NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Northeast Site Solutions
Denise Sabo
4 Angela's Way, Burlington CT 06013
203-435-3640
denise@northeastsitesolutions.com

April 8, 2022

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Tower Share Application
599 Greenwoods Road East, Norfolk, CT 06058
Latitude: 41.983188
Longitude: -73.153808
Site #: CT22102-A_CTNH394A_SBA/T-Mobile

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of T-Mobile. T-Mobile plans to install antennas and related equipment to the tower site located at 599 Greenwoods Road East, Norfolk, Connecticut.

T-Mobile proposes to install six (6) antennas and six (6) RRUs, at the 150-foot level of the existing 180-foot monopole tower, one (1) Fiber cable will also be installed. T-Mobile equipment cabinets and a 48KW diesel generator will be placed within a 10' x 15' lease area within the existing fenced compound. Included are plans by Chappell Engineering, dated May 24, 2022, Exhibit C. Also included is a structural analysis prepared by SBA, dated May 2, 2022, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit D. The facility was approved by the Connecticut Siting Council, Docket No. 320 on March 13, 2007. Please see attached Exhibit A.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of T-Mobile intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Matthew T. Riiska, First Selectman, and Michael Halloran Zoning Enforcement Officer for the Town of Norfolk, as well as the tower owner (SBA) and property owner (Town of Norfolk).

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modification will not result in an increase in the height of the existing structure. The top of the existing tower is 180-feet and the T-Mobile antennas will be located at a center line height of 150-feet.

2. The proposed modifications will not result in an increase of the site boundary as depicted on the attached site plan.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligent.

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4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. The combined site operations will result in a total power density of 3.62% as evidenced by Exhibit F.

Connecticut General Statutes 16-50aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, T-Mobile respectfully submits that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting T-Mobile proposed loading. The structural analysis is included as Exhibit D.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this monopole tower in Norfolk. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit T-Mobile to obtain a building permit for the proposed installation. Further, a Letter of Authorization is included as Exhibit G, authorizing T-Mobile to file this application for shared use.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of T-Mobile equipment at the 150-foot level of the existing 180-foot tower would have an insignificant visual impact on the area around the tower. T-Mobile ground equipment would be installed within the existing facility compound. T-Mobile's shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit F, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. T-Mobile will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist T-Mobile with this tower sharing application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting T-Mobile proposed loading. T-Mobile is not aware of any public safety concerns relative to the proposed sharing of the existing tower. T-Mobile's intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Norfolk.

Sincerely,

Denise Sabo

Denise Sabo
Mobile: 203-435-3640
Fax: 413-521-0558
Office: 4 Angela's Way, Burlington CT 06013
Email: denise@northeastsitesolutions.com

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Attachments

Cc: Matthew T. Riiska, First Selectman & Property Owner
Town of Norfolk
Board of Selectmen
PO Box 592
Norfolk, CT 06058

Michael Halloran - Zoning Enforcement Officer
Town Hall
19 Maple Avenue
Norfolk, CT 06058

SBA - Tower Owner

Exhibit A

Original Facility Approval

DOCKET NO. 320 - Message Center Management, Inc. and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off Greenwoods Road East (U.S. Route 44), Norfolk, Connecticut.	}	Connecticut Siting Council March 13, 2007

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Message Center Management, Inc., hereinafter referred to as the Certificate Holder, for a telecommunications facility at the Town of Norfolk Town Farm parcel located off Greenwoods Road East (Route 44), Norfolk, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC, Cellco Partnership d/b/a Verizon Wireless and other entities, both public and private, but such tower shall not exceed a height of 180 feet above ground level. Antennas mounted on the tower shall not exceed a height of 183 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Norfolk for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
    b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

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

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

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Norfolk public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Norfolk. Any proposed modifications to this Decision and Order shall likewise be so served.

9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

10. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Hartford Courant, The Register Citizen, and The Waterbury Republican-American.

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

The parties and intervenors to this proceeding are:

Certificate Holder Message Center Management, Inc.	**Its Representative** Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601
Co-Applicant New Cingular Wireless PCS, LLC	**Its Representative** Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601
Intervenor Cellco partnership d/b/a Verizon Wireless	**Its Representative** Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597

CERTIFICATION

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in **DOCKET NO. 320** - Message Center Management, Inc. and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off Greenwoods Road East (U.S. Route 44), Norfolk, Connecticut, and voted as follows to approve the proposed site:

Council Members	Vote Cast
Daniel F. Caruso, Chairman	Yes
Colin C. Tait, Vice Chairman	Abstain
Commissioner Donald W. Downes Designee: Gerald J. Heffernan	Yes
Commissioner Gina McCarthy Designee: Brian J. Emerick	Yes
Philip T. Ashton	Absent
Daniel P. Lynch, Jr.	Yes
James J. Murphy, Jr.	Absent
Dr. Barbara Currier Bell	Yes
Edward S. Wilensky	Yes

Dated at New Britain, Connecticut, March 13, 2007.

Exhibit B

Property Card

qPublic.net™ Town of Norfolk, CT

Summary

Account Number	001666
Parcel ID	44
Property Address	599 GREENWOODS RD E
Use Class/Description	9-2 EXEMPT COM/IND
Map/Block/Block Cut	4-10/4//
Zoning	C - Commercial
Acres	149

View Map

Owner

NORFOLK TOWN OF
PO BOX 592
NORFOLK, CT 06058-0592

Valuation

Assessed Year	**2021**	**2020**
Appraised Building Value	$0.00	$0.00
Appraised XF/OB Value	$48,050.00	$48,050.00
Appraised Land Value	$888,200.00	$888,200.00
Appraised Total Value	**$936,250.00**	**$936,250.00**
Assessed Building Value	$0.00	$0.00
Assessed XF/OB Value	$33,630.00	$33,630.00
Assessed Land Value	$621,740.00	$621,740.00
Assessed Total Value	**$655,370.00**	**$655,370.00**

Land

Building Number	1	**Land Units**	147 AC
Land Use	9-2 - EXEMPT COM/IND	**Value**	823,200

Building Number	1	**Land Units**	2 AC
Land Use	9-2 - EXEMPT COM/IND	**Value**	65,000

Building Information

Building #	1	**Notes**	TRANSFER STATION CELL TOWER MESSAGE CENTER MANAGEMENT EXEMPT PROPERTY
Style	Commercial		
Occupancy	0		
Actual Year Built	0		
Effective Year Built	0	**Fireplaces**	
Living Area	0	**Roof Cover**	Metal/Tin
Stories	1	**Roof Structure**	Irregular
Grade	03 C	**Floor Type**	Dirt/None Dirt/None
Condition		**Heat Type**	None
Exterior Wall	Average Average	**Fuel Type**	None
Interior Wall	None/Minumum None/Minumum	**AC**	None
		Bdrms/Full Bth/Hlf Bth/Ttl Rm	
		Basement Finished Area	
		Basement Sq. Ft.	

Code	**Description**	**Living Area**	**Gross Area**	**Effective Area**

Out Buildings\Extra Features

Description	SHED AVER	**Year Built**	0
Sub Description		**Value**	$1,920
Area	256 S.F.		

Description	SHED AVER	**Year Built**	0
Sub Description		**Value**	$2,630
Area	350 S.F.		

Description	WORK SHOP AVER	**Year Built**	0
Sub Description		**Value**	$6,000
Area	400 S.F		

Description	SHED AVER	**Year Built**	0
Sub Description		**Value**	$37,500
Area	5000 S.F.		

Sales History

Sales Date	Instrument Type	Grantor	Grantee	Book/Page
1/1/1900			NORFOLK TOWN OF	0019-0524

Recent Sales In Area

Sale date range:

From:

06/02/2012

To:

06/02/2022

Sales by Neighborhood

1500

Feet

Sales by Distance

Permit Information

Permit ID	Issue Date	Type	Description	Amount	Inspection Date	% Complete	Date Complete	Comments
279-E	09-27-2012	RE	Remodel	$12,000		100		NEW ANTENNAS

Photos

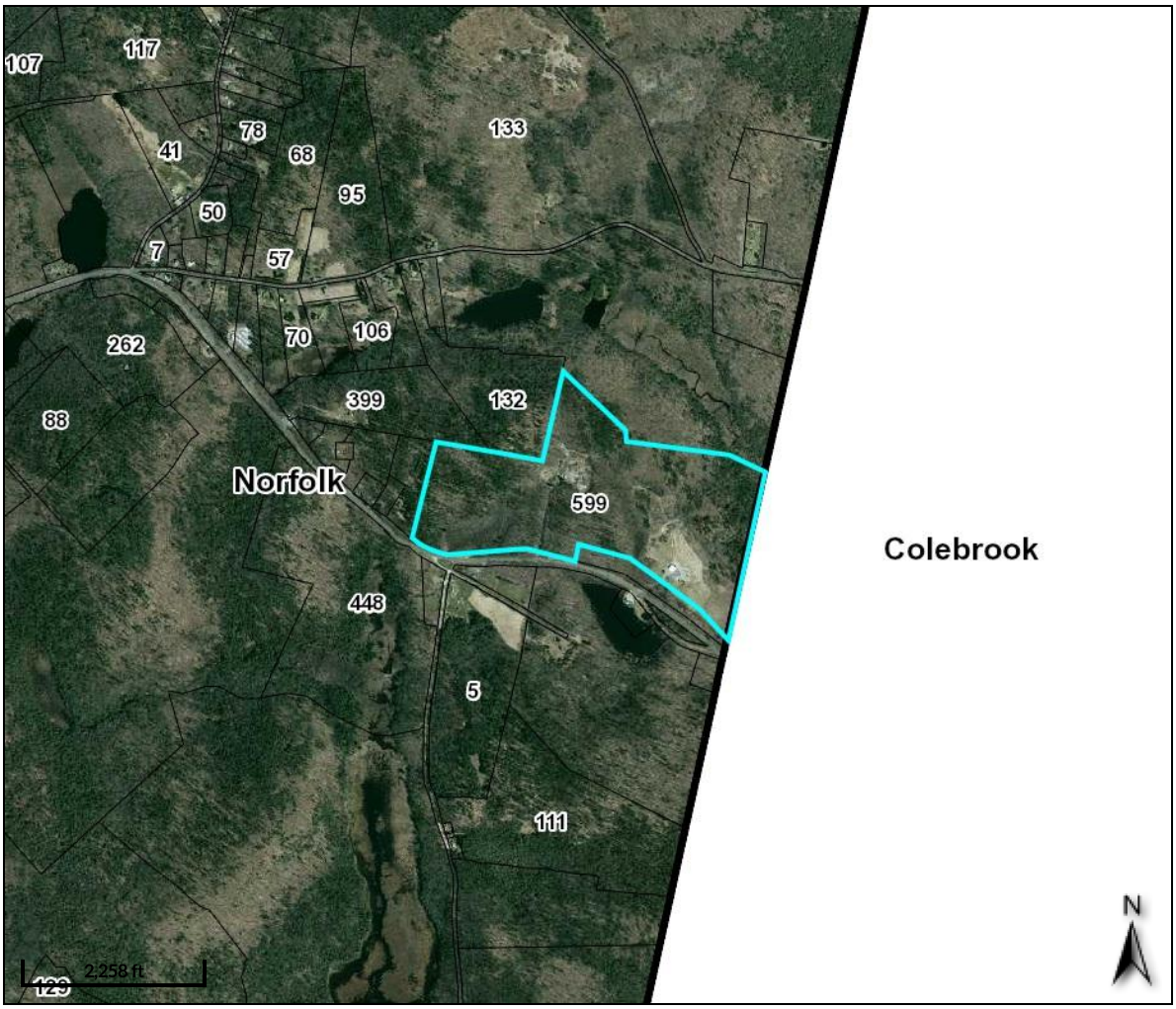
No data available for the following modules: Sketch.

Developed by Schneider GEOSPATIAL

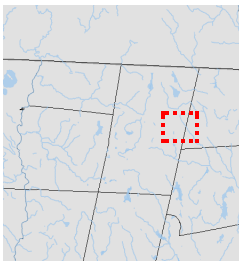
Last Data Upload: 6/1/2022, 8:59:40 PM

Version 2.3.197

qPublic.net™ Town of Norfolk, CT



Overview



Legend

- Parcels
- Map-Block-Lot
- Address Numbers
- Roads

Parcel ID	44	**Alternate ID**	001666	**Owner Address**	NORFOLK TOWN OF
Sec/Twp/Rng	4-10-4-	**Class**	E		PO BOX 592
Property Address	599 GREENWOODS RD E NORFOLK	**Acreage**	149		NORFOLK CT 06058-0592
District	3A				
Brief Tax Description	n/a (Note: Not to be used on legal documents)				

Date created: 6/2/2022
Last Data Uploaded: 6/1/2022 8:59:40 PM

Developed by Schneider GEOSPATIAL

Exhibit C

Construction Drawings

CTNH394_SBA_MONOPOLE_NORFOLK

APPROVALS

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

T-MOBILE TECHNICIAN SITE SAFETY NOTES

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

599 GREENSWOOD ROAD EAST
NORFOLK, CT 06058
LITCHFIELD COUNTY

SITE NO.: CTNH394A

SITE TYPE: 180'± MONOPOLE

RF DESIGN GUIDELINE: 67E5D998E 6160

SCOPE OF WORK

INSTALL:

- 6 ANTENNAS
- 6 RADIOS
- 1 6160 EQUIPMENT CABINET
- 1 B160 BATTERY CABINET
- 1 PPC
- 1 PURCELL CABINET
- 1 SLACKBOX
- 1 GPS ANTENNA
- 1 COAX CABLE FOR GPS
- 3 HYBRID CABLES
- 1 LOW-PROFILE MOUNT
- 1 10'x15' CONCRETE PAD
- 1 10'x15' ICE CANOPY
- 1 GENERATOR
- 1 AUTOMATIC TRANSFER SWITCH
- 2 20A-1P BREAKERS
- 1 125A-2P BREAKER
- 1 25A-1P BREAKER

SITE NOTES

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

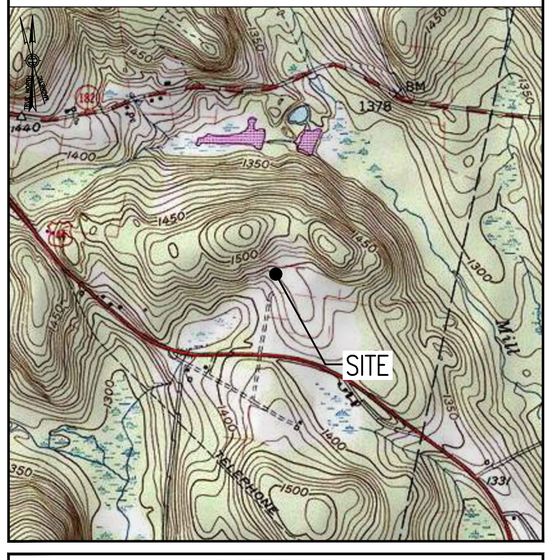
GENERAL NOTES

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

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

VICINITY MAP

SCALE: 1" = 1000'-0"



DIRECTIONS

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 58 TOWARD I-90 WEST. KEEP LEFT AT FORK & FOLLOW SIGNS FOR I-90 WEST/SPRINGFIELD/ALBANY. MERGE ONTO I-90 WEST. TAKE EXIT 78 TOWARD I-84. CONTINUE ONTO I-84. TAKE EXIT 61 TO MERGE ONTO I-291 WEST. TAKE EXIT 2B TO MERGE ONTO I-91 NORTH. TAKE EXIT 40 FOR CT-20 WEST. TAKE EXIT TOWARD EAST GRANBY. SLIGHT LEFT ONTO WEST GRANBY ROAD. TURN LEFT ONTO CT-219 SOUTH. CONTINUE STRAIGHT ONTO CT-318 WEST. TURN TIGHT ONTO US-44 WEST. TURN RIGHT ONTO BECKLEY ROAD. SITE IS LOCATED ON THE LEFT HAND SIDE.

SHEET INDEX

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A-5	GENERATOR SPECIFICATIONS 1 OF 2	1
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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:	CTNH394A
SITE NAME:	CTNH394_SBA_MONOPOLE_NORFOLF
SBA SITE NUMBER:	CT22102-A
SBA SITE NAME:	TOWN OF NORFOLK DPW SITE
SITE ADDRESS:	599 GREENSWOOD ROAD EAST NORFOLK, CT 06058
PROPERTY OWNER:	TOWN OF NORFOLK PO BOX 592 NORFOLK, CT 06058
TOWER OWNER:	MCM ACQUISITION 2017, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	LITCHFIELD
ZONING DISTRICT:	COMMERCIAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	180'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
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: 41.983190° N41°58'59.48" LONGITUDE: -73.153810° W73°09'13.72"

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
4/21/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/24/22	ISSUED FOR CONSTRUCTION	JRV
0	05/10/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTNH394A

SITE ADDRESS:
599 GREENSWOOD ROAD EAST
NORFOLK, CT 06058

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.494

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.

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

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Civil ·Structural ·Land Surveying

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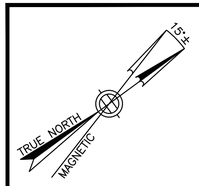
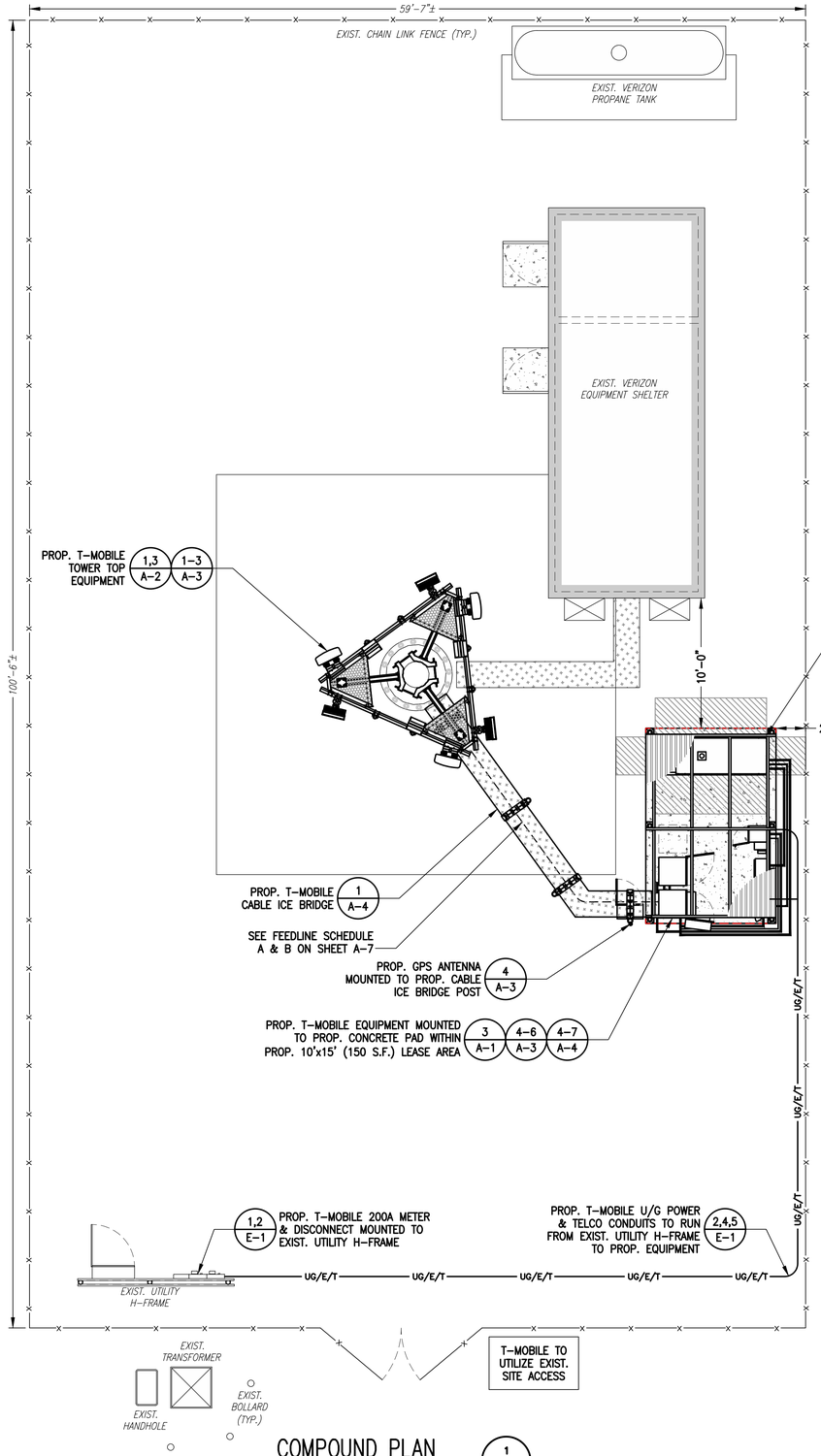




COMPOUND PLAN 1 A-1

SCALE: 3/16" = 1'-0"

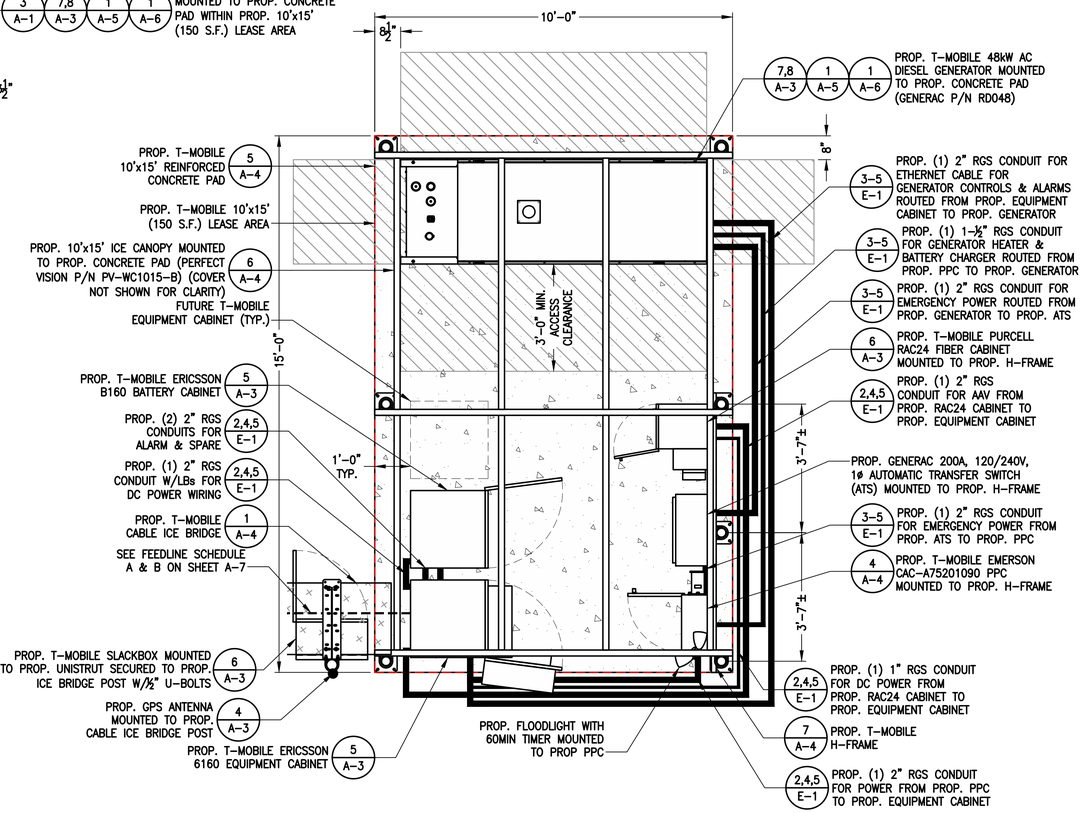
0 5'-4" 10'-8" 16'-0"

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 WORK NOTE (HAND DUG UTILITY TRENCH EXCAVATION REQUIRED):
EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH SUFFICIENT TEST HOLES OR AS DIRECTED/REQUIRED BY SBA REGIONAL SITE MANAGER SHALL HAND-EXCAVATE ALL PROPOSED UNDERGROUND UTILITY TRENCHES. GENERAL CONTRACTOR RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF EXISTING UNDERGROUND UTILITIES, PHYSICAL DAMAGE REPAIR, AND SERVICE RESTORATION.

PROPOSED EQUIPMENT LOCATION PHOTO 2 A-1

SCALE: N.T.S.



PROPOSED EQUIPMENT PLAN 3 A-1

SCALE: 1/2" = 1'-0"

0 2'-0" 4'-0" 6'-0"

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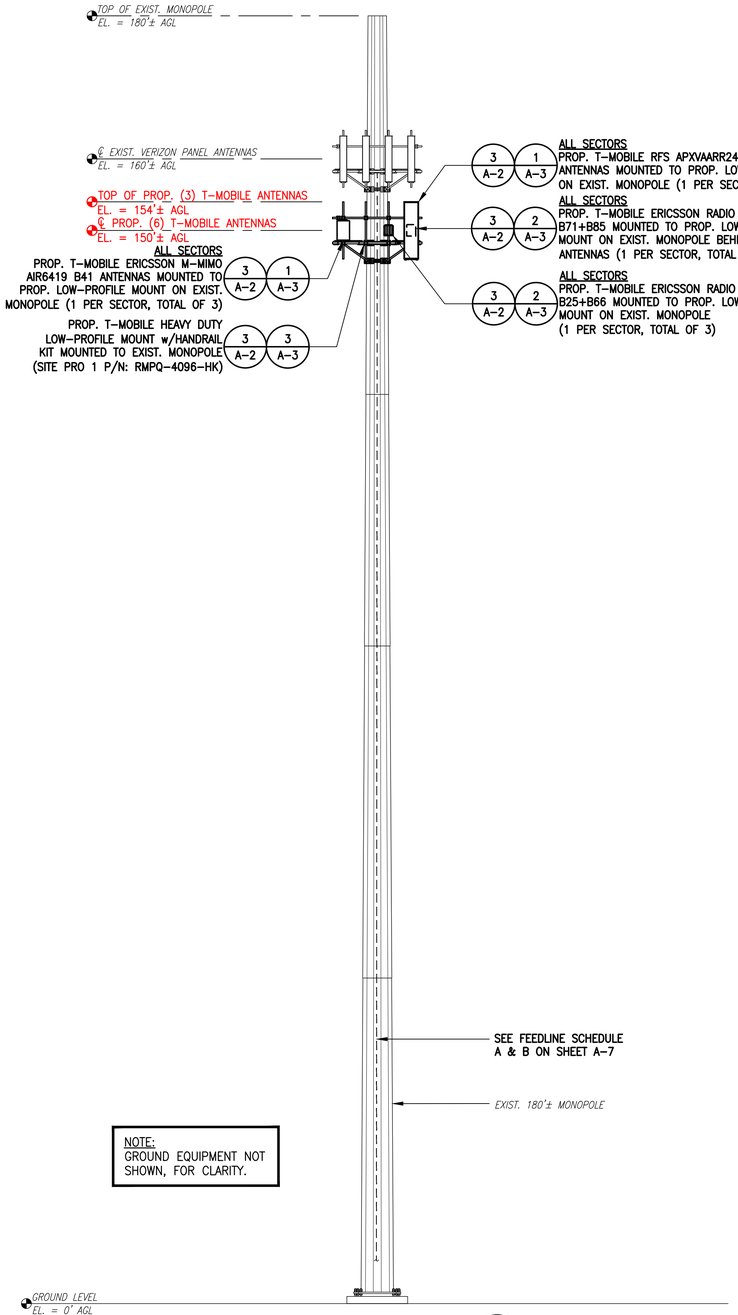
1815.494

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.

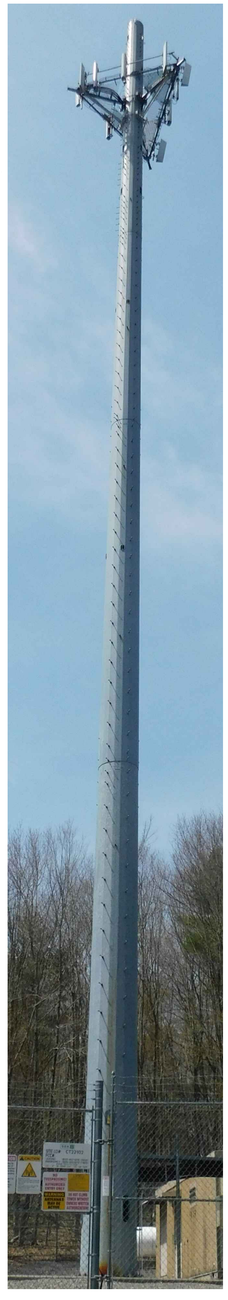
SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED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

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

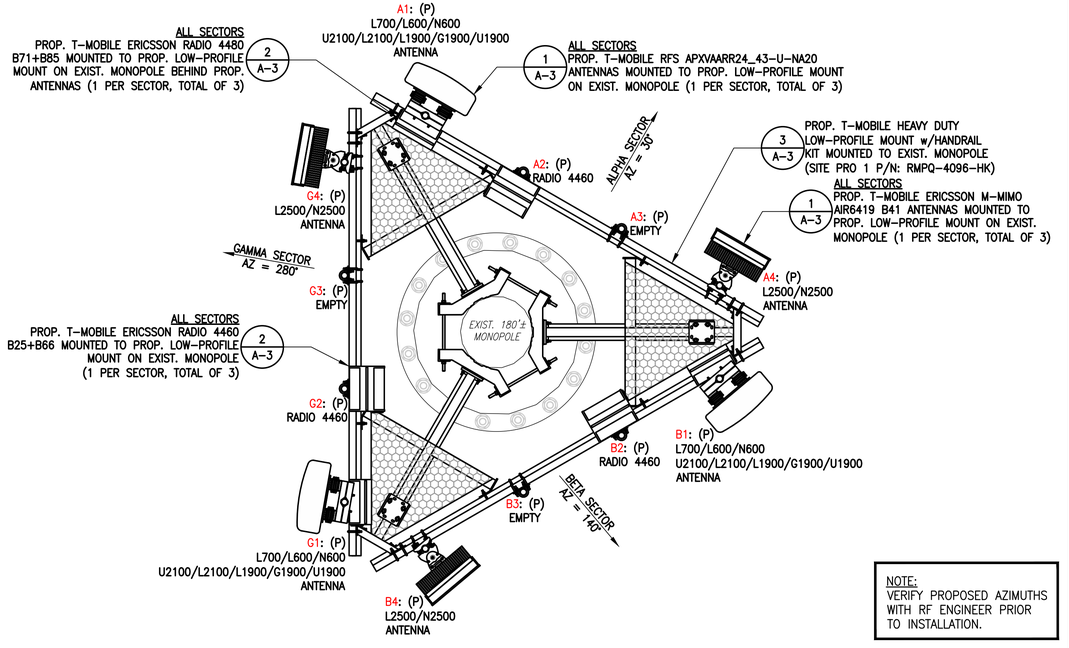


NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

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



EXISTING TOWER PHOTO (2 / A-2)
SCALE: N.T.S.



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

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

ANTENNA STATUS LEGEND:

EMPTY – EMPTY PIPE

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

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

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED PROFESSIONAL CIVIL ENGINEER
5/24/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
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0	05/10/22	ISSUED FOR REVIEW	JRV

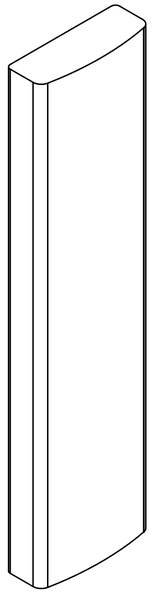
SITE NUMBER:
CTNH394A

SITE ADDRESS:
599 GREENSWOOD ROAD EAST
NORFOLK, CT 06058

SHEET TITLE
TOWER ELEVATION, ANTENNA PLAN & PHOTO

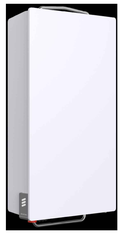
SHEET NUMBER
A-2

1815.494



RFS APXVAARR24_43-U-NA20 ANTENNA

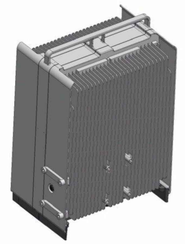
DIMENSIONS: 95.9"H x 24.0"W x 8.7"D
WEIGHT: 128.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3



ERICSSON M-MIMO AIR6419 B41 ANTENNA

DIMENSIONS: 36.3"H x 20.9"W x 9.0"D
WEIGHT: 83.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

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



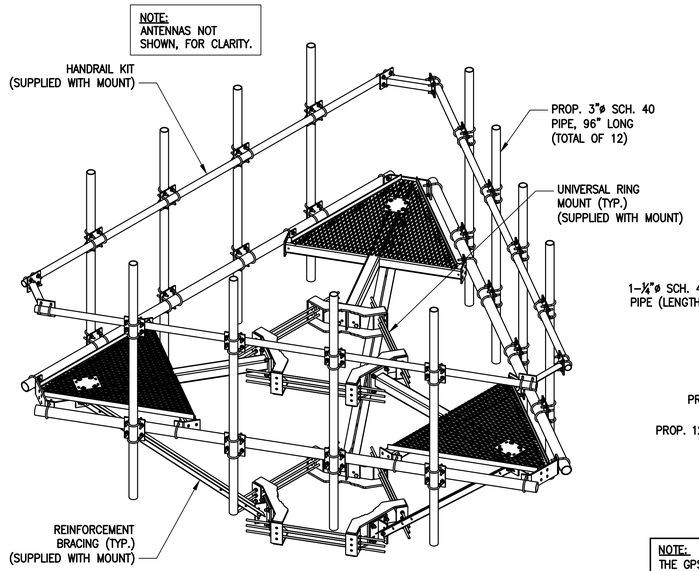
ERICSSON RADIO 4460 B25+B66

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: 93.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

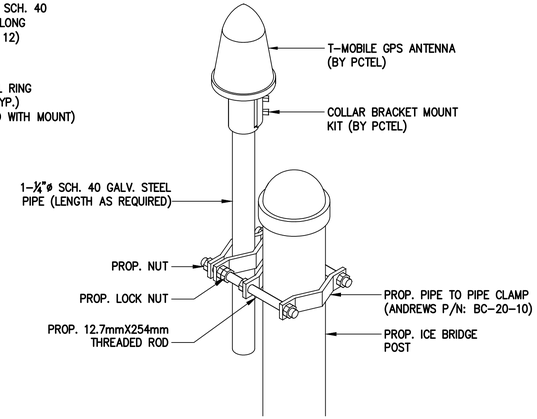
RADIO DETAILS (2 / A-3)
SCALE: N.T.S.



SITE-PRO 1 12'-6" LOW-PROFILE CO-LOCATION PLATFORM W/HANDRAIL KIT

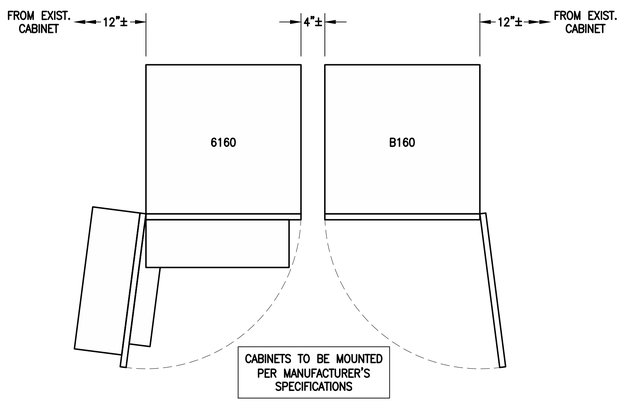
PART NUMBER: RMQP-4096-HK
QUANTITY: TOTAL OF 1

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



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



ERICSSON 6160 SITE SUPPORT CABINET

DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
WEIGHT: 680.0 lbs
QUANTITY: TOTAL OF 1

ERICSSON B160 BATTERY CABINET

DIMENSIONS: 63.25"H x 26.0"W x 26.0"D
WEIGHT: 1771.0 lbs
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL (5 / A-3)
SCALE: N.T.S.

PURCELL SITE SUPPORT CABINET RAC24

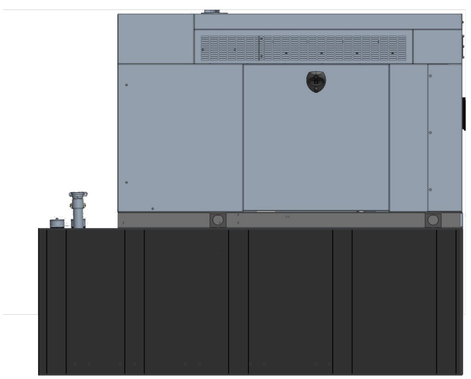
DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
QUANTITY: TOTAL OF 1

SLACKBOX - HOFFMAN 32FH91 NEMA 3R ENCLOSURE

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

SSC DETAILS (6 / A-3)
SCALE: N.T.S.

NOTE:
GENERATOR DIESEL TANK TO BE FILLED BY CONTRACTOR.

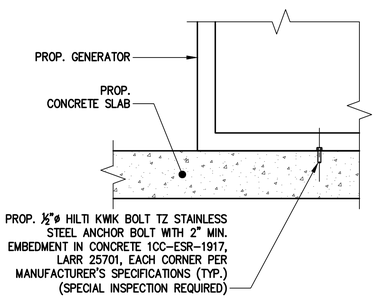


GENERAC RD048 48kW AC DIESEL GENERATOR

DIMENSIONS: 103.4"L x 35.0"W x 90.0"H
WEIGHT: 2,954 lbs
QUANTITY: TOTAL OF 1

GENERATOR DETAIL (7 / A-3)
SCALE: N.T.S.

NOTE:
CONTRACTOR TO VERIFY 3" MIN. FROM EDGE OF CONCRETE TO NEW MOUNTING BOLT.



GENERATOR MOUNTING DETAIL (8 / A-3)
SCALE: N.T.S.

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NORTON, MA 02766
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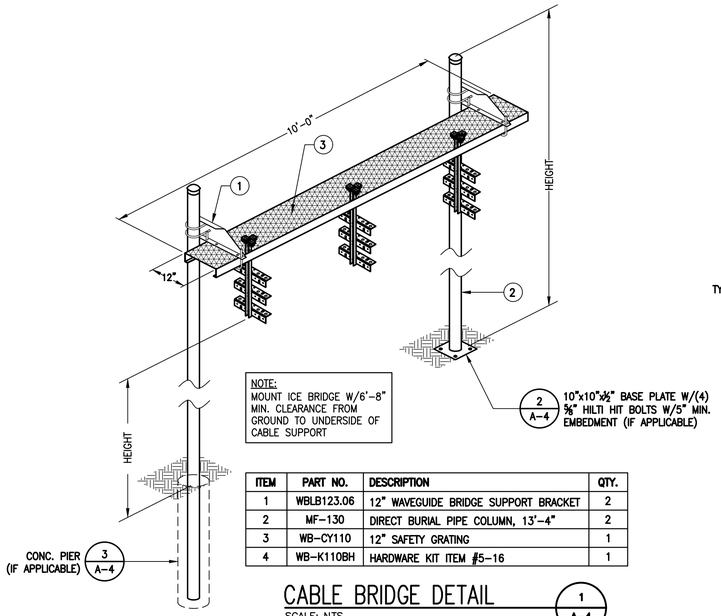
SHEET TITLE
SITE DETAILS
1 OF 2

SHEET NUMBER
A-3

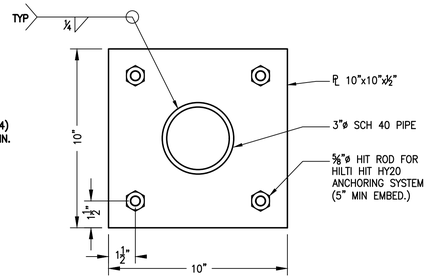
1815.494



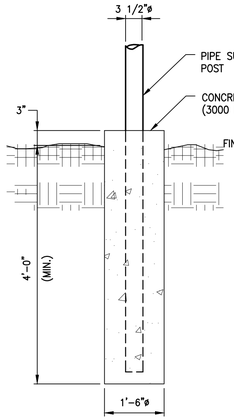
NOTE:
MOUNT ICE BRIDGE W/6'-8" MIN. CLEARANCE FROM GROUND TO UNDERSIDE OF CABLE SUPPORT

ITEM	PART NO.	DESCRIPTION	QTY.
1	WBLB123.06	12" WAVEGUIDE BRIDGE SUPPORT BRACKET	2
2	MF-130	DIRECT BURIAL PIPE COLUMN, 13'-4"	2
3	WB-CY110	12" SAFETY GRATING	1
4	WB-K110BH	HARDWARE KIT ITEM #5-16	1

CABLE BRIDGE DETAIL 1 A-4
SCALE: NTS



CABLE BRIDGE BASE PLATE 2 A-4
SCALE: NTS



NOTES:

1. FOR EXPOSED LEDGE, PROVIDE GROUT LEVELING PAD. INSTALL (2)-⅝"ø EXPANSION ANCHORS, (6" LONG).
2. FOR BURIED LEDGE AT LESS THAN 3'-6" BELOW FINISH GRADE, CORE 8"ø HOLE INTO LEDGE 18" DEEP. FILL AROUND PIPE WITH NON-SHRINK GROUT. USE COAL TAR ON BURIED LENGTH OF PIPE, AND BACKFILL TO FINISH GRADE
3. FOR CONCRETE, FASTEN BASEPLATE WITH (2)-⅝"ø EXPANSION ANCHORS, (6" LONG).
4. FOR POSTS ON CONCRETE OR EXPOSED LEDGE, PROVIDE 4"x8"x⅜" BASE PLATE WITH (2)-1⅛"ø HOLES @ 6" O.C.

CABLE BRIDGE PIER 3 A-4
SCALE: NTS

EMERSON CAC-A75201090 PPC
DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
QUANTITY: TOTAL OF 1

PPC DETAIL 5 A-4
SCALE: N.T.S.

CONCRETE GENERAL NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND TO THE PROJECT SPECIFICATIONS.
2. ALL CONCRETE IS TO BE NORMAL DENSITY CONCRETE WITH A MAXIMUM SLUMP OF 4 INCHES. MAXIMUM AGGREGATE SIZE ¾ INCH. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
3. PROVIDE AIR ENTRAINMENT OF 4 TO 6 PERCENT IN ALL EXPOSED CONCRETE WORK WITH AIR-ENTRAINING ADMIXTURE COMPLYING WITH ASTM C 260. AT TROWEL-FINISHED FLOORS, DO NOT EXCEED AIR-ENTRAINMENT CONTENT OF 3 PERCENT.
4. NO HOLES OR SLEEVES SHALL BE MADE THROUGH CONCRETE WORK OTHER THAN THOSE INDICATED ON THE STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
5. ALL FORMWORK OFFSET TOLERANCES (PER ACI 117) TO BE CLASS A.
6. FLOOR SLAB TOLERANCES TO ASTM E1155; SPECIFIED OVERALL MINIMUM VALUE OF FLATNESS F F=25 WITH LOCAL MINIMUM F F=17, AND MINIMUM VALUE OF LEVELNESS F F=20 WITH LOCAL MINIMUM F I AND F F WITHIN 72 HOURS OF SLAB CONSTRUCTION.
7. CABINETS ON SLAB (IF APPLICABLE). ALLOWABLE CAPACITY OF CONCRETE USED IN DESIGN MIN. 4000 PSI.

FOUNDATION NOTES:

1. DESIGN INFORMATION AND GENERAL REQUIREMENTS

   1.1 CODES

   A. DESIGN CONFORMS TO INTERNATIONAL BUILDING CODE 2012.

   B. AMERICAN CONCRETE INSTITUTE "BUILDING COADE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318-08.

2. EARTHWORK

   2.1 FOUNDATIONS

   A. FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON (UNDISTURBED RESIDUAL SOILS/COMPACTED STRUCTURAL FILL), CAPABLE OF SAFELY SUPPORTING A NET ALLOWABLE BEARING PRESSURE OF 2000 PSF. IF FOUNDATION CONDITIONS PROVE UNACCEPTIABLE AT ELEVATIONS SHOWN, EXCAVATION SHALL BE CARRIED DEEPER AND SHALL BE BACKFILLED WITH LEAN CONCRETE TO PLAN FOOTING BOTTOM, OR REDESIGN OF FOUNDATIONS WILL BE REQUIRED AT THE DIRECTION OF THE ENGINEER.

   B. DESIGN, FURNISH AND INSTALL ALL TEMPORARY SHEETING, SHORING AND DRAINAGE NECESSARY TO MAINTAIN THE EXCAVATION AND PROTECT SURROUNDING STRUCTURES AND UTILITIES.

   C. THOROUGHLY COMPACT ALL BOTTOM OF FOOTINGS PRIOR TO PLACING ANY CONCRETE.

3. CONCRETE

   3.1 FORMWORK

   A. CONCRETE CONSTRUCTION SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL, CONCRETE FOR BUILDINGS," (ACI 301-89).

   B. FORMWORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."

   3.2 REINFORCEMENT

   A. REINFORCING STEEL ASTM A615, GRADE 60. WELDED WIRE ASTM A185 (FLAT SHEET). LAPS 40 BAR DIAMETERS UNLESS NOTED. BARS SHALL BE SECURELY HELD IN ACCURATE POSITION BY SUITABLE ACCESSORIES, TIE BARS, SUPPORT BARS, ETC. HOOK LENGTHS SHALL BE 12 BAR DIAMETERS.

   B. CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

   FOOTINGS & SLABS CAST AGAINST GROUND . . . . . 3"
   CONCRETE TO BE IN CONTACT WITH GROUND
   OR WEATHER AT BARS GREATER THAN #5 . . . . . 2"
   AT BARS #5 OR LESS . . . . . 1-1/2"
   CONCRETE NOT TO BE EXPOSED TO GROUND
   OR WEATHER BEAMS, GIRDERS & COLUMNS . . . . . 1-1/2"
   SLABS & WALLS . . . . . 3/4"

   3.3 CAST-IN-PLACE-CONCRETE

   A. MINIMUM 28 DAY CYLINDER STRENGHT AND MAXIMUM SLUMP, PRIOR TO ADDITION OF SUPER PLASTICIZERS, AS FOLLOWS:

	F'C (PSI)	SLUMP
CLASS I FOOTINGS	4000	3"
CLASS II FOOTINGS	4000	3"
CLASS III INTERIOR ELEVATED SLABS & WALLS	4000	4"
CLASS V OTHER WORK	4000	4"
CLASS VI LEAN CONCRETE FOR OVER EXCAVATION OF FOUNDATIONS	2000	N/A

   B. MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 5. NO CALCIUM CHLORIDE OR ADMIXTURE CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE.

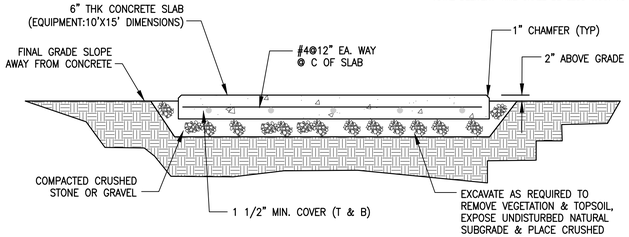
   C. COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE $57. COARSE AGGREGATE FOR LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C330 GRADED 3/4" TO 1/4".

   D. COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1.

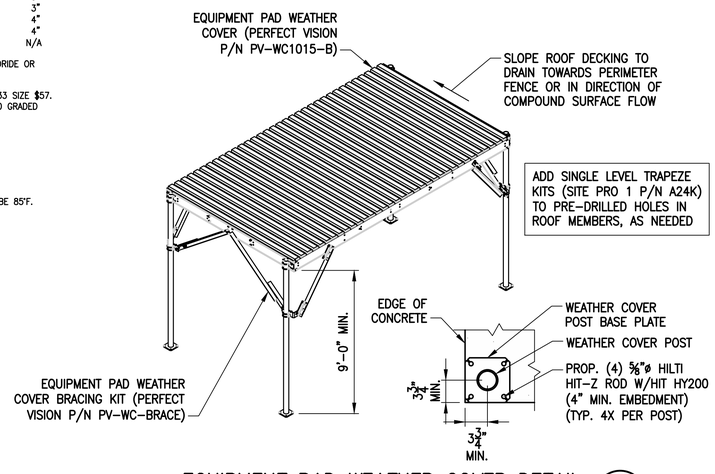
   E. HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R.

   F. CHAMFER ALL EXPOSED EDGES 3/4".

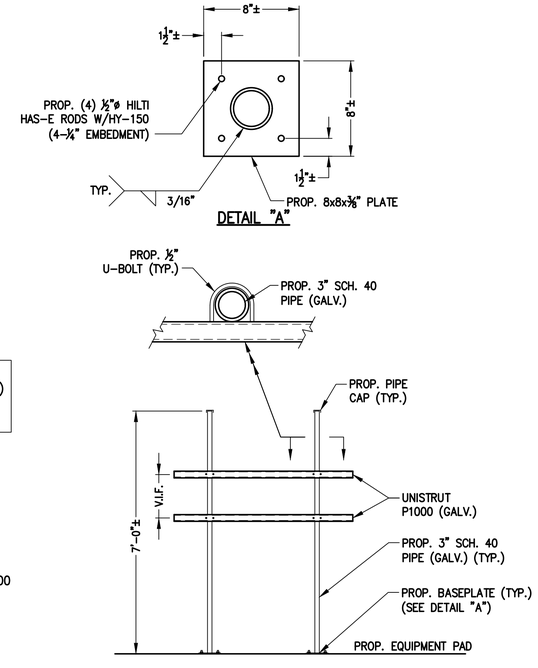
   G. THE MAXIMUM TEMPERATURE OF ALL CONCRETE AT DELIVERY TO THE SITE SHALL BE 85°F. TOTAL DELIVERY TIME SHALL BE LESS THAN 75 MINUTES.



CONCRETE PAD DETAIL 4 A-4
SCALE: N.T.S.



EQUIPMENT PAD WEATHER COVER DETAIL 6 A-4
SCALE: N.T.S.



H-FRAME DETAIL 7 A-4
SCALE: N.T.S.

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SBA
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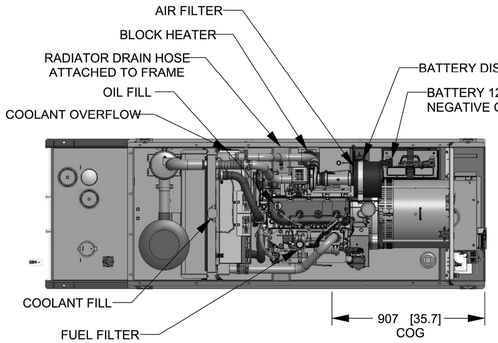
SHEET TITLE
SITE DETAILS
2 OF 2

SHEET NUMBER
A-4

1815.494

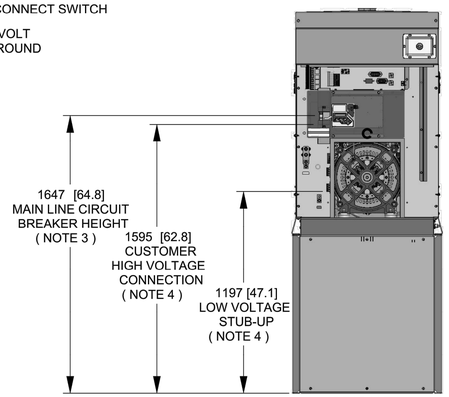
SH	REV	WINDCHILL VERSION	
1/2	A	A.1	



TOP VIEW
(SHOWN WITH ENCLOSURE REMOVED)

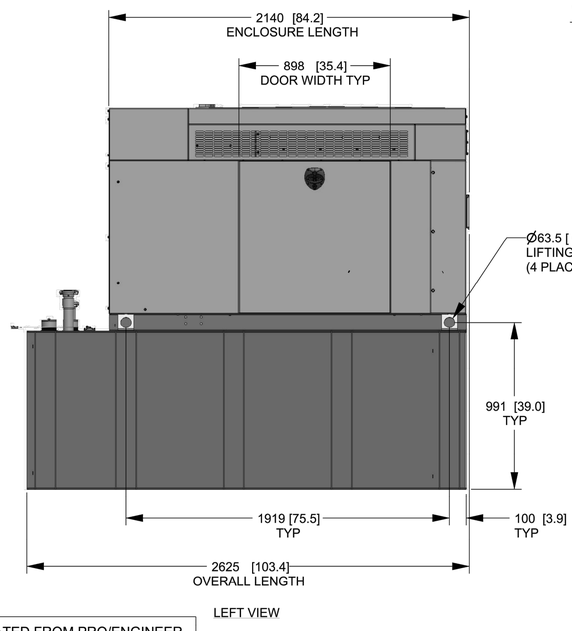
WEIGHT DATA WITH EMPTY BASETANK (SEE NOTE 6)	
GENERATOR AS SHOWN	1,322 [2,915]
WITH WOODEN SHIPPING SKID	1,340 [2,954]

WEIGHT: KG [LBS]
DIMENSIONS: MM [INCH]

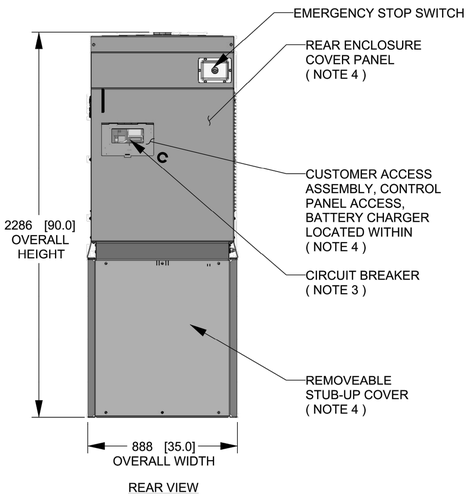


REAR VIEW
(SHOWN WITH REAR COVER PANEL REMOVED)

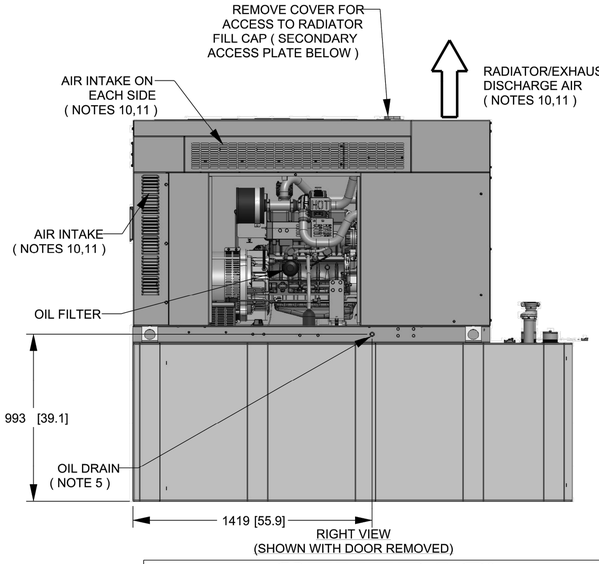
NOTES:
1. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
2. BATTERY (12 VOLT NEGATIVE GROUND SYSTEM).
3. CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
   - MAIN LINE CIRCUIT BREAKER 200 AMPS.
   - SEE SPECIFICATION SHEET OR OWNERS MANUAL.
   - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF GENERATOR.
   - CONTROL PANEL INCLUDES INTEGRATED BATTERY CHARGER.
4. REMOVE THE REAR STUB-UP AND REAR ENCLOSURE COVER PANEL TO ACCESS THE STUB-UP AREAS AS FOLLOWS:
   - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, AND BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION.
   - LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES.
5. ENGINE SERVICE CONNECTIONS:
   OIL DRAIN = 1/2" NPT
   RADIATOR DRAIN = HOSE CLAMPED TO FRAME
6. CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
7. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
8. REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
9. MOUNTING BOLTS OR STUDS TO MOUNTING SURFACE SHALL BE 5/8-11 GRADE 5 (USE STANDARD SAE TORQUE SPECS)
10. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
11. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADIATOR IS NOT RECIRCULATED. RECOMMENDED MINIMUM PERIMETER (3FT) AND VERTICAL OVER EXHAUST (5FT) CLEARANCE FOR SITE LOCATION.
12. GENERATOR MUST BE GROUNDED.



LEFT VIEW



REAR VIEW



RIGHT VIEW
(SHOWN WITH DOOR REMOVED)

DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

INSTALLATION DRAWING

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
INSTALL D3.4L G16
48KW Y06 EXT

ISSUE DATE:	8/8/18			
SIZE B	CAGE NO N/A	DWG NO 10000041950		REV A
SCALE 0.035	WT-KG SEE ABOVE	SHEET 1 of 2		

GENERATOR SPECIFICATIONS
SCALE: N.T.S.

1 / A-5

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

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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
5/24/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/24/22	ISSUED FOR CONSTRUCTION	JRV
0	05/10/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTNH394A

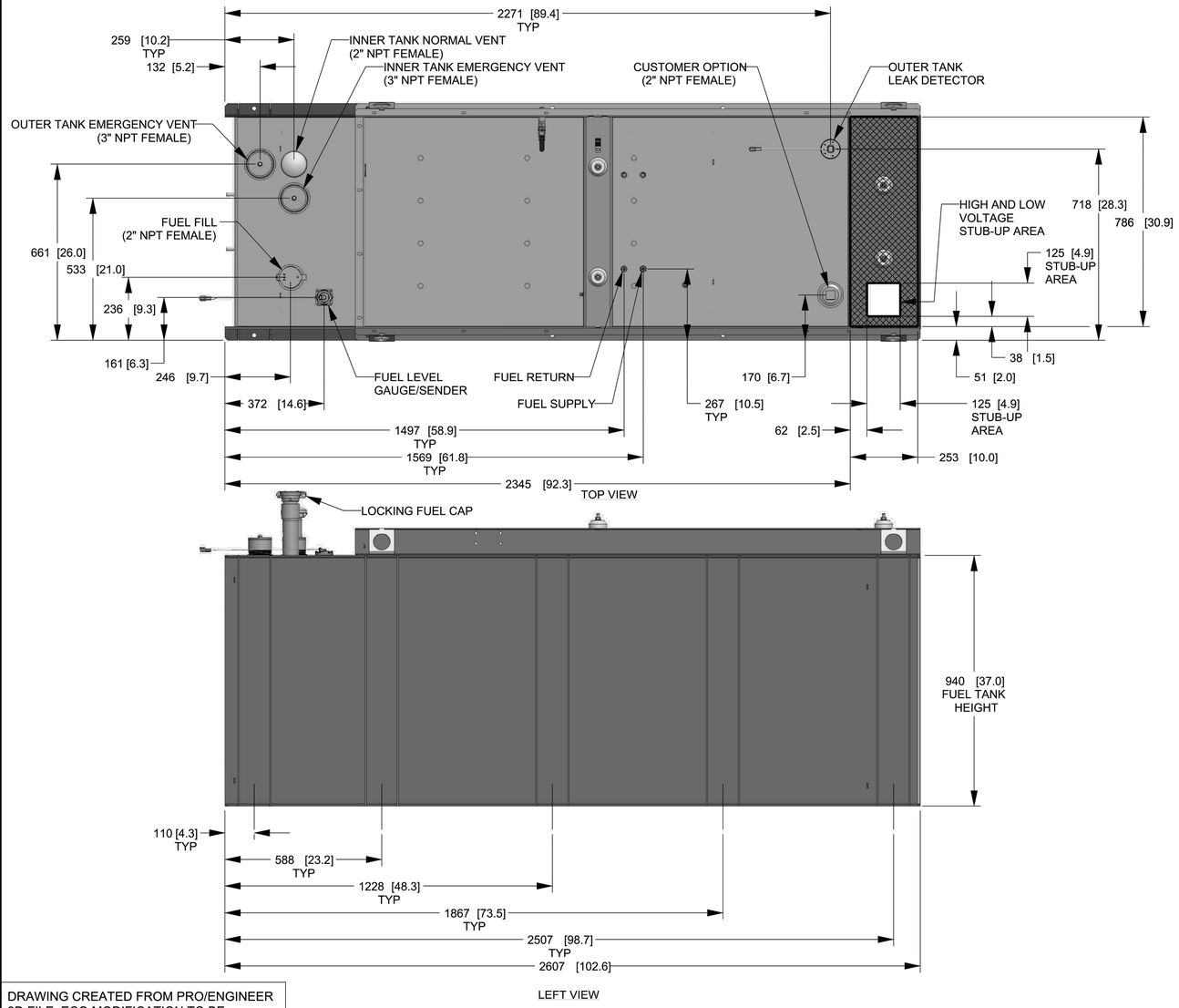
SITE ADDRESS:
599 GREENSWOOD ROAD EAST
NORFOLK, CT 06058

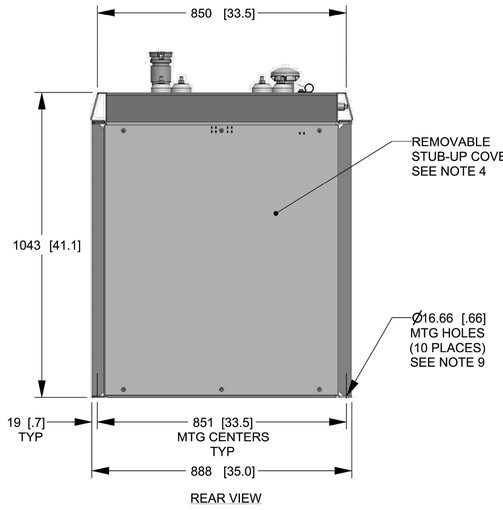
SHEET TITLE
GENERATOR SPECIFICATIONS 1

SHEET NUMBER
A-5

1815.494

SH	REV	WINDCHILL VERSION	
2/2	A	A.1	





FUEL TANK	
TOTAL CAPACITY	908 [240]
USABLE CAPACITY	867 [229]

CAPACITY: LITER [GALLON]
DIMENSIONS: MM [INCH]

TANK IS LISTED TO UL142 AND ULC5601

NOTE: STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS, CIRCUIT BREAKER, NEUTRAL AND CUSTOMER CONNECTION OPENING.

DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

INSTALLATION DRAWING

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
INSTALL D3.4L G16
48KW Y06 EXT

ISSUE DATE: 8/8/18

SIZE	CAGE NO	DWG NO	REV
B	N/A	10000041950	A

SCALE 0.060 | WT-KG SEE ABOVE | SHEET 2 of 2

GENERATOR SPECIFICATIONS 1 / A-6
SCALE: N.T.S.

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

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NORFOLK, CT 06058

SHEET TITLE
GENERATOR SPECIFICATIONS 2

SHEET NUMBER
A-6

1815.494

FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 RFS APXVAARR24_43-U-NA20	150'± AGL	30°	0°	0°	L700/L600/N600	RADIO 4480 B71+B85	(3) 2" (6x24) HCS FIBER CABLES (210'±)
						U2100/L2100/L1900/G1900/U1900	RADIO 4460 B25+B66	
	A2 RADIO 4460 B25+B66	–	–	–	–	–	–	
	A3 EMPTY PIPE	–	–	–	–	–	–	
	A4 ERICSSON M-MIMO AIR6419 B41	150'± AGL	30°	0°	0°	L2500/N2500	–	
BETA	B1 RFS APXVAARR24_43-U-NA20	150'± AGL	140°	0°	0°	L700/L600/N600	RADIO 4480 B71+B85	
						U2100/L2100/L1900/G1900/U1900	RADIO 4460 B25+B66	
	B2 RADIO 4460 B25+B66	–	–	–	–	–	–	
	B3 EMPTY PIPE	–	–	–	–	–	–	
	B4 ERICSSON M-MIMO AIR6419 B41	150'± AGL	140°	0°	0°	L2500/N2500	–	
GAMMA	G1 RFS APXVAARR24_43-U-NA20	150'± AGL	280°	0°	0°	L700/L600/N600	RADIO 4480 B71+B85	
						U2100/L2100/L1900/G1900/U1900	RADIO 4460 B25+B66	
	G2 RADIO 4460 B25+B66	–	–	–	–	–	–	
	G3 EMPTY PIPE	–	–	–	–	–	–	
	G4 ERICSSON M-MIMO AIR6419 B41	150'± AGL	280°	0°	0°	L2500/N2500	–	

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV1 – 03/02/22

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES		LOCATION
A	*EXISTING TO REMAIN:*	*NONE*	ROUTED PER STRUCTURAL ANALYSIS
	EXISTING TO BE REMOVED:	*NONE*	
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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599 GREENSWOOD ROAD EAST
NORFOLK, CT 06058

SHEET TITLE
ANTENNA & FEEDLINE CHARTS

SHEET NUMBER
A-7

1815.494

NOTES TO CONTRACTOR:

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTORS FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE ENGINEER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS REQUIRED WITH LOCAL AUTHORITY.
3. UTILITY SERVICES SHOWN ARE PROPOSED, THE ELECTRIC CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, ROUTING AND ASSOCIATED REQUIREMENTS WITH LOCAL UTILITY COMPANIES & SPRINT CONSTRUCTION MANAGER.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING AS REQUIRED FOR THE WORK.
5. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO ROUGH-IN.
6. THE CONDUIT RUNS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATION AND ROUTING SHALL BE PER EXISTING FIELD CONDITIONS.
7. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.
8. ALL CONDUITS SHALL BE MET WITH BENDS MADE IN ACCORDANCE WITH NEC TABLE 346-10. NO RIGHT ANGLE DEVICE OTHER THAN STANDARD CONDUIT ELBOWS WITH 12" MINIMUM INSIDE SWEEPS FOR ALL CONDUITS 2" OR LARGER.
9. ALL CONDUIT TERMINATIONS SHALL BE PROVIDED WITH PLASTIC THROAT INSULATING GROUNDING BUSHINGS.
10. ALL WIRE SHALL BE TYPE THWN, SOLID, ANNEALED COPPER UP TO SIZE #10 AWG (#8 AND LARGER SHALL BE CONCENTRIC STRANDED) 75 DEGREE C, (167 DEGREES F), 98% CONDUCTIVITY, MINIMUM #12.
11. ALL WIRES SHALL BE TAGGED AT ALL PULL BOXES, J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY, OR APPROVED EQUAL.
12. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
13. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH MECHANICAL CONTRACTOR AND COMPLY AS REQUIRED.
14. ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN NOT HAND WRITTEN.
15. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES, AND ALL DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.
16. THE CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS, DOCUMENT ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. SUBMIT AT SUBSTANTIAL COMPLETION.
17. ALL DISCONNECT SWITCHES AND OTHER CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL LOCATIONS FED FROM (NO EXCEPTIONS.)
18. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS OR RISERS THROUGH BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONSTRUCTION MANAGERS APPROVAL. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE PACKED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FILL FOR FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.

   NOTE: ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT (NEW AND EXISTING) SHALL BE FIELD VERIFIED WITH THE OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN OF CONDUIT AND WIRE. ALL EQUIPMENT SHALL BE PROPERLY CONNECTED ACCORDING TO THE NAMEPLATE DATA FURNISHED ON THE EQUIPMENT (THE DESIGN OF THESE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN AND SOME EQUIPMENT CHARACTERISTICS MAY NOT BE CORRECT AS SHOWN ON THESE DRAWINGS). LOCATION OF OUTLETS, BOXES, ETC. AND THE TYPE OF CONNECTION (PLUG OR DIRECT) SHALL BE CONFIRMED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
19. ALL UNDERGROUND CONDUIT ROUTING SHALL BE COORDINATED IN FIELD BETWEEN SPRINT WIE, CONTRACTOR, AND RESPECTIVE UTILITY COMPANIES.
20. ALL CONDUITS ROUTED BELOW GRADE SHALL TRANSITION TO RIGID GALVANIZED ELBOWS WITH RIGID GALVANIZED STEEL CONDUIT ABOVE GRADE.
21. CONTRACTOR SHALL PROVIDE ALL DIRECT BURIED CONDUITS WITH 6" WIDE. 6 MIL THICK ALUMINIZED PLASTIC WARNING TAPE IDENTIFYING CONTENTS. TAPE COLORS SHALL BE ORANGE FOR TELEPHONE AND RED FOR ELECTRIC.
22. ELECTRICAL CONTRACTOR SHALL PROVIDE A SECTION OF SEALTITE CONDUIT FOR TELCO CONNECTION TO THE PRIMARY RADIO CABINET. COORDINATE EXACT CONNECTION TYPE WITH LUCENT.
23. ELECTRICAL CONTRACTOR SHALL PROVIDE A SECTION OF SEALTITE CONDUIT FOR POWER CONNECTION TO THE PRIMARY RADIO CABINET. THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL 6'-0" COIL OF WIRE AT THE END OF THE SEALTITE.
24. GROUND IN ACCORD W/LOCAL CODE & SHEET E-2.
25. PROVIDE (2) 4" GALVANIZED RIGID STEEL CONDUIT RISER WITH 1/4" NYLON DRAG LINE INCLUDING 90° GRC SWEEP AT POLE (UP TO 20'-0" AFG). SECURE TO POLE PER UTILITY COMPANY REQUIREMENTS. PRIMARY CABLES BY UTILITY COMPANY.

ELECTRICAL SPECIFICATIONS

SECTION 16010 – GENERAL PROVISIONS

A. REQUIREMENTS: FURNISH ALL LABOR, MATERIALS, SERVICE, EQUIPMENT, AND APPLIANCES REQUIRED TO COMPLETE THE INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS AND CONTRACT DRAWINGS.

B. REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS: INSTALLATION, MATERIAL, EQUIPMENT AND WORKMANSHIP SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL CODE (NEC) – APPLICABLE STATE ELECTRIC CODES, THE NATIONAL ELECTRICAL SAFETY CODE (NESC), AND THE TERMS AND THE CONDITIONS OF THE AUTHORITIES HAVING LAWFUL JURISDICTION PERTAINING TO THE WORK REQUIRED. ALL MODIFICATIONS REQUIRED BY THESE CODES, RULES, REGULATIONS, AND AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.

C. UNDERWRITER'S LABORATORIES (UL): ALL MATERIALS, APPLIANCES, EQUIPMENT, OR OR DEVICES SHALL CONFORM TO THE APPLICABLE STANDARDS OF UNDERWRITER'S LABORATORIES, INC. THE LABEL OF, OR LISTING BY. UL, IS REQUIRED.

SECTION 16110 – RACEWAYS, BOXES AND FITTINGS

A. CONDUIT FITTINGS, CONNECTORS AND COUPLINGS, EMT COUPLINGS AND CONNECTORS EITHER STEEL OR MALLEABLE IRON ONLY. "CONCRETE TIGHT" OR "RAIN TIGHT" AND EITHER THE GLAND AND RING COMPRESSION TYPE OR STAINLESS STEEL MULTIPLE POINT LOCKING TYPE. CONNECTORS TO HAVE INSULATED THROATS. EMT FITTINGS USING SET SCREWS OR INDENTATIONS AS A MEANS OF ATTACHMENT ARE NOT PERMITTED.

B. BUSHINGS: INSULATED TYPE, DESIGNED TO PREVENT ABRASION OF WIRES WITHOUT IMPAIRING THE CONTINUITY OF THE CONDUIT GROUNDING SYSTEM, FOR RIGID STEEL CONDUIT, IMC AND RIGID ALUMINUM CONDUIT.

C. CONDUIT INSTALLATIONS: CONDUIT SYSTEMS, EMT, OR RIGID NON-METALLIC CONDUIT UNLESS NOTED. INSTALL CONCEALED CONDUIT AND EMT IN AS DIRECT LINES AS POSSIBLE. INSTALL EXPOSED CONDUITS AND EMT PARALLEL TO OR AT RIGHT ANGLES TO THE LINES OF THE BUILDING. RIGHT ANGLE BENDS IN EXPOSED CONDUIT AND EMT RUNS SHALL BE MADE WITH STANDARD ELBOWS, SCREW JOINTED CONDUIT FITTINGS OR CONDUIT BENT TO RADIUS NO LESS THAN THOSE OF STANDARD ELBOWS.

D. CONDUIT SUPPORTS: PROVIDE SUPPORTS FOR HORIZONTAL CONDUITS AND EMT NOT MORE THAN 8 FEET APART WITH NOT LESS THAN TWO SUPPORTS FOR EACH 10 FOOT STRAIGHT LENGTH AND ONE SUPPORT NEAR EACH ELBOW OR BEND INCLUDING RUNS ABOVE SUSPENDED CEILINGS AND WITHIN 3 FEET OF ALL JUNCTION BOXES, SWITCHES, FITTINGS, ETC. INSTALL ONE HOLE PIPE STRAPS ON CONDUITS 1 INCH OR SMALLER INSTALL INDIVIDUAL PIPE HANGERS FOR CONDUITS LARGER THAN 1 INCH. SPRING STEEL FASTENERS WITH HANGER RODS MAY BE USED IN DRY LOCATIONS IN LIEU OF PIPE STRAPS.

SECTION 16120 – CONDUCTORS

A. WIRES AND CABLES (600 VOLTS): CONFORM TO THE APPLICABLE UL AND ICEA STANDARDS FOR THE USE INTENDED. USE COPPER CONDUCTORS WITH 600 VOLTS INSULATION UNLESS OTHERWISE SPECIFIED OR NOTED ON THE DRAWINGS. USE STRANDED CONDUCTORS FOR NO. 8 OR LARGER WHERE ELSEWHERE SPECIFIED OR NOTED OTHERWISE ON THE DRAWINGS. USE OF ALUMINUM CONDUCTORS WILL NOT BE PERMITTED. INSULATION SHALL BE TYPE THHN/THWN, 75°C, FOR ALL CONDUCTORS, USELESS OTHERWISE SPECIFIED OR NOTED ON THE DRAWINGS.

B. COLOR CODING. PHASE, NEUTRAL, AND GROUND CONDUCTORS COLOR-CODED IN ACCORDANCE WITH NEC. CONNECT ALL CONDUCTORS OF THE SAME COLOR TO THE SAME PHASE CONDUCTOR, COLOR CODING SHALL BE BLACK, RED, BLUE, WHITE (120/208) OR BROWN ORANGE, YELLOW, GRAY (277/480) WITH GREEN FOR ALL GROUND CONDUCTORS.

C. CONNECTORS AND LUGS: FOR COPPER CONDUCTORS NO. 6 AND SMALLER: 3M SCOTCH-LOK OR T & B STA-KON COMPRESSION OR INDENT TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATING CAPS. FOR COPPER CONDUCTORS LARGER THAN NO. 6 SOLDERLESS, INDENT, HEX SCREW OR BOLT TYPE PRESSURE CONNECTORS, PROPERLY TAPED OR INSULATED.

D. SPLICES: (480 VOLTS AND UNDER): CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES UNLESS APPROVED BY THE BUILDING INSPECTOR.

SECTION 16220 – CIRCUIT BREAKERS

A. PROVIDE MOLDED CASE, BOLT-ON, THERMAL MAGNETIC TRIP, SINGLE, TWO OR THREE POLE BRANCH CIRCUIT BREAKERS AS SHOWN ON DRAWINGS. MULTIPLE POLE BREAKERS SHALL BE SINGLE HANDLE, COMMON TRIP. AIC RATING TO MATCH EXISTING OR AS REQUIRED FOR AVAILABLE FAULT CURRENTS.

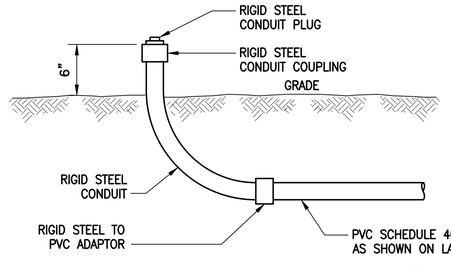
ELECTRICAL LEGEND

SYMBOLS

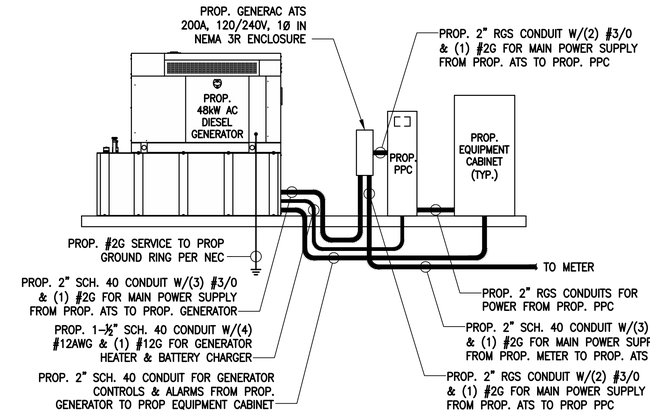
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT RUN UNDERGROUND
- CONDUIT RUN ABOVE GROUND
- (M) METER ON METER/BREAKER UNIT
- 5/8" x 10'-0" COPPER CLAD GROUND ROD
- EXOTHERMIC TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- G — G GROUND RING. #2 AWG SOLID TINNED BARE COPPER GROUND CONDUCTOR 6" BELOW FROST LINE AND 24" OFF CONCRETE PLATFORM
- XXX / XXX REPRESENTS DETAIL NUMBER; REF. DRAWING NUMBER
- XXX DETAIL NUMBER

ABBREVIATIONS

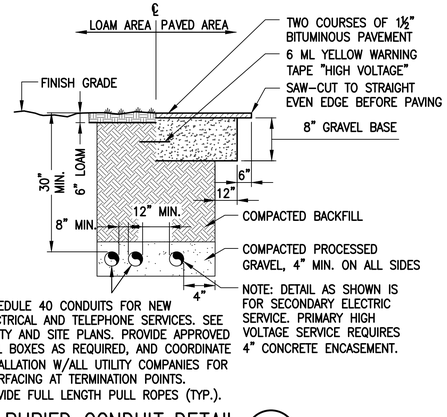
ACCA	ANTENNA CABLE COVER ASSEMBLY
AGB	COPPER ANTENNA GROUND BAR
AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
BTS	BASE TRANSMISSION SYSTEM
CIBGE	COAX ISOLATED GROUND BAR EXTERNAL
DWG	DRAWING
EMT	ELECTRICAL METALLIC TUBING
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GR	GROWTH
IGR	INTERIOR GROUND RING (HALO)
LAGB	LOWER ANTENNA COPPER GROUND BAR
MIGB	MASTER ISOLATED GROUND BAR
PCS	PERSONAL COMMUNICATION SYSTEM
PPC	POWER PROTECTION CABINET
PRC	PRIMARY RADIO CABINET
RGS	RIGID GALVANIZED STEEL
RWY	RACEWAY
TYP	TYPICAL
SSLP	SPRINT SPECTRUM LIMITED PARTNERSHIP
UAGB	UPPER ANTENNA COPPER GROUND BAR
EXIST.	EXISTING
PROP.	PROPOSED



TYPICAL CONDUIT STUB-UP DETAIL (4 / E-1)
SCALE: NONE

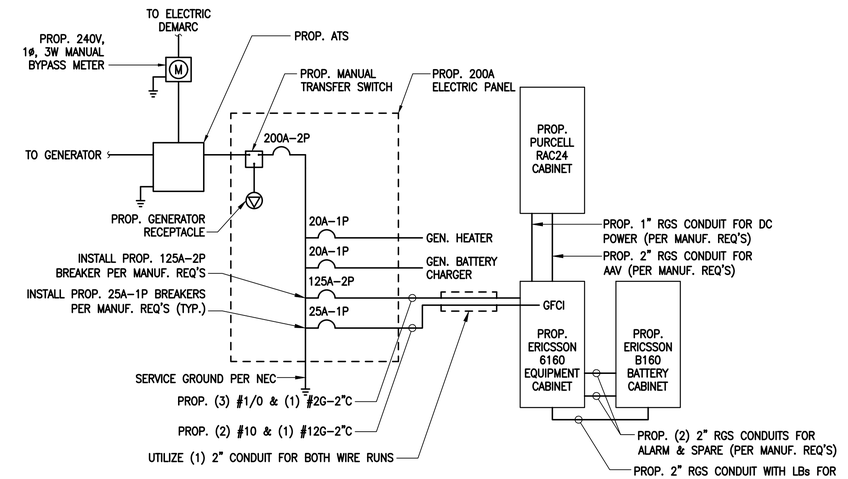


GENERATOR ONE-LINE POWER DIAGRAM (3 / E-1)
SCALE: NOT TO SCALE

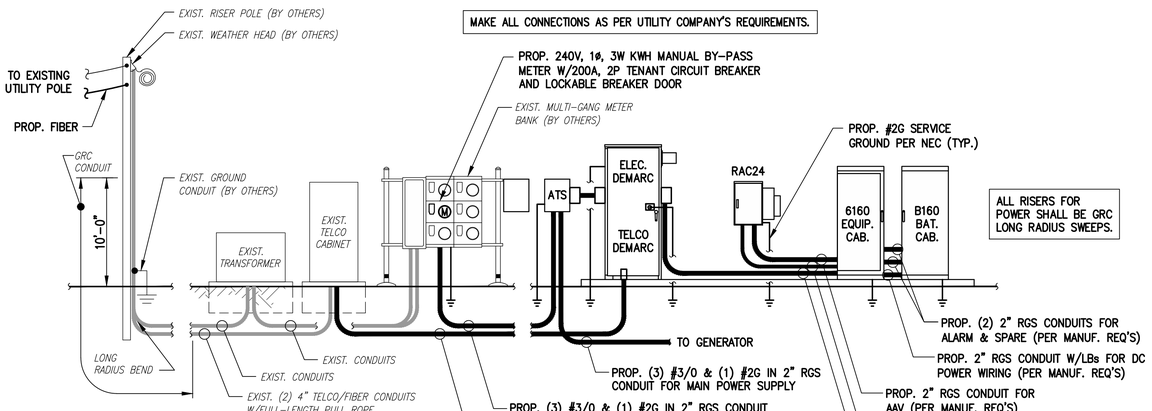


SCHEDULE 40 CONDUITS FOR NEW ELECTRICAL AND TELEPHONE SERVICES. SEE UTILITY AND SITE PLANS. PROVIDE APPROVED PULL BOXES AS REQUIRED, AND COORDINATE INSTALLATION W/ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS. PROVIDE FULL LENGTH PULL ROPES (TYP.).

BURIED CONDUIT DETAIL (5 / E-1)
SCALE: NOT TO SCALE



ONE LINE DIAGRAM (1 / E-1)
SCALE: NOT TO SCALE



POWER/TELCO RISER DIAGRAM (2 / E-1)
SCALE: NOT TO SCALE

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STATE OF CONNECTICUT · JAMES M. FITZGERALD · No. 25937 · LICENSED PROFESSIONAL CIVIL ENGINEER · 5/24/2022

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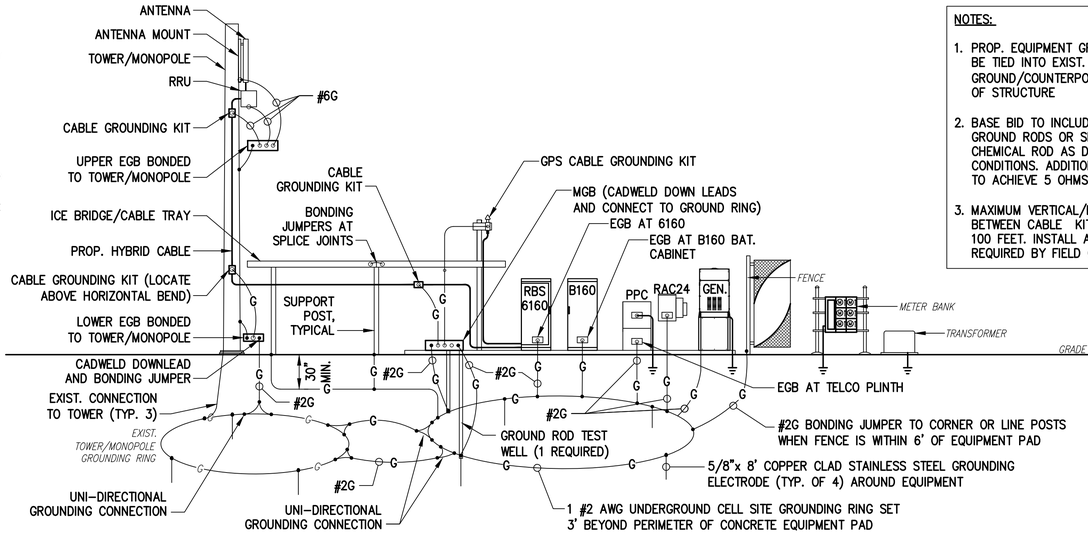
SHEET TITLE
SITE ELECTRIC & GROUNDING DETAILS
1 OF 2

SHEET NUMBER
E-1

1815.494

PROTECTIVE GROUNDING SYSTEMS GENERAL NOTES

1. GROUNDING SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250-GROUNDING AND BONDING.
2. GROUNDING SHALL BE IN ACCORDANCE WITH SPRINT SSEO DOCUMENTS 3.018.02.004 "BONDING, GROUNDING AND TRANSIENT PROTECTION FOR CELL SITES" AND 3.018.10.002 "SITE RESISTANCE TO EARTH TESTING".
3. PROVIDE GROUND CONNECTIONS FOR ALL METALLIC STRUCTURES, ENCLOSURES, RACEWAYS AND OTHER CONDUCTIVE ITEMS ASSOCIATED WITH THE INSTALLATION OF CARRIER'S EQUIPMENT.
4. GROUND CONNECTIONS: CLEAN SURFACES THOROUGHLY BEFORE APPLYING GROUND LUGS OR CLAMPS. IF SURFACE IS COATED, REMOVE THE COATING, APPLY A NON-CORROSIVE APPROVED COMPOUND TO CLEAN SURFACE AND INSTALL LUGS OR CLAMPS. WHERE GALVANIZING IS REMOVED FROM METAL, IT SHALL BE PAINTED OR TOUCHED UP WITH "GALVAMOX" OR EQUAL.
5. ALL GROUNDING WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PATH TO GROUND WITH GRADUAL BENDS AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
6. ALL CLAMPS AND SUPPORTS USED TO SUPPORT THE GROUNDING SYSTEM CONDUCTORS AND PVC CONDUITS SHALL BE PVC TYPE (NON CONDUCTIVE). DO NOT USE METAL BRACKETS OR SUPPORTS WHICH WOULD FORM A COMPLETE RING AROUND ANY GROUNDING CONDUCTOR.
7. ALL GROUND WIRES SHALL BE #2 SOLID TINNED BCW UNLESS NOTED OTHERWISE.
8. PROVIDE DEDICATED #2 AWG COPPER GROUND WIRE FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CIGBE.
9. GROUND ANTENNA BASES, FRAMES, CABLE RACKS, AND OTHER METALLIC COMPONENTS WITH #2 INSULATED TINNED STRANDED COPPER GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
10. EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE MASTER ISOLATION GROUND BAR (MGB) WITH #2 SOLID TINNED BCW EQUIPMENT CABINETS WALL HAVE (2) CONNECTIONS.
11. GROUND HYBRIFLEX SHIELD AT TOP, BOTTOM AND AT TRANSITION TO HYBRIFLEX JUMPER CABLES AT EQUIPMENT CABINET ENTRANCE USING MANUFACTURER'S GUIDELINES. WHEN HYBRIFLEX CABLE EXCEEDS 200', GROUND AT INTERVALS NOT EXCEEDING 100'.
12. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING GROUND BARS HAVE ENOUGH SPACE/HOLES FOR ADDITIONAL TWO HOLE LUGS.
13. EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL OTHERWISE. THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLES, LONG BARREL LUGS OR DOUBLE CRIMP "C" CLAMP. THE COPPER CABLES SHALL BE COATED WITH AN ANTI-OXIDANT (THOMAS BETTS KOPR-SHILD) BEFORE MAKING THE CRIMP CONNECTIONS THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDED TORQUES ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS.
14. AT ALL TERMINATIONS AT EQUIPMENT ENCLOSURES, PANEL, AND FRAMES OF EQUIPMENT AND WHERE EXPOSED FOR GROUNDING. CONDUCTOR TERMINATION SHALL BE PERFORMED UTILIZING TWO HOLE BOLTED TONGUE COMPRESSION TYPE LUGS WITH STAINLESS STEEL SELF-TAPPING SCREWS.
15. THE MASTER GROUND BAR (MGB) SHALL BE MADE OF BARE 1/4"x2" COPPER (FOR OUTDOOR APPLICATIONS IT SHALL BE TINNED COPPER) AND LARGE ENOUGH TO ACCOMMODATE THE REQUIRED NUMBER OF GROUND CONNECTIONS. THE HARDWARE SECURING THE MGB SHALL ELECTRICAL INSULATE THE MGB FROM ANY STRUCTURE TO WHICH IT IS FASTENED.
16. ALL BOLTS, WASHERS, AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.
17. ALL GROUNDING CONNECTIONS SHALL BE COATED WITH A COPPER SHIELD ANTI-CORROSIVE AGENT SUCH AS T&B KOPR SHIELD. VERIFY PRODUCT WITH SPRINT CONSTRUCTION MANAGER.
18. FOR NEW OR REPAIRED GROUNDING EQUIPMENT. REFER TO SPRINT GROUNDING STANDARDS AND FOLLOWING (SUPPLEMENTS):
    -ANTI-THEFT UPDATE TO SPRINT GROUNDING DATED 08-24-12
    -SPRINT ENGINEERING LETTER EL-0504 DATED 04-20-12



NOTES:

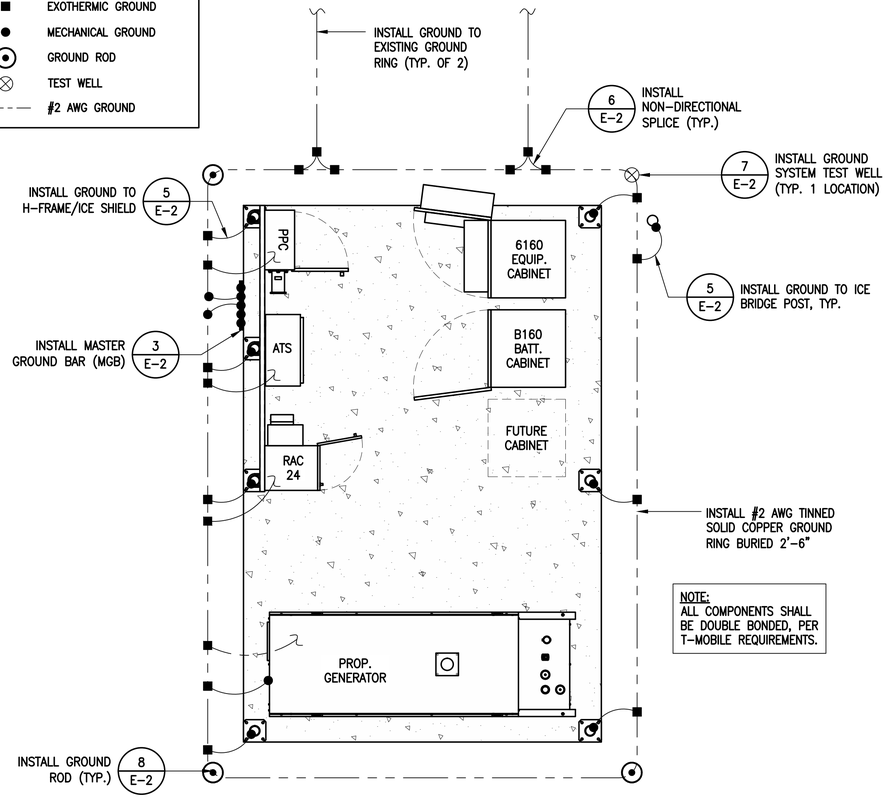
1. PROP. EQUIPMENT GROUNDING SYSTEM TO BE TIED INTO EXIST. GROUND/COUNTERPOISE SYSTEM AT BASE OF STRUCTURE
2. BASE BID TO INCLUDE INSTALLATION OF (4) GROUND RODS OR SINGLE KIT HORIZONTAL CHEMICAL ROD AS DETERMINED BY CONDITIONS. ADDITIONAL RODS AS REQUIRED TO ACHIEVE 5 OHMS RESISTANCE.
3. MAXIMUM VERTICAL/HORIZONTAL DISTANCE BETWEEN CABLE KITS SHALL NOT EXCEED 100 FEET. INSTALL ADDITIONAL KITS AS REQUIRED BY FIELD CONDITIONS.

GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE — 2 / E-2

GROUNDING LEGEND

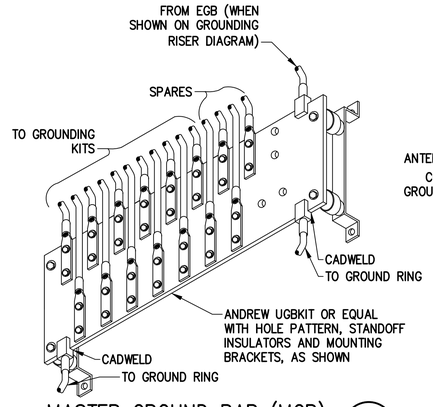
- EXOTHERMIC GROUND
- MECHANICAL GROUND
- GROUND ROD
- TEST WELL
- #2 AWG GROUND



NOTE:
ALL COMPONENTS SHALL BE DOUBLE BONDED, PER T-MOBILE REQUIREMENTS.

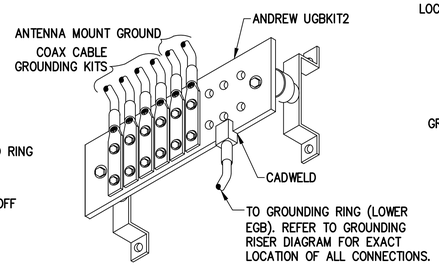
GROUNDING PLAN

SCALE: N.T.S. — 1 / E-2



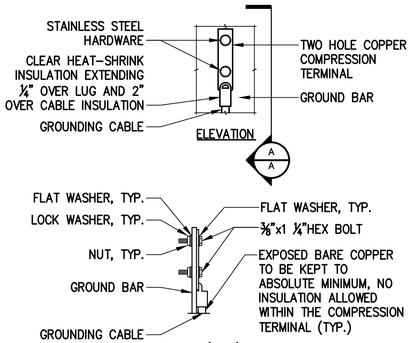
MASTER GROUND BAR (MGB)

SCALE: NOT TO SCALE — 3 / E-2



GROUND BAR (EGB)

SCALE: NOT TO SCALE — 4 / E-2

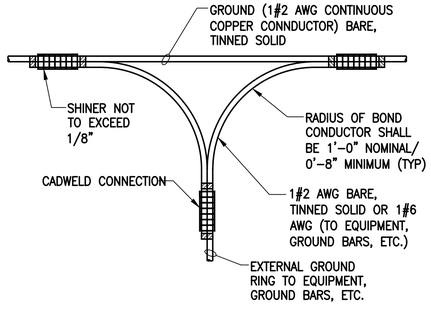


SECTION 'A-A'

NOTE:
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

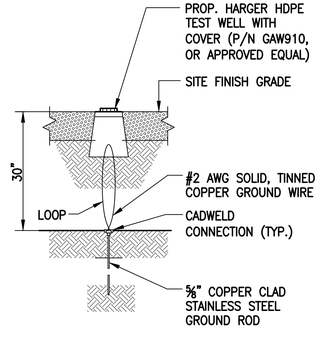
SCALE: NOT TO SCALE — 5 / E-2



NOTE: ALL CONNECTION TO GROUND SHALL BE NON-DIRECTIONAL.

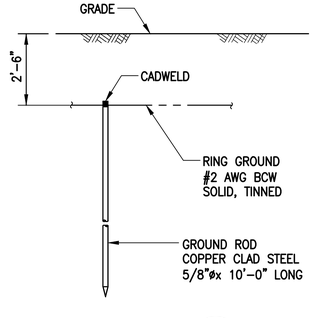
NON-DIRECTIONAL SPLICE

SCALE: NOT TO SCALE — 6 / E-2



GROUND ROD TEST WELL DETAIL

SCALE: NOT TO SCALE — 7 / E-2



GROUND ROD

SCALE: NOT TO SCALE — 8 / E-2

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

SBA
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
5/24/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/24/22	ISSUED FOR CONSTRUCTION	JRV
0	05/10/22	ISSUED FOR REVIEW	JRV

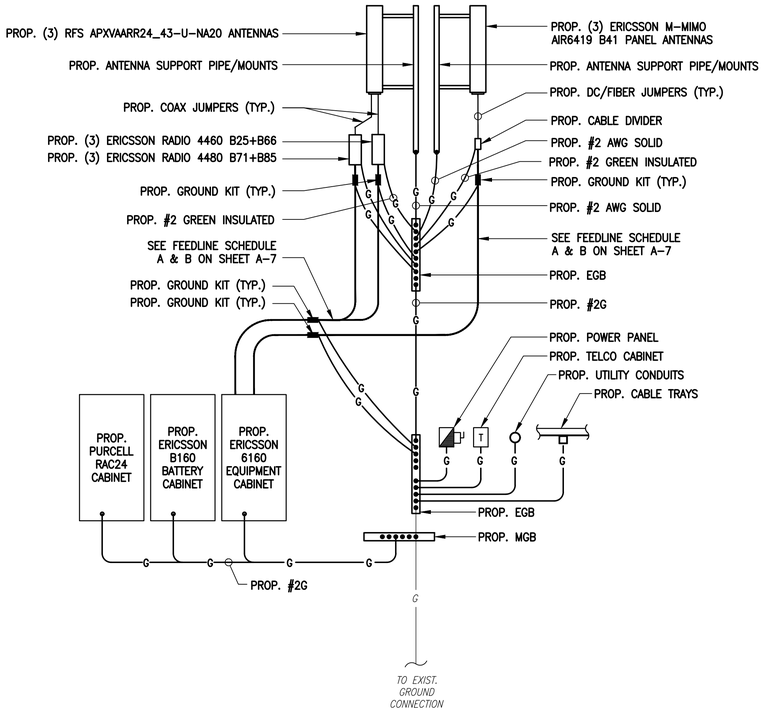
SITE NUMBER:
CTNH394A

SITE ADDRESS:
599 GREENSWOOD ROAD EAST
NORFOLK, CT 06058

SHEET TITLE
SITE ELECTRIC & GROUNDING DETAILS 2 OF 2

SHEET NUMBER
E-2

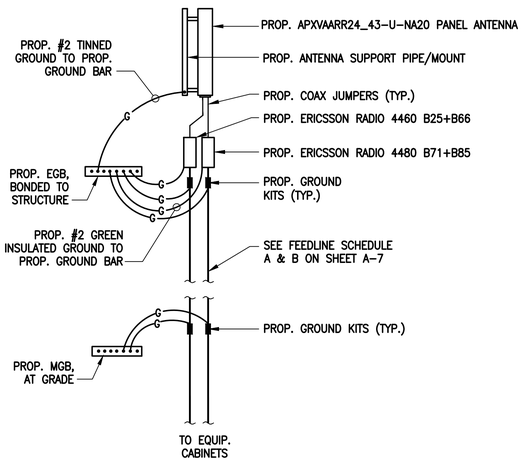
1815.494



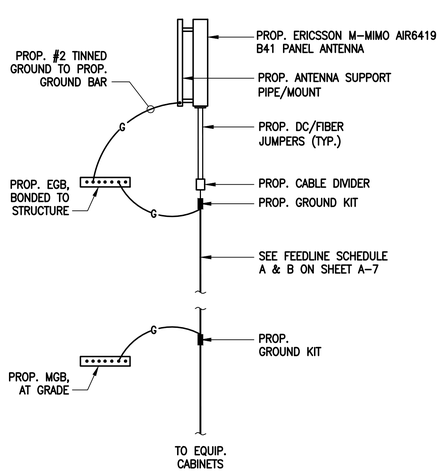
GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

1 / E-3



L700/L600/N600
U2100/L2100/L1900/G1900/U1900
ANTENNA



L2500/N2500 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL

SCALE: NOT TO SCALE

2 / E-3

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 PROP. 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.

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

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134 FLANDERS ROAD, SUITE 125
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www.chappellengineering.com

STATE OF CONNECTICUT
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No. 25997
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5/24/2022

CHECKED BY: JMT

APPROVED BY: JMT

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NORFOLK, CT 06058

SHEET TITLE
ANTENNA ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-3

1815.494

Exhibit D

Structural Analysis Report

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbasite.com

Structural Analysis Report

Client: T-Mobile

Client Site ID / Name: CTNH394A /CTNH394_SBA_Monopole_Norfolk
Application #: 194507, v1

SBA Site ID / Name: CT22102-A / Town of Norfolk DPW

180 ft Monopole

Greenwoods Road East
Norfolk, Connecticut 06058
Lat: 41.983189, Long: -73.153808

Project number: CT22102-TMO-042922

Analysis Results

Tower	44.1%	Pass
Foundation	31.0%	Pass

Change in tower stress due to mount modification / replacement	N/A

Prepared by:

Elizabeth Zubeldia
Structural Engineer II
561-322-7936
ezubeldia@sbasite.com

Reviewed by:

Anantha (Shan) Shanubhogue, P. E.
Senior Manager, Structural Engineering
(561) 981-7390
SShanubhogue@sbasite.com

May 2, 2022

STATE OF CONNECTICUT
ANANTHA B SHANUBHOGUE
33123
LICENSED
PROFESSIONAL ENGINEER

05/02/22

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbasite.com

Structural Analysis Report

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Reviewed by:

Anantha (Shan) Shanubhogue, P. E.
Senior Manager, Structural Engineering
(561) 981-7390
SShanubhogue@sbasite.com

May 2, 2022

Table of Contents

Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Valmont, Project No. 24166R3, dated 07-20-2007
Foundation drawings	Valmont, Drawing No. 211665, dated 07-20-2007
Geotechnical report	DR. Clarence Welti, P.E., P.C., dated 03-04-2007
Modification drawings	N/A
Mount Analysis	TES Project Number: 128078, dated 4/20/2022
Latest SA	SBAE, Project #: CT22102-VZW-061020, dated 06-10-2020

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut/LITCHFIELD/Norfolk
Governing Codes	ANSI/TIA/EIA 222-G, 2015 IBC, 2018 CBC
Basic Wind Speed (3-Sec gust)	89.0 mph (Ultimate Wind Speed: 115 mph)
Wind Speed with Ice (3-Sec gust)	40 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1.00”
Structural Class*	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft
Ground Elevation	1462.68 ft
Seismic Parameter S_s**	0.175
Seismic Parameter S_1	0.065

*This structural analysis is based upon the tower being classified as a structural 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.

**Earthquake effects were ignored as per section 2.7.3 of the TIA-222-G code provisions for Ss < 1.0.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	160.0	2	RFS APL868013 Panel	(1) Low Profile Platform, (1) Handrail Kit SitePro: HRK14, (1) Reinforcement Kit SitePro: PRK-1245L, (12) Crossover plates SitePro SCX1-K	(12) 1 5/8"	Verizon
2		4	Antel LPA-80080-6CF-EDIN-X Panel			
3		3	Antel BXA-171085-12BF Panel			
4		1	Antel BXA-70063-6CF-EDIN-5 Panel			
5		2	Antel BXA-70080-6CF-EDIN-X Panel			
6		6	Kaelus TMA2071F00V1-1 TMA			
7		6	RFS FD9R6004/2C-3L Diplexer			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 194507, v1 from T-Mobile and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	150.0	3	RFS - APXVAARR24_43-U-NA20 - Panel	Platform w/ Hand Rail, [SitePro 12' LP+HR+RS+MP]	(3) 1.9" Fiber	T-Mobile
2		3	Ericsson AIR6419 B41 - Panel			
3		3	Ericsson 4480 B71 + B85			
4		3	Ericsson 4460 B25 + B66			

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

PResults	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	43.0%	44.1%	33.1%

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	31.0%	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be sufficient to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

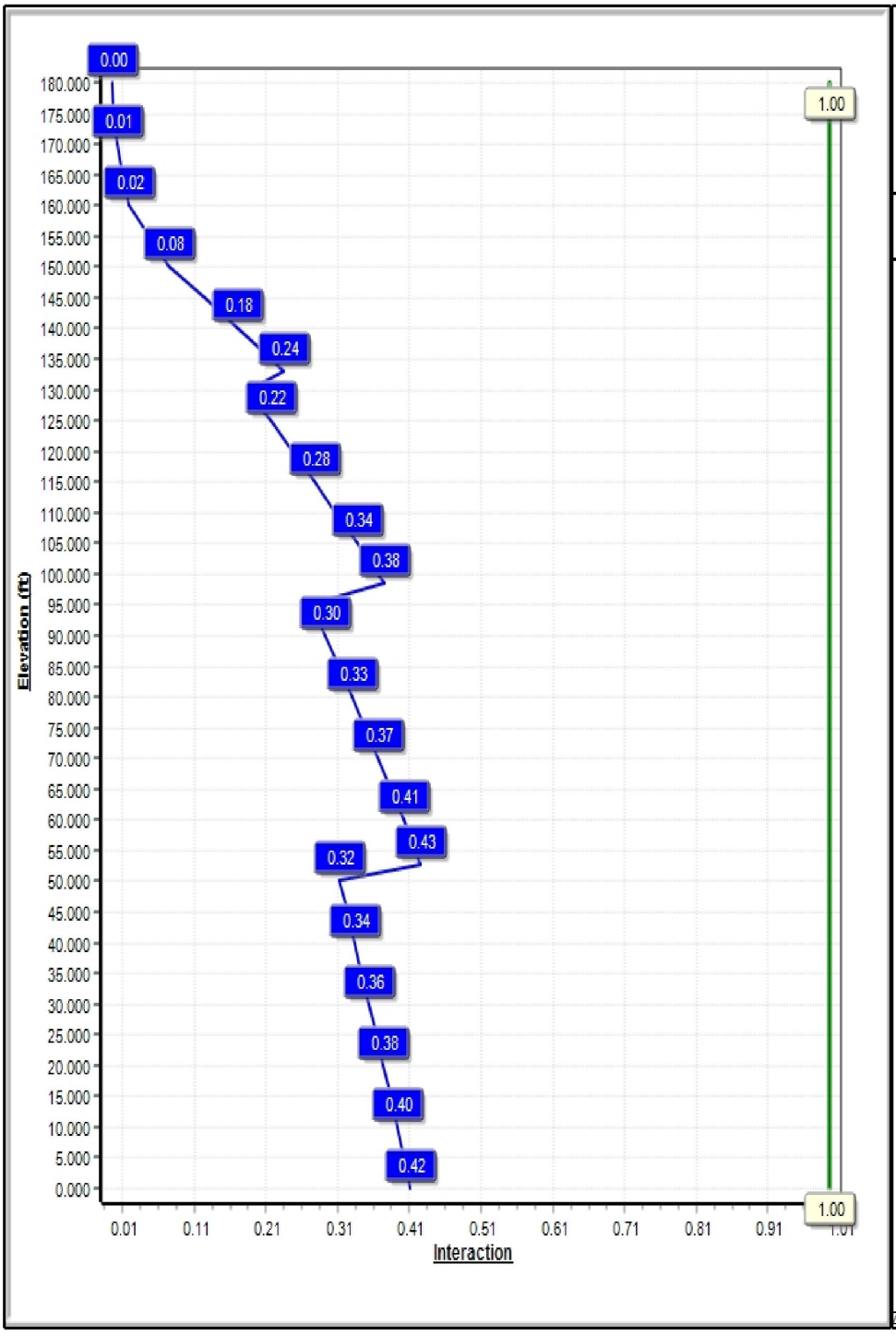
Appendix

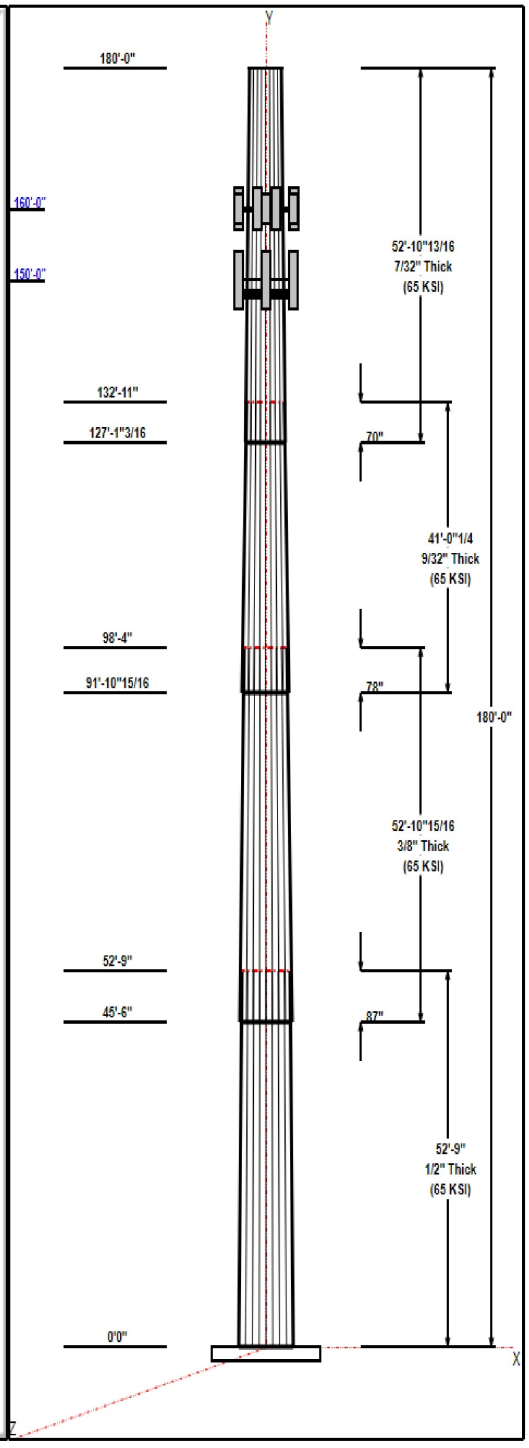
Usage Diagram - Max Ratio 43.04% at 52.8ft

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site	**Exposure:**	C	
Height:	180.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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

Load Case : 1.2D + 1.6W 89 mph Wind





Structure: CT22102-A

Type: Tapered
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.14000

5/2/2022

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	47.12	54.50	0.500		0.14000	65
2	52.91	41.47	48.88	0.375	Slip	0.14000	65
3	41.02	37.20	42.95	0.281	Slip	0.14000	65
4	52.90	31.05	38.46	0.219	Slip	0.14000	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
160.00	160.00	2	RFS APL868013 Panel	Verizon
160.00	160.00	4	Antel	Verizon
160.00	160.00	3	Antel BXA-171085-12BF	Verizon
160.00	160.00	1	Antel	Verizon
160.00	160.00	2	Antel	Verizon
160.00	160.00	1	Low Profile Platform	Verizon
160.00	160.00	6	RFS FD9R6004/2C-3L	Verizon
150.00	150.00	1	12' LP+HR+RS+MP	T-Mobile
150.00	150.00	3	Ericsson 4480 B71 + B85	T-Mobile
150.00	150.00	3	Ericsson 4460 B25 + B66	T-Mobile
150.00	150.00	3	RFS -	T-Mobile
150.00	150.00	3	Ericsson AIR6419 B41	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	160.00	Inside	1 5/8" Coax	Verizon
0.00	150.00	Inside	1.9" Fiber	T-Mobile

Anchor Bolts

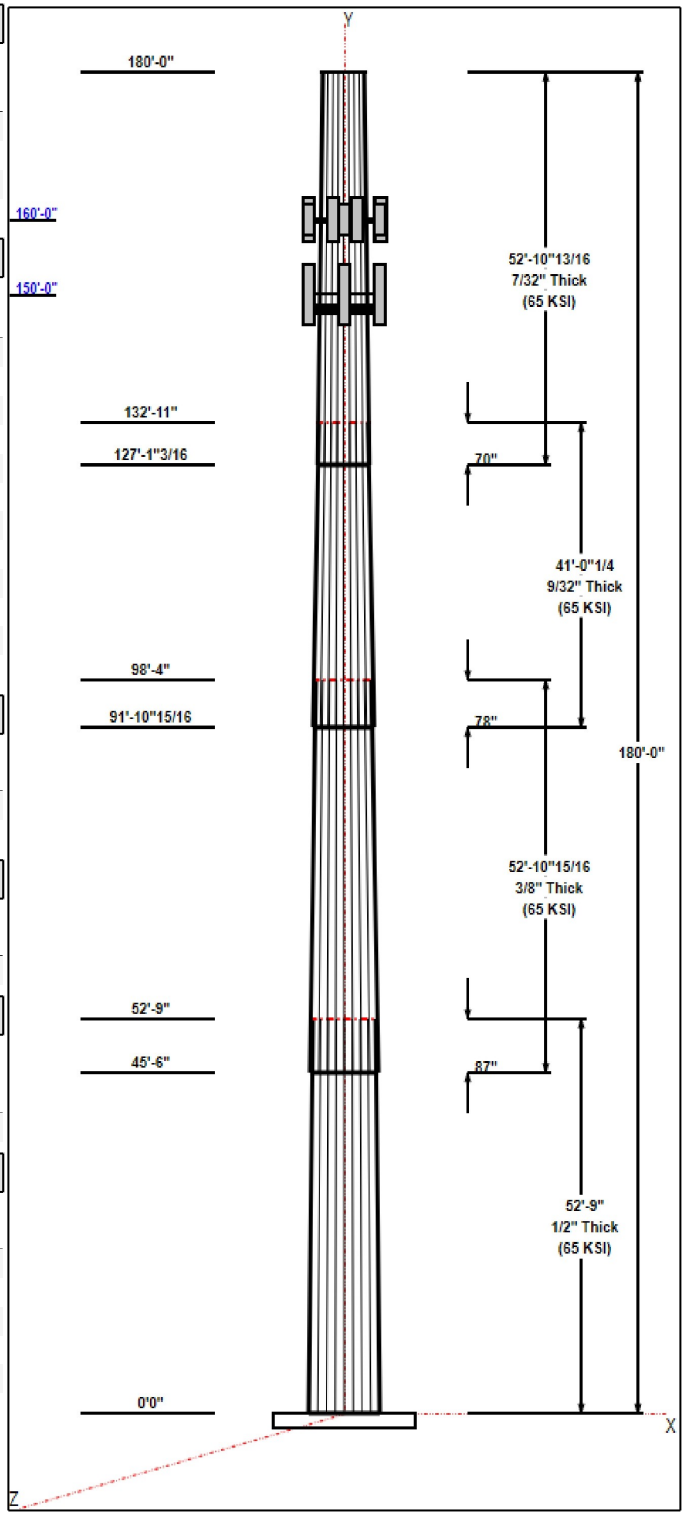
Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	68.9	60.0	Round

Reactions

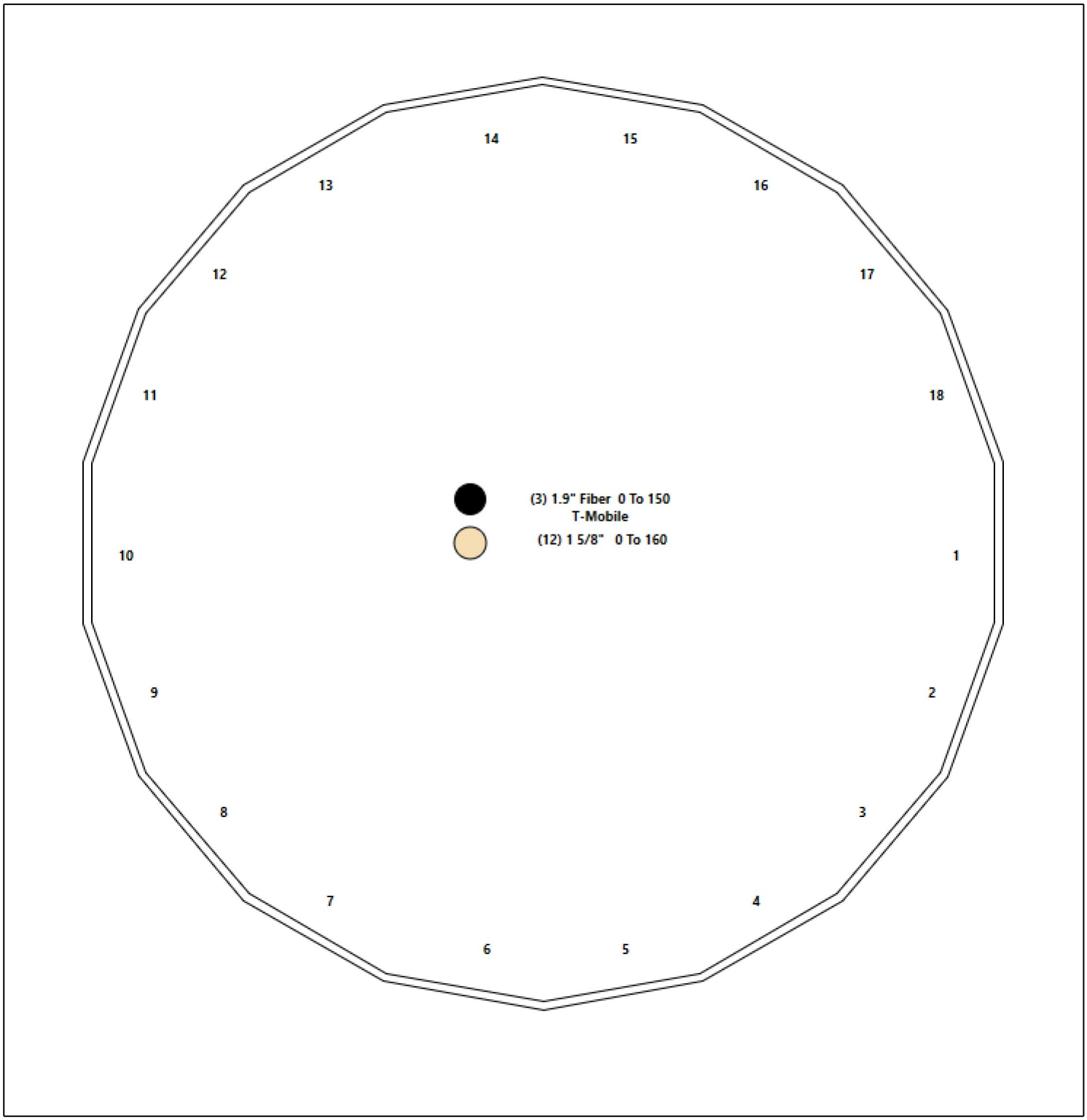
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 89 mph Wind	2808.7	24.5	49.1
0.9D + 1.6W 89 mph Wind	2784.1	24.5	36.8
1.2D + 1.0Di + 1.0Wi 40 mph Wind	622.0	5.6	62.1
1.2D + 1.0E	135.9	1.3	49.1
0.9D + 1.0E	134.7	1.3	36.9
1.0D + 1.0W 60 mph Wind	793.4	6.9	40.9



Structure: CT22102-A - Coax Line Placement

Type:
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)

5/2/2022



Shaft Properties

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 4

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	52.750	0.5000	65		0.00	14,330
2	18	52.910	0.3750	65	Slip	87.00	9,600
3	18	41.020	0.2813	65	Slip	78.00	4,958
4	18	52.903	0.2188	65	Slip	70.00	4,316
					Total Shaft Weight:		**33,205**

	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	54.50	0.00	85.69	31571.53	17.81	109.00	47.12	52.75	73.98	20309.1	15.20	94.23	0.140000
2	48.88	45.50	57.73	17160.71	21.57	130.35	41.47	98.41	48.91	10438.1	18.09	110.5	0.140000
3	42.95	91.91	38.08	8758.24	25.51	152.69	37.20	132.93	32.96	5676.22	21.91	132.2	0.140000
4	38.46	127.1	26.55	4904.20	29.59	175.80	31.05	180.00	21.41	2570.79	23.62	141.9	0.140000

Load Summary

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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	

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	160.00	RFS APL868013 Panel	2	7.00	3.61	0.90	115.17	3.732	0.90	0.00	0.00
2	160.00	Antel LPA-80080-6CF-EDIN-X Panel	4	21.00	8.63	0.76	182.98	11.619	0.76	0.00	0.00
3	160.00	Antel BXA-171085-12BF Panel	3	15.00	4.73	0.88	111.97	7.435	0.88	0.00	0.00
4	160.00	Antel BXA-70063-6CF-EDIN-5 Panel	1	17.00	7.57	0.78	136.71	10.681	0.78	0.00	0.00
5	160.00	Antel BXA-70080-6CF-EDIN-X Panel	2	18.00	5.77	0.90	145.51	8.162	0.90	0.00	0.00
6	160.00	Low Profile Platform	1	1500.00	22.00	1.00	2817.39	39.776	1.00	0.00	0.00
7	160.00	RFS FD9R6004/2C-3L Diplexer	6	3.00	0.37	0.62	12.32	0.829	0.63	0.00	0.00
8	150.00	12' LP+HR+RS+MP (RMQP-496-HK)	1	2314.60	35.30	1.00	5546.18	51.145	1.00	0.00	0.00
9	150.00	Ericsson 4480 B71 + B85	3	93.00	2.42	0.75	154.03	3.045	0.77	0.00	0.00
10	150.00	Ericsson 4460 B25 + B66	3	104.00	2.14	0.85	162.08	2.723	0.86	11.90	0.00
11	150.00	RFS - APXVAARR24_43-U-NA20	3	128.00	20.24	0.73	580.14	22.105	0.72	0.00	0.00
12	150.00	Ericsson AIR6419 B41	3	83.30	6.32	0.73	236.24	7.335	0.74	0.00	0.00
		Totals:	**32**	**5,253.50**			**13,560.81**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	160.00	(12) 1 5/8" Coax	0.00	Inside
0.00	150.00	(3) 1.9" Fiber	0.00	Inside

Shaft Section Properties

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	54.500	85.695	31571.5	17.81	109.00	80.5	1141.	0.0
5.00		0.5000	53.800	84.584	30359.6	17.56	107.60	80.7	1111.	1448.6
10.00		0.5000	53.100	83.473	29179.1	17.32	106.20	81.0	1082.	1429.7
15.00		0.5000	52.400	82.362	28029.6	17.07	104.80	81.3	1053.	1410.8
20.00		0.5000	51.700	81.251	26910.7	16.82	103.40	81.6	1025.	1391.9
25.00		0.5000	51.000	80.141	25821.9	16.57	102.00	81.9	997.2	1373.0
30.00		0.5000	50.300	79.030	24763.0	16.33	100.60	82.2	969.7	1354.1
35.00		0.5000	49.600	77.919	23733.3	16.08	99.20	82.5	942.5	1335.2
40.00		0.5000	48.900	76.808	22732.7	15.83	97.80	82.5	915.6	1316.3
45.00		0.5000	48.200	75.697	21760.5	15.59	96.40	82.5	889.2	1297.4
45.50	Bot - Section 2	0.5000	48.130	75.586	21664.9	15.56	96.26	82.5	886.6	128.7
50.00		0.5000	47.500	74.586	20816.5	15.34	95.00	82.5	863.2	2028.0
52.75	Top - Section 1	0.3750	47.865	56.523	16105.8	21.10	127.64	0.0	0.0	1226.2
55.00		0.3750	47.550	56.148	15787.4	20.95	126.80	76.8	653.9	431.3
60.00		0.3750	46.850	55.315	15095.0	20.62	124.93	77.1	634.6	948.2
65.00		0.3750	46.150	54.482	14423.2	20.29	123.07	77.5	615.6	934.0
70.00		0.3750	45.450	53.649	13771.6	19.96	121.20	77.9	596.8	919.9
75.00		0.3750	44.750	52.815	13139.9	19.63	119.33	78.3	578.3	905.7
80.00		0.3750	44.050	51.982	12527.8	19.30	117.47	78.7	560.2	891.5
85.00		0.3750	43.350	51.149	11935.0	18.97	115.60	79.1	542.3	877.3
90.00		0.3750	42.650	50.316	11361.3	18.64	113.73	79.5	524.7	863.2
91.91	Bot - Section 3	0.3750	42.383	49.998	11147.0	18.52	113.02	79.6	518.0	326.0
95.00		0.3750	41.950	49.483	10806.2	18.31	111.87	79.9	507.4	921.4
98.41	Top - Section 2	0.2813	42.035	37.272	8209.7	24.94	149.46	0.0	0.0	1005.8
100.00		0.2813	41.812	37.073	8079.1	24.80	148.67	72.2	380.6	201.1
105.00		0.2813	41.112	36.448	7677.4	24.36	146.18	72.7	367.8	625.4
110.00		0.2813	40.412	35.823	7289.3	23.93	143.69	73.3	355.3	614.8
115.00		0.2813	39.712	35.199	6914.5	23.49	141.20	73.8	342.9	604.2
120.00		0.2813	39.012	34.574	6552.7	23.05	138.71	74.3	330.8	593.5
125.00		0.2813	38.312	33.949	6203.8	22.61	136.22	74.8	318.9	582.9
127.10	Bot - Section 4	0.2813	38.019	33.687	6061.3	22.43	135.18	75.0	314.0	241.3
130.00		0.2813	37.612	33.324	5867.5	22.17	133.73	75.3	307.3	591.9
132.93	Top - Section 3	0.2188	37.640	25.981	4596.6	28.93	172.07	0.0	0.0	590.9
135.00		0.2188	37.350	25.780	4490.7	28.70	170.74	67.6	236.8	182.3
140.00		0.2188	36.650	25.294	4241.5	28.13	167.54	68.3	227.9	434.5
145.00		0.2188	35.950	24.808	4001.6	27.57	164.34	69.0	219.2	426.2
150.00		0.2188	35.250	24.322	3771.0	27.00	161.14	69.6	210.7	417.9
155.00		0.2188	34.550	23.836	3549.5	26.44	157.94	70.3	202.3	409.7
160.00		0.2188	33.850	23.350	3336.7	25.87	154.74	71.0	194.2	401.4
165.00		0.2188	33.150	22.864	3132.7	25.31	151.54	71.6	186.1	393.1
170.00		0.2188	32.450	22.378	2937.1	24.75	148.34	72.3	178.3	384.9
175.00		0.2188	31.750	21.892	2749.9	24.18	145.14	73.0	170.6	376.6
180.00		0.2188	31.050	21.406	2570.8	23.62	141.94	73.6	163.1	368.3
										33204.8

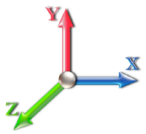
Wind Loading - Shaft

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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	

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.374	18.01	378.41	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	16.374	18.01	373.55	0.650	0.000	5.00	22.911	14.89	429.2	0.0	1738.3
10.00		1.00	0.85	16.374	18.01	368.69	0.650	0.000	5.00	22.614	14.70	423.6	0.0	1715.6
15.00		1.00	0.85	16.374	18.01	363.83	0.650	0.000	5.00	22.318	14.51	418.1	0.0	1692.9
20.00		1.00	0.90	17.374	19.11	369.76	0.650	0.000	5.00	22.022	14.31	437.7	0.0	1670.2
25.00		1.00	0.95	18.209	20.03	373.43	0.650	0.000	5.00	21.726	14.12	452.6	0.0	1647.5
30.00		1.00	0.98	18.922	20.81	375.44	0.650	0.000	5.00	21.430	13.93	463.9	0.0	1624.9
35.00		1.00	1.01	19.546	21.50	376.27	0.650	0.000	5.00	21.134	13.74	472.6	0.0	1602.2
40.00		1.00	1.04	20.103	22.11	376.21	0.650	0.000	5.00	20.837	13.54	479.2	0.0	1579.5
45.00		1.00	1.07	20.608	22.67	375.45	0.650	0.000	5.00	20.541	13.35	484.3	0.0	1556.8
45.50	Bot - Section 2	1.00	1.07	20.656	22.72	375.34	0.650	0.000	0.50	2.038	1.32	48.2	0.0	154.4
50.00		1.00	1.09	21.070	23.18	374.12	0.650	0.000	4.50	18.493	12.02	445.8	0.0	2433.6
52.75	Top - Section 1	1.00	1.11	21.309	23.44	373.19	0.650	0.000	2.75	11.183	7.27	272.6	0.0	1471.4
55.00		1.00	1.12	21.497	23.65	378.29	0.650	0.000	2.25	9.083	5.90	223.4	0.0	517.6
60.00		1.00	1.14	21.895	24.08	376.15	0.650	0.000	5.00	19.970	12.98	500.2	0.0	1137.9
65.00		1.00	1.16	22.267	24.49	373.67	0.650	0.000	5.00	19.674	12.79	501.2	0.0	1120.8
70.00		1.00	1.17	22.617	24.88	370.88	0.650	0.000	5.00	19.378	12.60	501.4	0.0	1103.8
75.00		1.00	1.19	22.948	25.24	367.83	0.650	0.000	5.00	19.082	12.40	500.9	0.0	1086.8
80.00		1.00	1.21	23.262	25.59	364.55	0.650	0.000	5.00	18.785	12.21	499.9	0.0	1069.8
85.00		1.00	1.22	23.561	25.92	361.05	0.650	0.000	5.00	18.489	12.02	498.3	0.0	1052.8
90.00		1.00	1.24	23.846	26.23	357.36	0.650	0.000	5.00	18.193	11.83	496.3	0.0	1035.8
91.91	Bot - Section 3	1.00	1.24	23.952	26.35	355.91	0.650	0.000	1.91	6.872	4.47	188.3	0.0	391.2
95.00		1.00	1.25	24.119	26.53	353.51	0.650	0.000	3.09	11.172	7.26	308.3	0.0	1105.7
98.41	Top - Section 2	1.00	1.26	24.299	26.73	350.78	0.650	0.000	3.41	12.198	7.93	339.1	0.0	1207.0
100.00		1.00	1.27	24.381	26.82	354.25	0.650	0.000	1.59	5.641	3.67	157.3	0.0	241.3
105.00		1.00	1.28	24.632	27.10	350.12	0.650	0.000	5.00	17.543	11.40	494.3	0.0	750.5
110.00		1.00	1.29	24.875	27.36	345.85	0.650	0.000	5.00	17.246	11.21	490.8	0.0	737.8
115.00		1.00	1.30	25.109	27.62	341.45	0.650	0.000	5.00	16.950	11.02	486.9	0.0	725.0
120.00		1.00	1.32	25.335	27.87	336.94	0.650	0.000	5.00	16.654	10.83	482.7	0.0	712.3
125.00		1.00	1.33	25.553	28.11	332.32	0.650	0.000	5.00	16.358	10.63	478.2	0.0	699.5
127.10	Bot - Section 4	1.00	1.33	25.643	28.21	330.35	0.650	0.000	2.10	6.771	4.40	198.6	0.0	289.5
130.00		1.00	1.34	25.765	28.34	327.59	0.650	0.000	2.90	9.398	6.11	277.0	0.0	710.3
132.93	Top - Section 3	1.00	1.34	25.886	28.48	324.78	0.650	0.000	2.93	9.383	6.10	277.9	0.0	709.0
135.00		1.00	1.35	25.971	28.57	326.60	0.650	0.000	2.07	6.568	4.27	195.1	0.0	218.8
140.00		1.00	1.36	26.170	28.79	321.71	0.650	0.000	5.00	15.654	10.18	468.7	0.0	521.4
145.00		1.00	1.37	26.364	29.00	316.73	0.650	0.000	5.00	15.358	9.98	463.2	0.0	511.5
150.00	Appurtenance(s)	1.00	1.38	26.553	29.21	311.68	0.650	0.000	5.00	15.062	9.79	457.5	0.0	501.5
155.00		1.00	1.39	26.737	29.41	306.54	0.650	0.000	5.00	14.766	9.60	451.7	0.0	491.6
160.00	Appurtenance(s)	1.00	1.40	26.917	29.61	301.34	0.650	0.000	5.00	14.470	9.41	445.6	0.0	481.7
165.00		1.00	1.41	27.091	29.80	296.06	0.650	0.000	5.00	14.174	9.21	439.3	0.0	471.8
170.00		1.00	1.42	27.262	29.99	290.72	0.650	0.000	5.00	13.877	9.02	432.8	0.0	461.8
175.00		1.00	1.42	27.429	30.17	285.32	0.650	0.000	5.00	13.581	8.83	426.2	0.0	451.9
180.00		1.00	1.43	27.592	30.35	279.86	0.650	0.000	5.00	13.285	8.64	419.4	0.0	442.0
								Totals:	**180.00**			**16,928.0**		**39,845.7**

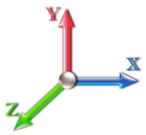
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	Antel	4	26.917	29.608	0.61	0.80	20.99	100.80	0.000	0.000	994.27	0.00	0.00
2	160.00	Low Profile Platform	1	26.917	29.608	1.00	1.00	22.00	1800.00	0.000	0.000	1042.21	0.00	0.00
3	160.00	Antel	2	26.917	29.608	0.72	0.80	8.31	43.20	0.000	0.000	393.61	0.00	0.00
4	160.00	Antel	1	26.917	29.608	0.62	0.80	4.72	20.40	0.000	0.000	223.78	0.00	0.00
5	160.00	Antel BXA-171085-12BF	3	26.917	29.608	0.70	0.80	9.99	54.00	0.000	0.000	473.25	0.00	0.00
6	160.00	RFS FD9R6004/2C-3L	6	26.917	29.608	0.50	0.80	1.10	21.60	0.000	0.000	52.16	0.00	0.00
7	160.00	RFS APL868013 Panel	2	26.917	29.608	0.72	0.80	5.20	16.80	0.000	0.000	246.26	0.00	0.00
8	150.00	Ericsson AIR6419 B41	3	26.553	29.209	0.55	0.75	10.38	299.88	0.000	0.000	485.12	0.00	0.00
9	150.00	RFS -	3	26.553	29.209	0.55	0.75	33.24	460.80	0.000	0.000	1553.63	0.00	0.00
10	150.00	Ericsson 4460 B25 + B66	3	26.553	29.209	0.64	0.75	4.09	374.40	13.391	0.000	191.27	1600.8	0.00
11	150.00	Ericsson 4480 B71 + B85	3	26.553	29.209	0.56	0.75	4.08	334.80	0.000	0.000	190.85	0.00	0.00
12	150.00	12' LP+HR+RS+MP	1	26.553	29.209	1.00	1.00	35.30	2777.52	0.000	0.000	1649.70	0.00	0.00
							Totals:		**6,304.20**			**7,496.12**		

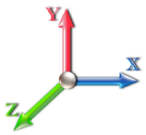
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		429.16	1832.94	0.00	0.00
10.00		423.62	1810.26	0.00	0.00
15.00		418.07	1787.58	0.00	0.00
20.00		437.70	1764.90	0.00	0.00
25.00		452.59	1742.22	0.00	0.00
30.00		463.88	1719.54	0.00	0.00
35.00		472.56	1696.86	0.00	0.00
40.00		479.22	1674.18	0.00	0.00
45.00		484.27	1651.50	0.00	0.00
45.50		48.16	163.90	0.00	0.00
50.00		445.76	2518.84	0.00	0.00
52.75		272.62	1523.46	0.00	0.00
55.00		223.38	560.19	0.00	0.00
60.00		500.20	1232.53	0.00	0.00
65.00		501.16	1215.52	0.00	0.00
70.00		501.38	1198.51	0.00	0.00
75.00		500.94	1181.50	0.00	0.00
80.00		499.91	1164.49	0.00	0.00
85.00		498.35	1147.48	0.00	0.00
90.00		496.30	1130.47	0.00	0.00
91.91		188.28	427.35	0.00	0.00
95.00		308.27	1164.20	0.00	0.00
98.41		339.08	1271.57	0.00	0.00
100.00		157.32	271.45	0.00	0.00
105.00		494.34	845.21	0.00	0.00
110.00		490.78	832.45	0.00	0.00
115.00		486.88	819.70	0.00	0.00
120.00		482.68	806.94	0.00	0.00
125.00		478.19	794.18	0.00	0.00
127.10		198.64	329.23	0.00	0.00
130.00		277.01	765.25	0.00	0.00
132.93		277.87	764.53	0.00	0.00
135.00		195.13	257.95	0.00	0.00
140.00		468.68	616.06	0.00	0.00
145.00		463.22	606.13	0.00	0.00
150.00	(13) attachments	4528.12	4843.61	1600.86	0.00
155.00		451.65	566.49	0.00	0.00
160.00	(19) attachments	3871.11	2613.37	0.00	0.00
165.00		439.28	471.76	0.00	0.00
170.00		432.81	461.84	0.00	0.00
175.00		426.17	451.92	0.00	0.00
180.00		419.35	442.00	0.00	0.00
	Totals:	**24,424.11**	**49,140.09**	**1,600.86**	**0.00**

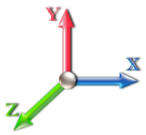
Calculated Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-49.11	-24.48	-1.59	-2808.6	-0.01	2808.67	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.416
5.00	-47.23	-24.15	-1.59	-2686.2	-0.01	2686.29	6146.71	3073.36	13441.6	6730.83	0.07	-0.124	0.000	0.407
10.00	-45.37	-23.82	-1.59	-2565.5	-0.01	2565.54	6087.80	3043.90	13136.3	6577.95	0.26	-0.247	0.000	0.398
15.00	-43.53	-23.48	-1.59	-2446.4	-0.01	2446.46	6028.30	3014.15	12833.2	6426.17	0.59	-0.369	0.000	0.388
20.00	-41.72	-23.12	-1.59	-2329.0	-0.01	2329.06	5968.23	2984.11	12532.3	6275.50	1.04	-0.490	0.000	0.378
25.00	-39.94	-22.73	-1.59	-2213.4	-0.01	2213.47	5907.57	2953.79	12233.7	6125.97	1.62	-0.610	0.000	0.368
30.00	-38.18	-22.33	-1.59	-2099.8	-0.02	2099.81	5846.34	2923.17	11937.4	5977.61	2.32	-0.729	0.000	0.358
35.00	-36.44	-21.91	-1.59	-1988.1	-0.02	1988.18	5784.52	2892.26	11643.5	5830.45	3.15	-0.846	-0.001	0.347
40.00	-34.73	-21.47	-1.59	-1878.6	-0.02	1878.66	5706.45	2853.23	11321.0	5668.93	4.09	-0.962	-0.001	0.338
45.00	-33.07	-20.99	-1.59	-1771.3	-0.02	1771.31	5623.92	2811.96	10994.2	5505.32	5.16	-1.077	-0.001	0.328
45.50	-32.89	-20.97	-1.59	-1760.8	-0.02	1760.82	5615.67	2807.83	10961.8	5489.09	5.28	-1.088	-0.001	0.327
50.00	-30.35	-20.52	-1.59	-1666.4	-0.02	1666.44	5541.39	2770.70	10672.3	5344.09	6.35	-1.189	-0.001	0.317
52.75	-28.81	-20.24	-1.59	-1610.0	-0.02	1610.01	3896.09	1948.05	7602.46	3806.88	7.05	-1.251	-0.001	0.430
55.00	-28.22	-20.05	-1.59	-1564.4	-0.02	1564.46	3879.06	1939.53	7518.61	3764.89	7.66	-1.301	-0.001	0.423
60.00	-26.96	-19.59	-1.59	-1464.1	-0.02	1464.19	3840.77	1920.38	7333.07	3671.98	9.09	-1.437	-0.001	0.406
65.00	-25.71	-19.11	-1.59	-1366.2	-0.03	1366.25	3801.90	1900.95	7148.65	3579.64	10.67	-1.571	-0.001	0.389
70.00	-24.48	-18.63	-1.59	-1270.6	-0.03	1270.69	3762.45	1881.23	6965.41	3487.88	12.38	-1.701	-0.001	0.371
75.00	-23.28	-18.15	-1.59	-1177.5	-0.03	1177.52	3722.43	1861.21	6783.41	3396.75	14.23	-1.827	-0.002	0.353
80.00	-22.10	-17.66	-1.59	-1086.7	-0.03	1086.79	3681.82	1840.91	6602.68	3306.25	16.21	-1.950	-0.002	0.335
85.00	-20.93	-17.16	-1.59	-998.51	-0.03	998.51	3640.63	1820.31	6423.28	3216.42	18.32	-2.068	-0.002	0.316
90.00	-19.80	-16.65	-1.59	-912.71	-0.04	912.71	3598.86	1799.43	6245.27	3127.28	20.55	-2.182	-0.002	0.297
91.91	-19.36	-16.46	-1.59	-880.91	-0.04	880.91	3582.75	1791.37	6177.64	3093.41	21.43	-2.225	-0.002	0.290
95.00	-18.19	-16.13	-1.59	-830.04	-0.04	830.04	3556.51	1778.25	6068.68	3038.85	22.89	-2.292	-0.002	0.278
98.41	-16.92	-15.76	-1.59	-775.04	-0.04	775.04	2417.34	1208.67	4152.00	2079.09	24.55	-2.365	-0.002	0.380
100.00	-16.63	-15.61	-1.60	-749.99	-0.04	749.99	2409.93	1204.97	4117.06	2061.59	25.35	-2.398	-0.003	0.371
105.00	-15.78	-15.11	-1.60	-671.93	-0.05	671.93	2386.24	1193.12	4007.42	2006.69	27.93	-2.523	-0.003	0.342
110.00	-14.94	-14.62	-1.60	-596.36	-0.05	596.36	2361.98	1180.99	3898.19	1951.99	30.63	-2.640	-0.003	0.312
115.00	-14.12	-14.12	-1.60	-523.29	-0.05	523.29	2337.13	1168.56	3789.44	1897.54	33.46	-2.750	-0.003	0.282
120.00	-13.31	-13.62	-1.60	-452.70	-0.06	452.70	2311.70	1155.85	3681.20	1843.33	36.39	-2.850	-0.004	0.251
125.00	-12.53	-13.11	-1.60	-384.62	-0.06	384.62	2285.69	1142.85	3573.52	1789.42	39.42	-2.941	-0.004	0.221
127.10	-12.20	-12.91	-1.60	-357.12	-0.06	357.12	2274.61	1137.31	3528.55	1766.90	40.72	-2.976	-0.004	0.208
130.00	-11.44	-12.60	-1.60	-319.65	-0.06	319.65	2259.10	1129.55	3466.46	1735.81	42.55	-3.023	-0.004	0.189
132.93	-10.69	-12.29	-1.60	-282.73	-0.07	282.73	1575.41	787.71	2427.26	1215.44	44.41	-3.065	-0.005	0.240
135.00	-10.43	-12.09	-1.60	-257.30	-0.07	257.30	1569.59	784.79	2399.45	1201.51	45.75	-3.093	-0.005	0.221
140.00	-9.83	-11.60	-1.60	-196.86	-0.07	196.86	1555.10	777.55	2332.23	1167.85	49.03	-3.165	-0.005	0.175
145.00	-9.24	-11.11	-1.60	-138.87	-0.08	138.87	1540.04	770.02	2265.00	1134.18	52.37	-3.222	-0.006	0.129
150.00	-4.65	-6.32	0.00	-83.33	0.01	83.33	1524.40	762.20	2197.80	1100.53	55.77	-3.261	-0.007	0.079
155.00	-4.11	-5.83	0.00	-51.75	0.01	51.75	1508.17	754.09	2130.69	1066.93	59.20	-3.287	-0.007	0.051
160.00	-1.73	-1.82	0.00	-22.57	0.00	22.57	1491.37	745.68	2063.72	1033.39	62.65	-3.301	-0.007	0.023
165.00	-1.28	-1.35	0.00	-13.47	0.00	13.47	1473.98	736.99	1996.93	999.95	66.11	-3.309	-0.007	0.014
170.00	-0.84	-0.90	0.00	-6.70	0.00	6.70	1456.02	728.01	1930.38	966.63	69.57	-3.314	-0.007	0.008
175.00	-0.42	-0.44	0.00	-2.22	0.00	2.22	1437.47	718.73	1864.13	933.45	73.04	-3.316	-0.007	0.003
180.00	0.00	-0.42	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	76.52	-3.316	-0.007	0.000

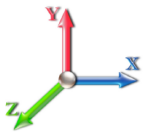
Wind Loading - Shaft

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.374	18.01	378.41	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	16.374	18.01	373.55	0.650	0.000	5.00	22.911	14.89	429.2	0.0	1303.7
10.00		1.00	0.85	16.374	18.01	368.69	0.650	0.000	5.00	22.614	14.70	423.6	0.0	1286.7
15.00		1.00	0.85	16.374	18.01	363.83	0.650	0.000	5.00	22.318	14.51	418.1	0.0	1269.7
20.00		1.00	0.90	17.374	19.11	369.76	0.650	0.000	5.00	22.022	14.31	437.7	0.0	1252.7
25.00		1.00	0.95	18.209	20.03	373.43	0.650	0.000	5.00	21.726	14.12	452.6	0.0	1235.7
30.00		1.00	0.98	18.922	20.81	375.44	0.650	0.000	5.00	21.430	13.93	463.9	0.0	1218.6
35.00		1.00	1.01	19.546	21.50	376.27	0.650	0.000	5.00	21.134	13.74	472.6	0.0	1201.6
40.00		1.00	1.04	20.103	22.11	376.21	0.650	0.000	5.00	20.837	13.54	479.2	0.0	1184.6
45.00		1.00	1.07	20.608	22.67	375.45	0.650	0.000	5.00	20.541	13.35	484.3	0.0	1167.6
45.50	Bot - Section 2	1.00	1.07	20.656	22.72	375.34	0.650	0.000	0.50	2.038	1.32	48.2	0.0	115.8
50.00		1.00	1.09	21.070	23.18	374.12	0.650	0.000	4.50	18.493	12.02	445.8	0.0	1825.2
52.75	Top - Section 1	1.00	1.11	21.309	23.44	373.19	0.650	0.000	2.75	11.183	7.27	272.6	0.0	1103.5
55.00		1.00	1.12	21.497	23.65	378.29	0.650	0.000	2.25	9.083	5.90	223.4	0.0	388.2
60.00		1.00	1.14	21.895	24.08	376.15	0.650	0.000	5.00	19.970	12.98	500.2	0.0	853.4
65.00		1.00	1.16	22.267	24.49	373.67	0.650	0.000	5.00	19.674	12.79	501.2	0.0	840.6
70.00		1.00	1.17	22.617	24.88	370.88	0.650	0.000	5.00	19.378	12.60	501.4	0.0	827.9
75.00		1.00	1.19	22.948	25.24	367.83	0.650	0.000	5.00	19.082	12.40	500.9	0.0	815.1
80.00		1.00	1.21	23.262	25.59	364.55	0.650	0.000	5.00	18.785	12.21	499.9	0.0	802.4
85.00		1.00	1.22	23.561	25.92	361.05	0.650	0.000	5.00	18.489	12.02	498.3	0.0	789.6
90.00		1.00	1.24	23.846	26.23	357.36	0.650	0.000	5.00	18.193	11.83	496.3	0.0	776.8
91.91	Bot - Section 3	1.00	1.24	23.952	26.35	355.91	0.650	0.000	1.91	6.872	4.47	188.3	0.0	293.4
95.00		1.00	1.25	24.119	26.53	353.51	0.650	0.000	3.09	11.172	7.26	308.3	0.0	829.3
98.41	Top - Section 2	1.00	1.26	24.299	26.73	350.78	0.650	0.000	3.41	12.198	7.93	339.1	0.0	905.2
100.00		1.00	1.27	24.381	26.82	354.25	0.650	0.000	1.59	5.641	3.67	157.3	0.0	181.0
105.00		1.00	1.28	24.632	27.10	350.12	0.650	0.000	5.00	17.543	11.40	494.3	0.0	562.9
110.00		1.00	1.29	24.875	27.36	345.85	0.650	0.000	5.00	17.246	11.21	490.8	0.0	553.3
115.00		1.00	1.30	25.109	27.62	341.45	0.650	0.000	5.00	16.950	11.02	486.9	0.0	543.8
120.00		1.00	1.32	25.335	27.87	336.94	0.650	0.000	5.00	16.654	10.83	482.7	0.0	534.2
125.00		1.00	1.33	25.553	28.11	332.32	0.650	0.000	5.00	16.358	10.63	478.2	0.0	524.6
127.10	Bot - Section 4	1.00	1.33	25.643	28.21	330.35	0.650	0.000	2.10	6.771	4.40	198.6	0.0	217.1
130.00		1.00	1.34	25.765	28.34	327.59	0.650	0.000	2.90	9.398	6.11	277.0	0.0	532.7
132.93	Top - Section 3	1.00	1.34	25.886	28.48	324.78	0.650	0.000	2.93	9.383	6.10	277.9	0.0	531.8
135.00		1.00	1.35	25.971	28.57	326.60	0.650	0.000	2.07	6.568	4.27	195.1	0.0	164.1
140.00		1.00	1.36	26.170	28.79	321.71	0.650	0.000	5.00	15.654	10.18	468.7	0.0	391.0
145.00		1.00	1.37	26.364	29.00	316.73	0.650	0.000	5.00	15.358	9.98	463.2	0.0	383.6
150.00	Appurtenance(s)	1.00	1.38	26.553	29.21	311.68	0.650	0.000	5.00	15.062	9.79	457.5	0.0	376.1
155.00		1.00	1.39	26.737	29.41	306.54	0.650	0.000	5.00	14.766	9.60	451.7	0.0	368.7
160.00	Appurtenance(s)	1.00	1.40	26.917	29.61	301.34	0.650	0.000	5.00	14.470	9.41	445.6	0.0	361.3
165.00		1.00	1.41	27.091	29.80	296.06	0.650	0.000	5.00	14.174	9.21	439.3	0.0	353.8
170.00		1.00	1.42	27.262	29.99	290.72	0.650	0.000	5.00	13.877	9.02	432.8	0.0	346.4
175.00		1.00	1.42	27.429	30.17	285.32	0.650	0.000	5.00	13.581	8.83	426.2	0.0	338.9
180.00		1.00	1.43	27.592	30.35	279.86	0.650	0.000	5.00	13.285	8.64	419.4	0.0	331.5
								Totals:	**180.00**			**16,928.0**		**29,884.3**

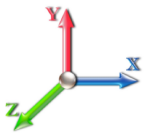
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	Antel	4	26.917	29.608	0.61	0.80	20.99	75.60	0.000	0.000	994.27	0.00	0.00
2	160.00	Low Profile Platform	1	26.917	29.608	1.00	1.00	22.00	1350.00	0.000	0.000	1042.21	0.00	0.00
3	160.00	Antel	2	26.917	29.608	0.72	0.80	8.31	32.40	0.000	0.000	393.61	0.00	0.00
4	160.00	Antel	1	26.917	29.608	0.62	0.80	4.72	15.30	0.000	0.000	223.78	0.00	0.00
5	160.00	Antel BXA-171085-12BF	3	26.917	29.608	0.70	0.80	9.99	40.50	0.000	0.000	473.25	0.00	0.00
6	160.00	RFS FD9R6004/2C-3L	6	26.917	29.608	0.50	0.80	1.10	16.20	0.000	0.000	52.16	0.00	0.00
7	160.00	RFS APL868013 Panel	2	26.917	29.608	0.72	0.80	5.20	12.60	0.000	0.000	246.26	0.00	0.00
8	150.00	Ericsson AIR6419 B41	3	26.553	29.209	0.55	0.75	10.38	224.91	0.000	0.000	485.12	0.00	0.00
9	150.00	RFS -	3	26.553	29.209	0.55	0.75	33.24	345.60	0.000	0.000	1553.63	0.00	0.00
10	150.00	Ericsson 4460 B25 + B66	3	26.553	29.209	0.64	0.75	4.09	280.80	13.391	0.000	191.27	1600.8	0.00
11	150.00	Ericsson 4480 B71 + B85	3	26.553	29.209	0.56	0.75	4.08	251.10	0.000	0.000	190.85	0.00	0.00
12	150.00	12' LP+HR+RS+MP	1	26.553	29.209	1.00	1.00	35.30	2083.14	0.000	0.000	1649.70	0.00	0.00
							Totals:		**4,728.15**			**7,496.12**		

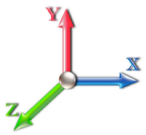
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		429.16	1374.71	0.00	0.00
10.00		423.62	1357.70	0.00	0.00
15.00		418.07	1340.69	0.00	0.00
20.00		437.70	1323.68	0.00	0.00
25.00		452.59	1306.67	0.00	0.00
30.00		463.88	1289.66	0.00	0.00
35.00		472.56	1272.65	0.00	0.00
40.00		479.22	1255.64	0.00	0.00
45.00		484.27	1238.63	0.00	0.00
45.50		48.16	122.93	0.00	0.00
50.00		445.76	1889.13	0.00	0.00
52.75		272.62	1142.60	0.00	0.00
55.00		223.38	420.14	0.00	0.00
60.00		500.20	924.40	0.00	0.00
65.00		501.16	911.64	0.00	0.00
70.00		501.38	898.88	0.00	0.00
75.00		500.94	886.13	0.00	0.00
80.00		499.91	873.37	0.00	0.00
85.00		498.35	860.61	0.00	0.00
90.00		496.30	847.85	0.00	0.00
91.91		188.28	320.51	0.00	0.00
95.00		308.27	873.15	0.00	0.00
98.41		339.08	953.68	0.00	0.00
100.00		157.32	203.59	0.00	0.00
105.00		494.34	633.91	0.00	0.00
110.00		490.78	624.34	0.00	0.00
115.00		486.88	614.77	0.00	0.00
120.00		482.68	605.20	0.00	0.00
125.00		478.19	595.64	0.00	0.00
127.10		198.64	246.92	0.00	0.00
130.00		277.01	573.94	0.00	0.00
132.93		277.87	573.40	0.00	0.00
135.00		195.13	193.46	0.00	0.00
140.00		468.68	462.04	0.00	0.00
145.00		463.22	454.60	0.00	0.00
150.00	(13) attachments	4528.12	3632.71	1600.86	0.00
155.00		451.65	424.87	0.00	0.00
160.00	(19) attachments	3871.11	1960.02	0.00	0.00
165.00		439.28	353.82	0.00	0.00
170.00		432.81	346.38	0.00	0.00
175.00		426.17	338.94	0.00	0.00
180.00		419.35	331.50	0.00	0.00
	Totals:	**24,424.11**	**36,855.07**	**1,600.86**	**0.00**

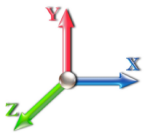
Calculated Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-36.83	-24.46	-1.59	-2784.1	-0.01	2784.10	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.410
5.00	-35.40	-24.11	-1.59	-2661.7	-0.01	2661.78	6146.71	3073.36	13441.6	6730.83	0.07	-0.123	0.000	0.401
10.00	-34.00	-23.75	-1.59	-2541.2	-0.01	2541.24	6087.80	3043.90	13136.3	6577.95	0.26	-0.245	0.000	0.392
15.00	-32.61	-23.40	-1.59	-2422.4	-0.01	2422.47	6028.30	3014.15	12833.2	6426.17	0.58	-0.366	0.000	0.382
20.00	-31.24	-23.01	-1.59	-2305.4	-0.01	2305.49	5968.23	2984.11	12532.3	6275.50	1.03	-0.486	0.000	0.373
25.00	-29.89	-22.61	-1.59	-2190.4	-0.01	2190.42	5907.57	2953.79	12233.7	6125.97	1.60	-0.604	0.000	0.363
30.00	-28.56	-22.19	-1.59	-2077.3	-0.01	2077.37	5846.34	2923.17	11937.4	5977.61	2.30	-0.722	0.000	0.352
35.00	-27.25	-21.76	-1.59	-1966.4	-0.01	1966.42	5784.52	2892.26	11643.5	5830.45	3.12	-0.838	-0.001	0.342
40.00	-25.96	-21.31	-1.59	-1857.6	-0.01	1857.64	5706.45	2853.23	11321.0	5668.93	4.05	-0.953	-0.001	0.332
45.00	-24.71	-20.83	-1.59	-1751.1	-0.01	1751.10	5623.92	2811.96	10994.2	5505.32	5.11	-1.066	-0.001	0.323
45.50	-24.57	-20.80	-1.59	-1740.6	-0.02	1740.69	5615.67	2807.83	10961.8	5489.09	5.23	-1.077	-0.001	0.322
50.00	-22.66	-20.35	-1.59	-1647.0	-0.02	1647.08	5541.39	2770.70	10672.3	5344.09	6.29	-1.177	-0.001	0.312
52.75	-21.50	-20.08	-1.59	-1591.1	-0.02	1591.11	3896.09	1948.05	7602.46	3806.88	6.99	-1.238	-0.001	0.424
55.00	-21.06	-19.88	-1.59	-1545.9	-0.02	1545.94	3879.06	1939.53	7518.61	3764.89	7.58	-1.287	-0.001	0.416
60.00	-20.10	-19.40	-1.59	-1446.5	-0.02	1446.56	3840.77	1920.38	7333.07	3671.98	9.00	-1.422	-0.001	0.399
65.00	-19.16	-18.92	-1.59	-1349.5	-0.02	1349.55	3801.90	1900.95	7148.65	3579.64	10.56	-1.554	-0.001	0.382
70.00	-18.23	-18.43	-1.59	-1254.9	-0.02	1254.95	3762.45	1881.23	6965.41	3487.88	12.26	-1.682	-0.001	0.365
75.00	-17.32	-17.94	-1.59	-1162.7	-0.03	1162.77	3722.43	1861.21	6783.41	3396.75	14.09	-1.807	-0.002	0.347
80.00	-16.43	-17.45	-1.59	-1073.0	-0.03	1073.06	3681.82	1840.91	6602.68	3306.25	16.05	-1.928	-0.002	0.329
85.00	-15.55	-16.95	-1.59	-985.81	-0.03	985.81	3640.63	1820.31	6423.28	3216.42	18.13	-2.045	-0.002	0.311
90.00	-14.70	-16.45	-1.59	-901.04	-0.03	901.04	3598.86	1799.43	6245.27	3127.28	20.33	-2.158	-0.002	0.292
91.91	-14.37	-16.26	-1.59	-869.63	-0.03	869.63	3582.75	1791.37	6177.64	3093.41	21.20	-2.200	-0.002	0.285
95.00	-13.49	-15.93	-1.59	-819.39	-0.04	819.39	3556.51	1778.25	6068.68	3038.85	22.65	-2.267	-0.002	0.274
98.41	-12.54	-15.57	-1.59	-765.06	-0.04	765.06	2417.34	1208.67	4152.00	2079.09	24.29	-2.338	-0.002	0.373
100.00	-12.32	-15.42	-1.60	-740.31	-0.04	740.31	2409.93	1204.97	4117.06	2061.59	25.08	-2.370	-0.003	0.364
105.00	-11.68	-14.92	-1.60	-663.21	-0.04	663.21	2386.24	1193.12	4007.42	2006.69	27.63	-2.494	-0.003	0.336
110.00	-11.05	-14.43	-1.60	-588.60	-0.05	588.60	2361.98	1180.99	3898.19	1951.99	30.30	-2.610	-0.003	0.306
115.00	-10.43	-13.93	-1.60	-516.47	-0.05	516.47	2337.13	1168.56	3789.44	1897.54	33.09	-2.718	-0.003	0.277
120.00	-9.83	-13.44	-1.60	-446.82	-0.05	446.82	2311.70	1155.85	3681.20	1843.33	35.99	-2.817	-0.004	0.247
125.00	-9.24	-12.94	-1.60	-379.64	-0.06	379.64	2285.69	1142.85	3573.52	1789.42	38.99	-2.906	-0.004	0.216
127.10	-9.00	-12.73	-1.60	-352.52	-0.06	352.52	2274.61	1137.31	3528.55	1766.90	40.27	-2.942	-0.004	0.204
130.00	-8.43	-12.43	-1.60	-315.55	-0.06	315.55	2259.10	1129.55	3466.46	1735.81	42.08	-2.987	-0.004	0.186
132.93	-7.87	-12.13	-1.60	-279.12	-0.06	279.12	1575.41	787.71	2427.26	1215.44	43.92	-3.029	-0.005	0.235
135.00	-7.67	-11.93	-1.60	-254.01	-0.07	254.01	1569.59	784.79	2399.45	1201.51	45.24	-3.057	-0.005	0.217
140.00	-7.22	-11.45	-1.60	-194.35	-0.07	194.35	1555.10	777.55	2332.23	1167.85	48.48	-3.128	-0.005	0.171
145.00	-6.79	-10.97	-1.60	-137.12	-0.08	137.12	1540.04	770.02	2265.00	1134.18	51.79	-3.184	-0.006	0.126
150.00	-3.41	-6.24	0.00	-82.29	0.01	82.29	1524.40	762.20	2197.80	1100.53	55.15	-3.223	-0.007	0.077
155.00	-3.01	-5.77	0.00	-51.08	0.01	51.08	1508.17	754.09	2130.69	1066.93	58.53	-3.248	-0.007	0.050
160.00	-1.27	-1.79	0.00	-22.24	0.00	22.24	1491.37	745.68	2063.72	1033.39	61.94	-3.263	-0.007	0.022
165.00	-0.94	-1.33	0.00	-13.27	0.00	13.27	1473.98	736.99	1996.93	999.95	65.36	-3.270	-0.007	0.014
170.00	-0.62	-0.88	0.00	-6.60	0.00	6.60	1456.02	728.01	1930.38	966.63	68.79	-3.275	-0.007	0.007
175.00	-0.31	-0.44	0.00	-2.19	0.00	2.19	1437.47	718.73	1864.13	933.45	72.22	-3.277	-0.007	0.003
180.00	0.00	-0.42	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	75.65	-3.277	-0.007	0.000

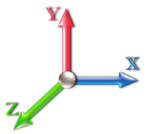
Wind Loading - Shaft

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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: 1.2D + 1.0Di + 1.0Wi 40 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	0.85	3.308	3.64	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	3.308	3.64	0.00	1.200	1.242	5.00	23.946	28.73	104.5	428.3	2166.5
10.00		1.00	0.85	3.308	3.64	0.00	1.200	1.331	5.00	23.724	28.47	103.6	453.9	2169.5
15.00		1.00	0.85	3.308	3.64	0.00	1.200	1.386	5.00	23.473	28.17	102.5	467.1	2160.0
20.00		1.00	0.90	3.509	3.86	0.00	1.200	1.427	5.00	23.211	27.85	107.5	474.8	2145.0
25.00		1.00	0.95	3.678	4.05	0.00	1.200	1.459	5.00	22.942	27.53	111.4	479.4	2127.0
30.00		1.00	0.98	3.822	4.20	0.00	1.200	1.486	5.00	22.668	27.20	114.4	482.0	2106.8
35.00		1.00	1.01	3.948	4.34	0.00	1.200	1.509	5.00	22.391	26.87	116.7	483.0	2085.2
40.00		1.00	1.04	4.061	4.47	0.00	1.200	1.529	5.00	22.112	26.53	118.5	483.0	2062.5
45.00		1.00	1.07	4.163	4.58	0.00	1.200	1.547	5.00	21.831	26.20	120.0	482.1	2038.9
45.50	Bot - Section 2	1.00	1.07	4.172	4.59	0.00	1.200	1.549	0.50	2.167	2.60	11.9	48.2	202.6
50.00		1.00	1.09	4.256	4.68	0.00	1.200	1.564	4.50	19.666	23.60	110.5	439.1	2872.7
52.75	Top - Section 1	1.00	1.11	4.304	4.73	0.00	1.200	1.572	2.75	11.904	14.28	67.6	267.7	1739.1
55.00		1.00	1.12	4.342	4.78	0.00	1.200	1.579	2.25	9.675	11.61	55.5	218.6	736.2
60.00		1.00	1.14	4.423	4.86	0.00	1.200	1.592	5.00	21.297	25.56	124.3	483.2	1621.0
65.00		1.00	1.16	4.498	4.95	0.00	1.200	1.605	5.00	21.012	25.21	124.7	480.1	1601.0
70.00		1.00	1.17	4.569	5.03	0.00	1.200	1.617	5.00	20.725	24.87	125.0	476.7	1580.6
75.00		1.00	1.19	4.635	5.10	0.00	1.200	1.628	5.00	20.439	24.53	125.1	473.0	1559.8
80.00		1.00	1.21	4.699	5.17	0.00	1.200	1.639	5.00	20.151	24.18	125.0	469.0	1538.8
85.00		1.00	1.22	4.759	5.24	0.00	1.200	1.649	5.00	19.863	23.84	124.8	464.7	1517.5
90.00		1.00	1.24	4.817	5.30	0.00	1.200	1.658	5.00	19.575	23.49	124.5	460.2	1496.0
91.91	Bot - Section 3	1.00	1.24	4.838	5.32	0.00	1.200	1.662	1.91	7.401	8.88	47.3	175.1	566.3
95.00		1.00	1.25	4.872	5.36	0.00	1.200	1.667	3.09	12.031	14.44	77.4	285.1	1390.8
98.41	Top - Section 2	1.00	1.26	4.908	5.40	0.00	1.200	1.673	3.41	13.149	15.78	85.2	312.4	1519.4
100.00		1.00	1.27	4.925	5.42	0.00	1.200	1.676	1.59	6.085	7.30	39.6	145.2	386.5
105.00		1.00	1.28	4.976	5.47	0.00	1.200	1.684	5.00	18.946	22.74	124.4	451.4	1201.9
110.00		1.00	1.29	5.025	5.53	0.00	1.200	1.692	5.00	18.656	22.39	123.7	446.1	1183.9
115.00		1.00	1.30	5.072	5.58	0.00	1.200	1.699	5.00	18.366	22.04	123.0	440.8	1165.8
120.00		1.00	1.32	5.117	5.63	0.00	1.200	1.707	5.00	18.076	21.69	122.1	435.2	1147.5
125.00		1.00	1.33	5.162	5.68	0.00	1.200	1.714	5.00	17.786	21.34	121.2	429.6	1129.1
127.10	Bot - Section 4	1.00	1.33	5.180	5.70	0.00	1.200	1.717	2.10	7.371	8.85	50.4	179.1	468.6
130.00		1.00	1.34	5.204	5.72	0.00	1.200	1.720	2.90	10.230	12.28	70.3	248.8	959.1
132.93	Top - Section 3	1.00	1.34	5.229	5.75	0.00	1.200	1.724	2.93	10.225	12.27	70.6	249.1	958.1
135.00		1.00	1.35	5.246	5.77	0.00	1.200	1.727	2.07	7.163	8.60	49.6	175.0	393.7
140.00		1.00	1.36	5.286	5.81	0.00	1.200	1.733	5.00	17.099	20.52	119.3	416.6	938.0
145.00		1.00	1.37	5.325	5.86	0.00	1.200	1.739	5.00	16.808	20.17	118.2	410.5	922.0
150.00	Appurtenance(s)	1.00	1.38	5.364	5.90	0.00	1.200	1.745	5.00	16.517	19.82	116.9	404.3	905.8
155.00		1.00	1.39	5.401	5.94	0.00	1.200	1.751	5.00	16.225	19.47	115.7	398.0	889.6
160.00	Appurtenance(s)	1.00	1.40	5.437	5.98	0.00	1.200	1.757	5.00	15.934	19.12	114.4	391.6	873.3
165.00		1.00	1.41	5.472	6.02	0.00	1.200	1.762	5.00	15.642	18.77	113.0	385.2	856.9
170.00		1.00	1.42	5.507	6.06	0.00	1.200	1.767	5.00	15.350	18.42	111.6	378.6	840.5
175.00		1.00	1.42	5.541	6.09	0.00	1.200	1.772	5.00	15.058	18.07	110.1	372.0	823.9
180.00		1.00	1.43	5.574	6.13	0.00	1.200	1.777	5.00	14.766	17.72	108.6	365.3	807.3
								Totals:	**180.00**			**4,250.3**		**55,854.9**

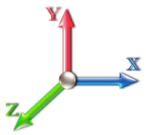
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 40 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	160.00	Antel	4	5.437	5.981	0.61	0.80	28.26	500.71	0.000	0.000	169.00	0.00	0.00
2	160.00	Low Profile Platform	1	5.437	5.981	1.00	1.00	39.78	2817.39	0.000	0.000	237.89	0.00	0.00
3	160.00	Antel	2	5.437	5.981	0.72	0.80	11.75	225.61	0.000	0.000	70.29	0.00	0.00
4	160.00	Antel	1	5.437	5.981	0.62	0.80	6.67	103.11	0.000	0.000	39.86	0.00	0.00
5	160.00	Antel BXA-171085-12BF	3	5.437	5.981	0.70	0.80	15.70	300.51	0.000	0.000	93.92	0.00	0.00
6	160.00	RFS FD9R6004/2C-3L	6	5.437	5.981	0.50	0.80	2.51	66.12	0.000	0.000	14.99	0.00	0.00
7	160.00	RFS APL868013 Panel	2	5.437	5.981	0.72	0.80	5.37	233.15	0.000	0.000	32.14	0.00	0.00
8	150.00	Ericsson AIR6419 B41	3	5.364	5.900	0.55	0.75	12.21	-7105.39	0.000	0.000	72.05	0.00	0.00
9	150.00	RFS -	3	5.364	5.900	0.54	0.75	35.81	-5912.77	0.000	0.000	211.28	0.00	0.00
10	150.00	Ericsson 4460 B25 + B66	3	5.364	5.900	0.65	0.75	5.27	-7253.34	13.391	0.000	31.08	416.24	0.00
11	150.00	Ericsson 4480 B71 + B85	3	5.364	5.900	0.58	0.75	5.28	-7317.10	0.000	0.000	31.13	0.00	0.00
12	150.00	12' LP+HR+RS+MP	1	5.364	5.900	1.00	1.00	51.15	5619.04	0.000	0.000	301.76	0.00	0.00
							Totals:		**-17,722.97**			**1,305.38**		

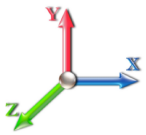
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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 40 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		104.54	2261.21	0.00	0.00
10.00		103.58	2264.17	0.00	0.00
15.00		102.48	2254.66	0.00	0.00
20.00		107.52	2239.71	0.00	0.00
25.00		111.39	2221.63	0.00	0.00
30.00		114.36	2201.50	0.00	0.00
35.00		116.69	2179.90	0.00	0.00
40.00		118.52	2157.20	0.00	0.00
45.00		119.96	2133.63	0.00	0.00
45.50		11.93	212.10	0.00	0.00
50.00		110.48	2957.93	0.00	0.00
52.75		67.63	1791.20	0.00	0.00
55.00		55.46	778.79	0.00	0.00
60.00		124.33	1715.70	0.00	0.00
65.00		124.75	1695.66	0.00	0.00
70.00		124.98	1675.24	0.00	0.00
75.00		125.06	1654.50	0.00	0.00
80.00		124.98	1633.47	0.00	0.00
85.00		124.78	1612.18	0.00	0.00
90.00		124.46	1590.66	0.00	0.00
91.91		47.26	602.46	0.00	0.00
95.00		77.37	1449.31	0.00	0.00
98.41		85.19	1583.94	0.00	0.00
100.00		39.55	416.60	0.00	0.00
105.00		124.43	1296.59	0.00	0.00
110.00		123.74	1278.60	0.00	0.00
115.00		122.96	1260.45	0.00	0.00
120.00		122.11	1242.16	0.00	0.00
125.00		121.18	1223.74	0.00	0.00
127.10		50.40	508.35	0.00	0.00
130.00		70.28	1014.07	0.00	0.00
132.93		70.57	1013.61	0.00	0.00
135.00		49.60	432.91	0.00	0.00
140.00		119.31	1032.67	0.00	0.00
145.00		118.15	1016.64	0.00	0.00
150.00	(13) attachments	764.23	-20969.04	416.24	0.00
155.00		115.67	964.51	0.00	0.00
160.00	(19) attachments	772.44	5194.80	0.00	0.00
165.00		112.99	856.94	0.00	0.00
170.00		111.58	840.48	0.00	0.00
175.00		110.13	823.94	0.00	0.00
180.00		108.64	807.32	0.00	0.00
	Totals:	**5,555.70**	**41,122.13**	**416.24**	**0.00**

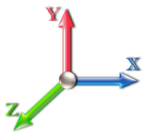
Calculated Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 40 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	-62.09	-5.57	-0.42	-621.97	0.00	621.97	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.100
5.00	-59.83	-5.49	-0.42	-594.12	0.00	594.12	6146.71	3073.36	13441.6	6730.83	0.01	-0.027	0.000	0.098
10.00	-57.56	-5.42	-0.42	-566.65	0.00	566.65	6087.80	3043.90	13136.3	6577.95	0.06	-0.055	0.000	0.096
15.00	-55.30	-5.34	-0.42	-539.57	0.00	539.57	6028.30	3014.15	12833.2	6426.17	0.13	-0.082	0.000	0.093
20.00	-53.06	-5.25	-0.42	-512.89	0.00	512.89	5968.23	2984.11	12532.3	6275.50	0.23	-0.108	0.000	0.091
25.00	-50.84	-5.16	-0.42	-486.65	0.00	486.65	5907.57	2953.79	12233.7	6125.97	0.36	-0.135	0.000	0.088
30.00	-48.63	-5.06	-0.42	-460.86	0.00	460.86	5846.34	2923.17	11937.4	5977.61	0.51	-0.161	0.000	0.085
35.00	-46.45	-4.96	-0.42	-435.57	0.00	435.57	5784.52	2892.26	11643.5	5830.45	0.69	-0.187	0.000	0.083
40.00	-44.29	-4.85	-0.42	-410.79	0.00	410.79	5706.45	2853.23	11321.0	5668.93	0.90	-0.212	0.000	0.080
45.00	-42.16	-4.73	-0.42	-386.55	0.00	386.55	5623.92	2811.96	10994.2	5505.32	1.14	-0.237	0.000	0.078
45.50	-41.95	-4.73	-0.42	-384.18	0.00	384.18	5615.67	2807.83	10961.8	5489.09	1.16	-0.239	0.000	0.077
50.00	-38.99	-4.62	-0.42	-362.91	0.00	362.91	5541.39	2770.70	10672.3	5344.09	1.40	-0.261	0.000	0.075
52.75	-37.19	-4.55	-0.42	-350.21	0.00	350.21	3896.09	1948.05	7602.46	3806.88	1.55	-0.275	0.000	0.102
55.00	-36.41	-4.50	-0.42	-339.98	0.00	339.98	3879.06	1939.53	7518.61	3764.89	1.69	-0.286	0.000	0.100
60.00	-34.70	-4.39	-0.42	-317.47	0.00	317.47	3840.77	1920.38	7333.07	3671.98	2.00	-0.315	0.000	0.095
65.00	-33.00	-4.27	-0.42	-295.54	0.00	295.54	3801.90	1900.95	7148.65	3579.64	2.35	-0.344	0.000	0.091
70.00	-31.32	-4.15	-0.42	-274.20	0.00	274.20	3762.45	1881.23	6965.41	3487.88	2.72	-0.372	0.000	0.087
75.00	-29.67	-4.03	-0.42	-253.47	0.00	253.47	3722.43	1861.21	6783.41	3396.75	3.13	-0.400	0.000	0.083
80.00	-28.03	-3.90	-0.42	-233.34	0.00	233.34	3681.82	1840.91	6602.68	3306.25	3.56	-0.426	0.000	0.078
85.00	-26.42	-3.78	-0.42	-213.84	0.00	213.84	3640.63	1820.31	6423.28	3216.42	4.02	-0.451	-0.001	0.074
90.00	-24.83	-3.65	-0.42	-194.96	0.00	194.96	3598.86	1799.43	6245.27	3127.28	4.51	-0.476	-0.001	0.069
91.91	-24.23	-3.60	-0.42	-188.00	0.00	188.00	3582.75	1791.37	6177.64	3093.41	4.70	-0.485	-0.001	0.068
95.00	-22.78	-3.51	-0.42	-176.88	0.00	176.88	3556.51	1778.25	6068.68	3038.85	5.02	-0.499	-0.001	0.065
98.41	-21.19	-3.42	-0.42	-164.89	0.00	164.89	2417.34	1208.67	4152.00	2079.09	5.38	-0.515	-0.001	0.088
100.00	-20.78	-3.38	-0.42	-159.46	0.00	159.46	2409.93	1204.97	4117.06	2061.59	5.55	-0.522	-0.001	0.086
105.00	-19.48	-3.25	-0.42	-142.55	0.00	142.55	2386.24	1193.12	4007.42	2006.69	6.11	-0.548	-0.001	0.079
110.00	-18.20	-3.13	-0.42	-126.28	0.00	126.28	2361.98	1180.99	3898.19	1951.99	6.70	-0.573	-0.001	0.072
115.00	-16.94	-3.00	-0.42	-110.65	0.00	110.65	2337.13	1168.56	3789.44	1897.54	7.31	-0.596	-0.001	0.066
120.00	-15.70	-2.87	-0.42	-95.67	0.00	95.67	2311.70	1155.85	3681.20	1843.33	7.95	-0.617	-0.001	0.059
125.00	-14.48	-2.74	-0.42	-81.33	0.00	81.33	2285.69	1142.85	3573.52	1789.42	8.61	-0.637	-0.001	0.052
127.10	-13.97	-2.68	-0.42	-75.60	0.00	75.60	2274.61	1137.31	3528.55	1766.90	8.89	-0.644	-0.001	0.049
130.00	-12.95	-2.60	-0.42	-67.81	0.00	67.81	2259.10	1129.55	3466.46	1735.81	9.28	-0.654	-0.001	0.045
132.93	-11.94	-2.52	-0.42	-60.19	0.00	60.19	1575.41	787.71	2427.26	1215.44	9.69	-0.663	-0.001	0.057
135.00	-11.51	-2.47	-0.42	-54.97	0.00	54.97	1569.59	784.79	2399.45	1201.51	9.98	-0.669	-0.001	0.053
140.00	-10.48	-2.34	-0.42	-42.63	0.00	42.63	1555.10	777.55	2332.23	1167.85	10.69	-0.684	-0.001	0.043
145.00	-9.46	-2.21	-0.42	-30.93	0.00	30.93	1540.04	770.02	2265.00	1134.18	11.41	-0.697	-0.002	0.033
150.00	-9.47	-1.45	0.00	-19.87	0.00	19.87	1524.40	762.20	2197.80	1100.53	12.14	-0.706	-0.002	0.024
155.00	-8.51	-1.32	0.00	-12.63	0.00	12.63	1508.17	754.09	2130.69	1066.93	12.89	-0.712	-0.002	0.017
160.00	-3.32	-0.48	0.00	-6.02	0.00	6.02	1491.37	745.68	2063.72	1033.39	13.64	-0.716	-0.002	0.008
165.00	-2.47	-0.36	0.00	-3.59	0.00	3.59	1473.98	736.99	1996.93	999.95	14.39	-0.718	-0.002	0.005
170.00	-1.63	-0.24	0.00	-1.79	0.00	1.79	1456.02	728.01	1930.38	966.63	15.14	-0.719	-0.002	0.003
175.00	-0.81	-0.12	0.00	-0.59	0.00	0.59	1437.47	718.73	1864.13	933.45	15.89	-0.720	-0.002	0.001
180.00	0.00	-0.11	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	16.65	-0.720	-0.002	0.000

Seismic Segment Forces (Factored)

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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 + 1.0E							**Iterations**	22
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1448.5	0.00	0.03	0.02	22.88	
10.00		1429.6	0.01	0.05	0.03	34.02	
15.00		1410.7	0.01	0.06	0.03	39.75	
20.00		1391.8	0.02	0.07	0.04	42.67	
25.00		1372.9	0.04	0.07	0.04	44.08	
30.00		1354.0	0.05	0.07	0.04	44.76	
35.00		1335.1	0.07	0.07	0.04	45.13	
40.00		1316.2	0.09	0.07	0.04	45.41	
45.00		1297.3	0.12	0.07	0.03	45.65	
45.50	Bot - Section 2	128.70	0.12	0.07	0.03	4.54	
50.00		2028.0	0.15	0.07	0.03	72.61	
52.75	Top - Section 1	1226.1	0.16	0.07	0.03	44.21	
55.00		431.32	0.18	0.07	0.03	15.61	
60.00		948.21	0.21	0.06	0.02	34.25	
65.00		934.03	0.25	0.06	0.02	32.93	
70.00		919.86	0.29	0.05	0.01	30.52	
75.00		905.68	0.33	0.04	0.01	26.69	
80.00		891.51	0.37	0.03	0.01	21.18	
85.00		877.33	0.42	0.01	0.01	13.93	
90.00		863.16	0.47	-0.01	0.01	5.25	
91.91	Bot - Section 3	325.98	0.49	-0.01	0.01	0.65	
95.00		921.41	0.53	-0.03	0.01	-4.42	
98.41	Top - Section 2	1005.8	0.56	-0.04	0.01	-12.30	
100.00		201.12	0.58	-0.05	0.01	-3.13	
105.00		625.44	0.64	-0.07	0.02	-15.53	
110.00		614.81	0.71	-0.09	0.03	-19.40	
115.00		604.18	0.77	-0.11	0.05	-21.21	
120.00		593.55	0.84	-0.12	0.07	-20.90	
125.00		582.92	0.91	-0.12	0.09	-18.53	
127.10	Bot - Section 4	241.27	0.94	-0.12	0.10	-7.07	
130.00		591.90	0.99	-0.11	0.12	-14.74	
132.93	Top - Section 3	590.87	1.03	-0.10	0.15	-11.38	
135.00		182.29	1.06	-0.09	0.17	-2.66	
140.00		434.48	1.14	-0.04	0.21	-0.36	
145.00		426.21	1.23	0.03	0.27	6.95	
150.00	Appurtenance(s)	3957.4	1.31	0.14	0.35	145.81	
155.00		409.67	1.40	0.29	0.43	24.93	
160.00	Appurtenance(s)	2115.4	1.49	0.48	0.53	186.93	
165.00		393.14	1.59	0.74	0.65	46.96	
170.00		384.87	1.69	1.07	0.79	59.33	
175.00		376.60	1.79	1.48	0.95	72.53	
180.00		368.33	1.89	1.98	1.14	86.48	
	Totals:	**38,458.3**				**1,145.0**	**Total Wind:** **24,424.1**

Calculated Forces

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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

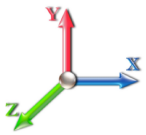
Load Case:	1.2D + 1.0E							**Iterations**	22
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33		**SA**	0.03	**Seismic Importance Factor**		1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-49.14	-1.30	0.00	-135.92	0.00	135.92	6205.05	3102.52	13749.1	6884.77		0.00	0.00	0.028
5.00	-47.31	-1.28	0.00	-129.43	0.00	129.43	6146.71	3073.36	13441.6	6730.83		0.00	-0.01	0.027
10.00	-45.50	-1.25	0.00	-123.02	0.00	123.02	6087.80	3043.90	13136.3	6577.95		0.01	-0.01	0.026
15.00	-43.71	-1.22	0.00	-116.77	0.00	116.77	6028.30	3014.15	12833.2	6426.17		0.03	-0.02	0.025
20.00	-41.94	-1.18	0.00	-110.69	0.00	110.69	5968.23	2984.11	12532.3	6275.50		0.05	-0.02	0.025
25.00	-40.20	-1.14	0.00	-104.81	0.00	104.81	5907.57	2953.79	12233.7	6125.97		0.08	-0.03	0.024
30.00	-38.48	-1.09	0.00	-99.14	0.00	99.14	5846.34	2923.17	11937.4	5977.61		0.11	-0.03	0.023
35.00	-36.78	-1.05	0.00	-93.67	0.00	93.67	5784.52	2892.26	11643.5	5830.45		0.15	-0.04	0.022
40.00	-35.11	-1.01	0.00	-88.42	0.00	88.42	5706.45	2853.23	11321.0	5668.93		0.20	-0.05	0.022
45.00	-33.46	-0.96	0.00	-83.38	0.00	83.38	5623.92	2811.96	10994.2	5505.32		0.25	-0.05	0.021
45.50	-33.30	-0.96	0.00	-82.90	0.00	82.90	5615.67	2807.83	10961.8	5489.09		0.25	-0.05	0.021
50.00	-30.78	-0.89	0.00	-78.59	0.00	78.59	5541.39	2770.70	10672.3	5344.09		0.30	-0.06	0.020
52.75	-29.25	-0.84	0.00	-76.15	0.00	76.15	3896.09	1948.05	7602.46	3806.88		0.34	-0.06	0.028
55.00	-28.69	-0.83	0.00	-74.26	0.00	74.26	3879.06	1939.53	7518.61	3764.89		0.37	-0.06	0.027
60.00	-27.46	-0.79	0.00	-70.12	0.00	70.12	3840.77	1920.38	7333.07	3671.98		0.43	-0.07	0.026
65.00	-26.24	-0.76	0.00	-66.15	0.00	66.15	3801.90	1900.95	7148.65	3579.64		0.51	-0.07	0.025
70.00	-25.05	-0.73	0.00	-62.33	0.00	62.33	3762.45	1881.23	6965.41	3487.88		0.59	-0.08	0.025
75.00	-23.86	-0.71	0.00	-58.66	0.00	58.66	3722.43	1861.21	6783.41	3396.75		0.68	-0.09	0.024
80.00	-22.70	-0.69	0.00	-55.12	0.00	55.12	3681.82	1840.91	6602.68	3306.25		0.77	-0.09	0.023
85.00	-21.55	-0.67	0.00	-51.69	0.00	51.69	3640.63	1820.31	6423.28	3216.42		0.87	-0.10	0.022
90.00	-20.42	-0.67	0.00	-48.32	0.00	48.32	3598.86	1799.43	6245.27	3127.28		0.98	-0.11	0.021
91.91	-19.99	-0.67	0.00	-47.04	0.00	47.04	3582.75	1791.37	6177.64	3093.41		1.02	-0.11	0.021
95.00	-18.83	-0.67	0.00	-44.98	0.00	44.98	3556.51	1778.25	6068.68	3038.85		1.10	-0.11	0.020
98.41	-17.56	-0.67	0.00	-42.70	0.00	42.70	2417.34	1208.67	4152.00	2079.09		1.18	-0.12	0.028
100.00	-17.29	-0.67	0.00	-41.65	0.00	41.65	2409.93	1204.97	4117.06	2061.59		1.21	-0.12	0.027
105.00	-16.44	-0.67	0.00	-38.32	0.00	38.32	2386.24	1193.12	4007.42	2006.69		1.34	-0.12	0.026
110.00	-15.61	-0.67	0.00	-34.99	0.00	34.99	2361.98	1180.99	3898.19	1951.99		1.48	-0.13	0.025
115.00	-14.79	-0.67	0.00	-31.66	0.00	31.66	2337.13	1168.56	3789.44	1897.54		1.62	-0.14	0.023
120.00	-13.98	-0.67	0.00	-28.33	0.00	28.33	2311.70	1155.85	3681.20	1843.33		1.76	-0.14	0.021
125.00	-13.19	-0.66	0.00	-25.00	0.00	25.00	2285.69	1142.85	3573.52	1789.42		1.92	-0.15	0.020
127.10	-12.86	-0.66	0.00	-23.61	0.00	23.61	2274.61	1137.31	3528.55	1766.90		1.98	-0.15	0.019
130.00	-12.09	-0.66	0.00	-21.68	0.00	21.68	2259.10	1129.55	3466.46	1735.81		2.08	-0.15	0.018
132.93	-11.33	-0.66	0.00	-19.74	0.00	19.74	1575.41	787.71	2427.26	1215.44		2.17	-0.16	0.023
135.00	-11.07	-0.66	0.00	-18.37	0.00	18.37	1569.59	784.79	2399.45	1201.51		2.24	-0.16	0.022
140.00	-10.46	-0.66	0.00	-15.07	0.00	15.07	1555.10	777.55	2332.23	1167.85		2.41	-0.17	0.020
145.00	-9.85	-0.65	0.00	-11.77	0.00	11.77	1540.04	770.02	2265.00	1134.18		2.59	-0.17	0.017
150.00	-5.01	-0.49	0.00	-8.50	0.00	8.50	1524.40	762.20	2197.80	1100.53		2.77	-0.17	0.011
155.00	-4.44	-0.47	0.00	-6.04	0.00	6.04	1508.17	754.09	2130.69	1066.93		2.95	-0.18	0.009
160.00	-1.83	-0.27	0.00	-3.71	0.00	3.71	1491.37	745.68	2063.72	1033.39		3.14	-0.18	0.005
165.00	-1.36	-0.22	0.00	-2.36	0.00	2.36	1473.98	736.99	1996.93	999.95		3.32	-0.18	0.003
170.00	-0.89	-0.16	0.00	-1.25	0.00	1.25	1456.02	728.01	1930.38	966.63		3.51	-0.18	0.002
175.00	-0.44	-0.09	0.00	-0.44	0.00	0.44	1437.47	718.73	1864.13	933.45		3.70	-0.18	0.001
180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44		3.89	-0.18	0.000

Seismic Segment Forces (Factored)

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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

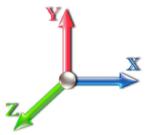
Load Case:	0.9D + 1.0E					**Iterations**	22
Gust Response Factor	1.10			**Sds**	0.19	**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33	**SA**	0.03	**Seismic Importance Factor**	1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1448.5	0.00	0.03	0.02	22.88	
10.00		1429.6	0.01	0.05	0.03	34.02	
15.00		1410.7	0.01	0.06	0.03	39.75	
20.00		1391.8	0.02	0.07	0.04	42.67	
25.00		1372.9	0.04	0.07	0.04	44.08	
30.00		1354.0	0.05	0.07	0.04	44.76	
35.00		1335.1	0.07	0.07	0.04	45.13	
40.00		1316.2	0.09	0.07	0.04	45.41	
45.00		1297.3	0.12	0.07	0.03	45.65	
45.50	Bot - Section 2	128.70	0.12	0.07	0.03	4.54	
50.00		2028.0	0.15	0.07	0.03	72.61	
52.75	Top - Section 1	1226.1	0.16	0.07	0.03	44.21	
55.00		431.32	0.18	0.07	0.03	15.61	
60.00		948.21	0.21	0.06	0.02	34.25	
65.00		934.03	0.25	0.06	0.02	32.93	
70.00		919.86	0.29	0.05	0.01	30.52	
75.00		905.68	0.33	0.04	0.01	26.69	
80.00		891.51	0.37	0.03	0.01	21.18	
85.00		877.33	0.42	0.01	0.01	13.93	
90.00		863.16	0.47	-0.01	0.01	5.25	
91.91	Bot - Section 3	325.98	0.49	-0.01	0.01	0.65	
95.00		921.41	0.53	-0.03	0.01	-4.42	
98.41	Top - Section 2	1005.8	0.56	-0.04	0.01	-12.30	
100.00		201.12	0.58	-0.05	0.01	-3.13	
105.00		625.44	0.64	-0.07	0.02	-15.53	
110.00		614.81	0.71	-0.09	0.03	-19.40	
115.00		604.18	0.77	-0.11	0.05	-21.21	
120.00		593.55	0.84	-0.12	0.07	-20.90	
125.00		582.92	0.91	-0.12	0.09	-18.53	
127.10	Bot - Section 4	241.27	0.94	-0.12	0.10	-7.07	
130.00		591.90	0.99	-0.11	0.12	-14.74	
132.93	Top - Section 3	590.87	1.03	-0.10	0.15	-11.38	
135.00		182.29	1.06	-0.09	0.17	-2.66	
140.00		434.48	1.14	-0.04	0.21	-0.36	
145.00		426.21	1.23	0.03	0.27	6.95	
150.00	Appurtenance(s)	3957.4	1.31	0.14	0.35	145.81	
155.00		409.67	1.40	0.29	0.43	24.93	
160.00	Appurtenance(s)	2115.4	1.49	0.48	0.53	186.93	
165.00		393.14	1.59	0.74	0.65	46.96	
170.00		384.87	1.69	1.07	0.79	59.33	
175.00		376.60	1.79	1.48	0.95	72.53	
180.00		368.33	1.89	1.98	1.14	86.48	
	Totals:	**38,458.3**				**1,145.0**	**Total Wind:** **24,424.1**

Calculated Forces

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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**	22
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.33	**SA**	0.03		**Seismic Importance Factor**		1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-36.86	-1.30	0.00	-134.72	0.00	134.72	6205.05	3102.52	13749.1	6884.77		0.00	0.00	0.026
5.00	-35.48	-1.28	0.00	-128.23	0.00	128.23	6146.71	3073.36	13441.6	6730.83		0.00	-0.01	0.025
10.00	-34.12	-1.25	0.00	-121.83	0.00	121.83	6087.80	3043.90	13136.3	6577.95		0.01	-0.01	0.024
15.00	-32.78	-1.21	0.00	-115.59	0.00	115.59	6028.30	3014.15	12833.2	6426.17		0.03	-0.02	0.023
20.00	-31.46	-1.17	0.00	-109.54	0.00	109.54	5968.23	2984.11	12532.3	6275.50		0.05	-0.02	0.023
25.00	-30.15	-1.13	0.00	-103.68	0.00	103.68	5907.57	2953.79	12233.7	6125.97		0.08	-0.03	0.022
30.00	-28.86	-1.09	0.00	-98.03	0.00	98.03	5846.34	2923.17	11937.4	5977.61		0.11	-0.03	0.021
35.00	-27.59	-1.04	0.00	-92.60	0.00	92.60	5784.52	2892.26	11643.5	5830.45		0.15	-0.04	0.021
40.00	-26.33	-1.00	0.00	-87.38	0.00	87.38	5706.45	2853.23	11321.0	5668.93		0.19	-0.05	0.020
45.00	-25.09	-0.95	0.00	-82.39	0.00	82.39	5623.92	2811.96	10994.2	5505.32		0.24	-0.05	0.019
45.50	-24.97	-0.95	0.00	-81.91	0.00	81.91	5615.67	2807.83	10961.8	5489.09		0.25	-0.05	0.019
50.00	-23.08	-0.88	0.00	-77.63	0.00	77.63	5541.39	2770.70	10672.3	5344.09		0.30	-0.06	0.019
52.75	-21.94	-0.83	0.00	-75.22	0.00	75.22	3896.09	1948.05	7602.46	3806.88		0.33	-0.06	0.025
55.00	-21.52	-0.82	0.00	-73.34	0.00	73.34	3879.06	1939.53	7518.61	3764.89		0.36	-0.06	0.025
60.00	-20.59	-0.79	0.00	-69.25	0.00	69.25	3840.77	1920.38	7333.07	3671.98		0.43	-0.07	0.024
65.00	-19.68	-0.75	0.00	-65.32	0.00	65.32	3801.90	1900.95	7148.65	3579.64		0.50	-0.07	0.023
70.00	-18.78	-0.72	0.00	-61.55	0.00	61.55	3762.45	1881.23	6965.41	3487.88		0.58	-0.08	0.023
75.00	-17.90	-0.70	0.00	-57.93	0.00	57.93	3722.43	1861.21	6783.41	3396.75		0.67	-0.09	0.022
80.00	-17.02	-0.68	0.00	-54.43	0.00	54.43	3681.82	1840.91	6602.68	3306.25		0.76	-0.09	0.021
85.00	-16.16	-0.66	0.00	-51.05	0.00	51.05	3640.63	1820.31	6423.28	3216.42		0.86	-0.10	0.020
90.00	-15.32	-0.66	0.00	-47.73	0.00	47.73	3598.86	1799.43	6245.27	3127.28		0.97	-0.10	0.020
91.91	-15.00	-0.66	0.00	-46.47	0.00	46.47	3582.75	1791.37	6177.64	3093.41		1.01	-0.11	0.019
95.00	-14.12	-0.66	0.00	-44.44	0.00	44.44	3556.51	1778.25	6068.68	3038.85		1.08	-0.11	0.019
98.41	-13.17	-0.66	0.00	-42.20	0.00	42.20	2417.34	1208.67	4152.00	2079.09		1.16	-0.11	0.026
100.00	-12.97	-0.66	0.00	-41.15	0.00	41.15	2409.93	1204.97	4117.06	2061.59		1.20	-0.12	0.025
105.00	-12.33	-0.66	0.00	-37.87	0.00	37.87	2386.24	1193.12	4007.42	2006.69		1.33	-0.12	0.024
110.00	-11.71	-0.66	0.00	-34.59	0.00	34.59	2361.98	1180.99	3898.19	1951.99		1.46	-0.13	0.023
115.00	-11.09	-0.66	0.00	-31.30	0.00	31.30	2337.13	1168.56	3789.44	1897.54		1.60	-0.14	0.021
120.00	-10.49	-0.66	0.00	-28.02	0.00	28.02	2311.70	1155.85	3681.20	1843.33		1.74	-0.14	0.020
125.00	-9.89	-0.66	0.00	-24.74	0.00	24.74	2285.69	1142.85	3573.52	1789.42		1.90	-0.15	0.018
127.10	-9.64	-0.66	0.00	-23.37	0.00	23.37	2274.61	1137.31	3528.55	1766.90		1.96	-0.15	0.017
130.00	-9.07	-0.65	0.00	-21.47	0.00	21.47	2259.10	1129.55	3466.46	1735.81		2.05	-0.15	0.016
132.93	-8.50	-0.65	0.00	-19.55	0.00	19.55	1575.41	787.71	2427.26	1215.44		2.15	-0.16	0.021
135.00	-8.30	-0.65	0.00	-18.20	0.00	18.20	1569.59	784.79	2399.45	1201.51		2.22	-0.16	0.020
140.00	-7.84	-0.65	0.00	-14.93	0.00	14.93	1555.10	777.55	2332.23	1167.85		2.38	-0.16	0.018
145.00	-7.39	-0.64	0.00	-11.67	0.00	11.67	1540.04	770.02	2265.00	1134.18		2.56	-0.17	0.015
150.00	-3.75	-0.49	0.00	-8.45	0.00	8.45	1524.40	762.20	2197.80	1100.53		2.74	-0.17	0.010
155.00	-3.33	-0.46	0.00	-6.01	0.00	6.01	1508.17	754.09	2130.69	1066.93		2.92	-0.17	0.008
160.00	-1.37	-0.27	0.00	-3.70	0.00	3.70	1491.37	745.68	2063.72	1033.39		3.10	-0.18	0.004
165.00	-1.02	-0.22	0.00	-2.35	0.00	2.35	1473.98	736.99	1996.93	999.95		3.28	-0.18	0.003
170.00	-0.67	-0.16	0.00	-1.24	0.00	1.24	1456.02	728.01	1930.38	966.63		3.47	-0.18	0.002
175.00	-0.33	-0.09	0.00	-0.44	0.00	0.44	1437.47	718.73	1864.13	933.45		3.66	-0.18	0.001
180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44		3.84	-0.18	0.000

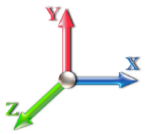
Wind Loading - Shaft

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	255.11	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	251.83	0.650	0.000	5.00	22.911	14.89	121.9	0.0	1448.6
10.00		1.00	0.85	7.442	8.19	248.56	0.650	0.000	5.00	22.614	14.70	120.3	0.0	1429.7
15.00		1.00	0.85	7.442	8.19	245.28	0.650	0.000	5.00	22.318	14.51	118.8	0.0	1410.8
20.00		1.00	0.90	7.896	8.69	249.28	0.650	0.000	5.00	22.022	14.31	124.3	0.0	1391.9
25.00		1.00	0.95	8.276	9.10	251.75	0.650	0.000	5.00	21.726	14.12	128.6	0.0	1373.0
30.00		1.00	0.98	8.600	9.46	253.10	0.650	0.000	5.00	21.430	13.93	131.8	0.0	1354.1
35.00		1.00	1.01	8.883	9.77	253.66	0.650	0.000	5.00	21.134	13.74	134.2	0.0	1335.2
40.00		1.00	1.04	9.137	10.05	253.62	0.650	0.000	5.00	20.837	13.54	136.1	0.0	1316.3
45.00		1.00	1.07	9.366	10.30	253.11	0.650	0.000	5.00	20.541	13.35	137.6	0.0	1297.4
45.50	Bot - Section 2	1.00	1.07	9.388	10.33	253.04	0.650	0.000	0.50	2.038	1.32	13.7	0.0	128.7
50.00		1.00	1.09	9.576	10.53	252.22	0.650	0.000	4.50	18.493	12.02	126.6	0.0	2028.0
52.75	Top - Section 1	1.00	1.11	9.685	10.65	251.59	0.650	0.000	2.75	11.183	7.27	77.4	0.0	1226.2
55.00		1.00	1.12	9.770	10.75	255.03	0.650	0.000	2.25	9.083	5.90	63.5	0.0	431.3
60.00		1.00	1.14	9.951	10.95	253.59	0.650	0.000	5.00	19.970	12.98	142.1	0.0	948.2
65.00		1.00	1.16	10.120	11.13	251.91	0.650	0.000	5.00	19.674	12.79	142.4	0.0	934.0
70.00		1.00	1.17	10.279	11.31	250.03	0.650	0.000	5.00	19.378	12.60	142.4	0.0	919.9
75.00		1.00	1.19	10.430	11.47	247.98	0.650	0.000	5.00	19.082	12.40	142.3	0.0	905.7
80.00		1.00	1.21	10.572	11.63	245.76	0.650	0.000	5.00	18.785	12.21	142.0	0.0	891.5
85.00		1.00	1.22	10.708	11.78	243.41	0.650	0.000	5.00	18.489	12.02	141.6	0.0	877.3
90.00		1.00	1.24	10.838	11.92	240.92	0.650	0.000	5.00	18.193	11.83	141.0	0.0	863.2
91.91	Bot - Section 3	1.00	1.24	10.886	11.97	239.94	0.650	0.000	1.91	6.872	4.47	53.5	0.0	326.0
95.00		1.00	1.25	10.962	12.06	238.32	0.650	0.000	3.09	11.172	7.26	87.6	0.0	921.4
98.41	Top - Section 2	1.00	1.26	11.043	12.15	236.48	0.650	0.000	3.41	12.198	7.93	96.3	0.0	1005.8
100.00		1.00	1.27	11.081	12.19	238.82	0.650	0.000	1.59	5.641	3.67	44.7	0.0	201.1
105.00		1.00	1.28	11.195	12.31	236.03	0.650	0.000	5.00	17.543	11.40	140.4	0.0	625.4
110.00		1.00	1.29	11.305	12.44	233.15	0.650	0.000	5.00	17.246	11.21	139.4	0.0	614.8
115.00		1.00	1.30	11.412	12.55	230.19	0.650	0.000	5.00	16.950	11.02	138.3	0.0	604.2
120.00		1.00	1.32	11.514	12.67	227.15	0.650	0.000	5.00	16.654	10.83	137.1	0.0	593.5
125.00		1.00	1.33	11.614	12.78	224.03	0.650	0.000	5.00	16.358	10.63	135.8	0.0	582.9
127.10	Bot - Section 4	1.00	1.33	11.654	12.82	222.71	0.650	0.000	2.10	6.771	4.40	56.4	0.0	241.3
130.00		1.00	1.34	11.710	12.88	220.85	0.650	0.000	2.90	9.398	6.11	78.7	0.0	591.9
132.93	Top - Section 3	1.00	1.34	11.765	12.94	218.95	0.650	0.000	2.93	9.383	6.10	78.9	0.0	590.9
135.00		1.00	1.35	11.803	12.98	220.18	0.650	0.000	2.07	6.568	4.27	55.4	0.0	182.3
140.00		1.00	1.36	11.894	13.08	216.88	0.650	0.000	5.00	15.654	10.18	133.1	0.0	434.5
145.00		1.00	1.37	11.982	13.18	213.53	0.650	0.000	5.00	15.358	9.98	131.6	0.0	426.2
150.00	Appurtenance(s)	1.00	1.38	12.068	13.27	210.12	0.650	0.000	5.00	15.062	9.79	130.0	0.0	417.9
155.00		1.00	1.39	12.152	13.37	206.66	0.650	0.000	5.00	14.766	9.60	128.3	0.0	409.7
160.00	Appurtenance(s)	1.00	1.40	12.233	13.46	203.15	0.650	0.000	5.00	14.470	9.41	126.6	0.0	401.4
165.00		1.00	1.41	12.313	13.54	199.59	0.650	0.000	5.00	14.174	9.21	124.8	0.0	393.1
170.00		1.00	1.42	12.390	13.63	195.99	0.650	0.000	5.00	13.877	9.02	122.9	0.0	384.9
175.00		1.00	1.42	12.466	13.71	192.35	0.650	0.000	5.00	13.581	8.83	121.1	0.0	376.6
180.00		1.00	1.43	12.540	13.79	188.67	0.650	0.000	5.00	13.285	8.64	119.1	0.0	368.3
								Totals:	**180.00**			**4,808.5**		**33,204.8**

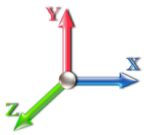
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

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	160.00	Antel	4	12.233	13.457	0.61	0.80	20.99	84.00	0.000	0.000	282.43	0.00	0.00
2	160.00	Low Profile Platform	1	12.233	13.457	1.00	1.00	22.00	1500.00	0.000	0.000	296.04	0.00	0.00
3	160.00	Antel	2	12.233	13.457	0.72	0.80	8.31	36.00	0.000	0.000	111.81	0.00	0.00
4	160.00	Antel	1	12.233	13.457	0.62	0.80	4.72	17.00	0.000	0.000	63.56	0.00	0.00
5	160.00	Antel BXA-171085-12BF	3	12.233	13.457	0.70	0.80	9.99	45.00	0.000	0.000	134.43	0.00	0.00
6	160.00	RFS FD9R6004/2C-3L	6	12.233	13.457	0.50	0.80	1.10	18.00	0.000	0.000	14.82	0.00	0.00
7	160.00	RFS APL868013 Panel	2	12.233	13.457	0.72	0.80	5.20	14.00	0.000	0.000	69.95	0.00	0.00
8	150.00	Ericsson AIR6419 B41	3	12.068	13.275	0.55	0.75	10.38	249.90	0.000	0.000	137.80	0.00	0.00
9	150.00	RFS -	3	12.068	13.275	0.55	0.75	33.24	384.00	0.000	0.000	441.32	0.00	0.00
10	150.00	Ericsson 4460 B25 + B66	3	12.068	13.275	0.64	0.75	4.09	312.00	13.391	0.000	54.33	727.57	0.00
11	150.00	Ericsson 4480 B71 + B85	3	12.068	13.275	0.56	0.75	4.08	279.00	0.000	0.000	54.21	0.00	0.00
12	150.00	12' LP+HR+RS+MP	1	12.068	13.275	1.00	1.00	35.30	2314.60	0.000	0.000	468.61	0.00	0.00
							Totals:		**5,253.50**			**2,129.31**		

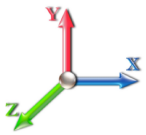
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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 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		121.91	1527.45	0.00	0.00
10.00		120.33	1508.55	0.00	0.00
15.00		118.75	1489.65	0.00	0.00
20.00		124.33	1470.75	0.00	0.00
25.00		128.56	1451.85	0.00	0.00
30.00		131.77	1432.95	0.00	0.00
35.00		134.23	1414.05	0.00	0.00
40.00		136.13	1395.15	0.00	0.00
45.00		137.56	1376.25	0.00	0.00
45.50		13.68	136.59	0.00	0.00
50.00		126.62	2099.03	0.00	0.00
52.75		77.44	1269.55	0.00	0.00
55.00		63.45	466.82	0.00	0.00
60.00		142.09	1027.11	0.00	0.00
65.00		142.36	1012.93	0.00	0.00
70.00		142.42	998.76	0.00	0.00
75.00		142.29	984.58	0.00	0.00
80.00		142.00	970.41	0.00	0.00
85.00		141.56	956.23	0.00	0.00
90.00		140.98	942.06	0.00	0.00
91.91		53.48	356.12	0.00	0.00
95.00		87.57	970.17	0.00	0.00
98.41		96.32	1059.64	0.00	0.00
100.00		44.69	226.21	0.00	0.00
105.00		140.42	704.34	0.00	0.00
110.00		139.41	693.71	0.00	0.00
115.00		138.30	683.08	0.00	0.00
120.00		137.11	672.45	0.00	0.00
125.00		135.83	661.82	0.00	0.00
127.10		56.42	274.36	0.00	0.00
130.00		78.69	637.71	0.00	0.00
132.93		78.93	637.11	0.00	0.00
135.00		55.43	214.96	0.00	0.00
140.00		133.13	513.38	0.00	0.00
145.00		131.58	505.11	0.00	0.00
150.00	(13) attachments	1286.23	4036.34	727.57	0.00
155.00		128.29	472.07	0.00	0.00
160.00	(19) attachments	1099.61	2177.80	0.00	0.00
165.00		124.78	393.14	0.00	0.00
170.00		122.94	384.87	0.00	0.00
175.00		121.06	376.60	0.00	0.00
180.00		119.12	368.33	0.00	0.00
	Totals:	**6,937.79**	**40,950.08**	**727.57**	**0.00**

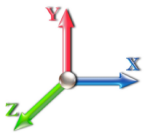
Calculated Forces

Structure:	CT22102-A	**Code:**	TIA-222-G	5/2/2022	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (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 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	-40.95	-6.95	-0.73	-793.41	0.00	793.41	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.122
5.00	-39.42	-6.85	-0.73	-758.67	0.00	758.67	6146.71	3073.36	13441.6	6730.83	0.02	-0.035	0.000	0.119
10.00	-37.90	-6.75	-0.73	-724.41	0.00	724.41	6087.80	3043.90	13136.3	6577.95	0.07	-0.070	0.000	0.116
15.00	-36.41	-6.65	-0.73	-690.65	0.00	690.65	6028.30	3014.15	12833.2	6426.17	0.17	-0.104	0.000	0.114
20.00	-34.94	-6.55	-0.73	-657.38	0.00	657.38	5968.23	2984.11	12532.3	6275.50	0.29	-0.138	0.000	0.111
25.00	-33.48	-6.43	-0.73	-624.65	0.00	624.65	5907.57	2953.79	12233.7	6125.97	0.46	-0.172	0.000	0.108
30.00	-32.04	-6.32	-0.73	-592.48	0.00	592.48	5846.34	2923.17	11937.4	5977.61	0.65	-0.206	0.000	0.105
35.00	-30.63	-6.19	-0.73	-560.91	0.00	560.91	5784.52	2892.26	11643.5	5830.45	0.89	-0.239	0.000	0.102
40.00	-29.23	-6.07	-0.73	-529.94	0.00	529.94	5706.45	2853.23	11321.0	5668.93	1.16	-0.272	0.000	0.099
45.00	-27.85	-5.93	-0.73	-499.60	0.00	499.60	5623.92	2811.96	10994.2	5505.32	1.46	-0.304	0.000	0.096
45.50	-27.71	-5.93	-0.73	-496.63	0.00	496.63	5615.67	2807.83	10961.8	5489.09	1.49	-0.307	0.000	0.095
50.00	-25.61	-5.80	-0.73	-469.97	0.00	469.97	5541.39	2770.70	10672.3	5344.09	1.79	-0.336	0.000	0.093
52.75	-24.34	-5.72	-0.73	-454.03	0.00	454.03	3896.09	1948.05	7602.46	3806.88	1.99	-0.353	0.000	0.126
55.00	-23.87	-5.66	-0.73	-441.16	0.00	441.16	3879.06	1939.53	7518.61	3764.89	2.16	-0.367	0.000	0.123
60.00	-22.84	-5.53	-0.73	-412.84	0.00	412.84	3840.77	1920.38	7333.07	3671.98	2.57	-0.406	-0.001	0.118
65.00	-21.83	-5.39	-0.73	-385.20	0.00	385.20	3801.90	1900.95	7148.65	3579.64	3.01	-0.443	-0.001	0.113
70.00	-20.83	-5.26	-0.73	-358.23	0.00	358.23	3762.45	1881.23	6965.41	3487.88	3.50	-0.480	-0.001	0.108
75.00	-19.84	-5.12	-0.73	-331.95	0.00	331.95	3722.43	1861.21	6783.41	3396.75	4.02	-0.516	-0.001	0.103
80.00	-18.87	-4.98	-0.73	-306.36	0.00	306.36	3681.82	1840.91	6602.68	3306.25	4.58	-0.550	-0.001	0.098
85.00	-17.91	-4.84	-0.73	-281.47	0.00	281.47	3640.63	1820.31	6423.28	3216.42	5.17	-0.583	-0.001	0.092
90.00	-16.97	-4.69	-0.73	-257.28	0.00	257.28	3598.86	1799.43	6245.27	3127.28	5.80	-0.616	-0.001	0.087
91.91	-16.61	-4.64	-0.73	-248.32	0.00	248.32	3582.75	1791.37	6177.64	3093.41	6.05	-0.628	-0.001	0.085
95.00	-15.64	-4.55	-0.73	-233.98	0.00	233.98	3556.51	1778.25	6068.68	3038.85	6.46	-0.647	-0.001	0.081
98.41	-14.58	-4.44	-0.73	-218.47	0.00	218.47	2417.34	1208.67	4152.00	2079.09	6.93	-0.667	-0.001	0.111
100.00	-14.35	-4.40	-0.73	-211.41	-0.01	211.41	2409.93	1204.97	4117.06	2061.59	7.15	-0.676	-0.001	0.109
105.00	-13.65	-4.26	-0.73	-189.41	-0.01	189.41	2386.24	1193.12	4007.42	2006.69	7.88	-0.712	-0.001	0.100
110.00	-12.96	-4.12	-0.73	-168.11	-0.01	168.11	2361.98	1180.99	3898.19	1951.99	8.64	-0.745	-0.001	0.092
115.00	-12.27	-3.98	-0.73	-147.51	-0.01	147.51	2337.13	1168.56	3789.44	1897.54	9.44	-0.775	-0.002	0.083
120.00	-11.60	-3.84	-0.73	-127.62	-0.01	127.62	2311.70	1155.85	3681.20	1843.33	10.27	-0.804	-0.002	0.074
125.00	-10.94	-3.70	-0.73	-108.44	-0.01	108.44	2285.69	1142.85	3573.52	1789.42	11.12	-0.829	-0.002	0.065
127.10	-10.66	-3.64	-0.73	-100.69	-0.01	100.69	2274.61	1137.31	3528.55	1766.90	11.49	-0.839	-0.002	0.062
130.00	-10.03	-3.55	-0.73	-90.13	-0.01	90.13	2259.10	1129.55	3466.46	1735.81	12.01	-0.852	-0.002	0.056
132.93	-9.39	-3.46	-0.73	-79.72	-0.01	79.72	1575.41	787.71	2427.26	1215.44	12.53	-0.865	-0.002	0.072
135.00	-9.18	-3.41	-0.73	-72.55	-0.01	72.55	1569.59	784.79	2399.45	1201.51	12.91	-0.872	-0.002	0.066
140.00	-8.66	-3.27	-0.73	-55.51	-0.01	55.51	1555.10	777.55	2332.23	1167.85	13.83	-0.893	-0.002	0.053
145.00	-8.16	-3.13	-0.73	-39.16	-0.01	39.16	1540.04	770.02	2265.00	1134.18	14.78	-0.909	-0.003	0.040
150.00	-4.14	-1.78	0.00	-23.50	0.00	23.50	1524.40	762.20	2197.80	1100.53	15.74	-0.920	-0.003	0.024
155.00	-3.67	-1.65	0.00	-14.59	0.00	14.59	1508.17	754.09	2130.69	1066.93	16.70	-0.927	-0.003	0.016
160.00	-1.51	-0.51	0.00	-6.35	0.00	6.35	1491.37	745.68	2063.72	1033.39	17.68	-0.931	-0.003	0.007
165.00	-1.12	-0.38	0.00	-3.79	0.00	3.79	1473.98	736.99	1996.93	999.95	18.65	-0.933	-0.003	0.005
170.00	-0.74	-0.25	0.00	-1.89	0.00	1.89	1456.02	728.01	1930.38	966.63	19.63	-0.935	-0.003	0.002
175.00	-0.37	-0.13	0.00	-0.63	0.00	0.63	1437.47	718.73	1864.13	933.45	20.61	-0.935	-0.003	0.001
180.00	0.00	-0.12	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	21.59	-0.935	-0.003	0.000

Final Analysis Summary

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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

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 89 mph Wind	24.5	0.00	49.11	0.01	1.59	2808.67
0.9D + 1.6W 89 mph Wind	24.5	0.00	36.83	0.01	1.59	2784.10
1.2D + 1.0Di + 1.0Wi 40 mph Wind	5.6	0.00	62.09	0.00	0.42	621.97
1.2D + 1.0E	1.3	0.00	49.14	0.00	0.00	135.92
0.9D + 1.0E	1.3	0.00	36.86	0.00	0.00	134.72
1.0D + 1.0W 60 mph Wind	6.9	0.00	40.95	0.00	0.73	793.41

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 89 mph Wind	-28.81	-20.24	-1.59	-1610.0	-0.02	-1610.0	3896.09	1948.0	7602.46	3806.88	52.75	0.430
0.9D + 1.6W 89 mph Wind	-21.50	-20.08	-1.59	-1591.1	-0.02	-1591.1	3896.09	1948.0	7602.46	3806.88	52.75	0.424
1.2D + 1.0Di + 1.0Wi 40 mph Wind	-37.19	-4.55	-0.42	-350.21	0.00	-350.21	3896.09	1948.0	7602.46	3806.88	52.75	0.102
1.2D + 1.0E	-17.56	-0.67	0.00	-42.70	0.00	-42.70	2417.34	1208.6	4152.00	2079.09	98.41	0.028
0.9D + 1.0E	-13.17	-0.66	0.00	-42.20	0.00	-42.20	2417.34	1208.6	4152.00	2079.09	98.41	0.026
1.0D + 1.0W 60 mph Wind	-24.34	-5.72	-0.73	-454.03	0.00	-454.03	3896.09	1948.0	7602.46	3806.88	52.75	0.126

Base Plate Summary

Structure:	CT22102-A		**Code:**	TIA-222-G	5/2/2022
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (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	
Original Design	
Moment (kip-ft):	4527.00
Axial (kip):	45.94
Shear (kip):	33.44
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	2808.67
Axial (kip):	49.11
Shear (kip):	24.48

Base Plate	
Yield (ksi):	60.00
Width (in):	68.89
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	12.18
Moment (kip-in):	411.44
Allow Stress (ksi):	81.00
Applied Stress (ksi):	26.73
Stress Ratio:	0.33

Anchor Bolts	
Bolt Circle:	61.84
Number Bolts:	20.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	6.00
Start Angle (deg):	0.00
Compression	
Force (kip):	112.11
Allowable (kip):	260.00
Ratio:	0.44
Tension	
Force (kip):	105.90
Allowable (kip):	260.00
Ratio:	0.42

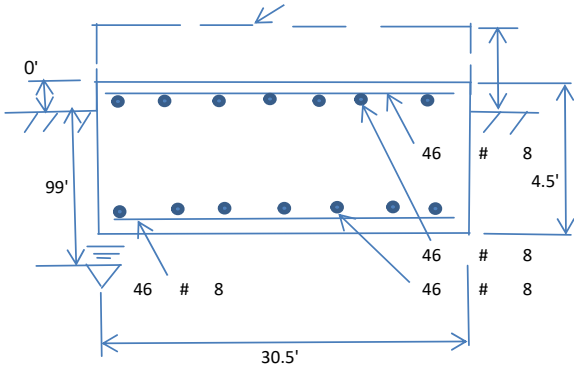
Monopole Mat Foundation Design

			Date: 4/29/2021
Customer Name:		**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	180
Site Number:	CT22102-A	**Engineer Name:**	SBA Engineer
Engr. Number:		**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

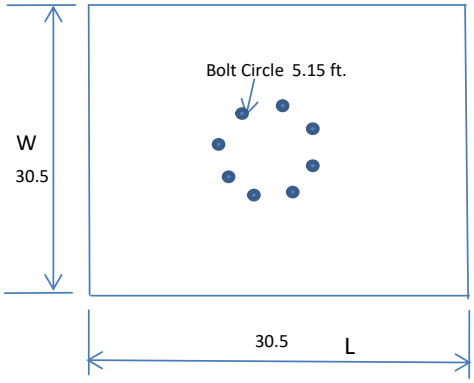


Base Reactions (Factored):

Axial Load (Kips):	49.1	Shear Force (Kips):	24.5
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2808.7
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Anchor Bolt Circle (ft.):	5.15	Depth of Base BG (ft.):	4.50
Thickness of Pad (ft):	4.50		
Length of Pad (ft.):	30.5	Width of Pad (ft.):	30.5
Final Length of pad (ft)	30.5	Final width of pad (ft):	30.5



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
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):	46	Qty. of Rebar in Pad (W):	46	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	46	Qty. of Rebar in Pad (W):	46	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

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

Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4186.13	Total Dry Concrete Weight (Kips):	627.92
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	627.92	Total Vertical Load on Base (Kips):	677.03

Check Soil Capacities:

				Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1583	<	Allowable Factored Soil Bearing (psf): 9000	0.18	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9367.1	>	Design Factored Momont (kips-ft): 2920	0.31	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.21	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		

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1518.5	>	One-Way Factored Shear (L-D. Kips):	280.2	0.18	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1518.5	>	One-Way Factored Shear (W-D., Kips)	280.2	0.18	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1866.2	>	One-Way Factored Shear (C-C, Kips):	441.9	0.24	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0020		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	8067.2	>	Moment at Bottom (L-Direct. K-Ft):	1151.3	0.14	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	8067.2	>	Moment at Bottom (W-Direct. K-Ft):	1151.3	0.14	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	11368.1	>	Moment at Bottom (C-C Dir. K-Ft):	1628.2	0.14	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0020		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	8067.2	>	Moment at the top (L-Dir Kips-Ft):	279.6	0.03	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	8067.2	>	Moment at the top (W-Dir Kips-Ft):	279.6	0.03	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	11368.1	>	Moment at the top (C-C Direc. K-Ft):	461.9	0.04	OK!

Exhibit E

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 Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT22102-A-SBA

Customer Site Name: Town of Norfolk DPW site

Carrier Name: T-Mobile (App#: 194507-1)

Carrier Site ID / Name: CTNH394A / CTNH394_SBA_Monopole_Norfolk

Site Location: Greenwoods Road East

Norfolk, Connecticut

LITCHFIELD County

Latitude: 41.983200

Longitude: -73.153800

Analysis Result:

Max Structural Usage: 46.2% [Pass]

Report Prepared By: Sandesh Khawas Bhujel

NOTE: The proposed mount (1) Sitepro RMQP-4096-HK was assumed to be installed properly to the existing tower per the manufacturer's instructions. Tower Engineering Solutions, LLC is not liable for any fit-up issues during installation.

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Introduction

The purpose of this report is to summarize the analysis results on the (1) Sitepro RMQP-4096-HK at 150.00' 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 Assembly Drawing, Sitepro RMQP-4096-HK
Antenna Loading	SBA Application #: 194507, v1, dated 4/20/2022

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 120 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 93 mph (3-Sec. Gust)
Basic Wind Speed with Ice: 40 mph (3-Sec. Gust) with 0.75" radial ice concurrent
Operational Wind Speed: 30 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G / 2015 IBC
Exposure Category: C
Structure Class: II
Topographic Category: 1
Crest Height (Ft): 0

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) Sitepro RMQP-4096-HK at 150.00' elevation

Final Antenna Configuration

3	RFS APXVAARR24_43-U-NA20
3	Ericsson AIR6419 B41
3	Ericsson 4480 B71 + B85
3	Ericsson 4460 B25 + B66

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 proposed mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 46.2%, which occurs in the mount pipe. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

NOTE: The proposed mount (1) Sitepro RMQP-4096-HK was assumed to be installed properly to the existing tower per the manufacturer's instructions. Tower Engineering Solutions, LLC is not liable for any fit-up issues during installation.

Attachments

1. Mount Diagram
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.

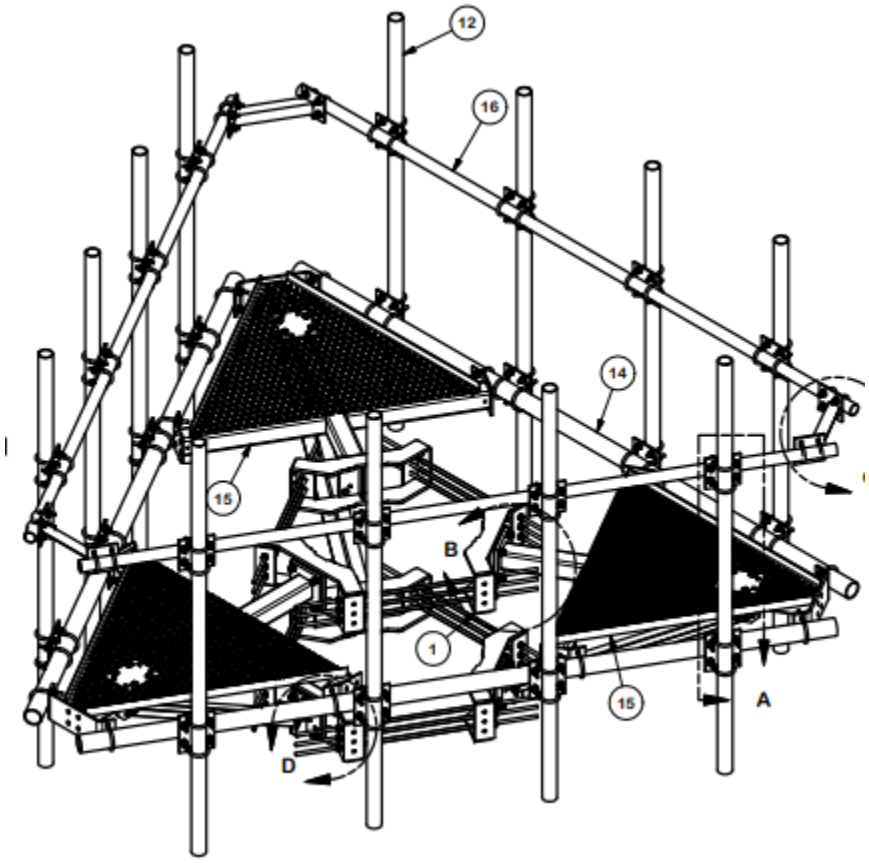
5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

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.


12
16
14
15
B
1
15
A
D

Structure: CT22102-A-SBA - Town of Norfolk DPW site

Sector: A

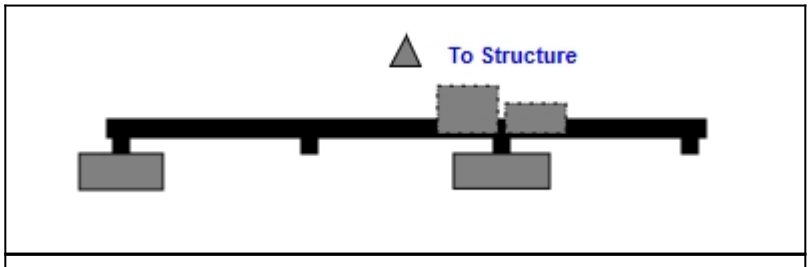
Structure Type: Monopole

Mount Elev: 150.00

4/20/2022

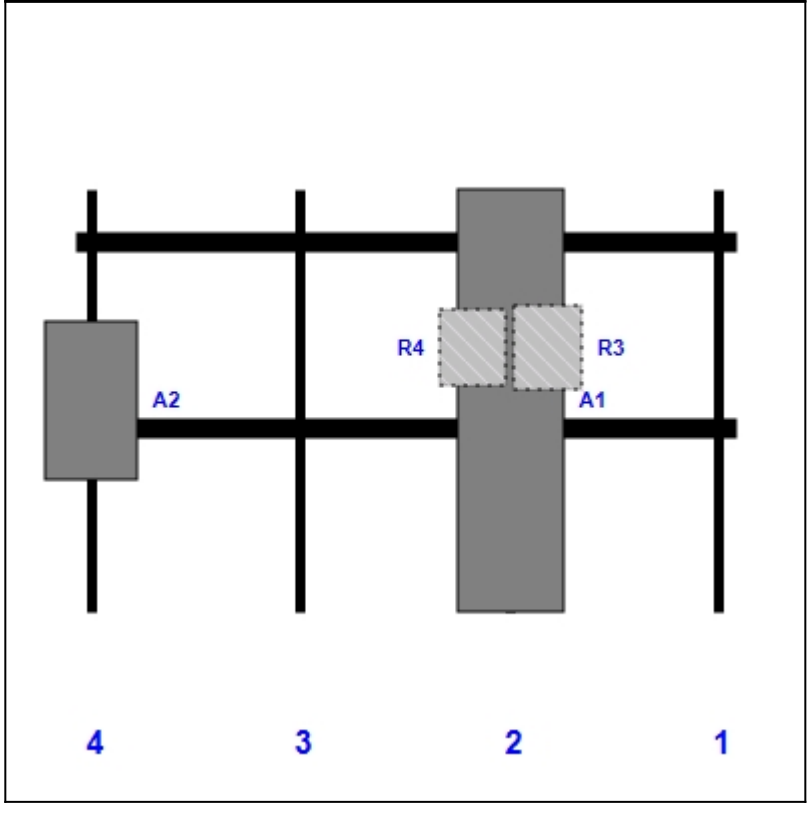
Tower Engineering Solutions

Plan View



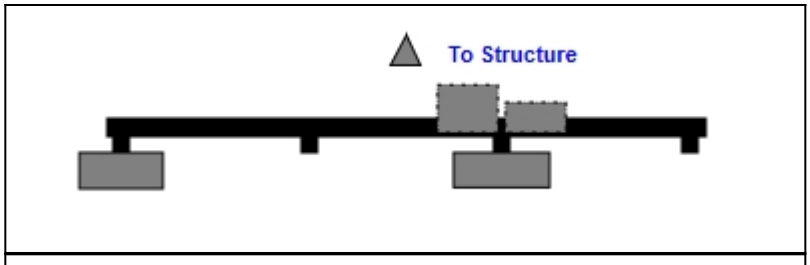
Front View

Looking Toward Structure



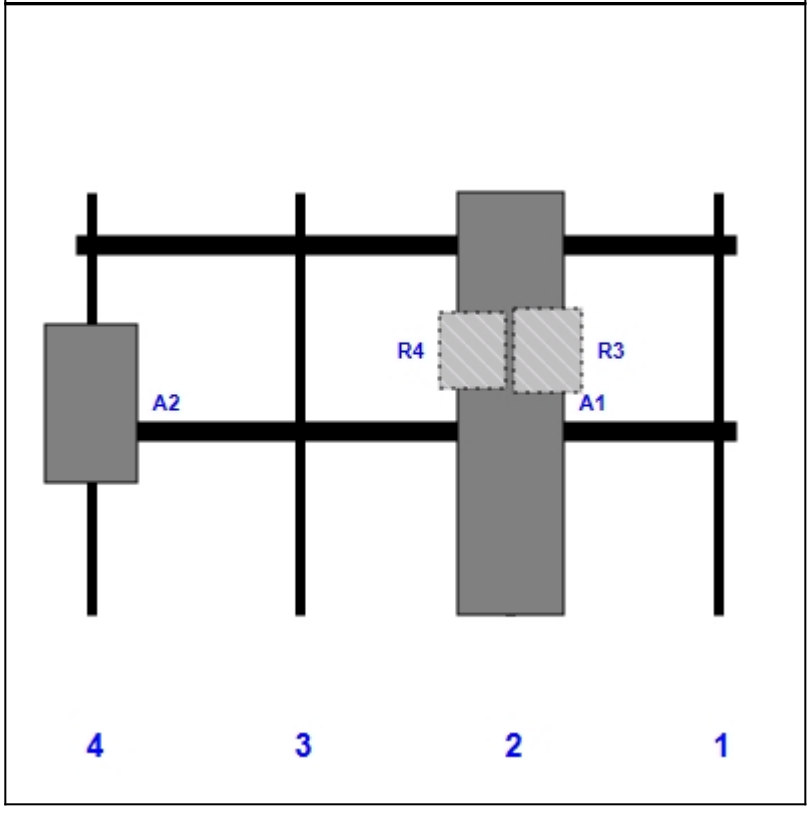
Ref	Model	Height (in)	Width (in)	H Dist Left	Pipe	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	APXVAARR24_43-U-NA20	95.90	24.00	99.00	2	a	Front	48.00		Added	
R3	4480 B71 + B85	19.20	15.10	99.00	2	a	Behind	36.00	8.50	Added	
R4	4460 B25 + B66	17.00	15.10	99.00	2	a	Behind	36.00	-8.50	Added	
A2	AIR6419 B41	36.30	20.90	4.00	4	a	Front	48.00		Added	

Plan View



Front View

Looking Toward Structure



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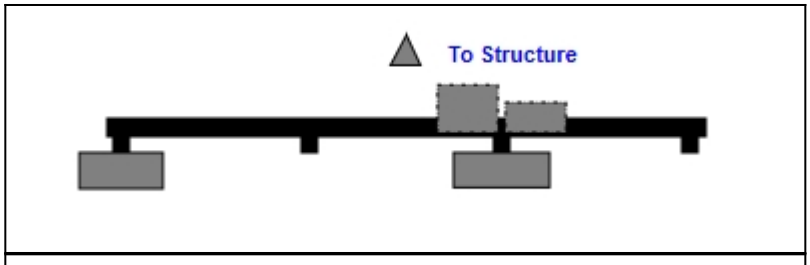
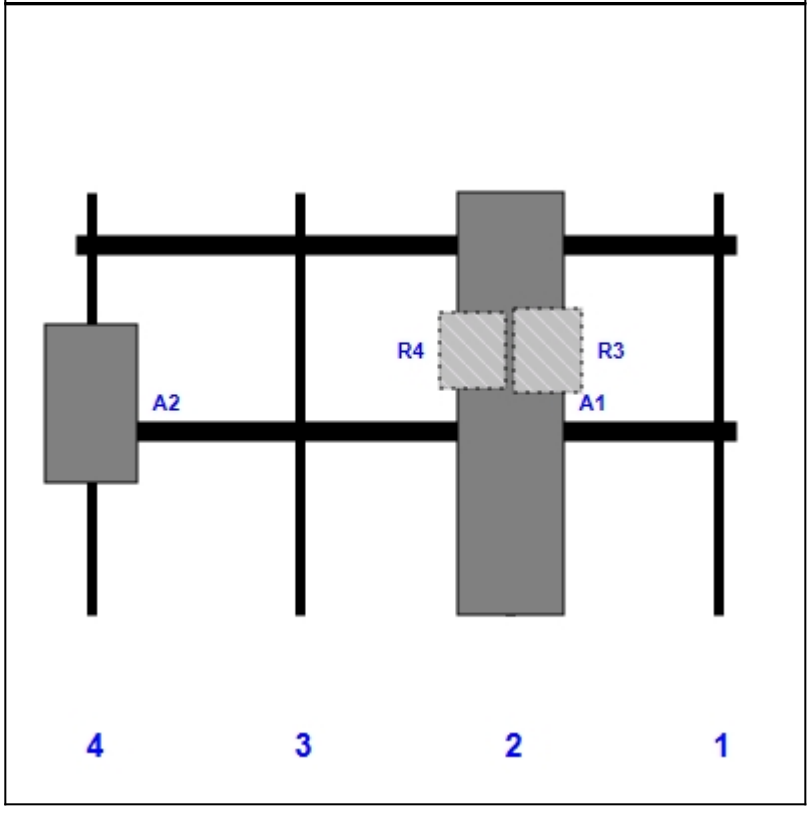
R3	4480 B71 + B85	19.20	15.10	99.00	2	a	Behind	36.00	8.50	Added	
R4	4460 B25 + B66	17.00	15.10	99.00	2	a	Behind	36.00	-8.50	Added	
A2	AIR6419 B41	36.30	20.90	4.00	4	a	Front	48.00		Added	

Plan View

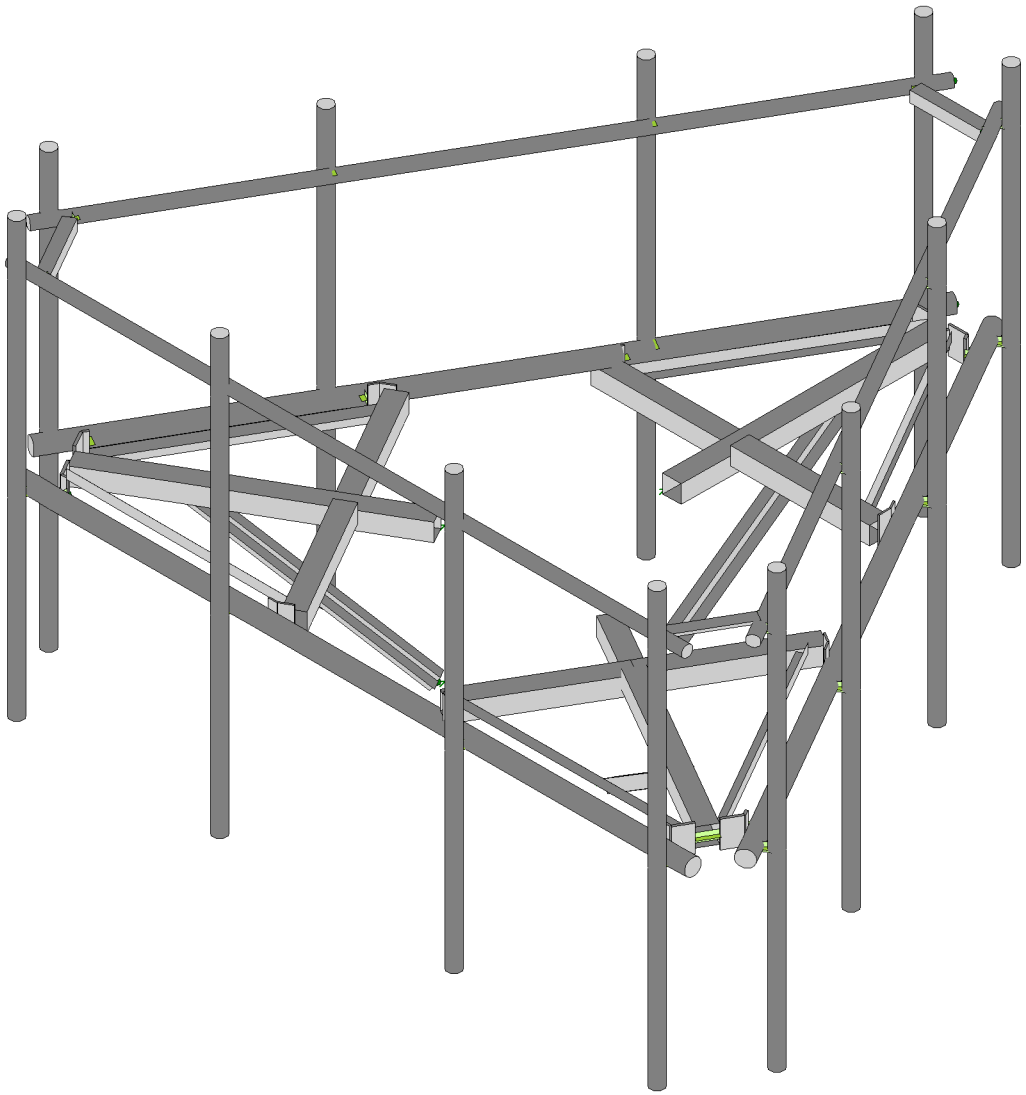


Front View

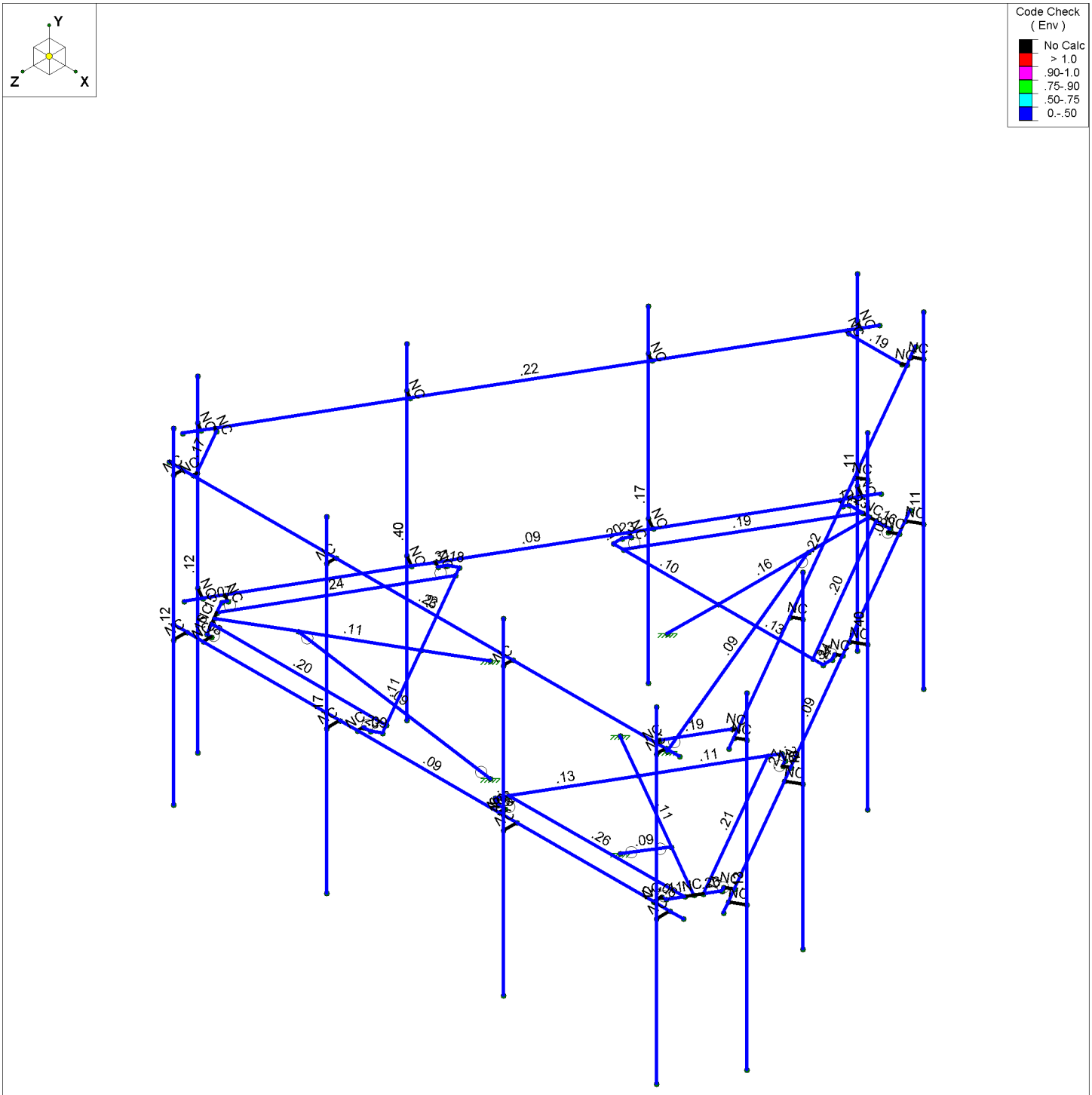
Looking Toward Structure



Ref	Model	Height (in)	Width (in)	H Dist Left	Pipe	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	APXVAARR24_43-U-NA20	95.90	24.00	99.00	2	a	Front	48.00		Added	
R3	4480 B71 + B85	19.20	15.10	99.00	2	a	Behind	36.00	8.50	Added	
R4	4460 B25 + B66	17.00	15.10	99.00	2	a	Behind	36.00	-8.50	Added	
A2	AIR6419 B41	36.30	20.90	4.00	4	a	Front	48.00		Added	

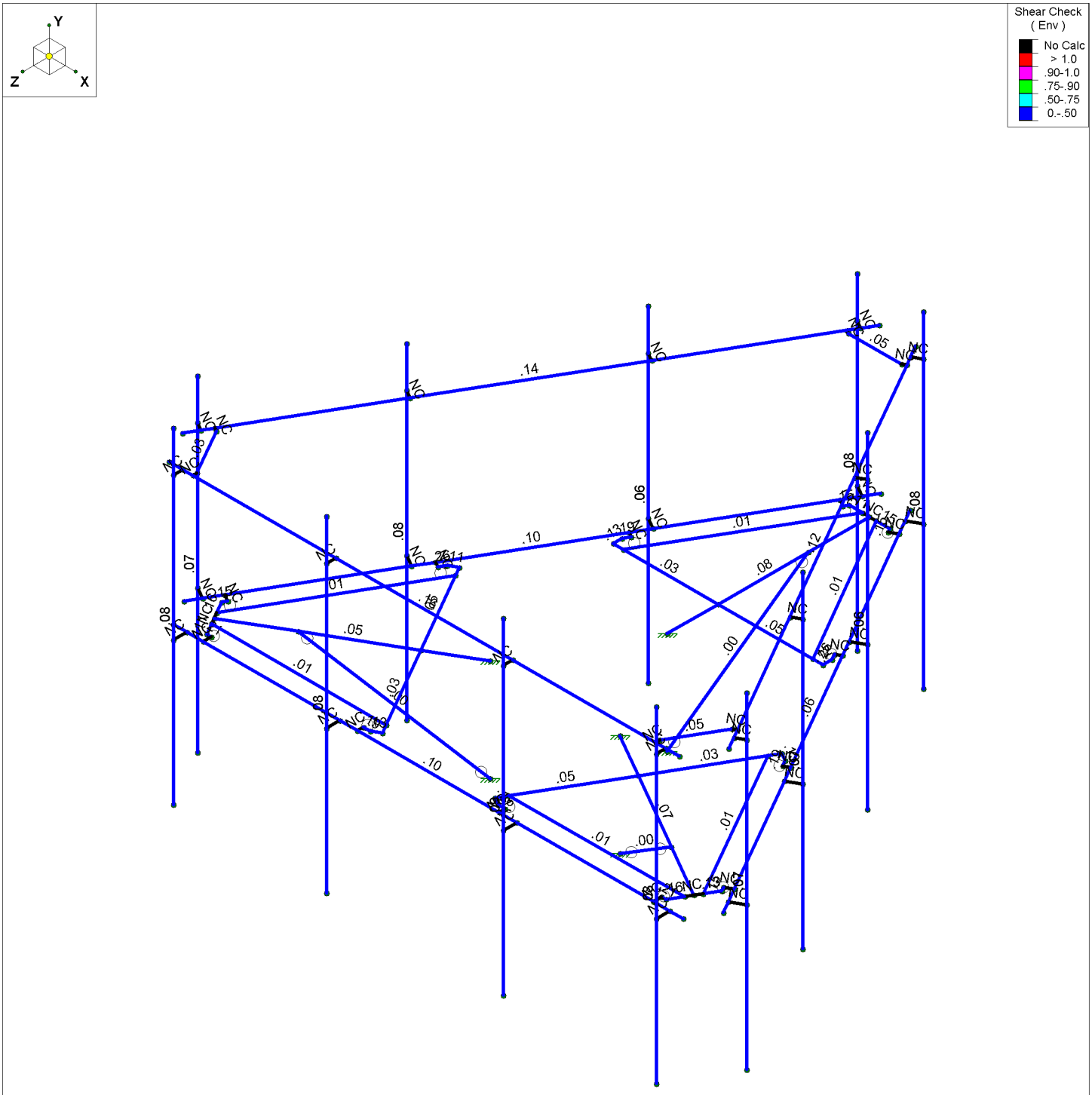


Tower Engineering Solutio...	CT22102-A-SBA_MT_LO_Loads Only_G	SK - 1
KW		Apr 20, 2022 at 1:21 PM
TES Project No. 128078		CT22102-A-SBA_128078_G_RISA_...



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

Tower Engineering Solutio...	CT22102-A-SBA_MT_LO_Loads Only_G	SK - 2
KW		Apr 20, 2022 at 1:22 PM
TES Project No. 128078		CT22102-A-SBA_128078_G_RISA_...



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

Tower Engineering Solutio...	CT22102-A-SBA_MT_LO_Loads Only_G	SK - 3
KW		Apr 20, 2022 at 1:22 PM
TES Project No. 128078		CT22102-A-SBA_128078_G_RISA_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					18			
2	Antenna Di	None					18			
3	Antenna W Front	None					18			
4	Antenna Wi Front	None					18			
5	Antenna W Side	None					18			
6	Antenna Wi Side	None					18			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					3	
10	Structure Di	None						63	3	
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...	None						60		
16	BLC 10 Transient Are...	None						60		

Load Combinations

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N2	0	0	-1.833333	0	
2	N3	0	0	-3.078125	0	
3	N4	0	0	-6.786458	0	
4	N5	-2.572917	0	-3.078125	0	
5	N6	2.572917	0	-3.078125	0	
6	N7	-2.572917	0	-3.296875	0	
7	N8	2.572917	0	-3.296875	0	
8	N10	2.489584	0	-3.441213	0	
9	N11	-.5	0	-6.786458	0	
10	N12	.5	0	-6.786458	0	
11	N13	-.556	0	-6.689463	0	
12	N14	.556	0	-6.689463	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
13	N9	-2.489583	0	-3.441213	0	
14	N15	-2.322917	0	-3.078125	0	
15	N18	-0.166667	0	-6.786458	0	
16	N18A	2.322917	0	-3.078125	0	
17	N19	0.166667	0	-6.786458	0	
18	N19A	2.615879	0	-3.514129	0	
19	N20	0.72595	0	-6.787583	0	
20	N23	-2.615879	0	-3.514129	0	
21	N24	-0.72595	0	-6.787583	0	
22	N25	-2.665734	0	1.539063	0	
23	N26	-5.877245	0	3.393229	0	
24	N27	-1.379276	0	3.767274	0	
25	N28	-3.952193	0	-0.689149	0	
26	N29	-1.568719	0	3.876649	0	
27	N30	-4.141636	0	-0.579774	0	
28	N31	-4.22497	0	-0.435436	0	
29	N32	-5.627245	0	3.826242	0	
30	N33	-6.127245	0	2.960216	0	
31	N34	-5.515245	0	3.826242	0	
32	N35	-6.071245	0	2.863222	0	
33	N36	-1.735386	0	3.876649	0	
34	N37	-1.504276	0	3.550767	0	
35	N38	-5.793912	0	3.537567	0	
36	N39	-3.827193	0	-0.472642	0	
37	N40	-5.960579	0	3.248891	0	
38	N41	-4.351265	0	-0.508353	0	
39	N42	-6.241194	0	2.765101	0	
40	N43	-1.735386	0	4.022482	0	
41	N44	-5.515245	0	4.022482	0	
42	N47	2.665734	0	1.539063	0	
43	N48	5.877245	0	3.393229	0	
44	N49	3.952193	0	-0.689149	0	
45	N50	1.379276	0	3.767274	0	
46	N51	4.141636	0	-0.579774	0	
47	N52	1.568719	0	3.876649	0	
48	N53	1.735386	0	3.876649	0	
49	N54	6.127245	0	2.960216	0	
50	N55	5.627245	0	3.826242	0	
51	N56	6.071245	0	2.863222	0	
52	N57	5.515245	0	3.826242	0	
53	N58	4.224969	0	-0.435436	0	
54	N59	3.827193	0	-0.472642	0	
55	N60	5.960579	0	3.248891	0	
56	N61	1.504276	0	3.550767	0	
57	N62	5.793912	0	3.537567	0	
58	N63	1.735386	0	4.022482	0	
59	N64	5.515245	0	4.022482	0	
60	N65	4.351265	0	-0.508353	0	
61	N66	6.241194	0	2.765101	0	
62	N65A	-6.25	0	4.022482	0	
63	N66A	6.25	0	4.022482	0	
64	N67	-5.916667	0	4.022482	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
65	N68	-2.166667	0	4.022482	0	
66	N69	5.916667	0	4.022482	0	
67	N70	2.166667	0	4.022482	0	
68	N71	-5.916667	0	4.350607	0	
69	N72	-2.166667	0	4.350607	0	
70	N73	5.916667	0	4.350607	0	
71	N74	2.166667	0	4.350607	0	
72	N75	-6.25	3.5	4.12144	0	
73	N76	6.25	3.5	4.12144	0	
74	N77	-5.916667	3.5	4.12144	0	
75	N78	-2.166667	3.5	4.12144	0	
76	N79	5.916667	3.5	4.12144	0	
77	N80	2.166667	3.5	4.12144	0	
78	N81	-5.916667	3.5	4.350607	0	
79	N82	-2.166667	3.5	4.350607	0	
80	N83	5.916667	3.5	4.350607	0	
81	N84	2.166667	3.5	4.350607	0	
82	N85	-5.916667	4.5	4.350607	0	
83	N86	-2.166667	4.5	4.350607	0	
84	N87	5.916667	4.5	4.350607	0	
85	N88	2.166667	4.5	4.350607	0	
86	N89	-5.916667	-3.5	4.350607	0	
87	N90	-2.166667	-3.5	4.350607	0	
88	N91	5.916667	-3.5	4.350607	0	
89	N92	2.166667	-3.5	4.350607	0	
90	N94	6.608572	0	3.401418	0	
91	N95	0.358572	0	-7.4239	0	
92	N96	6.441905	0	3.112743	0	
93	N97	4.566905	0	-0.134852	0	
94	N98	0.525238	0	-7.135225	0	
95	N99	2.400238	0	-3.88763	0	
96	N100	6.72607	0	2.94868	0	
97	N101	4.85107	0	-0.298915	0	
98	N102	0.809403	0	-7.299287	0	
99	N103	2.684403	0	-4.051692	0	
100	N104	6.694272	3.5	3.351939	0	
101	N105	0.444272	3.5	-7.473379	0	
102	N106	6.527606	3.5	3.063264	0	
103	N107	4.652605	3.5	-0.184332	0	
104	N108	0.610939	3.5	-7.184704	0	
105	N109	2.485939	3.5	-3.937109	0	
106	N110	6.72607	3.5	2.94868	0	
107	N111	4.85107	3.5	-0.298915	0	
108	N112	0.809403	3.5	-7.299287	0	
109	N113	2.684403	3.5	-4.051692	0	
110	N114	6.72607	4.5	2.94868	0	
111	N115	4.85107	4.5	-0.298915	0	
112	N116	0.809403	4.5	-7.299287	0	
113	N117	2.684403	4.5	-4.051692	0	
114	N118	6.72607	-3.5	2.94868	0	
115	N119	4.85107	-3.5	-0.298915	0	
116	N120	0.809403	-3.5	-7.299287	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
117	N121	2.684403	-3.5	-4.051692	0	
118	N123	-0.358572	0	-7.4239	0	
119	N124	-6.608572	0	3.401418	0	
120	N125	-0.525238	0	-7.135225	0	
121	N126	-2.400238	0	-3.88763	0	
122	N127	-6.441905	0	3.112743	0	
123	N128	-4.566905	0	-0.134852	0	
124	N129	-0.809403	0	-7.299287	0	
125	N130	-2.684403	0	-4.051692	0	
126	N131	-6.72607	0	2.94868	0	
127	N132	-4.85107	0	-0.298915	0	
128	N133	-0.444272	3.5	-7.473379	0	
129	N134	-6.694272	3.5	3.351939	0	
130	N135	-0.610939	3.5	-7.184704	0	
131	N136	-2.485939	3.5	-3.937109	0	
132	N137	-6.527606	3.5	3.063264	0	
133	N138	-4.652605	3.5	-0.184332	0	
134	N139	-0.809403	3.5	-7.299287	0	
135	N140	-2.684403	3.5	-4.051692	0	
136	N141	-6.72607	3.5	2.94868	0	
137	N142	-4.85107	3.5	-0.298915	0	
138	N143	-0.809403	4.5	-7.299287	0	
139	N144	-2.684403	4.5	-4.051692	0	
140	N145	-6.72607	4.5	2.94868	0	
141	N146	-4.85107	4.5	-0.298915	0	
142	N147	-0.809403	-3.5	-7.299287	0	
143	N148	-2.684403	-3.5	-4.051692	0	
144	N149	-6.72607	-3.5	2.94868	0	
145	N150	-4.85107	-3.5	-0.298915	0	
146	N149A	-5.668667	3.5	4.12144	0	
147	N150A	-5.668667	3.5	4.022482	0	
148	N151	5.668667	3.5	4.12144	0	
149	N152	5.668667	3.5	4.022482	0	
150	N153	6.403605	3.5	2.848489	0	
151	N154	6.317905	3.5	2.897969	0	
152	N155	0.734939	3.5	-6.96993	0	
153	N156	0.649238	3.5	-6.920451	0	
154	N157	-0.734939	3.5	-6.96993	0	
155	N158	-0.649238	3.5	-6.920451	0	
156	N159	-6.403605	3.5	2.848489	0	
157	N160	-6.317905	3.5	2.897969	0	
158	N161	0	0	-5.286458	0	
159	N162	0	-2.5	-1.833333	0	
160	N163	-4.578207	0	2.643229	0	
161	N165	4.578207	0	2.643229	0	
162	N163A	-1.587713	0	0.916667	0	
163	N166	-1.587713	-2.5	0.916667	0	
164	N167	1.587713	0	0.916667	0	
165	N170	1.587713	-2.5	0.916667	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoff Arms	HSS4X4X4	Beam	SquareTube	A500 Gr.B RE...	Typical	3.37	7.8	7.8	12.8
2	Plan Bracing	HSS4X4X4	Beam	SquareTube	A500 Gr.B RE...	Typical	3.37	7.8	7.8	12.8
3	Face Horizontals	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
4	Mount Pipes	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
5	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	Bottom Corner Plate	PL1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
7	Plan Brace Connection ...	PL3/8x6	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
8	Top Corner Braces	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
9	Grating Support Angles	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
10	Kickers	LL2.5x2.5x...	Beam	Double An...	A36 Gr.36	Typical	1.8	2.46	1.07	.023

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B RECT	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	.3	.65	.527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	.3	.65	.527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
9	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N2	N4			Standoff Arms	Beam	SquareTube	A500 Gr....	Typical
2	M2	N5	N3			Plan Bracing	Beam	SquareTube	A500 Gr....	Typical
3	M3	N5	N7			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
4	M4	N7	N9			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
5	M5	N6	N8			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
6	M6	N8	N10			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
7	M7	N18	N11			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
8	M8	N11	N13			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
9	M9	N19	N12			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
10	M10	N12	N14			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
11	M11	N15	N18			Grating Support Angles	Beam	Single Angle	A36 Gr.36	Typical
12	M12	N18A	N19		270	Grating Support Angles	Beam	Single Angle	A36 Gr.36	Typical
13	M13	N18	N19			RIGID	None	None	RIGID	Typical
14	M14	N14	N20			RIGID	None	None	RIGID	Typical
15	M15	N10	N19A			RIGID	None	None	RIGID	Typical
16	M16	N13	N24			RIGID	None	None	RIGID	Typical
17	M17	N9	N23			RIGID	None	None	RIGID	Typical
18	M19	N27	N25			Plan Bracing	Beam	SquareTube	A500 Gr....	Typical
19	M20	N27	N29			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
20	M21	N29	N36			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
21	M22	N28	N30			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
22	M23	N30	N31			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
23	M24	N38	N32			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
24	M25	N32	N34			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
25	M26	N40	N33			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
26	M27	N33	N35			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
27	M28	N37	N38			Grating Support Angles	Beam	Single Angle	A36 Gr.36	Typical
28	M29	N39	N40		270	Grating Support Angles	Beam	Single Angle	A36 Gr.36	Typical
29	M30	N38	N40			RIGID	None	None	RIGID	Typical
30	M31	N35	N42			RIGID	None	None	RIGID	Typical
31	M32	N31	N41			RIGID	None	None	RIGID	Typical
32	M33	N34	N44			RIGID	None	None	RIGID	Typical
33	M34	N36	N43			RIGID	None	None	RIGID	Typical
34	M36	N49	N47			Plan Bracing	Beam	SquareTube	A500 Gr....	Typical
35	M37	N49	N51			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
36	M38	N51	N58			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
37	M39	N50	N52			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
38	M40	N52	N53			Plan Brace Connection Plate	Beam	RECT	A36 Gr.36	Typical
39	M41	N60	N54			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
40	M42	N54	N56			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
41	M43	N62	N55			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
42	M44	N55	N57			Bottom Corner Plate	Beam	RECT	A36 Gr.36	Typical
43	M45	N59	N60			Grating Support Angles	Beam	Single Angle	A36 Gr.36	Typical
44	M46	N61	N62		270	Grating Support Angles	Beam	Single Angle	A36 Gr.36	Typical
45	M47	N60	N62			RIGID	None	None	RIGID	Typical
46	M48	N57	N64			RIGID	None	None	RIGID	Typical
47	M49	N53	N63			RIGID	None	None	RIGID	Typical
48	M50	N56	N66			RIGID	None	None	RIGID	Typical
49	M51	N58	N65			RIGID	None	None	RIGID	Typical
50	M52	N65A	N66A			Face Horizontals	Beam	Pipe	A53 Gr.B	Typical
51	M53	N75	N76			Support Rail	Beam	Pipe	A53 Gr.B	Typical
52	M54	N69	N73			RIGID	None	None	RIGID	Typical
53	M55	N79	N83			RIGID	None	None	RIGID	Typical
54	M56	N80	N84			RIGID	None	None	RIGID	Typical
55	M57	N70	N74			RIGID	None	None	RIGID	Typical
56	M58	N68	N72			RIGID	None	None	RIGID	Typical
57	M59	N78	N82			RIGID	None	None	RIGID	Typical
58	M60	N77	N81			RIGID	None	None	RIGID	Typical
59	M61	N67	N71			RIGID	None	None	RIGID	Typical
60	MP1A	N87	N91			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
61	MP2A	N88	N92			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
62	MP3A	N86	N90			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
63	MP4A	N85	N89			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
64	M66	N94	N95			Face Horizontals	Beam	Pipe	A53 Gr.B	Typical
65	M67	N104	N105			Support Rail	Beam	Pipe	A53 Gr.B	Typical
66	M68	N98	N102			RIGID	None	None	RIGID	Typical
67	M69	N108	N112			RIGID	None	None	RIGID	Typical
68	M70	N109	N113			RIGID	None	None	RIGID	Typical
69	M71	N99	N103			RIGID	None	None	RIGID	Typical
70	M72	N97	N101			RIGID	None	None	RIGID	Typical
71	M73	N107	N111			RIGID	None	None	RIGID	Typical
72	M74	N106	N110			RIGID	None	None	RIGID	Typical
73	M75	N96	N100			RIGID	None	None	RIGID	Typical
74	MP1C	N116	N120			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
75	MP2C	N117	N121			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
76	MP3C	N115	N119			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
77	MP4C	N114	N118			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
78	M80	N123	N124			Face Horizontals	Beam	Pipe	A53 Gr.B	Typical
79	M81	N133	N134			Support Rail	Beam	Pipe	A53 Gr.B	Typical
80	M82	N127	N131			RIGID	None	None	RIGID	Typical
81	M83	N137	N141			RIGID	None	None	RIGID	Typical
82	M84	N138	N142			RIGID	None	None	RIGID	Typical
83	M85	N128	N132			RIGID	None	None	RIGID	Typical
84	M86	N126	N130			RIGID	None	None	RIGID	Typical
85	M87	N136	N140			RIGID	None	None	RIGID	Typical
86	M88	N135	N139			RIGID	None	None	RIGID	Typical
87	M89	N125	N129			RIGID	None	None	RIGID	Typical
88	MP1B	N145	N149			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
89	MP2B	N146	N150			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
90	MP3B	N144	N148			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
91	MP4B	N143	N147			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
92	M94	N149A	N150A			RIGID	None	None	RIGID	Typical
93	M95	N151	N152			RIGID	None	None	RIGID	Typical
94	M96	N153	N154			RIGID	None	None	RIGID	Typical
95	M97	N155	N156			RIGID	None	None	RIGID	Typical
96	M98	N157	N158			RIGID	None	None	RIGID	Typical
97	M99	N159	N160			RIGID	None	None	RIGID	Typical
98	M100	N150A	N160		180	Top Corner Braces	Beam	Single Angle	A36 Gr.36	Typical
99	M101	N158	N156		180	Top Corner Braces	Beam	Single Angle	A36 Gr.36	Typical
100	M102	N154	N152		180	Top Corner Braces	Beam	Single Angle	A36 Gr.36	Typical
101	M103	N162	N161			Kickers	Beam	Double Angle...	A36 Gr.36	Typical
102	M102A	N163A	N26			Standoff Arms	Beam	SquareTube	A500 Gr....	Typical
103	M103A	N166	N163			Kickers	Beam	Double Angle...	A36 Gr.36	Typical
104	M104	N167	N48			Standoff Arms	Beam	SquareTube	A500 Gr....	Typical
105	M105	N170	N165			Kickers	Beam	Double Angle...	A36 Gr.36	Typical
106	M106	N3	N6			Plan Bracing	Beam	SquareTube	A500 Gr....	Typical
107	M107	N25	N28			Plan Bracing	Beam	SquareTube	A500 Gr....	Typical
108	M108	N47	N50			Plan Bracing	Beam	SquareTube	A500 Gr....	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	** 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...
14	M14		BenPIN				Yes	** NA **			None
15	M15		BenPIN				Yes	** NA **			None
16	M16		BenPIN				Yes	** NA **			None
17	M17		BenPIN				Yes	** NA **			None
18	M19						Yes				None
19	M20						Yes				None
20	M21						Yes				None
21	M22						Yes				None
22	M23						Yes				None
23	M24						Yes				None
24	M25						Yes				None
25	M26						Yes				None
26	M27						Yes				None
27	M28						Yes				None
28	M29						Yes				None
29	M30						Yes	** NA **			None
30	M31		BenPIN				Yes	** NA **			None
31	M32		BenPIN				Yes	** NA **			None
32	M33		BenPIN				Yes	** NA **			None
33	M34		BenPIN				Yes	** NA **			None
34	M36						Yes				None
35	M37						Yes				None
36	M38						Yes				None
37	M39						Yes				None
38	M40						Yes				None
39	M41						Yes				None
40	M42						Yes				None
41	M43						Yes				None
42	M44						Yes				None
43	M45						Yes				None
44	M46						Yes				None
45	M47						Yes	** NA **			None
46	M48		BenPIN				Yes	** NA **			None
47	M49		BenPIN				Yes	** NA **			None
48	M50		BenPIN				Yes	** NA **			None
49	M51		BenPIN				Yes	** NA **			None
50	M52						Yes				None
51	M53						Yes				None
52	M54						Yes	** NA **			None
53	M55						Yes	** NA **			None
54	M56						Yes	** NA **			None
55	M57						Yes	** NA **			None
56	M58						Yes	** NA **			None
57	M59						Yes	** NA **			None
58	M60						Yes	** NA **			None
59	M61						Yes	** NA **			None
60	MP1A						Yes				None
61	MP2A						Yes				None
62	MP3A						Yes				None
63	MP4A						Yes				None
64	M66						Yes				None
65	M67						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...
66	M68						Yes	** NA **			None
67	M69						Yes	** NA **			None
68	M70						Yes	** NA **			None
69	M71						Yes	** NA **			None
70	M72						Yes	** NA **			None
71	M73						Yes	** NA **			None
72	M74						Yes	** NA **			None
73	M75						Yes	** NA **			None
74	MP1C						Yes				None
75	MP2C						Yes				None
76	MP3C						Yes				None
77	MP4C						Yes				None
78	M80						Yes				None
79	M81						Yes				None
80	M82						Yes	** NA **			None
81	M83						Yes	** NA **			None
82	M84						Yes	** NA **			None
83	M85						Yes	** NA **			None
84	M86						Yes	** NA **			None
85	M87						Yes	** NA **			None
86	M88						Yes	** NA **			None
87	M89						Yes	** NA **			None
88	MP1B						Yes				None
89	MP2B						Yes				None
90	MP3B						Yes				None
91	MP4B						Yes				None
92	M94						Yes	** NA **			None
93	M95						Yes	** NA **			None
94	M96						Yes	** NA **			None
95	M97						Yes	** NA **			None
96	M98						Yes	** NA **			None
97	M99						Yes	** NA **			None
98	M100						Yes				None
99	M101						Yes				None
100	M102						Yes				None
101	M103	BenPIN	BenPIN				Yes				None
102	M102A						Yes				None
103	M103A	BenPIN	BenPIN				Yes				None
104	M104						Yes				None
105	M105	BenPIN	BenPIN				Yes				None
106	M106						Yes				None
107	M107						Yes				None
108	M108						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Standoff Ar...	4.953			Lbyy						Lateral
2	M2	Plan Bracing	2.573			Lbyy			2.1	2.1		Lateral
3	M3	Plan Brace ...	.219			Lbyy						Lateral
4	M4	Plan Brace ...	.167			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
5	M5	Plan Brace ...	.219			Lbyy						Lateral
6	M6	Plan Brace ...	.167			Lbyy						Lateral
7	M7	Bottom Cor...	.333			Lbyy						Lateral
8	M8	Bottom Cor...	.112			Lbyy						Lateral
9	M9	Bottom Cor...	.333			Lbyy						Lateral
10	M10	Bottom Cor...	.112			Lbyy						Lateral
11	M11	Grating Sup...	4.29			Lbyy						Lateral
12	M12	Grating Sup...	4.29			Lbyy						Lateral
13	M19	Plan Bracing	2.573			Lbyy			2.1	2.1		Lateral
14	M20	Plan Brace ...	.219			Lbyy						Lateral
15	M21	Plan Brace ...	.167			Lbyy						Lateral
16	M22	Plan Brace ...	.219			Lbyy						Lateral
17	M23	Plan Brace ...	.167			Lbyy						Lateral
18	M24	Bottom Cor...	.333			Lbyy						Lateral
19	M25	Bottom Cor...	.112			Lbyy						Lateral
20	M26	Bottom Cor...	.333			Lbyy						Lateral
21	M27	Bottom Cor...	.112			Lbyy						Lateral
22	M28	Grating Sup...	4.29			Lbyy						Lateral
23	M29	Grating Sup...	4.29			Lbyy						Lateral
24	M36	Plan Bracing	2.573			Lbyy			2.1	2.1		Lateral
25	M37	Plan Brace ...	.219			Lbyy						Lateral
26	M38	Plan Brace ...	.167			Lbyy						Lateral
27	M39	Plan Brace ...	.219			Lbyy						Lateral
28	M40	Plan Brace ...	.167			Lbyy						Lateral
29	M41	Bottom Cor...	.333			Lbyy						Lateral
30	M42	Bottom Cor...	.112			Lbyy						Lateral
31	M43	Bottom Cor...	.333			Lbyy						Lateral
32	M44	Bottom Cor...	.112			Lbyy						Lateral
33	M45	Grating Sup...	4.29			Lbyy						Lateral
34	M46	Grating Sup...	4.29			Lbyy						Lateral
35	M52	Face Horizo...	12.5			Lbyy						Lateral
36	M53	Support Rail	12.5			Lbyy						Lateral
37	MP1A	Mount Pipes	8			Lbyy						Lateral
38	MP2A	Mount Pipes	8			Lbyy						Lateral
39	MP3A	Mount Pipes	8			Lbyy						Lateral
40	MP4A	Mount Pipes	8			Lbyy						Lateral
41	M66	Face Horizo...	12.5			Lbyy						Lateral
42	M67	Support Rail	12.5			Lbyy						Lateral
43	MP1C	Mount Pipes	8			Lbyy						Lateral
44	MP2C	Mount Pipes	8			Lbyy						Lateral
45	MP3C	Mount Pipes	8			Lbyy						Lateral
46	MP4C	Mount Pipes	8			Lbyy						Lateral
47	M80	Face Horizo...	12.5			Lbyy						Lateral
48	M81	Support Rail	12.5			Lbyy						Lateral
49	MP1B	Mount Pipes	8			Lbyy						Lateral
50	MP2B	Mount Pipes	8			Lbyy						Lateral
51	MP3B	Mount Pipes	8			Lbyy						Lateral
52	MP4B	Mount Pipes	8			Lbyy						Lateral
53	M100	Top Corner ...	1.298			Lbyy						Lateral
54	M101	Top Corner ...	1.298			Lbyy						Lateral
55	M102	Top Corner ...	1.298			Lbyy						Lateral
56	M103	Kickers	4.263			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
57	M102A	Standoff Ar...	4.953			Lbyy						Lateral
58	M103A	Kickers	4.263			Lbyy						Lateral
59	M104	Standoff Ar...	4.953			Lbyy						Lateral
60	M105	Kickers	4.263			Lbyy						Lateral
61	M106	Plan Bracing	2.573			Lbyy			2.1	2.1		Lateral
62	M107	Plan Bracing	2.573			Lbyy			2.1	2.1		Lateral
63	M108	Plan Bracing	2.573			Lbyy			2.1	2.1		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	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N162	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N163A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N166	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N167	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N170	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	N2	max	1739.779	4	647.457	6	4870.013	1	.693	6	2.204	3	.457	3
2		min	-1740.163	3	77.018	1	-2556.049	2	.157	1	-2.197	4	-.15	4
3	N162	max	44.157	4	2427.5	5	-443.103	2	0	11	0	2	0	5
4		min	-43.893	3	317.242	2	-3282.4	5	0	1	0	5	0	2
5	N163A	max	4341.412	4	641.375	7	1318.874	1	.267	4	1.135	1	-.033	9
6		min	-2342.874	3	-22.828	9	-2476.576	2	-.272	3	-1.127	2	-.794	5
7	N166	max	-509.269	3	2406.756	8	1629.868	8	0	4	0	3	0	3
8		min	-2815.722	8	414.303	3	275.056	3	0	3	0	4	0	4
9	N167	max	1852.737	4	639.325	8	1955.717	1	-.017	1	1.217	2	.426	5
10		min	-3851.751	3	-11.842	10	-3112.793	2	-.71	6	-1.213	1	-.105	10
11	N170	max	2813.586	7	2404.983	7	1628.658	7	0	1	0	1	0	1
12		min	520.748	4	423.917	4	281.745	4	0	2	0	2	0	2
13	Totals:	max	6909.421	4	8776.193	7	7067.727	1						
14		min	-6909.418	3	3438.162	4	-7067.732	2						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1	M1	1	max	2556.049	2	646.894	6	1739.132	4	.15	4	2.204	3	.693	6
2			min	-4870.013	1	76.693	1	-1738.878	3	-.457	3	-2.197	4	.157	1
3		2	max	2556.049	2	609.254	6	1697.006	4	.15	4	.145	2	.074	1
4			min	-4870.013	1	58.366	1	-1696.753	3	-.457	3	-.135	1	-.136	2
5		3	max	2540.578	2	-160.476	2	124.731	4	.257	4	.021	3	.541	5
6			min	-4797.94	1	-1003.595	5	-124.687	3	-.283	3	-.02	4	-.168	2
7		4	max	2930.526	2	1264.553	5	37.409	4	.257	4	.097	4	1.215	5
8			min	-2763.98	1	98.115	2	-37.429	3	-.283	3	-.096	3	-.027	2
9		5	max	2930.526	2	1215.08	5	35.359	1	.257	4	.117	4	-.102	4
10			min	-2763.98	1	75.913	2	-35.187	2	-.283	3	-.116	3	-.322	7
11	M2	1	max	190.112	3	-165.17	3	919.311	2	-.053	2	.109	2	.049	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
12			min	-200.347	4	-533.426	8	-889.511	1	-.19	5	-.103	1	.006	1
13		2	max	515.414	3	-175.297	3	57.612	1	-.051	3	.288	2	.398	8
14			min	-499.71	4	-579.563	8	-85.699	2	-.201	8	-.276	1	.128	3
15		3	max	515.414	3	-187.696	3	35.73	1	-.051	3	.24	2	.78	8
16			min	-499.71	4	-607.906	8	-63.817	2	-.201	8	-.246	1	.244	3
17		4	max	515.414	3	-200.095	3	13.847	1	-.051	3	.206	2	1.18	8
18			min	-499.71	4	-636.25	8	-41.935	2	-.201	8	-.23	1	.369	3
19		5	max	515.414	3	-212.495	3	-1.974	4	-.051	3	.186	2	1.599	8
20			min	-499.71	4	-664.593	8	-37.643	7	-.201	8	-.228	1	.502	3
21	M3	1	max	919.39	2	533.447	8	199.282	4	.049	6	.103	1	.19	5
22			min	-889.43	1	165.307	3	-191.208	3	.006	1	-.109	2	.053	2
23		2	max	919.39	2	532.212	8	196.491	4	.049	6	.095	1	.161	5
24			min	-889.43	1	164.805	3	-188.417	3	.006	1	-.1	2	.041	2
25		3	max	919.39	2	530.977	8	193.7	4	.049	6	.086	1	.133	5
26			min	-889.43	1	164.302	3	-185.627	3	.006	1	-.092	2	.03	2
27		4	max	919.39	2	529.742	8	190.91	4	.049	6	.078	1	.104	5
28			min	-889.43	1	163.8	3	-182.836	3	.006	1	-.083	2	.018	2
29		5	max	919.39	2	528.507	8	188.119	4	.049	6	.07	1	.075	5
30			min	-889.43	1	163.297	3	-180.045	3	.006	1	-.074	2	.007	2
31	M4	1	max	874.058	2	528.553	8	392.463	4	.076	8	.07	1	.043	5
32			min	-847.002	1	163.18	3	-401.173	3	.024	3	-.074	2	-.009	2
33		2	max	873.137	2	527.612	8	390.868	4	.076	8	.083	1	.03	1
34			min	-846.081	1	162.797	3	-399.578	3	.024	3	-.088	2	-.018	2
35		3	max	872.217	2	526.671	8	389.273	4	.076	8	.096	1	.022	1
36			min	-845.16	1	162.414	3	-397.984	3	.024	3	-.101	2	-.026	2
37		4	max	871.296	2	525.731	8	387.679	4	.076	8	.109	1	.013	1
38			min	-844.24	1	162.031	3	-396.389	3	.024	3	-.114	2	-.035	2
39		5	max	870.375	2	524.79	8	386.084	4	.076	8	.123	1	.005	1
40			min	-843.319	1	161.649	3	-394.794	3	.024	3	-.127	2	-.053	6
41	M5	1	max	1064.423	2	707.788	5	498.028	4	.047	3	.177	3	.419	7
42			min	-1026.463	1	229.879	2	-503.06	3	-.021	4	-.174	4	.116	4
43		2	max	1064.423	2	706.554	5	495.237	4	.047	3	.149	3	.381	7
44			min	-1026.463	1	229.377	2	-500.269	3	-.021	4	-.147	4	.099	4
45		3	max	1064.423	2	705.319	5	492.447	4	.047	3	.122	3	.343	7
46			min	-1026.463	1	228.874	2	-497.479	3	-.021	4	-.12	4	.083	4
47		4	max	1064.423	2	704.084	5	489.656	4	.047	3	.095	3	.305	7
48			min	-1026.463	1	228.372	2	-494.688	3	-.021	4	-.093	4	.067	4
49		5	max	1064.423	2	702.849	5	486.865	4	.047	3	.068	3	.267	7
50			min	-1026.463	1	227.869	2	-491.897	3	-.021	4	-.066	4	.05	4
51	M6	1	max	899.43	2	702.985	5	876.298	4	-.033	2	.068	3	.25	7
52			min	-866.117	1	227.74	2	-859.447	3	-.102	5	-.066	4	.033	4
53		2	max	898.509	2	702.045	5	874.703	4	-.033	2	.06	2	.221	7
54			min	-865.196	1	227.358	2	-857.853	3	-.102	5	-.056	1	.021	4
55		3	max	897.589	2	701.104	5	873.109	4	-.033	2	.084	2	.192	7
56			min	-864.275	1	226.975	2	-856.258	3	-.102	5	-.079	1	.009	4
57		4	max	896.668	2	700.163	5	871.514	4	-.033	2	.108	2	.164	7
58			min	-863.355	1	226.592	2	-854.663	3	-.102	5	-.102	1	-.004	4
59		5	max	895.747	2	699.222	5	869.919	4	-.033	2	.131	2	.135	7
60			min	-862.434	1	226.209	2	-853.069	3	-.102	5	-.125	1	-.016	4
61	M7	1	max	373.178	3	545.336	8	422.217	2	.074	7	.218	1	.34	5
62			min	-311.228	4	7.667	3	-400.912	1	-.008	4	-.229	2	.037	2
63		2	max	373.178	3	543.186	8	417.965	2	.074	7	.184	1	.295	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 Mome...	LC
64			min	-311.228	4	6.647	3	-396.659	1	-.008	4	-.194	2	.034	2
65		3	max	373.178	3	541.035	8	413.712	2	.074	7	.151	1	.249	5
66			min	-311.228	4	5.626	3	-392.407	1	-.008	4	-.159	2	.032	2
67		4	max	373.178	3	538.884	8	409.46	2	.074	7	.119	1	.204	5
68			min	-311.228	4	4.605	3	-388.154	1	-.008	4	-.125	2	.029	2
69		5	max	373.178	3	536.733	8	405.208	2	.074	7	.087	1	.16	5
70			min	-311.228	4	3.584	3	-383.902	1	-.008	4	-.091	2	.027	2
71	M8	1	max	483.952	1	536.747	8	310.726	3	0	3	.087	1	.139	7
72			min	-476.56	2	4.097	3	-249.044	4	-.105	8	-.091	2	.034	4
73		2	max	483.333	1	536.024	8	309.654	3	0	3	.089	1	.126	7
74			min	-475.942	2	3.754	3	-247.972	4	-.105	8	-.092	2	.023	4
75		3	max	482.715	1	535.301	8	308.583	3	0	3	.091	1	.112	7
76			min	-475.323	2	3.411	3	-246.901	4	-.105	8	-.092	2	.012	4
77		4	max	482.096	1	534.579	8	307.511	3	0	3	.093	1	.099	7
78			min	-474.704	2	3.068	3	-245.829	4	-.105	8	-.093	2	.002	4
79		5	max	481.477	1	533.856	8	306.44	3	0	3	.095	1	.086	7
80			min	-474.086	2	2.725	3	-244.758	4	-.105	8	-.093	2	-.009	4
81	M9	1	max	393.217	4	555.988	7	272.268	1	-.012	1	.155	2	.366	7
82			min	-328.343	3	-50.132	4	-290.319	2	-.109	6	-.145	1	.004	4
83		2	max	393.217	4	553.837	7	268.015	1	-.012	1	.131	2	.319	7
84			min	-328.343	3	-51.152	4	-286.067	2	-.109	6	-.123	1	.008	4
85		3	max	393.217	4	551.686	7	263.763	1	-.012	1	.108	2	.273	7
86			min	-328.343	3	-52.173	4	-281.815	2	-.109	6	-.101	1	.012	4
87		4	max	393.217	4	549.536	7	259.511	1	-.012	1	.084	2	.227	7
88			min	-328.343	3	-53.194	4	-277.562	2	-.109	6	-.079	1	.017	4
89		5	max	393.217	4	547.385	7	255.258	1	-.012	1	.061	2	.182	7
90			min	-328.343	3	-54.215	4	-273.31	2	-.109	6	-.058	1	.021	4
91	M10	1	max	367.197	1	547.351	7	189.721	3	.107	7	.061	2	.178	6
92			min	-355.394	2	-53.793	4	-250.314	4	-.011	4	-.058	1	.057	1
93		2	max	366.578	1	546.628	7	188.649	3	.107	7	.063	2	.165	6
94			min	-354.775	2	-54.136	4	-249.242	4	-.011	4	-.061	1	.047	1
95		3	max	365.959	1	545.905	7	187.577	3	.107	7	.065	2	.152	6
96			min	-354.156	2	-54.479	4	-248.17	4	-.011	4	-.065	1	.036	1
97		4	max	365.341	1	545.183	7	186.506	3	.107	7	.067	2	.139	6
98			min	-353.537	2	-54.822	4	-247.099	4	-.011	4	-.068	1	.025	1
99		5	max	364.722	1	544.46	7	185.434	3	.107	7	.069	2	.126	6
100			min	-352.919	2	-55.165	4	-246.027	4	-.011	4	-.072	1	.014	1
101	M11	1	max	1132.103	1	23.947	8	29.307	4	0	4	.013	3	.016	2
102			min	-1194.975	2	-.362	3	-21.641	3	0	7	-.023	4	-.019	1
103		2	max	1140.03	1	9.68	8	15.674	4	0	4	.005	2	.003	2
104			min	-1202.901	2	-4.421	3	-8.009	3	0	7	-.004	1	-.005	1
105		3	max	1147.956	1	-.972	4	10.932	5	0	4	.011	4	.009	1
106			min	-1210.828	2	-17.832	7	-2.693	2	0	7	-.007	3	-.003	2
107		4	max	1155.883	1	-7.738	4	19.256	3	0	4	.003	4	.037	5
108			min	-1218.755	2	-40.362	7	-11.59	4	0	7	-.009	3	.001	2
109		5	max	1163.81	1	-12.457	4	32.888	3	0	4	-.006	3	.085	7
110			min	-1226.681	2	-56.641	7	-25.223	4	0	7	-.038	8	-.003	4
111	M12	1	max	1225.758	1	31.147	3	18.463	7	0	8	.016	4	.022	1
112			min	-1296.555	2	-21.168	4	-2.067	4	0	3	-.022	3	-.005	2
113		2	max	1233.684	1	17.515	3	4.47	3	0	8	.007	2	.015	5
114			min	-1304.482	2	-7.536	4	-6.128	4	0	3	-.003	1	.004	2
115		3	max	1241.611	1	13.783	5	-3.33	3	0	8	.011	3	.004	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
116			min	-1312.408	2	.146	2	-23.247	8	0	3	-.006	4	-.007	1
117		4	max	1249.538	1	19.729	4	-10.099	3	0	8	.003	3	-.004	3
118			min	-1320.335	2	-9.75	3	-45.785	8	0	3	-.009	4	-.039	5
119		5	max	1257.464	1	33.361	4	-14.818	3	0	8	-.007	4	0	3
120			min	-1328.262	2	-23.382	3	-62.064	8	0	3	-.04	7	-.093	8
121	M13	1	max	890.499	1	-31.574	3	1486.693	2	.147	7	.233	2	.382	5
122			min	-860.921	2	-601.579	5	-1405.566	1	.001	4	-.198	1	.045	2
123		2	max	890.499	1	-31.6	3	1486.693	2	.147	7	.357	2	.432	5
124			min	-860.921	2	-601.657	5	-1405.566	1	.001	4	-.315	1	.049	2
125		3	max	925.883	1	616.464	7	1486.693	2	.103	3	.481	2	.512	7
126			min	-896.051	2	-600.297	8	-1405.566	1	-.188	8	-.432	1	.059	2
127		4	max	925.883	1	616.385	7	1358.412	1	-.035	3	.286	2	.46	7
128			min	-896.051	2	-24.093	4	-1443.834	2	-.188	8	-.242	1	.027	4
129		5	max	925.883	1	616.307	7	1358.412	1	-.035	3	.165	2	.409	5
130			min	-896.051	2	-24.119	4	-1443.834	2	-.188	8	-.129	1	.029	4
131	M14	1	max	247.301	4	544.529	7	365.234	1	-.014	1	.069	2	.107	7
132			min	-184.179	3	-55.466	4	-352.624	2	-.126	6	-.072	1	-.011	4
133		2	max	247.301	4	544.529	7	365.234	1	-.014	1	.052	2	.08	7
134			min	-184.179	3	-55.466	4	-352.624	2	-.126	6	-.054	1	-.008	4
135		3	max	247.301	4	544.529	7	365.234	1	-.014	1	.035	2	.053	7
136			min	-184.179	3	-55.466	4	-352.624	2	-.126	6	-.036	1	-.005	4
137		4	max	247.301	4	544.529	7	365.234	1	-.014	1	.017	2	.027	7
138			min	-184.179	3	-55.466	4	-352.624	2	-.126	6	-.018	1	-.003	4
139		5	max	247.301	4	544.529	7	365.234	1	-.014	1	0	3	0	5
140			min	-184.179	3	-55.466	4	-352.624	2	-.126	6	0	7	0	3
141	M15	1	max	865.739	4	698.971	5	859.607	1	.135	7	.131	2	.102	5
142			min	-857.012	3	226.304	2	-898.898	2	-.016	4	-.125	1	.033	2
143		2	max	865.739	4	698.971	5	859.607	1	.135	7	.098	2	.076	5
144			min	-857.012	3	226.304	2	-898.898	2	-.016	4	-.094	1	.025	2
145		3	max	865.739	4	698.971	5	859.607	1	.135	7	.066	2	.051	5
146			min	-857.012	3	226.304	2	-898.898	2	-.016	4	-.063	1	.017	2
147		4	max	865.739	4	698.971	5	859.607	1	.135	7	.033	2	.025	5
148			min	-857.012	3	226.304	2	-898.898	2	-.016	4	-.031	1	.008	2
149		5	max	865.739	4	698.971	5	859.607	1	.135	7	0	3	0	5
150			min	-857.012	3	226.304	2	-898.898	2	-.016	4	0	5	0	8
151	M16	1	max	306.747	3	533.864	8	473.993	2	.086	7	.095	1	.105	8
152			min	-244.431	4	2.327	3	-481.921	1	-.009	4	-.093	2	0	3
153		2	max	306.747	3	533.864	8	473.993	2	.086	7	.071	1	.079	8
154			min	-244.431	4	2.327	3	-481.921	1	-.009	4	-.07	2	0	3
155		3	max	306.747	3	533.864	8	473.993	2	.086	7	.047	1	.052	8
156			min	-244.431	4	2.327	3	-481.921	1	-.009	4	-.047	2	0	3
157		4	max	306.747	3	533.864	8	473.993	2	.086	7	.024	1	.026	8
158			min	-244.431	4	2.327	3	-481.921	1	-.009	4	-.023	2	0	3
159		5	max	306.747	3	533.864	8	473.993	2	.086	7	0	1	0	10
160			min	-244.431	4	2.327	3	-481.921	1	-.009	4	0	3	0	5
161	M17	1	max	393.805	3	524.527	8	873.372	2	.053	6	.123	1	.076	8
162			min	-387.054	4	162.025	3	-840.586	1	-.005	1	-.127	2	.024	3
163		2	max	393.805	3	524.527	8	873.372	2	.053	6	.092	1	.057	8
164			min	-387.054	4	162.025	3	-840.586	1	-.005	1	-.096	2	.018	3
165		3	max	393.805	3	524.527	8	873.372	2	.053	6	.061	1	.038	8
166			min	-387.054	4	162.025	3	-840.586	1	-.005	1	-.064	2	.012	3
167		4	max	393.805	3	524.527	8	873.372	2	.053	6	.031	1	.019	8

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
168			min	-387.054	4	162.025	3	-840.586	1	-.005	1	-.032	2	.006	3
169		5	max	393.805	3	524.527	8	873.372	2	.053	6	0	4	0	7
170			min	-387.054	4	162.025	3	-840.586	1	-.005	1	0	2	0	11
171	M19	1	max	39.475	4	-176.247	1	982.818	1	-.05	1	.047	3	.048	7
172			min	-47.431	3	-532.824	6	-948.941	2	-.19	6	-.041	4	-.004	9
173		2	max	638.338	1	-192.165	1	153.829	4	-.053	1	.252	1	.397	6
174			min	-615.379	2	-577.905	6	-182.515	3	-.201	6	-.239	2	.139	1
175		3	max	647.813	1	-204.565	1	137.417	4	-.053	1	.251	1	.778	6
176			min	-624.854	2	-606.249	6	-166.104	3	-.201	6	-.256	2	.267	1
177		4	max	657.289	1	-216.964	1	121.006	4	-.053	1	.253	1	1.177	6
178			min	-634.33	2	-634.592	6	-149.692	3	-.201	6	-.276	2	.402	1
179		5	max	666.764	1	-229.363	1	104.594	4	-.053	1	.259	1	1.594	6
180			min	-643.805	2	-662.936	6	-133.28	3	-.201	6	-.299	2	.546	1
181	M20	1	max	982.817	1	532.73	6	47.816	3	.048	7	.041	4	.19	6
182			min	-948.942	2	176.5	1	-39.177	4	-.004	9	-.047	3	.05	1
183		2	max	981.609	1	531.495	6	47.119	3	.048	7	.039	4	.161	6
184			min	-947.734	2	175.997	1	-38.479	4	-.004	9	-.044	3	.04	1
185		3	max	980.4	1	530.26	6	46.421	3	.048	7	.039	2	.132	6
186			min	-946.525	2	175.495	1	-37.781	4	-.004	9	-.044	1	.03	1
187		4	max	979.192	1	529.026	6	45.724	3	.048	7	.039	2	.103	6
188			min	-945.317	2	174.992	1	-37.084	4	-.004	9	-.044	1	.021	1
189		5	max	977.983	1	527.791	6	45.026	3	.048	7	.04	2	.083	9
190			min	-944.108	2	174.49	1	-36.386	4	-.004	9	-.044	1	.011	1
191	M21	1	max	847.575	1	527.954	6	477.733	2	.076	6	.04	2	.074	9
192			min	-815.94	2	174.085	1	-484.772	1	.025	1	-.044	1	-.002	1
193		2	max	847.575	1	527.013	6	475.607	2	.076	6	.06	2	.063	9
194			min	-815.94	2	173.703	1	-482.646	1	.025	1	-.064	1	-.009	1
195		3	max	847.575	1	526.072	6	473.48	2	.076	6	.079	2	.052	9
196			min	-815.94	2	173.32	1	-480.52	1	.025	1	-.084	1	-.017	3
197		4	max	847.575	1	525.132	6	471.354	2	.076	6	.099	2	.041	9
198			min	-815.94	2	172.937	1	-478.394	1	.025	1	-.104	1	-.03	5
199		5	max	847.575	1	524.191	6	469.228	2	.076	6	.119	2	.03	9
200			min	-815.94	2	172.554	1	-476.268	1	.025	1	-.124	1	-.051	7
201	M22	1	max	1449.322	3	707.02	8	217.271	2	.039	1	.093	1	.416	8
202			min	-1411.846	4	233.524	3	-223.208	1	-.012	2	-.089	2	.136	2
203		2	max	1448.114	3	705.785	8	215.178	2	.039	1	.081	1	.378	8
204			min	-1410.638	4	233.021	3	-221.115	1	-.012	2	-.077	2	.119	2
205		3	max	1446.905	3	704.551	8	213.085	2	.039	1	.069	1	.339	5
206			min	-1409.429	4	232.519	3	-219.022	1	-.012	2	-.065	2	.102	2
207		4	max	1445.697	3	703.316	8	210.992	2	.039	1	.057	1	.302	5
208			min	-1408.221	4	232.016	3	-216.929	1	-.012	2	-.054	2	.085	2
209		5	max	1444.488	3	702.081	8	208.899	2	.039	1	.045	1	.264	5
210			min	-1407.013	4	231.514	3	-214.836	1	-.012	2	-.042	2	.068	2
211	M23	1	max	1159.82	3	702.274	8	876.557	3	-.034	3	.045	1	.247	5
212			min	-1127.478	4	231.272	3	-864.263	4	-.102	8	-.042	2	.053	2
213		2	max	1158.899	3	701.333	8	874.963	3	-.034	3	.06	3	.218	5
214			min	-1126.558	4	230.889	3	-862.668	4	-.102	8	-.056	4	.04	2
215		3	max	1157.978	3	700.393	8	873.368	3	-.034	3	.097	3	.189	5
216			min	-1125.637	4	230.506	3	-861.073	4	-.102	8	-.092	4	.027	2
217		4	max	1157.058	3	699.452	8	871.774	3	-.034	3	.133	3	.161	5
218			min	-1124.716	4	230.123	3	-859.479	4	-.102	8	-.127	4	.014	2
219		5	max	1156.137	3	698.511	8	870.179	3	-.034	3	.169	3	.132	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 Mome...	LC
220			min	-1123.796	4	229.74	3	-857.884	4	-.102	8	-.163	4	.002	2
221	M24	1	max	357.836	4	751.61	9	274.548	1	.073	5	.14	2	.421	9
222			min	-300.763	3	-13.417	1	-254.912	2	0	2	-.151	1	.022	1
223		2	max	355.995	4	750.589	9	273.485	1	.073	5	.119	2	.359	9
224			min	-298.921	3	-14.438	1	-253.849	2	0	2	-.129	1	.023	1
225		3	max	354.153	4	749.568	9	272.422	1	.073	5	.098	2	.296	9
226			min	-297.08	3	-15.459	1	-252.786	2	0	2	-.106	1	.024	1
227		4	max	352.312	4	748.547	9	271.359	1	.073	5	.077	2	.234	9
228			min	-295.239	3	-16.48	1	-251.723	2	0	2	-.083	1	.026	1
229		5	max	350.471	4	747.526	9	270.296	1	.073	5	.056	2	.172	9
230			min	-293.397	3	-17.501	1	-250.66	2	0	2	-.061	1	.027	1
231	M25	1	max	365.268	4	747.486	9	298.115	1	.004	1	.056	2	.139	8
232			min	-354.796	3	-17.298	1	-239.15	2	-.146	9	-.061	1	.037	3
233		2	max	365.268	4	747.143	9	296.687	1	.004	1	.056	4	.124	8
234			min	-354.796	3	-17.641	1	-237.721	2	-.146	9	-.058	3	.033	3
235		3	max	365.268	4	746.8	9	295.258	1	.004	1	.061	4	.111	5
236			min	-354.796	3	-17.984	1	-236.293	2	-.146	9	-.062	3	.023	2
237		4	max	365.268	4	746.457	9	293.829	1	.004	1	.066	4	.098	5
238			min	-354.796	3	-18.327	1	-234.864	2	-.146	9	-.066	3	.012	2
239		5	max	365.268	4	746.114	9	292.4	1	.004	1	.072	4	.085	5
240			min	-354.796	3	-18.67	1	-233.435	2	-.146	9	-.07	3	0	2
241	M26	1	max	390.169	2	560.889	8	235.27	4	0	4	.136	3	.367	8
242			min	-331.006	1	-47.248	3	-253.861	3	-.111	9	-.126	4	.018	3
243		2	max	388.328	2	558.739	8	232.081	4	0	4	.115	3	.32	8
244			min	-329.165	1	-48.269	3	-250.672	3	-.111	9	-.107	4	.022	3
245		3	max	386.487	2	556.588	8	228.891	4	0	4	.094	3	.274	8
246			min	-327.323	1	-49.289	3	-247.482	3	-.111	9	-.087	4	.026	3
247		4	max	384.645	2	554.437	8	225.702	4	0	4	.074	3	.227	8
248			min	-325.482	1	-50.31	3	-244.293	3	-.111	9	-.068	4	.03	3
249		5	max	382.804	2	552.286	8	222.513	4	0	4	.054	3	.181	8
250			min	-323.641	1	-51.331	3	-241.104	3	-.111	9	-.05	4	.035	3
251	M27	1	max	354.37	2	552.249	8	178.64	1	.108	8	.054	3	.18	7
252			min	-339.694	1	-51.61	3	-236.406	2	-.01	3	-.05	4	.051	4
253		2	max	353.751	2	551.527	8	178.282	1	.108	8	.051	3	.167	7
254			min	-339.075	1	-51.953	3	-236.048	2	-.01	3	-.049	2	.039	4
255		3	max	353.132	2	550.804	8	177.925	1	.108	8	.056	1	.154	7
256			min	-338.457	1	-52.296	3	-235.691	2	-.01	3	-.056	2	.026	4
257		4	max	352.513	2	550.081	8	177.568	1	.108	8	.061	1	.141	7
258			min	-337.838	1	-52.639	3	-235.334	2	-.01	3	-.063	2	.014	4
259		5	max	351.895	2	549.358	8	177.211	1	.108	8	.066	1	.128	9
260			min	-337.219	1	-52.982	3	-234.977	2	-.01	3	-.069	2	.001	4
261	M28	1	max	1104.158	2	23.683	7	45.69	2	0	9	.022	1	.028	1
262			min	-1170.662	1	1.715	4	-38.059	1	0	5	-.032	2	-.031	2
263		2	max	1104.102	2	9.415	7	27.449	2	0	9	.003	3	.011	9
264			min	-1170.606	1	-2.345	4	-19.817	1	0	5	-.002	9	-.006	2
265		3	max	1104.046	2	-1.991	9	10.722	6	0	9	.011	2	.01	2
266			min	-1170.55	1	-17.568	8	-1.576	1	0	5	-.007	1	-.003	1
267		4	max	1103.99	2	-8.757	9	16.665	1	0	9	.003	2	.037	8
268			min	-1170.493	1	-40.098	8	-9.034	2	0	5	-.009	1	.005	3
269		5	max	1103.933	2	-13.476	9	34.906	1	0	9	0	1	.082	5
270			min	-1170.437	1	-56.377	8	-27.275	2	0	5	-.039	6	.016	3
271	M29	1	max	1498.313	4	41.002	4	18.306	5	0	7	.022	3	.04	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
272			min	-1568.62	3	-31.087	3	-7.146	9	0	4	-.028	4	-.023	3
273		2	max	1506.183	4	27.272	4	4.037	5	0	7	.007	3	.016	8
274			min	-1576.49	3	-17.357	3	-11.207	9	0	4	-.003	4	-.001	3
275		3	max	1514.054	4	14.375	8	-4.835	1	0	7	.01	8	.006	3
276			min	-1584.361	3	-3.628	3	-23.091	6	0	4	-.003	2	-.02	9
277		4	max	1521.925	4	14.502	7	-11.603	1	0	7	.003	1	-.004	3
278			min	-1592.231	3	-.202	1	-45.628	6	0	4	-.011	9	-.046	9
279		5	max	1529.795	4	23.831	3	-16.322	1	0	7	-.004	3	-.015	1
280			min	-1600.102	3	-13.916	4	-61.908	6	0	4	-.041	8	-.091	6
281	M30	1	max	808.612	4	-4.99	1	1303.414	1	.143	5	.18	1	.434	9
282			min	-780.09	3	-764.894	9	-1223.31	2	.024	2	-.145	2	.037	1
283		2	max	808.612	4	-5.038	1	1303.414	1	.143	5	.289	1	.498	9
284			min	-780.09	3	-764.942	9	-1223.31	2	.024	2	-.247	2	.037	1
285		3	max	848.638	4	622.986	8	1564.684	4	.08	1	.427	3	.561	9
286			min	-815.762	3	-764.966	9	-1649.073	3	-.186	7	-.376	4	.128	3
287		4	max	848.638	4	622.869	8	1564.684	4	-.036	4	.29	3	.465	8
288			min	-815.762	3	-29.57	3	-1649.073	3	-.186	7	-.246	4	.027	3
289		5	max	848.638	4	622.721	8	1564.684	4	-.036	4	.153	3	.413	8
290			min	-815.762	3	-29.619	3	-1649.073	3	-.186	7	-.116	4	.03	3
291	M31	1	max	236	2	549.409	8	352.659	2	-.001	4	.066	1	.108	8
292			min	-176.157	1	-52.829	3	-336.612	1	-.128	9	-.069	2	-.01	3
293		2	max	236	2	549.409	8	352.659	2	-.001	4	.05	1	.081	8
294			min	-176.157	1	-52.829	3	-336.612	1	-.128	9	-.052	2	-.008	3
295		3	max	236	2	549.409	8	352.659	2	-.001	4	.033	1	.054	8
296			min	-176.157	1	-52.829	3	-336.612	1	-.128	9	-.035	2	-.005	3
297		4	max	236	2	549.409	8	352.659	2	-.001	4	.017	1	.027	8
298			min	-176.157	1	-52.829	3	-336.612	1	-.128	9	-.017	2	-.003	3
299		5	max	236	2	549.409	8	352.659	2	-.001	4	0	4	0	8
300			min	-176.157	1	-52.829	3	-336.612	1	-.128	9	0	2	0	4
301	M32	1	max	873.729	3	698.105	8	1119.456	4	.132	5	.169	3	.102	8
302			min	-854.796	4	230.125	3	-1160.958	3	.002	2	-.163	4	.034	3
303		2	max	873.729	3	698.105	8	1119.456	4	.132	5	.127	3	.076	8
304			min	-854.796	4	230.125	3	-1160.958	3	.002	2	-.122	4	.025	3
305		3	max	873.729	3	698.105	8	1119.456	4	.132	5	.085	3	.051	8
306			min	-854.796	4	230.125	3	-1160.958	3	.002	2	-.082	4	.017	3
307		4	max	873.729	3	698.105	8	1119.456	4	.132	5	.042	3	.025	8
308			min	-854.796	4	230.125	3	-1160.958	3	.002	2	-.041	4	.008	3
309		5	max	873.729	3	698.105	8	1119.456	4	.132	5	0	8	0	5
310			min	-854.796	4	230.125	3	-1160.958	3	.002	2	0	1	0	8
311	M33	1	max	292.9	1	746.297	9	354.418	3	.085	5	.072	4	.146	9
312			min	-232.933	2	-19.056	1	-365.768	4	0	2	-.07	3	-.004	1
313		2	max	292.9	1	746.297	9	354.418	3	.085	5	.054	4	.11	9
314			min	-232.933	2	-19.056	1	-365.768	4	0	2	-.052	3	-.003	1
315		3	max	292.9	1	746.297	9	354.418	3	.085	5	.036	4	.073	9
316			min	-232.933	2	-19.056	1	-365.768	4	0	2	-.035	3	-.002	1
317		4	max	292.9	1	746.297	9	354.418	3	.085	5	.018	4	.037	9
318			min	-232.933	2	-19.056	1	-365.768	4	0	2	-.017	3	0	1
319		5	max	292.9	1	746.297	9	354.418	3	.085	5	0	11	0	7
320			min	-232.933	2	-19.056	1	-365.768	4	0	2	0	4	0	5
321	M34	1	max	479.419	1	523.82	6	850.298	1	.051	7	.119	2	.076	6
322			min	-466.464	2	173.359	1	-813.491	2	-.03	9	-.124	1	.025	1
323		2	max	479.419	1	523.82	6	850.298	1	.051	7	.089	2	.057	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
324			min	-466.464	2	173.359	1	-813.491	2	-.03	9	-.093	1	.019	1
325		3	max	479.419	1	523.82	6	850.298	1	.051	7	.059	2	.038	6
326			min	-466.464	2	173.359	1	-813.491	2	-.03	9	-.062	1	.013	1
327		4	max	479.419	1	523.82	6	850.298	1	.051	7	.03	2	.019	6
328			min	-466.464	2	173.359	1	-813.491	2	-.03	9	-.031	1	.006	1
329		5	max	479.419	1	523.82	6	850.298	1	.051	7	0	1	0	3
330			min	-466.464	2	173.359	1	-813.491	2	-.03	9	0	2	0	2
331	M36	1	max	184.229	3	-179.55	2	1054.065	4	-.051	4	.129	4	.048	8
332			min	-182.935	4	-531.066	5	-1022.862	3	-.191	7	-.122	3	.008	3
333		2	max	471.671	4	-189.158	2	79.389	2	-.059	4	.365	4	.398	5
334			min	-446.268	3	-577.353	5	-107.199	1	-.201	7	-.352	3	.133	2
335		3	max	481.146	4	-201.557	2	73.918	2	-.059	4	.388	4	.778	5
336			min	-455.743	3	-605.696	5	-101.729	1	-.201	7	-.392	3	.259	2
337		4	max	490.621	4	-213.956	2	68.448	2	-.059	4	.421	4	1.177	5
338			min	-465.219	3	-634.04	5	-96.258	1	-.201	7	-.443	3	.393	2
339		5	max	500.096	4	-226.355	2	75.983	4	-.059	4	.464	4	1.594	5
340			min	-474.694	3	-662.383	5	-103.337	3	-.201	7	-.504	3	.534	2
341	M37	1	max	1054.297	4	531.171	5	187.414	4	.048	8	.122	3	.191	7
342			min	-1022.625	3	179.513	2	-180.031	3	.008	3	-.129	4	.051	4
343		2	max	1053.089	4	529.936	5	188.112	4	.048	8	.112	3	.162	7
344			min	-1021.417	3	179.011	2	-180.729	3	.008	3	-.119	4	.04	4
345		3	max	1051.881	4	528.702	5	188.809	4	.048	8	.102	3	.133	7
346			min	-1020.208	3	178.508	2	-181.427	3	.008	3	-.108	4	.029	4
347		4	max	1050.672	4	527.467	5	189.507	4	.048	8	.092	3	.104	7
348			min	-1019	3	178.006	2	-182.124	3	.008	3	-.098	4	.018	4
349		5	max	1049.464	4	526.232	5	190.205	4	.048	8	.082	3	.075	7
350			min	-1017.792	3	177.504	2	-182.822	3	.008	3	-.088	4	.007	4
351	M38	1	max	1001.724	4	526.128	5	355.321	3	.076	5	.082	3	.043	7
352			min	-974.942	3	177.527	2	-354.882	4	.026	2	-.088	4	-.008	4
353		2	max	1000.803	4	525.188	5	353.727	3	.076	5	.097	3	.029	3
354			min	-974.021	3	177.145	2	-353.287	4	.026	2	-.102	4	-.016	4
355		3	max	999.883	4	524.247	5	352.132	3	.076	5	.112	3	.02	3
356			min	-973.101	3	176.762	2	-351.692	4	.026	2	-.117	4	-.025	4
357		4	max	998.962	4	523.306	5	350.537	3	.076	5	.127	3	.011	3
358			min	-972.18	3	176.379	2	-350.098	4	.026	2	-.132	4	-.033	4
359		5	max	998.041	4	522.365	5	348.943	3	.076	5	.141	3	.002	3
360			min	-971.259	3	175.996	2	-348.503	4	.026	2	-.146	4	-.053	8
361	M39	1	max	1512.102	1	706.465	7	443.77	1	.036	6	.128	2	.419	6
362			min	-1470.448	2	238.806	4	-447.054	2	-.006	1	-.125	1	.123	1
363		2	max	1510.894	1	705.23	7	441.677	1	.036	6	.104	2	.38	6
364			min	-1469.239	2	238.303	4	-444.961	2	-.006	1	-.101	1	.109	1
365		3	max	1509.685	1	703.995	7	439.584	1	.036	6	.08	2	.342	6
366			min	-1468.031	2	237.801	4	-442.868	2	-.006	1	-.077	1	.094	1
367		4	max	1508.477	1	702.76	7	437.491	1	.036	6	.056	2	.304	6
368			min	-1466.822	2	237.299	4	-440.775	2	-.006	1	-.053	1	.08	1
369		5	max	1507.268	1	701.525	7	435.398	1	.036	6	.032	2	.266	6
370			min	-1465.614	2	236.796	4	-438.682	2	-.006	1	-.029	1	.065	1
371	M40	1	max	1089.206	1	701.578	7	1131.29	1	-.034	4	.032	2	.248	6
372			min	-1048.331	2	236.702	4	-1112.052	2	-.102	7	-.029	1	.054	1
373		2	max	1089.206	1	700.638	7	1129.164	1	-.034	4	.035	4	.219	6
374			min	-1048.331	2	236.32	4	-1109.926	2	-.102	7	-.031	3	.043	1
375		3	max	1089.206	1	699.697	7	1127.038	1	-.034	4	.065	1	.19	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
376			min	-1048.331	2	235.937	4	-1107.8	2	-.102	7	-.061	2	.032	1
377		4	max	1089.206	1	698.756	7	1124.912	1	-.034	4	.112	1	.161	6
378			min	-1048.331	2	235.554	4	-1105.673	2	-.102	7	-.107	2	.021	1
379		5	max	1089.206	1	697.815	7	1122.785	1	-.034	4	.159	1	.132	6
380			min	-1048.331	2	235.171	4	-1103.547	2	-.102	7	-.153	2	.01	1
381	M41	1	max	399.757	2	551.006	7	465.45	4	.094	10	.242	3	.342	7
382			min	-339.969	1	.646	4	-443.179	3	0	1	-.255	4	.024	4
383		2	max	397.915	2	548.855	7	462.26	4	.094	10	.206	3	.296	7
384			min	-338.128	1	-.375	4	-439.989	3	0	1	-.216	4	.024	4
385		3	max	396.074	2	546.704	7	459.071	4	.094	10	.169	3	.251	7
386			min	-336.287	1	-1.396	4	-436.8	3	0	1	-.178	4	.024	4
387		4	max	394.233	2	544.553	7	455.882	4	.094	10	.133	3	.205	7
388			min	-334.445	1	-2.417	4	-433.611	3	0	1	-.139	4	.024	4
389		5	max	392.391	2	542.402	7	452.692	4	.094	10	.097	3	.16	7
390			min	-332.604	1	-3.437	4	-430.421	3	0	1	-.102	4	.024	4
391	M42	1	max	430.715	3	542.383	7	260.192	2	0	4	.097	3	.143	10
392			min	-423.697	4	-3.703	4	-200.411	1	-.106	7	-.102	4	.031	1
393		2	max	430.096	3	541.66	7	259.835	2	0	4	.093	3	.134	10
394			min	-423.079	4	-4.046	4	-200.054	1	-.106	7	-.097	4	.023	1
395		3	max	429.478	3	540.938	7	259.477	2	0	4	.09	3	.126	10
396			min	-422.46	4	-4.389	4	-199.697	1	-.106	7	-.092	4	.015	1
397		4	max	428.859	3	540.215	7	259.12	2	0	4	.087	3	.118	10
398			min	-421.841	4	-4.732	4	-199.339	1	-.106	7	-.088	4	.007	1
399		5	max	428.24	3	539.492	7	258.763	2	0	4	.084	3	.109	10
400			min	-421.223	4	-5.075	4	-198.982	1	-.106	7	-.083	4	0	1
401	M43	1	max	340.223	3	747.237	10	175.425	3	-.005	2	.103	4	.427	10
402			min	-282.873	4	-104.096	1	-193.137	4	-.111	5	-.094	3	-.016	1
403		2	max	338.382	3	746.216	10	172.236	3	-.005	2	.087	4	.365	10
404			min	-281.031	4	-105.117	1	-189.948	4	-.111	5	-.079	3	-.007	1
405		3	max	336.54	3	745.196	10	169.047	3	-.005	2	.072	4	.303	10
406			min	-279.19	4	-106.138	1	-186.758	4	-.111	5	-.065	3	.001	1
407		4	max	334.699	3	744.175	10	165.858	3	-.005	2	.056	4	.241	10
408			min	-277.348	4	-107.159	1	-183.569	4	-.111	5	-.051	3	.01	1
409		5	max	332.858	3	743.154	10	162.668	3	-.005	2	.041	4	.183	6
410			min	-275.507	4	-108.18	1	-180.38	4	-.111	5	-.037	3	.019	1
411	M44	1	max	307.211	3	743.063	10	148.878	2	.146	10	.041	4	.179	5
412			min	-294.077	4	-107.886	1	-211.125	1	-.022	1	-.037	3	.063	2
413		2	max	307.211	3	742.72	10	148.845	4	.146	10	.045	4	.166	5
414			min	-294.077	4	-108.229	1	-209.696	1	-.022	1	-.043	3	.049	2
415		3	max	307.211	3	742.377	10	148.845	4	.146	10	.049	4	.153	5
416			min	-294.077	4	-108.572	1	-208.267	1	-.022	1	-.049	3	.035	2
417		4	max	307.211	3	742.034	10	148.845	4	.146	10	.053	4	.141	5
418			min	-294.077	4	-108.915	1	-206.838	1	-.022	1	-.055	3	.02	2
419		5	max	307.211	3	741.691	10	148.845	4	.146	10	.058	4	.128	5
420			min	-294.077	4	-109.258	1	-206.531	3	-.022	1	-.06	3	.006	2
421	M45	1	max	1163.281	3	24.013	5	41.187	3	0	3	.019	4	.033	4
422			min	-1227.12	4	-4.933	10	-33.562	4	0	8	-.029	3	-.036	3
423		2	max	1171.152	3	9.746	5	27.457	3	0	3	.005	4	.006	4
424			min	-1234.991	4	-8.993	10	-19.832	4	0	8	-.004	3	-.009	3
425		3	max	1179.022	3	-.721	1	13.728	3	0	3	.009	7	.022	10
426			min	-1242.862	4	-17.899	6	-6.103	4	0	8	-.004	2	-.005	4
427		4	max	1186.893	3	-7.487	1	11.235	8	0	3	.003	1	.045	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
428			min	-1250.732	4	-40.429	6	-3.287	1	0	8	-.01	10	0	4
429		5	max	1194.763	3	-12.206	1	21.357	4	0	3	-.004	4	.083	6
430			min	-1258.603	4	-56.708	6	-13.731	3	0	8	-.038	7	.005	1
431	M46	1	max	1572.783	2	46.168	2	17.98	8	0	5	.025	1	.037	2
432			min	-1647.433	1	-36.228	1	1.67	3	0	10	-.031	2	-.021	1
433		2	max	1572.727	2	27.927	2	3.71	8	0	5	.006	8	.016	6
434			min	-1647.377	1	-17.986	1	-2.39	3	0	10	-.001	2	-.007	10
435		3	max	1572.671	2	13.717	6	-4.143	10	0	5	.011	2	.003	1
436			min	-1647.321	1	.255	1	-22.764	7	0	10	-.006	1	-.007	10
437		4	max	1572.615	2	18.496	1	-10.911	10	0	5	.003	2	-.01	4
438			min	-1647.264	1	-8.555	2	-45.301	7	0	10	-.009	1	-.038	7
439		5	max	1572.559	2	36.737	1	-15.63	10	0	5	-.003	1	-.014	2
440			min	-1647.208	1	-26.797	2	-61.58	7	0	10	-.041	6	-.091	5
441	M47	1	max	698.724	3	-14.547	4	1564.286	4	.152	10	.265	4	.384	7
442			min	-668.981	4	-607.559	7	-1482.707	3	.007	1	-.229	3	.032	4
443		2	max	698.724	3	-14.595	4	1564.286	4	.152	10	.395	4	.435	7
444			min	-668.981	4	-607.707	7	-1482.707	3	.007	1	-.353	3	.033	4
445		3	max	735.964	3	762.705	10	1564.286	4	.152	10	.526	4	.568	10
446			min	-709.073	4	-607.824	7	-1482.707	3	-.188	5	-.476	3	.125	4
447		4	max	735.964	3	762.681	10	1397.278	2	-.028	2	.195	4	.505	10
448			min	-709.073	4	-81.613	1	-1480.856	1	-.188	5	-.151	3	-.004	1
449		5	max	735.964	3	762.633	10	1397.278	2	-.028	2	.117	4	.441	10
450			min	-709.073	4	-81.661	1	-1480.856	1	-.188	5	-.081	3	.003	1
451	M48	1	max	206.982	3	741.885	10	307.577	3	-.006	2	.058	4	.146	10
452			min	-148.34	4	-109.657	1	-293.781	4	-.128	5	-.06	3	-.022	1
453		2	max	206.982	3	741.885	10	307.577	3	-.006	2	.043	4	.109	10
454			min	-148.34	4	-109.657	1	-293.781	4	-.128	5	-.045	3	-.016	1
455		3	max	206.982	3	741.885	10	307.577	3	-.006	2	.029	4	.073	10
456			min	-148.34	4	-109.657	1	-293.781	4	-.128	5	-.03	3	-.011	1
457		4	max	206.982	3	741.885	10	307.577	3	-.006	2	.014	4	.036	10
458			min	-148.34	4	-109.657	1	-293.781	4	-.128	5	-.015	3	-.005	1
459		5	max	206.982	3	741.885	10	307.577	3	-.006	2	0	11	0	10
460			min	-148.34	4	-109.657	1	-293.781	4	-.128	5	0	4	0	7
461	M49	1	max	1119.469	1	697.706	7	1049.859	2	.132	6	.159	1	.102	7
462			min	-1106.96	2	235.263	4	-1088.001	1	.01	1	-.153	2	.034	4
463		2	max	1119.469	1	697.706	7	1049.859	2	.132	6	.119	1	.076	7
464			min	-1106.96	2	235.263	4	-1088.001	1	.01	1	-.115	2	.026	4
465		3	max	1119.469	1	697.706	7	1049.859	2	.132	6	.079	1	.051	7
466			min	-1106.96	2	235.263	4	-1088.001	1	.01	1	-.077	2	.017	4
467		4	max	1119.469	1	697.706	7	1049.859	2	.132	6	.04	1	.025	7
468			min	-1106.96	2	235.263	4	-1088.001	1	.01	1	-.038	2	.009	4
469		5	max	1119.469	1	697.706	7	1049.859	2	.132	6	0	1	0	6
470			min	-1106.96	2	235.263	4	-1088.001	1	.01	1	0	3	0	5
471	M50	1	max	259.53	2	539.583	7	422.523	4	.109	10	.084	3	.106	7
472			min	-198.175	1	-4.99	4	-427.422	3	0	1	-.083	4	0	4
473		2	max	259.53	2	539.583	7	422.523	4	.109	10	.063	3	.079	7
474			min	-198.175	1	-4.99	4	-427.422	3	0	1	-.062	4	0	4
475		3	max	259.53	2	539.583	7	422.523	4	.109	10	.042	3	.053	7
476			min	-198.175	1	-4.99	4	-427.422	3	0	1	-.041	4	0	4
477		4	max	259.53	2	539.583	7	422.523	4	.109	10	.021	3	.026	7
478			min	-198.175	1	-4.99	4	-427.422	3	0	1	-.021	4	0	4
479		5	max	259.53	2	539.583	7	422.523	4	.109	10	0	4	0	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
480			min	-198.175	1	-4.99	4	-427.422	3	0	1	0	2	0	1
481	M51	1	max	357.505	4	522.44	5	1002.174	4	.053	8	.141	3	.076	5
482			min	-340.551	3	176.038	2	-967.498	3	-.002	3	-.146	4	.026	2
483		2	max	357.505	4	522.44	5	1002.174	4	.053	8	.106	3	.057	5
484			min	-340.551	3	176.038	2	-967.498	3	-.002	3	-.11	4	.019	2
485		3	max	357.505	4	522.44	5	1002.174	4	.053	8	.071	3	.038	5
486			min	-340.551	3	176.038	2	-967.498	3	-.002	3	-.073	4	.013	2
487		4	max	357.505	4	522.44	5	1002.174	4	.053	8	.035	3	.019	5
488			min	-340.551	3	176.038	2	-967.498	3	-.002	3	-.037	4	.006	2
489		5	max	357.505	4	522.44	5	1002.174	4	.053	8	0	3	0	7
490			min	-340.551	3	176.038	2	-967.498	3	-.002	3	0	4	0	5
491	M52	1	max	0	11	0	11	0	11	0	11	0	11	0	11
492			min	0	1	0	1	0	1	0	1	0	1	0	1
493		2	max	189.086	2	127.281	4	135.012	4	.145	1	.276	4	.112	9
494			min	-155.777	1	-120.772	3	-122.703	3	-.185	2	-.266	3	-.015	4
495		3	max	994.224	2	225.451	8	157.253	3	.163	2	.126	2	.074	4
496			min	-1043.646	1	-18.726	3	-150.485	4	-.218	1	-.136	1	-.08	3
497		4	max	40.659	3	-37.024	4	137.07	4	.106	6	.302	3	.007	3
498			min	-78.907	4	-248.414	7	-153.575	3	-.009	4	-.297	4	-.303	8
499		5	max	0	11	0	11	0	11	0	11	0	11	0	11
500			min	0	1	0	1	0	1	0	1	0	1	0	1
501	M53	1	max	0	11	0	11	0	11	0	11	0	11	0	11
502			min	0	1	0	1	0	1	0	1	0	1	0	1
503		2	max	122.813	3	89.73	4	34.656	3	.161	1	.05	4	.089	3
504			min	-186.436	4	-110.782	3	-59.358	4	-.173	2	-.062	3	-.079	4
505		3	max	80.587	4	140.142	4	97.162	1	.082	1	.103	1	.011	2
506			min	-92.993	3	-93.058	3	-106.553	2	-.088	2	-.121	2	-.02	1
507		4	max	97.324	4	110.413	4	201.174	2	.23	2	.27	1	.094	4
508			min	-86.679	3	-139.051	3	-169.869	1	-.221	1	-.29	2	-.135	3
509		5	max	0	11	0	11	0	11	0	11	0	11	0	11
510			min	0	1	0	1	0	1	0	1	0	1	0	1
511	M54	1	max	120.085	1	372.123	2	266.485	3	.303	3	.228	1	.009	4
512			min	-75.49	2	-215.776	1	-215.185	4	-.206	4	-.246	2	-.106	6
513		2	max	120.085	1	372.123	2	266.485	3	.303	3	.233	1	.006	4
514			min	-75.49	2	-215.776	1	-215.185	4	-.206	4	-.246	2	-.128	6
515		3	max	120.085	1	372.123	2	266.485	3	.303	3	.237	1	.002	4
516			min	-75.49	2	-215.776	1	-215.185	4	-.206	4	-.246	2	-.149	6
517		4	max	120.085	1	372.123	2	266.485	3	.303	3	.241	1	-.001	4
518			min	-75.49	2	-215.776	1	-215.185	4	-.206	4	-.246	2	-.17	6
519		5	max	120.085	1	372.123	2	266.485	3	.303	3	.245	1	-.004	4
520			min	-75.49	2	-215.776	1	-215.185	4	-.206	4	-.246	2	-.191	6
521	M55	1	max	11.198	4	267.889	1	97.826	4	.278	3	.246	2	.046	4
522			min	-62.149	6	-320.069	2	-149.083	3	-.195	4	-.233	1	-.081	10
523		2	max	11.198	4	267.889	1	97.826	4	.278	3	.246	2	.046	4
524			min	-62.149	6	-320.069	2	-149.083	3	-.195	4	-.236	1	-.091	10
525		3	max	11.198	4	267.889	1	97.826	4	.278	3	.246	2	.045	4
526			min	-62.149	6	-320.069	2	-149.083	3	-.195	4	-.239	1	-.1	10
527		4	max	11.198	4	267.889	1	97.826	4	.278	3	.246	2	.044	4
528			min	-62.149	6	-320.069	2	-149.083	3	-.195	4	-.242	1	-.109	10
529		5	max	11.198	4	267.889	1	97.826	4	.278	3	.246	2	.044	4
530			min	-62.149	6	-320.069	2	-149.083	3	-.195	4	-.245	1	-.118	10
531	M56	1	max	229.706	1	62.853	1	39.589	8	.482	3	.154	2	.318	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
532			min	-269.165	2	-19.293	2	6.297	3	-.509	4	-.142	1	-.304	1
533		2	max	229.706	1	62.853	1	39.589	8	.482	3	.155	2	.319	2
534			min	-269.165	2	-19.293	2	6.297	3	-.509	4	-.141	1	-.307	1
535		3	max	229.706	1	62.853	1	39.589	8	.482	3	.155	2	.32	2
536			min	-269.165	2	-19.293	2	6.297	3	-.509	4	-.14	1	-.311	1
537		4	max	229.706	1	62.853	1	39.589	8	.482	3	.156	2	.321	2
538			min	-269.165	2	-19.293	2	6.297	3	-.509	4	-.139	1	-.314	1
539		5	max	229.706	1	62.853	1	39.589	8	.482	3	.156	2	.322	2
540			min	-269.165	2	-19.293	2	6.297	3	-.509	4	-.139	1	-.318	1
541	M57	1	max	1165.424	1	1076.148	6	712.024	3	.005	3	.269	4	.296	1
542			min	-1125.972	2	372.919	1	-735.074	4	-.097	8	-.278	3	-.164	2
543		2	max	1165.424	1	1076.148	6	712.024	3	.005	3	.209	4	.265	1
544			min	-1125.972	2	372.919	1	-735.074	4	-.097	8	-.22	3	-.201	2
545		3	max	1165.424	1	1076.148	6	712.024	3	.005	3	.148	4	.234	1
546			min	-1125.972	2	372.919	1	-735.074	4	-.097	8	-.162	3	-.238	2
547		4	max	1165.424	1	1076.148	6	712.024	3	.005	3	.14	1	.204	1
548			min	-1125.972	2	372.919	1	-735.074	4	-.097	8	-.155	2	-.275	2
549		5	max	1165.424	1	1076.148	6	712.024	3	.005	3	.139	1	.173	1
550			min	-1125.972	2	372.919	1	-735.074	4	-.097	8	-.156	2	-.313	2
551	M58	1	max	232.769	1	264.03	8	333.172	3	.429	3	.217	2	.348	2
552			min	-217.617	2	83.382	3	-384.381	4	-.53	4	-.174	1	-.363	1
553		2	max	232.769	1	264.03	8	333.172	3	.429	3	.216	2	.34	2
554			min	-217.617	2	83.382	3	-384.381	4	-.53	4	-.178	1	-.372	1
555		3	max	232.769	1	264.03	8	333.172	3	.429	3	.215	2	.332	2
556			min	-217.617	2	83.382	3	-384.381	4	-.53	4	-.181	1	-.38	1
557		4	max	232.769	1	264.03	8	333.172	3	.429	3	.215	2	.324	2
558			min	-217.617	2	83.382	3	-384.381	4	-.53	4	-.184	1	-.388	1
559		5	max	232.769	1	264.03	8	333.172	3	.429	3	.214	2	.316	2
560			min	-217.617	2	83.382	3	-384.381	4	-.53	4	-.188	1	-.396	1
561	M59	1	max	100.235	2	-30.792	3	267.026	4	.386	3	.178	1	.085	2
562			min	-115.387	1	-132.603	8	-215.805	3	-.464	4	-.216	2	-.079	1
563		2	max	100.235	2	-30.792	3	267.026	4	.386	3	.181	1	.087	2
564			min	-115.387	1	-132.603	8	-215.805	3	-.464	4	-.215	2	-.076	1
565		3	max	100.235	2	-30.792	3	267.026	4	.386	3	.183	1	.09	2
566			min	-115.387	1	-132.603	8	-215.805	3	-.464	4	-.215	2	-.073	1
567		4	max	100.235	2	-30.792	3	267.026	4	.386	3	.185	1	.092	2
568			min	-115.387	1	-132.603	8	-215.805	3	-.464	4	-.214	2	-.071	1
569		5	max	100.235	2	-30.792	3	267.026	4	.386	3	.188	1	.095	2
570			min	-115.387	1	-132.603	8	-215.805	3	-.464	4	-.214	2	-.068	1
571	M60	1	max	94.948	1	217.052	1	87.425	4	.209	3	.202	1	.085	3
572			min	-143.379	2	-237.432	2	-107.634	3	-.204	4	-.203	2	-.109	4
573		2	max	94.948	1	217.052	1	87.425	4	.209	3	.203	1	.09	3
574			min	-143.379	2	-237.432	2	-107.634	3	-.204	4	-.206	2	-.113	4
575		3	max	94.948	1	217.052	1	87.425	4	.209	3	.204	1	.095	3
576			min	-143.379	2	-237.432	2	-107.634	3	-.204	4	-.208	2	-.117	4
577		4	max	94.948	1	217.052	1	87.425	4	.209	3	.205	1	.1	3
578			min	-143.379	2	-237.432	2	-107.634	3	-.204	4	-.21	2	-.121	4
579		5	max	94.948	1	217.052	1	87.425	4	.209	3	.205	1	.105	3
580			min	-143.379	2	-237.432	2	-107.634	3	-.204	4	-.212	2	-.124	4
581	M61	1	max	355.639	1	473.139	6	371.798	3	.301	3	.2	2	.145	1
582			min	-307.201	2	-66.31	1	-351.692	4	-.234	4	-.2	1	-.185	2
583		2	max	355.639	1	473.139	6	371.798	3	.301	3	.203	2	.15	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
584			min	-307.201	2	-66.31	1	-351.692	4	-.234	4	-.201	1	-.216	2
585		3	max	355.639	1	473.139	6	371.798	3	.301	3	.206	2	.156	1
586			min	-307.201	2	-66.31	1	-351.692	4	-.234	4	-.203	1	-.248	2
587		4	max	355.639	1	473.139	6	371.798	3	.301	3	.209	2	.161	1
588			min	-307.201	2	-66.31	1	-351.692	4	-.234	4	-.204	1	-.28	2
589		5	max	355.639	1	473.139	6	371.798	3	.301	3	.212	2	.167	1
590			min	-307.201	2	-66.31	1	-351.692	4	-.234	4	-.205	1	-.312	2
591	MP1A	1	max	0	11	.007	4	.014	1	0	11	0	11	0	11
592			min	0	1	-.006	3	-.014	2	0	1	0	1	0	1
593		2	max	333.044	2	127.161	4	59.464	7	.245	1	.05	2	.068	4
594			min	-254.729	1	-178.708	3	-11.197	4	-.246	2	-.073	10	-.1	3
595		3	max	346.192	2	156.503	4	60.316	1	.245	1	.145	7	.287	3
596			min	-241.581	1	-208.05	3	-18.329	2	-.246	2	.01	4	-.216	4
597		4	max	-13.148	10	29.35	3	29.394	2	0	11	.029	1	.029	3
598			min	-32.851	5	-29.354	4	-29.385	1	0	1	-.029	2	-.029	4
599		5	max	0	11	.008	3	.052	2	0	11	0	11	0	11
600			min	0	1	-.017	8	-.043	1	0	1	0	1	0	1
601	MP2A	1	max	0	11	.084	4	.521	1	0	11	0	11	0	11
602			min	0	1	-.081	3	-.535	2	0	1	0	1	0	1
603		2	max	278.692	6	273.327	4	317.484	1	.139	1	.258	1	.122	4
604			min	24.286	1	-250.224	3	-278.984	2	-.156	2	-.215	2	-.118	3
605		3	max	718.715	6	450.066	4	591.764	1	.139	1	1.168	1	.559	3
606			min	273.834	1	-426.963	3	-553.265	2	-.156	2	-1.048	2	-.602	4
607		4	max	-89.948	10	255.948	3	545.623	2	0	11	.804	1	.369	3
608			min	-324.898	5	-255.942	4	-545.553	1	0	1	-.804	2	-.369	4
609		5	max	0	11	.186	4	.323	5	0	11	0	11	0	11
610			min	0	1	-.179	3	-.132	2	0	1	0	1	0	1
611	MP3A	1	max	0	11	.005	4	.028	1	0	11	0	11	0	11
612			min	0	1	-.005	3	-.028	2	0	1	0	1	0	1
613		2	max	165.457	8	296.555	4	145.27	1	.214	2	.077	1	.168	4
614			min	43.948	3	-245.255	3	-130.105	2	-.188	1	-.035	2	-.14	3
615		3	max	198.307	8	325.897	4	174.611	1	.214	2	.397	1	.38	3
616			min	57.096	3	-274.596	3	-159.446	2	-.188	1	-.325	2	-.455	4
617		4	max	-13.148	10	29.346	3	29.412	2	0	11	.029	1	.029	3
618			min	-32.851	5	-29.343	4	-29.402	1	0	1	-.029	2	-.029	4
619		5	max	0	11	.007	7	.07	2	0	11	0	11	0	11
620			min	0	1	-.003	9	-.06	1	0	1	0	1	0	1
621	MP4A	1	max	0	11	.006	4	.009	1	0	11	0	11	0	11
622			min	0	1	-.006	3	-.008	2	0	1	0	1	0	1
623		2	max	250.248	2	116.885	4	113.079	2	.212	2	.151	2	.087	4
624			min	-204.165	1	-137.224	3	-66.235	1	-.205	1	-.123	1	-.072	3
625		3	max	313.377	2	219.635	4	129.716	1	.212	2	.183	6	.306	3
626			min	-141.037	1	-239.973	3	-82.872	2	-.205	1	-.06	1	-.249	4
627		4	max	-13.148	10	29.36	3	29.504	2	0	11	.03	1	.029	3
628			min	-32.851	5	-29.376	4	-29.485	1	0	1	-.03	2	-.029	4
629		5	max	0	11	.019	3	.162	2	0	11	0	11	0	11
630			min	0	1	-.064	8	-.143	1	0	1	0	1	0	1
631	M66	1	max	0	11	.001	3	0	11	0	11	0	11	0	11
632			min	0	1	0	5	0	1	0	1	0	1	0	1
633		2	max	182.893	3	129.836	2	134.843	3	.161	4	.15	3	.109	10
634			min	-154.938	4	-123.285	1	-124.094	4	-.201	3	-.142	4	-.039	2
635		3	max	909.995	3	223.07	6	60.944	1	.105	1	.13	3	.088	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
636			min	-960.04	4	.916	1	-55.007	2	-.16	2	-.14	4	-.094	4
637		4	max	139.237	4	-52.497	2	113.655	2	.114	4	.279	4	.044	1
638			min	-170.765	3	-246.714	5	-129.784	1	-.038	3	-.271	3	-.308	6
639		5	max	0	11	0	8	0	3	0	11	0	11	0	11
640			min	0	1	-.002	2	0	5	0	1	0	1	0	1
641	M67	1	max	0	11	.001	1	.002	3	0	11	0	11	0	11
642			min	0	1	0	9	-.003	1	0	1	0	1	0	1
643		2	max	153.593	1	88.935	2	34.742	4	.121	4	.052	2	.091	1
644			min	-217.716	2	-109.992	1	-59.445	3	-.132	3	-.064	1	-.081	2
645		3	max	164.483	3	141.955	2	81.004	4	.08	4	.065	4	.011	1
646			min	-177.118	4	-94.9	1	-90.516	3	-.086	3	-.082	3	-.02	2
647		4	max	84.509	3	99.045	2	135.117	3	.174	3	.213	4	.085	3
648			min	-73.995	4	-127.641	1	-103.884	4	-.165	4	-.233	3	-.125	4
649		5	max	0	11	0	8	.003	3	0	11	0	11	0	11
650			min	0	1	-.002	2	0	1	0	1	0	1	0	1
651	M68	1	max	139.773	4	323.26	3	235.184	1	.273	1	.144	4	.038	3
652			min	-95.412	3	-166.849	4	-184.407	2	-.176	2	-.162	3	-.114	4
653		2	max	139.773	4	323.26	3	235.184	1	.273	1	.159	4	.04	2
654			min	-95.412	3	-166.849	4	-184.407	2	-.176	2	-.173	3	-.133	5
655		3	max	139.773	4	323.26	3	235.184	1	.273	1	.174	4	.046	2
656			min	-95.412	3	-166.849	4	-184.407	2	-.176	2	-.184	3	-.152	5
657		4	max	139.773	4	323.26	3	235.184	1	.273	1	.189	4	.052	2
658			min	-95.412	3	-166.849	4	-184.407	2	-.176	2	-.195	3	-.171	5
659		5	max	139.773	4	323.26	3	235.184	1	.273	1	.204	4	.058	2
660			min	-95.412	3	-166.849	4	-184.407	2	-.176	2	-.206	3	-.19	5
661	M69	1	max	28.339	2	219.037	4	82.734	2	.247	1	.189	3	.041	2
662			min	-70.909	1	-271.142	3	-133.616	1	-.163	2	-.176	4	-.073	1
663		2	max	28.339	2	219.037	4	82.734	2	.247	1	.193	3	.055	3
664			min	-70.909	1	-271.142	3	-133.616	1	-.163	2	-.183	4	-.084	4
665		3	max	28.339	2	219.037	4	82.734	2	.247	1	.197	3	.071	3
666			min	-70.909	1	-271.142	3	-133.616	1	-.163	2	-.19	4	-.096	4
667		4	max	28.339	2	219.037	4	82.734	2	.247	1	.201	3	.086	3
668			min	-70.909	1	-271.142	3	-133.616	1	-.163	2	-.197	4	-.109	4
669		5	max	28.339	2	219.037	4	82.734	2	.247	1	.206	3	.102	3
670			min	-70.909	1	-271.142	3	-133.616	1	-.163	2	-.204	4	-.122	4
671	M70	1	max	157.199	4	59.911	4	86.777	4	.471	1	.101	3	.26	3
672			min	-196.456	3	-13.665	3	-63.581	3	-.497	2	-.089	4	-.245	4
673		2	max	157.199	4	59.911	4	86.777	4	.471	1	.098	3	.261	3
674			min	-196.456	3	-13.665	3	-63.581	3	-.497	2	-.084	4	-.248	4
675		3	max	157.199	4	59.911	4	86.777	4	.471	1	.099	1	.261	3
676			min	-196.456	3	-13.665	3	-63.581	3	-.497	2	-.084	2	-.252	4
677		4	max	157.199	4	59.911	4	86.777	4	.471	1	.101	1	.262	3
678			min	-196.456	3	-13.665	3	-63.581	3	-.497	2	-.085	2	-.255	4
679		5	max	157.199	4	59.911	4	86.777	4	.471	1	.104	1	.263	3
680			min	-196.456	3	-13.665	3	-63.581	3	-.497	2	-.087	2	-.259	4
681	M71	1	max	904.505	4	1075.993	7	724.828	1	.154	3	.332	2	.206	4
682			min	-865.244	3	378.437	4	-748.033	2	-.209	4	-.342	1	-.073	3
683		2	max	904.505	4	1075.993	7	724.828	1	.154	3	.271	2	.175	4
684			min	-865.244	3	378.437	4	-748.033	2	-.209	4	-.282	1	-.11	3
685		3	max	904.505	4	1075.993	7	724.828	1	.154	3	.209	2	.144	4
686			min	-865.244	3	378.437	4	-748.033	2	-.209	4	-.223	1	-.147	3
687		4	max	904.505	4	1075.993	7	724.828	1	.154	3	.148	2	.113	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
688			min	-865.244	3	378.437	4	-748.033	2	-.209	4	-.163	1	-.184	3
689		5	max	904.505	4	1075.993	7	724.828	1	.154	3	.087	2	.082	4
690			min	-865.244	3	378.437	4	-748.033	2	-.209	4	-.104	1	-.221	3
691	M72	1	max	176.549	4	264.802	7	315.01	1	.414	1	.262	3	.236	3
692			min	-160.717	3	80.25	1	-366.228	2	-.515	2	-.219	4	-.253	4
693		2	max	176.549	4	264.802	7	315.01	1	.414	1	.244	3	.227	3
694			min	-160.717	3	80.25	1	-366.228	2	-.515	2	-.205	4	-.259	4
695		3	max	176.549	4	264.802	7	315.01	1	.414	1	.226	3	.217	3
696			min	-160.717	3	80.25	1	-366.228	2	-.515	2	-.191	4	-.266	4
697		4	max	176.549	4	264.802	7	315.01	1	.414	1	.208	3	.208	3
698			min	-160.717	3	80.25	1	-366.228	2	-.515	2	-.177	4	-.273	4
699		5	max	176.549	4	264.802	7	315.01	1	.414	1	.19	3	.198	3
700			min	-160.717	3	80.25	1	-366.228	2	-.515	2	-.163	4	-.279	4
701	M73	1	max	59.075	3	-27.896	1	264.542	2	.384	1	.189	4	.082	1
702			min	-74.885	4	-133.444	7	-213.412	1	-.462	2	-.226	3	-.076	2
703		2	max	59.075	3	-27.896	1	264.542	2	.384	1	.182	4	.083	1
704			min	-74.885	4	-133.444	7	-213.412	1	-.462	2	-.217	3	-.072	2
705		3	max	59.075	3	-27.896	1	264.542	2	.384	1	.176	4	.085	1
706			min	-74.885	4	-133.444	7	-213.412	1	-.462	2	-.208	3	-.068	2
707		4	max	59.075	3	-27.896	1	264.542	2	.384	1	.17	4	.086	1
708			min	-74.885	4	-133.444	7	-213.412	1	-.462	2	-.199	3	-.064	2
709		5	max	59.075	3	-27.896	1	264.542	2	.384	1	.163	4	.088	1
710			min	-74.885	4	-133.444	7	-213.412	1	-.462	2	-.19	3	-.061	2
711	M74	1	max	99.844	4	209.455	2	94.976	2	.218	1	.15	4	.122	1
712			min	-147.299	3	-229.657	1	-114.513	1	-.213	2	-.151	3	-.146	2
713		2	max	99.844	4	209.455	2	94.976	2	.218	1	.153	2	.136	1
714			min	-147.299	3	-229.657	1	-114.513	1	-.213	2	-.157	1	-.158	2
715		3	max	99.844	4	209.455	2	94.976	2	.218	1	.159	2	.149	1
716			min	-147.299	3	-229.657	1	-114.513	1	-.213	2	-.163	1	-.17	2
717		4	max	99.844	4	209.455	2	94.976	2	.218	1	.164	2	.162	1
718			min	-147.299	3	-229.657	1	-114.513	1	-.213	2	-.17	1	-.182	2
719		5	max	99.844	4	209.455	2	94.976	2	.218	1	.17	2	.175	1
720			min	-147.299	3	-229.657	1	-114.513	1	-.213	2	-.176	1	-.194	2
721	M75	1	max	250.013	4	465.709	5	383.77	1	.319	1	.219	3	.161	4
722			min	-202.548	3	-57.51	2	-364.171	2	-.253	2	-.22	4	-.201	3
723		2	max	250.013	4	465.709	5	383.77	1	.319	1	.201	3	.159	4
724			min	-202.548	3	-57.51	2	-364.171	2	-.253	2	-.2	4	-.225	3
725		3	max	250.013	4	465.709	5	383.77	1	.319	1	.183	3	.156	4
726			min	-202.548	3	-57.51	2	-364.171	2	-.253	2	-.18	4	-.249	3
727		4	max	250.013	4	465.709	5	383.77	1	.319	1	.165	3	.154	4
728			min	-202.548	3	-57.51	2	-364.171	2	-.253	2	-.16	4	-.273	3
729		5	max	250.013	4	465.709	5	383.77	1	.319	1	.176	1	.152	4
730			min	-202.548	3	-57.51	2	-364.171	2	-.253	2	-.17	2	-.297	3
731	MP1C	1	max	0	11	.012	4	.008	1	0	11	0	11	0	11
732			min	0	1	-.012	3	-.009	2	0	1	0	1	0	1
733		2	max	284.265	3	128.098	1	110.092	1	.204	4	.049	2	.099	4
734			min	-205.739	4	-65.953	2	-86.55	2	-.206	3	-.088	1	-.103	3
735		3	max	297.414	3	153.912	4	139.433	1	.204	4	.162	1	.105	2
736			min	-192.59	4	-91.637	3	-115.892	2	-.206	3	-.154	2	-.233	1
737		4	max	-13.148	10	29.389	3	29.363	2	0	11	.029	1	.029	3
738			min	-32.851	5	-29.379	4	-29.363	1	0	1	-.029	2	-.029	4
739		5	max	0	11	.05	7	.021	2	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 Mome...	LC
740			min	0	1	-.037	4	-.022	1	0	1	0	1	0	1
741	MP2C	1	max	0	11	.38	4	.185	1	0	11	0	11	0	11
742			min	0	1	-.394	3	-.181	2	0	1	0	1	0	1
743		2	max	278.434	7	294.974	4	242.631	1	.087	2	.13	3	.093	3
744			min	28.506	4	-273.229	3	-282.58	2	-.104	1	-.148	4	-.132	4
745		3	max	718.456	7	544.869	4	443.755	1	.087	2	.62	1	.889	3
746			min	278.054	4	-523.124	3	-483.705	2	-.104	1	-.718	2	-.972	4
747		4	max	-89.948	10	473.2	3	328.347	2	0	11	.478	1	.695	3
748			min	-324.898	5	-473.142	4	-328.387	1	0	1	-.478	2	-.695	4
749		5	max	0	11	.334	5	.147	1	0	11	0	11	0	11
750			min	0	1	-.148	3	-.263	7	0	1	0	1	0	1
751	MP3C	1	max	0	11	.019	4	.012	1	0	11	0	11	0	11
752			min	0	1	-.02	3	-.011	2	0	1	0	1	0	1
753		2	max	166.284	7	149.514	4	238.005	1	.19	3	.141	2	.05	1
754			min	41.272	1	-161.645	3	-289.927	2	-.163	4	-.138	1	-.101	2
755		3	max	199.135	7	178.856	4	267.346	1	.19	3	.367	1	.33	3
756			min	54.42	1	-190.987	3	-319.269	2	-.163	4	-.468	2	-.356	4
757		4	max	-13.148	10	29.387	3	29.363	2	0	11	.029	1	.029	3
758			min	-32.851	5	-29.38	4	-29.369	1	0	1	-.029	2	-.029	4
759		5	max	0	11	.045	3	.021	2	0	11	0	11	0	11
760			min	0	1	-.038	4	-.033	7	0	1	0	1	0	1
761	MP4C	1	max	0	11	.007	8	.008	1	0	11	0	11	0	11
762			min	0	1	-.006	3	-.008	2	0	1	0	1	0	1
763		2	max	242.775	1	88.201	3	120.95	1	.176	1	.155	2	.082	2
764			min	-196.236	2	-37.263	4	-126.904	2	-.17	2	-.156	1	-.114	1
765		3	max	305.903	1	135.388	4	247	1	.176	1	.212	1	.123	2
766			min	-133.107	2	-84.449	3	-252.954	2	-.17	2	-.225	2	-.257	1
767		4	max	-13.148	10	29.443	3	29.428	2	0	11	.03	1	.03	3
768			min	-32.851	5	-29.419	4	-29.425	1	0	1	-.03	2	-.029	4
769		5	max	0	11	.134	5	.087	2	0	11	0	11	0	11
770			min	0	1	-.095	2	-.083	1	0	1	0	1	0	1
771	M80	1	max	0	11	.002	1	.002	3	0	11	0	11	0	11
772			min	0	1	0	8	-.001	2	0	1	0	1	0	1
773		2	max	121.903	4	117.274	1	146.25	1	.086	2	.223	1	.109	4
774			min	-92.911	2	-110.907	2	-134.603	2	-.126	1	-.214	2	-.041	3
775		3	max	644.864	4	224.631	5	87.586	2	.196	4	.1	1	.093	1
776			min	-692.266	3	-10.26	2	-81.28	4	-.251	3	-.111	2	-.099	2
777		4	max	74.448	4	-56.786	1	97.468	1	.117	8	.286	2	.034	4
778			min	-112.752	3	-246.493	6	-114.533	2	-.013	1	-.28	1	-.308	7
779		5	max	0	11	0	6	0	1	0	11	0	11	0	11
780			min	0	1	-.002	3	-.002	4	0	1	0	1	0	1
781	M81	1	max	0	11	.002	2	0	5	0	11	0	11	0	11
782			min	0	1	0	7	-.002	4	0	1	0	1	0	1
783		2	max	105.005	4	77.974	1	31.562	2	.139	3	.032	3	.077	2
784			min	-169.198	3	-99.034	2	-56.073	1	-.151	4	-.044	4	-.067	1
785		3	max	158.715	1	133.523	1	60.698	3	.04	3	.088	3	.016	4
786			min	-171.284	2	-86.376	2	-70.177	4	-.046	4	-.106	4	-.025	3
787		4	max	124.292	1	117.042	1	172.868	4	.191	4	.199	3	.107	1
788			min	-113.71	2	-145.625	2	-141.545	3	-.182	3	-.22	4	-.148	2
789		5	max	0	11	0	11	.002	1	0	11	0	11	0	11
790			min	0	1	-.001	1	-.004	4	0	1	0	1	0	1
791	M82	1	max	107.523	2	318.175	4	261.629	2	.315	2	.227	3	.013	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
792			min	-64.722	1	-161.059	3	-209.808	1	-.218	1	-.243	4	-.117	8
793		2	max	107.523	2	318.175	4	261.629	2	.315	2	.219	3	.02	3
794			min	-64.722	1	-161.059	3	-209.808	1	-.218	1	-.232	4	-.137	8
795		3	max	107.523	2	318.175	4	261.629	2	.315	2	.212	3	.033	3
796			min	-64.722	1	-161.059	3	-209.808	1	-.218	1	-.22	4	-.157	8
797		4	max	107.523	2	318.175	4	261.629	2	.315	2	.205	3	.047	3
798			min	-64.722	1	-161.059	3	-209.808	1	-.218	1	-.209	4	-.178	8
799		5	max	107.523	2	318.175	4	261.629	2	.315	2	.197	3	.06	3
800			min	-64.722	1	-161.059	3	-209.808	1	-.218	1	-.197	4	-.198	8
801	M83	1	max	31.511	3	213.351	3	108.131	1	.296	2	.216	4	.069	1
802			min	-74.882	4	-265.899	4	-159.924	2	-.212	1	-.204	3	-.101	2
803		2	max	31.511	3	213.351	3	108.131	1	.296	2	.212	4	.077	1
804			min	-74.882	4	-265.899	4	-159.924	2	-.212	1	-.203	3	-.106	2
805		3	max	31.511	3	213.351	3	108.131	1	.296	2	.207	4	.085	1
806			min	-74.882	4	-265.899	4	-159.924	2	-.212	1	-.201	3	-.111	2
807		4	max	31.511	3	213.351	3	108.131	1	.296	2	.202	4	.092	1
808			min	-74.882	4	-265.899	4	-159.924	2	-.212	1	-.199	3	-.115	2
809		5	max	31.511	3	213.351	3	108.131	1	.296	2	.197	4	.1	1
810			min	-74.882	4	-265.899	4	-159.924	2	-.212	1	-.197	3	-.12	2
811	M84	1	max	174.27	3	55.749	6	83.202	4	.482	2	.144	4	.236	4
812			min	-214.111	4	-10.651	9	-60.921	3	-.509	1	-.132	3	-.222	3
813		2	max	174.27	3	55.749	6	83.202	4	.482	2	.149	4	.236	4
814			min	-214.111	4	-10.651	9	-60.921	3	-.509	1	-.136	3	-.225	3
815		3	max	174.27	3	55.749	6	83.202	4	.482	2	.154	4	.237	4
816			min	-214.111	4	-10.651	9	-60.921	3	-.509	1	-.139	3	-.228	3
817		4	max	174.27	3	55.749	6	83.202	4	.482	2	.158	4	.237	4
818			min	-214.111	4	-10.651	9	-60.921	3	-.509	1	-.142	3	-.231	3
819		5	max	174.27	3	55.749	6	83.202	4	.482	2	.163	4	.237	4
820			min	-214.111	4	-10.651	9	-60.921	3	-.509	1	-.146	3	-.233	3
821	M85	1	max	887.419	3	1074.311	5	727.795	2	.132	3	.327	3	.244	3
822			min	-847.578	4	389.736	3	-750.305	1	-.186	4	-.337	4	-.113	4
823		2	max	887.419	3	1074.311	5	727.795	2	.132	3	.282	3	.212	3
824			min	-847.578	4	389.736	3	-750.305	1	-.186	4	-.293	4	-.149	4
825		3	max	887.419	3	1074.311	5	727.795	2	.132	3	.237	3	.18	3
826			min	-847.578	4	389.736	3	-750.305	1	-.186	4	-.25	4	-.185	4
827		4	max	887.419	3	1074.311	5	727.795	2	.132	3	.191	3	.148	3
828			min	-847.578	4	389.736	3	-750.305	1	-.186	4	-.207	4	-.221	4
829		5	max	887.419	3	1074.311	5	727.795	2	.132	3	.146	3	.116	3
830			min	-847.578	4	389.736	3	-750.305	1	-.186	4	-.163	4	-.257	4
831	M86	1	max	209.863	3	264.883	5	303.109	2	.405	2	.216	1	.294	4
832			min	-195.199	4	78.188	2	-354.396	1	-.506	1	-.173	2	-.309	3
833		2	max	209.863	3	264.883	5	303.109	2	.405	2	.187	1	.288	4
834			min	-195.199	4	78.188	2	-354.396	1	-.506	1	-.148	2	-.319	3
835		3	max	209.863	3	264.883	5	303.109	2	.405	2	.158	1	.281	4
836			min	-195.199	4	78.188	2	-354.396	1	-.506	1	-.123	2	-.328	3
837		4	max	209.863	3	264.883	5	303.109	2	.405	2	.129	1	.275	4
838			min	-195.199	4	78.188	2	-354.396	1	-.506	1	-.098	2	-.338	3
839		5	max	209.863	3	264.883	5	303.109	2	.405	2	.142	4	.268	4
840			min	-195.199	4	78.188	2	-354.396	1	-.506	1	-.116	3	-.348	3
841	M87	1	max	93.551	4	-25.649	2	252.74	1	.351	2	.12	2	.105	4
842			min	-108.229	3	-133.489	5	-201.511	2	-.43	1	-.157	1	-.099	3
843		2	max	93.551	4	-25.649	2	252.74	1	.351	2	.108	2	.107	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
844			min	-108.229	3	-133.489	5	-201.511	2	-.43	1	-.143	1	-.095	3
845		3	max	93.551	4	-25.649	2	252.74	1	.351	2	.097	2	.108	4
846			min	-108.229	3	-133.489	5	-201.511	2	-.43	1	-.128	1	-.091	3
847		4	max	93.551	4	-25.649	2	252.74	1	.351	2	.106	3	.11	4
848			min	-108.229	3	-133.489	5	-201.511	2	-.43	1	-.135	4	-.088	3
849		5	max	93.551	4	-25.649	2	252.74	1	.351	2	.116	3	.111	4
850			min	-108.229	3	-133.489	5	-201.511	2	-.43	1	-.142	4	-.084	3
851	M88	1	max	49.585	2	268.345	3	67.202	1	.175	2	.193	3	.08	4
852			min	-96.805	1	-288.691	4	-87.889	2	-.17	1	-.195	4	-.103	3
853		2	max	49.585	2	268.345	3	67.202	1	.175	2	.196	3	.097	4
854			min	-96.805	1	-288.691	4	-87.889	2	-.17	1	-.2	4	-.119	3
855		3	max	49.585	2	268.345	3	67.202	1	.175	2	.2	3	.113	4
856			min	-96.805	1	-288.691	4	-87.889	2	-.17	1	-.204	4	-.134	3
857		4	max	49.585	2	268.345	3	67.202	1	.175	2	.204	3	.13	4
858			min	-96.805	1	-288.691	4	-87.889	2	-.17	1	-.209	4	-.15	3
859		5	max	49.585	2	268.345	3	67.202	1	.175	2	.207	3	.146	4
860			min	-96.805	1	-288.691	4	-87.889	2	-.17	1	-.214	4	-.165	3
861	M89	1	max	320.598	3	478.761	8	356.915	2	.267	2	.138	1	.086	2
862			min	-271.306	4	-117.488	3	-336.431	1	-.201	1	-.139	2	-.126	1
863		2	max	320.598	3	478.761	8	356.915	2	.267	2	.144	4	.077	2
864			min	-271.306	4	-117.488	3	-336.431	1	-.201	1	-.142	3	-.143	1
865		3	max	320.598	3	478.761	8	356.915	2	.267	2	.167	4	.077	3
866			min	-271.306	4	-117.488	3	-336.431	1	-.201	1	-.164	3	-.17	4
867		4	max	320.598	3	478.761	8	356.915	2	.267	2	.191	4	.087	3
868			min	-271.306	4	-117.488	3	-336.431	1	-.201	1	-.185	3	-.206	4
869		5	max	320.598	3	478.761	8	356.915	2	.267	2	.214	4	.096	3
870			min	-271.306	4	-117.488	3	-336.431	1	-.201	1	-.207	3	-.242	4
871	MP1B	1	max	0	11	.01	4	.008	1	0	11	0	11	0	11
872			min	0	1	-.011	3	-.007	2	0	1	0	1	0	1
873		2	max	278.83	4	37.802	2	126.468	1	.197	3	.124	2	.077	9
874			min	-200.296	3	-48.65	1	-192.182	2	-.197	4	-.107	1	-.013	3
875		3	max	291.978	4	37.802	2	155.81	1	.197	3	.175	1	.127	1
876			min	-187.147	3	-48.65	1	-221.524	2	-.197	4	-.29	2	-.07	2
877		4	max	-13.148	10	29.374	3	29.358	2	0	11	.029	1	.029	3
878			min	-32.851	5	-29.38	4	-29.366	1	0	1	-.029	2	-.029	4
879		5	max	0	11	.033	3	.017	2	0	11	0	11	0	11
880			min	0	1	-.038	4	-.034	5	0	1	0	1	0	1
881	MP2B	1	max	0	11	.402	4	.166	1	0	11	0	11	0	11
882			min	0	1	-.392	3	-.157	2	0	1	0	1	0	1
883		2	max	276.561	5	247.782	4	270.4	1	.146	3	.118	4	.144	3
884			min	39.775	3	-293.406	3	-269.984	2	-.163	4	-.142	3	-.109	4
885		3	max	716.583	5	497.677	4	471.524	1	.146	3	.661	1	.981	3
886			min	289.323	3	-543.301	3	-471.108	2	-.163	4	-.685	2	-.855	4
887		4	max	-89.948	10	473.147	3	328.331	2	0	11	.478	1	.695	3
888			min	-324.898	5	-473.211	4	-328.36	1	0	1	-.478	2	-.695	4
889		5	max	0	11	.137	4	.174	1	0	11	0	11	0	11
890			min	0	1	-.358	5	-.206	6	0	1	0	1	0	1
891	MP3B	1	max	0	11	.024	4	.011	4	0	11	0	11	0	11
892			min	0	1	-.024	3	-.011	3	0	1	0	1	0	1
893		2	max	166.329	5	177.371	4	254.372	1	.142	4	.094	4	.097	2
894			min	38.87	2	-215.882	3	-217.641	2	-.116	3	-.139	3	-.074	1
895		3	max	199.179	5	206.713	4	283.714	1	.142	4	.406	1	.439	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
896			min	52.018	2	-245.223	3	-246.983	2	-.116	3	-.377	2	-.339	4
897		4	max	-13.148	10	29.394	3	29.353	2	0	11	.029	1	.029	3
898			min	-32.851	5	-29.403	4	-29.356	1	0	1	-.029	2	-.029	4
899		5	max	0	11	.052	3	.029	3	0	11	0	11	0	11
900			min	0	1	-.062	4	-.032	4	0	1	0	1	0	1
901	MP4B	1	max	0	11	.009	4	.006	1	0	11	0	11	0	11
902			min	0	1	-.01	3	-.007	2	0	1	0	1	0	1
903		2	max	301.625	4	86.875	2	71.215	3	.214	4	.047	2	.2	4
904			min	-255.289	3	-117.521	1	-112.452	4	-.207	3	-.075	1	-.183	3
905		3	max	364.753	4	177.804	4	165.446	1	.214	4	.165	3	.211	1
906			min	-192.161	3	-208.198	3	-206.697	2	-.207	3	-.275	4	-.133	2
907		4	max	-13.148	10	29.495	3	29.373	2	0	11	.029	1	.03	3
908			min	-32.851	5	-29.504	4	-29.395	1	0	1	-.029	2	-.03	4
909		5	max	0	11	.154	3	.072	3	0	11	0	11	0	11
910			min	0	1	-.162	4	-.121	8	0	1	0	1	0	1
911	M94	1	max	152.649	1	248.494	2	273.672	4	.073	2	.222	3	.157	2
912			min	-225.281	2	-232.703	1	-230.571	3	-.081	1	-.259	4	-.168	1
913		2	max	152.649	1	248.494	2	273.672	4	.073	2	.217	3	.151	2
914			min	-225.281	2	-232.703	1	-230.571	3	-.081	1	-.252	4	-.162	1
915		3	max	152.649	1	248.494	2	273.672	4	.073	2	.211	3	.144	2
916			min	-225.281	2	-232.703	1	-230.571	3	-.081	1	-.246	4	-.157	1
917		4	max	152.649	1	248.494	2	273.672	4	.073	2	.205	3	.138	2
918			min	-225.281	2	-232.703	1	-230.571	3	-.081	1	-.239	4	-.151	1
919		5	max	152.649	1	248.494	2	273.672	4	.073	2	.199	3	.132	2
920			min	-225.281	2	-232.703	1	-230.571	3	-.081	1	-.232	4	-.145	1
921	M95	1	max	205.444	1	318.794	2	195.193	4	.103	1	.162	3	.195	2
922			min	-280.457	2	-319.437	1	-235.663	3	-.09	2	-.127	4	-.218	1
923		2	max	205.444	1	318.794	2	195.193	4	.103	1	.156	3	.187	2
924			min	-280.457	2	-319.437	1	-235.663	3	-.09	2	-.122	4	-.21	1
925		3	max	205.444	1	318.794	2	195.193	4	.103	1	.15	3	.179	2
926			min	-280.457	2	-319.437	1	-235.663	3	-.09	2	-.117	4	-.202	1
927		4	max	205.444	1	318.794	2	195.193	4	.103	1	.144	3	.171	2
928			min	-280.457	2	-319.437	1	-235.663	3	-.09	2	-.112	4	-.194	1
929		5	max	205.444	1	318.794	2	195.193	4	.103	1	.139	3	.164	2
930			min	-280.457	2	-319.437	1	-235.663	3	-.09	2	-.107	4	-.186	1
931	M96	1	max	163.261	4	326.611	1	296.125	2	.1	1	.282	1	.214	1
932			min	-235.064	3	-311.434	2	-251.777	1	-.108	2	-.319	2	-.226	2
933		2	max	163.261	4	326.611	1	296.125	2	.1	1	.276	1	.206	1
934			min	-235.064	3	-311.434	2	-251.777	1	-.108	2	-.311	2	-.218	2
935		3	max	163.261	4	326.611	1	296.125	2	.1	1	.269	1	.198	1
936			min	-235.064	3	-311.434	2	-251.777	1	-.108	2	-.304	2	-.21	2
937		4	max	163.261	4	326.611	1	296.125	2	.1	1	.263	1	.189	1
938			min	-235.064	3	-311.434	2	-251.777	1	-.108	2	-.297	2	-.202	2
939		5	max	163.261	4	326.611	1	296.125	2	.1	1	.257	1	.181	1
940			min	-235.064	3	-311.434	2	-251.777	1	-.108	2	-.289	2	-.195	2
941	M97	1	max	105.334	2	345.032	3	141.59	3	.112	4	.086	4	.214	3
942			min	-178.676	1	-346.488	4	-184.1	4	-.099	3	-.052	3	-.237	4
943		2	max	105.334	2	345.032	3	141.59	3	.112	4	.082	4	.205	3
944			min	-178.676	1	-346.488	4	-184.1	4	-.099	3	-.048	3	-.228	4
945		3	max	105.334	2	345.032	3	141.59	3	.112	4	.077	4	.196	3
946			min	-178.676	1	-346.488	4	-184.1	4	-.099	3	-.045	3	-.219	4
947		4	max	105.334	2	345.032	3	141.59	3	.112	4	.073	4	.188	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
948			min	-178.676	1	-346.488	4	-184.1	4	-.099	3	-.041	3	-.211	4
949		5	max	105.334	2	345.032	3	141.59	3	.112	4	.068	4	.179	3
950			min	-178.676	1	-346.488	4	-184.1	4	-.099	3	-.038	3	-.202	4
951	M98	1	max	90.619	2	353.434	4	217.919	3	.108	4	.217	4	.231	4
952			min	-162.439	1	-337.967	3	-173.24	4	-.116	3	-.254	3	-.242	3
953		2	max	90.619	2	353.434	4	217.919	3	.108	4	.212	4	.222	4
954			min	-162.439	1	-337.967	3	-173.24	4	-.116	3	-.248	3	-.234	3
955		3	max	90.619	2	353.434	4	217.919	3	.108	4	.208	4	.213	4
956			min	-162.439	1	-337.967	3	-173.24	4	-.116	3	-.243	3	-.226	3
957		4	max	90.619	2	353.434	4	217.919	3	.108	4	.204	4	.205	4
958			min	-162.439	1	-337.967	3	-173.24	4	-.116	3	-.237	3	-.217	3
959		5	max	90.619	2	353.434	4	217.919	3	.108	4	.2	4	.196	4
960			min	-162.439	1	-337.967	3	-173.24	4	-.116	3	-.232	3	-.209	3
961	M99	1	max	201.862	3	239.505	1	215.881	1	.081	2	.169	2	.147	1
962			min	-275.611	4	-241.716	2	-257.285	2	-.068	1	-.133	1	-.17	2
963		2	max	201.862	3	239.505	1	215.881	1	.081	2	.162	2	.141	1
964			min	-275.611	4	-241.716	2	-257.285	2	-.068	1	-.128	1	-.164	2
965		3	max	201.862	3	239.505	1	215.881	1	.081	2	.156	2	.135	1
966			min	-275.611	4	-241.716	2	-257.285	2	-.068	1	-.123	1	-.158	2
967		4	max	201.862	3	239.505	1	215.881	1	.081	2	.15	2	.129	1
968			min	-275.611	4	-241.716	2	-257.285	2	-.068	1	-.117	1	-.152	2
969		5	max	201.862	3	239.505	1	215.881	1	.081	2	.143	2	.123	1
970			min	-275.611	4	-241.716	2	-257.285	2	-.068	1	-.112	1	-.146	2
971	M100	1	max	155.123	3	232.995	1	199.345	2	.003	1	.078	4	.25	4
972			min	-239.213	4	-248.206	2	-200.997	1	-.003	2	-.069	9	-.216	3
973		2	max	152.134	3	234.572	1	201.071	2	.003	1	.077	4	.171	4
974			min	-236.225	4	-246.629	2	-202.722	1	-.003	2	-.068	3	-.134	3
975		3	max	149.146	3	236.15	1	202.796	2	.003	1	.078	4	.092	4
976			min	-233.236	4	-245.052	2	-204.448	1	-.003	2	-.071	3	-.053	3
977		4	max	146.157	3	237.727	1	204.522	2	.003	1	.08	4	.117	2
978			min	-230.247	4	-243.474	2	-206.173	1	-.003	2	-.075	3	-.076	1
979		5	max	143.168	3	239.304	1	206.247	2	.003	1	.084	4	.219	2
980			min	-227.259	4	-241.897	2	-207.899	1	-.003	2	-.08	3	-.179	1
981	M101	1	max	121.093	2	338.273	3	206.23	4	.004	3	.038	1	.333	3
982			min	-204.911	1	-353.175	4	-207.674	3	-.005	4	-.025	2	-.299	4
983		2	max	121.093	2	339.85	3	206.23	4	.004	3	.039	1	.207	3
984			min	-204.911	1	-351.598	4	-207.674	3	-.005	4	-.03	2	-.171	4
985		3	max	121.093	2	341.428	3	206.23	4	.004	3	.056	3	.081	3
986			min	-204.911	1	-350.021	4	-207.674	3	-.005	4	-.05	4	-.043	4
987		4	max	121.093	2	343.005	3	206.23	4	.004	3	.087	3	.084	4
988			min	-204.911	1	-348.443	4	-207.674	3	-.005	4	-.083	4	-.045	3
989		5	max	121.093	2	344.582	3	206.23	4	.004	3	.118	3	.212	4
990			min	-204.911	1	-346.866	4	-207.674	3	-.005	4	-.115	4	-.171	3
991	M102	1	max	128.056	1	311.782	2	217.349	1	.004	2	.077	10	.362	2
992			min	-213.369	2	-326.363	1	-218.095	2	-.004	1	-.035	1	-.328	1
993		2	max	125.067	1	313.359	2	215.624	1	.004	2	.069	2	.24	2
994			min	-210.38	2	-324.785	1	-216.369	2	-.004	1	-.06	1	-.204	1
995		3	max	122.078	1	314.936	2	213.898	1	.004	2	.092	2	.119	2
996			min	-207.392	2	-323.208	1	-214.644	2	-.004	1	-.085	1	-.08	1
997		4	max	120.499	4	316.514	2	212.173	1	.004	2	.115	2	.089	3
998			min	-204.403	2	-321.631	1	-212.918	2	-.004	1	-.111	1	-.048	4
999		5	max	123.488	4	318.091	2	210.447	1	.004	2	.139	2	.165	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1000			min	-207.139	3	-320.053	1	-211.193	2	-.004	1	-.136	1	-.124	2
1001	M103	1	max	4082.303	5	42.199	5	45.321	4	0	2	0	11	0	11
1002			min	544.954	2	-2.896	2	-45.321	3	0	5	0	1	0	1
1003		2	max	4070.513	5	21.099	5	22.661	4	0	2	.036	4	.002	2
1004			min	529.596	2	-1.448	2	-22.661	3	0	5	-.036	3	-.034	5
1005		3	max	4058.723	5	0	11	0	11	0	2	.048	4	.003	2
1006			min	514.239	2	0	1	0	1	0	5	-.048	3	-.045	5
1007		4	max	4046.934	5	1.448	2	22.661	3	0	2	.036	4	.002	2
1008			min	498.881	2	-21.099	5	-22.661	4	0	5	-.036	3	-.034	5
1009		5	max	4035.144	5	2.896	2	45.321	3	0	2	0	11	0	11
1010			min	483.523	2	-42.199	5	-45.321	4	0	5	0	1	0	1
1011	M102A	1	max	2321.016	3	640.797	7	1089.278	2	.105	3	1.135	1	.688	7
1012			min	-4634.022	4	-22.914	9	-1091.101	1	-.426	8	-1.127	2	.063	9
1013		2	max	2302.775	3	603.157	7	1057.684	2	.105	3	.97	3	.103	9
1014			min	-4615.782	4	-41.24	9	-1059.507	1	-.426	8	-.958	4	-.125	3
1015		3	max	2243.682	3	-197.935	3	127.751	2	.236	9	.155	3	.696	9
1016			min	-4498.895	4	-995.738	8	-127.974	1	-.197	1	-.153	4	-.112	3
1017		4	max	2748.063	3	1251.708	8	60.599	2	.236	9	.174	2	1.199	8
1018			min	-2579.55	4	158.013	3	-60.213	1	-.197	1	-.173	1	.05	3
1019		5	max	2729.823	3	1202.434	8	37.71	4	.236	9	.229	2	-.103	2
1020			min	-2561.309	4	135.876	3	-38.171	3	-.197	1	-.228	1	-.322	5
1021	M103A	1	max	4046.664	8	42.372	8	35.886	2	0	3	0	11	0	11
1022			min	711.599	3	-3.714	3	-35.886	1	0	4	0	1	0	1
1023		2	max	4034.995	8	21.186	8	17.943	2	0	3	.029	2	.003	3
1024			min	695.677	3	-1.857	3	-17.943	1	0	4	-.029	1	-.034	8
1025		3	max	4023.325	8	0	11	0	11	0	3	.038	2	.004	3
1026			min	679.754	3	0	1	0	1	0	4	-.038	1	-.045	8
1027		4	max	4011.655	8	1.857	3	17.943	1	0	3	.029	2	.003	3
1028			min	663.831	3	-21.186	8	-17.943	2	0	4	-.029	1	-.034	8
1029		5	max	3999.986	8	3.714	3	35.886	1	0	3	0	11	0	11
1030			min	647.909	3	-42.372	8	-35.886	2	0	4	0	1	0	1
1031	M104	1	max	2025.585	4	638.738	8	1474.549	1	.185	1	1.217	2	.687	8
1032			min	-4335.665	3	-11.93	10	-1470.167	2	-.491	2	-1.213	1	.07	10
1033		2	max	2007.344	4	601.098	8	1442.955	1	.185	1	.594	1	.096	10
1034			min	-4317.424	3	-30.256	10	-1438.573	2	-.491	2	-.584	2	-.119	1
1035		3	max	2001.214	4	-200.059	4	75.918	3	.226	1	.116	3	.689	10
1036			min	-4254.509	3	-995.322	7	-76.04	4	-.257	10	-.115	4	-.104	4
1037		4	max	2518.882	4	1250.387	7	49.563	3	.226	1	.199	3	1.198	7
1038			min	-2347.832	3	165.541	4	-48.712	4	-.257	10	-.199	4	.058	4
1039		5	max	2500.641	4	1201.113	7	39.031	3	.226	1	.254	3	-.107	3
1040			min	-2329.591	3	143.404	4	-38.18	4	-.257	10	-.252	4	-.321	8
1041	M105	1	max	4043.636	7	42.372	7	35.886	1	0	1	0	11	0	11
1042			min	727.999	4	-3.714	4	-35.886	2	0	2	0	1	0	1
1043		2	max	4031.966	7	21.186	7	17.943	1	0	1	.029	1	.003	4
1044			min	712.077	4	-1.857	4	-17.943	2	0	2	-.029	2	-.034	7
1045		3	max	4020.296	7	0	11	0	11	0	1	.038	1	.004	4
1046			min	696.154	4	0	1	0	1	0	2	-.038	2	-.045	7
1047		4	max	4008.627	7	1.857	4	17.943	2	0	1	.029	1	.003	4
1048			min	680.231	4	-21.186	7	-17.943	1	0	2	-.029	2	-.034	7
1049		5	max	3996.957	7	3.714	4	35.886	2	0	1	0	11	0	11
1050			min	664.309	4	-42.372	7	-35.886	1	0	2	0	1	0	1
1051	M106	1	max	1030.118	4	832.001	5	63.768	1	.417	7	.276	2	1.961	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 Mome...	LC
1052			min	-1014.047	3	283.088	2	-35.789	2	.108	4	-.311	1	.642	2
1053		2	max	1030.118	4	803.66	5	56.82	3	.417	7	.26	2	1.435	5
1054			min	-1014.047	3	270.689	2	-29.232	4	.108	4	-.277	1	.464	2
1055		3	max	1030.118	4	775.319	5	56.82	3	.417	7	.258	2	.927	5
1056			min	-1014.047	3	258.291	2	-29.232	4	.108	4	-.258	1	.293	2
1057		4	max	1030.118	4	746.978	5	56.82	3	.417	7	.271	2	.439	8
1058			min	-1014.047	3	245.893	2	-29.232	4	.108	4	-.252	1	.12	3
1059		5	max	493.837	4	707.968	5	1026.436	1	.419	7	.177	3	.021	4
1060			min	-507.116	3	229.328	2	-1064.449	2	.116	4	-.174	4	-.047	3
1061	M107	1	max	1037.186	3	831.261	8	202.413	4	.413	5	.653	3	1.958	8
1062			min	-1012.438	4	286.771	3	-174.954	3	.13	2	-.686	4	.655	1
1063		2	max	1027.711	3	802.92	8	186.002	4	.413	5	.546	3	1.433	6
1064			min	-1002.962	4	274.373	3	-158.543	3	.13	2	-.562	4	.47	1
1065		3	max	1018.236	3	774.58	8	169.59	4	.413	5	.449	3	.926	6
1066			min	-993.487	4	261.974	3	-142.131	3	.13	2	-.447	4	.292	1
1067		4	max	1008.76	3	746.239	8	153.178	4	.413	5	.363	3	.438	6
1068			min	-984.012	4	249.576	3	-125.719	3	.13	2	-.343	4	.122	1
1069		5	max	217.135	2	707.228	8	1411.561	4	.416	8	.093	1	.012	2
1070			min	-223.254	1	232.87	3	-1449.609	3	.136	2	-.089	2	-.039	1
1071	M108	1	max	1338.118	1	830.875	7	155.678	2	.416	6	.495	1	1.958	7
1072			min	-1318.441	2	290.802	4	-128.219	1	.12	1	-.53	2	.661	4
1073		2	max	1328.642	1	802.534	7	150.208	2	.416	6	.415	1	1.433	7
1074			min	-1308.965	2	278.403	4	-122.748	1	.12	1	-.431	2	.478	4
1075		3	max	1319.167	1	774.193	7	144.737	2	.416	6	.338	1	.926	7
1076			min	-1299.49	2	266.005	4	-117.278	1	.12	1	-.337	2	.302	4
1077		4	max	1309.692	1	745.852	7	139.267	2	.416	6	.264	1	.437	7
1078			min	-1290.015	2	253.607	4	-111.807	1	.12	1	-.245	2	.135	4
1079		5	max	440.625	1	706.527	7	1470.245	2	.419	6	.128	2	.006	1
1080			min	-450.228	2	238.486	4	-1512.303	1	.123	1	-.125	1	-.036	6

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....		L...	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	M6	PL3/8x6	.243	.167	2	.257	0	y	5	71583....	72900	.57	9.113	1...	H1-1b
2	M23	PL3/8x6	.311	.167	3	.257	0	y	8	71583....	72900	.57	9.113	1...	H1-1b
3	M40	PL3/8x6	.287	.167	1	.257	0	y	7	71583....	72900	.57	9.113	1...	H1-1b
4	M25	PL1/2x6	.076	.112	4	.210	0	y	9	96760....	97200	1.012	12.15	1...	H1-1b
5	M44	PL1/2x6	.064	.112	4	.209	0	y	10	96760....	97200	1.012	12.15	1...	H1-1b
6	M4	PL3/8x6	.234	.167	2	.193	0	y	8	71583....	72900	.57	9.113	1...	H1-1b
7	M21	PL3/8x6	.227	.167	1	.193	0	y	6	71583....	72900	.57	9.113	1...	H1-1b
8	M38	PL3/8x6	.268	.167	4	.192	0	y	5	71583....	72900	.57	9.113	1...	H1-1b
9	M53	PIPE_2.0	.257	8.4...	2	.162	11....		2	6295.4...	32130	1.872	1.872	3...	H1-1b
10	M26	PL1/2x6	.146	0	4	.156	0	y	7	93378....	97200	1.012	12.15	1...	H1-1b
11	M43	PL1/2x6	.111	0	4	.156	0	y	5	93378....	97200	1.012	12.15	1...	H1-1b
12	M27	PL1/2x6	.074	.112	2	.155	0	y	8	96760....	97200	1.012	12.15	1...	H1-1b
13	M9	PL1/2x6	.164	0	1	.154	0	y	6	93378....	97200	1.012	12.15	1...	H1-1b
14	M10	PL1/2x6	.077	.112	2	.153	0	y	7	96760....	97200	1.012	12.15	1...	H1-1b
15	M42	PL1/2x6	.107	0	4	.152	0	y	7	96760....	97200	1.012	12.15	1...	H1-1b
16	M8	PL1/2x6	.098	.112	1	.150	0	y	8	96760....	97200	1.012	12.15	1...	H1-1b
17	M81	PIPE_2.0	.221	8.4...	4	.137	11....		4	6295.4...	32130	1.872	1.872	2...	H1-1b
18	M41	PL1/2x6	.258	0	3	.131	0	y	10	93378....	97200	1.012	12.15	1...	H1-1b

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....	L...	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
19	M3	PL3/8x6	.204	0	2	.129	0 y	6	70647....	72900	.57	9.113	1...	H1-1b
20	M37	PL3/8x6	.239	0	4	.129	0 y	8	70647....	72900	.57	9.113	1...	H1-1b
21	M20	PL3/8x6	.094	0	3	.127	0 y	7	70647....	72900	.57	9.113	1...	H1-1b
22	M67	PIPE_2.0	.215	8.4...	3	.123	11....	3	6295.4...	32130	1.872	1.872	2...	H1-1b
23	M5	PL3/8x6	.339	0	3	.117	0 y	3	70647....	72900	.57	9.113	1...	H1-1b
24	M7	PL1/2x6	.234	0	1	.109	0 y	7	93378....	97200	1.012	12.15	1...	H1-1b
25	M24	PL1/2x6	.158	0	2	.108	0 y	5	93378....	97200	1.012	12.15	1...	H1-1b
26	M22	PL3/8x6	.184	0	1	.107	0 y	5	70647....	72900	.57	9.113	1...	H1-1b
27	M39	PL3/8x6	.258	0	2	.107	0 y	6	70647....	72900	.57	9.113	1...	H1-1b
28	M52	PIPE_3.0	.094	8.3...	8	.104	8.0...	1	28250....	65205	5.749	5.749	2...	H1-1b
29	M80	PIPE_3.0	.093	8.3...	5	.100	8.0...	3	28250....	65205	5.749	5.749	2...	H1-1b
30	MP2A	PIPE_2.5	.462	4.5	2	.087	4.5	2	30038....	50715	3.596	3.596	2...	H1-1b
31	MP2B	PIPE_2.5	.401	4.5	4	.085	4.5	4	30038....	50715	3.596	3.596	1...	H1-1b
32	MP1A	PIPE_2.5	.116	4.5	3	.083	4.5	1	30038....	50715	3.596	3.596	1...	H1-1b
33	MP4B	PIPE_2.5	.109	4.5	4	.082	4.5	4	30038....	50715	3.596	3.596	1...	H1-1b
34	MP4A	PIPE_2.5	.123	4.5	3	.081	4.5	2	30038....	50715	3.596	3.596	2...	H1-1b
35	M1	HSS4X4...	.159	0	4	.079	0 z	3	12590....	139518	16.181	16.181	1...	H1-1b
36	MP3A	PIPE_2.5	.175	4.5	4	.078	4.5	2	30038....	50715	3.596	3.596	1...	H1-1b
37	MP1C	PIPE_2.5	.109	4.5	1	.077	4.5	4	30038....	50715	3.596	3.596	2...	H1-1b
38	MP3C	PIPE_2.5	.179	4.5	2	.075	4.5	3	30038....	50715	3.596	3.596	2...	H1-1b
39	M104	HSS4X4...	.106	3.4...	7	.074	0 z	2	12590....	139518	16.181	16.181	1...	H1-1b
40	MP4C	PIPE_2.5	.129	4.5	1	.073	4.5	1	30038....	50715	3.596	3.596	1...	H1-1b
41	MP1B	PIPE_2.5	.115	4.5	2	.070	4.5	4	30038....	50715	3.596	3.596	2...	H1-1b
42	M66	PIPE_3.0	.094	8.3...	6	.064	8.0...	4	28250....	65205	5.749	5.749	2...	H1-1b
43	MP2C	PIPE_2.5	.402	4.5	4	.063	4.5	1	30038....	50715	3.596	3.596	1...	H1-1b
44	MP3B	PIPE_2.5	.166	4.5	1	.060	4.5	4	30038....	50715	3.596	3.596	1...	H1-1b
45	M108	HSS4X4...	.129	0	6	.053	2.3... z	2	12347....	139518	16.181	16.181	1...	H1-1b
46	M106	HSS4X4...	.127	0	5	.052	0 y	7	12347....	139518	16.181	16.181	1...	H1-1b
47	M107	HSS4X4...	.131	0	8	.052	0 y	8	12347....	139518	16.181	16.181	1...	H1-1b
48	M101	L2.5x2.5x4	.187	1.2...	4	.052	0 y	4	36492....	38556	1.114	2.537	2...	H2-1
49	M102A	HSS4X4...	.106	3.4...	8	.051	0 z	1	12590....	139518	16.181	16.181	1...	H1-1b
50	M102	L2.5x2.5x4	.191	0	2	.048	0 y	1	36492....	38556	1.114	2.537	2...	H2-1
51	M100	L2.5x2.5x4	.175	0	4	.035	0 y	2	36492....	38556	1.114	2.537	2...	H2-1
52	M36	HSS4X4...	.107	2.5...	7	.034	.241 z	3	12347....	139518	16.181	16.181	1...	H1-1b
53	M2	HSS4X4...	.104	2.5...	5	.032	2.5... y	8	12347....	139518	16.181	16.181	1...	H1-1b
54	M19	HSS4X4...	.105	2.5...	6	.032	2.5... y	6	12347....	139518	16.181	16.181	1...	H1-1b
55	M12	L2x2x3	.204	4.29	1	.011	4.29 z	8	9305.2...	23392.8	.558	1.22	2...	H2-1
56	M46	L2x2x3	.255	0	2	.011	4.29 z	5	9305.2...	23392.8	.558	1.23	2...	H2-1
57	M29	L2x2x3	.244	0	4	.011	4.29 z	6	9305.2...	23392.8	.558	1.195	2...	H2-1
58	M11	L2x2x3	.192	4.29	1	.010	4.29 y	7	9305.2...	23392.8	.558	1.218	2...	H2-1
59	M45	L2x2x3	.207	0	3	.010	4.29 y	6	9305.2...	23392.8	.558	1.182	1...	H2-1
60	M28	L2x2x3	.201	0	2	.010	4.29 y	5	9305.2...	23392.8	.558	1.2	2...	H2-1
61	M103A	LL2.5x2....	.091	0	8	.004	0 y	4	44568....	58320	3.954	2.55	1...	H1-1...
62	M105	LL2.5x2....	.091	0	7	.003	0 z	2	44568....	58320	3.954	2.55	1...	H1-1...
63	M103	LL2.5x2....	.092	0	5	.003	4.2... y	5	44568....	58320	3.954	2.55	1	H1-1...

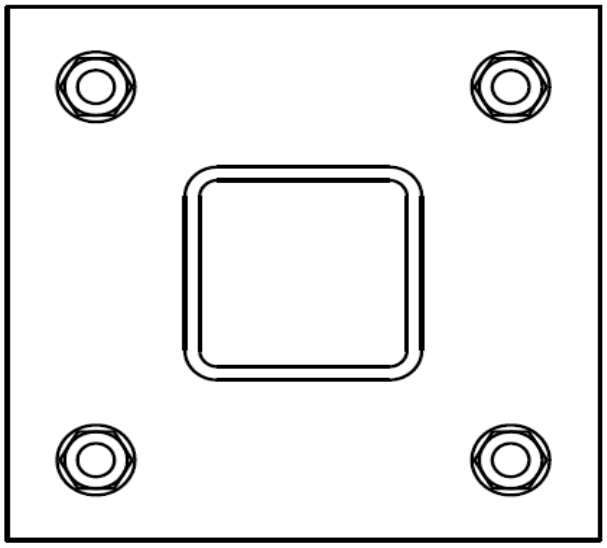
Tower Engineering Solutions

Standoff Arm Flange Connection Check

			Date: 4/20/2022
Customer:	SBA	TIA Standard:	ANSI/TIA-222-G
Carrier:	T Mobile	Mount Elev. [ft]:	150
Site Name:	Town of Norfolk DPW site	Engineer Name:	Sandesh Khawas Bhujel
Site Number:	CT22102-SBA	Project #:	128078

NOTE: The calculations shown below are for a single representative load combination for example purposes. The results for all load combinations are presented in the Results Summary Table.

RISA Member Label =	M1	
I or J End?	I	
Load Combination # =	3	
Plate Width, Wp =	7	[In]
Plate Height, Hp =	7	[In]
Plate Thickness, tp =	1	[In]
Plate Fy =	36	[KSI]
Bolt Diameter, db =	0.625	[In]
Bolt Fu =	120	[KSI]
Bolt Horizontal Spacing, Sbh =	6	[In]
Bolt Vertical Spacing, Sbv =	6	[In]
Standoff Member Shape =	Rect Tube	
Member Width, Wm =	4	[In]
Member Depth, Dm =	4	[In]
Member Thickness, tm =	0.25	[In]
Standoff Weld Size =	0.1875	[In]
# Standoff Welds =	2	
Length of Stiffener, Ls =		[In]
Width of Stiffener, Ws =		[In]
Width of Notch, Wn =		[In]
Stiffener Dim 1, ds1 =		[In]
Stiffener Dim 2, ds2 =		[In]
Stiffener Fy =		[KSI]
Stiffener Weld Size =		[In]
# Stiffener Welds =		



Typical Connection Detail

NOTES

Standoff and Stiffener welds are assumed 0.1875 in.

Capacity Checks:

Max Bolt Shear =	0.715	[Kips]
Bolt Shear Capacity =	13.81	[Kips]
Max Bolt Shear Usage =	5.2%	PASS
Max Bolt Tension =	2.79	[Kips]
Bolt Tension Capacity =	20.34	[Kips]
Max Bolt Tension Usage =	13.7%	PASS
Max Bolt Interaction =	14.6%	PASS
Max Plate Bending Moment =	5.17	[Kip-In]
Length of Yield Line =	4.71	[In]
Plate Moment Capacity =	38.14	[Kip-In]
Max Plate Usage =	12.1%	PASS
Max Weld Usage =	19.1%	PASS

	Standoff Arm Flange Connection Check		Date
			4/20/2022
Customer:	SBA	TIA Standard:	ANSI/TIA-222-G
Carrier:	T Mobile	Mount Elev. [ft]:	150
Site Name:	Town of Norfolk DPW site	Engineer Name:	Sandesh Khawas Bhujel
Site Number:	CT22102-SBA	Project #:	128078

Results Summary Table

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M1	I	1	0.2668	1.4987	1.9%	7.4%	7.6%	6.5%	9.4%
M1	I	2	0.1214	0.0000	0.9%	0.0%	0.9%	0.0%	5.7%
M1	I	3	0.7150	2.7939	5.2%	13.7%	14.6%	12.1%	19.1%
M1	I	4	0.5342	2.7162	3.9%	13.4%	13.9%	11.7%	14.1%
M1	I	5	0.4052	1.5922	2.9%	7.8%	8.1%	6.9%	10.4%
M1	I	6	0.3942	1.2682	2.9%	6.2%	6.8%	5.5%	8.4%
M1	I	7	0.4706	1.8135	3.4%	8.9%	9.2%	7.8%	12.1%
M1	I	8	0.4050	1.7880	2.9%	8.8%	9.1%	7.7%	6.9%
M1	I	9	0.1816	0.6220	1.3%	3.1%	3.3%	2.7%	3.9%
M1	I	10	0.1543	0.6529	1.1%	3.2%	3.3%	2.8%	4.3%
M1	I	11	0.1860	0.6564	1.3%	3.2%	3.5%	2.8%	4.3%
M102A	I	1	0.4802	1.2271	3.5%	6.0%	6.8%	5.3%	11.1%
M102A	I	2	0.2792	2.1483	2.0%	10.6%	10.8%	9.3%	10.6%
M102A	I	3	0.2668	0.0000	1.9%	0.0%	1.9%	0.0%	7.1%
M102A	I	4	0.4363	1.4896	3.2%	7.3%	8.0%	6.4%	7.7%
M102A	I	5	0.4448	1.5446	3.2%	7.6%	7.8%	6.7%	10.3%
M102A	I	6	0.4010	1.7018	2.9%	8.4%	8.7%	7.3%	8.5%
M102A	I	7	0.3904	1.2995	2.8%	6.4%	6.7%	5.6%	8.7%
M102A	I	8	0.4300	1.5679	3.1%	7.7%	8.3%	6.8%	10.1%
M102A	I	9	0.0570	0.8082	0.4%	4.0%	4.0%	3.5%	5.0%
M102A	I	10	0.1651	0.6404	1.2%	3.1%	3.2%	2.8%	4.3%
M102A	I	11	0.1860	0.6564	1.3%	3.2%	3.5%	2.8%	4.3%
M104	I	1	0.4985	1.2242	3.6%	6.0%	6.9%	5.3%	8.4%
M104	I	2	0.6707	2.3194	4.9%	11.4%	12.3%	10.0%	15.6%
M104	I	3	0.1811	1.6125	1.3%	7.9%	7.9%	7.0%	10.1%
M104	I	4	0.1989	0.1877	1.4%	0.9%	1.7%	0.8%	3.4%
M104	I	5	0.3982	1.5287	2.9%	7.5%	7.9%	6.6%	7.4%
M104	I	6	0.4619	1.7396	3.3%	8.6%	8.8%	7.5%	11.5%
M104	I	7	0.3953	1.5990	2.9%	7.9%	8.0%	6.9%	10.4%
M104	I	8	0.4085	1.3163	3.0%	6.5%	7.1%	5.7%	8.4%
M104	I	9	0.1936	0.6351	1.4%	3.1%	3.3%	2.7%	2.8%
M104	I	10	0.2650	0.8019	1.9%	3.9%	4.2%	3.5%	4.4%
M104	I	11	0.1860	0.6564	1.3%	3.2%	3.5%	2.8%	4.3%

Exhibit F

Power Density/RF Emissions Report

Radio Frequency Exposure Analysis Report

May 18, 2022

Centerline on behalf of T-Mobile
Centerline Communications Project Number: N/A

T-Mobile Site Name: CTNH394_SBA_Monopole_Norfolk
Site Number: CTNH394A

Site Address: 599 Greenswood Rd. East, Norfolk, CT 06058

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	36.16215 µW/cm^2
Cumulative General Population % MPE (Ground Level):	3.61626%

750 West Center Street | Suite 301 | West Bridgewater | MA | 02379

May 18, 2022

Centerline
Attn: Ryan Clark, Site Acquisition Consultant
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **CTNH394_SBA_Monopole_Norfolk**

Centerline Communications, LLC ("Centerline") was contracted to analyze the proposed T-Mobile facility at **599 Greenswood Rd. East, Norfolk, CT 06058** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu W/cm^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{MHz}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of 1 mW/cm^2 (1000 $\mu W/cm^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the 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.

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.

Calculation Methodology

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

Data & Results

The following table details the antennas and operating parameters for the T-Mobile antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

Maximum Calculated Cumulative Power Density (Location: approximately 525' northeast of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm²)	General Population MPE Limit (μW/cm²)	General Population % MPE
T-Mobile A 1	RFS APXVAARR24 43-U-NA20	700	13.17	150.00	2.00	40.00	1659.93	0.00005	466.67	0.00001
T-Mobile A 1	RFS APXVAARR24 43-U-NA20	600	13.09	150.00	4.00	60.00	4888.90	0.00011	400.00	0.00003
T-Mobile A 1	RFS APXVAARR24 43-U-NA20	600	13.09	150.00	2.00	40.00	1629.63	0.00004	400.00	0.00001
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	1900	15.29	150.00	1.00	40.00	1352.26	0.00003	1000.00	0.00000
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	2100	17.32	150.00	1.00	40.00	2158.04	0.00003	1000.00	0.00000
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	1900	15.29	150.00	2.00	140.00	9465.82	0.00018	1000.00	0.00002
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	2100	17.32	150.00	2.00	140.00	15106.30	0.00018	1000.00	0.00002
T-Mobile A 2	ERICSSON AIR6419*	2500	22.35	150.00	2.00	80.00	27486.53	17.42513	1000.00	1.74251
T-Mobile A 2	ERICSSON AIR6419*	2500	22.35	150.00	2.00	80.00	27486.53	17.42513	1000.00	1.74251
T-Mobile B 3	RFS APXVAARR24 43-U-NA20	700	13.17	150.00	2.00	40.00	1659.93	0.00000	466.67	0.00000
T-Mobile B 3	RFS APXVAARR24 43-U-NA20	600	13.09	150.00	4.00	60.00	4888.90	0.00000	400.00	0.00000
T-Mobile B 3	RFS APXVAARR24 43-U-NA20	600	13.09	150.00	2.00	40.00	1629.63	0.00000	400.00	0.00000
T-Mobile B 3	RFS APXVAARR24_43-U-NA20	1900	15.29	150.00	1.00	40.00	1352.26	0.00000	1000.00	0.00000
T-Mobile B 3	RFS APXVAARR24_43-U-NA20	2100	17.32	150.00	1.00	40.00	2158.04	0.00000	1000.00	0.00000
T-Mobile B 3	RFS APXVAARR24_43-U-NA20	1900	15.29	150.00	2.00	140.00	9465.82	0.00000	1000.00	0.00000
T-Mobile B 3	RFS APXVAARR24_43-U-NA20	2100	17.32	150.00	2.00	140.00	15106.30	0.00000	1000.00	0.00000
T-Mobile B 4	ERICSSON AIR6419*	2500	22.35	150.00	2.00	80.00	27486.53	0.38122	1000.00	0.03812
T-Mobile B 4	ERICSSON AIR6419*	2500	22.35	150.00	2.00	80.00	27486.53	0.38122	1000.00	0.03812
T-Mobile C 5	RFS APXVAARR24 43-U-NA20	700	13.17	150.00	2.00	40.00	1659.93	0.00000	466.67	0.00000
T-Mobile C 5	RFS APXVAARR24 43-U-NA20	600	13.09	150.00	4.00	60.00	4888.90	0.00000	400.00	0.00000
T-Mobile C 5	RFS APXVAARR24 43-U-NA20	600	13.09	150.00	2.00	40.00	1629.63	0.00000	400.00	0.00000
T-Mobile C 5	RFS APXVAARR24_43-U-NA20	1900	15.29	150.00	1.00	40.00	1352.26	0.00000	1000.00	0.00000
T-Mobile C 5	RFS APXVAARR24_43-U-NA20	2100	17.32	150.00	1.00	40.00	2158.04	0.00000	1000.00	0.00000
T-Mobile C 5	RFS APXVAARR24_43-U-NA20	1900	15.29	150.00	2.00	140.00	9465.82	0.00000	1000.00	0.00000
T-Mobile C 5	RFS APXVAARR24_43-U-NA20	2100	17.32	150.00	2.00	140.00	15106.30	0.00000	1000.00	0.00000
T-Mobile C 6	ERICSSON AIR6419*	2500	22.35	150.00	2.00	80.00	27486.53	0.27427	1000.00	0.02743
T-Mobile C 6	ERICSSON AIR6419*	2500	22.35	150.00	2.00	80.00	27486.53	0.27427	1000.00	0.02743
Verizon A 7	RFS APL868013	850	12.90	160.00	7.00	10.00	1364.89	0.00003	566.67	0.00000
Verizon A 8	AMPHENOL BXA-171085-12CF-EDIN-0	2100	15.90	160.00	4.00	40.00	6224.72	0.00005	1000.00	0.00001
Verizon A 8	AMPHENOL BXA-171085-12CF-EDIN-0	1900	15.50	160.00	4.00	40.00	5677.01	0.00006	1000.00	0.00001
Verizon A 9	ANTEL BXA-70063-6CF-EDIN-5	850	14.50	160.00	4.00	40.00	4509.41	0.00012	566.67	0.00002
Verizon A 10	RFS APL868013	850	12.90	160.00	7.00	10.00	1364.89	0.00003	566.67	0.00000
Verizon B 11	AMPHENOL LPA-80080-6CF-EDIN-0	850	14.00	160.00	7.00	10.00	1758.32	0.00000	566.67	0.00000
Verizon B 12	AMPHENOL BXA-171085-12CF-EDIN-0	2100	15.90	160.00	4.00	40.00	6224.72	0.00000	1000.00	0.00000
Verizon B 12	AMPHENOL BXA-171085-12CF-EDIN-0	1900	15.50	160.00	4.00	40.00	5677.01	0.00000	1000.00	0.00000

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu W/cm^2$)	General Population MPE Limit ($\mu W/cm^2$)	General Population % MPE
Verizon B 13	AMPHENOL BXA-70080-6CF-EDIN-0	850	13.50	160.00	4.00	40.00	3581.95	0.00000	566.67	0.00000
Verizon B 14	AMPHENOL LPA-80080-6CF-EDIN-0	850	14.00	160.00	7.00	10.00	1758.32	0.00000	566.67	0.00000
Verizon C 15	AMPHENOL LPA-80080-6CF-EDIN-0	850	14.00	160.00	7.00	10.00	1758.32	0.00000	566.67	0.00000
Verizon C 16	AMPHENOL BXA-171085-12CF-EDIN-0	2100	15.90	160.00	4.00	40.00	6224.72	0.00000	1000.00	0.00000
Verizon C 16	AMPHENOL BXA-171085-12CF-EDIN-0	1900	15.50	160.00	4.00	40.00	5677.01	0.00000	1000.00	0.00000
Verizon C 17	AMPHENOL BXA-70080-6CF-EDIN-0	850	13.50	160.00	4.00	40.00	3581.95	0.00000	566.67	0.00000
Verizon C 18	AMPHENOL LPA-80080-6CF-EDIN-0	850	14.00	160.00	7.00	10.00	1758.32	0.00000	566.67	0.00000
							Cumulative Power Density:	**36.16215 $\mu W/cm^2$**	**Cumulative % MPE:**	**3.61626%**

*Note: Patterns for the Ericsson AIR6419 were not available. The Ericsson AIR6449 was used as a substitute.

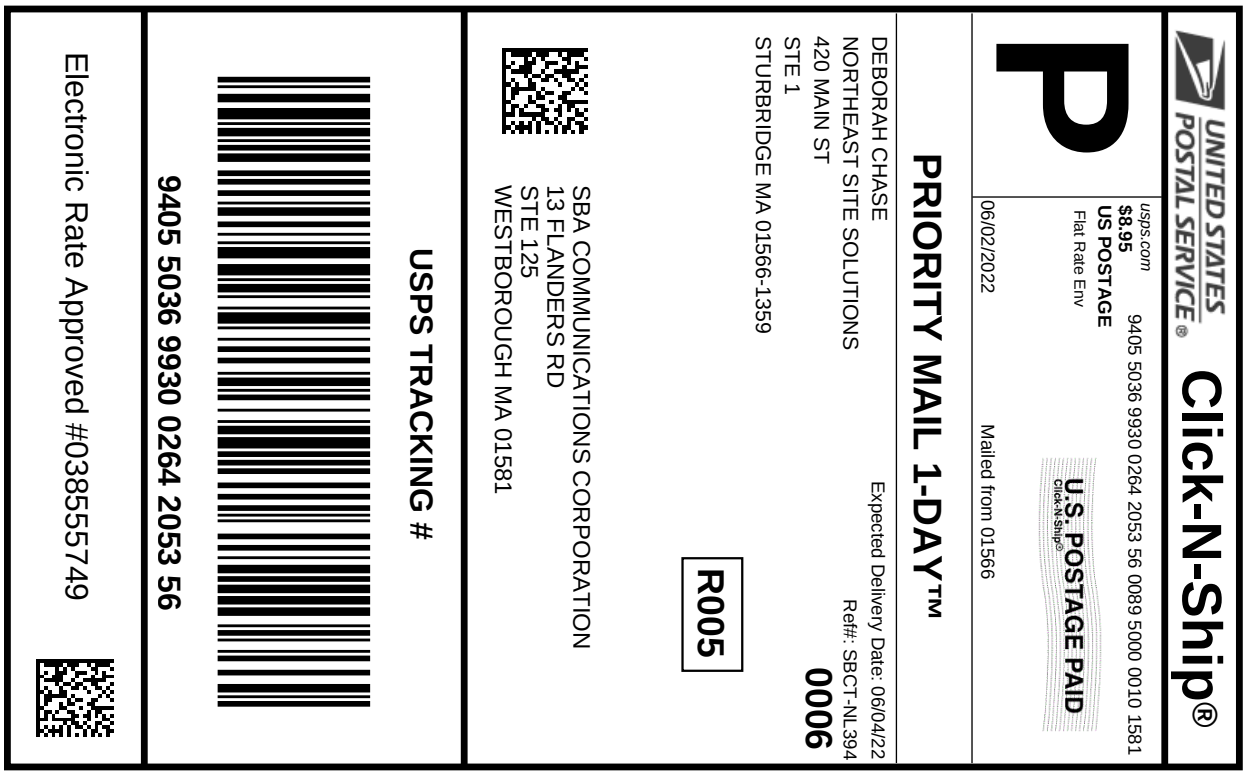
Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at ground that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **Compliant** with FCC rules and regulations.

Katrina Styx
RF EME Technical Writer
Centerline Communications, LLC

Exhibit G

Recipient Mailings



Cut on dotted line.

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2. **Place your label so it does not wrap around the edge of the package.**
3. **Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.**
4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0264 2053 56

Trans. #:	564813177
Print Date:	06/02/2022
Ship Date:	06/02/2022
Expected Delivery Date:	06/04/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: SBCT-NL394

To: SBA COMMUNICATIONS CORPORATION
13 FLANDERS RD
STE 125
WESTBOROUGH MA 01581

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

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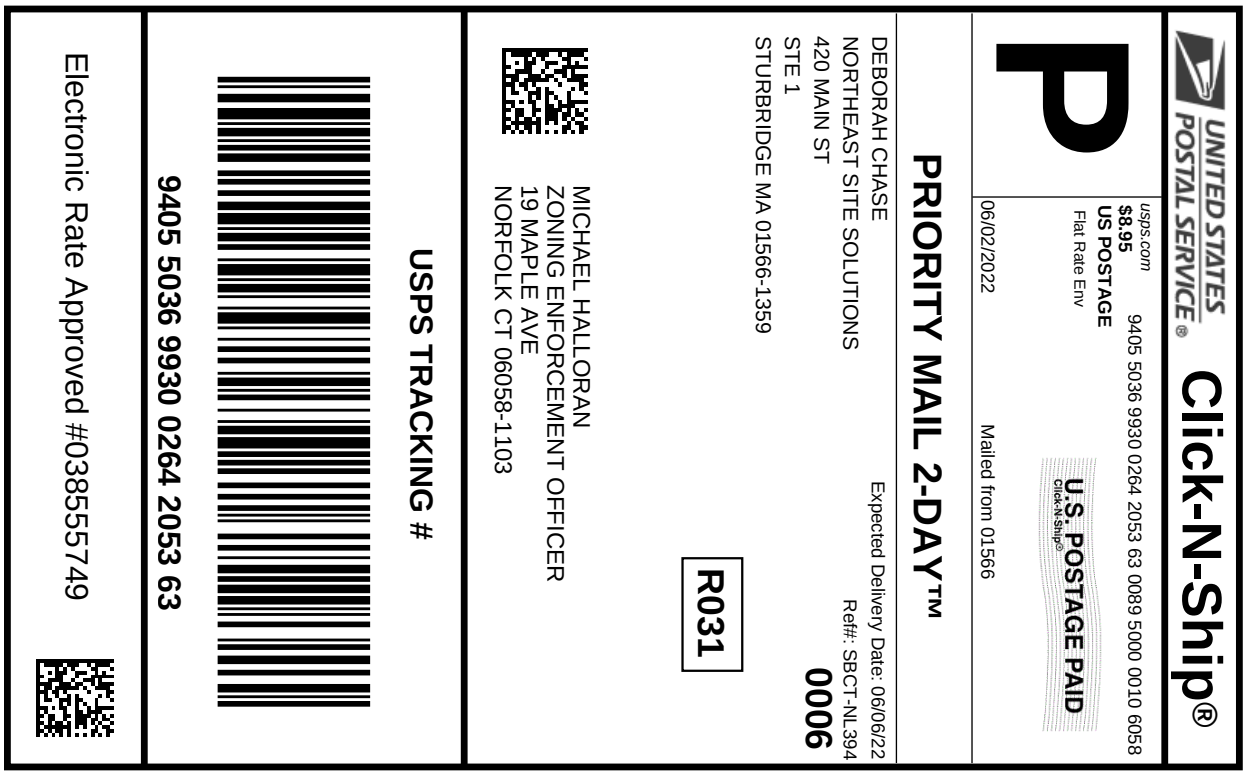
Check the status of your shipment on the USPS Tracking® page at usps.com



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2. **Place your label so it does not wrap around the edge of the package.**
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4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0264 2053 63

Trans. #:	564813177
Print Date:	06/02/2022
Ship Date:	06/02/2022
Expected Delivery Date:	06/06/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: SBCT-NL394

To: MICHAEL HALLORAN
ZONING ENFORCEMENT OFFICER
19 MAPLE AVE
NORFOLK CT 06058-1103

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

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9405 5036 9930 0264 2053 70 0089 5000 0010 6058

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$8.95
US POSTAGE
Flat Rate Env

06/02/2022 Mailed from 01566

U.S. POSTAGE PAID
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PRIORITY MAIL 2-DAY™

DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Expected Delivery Date: 06/06/22
Ref#: SBCT-NL394

0006

B006

MATTHEW T RIISKA
FIRST SELECTMAN
PO BOX 592
NORFOLK CT 06058-0592

USPS TRACKING #

9405 5036 9930 0264 2053 70

Electronic Rate Approved #038555749

Cut on dotted line.

Instructions

1. **Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.**
2. **Place your label so it does not wrap around the edge of the package.**
3. **Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.**
4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0264 2053 70

Trans. #:	564813177
Print Date:	06/02/2022
Ship Date:	06/02/2022
Expected Delivery Date:	06/06/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: SBCT-NL394

To: MATTHEW T RIISKA
FIRST SELECTMAN
PO BOX 592
NORFOLK CT 06058-0592

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

UNITED STATES POSTAL SERVICE®

Thank you for shipping with the United States Postal Service!
Check the status of your shipment on the USPS Tracking® page at usps.com

CTNH 394A

SBA TMO

UNITED STATES POSTAL SERVICE.

FARMINGTON
210 MAIN ST
FARMINGTON, CT 06032-9998
(300)275-8777

06/07/2022 08:50 AM

Product	Qty	Unit Price	Price
Prepaid Mail Norfolk, CT 06058 Weight: 0 lb 8.80 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 2053 70	1		$0.00
Prepaid Mail Norfolk, CT 06058 Weight: 0 lb 8.80 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 2053 63	1		$0.00
Prepaid Mail Westborough, MA 01581 Weight: 0 lb 2.00 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 2053 56	1		$0.00
Grand Total:			$0.00

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eligible to receive a third set
of 8 free test kits.
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or call 1-800-410-7420.