

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

August 12, 2021

Via Electronic Mail

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification
295 (a/k/a 297) North Street, Plymouth, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above-referenced property address (the “Property”). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower was approved by the Town of Plymouth in October 1999. Cellco’s shared use of the tower was approved by the Council in October 2003 (EM-VER-111-031001). A copy of the Town approval and Cellco’s 2003 approval are included in Attachment 1.

Cellco now intends to modify its facility by replacing all of its existing antennas with three (3) new Samsung MT6407-77A antennas and six (6) new MX06FRO660-03 antennas and installing six (6) remote radio heads (“RRHs”) on its existing antenna platform. A set of project plans showing Cellco’s proposed facility modifications and new antennas and RRHs specifications are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Plymouth’s Chief Elected Official and Land Use Officer.

Melanie A. Bachman, Esq.
August 12, 2021
Page 2

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. The replacement antennas and RRHs will be installed on Cellco's existing antenna platform.
2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative general power density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna platform, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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

Melanie A. Bachman, Esq.
August 12, 2021
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth C. Baldwin', with a stylized, cursive script.

Kenneth C. Baldwin

Enclosures

Copy to:

David V. Merchant, Mayor for the Town of Plymouth
Margus Laan, Plymouth Director of Planning and Economic Development
Francis A. Bart, et al/Raymond and Brenda Lagosz, Property Owner
Alex Tyurin

ATTACHMENT 1

RECEIVED FOR RECORD

PLANNING & ZONING PUBLIC HEARING
OCTOBER 14, 1999

10-21-99 At 10:06 pm
Gordon R. Rockwood Town Clerk

The Public Hearings were called to order at 7:15 p.m. by Chairman Steven Panasuk.

ATTENDANCE - Gaye Zukauskas, Bill Kuehn-Town Planner, Patrick Herzing, Pat Pierzanowski-Recording & Office Secretary and Steven Panasuk-Chairman. Absent were Vice Chairman Andrew Dolecki and Raymond Kovaleski. There was no staff in the audience.

Chairman Steve Panasuk went over the procedures to be followed for the public hearings.

1. North Street - Telecommunication Tower Special Permit - SBA Communications, Inc. - Tom Flynn represented SBA Communications, Inc. The public hearing was continued so the Commission could inspect the site, look at the materials given them at the last meeting and receive more information to complete the record. Mr. Flynn gave the Commission information regarding photograph and section locations to satisfy the regulations. It won't look much different from what is there because their tower will be quite close. They do make space available to town emergency services without any rent. It will be a mat gray - made of galvanized steel. **FOR** - no one. **AGAINST** - no one. **FOR NOR AGAINST** - No one. The radiation is less than 10% of the maximum standards allowed. The Commission was concerned about abandonment. If it is abandoned, with is to be dismantled within 6 months. Mr. Flynn stated that they have a long term lease with the landowner. They will abide by the regulations. Discussion was had. **MOTION:** Patrick Herzing made a motion to close the public hearing on North Street-Telecommunication Tower-Special Permit-SBA Communication, Inc. Gaye Zukauskas seconded. **VOTE:** P. Herzing - Aye, G. Zukauskas - Aye and Chairman Panasuk so voted. **MOTION:** Gaye Zukauskas made a motion to approve a special permit for SBA Communications, Inc.-North Street. All proper permits to be acquired and bond to be set by the Town Engineer. Letter of removal process upon abandonment to be submitted by SBA Communications, Inc. Patrick Herzing seconded. **VOTE:** P. Herzing - Aye, G. Zukauskas - Aye and Chairman Panasuk so voted.

2. Fall Mountain Lake - Excavation/Dredging Special Permit - Fall Mtn. Lake Property Owners Assoc., Inc. - Robert Geckler, President of the Fall Mountain Lake Property Owners Association, Inc. represented the applicants. Wolcott Sand & Gravel will not require payment until the project is completed. Mr. Geckler stated that no bond was required when the work was done at Lake Plymouth. Steve Panasuk suggested a \$5,000 bond to cover street clean up, etc. Work would probably begin next fall. They are working with DEP regarding the dam. **FOR** - No one. **AGAINST** - No one. **FOR NOR AGAINST** - No one. Discussion was had. **MOTION:** Patrick Herzing made a motion to close the public hearing. Gaye Zukauskas seconded. **VOTE:** P. Herzing - Aye, G. Zukauskas - Aye and Chairman Panasuk so voted. **MOTION:** Gaye Zukauskas made a motion to approve the special permit for Fall Mountain Lake - excavation/dredging - Fall Mountain Lake Property Owners Assoc., Inc. with a \$5000 bond for clean up. Patrick Herzing seconded. **VOTE:** P. Herzing - Aye, G. Zukauskas - Aye and Chairman Panasuk so voted.

3. Town Hill Road - Pines Subdivision - Rear Lot Special Permit - Resubdivision - CT Water Co. - Keith Nadeau, PE for CT Water Co. Mr. Nadeau went over what happened on this. Steve Panasuk read the letter from Anthony A. Lorenzetti dated 10/1/99 into the record. Steve Panasuk read the letter from Rob Rubbo of Torrington Area Health dated 10/4/99 into the record. The water has come through and all lots will have public water. **FOR** - No one. **AGAINST** - No one. **FOR NOR AGAINST** - No one. Discussion was had.

RECEIVED FOR RECORD

9-17-99 At 9:03 AM
Jason M. Hebel, Town Clerk

PLANNING & ZONING PUBLIC HEARING
SEPTEMBER 9, 1999

The Public Hearing was called to order at 7:03 p.m. by Chairman Steven Panasuk.

ATTENDANCE - Gaye Zukauskas, Andrew Dolecki, Bill Kuehn-Town Planner, Patrick Herzing (entered at 7:08), Pat Pierzanowski-Recording & Office Secretary and Steven Panasuk-Chairman. In the audience was Anthony A. Lorenzetti, PE, Director of Public Works.

Chairman Steve Panasuk went over the procedures to be followed for the public hearings.

①. **North Street – Telecommunication Tower Special Permit – SBA Communications, Inc.**
- Mr. Kuehn read the legal notice into the record for all 4 public hearings. Mr. Tom Flynn, Zoning Consultant with SBA represented the applicants. He gave the Commissioners each a package of materials pertaining to this application. He explained that this is a 195' tall monopole on North Street, which will be capable of handling up to 5 PCS type antennae. The site plan poses very little impact. They lease the land and build a tower. Sprint PCS and Nextel will be on this antenna. There will be a pole, a parking area and a fenced in area. It will be manned by someone periodically possibly 2 times a month. There will be electricity and telephone but no water, sewer or septic. There is another antenna on this piece of property. It is a wooded piece of property, fairly isolated and not visible from the surrounding area. The pole will be 213 feet from the house. The utilities will be underground. There will be no landscaping because it is in the woods. As any antennae are proposed, they will have to come to the Commission for approvals, etc. Mr. Flynn showed the Commission a sketch of the pole. It is taller and stockier than the existing pole, which cannot accommodate these carriers. The antenna will not be lit or striped because it is not required by the Siting Council. It is made of galvanized steel and once it hits the air will turn to a grayish brown. Mr. Flynn went over the frequency, power and area coverage. They comply with FCC Regulations regarding electro magnetic radiation and it will not interfere with TVs, radios or telephones. To summarize, it is not within 200 feet of a residence. It is not lit. It is made of galvanized steel and will be dull gray so doesn't need to be painted. There will be no signage or advertising. The pole is suitable to hold up to 5 carriers. It meets all the setbacks. All carriers will have to come to the Commission for special permit approvals. It will be fenced and secure. Complies with all non-interference as per FCC regulations. The utilities will be underground. Monopoles have no history of failings. If they did fail, they would twist and fold or knuckle into itself. **FOR** – no one. **AGAINST** – no one. **FOR NOR AGAINST** – Scott Magnano of Scott Road asked how high the existing pole is. It is 185'. Discussion was had. **MOTION:** Gaye Zukauskas made a motion to continue the public hearing for 297 North Street, SBA, Inc. to our next scheduled meeting to be determined. Patrick Herzing seconded. **VOTE:** A. Dolecki – Aye, G. Zukauskas – Aye, P. Herzing – Aye and Chairman Panasuk so voted.

2. 58 Lakeside Dr. – RA-2 Residence Expansion Special Permit – Casey – Chris Casey represented himself. They want to take off an addition and put on a new addition using the same footprint. They have already received a variance from ZBA to increase lot coverage. Asked that an A-2 survey be waived. Mr. Kuehn passed around a picture of the property. The addition will be going up. **FOR** – No one. **AGAINST** – No one. **FOR NOR AGAINST** – No one. Discussion was had. **MOTION:** Patrick Herzing made a motion to close the public hearing for 58 Lakeside Dr. Gaye Zukauskas seconded. **VOTE:** A. Dolecki – Aye, G. Zukauskas – Aye, P. Herzing – Aye and Chairman Panasuk so voted. **MOTION:** Gaye Zukauskas made a motion to grant the applicant a special permit for 58 Lakeside Drive. The applicants will get all the permits



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

Web Site: www.state.ct.us/csc/index.htm

October 15, 2003

Kenneth C. Baldwin
Robinson & Cole
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-111-031001** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 297 North Street, Plymouth, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on October 14, 2003, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the modifications recommended in the Structural Analysis Report prepared by Daniel Blakeman (dated September 9, 2003) be implemented as part of the antenna installation.

The proposed modifications are to be implemented as specified here and in your notice dated October 1, 2003. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

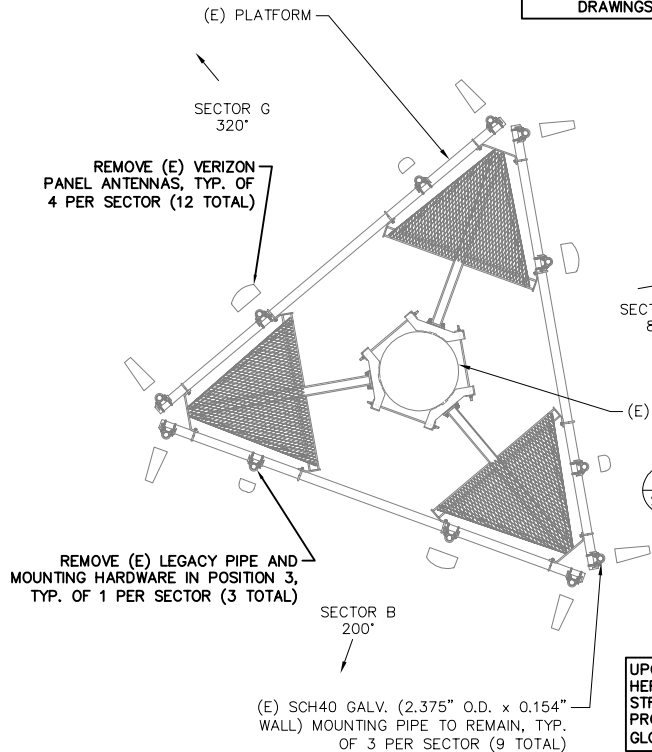
Pamela B. Katz, P.E.
Chairman

PBK/laf

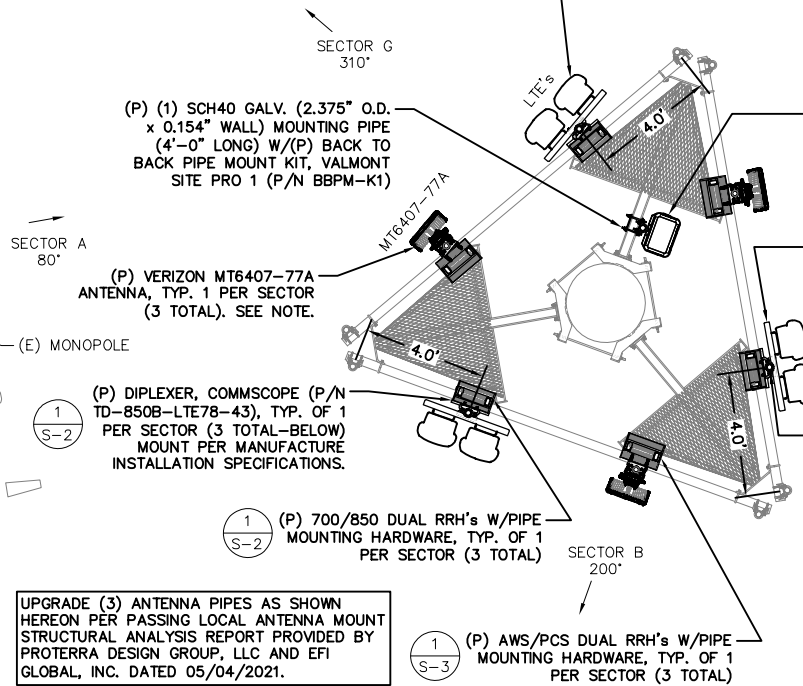
- c: Honorable David C. Mischke, Mayor, Town of Plymouth
William Kuehn, Town Planner, Town of Plymouth
Sheila R. Becker, Regional Director of Compliance, SBA, Inc.
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels
Thomas F. Flynn III, Nextel Communications
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae

ATTACHMENT 2

NOTE: AT TIME OF PUBLICATION, THE DESIGN OF THE VERIZON MT6407-77A ANTENNA WAS NOT FINALIZED. BASED UPON DIRECTIVE BY VERIZON WIRELESS, FOR DESIGN PURPOSES THE PROPOSED EQUIPMENT HAS BEEN CONSIDERED TO BE A MAXIMUM SIZE NOT TO EXCEED 35.1"±H x 16.1"±W x 5.6"±D AND WEIGH APPROXIMATELY 87.1±LBS. IF ANY OF THESE PARAMETERS ARE EXCEEDED BY THE EQUIPMENT THE ENGINEER(S) SHALL BE NOTIFIED TO REVISE THE DRAWINGS, STRUCTURAL ANALYSIS, AND MOUNT ANALYSIS.



(E) ANTENNA PLAN
SCALE: 1"=4'
1
S-1



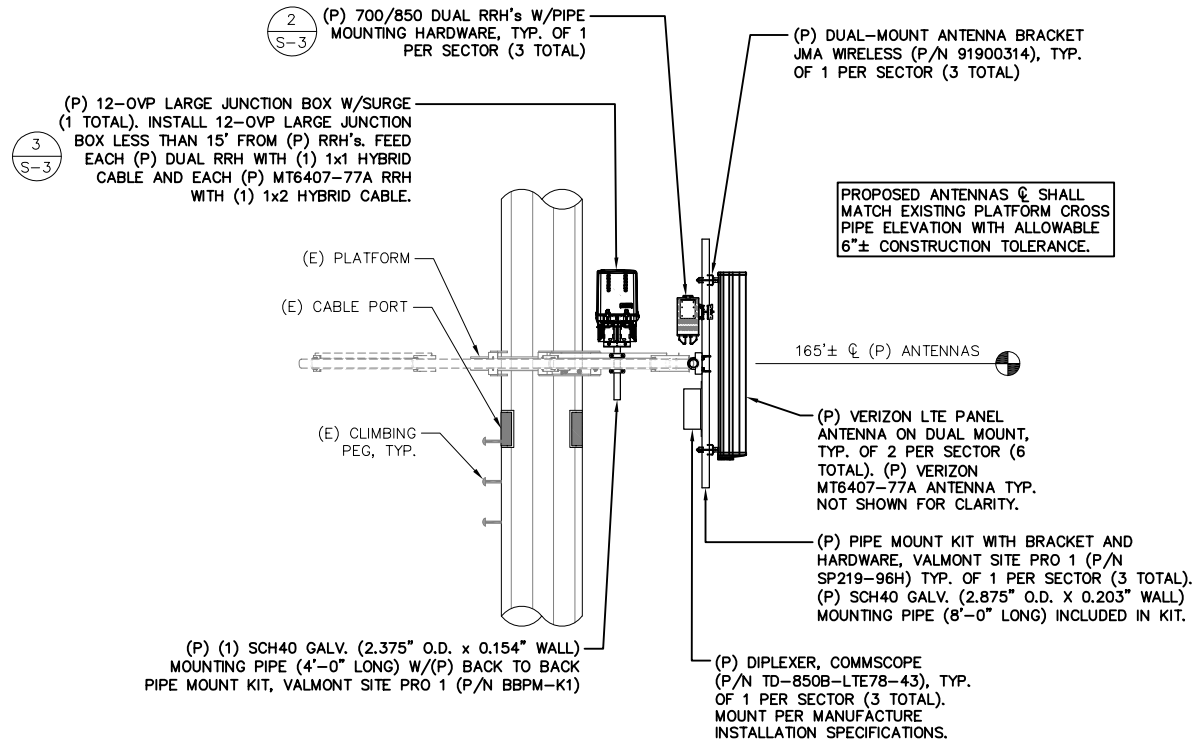
(P) ANTENNA PLAN
SCALE: 1"=4'
2
S-1

CONFIGURATION AS VIEWED FROM BEHIND ANTENNAS
BASED UPON RFDS REV5 DATED APRIL 26, 2021

(P) ANTENNA CONFIGURATION
SCALE: NONE
3
S-1

REVISIONS	
0	PER RFDS DATED APRIL 15, 2019
1	PER RFDS REV3 DATED MARCH 11, 2020
2	RAD
3	PER RFDS REV4 DATED DECEMBER 15, 2020
4	PER RFDS REV5 DATED APRIL 26, 2021

DESIGNED BY:	JWG/JMM	JOB #:	17-017
DRAWN BY:	TBD	REV. #:	4
DATE:	05/05/21	S-1	
SHEET:	2 OF 5		



(P) ANTENNA ELEVATION

SCALE: 1"=4'



NOTE: (E) PLATFORM MEASURED IN FIELD AT 162' $\pm$ AGL. SHOWN 165' HEREON BASED ON RECORD DOCUMENTS.



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

PLYMOUTH NW CT
2021 AWS ADD
LOCATION CODE 467291
SBA SITE I.D.#: CT01497
297 NORTH ADAMS STREET
PLYMOUTH, CT 06782

REVISIONS

0	PER RFDS DATED APRIL 15, 2019
1	PER RFDS REV3 DATED MARCH 11, 2020
2	RAD
3	PER RFDS REV4 DATED DECEMBER 15, 2020
4	PER RFDS REV5 DATED APRIL 26, 2021

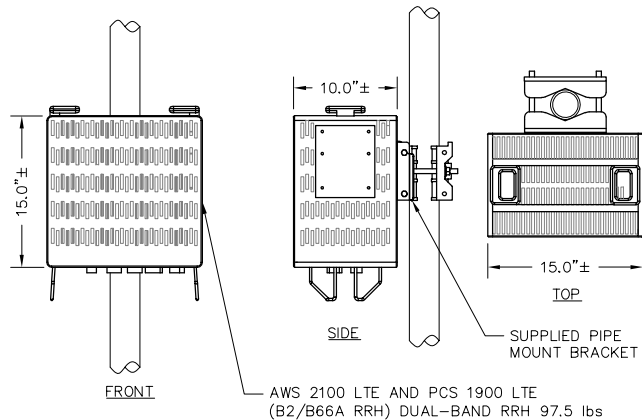
DESIGNED BY: JWG/JMM JOB #: 17-017

DRAWN BY: TBD REV. #: 4

DATE: 05/05/21

SHEET: 3 OF 5

S-2

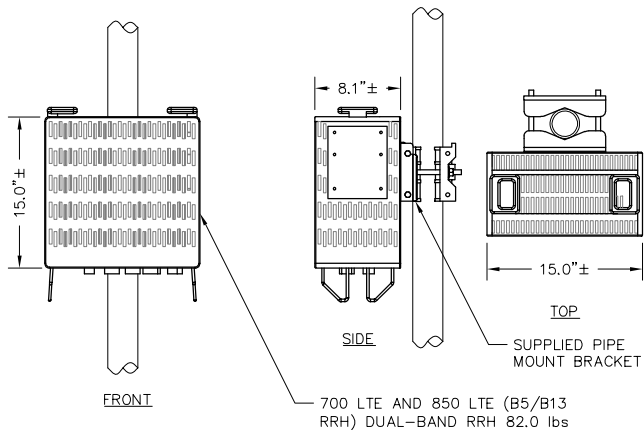


AWS 2100 LTE AND PCS 1900 LTE
(B2/B66A RRH) DUAL-BAND RRH 97.5 lbs

(P) AWS/PCS RRH MOUNTING DETAIL

SCALE: NONE

1
S-3

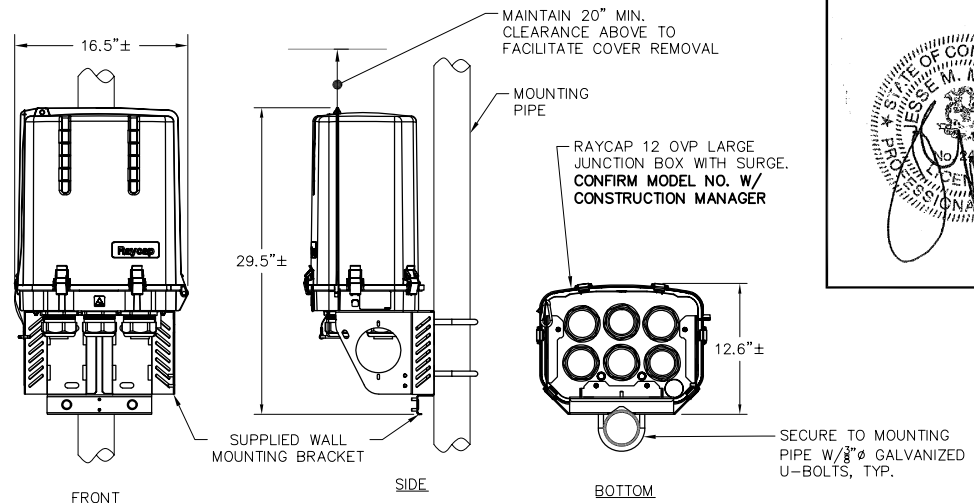


700 LTE AND 850 LTE (B5/B13
RRH) DUAL-BAND RRH 82.0 lbs

(P) 700/850 RRH MOUNTING DETAIL

SCALE: NONE

2
S-3



(P) LARGE JUNCTION BOX MOUNTING DETAIL

SCALE: NONE

3
S-3

INSTALLATION NOTES:

1. INSTALL ALL EQUIPMENT, MOUNTING BRACKETS, AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. GROUND DISTRIBUTION BOXES, MOUNTING PIPES, AND RRHs IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. INSTALL EQUIPMENT AND MOUNTING BRACKETS TO PRESERVE CLIMBING ACCESS ON TOWER.
4. EQUIPMENT TO BE INSTALLED AT VERIZON RAD. CENTER IN ACCORDANCE WITH GLOBAL TOWER STRUCTURAL ANALYSIS (BY OTHERS) AND MOUNT ANALYSIS.



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

PLYMOUTH NW CT
2021 AWS ADD
LOCATION CODE 467291
SBA SITE I.D.#: CT01497
297 NORTH ADAMS STREET
PLYMOUTH, CT 06782

REVISIONS

0	PER RFDS DATED APRIL 15, 2019
1	PER RFDS REV3 DATED MARCH 11, 2020
2	RAD
3	PER RFDS REV4 DATED DECEMBER 15, 2020
4	PER RFDS REV5 DATED APRIL 26, 2021

DESIGNED BY:	JWG/JMM	JOB #:	17-017
DRAWN BY:	TBD	REV. #:	4
DATE:	05/05/21	S-3	
SHEET:	4 OF 5		

POST MODIFICATION INSPECTION (PMI) REQUIREMENTS:

A POST MODIFICATION INSPECTION (PMI) REPORT IS REQUIRED FOR THE MOUNT MODIFICATIONS AT THIS SITE. CONTRACTOR TO PROVIDE THE FOLLOWING INFORMATION, DOCUMENTS & PHOTOS TO CONFIRM THE MODIFICATIONS HAVE BEEN COMPLETED PER THE MOUNT MODIFICATION DRAWINGS. ALL PHOTOS AND DOCUMENTS SHALL FOLLOW THE STANDARD VERIZON NAMING CONVENTIONS AND ORGANIZATION TREES.

PURPOSE – TO PROVIDE THE ENGINEER OF RECORD THE PROPER DOCUMENTATION IN ORDER TO COMPLETE THE REQUIRED MOUNT DESKTOP REVIEW OF THE POST MODIFICATION INSPECTION REPORT.

- CONTRACTOR IS RESPONSIBLE FOR MAKING CERTAIN THE PHOTOS PROVIDED AS NOTED BELOW PROVIDE CONFIRMATION THAT THE MODIFICATION WAS COMPLETED IN ACCORDANCE WITH THE MODIFICATION DRAWINGS.
- CONTRACTOR SHALL RELAY ANY DATA THAT CAN IMPACT THE PERFORMANCE OF THE MOUNT OR THE MOUNT MODIFICATION, THIS INCLUDES SAFETY ISSUES.

BASE REQUIREMENTS:

- PROVIDE "AS BUILT DRAWINGS" SHOWING CONTRACTOR'S NAME, PREPARER'S SIGNATURE, AND DATE. ANY DEVIATIONS FROM THE DRAWINGS (PROPOSED MODIFICATION) MUST BE SHOWN.
- NOTATION THAT ALL HARDWARE WAS PROPERLY INSTALLED, AND THE EXISTING HARDWARE WAS INSPECTED FOR ANY ISSUES.
- VERIFICATION THAT LOADING IS AS COMMUNICATED IN THE MODIFICATION DRAWINGS. NOTE: IF LOADING IS DIFFERENT THAN WHAT IS CONVEYED IN THE MODIFICATION DRAWING CONTACT THE ENGINEER OF RECORD IMMEDIATELY.
- EACH PHOTO SHOULD BE DATED AND TIME STAMPED.
- PHOTOS SHOULD BE HIGH RESOLUTION AND SUBMITTED IN A .ZIP FILE AND SHOULD BE ORGANIZED IN THE FILE STRUCTURE AS DEPICTED IN THE VERIZON NETWORK STANDARDS PROCESS NSD446.
- ANY SPECIAL PHOTOS OUTSIDE OF THE STANDARD REQUIREMENTS WILL BE INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL ENSURE THAT THE SAFETY CLIMB SYSTEM IS SUPPORTED AND NOT ADVERSELY IMPACTED BY THE INSTALL OF THE MODIFICATION COMPONENTS. THIS MAY INVOLVE THE INSTALLATION OF WIRE GUIDES, OR OTHER ITEMS TO PROTECT THE SAFETY CLIMB.
- THE PHOTOS IN THE FILE STRUCTURE SHOULD BE UPLOADED TO A SHAREFILE SUCH AS DROPBOX AND ACCESS SHARED WITH THE EOR VIA EMAIL.

MATERIAL CERTIFICATION:

- MATERIALS UTILIZED MUST BE AS PER SPECIFICATION ON THE DRAWINGS OR THE EQUIVALENT AS VALIDATED BY THE ENGINEER OF RECORD.
- SUBMISSION OF SPECIFICATIONS, INVOICES CERTIFYING, AND/OR ENGINEER OF RECORD APPROVAL OF AN "EQUIVALENT" MUST BE SUBMITTED TO THE NOTED EMAIL BOX BY THE PMI CONTRACTOR
- THE CONTRACTOR MUST CERTIFY THAT THE MATERIALS MEET THESE SPECIFICATIONS BY ONE OF THE METHODS BELOW AND SHALL BE SUBMITTED TO THE NOTED EMAIL BOX BY THE PMI CONTRACTOR:

☐ THE MATERIAL UTILIZED WAS AS SPECIFIED ON THE MOUNT MODIFICATION DRAWINGS.

☐ THE MATERIAL UTILIZED WAS AN "EQUIVALENT" AND INCLUDED AS PART OF THE PMI ARE THE CERTIFICATIONS FROM THE ENGINEER OF RECORD, INVOICES, AND/OR SPECIFICATIONS VALIDATING ACCEPTED STATUS.

CERTIFYING INDIVIDUAL: COMPANY _____
NAME _____
SIGNATURE _____

PHOTO REQUIREMENTS:

BASE AND "DURING INSTALLATION PHOTOS":

- BASE PICTURES INCLUDE
 - PHOTO OF GATE SIGNS SHOWING THE TOWER OWNER, SITE NAME, AND NUMBER
 - PHOTO OF CARRIER SHELTER SHOWING THE CARRIER SITE NAME AND NUMBER IF AVAILABLE
 - PHOTOS OF THE GALVANIZING COMPOUND AND/OR PAINT USED (IF APPLICABLE), CLEARLY SHOWING THE LABEL AND NAME
 - "DURING INSTALLATION PHOTOS IF PROVIDED – MUST BE PLACED ONLY IN THIS FOLDER

PHOTOS TAKEN AT GROUND LEVEL:

- OVERALL TOWER STRUCTURE BEFORE AND AFTER INSTALLATION OF THE MODIFICATIONS
- PHOTOS OF THE APPROPRIATE MOUNT BEFORE AND AFTER INSTALLATION OF THE MODIFICATIONS; IF THE MOUNTS ARE AT DIFFERENT RAD ELEVATIONS, PICTURES MUST BE PROVIDED FOR ALL ELEVATIONS THAT THE MODIFICATIONS WERE INSTALLED

PHOTOS TAKEN AT MOUNT ELEVATION

- PHOTOS SHOWING EACH INDIVIDUAL SECTOR BEFORE AND ALSO AFTER INSTALLATION OF MODIFICATIONS. EACH ENTIRE SECTOR MUST BE IN ONE PHOTO TO SHOW IN THE INTER-CONNECTION OF MEMBERS.
- CLOSE-UP PHOTOS OF EACH INSTALLED MODIFICATION PER THE MODIFICATION DRAWINGS; PICTURES SHOULD ALSO INCLUDE CONNECTION HARDWARE (U-BOLTS, BOLTS, NUTS, ALL-THREADED RODS, ETC.)
- PHOTOS SHOWING THE MEASUREMENTS OF THE INSTALLED MODIFICATION MEMBER SIZES (I.E. LENGTHS, WIDTHS, DEPTHS, DIAMETERS, THICKNESSES)
- PHOTOS SHOWING THE ELEVATION OR DISTANCES OF THE INSTALLED MODIFICATIONS FROM THE APPROPRIATE REFERENCE LOCATIONS SHOWN IN THE MODIFICATION DRAWINGS SUCH AS:
 - PHOTOS SHOWING THE DISTANCE BETWEEN RING MOUNTS FOR KICKER BRACING;
 - THE SPACING BETWEEN MOUNTING RAIL AND HANDRAIL;
 - LOCATION OF TIE-BACKS ON SECTOR FRAMES INCLUDING SPACING FROM THE KNUCKLE AT THE STANDOFF ARM;
 - SPACING BETWEEN SECTOR FRAMES AND ANY V-BRACING KIT LEG MOUNTS;
 - PHOTOS OF OTHER CRITICAL DIMENSIONS DEPICTED IN THE MODIFICATION DRAWINGS MAY BE REQUIRED.
- PHOTOS SHOWING THE INSTALLED MODIFICATIONS ONTO THE TOWER WITH TAPE DROP MEASUREMENTS (IF APPLICABLE) (I.E. RING/COLLAR MOUNTS, TIE-BACKS, V-BRACING KITS, ETC.); IF THE EXISTING MOUNT ELEVATION NEEDS TO BE CHANGED ACCORDING TO THE MODIFICATION DRAWINGS, A TAPE DROP MEASUREMENT SHALL BE PROVIDED BEFORE THE ELEVATION CHANGE
- PHOTOS SHOWING THE SAFETY CLIMB WIRE ROPE ABOVE AND BELOW THE MOUNT PRIOR TO MODIFICATION.
- PHOTOS SHOWING THE SAFETY CLIMB WIRE ROPE ABOVE AND BELOW THE MOUNT POST MODIFICATION.



ProTerra
DESIGN GROUP, LLC
4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

PLYMOUTH NW CT
2021 AWS ADD
LOCATION CODE 467291
SBA SITE I.D.#: CT01497
297 NORTH ADAMS STREET
PLYMOUTH, CT 06782

REVISIONS		DESIGNED BY:	JWG/JMM	JOB #:	17-017
0	PER RFDS DATED APRIL 15, 2019	DRAWN BY:	TBD	REV. #:	4
1	PER RFDS REV3 DATED MARCH 11, 2020	DATE:	05/05/21	GN-1	
2	RAD	SHEET:	5 OF 5		
3	PER RFDS REV4 DATED DECEMBER 15, 2020				
4	PER RFDS REV5 DATED APRIL 26, 2021				

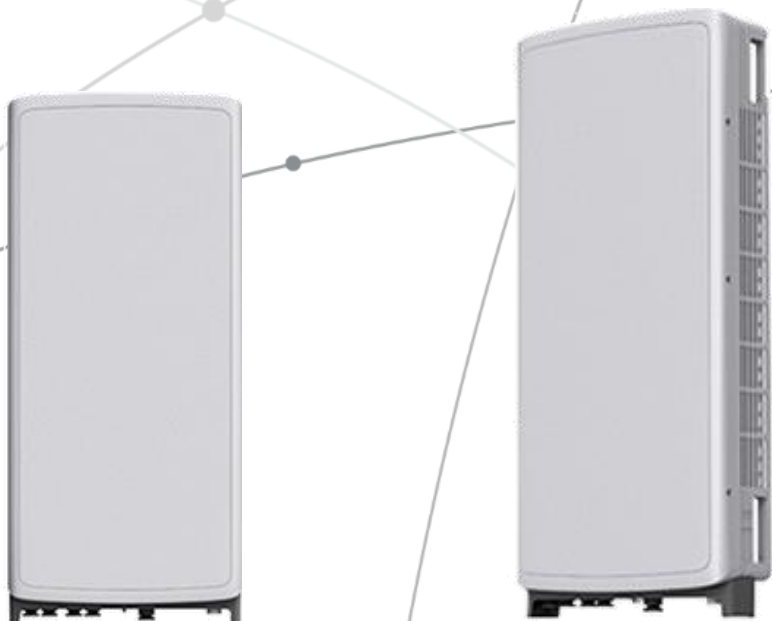
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A



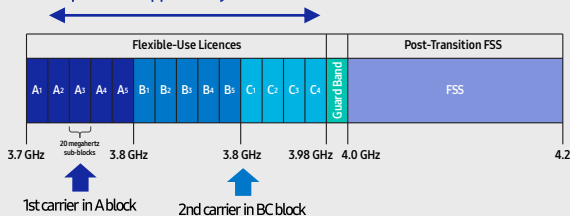
Points of Differentiation

Wide Bandwidth

With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks

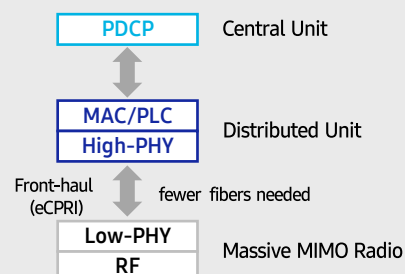
C-Band spectrum supported by Massive MIMO Radio



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.

It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

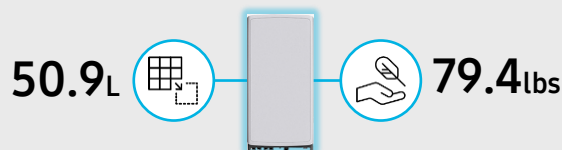
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



Well Matched Design

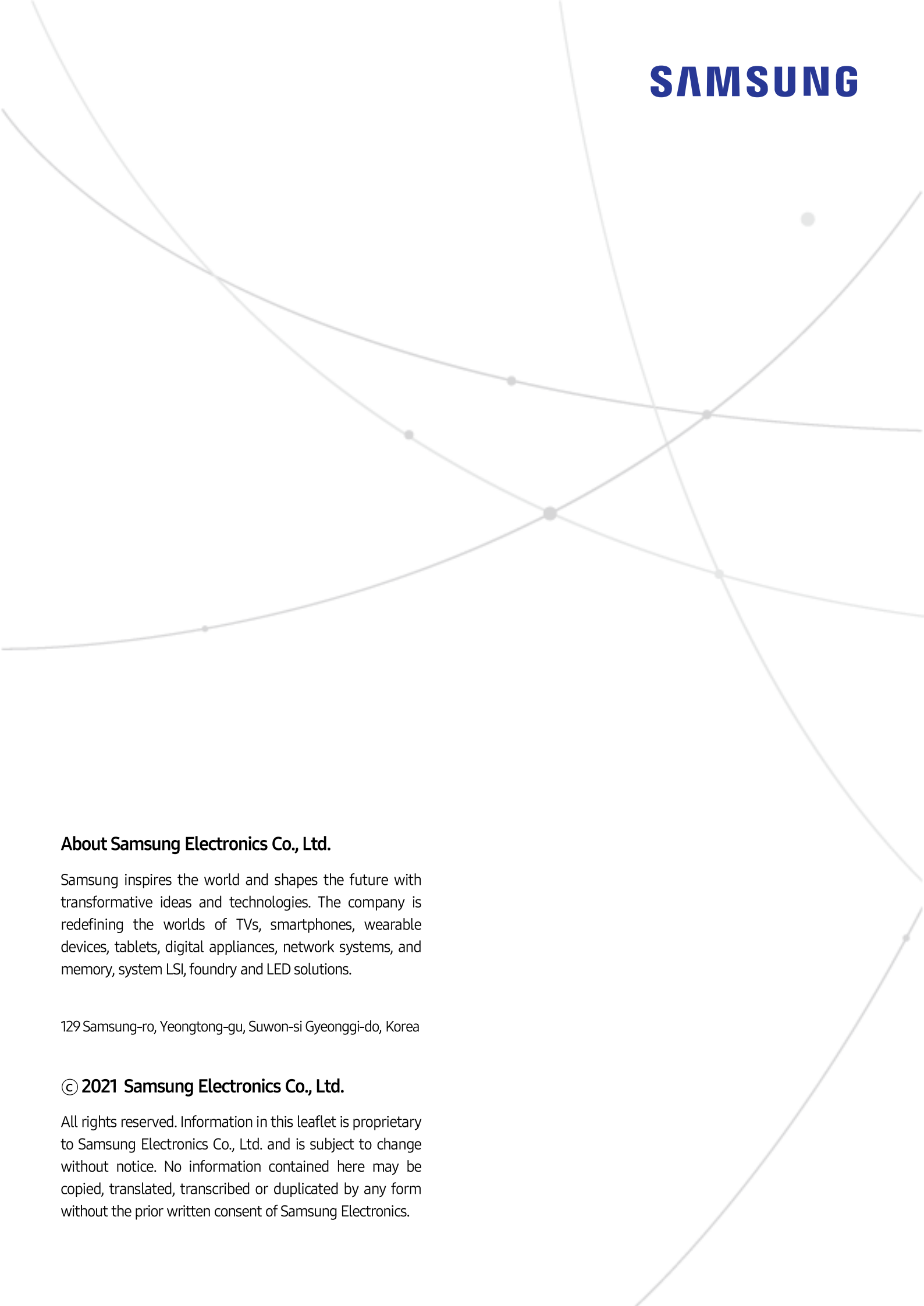
Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. Despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment.



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs



SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

© 2021 Samsung Electronics Co., Ltd.

All rights reserved. Information in this leaflet is proprietary to Samsung Electronics Co., Ltd. and is subject to change without notice. No information contained here may be copied, translated, transcribed or duplicated by any form without the prior written consent of Samsung Electronics.

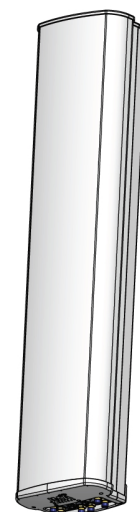
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs



NWAV™

Fast Roll-Off antennas increase data throughput without compromising coverage

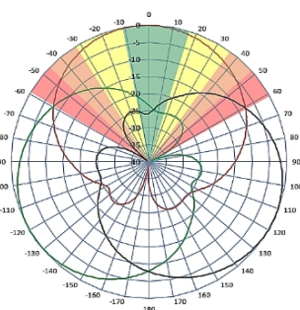
The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors.

Non-FRO antenna

Large traditional antenna pattern overlap creates harmful interference.

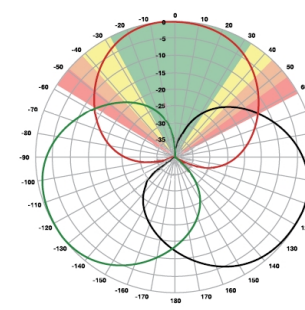
JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

JMA FRO antenna



LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

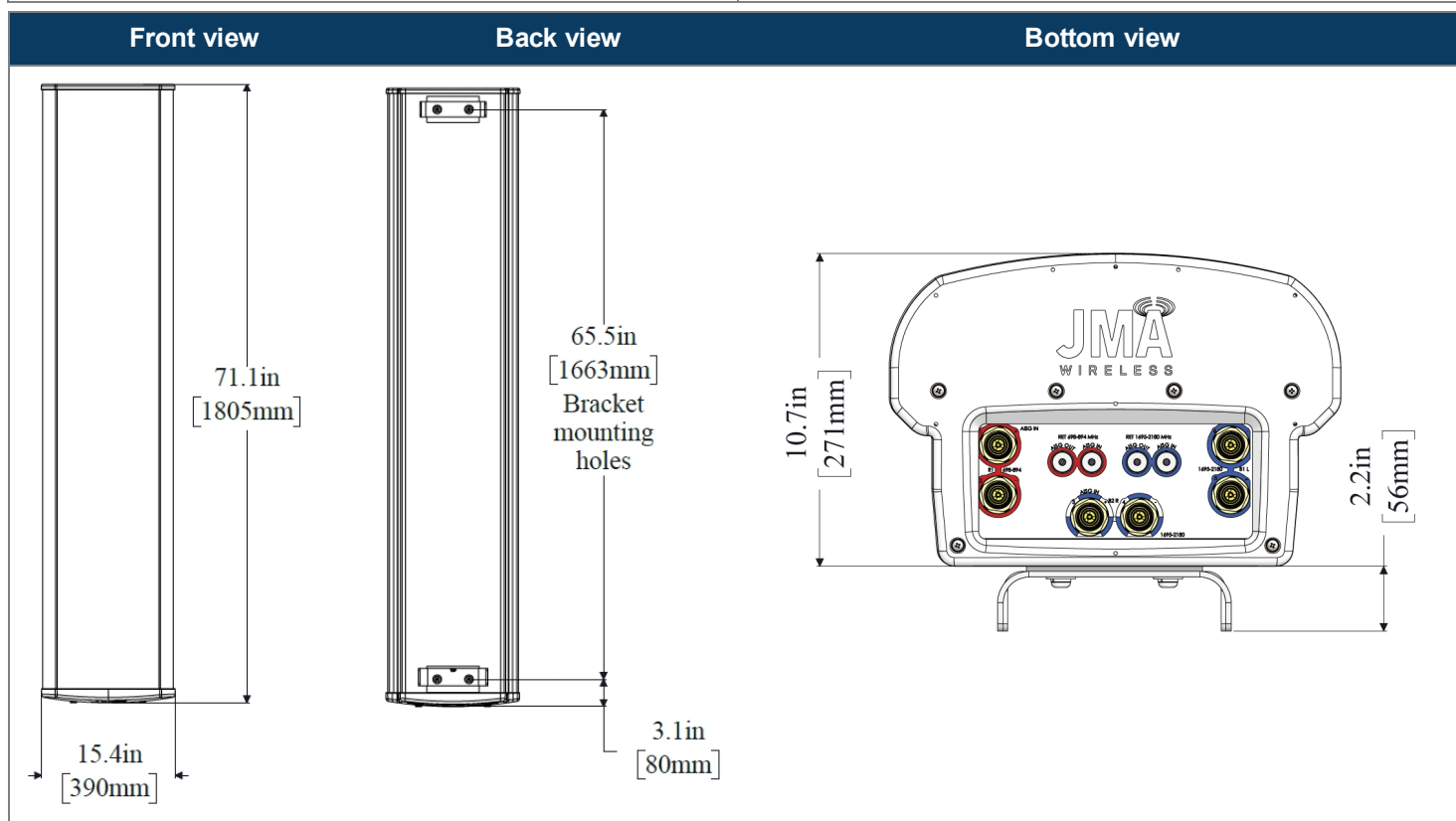
The LTE radio automatically selects the best throughput based on measured SINR.



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees ¹	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB ¹	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB ¹	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

¹ Typical value over frequency and tilt

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	71.3/ 15.4/ 10.7 (1811/ 392/ 273)
Shipping dimensions length/width/height, inches (mm)	82/ 20/ 15 (2083/ 508/ 381)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	60 (27.0)
Shipping weight, lb (kg)	90 (41.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.18)
Range of mechanical up/down tilt	-2° to 14°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral, and rear wind loading @ 150 km/h, lbf (N)	154 (685), 73 (325), 158 (703)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.6



Ordering information	
Antenna model	Description
MX06FRO660-03	6F X-Pol HEX FRO 60° independent tilt 700/850 RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

Remote electrical tilt (RET 1000) information

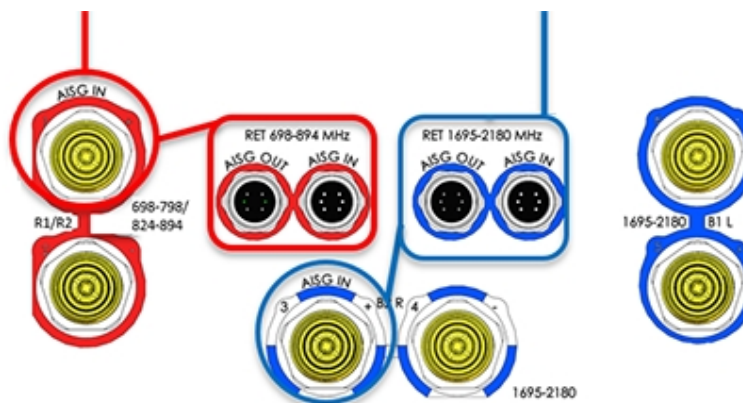
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	2
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
R1	698-798	1-2
R2	824-894	1-2

RET device	Band	RF port
B1/B2	1695-2180	3-6



Array topology

3 sets of radiating arrays

R1/R2: 698-894 MHz
B1: 1695-2180 MHz
B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



SAMSUNG

Dual-Band Radio Unit AWS/PCS (B66/B2)

RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD

Operating Frequencies:

B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)

B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)

Instantaneous Bandwidth:

70MHz(B66) + 60MHz(B2)

RF Chain: 4T4R/2T4R/2T2R

Output Power: Total 320W

DU-RU Interface: CPRI (10Gbps)

Dimensions: 380 x 380 x 255mm (36.8L)

Weight: 38.3kg

Input Power: -48V DC

Operating Temp.: -40 - 55°(w/o solar load)

Cooling: Natural convection

SAMSUNG

Dual-Band Radio Unit 700/850MHz (B13/B5) RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
 B13: DL(746-756MHz)/UL(777-787MHz)
 B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

ATTACHMENT 3

	General	Power	Density					
Site Name: Plymouth NW								
Tower Height: Verizon @ 165ft								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total
*VoiceStream	4	257	175	1930	0.0129	1.0000	0.13%	
*Sprint	2	13	196	1900	0.0003	1.0000	0.00%	
*Sprint	1	12	196	850	0.0001	0.5667	0.00%	
*Sprint	2	13	195.5	2500	0.0003	1.0000	0.00%	
VZW 700	4	623	165	0.0033	751	0.5007	0.66%	
VZW CDMA	2	258	165	0.0007	877.26	0.5848	0.12%	
VZW Cellular	4	623	165	0.0033	874	0.5827	0.57%	
VZW PCS	4	1396	165	0.0074	1975	1.0000	0.74%	
VZW AWS	4	1530	165	0.0081	2120	1.0000	0.81%	
VZW CBAND	4	6531	165	0.0345	3730.08	1.0000	3.45%	
								6.49%
* Source: Siting Council								

ATTACHMENT 4



Tower Engineering Solutions

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

Structural Analysis Report

Existing 195 ft Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01497-S

Customer Site Name: Plymouth 2 CT

Carrier Name: Verizon (App#: 128227-4)

Carrier Site ID / Name: 324688 / Plymouth NW CT

Site Location: 297 North Street

Plymouth, Connecticut

Litchfield County

Latitude: 41.693319

Longitude: -73.053711

Exp.10/31/2021

Analysis Result:

Max Structural Usage: 99.9% [Pass]

Max Foundation Usage: 28.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification:



07/15/2021

Report Prepared By : Tawfeeq Alajaj

Introduction

The purpose of this report is to summarize the analysis results on the 195 ft Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Fred A. Nudd Corporation, Project #7109, on November, 1999.
Foundation Drawing	Fred A. Nudd Corporation, Project #7109, on November 10, 1999.
Geotechnical Report	Jaworski Geotech, INC., Project #99338G, on November 8, 1999.
Modification Drawings	
Mount Analysis	TES Project No. 81154, Dated July 29, 2019. Verizon MA by ProTerra Design Group, LCC. Dated 05 04

Analysis Criteria

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

Wind Speed Used in the Analysis:	120.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	40 mph (3-Sec. Gust) with 1" radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	
Exposure Category:	
Risk Category:	
Topographic Category:	
Crest Height:	0 ft
Seismic Parameters:	

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			RFS APXVSP18-C-A20 - Panel	T-arm w/ working platform		Sprint
			RFS APXVTM14-C-I20 - Panel			
			ALU 1900MHz RRH			
			ALU 800 MHz RRH			
			ALU TD-RRH8x20-25			
			ALU 800MHz Filter			
				(3) T-Arms w/ Working Platforms + Support Rail Kit (MS-HR35-18) +T-Arm Kit (MS-TAW-350RO)	Coax (1) 1 5/8" Fiber	T-Mobile
			Ericsson KRY 112 144/1			
			Ericsson KRY 112 489/2			
			Allen Telecom FE15501P77/75			
			Ericsson Radio 4449 B71+B12			
			Antel BXA-70063-6CF_2 - Panel			
			Antel BXA-171085-8BF_2 - Panel	Low Profile Platform		Verizon
			Antel LPA-80080/6CF - Panel			
			Lucent 407577689 Gps	Stand Off	1/2" Coax	Sprint

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
		6	JMA Wireless - MX06FRO660-03 - Panel	Modified Low Profile Platform with SP219-96H and (1)	Hybrid	Verizon
			Samsung - MT6407-77A - Panel			
			Samsung B5/B13 RRHBR04C			
			Samsung B2/B66A RRHBR049			
			Raycap RVZDC-6627-PF-48			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:			
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Analysis Reactions		

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

Service Load Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.2336 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

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

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

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

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

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

Usage Diagram - Max Ratio 62.07% at 5.0ft

Structure: CT01497-S-SBA
Site Name: Plymouth 2 CT
Height: 195.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-H
Exposure: C
Gh: 1.1

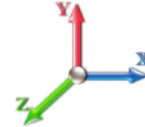
7/15/2021

Page: 1



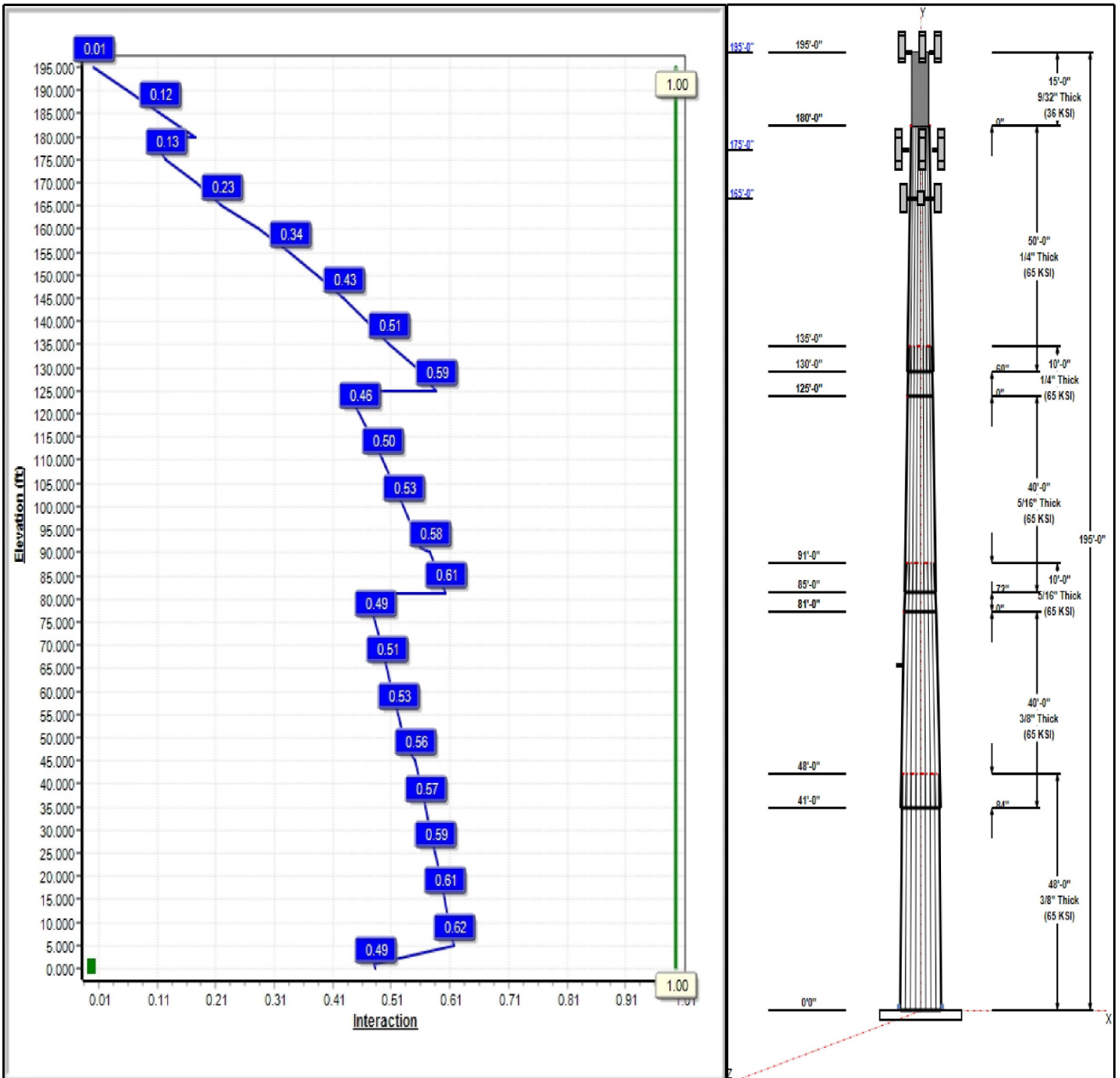
Dead Load Factor: 1.20
Wind Load Factor: 1.00

Load Case : 1.2D + 1.0W 120 mph Wind



Iterations: 26

Copyright © 2021 by Tower Engineering Solutions, LLC. All rights reserved.



Structure: CT01497-S-SBA

Type: Custom
Site Name: Plymouth 2 CT
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23542

7/15/2021

Page: 2



Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.20	64.50	0.375		0.23542	65
2	40.00	46.18	55.60	0.375	Slip	0.23542	65
3	10.00	43.83	46.18	0.313	Butt	0.23542	65
4	40.00	36.45	45.86	0.313	Slip	0.23542	65
5	10.00	34.09	36.45	0.250	Butt	0.23542	65
6	50.00	24.00	35.77	0.250	Slip	0.23542	65
7	15.00	24.00	24.00	0.281	Butt	0.00000	36

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
195.00	196.00	3	APXVSP18-C-A20	Sprint
195.00	196.00	3	APXVTM14-C-I20	Sprint
195.00	196.00	3	1900MHz RRH (65MHz)	Sprint
195.00	196.00	3	800 MHz RRH	Sprint
195.00	196.00	3	TD-RRH8x20-25	Sprint
195.00	196.00	3	ALU 800MHz External	Sprint
195.00	196.00	4	ACU-A20-N	Sprint
195.00	195.00	3	T-Arms w/ Working	Sprint
175.00	175.00	3	T-Arms w/ Working	T-Mobile
175.00	175.00	3	RR90-17-02DP	T-Mobile
175.00	175.00	3	APXVAARR24_43-U-NA20	T-Mobile
175.00	175.00	3	KRY 112 144/1	T-Mobile
175.00	175.00	3	KRY 112 489/2	T-Mobile
175.00	175.00	3	4449 B71 + B85	T-Mobile
175.00	175.00	6	FE15501P77/75	T-Mobile
175.00	175.00	1	(3) T-Arm Kit	T-Mobile
165.00	165.00	1	Low Profile	Verizon
165.00	165.00	6	MX06FRO660-03	Verizon
165.00	165.00	3	MT6407-77A	Verizon
165.00	165.00	3	Samsung B5/B13	Verizon
165.00	165.00	3	Samsung B2/B66A	Verizon
165.00	165.00	1	Raycap	Verizon
165.00	165.00	1	91900314	Verizon
70.00	70.00	1	407577689 Gps	Sprint
70.00	70.00	1	Side Arm (L. Heavy)	Sprint

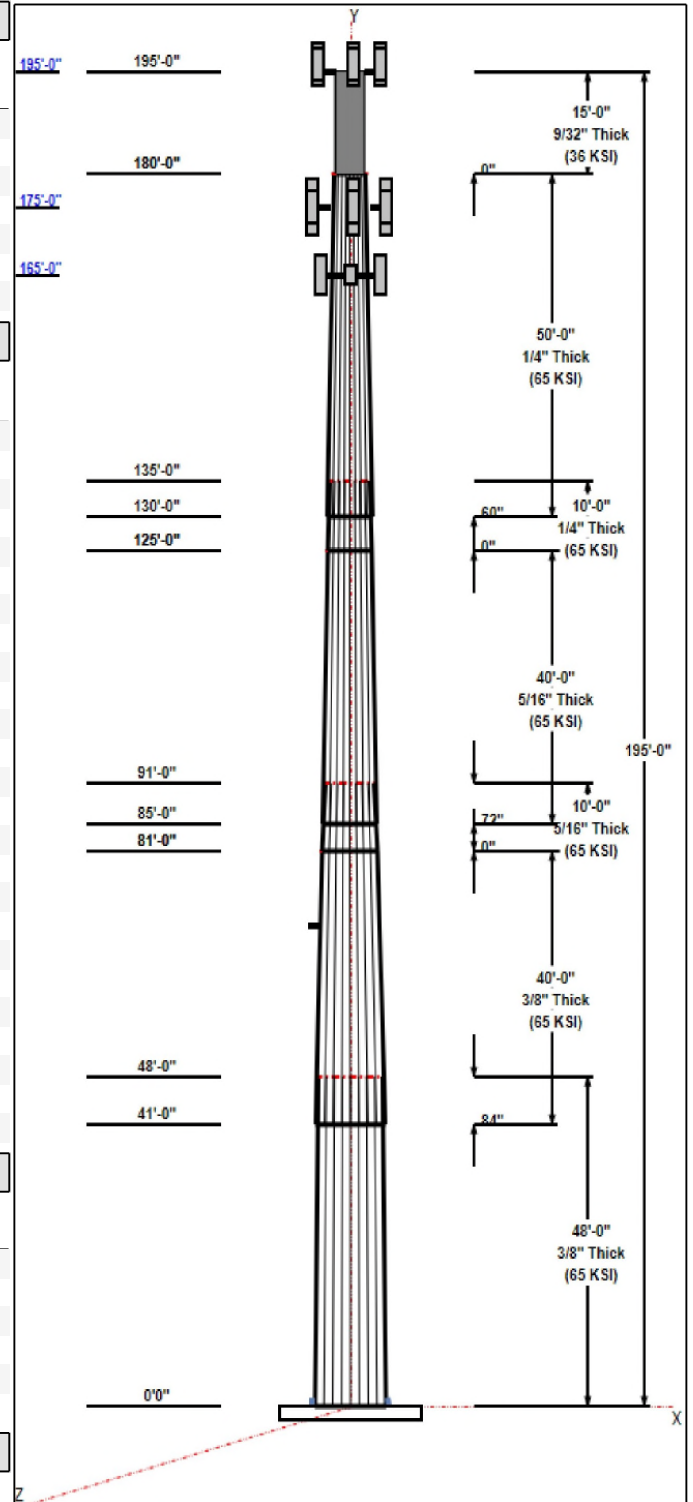
Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	195.00	Inside	1 1/4" Coax	Sprint
0.00	175.00	Inside	1 5/8" Coax	T-Mobile
0.00	175.00	Inside	1 5/8" Fiber	T-Mobile
0.00	165.00	Inside	1 5/8" Coax	Verizon
0.00	165.00	Inside	1 5/8" Hybrid	Verizon
0.00	70.00	Inside	1/2" Coax	Sprint

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.00" A687	90.0	Radial

Base Plate



Structure: CT01497-S-SBA

Type: Custom
Site Name: Plymouth 2 CT
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

7/15/2021

Page: 3



Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	54.5	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 120 mph Wind	3771.0	29.3	53.7
0.9D + 1.0W 120 mph Wind	3723.8	29.3	40.3
1.2D + 1.0Di + 1.0Wi 40 mph Wind	673.5	5.2	70.6
1.2D + 1.0Ev + 1.0Eh	121.0	0.7	55.5
0.9D + 1.0Ev + 1.0Eh	119.7	0.7	42.0
1.0D + 1.0W 60 mph Wind	837.4	6.6	44.7

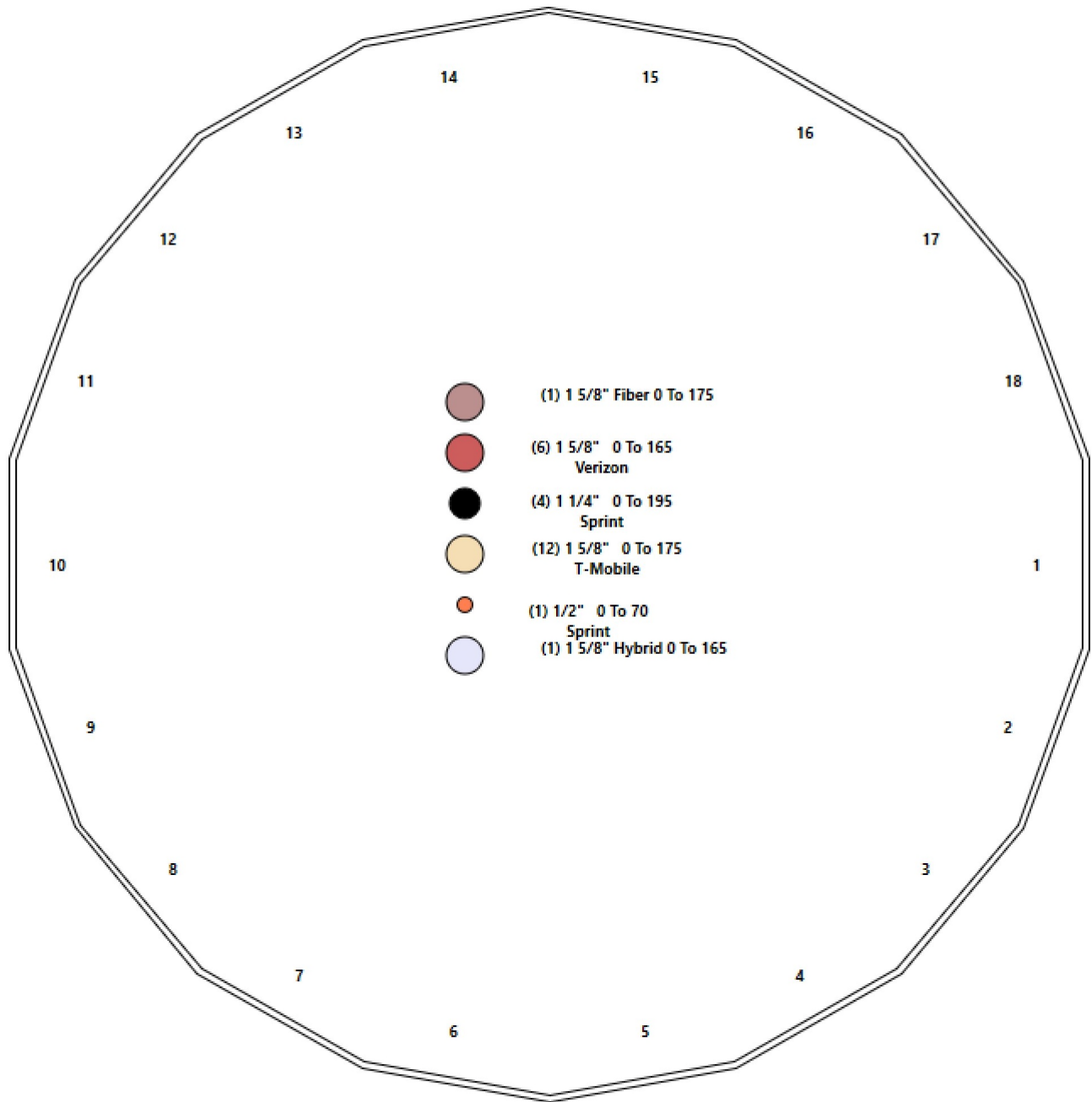
Structure: CT01497-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Plymouth 2 CT
Height: 195.00 (ft)

7/15/2021



Page: 4



Shaft Properties

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.3750	65		0.00	11,368
2	18	40.000	0.3750	65	Slip	84.00	8,183
3	18	10.000	0.3125	65	Flange	0.00	1,508
4	18	40.000	0.3125	65	Slip	72.00	5,514
5	18	10.000	0.2500	65	Flange	0.00	946
6	18	50.000	0.2500	65	Slip	60.00	4,001
7	R	15.000	0.2810	36	Flange	0.00	1,069
Total Shaft Weight:							32,588

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	64.50	0.00	76.32	39651.33	28.92	172.00	53.20	48.00	62.87	22166.3	23.60	141.8	0.235417
2	55.60	41.00	65.73	25324.08	24.73	148.26	46.18	81.00	54.52	14452.7	20.30	123.1	0.235417
3	46.18	81.00	45.49	12093.31	24.65	147.78	43.83	91.00	43.16	10325.2	23.32	140.2	0.235417
4	45.86	85.00	45.18	11844.57	24.47	146.77	36.45	125.00	35.84	5912.81	19.15	116.6	0.235417
5	36.45	125.0	28.72	4754.83	24.30	145.79	34.09	135.00	26.85	3886.15	22.64	136.3	0.235417
6	35.77	130.0	28.18	4492.97	23.82	143.08	24.00	180.00	18.84	1343.00	15.52	96.00	0.235417
7	24.00	180.0	20.94	1473.63	0.00	85.41	24.00	195.00	20.94	1473.63	0.00	85.41	0.000000

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors		Termination Connectors			
							Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
0.00	1.00	6	SOL 1 3/4" William R71	128	150	5.62	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt	3.00		

Load Summary

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 6

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	195.00	APXVSP18-C-A20	3	57.00	8.02	0.83	175.30	9.932	0.85	0.00	1.00
2	195.00	APXVTM14-C-I20	3	56.20	6.34	0.77	159.07	7.086	0.79	0.00	1.00
3	195.00	1900MHz RRH (65MHz)	3	60.00	2.77	0.50	117.10	3.638	0.67	0.00	1.00
4	195.00	800 MHz RRH	3	53.00	2.49	0.50	103.62	3.273	0.67	0.00	1.00
5	195.00	TD-RRH8x20-25	3	70.00	4.05	0.50	140.71	4.592	0.67	0.00	1.00
6	195.00	ALU 800MHz External Notch Filt	3	8.80	0.78	0.50	20.87	1.223	0.71	0.00	1.00
7	195.00	ACU-A20-N	4	1.00	0.14	0.50	3.94	0.343	0.50	0.00	1.00
8	195.00	T-Arms w/ Working Platforms	3	500.00	17.75	0.75	977.76	30.470	0.75	0.00	0.00
9	175.00	T-Arms w/ Working Platforms	3	500.00	17.75	0.75	972.62	30.334	0.75	0.00	0.00
10	175.00	RR90-17-02DP	3	13.50	4.36	0.68	74.05	5.005	0.68	0.00	0.00
11	175.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	399.42	21.511	0.70	0.00	0.00
12	175.00	KRY 112 144/1	3	11.00	0.41	0.50	18.30	0.732	0.50	0.00	0.00
13	175.00	KRY 112 489/2	3	15.40	0.65	0.50	27.33	1.064	0.50	0.00	0.00
14	175.00	4449 B71 + B85	3	73.20	1.97	0.50	112.29	2.356	0.50	0.00	0.00
15	175.00	FE15501P77/75	6	14.30	0.71	0.50	26.19	1.165	0.50	0.00	0.00
16	175.00	(3) T-Arm Kit	1	500.00	16.00	0.75	901.73	26.587	0.75	0.00	0.00
17	165.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2380.96	33.887	1.00	0.00	0.00
18	165.00	MX06FRO660-03	6	71.00	9.87	0.88	243.06	10.779	0.88	0.00	0.00
19	165.00	MT6407-77A	3	79.40	4.69	0.70	154.42	5.321	0.70	0.00	0.00
20	165.00	Samsung B5/B13 RRHBR04C	3	70.30	1.88	0.50	103.03	2.251	0.50	0.00	0.00
21	165.00	Samsung B2/B66A RRHBR049	3	84.40	1.88	0.50	118.90	2.251	0.50	0.00	0.00
22	165.00	Raycap RVZDC-6627-PF-48	1	32.00	3.79	0.50	111.76	4.317	0.50	0.00	0.00
23	165.00	91900314	1	25.35	0.00	1.00	37.26	0.000	1.00	0.00	0.00
24	70.00	407577689 Gps	1	4.00	0.91	0.50	19.58	1.531	0.50	0.00	0.00
25	70.00	Side Arm (L. Heavy)	1	120.00	3.50	1.00	184.69	6.021	1.00	0.00	0.00
Totals:			70	8,037.75			16,291.70				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	195.00	(4) 1 1/4" Coax	0.00	Inside
0.00	175.00	(12) 1 5/8" Coax	0.00	Inside
0.00	175.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	165.00	(6) 1 5/8" Coax	0.00	Inside
0.00	165.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	70.00	(1) 1/2" Coax	0.00	Inside

Shaft Section Properties

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 7

Increment Length: 5 (ft)

											Additional Reinforcing			
Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00	RB1	0.3750	64.500	76.322	39651.3	28.92	172.00	65	67	0.0	15.60	11711.9	11711.9	
1.00	RT1	0.3750	64.265	76.042	39216.2	28.81	171.37	65	68	259.2	15.60	11640.9	11640.9	54.4
5.00		0.3750	63.323	74.921	37507.6	28.36	168.86	65	68	1027.4				
10.00		0.3750	62.146	73.520	35442.6	27.81	165.72	65	69	1262.8				
15.00		0.3750	60.969	72.119	33454.9	27.26	162.58	65	69	1238.9				
20.00		0.3750	59.792	70.718	31542.8	26.70	159.44	65	70	1215.1				
25.00		0.3750	58.615	69.317	29705.1	26.15	156.31	65	71	1191.3				
30.00		0.3750	57.437	67.916	27940.1	25.60	153.17	65	71	1167.4				
35.00		0.3750	56.260	66.515	26246.5	25.04	150.03	65	72	1143.6				
40.00		0.3750	55.083	65.114	24622.7	24.49	146.89	65	73	1119.8				
41.00	Bot - Section 2	0.3750	54.848	64.834	24306.2	24.38	146.26	65	73	221.1				
45.00		0.3750	53.906	63.713	23067.4	23.94	143.75	65	73	1761.8				
48.00	Top - Section 1	0.3750	53.950	63.765	23124.0	23.96	143.87	65	73	1301.3				
50.00		0.3750	53.479	63.205	22519.6	23.74	142.61	65	73	432.1				
55.00		0.3750	52.302	61.804	21055.1	23.18	139.47	65	74	1063.4				
60.00		0.3750	51.125	60.403	19655.5	22.63	136.33	65	75	1039.6				
65.00		0.3750	49.948	59.002	18319.3	22.08	133.19	65	75	1015.8				
70.00		0.3750	48.771	57.601	17045.1	21.52	130.06	65	76	991.9				
75.00		0.3750	47.594	56.200	15831.4	20.97	126.92	65	77	968.1				
80.00		0.3750	46.417	54.799	14676.7	20.41	123.78	65	77	944.3				
81.00	Top - Section 2	0.3750	46.181	54.519	14452.7	20.30	123.15	65	78	186.0				
81.00	Bot - Section 3	0.3125	46.181	45.494	12093.3	24.36	147.78	65	72					
85.00	Bot - Section 4	0.3125	45.240	44.560	11363.7	24.12	144.77	65	73	612.9				
90.00		0.3125	44.062	43.393	10493.7	23.45	141.00	65	74	1507.0				
91.00	Top - Section 3	0.3125	44.452	43.779	10776.5	23.67	142.25	65	74	296.6				
95.00		0.3125	43.510	42.845	10101.4	23.14	139.23	65	74	589.5				
100.00		0.3125	42.333	41.678	9298.0	22.48	135.47	65	75	719.0				
105.00		0.3125	41.156	40.510	8538.3	21.81	131.70	65	76	699.2				
110.00		0.3125	39.979	39.343	7821.2	21.15	127.93	65	77	679.3				
115.00		0.3125	38.802	38.175	7145.4	20.48	124.17	65	77	659.4				
120.00		0.3125	37.625	37.008	6509.6	19.82	120.40	65	78	639.6				
125.00	Top - Section 4	0.3125	36.448	35.841	5912.8	19.15	116.63	65	79	619.7				
125.00	Bot - Section 5	0.2500	36.448	28.722	4754.8	23.94	145.79	65	73					
130.00	Bot - Section 6	0.2500	35.271	27.788	4305.9	23.47	141.08	65	74	480.7				
135.00	Top - Section 5	0.2500	34.594	27.251	4060.9	22.99	138.37	65	74	936.4				
140.00		0.2500	33.417	26.317	3657.5	22.16	133.67	65	75	455.7				
145.00		0.2500	32.240	25.383	3281.8	21.33	128.96	65	76	439.8				
150.00		0.2500	31.062	24.449	2932.7	20.50	124.25	65	77	423.9				
155.00		0.2500	29.885	23.515	2609.3	19.67	119.54	65	78	408.0				
160.00		0.2500	28.708	22.581	2310.5	18.84	114.83	65	79	392.1				
165.00		0.2500	27.531	21.647	2035.5	18.01	110.12	65	80	376.2				
170.00		0.2500	26.354	20.713	1783.3	17.18	105.42	65	81	360.4				
175.00		0.2500	25.177	19.779	1552.7	16.35	100.71	65	82	344.5				
180.00	Top - Section 6	0.2500	24.000	18.845	1343.0	15.52	96.00	65	83	328.6				
180.00	Bot - Section 7	0.2810	24.000	20.939	1473.6	13.80	85.41	36	36					
185.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	356.3				
190.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	356.3				
195.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	356.3				
Total Weight										32588.3				

54.4

Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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

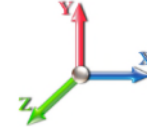


Load Case: 1.2D + 1.0W 120 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



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	RB1	1.00	0.85	23.888	26.28	540.93	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.85	23.888	26.28	538.95	0.730	0.000	1.00	5.448	3.98	104.5	0.0	311.1
5.00		1.00	0.85	23.888	26.28	531.06	0.730	0.000	4.00	21.593	15.76	414.2	0.0	1232.9
10.00		1.00	0.85	23.888	26.28	521.19	0.730	0.000	5.00	26.543	19.38	509.2	0.0	1515.3
15.00		1.00	0.85	23.888	26.28	511.31	0.730	0.000	5.00	26.045	19.01	499.6	0.0	1486.7
20.00		1.00	0.90	25.347	27.88	516.52	0.730	0.000	5.00	25.547	18.65	520.0	0.0	1458.1
25.00		1.00	0.95	26.566	29.22	518.39	0.730	0.000	5.00	25.049	18.29	534.3	0.0	1429.5
30.00		1.00	0.98	27.605	30.37	517.82	0.730	0.000	5.00	24.550	17.92	544.2	0.0	1400.9
35.00		1.00	1.01	28.516	31.37	515.50	0.730	0.000	5.00	24.052	17.56	550.8	0.0	1372.3
40.00		1.00	1.04	29.329	32.26	511.86	0.730	0.000	5.00	23.554	17.19	554.7	0.0	1343.7
41.00	Bot - Section 2	1.00	1.05	29.482	32.43	511.00	0.730	0.000	1.00	4.651	3.40	110.1	0.0	265.3
45.00		1.00	1.07	30.065	33.07	507.17	0.730	0.000	4.00	18.659	13.62	450.5	0.0	2114.2
48.00	Top - Section 1	1.00	1.08	30.477	33.52	503.94	0.730	0.000	3.00	13.785	10.06	337.4	0.0	1561.6
50.00		1.00	1.09	30.740	33.81	508.77	0.730	0.000	2.00	9.091	6.64	224.4	0.0	518.5
55.00		1.00	1.12	31.363	34.50	502.59	0.730	0.000	5.00	22.378	16.34	563.6	0.0	1276.1
60.00		1.00	1.14	31.942	35.14	495.80	0.730	0.000	5.00	21.880	15.97	561.2	0.0	1247.5
65.00		1.00	1.16	32.485	35.73	488.48	0.730	0.000	5.00	21.382	15.61	557.8	0.0	1218.9
70.00	Appurtenance(s)	1.00	1.17	32.996	36.30	480.70	0.730	0.000	5.00	20.884	15.25	553.3	0.0	1190.3
75.00		1.00	1.19	33.479	36.83	472.52	0.730	0.000	5.00	20.386	14.88	548.0	0.0	1161.7
80.00		1.00	1.21	33.937	37.33	463.98	0.730	0.000	5.00	19.888	14.52	542.0	0.0	1133.1
81.00	Top - Section 2	1.00	1.21	34.026	37.43	462.23	0.730	0.000	1.00	3.918	2.86	107.0	0.0	223.2
85.00	Bot - Section 4	1.00	1.22	34.373	37.81	455.10	0.730	0.000	4.00	15.472	11.29	427.0	0.0	735.4
90.00		1.00	1.24	34.789	38.27	445.94	0.730	0.000	5.00	19.156	13.98	535.1	0.0	1808.4
91.00	Top - Section 3	1.00	1.24	34.870	38.36	444.07	0.730	0.000	1.00	3.771	2.75	105.6	0.0	356.0
95.00		1.00	1.25	35.187	38.71	442.86	0.730	0.000	4.00	14.887	10.87	420.6	0.0	707.4
100.00		1.00	1.27	35.569	39.13	433.22	0.730	0.000	5.00	18.160	13.26	518.7	0.0	862.8
105.00		1.00	1.28	35.936	39.53	423.34	0.730	0.000	5.00	17.662	12.89	509.7	0.0	839.0
110.00		1.00	1.29	36.290	39.92	413.25	0.730	0.000	5.00	17.164	12.53	500.2	0.0	815.2
115.00		1.00	1.30	36.631	40.29	402.96	0.730	0.000	5.00	16.666	12.17	490.2	0.0	791.3
120.00		1.00	1.32	36.961	40.66	392.49	0.730	0.000	5.00	16.168	11.80	479.9	0.0	767.5
125.00	Top - Section 4	1.00	1.33	37.280	41.01	381.85	0.730	0.000	5.00	15.670	11.44	469.1	0.0	743.7
130.00	Bot - Section 6	1.00	1.34	37.589	41.35	371.05	0.730	0.000	5.00	15.172	11.08	457.9	0.0	576.9
135.00	Top - Section 5	1.00	1.35	37.889	41.68	360.09	0.730	0.000	5.00	14.885	10.87	452.9	0.0	1123.7
140.00		1.00	1.36	38.180	42.00	354.30	0.730	0.000	5.00	14.387	10.50	441.1	0.0	546.8
145.00		1.00	1.37	38.463	42.31	343.08	0.730	0.000	5.00	13.889	10.14	429.0	0.0	527.8
150.00		1.00	1.38	38.739	42.61	331.74	0.730	0.000	5.00	13.391	9.78	416.6	0.0	508.7
155.00		1.00	1.39	39.007	42.91	320.27	0.730	0.000	5.00	12.893	9.41	403.9	0.0	489.6
160.00		1.00	1.40	39.269	43.20	308.69	0.730	0.000	5.00	12.395	9.05	390.9	0.0	470.6
165.00	Appurtenance(s)	1.00	1.41	39.524	43.48	296.99	0.730	0.000	5.00	11.897	8.69	377.6	0.0	451.5
170.00		1.00	1.42	39.773	43.75	285.19	0.730	0.000	5.00	11.399	8.32	364.1	0.0	432.4
175.00	Appurtenance(s)	1.00	1.42	40.016	44.02	273.28	0.730	0.000	5.00	10.901	7.96	350.3	0.0	413.4
180.00	Top - Section 6	1.00	1.43	40.254	44.28	261.28	0.730	0.000	5.00	10.403	7.59	336.3	0.0	394.3
185.00		1.00	1.44	40.487	44.54	258.05	0.600	0.000	5.00	10.000	6.00	267.2	0.0	427.5
190.00		1.00	1.45	40.715	44.79	258.78	0.600	0.000	5.00	10.000	6.00	268.7	0.0	427.5
195.00	Appurtenance(s)	1.00	1.46	40.939	45.03	259.49	0.600	0.000	5.00	10.000	6.00	270.2	0.0	427.5
Totals:									195.00			18,469.4		39,106.0

Discrete Appurtenance Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (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 + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 26

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	195.00	800 MHz RRH	3	40.983	45.081	0.45	0.90	3.36	190.80	0.000	1.000	151.54	0.00	151.54
2	195.00	APXVSP18-C-A20	3	40.983	45.081	0.83	1.00	19.97	205.20	0.000	1.000	900.26	0.00	900.26
3	195.00	APXVTM14-C-I20	3	40.983	45.081	0.77	1.00	14.65	202.32	0.000	1.000	660.23	0.00	660.23
4	195.00	1900MHz RRH (65MHz)	3	40.983	45.081	0.45	0.90	3.74	216.00	0.000	1.000	168.58	0.00	168.58
5	195.00	T-Arms w/ Working	3	40.939	45.032	0.56	0.75	29.95	1800.00	0.000	0.000	1348.86	0.00	0.00
6	195.00	TD-RRH8x20-25	3	40.983	45.081	0.45	0.90	5.47	252.00	0.000	1.000	246.48	0.00	246.48
7	195.00	ALU 800MHz External	3	40.983	45.081	0.45	0.90	1.05	31.68	0.000	1.000	47.47	0.00	47.47
8	195.00	ACU-A20-N	4	40.983	45.081	0.45	0.90	0.25	4.80	0.000	1.000	11.36	0.00	11.36
9	175.00	(3) T-Arm Kit	1	40.016	44.018	0.56	0.75	9.00	600.00	0.000	0.000	396.16	0.00	0.00
10	175.00	FE15501P77/75	6	40.016	44.018	0.40	0.80	1.70	102.96	0.000	0.000	75.01	0.00	0.00
11	175.00	4449 B71 + B85	3	40.016	44.018	0.40	0.80	2.36	263.52	0.000	0.000	104.06	0.00	0.00
12	175.00	KRY 112 489/2	3	40.016	44.018	0.40	0.80	0.78	55.44	0.000	0.000	34.33	0.00	0.00
13	175.00	KRY 112 144/1	3	40.016	44.018	0.40	0.80	0.49	39.60	0.000	0.000	21.66	0.00	0.00
14	175.00	RR90-17-02DP	3	40.016	44.018	0.54	0.80	7.12	48.60	0.000	0.000	313.21	0.00	0.00
15	175.00	T-Arms w/ Working	3	40.016	44.018	0.56	0.75	29.95	1800.00	0.000	0.000	1318.48	0.00	0.00
16	175.00	APXVAARR24_43-U-NA2	3	40.016	44.018	0.56	0.80	34.00	460.80	0.000	0.000	1496.76	0.00	0.00
17	165.00	MT6407-77A	3	39.524	43.476	0.56	0.80	7.88	285.84	0.000	0.000	342.56	0.00	0.00
18	165.00	Low Profile	1	39.524	43.476	1.00	1.00	22.00	1800.00	0.000	0.000	956.48	0.00	0.00
19	165.00	MX06FRO660-03	6	39.524	43.476	0.70	0.80	41.69	511.20	0.000	0.000	1812.56	0.00	0.00
20	165.00	Samsung B2/B66A	3	39.524	43.476	0.40	0.80	2.26	303.84	0.000	0.000	98.08	0.00	0.00
21	165.00	Samsung B5/B13	3	39.524	43.476	0.40	0.80	2.26	253.08	0.000	0.000	98.08	0.00	0.00
22	165.00	Raycap	1	39.524	43.476	0.40	0.80	1.52	38.40	0.000	0.000	65.91	0.00	0.00
23	165.00	91900314	1	39.524	43.476	1.00	1.00	0.00	30.42	0.000	0.000	0.00	0.00	0.00
24	70.00	Side Arm (L. Heavy)	1	32.996	36.296	1.00	1.00	3.50	144.00	0.000	0.000	127.03	0.00	0.00
25	70.00	407577689 Gps	1	32.996	36.296	0.50	1.00	0.46	4.80	0.000	0.000	16.51	0.00	0.00
Totals:									9,645.30			10,811.67		

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (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 + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 26

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
1.00		104.51	339.54	0.00	0.00
5.00		414.20	1346.72	0.00	0.00
10.00		509.15	1657.66	0.00	0.00
15.00		499.60	1629.05	0.00	0.00
20.00		519.96	1600.45	0.00	0.00
25.00		534.34	1571.85	0.00	0.00
30.00		544.21	1543.24	0.00	0.00
35.00		550.76	1514.64	0.00	0.00
40.00		554.73	1486.04	0.00	0.00
41.00		110.11	293.78	0.00	0.00
45.00		450.48	2228.04	0.00	0.00
48.00		337.36	1647.01	0.00	0.00
50.00		224.39	575.39	0.00	0.00
55.00		563.56	1418.45	0.00	0.00
60.00		561.21	1389.85	0.00	0.00
65.00		557.76	1361.25	0.00	0.00
70.00	(2) attachments	696.88	1481.44	0.00	0.00
75.00		548.04	1303.08	0.00	0.00
80.00		541.96	1274.48	0.00	0.00
81.00		107.04	251.46	0.00	0.00
85.00		427.04	848.54	0.00	0.00
90.00		535.13	1949.73	0.00	0.00
91.00		105.60	384.23	0.00	0.00
95.00		420.62	820.52	0.00	0.00
100.00		518.69	1004.20	0.00	0.00
105.00		509.67	980.37	0.00	0.00
110.00		500.17	956.53	0.00	0.00
115.00		490.23	932.69	0.00	0.00
120.00		479.86	908.86	0.00	0.00
125.00		469.09	885.02	0.00	0.00
130.00		457.95	718.23	0.00	0.00
135.00		452.89	1265.07	0.00	0.00
140.00		441.10	688.20	0.00	0.00
145.00		428.99	669.13	0.00	0.00
150.00		416.57	650.06	0.00	0.00
155.00		403.85	630.99	0.00	0.00
160.00		390.86	611.92	0.00	0.00
165.00	(18) attachments	3751.26	3815.63	0.00	0.00
170.00		364.07	529.74	0.00	0.00
175.00	(25) attachments	4109.96	3881.59	0.00	0.00
180.00		336.28	410.13	0.00	0.00
185.00		267.22	443.34	0.00	0.00
190.00		268.72	443.34	0.00	0.00
195.00	(25) attachments	3804.97	3346.14	0.00	2185.92
Totals:		29,281.04	53,687.62	0.00	2,185.92

Calculated Forces

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 11

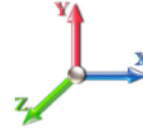


Load Case: 1.2D + 1.0W 120 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load 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	-53.68	-29.29	0.00	-3771.0	0.00	3771.04	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.486
1.00	-53.32	-29.24	0.00	-3741.7	0.00	3741.75	4620.83	1334.53	7074.15	6086.42	0.00	-0.021	0.000	0.484
1.00	-53.32	-29.24	0.00	-3741.7	0.00	3741.75	4620.83	1334.53	7074.15	6086.42	0.00	-0.021	0.000	0.484
5.00	-51.91	-28.92	0.00	-3624.8	0.00	3624.81	4587.84	1314.86	6867.16	5953.37	0.06	-0.103	0.000	0.621
10.00	-50.19	-28.52	0.00	-3480.2	0.00	3480.22	4545.12	1290.28	6612.74	5787.00	0.24	-0.238	0.000	0.613
15.00	-48.50	-28.13	0.00	-3337.6	0.00	3337.61	4500.76	1265.69	6363.12	5620.67	0.56	-0.375	0.000	0.605
20.00	-46.83	-27.71	0.00	-3196.9	0.00	3196.95	4454.76	1241.10	6118.30	5454.49	1.03	-0.514	0.000	0.597
25.00	-45.20	-27.28	0.00	-3058.3	0.00	3058.39	4407.12	1216.52	5878.29	5288.58	1.64	-0.655	0.000	0.589
30.00	-43.60	-26.82	0.00	-2922.0	0.00	2922.01	4357.84	1191.93	5643.07	5123.07	2.40	-0.798	0.000	0.581
35.00	-42.02	-26.36	0.00	-2787.9	0.00	2787.91	4306.92	1167.34	5412.67	4958.08	3.32	-0.943	0.000	0.573
40.00	-40.51	-25.84	0.00	-2656.1	0.00	2656.13	4254.35	1142.76	5187.06	4793.73	4.38	-1.091	0.000	0.564
41.00	-40.18	-25.77	0.00	-2630.2	0.00	2630.29	4243.64	1137.84	5142.51	4760.94	4.62	-1.121	0.000	0.562
45.00	-37.92	-25.35	0.00	-2527.2	0.00	2527.20	4200.14	1118.17	4966.25	4630.13	5.61	-1.242	0.000	0.555
48.00	-36.24	-25.02	0.00	-2451.1	0.00	2451.15	4202.19	1119.08	4974.38	4636.19	6.42	-1.334	0.000	0.538
50.00	-35.63	-24.85	0.00	-2401.1	0.00	2401.11	4180.07	1109.25	4887.33	4570.98	6.99	-1.396	0.000	0.534
55.00	-34.16	-24.34	0.00	-2276.8	0.00	2276.86	4123.62	1084.66	4673.07	4408.60	8.53	-1.544	0.000	0.525
60.00	-32.72	-23.83	0.00	-2155.1	0.00	2155.16	4065.54	1060.07	4463.61	4247.27	10.23	-1.694	0.000	0.516
65.00	-31.32	-23.31	0.00	-2036.0	0.00	2036.04	4005.81	1035.49	4258.96	4087.10	12.09	-1.846	0.000	0.506
70.00	-29.80	-22.64	0.00	-1919.4	0.00	1919.49	3944.44	1010.90	4059.10	3928.21	14.10	-1.999	0.000	0.497
75.00	-28.46	-22.13	0.00	-1806.2	0.00	1806.28	3881.43	986.31	3864.05	3770.72	16.28	-2.155	0.000	0.487
80.00	-27.17	-21.58	0.00	-1695.6	0.00	1695.65	3816.78	961.72	3673.81	3614.75	18.62	-2.312	0.000	0.477
81.00	-26.89	-21.50	0.00	-1674.0	0.00	1674.07	3803.65	956.81	3636.33	3583.75	19.11	-2.345	0.000	0.475
81.00	-26.89	-21.50	0.00	-1674.0	0.00	1674.07	2964.89	798.43	3038.55	2801.11	19.11	-2.345	0.000	0.607
85.00	-26.00	-21.11	0.00	-1588.0	0.00	1588.07	2929.08	782.04	2915.07	2710.08	21.13	-2.473	0.000	0.596
90.00	-24.04	-20.54	0.00	-1482.5	0.00	1482.51	2882.85	761.55	2764.32	2596.94	23.82	-2.665	0.000	0.580
91.00	-23.63	-20.46	0.00	-1461.9	0.00	1461.97	2898.33	768.33	2813.78	2634.30	24.38	-2.705	0.000	0.564
95.00	-22.77	-20.06	0.00	-1380.1	0.00	1380.15	2860.60	751.94	2695.00	2544.15	26.71	-2.862	0.000	0.551
100.00	-21.73	-19.57	0.00	-1279.8	0.00	1279.84	2811.95	731.45	2550.13	2432.25	29.81	-3.049	0.000	0.535
105.00	-20.71	-19.07	0.00	-1182.0	0.00	1182.01	2761.66	710.96	2409.26	2321.34	33.10	-3.237	0.000	0.517
110.00	-19.73	-18.58	0.00	-1086.6	0.00	1086.66	2709.73	690.47	2272.40	2211.55	36.59	-3.426	0.000	0.499
115.00	-18.76	-18.10	0.00	-993.76	0.00	993.76	2656.16	669.98	2139.54	2103.00	40.28	-3.616	0.000	0.480
120.00	-17.83	-17.62	0.00	-903.27	0.00	903.27	2600.95	649.49	2010.67	1995.80	44.17	-3.804	0.000	0.460
125.00	-16.92	-17.14	0.00	-815.19	0.00	815.19	2544.10	629.00	1885.82	1890.08	48.25	-3.992	0.000	0.439
125.00	-16.92	-17.14	0.00	-815.19	0.00	815.19	1882.48	504.07	1513.88	1403.39	48.25	-3.992	0.000	0.591
130.00	-16.18	-16.70	0.00	-729.46	0.00	729.46	1845.69	487.68	1417.02	1330.91	52.53	-4.178	0.000	0.558
135.00	-14.89	-16.21	0.00	-645.99	0.00	645.99	1823.78	478.25	1362.76	1289.51	57.02	-4.405	0.000	0.510
140.00	-14.18	-15.77	0.00	-564.95	0.00	564.95	1784.40	461.86	1270.94	1218.11	61.75	-4.627	0.000	0.473
145.00	-13.49	-15.33	0.00	-486.12	0.00	486.12	1743.38	445.47	1182.33	1147.55	66.70	-4.831	0.000	0.433
150.00	-12.83	-14.90	0.00	-409.47	0.00	409.47	1700.71	429.08	1096.92	1077.96	71.86	-5.025	0.000	0.389
155.00	-12.20	-14.48	0.00	-334.96	0.00	334.96	1656.41	412.69	1014.72	1009.45	77.22	-5.206	0.000	0.340
160.00	-11.59	-14.07	0.00	-262.56	0.00	262.56	1610.46	396.29	935.71	942.14	82.75	-5.369	0.000	0.287
165.00	-8.12	-9.99	0.00	-192.24	0.00	192.24	1562.88	379.90	859.91	876.15	88.45	-5.509	0.000	0.225
170.00	-7.61	-9.59	0.00	-142.30	0.00	142.30	1513.65	363.51	787.30	811.61	94.27	-5.626	0.000	0.181
175.00	-4.15	-5.12	0.00	-94.37	0.00	94.37	1462.77	347.12	717.90	748.63	100.21	-5.720	0.000	0.129
180.00	-3.77	-4.75	0.00	-68.77	0.00	68.77	1400.09	330.73	651.70	682.38	106.23	-5.795	0.000	0.104
180.00	-3.77	-4.75	0.00	-68.77	0.00	68.77	678.42	203.53	25205.7	396.30	106.23	-5.795	0.000	0.180
185.00	-3.35	-4.44	0.00	-45.03	0.00	45.03	678.42	203.53	25205.7	396.30	112.32	-5.855	0.000	0.119
190.00	-2.94	-4.13	0.00	-22.83	0.00	22.83	678.42	203.53	25205.7	396.30	118.46	-5.888	0.000	0.062

Calculated Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (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



195.00	0.00	-3.80	0.00	-2.19	0.00	2.19	678.42	203.53	25205.7	396.30	124.63	-5.900	0.000	0.006
--------	------	-------	------	-------	------	------	--------	--------	---------	--------	--------	--------	-------	-------

Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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

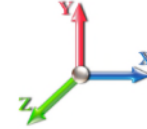


Load Case: 0.9D + 1.0W 120 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.00



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	RB1	1.00	0.85	23.888	26.28	540.93	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.85	23.888	26.28	538.95	0.730	0.000	1.00	5.448	3.98	104.5	0.0	233.3
5.00		1.00	0.85	23.888	26.28	531.06	0.730	0.000	4.00	21.593	15.76	414.2	0.0	924.6
10.00		1.00	0.85	23.888	26.28	521.19	0.730	0.000	5.00	26.543	19.38	509.2	0.0	1136.5
15.00		1.00	0.85	23.888	26.28	511.31	0.730	0.000	5.00	26.045	19.01	499.6	0.0	1115.1
20.00		1.00	0.90	25.347	27.88	516.52	0.730	0.000	5.00	25.547	18.65	520.0	0.0	1093.6
25.00		1.00	0.95	26.566	29.22	518.39	0.730	0.000	5.00	25.049	18.29	534.3	0.0	1072.1
30.00		1.00	0.98	27.605	30.37	517.82	0.730	0.000	5.00	24.550	17.92	544.2	0.0	1050.7
35.00		1.00	1.01	28.516	31.37	515.50	0.730	0.000	5.00	24.052	17.56	550.8	0.0	1029.2
40.00		1.00	1.04	29.329	32.26	511.86	0.730	0.000	5.00	23.554	17.19	554.7	0.0	1007.8
41.00	Bot - Section 2	1.00	1.05	29.482	32.43	511.00	0.730	0.000	1.00	4.651	3.40	110.1	0.0	199.0
45.00		1.00	1.07	30.065	33.07	507.17	0.730	0.000	4.00	18.659	13.62	450.5	0.0	1585.6
48.00	Top - Section 1	1.00	1.08	30.477	33.52	503.94	0.730	0.000	3.00	13.785	10.06	337.4	0.0	1171.2
50.00		1.00	1.09	30.740	33.81	508.77	0.730	0.000	2.00	9.091	6.64	224.4	0.0	388.8
55.00		1.00	1.12	31.363	34.50	502.59	0.730	0.000	5.00	22.378	16.34	563.6	0.0	957.1
60.00		1.00	1.14	31.942	35.14	495.80	0.730	0.000	5.00	21.880	15.97	561.2	0.0	935.6
65.00		1.00	1.16	32.485	35.73	488.48	0.730	0.000	5.00	21.382	15.61	557.8	0.0	914.2
70.00	Appurtenance(s)	1.00	1.17	32.996	36.30	480.70	0.730	0.000	5.00	20.884	15.25	553.3	0.0	892.7
75.00		1.00	1.19	33.479	36.83	472.52	0.730	0.000	5.00	20.386	14.88	548.0	0.0	871.3
80.00		1.00	1.21	33.937	37.33	463.98	0.730	0.000	5.00	19.888	14.52	542.0	0.0	849.8
81.00	Top - Section 2	1.00	1.21	34.026	37.43	462.23	0.730	0.000	1.00	3.918	2.86	107.0	0.0	167.4
85.00	Bot - Section 4	1.00	1.22	34.373	37.81	455.10	0.730	0.000	4.00	15.472	11.29	427.0	0.0	551.6
90.00		1.00	1.24	34.789	38.27	445.94	0.730	0.000	5.00	19.156	13.98	535.1	0.0	1356.3
91.00	Top - Section 3	1.00	1.24	34.870	38.36	444.07	0.730	0.000	1.00	3.771	2.75	105.6	0.0	267.0
95.00		1.00	1.25	35.187	38.71	442.86	0.730	0.000	4.00	14.887	10.87	420.6	0.0	530.6
100.00		1.00	1.27	35.569	39.13	433.22	0.730	0.000	5.00	18.160	13.26	518.7	0.0	647.1
105.00		1.00	1.28	35.936	39.53	423.34	0.730	0.000	5.00	17.662	12.89	509.7	0.0	629.3
110.00		1.00	1.29	36.290	39.92	413.25	0.730	0.000	5.00	17.164	12.53	500.2	0.0	611.4
115.00		1.00	1.30	36.631	40.29	402.96	0.730	0.000	5.00	16.666	12.17	490.2	0.0	593.5
120.00		1.00	1.32	36.961	40.66	392.49	0.730	0.000	5.00	16.168	11.80	479.9	0.0	575.6
125.00	Top - Section 4	1.00	1.33	37.280	41.01	381.85	0.730	0.000	5.00	15.670	11.44	469.1	0.0	557.7
130.00	Bot - Section 6	1.00	1.34	37.589	41.35	371.05	0.730	0.000	5.00	15.172	11.08	457.9	0.0	432.7
135.00	Top - Section 5	1.00	1.35	37.889	41.68	360.09	0.730	0.000	5.00	14.885	10.87	452.9	0.0	842.8
140.00		1.00	1.36	38.180	42.00	354.30	0.730	0.000	5.00	14.387	10.50	441.1	0.0	410.1
145.00		1.00	1.37	38.463	42.31	343.08	0.730	0.000	5.00	13.889	10.14	429.0	0.0	395.8
150.00		1.00	1.38	38.739	42.61	331.74	0.730	0.000	5.00	13.391	9.78	416.6	0.0	381.5
155.00		1.00	1.39	39.007	42.91	320.27	0.730	0.000	5.00	12.893	9.41	403.9	0.0	367.2
160.00		1.00	1.40	39.269	43.20	308.69	0.730	0.000	5.00	12.395	9.05	390.9	0.0	352.9
165.00	Appurtenance(s)	1.00	1.41	39.524	43.48	296.99	0.730	0.000	5.00	11.897	8.69	377.6	0.0	338.6
170.00		1.00	1.42	39.773	43.75	285.19	0.730	0.000	5.00	11.399	8.32	364.1	0.0	324.3
175.00	Appurtenance(s)	1.00	1.42	40.016	44.02	273.28	0.730	0.000	5.00	10.901	7.96	350.3	0.0	310.0
180.00	Top - Section 6	1.00	1.43	40.254	44.28	261.28	0.730	0.000	5.00	10.403	7.59	336.3	0.0	295.7
185.00		1.00	1.44	40.487	44.54	258.05	0.600	0.000	5.00	10.000	6.00	267.2	0.0	320.6
190.00		1.00	1.45	40.715	44.79	258.78	0.600	0.000	5.00	10.000	6.00	268.7	0.0	320.6
195.00	Appurtenance(s)	1.00	1.46	40.939	45.03	259.49	0.600	0.000	5.00	10.000	6.00	270.2	0.0	320.6
Totals:									195.00			18,469.4		29,329.5

Discrete Appurtenance Forces

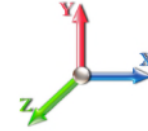
Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 14



Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	195.00	800 MHz RRH	3	40.983	45.081	0.45	0.90	3.36	143.10	0.000	1.000	151.54	0.00	151.54
2	195.00	APXVSP18-C-A20	3	40.983	45.081	0.83	1.00	19.97	153.90	0.000	1.000	900.26	0.00	900.26
3	195.00	APXVTM14-C-I20	3	40.983	45.081	0.77	1.00	14.65	151.74	0.000	1.000	660.23	0.00	660.23
4	195.00	1900MHz RRH (65MHz)	3	40.983	45.081	0.45	0.90	3.74	162.00	0.000	1.000	168.58	0.00	168.58
5	195.00	T-Arms w/ Working	3	40.939	45.032	0.56	0.75	29.95	1350.00	0.000	0.000	1348.86	0.00	0.00
6	195.00	TD-RRH8x20-25	3	40.983	45.081	0.45	0.90	5.47	189.00	0.000	1.000	246.48	0.00	246.48
7	195.00	ALU 800MHz External	3	40.983	45.081	0.45	0.90	1.05	23.76	0.000	1.000	47.47	0.00	47.47
8	195.00	ACU-A20-N	4	40.983	45.081	0.45	0.90	0.25	3.60	0.000	1.000	11.36	0.00	11.36
9	175.00	(3) T-Arm Kit	1	40.016	44.018	0.56	0.75	9.00	450.00	0.000	0.000	396.16	0.00	0.00
10	175.00	FE15501P77/75	6	40.016	44.018	0.40	0.80	1.70	77.22	0.000	0.000	75.01	0.00	0.00
11	175.00	4449 B71 + B85	3	40.016	44.018	0.40	0.80	2.36	197.64	0.000	0.000	104.06	0.00	0.00
12	175.00	KRY 112 489/2	3	40.016	44.018	0.40	0.80	0.78	41.58	0.000	0.000	34.33	0.00	0.00
13	175.00	KRY 112 144/1	3	40.016	44.018	0.40	0.80	0.49	29.70	0.000	0.000	21.66	0.00	0.00
14	175.00	RR90-17-02DP	3	40.016	44.018	0.54	0.80	7.12	36.45	0.000	0.000	313.21	0.00	0.00
15	175.00	T-Arms w/ Working	3	40.016	44.018	0.56	0.75	29.95	1350.00	0.000	0.000	1318.48	0.00	0.00
16	175.00	APXVAARR24_43-U-NA2	3	40.016	44.018	0.56	0.80	34.00	345.60	0.000	0.000	1496.76	0.00	0.00
17	165.00	MT6407-77A	3	39.524	43.476	0.56	0.80	7.88	214.38	0.000	0.000	342.56	0.00	0.00
18	165.00	Low Profile	1	39.524	43.476	1.00	1.00	22.00	1350.00	0.000	0.000	956.48	0.00	0.00
19	165.00	MX06FRO660-03	6	39.524	43.476	0.70	0.80	41.69	383.40	0.000	0.000	1812.56	0.00	0.00
20	165.00	Samsung B2/B66A	3	39.524	43.476	0.40	0.80	2.26	227.88	0.000	0.000	98.08	0.00	0.00
21	165.00	Samsung B5/B13	3	39.524	43.476	0.40	0.80	2.26	189.81	0.000	0.000	98.08	0.00	0.00
22	165.00	Raycap	1	39.524	43.476	0.40	0.80	1.52	28.80	0.000	0.000	65.91	0.00	0.00
23	165.00	91900314	1	39.524	43.476	1.00	1.00	0.00	22.82	0.000	0.000	0.00	0.00	0.00
24	70.00	Side Arm (L. Heavy)	1	32.996	36.296	1.00	1.00	3.50	108.00	0.000	0.000	127.03	0.00	0.00
25	70.00	407577689 Gps	1	32.996	36.296	0.50	1.00	0.46	3.60	0.000	0.000	16.51	0.00	0.00
Totals:									7,233.97			10,811.67		

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 15



Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		104.51	254.66	0.00	0.00
5.00		414.20	1010.04	0.00	0.00
10.00		509.15	1243.24	0.00	0.00
15.00		499.60	1221.79	0.00	0.00
20.00		519.96	1200.34	0.00	0.00
25.00		534.34	1178.89	0.00	0.00
30.00		544.21	1157.43	0.00	0.00
35.00		550.76	1135.98	0.00	0.00
40.00		554.73	1114.53	0.00	0.00
41.00		110.11	220.33	0.00	0.00
45.00		450.48	1671.03	0.00	0.00
48.00		337.36	1235.25	0.00	0.00
50.00		224.39	431.54	0.00	0.00
55.00		563.56	1063.84	0.00	0.00
60.00		561.21	1042.39	0.00	0.00
65.00		557.76	1020.93	0.00	0.00
70.00	(2) attachments	696.88	1111.08	0.00	0.00
75.00		548.04	977.31	0.00	0.00
80.00		541.96	955.86	0.00	0.00
81.00		107.04	188.60	0.00	0.00
85.00		427.04	636.40	0.00	0.00
90.00		535.13	1462.30	0.00	0.00
91.00		105.60	288.17	0.00	0.00
95.00		420.62	615.39	0.00	0.00
100.00		518.69	753.15	0.00	0.00
105.00		509.67	735.27	0.00	0.00
110.00		500.17	717.40	0.00	0.00
115.00		490.23	699.52	0.00	0.00
120.00		479.86	681.64	0.00	0.00
125.00		469.09	663.77	0.00	0.00
130.00		457.95	538.68	0.00	0.00
135.00		452.89	948.80	0.00	0.00
140.00		441.10	516.15	0.00	0.00
145.00		428.99	501.85	0.00	0.00
150.00		416.57	487.54	0.00	0.00
155.00		403.85	473.24	0.00	0.00
160.00		390.86	458.94	0.00	0.00
165.00	(18) attachments	3751.26	2861.72	0.00	0.00
170.00		364.07	397.31	0.00	0.00
175.00	(25) attachments	4109.96	2911.20	0.00	0.00
180.00		336.28	307.59	0.00	0.00
185.00		267.22	332.51	0.00	0.00
190.00		268.72	332.51	0.00	0.00
195.00	(25) attachments	3804.97	2509.61	0.00	2185.92
Totals:		29,281.04	40,265.71	0.00	2,185.92

Calculated Forces

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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

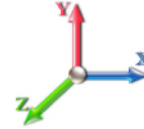


Load Case: 0.9D + 1.0W 120 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-40.26	-29.29	0.00	-3723.8	0.00	3723.82	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.477
1.00	-39.98	-29.22	0.00	-3694.5	0.00	3694.53	4620.83	1334.53	7074.15	6086.42	0.00	-0.021	0.000	0.476
1.00	-39.98	-29.22	0.00	-3694.5	0.00	3694.53	4620.83	1334.53	7074.15	6086.42	0.00	-0.021	0.000	0.476
5.00	-38.92	-28.88	0.00	-3577.6	0.00	3577.65	4587.84	1314.86	6867.16	5953.37	0.05	-0.102	0.000	0.610
10.00	-37.61	-28.45	0.00	-3433.2	0.00	3433.27	4545.12	1290.28	6612.74	5787.00	0.23	-0.235	0.000	0.602
15.00	-36.32	-28.03	0.00	-3291.0	0.00	3291.02	4500.76	1265.69	6363.12	5620.67	0.55	-0.370	0.000	0.594
20.00	-35.06	-27.59	0.00	-3150.8	0.00	3150.86	4454.76	1241.10	6118.30	5454.49	1.01	-0.507	0.000	0.586
25.00	-33.82	-27.12	0.00	-3012.9	0.00	3012.92	4407.12	1216.52	5878.29	5288.58	1.62	-0.646	0.000	0.578
30.00	-32.60	-26.65	0.00	-2877.3	0.00	2877.30	4357.84	1191.93	5643.07	5123.07	2.37	-0.787	0.000	0.570
35.00	-31.41	-26.16	0.00	-2744.0	0.00	2744.07	4306.92	1167.34	5412.67	4958.08	3.27	-0.930	0.000	0.561
40.00	-30.27	-25.63	0.00	-2613.2	0.00	2613.29	4254.35	1142.76	5187.06	4793.73	4.32	-1.075	0.000	0.553
41.00	-30.01	-25.55	0.00	-2587.6	0.00	2587.66	4243.64	1137.84	5142.51	4760.94	4.55	-1.105	0.000	0.551
45.00	-28.31	-25.12	0.00	-2485.4	0.00	2485.44	4200.14	1118.17	4966.25	4630.13	5.53	-1.224	0.000	0.544
48.00	-27.05	-24.79	0.00	-2410.0	0.00	2410.08	4202.19	1119.08	4974.38	4636.19	6.33	-1.314	0.000	0.527
50.00	-26.58	-24.61	0.00	-2360.4	0.00	2360.49	4180.07	1109.25	4887.33	4570.98	6.89	-1.376	0.000	0.523
55.00	-25.47	-24.08	0.00	-2237.4	0.00	2237.46	4123.62	1084.66	4673.07	4408.60	8.41	-1.521	0.000	0.514
60.00	-24.38	-23.55	0.00	-2117.0	0.00	2117.06	4065.54	1060.07	4463.61	4247.27	10.08	-1.668	0.000	0.505
65.00	-23.31	-23.03	0.00	-1999.2	0.00	1999.29	4005.81	1035.49	4258.96	4087.10	11.91	-1.817	0.000	0.495
70.00	-22.17	-22.35	0.00	-1884.1	0.00	1884.16	3944.44	1010.90	4059.10	3928.21	13.89	-1.968	0.000	0.486
75.00	-21.15	-21.83	0.00	-1772.4	0.00	1772.40	3881.43	986.31	3864.05	3770.72	16.04	-2.120	0.000	0.476
80.00	-20.18	-21.28	0.00	-1663.2	0.00	1663.27	3816.78	961.72	3673.81	3614.75	18.34	-2.275	0.000	0.466
81.00	-19.97	-21.19	0.00	-1641.9	0.00	1641.99	3803.65	956.81	3636.33	3583.75	18.82	-2.307	0.000	0.464
81.00	-19.97	-21.19	0.00	-1641.9	0.00	1641.99	2964.89	798.43	3038.55	2801.11	18.82	-2.307	0.000	0.594
85.00	-19.30	-20.79	0.00	-1557.2	0.00	1557.21	2929.08	782.04	2915.07	2710.08	20.80	-2.433	0.000	0.582
90.00	-17.82	-20.23	0.00	-1453.2	0.00	1453.24	2882.85	761.55	2764.32	2596.94	23.45	-2.621	0.000	0.566
91.00	-17.50	-20.14	0.00	-1433.0	0.00	1433.01	2898.33	768.33	2813.78	2634.30	24.01	-2.660	0.000	0.551
95.00	-16.85	-19.74	0.00	-1352.4	0.00	1352.45	2860.60	751.94	2695.00	2544.15	26.30	-2.814	0.000	0.538
100.00	-16.06	-19.24	0.00	-1253.7	0.00	1253.74	2811.95	731.45	2550.13	2432.25	29.34	-2.997	0.000	0.522
105.00	-15.29	-18.74	0.00	-1157.5	0.00	1157.56	2761.66	710.96	2409.26	2321.34	32.58	-3.182	0.000	0.505
110.00	-14.55	-18.24	0.00	-1063.8	0.00	1063.87	2709.73	690.47	2272.40	2211.55	36.01	-3.367	0.000	0.487
115.00	-13.82	-17.76	0.00	-972.64	0.00	972.64	2656.16	669.98	2139.54	2103.00	39.64	-3.552	0.000	0.468
120.00	-13.12	-17.28	0.00	-883.86	0.00	883.86	2600.95	649.49	2010.67	1995.80	43.45	-3.737	0.000	0.449
125.00	-12.43	-16.81	0.00	-797.47	0.00	797.47	2544.10	629.00	1885.82	1890.08	47.46	-3.920	0.000	0.428
125.00	-12.43	-16.81	0.00	-797.47	0.00	797.47	1882.48	504.07	1513.88	1403.39	47.46	-3.920	0.000	0.576
130.00	-11.87	-16.35	0.00	-713.44	0.00	713.44	1845.69	487.68	1417.02	1330.91	51.66	-4.102	0.000	0.544
135.00	-10.89	-15.87	0.00	-631.68	0.00	631.68	1823.78	478.25	1362.76	1289.51	56.08	-4.324	0.000	0.497
140.00	-10.36	-15.43	0.00	-552.31	0.00	552.31	1784.40	461.86	1270.94	1218.11	60.72	-4.541	0.000	0.460
145.00	-9.84	-15.00	0.00	-475.16	0.00	475.16	1743.38	445.47	1182.33	1147.55	65.58	-4.741	0.000	0.421
150.00	-9.34	-14.57	0.00	-400.17	0.00	400.17	1700.71	429.08	1096.92	1077.96	70.64	-4.931	0.000	0.378
155.00	-8.87	-14.15	0.00	-327.32	0.00	327.32	1656.41	412.69	1014.72	1009.45	75.90	-5.107	0.000	0.331
160.00	-8.41	-13.74	0.00	-256.55	0.00	256.55	1610.46	396.29	935.71	942.14	81.33	-5.266	0.000	0.279
165.00	-5.89	-9.76	0.00	-187.83	0.00	187.83	1562.88	379.90	859.91	876.15	86.91	-5.403	0.000	0.219
170.00	-5.51	-9.37	0.00	-139.06	0.00	139.06	1513.65	363.51	787.30	811.61	92.62	-5.517	0.000	0.176
175.00	-3.00	-5.00	0.00	-92.23	0.00	92.23	1462.77	347.12	717.90	748.63	98.45	-5.609	0.000	0.125
180.00	-2.73	-4.64	0.00	-67.24	0.00	67.24	1400.09	330.73	651.70	682.38	104.35	-5.682	0.000	0.101
180.00	-2.73	-4.64	0.00	-67.24	0.00	67.24	678.42	203.53	25205.7	396.30	104.35	-5.682	0.000	0.174
185.00	-2.42	-4.34	0.00	-44.07	0.00	44.07	678.42	203.53	25205.7	396.30	110.33	-5.741	0.000	0.115
190.00	-2.11	-4.04	0.00	-22.38	0.00	22.38	678.42	203.53	25205.7	396.30	116.35	-5.773	0.000	0.060

Calculated Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (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



195.00	0.00	-3.80	0.00	-2.19	0.00	2.19	678.42	203.53	25205.7	396.30	122.39	-5.785	0.000	0.006
--------	------	-------	------	-------	------	------	--------	--------	---------	--------	--------	--------	-------	-------

Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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

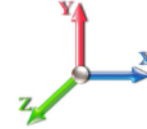


Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



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	RB1	1.00	0.85	2.654	2.92	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.85	2.654	2.92	0.00	1.200	0.705	1.00	5.565	6.68	19.5	56.8	367.9
5.00		1.00	0.85	2.654	2.92	0.00	1.200	0.828	4.00	22.145	26.57	77.6	263.5	1496.4
10.00		1.00	0.85	2.654	2.92	0.00	1.200	0.887	5.00	27.282	32.74	95.6	346.9	1862.2
15.00		1.00	0.85	2.654	2.92	0.00	1.200	0.924	5.00	26.815	32.18	93.9	354.7	1841.5
20.00		1.00	0.90	2.816	3.10	0.00	1.200	0.951	5.00	26.339	31.61	97.9	358.3	1816.4
25.00		1.00	0.95	2.952	3.25	0.00	1.200	0.973	5.00	25.859	31.03	100.8	359.4	1788.9
30.00		1.00	0.98	3.067	3.37	0.00	1.200	0.991	5.00	25.376	30.45	102.7	358.9	1759.8
35.00		1.00	1.01	3.168	3.49	0.00	1.200	1.006	5.00	24.891	29.87	104.1	357.2	1729.5
40.00		1.00	1.04	3.259	3.58	0.00	1.200	1.019	5.00	24.404	29.28	105.0	354.7	1698.4
41.00	Bot - Section 2	1.00	1.05	3.276	3.60	0.00	1.200	1.022	1.00	4.821	5.79	20.8	70.8	336.1
45.00		1.00	1.07	3.341	3.67	0.00	1.200	1.032	4.00	19.347	23.22	85.3	285.0	2399.2
48.00	Top - Section 1	1.00	1.08	3.386	3.72	0.00	1.200	1.038	3.00	14.304	17.17	63.9	212.4	1774.0
50.00		1.00	1.09	3.416	3.76	0.00	1.200	1.042	2.00	9.438	11.33	42.6	141.0	659.4
55.00		1.00	1.12	3.485	3.83	0.00	1.200	1.052	5.00	23.255	27.91	107.0	348.2	1624.3
60.00		1.00	1.14	3.549	3.90	0.00	1.200	1.062	5.00	22.764	27.32	106.6	343.5	1591.1
65.00		1.00	1.16	3.609	3.97	0.00	1.200	1.070	5.00	22.273	26.73	106.1	338.5	1557.5
70.00	Appurtenance(s)	1.00	1.17	3.666	4.03	0.00	1.200	1.078	5.00	21.782	26.14	105.4	333.2	1523.6
75.00		1.00	1.19	3.720	4.09	0.00	1.200	1.086	5.00	21.290	25.55	104.5	327.7	1489.4
80.00		1.00	1.21	3.771	4.15	0.00	1.200	1.093	5.00	20.798	24.96	103.5	321.9	1455.0
81.00	Top - Section 2	1.00	1.21	3.781	4.16	0.00	1.200	1.094	1.00	4.100	4.92	20.5	64.1	287.3
85.00	Bot - Section 4	1.00	1.22	3.819	4.20	0.00	1.200	1.099	4.00	16.205	19.45	81.7	252.7	988.1
90.00		1.00	1.24	3.865	4.25	0.00	1.200	1.106	5.00	20.077	24.09	102.4	313.9	2122.3
91.00	Top - Section 3	1.00	1.24	3.874	4.26	0.00	1.200	1.107	1.00	3.956	4.75	20.2	62.5	418.5
95.00		1.00	1.25	3.910	4.30	0.00	1.200	1.112	4.00	15.628	18.75	80.7	246.0	953.5
100.00		1.00	1.27	3.952	4.35	0.00	1.200	1.117	5.00	19.091	22.91	99.6	301.0	1163.8
105.00		1.00	1.28	3.993	4.39	0.00	1.200	1.123	5.00	18.598	22.32	98.0	294.3	1133.3
110.00		1.00	1.29	4.032	4.44	0.00	1.200	1.128	5.00	18.104	21.72	96.4	287.5	1102.7
115.00		1.00	1.30	4.070	4.48	0.00	1.200	1.133	5.00	17.610	21.13	94.6	280.5	1071.9
120.00		1.00	1.32	4.107	4.52	0.00	1.200	1.138	5.00	17.116	20.54	92.8	273.5	1041.0
125.00	Top - Section 4	1.00	1.33	4.142	4.56	0.00	1.200	1.142	5.00	16.622	19.95	90.9	266.3	1009.9
130.00	Bot - Section 6	1.00	1.34	4.177	4.59	0.00	1.200	1.147	5.00	16.128	19.35	88.9	259.0	835.8
135.00	Top - Section 5	1.00	1.35	4.210	4.63	0.00	1.200	1.151	5.00	15.845	19.01	88.1	255.1	1378.8
140.00		1.00	1.36	4.242	4.67	0.00	1.200	1.155	5.00	15.350	18.42	86.0	247.7	794.5
145.00		1.00	1.37	4.274	4.70	0.00	1.200	1.160	5.00	14.856	17.83	83.8	240.1	767.9
150.00		1.00	1.38	4.304	4.73	0.00	1.200	1.163	5.00	14.361	17.23	81.6	232.4	741.1
155.00		1.00	1.39	4.334	4.77	0.00	1.200	1.167	5.00	13.866	16.64	79.3	224.7	714.3
160.00		1.00	1.40	4.363	4.80	0.00	1.200	1.171	5.00	13.371	16.05	77.0	216.9	687.5
165.00	Appurtenance(s)	1.00	1.41	4.392	4.83	0.00	1.200	1.175	5.00	12.876	15.45	74.6	209.0	660.5
170.00		1.00	1.42	4.419	4.86	0.00	1.200	1.178	5.00	12.381	14.86	72.2	201.1	633.5
175.00	Appurtenance(s)	1.00	1.42	4.446	4.89	0.00	1.200	1.182	5.00	11.886	14.26	69.8	193.1	606.4
180.00	Top - Section 6	1.00	1.43	4.473	4.92	0.00	1.200	1.185	5.00	11.391	13.67	67.3	185.0	579.3
185.00		1.00	1.44	4.499	4.95	0.00	1.200	1.188	5.00	10.990	13.19	65.3	182.8	610.3
190.00		1.00	1.45	4.524	4.98	0.00	1.200	1.191	5.00	10.993	13.19	65.6	183.3	610.8
195.00	Appurtenance(s)	1.00	1.46	4.549	5.00	0.00	1.200	1.194	5.00	10.995	13.19	66.0	183.8	611.3
Totals:									195.00			3,586.2		50,295.0

Discrete Appurtenance Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 19



Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	195.00	800 MHz RRH	3	4.554	5.009	0.60	0.90	5.92	279.35	0.000	1.000	29.66	0.00	29.66
2	195.00	APXVSP18-C-A20	3	4.554	5.009	0.85	1.00	25.33	411.59	0.000	1.000	126.86	0.00	126.86
3	195.00	APXVTM14-C-I20	3	4.554	5.009	0.79	1.00	16.79	510.93	0.000	1.000	84.13	0.00	84.13
4	195.00	1900MHz RRH (65MHz)	3	4.554	5.009	0.60	0.90	6.58	315.61	0.000	1.000	32.97	0.00	32.97
5	195.00	T-Arms w/ Working	3	4.549	5.004	0.56	0.75	51.42	2573.29	0.000	0.000	257.28	0.00	0.00
6	195.00	TD-RRH8x20-25	3	4.554	5.009	0.60	0.90	8.31	464.14	0.000	1.000	41.61	0.00	41.61
7	195.00	ALU 800MHz External	3	4.554	5.009	0.64	0.90	2.34	52.90	0.000	1.000	11.74	0.00	11.74
8	195.00	ACU-A20-N	4	4.554	5.009	0.45	0.90	0.62	11.36	0.000	1.000	3.09	0.00	3.09
9	175.00	(3) T-Arm Kit	1	4.446	4.891	0.56	0.75	14.96	851.73	0.000	0.000	73.14	0.00	0.00
10	175.00	FE15501P77/75	6	4.446	4.891	0.40	0.80	2.80	144.33	0.000	0.000	13.68	0.00	0.00
11	175.00	4449 B71 + B85	3	4.446	4.891	0.40	0.80	2.83	205.60	0.000	0.000	13.82	0.00	0.00
12	175.00	KRY 112 489/2	3	4.446	4.891	0.40	0.80	1.28	76.23	0.000	0.000	6.25	0.00	0.00
13	175.00	KRY 112 144/1	3	4.446	4.891	0.40	0.80	0.88	52.20	0.000	0.000	4.29	0.00	0.00
14	175.00	RR90-17-02DP	3	4.446	4.891	0.54	0.80	8.17	230.25	0.000	0.000	39.95	0.00	0.00
15	175.00	T-Arms w/ Working	3	4.446	4.891	0.56	0.75	51.19	2557.86	0.000	0.000	250.35	0.00	0.00
16	175.00	APXVAARR24_43-U-NA2	3	4.446	4.891	0.56	0.80	36.14	1275.06	0.000	0.000	176.75	0.00	0.00
17	165.00	MT6407-77A	3	4.392	4.831	0.56	0.80	8.94	510.91	0.000	0.000	43.18	0.00	0.00
18	165.00	Low Profile	1	4.392	4.831	1.00	1.00	33.89	2380.96	0.000	0.000	163.70	0.00	0.00
19	165.00	MX06FRO660-03	6	4.392	4.831	0.70	0.80	45.53	1543.58	0.000	0.000	219.95	0.00	0.00
20	165.00	Samsung B2/B66A	3	4.392	4.831	0.40	0.80	2.70	301.74	0.000	0.000	13.05	0.00	0.00
21	165.00	Samsung B5/B13	3	4.392	4.831	0.40	0.80	2.70	316.48	0.000	0.000	13.05	0.00	0.00
22	165.00	Raycap	1	4.392	4.831	0.40	0.80	1.73	118.16	0.000	0.000	8.34	0.00	0.00
23	165.00	91900314	1	4.392	4.831	1.00	1.00	0.00	41.18	0.000	0.000	0.00	0.00	0.00
24	70.00	Side Arm (L. Heavy)	1	3.666	4.033	1.00	1.00	6.02	178.69	0.000	0.000	24.28	0.00	0.00
25	70.00	407577689 Gps	1	3.666	4.033	0.50	1.00	0.77	13.18	0.000	0.000	3.09	0.00	0.00
Totals:								15,417.30				1,654.21		

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (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 + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 24



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		19.50	396.35	0.00	0.00
5.00		77.59	1610.26	0.00	0.00
10.00		95.59	2004.57	0.00	0.00
15.00		93.95	1983.78	0.00	0.00
20.00		97.92	1958.74	0.00	0.00
25.00		100.76	1931.25	0.00	0.00
30.00		102.74	1902.14	0.00	0.00
35.00		104.10	1871.86	0.00	0.00
40.00		104.98	1840.70	0.00	0.00
41.00		20.85	364.59	0.00	0.00
45.00		85.31	2513.01	0.00	0.00
48.00		63.94	1859.41	0.00	0.00
50.00		42.55	716.37	0.00	0.00
55.00		106.97	1766.65	0.00	0.00
60.00		106.65	1733.39	0.00	0.00
65.00		106.12	1699.79	0.00	0.00
70.00	(2) attachments	132.78	1857.76	0.00	0.00
75.00		104.54	1630.76	0.00	0.00
80.00		103.52	1596.35	0.00	0.00
81.00		20.46	315.60	0.00	0.00
85.00		81.69	1101.21	0.00	0.00
90.00		102.44	2263.64	0.00	0.00
91.00		20.23	446.76	0.00	0.00
95.00		80.65	1066.55	0.00	0.00
100.00		99.59	1305.20	0.00	0.00
105.00		98.02	1274.68	0.00	0.00
110.00		96.36	1244.02	0.00	0.00
115.00		94.61	1213.22	0.00	0.00
120.00		92.79	1182.31	0.00	0.00
125.00		90.88	1151.28	0.00	0.00
130.00		88.91	977.20	0.00	0.00
135.00		88.05	1520.21	0.00	0.00
140.00		85.96	935.86	0.00	0.00
145.00		83.80	909.22	0.00	0.00
150.00		81.59	882.50	0.00	0.00
155.00		79.33	855.70	0.00	0.00
160.00		77.01	828.82	0.00	0.00
165.00	(18) attachments	535.91	6014.88	0.00	0.00
170.00		72.22	730.81	0.00	0.00
175.00	(25) attachments	648.00	6096.97	0.00	0.00
180.00		67.25	595.09	0.00	0.00
185.00		65.26	626.15	0.00	0.00
190.00		65.64	626.67	0.00	0.00
195.00	(25) attachments	653.35	5246.34	0.00	330.05
Totals:		5,240.37	70,648.63	0.00	330.05

Calculated Forces

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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

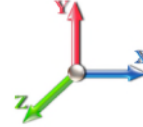


Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load 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	-70.65	-5.24	0.00	-673.48	0.00	673.48	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.098
1.00	-70.25	-5.23	0.00	-668.24	0.00	668.24	4620.83	1334.53	7074.15	6086.42	0.00	-0.004	0.000	0.097
1.00	-70.25	-5.23	0.00	-668.24	0.00	668.24	4620.83	1334.53	7074.15	6086.42	0.00	-0.004	0.000	0.097
5.00	-68.64	-5.18	0.00	-647.30	0.00	647.30	4587.84	1314.86	6867.16	5953.37	0.01	-0.018	0.000	0.124
10.00	-66.63	-5.11	0.00	-621.41	0.00	621.41	4545.12	1290.28	6612.74	5787.00	0.04	-0.042	0.000	0.122
15.00	-64.65	-5.04	0.00	-595.85	0.00	595.85	4500.76	1265.69	6363.12	5620.67	0.10	-0.067	0.000	0.120
20.00	-62.69	-4.97	0.00	-570.64	0.00	570.64	4454.76	1241.10	6118.30	5454.49	0.18	-0.092	0.000	0.119
25.00	-60.75	-4.89	0.00	-545.80	0.00	545.80	4407.12	1216.52	5878.29	5288.58	0.29	-0.117	0.000	0.117
30.00	-58.85	-4.81	0.00	-521.34	0.00	521.34	4357.84	1191.93	5643.07	5123.07	0.43	-0.142	0.000	0.115
35.00	-56.97	-4.73	0.00	-497.28	0.00	497.28	4306.92	1167.34	5412.67	4958.08	0.59	-0.168	0.000	0.114
40.00	-55.13	-4.63	0.00	-473.64	0.00	473.64	4254.35	1142.76	5187.06	4793.73	0.78	-0.195	0.000	0.112
41.00	-54.77	-4.62	0.00	-469.01	0.00	469.01	4243.64	1137.84	5142.51	4760.94	0.82	-0.200	0.000	0.111
45.00	-52.25	-4.55	0.00	-450.51	0.00	450.51	4200.14	1118.17	4966.25	4630.13	1.00	-0.222	0.000	0.110
48.00	-50.39	-4.49	0.00	-436.88	0.00	436.88	4202.19	1119.08	4974.38	4636.19	1.15	-0.238	0.000	0.106
50.00	-49.68	-4.46	0.00	-427.90	0.00	427.90	4180.07	1109.25	4887.33	4570.98	1.25	-0.249	0.000	0.106
55.00	-47.91	-4.36	0.00	-405.62	0.00	405.62	4123.62	1084.66	4673.07	4408.60	1.52	-0.276	0.000	0.104
60.00	-46.17	-4.27	0.00	-383.79	0.00	383.79	4065.54	1060.07	4463.61	4247.27	1.83	-0.302	0.000	0.102
65.00	-44.47	-4.18	0.00	-362.44	0.00	362.44	4005.81	1035.49	4258.96	4087.10	2.16	-0.329	0.000	0.100
70.00	-42.61	-4.05	0.00	-341.56	0.00	341.56	3944.44	1010.90	4059.10	3928.21	2.52	-0.357	0.000	0.098
75.00	-40.98	-3.96	0.00	-321.30	0.00	321.30	3881.43	986.31	3864.05	3770.72	2.90	-0.384	0.000	0.096
80.00	-39.38	-3.85	0.00	-301.51	0.00	301.51	3816.78	961.72	3673.81	3614.75	3.32	-0.412	0.000	0.094
81.00	-39.07	-3.84	0.00	-297.65	0.00	297.65	3803.65	956.81	3636.33	3583.75	3.41	-0.418	0.000	0.093
81.00	-39.07	-3.84	0.00	-297.65	0.00	297.65	2964.89	798.43	3038.55	2801.11	3.41	-0.418	0.000	0.119
85.00	-37.97	-3.77	0.00	-282.29	0.00	282.29	2929.08	782.04	2915.07	2710.08	3.77	-0.441	0.000	0.117
90.00	-35.70	-3.66	0.00	-263.43	0.00	263.43	2882.85	761.55	2764.32	2596.94	4.25	-0.475	0.000	0.114
91.00	-35.25	-3.65	0.00	-259.77	0.00	259.77	2898.33	768.33	2813.78	2634.30	4.35	-0.482	0.000	0.111
95.00	-34.19	-3.58	0.00	-245.17	0.00	245.17	2860.60	751.94	2695.00	2544.15	4.77	-0.510	0.000	0.108
100.00	-32.88	-3.49	0.00	-227.28	0.00	227.28	2811.95	731.45	2550.13	2432.25	5.32	-0.543	0.000	0.105
105.00	-31.60	-3.39	0.00	-209.85	0.00	209.85	2761.66	710.96	2409.26	2321.34	5.90	-0.577	0.000	0.102
110.00	-30.36	-3.30	0.00	-192.88	0.00	192.88	2709.73	690.47	2272.40	2211.55	6.53	-0.610	0.000	0.098
115.00	-29.14	-3.21	0.00	-176.37	0.00	176.37	2656.16	669.98	2139.54	2103.00	7.18	-0.644	0.000	0.095
120.00	-27.96	-3.12	0.00	-160.31	0.00	160.31	2600.95	649.49	2010.67	1995.80	7.88	-0.677	0.000	0.091
125.00	-26.81	-3.03	0.00	-144.71	0.00	144.71	2544.10	629.00	1885.82	1890.08	8.60	-0.711	0.000	0.087
125.00	-26.81	-3.03	0.00	-144.71	0.00	144.71	1882.48	504.07	1513.88	1403.39	8.60	-0.711	0.000	0.117
130.00	-25.83	-2.95	0.00	-129.54	0.00	129.54	1845.69	487.68	1417.02	1330.91	9.36	-0.744	0.000	0.111
135.00	-24.31	-2.86	0.00	-114.81	0.00	114.81	1823.78	478.25	1362.76	1289.51	10.16	-0.784	0.000	0.102
140.00	-23.37	-2.77	0.00	-100.53	0.00	100.53	1784.40	461.86	1270.94	1218.11	11.01	-0.823	0.000	0.096
145.00	-22.47	-2.69	0.00	-86.66	0.00	86.66	1743.38	445.47	1182.33	1147.55	11.89	-0.860	0.000	0.088
150.00	-21.58	-2.61	0.00	-73.22	0.00	73.22	1700.71	429.08	1096.92	1077.96	12.81	-0.894	0.000	0.081
155.00	-20.73	-2.53	0.00	-60.18	0.00	60.18	1656.41	412.69	1014.72	1009.45	13.76	-0.927	0.000	0.072
160.00	-19.90	-2.44	0.00	-47.55	0.00	47.55	1610.46	396.29	935.71	942.14	14.75	-0.956	0.000	0.063
165.00	-13.89	-1.81	0.00	-35.33	0.00	35.33	1562.88	379.90	859.91	876.15	15.77	-0.982	0.000	0.049
170.00	-13.16	-1.73	0.00	-26.27	0.00	26.27	1513.65	363.51	787.30	811.61	16.81	-1.003	0.000	0.041
175.00	-7.08	-0.98	0.00	-17.61	0.00	17.61	1462.77	347.12	717.90	748.63	17.87	-1.021	0.000	0.028
180.00	-6.48	-0.90	0.00	-12.72	0.00	12.72	1400.09	330.73	651.70	682.38	18.94	-1.035	0.000	0.023
180.00	-6.48	-0.90	0.00	-12.72	0.00	12.72	678.42	203.53	25205.7	396.30	18.94	-1.035	0.000	0.042
185.00	-5.86	-0.83	0.00	-8.21	0.00	8.21	678.42	203.53	25205.7	396.30	20.03	-1.046	0.000	0.029
190.00	-5.23	-0.75	0.00	-4.08	0.00	4.08	678.42	203.53	25205.7	396.30	21.13	-1.052	0.000	0.018

Calculated Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (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



195.00	0.00	-0.65	0.00	-0.33	0.00	0.33	678.42	203.53	25205.7	396.30	22.23	-1.054	0.000	0.001
--------	------	-------	------	-------	------	------	--------	--------	---------	--------	-------	--------	-------	-------

Seismic Segment Forces (Factored)

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (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: 1.2D + 1.0Ev + 1.0Eh

Iterations 23

Gust Response Factor 1.10

Sds 0.20

Ss 0.18

Dead Load Factor 1.20 **Seismic Load Factor** 1.00

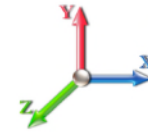
Sd1 0.09

S1 0.05

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29

SA 0.03

Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	
						R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	
1.00	RT1	287.69	0.50	11.23	0.00	
5.00		1141.2	3.00	44.55	0.01	
10.00		1405.1	7.50	54.86	0.07	
15.00		1381.2	12.50	53.92	0.19	
20.00		1357.4	17.50	52.99	0.36	
25.00		1333.5	22.50	52.06	0.57	
30.00		1309.7	27.50	51.13	0.83	
35.00		1285.9	32.50	50.20	1.11	
40.00		1262.0	37.50	49.27	1.43	
41.00	Bot - Section 2	249.56	40.50	9.74	0.07	
45.00		1875.6	43.00	73.23	4.15	
48.00	Top - Section 1	1386.7	46.50	54.14	2.65	
50.00		488.98	49.00	19.09	0.37	
55.00		1205.7	52.50	47.07	2.55	
60.00		1181.9	57.50	46.14	2.94	
65.00		1158.0	62.50	45.21	3.34	
70.00	Appurtenance(s)	1258.2	67.50	49.12	4.60	
75.00		1109.4	72.50	43.31	4.12	
80.00		1085.6	77.50	42.38	4.51	
81.00	Top - Section 2	214.26	80.50	8.36	0.19	
85.00	Bot - Section 4	725.96	83.00	28.34	2.31	
90.00		1648.3	87.50	64.35	13.26	
91.00	Top - Section 3	324.90	90.50	12.68	0.55	
95.00		702.62	93.00	27.43	2.72	
100.00		860.40	97.50	33.59	4.49	
105.00		840.53	102.50	32.81	4.73	
110.00		820.67	107.50	32.04	4.96	
115.00		800.81	112.50	31.26	5.17	
120.00		780.94	117.50	30.49	5.37	
125.00	Top - Section 4	761.08	122.50	29.71	5.54	
130.00	Bot - Section 6	622.09	127.50	24.29	4.01	
135.00	Top - Section 5	1077.7	132.50	42.08	13.00	
140.00		597.06	137.50	23.31	4.30	
145.00		581.17	142.50	22.69	4.37	
150.00		565.28	147.50	22.07	4.43	
155.00		549.38	152.50	21.45	4.47	
160.00		533.49	157.50	20.83	4.50	
165.00	Appurtenance(s)	3203.2	162.50	125.06	172.70	
170.00		457.67	167.50	17.87	3.75	
175.00	Appurtenance(s)	3250.8	172.50	126.91	200.44	
180.00	Top - Section 6	344.41	177.50	13.45	2.38	
185.00		372.09	182.50	14.53	2.94	
190.00		372.09	187.50	14.53	3.10	
195.00	Appurtenance(s)	2791.0	192.50	108.96	184.00	
Totals:		45,562.4		1,778.8	691.6	
						Total Wind: 29,281.0

Seismic Segment Forces (Factored)

Structure:	CT01497-S-SBA	Code:	EIA/TIA-222-H	7/15/2021
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (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



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

Calculated Forces

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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: 1.2D + 1.0Ev + 1.0Eh

Iterations 23

Gust Response Factor 1.10

Sds 0.20

Ss 0.18

Dead Load Factor 1.20

Seismic Load Factor 1.00

Sd1 0.09

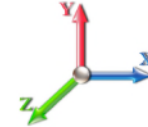
S1 0.05

Wind Load Factor 0.00

Structure Frequency (f1) 0.29

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	-55.47	-0.69	0.00	-121.04	0.00	121.04	4628.91	1339.45	7126.38	6119.66	0.00	0.00	0.00	0.025
1.00	-55.12	-0.69	0.00	-120.35	0.00	120.35	4620.83	1334.53	7074.15	6086.42	0.00	0.00	0.00	0.025
1.00	-55.12	-0.69	0.00	-120.35	0.00	120.35	4620.83	1334.53	7074.15	6086.42	0.00	0.00	0.00	0.025
5.00	-53.72	-0.70	0.00	-117.57	0.00	117.57	4587.84	1314.86	6867.16	5953.37	0.00	0.00	0.00	0.031
10.00	-52.01	-0.70	0.00	-114.09	0.00	114.09	4545.12	1290.28	6612.74	5787.00	0.01	-0.01	0.00	0.031
15.00	-50.33	-0.70	0.00	-110.59	0.00	110.59	4500.76	1265.69	6363.12	5620.67	0.02	-0.01	0.00	0.031
20.00	-48.68	-0.71	0.00	-107.07	0.00	107.07	4454.76	1241.10	6118.30	5454.49	0.03	-0.02	0.00	0.031
25.00	-47.05	-0.71	0.00	-103.54	0.00	103.54	4407.12	1216.52	5878.29	5288.58	0.05	-0.02	0.00	0.030
30.00	-45.46	-0.71	0.00	-99.99	0.00	99.99	4357.84	1191.93	5643.07	5123.07	0.08	-0.03	0.00	0.030
35.00	-43.89	-0.71	0.00	-96.43	0.00	96.43	4306.92	1167.34	5412.67	4958.08	0.11	-0.03	0.00	0.030
40.00	-42.36	-0.71	0.00	-92.86	0.00	92.86	4254.35	1142.76	5187.06	4793.73	0.14	-0.04	0.00	0.029
41.00	-42.05	-0.72	0.00	-92.15	0.00	92.15	4243.64	1137.84	5142.51	4760.94	0.15	-0.04	0.00	0.029
45.00	-39.75	-0.71	0.00	-89.29	0.00	89.29	4200.14	1118.17	4966.25	4630.13	0.19	-0.04	0.00	0.029
48.00	-38.05	-0.71	0.00	-87.15	0.00	87.15	4202.19	1119.08	4974.38	4636.19	0.21	-0.05	0.00	0.028
50.00	-37.46	-0.71	0.00	-85.73	0.00	85.73	4180.07	1109.25	4887.33	4570.98	0.23	-0.05	0.00	0.028
55.00	-35.99	-0.71	0.00	-82.17	0.00	82.17	4123.62	1084.66	4673.07	4408.60	0.29	-0.05	0.00	0.027
60.00	-34.55	-0.71	0.00	-78.61	0.00	78.61	4065.54	1060.07	4463.61	4247.27	0.34	-0.06	0.00	0.027
65.00	-33.15	-0.71	0.00	-75.06	0.00	75.06	4005.81	1035.49	4258.96	4087.10	0.41	-0.06	0.00	0.027
70.00	-31.62	-0.71	0.00	-71.51	0.00	71.51	3944.44	1010.90	4059.10	3928.21	0.48	-0.07	0.00	0.026
75.00	-30.27	-0.70	0.00	-67.98	0.00	67.98	3881.43	986.31	3864.05	3770.72	0.55	-0.08	0.00	0.026
80.00	-28.95	-0.70	0.00	-64.47	0.00	64.47	3816.78	961.72	3673.81	3614.75	0.63	-0.08	0.00	0.025
81.00	-28.69	-0.70	0.00	-63.77	0.00	63.77	3803.65	956.81	3636.33	3583.75	0.65	-0.08	0.00	0.025
81.00	-28.69	-0.70	0.00	-63.77	0.00	63.77	2964.89	798.43	3038.55	2801.11	0.65	-0.08	0.00	0.032
85.00	-27.82	-0.70	0.00	-60.97	0.00	60.97	2929.08	782.04	2915.07	2710.08	0.72	-0.09	0.00	0.032
90.00	-25.80	-0.68	0.00	-57.48	0.00	57.48	2882.85	761.55	2764.32	2596.94	0.82	-0.09	0.00	0.031
91.00	-25.41	-0.69	0.00	-56.79	0.00	56.79	2898.33	768.33	2813.78	2634.30	0.84	-0.10	0.00	0.030
95.00	-24.56	-0.68	0.00	-54.05	0.00	54.05	2860.60	751.94	2695.00	2544.15	0.92	-0.10	0.00	0.030
100.00	-23.52	-0.68	0.00	-50.63	0.00	50.63	2811.95	731.45	2550.13	2432.25	1.03	-0.11	0.00	0.029
105.00	-22.51	-0.68	0.00	-47.23	0.00	47.23	2761.66	710.96	2409.26	2321.34	1.15	-0.12	0.00	0.028
110.00	-21.52	-0.67	0.00	-43.85	0.00	43.85	2709.73	690.47	2272.40	2211.55	1.28	-0.12	0.00	0.028
115.00	-20.55	-0.67	0.00	-40.49	0.00	40.49	2656.16	669.98	2139.54	2103.00	1.41	-0.13	0.00	0.027
120.00	-19.61	-0.66	0.00	-37.15	0.00	37.15	2600.95	649.49	2010.67	1995.80	1.56	-0.14	0.00	0.026
125.00	-18.70	-0.66	0.00	-33.83	0.00	33.83	2544.10	629.00	1885.82	1890.08	1.71	-0.15	0.00	0.025
125.00	-18.70	-0.66	0.00	-33.83	0.00	33.83	1882.48	504.07	1513.88	1403.39	1.71	-0.15	0.00	0.034
130.00	-17.96	-0.65	0.00	-30.55	0.00	30.55	1845.69	487.68	1417.02	1330.91	1.87	-0.16	0.00	0.033
135.00	-16.65	-0.64	0.00	-27.27	0.00	27.27	1823.78	478.25	1362.76	1289.51	2.04	-0.17	0.00	0.030
140.00	-15.94	-0.64	0.00	-24.07	0.00	24.07	1784.40	461.86	1270.94	1218.11	2.21	-0.17	0.00	0.029
145.00	-15.25	-0.63	0.00	-20.89	0.00	20.89	1743.38	445.47	1182.33	1147.55	2.40	-0.18	0.00	0.027
150.00	-14.57	-0.63	0.00	-17.73	0.00	17.73	1700.71	429.08	1096.92	1077.96	2.60	-0.19	0.00	0.025
155.00	-13.92	-0.62	0.00	-14.59	0.00	14.59	1656.41	412.69	1014.72	1009.45	2.80	-0.20	0.00	0.023
160.00	-13.29	-0.62	0.00	-11.47	0.00	11.47	1610.46	396.29	935.71	942.14	3.02	-0.21	0.00	0.020
165.00	-9.35	-0.43	0.00	-8.38	0.00	8.38	1562.88	379.90	859.91	876.15	3.24	-0.21	0.00	0.016
170.00	-8.80	-0.43	0.00	-6.23	0.00	6.23	1513.65	363.51	787.30	811.61	3.46	-0.22	0.00	0.013
175.00	-4.79	-0.21	0.00	-4.09	0.00	4.09	1462.77	347.12	717.90	748.63	3.69	-0.22	0.00	0.009
180.00	-4.37	-0.21	0.00	-3.04	0.00	3.04	1400.09	330.73	651.70	682.38	3.93	-0.23	0.00	0.008
180.00	-4.37	-0.21	0.00	-3.04	0.00	3.04	678.42	203.53	25205.7	396.30	3.93	-0.23	0.00	0.014
185.00	-3.91	-0.20	0.00	-2.00	0.00	2.00	678.42	203.53	25205.7	396.30	4.16	-0.23	0.00	0.011

Calculated Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (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



190.00	-3.45	-0.20	0.00	-0.99	0.00	0.99	678.42	203.53	25205.7	396.30	4.40	-0.23	0.008
195.00	0.00	-0.18	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	4.64	-0.23	0.000

Seismic Segment Forces (Factored)

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 27

Load Case: 0.9D + 1.0Ev + 1.0Eh

Iterations 22

Gust Response Factor 1.10

Sds 0.20

Ss 0.18

Dead Load Factor 0.90 **Seismic Load Factor** 1.00

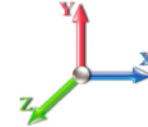
Sd1 0.09

S1 0.05

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29

SA 0.03

Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	
						R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	
1.00	RT1	280.58	0.50	10.95	0.00	
5.00		1112.7	3.00	43.44	0.01	
10.00		1369.5	7.50	53.47	0.07	
15.00		1345.6	12.50	52.54	0.18	
20.00		1321.8	17.50	51.60	0.35	
25.00		1298.0	22.50	50.67	0.56	
30.00		1274.1	27.50	49.74	0.80	
35.00		1250.3	32.50	48.81	1.08	
40.00		1226.5	37.50	47.88	1.38	
41.00	Bot - Section 2	242.44	40.50	9.46	0.06	
45.00		1847.2	43.00	72.12	4.12	
48.00	Top - Section 1	1365.3	46.50	53.30	2.63	
50.00		474.75	49.00	18.53	0.35	
55.00		1170.1	52.50	45.68	2.47	
60.00		1146.3	57.50	44.75	2.84	
65.00		1122.5	62.50	43.82	3.22	
70.00	Appurtenance(s)	1222.6	67.50	47.73	4.45	
75.00		1074.1	72.50	41.93	3.96	
80.00		1050.2	77.50	41.00	4.33	
81.00	Top - Section 2	207.20	80.50	8.09	0.18	
85.00	Bot - Section 4	697.69	83.00	27.24	2.19	
90.00		1613.0	87.50	62.97	13.02	
91.00	Top - Section 3	317.83	90.50	12.41	0.54	
95.00		674.35	93.00	26.33	2.57	
100.00		825.06	97.50	32.21	4.23	
105.00		805.19	102.50	31.43	4.45	
110.00		785.33	107.50	30.66	4.66	
115.00		765.47	112.50	29.88	4.85	
120.00		745.60	117.50	29.11	5.02	
125.00	Top - Section 4	725.74	122.50	28.33	5.17	
130.00	Bot - Section 6	586.75	127.50	22.91	3.66	
135.00	Top - Section 5	1042.4	132.50	40.70	12.47	
140.00		561.72	137.50	21.93	3.90	
145.00		545.83	142.50	21.31	3.95	
150.00		529.94	147.50	20.69	3.99	
155.00		514.04	152.50	20.07	4.02	
160.00		498.15	157.50	19.45	4.02	
165.00	Appurtenance(s)	3167.9	162.50	123.68	173.23	
170.00		433.34	167.50	16.92	3.44	
175.00	Appurtenance(s)	3226.5	172.50	125.96	202.50	
180.00	Top - Section 6	340.45	177.50	13.29	2.39	
185.00		368.13	182.50	14.37	2.95	
190.00		368.13	187.50	14.37	3.11	
195.00	Appurtenance(s)	2787.1	192.50	108.81	188.16	
Totals:		44,328.3		1,730.6	691.6	
						Total Wind: 29,281.0

Seismic Segment Forces (Factored)

Structure:	CT01497-S-SBA	Code:	EIA/TIA-222-H	7/15/2021
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (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



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

Calculated Forces

Structure: CT01497-S-SBA **Code:** EIA/TIA-222-H 7/15/2021
Site Name: Plymouth 2 CT **Exposure:** C
Height: 195.00 (ft) **Crest Height:** 0.00
Base Elev: 0.000 (ft) **Site Class:** D - Stiff Soil
Gh: 1.1 **Topography:** 1 **Struct Class:** II Page: 29



Load Case: 0.9D + 1.0Ev + 1.0Eh

Iterations 22

Gust Response Factor 1.10

Sds 0.20

Ss 0.18

Dead Load Factor 0.90

Seismic Load Factor 1.00

Sd1 0.09

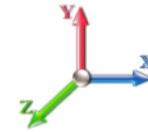
S1 0.05

Wind Load Factor 0.00

Structure Frequency (f1) 0.29

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	-42.00	-0.69	0.00	-119.66	0.00	119.66	4628.91	1339.45	7126.38	6119.66	0.00	0.00	0.00	0.023
1.00	-41.73	-0.69	0.00	-118.97	0.00	118.97	4620.83	1334.53	7074.15	6086.42	0.00	0.00	0.00	0.023
1.00	-41.73	-0.69	0.00	-118.97	0.00	118.97	4620.83	1334.53	7074.15	6086.42	0.00	0.00	0.00	0.023
5.00	-40.68	-0.69	0.00	-116.21	0.00	116.21	4587.84	1314.86	6867.16	5953.37	0.00	0.00	0.00	0.028
10.00	-39.38	-0.70	0.00	-112.74	0.00	112.74	4545.12	1290.28	6612.74	5787.00	0.01	-0.01	0.00	0.028
15.00	-38.11	-0.70	0.00	-109.25	0.00	109.25	4500.76	1265.69	6363.12	5620.67	0.02	-0.01	0.00	0.028
20.00	-36.85	-0.70	0.00	-105.76	0.00	105.76	4454.76	1241.10	6118.30	5454.49	0.03	-0.02	0.00	0.028
25.00	-35.62	-0.70	0.00	-102.25	0.00	102.25	4407.12	1216.52	5878.29	5288.58	0.05	-0.02	0.00	0.027
30.00	-34.42	-0.71	0.00	-98.73	0.00	98.73	4357.84	1191.93	5643.07	5123.07	0.08	-0.03	0.00	0.027
35.00	-33.23	-0.71	0.00	-95.20	0.00	95.20	4306.92	1167.34	5412.67	4958.08	0.11	-0.03	0.00	0.027
40.00	-32.07	-0.71	0.00	-91.67	0.00	91.67	4254.35	1142.76	5187.06	4793.73	0.14	-0.04	0.00	0.027
41.00	-31.84	-0.71	0.00	-90.96	0.00	90.96	4243.64	1137.84	5142.51	4760.94	0.15	-0.04	0.00	0.027
45.00	-30.10	-0.70	0.00	-88.13	0.00	88.13	4200.14	1118.17	4966.25	4630.13	0.18	-0.04	0.00	0.026
48.00	-28.81	-0.70	0.00	-86.02	0.00	86.02	4202.19	1119.08	4974.38	4636.19	0.21	-0.04	0.00	0.025
50.00	-28.36	-0.70	0.00	-84.61	0.00	84.61	4180.07	1109.25	4887.33	4570.98	0.23	-0.05	0.00	0.025
55.00	-27.25	-0.70	0.00	-81.10	0.00	81.10	4123.62	1084.66	4673.07	4408.60	0.28	-0.05	0.00	0.025
60.00	-26.16	-0.70	0.00	-77.59	0.00	77.59	4065.54	1060.07	4463.61	4247.27	0.34	-0.06	0.00	0.025
65.00	-25.10	-0.70	0.00	-74.08	0.00	74.08	4005.81	1035.49	4258.96	4087.10	0.40	-0.06	0.00	0.024
70.00	-23.94	-0.70	0.00	-70.59	0.00	70.59	3944.44	1010.90	4059.10	3928.21	0.47	-0.07	0.00	0.024
75.00	-22.92	-0.69	0.00	-67.11	0.00	67.11	3881.43	986.31	3864.05	3770.72	0.55	-0.07	0.00	0.024
80.00	-21.92	-0.69	0.00	-63.65	0.00	63.65	3816.78	961.72	3673.81	3614.75	0.63	-0.08	0.00	0.023
81.00	-21.72	-0.69	0.00	-62.96	0.00	62.96	3803.65	956.81	3636.33	3583.75	0.64	-0.08	0.00	0.023
81.00	-21.72	-0.69	0.00	-62.96	0.00	62.96	2964.89	798.43	3038.55	2801.11	0.64	-0.08	0.00	0.030
85.00	-21.06	-0.69	0.00	-60.20	0.00	60.20	2929.08	782.04	2915.07	2710.08	0.71	-0.09	0.00	0.029
90.00	-19.54	-0.67	0.00	-56.76	0.00	56.76	2882.85	761.55	2764.32	2596.94	0.81	-0.09	0.00	0.029
91.00	-19.24	-0.67	0.00	-56.09	0.00	56.09	2898.33	768.33	2813.78	2634.30	0.83	-0.10	0.00	0.028
95.00	-18.59	-0.67	0.00	-53.39	0.00	53.39	2860.60	751.94	2695.00	2544.15	0.91	-0.10	0.00	0.027
100.00	-17.81	-0.67	0.00	-50.02	0.00	50.02	2811.95	731.45	2550.13	2432.25	1.02	-0.11	0.00	0.027
105.00	-17.04	-0.67	0.00	-46.67	0.00	46.67	2761.66	710.96	2409.26	2321.34	1.14	-0.12	0.00	0.026
110.00	-16.29	-0.66	0.00	-43.34	0.00	43.34	2709.73	690.47	2272.40	2211.55	1.26	-0.12	0.00	0.026
115.00	-15.56	-0.66	0.00	-40.03	0.00	40.03	2656.16	669.98	2139.54	2103.00	1.40	-0.13	0.00	0.025
120.00	-14.85	-0.65	0.00	-36.75	0.00	36.75	2600.95	649.49	2010.67	1995.80	1.54	-0.14	0.00	0.024
125.00	-14.16	-0.65	0.00	-33.48	0.00	33.48	2544.10	629.00	1885.82	1890.08	1.69	-0.15	0.00	0.023
125.00	-14.16	-0.65	0.00	-33.48	0.00	33.48	1882.48	504.07	1513.88	1403.39	1.69	-0.15	0.00	0.031
130.00	-13.60	-0.64	0.00	-30.24	0.00	30.24	1845.69	487.68	1417.02	1330.91	1.84	-0.15	0.00	0.030
135.00	-12.61	-0.63	0.00	-27.02	0.00	27.02	1823.78	478.25	1362.76	1289.51	2.01	-0.16	0.00	0.028
140.00	-12.07	-0.63	0.00	-23.86	0.00	23.86	1784.40	461.86	1270.94	1218.11	2.19	-0.17	0.00	0.026
145.00	-11.55	-0.62	0.00	-20.72	0.00	20.72	1743.38	445.47	1182.33	1147.55	2.37	-0.18	0.00	0.025
150.00	-11.04	-0.62	0.00	-17.60	0.00	17.60	1700.71	429.08	1096.92	1077.96	2.57	-0.19	0.00	0.023
155.00	-10.55	-0.62	0.00	-14.49	0.00	14.49	1656.41	412.69	1014.72	1009.45	2.77	-0.20	0.00	0.021
160.00	-10.07	-0.61	0.00	-11.41	0.00	11.41	1610.46	396.29	935.71	942.14	2.98	-0.20	0.00	0.018
165.00	-7.08	-0.43	0.00	-8.35	0.00	8.35	1562.88	379.90	859.91	876.15	3.20	-0.21	0.00	0.014
170.00	-6.67	-0.42	0.00	-6.21	0.00	6.21	1513.65	363.51	787.30	811.61	3.42	-0.22	0.00	0.012
175.00	-3.63	-0.21	0.00	-4.09	0.00	4.09	1462.77	347.12	717.90	748.63	3.65	-0.22	0.00	0.008
180.00	-3.31	-0.21	0.00	-3.04	0.00	3.04	1400.09	330.73	651.70	682.38	3.88	-0.22	0.00	0.007
180.00	-3.31	-0.21	0.00	-3.04	0.00	3.04	678.42	203.53	25205.7	396.30	3.88	-0.22	0.00	0.013
185.00	-2.96	-0.20	0.00	-2.01	0.00	2.01	678.42	203.53	25205.7	396.30	4.12	-0.23	0.00	0.009

Calculated Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 30



190.00	-2.62	-0.20	0.00	-0.99	0.00	0.99	678.42	203.53	25205.7	396.30	4.35	-0.23	0.006
195.00	0.00	-0.19	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	4.59	-0.23	0.000

Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 31

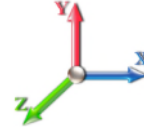


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



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	RB1	1.00	0.85	5.343	5.88	270.46	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.85	5.343	5.88	269.48	0.730	0.000	1.00	5.448	3.98	23.4	0.0	259.2
5.00		1.00	0.85	5.343	5.88	265.53	0.730	0.000	4.00	21.593	15.76	92.6	0.0	1027.4
10.00		1.00	0.85	5.343	5.88	260.59	0.730	0.000	5.00	26.543	19.38	113.9	0.0	1262.8
15.00		1.00	0.85	5.343	5.88	255.66	0.730	0.000	5.00	26.045	19.01	111.8	0.0	1238.9
20.00		1.00	0.90	5.670	6.24	258.26	0.730	0.000	5.00	25.547	18.65	116.3	0.0	1215.1
25.00		1.00	0.95	5.942	6.54	259.19	0.730	0.000	5.00	25.049	18.29	119.5	0.0	1191.3
30.00		1.00	0.98	6.175	6.79	258.91	0.730	0.000	5.00	24.550	17.92	121.7	0.0	1167.4
35.00		1.00	1.01	6.379	7.02	257.75	0.730	0.000	5.00	24.052	17.56	123.2	0.0	1143.6
40.00		1.00	1.04	6.560	7.22	255.93	0.730	0.000	5.00	23.554	17.19	124.1	0.0	1119.8
41.00	Bot - Section 2	1.00	1.05	6.595	7.25	255.50	0.730	0.000	1.00	4.651	3.40	24.6	0.0	221.1
45.00		1.00	1.07	6.725	7.40	253.59	0.730	0.000	4.00	18.659	13.62	100.8	0.0	1761.8
48.00	Top - Section 1	1.00	1.08	6.817	7.50	251.97	0.730	0.000	3.00	13.785	10.06	75.5	0.0	1301.3
50.00		1.00	1.09	6.876	7.56	254.38	0.730	0.000	2.00	9.091	6.64	50.2	0.0	432.1
55.00		1.00	1.12	7.015	7.72	251.29	0.730	0.000	5.00	22.378	16.34	126.1	0.0	1063.4
60.00		1.00	1.14	7.145	7.86	247.90	0.730	0.000	5.00	21.880	15.97	125.5	0.0	1039.6
65.00		1.00	1.16	7.266	7.99	244.24	0.730	0.000	5.00	21.382	15.61	124.8	0.0	1015.8
70.00	Appurtenance(s)	1.00	1.17	7.381	8.12	240.35	0.730	0.000	5.00	20.884	15.25	123.8	0.0	991.9
75.00		1.00	1.19	7.489	8.24	236.26	0.730	0.000	5.00	20.386	14.88	122.6	0.0	968.1
80.00		1.00	1.21	7.591	8.35	231.99	0.730	0.000	5.00	19.888	14.52	121.2	0.0	944.3
81.00	Top - Section 2	1.00	1.21	7.611	8.37	231.11	0.730	0.000	1.00	3.918	2.86	23.9	0.0	186.0
85.00	Bot - Section 4	1.00	1.22	7.689	8.46	227.55	0.730	0.000	4.00	15.472	11.29	95.5	0.0	612.9
90.00		1.00	1.24	7.782	8.56	222.97	0.730	0.000	5.00	19.156	13.98	119.7	0.0	1507.0
91.00	Top - Section 3	1.00	1.24	7.800	8.58	222.04	0.730	0.000	1.00	3.771	2.75	23.6	0.0	296.6
95.00		1.00	1.25	7.871	8.66	221.43	0.730	0.000	4.00	14.887	10.87	94.1	0.0	589.5
100.00		1.00	1.27	7.956	8.75	216.61	0.730	0.000	5.00	18.160	13.26	116.0	0.0	719.0
105.00		1.00	1.28	8.038	8.84	211.67	0.730	0.000	5.00	17.662	12.89	114.0	0.0	699.2
110.00		1.00	1.29	8.118	8.93	206.62	0.730	0.000	5.00	17.164	12.53	111.9	0.0	679.3
115.00		1.00	1.30	8.194	9.01	201.48	0.730	0.000	5.00	16.666	12.17	109.7	0.0	659.4
120.00		1.00	1.32	8.268	9.09	196.25	0.730	0.000	5.00	16.168	11.80	107.3	0.0	639.6
125.00	Top - Section 4	1.00	1.33	8.339	9.17	190.93	0.730	0.000	5.00	15.670	11.44	104.9	0.0	619.7
130.00	Bot - Section 6	1.00	1.34	8.408	9.25	185.52	0.730	0.000	5.00	15.172	11.08	102.4	0.0	480.7
135.00	Top - Section 5	1.00	1.35	8.475	9.32	180.05	0.730	0.000	5.00	14.885	10.87	101.3	0.0	936.4
140.00		1.00	1.36	8.540	9.39	177.15	0.730	0.000	5.00	14.387	10.50	98.7	0.0	455.7
145.00		1.00	1.37	8.604	9.46	171.54	0.730	0.000	5.00	13.889	10.14	96.0	0.0	439.8
150.00		1.00	1.38	8.665	9.53	165.87	0.730	0.000	5.00	13.391	9.78	93.2	0.0	423.9
155.00		1.00	1.39	8.725	9.60	160.13	0.730	0.000	5.00	12.893	9.41	90.3	0.0	408.0
160.00		1.00	1.40	8.784	9.66	154.34	0.730	0.000	5.00	12.395	9.05	87.4	0.0	392.1
165.00	Appurtenance(s)	1.00	1.41	8.841	9.72	148.49	0.730	0.000	5.00	11.897	8.69	84.5	0.0	376.2
170.00		1.00	1.42	8.897	9.79	142.59	0.730	0.000	5.00	11.399	8.32	81.4	0.0	360.4
175.00	Appurtenance(s)	1.00	1.42	8.951	9.85	136.64	0.730	0.000	5.00	10.901	7.96	78.4	0.0	344.5
180.00	Top - Section 6	1.00	1.43	9.004	9.90	130.64	0.730	0.000	5.00	10.403	7.59	75.2	0.0	328.6
185.00		1.00	1.44	9.056	9.96	129.03	0.600	0.000	5.00	10.000	6.00	59.8	0.0	356.3
190.00		1.00	1.45	9.107	10.02	129.39	0.600	0.000	5.00	10.000	6.00	60.1	0.0	356.3
195.00	Appurtenance(s)	1.00	1.46	9.157	10.07	129.74	0.600	0.000	5.00	10.000	6.00	60.4	0.0	356.3
Totals:									195.00			4,131.3		32,588.3

Discrete Appurtenance Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 32



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	195.00	800 MHz RRH	3	9.167	10.084	0.45	0.90	3.36	159.00	0.000	1.000	33.90	0.00	33.90
2	195.00	APXVSP18-C-A20	3	9.167	10.084	0.83	1.00	19.97	171.00	0.000	1.000	201.37	0.00	201.37
3	195.00	APXVTM14-C-I20	3	9.167	10.084	0.77	1.00	14.65	168.60	0.000	1.000	147.68	0.00	147.68
4	195.00	1900MHz RRH (65MHz)	3	9.167	10.084	0.45	0.90	3.74	180.00	0.000	1.000	37.71	0.00	37.71
5	195.00	T-Arms w/ Working	3	9.157	10.073	0.56	0.75	29.95	1500.00	0.000	0.000	301.72	0.00	0.00
6	195.00	TD-RRH8x20-25	3	9.167	10.084	0.45	0.90	5.47	210.00	0.000	1.000	55.13	0.00	55.13
7	195.00	ALU 800MHz External	3	9.167	10.084	0.45	0.90	1.05	26.40	0.000	1.000	10.62	0.00	10.62
8	195.00	ACU-A20-N	4	9.167	10.084	0.45	0.90	0.25	4.00	0.000	1.000	2.54	0.00	2.54
9	175.00	(3) T-Arm Kit	1	8.951	9.846	0.56	0.75	9.00	500.00	0.000	0.000	88.62	0.00	0.00
10	175.00	FE15501P77/75	6	8.951	9.846	0.40	0.80	1.70	85.80	0.000	0.000	16.78	0.00	0.00
11	175.00	4449 B71 + B85	3	8.951	9.846	0.40	0.80	2.36	219.60	0.000	0.000	23.28	0.00	0.00
12	175.00	KRY 112 489/2	3	8.951	9.846	0.40	0.80	0.78	46.20	0.000	0.000	7.68	0.00	0.00
13	175.00	KRY 112 144/1	3	8.951	9.846	0.40	0.80	0.49	33.00	0.000	0.000	4.84	0.00	0.00
14	175.00	RR90-17-02DP	3	8.951	9.846	0.54	0.80	7.12	40.50	0.000	0.000	70.06	0.00	0.00
15	175.00	T-Arms w/ Working	3	8.951	9.846	0.56	0.75	29.95	1500.00	0.000	0.000	294.92	0.00	0.00
16	175.00	APXVAARR24_43-U-NA2	3	8.951	9.846	0.56	0.80	34.00	384.00	0.000	0.000	334.80	0.00	0.00
17	165.00	MT6407-77A	3	8.841	9.725	0.56	0.80	7.88	238.20	0.000	0.000	76.62	0.00	0.00
18	165.00	Low Profile	1	8.841	9.725	1.00	1.00	22.00	1500.00	0.000	0.000	213.95	0.00	0.00
19	165.00	MX06FRO660-03	6	8.841	9.725	0.70	0.80	41.69	426.00	0.000	0.000	405.44	0.00	0.00
20	165.00	Samsung B2/B66A	3	8.841	9.725	0.40	0.80	2.26	253.20	0.000	0.000	21.94	0.00	0.00
21	165.00	Samsung B5/B13	3	8.841	9.725	0.40	0.80	2.26	210.90	0.000	0.000	21.94	0.00	0.00
22	165.00	Raycap	1	8.841	9.725	0.40	0.80	1.52	32.00	0.000	0.000	14.74	0.00	0.00
23	165.00	91900314	1	8.841	9.725	1.00	1.00	0.00	25.35	0.000	0.000	0.00	0.00	0.00
24	70.00	Side Arm (L. Heavy)	1	7.381	8.119	1.00	1.00	3.50	120.00	0.000	0.000	28.42	0.00	0.00
25	70.00	407577689 Gps	1	7.381	8.119	0.50	1.00	0.46	4.00	0.000	0.000	3.69	0.00	0.00
Totals:									8,037.75	2,418.40				

Total Applied Force Summary

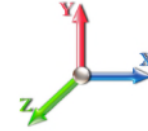
Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 33



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		23.38	282.95	0.00	0.00
5.00		92.65	1122.27	0.00	0.00
10.00		113.89	1381.38	0.00	0.00
15.00		111.75	1357.54	0.00	0.00
20.00		116.31	1333.71	0.00	0.00
25.00		119.52	1309.87	0.00	0.00
30.00		121.73	1286.04	0.00	0.00
35.00		123.20	1262.20	0.00	0.00
40.00		124.09	1238.36	0.00	0.00
41.00		24.63	244.81	0.00	0.00
45.00		100.76	1856.70	0.00	0.00
48.00		75.46	1372.50	0.00	0.00
50.00		50.19	479.49	0.00	0.00
55.00		126.06	1182.04	0.00	0.00
60.00		125.53	1158.21	0.00	0.00
65.00		124.76	1134.37	0.00	0.00
70.00	(2) attachments	155.88	1234.54	0.00	0.00
75.00		122.59	1085.90	0.00	0.00
80.00		121.23	1062.06	0.00	0.00
81.00		23.94	209.55	0.00	0.00
85.00		95.52	707.11	0.00	0.00
90.00		119.70	1624.78	0.00	0.00
91.00		23.62	320.19	0.00	0.00
95.00		94.09	683.77	0.00	0.00
100.00		116.02	836.84	0.00	0.00
105.00		114.01	816.97	0.00	0.00
110.00		111.88	797.11	0.00	0.00
115.00		109.66	777.25	0.00	0.00
120.00		107.34	757.38	0.00	0.00
125.00		104.93	737.52	0.00	0.00
130.00		102.44	598.53	0.00	0.00
135.00		101.30	1054.22	0.00	0.00
140.00		98.67	573.50	0.00	0.00
145.00		95.96	557.61	0.00	0.00
150.00		93.18	541.72	0.00	0.00
155.00		90.34	525.82	0.00	0.00
160.00		87.43	509.93	0.00	0.00
165.00	(18) attachments	839.10	3179.69	0.00	0.00
170.00		81.44	441.45	0.00	0.00
175.00	(25) attachments	919.33	3234.66	0.00	0.00
180.00		75.22	341.77	0.00	0.00
185.00		59.77	369.45	0.00	0.00
190.00		60.11	369.45	0.00	0.00
195.00	(25) attachments	851.11	2788.45	0.00	488.96
Totals:		6,549.71	44,739.68	0.00	488.96

Calculated Forces

Structure: CT01497-S-SBA

Code: EIA/TIA-222-H

7/15/2021

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 34

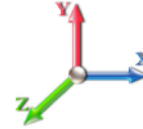


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load 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	-44.74	-6.55	0.00	-837.37	0.00	837.37	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.114
1.00	-44.46	-6.54	0.00	-830.82	0.00	830.82	4620.83	1334.53	7074.15	6086.42	0.00	-0.005	0.000	0.113
1.00	-44.46	-6.54	0.00	-830.82	0.00	830.82	4620.83	1334.53	7074.15	6086.42	0.00	-0.005	0.000	0.113
5.00	-43.33	-6.46	0.00	-804.68	0.00	804.68	4587.84	1314.86	6867.16	5953.37	0.01	-0.023	0.000	0.145
10.00	-41.95	-6.37	0.00	-772.37	0.00	772.37	4545.12	1290.28	6612.74	5787.00	0.05	-0.053	0.000	0.143
15.00	-40.58	-6.28	0.00	-740.53	0.00	740.53	4500.76	1265.69	6363.12	5620.67	0.12	-0.083	0.000	0.141
20.00	-39.25	-6.18	0.00	-709.14	0.00	709.14	4454.76	1241.10	6118.30	5454.49	0.23	-0.114	0.000	0.139
25.00	-37.93	-6.08	0.00	-678.24	0.00	678.24	4407.12	1216.52	5878.29	5288.58	0.36	-0.145	0.000	0.137
30.00	-36.65	-5.97	0.00	-647.85	0.00	647.85	4357.84	1191.93	5643.07	5123.07	0.53	-0.177	0.000	0.135
35.00	-35.38	-5.87	0.00	-617.98	0.00	617.98	4306.92	1167.34	5412.67	4958.08	0.74	-0.209	0.000	0.133
40.00	-34.14	-5.75	0.00	-588.65	0.00	588.65	4254.35	1142.76	5187.06	4793.73	0.97	-0.242	0.000	0.131
41.00	-33.89	-5.73	0.00	-582.91	0.00	582.91	4243.64	1137.84	5142.51	4760.94	1.02	-0.249	0.000	0.130
45.00	-32.04	-5.64	0.00	-559.97	0.00	559.97	4200.14	1118.17	4966.25	4630.13	1.24	-0.275	0.000	0.129
48.00	-30.66	-5.56	0.00	-543.06	0.00	543.06	4202.19	1119.08	4974.38	4636.19	1.42	-0.296	0.000	0.124
50.00	-30.18	-5.52	0.00	-531.94	0.00	531.94	4180.07	1109.25	4887.33	4570.98	1.55	-0.310	0.000	0.124
55.00	-29.00	-5.41	0.00	-504.32	0.00	504.32	4123.62	1084.66	4673.07	4408.60	1.89	-0.342	0.000	0.121
60.00	-27.84	-5.29	0.00	-477.29	0.00	477.29	4065.54	1060.07	4463.61	4247.27	2.27	-0.376	0.000	0.119
65.00	-26.70	-5.17	0.00	-450.83	0.00	450.83	4005.81	1035.49	4258.96	4087.10	2.68	-0.409	0.000	0.117
70.00	-25.46	-5.02	0.00	-424.96	0.00	424.96	3944.44	1010.90	4059.10	3928.21	3.13	-0.443	0.000	0.115
75.00	-24.38	-4.91	0.00	-399.84	0.00	399.84	3881.43	986.31	3864.05	3770.72	3.61	-0.478	0.000	0.112
80.00	-23.31	-4.79	0.00	-375.31	0.00	375.31	3816.78	961.72	3673.81	3614.75	4.13	-0.512	0.000	0.110
81.00	-23.10	-4.77	0.00	-370.52	0.00	370.52	3803.65	956.81	3636.33	3583.75	4.24	-0.520	0.000	0.109
81.00	-23.10	-4.77	0.00	-370.52	0.00	370.52	2964.89	798.43	3038.55	2801.11	4.24	-0.520	0.000	0.140
85.00	-22.39	-4.68	0.00	-351.45	0.00	351.45	2929.08	782.04	2915.07	2710.08	4.68	-0.548	0.000	0.137
90.00	-20.77	-4.55	0.00	-328.06	0.00	328.06	2882.85	761.55	2764.32	2596.94	5.28	-0.591	0.000	0.134
91.00	-20.45	-4.53	0.00	-323.51	0.00	323.51	2898.33	768.33	2813.78	2634.30	5.41	-0.599	0.000	0.130
95.00	-19.76	-4.44	0.00	-305.38	0.00	305.38	2860.60	751.94	2695.00	2544.15	5.92	-0.634	0.000	0.127
100.00	-18.92	-4.33	0.00	-283.15	0.00	283.15	2811.95	731.45	2550.13	2432.25	6.61	-0.676	0.000	0.123
105.00	-18.10	-4.22	0.00	-261.49	0.00	261.49	2761.66	710.96	2409.26	2321.34	7.34	-0.717	0.000	0.119
110.00	-17.30	-4.11	0.00	-240.38	0.00	240.38	2709.73	690.47	2272.40	2211.55	8.11	-0.759	0.000	0.115
115.00	-16.53	-4.00	0.00	-219.82	0.00	219.82	2656.16	669.98	2139.54	2103.00	8.93	-0.801	0.000	0.111
120.00	-15.77	-3.90	0.00	-199.79	0.00	199.79	2600.95	649.49	2010.67	1995.80	9.79	-0.843	0.000	0.106
125.00	-15.03	-3.79	0.00	-180.30	0.00	180.30	2544.10	629.00	1885.82	1890.08	10.70	-0.884	0.000	0.101
125.00	-15.03	-3.79	0.00	-180.30	0.00	180.30	1882.48	504.07	1513.88	1403.39	10.70	-0.884	0.000	0.137
130.00	-14.43	-3.69	0.00	-161.34	0.00	161.34	1845.69	487.68	1417.02	1330.91	11.65	-0.925	0.000	0.129
135.00	-13.37	-3.59	0.00	-142.88	0.00	142.88	1823.78	478.25	1362.76	1289.51	12.64	-0.975	0.000	0.118
140.00	-12.80	-3.49	0.00	-124.95	0.00	124.95	1784.40	461.86	1270.94	1218.11	13.69	-1.025	0.000	0.110
145.00	-12.24	-3.39	0.00	-107.52	0.00	107.52	1743.38	445.47	1182.33	1147.55	14.79	-1.070	0.000	0.101
150.00	-11.70	-3.30	0.00	-90.57	0.00	90.57	1700.71	429.08	1096.92	1077.96	15.93	-1.113	0.000	0.091
155.00	-11.17	-3.20	0.00	-74.09	0.00	74.09	1656.41	412.69	1014.72	1009.45	17.12	-1.153	0.000	0.080
160.00	-10.66	-3.11	0.00	-58.08	0.00	58.08	1610.46	396.29	935.71	942.14	18.35	-1.189	0.000	0.068
165.00	-7.50	-2.21	0.00	-42.53	0.00	42.53	1562.88	379.90	859.91	876.15	19.61	-1.220	0.000	0.053
170.00	-7.06	-2.12	0.00	-31.48	0.00	31.48	1513.65	363.51	787.30	811.61	20.90	-1.245	0.000	0.043
175.00	-3.84	-1.13	0.00	-20.88	0.00	20.88	1462.77	347.12	717.90	748.63	22.22	-1.266	0.000	0.031
180.00	-3.50	-1.05	0.00	-15.22	0.00	15.22	1400.09	330.73	651.70	682.38	23.55	-1.283	0.000	0.025
180.00	-3.50	-1.05	0.00	-15.22	0.00	15.22	678.42	203.53	25205.7	396.30	23.55	-1.283	0.000	0.044
185.00	-3.14	-0.98	0.00	-9.97	0.00	9.97	678.42	203.53	25205.7	396.30	24.90	-1.296	0.000	0.030
190.00	-2.77	-0.91	0.00	-5.06	0.00	5.06	678.42	203.53	25205.7	396.30	26.26	-1.303	0.000	0.017

Calculated Forces

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 35
Struct Class: II		



195.00	0.00	-0.85	0.00	-0.49	0.00	0.49	678.42	203.53	25205.7	396.30	27.63	-1.306	0.000	0.001
--------	------	-------	------	-------	------	------	--------	--------	---------	--------	-------	--------	-------	-------

Final Analysis Summary

Structure: CT01497-S-SBA	Code: EIA/TIA-222-H	7/15/2021	
Site Name: Plymouth 2 CT	Exposure: C		
Height: 195.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 36



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 + 1.0W 120 mph Wind	29.3	0.00	53.68	0.00	0.00	3771.04
0.9D + 1.0W 120 mph Wind	29.3	0.00	40.26	0.00	0.00	3723.82
1.2D + 1.0Di + 1.0Wi 40 mph Wind	5.2	0.00	70.65	0.00	0.00	673.48
1.2D + 1.0Ev + 1.0Eh	0.7	0.00	55.47	0.00	0.00	121.04
0.9D + 1.0Ev + 1.0Eh	0.7	0.00	42.00	0.00	0.00	119.66
1.0D + 1.0W 60 mph Wind	6.6	0.00	44.74	0.00	0.00	837.37

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 + 1.0W 120 mph Wind	-51.91	-28.92	0.00	-3624.8	0.00	-3624.8	4587.84	1314.8	6867.16	5953.37	5.00	0.621
0.9D + 1.0W 120 mph Wind	-38.92	-28.88	0.00	-3577.6	0.00	-3577.6	4587.84	1314.8	6867.16	5953.37	5.00	0.610
1.2D + 1.0Di + 1.0Wi 40 mph Wind	-68.64	-5.18	0.00	-647.30	0.00	-647.30	4587.84	1314.8	6867.16	5953.37	5.00	0.124
1.2D + 1.0Ev + 1.0Eh	-18.70	-0.66	0.00	-33.83	0.00	-33.83	2544.10	629.00	1885.82	1890.08	125.00	0.034
0.9D + 1.0Ev + 1.0Eh	-14.16	-0.65	0.00	-33.48	0.00	-33.48	2544.10	629.00	1885.82	1890.08	125.00	0.031
1.0D + 1.0W 60 mph Wind	-43.33	-6.46	0.00	-804.68	0.00	-804.68	4587.84	1314.8	6867.16	5953.37	5.00	0.145

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
			VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Req'd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Req'd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
0.0	1.0	(6) SOL-1 3/4" William R71	57.7	1.39	25.3	88.8	25.3	4	0	88.7	25.3	4	0	88.75	259.7	298.82	0.342

	Monopole Mat Foundation Design		Date
			7/14/2021
	Customer Name:	SBA Communications Corp	EIA/TIA Standard:
	Site Name:		Structure Height (Ft.):
	Site Number:	CT01497-A-SBA	Engineer Name:
Engr. Number:		Manager Login Req'd:	

Foundation Info Obtained from:

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	53.7	Shear Force (Kips):	29.3
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3771.0

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Anchor Bolt Circle (ft.):	58.00	Depth of Base BG (ft.):	3.00
Thickness of Pad (ft):	4.50		
Length of Pad (ft.):	35	Width of Pad (ft.):	35

Final Length of pad (ft) 35.0 Final width of pad (ft): 35.0

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):	56	Qty. of Rebar in Pad (W):	56	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	56	Qty. of Rebar in Pad (W):	56	

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

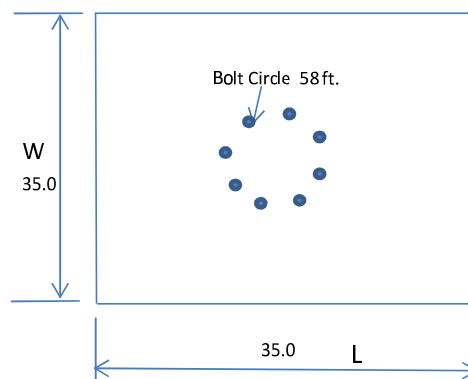
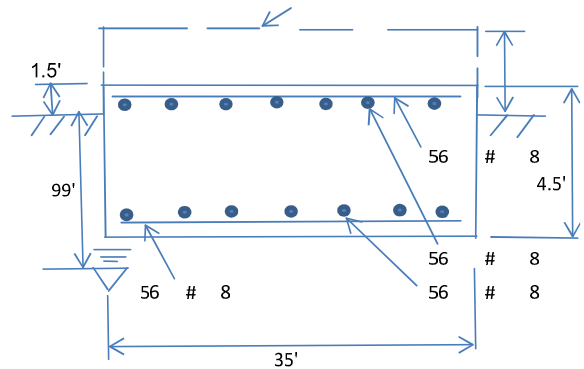
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Botm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Botm of Pad:	25
Consider soil 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.):	5512.50	Total Dry Concrete Weight (Kips):	826.88
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	826.88	Total Vertical Load on Base (Kips):	880.53

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	1502	<	Allowable Factored Soil Bearing (psf):	22500	0.07	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	13962.2	>	Design Factored Momont (kips-ft):	3904	0.28	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.58					OK!



Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):

0.90 Strength reduction factor (Shear):

Strength reduction factor (Axial compression):

0.65 Wind Load Factor on Concrete Design:

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):

One-Way Factored Shear (L-D. Kips):

One-Way Design Shear Capacity (W-Direction, Kips):

One-Way Factored Shear (W-D., Kips)

One-Way Design Shear Capacity (Corner-Corner, Kips):

One-Way Factored Shear (C-C, Kips): 30.4

Lower Steel Pad Reinforcement Ratio (L-Direct.):

Lower Steel Pad Reinf. Ratio (W-Direct

Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):

Moment at Bottom (L-Direct. K-Ft):

Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):

Moment at Bottom (W-Direct. K-Ft):

Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):

Moment at Bottom (C-C Dir. K-Ft):

Upper Steel Pad Reinforcement Ratio (L-Direct.):

Upper Steel Reinf. Ratio (W-Direct.): 0.0021

Upper Steel Pad Moment Capacity (L-Direction, Kips-ft):

Moment at the top (L-Dir Kips-Ft):

Upper Steel Pad Moment Capacity (W-Direction, Kips-ft):

Moment at the top (W-Dir Kips-Ft): 108.9

Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):

Moment at the top (C-C Direc. K-Ft): -5.7



Date: 5/4/2021



Submitted To: Verizon Wireless
118 Flanders Road – Third Floor
Westborough, MA 01581

Subject: Mount Structural Analysis Report – Rev.1

Verizon Wireless Designation: Site Name: Plymouth NW CT

Site Data: 297 North Adams Street, Plymouth, CT 06782
Latitude 41.691330, Longitude -73.050368

We are pleased to submit this “Mount Structural Analysis Report – Rev.1” to determine the structural capacity of the antenna mount utilized by Verizon Wireless at the above referenced site.

The purpose of the analysis is to determine acceptability of the mount stress level for the changes proposed by Verizon Wireless. Under the following load case we have determined the mount to have:

Existing + Proposed Equipment **Adequate Capacity with Mods (61.4%)**
Note: See Analysis Criteria for loading configuration

The analysis has been performed in accordance with TIA-222-G Standard and the 2018 Connecticut State Building Code (2015 IBC).

We appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects, please give us a call.

Prepared by Consulting Engineer:

Ahmet Colakoglu, PE
Connecticut Professional Engineer
License No: 27057



1117 Perimeter Center West, Suite E500
Atlanta, GA 30338
Tel: (470) 990-6593

Reviewed By: **Jesse Moreno, PE**
Digitally signed by Jesse Moreno, PE
Date: 2021.05.05 10:03:05 -04'00'

ProTerra Design Group, LLC

The analysis was performed for the existing and proposed appurtenances as specified in the loading information referenced below, and per the following loading criteria of Table 1.

Table 1 – Loading and Analysis Criteria

Rad Center	
Structure Type	Monopole
Exposure Category	
Wind Speed	120 mph * $\sqrt{0.6}$ = 93 mph (ASD)
Ice Loading	0.75" with 50 mph Wind
Risk Category	
Topographic Factor	Kzt = 1.0

Table 1.1 – Existing Configuration for Verizon

Qty	Model
	Antel LPA-80080/6CF – Antennas
	Antel BXA-70063-6CF – Antennas
	Antel BXA-1850-12CF – Antennas
	UHBA B13 RRH 4x30 – RRUs

Table 1.2 – Proposed and Final Appurtenance Configuration for Verizon

Qty	Model
	JMA MX06FRO660-03 – Antennas*
	MT6407-77A – Antennas
	B2/B66A RRH-BR049 (RFV01U-D1A) – RRUs**
	B5/B13 RRH-BR04C (RFV01U-D2A) – RRUs**
	DB-C1-12C-24AB-0Z – Junction Box
	TD-850B-LTE78-43 – Diplexers
	JMA Dual Mount Bracket Kit 91900314

* Dual mounted on the dual mount bracket kits.

** To be mounted behind antennas.

Table 1.3 – Assumed Material Properties

Member Type	ASTM Material Designation	Fy (ksi)	Fu (ksi)
Pipes	A53 Gr. B		
Angles/Channels	A36		
Rectangular HSS	A500 Gr. B – 46		
Round HSS	A500 Gr. B – 42		
Others (UNO)	A572 Gr. 50		

The analysis is based on the following information:

Table 2 – Documents

Document	Provided By	Date
	Verizon Wireless	
Sketch for Mount Analysis	ProTerra Design Group, LLC	
Mount Photographs	ProTerra Design Group, LLC	

2.1) Analysis Method

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

2.2) Analysis Conditions and Assumptions

The mount was built and installed in accordance with the manufacturer's specifications. The mount has been maintained and will be maintained in accordance with the manufacturer's specifications. All structural members and connections of the mount are in good condition and can achieve theoretical strength.

The configuration of antennas is as specified in "1) Analysis Criteria".

The analysis was performed for the subject mount only. It does not include an evaluation of the other mounts or the tower, which should be analyzed by others.

The evaluation does not include any antenna rigging loads. The equipment should not be rigged using the subject antenna mount as the support.

The analysis includes a minimum 250 lbf maintenance point load at the worst-case location on the mount, as well as a minimum 250 lbf maintenance point load at each antenna location in conjunction with a 30 mph wind load.

Any steel grating represented in this model is for loading purposes only and it is not considered to provide any structural restraint or support.

Member sizes per the mount sketch, mount photographs and assumed based on our experience with similar structures. Please refer to calculation output in the appendix of this report for sizes and lengths assumed.

All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

ProTerra Design Group, LLC must be notified immediately if any of these assumptions are discovered to be incorrect. The results of this analysis may be affected if any of the assumptions are not valid or have been made in error.

The analysis results are shown on the table below.

Table 3.1 – Mount Component Stresses vs. Capacity

Component	% Capacity	Pass / Fail
Grating Angle		Pass
Antenna Mount Pipe		Pass
Base Perimeter Pipe		Pass
Main Support Tube		Pass
Bracing Tube		Pass
Platform Base Connection Plates		Pass

Platform Mount: The existing platform mount **will have adequate** capacity for the proposed changes by Verizon, **once the proposed modifications are completed as listed below and per the Mount sketch (SK-1) prepared by ProTerra Design Group, LLC, dated 12/21/2020.** For the code specified load combinations and as a maximum, the mount members are stressed to of their structural capacity.

Note: The proposed modifications are-

1. The Dual antenna should be mounted on an 8' long 2.5 STD pipe at each sector, a total of three (3) pipes.
2. One (1) 4' long 2.0 STD pipe should be attached to the platform standoff tube to mount the OVP box.

CLIENT: Verizon

PROJECT: Plymouth NW CT

SUBJECT: Antenna Loads - TIA 222 G Standard (chapter 16 revisions)

Tower Height
Base Height
Speed, V₁
Basic Wind Speed
with I_{ce}, V_i
Maintenance Load
Factor, L_w
Design Ice Thickness, t_i

190.00
83
50
0.1041

ft
mph (=Ultimate Speed S_{ref}(0.6))
mph
Load Factor for Maint. Load Cases
(Basic Wind Speed=30 mph)
inches

Type of Mount: Platform

Table 2.3 Importance Factors				
Structure Classification	Wind Load Without Ice	Wind Load With Ice	Ice Thickness, s	Earthquake
II	I	I	I	I

Table 2.4 Exposure Category Coefficients				
Exposure Category	Zg	a	Kzmin	Ke
I	1200	7	0.7	0.9
II				0.55

Table 2.5 Topographic Categories
Kzt

Table 2.2 Wind Directionality Factor, Kd	
Structure Type	Kd
Monopole	0.95
Gust Effect Factor, Gf	DOES NOT CHANGE
Table 2.3 Shielding Factor, Ks	
Structure Type	Gf
Monopole	1.0
Shielding Factor, Ka	DOES NOT CHANGE
Table 2.4 Reliability Factors	
Structure Type	Ka
Monopole	0.90
Reliability Factors	
ST	0.100
FA	0.024
FR	1.8
FR	2.4
FR	2

CLIENT: Verizon
PROJECT: Plymouth NW CT
SUBJECT: Antenna Loads - 11A 222 G Standard (chapter 16 revisions)

Kz 1.1746 (89)
reduction 0.28505
U (in) 1.701928

Antenna AND Mount With Ice

Mounting Pole	Height (ft)	Model Number	#	H (in)	W (in)	D (in)	Ka	*A ₁ (ft ²)	*A ₂ (ft ²)	Volume Ice (ft ³)	Weight Ice (lbs)	**Ca (FRONT)	**Ca (SIDE)	Kz	q _t (psf)	Ice Wind Load (Front)	Ice Wind Load (Side)	Combined Wind Load (Front)	Combined Wind Load (Side)	Ice Dead Load	**Y ₁ Wind Load (Front)	**Y ₂ Wind Load (Side)	Ice Load
Pos. 1 & Pos. 4		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
Pos. 2	165.00	MT1407-77A	1	35.0	19.7	10.0	0.90	1.42	1.19	3.01	188.66	0.70	0.71	1.140	6.9	6.2	5.2	42.1	24.1	168	42	35	248
	165.00	B2B86A RRH-BR049	1	15.0	15.0	10.0	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
Pos. 3	165.00	JMA M306FRO68-33	2	71.3	15.4	10.7	0.90	2.21	2.09	4.86	271.95	0.73	0.76	1.140	6.9	20.2	19.9	143.4	11.4	544	22	18	124
	165.00	B5B13 RRH-BR04C	1	15.0	15.0	8.1	0.90	-	0.65	1.25	70.20	0.70	0.70	1.140	6.9	0.0	2.8	0.0	9.2	70	143	128	680
	165.00	TD-680B-LTE78-43	1	15.5	15.3	6.4	0.90	-	0.62	1.18	65.98	0.70	0.70	1.140	6.9	0.0	2.7	0.0	7.9	66	72	65	341
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
Large COVP		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	31	24	147
	165.00	DB-C1-12C-24AB-02	1	29.5	16.5	12.6	0.90	1.21	1.12	2.62	146.78	0.70	0.70	1.140	6.9	0.0	4.9	30.6	24.2	147	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	16	13	74

* A₁, A₂, Volume Ice and Weight Ice are calculated per unit

** Ca will equal 1.2 for all ice load calculations

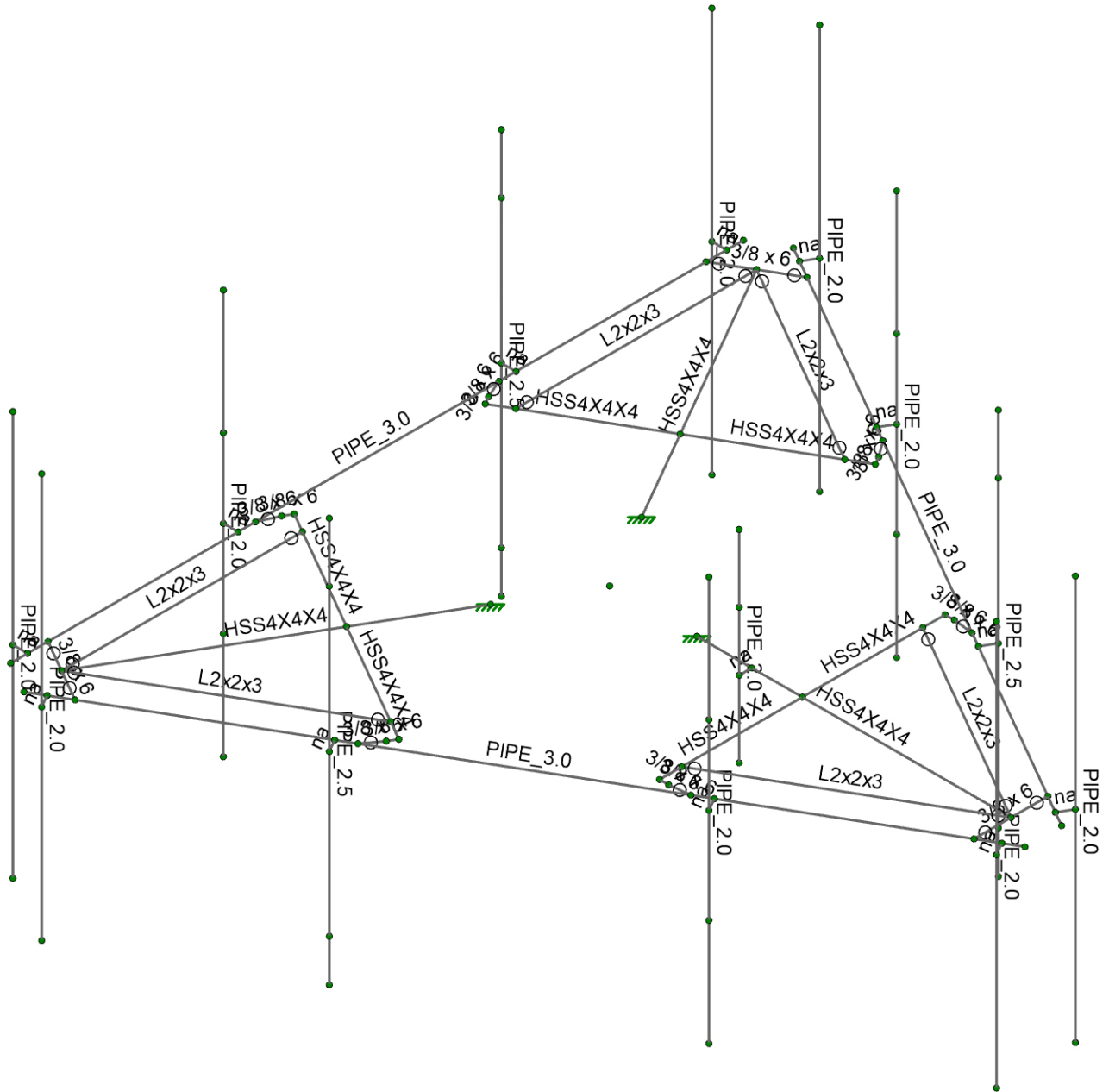
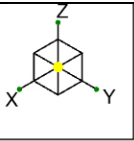
Mount	Height (ft)	Member	θ ₁ (in)	**W (in)	D (in)	***A ₁ (ft ²)	Volume Ice (ft ³)	Weight Ice (lbs)	****Ca (FRONT)	Kz	q _t (psf)	Ice Wind Load (Front)	Combined Wind Load (Front)	Ice Dead Load
	165.00	3.0 STD Pipe	12.00	3.50	0.00	0.47	0.20	11.33	1.20	1.140	6.2	3.5	5.7	11
	165.00	2.5 STD Pipe	12.00	2.88	0.00	0.46	0.18	9.99	1.20	1.140	6.2	3.4	5.2	10
	165.00	2.0 STD Pipe	12.00	2.25	0.00	0.43	0.14	7.56	1.20	1.140	6.2	3.2	4.8	9
	165.00	1.5 STD Pipe	12.00	1.62	0.00	0.43	0.10	5.48	1.20	1.140	6.2	3.2	5.3	9
	165.00	L2.5x2.5x3	0.00	2.50	2.50	-	-	-	-	-	-	-	-	-
	165.00	Angle Diagonal	0.00	0.00	4.00	-	-	-	-	-	-	-	-	-
	165.00	HSS 4x4x4	12.00	4.00	0.00	0.48	0.40	22.26	1.20	1.140	6.2	3.6	7.7	22
	165.00	6" x 3/8" Plate	12.00	6.00	0.38	0.53	0.32	17.81	1.20	1.140	6.2	3.9	10.2	18
	165.00	6" x 3/8" Plate	12.00	6.00	0.38	0.53	0.32	17.81	1.20	1.140	6.2	3.9	10.2	18
	165.00	Double Angle (L2.5x2.5x3x0)	0.00	5.00	2.50	-	-	-	-	-	-	-	-	-
	165.00	Double Angle (L3x3x4x0)	0.00	3.00	3.00	-	-	-	-	-	-	-	-	-
	165.00	Channel (Weak Axis Bending)	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-
	165.00	Invert U 5.375x3.625x3.375	0.00	3.63	5.38	-	-	-	-	-	-	-	-	-

* The dimension L is the longest dimension of the member

** The dimension W is the width of the member that resists wind load

*** A₁ is the area of ice built up on the LV plane

**** Ca will equal 1.2 for all ice load calculations



Envelope Only Solution

ProTerra Design Group, LLC

AG

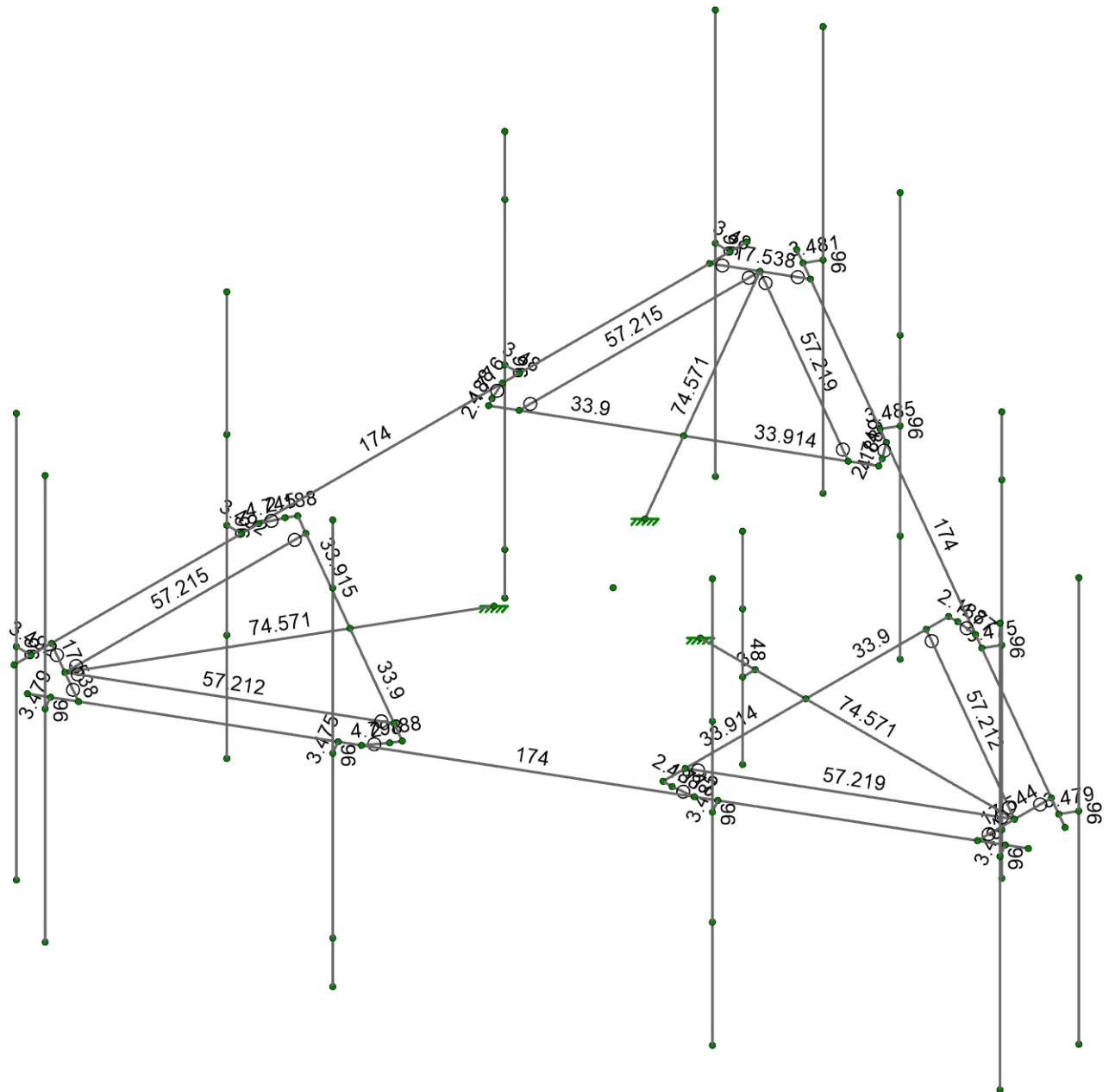
049.00158 - 2078003

Plymouth NW CT - Rev.1

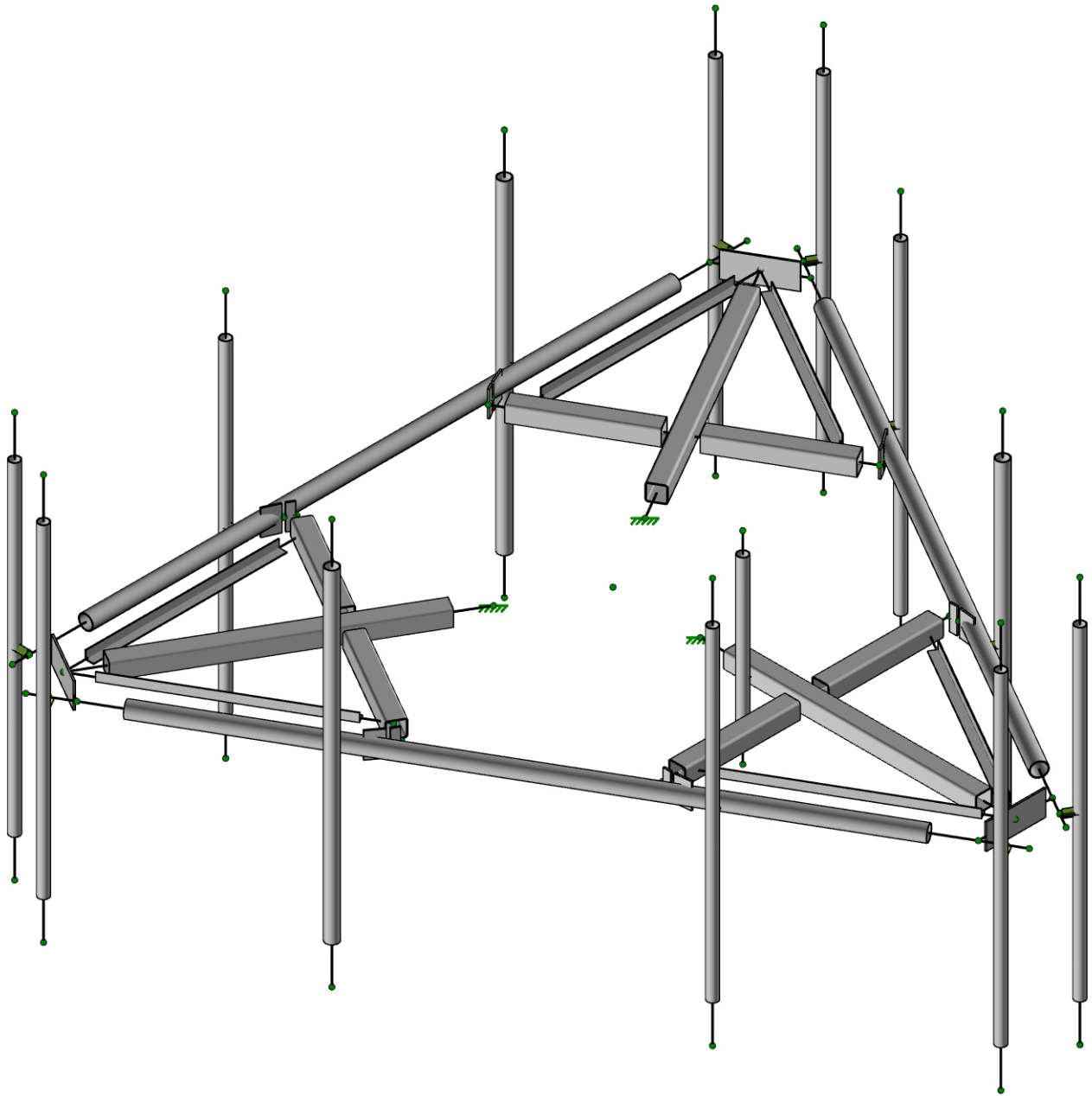
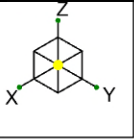
SK-1

May 04, 2021

Plymouth NW CT - Rev.1.r3d



Plymouth NW CT - Rev.1.r3d



Envelope Only Solution

ProTerra Design Group, LLC

AG

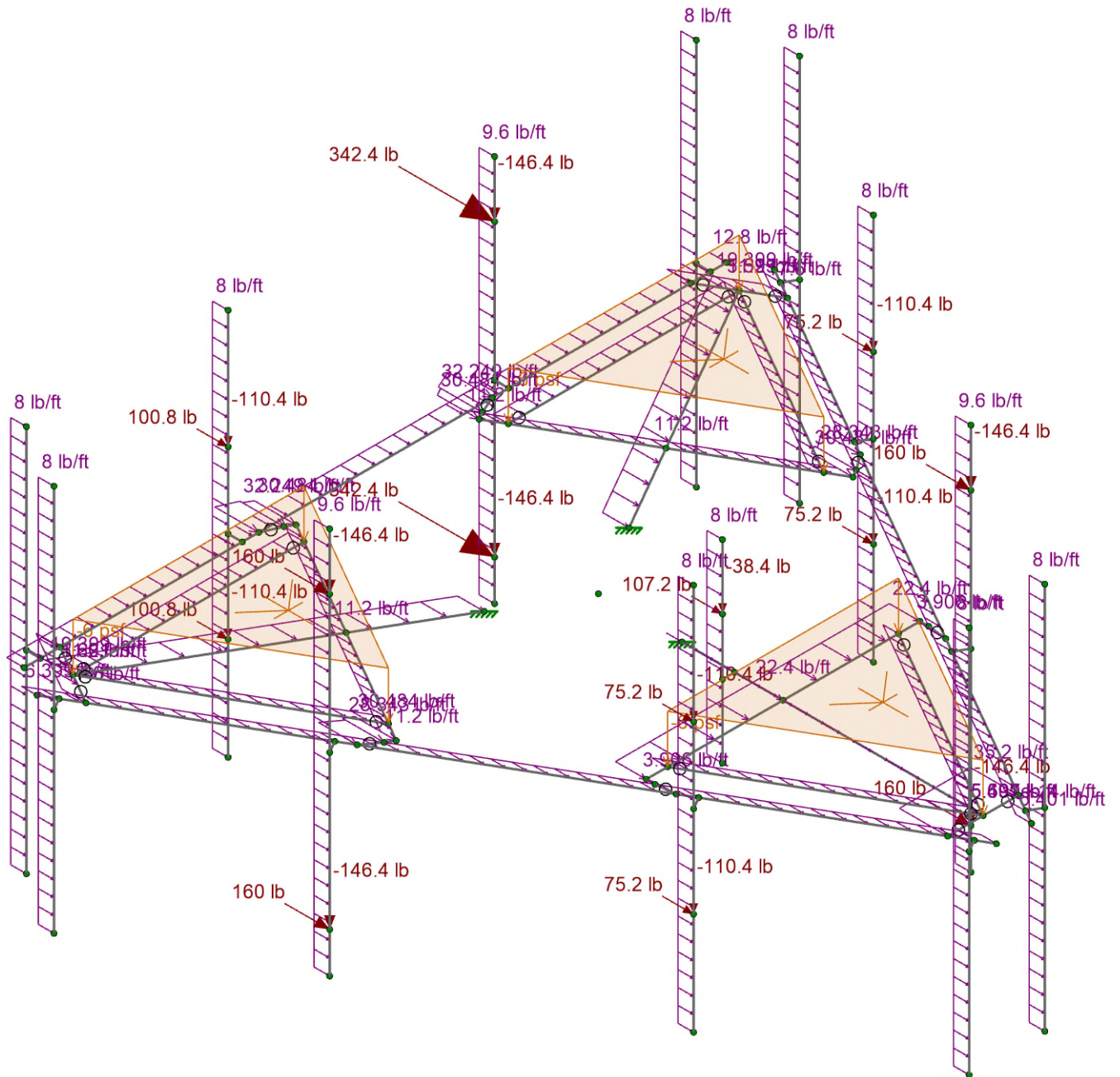
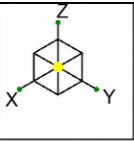
049.00158 - 2078003

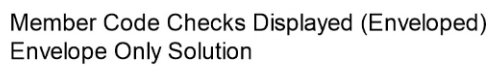
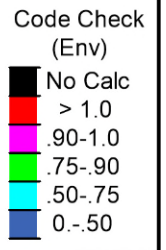
Plymouth NW CT - Rev.1

SK-3

May 04, 2021

Plymouth NW CT - Rev.1.r3d

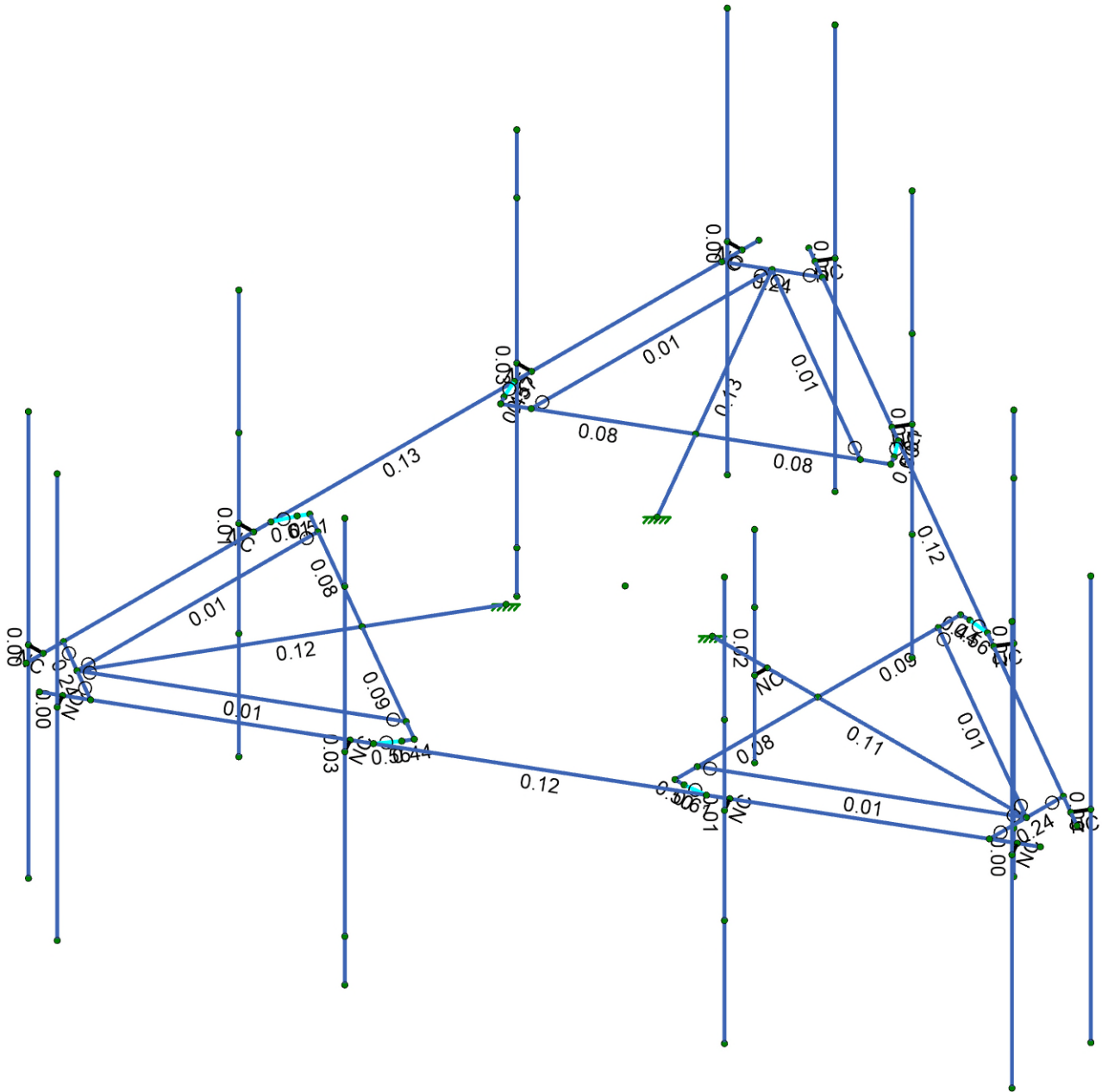
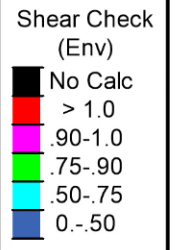
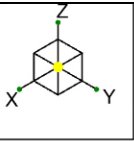




SK-5

May 04, 2021

Plymouth NW CT - Rev.1.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

ProTerra Design Group, LLC

AG

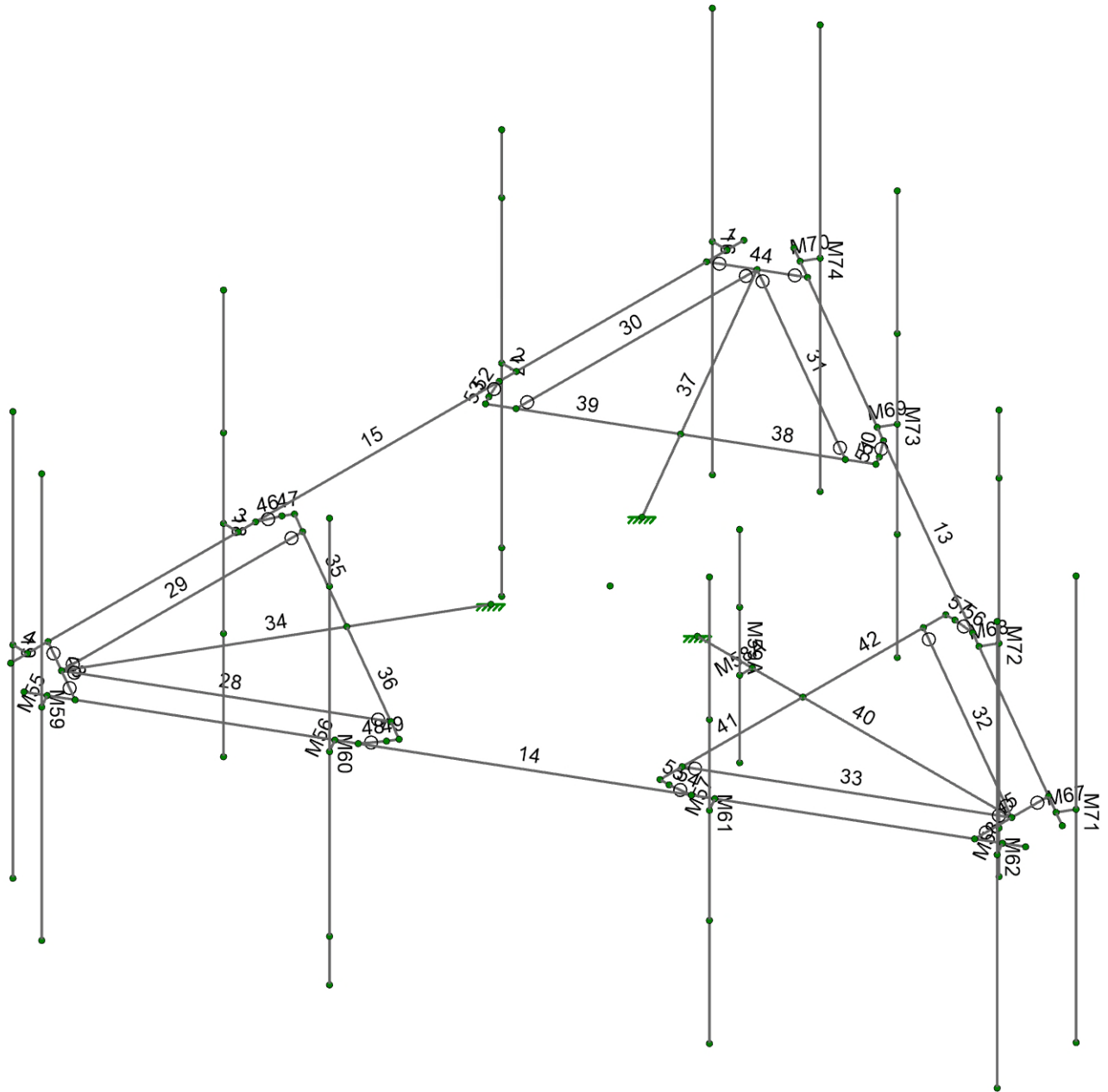
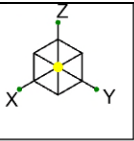
049.00158 - 2078003

Plymouth NW CT - Rev.1

SK-6

May 04, 2021

Plymouth NW CT - Rev.1.r3d



Envelope Only Solution

ProTerra Design Group, LLC

AG

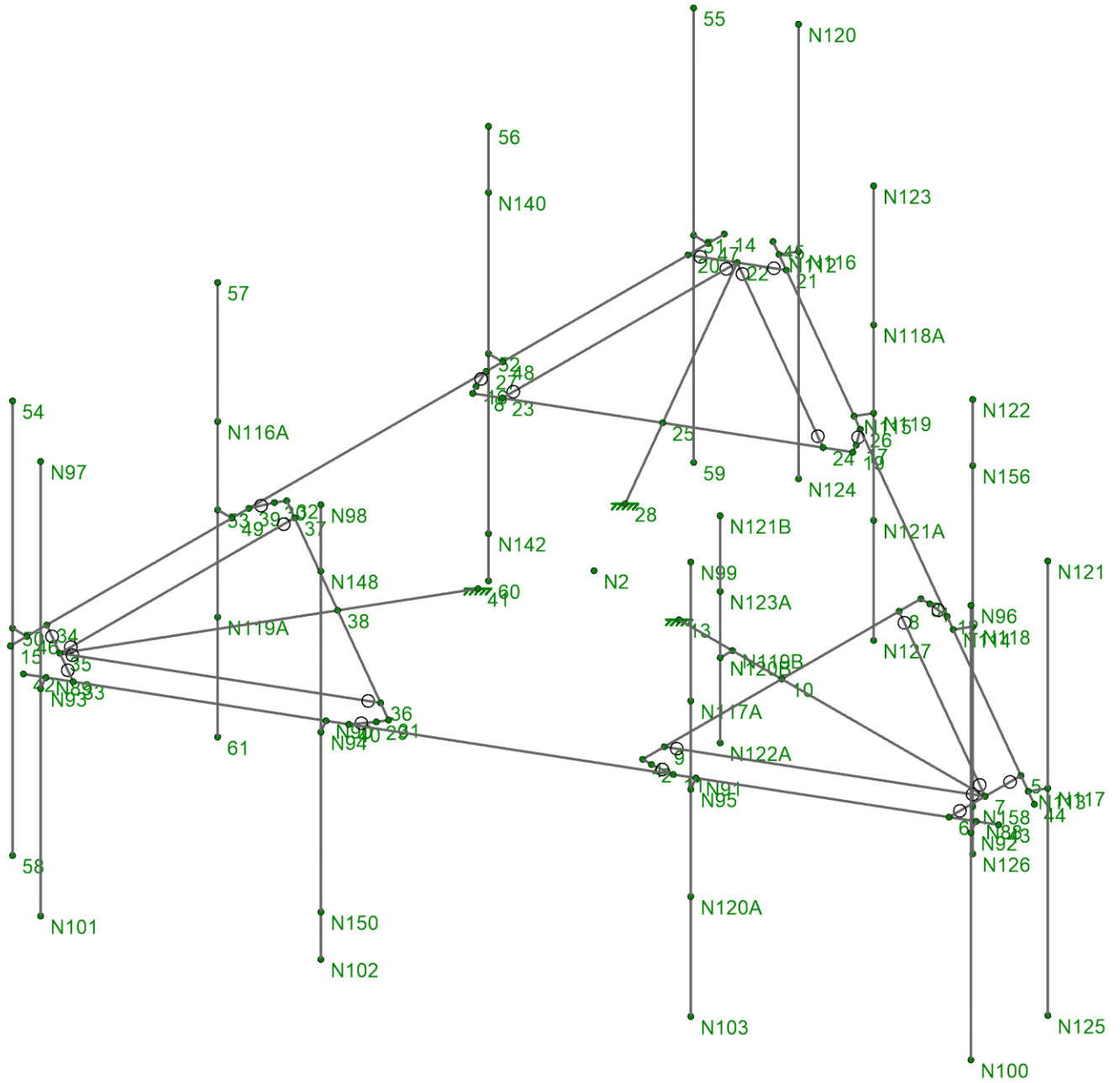
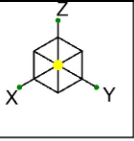
049.00158 - 2078003

Plymouth NW CT - Rev.1

SK-7

May 04, 2021

Plymouth NW CT - Rev.1.r3d



Envelope Only Solution

ProTerra Design Group, LLC

AG

049.00158 - 2078003

Plymouth NW CT - Rev.1

SK-8

May 04, 2021

Plymouth NW CT - Rev.1.r3d

Model Settings

Solution

Members

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in ²)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes

Wall Panels

Approximate Mesh Size (in)	12
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	No
Maximum Number of Iterations	3

Processor Core Utilization

Single	No
Multiple (Optimum)	Yes
Maximum	No

Axis

Vertical Global Axis

Global Axis corresponding to vertical direction	Z
Convert Existing Data	Yes

Default Member Orientation

Default Global Plane for z-axis	XZ
---------------------------------	----

Plate Axis

Plate Local Axis Orientation	Nodal
------------------------------	-------

Codes

Hot Rolled Steel	AISC 14th (360-10): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 14th (360-10): LRFD
Cold Formed Steel	AISI NAS-01: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AF&PA NDS-05/08: ASD
Temperature	< 100F
Concrete	ACI 318-05
Masonry	ACI 530-05: ASD
Aluminum	AA ADM1-05: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Concrete

Column Design

Analysis Methodology	Exact Integration Method
Parame Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	No

Model Settings (Continued)

List forces which were ignored for design in the Detail Report	Yes
--	-----

Rebar

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No

Shear Reinforcement

Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Seismic

RISA-3D Seismic Load Options

Code	ASCE 7-05
Occupancy Cat	I or II
Drift Cat	Other
Base Elevation (ft)	
Include the weight of the structure in base shear calcs	Yes

Site Parameters

S_1 (g)	1
SD_1 (g)	1
SD_s (g)	1
T_L (sec)	-1

Structure Characteristics

T Z (sec)	
T X (sec)	
C_x	0.035
$C_{Exp. Z}$	0.75
$C_{Exp. X}$	0.75
R Z	8.5
R X	8.5
$\Omega_0 Z$	1
$\Omega_0 X$	1
$C_d Z$	4
$C_d X$	4
ρZ	1
ρX	1

Project Grid Lines

No Data to Print...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [$10^{-6}/^{\circ}\text{F}$]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
3	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
4	A500 Gr.42	29000	11154	0.3	0.65	0.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	0.3	0.65	0.49	46	1.2	58	1.1
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.5	60	1.2
7	A529 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	HR1A	C15X50	Beam	Wide Flange	A36 Gr.36	Typical	14.7	11	404	2.65

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	47	51		RIGID	None	None	LINK	Typical
2	2	48	52		RIGID	None	None	LINK	Typical
3	3	49	53		RIGID	None	None	LINK	Typical
4	4	46	50		RIGID	None	None	LINK	Typical
5	M55	N89	N93		RIGID	None	None	LINK	Typical
6	M56	N90	N94		RIGID	None	None	LINK	Typical
7	M57	N91	N95		RIGID	None	None	LINK	Typical
8	M58	N88	N92		RIGID	None	None	LINK	Typical
9	M67	N113	N117		RIGID	None	None	LINK	Typical
10	M68	N114	N118		RIGID	None	None	LINK	Typical
11	M69	N115	N119		RIGID	None	None	LINK	Typical
12	M70	N112	N116		RIGID	None	None	LINK	Typical
13	13	44	45		PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical
14	14	42	43		PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical
15	15	14	15		PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical
16	17	56	60		PIPE 2.5	Beam	BAR	A53 Gr.B	Typical
17	M60	N98	N102		PIPE 2.5	Beam	BAR	A53 Gr.B	Typical
18	M72	N122	N126		PIPE 2.5	Beam	BAR	A53 Gr.B	Typical
19	16	55	59		PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
20	18	57	61		PIPE 2.0	None	None	A53 Gr.B	Typical
21	19	54	58		PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
22	M59	N97	N101		PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
23	M61	N99	N103		PIPE 2.0	None	None	A53 Gr.B	Typical
24	M62	N96	N100		PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
25	M71	N121	N125		PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
26	M73	N123	N127		PIPE 2.0	None	None	A53 Gr.B	Typical
27	M74	N120	N124		PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
28	28	35	36	180	L2x2x3	None	None	A36 Gr.36	Typical
29	29	35	37	270	L2x2x3	None	None	A36 Gr.36	Typical
30	30	22	23		L2x2x3	None	None	A36 Gr.36	Typical
31	31	22	24	90	L2x2x3	None	None	A36 Gr.36	Typical
32	32	7	8	180	L2x2x3	None	None	A36 Gr.36	Typical
33	33	7	9	90	L2x2x3	None	None	A36 Gr.36	Typical
34	34	35	41		HSS4X4X4	None	None	A500 Gr.46	Typical
35	35	38	32		HSS4X4X4	None	None	A500 Gr.46	Typical
36	36	31	38		HSS4X4X4	None	None	A500 Gr.46	Typical
37	37	22	28		HSS4X4X4	None	None	A500 Gr.46	Typical
38	38	25	19		HSS4X4X4	None	None	A500 Gr.46	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
39	39	18	25		HSS4X4X4	None	None	A500 Gr.46	Typical
40	40	7	13		HSS4X4X4	None	None	A500 Gr.46	Typical
41	41	10	4		HSS4X4X4	None	None	A500 Gr.46	Typical
42	42	3	10		HSS4X4X4	None	None	A500 Gr.46	Typical
43	43	33	34		3/8 x 6	None	None	A36 Gr.36	Typical
44	44	21	20		3/8 x 6	None	None	A36 Gr.36	Typical
45	45	5	6		3/8 x 6	None	None	A36 Gr.36	Typical
46	46	30	39		3/8 x 6	None	None	A36 Gr.36	Typical
47	47	32	30		3/8 x 6	None	None	A36 Gr.36	Typical
48	48	29	40		3/8 x 6	None	None	A36 Gr.36	Typical
49	49	31	29		3/8 x 6	None	None	A36 Gr.36	Typical
50	50	17	26		3/8 x 6	None	None	A36 Gr.36	Typical
51	51	19	17		3/8 x 6	None	None	A36 Gr.36	Typical
52	52	16	27		3/8 x 6	None	None	A36 Gr.36	Typical
53	53	18	16		3/8 x 6	None	None	A36 Gr.36	Typical
54	54	2	11		3/8 x 6	None	None	A36 Gr.36	Typical
55	55	4	2		3/8 x 6	None	None	A36 Gr.36	Typical
56	56	1	12		3/8 x 6	None	None	A36 Gr.36	Typical
57	57	3	1		3/8 x 6	None	None	A36 Gr.36	Typical
58	M58A	N119B	N120B		RIGID	None	None	LINK	Typical
59	M59A	N121B	N122A		PIPE 2.0	Beam	Wide Flange	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	1			Yes	** NA **	None
2	2			Yes	** NA **	None
3	3			Yes	** NA **	None
4	4			Yes	** NA **	None
5	M55			Yes	** NA **	None
6	M56			Yes	** NA **	None
7	M57			Yes	** NA **	None
8	M58			Yes	** NA **	None
9	M67			Yes	** NA **	None
10	M68			Yes	** NA **	None
11	M69			Yes	** NA **	None
12	M70			Yes	** NA **	None
13	13			Yes		None
14	14			Yes		None
15	15			Yes		None
16	17			Yes		None
17	M60			Yes		None
18	M72			Yes		None
19	16			Yes		None
20	18			Yes	** NA **	None
21	19			Yes		None
22	M59			Yes		None
23	M61			Yes	** NA **	None
24	M62			Yes		None
25	M71			Yes		None
26	M73			Yes	** NA **	None
27	M74			Yes		None
28	28	BenPIN	BenPIN	Yes	** NA **	None
29	29	BenPIN	BenPIN	Yes	** NA **	None
30	30	BenPIN	BenPIN	Yes	** NA **	None
31	31	BenPIN	BenPIN	Yes	** NA **	None
32	32	BenPIN	BenPIN	Yes	** NA **	None
33	33	BenPIN	BenPIN	Yes	** NA **	None
34	34			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
35	35			Yes	** NA **	None
36	36			Yes	** NA **	None
37	37			Yes	** NA **	None
38	38			Yes	** NA **	None
39	39			Yes	** NA **	None
40	40			Yes	** NA **	None
41	41			Yes	** NA **	None
42	42			Yes	** NA **	None
43	43	BenPIN	BenPIN	Yes	** NA **	None
44	44	BenPIN	BenPIN	Yes	** NA **	None
45	45	BenPIN	BenPIN	Yes	** NA **	None
46	46		BenPIN	Yes	** NA **	None
47	47			Yes	** NA **	None
48	48		BenPIN	Yes	** NA **	None
49	49			Yes	** NA **	None
50	50		BenPIN	Yes	** NA **	None
51	51			Yes	** NA **	None
52	52		BenPIN	Yes	** NA **	None
53	53			Yes	** NA **	None
54	54		BenPIN	Yes	** NA **	None
55	55			Yes	** NA **	None
56	56		BenPIN	Yes	** NA **	None
57	57			Yes	** NA **	None
58	M58A			Yes	** NA **	None
59	M59A			Yes		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Function
1	13	PIPE 3.0	174	Lbyy	Lateral
2	14	PIPE 3.0	174	Lbyy	Lateral
3	15	PIPE 3.0	174	Lbyy	Lateral
4	17	PIPE 2.5	96	Lbyy	Lateral
5	M60	PIPE 2.5	96	Lbyy	Lateral
6	M72	PIPE 2.5	96	Lbyy	Lateral
7	16	PIPE 2.0	96	Lbyy	Lateral
8	18	PIPE 2.0	96		Lateral
9	19	PIPE 2.0	96		Lateral
10	M59	PIPE 2.0	96	Lbyy	Lateral
11	M61	PIPE 2.0	96		Lateral
12	M62	PIPE 2.0	96		Lateral
13	M71	PIPE 2.0	96	Lbyy	Lateral
14	M73	PIPE 2.0	96		Lateral
15	M74	PIPE 2.0	96		Lateral
16	28	L2x2x3	57.212		Lateral
17	29	L2x2x3	57.215		Lateral
18	30	L2x2x3	57.215		Lateral
19	31	L2x2x3	57.219		Lateral
20	32	L2x2x3	57.212		Lateral
21	33	L2x2x3	57.219		Lateral
22	34	HSS4X4X4	74.571		Lateral
23	35	HSS4X4X4	33.915		Lateral
24	36	HSS4X4X4	33.9		Lateral
25	37	HSS4X4X4	74.571		Lateral
26	38	HSS4X4X4	33.914		Lateral
27	39	HSS4X4X4	33.9		Lateral
28	40	HSS4X4X4	74.571		Lateral
29	41	HSS4X4X4	33.914		Lateral
30	42	HSS4X4X4	33.9		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lcomp top [in]	Function
31	43	3/8 x 6	17.538		Lateral
32	44	3/8 x 6	17.538		Lateral
33	45	3/8 x 6	17.544		Lateral
34	46	3/8 x 6	4.745		Lateral
35	47	3/8 x 6	2.188		Lateral
36	48	3/8 x 6	4.798		Lateral
37	49	3/8 x 6	2.188		Lateral
38	50	3/8 x 6	4.749		Lateral
39	51	3/8 x 6	2.188		Lateral
40	52	3/8 x 6	4.776		Lateral
41	53	3/8 x 6	2.188		Lateral
42	54	3/8 x 6	4.777		Lateral
43	55	3/8 x 6	2.188		Lateral
44	56	3/8 x 6	4.77		Lateral
45	57	3/8 x 6	2.188		Lateral
46	M59A	PIPE 2.0	48	Lbyy	Lateral

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	1	-33.906712	47.930469	0	
2	N2	0	0	0	
3	2	33.907959	47.930469	0	
4	3	-33.906712	45.742899	0	
5	4	33.907959	45.742899	0	
6	5	-8.765555	95.292751	0	
7	6	8.778371	95.292751	0	
8	7	-0.006511	95.292751	0	
9	8	-28.606997	45.742899	0	
10	9	28.608244	45.742899	0	
11	10	-0.006511	45.742899	0	
12	11	33.377887	52.67815	0	
13	12	-33.377478	52.670641	0	
14	13	-0.006511	20.721322	0	
15	14	-87.009796	-55.236939	0	
16	15	86.990589	-55.249297	0	
17	16	-24.564921	-53.322815	0	
18	17	-58.472257	5.406413	0	
19	18	-22.67043	-52.22903	0	
20	19	-56.577766	6.500198	0	
21	20	-78.149053	-55.236939	0	
22	21	-86.917891	-40.048866	0	
23	22	-82.531961	-47.64552	0	
24	23	-25.316721	-47.64552	0	
25	24	-53.927908	1.91051	0	
26	25	-39.620588	-22.870497	0	
27	26	-62.296174	2.590204	0	
28	27	-28.940062	-55.236939	0	
29	28	-17.951295	-10.359658	0	
30	29	58.4521	5.394056	0	
31	30	24.544765	-53.335173	0	
32	31	56.557608	6.487841	0	
33	32	22.650274	-52.241388	0	
34	33	86.904971	-40.048688	0	
35	34	78.136031	-55.236939	0	
36	35	82.518938	-47.645521	0	
37	36	53.907751	1.898152	0	
38	37	25.303698	-47.645521	0	
39	38	39.607566	-22.870497	0	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
40	39	28.891658	-55.236939	0	
41	40	62.315243	2.548957	0	
42	41	17.938272	-10.359658	0	
43	42	91.34149	-47.734225	0	
44	43	4.352	102.960708	0	
45	44	-4.331694	102.971164	0	
46	45	-91.342589	-47.711411	0	
47	46	82.980589	-55.236939	0	
48	47	-82.999996	-55.236939	0	
49	48	-32.999996	-55.236939	0	
50	49	32.999989	-55.236939	0	
51	50	82.980589	-58.729297	0	
52	51	-82.999996	-58.716939	0	
53	52	-32.999996	-58.716939	0	
54	53	32.999989	-58.729297	0	
55	54	82.980589	-58.729297	48	
56	55	-82.999996	-58.716939	48	
57	56	-32.999996	-58.716939	48	
58	57	32.999989	-58.729297	48	
59	58	82.980589	-58.729297	-48	
60	59	-82.999996	-58.716939	-48	
61	60	-32.999996	-58.716939	-48	
62	61	32.999989	-58.729297	-48	
63	N88	6.356022	99.487382	0	
64	N89	89.337467	-44.260898	0	
65	N90	64.341171	-0.957721	0	
66	N91	31.342719	56.200832	0	
67	N92	9.370768	101.227946	0	
68	N93	92.350259	-42.521462	0	
69	N94	67.350359	0.779635	0	
70	N95	34.361068	57.943477	0	
71	N96	9.370768	101.227946	48	
72	N97	92.350259	-42.521462	48	
73	N98	67.350359	0.779635	48	
74	N99	34.361068	57.943477	48	
75	N100	9.370768	101.227946	-48	
76	N101	92.350259	-42.521462	-48	
77	N102	67.350359	0.779635	-48	
78	N103	34.361068	57.943477	-48	
79	N112	-89.336611	-44.239214	0	
80	N113	-6.337672	99.498966	0	
81	N114	-31.341175	56.199949	0	
82	N115	-64.342709	-0.956825	0	
83	N116	-92.351357	-42.49865	0	
84	N117	-9.350463	101.238402	0	
85	N118	-34.350363	57.937305	0	
86	N119	-67.361057	0.78582	0	
87	N120	-92.351357	-42.49865	48	
88	N121	-9.350463	101.238402	48	
89	N122	-34.350363	57.937305	48	
90	N123	-67.361057	0.78582	48	
91	N124	-92.351357	-42.49865	-48	
92	N125	-9.350463	101.238402	-48	
93	N126	-34.350363	57.937305	-48	
94	N127	-67.361057	0.78582	-48	
95	N140	-32.999996	-58.716939	34	
96	N142	-32.999996	-58.716939	-38	
97	N148	67.350359	0.779635	34	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
98	N150	67.350359	0.779635	-38	
99	N156	-34.350363	57.937305	34	
100	N158	-34.350363	57.937305	-38	
101	N116A	32.999989	-58.729297	18.65	
102	N117A	34.361068	57.943477	18.65	
103	N118A	-67.361057	0.78582	18.65	
104	N119A	32.999989	-58.729297	-22.65	
105	N120A	34.361068	57.943477	-22.65	
106	N121A	-67.361057	0.78582	-22.65	
107	N119B	-0.006511	33.742899	0	
108	N120B	2.993489	33.742899	0	
109	N121B	2.993489	33.742899	30	
110	N122A	2.993489	33.742899	-18	
111	N123A	2.993489	33.742899	14	

Node Boundary Conditions

	Node 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	13	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	28	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	41	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Basic Load Cases

	BLC Description	Category	Z Gravity	Nodal	Distributed	Area(Member)
1	DEAD LOAD	None	-1	13		3
2	DEAD LOAD ICE	None		13	46	3
3	WIND LOAD (NO ICE) FRONT	None		13	46	
4	WIND LOAD (NO ICE) SIDE	None		13	46	
5	WIND LOAD (ICE) FRONT	None		13	46	
6	WIND LOAD (ICE) SIDE	None		13	46	
7	LIVE LOAD1	None		1		
8	LIVE LOAD2	None		1		
9	LIVE LOAD3	None		1		
10	MAINTENANCE LOAD 1	None		1		
11	MAINTENANCE LOAD 2	None		1		
12	MAINTENANCE LOAD 3	None		1		
13	MAINTENANCE LOAD 4	None		1		
14	BLC 1 Transient Area Loads	None			21	
15	BLC 2 Transient Area Loads	None			21	

Node Loads and Enforced Displacements (BLC 1 : DEAD LOAD)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N116A	L	Z	-92
2	N119A	L	Z	-92
3	N118A	L	Z	-92
4	N121A	L	Z	-92
5	N117A	L	Z	-92
6	N120A	L	Z	-92
7	N140	L	Z	-122
8	N142	L	Z	-122
9	N156	L	Z	-122
10	N158	L	Z	-122
11	N148	L	Z	-122
12	N150	L	Z	-122
13	N123A	L	Z	-32

Node Loads and Enforced Displacements (BLC 2 : DEAD LOAD ICE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N116A	L	Z	-124
2	N119A	L	Z	-124
3	N118A	L	Z	-124
4	N121A	L	Z	-124
5	N117A	L	Z	-124
6	N120A	L	Z	-124
7	N140	L	Z	-341
8	N142	L	Z	-341
9	N156	L	Z	-341
10	N158	L	Z	-341
11	N148	L	Z	-341
12	N150	L	Z	-341
13	N123A	L	Z	-147

Node Loads and Enforced Displacements (BLC 3 : WIND LOAD (NO ICE) FRONT)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N116A	L	Y	63
2	N119A	L	Y	63
3	N118A	L	Y	47
4	N121A	L	Y	47
5	N117A	L	Y	47
6	N120A	L	Y	47
7	N140	L	Y	214
8	N142	L	Y	214
9	N156	L	Y	100
10	N158	L	Y	100
11	N148	L	Y	100
12	N150	L	Y	100
13	N123A	L	Y	67

Node Loads and Enforced Displacements (BLC 4 : WIND LOAD (NO ICE) SIDE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N116A	L	X	47
2	N119A	L	X	47
3	N118A	L	X	63
4	N121A	L	X	63
5	N117A	L	X	63
6	N120A	L	X	63
7	N140	L	X	100
8	N142	L	X	100
9	N156	L	X	214
10	N158	L	X	214
11	N148	L	X	214
12	N150	L	X	214
13	N123A	L	X	88

Node Loads and Enforced Displacements (BLC 5 : WIND LOAD (ICE) FRONT)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N116A	L	Y	22
2	N119A	L	Y	22
3	N118A	L	Y	18
4	N121A	L	Y	18
5	N117A	L	Y	18
6	N120A	L	Y	18

Node Loads and Enforced Displacements (BLC 5 : WIND LOAD (ICE) FRONT) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
7	N140	L	Y	72
8	N142	L	Y	72
9	N156	L	Y	37
10	N158	L	Y	37
11	N148	L	Y	37
12	N150	L	Y	37
13	N123A	L	Y	24

Node Loads and Enforced Displacements (BLC 6 : WIND LOAD (ICE) SIDE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N116A	L	X	18
2	N119A	L	X	18
3	N118A	L	X	22
4	N121A	L	X	22
5	N117A	L	X	22
6	N120A	L	X	22
7	N140	L	X	37
8	N142	L	X	37
9	N156	L	X	72
10	N158	L	X	72
11	N148	L	X	72
12	N150	L	X	72
13	N123A	L	X	31

Node Loads and Enforced Displacements (BLC 7 : LIVE LOAD1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	35	L	Z	-250

Node Loads and Enforced Displacements (BLC 8 : LIVE LOAD2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	22	L	Z	-250

Node Loads and Enforced Displacements (BLC 9 : LIVE LOAD3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	7	L	Z	-250

Node Loads and Enforced Displacements (BLC 10 : MAINTENANCE LOAD 1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	58	L	Z	-500

Node Loads and Enforced Displacements (BLC 11 : MAINTENANCE LOAD 2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	61	L	Z	-500

Node Loads and Enforced Displacements (BLC 12 : MAINTENANCE LOAD 3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	60	L	Z	-500

Node Loads and Enforced Displacements (BLC 13 : MAINTENANCE LOAD 4)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	59	L	Z	-500

Member Point Loads

No Data to Print...

Member Distributed Loads (BLC 2 : DEAD LOAD ICE)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	13	Z	-11	-11	0	%100
2	14	Z	-11	-11	0	%100
3	15	Z	-11	-11	0	%100
4	17	Z	-10	-10	0	%100
5	M60	Z	-10	-10	0	%100
6	M72	Z	-10	-10	0	%100
7	16	Z	-9	-9	0	%100
8	18	Z	-9	-9	0	%100
9	19	Z	-9	-9	0	%100
10	M59	Z	-9	-9	0	%100
11	M61	Z	-9	-9	0	%100
12	M62	Z	-9	-9	0	%100
13	M71	Z	-9	-9	0	%100
14	M73	Z	-9	-9	0	%100
15	M74	Z	-9	-9	0	%100
16	M59A	Z	-9	-9	0	%100
17	28	Z	-5	-5	0	%100
18	29	Z	-5	-5	0	%100
19	30	Z	-5	-5	0	%100
20	31	Z	-5	-5	0	%100
21	32	Z	-5	-5	0	%100
22	33	Z	-5	-5	0	%100
23	34	Z	-22	-22	0	%100
24	35	Z	-22	-22	0	%100
25	36	Z	-22	-22	0	%100
26	37	Z	-22	-22	0	%100
27	38	Z	-22	-22	0	%100
28	39	Z	-22	-22	0	%100
29	40	Z	-22	-22	0	%100
30	41	Z	-22	-22	0	%100
31	42	Z	-22	-22	0	%100
32	43	Z	-18	-18	0	%100
33	44	Z	-18	-18	0	%100
34	45	Z	-18	-18	0	%100
35	46	Z	-18	-18	0	%100
36	47	Z	-18	-18	0	%100
37	48	Z	-18	-18	0	%100
38	49	Z	-18	-18	0	%100
39	50	Z	-18	-18	0	%100
40	51	Z	-18	-18	0	%100
41	52	Z	-18	-18	0	%100
42	53	Z	-18	-18	0	%100
43	54	Z	-18	-18	0	%100
44	55	Z	-18	-18	0	%100
45	56	Z	-18	-18	0	%100
46	57	Z	-18	-18	0	%100

Member Distributed Loads (BLC 3 : WIND LOAD (NO ICE) FRONT)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	13	PY	8	8	0	%100
2	14	PY	8	8	0	%100
3	15	PY	8	8	0	%100
4	17	PY	6	6	0	%100
5	M60	PY	6	6	0	%100
6	M72	PY	6	6	0	%100
7	16	PY	5	5	0	%100
8	18	PY	5	5	0	%100
9	19	PY	5	5	0	%100
10	M59	PY	5	5	0	%100
11	M61	PY	5	5	0	%100
12	M62	PY	5	5	0	%100
13	M71	PY	5	5	0	%100
14	M73	PY	5	5	0	%100
15	M74	PY	5	5	0	%100
16	M59A	PY	5	5	0	%100
17	28	PY	7	7	0	%100
18	29	PY	7	7	0	%100
19	30	PY	7	7	0	%100
20	31	PY	7	7	0	%100
21	32	PY	7	7	0	%100
22	33	PY	7	7	0	%100
23	34	PY	14	14	0	%100
24	35	PY	14	14	0	%100
25	36	PY	14	14	0	%100
26	37	PY	14	14	0	%100
27	38	PY	14	14	0	%100
28	39	PY	14	14	0	%100
29	40	PY	14	14	0	%100
30	41	PY	14	14	0	%100
31	42	PY	14	14	0	%100
32	43	PY	22	22	0	%100
33	44	PY	22	22	0	%100
34	45	PY	22	22	0	%100
35	46	PY	22	22	0	%100
36	47	PY	22	22	0	%100
37	48	PY	22	22	0	%100
38	49	PY	22	22	0	%100
39	50	PY	22	22	0	%100
40	51	PY	22	22	0	%100
41	52	PY	22	22	0	%100
42	53	PY	22	22	0	%100
43	54	PY	22	22	0	%100
44	55	PY	22	22	0	%100
45	56	PY	22	22	0	%100
46	57	PY	22	22	0	%100

Member Distributed Loads (BLC 4 : WIND LOAD (NO ICE) SIDE)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	13	PX	8	8	0	%100
2	14	PX	8	8	0	%100
3	15	PX	8	8	0	%100
4	17	PX	6	6	0	%100
5	M60	PX	6	6	0	%100
6	M72	PX	6	6	0	%100
7	16	PX	5	5	0	%100
8	18	PX	5	5	0	%100

Member Distributed Loads (BLC 4 : WIND LOAD (NO ICE) SIDE) (Continued)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
9	19	PX	5	5	0	%100
10	M59	PX	5	5	0	%100
11	M61	PX	5	5	0	%100
12	M62	PX	5	5	0	%100
13	M71	PX	5	5	0	%100
14	M73	PX	5	5	0	%100
15	M74	PX	5	5	0	%100
16	M59A	PX	5	5	0	%100
17	28	PX	7	7	0	%100
18	29	PX	7	7	0	%100
19	30	PX	7	7	0	%100
20	31	PX	7	7	0	%100
21	32	PX	7	7	0	%100
22	33	PX	7	7	0	%100
23	34	PX	14	14	0	%100
24	35	PX	14	14	0	%100
25	36	PX	14	14	0	%100
26	37	PX	14	14	0	%100
27	38	PX	14	14	0	%100
28	39	PX	14	14	0	%100
29	40	PX	14	14	0	%100
30	41	PX	14	14	0	%100
31	42	PX	14	14	0	%100
32	43	PX	22	22	0	%100
33	44	PX	22	22	0	%100
34	45	PX	22	22	0	%100
35	46	PX	22	22	0	%100
36	47	PX	22	22	0	%100
37	48	PX	22	22	0	%100
38	49	PX	22	22	0	%100
39	50	PX	22	22	0	%100
40	51	PX	22	22	0	%100
41	52	PX	22	22	0	%100
42	53	PX	22	22	0	%100
43	54	PX	22	22	0	%100
44	55	PX	22	22	0	%100
45	56	PX	22	22	0	%100
46	57	PX	22	22	0	%100

Member Distributed Loads (BLC 5 : WIND LOAD (ICE) FRONT)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	13	PY	5.7	5.7	0	%100
2	14	PY	5.7	5.7	0	%100
3	15	PY	5.7	5.7	0	%100
4	17	PY	5.2	5.2	0	%100
5	M60	PY	5.2	5.2	0	%100
6	M72	PY	5.2	5.2	0	%100
7	16	PY	4.8	4.8	0	%100
8	18	PY	4.8	4.8	0	%100
9	19	PY	4.8	4.8	0	%100
10	M59	PY	4.8	4.8	0	%100
11	M61	PY	4.8	4.8	0	%100
12	M62	PY	4.8	4.8	0	%100
13	M71	PY	4.8	4.8	0	%100
14	M73	PY	4.8	4.8	0	%100
15	M74	PY	4.8	4.8	0	%100
16	M59A	PY	4.8	4.8	0	%100
17	28	PY	5.3	5.3	0	%100

Member Distributed Loads (BLC 5 : WIND LOAD (ICE) FRONT) (Continued)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
18	29	PY	5.3	5.3	0	%100
19	30	PY	5.3	5.3	0	%100
20	31	PY	5.3	5.3	0	%100
21	32	PY	5.3	5.3	0	%100
22	33	PY	5.3	5.3	0	%100
23	34	PY	7.7	7.7	0	%100
24	35	PY	7.7	7.7	0	%100
25	36	PY	7.7	7.7	0	%100
26	37	PY	7.7	7.7	0	%100
27	38	PY	7.7	7.7	0	%100
28	39	PY	7.7	7.7	0	%100
29	40	PY	7.7	7.7	0	%100
30	41	PY	7.7	7.7	0	%100
31	42	PY	7.7	7.7	0	%100
32	43	PY	10.2	10.2	0	%100
33	44	PY	10.2	10.2	0	%100
34	45	PY	10.2	10.2	0	%100
35	46	PY	10.2	10.2	0	%100
36	47	PY	10.2	10.2	0	%100
37	48	PY	10.2	10.2	0	%100
38	49	PY	10.2	10.2	0	%100
39	50	PY	10.2	10.2	0	%100
40	51	PY	10.2	10.2	0	%100
41	52	PY	10.2	10.2	0	%100
42	53	PY	10.2	10.2	0	%100
43	54	PY	10.2	10.2	0	%100
44	55	PY	10.2	10.2	0	%100
45	56	PY	10.2	10.2	0	%100
46	57	PY	10.2	10.2	0	%100

Member Distributed Loads (BLC 6 : WIND LOAD (ICE) SIDE)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	13	PX	5.7	5.7	0	%100
2	14	PX	5.7	5.7	0	%100
3	15	PX	5.7	5.7	0	%100
4	17	PX	5.2	5.2	0	%100
5	M60	PX	5.2	5.2	0	%100
6	M72	PX	5.2	5.2	0	%100
7	16	PX	4.8	4.8	0	%100
8	18	PX	4.8	4.8	0	%100
9	19	PX	4.8	4.8	0	%100
10	M59	PX	4.8	4.8	0	%100
11	M61	PX	4.8	4.8	0	%100
12	M62	PX	4.8	4.8	0	%100
13	M71	PX	4.8	4.8	0	%100
14	M73	PX	4.8	4.8	0	%100
15	M74	PX	4.8	4.8	0	%100
16	M59A	PX	4.8	4.8	0	%100
17	28	PX	5.3	5.3	0	%100
18	29	PX	5.3	5.3	0	%100
19	30	PX	5.3	5.3	0	%100
20	31	PX	5.3	5.3	0	%100
21	32	PX	5.3	5.3	0	%100
22	33	PX	5.3	5.3	0	%100
23	34	PX	7.7	7.7	0	%100
24	35	PX	7.7	7.7	0	%100
25	36	PX	7.7	7.7	0	%100
26	37	PX	7.7	7.7	0	%100

Member Distributed Loads (BLC 6 : WIND LOAD (ICE) SIDE) (Continued)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
27	38	PX	7.7	0	%100
28	39	PX	7.7	0	%100
29	40	PX	7.7	0	%100
30	41	PX	7.7	0	%100
31	42	PX	7.7	0	%100
32	43	PX	10.2	0	%100
33	44	PX	10.2	0	%100
34	45	PX	10.2	0	%100
35	46	PX	10.2	0	%100
36	47	PX	10.2	0	%100
37	48	PX	10.2	0	%100
38	49	PX	10.2	0	%100
39	50	PX	10.2	0	%100
40	51	PX	10.2	0	%100
41	52	PX	10.2	0	%100
42	53	PX	10.2	0	%100
43	54	PX	10.2	0	%100
44	55	PX	10.2	0	%100
45	56	PX	10.2	0	%100
46	57	PX	10.2	0	%100

Member Distributed Loads (BLC 14 : BLC 1 Transient Area Loads)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	28	Z	-0.704	0	28.606
2	28	Z	-2.796	28.606	57.212
3	29	Z	-0.704	0	28.608
4	29	Z	-2.797	28.608	57.215
5	34	Z	-6.24	14.095	36.794
6	35	Z	-5.371	0.263	12.263
7	36	Z	-5.37	21.639	33.639
8	30	Z	-0.704	0	28.608
9	30	Z	-2.797	28.608	57.215
10	31	Z	-0.705	0	28.609
11	31	Z	-2.797	28.609	57.219
12	37	Z	-6.242	14.094	36.794
13	38	Z	-5.372	0.264	12.264
14	39	Z	-5.371	21.638	33.638
15	32	Z	-0.704	0	28.606
16	32	Z	-2.796	28.606	57.212
17	33	Z	-0.704	0	28.609
18	33	Z	-2.797	28.609	57.219
19	40	Z	-6.241	14.094	36.793
20	41	Z	-5.373	0.264	12.264
21	42	Z	-5.37	21.639	33.639

Member Distributed Loads (BLC 15 : BLC 2 Transient Area Loads)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	28	Z	-1.158	0	28.606
2	28	Z	-4.597	28.606	57.212
3	29	Z	-1.158	0	28.608
4	29	Z	-4.598	28.608	57.215
5	34	Z	-10.259	14.095	36.794
6	35	Z	-8.83	0.263	12.263
7	36	Z	-8.828	21.639	33.639
8	30	Z	-1.158	0	28.608
9	30	Z	-4.598	28.608	57.215

Member Distributed Loads (BLC 15 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
10	31	Z	-1.158	-4.599	0	28.609
11	31	Z	-4.599	-8.04	28.609	57.219
12	37	Z	-10.262	-10.262	14.094	36.794
13	38	Z	-8.832	-8.832	0.264	12.264
14	39	Z	-8.83	-8.83	21.638	33.638
15	32	Z	-1.158	-4.597	0	28.606
16	32	Z	-4.597	-8.037	28.606	57.212
17	33	Z	-1.158	-4.599	0	28.609
18	33	Z	-4.599	-8.04	28.609	57.219
19	40	Z	-10.26	-10.26	14.094	36.793
20	41	Z	-8.833	-8.833	0.264	12.264
21	42	Z	-8.828	-8.828	21.639	33.639

Member Area Loads (BLC 1 : DEAD LOAD)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	35	37	36	36	Z	Two Way	-5
2	23	22	24	24	Z	Two Way	-5
3	9	8	7	7	Z	Two Way	-5

Member Area Loads (BLC 2 : DEAD LOAD ICE)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	35	37	36	36	Z	Two Way	-8.22
2	23	22	24	24	Z	Two Way	-8.22
3	9	8	7	7	Z	Two Way	-8.22

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DL + WL (NO ICE) 0 Degree	Yes	Y	1	1.2			3	1.6		
2	DL + WL (NO ICE) 30 Degree	Yes	Y	1	1.2			3	1.386	4	0.8
3	DL + WL (NO ICE) 60 Degree	Yes	Y	1	1.2			3	0.8	4	1.386
4	DL + WL (NO ICE) 90 Degree	Yes	Y	1	1.2					4	1.6
5	DL + WL (NO ICE) 120 Degree	Yes	Y	1	1.2			3	-0.8	4	1.386
6	DL + WL (NO ICE) 150 Degree	Yes	Y	1	1.2			3	-1.386	4	0.8
7	DL + WL (NO ICE) 180 Degree	Yes	Y	1	1.2			3	-1.6		
8	DL + WL (NO ICE) 210 Degree	Yes	Y	1	1.2			3	-1.386	4	-0.8
9	DL + WL (NO ICE) 240 Degree	Yes	Y	1	1.2			3	-0.8	4	-1.386
10	DL + WL (NO ICE) 270 Degree	Yes	Y	1	1.2					4	-1.6
11	DL + WL (NO ICE) 300 Degree	Yes	Y	1	1.2			3	0.8	4	-1.386
12	DL + WL (NO ICE) 330 Degree	Yes	Y	1	1.2			3	1.386	4	-0.8
13	DL + DL ICE + WL (ICE) 0 Degree	Yes	Y	1	1.2	2	1	5	1		
14	DL + DL ICE + WL (ICE) 30 Degree	Yes	Y	1	1.2	2	1	5	0.866	6	0.5
15	DL + DL ICE + WL (ICE) 60 Degree	Yes	Y	1	1.2	2	1	5	0.5	6	0.866
16	DL + DL ICE + WL (ICE) 90 Degree	Yes	Y	1	1.2	2	1			6	1
17	DL + DL ICE + WL (ICE) 120 Degree	Yes	Y	1	1.2	2	1	5	-0.5	6	0.866
18	DL + DL ICE + WL (ICE) 150 Degree	Yes	Y	1	1.2	2	1	5	-0.866	6	0.5
19	DL + DL ICE + WL (ICE) 180 Degree	Yes	Y	1	1.2	2	1	5	-1		
20	DL + DL ICE + WL (ICE) 210 Degree	Yes	Y	1	1.2	2	1	5	-0.866	6	-0.5
21	DL + DL ICE + WL (ICE) 240 Degree	Yes	Y	1	1.2	2	1	5	-0.5	6	-0.866
22	DL + DL ICE + WL (ICE) 270 Degree	Yes	Y	1	1.2	2	1			6	-1
23	DL + DL ICE + WL (ICE) 300 Degree	Yes	Y	1	1.2	2	1	5	0.5	6	-0.866
24	DL + DL ICE + WL (ICE) 330 Degree	Yes	Y	1	1.2	2	1	5	0.866	6	-0.5
25	DEAD LOAD + LIVE LOAD1	Yes	Y	1	1.2					7	1.5
26	DEAD LOAD + LIVE LOAD2	Yes	Y	1	1.2					8	1.5
27	DEAD LOAD + LIVE LOAD3	Yes	Y	1	1.2					9	1.5
28	DL + MAIN I 1+30MPH WL FRONT	Yes	Y	1	1.2	10	1.5	3	0.104		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
29	DL + MAIN L2+30MPH WL FRONT	Yes	Y	1	1.2	11	1.5	3	0.104		
30	DL + MAIN L3+30MPH WL FRONT	Yes	Y	1	1.2	12	1.5	3	0.104		
31	DL + MAIN L4+30MPH WL FRONT	Yes	Y	1	1.2	13	1.5	3	0.104		
32	DL + MAIN L1+30MPH WL SIDE	Yes	Y	1	1.2	10	1.5	4	0.104		
33	DL + MAIN L2+30MPH WL SIDE	Yes	Y	1	1.2	11	1.5	4	0.104		
34	DL + MAIN L3+30MPH WL SIDE	Yes	Y	1	1.2	12	1.5	4	0.104		
35	DL + MAIN L4+30MPH WL SIDE	Yes	Y	1	1.2	13	1.5	4	0.104		
36	DL + MAIN L1+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	10	1.5	3	-0.104		
37	DL + MAIN L2+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	11	1.5	3	-0.104		
38	DL + MAIN L3+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	12	1.5	3	-0.104		
39	DL + MAIN L4+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	13	1.5	3	-0.104		
40	DL + MAIN L1+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	10	1.5	4	-0.104		
41	DL + MAIN L2+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	11	1.5	4	-0.104		
42	DL + MAIN L3+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	12	1.5	4	-0.104		
43	DL + MAIN L4+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	13	1.5	4	-0.104		

Envelope Node Reactions

Node Label			X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	13	max	1218.516	10	1578.774	7	3129.623	19	8.549	22	0.387	22	1.766	4
2		min	-1215.277	4	-1573.279	1	988.62	29	2.745	39	-0.078	34	-1.764	10
3	28	max	1592.737	9	1504.929	8	2889.938	15	-1.436	36	7.003	15	1.043	2
4		min	-1602.489	3	-1503.104	2	1000.928	40	-4.53	14	2.347	40	-1.046	8
5	41	max	1803.942	11	1177.083	6	2894.082	23	-1.312	39	-2.422	35	0.57	7
6		min	-1796.306	5	-1179.993	12	1001.868	35	-3.936	28	-7.431	23	-0.563	1
7	Totals:	max	4396.92	10	4028.256	7	8894.775	14						
8		min	-4396.92	4	-4028.256	1	3244.818	7						

Envelope Node Displacements

Node Label			X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1	1	max	0.031	4	0.027	3	-0.077	42	-3.479e-3	31	-1.667e-3	11	7.257e-3	10
2		min	-0.03	10	-0.026	9	-0.288	17	-1.1e-2	19	-9.655e-3	17	-7.366e-3	4
3	N2	max	0	43	0	43	0	43	0	43	0	43	0	43
4		min	0	1	0	1	0	1	0	1	0	1	0	1
5	2	max	0.026	4	0.024	10	-0.066	33	-3.446e-3	28	8.269e-3	21	3.968e-3	10
6		min	-0.026	10	-0.025	4	-0.223	21	-1.081e-2	20	1.54e-3	3	-3.948e-3	4
7	3	max	0.021	4	0.027	3	-0.069	42	-3.449e-3	31	-1.057e-3	42	8.002e-4	9
8		min	-0.021	10	-0.026	9	-0.264	17	-1.09e-2	19	-5.171e-3	17	-8.169e-4	3
9	4	max	0.021	4	0.024	10	-0.058	33	-3.418e-3	28	3.188e-3	21	6.563e-4	11
10		min	-0.021	10	-0.025	4	-0.2	21	-1.072e-2	20	7.252e-4	33	-6.623e-4	5
11	5	max	0.062	4	0.032	3	-0.2	31	-4.606e-3	11	-2.673e-3	11	1.207e-3	4
12		min	-0.061	10	-0.031	9	-0.649	19	-1.958e-2	17	-2.097e-2	17	-1.187e-3	10
13	6	max	0.062	4	0.019	11	-0.196	28	-4.91e-3	3	1.908e-2	21	4.581e-4	8
14		min	-0.061	10	-0.019	5	-0.624	19	-2.065e-2	21	2.688e-3	3	-4.737e-4	2
15	7	max	0.062	4	0.001	1	-0.201	31	-3.375e-3	28	1.822e-4	31	7.893e-4	10
16		min	-0.061	10	-0.001	7	-0.637	19	-1.075e-2	19	-1.398e-3	16	-8.019e-4	4
17	8	max	0.021	4	0.022	3	-0.063	42	-3.355e-3	31	-1.011e-3	42	7.598e-4	9
18		min	-0.021	10	-0.022	9	-0.237	17	-1.059e-2	19	-5.013e-3	17	-7.763e-4	3
19	9	max	0.021	4	0.021	10	-0.054	33	-3.329e-3	32	3.029e-3	21	6.349e-4	11
20		min	-0.021	10	-0.022	4	-0.183	21	-1.044e-2	20	6.788e-4	33	-6.407e-4	5
21	10	max	0.021	4	0	1	-0.044	39	-2.849e-3	32	1.427e-4	42	9.156e-4	10
22		min	-0.021	10	0	7	-0.137	20	-8.929e-3	19	-8.517e-4	16	-9.242e-4	4
23	11	max	0.055	4	0.021	10	-0.082	33	-3.805e-3	3	2.113e-2	21	2.571e-4	12
24		min	-0.055	10	-0.022	4	-0.271	21	-1.725e-2	21	3.25e-3	3	-2.513e-4	6
25	12	max	0.085	4	0.021	3	-0.093	42	-3.992e-3	11	-2.962e-3	11	7.784e-4	9
26		min	-0.084	10	-0.021	9	-0.336	17	-1.884e-2	17	-2.128e-2	17	-7.932e-4	3
27	13	max	0	4	0	1	0	29	0	39	0	34	0	10

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
28		min	0	10	0	7	0	19	0	22	0	22	0	4
29	14	max	0.039	9	0.071	4	-0.218	40	2.814e-2	13	-1.624e-3	41	2.129e-3	12
30		min	-0.04	3	-0.07	10	-0.836	35	3.929e-3	7	-1.125e-2	35	-2.126e-3	5
31	15	max	0.039	9	0.067	10	-0.216	35	2.691e-2	13	1.157e-2	40	1.463e-3	10
32		min	-0.04	3	-0.068	4	-0.835	40	4.172e-3	7	1.953e-3	34	-1.459e-3	4
33	16	max	0.036	10	0.018	12	-0.09	7	1.388e-2	13	-2.91e-4	29	4.353e-3	7
34		min	-0.036	4	-0.018	6	-0.288	13	3.161e-3	7	-5.795e-3	39	-4.491e-3	1
35	17	max	0.035	4	0.039	3	-0.06	42	3.016e-3	43	-4.021e-3	10	3.204e-3	9
36		min	-0.035	10	-0.038	9	-0.22	16	-1.881e-3	5	-1.341e-2	16	-3.295e-3	3
37	18	max	0.035	10	0.016	12	-0.082	7	9.919e-3	13	-2.028e-3	41	1.129e-3	11
38		min	-0.035	4	-0.016	6	-0.264	13	3.126e-3	7	-6.966e-3	35	-1.137e-3	5
39	19	max	0.038	4	0.034	4	-0.046	42	3.804e-3	31	-3.708e-3	40	1.845e-3	10
40		min	-0.038	10	-0.033	9	-0.197	17	5.966e-4	36	-1.079e-2	16	-1.864e-3	4
41	20	max	0.039	9	0.057	4	-0.199	40	2.811e-2	13	-1.617e-3	41	2.148e-3	12
42		min	-0.04	3	-0.056	10	-0.736	35	3.92e-3	7	-1.114e-2	35	-2.146e-3	5
43	21	max	0.012	11	0.073	4	-0.198	40	4.005e-3	43	-5.586e-3	11	9.428e-4	11
44		min	-0.012	5	-0.072	10	-0.673	35	-6.199e-3	17	-2.73e-2	17	-9.447e-4	5
45	22	max	0.033	10	0.06	4	-0.198	40	9.584e-3	31	-2.483e-3	41	1.28e-3	10
46		min	-0.033	4	-0.06	10	-0.704	35	1.696e-3	36	-9.546e-3	35	-1.295e-3	4
47	23	max	0.03	10	0.013	12	-0.074	7	9.629e-3	13	-1.941e-3	41	1.135e-3	11
48		min	-0.031	4	-0.013	6	-0.236	13	3.046e-3	7	-6.878e-3	35	-1.145e-3	5
49	24	max	0.029	4	0.029	3	-0.048	42	3.776e-3	31	-3.59e-3	40	1.762e-3	10
50		min	-0.029	10	-0.029	9	-0.18	16	5.933e-4	36	-1.047e-2	16	-1.78e-3	4
51	25	max	0.006	9	0.012	3	-0.044	40	5.203e-3	13	-2.287e-3	41	9.555e-4	10
52		min	-0.006	3	-0.012	9	-0.135	15	1.551e-3	36	-7.232e-3	16	-9.661e-4	4
53	26	max	0.029	5	0.054	3	-0.082	41	4.874e-4	43	-4.87e-3	11	1.079e-3	10
54		min	-0.028	11	-0.053	9	-0.267	16	-9.671e-3	17	-2.538e-2	17	-1.094e-3	4
55	27	max	0.039	9	0.051	1	-0.108	25	2.801e-2	13	-1.79e-4	41	3.638e-4	9
56		min	-0.04	3	-0.05	7	-0.335	14	3.863e-3	7	-7.058e-3	35	-3.689e-4	3
57	28	max	0	3	0	2	0	40	0	14	0	40	0	8
58		min	0	9	0	8	0	15	0	36	0	15	0	2
59	29	max	0.04	4	0.034	10	-0.072	33	2.836e-3	32	1.432e-2	22	2.006e-3	1
60		min	-0.04	10	-0.034	4	-0.288	21	-2.959e-3	21	4.136e-3	4	-2.002e-3	7
61	30	max	0.037	9	0.014	2	-0.078	7	1.255e-2	13	5.869e-3	36	1.312e-3	10
62		min	-0.038	3	-0.014	8	-0.245	29	3.032e-3	7	3.969e-4	30	-1.355e-3	4
63	31	max	0.041	4	0.032	10	-0.058	33	3.521e-3	28	1.2e-2	22	1.931e-3	10
64		min	-0.041	10	-0.032	4	-0.264	21	3.071e-4	39	3.918e-3	35	-1.933e-3	4
65	32	max	0.036	9	0.016	2	-0.07	7	8.11e-3	29	7.667e-3	22	1.282e-3	9
66		min	-0.036	3	-0.016	8	-0.23	29	2.799e-3	6	2.177e-3	34	-1.295e-3	3
67	33	max	0.024	9	0.065	10	-0.202	35	3.624e-3	32	2.748e-2	21	2.29e-3	9
68		min	-0.024	3	-0.065	4	-0.677	40	-8.521e-3	21	5.271e-3	3	-2.282e-3	3
69	34	max	0.039	9	0.054	10	-0.194	35	2.688e-2	13	1.146e-2	40	1.48e-3	10
70		min	-0.04	3	-0.055	4	-0.732	40	4.163e-3	7	1.946e-3	34	-1.476e-3	4
71	35	max	0.032	10	0.058	10	-0.198	35	9.159e-3	28	9.982e-3	22	1.303e-3	9
72		min	-0.032	4	-0.059	4	-0.704	40	1.268e-3	39	2.728e-3	34	-1.312e-3	3
73	36	max	0.032	4	0.027	10	-0.058	33	3.49e-3	28	1.165e-2	22	1.86e-3	10
74		min	-0.032	10	-0.027	4	-0.237	21	3.008e-4	39	3.796e-3	35	-1.862e-3	4
75	37	max	0.03	9	0.013	2	-0.064	7	7.897e-3	29	7.502e-3	22	1.274e-3	9
76		min	-0.03	3	-0.012	8	-0.201	29	2.719e-3	6	2.093e-3	34	-1.287e-3	3
77	38	max	0.004	11	0.008	11	-0.044	35	4.935e-3	28	8.123e-3	22	9.289e-4	10
78		min	-0.004	5	-0.008	5	-0.136	23	1.289e-3	39	2.44e-3	34	-9.325e-4	4
79	39	max	0.039	9	0.015	1	-0.095	6	2.696e-2	13	6.829e-3	40	6.331e-4	8
80		min	-0.04	3	-0.015	7	-0.274	29	4.086e-3	7	-4.207e-5	34	-6.542e-4	2
81	40	max	0.049	3	0.03	11	-0.094	34	5.904e-4	32	2.701e-2	21	6.95e-4	10
82		min	-0.049	9	-0.03	5	-0.336	22	-9.127e-3	21	4.818e-3	3	-6.901e-4	4
83	41	max	0	5	0	12	0	35	0	28	0	23	0	1
84		min	0	11	0	6	0	23	0	39	0	35	0	7
85	42	max	0.042	9	0.073	10	-0.22	35	3.626e-3	32	2.751e-2	21	2.277e-3	9

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
86		min	-0.042	3	-0.074	4	-0.769	40	-8.516e-3	21	5.282e-3	3	-2.269e-3	3
87	43	max	0.063	4	0.019	11	-0.22	28	-4.921e-3	3	1.909e-2	21	4.609e-4	8
88		min	-0.063	10	-0.019	5	-0.699	19	-2.069e-2	21	2.692e-3	3	-4.765e-4	2
89	44	max	0.053	4	0.036	4	-0.222	35	-4.616e-3	11	-2.677e-3	11	1.187e-3	4
90		min	-0.052	10	-0.036	9	-0.707	20	-1.961e-2	17	-2.098e-2	17	-1.167e-3	10
91	45	max	0.019	11	0.076	4	-0.219	40	4.007e-3	43	-5.597e-3	11	9.3e-4	11
92		min	-0.019	5	-0.075	10	-0.767	35	-6.194e-3	17	-2.733e-2	17	-9.32e-4	5
93	46	max	0.039	9	0.062	10	-0.206	35	2.691e-2	13	1.157e-2	40	1.463e-3	10
94		min	-0.04	3	-0.062	4	-0.788	40	4.172e-3	7	1.953e-3	34	-1.459e-3	4
95	47	max	0.039	9	0.064	4	-0.209	40	2.814e-2	13	-1.624e-3	41	2.129e-3	12
96		min	-0.04	3	-0.064	10	-0.791	35	3.929e-3	7	-1.125e-2	35	-2.126e-3	5
97	48	max	0.039	9	0.052	1	-0.113	36	2.826e-2	13	-4.871e-4	41	4.47e-4	10
98		min	-0.04	3	-0.051	7	-0.359	14	3.86e-3	7	-7.601e-3	35	-4.586e-4	4
99	49	max	0.039	9	0.013	1	-0.1	39	2.708e-2	13	7.457e-3	40	6.831e-4	9
100		min	-0.04	3	-0.013	7	-0.288	28	4.121e-3	7	3.499e-4	34	-6.896e-4	3
101	50	max	0.044	9	0.062	10	-0.245	6	2.691e-2	13	1.157e-2	40	1.463e-3	10
102		min	-0.045	3	-0.062	4	-0.855	28	4.172e-3	7	1.953e-3	34	-1.459e-3	4
103	51	max	0.044	10	0.064	4	-0.249	8	2.814e-2	13	-1.624e-3	41	2.129e-3	12
104		min	-0.044	4	-0.064	10	-0.858	31	3.929e-3	7	-1.125e-2	35	-2.126e-3	5
105	52	max	0.041	9	0.052	1	-0.129	7	2.826e-2	13	-4.871e-4	41	4.47e-4	10
106		min	-0.041	3	-0.051	7	-0.457	13	3.86e-3	7	-7.601e-3	35	-4.586e-4	4
107	53	max	0.041	9	0.013	1	-0.117	7	2.708e-2	13	7.457e-3	40	6.831e-4	9
108		min	-0.042	3	-0.013	7	-0.381	13	4.121e-3	7	3.499e-4	34	-6.896e-4	3
109	54	max	0.556	40	-0.225	8	-0.245	6	2.646e-2	13	1.161e-2	32	1.463e-3	10
110		min	0.093	34	-1.275	14	-0.855	28	5.02e-3	7	1.923e-3	42	-1.459e-3	4
111	55	max	-0.077	41	-0.214	6	-0.249	8	2.769e-2	13	-1.592e-3	33	2.129e-3	12
112		min	-0.541	35	-1.334	24	-0.858	31	4.777e-3	7	-1.129e-2	43	-2.126e-3	5
113	56	max	-0.02	33	-0.455	2	-0.129	7	2.76e-2	19	9.273e-4	4	4.47e-4	10
114		min	-0.369	43	-1.316	19	-0.457	13	9.122e-3	1	-7.802e-3	43	-4.586e-4	4
115	57	max	0.359	32	-0.293	7	-0.118	7	2.642e-2	13	7.563e-3	32	6.831e-4	9
116		min	0.016	42	-1.273	13	-0.381	13	6.181e-3	7	2.565e-4	42	-6.896e-4	3
117	58	max	-0.094	38	1.312	13	-0.245	6	2.736e-2	13	1.095e-2	40	1.463e-3	10
118		min	-0.534	28	0.175	7	-0.857	28	3.325e-3	7	1.801e-3	4	-1.459e-3	4
119	59	max	0.519	39	1.371	13	-0.249	8	2.859e-2	13	-1.487e-3	10	2.129e-3	12
120		min	0.078	29	0.163	7	-0.86	31	3.082e-3	7	-1.065e-2	35	-2.126e-3	5
121	60	max	0.37	35	1.418	13	-0.129	7	2.971e-2	13	2.007e-3	10	4.47e-4	10
122		min	-0.009	10	-0.142	7	-0.457	13	-3.922e-3	7	-7.825e-3	35	-4.586e-4	4
123	61	max	-0.014	34	1.33	13	-0.118	7	2.781e-2	13	7.58e-3	40	6.831e-4	9
124		min	-0.36	40	0.081	7	-0.382	13	1.493e-3	7	-3.983e-4	4	-6.896e-4	3
125	N88	max	0.063	4	0.019	11	-0.209	28	-4.92e-3	3	1.909e-2	21	4.608e-4	8
126		min	-0.062	10	-0.019	5	-0.665	19	-2.069e-2	21	2.692e-3	3	-4.764e-4	2
127	N89	max	0.034	9	0.069	10	-0.212	35	3.626e-3	32	2.751e-2	21	2.277e-3	9
128		min	-0.034	3	-0.07	4	-0.727	40	-8.516e-3	21	5.282e-3	3	-2.269e-3	3
129	N90	max	0.046	3	0.031	11	-0.101	34	1.079e-3	32	2.737e-2	21	8.935e-4	10
130		min	-0.047	9	-0.031	5	-0.36	22	-8.994e-3	21	4.903e-3	3	-8.882e-4	4
131	N91	max	0.056	4	0.021	10	-0.088	32	-4.027e-3	3	2.085e-2	21	2.294e-4	11
132		min	-0.056	10	-0.021	4	-0.291	20	-1.796e-2	21	3.162e-3	3	-2.302e-4	5
133	N92	max	0.063	4	0.019	11	-0.244	32	-4.92e-3	3	1.909e-2	21	4.608e-4	8
134		min	-0.062	10	-0.019	5	-0.758	21	-2.069e-2	21	2.692e-3	3	-4.764e-4	2
135	N93	max	0.03	9	0.075	10	-0.244	35	3.626e-3	32	2.751e-2	21	2.277e-3	9
136		min	-0.03	3	-0.076	4	-0.773	22	-8.516e-3	21	5.282e-3	3	-2.269e-3	3
137	N94	max	0.048	3	0.034	11	-0.132	4	1.079e-3	32	2.737e-2	21	8.935e-4	10
138		min	-0.048	9	-0.034	5	-0.457	22	-8.994e-3	21	4.903e-3	3	-8.882e-4	4
139	N95	max	0.056	4	0.021	10	-0.12	33	-4.027e-3	3	2.085e-2	21	2.294e-4	11
140		min	-0.056	10	-0.022	4	-0.385	21	-1.796e-2	21	3.162e-3	3	-2.302e-4	5
141	N96	max	0.888	19	1.001	23	-0.244	32	-4.98e-3	4	1.869e-2	21	4.608e-4	8
142		min	0.215	3	0.221	4	-0.758	21	-2.081e-2	23	3.426e-3	3	-4.764e-4	2
143	N97	max	1.31	21	0.427	22	-0.244	35	3.628e-3	32	2.713e-2	21	2.277e-3	9

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
144		min	0.25	3	-0.179	32	-0.773	22	-8.571e-3	23	6.018e-3	3	-2.269e-3	3
145	N98	max	1.3	17	0.454	23	-0.132	4	1.083e-3	36	2.731e-2	17	8.935e-4	10
146		min	0.373	11	-0.054	32	-0.458	22	-9.381e-3	24	7.119e-3	11	-8.882e-4	4
147	N99	max	0.981	18	0.878	23	-0.12	33	-3.896e-3	5	2.037e-2	19	2.294e-4	11
148		min	0.265	2	0.175	5	-0.385	21	-1.824e-2	24	4.946e-3	3	-2.302e-4	5
149	N100	max	-0.04	4	-0.232	3	-0.244	32	-4.495e-3	3	1.953e-2	22	4.608e-4	8
150		min	-0.955	22	-1.004	20	-0.758	21	-2.098e-2	20	1.935e-3	4	-4.764e-4	2
151	N101	max	-0.25	4	0.171	28	-0.244	35	3.624e-3	32	2.794e-2	22	2.277e-3	9
152		min	-1.333	22	-0.413	19	-0.773	22	-8.835e-3	20	4.466e-3	4	-2.269e-3	3
153	N102	max	0.085	4	0.062	2	-0.132	4	2.228e-3	2	2.881e-2	22	8.935e-4	10
154		min	-1.375	22	-0.457	19	-0.458	22	-9.685e-3	20	-2.854e-3	4	-8.882e-4	4
155	N103	max	0.003	4	-0.156	2	-0.12	33	-2.697e-3	2	2.16e-2	22	2.294e-4	11
156		min	-1.044	22	-0.877	20	-0.385	21	-1.847e-2	20	6.209e-4	4	-2.302e-4	5
157	N112	max	0.015	11	0.074	4	-0.209	40	4.007e-3	43	-5.597e-3	11	9.302e-4	11
158		min	-0.016	5	-0.074	10	-0.724	35	-6.194e-3	17	-2.733e-2	17	-9.321e-4	5
159	N113	max	0.057	4	0.034	3	-0.212	35	-4.616e-3	11	-2.677e-3	11	1.187e-3	4
160		min	-0.056	10	-0.034	9	-0.681	20	-1.961e-2	17	-2.098e-2	17	-1.167e-3	10
161	N114	max	0.088	4	0.02	3	-0.1	43	-4.141e-3	11	-2.885e-3	11	6.184e-4	9
162		min	-0.086	10	-0.019	9	-0.36	17	-1.922e-2	17	-2.134e-2	17	-6.325e-4	3
163	N115	max	0.025	5	0.056	3	-0.088	41	1.059e-3	43	-5.024e-3	11	1.026e-3	10
164		min	-0.025	11	-0.055	9	-0.287	16	-9.073e-3	17	-2.586e-2	17	-1.038e-3	4
165	N116	max	0.014	11	0.077	4	-0.24	40	4.007e-3	43	-5.597e-3	11	9.302e-4	11
166		min	-0.014	5	-0.076	10	-0.762	35	-6.194e-3	17	-2.733e-2	17	-9.321e-4	5
167	N117	max	0.055	4	0.031	3	-0.247	43	-4.616e-3	11	-2.677e-3	11	1.187e-3	4
168		min	-0.054	10	-0.031	9	-0.777	17	-1.961e-2	17	-2.098e-2	17	-1.167e-3	10
169	N118	max	0.089	4	0.022	3	-0.132	42	-4.141e-3	11	-2.885e-3	11	6.184e-4	9
170		min	-0.087	10	-0.021	9	-0.457	17	-1.922e-2	17	-2.134e-2	17	-6.325e-4	3
171	N119	max	0.027	5	0.059	3	-0.119	41	1.059e-3	43	-5.024e-3	11	1.026e-3	10
172		min	-0.027	11	-0.058	9	-0.381	16	-9.073e-3	17	-2.586e-2	17	-1.038e-3	4
173	N120	max	-0.281	11	0.317	15	-0.24	40	4.009e-3	43	-6.333e-3	11	9.302e-4	11
174		min	-1.298	17	-0.197	43	-0.762	35	-6.252e-3	15	-2.695e-2	17	-9.321e-4	5
175	N121	max	-0.199	11	0.951	15	-0.247	43	-4.678e-3	10	-3.411e-3	11	1.187e-3	4
176		min	-0.98	19	0.195	10	-0.777	17	-1.972e-2	15	-2.059e-2	17	-1.167e-3	10
177	N122	max	-0.218	3	0.944	15	-0.133	42	-3.364e-3	8	-4.913e-3	3	6.184e-4	9
178		min	-1.025	21	0.159	9	-0.458	17	-1.971e-2	14	-2.127e-2	21	-6.325e-4	3
179	N123	max	-0.339	11	0.46	15	-0.119	41	1.061e-3	43	-6.811e-3	11	1.026e-3	10
180		min	-1.216	18	-0.055	43	-0.381	16	-9.317e-3	14	-2.538e-2	19	-1.038e-3	4
181	N124	max	1.327	16	0.191	31	-0.24	40	4.004e-3	43	-4.8e-3	10	9.302e-4	11
182		min	0.254	10	-0.307	19	-0.762	35	-6.529e-3	18	-2.776e-2	16	-9.321e-4	5
183	N125	max	1.044	16	-0.227	11	-0.247	43	-4.191e-3	11	-1.908e-3	10	1.187e-3	4
184		min	0.047	10	-0.952	18	-0.777	17	-1.99e-2	18	-2.141e-2	16	-1.167e-3	10
185	N126	max	1.1	16	-0.104	12	-0.133	42	-1.329e-3	12	4.838e-3	10	6.184e-4	9
186		min	-0.223	10	-0.941	18	-0.458	17	-1.978e-2	18	-2.284e-2	16	-6.325e-4	3
187	N127	max	1.273	16	0.053	31	-0.119	41	1.109e-3	31	-2.46e-3	10	1.026e-3	10
188		min	0.117	10	-0.458	19	-0.381	16	-9.641e-3	18	-2.658e-2	16	-1.038e-3	4
189	N140	max	-0.015	33	-0.324	4	-0.129	7	2.76e-2	19	9.164e-4	4	4.47e-4	10
190		min	-0.26	43	-0.929	19	-0.457	13	9.133e-3	1	-7.801e-3	43	-4.586e-4	4
191	N142	max	0.292	35	1.121	13	-0.129	7	2.97e-2	13	2.003e-3	10	4.47e-4	10
192		min	0.012	10	-0.103	7	-0.457	13	-3.918e-3	7	-7.825e-3	35	-4.586e-4	4
193	N148	max	0.918	17	0.324	23	-0.132	4	1.083e-3	32	2.73e-2	17	8.935e-4	10
194		min	0.274	11	-0.039	32	-0.458	22	-9.375e-3	24	7.128e-3	11	-8.882e-4	4
195	N150	max	0.056	4	0.045	28	-0.132	4	2.224e-3	2	2.881e-2	22	8.935e-4	10
196		min	-1.086	22	-0.361	19	-0.458	22	-9.684e-3	20	-2.85e-3	4	-8.882e-4	4
197	N156	max	-0.149	3	0.669	15	-0.133	42	-3.373e-3	8	-4.922e-3	3	6.184e-4	9
198		min	-0.728	21	0.111	9	-0.458	17	-1.97e-2	14	-2.126e-2	21	-6.325e-4	3
199	N158	max	0.871	16	-0.091	12	-0.133	42	-1.333e-3	12	4.834e-3	10	6.184e-4	9
200		min	-0.174	10	-0.743	18	-0.458	17	-1.978e-2	18	-2.284e-2	16	-6.325e-4	3
201	N116A	max	0.141	40	-0.113	7	-0.118	7	2.653e-2	13	7.549e-3	32	6.831e-4	9

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
202		min	0.005	34	-0.496	13	-0.381	13	5.987e-3	7	2.69e-4	42	-6.896e-4	3
203	N117A	max	0.386	18	0.344	23	-0.12	33	-3.992e-3	5	2.041e-2	20	2.294e-4	11
204		min	0.108	1	0.055	4	-0.385	21	-1.815e-2	23	4.778e-3	3	-2.302e-4	5
205	N118A	max	-0.14	11	0.188	15	-0.119	41	1.061e-3	43	-6.643e-3	11	1.026e-3	10
206		min	-0.471	18	-0.038	10	-0.381	16	-9.221e-3	15	-2.542e-2	18	-1.038e-3	4
207	N119A	max	-0.007	38	0.625	13	-0.118	7	2.775e-2	13	7.573e-3	40	6.831e-4	9
208		min	-0.169	28	0.043	7	-0.382	13	1.618e-3	7	-2.739e-4	4	-6.896e-4	3
209	N120A	max	0.02	4	-0.087	2	-0.12	33	-2.805e-3	2	2.153e-2	22	2.294e-4	11
210		min	-0.497	22	-0.411	19	-0.385	21	-1.841e-2	20	7.454e-4	4	-2.302e-4	5
211	N121A	max	0.6	16	0.025	31	-0.119	41	1.101e-3	31	-2.585e-3	10	1.026e-3	10
212		min	0.054	10	-0.217	20	-0.381	16	-9.58e-3	18	-2.651e-2	16	-1.038e-3	4
213	N119B	max	0.008	4	0	1	-0.014	39	-1.899e-3	39	8.503e-5	34	9.566e-4	10
214		min	-0.008	10	0	7	-0.044	23	-5.927e-3	24	-4.237e-4	22	-9.597e-4	4
215	N120B	max	0.008	4	0.003	10	-0.014	36	-1.899e-3	39	8.503e-5	34	9.566e-4	10
216		min	-0.008	10	-0.003	4	-0.043	16	-5.927e-3	24	-4.237e-4	22	-9.597e-4	4
217	N121B	max	0.038	4	0.185	13	-0.014	36	-1.184e-3	7	1.164e-3	4	9.566e-4	10
218		min	-0.042	10	0.04	7	-0.043	16	-6.222e-3	13	-1.296e-3	10	-9.597e-4	4
219	N122A	max	0.01	16	-0.034	43	-0.014	36	-1.9e-3	32	8.214e-5	34	9.566e-4	10
220		min	-0.006	10	-0.108	17	-0.043	16	-5.945e-3	19	-4.147e-4	16	-9.597e-4	4
221	N123A	max	0.019	4	0.086	24	-0.014	36	-1.216e-3	7	1.133e-3	4	9.566e-4	10
222		min	-0.021	10	0.021	6	-0.043	16	-6.203e-3	13	-1.265e-3	10	-9.597e-4	4

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

Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn	
1	40	HSS4X4X4	0.563	74.571	22	0.11	74.571	z	22	118697.265	139518	16.181	16.181	3	H1-1b
2	37	HSS4X4X4	0.536	74.571	14	0.133	74.571	z	30	118697.265	139518	16.181	16.181	3	H1-1b
3	34	HSS4X4X4	0.531	74.571	24	0.123	74.571	z	29	118697.265	139518	16.181	16.181	3	H1-1b
4	57	3/8 x 6	0.352	0	4	0.442	0	y	16	71198.626	72900	9.113	0.57	1.135	H1-1b
5	M60	PIPE 2.5	0.325	48	4	0.025	48	z	4	30038.461	50715	3.596	3.596	1.482	H1-1b
6	17	PIPE 2.5	0.324	48	7	0.025	48	z	7	30038.461	50715	3.596	3.596	1.493	H1-1b
7	M72	PIPE 2.5	0.324	48	10	0.025	48	z	10	30038.461	50715	3.596	3.596	1.482	H1-1b
8	53	3/8 x 6	0.268	0	1	0.445	0	y	13	71198.626	72900	9.113	0.57	1.135	H1-1b
9	56	3/8 x 6	0.255	0	4	0.562	0	y	17	65690.078	72900	9.113	0.57	1.669	H1-1b
10	30	L2x2x3	0.248	29.204	8	0.011	57.215	z	13	7539.678	23392.8	0.558	1.065	1.149	H2-1
11	36	HSS4X4X4	0.24	33.9	21	0.085	33.9	z	23	134935.078	139518	16.181	16.181	1.099	H1-1b
12	39	HSS4X4X4	0.238	33.9	13	0.085	33.9	z	14	134935.017	139518	16.181	16.181	1.031	H1-1b
13	42	HSS4X4X4	0.236	33.9	17	0.085	33.9	z	18	134935.048	139518	16.181	16.181	1.062	H1-1b
14	28	L2x2x3	0.235	28.606	4	0.011	57.212	z	22	7540.618	23392.8	0.558	1.069	1.169	H2-1
15	13	PIPE 3.0	0.223	114.188	23	0.125	58	z	17	21265.925	65205	5.749	5.749	2.399	H1-1b
16	15	PIPE 3.0	0.223	114.188	19	0.125	58	z	13	21265.925	65205	5.749	5.749	2.287	H1-1b
17	38	HSS4X4X4	0.221	0	17	0.077	0	z	15	134931.283	139518	16.181	16.181	1.039	H1-1b
18	14	PIPE 3.0	0.221	114.188	15	0.125	58	z	22	21265.925	65205	5.749	5.749	2.296	H1-1b
19	29	L2x2x3	0.22	29.204	6	0.012	57.215	y	24	7539.678	23392.8	0.558	1.065	1.149	H2-1
20	35	HSS4X4X4	0.219	0	14	0.078	0	z	23	134931.223	139518	16.181	16.181	1.144	H1-1b
21	41	HSS4X4X4	0.216	0	21	0.078	0	z	20	134931.253	139518	16.181	16.181	1.137	H1-1b
22	52	3/8 x 6	0.211	0	1	0.566	0	y	13	65673.468	72900	9.113	0.57	1.669	H1-1b
23	31	L2x2x3	0.206	28.609	10	0.012	57.219	y	16	7538.738	23392.8	0.558	1.069	1.169	H2-1
24	55	3/8 x 6	0.187	0	10	0.5	0	y	22	71198.626	72900	9.113	0.57	1.134	H1-1b
25	32	L2x2x3	0.184	28.606	12	0.011	57.212	z	17	7540.618	23392.8	0.558	1.13	1.5	H2-1
26	49	3/8 x 6	0.173	0	8	0.441	2.188	y	21	71198.626	72900	9.113	0.57	1.135	H1-1b
27	33	L2x2x3	0.168	28.609	2	0.012	57.219	y	21	7538.738	23392.8	0.558	1.13	1.5	H2-1
28	48	3/8 x 6	0.143	0	9	0.562	0	y	21	65610.87	72900	9.113	0.57	1.669	H1-1b
29	M73	PIPE 2.0	0.138	48	10	0.014	48	z	10	14916.096	32130	1.872	1.872	1.856	H1-1b
30	18	PIPE 2.0	0.138	48	7	0.014	48	z	7	14916.096	32130	1.872	1.872	1.817	H1-1b
31	M61	PIPE 2.0	0.138	48	4	0.014	48	z	4	14916.096	32130	1.872	1.872	1.856	H1-1b
32	54	3/8 x 6	0.137	0	10	0.609	0	y	21	65668.839	72900	9.113	0.57	1.669	H1-1b
33	51	3/8 x 6	0.13	0	2	0.503	2.188	y	17	71198.626	72900	9.113	0.57	1.138	H1-1b
34	M59A	PIPE 2.0	0.102	30	10	0.017	30	z	10	26521.424	32130	1.872	1.872	2.403	H1-1b

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

Member	Shape	Code Check	Loc[in]	LC Shear Check	Loc[in]	Dir	LC phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn	
35	45	3/8 x 6	0.091	8.589	3	0.243	8.772	y 21	19352.941	72900	9.113	0.57	1.329H1-1b
36	47	3/8 x 6	0.077	0	24	0.507	2.188	y 13	71198.626	72900	9.113	0.57	1.138H1-1b
37	50	3/8 x 6	0.077	0	2	0.609	4.749	y 17	65747.799	72900	9.113	0.57	1.669H1-1b
38	46	3/8 x 6	0.07	0	12	0.614	0	y 13	65759.937	72900	9.113	0.57	1.669H1-1b
39	44	3/8 x 6	0.06	8.769	3	0.243	8.769	y 17	19366.738	72900	9.113	0.57	1.51H1-1b
40	43	3/8 x 6	0.053	8.952	28	0.245	8.952	y 13	19366.284	72900	9.113	0.57	2.415H1-1b
41	19	PIPE 2.0	0.048	48	36	0.003	48	5	14916.096	32130	1.872	1.872	1.559H1-1b
42	16	PIPE 2.0	0.048	48	39	0.003	48	9	14916.096	32130	1.872	1.872	1.559H1-1b
43	M62	PIPE 2.0	0.035	48	2	0.003	48	2	14916.096	32130	1.872	1.872	1.562H1-1b
44	M71	PIPE 2.0	0.035	48	12	0.003	48	12	14916.096	32130	1.872	1.872	1.562H1-1b
45	M74	PIPE 2.0	0.035	48	9	0.003	48	9	14916.096	32130	1.872	1.872	1.563H1-1b
46	M59	PIPE 2.0	0.035	48	5	0.003	48	5	14916.096	32130	1.872	1.872	1.563H1-1b

ATTACHMENT 5

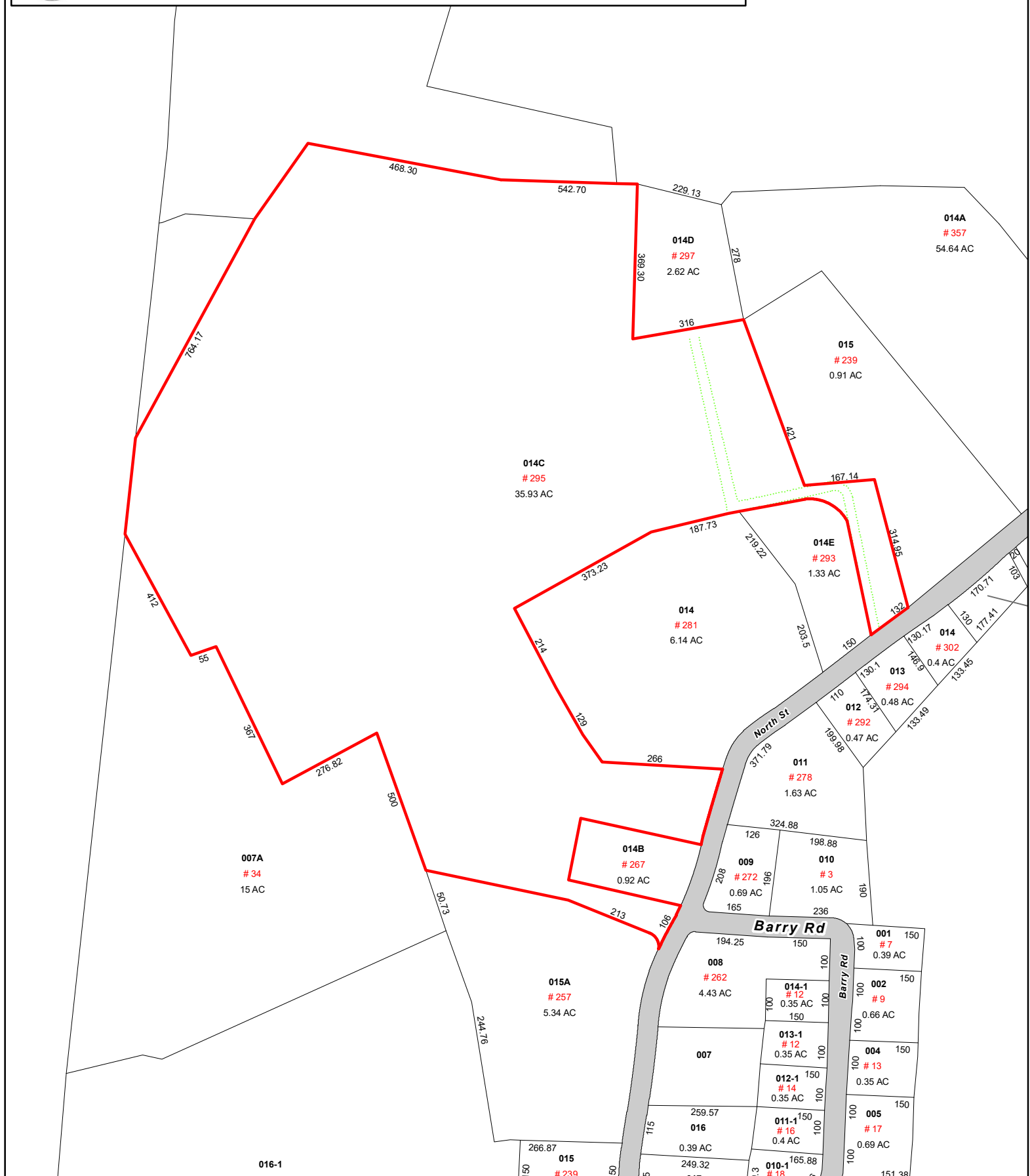


Town of Plymouth, Connecticut. Assessment Parcel Map

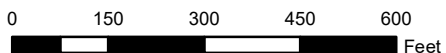
GIS Link 017-014-014C

Address: 295 NORTH ST

013A
395
1.34 AC



1 inch = 300 feet



Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of Plymouth and its mapping contractors assume no legal responsibility for the information contained herein.

Map Produced: October 2020



Town of Plymouth
Property Listing Report

Parcel ID 017-014-014C

Account 00074400

Property Information

Owner	BART FRANCIS A ETAL
Address	295 NORTH ST
Mailing Address	297 NORTH ST PLYMOUTH, CT 06782
Land Use	-
Land Class	R

Census Tract	4253
Neighborhood	101
Zoning	RA1
Acreage	35.93
Utilities	
Lot Setting/ Desc	/ 2

Photo



PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	44500	
Outbuildings		
Improvements		
Extras		
Land	268800	
Total	137800	96460
Previous		

Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Total Rooms	
Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

EXTERIOR WALLS:

Primary	
Secondary	

INTERIOR WALLS:

Primary	
Secondary	

FLOORS:

Primary	
Secondary	

HEATING/AC:

Heating Type	
Heating Fuel	
AC Type	

BUILDING AREA:

Effective Building Area	
Gross Building Area	
Total Living Area	

SALES HISTORY:

Sale Date	0
Sale Price	0
Book/ Page	163/1120



Town of Plymouth
Property Listing Report

Parcel ID 017-014-014D

Account 00074600

Property Information

Owner	LAGOSZ RAYMOND & BRENDA
Address	297 NORTH ST
Mailing Address	297 NORTH ST PLYMOUTH, CT 06782
Land Use	-
Land Class	R

Census Tract	4253
Neighborhood	101
Zoning	RA1
Acreage	2.62
Utilities	
Lot Setting/ Desc	/ 1

Photo



PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	145040	
Outbuildings		
Improvements		
Extras		
Land	97800	
Total	242840	169990
Previous		

Construction Details

Year Built	
Stories	1.5
Building Style	CAPE
Building Use	
Building Condition	AVERAGE
Total Rooms	7
Bedrooms	4
Full Bathrooms	2/1
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

EXTERIOR WALLS:

Primary	FRAME
Secondary	

INTERIOR WALLS:

Primary	
Secondary	

FLOORS:

Primary	
Secondary	

HEATING/AC:

Heating Type	
Heating Fuel	OIL
AC Type	WARM AIR

BUILDING AREA:

Effective Building Area	
Gross Building Area	
Total Living Area	

SALES HISTORY:

Sale Date	0
Sale Price	0
Book/ Page	163/1122

ATTACHMENT 6



PLYMOUTH NW
Certificate of Mailing — Firm

Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™ 3	Affix Stamp Here <i>Postmark with Date of Receipt</i> neopost 08/12/2021 US POSTAGE \$002.89 ZIP 06103- 041L12203937		
Postmaster, per (name of receiving employee) Q						
USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift	
1.	David V. Merchant, Mayor Town of Plymouth 80 Main Street Terryville, CT 06786					
2.	Margus Laan, Director of Planning and Economic Development Town of Plymouth 80 Main Street Terryville, CT 06786					
3.	Francis A. Bart, et al/Raymond and Brenda Lagosz 297 North Street Plymouth, CT 06782					
4.						
5.						
6.						

