Yes	** NA **			None
41	M41						Yes	** NA **			None
42	M42						Yes	** NA **			None
43	M43						Yes	** NA **			None
44	M44						Yes	** NA **			None
45	M45						Yes	** NA **			None
46	M46						Yes	** NA **			None
47	M47						Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None
51	M51						Yes	** NA **			None
52	M52						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	M54						Yes	** NA **			None
55	M55						Yes	** NA **			None
56	M56						Yes	** NA **			None
57	M57						Yes	** NA **			None
58	M58						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	M60						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	M62						Yes	** NA **			None
63	M63						Yes	** NA **			None
64	M64						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	M66						Yes	** NA **			None
67	M67						Yes	** NA **			None
68	M68						Yes				None
69	M69						Yes				None
70	M70	BenPIN					Yes	** NA **			None
71	M71	BenPIN					Yes	** NA **			None
72	M72	BenPIN					Yes	** NA **			None
73	M73	BenPIN					Yes	** NA **			None
74	M74	BenPIN					Yes	** NA **			None
75	M75	BenPIN					Yes	** NA **			None
76	M76	BenPIN					Yes	** NA **			None
77	M77	BenPIN					Yes	** NA **			None
78	M78	BenPIN					Yes	** NA **			None
79	M79	BenPIN					Yes	** NA **			None
80	M80	BenPIN					Yes	** NA **			None
81	M81	BenPIN					Yes	** NA **			None
82	M82						Yes	** NA **			None
83	M83						Yes	** NA **			None
84	M84						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
85	M85						Yes	** NA **			None
86	M86						Yes				None
87	M87						Yes				None
88	M88						Yes				None
89	M89						Yes				None
90	M90						Yes				None
91	M91						Yes				None
92	M92						Yes				None
93	M93						Yes				None
94	M94						Yes				None
95	M95						Yes				None
96	M96						Yes				None
97	M97						Yes				None
98	M98						Yes	** NA **			None
99	M99						Yes	** NA **			None
100	M100						Yes	** NA **			None
101	M101						Yes	** NA **			None
102	M102						Yes				None
103	M103						Yes				None
104	M104						Yes				None
105	M105						Yes				None
106	M106						Yes				None
107	M107						Yes				None
108	M108						Yes				None
109	M109						Yes				None
110	M110						Yes				None
111	M111						Yes				None
112	M112						Yes				None
113	M113						Yes				None
114	M114						Yes	** NA **			None
115	M115						Yes	** NA **			None
116	M116						Yes	** NA **			None
117	M117						Yes	** NA **			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	Standoff Arm	5.185			Lbyy			2.1	2.1		Lateral
2	M2	Standoff Arm	5.188			Lbyy			2.1	2.1		Lateral
3	M3	Footrail Con...	.375			Lbyy			.65	.65		Lateral
4	M4	Footrail Con...	.375			Lbyy			.65	.65		Lateral
5	M5	Plan Bracin...	.156			Lbyy			.65	.65		Lateral
6	M6	Plan Bracin...	.332			Lbyy			.8	.8		Lateral
7	M7	Plan Bracin...	.156			Lbyy			.65	.65		Lateral
8	M8	Plan Bracin...	.333			Lbyy			.8	.8		Lateral
9	M9	Grating Ang...	4.21			Lbyy			.65	.65		Lateral
10	M10	Grating Ang...	4.209			Lbyy			.65	.65		Lateral
11	M11	Footrail Con...	.322			Lbyy			.8	.8		Lateral
12	M12	Footrail Con...	.321			Lbyy			.8	.8		Lateral
13	M13	Standoff Arm	5.188			Lbyy			2.1	2.1		Lateral
14	M14	Plan Bracing	2.58			Lbyy			1	1		Lateral
15	M15	Plan Bracing	2.58			Lbyy			1	1		Lateral
16	M16	Footrails	12.5			Lbyy			1	1		Lateral
17	M17	Footrails	12.5			Lbyy			1	1		Lateral
18	M18	Footrails	12.5			Lbyy			1	1		Lateral
19	M19	Kickers	4.662			Lbyy			1	1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
20	M20	Kickers	4.664			Lbyy			1	1		Lateral
21	M21	Kickers	4.664			Lbyy			1	1		Lateral
22	M22	Handrails	12.5			Lbyy			1	1		Lateral
23	M23	Handrails	12.5			Lbyy			1	1		Lateral
24	M24	Handrails	12.5			Lbyy			1	1		Lateral
25	M25	Handrail Co...	1.383			Lbyy			.65	.65		Lateral
26	MP4A	Mount Pipes	8			Lbyy			1	1		Lateral
27	MP1A	Mount Pipes	8			Lbyy			1	1		Lateral
28	MP3A	Mount Pipes	8			Lbyy			1	1		Lateral
29	MP2A	Mount Pipes	8			Lbyy			1	1		Lateral
30	MP4C	Mount Pipes	8			Lbyy			1	1		Lateral
31	MP1C	Mount Pipes	8			Lbyy			1	1		Lateral
32	MP3C	Mount Pipes	8			Lbyy			1	1		Lateral
33	MP2C	Mount Pipes	8			Lbyy			1	1		Lateral
34	MP4B	Mount Pipes	8			Lbyy			1	1		Lateral
35	MP1B	Mount Pipes	8			Lbyy			1	1		Lateral
36	MP3B	Mount Pipes	8			Lbyy			1	1		Lateral
37	MP2B	Mount Pipes	8			Lbyy			1	1		Lateral
38	M68	Handrail Co...	1.383			Lbyy			.65	.65		Lateral
39	M69	Handrail Co...	1.383			Lbyy			.65	.65		Lateral
40	M86	Footrail Con...	.375			Lbyy			.65	.65		Lateral
41	M87	Footrail Con...	.375			Lbyy			.65	.65		Lateral
42	M88	Plan Bracin...	.156			Lbyy			.65	.65		Lateral
43	M89	Plan Bracin...	.332			Lbyy			.8	.8		Lateral
44	M90	Plan Bracin...	.156			Lbyy			.65	.65		Lateral
45	M91	Plan Bracin...	.333			Lbyy			.8	.8		Lateral
46	M92	Grating Ang...	4.21			Lbyy			.65	.65		Lateral
47	M93	Grating Ang...	4.209			Lbyy			.65	.65		Lateral
48	M94	Footrail Con...	.322			Lbyy			.8	.8		Lateral
49	M95	Footrail Con...	.321			Lbyy			.8	.8		Lateral
50	M96	Plan Bracing	2.58			Lbyy			1	1		Lateral
51	M97	Plan Bracing	2.58			Lbyy			1	1		Lateral
52	M102	Footrail Con...	.374			Lbyy			.65	.65		Lateral
53	M103	Footrail Con...	.376			Lbyy			.65	.65		Lateral
54	M104	Plan Bracin...	.156			Lbyy			.65	.65		Lateral
55	M105	Plan Bracin...	.332			Lbyy			.8	.8		Lateral
56	M106	Plan Bracin...	.156			Lbyy			.65	.65		Lateral
57	M107	Plan Bracin...	.333			Lbyy			.8	.8		Lateral
58	M108	Grating Ang...	4.21			Lbyy			.65	.65		Lateral
59	M109	Grating Ang...	4.209			Lbyy			.65	.65		Lateral
60	M110	Footrail Con...	.322			Lbyy			.8	.8		Lateral
61	M111	Footrail Con...	.321			Lbyy			.8	.8		Lateral
62	M112	Plan Bracing	2.579			Lbyy			1	1		Lateral
63	M113	Plan Bracing	2.581			Lbyy			1	1		Lateral

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	N3						
2	N5	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N29						
4	N6	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N4	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N31	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	N32	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
8	N33	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	N5	max	2063.072	4	1325.75	6	8083.969	1	1.511	6	2.587	3	.839	3
2		min	-2062.479	3	153.762	1	-5549.981	2	.216	1	-2.549	4	-.623	4
3	N6	max	4197.919	4	1357.325	8	3022.076	1	.229	1	1.463	2	1.206	5
4		min	-6482.72	3	207.779	3	-4358.362	2	-1.212	6	-1.425	1	-.134	2
5	N4	max	6959.266	4	1367.092	7	2292.977	1	.367	4	.766	3	-.093	2
6		min	-4675.941	3	184.046	4	-3623.747	2	-.656	3	-.742	4	-1.58	5
7	N31	max	787.219	3	3383.557	8	2610.892	8	0	4	0	3	0	3
8		min	-4509.264	8	-588.792	3	-475.64	3	0	3	0	4	0	4
9	N32	max	55.92	4	3311.46	5	1361	2	0	11	0	4	0	3
10		min	-55.707	3	-866.772	2	-5101.25	5	0	1	0	3	0	4
11	N33	max	4506.416	7	3379.347	7	2609.46	7	0	1	0	1	0	1
12		min	-749.438	4	-560.736	4	-454.048	4	0	2	0	2	0	2
13	Totals:	max	9288.674	4	12967.78	5	9472.532	1						
14		min	-9288.732	3	3923.898	2	-9472.574	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	710.243	3	469.028	3	201.969	2	.289	2	.212	2	-.01	3
2			min	-706.998	4	-1674.042	8	-204.053	1	-.439	1	-.231	1	-.332	8
3		2	max	4713.35	3	1241.858	8	127.82	4	.216	3	.134	4	1.907	4
4			min	-7179.302	4	-221.083	3	-121.859	3	-.349	1	-.133	3	-1.043	3
5		3	max	4735.449	3	1193.943	8	115.061	4	.216	3	.291	4	.75	4
6			min	-7201.401	4	-238.921	3	-109.1	3	-.349	1	-.283	3	-.745	3
7		4	max	4965.715	3	-165.429	4	1200.024	2	.392	2	1.631	4	.044	9
8			min	-7616.773	4	-1317.355	7	-1201.086	1	-.606	1	-1.678	3	-.181	7
9		5	max	4987.814	3	-183.267	4	1238.3	2	.392	2	.742	4	1.558	7
10			min	-7638.872	4	-1365.27	7	-1239.362	1	-.606	1	-.766	3	.248	4
11	M2	1	max	797.534	4	471.367	4	482.507	1	.479	1	.311	1	-.004	4
12			min	-787.532	3	-1672.987	7	-436.888	2	-.614	2	-.323	2	-.338	7
13		2	max	4420.712	4	1238.419	7	129.938	2	.334	1	.135	4	1.846	3
14			min	-6886.664	3	-193.42	4	-124.468	1	-.467	2	-.134	3	-.985	4
15		3	max	4442.822	4	1190.479	7	91.642	2	.334	1	.237	4	.723	3
16			min	-6908.774	3	-211.268	4	-86.172	1	-.467	2	-.225	3	-.722	4
17		4	max	4661.254	4	-189.152	3	1744.037	1	.614	1	1.281	4	.008	3
18			min	-7306.849	3	-1307.524	8	-1737.271	2	-.821	2	-1.308	3	-.168	8
19		5	max	4683.364	4	-206.999	3	1782.333	1	.614	1	1.425	1	1.559	8
20			min	-7328.96	3	-1355.463	8	-1775.567	2	-.821	2	-1.463	2	.265	3
21	M3	1	max	839.014	1	642.694	5	456.339	2	.178	5	.212	1	.525	5
22			min	-794.748	2	-298.871	2	-462.806	1	-.014	2	-.211	2	-.21	2
23		2	max	839.014	1	639.627	5	450.802	2	.178	5	.176	3	.465	5
24			min	-794.748	2	-300.019	2	-457.27	1	-.014	2	-.172	4	-.182	2
25		3	max	839.014	1	636.56	5	445.266	2	.178	5	.148	3	.405	5
26			min	-794.748	2	-301.168	2	-451.734	1	-.014	2	-.147	4	-.154	2
27		4	max	839.014	1	633.493	5	439.729	2	.178	5	.121	3	.345	5
28			min	-794.748	2	-302.316	2	-446.197	1	-.014	2	-.122	4	-.126	2
29		5	max	839.014	1	630.427	5	434.193	2	.178	5	.093	3	.286	5
30			min	-794.748	2	-303.464	2	-440.661	1	-.014	2	-.096	4	-.097	2
31	M4	1	max	828.856	1	1053.697	5	424.486	1	-.005	2	.226	3	.787	5
32			min	-764.03	2	-341.555	2	-437.185	2	-.16	5	-.217	4	-.229	2
33		2	max	828.856	1	1050.63	5	418.95	1	-.005	2	.192	3	.689	5
34			min	-764.03	2	-342.704	2	-431.648	2	-.16	5	-.182	4	-.197	2
35		3	max	828.856	1	1047.563	5	413.413	1	-.005	2	.157	3	.59	5
36			min	-764.03	2	-343.852	2	-426.112	2	-.16	5	-.146	4	-.165	2
37		4	max	828.856	1	1044.497	5	407.877	1	-.005	2	.122	3	.492	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
38			min	-764.03	2	-345	2	-420.575	2	-.16	5	-.111	4	-.132	2
39		5	max	828.856	1	1041.43	5	402.341	1	-.005	2	.087	3	.394	5
40			min	-764.03	2	-346.149	2	-415.039	2	-.16	5	-.076	4	-.1	2
41	M5	1	max	1366.308	2	954.465	5	617.597	4	.129	6	.297	3	.375	1
42			min	-1300.387	1	71.222	2	-599.225	3	-.043	1	-.304	4	-.203	2
43		2	max	1366.036	2	953.32	5	615.331	4	.129	6	.274	3	.356	1
44			min	-1300.115	1	70.864	2	-596.959	3	-.043	1	-.28	4	-.206	2
45		3	max	1365.764	2	952.175	5	613.065	4	.129	6	.251	3	.338	1
46			min	-1299.843	1	70.506	2	-594.693	3	-.043	1	-.256	4	-.208	2
47		4	max	1365.492	2	951.03	5	610.799	4	.129	6	.228	3	.319	1
48			min	-1299.571	1	70.149	2	-592.427	3	-.043	1	-.233	4	-.211	2
49		5	max	1365.221	2	949.885	5	608.533	4	.129	6	.205	3	.3	1
50			min	-1299.299	1	69.791	2	-590.161	3	-.043	1	-.209	4	-.214	2
51	M6	1	max	1241.296	2	950.195	5	744.117	4	.158	5	.205	3	.295	1
52			min	-1179.239	1	68.537	2	-757.91	3	.022	2	-.209	4	-.238	2
53		2	max	1239.254	2	947.756	5	740.32	4	.158	5	.142	3	.256	1
54			min	-1177.197	1	67.776	2	-754.113	3	.022	2	-.147	4	-.244	2
55		3	max	1237.212	2	945.318	5	736.523	4	.158	5	.091	1	.216	1
56			min	-1175.155	1	67.014	2	-750.316	3	.022	2	-.1	2	-.25	2
57		4	max	1235.17	2	942.879	5	732.726	4	.158	5	.137	1	.177	1
58			min	-1173.113	1	66.253	2	-746.519	3	.022	2	-.147	2	-.255	2
59		5	max	1233.128	2	940.44	5	728.929	4	.158	5	.183	1	.137	1
60			min	-1171.07	1	65.491	2	-742.722	3	.022	2	-.194	2	-.261	2
61	M7	1	max	1568.463	2	1056.227	5	718.831	4	.083	3	.362	3	.539	5
62			min	-1467.371	1	89.292	2	-744.896	3	-.112	4	-.353	4	-.126	4
63		2	max	1568.192	2	1055.082	5	716.565	4	.083	3	.333	3	.498	5
64			min	-1467.099	1	88.934	2	-742.63	3	-.112	4	-.325	4	-.135	4
65		3	max	1567.92	2	1053.936	5	714.299	4	.083	3	.304	3	.457	5
66			min	-1466.827	1	88.576	2	-740.364	3	-.112	4	-.297	4	-.145	4
67		4	max	1567.648	2	1052.791	5	712.033	4	.083	3	.275	3	.416	5
68			min	-1466.555	1	88.219	2	-738.098	3	-.112	4	-.269	4	-.154	4
69		5	max	1567.376	2	1051.646	5	709.767	4	.083	3	.246	3	.375	5
70			min	-1466.283	1	87.861	2	-735.832	3	-.112	4	-.241	4	-.163	4
71	M8	1	max	1396.363	2	1051.92	5	994.111	4	-.018	2	.246	3	.358	3
72			min	-1298.938	1	86.889	2	-968.95	3	-.167	5	-.241	4	-.193	4
73		2	max	1394.308	2	1049.467	5	990.292	4	-.018	2	.166	3	.327	3
74			min	-1296.884	1	86.123	2	-965.132	3	-.167	5	-.159	4	-.212	4
75		3	max	1392.254	2	1047.015	5	986.474	4	-.018	2	.099	2	.297	3
76			min	-1294.829	1	85.357	2	-961.314	3	-.167	5	-.086	1	-.232	4
77		4	max	1390.2	2	1044.562	5	982.656	4	-.018	2	.16	2	.267	3
78			min	-1292.775	1	84.591	2	-957.495	3	-.167	5	-.144	1	-.251	4
79		5	max	1388.145	2	1042.109	5	978.838	4	-.018	2	.22	2	.237	3
80			min	-1290.721	1	83.825	2	-953.677	3	-.167	5	-.203	1	-.27	4
81	M9	1	max	1577.061	1	95.956	5	31.474	3	0	6	-.005	2	.112	5
82			min	-1778.745	2	11.539	2	-39.528	4	0	3	-.06	7	-.029	2
83		2	max	1568.113	1	70.088	5	15.898	3	0	6	.005	2	.049	1
84			min	-1769.797	2	5.425	2	-23.952	4	0	3	-.009	1	-.031	2
85		3	max	1559.164	1	30.319	5	13.022	2	0	6	.023	7	.016	1
86			min	-1760.848	2	-4.656	2	-20.936	1	0	3	-.004	4	-.024	2
87		4	max	1550.216	1	8.342	1	18.163	2	0	6	.017	2	-.004	2
88			min	-1751.9	2	-23.675	6	-26.077	1	0	3	-.01	1	-.03	5
89		5	max	1541.267	1	.028	1	23.304	2	0	6	.016	2	.028	2
90			min	-1742.952	2	-57.253	6	-31.218	1	0	3	-.033	7	-.036	1
91	M10	1	max	1488.803	1	34.037	4	106.321	5	0	4	-.003	2	.028	2
92			min	-1670.54	2	-44.689	3	10.434	2	0	7	-.07	5	-.145	5
93		2	max	1479.861	1	18.458	4	80.301	5	0	4	.006	2	.03	2
94			min	-1661.598	2	-29.109	3	4.276	2	0	7	-.014	5	-.061	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
95		3	max	1470.919	1	12.297	2	39.958	5	0	4	.02	8	.023	2
96			min	-1652.656	2	-22.914	1	-5.969	2	0	7	-.005	3	-.021	1
97		4	max	1461.977	1	17.429	2	13.705	1	0	4	.014	2	.028	7
98			min	-1643.714	2	-28.047	1	-20.842	6	0	7	-.008	1	0	4
99		5	max	1453.034	1	22.562	2	4.784	1	0	4	.013	3	.042	1
100			min	-1634.772	2	-33.179	1	-56.544	6	0	7	-.036	8	-.032	2
101	M11	1	max	893.73	1	630.899	5	307.518	1	.061	2	.093	3	.326	5
102			min	-861.641	2	-304.682	2	-286.399	2	-.103	1	-.096	4	-.077	2
103		2	max	891.355	1	628.262	5	309.743	1	.061	2	.084	3	.275	5
104			min	-859.266	2	-305.669	2	-288.624	2	-.103	1	-.084	4	-.052	2
105		3	max	888.981	1	625.626	5	311.968	1	.061	2	.093	1	.224	5
106			min	-856.891	2	-306.656	2	-290.849	2	-.103	1	-.09	2	-.028	2
107		4	max	886.606	1	622.99	5	314.193	1	.061	2	.118	1	.174	5
108			min	-854.517	2	-307.644	2	-293.074	2	-.103	1	-.114	2	-.003	2
109		5	max	884.232	1	620.777	1	316.418	1	.061	2	.143	1	.124	5
110			min	-852.142	2	-308.631	2	-295.299	2	-.103	1	-.138	2	.022	2
111	M12	1	max	859.019	1	1041.532	5	275.912	2	.178	5	.087	3	.387	5
112			min	-827.402	2	-347.577	2	-325.643	1	-.076	2	-.076	4	-.065	2
113		2	max	856.658	1	1038.911	5	278.13	2	.178	5	.088	3	.303	5
114			min	-825.041	2	-348.559	2	-327.862	1	-.076	2	-.082	4	-.037	2
115		3	max	854.297	1	1036.29	5	280.349	2	.178	5	.088	3	.22	5
116			min	-822.68	2	-349.54	2	-330.08	1	-.076	2	-.088	4	-.009	2
117		4	max	851.935	1	1033.669	5	282.567	2	.178	5	.108	2	.137	5
118			min	-820.318	2	-350.522	2	-332.299	1	-.076	2	-.108	1	.016	4
119		5	max	849.574	1	1031.047	5	284.786	2	.178	5	.131	2	.063	6
120			min	-817.957	2	-351.504	2	-334.517	1	-.076	2	-.135	1	-.011	1
121	M13	1	max	897.873	2	642.554	2	497.617	4	.472	4	.414	4	.01	2
122			min	-882.848	1	-1695.858	5	-479.672	3	-.615	3	-.43	3	-.338	5
123		2	max	5309.297	2	1226.759	5	107.582	3	.322	4	.072	4	2.073	1
124			min	-7665.757	1	-301.077	2	-101.548	4	-.458	3	-.071	3	-1.239	2
125		3	max	5309.297	2	1178.82	5	56.521	3	.322	4	.063	1	.837	1
126			min	-7665.757	1	-318.924	2	-50.486	4	-.458	3	-.053	2	-.836	2
127		4	max	5549.98	2	-135.184	1	2011.028	4	.623	4	.332	1	.029	1
128			min	-8083.969	1	-1276.248	6	-2009.775	3	-.839	3	-.368	2	-.175	6
129		5	max	5549.98	2	-153.031	1	2062.09	4	.623	4	2.549	4	1.511	6
130			min	-8083.969	1	-1324.188	6	-2060.836	3	-.839	3	-2.587	3	.216	1
131	M14	1	max	524.035	3	-70.802	2	1366.169	2	.189	2	.304	4	.131	2
132			min	-558.192	4	-954.709	5	-1301.059	1	-.367	1	-.297	3	-.087	1
133		2	max	893.426	3	-107.266	2	24.939	3	-.069	2	.511	2	.692	5
134			min	-839.226	4	-1027.746	5	-175.84	8	-.35	5	-.484	1	.033	2
135		3	max	893.426	3	-116.142	2	24.939	3	-.069	2	.509	2	1.363	5
136			min	-839.226	4	-1051.587	5	-177.306	5	-.35	5	-.545	1	.105	2
137		4	max	893.426	3	-125.018	2	36.208	2	-.069	2	.525	2	2.048	5
138			min	-839.226	4	-1075.428	5	-182.896	5	-.35	5	-.623	1	.183	2
139		5	max	893.426	3	-133.893	2	61.602	2	-.069	2	.556	2	2.75	5
140			min	-839.226	4	-1099.27	5	-188.487	5	-.35	5	-.717	1	.266	2
141	M15	1	max	1171.141	4	1203.004	5	258.71	1	.562	7	.853	2	2.928	5
142			min	-1121.575	3	147.893	2	-180.032	2	.05	4	-.958	1	.244	2
143		2	max	1171.141	4	1179.163	5	233.316	1	.562	7	.745	2	2.16	5
144			min	-1121.575	3	139.018	2	-154.638	2	.05	4	-.8	1	.152	2
145		3	max	1171.141	4	1155.321	5	207.923	1	.562	7	.654	2	1.407	5
146			min	-1121.575	3	130.142	2	-129.245	2	.05	4	-.658	1	.065	2
147		4	max	1171.141	4	1131.48	5	182.529	1	.562	7	.579	2	.67	5
148			min	-1121.575	3	121.266	2	-103.851	2	.05	4	-.532	1	-.016	2
149		5	max	600.232	4	1056.384	5	1478.402	1	.539	5	.362	3	.126	4
150			min	-651.787	3	88.379	2	-1577.669	2	-.112	4	-.353	4	-.131	3
151	M16	1	max	0	11	.008	1	.004	3	0	11	0	11	0	11

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
152			min	0	1	0	7	-.011	1	0	1	0	1	0	1
153		2	max	438.153	3	496.008	2	340.051	3	.728	4	.479	2	.083	2
154			min	-466.208	4	-470.888	1	-334.998	4	-.788	3	-.478	1	-.102	1
155		3	max	1135.906	3	385.694	2	84.894	1	.486	1	.27	4	.125	3
156			min	-1329.483	4	-253.077	1	-78.259	2	-.53	2	-.292	3	-.217	4
157		4	max	46.751	1	284.02	3	349.227	2	.544	1	.424	4	.185	1
158			min	-169.303	8	-332.239	4	-347.273	1	-.507	2	-.428	3	-.312	2
159		5	max	0	11	.001	8	.01	3	0	11	0	11	0	11
160			min	0	1	-.007	2	0	5	0	1	0	1	0	1
161	M17	1	max	0	11	.007	2	0	11	0	11	0	11	0	11
162			min	0	1	0	7	-.007	4	0	1	0	1	0	1
163		2	max	260.319	1	428.033	3	298.909	1	.508	2	.467	1	.08	1
164			min	-292.805	2	-407.376	4	-291.12	2	-.568	1	-.463	2	-.091	2
165		3	max	938.037	4	398.842	1	153.782	2	.416	4	.328	3	.12	1
166			min	-1124.651	3	-266.025	2	-148.159	1	-.462	3	-.353	4	-.212	2
167		4	max	94.223	4	313.377	1	386.039	3	.549	4	.545	2	.19	2
168			min	-178.45	7	-363.696	2	-381.529	4	-.515	3	-.562	1	-.323	1
169		5	max	0	11	.002	8	.012	1	0	11	0	11	0	11
170			min	0	1	-.009	1	-.011	4	0	1	0	1	0	1
171	M18	1	max	0	11	0	11	0	11	0	11	0	11	0	11
172			min	0	1	0	1	0	1	0	1	0	1	0	1
173		2	max	458.434	2	406.51	4	334.327	2	.66	1	.616	4	.096	4
174			min	-464.326	1	-381.343	3	-330.139	1	-.714	2	-.615	3	-.115	3
175		3	max	1409.575	2	438.942	4	206.485	3	.421	3	.381	1	.071	4
176			min	-1609.278	1	-304.549	3	-200.156	4	-.468	4	-.401	2	-.172	7
177		4	max	105.154	2	254.952	4	346.136	1	.415	3	.543	3	.177	3
178			min	-185.461	5	-303.258	3	-345.276	2	-.379	4	-.558	4	-.307	4
179		5	max	0	11	0	11	0	11	0	11	0	11	0	11
180			min	0	1	0	1	0	1	0	1	0	1	0	1
181	M19	1	max	6212.472	8	63.985	8	45.034	2	0	3	0	11	0	11
182			min	-1091.912	3	-3.715	3	-45.034	1	0	4	0	1	0	1
183		2	max	6197.664	8	31.992	8	22.517	2	0	3	.039	2	.003	3
184			min	-1110.812	3	-1.858	3	-22.517	1	0	4	-.039	1	-.056	8
185		3	max	6182.857	8	0	11	0	11	0	3	.052	2	.004	3
186			min	-1129.711	3	0	1	0	1	0	4	-.052	1	-.075	8
187		4	max	6168.049	8	1.858	3	22.517	1	0	3	.039	2	.003	3
188			min	-1148.611	3	-31.992	8	-22.517	2	0	4	-.039	1	-.056	8
189		5	max	6153.241	8	3.715	3	45.034	1	0	3	0	11	0	11
190			min	-1167.511	3	-63.985	8	-45.034	2	0	4	0	1	0	1
191	M20	1	max	6081.507	5	63.56	5	57.387	4	0	4	0	11	0	11
192			min	-1613.57	2	-2.014	2	-57.387	3	0	3	0	1	0	1
193		2	max	6066.336	5	31.78	5	28.693	4	0	4	.05	4	.002	2
194			min	-1631.147	2	-1.007	2	-28.693	3	0	3	-.05	3	-.056	5
195		3	max	6051.165	5	0	11	0	11	0	4	.067	4	.002	2
196			min	-1648.724	2	0	1	0	1	0	3	-.067	3	-.074	5
197		4	max	6035.993	5	1.007	2	28.693	3	0	4	.05	4	.002	2
198			min	-1666.302	2	-31.78	5	-28.693	4	0	3	-.05	3	-.056	5
199		5	max	6020.822	5	2.014	2	57.387	3	0	4	0	11	0	11
200			min	-1683.879	2	-63.56	5	-57.387	4	0	3	0	1	0	1
201	M21	1	max	6207.51	7	64.024	7	45.053	1	0	1	0	11	0	11
202			min	-1040.137	4	-3.702	4	-45.053	2	0	2	0	1	0	1
203		2	max	6192.704	7	32.012	7	22.527	1	0	1	.039	1	.003	4
204			min	-1059.043	4	-1.851	4	-22.527	2	0	2	-.039	2	-.056	7
205		3	max	6177.898	7	0	11	0	11	0	1	.053	1	.004	4
206			min	-1077.949	4	0	1	0	1	0	2	-.053	2	-.075	7
207		4	max	6163.092	7	1.851	4	22.527	2	0	1	.039	1	.003	4
208			min	-1096.855	4	-32.012	7	-22.527	1	0	2	-.039	2	-.056	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
209		5	max	6148.285	7	3.702	4	45.053	2	0	1	0	11	0	11
210			min	-1115.761	4	-64.024	7	-45.053	1	0	2	0	1	0	1
211	M22	1	max	0	11	0	11	0	11	0	11	0	11	0	11
212			min	0	1	0	1	0	1	0	1	0	1	0	1
213		2	max	476.053	3	292.208	4	258.51	1	.485	1	.262	4	.056	3
214			min	-489.362	4	-239.29	3	-290.137	2	-.506	2	-.265	3	-.061	4
215		3	max	220.815	2	463.839	4	271.51	1	.288	1	.482	1	.044	3
216			min	-122.957	1	-415.946	3	-283.879	2	-.297	2	-.5	2	-.056	4
217		4	max	320.944	4	347.852	4	479.732	2	.662	2	.545	1	.111	4
218			min	-240.768	3	-401.771	3	-456.497	1	-.658	1	-.556	2	-.129	3
219		5	max	0	11	0	11	0	11	0	11	0	11	0	11
220			min	0	1	0	1	0	1	0	1	0	1	0	1
221	M23	1	max	0	11	.01	3	.026	3	0	11	0	11	0	11
222			min	0	1	-.003	1	-.036	1	0	1	0	1	0	1
223		2	max	537.904	1	249.9	2	282.663	4	.397	4	.314	2	.079	1
224			min	-553.761	2	-195.3	1	-317.07	3	-.419	3	-.319	1	-.085	2
225		3	max	426.977	3	469.429	2	265.528	4	.291	4	.341	4	.06	1
226			min	-333.311	4	-421.258	1	-279.596	3	-.302	3	-.362	3	-.072	2
227		4	max	288.715	3	362.022	2	291.477	1	.462	3	.498	4	.171	3
228			min	-202.546	4	-413.393	1	-268.595	2	-.456	4	-.513	3	-.189	4
229		5	max	0	11	.009	4	.042	3	0	11	0	11	0	11
230			min	0	1	-.011	2	-.015	1	0	1	0	1	0	1
231	M24	1	max	0	11	.008	1	0	5	0	11	0	11	0	11
232			min	0	1	-.007	4	-.038	4	0	1	0	1	0	1
233		2	max	325.039	4	291.685	1	225.405	2	.366	3	.273	3	.071	4
234			min	-335.618	3	-241.902	2	-258.282	1	-.387	4	-.275	4	-.077	3
235		3	max	380.108	1	428.706	1	193.124	2	.187	2	.395	3	.067	4
236			min	-293.833	2	-380.595	2	-207.967	1	-.198	1	-.414	4	-.079	3
237		4	max	400.98	1	313.186	1	444.01	4	.579	4	.366	3	.159	1
238			min	-319.866	2	-368.34	2	-419.69	3	-.574	3	-.378	4	-.177	2
239		5	max	0	11	.002	2	.03	1	0	11	0	11	0	11
240			min	0	1	-.014	3	-.043	4	0	1	0	1	0	1
241	M25	1	max	667.305	2	878.695	3	684.046	4	.026	3	.241	1	.848	3
242			min	-756.986	1	-938.379	4	-703.077	3	-.026	4	-.196	2	-.811	4
243		2	max	667.295	2	880.375	3	684.046	4	.026	3	.211	1	.461	3
244			min	-756.976	1	-936.7	4	-703.077	3	-.026	4	-.185	2	-.415	4
245		3	max	667.285	2	882.055	3	684.046	4	.026	3	.183	1	.358	1
246			min	-756.966	1	-935.02	4	-703.077	3	-.026	4	-.175	2	-.306	2
247		4	max	667.275	2	883.735	3	684.046	4	.026	3	.157	1	.377	4
248			min	-756.956	1	-933.34	4	-703.077	3	-.026	4	-.167	2	-.314	3
249		5	max	667.265	2	885.414	3	684.046	4	.026	3	.149	3	.772	4
250			min	-756.945	1	-931.661	4	-703.077	3	-.026	4	-.173	4	-.702	3
251	MP4A	1	max	0	11	.02	4	.085	1	0	11	0	11	0	11
252			min	0	1	-.019	3	-.081	2	0	1	0	1	0	1
253		2	max	792.035	2	519.387	4	264.409	2	.828	2	.515	3	.874	4
254			min	-632.531	1	-455.999	3	-237.498	1	-.815	1	-.491	4	-.805	3
255		3	max	805.184	2	553.344	4	241.229	4	.828	2	.564	2	.141	3
256			min	-619.383	1	-489.955	3	-212.115	3	-.815	1	-.484	1	-.199	4
257		4	max	-13.148	10	33.976	3	34.117	2	0	11	.034	1	.034	3
258			min	-43.137	5	-33.971	4	-34.114	1	0	1	-.034	2	-.034	4
259		5	max	0	11	.034	7	.16	2	0	11	0	11	0	11
260			min	0	1	-.015	4	-.157	1	0	1	0	1	0	1
261	MP1A	1	max	0	11	.085	8	.236	5	0	11	0	11	0	11
262			min	0	1	-.05	2	-.303	6	0	1	0	1	0	1
263		2	max	891.099	2	369.089	4	327.625	2	1.036	1	.355	4	.69	4
264			min	-812.185	1	-481.384	3	-268.025	1	-1.052	2	-.415	3	-.837	3
265		3	max	1029.047	2	502.603	4	260.911	3	1.036	1	.398	2	.264	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
266			min	-674.237	1	-614.898	3	-198.334	4	-1.052	2	-.335	1	-.187	1
267		4	max	-13.148	10	33.97	3	34.133	2	0	11	.034	1	.034	3
268			min	-43.137	5	-33.977	4	-34.125	1	0	1	-.034	2	-.034	4
269		5	max	0	11	.013	3	.176	2	0	11	0	11	0	11
270			min	0	1	-.053	8	-.169	1	0	1	0	1	0	1
271	MP3A	1	max	0	11	.02	4	.195	1	0	11	0	11	0	11
272			min	0	1	-.023	7	-.195	2	0	1	0	1	0	1
273		2	max	308.628	8	734.548	4	261.976	1	.58	2	.157	2	1.172	4
274			min	-88.324	3	-634.871	3	-241.071	2	-.554	1	-.141	1	-1.019	3
275		3	max	351.765	8	768.504	4	295.932	1	.58	2	.417	1	.285	3
276			min	-75.176	3	-668.827	3	-275.027	2	-.554	1	-.359	2	-.331	4
277		4	max	-13.148	10	33.965	3	34.161	2	0	11	.034	1	.034	3
278			min	-43.137	5	-33.961	4	-34.155	1	0	1	-.034	2	-.034	4
279		5	max	0	11	.029	7	.204	2	0	11	0	11	0	11
280			min	0	1	-.004	4	-.198	1	0	1	0	1	0	1
281	MP2A	1	max	374.108	8	258.677	4	603.013	1	0	11	0	11	0	11
282			min	73.68	1	-258.67	3	-603.052	2	0	1	0	1	0	1
283		2	max	660.899	8	565.592	4	876.143	1	.277	1	1.599	1	.759	4
284			min	170.828	1	-570.643	3	-876.183	2	-.28	2	-1.599	2	-.767	3
285		3	max	817.397	7	670.572	4	392.434	1	.277	1	1.144	1	.444	3
286			min	192.931	4	-675.623	3	-365.359	2	-.28	2	-1.081	2	-.442	4
287		4	max	-86.828	10	291.626	3	633.11	2	0	11	1.232	1	.549	3
288			min	-417.245	5	-291.632	4	-633.015	1	0	1	-1.232	2	-.549	4
289		5	max	-73.68	10	257.669	3	599.153	2	0	11	0	11	0	11
290			min	-374.108	5	-257.675	4	-599.058	1	0	1	0	1	0	1
291	MP4C	1	max	0	11	.062	2	.045	1	0	11	0	11	0	11
292			min	0	1	-.059	1	-.047	6	0	1	0	1	0	1
293		2	max	694.84	1	185.192	3	513.403	1	.636	3	1.222	2	.066	3
294			min	-518.569	2	-189.804	4	-582.617	2	-.622	4	-1.176	1	-.12	4
295		3	max	707.989	1	151.235	3	547.36	1	.636	3	.362	4	.266	2
296			min	-505.421	2	-155.847	4	-616.574	2	-.622	4	-.45	3	-.307	1
297		4	max	-13.148	10	34.05	3	34.035	2	0	11	.034	1	.034	3
298			min	-43.137	5	-34.05	4	-34.041	1	0	1	-.034	2	-.034	4
299		5	max	0	11	.107	1	.078	2	0	11	0	11	0	11
300			min	0	1	-.106	2	-.084	1	0	1	0	1	0	1
301	MP1C	1	max	0	11	.184	4	.138	7	0	11	0	11	0	11
302			min	0	1	-.257	7	-.146	8	0	1	0	1	0	1
303		2	max	729.501	3	503.783	1	384.354	4	.773	4	.606	3	.701	4
304			min	-642.817	4	-395.193	2	-317.2	3	-.794	3	-.704	4	-.577	3
305		3	max	867.449	3	503.783	1	384.354	4	.773	4	.099	1	.31	2
306			min	-504.869	4	-395.193	2	-317.2	3	-.794	3	-.067	2	-.404	1
307		4	max	-13.148	10	34.108	3	34.001	2	0	11	.034	1	.034	3
308			min	-43.137	5	-34.097	4	-33.999	1	0	1	-.034	2	-.034	4
309		5	max	0	11	.157	7	.071	4	0	11	0	11	0	11
310			min	0	1	-.14	4	-.069	3	0	1	0	1	0	1
311	MP3C	1	max	0	11	.131	4	.073	1	0	11	0	11	0	11
312			min	0	1	-.13	3	-.071	2	0	1	0	1	0	1
313		2	max	315.751	6	326.483	4	589.794	1	.564	3	1.048	2	.358	4
314			min	-137.877	1	-355.914	3	-688.047	2	-.534	4	-.921	1	-.448	2
315		3	max	358.888	6	360.44	4	623.751	1	.564	3	.292	1	.301	3
316			min	-124.729	1	-389.871	3	-722.004	2	-.534	4	-.362	2	-.329	4
317		4	max	-13.148	10	34.091	3	34.02	2	0	11	.034	1	.034	3
318			min	-43.137	5	-34.087	4	-34.027	1	0	1	-.034	2	-.034	4
319		5	max	0	11	.134	3	.067	4	0	11	0	11	0	11
320			min	0	1	-.13	4	-.09	7	0	1	0	1	0	1
321	MP2C	1	max	374.108	8	516.697	4	344.593	1	0	11	0	11	0	11
322			min	73.68	1	-516.745	3	-344.576	2	0	1	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
323		2	max	660.899	8	752.66	4	463.826	1	.345	2	.915	1	1.37	3
324			min	170.828	2	-752.709	3	-478.397	2	-.351	1	-.915	2	-1.37	4
325		3	max	816.939	5	456.152	4	593.127	1	.345	2	.513	1	.853	3
326			min	201.296	2	-428.659	3	-607.699	2	-.351	1	-.544	2	-.908	4
327		4	max	-86.828	10	547.678	3	376.945	2	0	11	.72	1	1.061	3
328			min	-417.245	5	-547.587	4	-376.991	1	0	1	-.72	2	-1.061	4
329		5	max	-73.68	10	513.721	3	342.989	2	0	11	0	11	0	11
330			min	-374.108	5	-513.63	4	-343.034	1	0	1	0	1	0	1
331	MP4B	1	max	0	11	.079	4	.049	4	0	11	0	11	0	11
332			min	0	1	-.083	3	-.051	3	0	1	0	1	0	1
333		2	max	878.75	4	395.796	2	384.938	3	.725	4	.483	4	.809	4
334			min	-711.032	3	-450.574	1	-345.542	4	-.707	3	-.553	3	-.818	3
335		3	max	891.898	4	395.796	2	384.938	3	.725	4	.217	3	.46	4
336			min	-697.883	3	-450.574	1	-345.542	4	-.707	3	-.208	4	-.363	3
337		4	max	-13.148	10	34.109	3	33.985	2	0	11	.034	1	.034	3
338			min	-43.137	5	-34.115	4	-33.983	1	0	1	-.034	2	-.034	4
339		5	max	0	11	.153	3	.078	3	0	11	0	11	0	11
340			min	0	1	-.158	4	-.076	4	0	1	0	1	0	1
341	MP1B	1	max	0	11	.222	8	.143	5	0	11	0	11	0	11
342			min	0	1	-.189	7	-.085	2	0	1	0	1	0	1
343		2	max	786.175	4	260.005	3	391.394	1	.89	3	1.104	2	.232	3
344			min	-705.365	3	-257.381	4	-520.496	2	-.903	4	-.947	1	-.209	4
345		3	max	924.124	4	119.71	2	542.095	1	.89	3	.371	3	.196	4
346			min	-567.416	3	-116.239	1	-671.198	2	-.903	4	-.469	4	-.178	3
347		4	max	-13.148	10	34.072	3	34.016	2	0	11	.034	1	.034	3
348			min	-43.137	5	-34.075	4	-34.026	1	0	1	-.034	2	-.034	4
349		5	max	0	11	.115	3	.059	2	0	11	0	11	0	11
350			min	0	1	-.118	4	-.102	5	0	1	0	1	0	1
351	MP3B	1	max	0	11	.16	4	.082	4	0	11	0	11	0	11
352			min	0	1	-.159	3	-.084	3	0	1	0	1	0	1
353		2	max	317.595	7	375.596	4	597.027	1	.361	1	.812	2	.462	4
354			min	-125.678	4	-444.223	3	-523.233	2	-.331	2	-.95	1	-.525	3
355		3	max	360.732	7	409.553	4	630.984	1	.361	1	.278	1	.397	3
356			min	-112.53	4	-478.18	3	-557.19	2	-.331	2	-.268	2	-.323	4
357		4	max	-13.148	10	34.118	3	33.994	2	0	11	.034	1	.034	3
358			min	-43.137	5	-34.126	4	-33.994	1	0	1	-.034	2	-.034	4
359		5	max	0	11	.161	3	.092	3	0	11	0	11	0	11
360			min	0	1	-.17	4	-.092	4	0	1	0	1	0	1
361	MP2B	1	max	374.108	8	516.753	4	344.543	1	0	11	0	11	0	11
362			min	73.68	1	-516.721	3	-344.513	2	0	1	0	1	0	1
363		2	max	660.899	8	752.717	4	506.173	1	.393	3	.915	1	1.37	3
364			min	170.828	1	-752.685	3	-506.142	2	-.397	4	-.914	2	-1.37	4
365		3	max	816.807	6	424.803	4	577.902	1	.393	3	.528	1	.885	3
366			min	193.238	1	-450.776	3	-598.634	2	-.397	4	-.561	2	-.83	4
367		4	max	-86.828	10	547.629	3	376.88	2	0	11	.72	1	1.061	3
368			min	-417.245	5	-547.71	4	-376.935	1	0	1	-.72	2	-1.061	4
369		5	max	-73.68	10	513.672	3	342.923	2	0	11	0	11	0	11
370			min	-374.108	5	-513.753	4	-342.978	1	0	1	0	1	0	1
371	M38	1	max	260.284	3	1067.703	2	762.239	3	1.098	3	.984	1	.379	4
372			min	-198.273	4	-637.352	1	-652.164	4	-.852	4	-1.03	2	-.415	3
373		2	max	260.284	3	1067.703	2	762.239	3	1.098	3	.997	1	.369	4
374			min	-198.273	4	-637.352	1	-652.164	4	-.852	4	-1.035	2	-.436	3
375		3	max	260.284	3	1067.703	2	762.239	3	1.098	3	1.01	1	.38	1
376			min	-198.273	4	-637.352	1	-652.164	4	-.852	4	-1.041	2	-.473	2
377		4	max	260.284	3	1067.703	2	762.239	3	1.098	3	1.023	1	.424	1
378			min	-198.273	4	-637.352	1	-652.164	4	-.852	4	-1.046	2	-.547	2
379		5	max	260.284	3	1067.703	2	762.239	3	1.098	3	1.036	1	.468	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
380			min	-198.273	4	-637.352	1	-652.164	4	-.852	4	-1.052	2	-.621	2
381	M39	1	max	1052.185	1	1277.858	7	1000.037	3	.78	3	.517	4	.207	6
382			min	-1023.621	2	292.886	4	-995.646	4	-.77	4	-.522	3	-.115	1
383		2	max	1052.185	1	1277.858	7	1000.037	3	.78	3	.448	4	.171	2
384			min	-1023.621	2	292.886	4	-995.646	4	-.77	4	-.453	3	-.136	1
385		3	max	1052.185	1	1277.858	7	1000.037	3	.78	3	.379	4	.146	2
386			min	-1023.621	2	292.886	4	-995.646	4	-.77	4	-.384	3	-.158	1
387		4	max	1052.185	1	1277.858	7	1000.037	3	.78	3	.311	4	.122	2
388			min	-1023.621	2	292.886	4	-995.646	4	-.77	4	-.315	3	-.179	1
389		5	max	1052.185	1	1277.858	7	1000.037	3	.78	3	.277	1	.098	2
390			min	-1023.621	2	292.886	4	-995.646	4	-.77	4	-.28	2	-.258	5
391	M40	1	max	524.597	1	609.242	8	808.311	3	1.29	3	.596	2	.845	2
392			min	-508.514	2	12.705	3	-906.185	4	-1.486	4	-.543	1	-.838	1
393		2	max	524.597	1	609.242	8	808.311	3	1.29	3	.592	2	.839	2
394			min	-508.514	2	12.705	3	-906.185	4	-1.486	4	-.546	1	-.856	1
395		3	max	524.597	1	609.242	8	808.311	3	1.29	3	.588	2	.833	2
396			min	-508.514	2	12.705	3	-906.185	4	-1.486	4	-.549	1	-.874	1
397		4	max	524.597	1	609.242	8	808.311	3	1.29	3	.584	2	.826	2
398			min	-508.514	2	12.705	3	-906.185	4	-1.486	4	-.552	1	-.892	1
399		5	max	524.597	1	609.242	8	808.311	3	1.29	3	.58	2	.82	2
400			min	-508.514	2	12.705	3	-906.185	4	-1.486	4	-.554	1	-.91	1
401	M41	1	max	242.065	4	834.892	2	557.262	3	.842	3	.804	2	.66	1
402			min	-210.114	3	-590.63	1	-620.831	4	-.995	4	-.774	1	-.714	2
403		2	max	242.065	4	834.892	2	557.262	3	.842	3	.81	2	.701	1
404			min	-210.114	3	-590.63	1	-620.831	4	-.995	4	-.784	1	-.771	2
405		3	max	242.065	4	834.892	2	557.262	3	.842	3	.816	2	.742	1
406			min	-210.114	3	-590.63	1	-620.831	4	-.995	4	-.794	1	-.829	2
407		4	max	242.065	4	834.892	2	557.262	3	.842	3	.822	2	.783	1
408			min	-210.114	3	-590.63	1	-620.831	4	-.995	4	-.804	1	-.887	2
409		5	max	242.065	4	834.892	2	557.262	3	.842	3	.828	2	.823	1
410			min	-210.114	3	-590.63	1	-620.831	4	-.995	4	-.815	1	-.944	2
411	M42	1	max	309.866	4	903.419	3	675.485	1	1.056	1	.602	4	.504	2
412			min	-224.398	3	-470.222	4	-571.133	2	-.818	2	-.655	3	-.54	1
413		2	max	309.866	4	903.419	3	675.485	1	1.056	1	.645	4	.52	2
414			min	-224.398	3	-470.222	4	-571.133	2	-.818	2	-.689	3	-.587	1
415		3	max	309.866	4	903.419	3	675.485	1	1.056	1	.688	4	.536	2
416			min	-224.398	3	-470.222	4	-571.133	2	-.818	2	-.724	3	-.633	1
417		4	max	309.866	4	903.419	3	675.485	1	1.056	1	.73	4	.552	2
418			min	-224.398	3	-470.222	4	-571.133	2	-.818	2	-.759	3	-.68	1
419		5	max	309.866	4	903.419	3	675.485	1	1.056	1	.773	4	.568	2
420			min	-224.398	3	-470.222	4	-571.133	2	-.818	2	-.794	3	-.727	1
421	M43	1	max	817.966	4	1277.318	5	987.088	1	.622	1	.617	2	.204	7
422			min	-791.982	3	297.764	2	-985.915	2	-.617	2	-.624	1	-.113	4
423		2	max	817.966	4	1277.318	5	987.088	1	.622	1	.549	2	.178	3
424			min	-791.982	3	297.764	2	-985.915	2	-.617	2	-.555	1	-.138	4
425		3	max	817.966	4	1277.318	5	987.088	1	.622	1	.481	2	.156	3
426			min	-791.982	3	297.764	2	-985.915	2	-.617	2	-.487	1	-.164	4
427		4	max	817.966	4	1277.318	5	987.088	1	.622	1	.413	2	.135	3
428			min	-791.982	3	297.764	2	-985.915	2	-.617	2	-.419	1	-.19	4
429		5	max	817.966	4	1277.318	5	987.088	1	.622	1	.345	2	.113	3
430			min	-791.982	3	297.764	2	-985.915	2	-.617	2	-.351	1	-.256	8
431	M44	1	max	379.875	4	616.166	6	771.714	1	1.213	1	.723	3	.589	3
432			min	-355.566	3	-40.394	1	-871.157	2	-1.412	2	-.667	4	-.58	4
433		2	max	379.875	4	616.166	6	771.714	1	1.213	1	.683	3	.572	3
434			min	-355.566	3	-40.394	1	-871.157	2	-1.412	2	-.633	4	-.589	4
435		3	max	379.875	4	616.166	6	771.714	1	1.213	1	.644	3	.555	3
436			min	-355.566	3	-40.394	1	-871.157	2	-1.412	2	-.6	4	-.597	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
437		4	max	379.875	4	616.166	6	771.714	1	1.213	1	.604	3	.538	3
438			min	-355.566	3	-40.394	1	-871.157	2	-1.412	2	-.567	4	-.605	4
439		5	max	379.875	4	616.166	6	771.714	1	1.213	1	.564	3	.522	3
440			min	-355.566	3	-40.394	1	-871.157	2	-1.412	2	-.534	4	-.613	4
441	M45	1	max	257.814	3	731.022	1	588.658	1	.824	1	.71	3	.73	4
442			min	-220.144	4	-483.028	2	-656.35	2	-.98	2	-.68	4	-.79	3
443		2	max	257.814	3	731.022	1	588.658	1	.824	1	.691	3	.755	4
444			min	-220.144	4	-483.028	2	-656.35	2	-.98	2	-.666	4	-.831	3
445		3	max	257.814	3	731.022	1	588.658	1	.824	1	.673	3	.78	4
446			min	-220.144	4	-483.028	2	-656.35	2	-.98	2	-.651	4	-.873	3
447		4	max	257.814	3	731.022	1	588.658	1	.824	1	.654	3	.805	4
448			min	-220.144	4	-483.028	2	-656.35	2	-.98	2	-.637	4	-.915	3
449		5	max	257.814	3	731.022	1	588.658	1	.824	1	.636	3	.83	4
450			min	-220.144	4	-483.028	2	-656.35	2	-.98	2	-.622	4	-.957	3
451	M46	1	max	319.44	2	966.034	4	788.297	2	1.021	2	.971	3	.515	3
452			min	-250.137	1	-526.825	3	-673.921	1	-.771	1	-1.013	4	-.548	4
453		2	max	319.44	2	966.034	4	788.297	2	1.021	2	.951	3	.551	3
454			min	-250.137	1	-526.825	3	-673.921	1	-.771	1	-.985	4	-.615	4
455		3	max	319.44	2	966.034	4	788.297	2	1.021	2	.931	3	.587	3
456			min	-250.137	1	-526.825	3	-673.921	1	-.771	1	-.958	4	-.682	4
457		4	max	319.44	2	966.034	4	788.297	2	1.021	2	.91	3	.624	3
458			min	-250.137	1	-526.825	3	-673.921	1	-.771	1	-.93	4	-.748	4
459		5	max	319.44	2	966.034	4	788.297	2	1.021	2	.89	3	.66	3
460			min	-250.137	1	-526.825	3	-673.921	1	-.771	1	-.903	4	-.815	4
461	M47	1	max	790.684	3	1277.164	6	949.578	2	.554	2	.582	3	.189	8
462			min	-757.269	4	289.528	1	-944.091	1	-.543	1	-.586	4	-.061	2
463		2	max	790.684	3	1277.164	6	949.578	2	.554	2	.535	3	.126	1
464			min	-757.269	4	289.528	1	-944.091	1	-.543	1	-.539	4	-.089	2
465		3	max	790.684	3	1277.164	6	949.578	2	.554	2	.488	3	.106	1
466			min	-757.269	4	289.528	1	-944.091	1	-.543	1	-.492	4	-.118	2
467		4	max	790.684	3	1277.164	6	949.578	2	.554	2	.44	3	.086	1
468			min	-757.269	4	289.528	1	-944.091	1	-.543	1	-.444	4	-.153	7
469		5	max	790.684	3	1277.164	6	949.578	2	.554	2	.393	3	.066	1
470			min	-757.269	4	289.528	1	-944.091	1	-.543	1	-.397	4	-.24	7
471	M48	1	max	449.284	3	617.739	7	748.625	2	1.178	2	.594	1	.706	4
472			min	-439.659	4	-34.836	4	-844.875	1	-1.371	1	-.538	2	-.697	3
473		2	max	449.284	3	617.739	7	748.625	2	1.178	2	.535	1	.709	4
474			min	-439.659	4	-34.836	4	-844.875	1	-1.371	1	-.486	2	-.724	3
475		3	max	449.284	3	617.739	7	748.625	2	1.178	2	.477	1	.711	4
476			min	-439.659	4	-34.836	4	-844.875	1	-1.371	1	-.434	2	-.751	3
477		4	max	449.284	3	617.739	7	748.625	2	1.178	2	.419	1	.713	4
478			min	-439.659	4	-34.836	4	-844.875	1	-1.371	1	-.383	2	-.778	3
479		5	max	449.284	3	617.739	7	748.625	2	1.178	2	.361	1	.716	4
480			min	-439.659	4	-34.836	4	-844.875	1	-1.371	1	-.331	2	-.805	3
481	M49	1	max	231.303	1	917.458	4	443.375	2	.758	2	.607	4	.508	2
482			min	-201.354	2	-673.47	3	-499.376	1	-.899	1	-.572	3	-.568	1
483		2	max	231.303	1	917.458	4	443.375	2	.758	2	.636	4	.514	2
484			min	-201.354	2	-673.47	3	-499.376	1	-.899	1	-.606	3	-.59	1
485		3	max	231.303	1	917.458	4	443.375	2	.758	2	.666	4	.519	2
486			min	-201.354	2	-673.47	3	-499.376	1	-.899	1	-.64	3	-.612	1
487		4	max	231.303	1	917.458	4	443.375	2	.758	2	.695	4	.524	2
488			min	-201.354	2	-673.47	3	-499.376	1	-.899	1	-.673	3	-.634	1
489		5	max	231.303	1	917.458	4	443.375	2	.758	2	.725	4	.53	2
490			min	-201.354	2	-673.47	3	-499.376	1	-.899	1	-.707	3	-.656	1
491	M50	1	max	454.102	1	831.985	1	254.389	4	.952	3	1.036	2	.369	4
492			min	-544.922	2	-872.94	2	-364.516	3	-.805	4	-.99	1	-.437	3
493		2	max	454.102	1	831.985	1	254.389	4	.952	3	1.04	2	.365	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
494			min	-544.922	2	-872.94	2	-364.516	3	-.805	4	-1.001	1	-.431	3
495		3	max	454.102	1	831.985	1	254.389	4	.952	3	1.044	2	.362	4
496			min	-544.922	2	-872.94	2	-364.516	3	-.805	4	-1.013	1	-.426	3
497		4	max	454.102	1	831.985	1	254.389	4	.952	3	1.048	2	.358	4
498			min	-544.922	2	-872.94	2	-364.516	3	-.805	4	-1.024	1	-.42	3
499		5	max	454.102	1	831.985	1	254.389	4	.952	3	1.052	2	.355	4
500			min	-544.922	2	-872.94	2	-364.516	3	-.805	4	-1.036	1	-.415	3
501	M51	1	max	686.523	1	141.813	8	182.493	4	1.454	3	.289	3	.959	2
502			min	-715.82	2	-27.28	3	-187.048	3	-1.446	4	-.284	4	-.946	1
503		2	max	686.523	1	141.813	8	182.493	4	1.454	3	.285	2	.96	2
504			min	-715.82	2	-27.28	3	-187.048	3	-1.446	4	-.28	1	-.948	1
505		3	max	686.523	1	141.813	8	182.493	4	1.454	3	.283	2	.961	2
506			min	-715.82	2	-27.28	3	-187.048	3	-1.446	4	-.279	1	-.95	1
507		4	max	686.523	1	141.813	8	182.493	4	1.454	3	.282	2	.961	2
508			min	-715.82	2	-27.28	3	-187.048	3	-1.446	4	-.278	1	-.951	1
509		5	max	686.523	1	141.813	8	182.493	4	1.454	3	.281	2	.962	2
510			min	-715.82	2	-27.28	3	-187.048	3	-1.446	4	-.277	1	-.953	1
511	M52	1	max	51.27	3	163.507	3	627.858	4	1.053	3	.545	1	.209	2
512			min	-70.923	4	-184.347	4	-529.808	3	-1.206	4	-.593	2	-.197	1
513		2	max	51.27	3	163.507	3	627.858	4	1.053	3	.547	1	.205	2
514			min	-70.923	4	-184.347	4	-529.808	3	-1.206	4	-.59	2	-.192	1
515		3	max	51.27	3	163.507	3	627.858	4	1.053	3	.55	1	.2	2
516			min	-70.923	4	-184.347	4	-529.808	3	-1.206	4	-.587	2	-.186	1
517		4	max	51.27	3	163.507	3	627.858	4	1.053	3	.552	1	.196	2
518			min	-70.923	4	-184.347	4	-529.808	3	-1.206	4	-.584	2	-.181	1
519		5	max	51.27	3	163.507	3	627.858	4	1.053	3	.554	1	.192	2
520			min	-70.923	4	-184.347	4	-529.808	3	-1.206	4	-.581	2	-.175	1
521	M53	1	max	261.23	1	642.262	1	484.36	4	.839	3	.78	1	.452	3
522			min	-310.059	2	-782.619	2	-422.039	3	-.908	4	-.809	2	-.46	4
523		2	max	261.23	1	642.262	1	484.36	4	.839	3	.789	1	.467	3
524			min	-310.059	2	-782.619	2	-422.039	3	-.908	4	-.814	2	-.468	4
525		3	max	261.23	1	642.262	1	484.36	4	.839	3	.797	1	.483	3
526			min	-310.059	2	-782.619	2	-422.039	3	-.908	4	-.819	2	-.476	4
527		4	max	261.23	1	642.262	1	484.36	4	.839	3	.806	1	.499	3
528			min	-310.059	2	-782.619	2	-422.039	3	-.908	4	-.824	2	-.483	4
529		5	max	261.23	1	642.262	1	484.36	4	.839	3	.815	1	.515	3
530			min	-310.059	2	-782.619	2	-422.039	3	-.908	4	-.828	2	-.491	4
531	M54	1	max	354.738	2	667.301	4	212.55	3	1.05	4	.745	3	.329	2
532			min	-421.897	1	-706.451	3	-333.694	4	-.902	3	-.696	4	-.396	1
533		2	max	354.738	2	667.301	4	212.55	3	1.05	4	.757	3	.303	2
534			min	-421.897	1	-706.451	3	-333.694	4	-.902	3	-.715	4	-.368	1
535		3	max	354.738	2	667.301	4	212.55	3	1.05	4	.77	3	.278	2
536			min	-421.897	1	-706.451	3	-333.694	4	-.902	3	-.734	4	-.341	1
537		4	max	354.738	2	667.301	4	212.55	3	1.05	4	.782	3	.311	3
538			min	-421.897	1	-706.451	3	-333.694	4	-.902	3	-.753	4	-.372	4
539		5	max	354.738	2	667.301	4	212.55	3	1.05	4	.794	3	.351	3
540			min	-421.897	1	-706.451	3	-333.694	4	-.902	3	-.773	4	-.41	4
541	M55	1	max	485.397	4	136.756	6	111.424	4	1.464	1	.371	1	.764	3
542			min	-511.598	3	-24.517	1	-118.783	3	-1.46	2	-.364	2	-.747	4
543		2	max	485.397	4	136.756	6	111.424	4	1.464	1	.366	1	.761	3
544			min	-511.598	3	-24.517	1	-118.783	3	-1.46	2	-.359	2	-.747	4
545		3	max	485.397	4	136.756	6	111.424	4	1.464	1	.361	1	.758	3
546			min	-511.598	3	-24.517	1	-118.783	3	-1.46	2	-.355	2	-.746	4
547		4	max	485.397	4	136.756	6	111.424	4	1.464	1	.356	1	.755	3
548			min	-511.598	3	-24.517	1	-118.783	3	-1.46	2	-.35	2	-.746	4
549		5	max	485.397	4	136.756	6	111.424	4	1.464	1	.351	1	.752	3
550			min	-511.598	3	-24.517	1	-118.783	3	-1.46	2	-.345	2	-.746	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
551	M56	1	max	74.303	1	214.169	1	589.828	2	1.005	1	.596	4	.219	1
552			min	-87.898	2	-230.858	2	-488.95	1	-1.161	2	-.648	3	-.206	2
553		2	max	74.303	1	214.169	1	589.828	2	1.005	1	.58	4	.207	1
554			min	-87.898	2	-230.858	2	-488.95	1	-1.161	2	-.627	3	-.193	2
555		3	max	74.303	1	214.169	1	589.828	2	1.005	1	.565	4	.195	1
556			min	-87.898	2	-230.858	2	-488.95	1	-1.161	2	-.606	3	-.18	2
557		4	max	74.303	1	214.169	1	589.828	2	1.005	1	.549	4	.182	1
558			min	-87.898	2	-230.858	2	-488.95	1	-1.161	2	-.585	3	-.167	2
559		5	max	74.303	1	214.169	1	589.828	2	1.005	1	.534	4	.17	1
560			min	-87.898	2	-230.858	2	-488.95	1	-1.161	2	-.564	3	-.153	2
561	M57	1	max	336.78	4	533.745	2	538.54	2	1.012	1	.654	4	.51	1
562			min	-374.972	3	-680.275	1	-472.696	1	-1.08	2	-.683	3	-.518	2
563		2	max	336.78	4	533.745	2	538.54	2	1.012	1	.646	4	.55	1
564			min	-374.972	3	-680.275	1	-472.696	1	-1.08	2	-.671	3	-.548	2
565		3	max	336.78	4	533.745	2	538.54	2	1.012	1	.638	4	.589	1
566			min	-374.972	3	-680.275	1	-472.696	1	-1.08	2	-.659	3	-.579	2
567		4	max	336.78	4	533.745	2	538.54	2	1.012	1	.63	4	.628	1
568			min	-374.972	3	-680.275	1	-472.696	1	-1.08	2	-.648	3	-.61	2
569		5	max	336.78	4	533.745	2	538.54	2	1.012	1	.622	4	.667	1
570			min	-374.972	3	-680.275	1	-472.696	1	-1.08	2	-.636	3	-.641	2
571	M58	1	max	500.466	3	726.948	3	277.626	1	1.13	2	.931	4	.384	1
572			min	-579.21	4	-765.678	4	-392.781	2	-.983	1	-.89	3	-.452	2
573		2	max	500.466	3	726.948	3	277.626	1	1.13	2	.924	4	.404	1
574			min	-579.21	4	-765.678	4	-392.781	2	-.983	1	-.89	3	-.47	2
575		3	max	500.466	3	726.948	3	277.626	1	1.13	2	.917	4	.424	1
576			min	-579.21	4	-765.678	4	-392.781	2	-.983	1	-.89	3	-.488	2
577		4	max	500.466	3	726.948	3	277.626	1	1.13	2	.91	4	.444	1
578			min	-579.21	4	-765.678	4	-392.781	2	-.983	1	-.89	3	-.505	2
579		5	max	500.466	3	726.948	3	277.626	1	1.13	2	.903	4	.464	1
580			min	-579.21	4	-765.678	4	-392.781	2	-.983	1	-.89	3	-.523	2
581	M59	1	max	514.33	3	143.14	5	61.818	4	1.395	2	.383	4	.709	4
582			min	-548.044	4	-29.358	4	-71.289	3	-1.385	1	-.376	3	-.697	3
583		2	max	514.33	3	143.14	5	61.818	4	1.395	2	.386	4	.711	4
584			min	-548.044	4	-29.358	4	-71.289	3	-1.385	1	-.38	3	-.701	3
585		3	max	514.33	3	143.14	5	61.818	4	1.395	2	.39	4	.713	4
586			min	-548.044	4	-29.358	4	-71.289	3	-1.385	1	-.385	3	-.705	3
587		4	max	514.33	3	143.14	5	61.818	4	1.395	2	.394	4	.714	4
588			min	-548.044	4	-29.358	4	-71.289	3	-1.385	1	-.389	3	-.709	3
589		5	max	514.33	3	143.14	5	61.818	4	1.395	2	.397	4	.716	4
590			min	-548.044	4	-29.358	4	-71.289	3	-1.385	1	-.393	3	-.713	3
591	M60	1	max	74.406	4	202.682	4	562.705	1	.959	2	.438	2	.256	4
592			min	-84.18	3	-221.23	3	-465.778	2	-1.108	1	-.49	1	-.243	3
593		2	max	74.406	4	202.682	4	562.705	1	.959	2	.411	2	.244	4
594			min	-84.18	3	-221.23	3	-465.778	2	-1.108	1	-.458	1	-.231	3
595		3	max	74.406	4	202.682	4	562.705	1	.959	2	.385	2	.232	4
596			min	-84.18	3	-221.23	3	-465.778	2	-1.108	1	-.425	1	-.218	3
597		4	max	74.406	4	202.682	4	562.705	1	.959	2	.358	2	.221	4
598			min	-84.18	3	-221.23	3	-465.778	2	-1.108	1	-.393	1	-.205	3
599		5	max	74.406	4	202.682	4	562.705	1	.959	2	.331	2	.209	4
600			min	-84.18	3	-221.23	3	-465.778	2	-1.108	1	-.361	1	-.193	3
601	M61	1	max	269.32	2	723.793	3	423.849	3	.84	4	.61	3	.342	2
602			min	-299.173	1	-866.768	4	-357.657	4	-.905	3	-.642	4	-.349	1
603		2	max	269.32	2	723.793	3	423.849	3	.84	4	.634	3	.339	4
604			min	-299.173	1	-866.768	4	-357.657	4	-.905	3	-.663	4	-.337	3
605		3	max	269.32	2	723.793	3	423.849	3	.84	4	.659	3	.389	4
606			min	-299.173	1	-866.768	4	-357.657	4	-.905	3	-.683	4	-.379	3
607		4	max	269.32	2	723.793	3	423.849	3	.84	4	.683	3	.439	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
608			min	-299.173	1	-866.768	4	-357.657	4	-.905	3	-.704	4	-.42	3
609		5	max	269.32	2	723.793	3	423.849	3	.84	4	.707	3	.489	4
610			min	-299.173	1	-866.768	4	-357.657	4	-.905	3	-.725	4	-.462	3
611	M62	1	max	954.59	1	816.65	2	577.068	4	.244	1	.655	3	.522	2
612			min	-1062.012	2	-844.162	1	-603.737	3	-.211	2	-.628	4	-.583	1
613		2	max	954.59	1	816.65	2	577.068	4	.244	1	.636	3	.495	2
614			min	-1062.012	2	-844.162	1	-603.737	3	-.211	2	-.609	4	-.556	1
615		3	max	954.59	1	816.65	2	577.068	4	.244	1	.616	3	.469	2
616			min	-1062.012	2	-844.162	1	-603.737	3	-.211	2	-.59	4	-.528	1
617		4	max	954.59	1	816.65	2	577.068	4	.244	1	.596	3	.442	2
618			min	-1062.012	2	-844.162	1	-603.737	3	-.211	2	-.571	4	-.501	1
619		5	max	954.59	1	816.65	2	577.068	4	.244	1	.577	3	.416	2
620			min	-1062.012	2	-844.162	1	-603.737	3	-.211	2	-.553	4	-.474	1
621	M63	1	max	567.383	1	703.075	2	970.364	4	.204	3	.93	3	.449	3
622			min	-639.648	2	-634.632	1	-901.299	3	-.201	4	-.989	4	-.436	4
623		2	max	567.383	1	703.075	2	970.364	4	.204	3	.9	3	.433	3
624			min	-639.648	2	-634.632	1	-901.299	3	-.201	4	-.958	4	-.422	4
625		3	max	567.383	1	703.075	2	970.364	4	.204	3	.871	3	.416	3
626			min	-639.648	2	-634.632	1	-901.299	3	-.201	4	-.926	4	-.407	4
627		4	max	567.383	1	703.075	2	970.364	4	.204	3	.842	3	.4	3
628			min	-639.648	2	-634.632	1	-901.299	3	-.201	4	-.895	4	-.393	4
629		5	max	567.383	1	703.075	2	970.364	4	.204	3	.812	3	.384	3
630			min	-639.648	2	-634.632	1	-901.299	3	-.201	4	-.863	4	-.379	4
631	M64	1	max	633.978	2	890.862	3	475.575	3	.311	4	.491	4	.65	3
632			min	-724.538	1	-926.922	4	-524.141	4	-.278	3	-.452	3	-.713	4
633		2	max	633.978	2	890.862	3	475.575	3	.311	4	.474	4	.621	3
634			min	-724.538	1	-926.922	4	-524.141	4	-.278	3	-.437	3	-.683	4
635		3	max	633.978	2	890.862	3	475.575	3	.311	4	.457	4	.592	3
636			min	-724.538	1	-926.922	4	-524.141	4	-.278	3	-.422	3	-.653	4
637		4	max	633.978	2	890.862	3	475.575	3	.311	4	.44	4	.564	3
638			min	-724.538	1	-926.922	4	-524.141	4	-.278	3	-.406	3	-.622	4
639		5	max	633.978	2	890.862	3	475.575	3	.311	4	.423	4	.535	3
640			min	-724.538	1	-926.922	4	-524.141	4	-.278	3	-.391	3	-.592	4
641	M65	1	max	653.075	4	862.253	1	1071.083	2	.305	1	1.008	1	.688	1
642			min	-722.384	3	-797.283	2	-993.066	1	-.302	2	-1.07	2	-.675	2
643		2	max	653.075	4	862.253	1	1071.083	2	.305	1	.976	1	.66	1
644			min	-722.384	3	-797.283	2	-993.066	1	-.302	2	-1.035	2	-.649	2
645		3	max	653.075	4	862.253	1	1071.083	2	.305	1	.944	1	.632	1
646			min	-722.384	3	-797.283	2	-993.066	1	-.302	2	-1	2	-.623	2
647		4	max	653.075	4	862.253	1	1071.083	2	.305	1	.911	1	.604	1
648			min	-722.384	3	-797.283	2	-993.066	1	-.302	2	-.965	2	-.597	2
649		5	max	653.075	4	862.253	1	1071.083	2	.305	1	.879	1	.576	1
650			min	-722.384	3	-797.283	2	-993.066	1	-.302	2	-.93	2	-.571	2
651	M66	1	max	953.364	3	647.343	1	659.254	1	.274	2	.735	2	.54	1
652			min	-1054.218	4	-690.636	2	-693.568	2	-.241	1	-.705	1	-.603	2
653		2	max	953.364	3	647.343	1	659.254	1	.274	2	.713	2	.519	1
654			min	-1054.218	4	-690.636	2	-693.568	2	-.241	1	-.684	1	-.581	2
655		3	max	953.364	3	647.343	1	659.254	1	.274	2	.69	2	.498	1
656			min	-1054.218	4	-690.636	2	-693.568	2	-.241	1	-.662	1	-.558	2
657		4	max	953.364	3	647.343	1	659.254	1	.274	2	.668	2	.477	1
658			min	-1054.218	4	-690.636	2	-693.568	2	-.241	1	-.641	1	-.536	2
659		5	max	953.364	3	647.343	1	659.254	1	.274	2	.645	2	.456	1
660			min	-1054.218	4	-690.636	2	-693.568	2	-.241	1	-.62	1	-.514	2
661	M67	1	max	504.56	2	941.681	4	742.031	3	.291	4	.609	4	.676	4
662			min	-569.362	1	-875.233	3	-661.698	4	-.287	3	-.677	3	-.661	3
663		2	max	504.56	2	941.681	4	742.031	3	.291	4	.587	4	.645	4
664			min	-569.362	1	-875.233	3	-661.698	4	-.287	3	-.653	3	-.633	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
665		3	max	504.56	2	941.681	4	742.031	3	.291	4	.566	4	.615	4
666			min	-569.362	1	-875.233	3	-661.698	4	-.287	3	-.629	3	-.605	3
667		4	max	504.56	2	941.681	4	742.031	3	.291	4	.544	4	.584	4
668			min	-569.362	1	-875.233	3	-661.698	4	-.287	3	-.604	3	-.576	3
669		5	max	504.56	2	941.681	4	742.031	3	.291	4	.523	4	.553	4
670			min	-569.362	1	-875.233	3	-661.698	4	-.287	3	-.58	3	-.548	3
671	M68	1	max	800.658	3	638.736	1	584.87	3	.019	1	.307	4	.914	4
672			min	-894.471	4	-698.81	2	-595.455	4	-.019	2	-.267	3	-.882	3
673		2	max	796.97	3	640.416	1	578.499	3	.019	1	.27	4	.661	4
674			min	-890.782	4	-697.13	2	-589.084	4	-.019	2	-.247	3	-.618	3
675		3	max	793.282	3	642.096	1	572.129	3	.019	1	.236	4	.409	4
676			min	-887.094	4	-695.45	2	-582.714	4	-.019	2	-.228	3	-.355	3
677		4	max	789.593	3	643.776	1	565.758	3	.019	1	.203	4	.567	2
678			min	-883.406	4	-693.771	2	-576.343	4	-.019	2	-.21	3	-.507	1
679		5	max	785.905	3	645.455	1	559.388	3	.019	1	.172	4	.868	2
680			min	-879.718	4	-692.091	2	-569.972	4	-.019	2	-.193	3	-.803	1
681	M69	1	max	694.266	1	800.556	2	755.002	1	.025	2	.201	2	1.114	2
682			min	-797.627	2	-859.676	1	-764.879	2	-.025	1	-.161	1	-1.082	1
683		2	max	690.588	1	802.236	2	752.885	1	.025	2	.211	2	.732	2
684			min	-793.949	2	-857.996	1	-762.761	2	-.025	1	-.186	1	-.688	1
685		3	max	686.91	1	803.915	2	750.767	1	.025	2	.221	2	.357	3
686			min	-790.271	2	-856.316	1	-760.643	2	-.025	1	-.212	1	-.305	4
687		4	max	683.232	1	805.595	2	748.649	1	.025	2	.232	2	.506	3
688			min	-786.593	2	-854.636	1	-758.526	2	-.025	1	-.238	1	-.447	4
689		5	max	679.554	1	807.275	2	746.532	1	.025	2	.244	2	.655	3
690			min	-782.915	2	-852.957	1	-756.408	2	-.025	1	-.264	1	-.592	4
691	M70	1	max	444.855	2	355.827	1	697.365	3	.106	5	0	11	0	11
692			min	-403.442	3	-674.971	2	-732.616	4	0	2	0	1	0	1
693		2	max	444.855	2	355.827	1	697.365	3	.106	5	.031	3	.03	2
694			min	-403.442	3	-674.971	2	-732.616	4	0	2	-.033	4	-.016	1
695		3	max	444.855	2	355.827	1	697.365	3	.106	5	.063	3	.061	2
696			min	-403.442	3	-674.971	2	-732.616	4	0	2	-.066	4	-.032	1
697		4	max	444.855	2	355.827	1	697.365	3	.106	5	.094	3	.091	2
698			min	-403.442	3	-674.971	2	-732.616	4	0	2	-.099	4	-.048	1
699		5	max	444.855	2	355.827	1	697.365	3	.106	5	.126	3	.121	2
700			min	-403.442	3	-674.971	2	-732.616	4	0	2	-.132	4	-.064	1
701	M71	1	max	522.644	3	389.729	1	735.451	3	.043	2	0	11	0	11
702			min	-461.365	4	-1039.967	6	-710.155	4	-.058	1	0	1	0	1
703		2	max	522.644	3	389.729	1	735.451	3	.043	2	.033	3	.047	6
704			min	-461.365	4	-1039.967	6	-710.155	4	-.058	1	-.032	4	-.018	1
705		3	max	522.644	3	389.729	1	735.451	3	.043	2	.066	3	.094	6
706			min	-461.365	4	-1039.967	6	-710.155	4	-.058	1	-.064	4	-.035	1
707		4	max	522.644	3	389.729	1	735.451	3	.043	2	.099	3	.14	6
708			min	-461.365	4	-1039.967	6	-710.155	4	-.058	1	-.096	4	-.053	1
709		5	max	522.644	3	389.729	1	735.451	3	.043	2	.132	3	.187	6
710			min	-461.365	4	-1039.967	6	-710.155	4	-.058	1	-.128	4	-.07	1
711	M72	1	max	545.09	3	401.484	4	704.658	4	.109	6	0	11	0	2
712			min	-501.644	4	-720.396	3	-740.878	3	-.003	1	0	1	0	1
713		2	max	545.09	3	401.484	4	704.658	4	.109	6	.032	4	.032	3
714			min	-501.644	4	-720.396	3	-740.878	3	-.003	1	-.033	3	-.018	4
715		3	max	545.09	3	401.484	4	704.658	4	.109	6	.063	4	.065	3
716			min	-501.644	4	-720.396	3	-740.878	3	-.003	1	-.067	3	-.036	4
717		4	max	545.09	3	401.484	4	704.658	4	.109	6	.095	4	.097	3
718			min	-501.644	4	-720.396	3	-740.878	3	-.003	1	-.1	3	-.054	4
719		5	max	545.09	3	401.484	4	704.658	4	.109	6	.127	4	.13	3
720			min	-501.644	4	-720.396	3	-740.878	3	-.003	1	-.133	3	-.072	4
721	M73	1	max	528.258	1	348.98	2	750.434	1	.05	1	0	11	0	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
722			min	-463.249	2	-1031.269	5	-726.355	2	-.063	2	0	1	0	2
723		2	max	528.258	1	348.98	2	750.434	1	.05	1	.034	1	.046	5
724			min	-463.249	2	-1031.269	5	-726.355	2	-.063	2	-.033	2	-.016	2
725		3	max	528.258	1	348.98	2	750.434	1	.05	1	.068	1	.093	5
726			min	-463.249	2	-1031.269	5	-726.355	2	-.063	2	-.065	2	-.031	2
727		4	max	528.258	1	348.98	2	750.434	1	.05	1	.101	1	.139	5
728			min	-463.249	2	-1031.269	5	-726.355	2	-.063	2	-.098	2	-.047	2
729		5	max	528.258	1	348.98	2	750.434	1	.05	1	.135	1	.186	5
730			min	-463.249	2	-1031.269	5	-726.355	2	-.063	2	-.131	2	-.063	2
731	M74	1	max	505.35	1	306.401	2	765.474	2	.108	7	0	11	0	2
732			min	-468.547	2	-622.47	1	-797.116	1	.008	4	0	1	0	4
733		2	max	505.35	1	306.401	2	765.474	2	.108	7	.034	2	.028	1
734			min	-468.547	2	-622.47	1	-797.116	1	.008	4	-.036	1	-.014	2
735		3	max	505.35	1	306.401	2	765.474	2	.108	7	.069	2	.056	1
736			min	-468.547	2	-622.47	1	-797.116	1	.008	4	-.072	1	-.028	2
737		4	max	505.35	1	306.401	2	765.474	2	.108	7	.103	2	.084	1
738			min	-468.547	2	-622.47	1	-797.116	1	.008	4	-.108	1	-.041	2
739		5	max	505.35	1	306.401	2	765.474	2	.108	7	.138	2	.112	1
740			min	-468.547	2	-622.47	1	-797.116	1	.008	4	-.143	1	-.055	2
741	M75	1	max	433.995	2	457.272	3	725.265	2	.072	4	0	11	0	7
742			min	-366.076	1	-1056.747	8	-695.557	1	-.085	3	0	1	0	4
743		2	max	433.995	2	457.272	3	725.265	2	.072	4	.033	2	.048	8
744			min	-366.076	1	-1056.747	8	-695.557	1	-.085	3	-.031	1	-.021	3
745		3	max	433.995	2	457.272	3	725.265	2	.072	4	.065	2	.095	8
746			min	-366.076	1	-1056.747	8	-695.557	1	-.085	3	-.063	1	-.041	3
747		4	max	433.995	2	457.272	3	725.265	2	.072	4	.098	2	.143	8
748			min	-366.076	1	-1056.747	8	-695.557	1	-.085	3	-.094	1	-.062	3
749		5	max	433.995	2	457.272	3	725.265	2	.072	4	.131	2	.19	8
750			min	-366.076	1	-1056.747	8	-695.557	1	-.085	3	-.125	1	-.082	3
751	M76	1	max	1412.415	1	-133.169	1	1341.507	2	.257	2	0	11	0	11
752			min	-1395.874	2	-1019.928	7	-1458.122	1	-.296	1	0	1	0	1
753		2	max	1412.415	1	-133.169	1	1341.507	2	.257	2	.054	2	.041	7
754			min	-1395.874	2	-1019.928	7	-1458.122	1	-.296	1	-.058	1	.005	1
755		3	max	1412.415	1	-133.169	1	1341.507	2	.257	2	.107	2	.082	7
756			min	-1395.874	2	-1019.928	7	-1458.122	1	-.296	1	-.117	1	.011	1
757		4	max	1412.415	1	-133.169	1	1341.507	2	.257	2	.161	2	.122	7
758			min	-1395.874	2	-1019.928	7	-1458.122	1	-.296	1	-.175	1	.016	1
759		5	max	1412.415	1	-133.169	1	1341.507	2	.257	2	.215	2	.163	7
760			min	-1395.874	2	-1019.928	7	-1458.122	1	-.296	1	-.233	1	.021	1
761	M77	1	max	968.719	1	-111.687	1	1100.628	1	.288	5	0	11	0	11
762			min	-945.923	2	-917.732	8	-1012.23	2	-.115	2	0	1	0	1
763		2	max	968.719	1	-111.687	1	1100.628	1	.288	5	.044	1	.037	8
764			min	-945.923	2	-917.732	8	-1012.23	2	-.115	2	-.04	2	.004	1
765		3	max	968.719	1	-111.687	1	1100.628	1	.288	5	.088	1	.073	8
766			min	-945.923	2	-917.732	8	-1012.23	2	-.115	2	-.081	2	.009	1
767		4	max	968.719	1	-111.687	1	1100.628	1	.288	5	.132	1	.11	8
768			min	-945.923	2	-917.732	8	-1012.23	2	-.115	2	-.121	2	.013	1
769		5	max	968.719	1	-111.687	1	1100.628	1	.288	5	.176	1	.147	8
770			min	-945.923	2	-917.732	8	-1012.23	2	-.115	2	-.162	2	.018	1
771	M78	1	max	982.612	4	-85.697	2	1268.592	1	.236	3	0	11	0	3
772			min	-973.12	3	-1040.833	5	-1376.485	2	-.271	4	0	1	0	4
773		2	max	982.612	4	-85.697	2	1268.592	1	.236	3	.051	1	.042	5
774			min	-973.12	3	-1040.833	5	-1376.485	2	-.271	4	-.055	2	.003	2
775		3	max	982.612	4	-85.697	2	1268.592	1	.236	3	.101	1	.083	5
776			min	-973.12	3	-1040.833	5	-1376.485	2	-.271	4	-.11	2	.007	2
777		4	max	982.612	4	-85.697	2	1268.592	1	.236	3	.152	1	.125	5
778			min	-973.12	3	-1040.833	5	-1376.485	2	-.271	4	-.165	2	.01	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
779		5	max	982.612	4	-85.697	2	1268.592	1	.236	3	.203	1	.167	5
780			min	-973.12	3	-1040.833	5	-1376.485	2	-.271	4	-.22	2	.014	2
781	M79	1	max	814.391	4	-67.223	4	1372.324	4	.283	8	0	11	0	2
782			min	-781.535	3	-922.02	7	-1289.907	3	-.141	3	0	1	0	1
783		2	max	814.391	4	-67.223	4	1372.324	4	.283	8	.055	4	.037	7
784			min	-781.535	3	-922.02	7	-1289.907	3	-.141	3	-.052	3	.003	4
785		3	max	814.391	4	-67.223	4	1372.324	4	.283	8	.11	4	.074	7
786			min	-781.535	3	-922.02	7	-1289.907	3	-.141	3	-.103	3	.005	4
787		4	max	814.391	4	-67.223	4	1372.324	4	.283	8	.165	4	.111	7
788			min	-781.535	3	-922.02	7	-1289.907	3	-.141	3	-.155	3	.008	4
789		5	max	814.391	4	-67.223	4	1372.324	4	.283	8	.22	4	.148	7
790			min	-781.535	3	-922.02	7	-1289.907	3	-.141	3	-.206	3	.011	4
791	M80	1	max	1150.025	3	-84.576	3	1568.388	4	.209	4	0	11	0	5
792			min	-1117.896	4	-1027.557	8	-1691.058	3	-.257	3	0	1	0	4
793		2	max	1150.025	3	-84.576	3	1568.388	4	.209	4	.063	4	.041	8
794			min	-1117.896	4	-1027.557	8	-1691.058	3	-.257	3	-.068	3	.003	3
795		3	max	1150.025	3	-84.576	3	1568.388	4	.209	4	.125	4	.082	8
796			min	-1117.896	4	-1027.557	8	-1691.058	3	-.257	3	-.135	3	.007	3
797		4	max	1150.025	3	-84.576	3	1568.388	4	.209	4	.188	4	.123	8
798			min	-1117.896	4	-1027.557	8	-1691.058	3	-.257	3	-.203	3	.01	3
799		5	max	1150.025	3	-84.576	3	1568.388	4	.209	4	.251	4	.164	8
800			min	-1117.896	4	-1027.557	8	-1691.058	3	-.257	3	-.271	3	.014	3
801	M81	1	max	750.658	3	-68.419	2	1213.386	2	.266	6	0	11	0	9
802			min	-741.952	4	-939.186	5	-1142.386	1	-.134	1	0	1	0	3
803		2	max	750.658	3	-68.419	2	1213.386	2	.266	6	.049	2	.038	5
804			min	-741.952	4	-939.186	5	-1142.386	1	-.134	1	-.046	1	.003	2
805		3	max	750.658	3	-68.419	2	1213.386	2	.266	6	.097	2	.075	5
806			min	-741.952	4	-939.186	5	-1142.386	1	-.134	1	-.091	1	.005	2
807		4	max	750.658	3	-68.419	2	1213.386	2	.266	6	.146	2	.113	5
808			min	-741.952	4	-939.186	5	-1142.386	1	-.134	1	-.137	1	.008	2
809		5	max	750.658	3	-68.419	2	1213.386	2	.266	6	.194	2	.15	5
810			min	-741.952	4	-939.186	5	-1142.386	1	-.134	1	-.183	1	.011	2
811	M82	1	max	56.366	6	833.905	2	1406.288	2	.03	2	.228	1	.153	2
812			min	-5.966	1	-751.769	1	-1243.877	1	-.047	1	-.258	2	-.137	1
813		2	max	56.366	6	833.905	2	1406.288	2	.03	2	.174	1	.117	2
814			min	-5.966	1	-751.769	1	-1243.877	1	-.047	1	-.197	2	-.105	1
815		3	max	56.366	6	833.905	2	1406.288	2	.03	2	.119	1	.08	2
816			min	-5.966	1	-751.769	1	-1243.877	1	-.047	1	-.135	2	-.072	1
817		4	max	56.366	6	833.905	2	1406.288	2	.03	2	.065	1	.044	2
818			min	-5.966	1	-751.769	1	-1243.877	1	-.047	1	-.074	2	-.039	1
819		5	max	56.366	6	833.905	2	1406.288	2	.03	2	.015	3	.01	4
820			min	-5.966	1	-751.769	1	-1243.877	1	-.047	1	-.017	4	-.008	3
821	M83	1	max	56.519	6	795.541	1	1500.126	2	.046	1	.235	1	.142	1
822			min	-.702	1	-887.715	2	-1320.467	1	-.031	2	-.269	2	-.159	2
823		2	max	56.519	6	795.541	1	1500.126	2	.046	1	.177	1	.107	1
824			min	-.702	1	-887.715	2	-1320.467	1	-.031	2	-.203	2	-.12	2
825		3	max	56.519	6	795.541	1	1500.126	2	.046	1	.12	1	.072	1
826			min	-.702	1	-887.715	2	-1320.467	1	-.031	2	-.138	2	-.082	2
827		4	max	56.519	6	795.541	1	1500.126	2	.046	1	.062	1	.037	1
828			min	-.702	1	-887.715	2	-1320.467	1	-.031	2	-.072	2	-.043	2
829		5	max	56.519	6	795.541	1	1500.126	2	.046	1	.005	1	.003	1
830			min	-.702	1	-887.715	2	-1320.467	1	-.031	2	-.012	6	-.008	6
831	M84	1	max	202.637	5	707.999	4	2647.103	1	.194	4	.492	2	.15	4
832			min	25.116	2	-695.256	3	-2988.957	2	-.202	3	-.312	1	-.157	3
833		2	max	202.637	5	707.999	4	2647.103	1	.194	4	.361	2	.119	4
834			min	25.116	2	-695.256	3	-2988.957	2	-.202	3	-.196	1	-.127	3
835		3	max	202.637	5	707.999	4	2647.103	1	.194	4	.304	6	.088	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
836			min	25.116	2	-695.256	3	-2988.957	2	-.202	3	-.081	1	-.097	3
837		4	max	202.637	5	707.999	4	2647.103	1	.194	4	.25	6	.058	4
838			min	25.116	2	-695.256	3	-2988.957	2	-.202	3	.035	1	-.066	3
839		5	max	202.637	5	707.999	4	2647.103	1	.194	4	.236	5	.027	4
840			min	25.116	2	-695.256	3	-2988.957	2	-.202	3	-.03	2	-.036	3
841	M85	1	max	795.532	1	-13.117	2	1362.109	1	.014	2	.029	3	.061	5
842			min	-887.695	2	-96.012	5	-1540.998	2	-.105	5	-.048	4	-.008	2
843		2	max	795.532	1	-13.143	2	1362.109	1	.014	2	.061	3	.065	5
844			min	-887.695	2	-96.103	5	-1540.998	2	-.105	5	-.087	4	-.007	2
845		3	max	795.532	1	106.405	5	1362.109	1	.132	5	.071	1	.085	5
846			min	-887.695	2	-94.737	8	-1540.998	2	-.048	4	-.127	4	-.008	2
847		4	max	751.77	1	106.314	5	1447.893	2	.132	5	.049	4	.081	5
848			min	-833.923	2	11.882	2	-1284.795	1	-.016	2	-.084	3	-.008	2
849		5	max	751.77	1	106.223	5	1447.893	2	.132	5	.031	4	.076	5
850			min	-833.923	2	11.856	2	-1284.795	1	-.016	2	-.058	3	-.009	2
851	M86	1	max	758.163	4	682.886	2	427.063	3	.177	6	.208	4	.532	6
852			min	-709.07	3	-347.687	1	-435.513	4	0	1	-.206	3	-.235	1
853		2	max	755.778	4	681.737	2	422.889	3	.177	6	.167	4	.47	6
854			min	-706.685	3	-348.835	1	-431.34	4	0	1	-.167	3	-.203	1
855		3	max	753.393	4	680.589	2	418.716	3	.177	6	.127	4	.409	6
856			min	-704.3	3	-349.983	1	-427.166	4	0	1	-.127	3	-.17	1
857		4	max	751.008	4	679.44	2	414.542	3	.177	6	.087	4	.348	6
858			min	-701.915	3	-351.132	1	-422.993	4	0	1	-.088	3	-.137	1
859		5	max	748.623	4	678.292	2	410.369	3	.177	6	.048	4	.287	6
860			min	-699.53	3	-352.28	1	-418.82	4	0	1	-.049	3	-.104	1
861	M87	1	max	745.077	2	1079.106	8	429.544	2	-.007	3	.226	1	.804	8
862			min	-674.168	1	-449.365	3	-438.36	1	-.162	8	-.212	2	-.3	3
863		2	max	742.668	2	1076.039	8	428.139	2	-.007	3	.185	1	.703	8
864			min	-671.758	1	-450.513	3	-436.955	1	-.162	8	-.172	2	-.257	3
865		3	max	740.258	2	1072.972	8	426.733	2	-.007	3	.144	1	.602	8
866			min	-669.349	1	-451.662	3	-435.55	1	-.162	8	-.132	2	-.215	3
867		4	max	737.849	2	1069.905	8	425.328	2	-.007	3	.104	1	.501	8
868			min	-666.939	1	-452.81	3	-434.144	1	-.162	8	-.092	2	-.173	3
869		5	max	735.439	2	1066.838	8	423.923	2	-.007	3	.063	1	.401	8
870			min	-664.53	1	-453.959	3	-432.739	1	-.162	8	-.052	2	-.13	3
871	M88	1	max	1407.421	1	932.424	8	496.037	2	.135	5	.215	1	.331	2
872			min	-1309.687	2	114.052	1	-485.431	1	-.035	2	-.219	2	-.178	1
873		2	max	1406.59	1	931.279	8	494.094	2	.135	5	.196	1	.314	2
874			min	-1308.856	2	113.695	1	-483.488	1	-.035	2	-.2	2	-.182	1
875		3	max	1405.759	1	930.134	8	492.151	2	.135	5	.177	1	.297	2
876			min	-1308.025	2	113.337	1	-481.545	1	-.035	2	-.18	2	-.187	1
877		4	max	1404.928	1	928.988	8	490.208	2	.135	5	.158	1	.281	2
878			min	-1307.194	2	112.979	1	-479.601	1	-.035	2	-.161	2	-.191	1
879		5	max	1404.097	1	927.843	8	488.264	2	.135	5	.14	1	.264	2
880			min	-1306.362	2	112.622	1	-477.658	1	-.035	2	-.142	2	-.196	1
881	M89	1	max	1133.721	1	927.99	8	927.317	2	.153	8	.14	1	.259	2
882			min	-1036.546	2	111.743	1	-962.238	1	.025	3	-.142	2	-.22	1
883		2	max	1133.574	1	925.552	8	922.426	2	.153	8	.06	1	.223	2
884			min	-1036.399	2	110.982	1	-957.347	1	.025	3	-.066	2	-.23	1
885		3	max	1133.426	1	923.113	8	917.535	2	.153	8	.078	4	.188	2
886			min	-1036.251	2	110.22	1	-952.456	1	.025	3	-.087	3	-.239	1
887		4	max	1133.278	1	920.674	8	912.645	2	.153	8	.104	4	.152	2
888			min	-1036.104	2	109.458	1	-947.566	1	.025	3	-.114	3	-.248	1
889		5	max	1133.131	1	918.235	8	907.754	2	.153	8	.162	2	.117	2
890			min	-1035.956	2	108.697	1	-942.675	1	.025	3	-.176	1	-.283	5
891	M90	1	max	2015.297	3	1043.64	8	430.925	3	.068	4	.183	4	.533	8
892			min	-1897.736	4	87.133	3	-445.743	4	-.101	3	-.173	3	-.193	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
893		2	max	2014.193	3	1042.495	8	430.098	3	.068	4	.165	4	.493	8
894			min	-1896.633	4	86.776	3	-444.917	4	-.101	3	-.156	3	-.196	3
895		3	max	2013.09	3	1041.35	8	429.272	3	.068	4	.148	4	.452	8
896			min	-1895.53	4	86.418	3	-444.091	4	-.101	3	-.139	3	-.2	3
897		4	max	2011.987	3	1040.205	8	428.445	3	.068	4	.131	4	.412	8
898			min	-1894.427	4	86.06	3	-443.264	4	-.101	3	-.122	3	-.203	3
899		5	max	2010.884	3	1039.059	8	427.619	3	.068	4	.114	4	.381	4
900			min	-1893.324	4	85.703	3	-442.438	4	-.101	3	-.106	3	-.206	3
901	M91	1	max	1715.187	3	1039.46	8	1135.867	3	-.018	3	.114	4	.379	4
902			min	-1600.685	4	84.279	3	-1100.278	4	-.165	8	-.106	3	-.229	3
903		2	max	1712.985	3	1037.008	8	1132.304	3	-.018	3	.102	1	.337	4
904			min	-1598.483	4	83.513	3	-1096.716	4	-.165	8	-.091	2	-.236	3
905		3	max	1710.783	3	1034.555	8	1128.741	3	-.018	3	.091	1	.295	4
906			min	-1596.282	4	82.747	3	-1093.153	4	-.165	8	-.079	2	-.243	3
907		4	max	1708.581	3	1032.102	8	1125.179	3	-.018	3	.177	3	.253	4
908			min	-1594.08	4	81.981	3	-1089.59	4	-.165	8	-.16	4	-.25	3
909		5	max	1706.379	3	1029.649	8	1121.616	3	-.018	3	.271	3	.211	4
910			min	-1591.878	4	81.215	3	-1086.028	4	-.165	8	-.251	4	-.256	3
911	M92	1	max	1867.041	4	134.032	8	14.886	1	0	7	-.01	3	.136	6
912			min	-2089.979	3	25.172	3	-23.098	2	0	4	-.084	8	-.016	1
913		2	max	1858.048	4	97.608	8	9.669	1	0	7	.008	1	.042	4
914			min	-2080.986	3	16.046	3	-17.881	2	0	4	-.011	2	-.024	3
915		3	max	1849.056	4	33.383	8	14.495	3	0	7	.037	5	.009	4
916			min	-2071.994	3	-1.013	3	-22.631	4	0	4	-.002	2	-.035	7
917		4	max	1840.063	4	-2.47	4	29.994	3	0	7	.019	7	0	3
918			min	-2063.001	3	-52.205	7	-38.13	4	0	4	-.008	4	-.036	8
919		5	max	1831.071	4	-15.997	4	45.493	3	0	7	.023	3	.051	3
920			min	-2054.008	3	-104.05	7	-53.629	4	0	4	-.062	8	-.046	4
921	M93	1	max	1267.578	2	27.194	2	147.087	8	0	2	-.009	3	.024	3
922			min	-1488.129	1	-37.951	1	21.598	3	0	5	-.098	6	-.171	8
923		2	max	1267.525	2	8.291	3	110.355	8	0	2	.011	3	.03	3
924			min	-1488.077	1	-22.326	5	12.383	3	0	5	-.017	4	-.06	4
925		3	max	1267.473	2	8.291	3	44.977	8	0	2	.035	7	.028	3
926			min	-1488.024	1	-20.856	8	-5.005	3	0	5	-.003	4	-.017	4
927		4	max	1267.421	2	24.184	1	4.661	4	0	2	.018	7	.032	6
928			min	-1487.972	1	-34.942	2	-53.832	7	0	5	-.004	4	.005	1
929		5	max	1267.368	2	44.896	1	-10.078	4	0	2	.018	1	.033	2
930			min	-1487.92	1	-55.654	2	-109.928	7	0	5	-.069	6	-.039	1
931	M94	1	max	815.839	4	678.062	2	331.008	2	.076	1	.048	4	.325	6
932			min	-777.174	3	-353.02	1	-290.587	1	-.118	2	-.049	3	-.071	1
933		2	max	814.786	4	677.075	2	335.522	2	.076	1	.069	4	.273	6
934			min	-776.12	3	-354.007	1	-295.101	1	-.118	2	-.068	3	-.043	1
935		3	max	813.733	4	676.088	2	340.035	2	.076	1	.09	4	.221	6
936			min	-775.067	3	-354.994	1	-299.615	1	-.118	2	-.087	3	-.014	1
937		4	max	812.679	4	675.1	2	344.549	2	.076	1	.111	4	.171	8
938			min	-774.014	3	-355.981	1	-304.128	1	-.118	2	-.106	3	.002	3
939		5	max	811.626	4	674.113	2	349.062	2	.076	1	.132	4	.125	8
940			min	-772.96	3	-356.969	1	-308.642	1	-.118	2	-.126	3	.004	3
941	M95	1	max	810.123	2	1066.893	8	204.111	3	.192	4	.063	1	.392	8
942			min	-770.882	1	-455.021	3	-264.346	4	-.1	3	-.052	2	-.083	3
943		2	max	808.815	2	1064.272	8	208.448	3	.192	4	.079	1	.307	8
944			min	-769.574	1	-456.002	3	-268.683	4	-.1	3	-.072	2	-.047	3
945		3	max	807.507	2	1061.651	8	212.785	3	.192	4	.094	1	.222	8
946			min	-768.265	1	-456.984	3	-273.02	4	-.1	3	-.091	2	-.01	3
947		4	max	806.198	2	1059.03	8	217.122	3	.192	4	.11	1	.137	8
948			min	-766.957	1	-457.965	3	-277.358	4	-.1	3	-.111	2	.026	3
949		5	max	804.89	2	1056.409	8	221.46	3	.192	4	.125	1	.067	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
950			min	-765.649	1	-458.947	3	-281.695	4	-.1	3	-.131	2	-.027	4
951	M96	1	max	311.941	1	-113.343	1	1455.035	1	.164	1	.219	2	.125	1
952			min	-340.364	2	-932.543	8	-1359.125	2	-.324	2	-.215	1	-.074	2
953		2	max	1101.172	1	-151.894	1	192.88	1	-.069	1	.376	1	.68	8
954			min	-1030.449	2	-1061.479	6	-293.462	2	-.358	6	-.34	2	.06	3
955		3	max	1112.159	1	-160.77	1	199.214	1	-.069	1	.503	1	1.372	6
956			min	-1041.436	2	-1085.321	6	-299.797	2	-.358	6	-.532	2	.166	1
957		4	max	1123.147	1	-169.646	1	205.549	1	-.069	1	.633	1	2.08	6
958			min	-1052.424	2	-1109.162	6	-306.131	2	-.358	6	-.727	2	.272	1
959		5	max	1134.135	1	-178.522	1	211.883	1	-.069	1	.768	1	2.803	6
960			min	-1063.412	2	-1133.003	6	-312.465	2	-.358	6	-.927	2	.384	1
961	M97	1	max	1291.984	3	1238.133	8	450.541	4	.578	5	1.335	3	2.987	8
962			min	-1222.17	4	156.342	3	-370.436	3	.041	2	-1.437	4	.271	3
963		2	max	1280.98	3	1214.292	8	431.509	4	.578	5	1.102	3	2.196	8
964			min	-1211.167	4	147.467	3	-351.404	3	.041	2	-1.153	4	.173	3
965		3	max	1269.976	3	1190.451	8	412.478	4	.578	5	.881	3	1.42	8
966			min	-1200.163	4	138.591	3	-332.373	3	.041	2	-.881	4	.081	3
967		4	max	1258.972	3	1166.609	8	393.447	4	.578	5	.673	3	.66	8
968			min	-1189.159	4	129.715	3	-313.342	3	.041	2	-.621	4	-.005	3
969		5	max	304.244	2	1043.787	8	1936.442	4	.533	8	.183	4	.123	3
970			min	-329.637	1	86.005	3	-2052.868	3	-.18	3	-.173	3	-.122	4
971	M98	1	max	108.782	7	1488.085	1	53.204	2	.04	1	.007	1	.274	1
972			min	10.933	4	-1267.48	2	-40.478	1	-.058	2	-.009	2	-.209	2
973		2	max	108.782	7	1488.085	1	53.204	2	.04	1	.006	1	.209	1
974			min	10.933	4	-1267.48	2	-40.478	1	-.058	2	-.007	2	-.154	2
975		3	max	108.782	7	1488.085	1	53.204	2	.04	1	.004	1	.144	1
976			min	10.933	4	-1267.48	2	-40.478	1	-.058	2	-.005	2	-.102	4
977		4	max	108.782	7	1488.085	1	53.204	2	.04	1	.002	1	.085	3
978			min	10.933	4	-1267.48	2	-40.478	1	-.058	2	-.003	2	-.051	4
979		5	max	108.782	7	1488.085	1	53.204	2	.04	1	0	1	.058	7
980			min	10.933	4	-1267.48	2	-40.478	1	-.058	2	0	2	0	4
981	M99	1	max	103.098	5	994.847	3	1797.547	3	.068	4	.279	4	.183	3
982			min	16.248	2	-869.48	4	-1612.46	4	-.053	3	-.331	3	-.15	4
983		2	max	103.098	5	994.847	3	1797.547	3	.068	4	.208	4	.14	3
984			min	16.248	2	-869.48	4	-1612.46	4	-.053	3	-.253	3	-.112	4
985		3	max	103.098	5	994.847	3	1797.547	3	.068	4	.138	4	.097	3
986			min	16.248	2	-869.48	4	-1612.46	4	-.053	3	-.175	3	-.074	4
987		4	max	103.098	5	994.847	3	1797.547	3	.068	4	.068	4	.053	3
988			min	16.248	2	-869.48	4	-1612.46	4	-.053	3	-.096	3	-.036	4
989		5	max	103.098	5	994.847	3	1797.547	3	.068	4	-.003	4	.025	7
990			min	16.248	2	-869.48	4	-1612.46	4	-.053	3	-.044	7	.002	4
991	M100	1	max	281.647	8	2423.266	3	1790.21	3	.106	2	.215	4	.415	3
992			min	49.561	3	-2113.583	4	-1598.252	4	-.116	1	-.318	3	-.221	4
993		2	max	281.647	8	2423.266	3	1790.21	3	.106	2	.145	4	.363	7
994			min	49.561	3	-2113.583	4	-1598.252	4	-.116	1	-.24	3	-.129	4
995		3	max	281.647	8	2423.266	3	1790.21	3	.106	2	.075	4	.319	7
996			min	49.561	3	-2113.583	4	-1598.252	4	-.116	1	-.176	7	-.037	4
997		4	max	281.647	8	2423.266	3	1790.21	3	.106	2	.006	4	.28	5
998			min	49.561	3	-2113.583	4	-1598.252	4	-.116	1	-.147	7	.038	2
999		5	max	281.647	8	2423.266	3	1790.21	3	.106	2	0	1	.266	8
1000			min	49.561	3	-2113.583	4	-1598.252	4	-.116	1	-.132	6	-.008	3
1001	M101	1	max	925.403	4	-25.12	1	1623.104	4	0	1	.024	1	.077	6
1002			min	-1023.469	3	-134.071	8	-1820.114	3	-.133	6	-.042	2	0	1
1003		2	max	925.403	4	-25.172	1	1623.104	4	0	1	.041	4	.082	6
1004			min	-1023.469	3	-134.253	8	-1820.114	3	-.133	6	-.068	3	.001	1
1005		3	max	925.403	4	147.453	8	1623.104	4	.163	8	.108	4	.107	8
1006			min	-1023.469	3	-134.24	6	-1820.114	3	-.07	2	-.144	3	.006	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
1007		4	max	608.066	2	147.271	8	1309.484	1	.163	8	.045	2	.101	8
1008			min	-707.297	1	22.143	3	-1112.86	2	-.009	3	-.08	1	-.004	3
1009		5	max	608.066	2	147.089	8	1309.484	1	.163	8	.023	3	.094	8
1010			min	-707.297	1	22.091	3	-1112.86	2	-.009	3	-.054	8	-.005	3
1011	M102	1	max	823.702	3	727.803	3	436.702	1	.18	7	.25	2	.546	3
1012			min	-771.914	4	-393.629	4	-448.288	2	-.011	4	-.248	1	-.271	4
1013		2	max	826.091	3	726.658	3	435.322	1	.18	7	.208	2	.479	7
1014			min	-774.304	4	-394.774	4	-446.909	2	-.011	4	-.207	1	-.234	4
1015		3	max	828.48	3	725.514	3	433.943	1	.18	7	.167	2	.417	7
1016			min	-776.693	4	-395.918	4	-445.529	2	-.011	4	-.166	1	-.197	4
1017		4	max	830.869	3	724.369	3	432.564	1	.18	7	.125	2	.355	7
1018			min	-779.082	4	-397.063	4	-444.15	2	-.011	4	-.126	1	-.16	4
1019		5	max	833.258	3	723.225	3	431.184	1	.18	7	.084	2	.294	7
1020			min	-781.471	4	-398.207	4	-442.771	2	-.011	4	-.086	1	-.123	4
1021	M103	1	max	830.899	3	1062.514	6	394.514	3	.006	1	.185	4	.796	6
1022			min	-767.538	4	-381.479	1	-406.113	4	-.162	6	-.169	3	-.261	1
1023		2	max	828.494	3	1059.437	6	390.347	3	.006	1	.147	4	.696	6
1024			min	-765.133	4	-382.631	1	-401.947	4	-.162	6	-.132	3	-.226	1
1025		3	max	826.088	3	1056.359	6	386.181	3	.006	1	.109	4	.596	6
1026			min	-762.727	4	-383.783	1	-397.78	4	-.162	6	-.096	3	-.189	1
1027		4	max	823.682	3	1053.282	6	382.014	3	.006	1	.072	4	.497	6
1028			min	-760.322	4	-384.936	1	-393.614	4	-.162	6	-.06	3	-.153	1
1029		5	max	821.277	3	1050.205	6	377.848	3	.006	1	.05	2	.398	6
1030			min	-757.916	4	-386.088	1	-389.447	4	-.162	6	-.038	1	-.117	1
1031	M104	1	max	1594.803	4	937.689	7	349.207	1	.134	8	.181	2	.376	3
1032			min	-1517.526	3	69.802	4	-336.659	2	-.045	3	-.191	1	-.219	4
1033		2	max	1593.699	4	936.544	7	347.734	1	.134	8	.168	2	.358	3
1034			min	-1516.423	3	69.445	4	-335.187	2	-.045	3	-.177	1	-.222	4
1035		3	max	1592.596	4	935.399	7	346.262	1	.134	8	.155	2	.34	3
1036			min	-1515.32	3	69.087	4	-333.715	2	-.045	3	-.163	1	-.225	4
1037		4	max	1591.493	4	934.254	7	344.79	1	.134	8	.142	2	.321	3
1038			min	-1514.217	3	68.73	4	-332.243	2	-.045	3	-.15	1	-.227	4
1039		5	max	1590.39	4	933.109	7	343.318	1	.134	8	.129	2	.303	3
1040			min	-1513.114	3	68.372	4	-330.77	2	-.045	3	-.137	1	-.23	4
1041	M105	1	max	1402.918	4	933.499	7	751.518	3	.154	7	.129	2	.299	3
1042			min	-1331.759	3	67.109	4	-774.676	4	.021	4	-.137	1	-.255	4
1043		2	max	1400.729	4	931.06	7	747.976	3	.154	7	.114	2	.26	3
1044			min	-1329.569	3	66.347	4	-771.134	4	.021	4	-.122	1	-.261	4
1045		3	max	1398.539	4	928.621	7	744.435	3	.154	7	.099	2	.221	3
1046			min	-1327.379	3	65.586	4	-767.593	4	.021	4	-.107	1	-.266	4
1047		4	max	1396.349	4	926.182	7	740.894	3	.154	7	.145	3	.182	3
1048			min	-1325.19	3	64.824	4	-764.051	4	.021	4	-.156	4	-.272	4
1049		5	max	1394.16	4	923.744	7	737.352	3	.154	7	.206	3	.143	3
1050			min	-1323	3	64.063	4	-760.51	4	.021	4	-.22	4	-.278	8
1051	M106	1	max	1920.017	1	1034.648	7	755.081	1	.09	2	.355	2	.544	6
1052			min	-1779.522	2	134.014	1	-778.678	2	-.12	1	-.35	1	-.202	1
1053		2	max	1919.186	1	1033.503	7	753.138	1	.09	2	.325	2	.504	6
1054			min	-1778.691	2	133.657	1	-776.735	2	-.12	1	-.32	1	-.208	1
1055		3	max	1918.355	1	1032.358	7	751.195	1	.09	2	.295	2	.464	6
1056			min	-1777.86	2	133.299	1	-774.792	2	-.12	1	-.291	1	-.213	1
1057		4	max	1917.524	1	1031.213	7	749.252	1	.09	2	.265	2	.425	2
1058			min	-1777.029	2	132.942	1	-772.849	2	-.12	1	-.262	1	-.218	1
1059		5	max	1916.693	1	1030.067	7	747.308	1	.09	2	.235	2	.407	2
1060			min	-1776.197	2	132.584	1	-770.906	2	-.12	1	-.233	1	-.223	1
1061	M107	1	max	1514.344	1	1030.137	7	1407.178	1	-.024	4	.235	2	.412	2
1062			min	-1368.246	2	131.152	1	-1356.63	2	-.164	7	-.233	1	-.252	1
1063		2	max	1514.196	1	1027.684	7	1402.259	1	-.024	4	.122	2	.373	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
1064			min	-1368.098	2	130.386	1	-1351.711	2	-.164	7	-.116	1	-.263	1
1065		3	max	1514.049	1	1025.231	7	1397.34	1	-.024	4	.077	4	.335	2
1066			min	-1367.951	2	129.62	1	-1346.792	2	-.164	7	-.064	3	-.273	1
1067		4	max	1513.901	1	1022.778	7	1392.421	1	-.024	4	.117	1	.297	2
1068			min	-1367.803	2	128.854	1	-1341.873	2	-.164	7	-.103	2	-.284	1
1069		5	max	1513.754	1	1020.325	7	1387.502	1	-.024	4	.233	1	.259	2
1070			min	-1367.656	2	128.088	1	-1336.954	2	-.164	7	-.215	2	-.295	1
1071	M108	1	max	1862.474	2	134.525	7	29.127	2	0	5	-.007	1	.136	7
1072			min	-2107.881	1	24.122	4	-37.447	1	0	2	-.085	6	-.017	4
1073		2	max	1862.43	2	98.101	7	8.411	2	0	5	.01	4	.045	3
1074			min	-2107.837	1	14.995	4	-18.44	5	0	2	-.013	3	-.027	4
1075		3	max	1862.386	2	33.875	7	6.346	4	0	5	.037	8	.012	3
1076			min	-2107.793	1	-2.064	4	-16.35	7	0	2	-.002	3	-.035	8
1077		4	max	1862.342	2	-1.371	3	24.702	1	0	5	.019	8	-.005	1
1078			min	-2107.748	1	-52.043	8	-33.022	2	0	2	-.005	3	-.035	6
1079		5	max	1862.298	2	-14.898	3	45.419	1	0	5	.023	1	.037	1
1080			min	-2107.704	1	-103.889	8	-53.739	2	0	2	-.063	6	-.032	2
1081	M109	1	max	1465.813	3	19.425	1	147.21	6	0	3	-.01	4	.029	1
1082			min	-1661.262	4	-30.223	2	20.781	1	0	8	-.097	7	-.172	6
1083		2	max	1456.819	3	14.201	1	110.478	6	0	3	.008	1	.028	1
1084			min	-1652.267	4	-24.999	2	11.566	1	0	8	-.015	2	-.058	2
1085		3	max	1447.824	3	13.715	4	45.1	6	0	3	.036	5	.027	8
1086			min	-1643.272	4	-24.509	3	-5.822	1	0	8	-.002	2	-.015	3
1087		4	max	1438.83	3	29.204	4	5.561	2	0	3	.019	8	.034	7
1088			min	-1634.278	4	-39.998	3	-53.723	5	0	8	-.006	3	0	4
1089		5	max	1429.835	3	44.692	4	-9.178	2	0	3	.017	4	.049	3
1090			min	-1625.283	4	-55.486	3	-109.818	5	0	8	-.068	7	-.054	4
1091	M110	1	max	844.71	3	722.91	3	345.308	3	.083	4	.084	2	.332	7
1092			min	-807.46	4	-399.456	4	-319.186	4	-.125	3	-.086	1	-.092	4
1093		2	max	843.389	3	721.922	3	349.667	3	.083	4	.093	2	.279	7
1094			min	-806.138	4	-400.444	4	-323.545	4	-.125	3	-.092	1	-.06	4
1095		3	max	842.067	3	720.935	3	354.026	3	.083	4	.102	2	.226	7
1096			min	-804.817	4	-401.431	4	-327.904	4	-.125	3	-.099	1	-.027	4
1097		4	max	840.746	3	719.948	3	358.385	3	.083	4	.112	2	.174	7
1098			min	-803.496	4	-402.418	4	-332.263	4	-.125	3	-.106	1	.005	4
1099		5	max	839.425	3	718.961	3	362.743	3	.083	4	.133	3	.126	6
1100			min	-802.174	4	-403.405	4	-336.621	4	-.125	3	-.127	4	.009	1
1101	M111	1	max	837.456	3	1050.16	6	287.983	4	.179	6	.05	2	.391	6
1102			min	-803.2	4	-386.205	1	-337.818	3	-.082	1	-.038	1	-.084	1
1103		2	max	836.403	3	1047.539	6	288.23	4	.179	6	.058	4	.307	6
1104			min	-802.147	4	-387.187	1	-338.066	3	-.082	1	-.051	3	-.053	1
1105		3	max	835.35	3	1044.918	6	288.478	4	.179	6	.082	4	.223	6
1106			min	-801.094	4	-388.169	1	-338.313	3	-.082	1	-.078	3	-.022	1
1107		4	max	834.297	3	1042.297	6	288.725	4	.179	6	.105	4	.139	6
1108			min	-800.041	4	-389.15	1	-338.56	3	-.082	1	-.105	3	.009	1
1109		5	max	833.244	3	1039.676	6	288.972	4	.179	6	.128	4	.063	5
1110			min	-798.988	4	-390.132	1	-338.807	3	-.082	1	-.132	3	-.004	2
1111	M112	1	max	376.577	2	-69.285	4	1609.193	4	.204	4	.191	1	.138	4
1112			min	-392.897	1	-937.935	7	-1532.036	3	-.368	3	-.181	2	-.089	3
1113		2	max	880.453	4	-117.816	4	241.32	4	-.061	4	.588	4	.681	7
1114			min	-804.084	3	-1064.993	7	-338.167	3	-.366	7	-.557	3	.034	4
1115		3	max	891.443	4	-126.688	4	260.356	4	-.061	4	.75	4	1.375	7
1116			min	-815.075	3	-1088.823	7	-357.203	3	-.366	7	-.781	3	.113	4
1117		4	max	902.434	4	-135.559	4	279.392	4	-.061	4	.924	4	2.085	7
1118			min	-826.065	3	-1112.652	7	-376.239	3	-.366	7	-1.017	3	.197	4
1119		5	max	913.424	4	-144.43	4	298.428	4	-.061	4	1.11	4	2.81	7
1120			min	-837.055	3	-1136.482	7	-395.275	3	-.366	7	-1.266	3	.288	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
1121	M113	1	max	1644.941	1	1230.211	6	297.446	2	.581	8	.854	1	2.96	7
1122			min	-1588.347	2	194.12	1	-216.306	1	.109	3	-.956	2	.393	4
1123		2	max	1633.94	1	1206.358	6	291.095	2	.581	8	.717	1	2.175	7
1124			min	-1577.345	2	185.24	1	-209.955	1	.109	3	-.766	2	.259	4
1125		3	max	1622.938	1	1182.505	6	284.743	2	.581	8	.583	1	1.405	7
1126			min	-1566.344	2	176.36	1	-203.603	1	.109	3	-.58	2	.131	4
1127		4	max	1611.937	1	1158.652	6	278.391	2	.581	8	.454	1	.651	7
1128			min	-1555.343	2	167.48	1	-197.252	1	.109	3	-.399	2	.009	4
1129		5	max	511.629	1	1034.631	7	1860.11	2	.543	6	.355	2	.143	1
1130			min	-569.993	2	132.763	1	-1995.709	1	-.187	1	-.35	1	-.147	2
1131	M114	1	max	109.741	5	779.864	4	1265.594	3	.05	4	.272	4	.149	4
1132			min	8.766	2	-667.853	3	-1426.602	4	-.068	3	-.222	3	-.117	3
1133		2	max	109.741	5	779.864	4	1265.594	3	.05	4	.21	4	.115	4
1134			min	8.766	2	-667.853	3	-1426.602	4	-.068	3	-.166	3	-.088	3
1135		3	max	109.741	5	779.864	4	1265.594	3	.05	4	.148	4	.081	4
1136			min	8.766	2	-667.853	3	-1426.602	4	-.068	3	-.111	3	-.059	3
1137		4	max	109.741	5	779.864	4	1265.594	3	.05	4	.085	4	.047	4
1138			min	8.766	2	-667.853	3	-1426.602	4	-.068	3	-.056	3	-.029	3
1139		5	max	109.741	5	779.864	4	1265.594	3	.05	4	.051	5	.029	5
1140			min	8.766	2	-667.853	3	-1426.602	4	-.068	3	-.005	2	-.003	2
1141	M115	1	max	103.271	8	2107.816	1	40.897	1	.058	2	.009	2	.378	1
1142			min	14.16	3	-1862.425	2	-49.889	2	-.042	1	-.007	1	-.312	2
1143		2	max	103.271	8	2107.816	1	40.897	1	.058	2	.007	2	.286	1
1144			min	14.16	3	-1862.425	2	-49.889	2	-.042	1	-.006	1	-.231	2
1145		3	max	103.271	8	2107.816	1	40.897	1	.058	2	.005	2	.194	1
1146			min	14.16	3	-1862.425	2	-49.889	2	-.042	1	-.004	1	-.15	2
1147		4	max	103.271	8	2107.816	1	40.897	1	.058	2	.002	2	.102	1
1148			min	14.16	3	-1862.425	2	-49.889	2	-.042	1	-.002	1	-.069	2
1149		5	max	103.271	8	2107.816	1	40.897	1	.058	2	0	2	.049	8
1150			min	14.16	3	-1862.425	2	-49.889	2	-.042	1	0	1	.009	3
1151	M116	1	max	281.238	7	2404.627	1	1255.671	3	.168	1	.253	4	.452	1
1152			min	19.018	4	-2062.379	2	-1421.278	4	-.172	2	-.138	3	-.262	2
1153		2	max	281.238	7	2404.627	1	1255.671	3	.168	1	.222	8	.353	5
1154			min	19.018	4	-2062.379	2	-1421.278	4	-.172	2	-.083	3	-.172	2
1155		3	max	281.238	7	2404.627	1	1255.671	3	.168	1	.196	8	.31	5
1156			min	19.018	4	-2062.379	2	-1421.278	4	-.172	2	-.028	3	-.082	2
1157		4	max	281.238	7	2404.627	1	1255.671	3	.168	1	.171	8	.268	5
1158			min	19.018	4	-2062.379	2	-1421.278	4	-.172	2	.02	1	.008	2
1159		5	max	281.238	7	2404.627	1	1255.671	3	.168	1	.163	6	.247	7
1160			min	19.018	4	-2062.379	2	-1421.278	4	-.172	2	-.006	1	-.002	4
1161	M117	1	max	902.517	2	-24.647	4	1629.413	2	.004	4	.019	4	.077	7
1162			min	-1017.523	1	-134.502	7	-1846.42	1	-.134	7	-.038	7	-.002	4
1163		2	max	902.517	2	-24.699	4	1629.413	2	.004	4	.075	2	.083	7
1164			min	-1017.523	1	-134.684	7	-1846.42	1	-.134	7	-.103	1	-.001	4
1165		3	max	902.517	2	147.658	6	1629.413	2	.163	6	.143	2	.106	6
1166			min	-1017.523	1	-132.057	5	-1846.42	1	-.031	1	-.18	1	.006	4
1167		4	max	726.063	3	147.476	6	1449.396	4	.163	6	.018	3	.1	6
1168			min	-809.729	4	20.725	1	-1274.502	3	-.007	1	-.068	8	-.003	1
1169		5	max	726.063	3	147.294	6	1449.396	4	.163	6	.032	1	.094	6
1170			min	-809.729	4	20.673	1	-1274.502	3	-.007	1	-.059	2	-.004	1

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc...	...	LC	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
1	M1	HSS4X4X4	.152	1.2...	4	.077	5.1...	z	1	84943...	139518	16.181	16.181	...	H1-1b
2	M2	HSS4X4X4	.147	1.2...	3	.106	5.1...	z	2	84900...	139518	16.181	16.181	...	H1-1b

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc...	...	LC	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
3	M3	PL1/2x6	.254	0	1	.249	0	y	5	95137...	97200	1.012	12.15	...	H1-1b
4	M4	PL1/2x6	.265	0	3	.236	0	y	5	95137...	97200	1.012	12.15	...	H1-1b
5	M5	PL3/8x6	.556	0	4	.324	0	y	6	72256...	72900	.57	9.113	...	H1-1b
6	M6	PL3/8x6	.379	0	4	.393	0	y	5	69467...	72900	.57	9.113	...	H1-1b
7	M7	PL3/8x6	.685	0	3	.263	0	y	4	72256...	72900	.57	9.113	...	H1-1b
8	M8	PL3/8x6	.475	0	3	.417	0	y	5	69430...	72900	.57	9.113	...	H1-1b
9	M9	L2x2x3	.210	0	1	.017	0	y	8	16076...	23392...	.558	1.239	...	H2-1
10	M10	L2x2x3	.248	0	7	.020	0	z	7	16079...	23392...	.558	1.239	...	H2-1
11	M11	PL1/2x6	.150	.322	1	.151	0	y	1	94894...	97200	1.012	12.15	...	H1-1b
12	M12	PL1/2x6	.139	.321	1	.259	0	y	5	94920...	97200	1.012	12.15	...	H1-1b
13	M13	HSS4X4X4	.193	5.1...	3	.115	5.1...	z	3	84899...	139518	16.181	16.181	...	H1-1b
14	M14	HSS4X4X4	.196	2.58	5	.061	.376	z	1	13568...	139518	16.181	16.181	...	H1-1b
15	M15	HSS4X4X4	.204	0	5	.072	0	y	7	13568...	139518	16.181	16.181	...	H1-1b
16	M16	PIPE_3.0	.190	1.3...	2	.189	4.4...		3	28250...	65205	5.749	5.749	...	H1-1b
17	M17	PIPE_3.0	.188	4.5...	1	.153	8.0...		4	28250...	65205	5.749	5.749	...	H1-1b
18	M18	PIPE_3.0	.199	4.5...	4	.172	4.4...		2	28250...	65205	5.749	5.749	...	H1-1b
19	M19	LL2.5x2.5x3x3	.142	0	8	.006	4.6...	y	4	43654...	58320	3.954	2.55	...	H1-1...
20	M20	LL2.5x2.5x3x3	.139	0	5	.005	0	z	3	43642...	58320	3.954	2.55	1	H1-1...
21	M21	LL2.5x2.5x3x3	.142	0	7	.006	4.6...	z	2	43642...	58320	3.954	2.55	...	H1-1...
22	M22	PIPE_2.0	.868	7.9...	2	.482	11....		1	6295....	32130	1.872	1.872	...	H3-6
23	M23	PIPE_2.0	.997	1.1...	1	.536	11....		4	6295....	32130	1.872	1.872	...	H3-6
24	M24	PIPE_2.0	.860	1.1...	4	.507	1.1...		4	6295....	32130	1.872	1.872	...	H3-6
25	M25	L2.5x2.5x4	.464	1.3...	4	.204	0	y	4	37553...	38556	1.114	2.537	...	H2-1
26	MP4A	PIPE_2.5	.343	5.5	2	.280	2		2	30038...	50715	3.596	3.596	...	H3-6
27	MP1A	PIPE_2.5	.353	5.5	3	.354	2		2	30038...	50715	3.596	3.596	...	H1-1b
28	MP3A	PIPE_2.5	.437	5.5	4	.214	5.5		2	30038...	50715	3.596	3.596	...	H1-1b
29	MP2A	PIPE_2.5	.491	5.5	1	.146	2		2	30038...	50715	3.596	3.596	...	H1-1b
30	MP4C	PIPE_2.5	.345	2	2	.227	2		3	30038...	50715	3.596	3.596	...	H1-1b
31	MP1C	PIPE_2.5	.374	5.5	1	.280	5.5		4	30038...	50715	3.596	3.596	...	H1-1b
32	MP3C	PIPE_2.5	.435	5.5	2	.220	5.5		3	30038...	50715	3.596	3.596	...	H1-1b
33	MP2C	PIPE_2.5	.453	5.5	4	.154	5.5		1	30038...	50715	3.596	3.596	...	H1-1b
34	MP4B	PIPE_2.5	.349	2	4	.256	5.5		4	30038...	50715	3.596	3.596	...	H3-6
35	MP1B	PIPE_2.5	.418	5.5	4	.315	2		4	30038...	50715	3.596	3.596	...	H3-6
36	MP3B	PIPE_2.5	.401	5.5	1	.167	5.5		1	30038...	50715	3.596	3.596	...	H1-1b
37	MP2B	PIPE_2.5	.445	5.5	3	.175	2		4	30038...	50715	3.596	3.596	...	H1-1b
38	M68	L2.5x2.5x4	.659	0	4	.149	0	y	2	37553...	38556	1.114	2.537	...	H2-1
39	M69	L2.5x2.5x4	.641	0	2	.193	0	y	1	37553...	38556	1.114	2.537	...	H2-1
40	M86	PL1/2x6	.233	0	4	.247	0	y	6	95137...	97200	1.012	12.15	...	H1-1b
41	M87	PL1/2x6	.244	0	1	.239	0	y	8	95137...	97200	1.012	12.15	...	H1-1b
42	M88	PL3/8x6	.430	0	2	.338	0	y	5	72256...	72900	.57	9.113	...	H1-1b
43	M89	PL3/8x6	.345	.332	1	.382	0	y	8	69467...	72900	.57	9.113	...	H1-1b
44	M90	PL3/8x6	.384	0	4	.233	0	y	3	72256...	72900	.57	9.113	...	H1-1b
45	M91	PL3/8x6	.515	.333	3	.412	0	y	8	69430...	72900	.57	9.113	...	H1-1b
46	M92	L2x2x3	.265	0	6	.022	0	y	6	16076...	23392...	.558	1.239	...	H2-1
47	M93	L2x2x3	.311	0	8	.026	0	z	8	16079...	23392...	.558	1.239	...	H2-1
48	M94	PL1/2x6	.140	.322	4	.171	0	y	2	94894...	97200	1.012	12.15	...	H1-1b
49	M95	PL1/2x6	.135	.321	2	.276	0	y	4	94920...	97200	1.012	12.15	...	H1-1b
50	M96	HSS4X4X4	.201	2.58	6	.059	.376	z	2	13568...	139518	16.181	16.181	...	H1-1b
51	M97	HSS4X4X4	.214	0	8	.084	2.2...	z	4	13568...	139518	16.181	16.181	...	H1-1b
52	M102	PL1/2x6	.265	0	1	.251	0	y	7	95151...	97200	1.012	12.15	...	H1-1b
53	M103	PL1/2x6	.210	0	3	.239	0	y	6	95123...	97200	1.012	12.15	...	H1-1b
54	M104	PL3/8x6	.338	0	1	.336	0	y	8	72256...	72900	.57	9.113	...	H1-1b
55	M105	PL3/8x6	.426	.332	4	.385	0	y	7	69467...	72900	.57	9.113	...	H1-1b
56	M106	PL3/8x6	.688	0	2	.279	0	y	1	72256...	72900	.57	9.113	...	H1-1b
57	M107	PL3/8x6	.466	0	2	.411	0	y	7	69430...	72900	.57	9.113	...	H1-1b
58	M108	L2x2x3	.269	0	5	.022	0	y	5	16076...	23392...	.558	1.239	...	H2-1
59	M109	L2x2x3	.315	0	6	.026	0	z	6	16079...	23392...	.558	1.239	...	H2-1

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc...	...	LC	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
60	M110	PL1/2x6	.139	.322	3	.181	0	y	3	94894...	97200	1.012	12.15	...	H1-1b
61	M111	PL1/2x6	.136	.321	3	.261	0	y	6	94920...	97200	1.012	12.15	...	H1-1b
62	M112	HSS4X4X4	.206	2.5...	7	.067	.376	z	3	13568...	139518	16.181	16.181	...	H1-1b
63	M113	HSS4X4X4	.206	0	6	.083	2.2...	z	2	13568...	139518	16.181	16.181	...	H1-1b

EXHIBIT 9

EME Report

Radio Frequency Emissions Analysis Report

February 22, 2022

Centerline Communications on behalf of T-Mobile

Site Name: North Chaplin
Site Address: 203 Davis Road, Chaplin, CT 06235

Site Compliance Summary

Compliance Status:	Compliant
Carrier MPE% of FCC General Population Allowable Limit:	4.95020100%
Composite MPE% of FCC General Population Allowable Limit:	4.95052900%

February 22, 2022

Attn: T-Mobile

Emissions Analysis for Site: **North Chaplin**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed T-Mobile facility to be located a monopole near **203 Davis Road, Chaplin CT 06235** for the purpose of determining whether the emissions from the proposed facility 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 97-01 and 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 is 400 $\mu W/cm^2$, the 700 MHz is 467 $\mu W/cm^2$, the 1900 MHz, 2100 MHz, and 2500 MHz bands is 1000 $\mu W/cm^2$.

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, 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 facility using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing focused omnidirectional 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, was focused at the base of the tower. This is a very conservative estimate since the gain reduction in actual applications is typically greater than 10 dB in the direction of ground immediately surrounding the facility. Real world emissions values from this facility are expected to be lower than values listed in this report at ground level. 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.

RRH #	Frequency Band	Technology	Channel Count	Transmit Power per Channel (W)
1	1900	GSM	1	15
2	1900	LTE	2	140
2	2100	LTE	2	140
3	700	LTE	2	40
3	600	LTE	4	60
3	600	NR	2	40
4	2500	LTE	1	90
4	2500	NR	1	90
4	2500	LTE	1	30
4	2500	NR	1	30
5	1900	GSM	1	15
6	1900	LTE	2	140
6	2100	LTE	2	140
7	700	LTE	2	40
7	600	LTE	4	60
7	600	NR	2	40

8	2500	LTE	1	90
8	2500	NR	1	90
8	2500	LTE	1	30
8	2500	NR	1	30
9	1900	GSM	1	15
10	1900	LTE	2	140
10	2100	LTE	2	140
11	700	LTE	2	40
11	600	LTE	4	60
11	600	NR	2	40
12	2500	LTE	1	90
12	2500	NR	1	90
12	2500	LTE	1	30
12	2500	NR	1	30
13	850	CDMA	4	20
14	700	LTE	2	40
14	850	LTE	2	40
15	1900	LTE	4	40
14	700	LTE	2	40
14	850	LTE	2	40
15	2100	LTE	4	40
16	3700	NR	4	50
13	850	CDMA	4	20
17	850	CDMA	4	20
18	700	LTE	2	40
18	850	LTE	2	40
19	1900	LTE	4	40
18	700	LTE	2	40
18	850	LTE	2	40
19	2100	LTE	4	40
20	3700	NR	4	50
17	850	CDMA	4	20
21	850	CDMA	4	20
22	700	LTE	2	40
22	850	LTE	2	40
23	1900	LTE	4	40
22	700	LTE	2	40
22	850	LTE	2	40
23	2100	LTE	4	40
24	3700	NR	4	50

21	850	CDMA	4	20

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

Table 1: Channel Data Table

The following antennas listed in Table 2 were used in the modeling for transmission in the 600 MHz, the 700 MHz, the 1900 MHz, 2100 MHz, and 2500 MHz frequency bands. This is based on information from the carrier with regard to anticipated antenna selection.

Sector	Antenna Number	Make / Model	Centerline (ft)
A	1	COMMSCOPE VV-65A-R1B	164
A	1	COMMSCOPE VV-65A-R1B	164
A	1	COMMSCOPE VV-65A-R1B	164
A	2	RFS APXVAALL24 43-U-NA20	164
A	2	RFS APXVAALL24 43-U-NA20	164
A	2	RFS APXVAALL24 43-U-NA20	164
A	3	ERICSSON AIR6449 2500	164
A	3	ERICSSON AIR6449 2500	164
A	3	ERICSSON AIR6449 2500	164
A	3	ERICSSON AIR6449 2500	164
B	4	COMMSCOPE VV-65A-R1B	164
B	4	COMMSCOPE VV-65A-R1B	164
B	4	COMMSCOPE VV-65A-R1B	164
B	5	RFS APXVAALL24 43-U-NA20	164
B	5	RFS APXVAALL24 43-U-NA20	164
B	5	RFS APXVAALL24 43-U-NA20	164
B	6	ERICSSON AIR6449 2500	164
B	6	ERICSSON AIR6449 2500	164
B	6	ERICSSON AIR6449 2500	164
B	6	ERICSSON AIR6449 2500	164
C	7	COMMSCOPE VV-65A-R1B	164
C	7	COMMSCOPE VV-65A-R1B	164
C	7	COMMSCOPE VV-65A-R1B	164
C	8	RFS APXVAALL24 43-U-NA20	164
C	8	RFS APXVAALL24 43-U-NA20	164
C	8	RFS APXVAALL24 43-U-NA20	164
C	9	ERICSSON AIR6449 2500	164
C	9	ERICSSON AIR6449 2500	164
C	9	ERICSSON AIR6449 2500	164
C	9	ERICSSON AIR6449 2500	164
A	10	AMPHENOL LPA-80080-6CF-EDIN-0	154.2
A	11	COMMSCOPE JAHH-65B-R3B	154.2
A	11	COMMSCOPE JAHH-65B-R3B	154.2
A	11	COMMSCOPE JAHH-65B-R3B	154.2

A	12	COMMSCOPE JAHH-65B-R3B	154.2
A	12	COMMSCOPE JAHH-65B-R3B	154.2
A	12	COMMSCOPE JAHH-65B-R3B	154.2
A	13	SAMSUNG MT6407	154.2
A	14	AMPHENOL LPA-80080-6CF-EDIN-0	154.2
B	15	AMPHENOL LPA-80063-6CF-EDIN-0	154.2
B	16	COMMSCOPE JAHH-65B-R3B	154.2
B	16	COMMSCOPE JAHH-65B-R3B	154.2
B	16	COMMSCOPE JAHH-65B-R3B	154.2
B	17	COMMSCOPE JAHH-65B-R3B	154.2
B	17	COMMSCOPE JAHH-65B-R3B	154.2
B	17	COMMSCOPE JAHH-65B-R3B	154.2
B	18	SAMSUNG MT6407	154.2
B	19	AMPHENOL LPA-80063-6CF-EDIN-0	154.2
C	20	AMPHENOL LPA-80063-6CF-EDIN-0	154.2
C	21	COMMSCOPE JAHH-65B-R3B	154.2
C	21	COMMSCOPE JAHH-65B-R3B	154.2
C	21	COMMSCOPE JAHH-65B-R3B	154.2
C	22	COMMSCOPE JAHH-65B-R3B	154.2
C	22	COMMSCOPE JAHH-65B-R3B	154.2
C	22	COMMSCOPE JAHH-65B-R3B	154.2
C	23	SAMSUNG MT6407	154.2
C	24	AMPHENOL LPA-80063-6CF-EDIN-0	154.2

Table 2: Antenna Data

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

Results

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

ID	Make / Model	Frequency Band	Gain (dBd)	Centerline (ft)	Channel Count	TX Power (W)	ERP (W)	MPE %
T-Mobile A 1	COMMSCOPE VV-65A-R1B	1900	15.25	164.0	1	15	502.4482	0.000001000
T-Mobile A 1	COMMSCOPE VV-65A-R1B	1900	15.25	164.0	2	140	9379.0323	0.000013000
T-Mobile A 1	COMMSCOPE VV-65A-R1B	2100	15.87	164.0	2	140	10818.2754	0.000012000
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	700	13.65	164.0	2	40	1853.9157	0.000007000
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	600	12.95	164.0	4	60	4733.8146	0.000021000
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	600	12.95	164.0	2	40	1577.9382	0.000007000
T-Mobile A 3	ERICSSON AIR6449	2500	22.35	164.0	1	90	15461.1755	0.824971000
T-Mobile A 3	ERICSSON AIR6449	2500	22.35	164.0	1	90	15461.1755	0.824971000
T-Mobile A 3	ERICSSON AIR6449	2500	15.15	164.0	1	30	982.0221	0.000001000
T-Mobile A 3	ERICSSON AIR6449	2500	15.15	164.0	1	30	982.0221	0.000001000
T-Mobile B 4	COMMSCOPE VV-65A-R1B	1900	15.25	164.0	1	15	502.4482	0.000001000
T-Mobile B 4	COMMSCOPE VV-65A-R1B	1900	15.25	164.0	2	140	9379.0323	0.000013000
T-Mobile B 4	COMMSCOPE VV-65A-R1B	2100	15.87	164.0	2	140	10818.2754	0.000012000
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	700	13.65	164.0	2	40	1853.9157	0.000007000
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	600	12.95	164.0	4	60	4733.8146	0.000021000
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	600	12.95	164.0	2	40	1577.9382	0.000007000
T-Mobile B 6	ERICSSON AIR6449	2500	22.35	164.0	1	90	15461.1755	0.825064000
T-Mobile B 6	ERICSSON AIR6449	2500	22.35	164.0	1	90	15461.1755	0.825064000
T-Mobile B 6	ERICSSON AIR6449	2500	15.15	164.0	1	30	982.0221	0.000001000
T-Mobile B 6	ERICSSON AIR6449	2500	15.15	164.0	1	30	982.0221	0.000001000
T-Mobile C 7	COMMSCOPE VV-65A-R1B	1900	15.25	164.0	1	15	502.4482	0.000001000
T-Mobile C 7	COMMSCOPE VV-65A-R1B	1900	15.25	164.0	2	140	9379.0323	0.000013000
T-Mobile C 7	COMMSCOPE VV-65A-R1B	2100	15.87	164.0	2	140	10818.2754	0.000012000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	700	13.65	164.0	2	40	1853.9157	0.000007000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	600	12.95	164.0	4	60	4733.8146	0.000021000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	600	12.95	164.0	2	40	1577.9382	0.000007000
T-Mobile C 9	ERICSSON AIR6449	2500	22.35	164.0	1	90	15461.1755	0.824971000
T-Mobile C 9	ERICSSON AIR6449	2500	22.35	164.0	1	90	15461.1755	0.824971000
T-Mobile C 9	ERICSSON AIR6449	2500	15.15	164.0	1	30	982.0221	0.000001000
T-Mobile C 9	ERICSSON AIR6449	2500	15.15	164.0	1	30	982.0221	0.000001000
							T-Mobile MPE%	**4.950201000**
Verizon A 10	AMPHENOL LPA-80080-6CF-EDIN-0	850	14	154.2	4	20	2009.5091	0.000005000
Verizon A 11	COMMSCOPE JAHH-65B-R3B	700	12.11	154.2	2	40	1300.4390	0.000009000
Verizon A 11	COMMSCOPE JAHH-65B-R3B	850	12.81	154.2	2	40	1527.8826	0.000008000
Verizon A 11	COMMSCOPE JAHH-65B-R3B	1900	15.72	154.2	4	40	5972.0025	0.000007000

Verizon A 12	COMMSCOPE JAHH-65B-R3B	700	12.11	154.2	2	40	1300.4390	0.000009000
Verizon A 12	COMMSCOPE JAHH-65B-R3B	850	12.81	154.2	2	40	1527.8826	0.000008000
Verizon A 12	COMMSCOPE JAHH-65B-R3B	2100	15.71	154.2	4	40	5958.2673	0.000007000
Verizon A 13	SAMSUNG MT6407	3700	23.05	154.2	4	50	40367.3273	0.000050000
Verizon A 14	AMPHENOL LPA-80080-6CF-EDIN-0	850	14	154.2	4	20	2009.5091	0.000005000
Verizon B 15	AMPHENOL LPA-80063-6CF-EDIN-0	850	14.5	154.2	4	20	2254.7063	0.000006000
Verizon B 16	COMMSCOPE JAHH-65B-R3B	700	12.11	154.2	2	40	1300.4390	0.000009000
Verizon B 16	COMMSCOPE JAHH-65B-R3B	850	12.81	154.2	2	40	1527.8826	0.000008000
Verizon B 16	COMMSCOPE JAHH-65B-R3B	1900	15.72	154.2	4	40	5972.0025	0.000007000
Verizon B 17	COMMSCOPE JAHH-65B-R3B	700	12.11	154.2	2	40	1300.4390	0.000009000
Verizon B 17	COMMSCOPE JAHH-65B-R3B	850	12.81	154.2	2	40	1527.8826	0.000008000
Verizon B 17	COMMSCOPE JAHH-65B-R3B	2100	15.71	154.2	4	40	5958.2673	0.000007000
Verizon B 18	SAMSUNG MT6407	3700	23.05	154.2	4	50	40367.3273	0.000050000
Verizon B 19	AMPHENOL LPA-80063-6CF-EDIN-0	850	14.5	154.2	4	20	2254.7063	0.000006000
Verizon C 20	AMPHENOL LPA-80063-6CF-EDIN-0	850	14.5	154.2	4	20	2254.7063	0.000006000
Verizon C 21	COMMSCOPE JAHH-65B-R3B	700	12.11	154.2	2	40	1300.4390	0.000009000
Verizon C 21	COMMSCOPE JAHH-65B-R3B	850	12.81	154.2	2	40	1527.8826	0.000008000
Verizon C 21	COMMSCOPE JAHH-65B-R3B	1900	15.72	154.2	4	40	5972.0025	0.000007000
Verizon C 22	COMMSCOPE JAHH-65B-R3B	700	12.11	154.2	2	40	1300.4390	0.000009000
Verizon C 22	COMMSCOPE JAHH-65B-R3B	850	12.81	154.2	2	40	1527.8826	0.000008000
Verizon C 22	COMMSCOPE JAHH-65B-R3B	2100	15.71	154.2	4	40	5958.2673	0.000007000
Verizon C 23	SAMSUNG MT6407	3700	23.05	154.2	4	50	40367.3273	0.000050000
Verizon C 24	AMPHENOL LPA-80063-6CF-EDIN-0	850	14.5	154.2	4	20	2254.7063	0.000006000
							Verizon MPE%	**0.000328000**

Table 3: T-Mobile Antenna Inventory & Power Level

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 4* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-Mobile sector(s).

Frequency Band	Technology	Centerline (ft.)	# of Channels	ERP W (Per Channel)	Total Power Density (µW/cm²)	Allowable MPE (µW/cm²)	MPE %
1900	GSM	164.0	1	502.4481587	0.0000070	1000	0.00000100
1900	LTE	164.0	2	4689.516148	0.0001260	1000	0.00001300
2100	LTE	164.0	2	5409.137679	0.0001220	1000	0.00001200
700	LTE	164.0	2	926.95786	0.0000320	467	0.00000700
600	LTE	164.0	4	1183.453642	0.0000840	400	0.00002100
600	NR	164.0	2	788.9690944	0.0000280	400	0.00000700
2500	LTE	164.0	1	15461.17548	8.2497110	1000	0.82497100
2500	NR	164.0	1	15461.17548	8.2497110	1000	0.82497100
2500	LTE	164.0	1	982.0220846	0.0000140	1000	0.00000100
2500	NR	164.0	1	982.0220846	0.0000140	1000	0.00000100
1900	GSM	164.0	1	502.4481587	0.0000070	1000	0.00000100
1900	LTE	164.0	2	4689.516148	0.0001280	1000	0.00001300
2100	LTE	164.0	2	5409.137679	0.0001250	1000	0.00001200
700	LTE	164.0	2	926.95786	0.0000320	467	0.00000700
600	LTE	164.0	4	1183.453642	0.0000860	400	0.00002100
600	NR	164.0	2	788.9690944	0.0000290	400	0.00000700
2500	LTE	164.0	1	15461.17548	8.2506350	1000	0.82506400
2500	NR	164.0	1	15461.17548	8.2506350	1000	0.82506400
2500	LTE	164.0	1	982.0220846	0.0000140	1000	0.00000100
2500	NR	164.0	1	982.0220846	0.0000140	1000	0.00000100
1900	GSM	164.0	1	502.4481587	0.0000070	1000	0.00000100
1900	LTE	164.0	2	4689.516148	0.0001280	1000	0.00001300
2100	LTE	164.0	2	5409.137679	0.0001250	1000	0.00001200
700	LTE	164.0	2	926.95786	0.0000320	467	0.00000700
600	LTE	164.0	4	1183.453642	0.0000860	400	0.00002100
600	NR	164.0	2	788.9690944	0.0000290	400	0.00000700
2500	LTE	164.0	1	15461.17548	8.2497110	1000	0.82497100
2500	NR	164.0	1	15461.17548	8.2497110	1000	0.82497100
2500	LTE	164.0	1	982.0220846	0.0000140	1000	0.00000100
2500	NR	164.0	1	982.0220846	0.0000140	1000	0.00000100
T-Mobile MPE%							**4.95020100 %**

Table 4: 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:

Carrier	Predicted MPE %
T-Mobile	4.95020100%
AT&T	0.00032800%
Composite	**4.95052900%**

Table 5: Total Predicted MPE(%) by Carrier

Compliance Status:

The anticipated composite MPE value for this site assuming all carriers present is **4.95052900%** of the allowable FCC established general population limit sampled at the ground level.

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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