Robinson+Cole

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Also admitted in Massachusetts
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October 5, 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**
465 Hills Street, East Hartford, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower disguised as a pine tree ("monopine") and related equipment on the ground, near the base of the monopine tower. The monopine tower was approved by the Siting Council ("Council") in July of 2013 (Docket No. 436). Cellco's shared use of the tower was approved by the Council in April of 2020 (TS-VER-043-200708). Copies of the Council's Docket No. 436 Decision and Order and TS-VER-043-200708 approval are included in Attachment 1.

Cellco now intends to modify its facility by installing three (3) Samsung MT6407-77A on its existing antenna mounts. A set of project plans showing Cellco's proposed facility modifications and new antennas 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 East Hartford's Chief Elected Official and Land Use Officer.

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.

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 mounts 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).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Marcia Leclerc, Mayor for the Town of East Hartford
Eileen Buckheit, East Hartford Development Director
LW Realty LLC, Property Owner
Tim Parks

ATTACHMENT 1

DOCKET NO. 436 – Message Center Management, Inc. and New Cingular Wireless PCS, LLC Application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at one of two sites: 465 Hills Street or 56 Hills Street, East Hartford, Connecticut.	}	Connecticut Siting Council July 25, 2013

Decision and Order

Pursuant to Connecticut General Statutes §16-50p and the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes **§** 16-50k, be issued to Message Center Management, Inc., hereinafter referred to as the Certificate Holder, for a telecommunications facility at Site A, located at 465 Hills Street, East Hartford, Connecticut. The Council denies certification of Site B, located at 56 Hills Street, East Hartford, Connecticut.

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

1. The tower shall be constructed as a stealth tree monopole (i.e. monopine), no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of (AT&T) and other entities, both public and private, but such monopole shall not exceed a height of 110 feet above ground level. The height at the top of the "tree top" shall not exceed 117 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of East Hartford for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, emergency backup generator, and landscaping; and
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Eastern Box Turtle Protection Program shall be implemented to mitigate any possible impacts to Eastern Box Turtles in the event any are found in the vicinity of the site.

4. The tower shall be designed with a yield point to ensure that the setback radius remains within the subject property boundaries.

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

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

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

8. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

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

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

11. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

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

13. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

14. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

15. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, emergency backup generator, and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

16. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.

We hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed in the Service List, dated February 20, 2013, and notice of issuance published in The Journal Inquirer.

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

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@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

August 28, 2020

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

RE: **TS-VER-043-200708** - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 465 Hills Street, East Hartford, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on August 27, 2020, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the following conditions:

1. Approval of any changes be delegated to Council staff;

2. Verizon's antennas and equipment to be installed on the tower shall be camouflaged by the existing pine branches consistent with Condition No. 1 of the Council's Decision and Order in Docket No. 436;

3. The Eastern Box Turtle Protection Program shall be implemented to mitigate any possible impacts to Eastern Box Turtles in the event any are found in the vicinity of the site consistent with Condition No. 3 of the Council's Decision and Order in Docket No. 436;

4. Any deviation from the proposed installation as specified in the original tower share request and supporting materials with the Council shall render this decision invalid;

5. Any material changes to the proposed installation as specified in the original tower share request and supporting materials filed with the Council shall require an explicit request for modification to the Council pursuant to Connecticut General Statutes § 16-50aa, including 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;

6. Not less than 45 days after completion of the proposed installation, the Council shall be notified in writing that the installation has been completed;

7. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by Verizon shall be removed within 60 days of the date the antenna ceased to function;

8. The validity of this action shall expire one year from the date of this letter; and

9. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council and applies only to this request for tower sharing dated July 8, 2020. This facility has 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. Any deviation from the approved tower sharing request is enforceable under the provisions of Connecticut General Statutes § 16-50u.

The proposed shared use is to be implemented as specified in your letter dated July 8, 2020, including the placement of all necessary equipment and shelters within the tower compound.

Please be advised that the validity of this action shall expire one year from the date of this letter.

Thank you for your attention and cooperation.

Sincerely,

s/ Melanie A. Bachman

Melanie Bachman
Executive Director

MAB/IN/emr

c: The Honorable Marcia A. Leclerc, Mayor, Town of East Hartford (mleclerc@ci.east-hartford.ct.us)

ATTACHMENT 2

EAST_HARTFORD_10_CT

465 HILLS STREET
EAST HARTFORD, CT 06118
SBA SITE ID: CT22077

LOCATION CODE (PSLC): 607552
FUZE ID: 16536325
EQUIPMENT UPGRADE PROJECT
RFDS DATE: 04/22/21

PROJECT SUMMARY

SCOPE OF WORK:	EXISTING TELECOMMUNICATIONS FACILITY EQUIPMENT ALTERATION
SITE NAME:	EAST_HARTFORD_10_CT
LOCATION CODE (PSLC):	607552
FUZE PROJECT ID:	16536325
SITE ADDRESS:	465 HILLS STREET EAST HARTFORD, CT 06118
LATITUDE:	41.74071389 N (RFDS)
LONGITUDE:	−72.58410278 W (RFDS)
FACILITY:	MONOPINE SBA SITE I.D.#: CT22077
APPLICANT, LESSEE/LICENSEE, PROJECT OWNER:	CELLCO PARTNERSHIP dba VERIZON WIRELESS 118 FLANDERS ROAD THIRD FLOOR WESTBOROUGH, MA 01581
ENGINEER:	PROTERRA DESIGN GROUP, LLC 4 BAY ROAD BUILDING A, SUITE 200 HADLEY, MA 01035

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T−1	TITLE SHEET	0
A−1	COMPOUND PLAN & ELEVATION	0
A−2	PROPOSED ANTENNA PLAN & ELEVATION	0
GN−1	GENERAL NOTES	0

LOCATION MAP

N

IMAGE SOURCE: OPENSTREETMAP

GENERAL NOTES

1. VERIFY COAX CONFIGURATION, ANTENNA CONFIGURATION, AND ANTENNA HEIGHT WITH LATEST RF DATA SHEET PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL SCHEDULE AND SEQUENCE ALL REQUIRED WORK WITH THE OWNER'S REPRESENTATIVE AND CONSTRUCTION MANAGER.
3. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE−CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER
4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES FOR THE WORK.
5. ANTENNAS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, GLOBAL STRUCTURAL ANALYSIS, AND LOCAL ANTENNA MOUNT ANALYSIS INCLUDING ANTENNA MOUNT MODIFICATIONS AND STRUCTURAL AUGMENTS AS APPLICABLE.
6. REPLACE AND/OR REUSE (E) MOUNTING HARDWARE, INSPECT FOR DAMAGE, AND REPLACE AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.
7. EQUIPMENT LOCATIONS AND CONDITIONS TO BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR BE RESPONSIBLE FOR THE SAME.
8. NORTH SHOWN IS APPROXIMATE. NOT ALL (E) OR (P) IMPROVEMENTS REQUIRED MAY BE SHOWN FOR CLARITY.
9. ANTENNA ELEVATIONS SHALL BE PER ZONING OR AS APPROVALS DICTATE.
10. THESE CONSTRUCTION DRAWINGS ARE CONTINGENT UPON A PASSING GLOBAL STRUCTURAL ANALYSIS INCLUDING THE INSTALLATION OF ANY REQUIRED MODIFICATIONS AND INSPECTION REPORTS AS A RESULT THEREIN.

STRUCTURAL NOTES

GLOBAL TOWER STRUCTURAL ANALYSIS REPORT:

PENDING: A GLOBAL TOWER STRUCTURAL ANALYSIS SHALL BE COMPLETED BY EIF GLOBAL PRIOR TO CONSTRUCTION TO CONFIRM CAPACITY.

LOCAL ANTENNA MOUNT ANALYSIS REPORT:

PASSING REPORT – NO MODIFICATIONS REQUIRED BY PROTERRA AND EFI GLOBAL, INC DATED 07/20/21.

Jesse Moreno, PE

Digitally signed by Jesse Moreno, PE
Date: 2021.07.23 16:56:49 -04'00'

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph: (413)320-4918

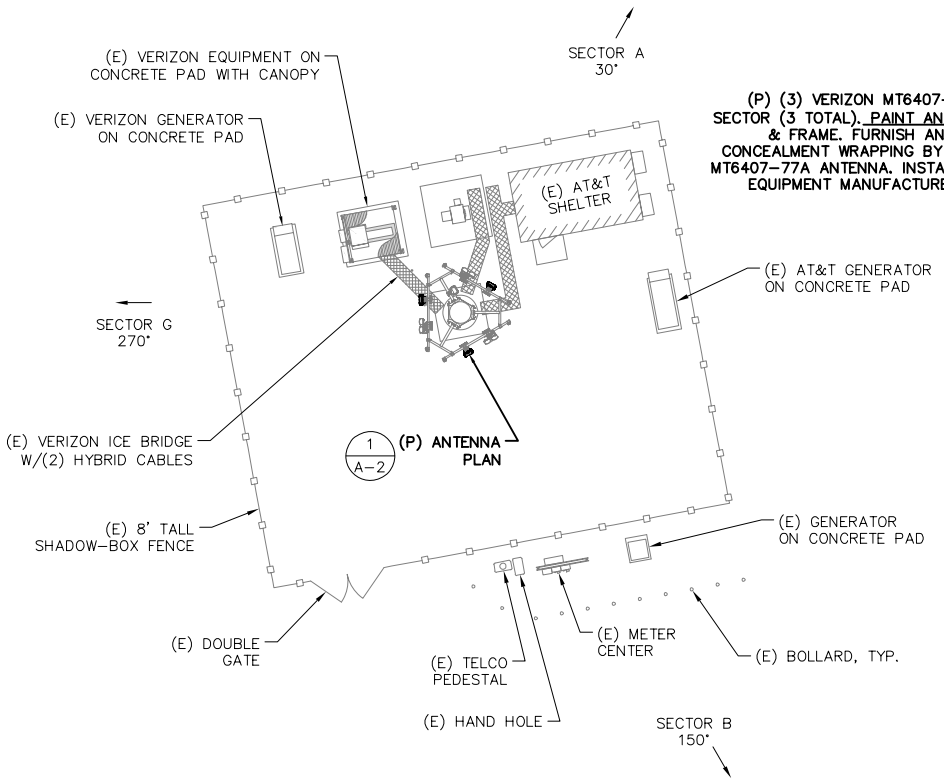
REVISIONS

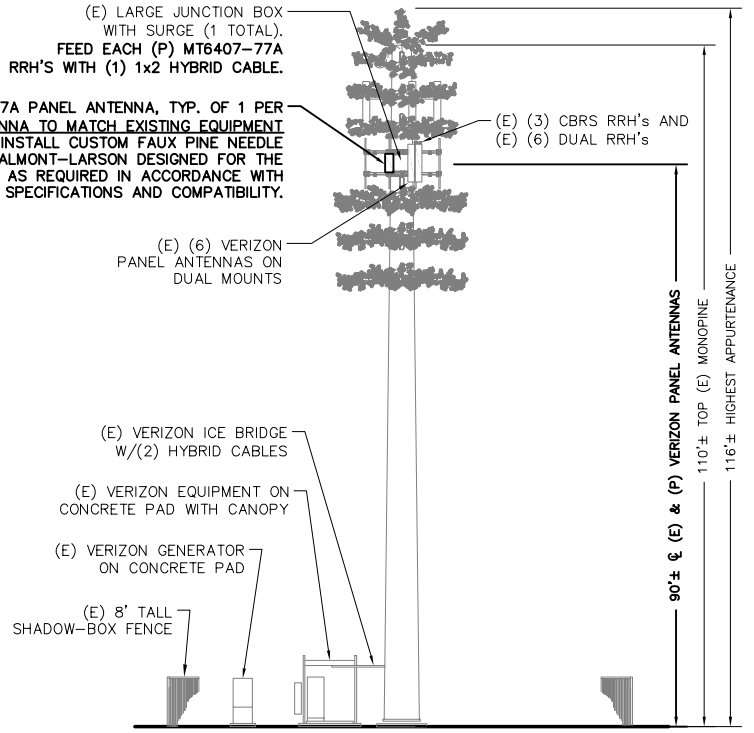
REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/23/21	PER RFDS DATED 04/22/21	TBD	JWG	JMM

STATE OF CONNECTICUT
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
7-23-2021

EAST_HARTFORD_10_CT
465 HILLS STREET
EAST HARTFORD, CT 06118
FUZE PROJECT ID: 16536325
SBA SITE I.D.#: CT22077

T-1





A GLOBAL TOWER STRUCTURAL ANALYSIS SHALL BE COMPLETED PRIOR TO CONSTRUCTION TO CONFIRM CAPACITY.

INSTALL EQUIPMENT IN CONFORMANCE WITH LOCAL ANTENNA MOUNT ANALYSIS PROVIDED BY PROTERRA DESIGN GROUP, LLC AND EFI GLOBAL, INC. DATED 07/21/2021.

N

COMPOUND PLAN

SCALE: 1"=20' (11x17)

1 / A-1

20 10 0 20

SOUTH ELEVATION

SCALE: 1"=20' (11x17)

2 / A-1

20 10 0 20

verizon
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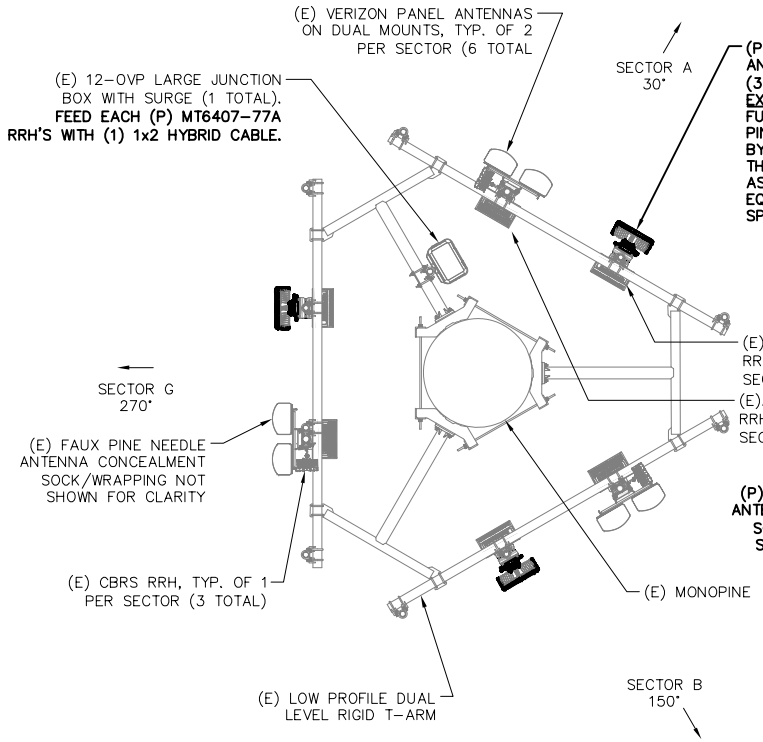
465 HILLS STREET
EAST HARTFORD, CT 06118
FUZE PROJECT ID: 16536325
SBA SITE ID: CT22077

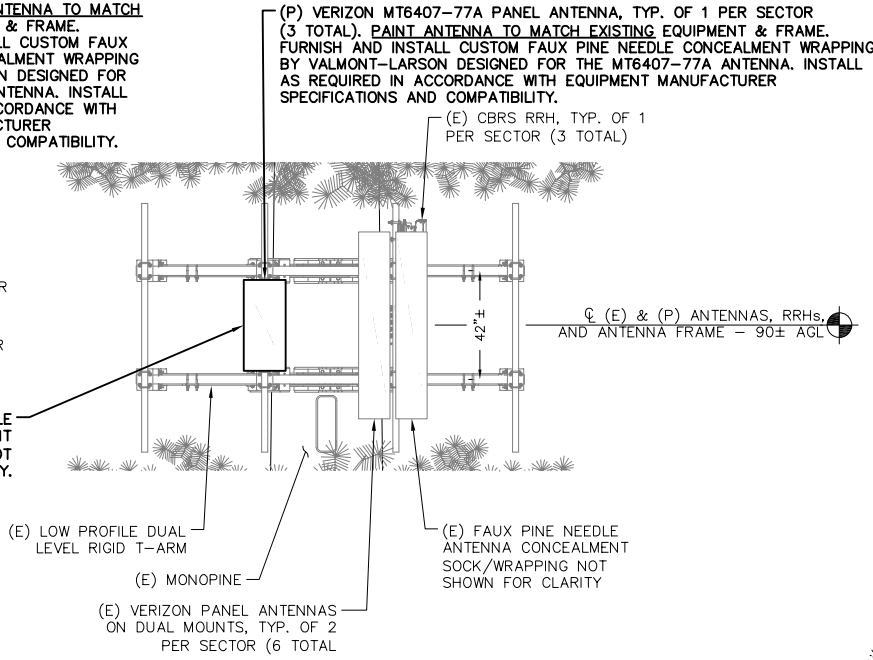
A-1

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.

FAUX PINE ANTENNA SOCK SPECIAL WORK NOTE:
CONTRACTOR/ CONSTRUCTION MANAGER SHALL PROVIDE MT6407-77A SPECIFICATIONS TO VALMONT-LARSON FOR FABRICATION OF CUSTOM PINE SOCK AS REQUIRED.
PREVIOUS CONTACT:

Cathleen Smith | Production Assistant
Valmont Larson | 1501 S Euclid Ave, Tucson, AZ 85713 USA
Office +1 (520) 294-3900
Direct + 1 (520) 497-0170
Cathleen.Smith@valmont.com





N

(P) ANTENNA PLAN

SCALE: 1"=4'

1 / A-2

4 2 0 4

A GLOBAL TOWER STRUCTURAL ANALYSIS SHALL BE COMPLETED PRIOR TO CONSTRUCTION TO CONFIRM CAPACITY.

INSTALL EQUIPMENT IN CONFORMANCE WITH LOCAL ANTENNA MOUNT ANALYSIS PROVIDED BY PROTERRA DESIGN GROUP, LLC AND EFI GLOBAL, INC. DATED 07/21/2021.

(P) ANTENNA ELEVATION

SCALE: 1"=4'

2 / A-2

4 2 0 4

verizon
118 FLANDERS ROAD
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REVISIONS

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STATE OF CONNECTICUT
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EAST HARTFORD, CT 06118
FUZE PROJECT ID: 16536325
SBA SITE ID/#: CT22077

A-2

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 NSTD446.
- 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 SHALL BE UPLOADED BY THE CONTRACTOR TO A FILE SHARING AND TRANSFER SERVICE SUCH AS DROPBOX OR OTHER. AN ACCESS LINK SHALL BE PROVIDED TO THE ENGINEER 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.

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph:(413)320-4918

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/23/21	PER RFDS DATED 04/22/21	TBD	JWG	JMM

STATE OF CONNECTION
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
7-23-2021

EAST_HARTFORD_10_CT
465 HILLS STREET
EAST HARTFORD, CT 06118
FUZE PROJECT ID: 16536325
SBA SITE ID: CT22077

GN-1

SAMSUNG

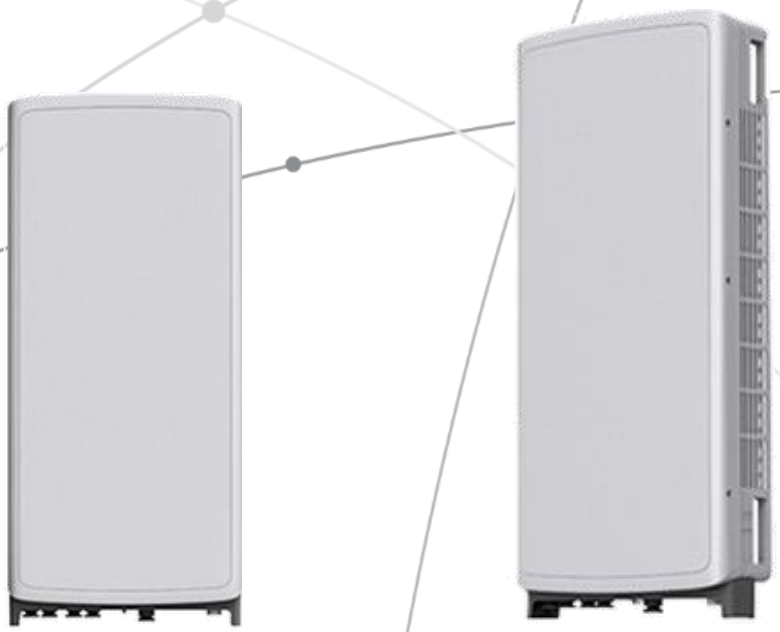
SAMSUNG

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

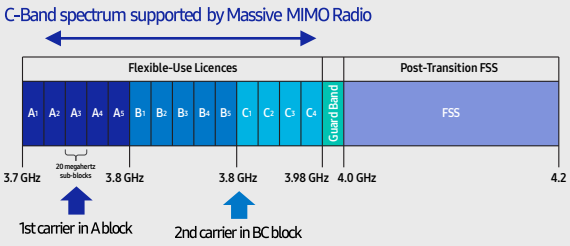


Points of Differentiation

Wide Bandwidth

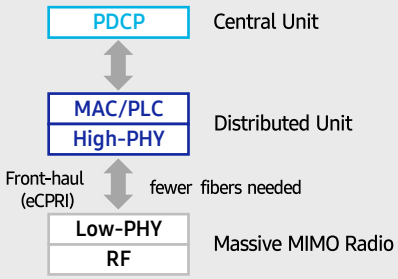
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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



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.

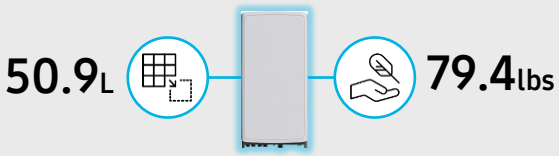
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

ATTACHMENT 3

	General	Power	Density					
Site Name: East Hartford 10								
Tower Height: Verizon @ 90ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T	1	500	100	880	0.0203	0.5867	0.35%	
*AT&T	1	500	100	1900	0.0203	1.0000	0.20%	
*AT&T	1	500	100	734	0.0203	0.4893	0.42%	
*AT&T	3	296	100	880	0.0361	0.5867	0.62%	
*AT&T	1	427	100	1900	0.0174	1.0000	0.17%	
*EHFD Microwave	1	2000	110	5000	0.0665	1.0000	0.66%	
VZW 700	**4**	**656**	**90**	**751**	**0.0117**	**0.5007**	**2.33%**	
VZW Cellular	**4**	**706**	**90**	**874**	**0.0125**	**0.5827**	**2.15%**	
VZW PCS	**4**	**1422**	**90**	**1975**	**0.0253**	**1.0000**	**2.53%**	
VZW AWS	**4**	**1606**	**90**	**2120**	**0.0285**	**1.0000**	**2.85%**	
VZW CBRS	**4**	**12**	**90**	**3560.3**	**0.0002**	**1.0000**	**0.02%**	
VZW CBAND	**4**	**6531**	**90**	**3730**	**0.1160**	**1.0000**	**11.60%**	
								23.90%
* Source: Siting Council								

ATTACHMENT 4

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

T + 561.995.7670
F + 561.995.7626

sbasite.com

Structural Analysis Report

Client: Verizon

Client Site ID / Name: 607552 / East_Hartford_10_CT
Application #: 169092, v1

SBA Site ID / Name: CT22077-A / East Hartford (465 Hill St)

110 ft Monopine

465 Hills Street
East Hartford, Connecticut 06118
Lat: 41.740722, Long: -72.584111

Project number: CT22077-VZW-092321

Analysis Results

Tower	39.3%	Pass
Foundation	60.0%	Pass

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

Prepared by:

Asmerom Hagos
Structural Engineer II
214-570-8110 ext 2612
ahagos@sbasite.com

Reviewed by:

Anantha (Shan) Shanubhogue, P.E.
Senior Manager, Structural Engineering
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September 27, 2021

09/28/21

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Reviewed by:

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

September 27, 2021

Table of Contents

Introduction

The purpose of this report is to summarize the analysis results on the 110 ft Monopine to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Larson Camouflage, Project # 641200, dated 04/08/2014
Foundation drawings	Larson Camouflage, Project # 641200, dated 04/08/2014
Geotechnical report	Terracon, Project # J2135182, dated 08/16/2013
Modification drawings	N/A
Latest SA	TES, Project # 114577, dated 09/02/2021

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut / HARTFORD / East Hartford
Governing Codes	ANSI/TIA/EIA 222-G, 2015 IBC / 2018 CSBC
Basic Wind Speed (3-Sec gust)	97.0 mph (Ultimate Wind Speed: 125 mph)
Wind Speed with Ice (3-Sec gust)	50 mph (3-Sec. Gust)
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1.00”
Structural Class*	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft
Ground Elevation	0 ft.
Seismic Parameter Ss**	0.18
Seismic Parameter S_1	0.064

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

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

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			RFS BA6312-1 - Whip	Pipe		East Hartford Fire D
			Commscope HPD2-4.7 - Dish			
			CCI - HPA-65R-BUU-H8 - Panel	(3) T-Arms	(2) 3/8" Fiber (8) DC Fiber	
			Raycap DC2-48-60-18-8F			
			Commscope NHH-65B-R2B - Panel	(1) Dual Level Ultra Low Profile T-Arm (Site Pro1 ULPD12)	Hybrid	Verizon
			Commscope NHHSS-65B-R2B - Panel			
			Samsung B2/B66A RRH-BR049			
			Samsung B5/B13 RRH-BR04C (RFV01U-			
			Samsung CBRS RRH - RT4401- 48A			
			Raycap RVZDC-6627-PF-48			
		3	JMA Wireless MX08FRO665-21 - Panel	(3) T-Arms	Hybrid	Dish Wireless
			Fujitsu TA08025-B604 RRU			
			Fujitsu TA08025-B605 RRU			
			Raycap RDIDC-9181-OF-48 OVP			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 169092, v1 from Verizon and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Commscope NHH-65B-R2B Panel	(1) Dual Level Ultra Low Profile T-Arm (Site Pro1 ULPD12)	Hybrid	Verizon
			Commscope NHHSS-65B-R2B Panel			
			Samsung MT6407-77A Panel			
			Samsung B2/B66A RRH-BR049			
			Samsung B5/B13 RRH-BR04C (RFV01U-			
		3	Samsung CBRS RRH - RT4401- 48A RRU			
			Raycap RVZDC-6627-PF-48 OVP			

Analysis Results

Tower

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

Table 5 Tower Analysis Summary

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

Foundation

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

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	60.0%	Pass

Conclusions

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

Installation Requirements

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

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

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

Limitations

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

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

Appendix

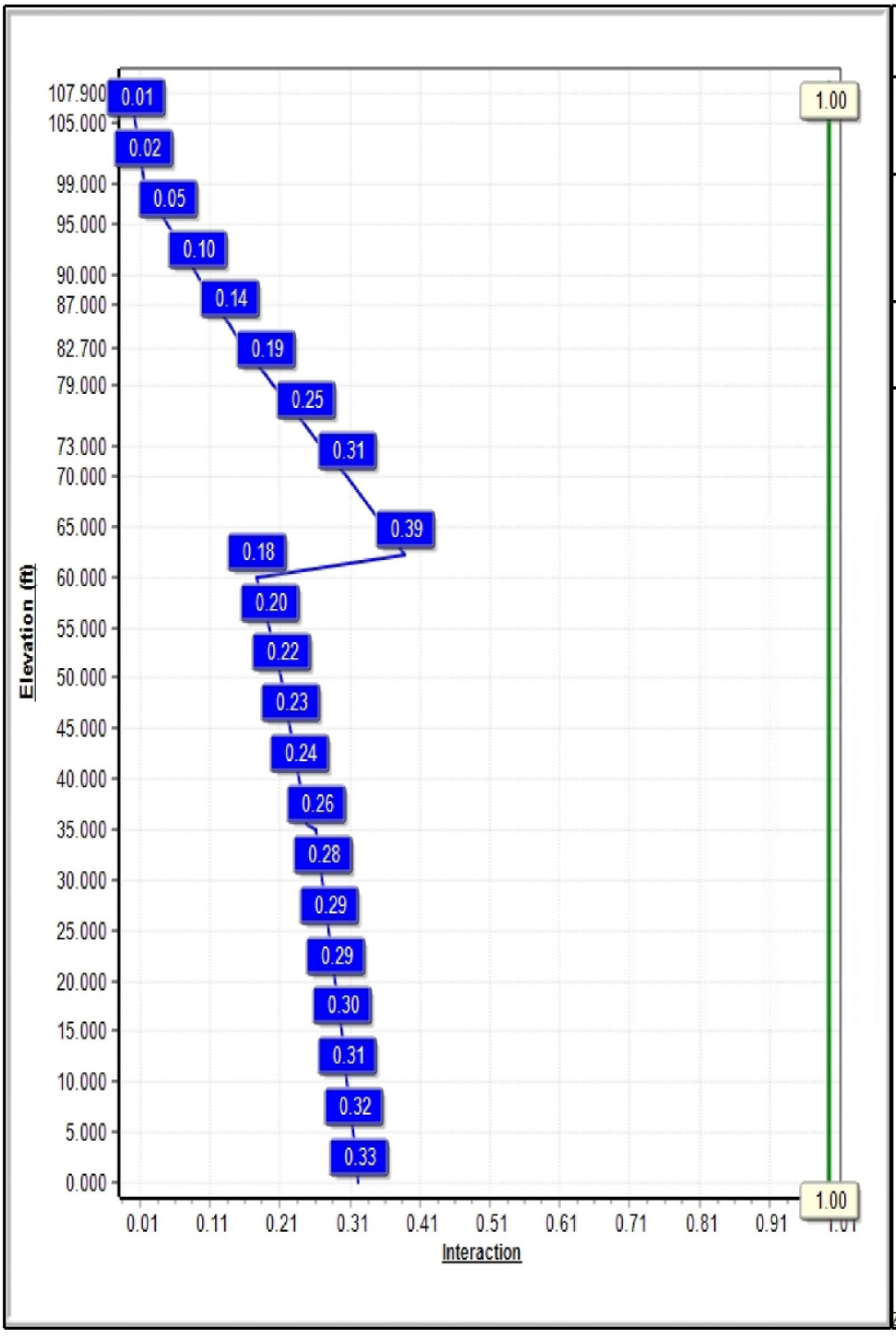
Usage Diagram - Max Ratio 39.26% at 62.3ft

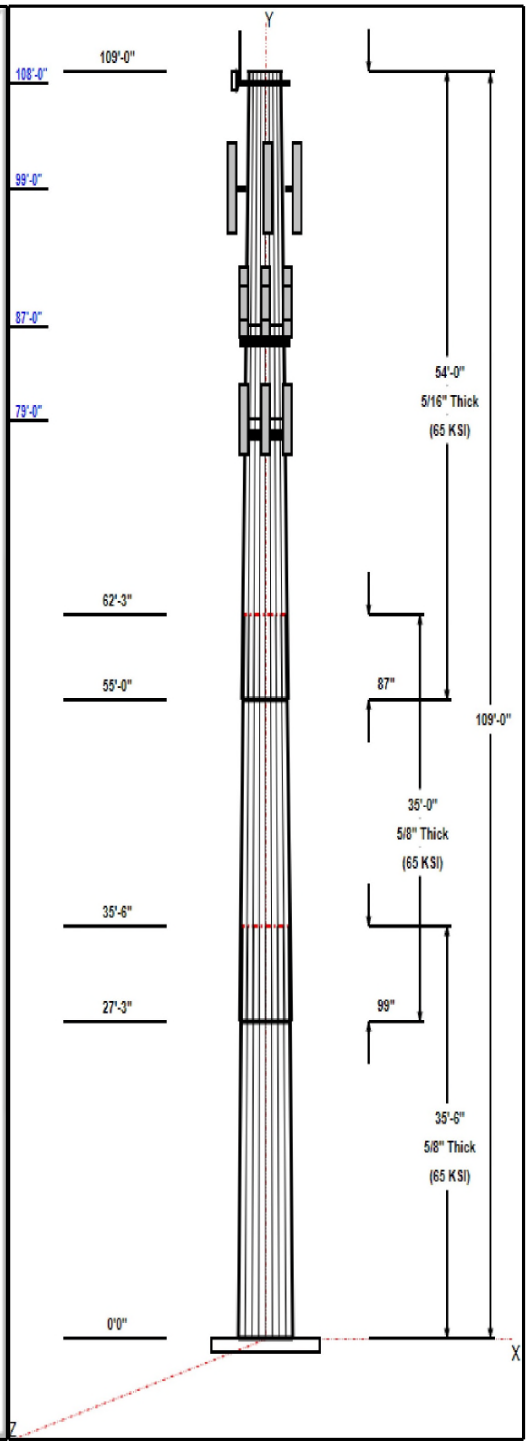
Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C	
Height:	109.00 (ft)	**Gh:**	1.1	
Base Elev:	1.000 (ft)			Page: 1

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 96 mph Wind

Iterations: 15





Structure: CT22077-A

Type: Tapered
Site Name: East Hartford (465 Hill St)
Height: 109.00 (ft)
Base Elev: 1.00 (ft)

Base Shape: 18 Sided
Taper: 0.30000

9/23/2021

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	35.50	56.67	67.33	0.625		0.30000	65
2	35.00	49.90	60.40	0.625	Slip	0.30000	65
3	54.00	36.50	52.70	0.313	Slip	0.30000	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
109.00	109.00	1	Top Hat	-
108.00	110.20	1	BA6312-1	East Hartford Fire
108.00	109.00	1	HPD2-4.7	East Hartford Fire
108.00	108.00	1	Pipe	East Hartford Fire
107.90	107.90	1	6 FT Branches	-
99.00	99.00	6	RRUS-12	AT&T
99.00	99.00	5	Raycap DC2-48-60-18-8F	AT&T
99.00	99.00	3	T-Arms	AT&T
99.00	99.00	12	HPA-65R-BUU-H8	AT&T
99.00	99.00	6	RRUS-32	AT&T
99.00	99.00	6	RRUS-E2	AT&T
99.00	99.00	6	RRUS-A2	AT&T
99.00	99.00	9	RRUS-11	AT&T
97.20	97.20	1	8 FT Branches	-
87.00	89.00	3	Samsung MT6407-77A	Verizon
87.00	89.00	3	Commscope	Verizon
87.00	89.00	3	Commscope	Verizon
87.00	89.00	3	Samsung B2/B66A	Verizon
87.00	89.00	3	Samsung B5/B13	Verizon
87.00	89.00	3	Samsung CBRS RRH -	Verizon
87.00	86.00	1	Raycap	Verizon
87.00	87.00	1	T-Arm Mount (Site Pro1	Verizon
82.70	82.70	1	10 FT Branches	-
79.00	79.00	3	MX08FRO665-21	Dish Wireless
79.00	79.00	3	TA08025-B604	Dish Wireless
79.00	79.00	3	TA08025-B605	Dish Wireless
79.00	79.00	1	RDIDC-9181-OF-48	Dish Wireless
79.00	79.00	1	MC-K6M-6-96 (3 Sectors)	Dish Wireless
73.00	73.00	1	12 FT Branches	-

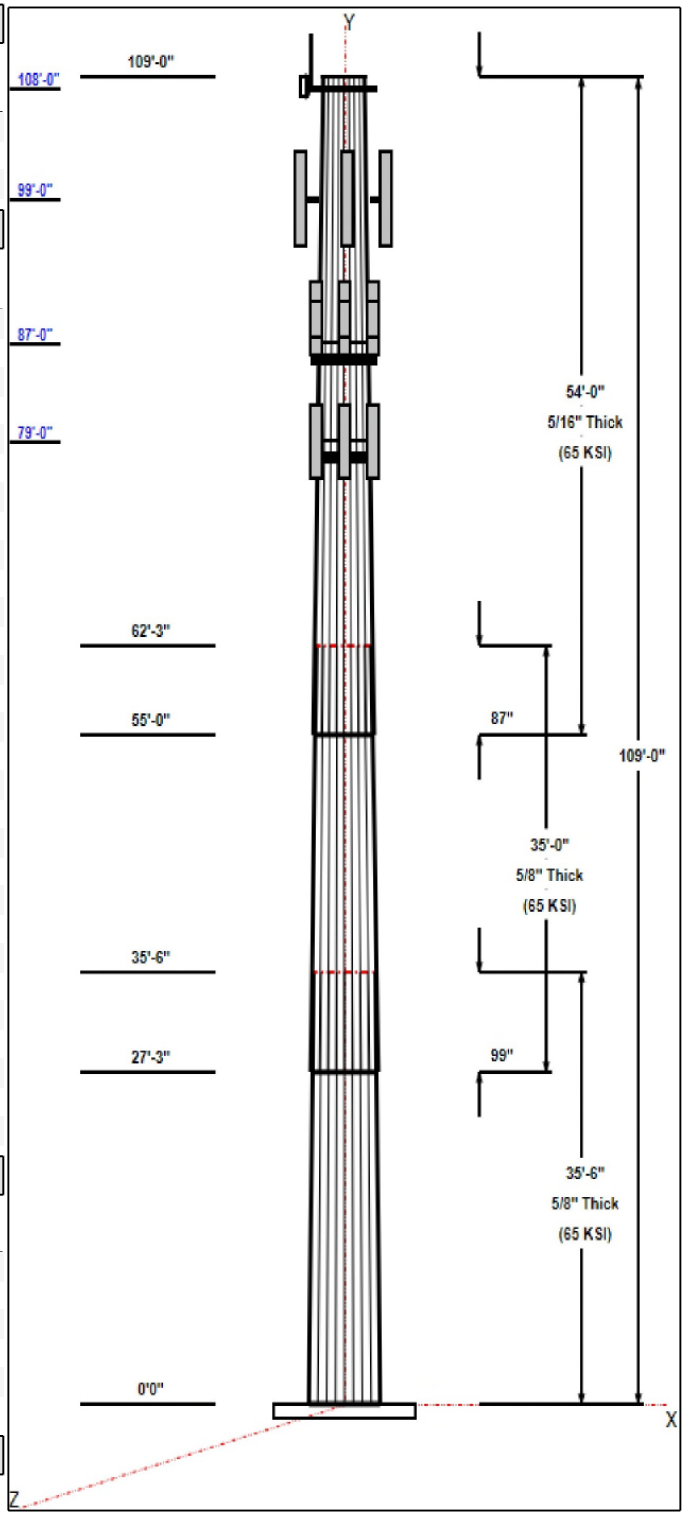
Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	108.00	Inside	7/8" Coax	East Hartford Fire
0.00	99.00	Inside	3/8" Fiber	AT&T
0.00	99.00	Inside	3/8" RET	AT&T
0.00	99.00	Inside	DC Fiber	AT&T
0.00	87.00	Inside	1 5/8" Hybrid	Verizon
0.00	79.00	Inside	1.411" Hybrid	Dish Wireless

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
30	2.25" 18J	75.0	Radial

Base Plate



Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	81.5	50.0	Round

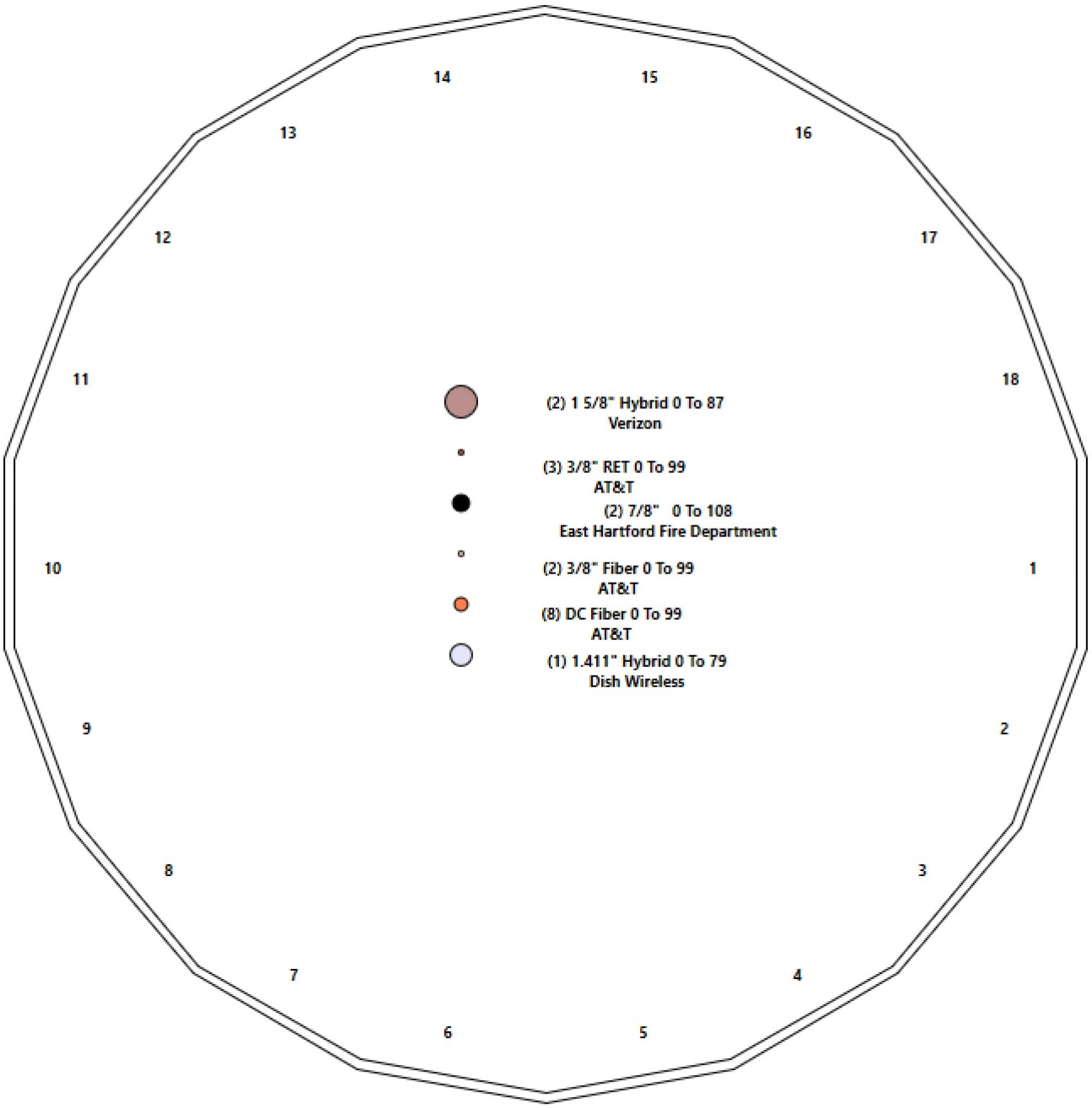
Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 96 mph Wind	4208.5	51.0	63.4
0.9D + 1.6W 96 mph Wind	4199.4	51.0	47.5
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1292.9	15.7	116.0
1.2D + 1.0E	200.2	2.5	63.4
0.9D + 1.0E	199.7	2.5	47.6
1.0D + 1.0W 60 mph Wind	1026.1	12.5	52.9

Structure: CT22077-A - Coax Line Placement

Type: Monopine
Site Name: East Hartford (465 Hill St)
Height: 109.00 (ft)

9/23/2021



Shaft Properties

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (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	35.500	0.6250	65		0.00	14,707
2	18	35.000	0.6250	65	Slip	99.00	12,882
3	18	54.000	0.3125	65	Slip	87.00	8,071
					Total Shaft Weight:		**35,660**

	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	67.33	0.00	132.3	74370.70	17.58	107.72	56.67	35.50	111.1	44131.7	14.58	90.68	0.300000
2	60.40	27.25	118.5	53528.26	15.63	96.64	49.90	62.25	97.75	29985.0	12.67	79.84	0.300000
3	52.70	55.00	51.96	18016.79	28.33	168.64	36.50	109.00	35.89	5938.41	19.18	116.8	0.300000

Load Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 6

Discrete Appurtenances

				No Ice			Ice				
No.	**Elev (ft)**	**Description**	**Qty**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Hor. Ecc. (ft)**	**Vert Ecc (ft)**
1	109.00	Top Hat	1	160.00	20.00	1.00	448.75	38.047	1.00	0.00	0.00
2	108.00	BA6312-1	1	2.00	0.44	1.00	56.63	1.919	1.00	0.00	2.20
3	108.00	HPD2-4.7	1	27.00	3.96	1.00	134.56	5.477	1.00	0.00	1.00
4	108.00	Pipe	1	137.25	5.00	1.00	310.48	13.114	1.00	0.00	0.00
5	107.90	6 FT Branches	1	720.00	45.00	1.00	2018.09	85.565	1.00	0.00	0.00
6	99.00	RRUS-12	6	60.00	2.70	0.67	145.80	3.545	0.67	0.00	0.00
7	99.00	Raycap DC2-48-60-18-8F	5	31.80	0.92	1.00	110.96	1.481	1.00	0.00	0.00
8	99.00	T-Arms	3	400.00	10.00	0.75	757.52	21.172	0.75	0.00	0.00
9	99.00	HPA-65R-BUU-H8	12	68.00	12.98	0.79	458.01	15.083	0.79	0.00	0.00
10	99.00	RRUS-32	6	53.00	2.74	0.67	173.37	3.693	0.67	0.00	0.00
11	99.00	RRUS-E2	6	59.40	3.15	0.67	189.24	4.087	0.67	0.00	0.00
12	99.00	RRUS-A2	6	21.20	1.86	0.67	67.43	3.107	0.67	0.00	0.00
13	99.00	RRUS-11	9	50.70	2.52	0.67	172.26	3.375	0.67	0.00	0.00
14	97.20	8 FT Branches	1	2350.00	150.50	1.00	6543.22	84.772	1.00	0.00	0.00
15	87.00	Samsung MT6407-77A	3	87.10	4.70	0.70	228.91	5.841	0.70	0.00	2.00
16	87.00	Commscope NHH-65B-R2B	3	43.70	8.08	0.83	311.58	9.743	0.83	0.00	2.00
17	87.00	Commscope NHHSS-65B-R2B	3	40.60	8.08	0.83	308.48	9.743	0.83	0.00	2.00
18	87.00	Samsung B2/B66A RRH-BR049	3	84.50	1.88	0.67	149.30	2.577	0.67	0.00	2.00
19	87.00	Samsung B5/B13 RRH-BR04C	3	84.50	1.88	0.67	149.30	2.577	0.67	0.00	2.00
20	87.00	Samsung CBRS RRH - RT4401- 48A	3	6.60	1.19	0.67	37.24	2.184	0.67	0.00	2.00
21	87.00	Raycap RVZDC-6627-PF-48	1	32.00	3.79	1.00	199.98	4.832	1.00	0.00	-1.00
22	87.00	T-Arm Mount (Site Pro1 ULPD12)	1	2419.26	41.68	1.00	6688.98	07.884	1.00	0.00	0.00
23	82.70	10 FT Branches	1	2706.00	160.00	1.00	7457.92	00.485	1.00	0.00	0.00
24	79.00	MX08FRO665-21	3	64.50	12.49	0.74	428.70	14.324	0.74	0.00	0.00
25	79.00	TA08025-B604	3	63.90	1.96	0.67	127.29	2.662	0.67	0.00	0.00
26	79.00	TA08025-B605	3	75.00	1.96	0.67	140.49	2.662	0.67	0.00	0.00
27	79.00	RDIDC-9181-OF-48	1	21.90	2.01	0.67	88.57	2.721	0.67	0.00	0.00
28	79.00	MC-K6M-6-96 (3 Sectors)	1	860.00	20.95	0.75	1912.38	53.911	0.75	0.00	0.00
29	73.00	12 FT Branches	1	1386.00	82.60	1.00	3790.11	54.238	1.00	0.00	0.00
		Totals:	**92**	**16,265.51**			**48,622.47**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	108.00	(2) 7/8" Coax	0.00	Inside
0.00	99.00	(2) 3/8" Fiber	0.00	Inside
0.00	99.00	(3) 3/8" RET	0.00	Inside
0.00	99.00	(8) DC Fiber	0.00	Inside
0.00	87.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	79.00	(1) 1.411" Hybrid	0.00	Inside

Shaft Section Properties

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.6250	67.325	132.311	74370.7	17.58	107.72	80.7	2175.	0.0
5.00		0.6250	65.825	129.336	69465.2	17.16	105.32	81.2	2078.	2225.8
10.00		0.6250	64.325	126.360	64780.3	16.74	102.92	81.7	1983.	2175.2
15.00		0.6250	62.825	123.385	60310.9	16.31	100.52	82.2	1890.	2124.6
20.00		0.6250	61.325	120.409	56051.9	15.89	98.12	82.5	1800.	2073.9
25.00		0.6250	59.825	117.434	51998.3	15.47	95.72	82.5	1711.	2023.3
27.25	Bot - Section 2	0.6250	59.150	116.095	50239.9	15.28	94.64	82.5	1672.	894.0
30.00		0.6250	58.325	114.458	48145.1	15.04	93.32	82.5	1625.	2180.6
35.00		0.6250	56.825	111.483	44487.0	14.62	90.92	82.5	1542.	3886.3
35.50	Top - Section 1	0.6250	57.925	113.665	47150.7	14.93	92.68	0.0	0.0	383.1
40.00		0.6250	56.575	110.987	43896.0	14.55	90.52	82.5	1528.	1720.0
45.00		0.6250	55.075	108.011	40459.3	14.13	88.12	82.5	1446.	1863.0
50.00		0.6250	53.575	105.036	37206.8	13.70	85.72	82.5	1367.	1812.4
55.00	Bot - Section 3	0.6250	52.075	102.060	34133.5	13.28	83.32	82.5	1291.	1761.8
60.00		0.6250	50.575	99.085	31234.2	12.86	80.92	82.5	1216.	2582.5
62.25	Top - Section 2	0.3125	50.525	49.803	15864.6	27.10	161.68	0.0	0.0	1137.4
65.00		0.3125	49.700	48.984	15095.4	26.63	159.04	70.1	598.2	462.2
70.00		0.3125	48.200	47.497	13761.3	25.79	154.24	71.1	562.3	820.8
73.00		0.3125	47.300	46.604	12999.9	25.28	151.36	71.7	541.3	480.3
75.00		0.3125	46.700	46.009	12508.3	24.94	149.44	72.1	527.5	315.1
79.00		0.3125	45.500	44.819	11562.4	24.26	145.60	72.9	500.5	618.1
80.00		0.3125	45.200	44.521	11333.7	24.09	144.64	73.1	493.9	152.0
82.70		0.3125	44.390	43.718	10731.1	23.64	142.05	73.6	476.1	405.3
85.00		0.3125	43.700	43.033	10235.0	23.25	139.84	74.1	461.3	339.5
87.00		0.3125	43.100	42.438	9816.2	22.91	137.92	74.5	448.6	290.8
90.00		0.3125	42.200	41.546	9209.7	22.40	135.04	75.1	429.8	428.7
95.00		0.3125	40.700	40.058	8255.3	21.55	130.24	76.0	399.5	694.2
97.20		0.3125	40.040	39.403	7857.2	21.18	128.13	76.5	386.5	297.4
99.00		0.3125	39.500	38.868	7541.1	20.88	126.40	76.8	376.0	239.7
100.00		0.3125	39.200	38.570	7369.3	20.71	125.44	77.0	370.3	131.8
105.00		0.3125	37.700	37.082	6549.0	19.86	120.64	78.0	342.1	643.6
107.90		0.3125	36.830	36.219	6102.4	19.37	117.86	78.6	326.3	361.7
108.00		0.3125	36.800	36.190	6087.3	19.35	117.76	78.6	325.8	12.3
109.00		0.3125	36.500	35.892	5938.4	19.18	116.80	78.8	320.4	122.6
										35660.0

Wind Loading - Shaft

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Load Case: 1.2D + 1.6W 96 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 15

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.051	20.96	504.22	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.051	20.96	492.99	0.650	0.000	5.00	28.168	18.31	613.9	0.0	2671.0
10.00		1.00	0.85	19.051	20.96	481.76	0.650	0.000	5.00	27.533	17.90	600.1	0.0	2610.2
15.00		1.00	0.86	19.287	21.22	473.42	0.650	0.000	5.00	26.898	17.48	593.5	0.0	2549.5
20.00		1.00	0.91	20.423	22.47	475.53	0.650	0.000	5.00	26.264	17.07	613.6	0.0	2488.7
25.00		1.00	0.95	21.362	23.50	474.45	0.650	0.000	5.00	25.629	16.66	626.3	0.0	2428.0
27.25	Bot - Section 2	1.00	0.97	21.739	23.91	473.21	0.650	0.000	2.25	11.326	7.36	281.7	0.0	1072.8
30.00		1.00	0.99	22.168	24.38	471.20	0.650	0.000	2.75	13.959	9.07	354.0	0.0	2616.8
35.00		1.00	1.02	22.877	25.16	466.36	0.650	0.000	5.00	24.889	16.18	651.4	0.0	4663.6
35.50	Top - Section 1	1.00	1.02	22.944	25.24	465.81	0.650	0.000	0.50	2.454	1.60	64.4	0.0	459.7
40.00		1.00	1.05	23.512	25.86	470.71	0.650	0.000	4.50	21.800	14.17	586.4	0.0	2064.0
45.00		1.00	1.07	24.089	26.50	463.82	0.650	0.000	5.00	23.619	15.35	650.9	0.0	2235.6
50.00		1.00	1.10	24.618	27.08	456.11	0.650	0.000	5.00	22.985	14.94	647.3	0.0	2174.9
55.00	Bot - Section 3	1.00	1.12	25.107	27.62	447.73	0.650	0.000	5.00	22.350	14.53	641.9	0.0	2114.1
60.00		1.00	1.14	25.563	28.12	438.76	0.650	0.000	5.00	21.980	14.29	642.8	0.0	3099.0
62.25	Top - Section 2	1.00	1.15	25.759	28.33	434.56	0.650	0.000	2.25	9.684	6.29	285.4	0.0	1364.8
65.00		1.00	1.16	25.991	28.59	434.76	0.650	0.000	2.75	11.661	7.58	346.7	0.0	554.6
70.00		1.00	1.18	26.393	29.03	424.89	0.650	0.000	5.00	20.710	13.46	625.3	0.0	984.9
73.00	Appurtenance(s)	1.00	1.19	26.624	29.29	418.78	0.650	0.000	3.00	12.122	7.88	369.2	0.0	576.4
75.00		1.00	1.19	26.774	29.45	414.63	0.650	0.000	2.00	7.954	5.17	243.6	0.0	378.2
79.00	Appurtenance(s)	1.00	1.21	27.065	29.77	406.16	0.650	0.000	4.00	15.604	10.14	483.1	0.0	741.8
80.00		1.00	1.21	27.136	29.85	404.01	0.650	0.000	1.00	3.837	2.49	119.1	0.0	182.4
82.70	Appurtenance(s)	1.00	1.22	27.324	30.06	398.14	0.650	0.000	2.70	10.234	6.65	319.9	0.0	486.4
85.00		1.00	1.23	27.480	30.23	393.08	0.650	0.000	2.30	8.572	5.57	269.5	0.0	407.4
87.00	Appurtenance(s)	1.00	1.23	27.613	30.37	388.62	0.650	0.000	2.00	7.345	4.77	232.0	0.0	349.0
90.00		1.00	1.24	27.809	30.59	381.85	0.650	0.000	3.00	10.827	7.04	344.4	0.0	514.4
95.00		1.00	1.25	28.124	30.94	370.35	0.650	0.000	5.00	17.537	11.40	564.2	0.0	833.0
97.20	Appurtenance(s)	1.00	1.26	28.258	31.08	365.22	0.650	0.000	2.20	7.515	4.88	243.0	0.0	356.9
99.00	Appurtenance(s)	1.00	1.27	28.367	31.20	360.98	0.650	0.000	1.80	6.058	3.94	196.6	0.0	287.6
100.00		1.00	1.27	28.426	31.27	358.62	0.650	0.000	1.00	3.330	2.16	108.3	0.0	158.1
105.00		1.00	1.28	28.717	31.59	346.65	0.650	0.000	5.00	16.268	10.57	534.4	0.0	772.3
107.90	Appurtenance(s)	1.00	1.29	28.880	31.77	339.62	0.650	0.000	2.90	9.145	5.94	302.1	0.0	434.0
108.00	Appurtenance(s)	1.00	1.29	28.886	31.77	339.37	0.650	0.000	0.10	0.312	0.20	10.3	0.0	14.8
109.00	Appurtenance(s)	1.00	1.29	28.942	31.84	336.93	0.650	0.000	1.00	3.101	2.02	102.7	0.0	147.2
								Totals:	**109.00**			**13,268.1**		**42,792.0**

Discrete Appurtenance Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 96 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 15

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa 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	109.00	Top Hat	1	28.942	31.836	1.00	1.00	20.00	192.00	0.000	0.000	1018.75	0.00	0.00
2	108.00	Pipe	1	28.886	31.775	1.00	1.00	5.00	164.70	0.000	0.000	254.20	0.00	0.00
3	108.00	HPD2-4.7	1	28.942	31.836	1.00	1.00	3.96	32.40	0.000	1.000	201.71	0.00	201.71
4	108.00	BA6312-1	1	29.008	31.909	1.00	1.00	0.44	2.40	0.000	2.200	22.46	0.00	49.42
5	107.90	6 FT Branches	1	28.880	31.769	1.00	1.00	45.00	864.00	0.000	0.000	2287.33	0.00	0.00
6	99.00	HPA-65R-BUU-H8	12	28.367	31.203	0.63	0.80	98.44	979.20	0.000	0.000	4914.67	0.00	0.00
7	99.00	RRUS-12	6	28.367	31.203	0.54	0.80	8.68	432.00	0.000	0.000	433.51	0.00	0.00
8	99.00	Raycap DC2-48-60-18-8F	5	28.367	31.203	0.80	0.80	3.68	190.80	0.000	0.000	183.73	0.00	0.00
9	99.00	T-Arms	3	28.367	31.203	0.56	0.75	16.88	1440.00	0.000	0.000	842.49	0.00	0.00
10	99.00	RRUS-A2	6	28.367	31.203	0.54	0.80	5.98	152.64	0.000	0.000	298.64	0.00	0.00
11	99.00	RRUS-32	6	28.367	31.203	0.54	0.80	8.81	381.60	0.000	0.000	439.93	0.00	0.00
12	99.00	RRUS-E2	6	28.367	31.203	0.54	0.80	10.13	427.68	0.000	0.000	505.76	0.00	0.00
13	99.00	RRUS-11	9	28.367	31.203	0.54	0.80	12.16	547.56	0.000	0.000	606.92	0.00	0.00
14	97.20	8 FT Branches	1	28.258	31.084	1.00	1.00	150.50	2820.00	0.000	0.000	7485.10	0.00	0.00
15	87.00	T-Arm Mount (Site Pro1	1	27.613	30.375	1.00	1.00	41.68	2903.11	0.000	0.000	2025.64	0.00	0.00
16	87.00	Commscope	3	27.744	30.519	0.66	0.80	16.10	146.16	0.000	2.000	785.94	0.00	1571.88
17	87.00	Samsung MT6407-77A	3	27.744	30.519	0.56	0.80	7.90	313.56	0.000	2.000	385.56	0.00	771.13
18	87.00	Commscope	3	27.744	30.519	0.66	0.80	16.10	157.32	0.000	2.000	785.94	0.00	1571.88
19	87.00	Raycap	1	27.547	30.302	0.80	0.80	3.03	38.40	0.000	-1.000	147.00	0.00	-147.00
20	87.00	Samsung B2/B66A	3	27.744	30.519	0.54	0.80	3.02	304.20	0.000	2.000	147.62	0.00	295.23
21	87.00	Samsung B5/B13	3	27.744	30.519	0.54	0.80	3.02	304.20	0.000	2.000	147.62	0.00	295.23
22	87.00	Samsung CBRS RRH -	3	27.744	30.519	0.54	0.80	1.91	23.76	0.000	2.000	93.44	0.00	186.88
23	82.70	10 FT Branches	1	27.324	30.056	1.00	1.00	160.00	3247.20	0.000	0.000	7694.37	0.00	0.00
24	79.00	MC-K6M-6-96 (3 Sectors)	1	27.065	29.771	0.75	1.00	15.71	1032.00	0.000	0.000	748.45	0.00	0.00
25	79.00	RDIDC-9181-OF-48	1	27.065	29.771	0.54	0.80	1.08	26.28	0.000	0.000	51.32	0.00	0.00
26	79.00	TA08025-B605	3	27.065	29.771	0.54	0.80	3.15	270.00	0.000	0.000	150.13	0.00	0.00
27	79.00	TA08025-B604	3	27.065	29.771	0.54	0.80	3.15	230.04	0.000	0.000	150.13	0.00	0.00
28	79.00	MX08FRO665-21	3	27.065	29.771	0.59	0.80	22.18	232.20	0.000	0.000	1056.63	0.00	0.00
29	73.00	12 FT Branches	1	26.624	29.287	1.00	1.00	82.60	1663.20	0.000	0.000	3870.54	0.00	0.00
							Totals:		**19,518.61**			**37,735.53**		

Total Applied Force Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Load Case: 1.2D + 1.6W 96 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 15

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		613.90	2730.26	0.00	0.00
10.00		600.07	2669.51	0.00	0.00
15.00		593.48	2608.76	0.00	0.00
20.00		613.62	2548.01	0.00	0.00
25.00		626.33	2487.26	0.00	0.00
27.25		281.67	1099.45	0.00	0.00
30.00		354.01	2649.37	0.00	0.00
35.00		651.36	4722.87	0.00	0.00
35.50		64.41	465.60	0.00	0.00
40.00		586.37	2117.34	0.00	0.00
45.00		650.88	2294.89	0.00	0.00
50.00		647.30	2234.14	0.00	0.00
55.00		641.95	2173.39	0.00	0.00
60.00		642.78	3158.30	0.00	0.00
62.25		285.36	1391.50	0.00	0.00
65.00		346.73	587.25	0.00	0.00
70.00		625.33	1044.19	0.00	0.00
73.00	(1) attachments	4239.74	2275.14	0.00	0.00
75.00		243.63	401.88	0.00	0.00
79.00	(11) attachments	2639.79	2579.70	0.00	0.00
80.00		119.13	192.89	0.00	0.00
82.70	(1) attachments	8014.28	3761.93	0.00	0.00
85.00		269.49	431.49	0.00	0.00
87.00	(20) attachments	4750.77	4560.70	0.00	4545.22
90.00		344.44	537.95	0.00	0.00
95.00		564.24	872.28	0.00	0.00
97.20	(1) attachments	7728.05	3194.18	0.00	0.00
99.00	(53) attachments	8422.24	4853.25	0.00	0.00
100.00		108.28	159.35	0.00	0.00
105.00		534.44	778.53	0.00	0.00
107.90	(1) attachments	2589.47	1301.63	0.00	0.00
108.00	(3) attachments	488.67	214.41	0.00	251.13
109.00	(1) attachments	1121.43	339.17	0.00	0.00
	Totals:	**51,003.64**	**63,436.55**	**0.00**	**4,796.35**

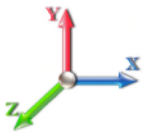
Calculated Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6W 96 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 15

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	-63.40	-51.05	0.00	-4208.5	0.00	4208.51	9612.09	4806.04	26304.5	13171.8	0.00	0.000	0.000	0.326
5.00	-60.60	-50.51	0.00	-3953.2	0.00	3953.27	9453.86	4726.93	25284.3	12660.9	0.04	-0.078	0.000	0.319
10.00	-57.86	-49.99	0.00	-3700.7	0.00	3700.70	9292.97	4646.48	24276.8	12156.4	0.17	-0.156	0.000	0.311
15.00	-55.19	-49.46	0.00	-3450.7	0.00	3450.76	9129.41	4564.70	23282.4	11658.5	0.37	-0.235	0.000	0.302
20.00	-52.58	-48.91	0.00	-3203.4	0.00	3203.46	8945.81	4472.90	22258.5	11145.8	0.66	-0.313	0.000	0.293
25.00	-50.05	-48.32	0.00	-2958.9	0.00	2958.92	8724.74	4362.37	21166.6	10599.0	1.04	-0.392	0.000	0.285
27.25	-48.92	-48.06	0.00	-2850.2	0.00	2850.21	8625.26	4312.63	20684.1	10357.4	1.23	-0.427	0.000	0.281
30.00	-46.22	-47.73	0.00	-2718.0	0.00	2718.05	8503.68	4251.84	20102.1	10066.0	1.49	-0.471	0.000	0.276
35.00	-41.47	-47.07	0.00	-2479.3	0.00	2479.39	8282.61	4141.30	19065.0	9546.71	2.02	-0.548	0.000	0.265
35.50	-40.97	-47.03	0.00	-2455.8	0.00	2455.85	8444.72	4222.36	19822.8	9926.18	2.08	-0.555	0.000	0.252
40.00	-38.81	-46.47	0.00	-2244.2	0.00	2244.22	8245.77	4122.88	18894.9	9461.50	2.64	-0.624	0.000	0.242
45.00	-36.46	-45.83	0.00	-2011.8	0.00	2011.89	8024.70	4012.35	17889.9	8958.25	3.33	-0.693	0.000	0.229
50.00	-34.19	-45.20	0.00	-1782.7	0.00	1782.72	7803.63	3901.82	16912.3	8468.76	4.09	-0.759	0.000	0.215
55.00	-31.97	-44.56	0.00	-1556.7	0.00	1556.74	7582.57	3791.28	15962.3	7993.02	4.92	-0.823	0.000	0.199
60.00	-28.79	-43.89	0.00	-1333.9	0.00	1333.94	7361.50	3680.75	15039.7	7531.04	5.82	-0.883	0.000	0.181
62.25	-27.38	-43.60	0.00	-1235.1	0.00	1235.19	3116.45	1558.23	6440.45	3225.01	6.24	-0.910	0.000	0.393
65.00	-26.75	-43.27	0.00	-1115.2	0.00	1115.29	3089.39	1544.69	6278.97	3144.15	6.78	-0.940	0.000	0.364
70.00	-25.67	-42.66	0.00	-898.94	0.00	898.94	3038.11	1519.05	5986.03	2997.46	7.82	-1.035	0.000	0.309
73.00	-23.44	-38.40	0.00	-770.95	0.00	770.95	3006.06	1503.03	5810.85	2909.74	8.49	-1.087	0.000	0.273
75.00	-23.02	-38.16	0.00	-694.16	0.00	694.16	2984.16	1492.08	5694.37	2851.42	8.95	-1.119	0.000	0.252
79.00	-20.47	-35.49	0.00	-541.51	0.00	541.51	2939.09	1469.54	5462.31	2735.21	9.92	-1.175	0.000	0.206
80.00	-20.26	-35.37	0.00	-506.02	0.00	506.02	2927.55	1463.78	5404.50	2706.27	10.16	-1.188	0.000	0.194
82.70	-16.66	-27.29	0.00	-410.52	0.00	410.52	2895.88	1447.94	5248.88	2628.34	10.85	-1.219	0.000	0.162
85.00	-16.22	-27.01	0.00	-347.77	0.00	347.77	2868.28	1434.14	5116.91	2562.26	11.44	-1.242	0.000	0.142
87.00	-11.76	-22.17	0.00	-289.20	0.00	289.20	2843.82	1421.91	5002.62	2505.03	11.97	-1.260	0.000	0.120
90.00	-11.22	-21.82	0.00	-222.70	0.00	222.70	2806.34	1403.17	4832.08	2419.63	12.77	-1.282	0.000	0.096
95.00	-10.36	-21.24	0.00	-113.62	0.00	113.62	2741.73	1370.87	4550.54	2278.65	14.13	-1.308	0.000	0.054
97.20	-7.34	-13.44	0.00	-66.90	0.00	66.90	2712.46	1356.23	4427.82	2217.20	14.73	-1.315	0.000	0.033
99.00	-2.68	-4.90	0.00	-42.71	0.00	42.71	2688.12	1344.06	4327.98	2167.21	15.23	-1.319	0.000	0.021
100.00	-2.52	-4.79	0.00	-37.81	0.00	37.81	2674.46	1337.23	4272.75	2139.55	15.51	-1.320	0.000	0.019
105.00	-1.76	-4.24	0.00	-13.84	0.00	13.84	2604.52	1302.26	3999.24	2002.59	16.89	-1.325	0.000	0.008
107.90	-0.52	-1.62	0.00	-1.54	0.00	1.54	2562.73	1281.37	3842.75	1924.23	17.70	-1.326	0.000	0.001
108.00	-0.31	-1.13	0.00	-1.13	0.00	1.13	2561.28	1280.64	3837.38	1921.54	17.72	-1.326	0.000	0.001
109.00	0.00	-1.12	0.00	0.00	0.00	0.00	2546.65	1273.32	3783.83	1894.73	18.00	-1.326	0.000	0.000

Wind Loading - Shaft

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 0.9D + 1.6W 96 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 15

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.051	20.96	504.22	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.051	20.96	492.99	0.650	0.000	5.00	28.168	18.31	613.9	0.0	2003.2
10.00		1.00	0.85	19.051	20.96	481.76	0.650	0.000	5.00	27.533	17.90	600.1	0.0	1957.7
15.00		1.00	0.86	19.287	21.22	473.42	0.650	0.000	5.00	26.898	17.48	593.5	0.0	1912.1
20.00		1.00	0.91	20.423	22.47	475.53	0.650	0.000	5.00	26.264	17.07	613.6	0.0	1866.5
25.00		1.00	0.95	21.362	23.50	474.45	0.650	0.000	5.00	25.629	16.66	626.3	0.0	1821.0
27.25	Bot - Section 2	1.00	0.97	21.739	23.91	473.21	0.650	0.000	2.25	11.326	7.36	281.7	0.0	804.6
30.00		1.00	0.99	22.168	24.38	471.20	0.650	0.000	2.75	13.959	9.07	354.0	0.0	1962.6
35.00		1.00	1.02	22.877	25.16	466.36	0.650	0.000	5.00	24.889	16.18	651.4	0.0	3497.7
35.50	Top - Section 1	1.00	1.02	22.944	25.24	465.81	0.650	0.000	0.50	2.454	1.60	64.4	0.0	344.8
40.00		1.00	1.05	23.512	25.86	470.71	0.650	0.000	4.50	21.800	14.17	586.4	0.0	1548.0
45.00		1.00	1.07	24.089	26.50	463.82	0.650	0.000	5.00	23.619	15.35	650.9	0.0	1676.7
50.00		1.00	1.10	24.618	27.08	456.11	0.650	0.000	5.00	22.985	14.94	647.3	0.0	1631.1
55.00	Bot - Section 3	1.00	1.12	25.107	27.62	447.73	0.650	0.000	5.00	22.350	14.53	641.9	0.0	1585.6
60.00		1.00	1.14	25.563	28.12	438.76	0.650	0.000	5.00	21.980	14.29	642.8	0.0	2324.3
62.25	Top - Section 2	1.00	1.15	25.759	28.33	434.56	0.650	0.000	2.25	9.684	6.29	285.4	0.0	1023.6
65.00		1.00	1.16	25.991	28.59	434.76	0.650	0.000	2.75	11.661	7.58	346.7	0.0	416.0
70.00		1.00	1.18	26.393	29.03	424.89	0.650	0.000	5.00	20.710	13.46	625.3	0.0	738.7
73.00	Appurtenance(s)	1.00	1.19	26.624	29.29	418.78	0.650	0.000	3.00	12.122	7.88	369.2	0.0	432.3
75.00		1.00	1.19	26.774	29.45	414.63	0.650	0.000	2.00	7.954	5.17	243.6	0.0	283.6
79.00	Appurtenance(s)	1.00	1.21	27.065	29.77	406.16	0.650	0.000	4.00	15.604	10.14	483.1	0.0	556.3
80.00		1.00	1.21	27.136	29.85	404.01	0.650	0.000	1.00	3.837	2.49	119.1	0.0	136.8
82.70	Appurtenance(s)	1.00	1.22	27.324	30.06	398.14	0.650	0.000	2.70	10.234	6.65	319.9	0.0	364.8
85.00		1.00	1.23	27.480	30.23	393.08	0.650	0.000	2.30	8.572	5.57	269.5	0.0	305.5
87.00	Appurtenance(s)	1.00	1.23	27.613	30.37	388.62	0.650	0.000	2.00	7.345	4.77	232.0	0.0	261.8
90.00		1.00	1.24	27.809	30.59	381.85	0.650	0.000	3.00	10.827	7.04	344.4	0.0	385.8
95.00		1.00	1.25	28.124	30.94	370.35	0.650	0.000	5.00	17.537	11.40	564.2	0.0	624.8
97.20	Appurtenance(s)	1.00	1.26	28.258	31.08	365.22	0.650	0.000	2.20	7.515	4.88	243.0	0.0	267.7
99.00	Appurtenance(s)	1.00	1.27	28.367	31.20	360.98	0.650	0.000	1.80	6.058	3.94	196.6	0.0	215.7
100.00		1.00	1.27	28.426	31.27	358.62	0.650	0.000	1.00	3.330	2.16	108.3	0.0	118.6
105.00		1.00	1.28	28.717	31.59	346.65	0.650	0.000	5.00	16.268	10.57	534.4	0.0	579.2
107.90	Appurtenance(s)	1.00	1.29	28.880	31.77	339.62	0.650	0.000	2.90	9.145	5.94	302.1	0.0	325.5
108.00	Appurtenance(s)	1.00	1.29	28.886	31.77	339.37	0.650	0.000	0.10	0.312	0.20	10.3	0.0	11.1
109.00	Appurtenance(s)	1.00	1.29	28.942	31.84	336.93	0.650	0.000	1.00	3.101	2.02	102.7	0.0	110.4
								Totals:	**109.00**			**13,268.1**		**32,094.0**

Discrete Appurtenance Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 0.9D + 1.6W 96 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 15

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa 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	109.00	Top Hat	1	28.942	31.836	1.00	1.00	20.00	144.00	0.000	0.000	1018.75	0.00	0.00
2	108.00	Pipe	1	28.886	31.775	1.00	1.00	5.00	123.53	0.000	0.000	254.20	0.00	0.00
3	108.00	HPD2-4.7	1	28.942	31.836	1.00	1.00	3.96	24.30	0.000	1.000	201.71	0.00	201.71
4	108.00	BA6312-1	1	29.008	31.909	1.00	1.00	0.44	1.80	0.000	2.200	22.46	0.00	49.42
5	107.90	6 FT Branches	1	28.880	31.769	1.00	1.00	45.00	648.00	0.000	0.000	2287.33	0.00	0.00
6	99.00	HPA-65R-BUU-H8	12	28.367	31.203	0.63	0.80	98.44	734.40	0.000	0.000	4914.67	0.00	0.00
7	99.00	RRUS-12	6	28.367	31.203	0.54	0.80	8.68	324.00	0.000	0.000	433.51	0.00	0.00
8	99.00	Raycap DC2-48-60-18-8F	5	28.367	31.203	0.80	0.80	3.68	143.10	0.000	0.000	183.73	0.00	0.00
9	99.00	T-Arms	3	28.367	31.203	0.56	0.75	16.88	1080.00	0.000	0.000	842.49	0.00	0.00
10	99.00	RRUS-A2	6	28.367	31.203	0.54	0.80	5.98	114.48	0.000	0.000	298.64	0.00	0.00
11	99.00	RRUS-32	6	28.367	31.203	0.54	0.80	8.81	286.20	0.000	0.000	439.93	0.00	0.00
12	99.00	RRUS-E2	6	28.367	31.203	0.54	0.80	10.13	320.76	0.000	0.000	505.76	0.00	0.00
13	99.00	RRUS-11	9	28.367	31.203	0.54	0.80	12.16	410.67	0.000	0.000	606.92	0.00	0.00
14	97.20	8 FT Branches	1	28.258	31.084	1.00	1.00	150.50	2115.00	0.000	0.000	7485.10	0.00	0.00
15	87.00	T-Arm Mount (Site Pro1	1	27.613	30.375	1.00	1.00	41.68	2177.33	0.000	0.000	2025.64	0.00	0.00
16	87.00	Commscope	3	27.744	30.519	0.66	0.80	16.10	109.62	0.000	2.000	785.94	0.00	1571.88
17	87.00	Samsung MT6407-77A	3	27.744	30.519	0.56	0.80	7.90	235.17	0.000	2.000	385.56	0.00	771.13
18	87.00	Commscope	3	27.744	30.519	0.66	0.80	16.10	117.99	0.000	2.000	785.94	0.00	1571.88
19	87.00	Raycap	1	27.547	30.302	0.80	0.80	3.03	28.80	0.000	-1.000	147.00	0.00	-147.00
20	87.00	Samsung B2/B66A	3	27.744	30.519	0.54	0.80	3.02	228.15	0.000	2.000	147.62	0.00	295.23
21	87.00	Samsung B5/B13	3	27.744	30.519	0.54	0.80	3.02	228.15	0.000	2.000	147.62	0.00	295.23
22	87.00	Samsung CBRS RRH -	3	27.744	30.519	0.54	0.80	1.91	17.82	0.000	2.000	93.44	0.00	186.88
23	82.70	10 FT Branches	1	27.324	30.056	1.00	1.00	160.00	2435.40	0.000	0.000	7694.37	0.00	0.00
24	79.00	MC-K6M-6-96 (3 Sectors)	1	27.065	29.771	0.75	1.00	15.71	774.00	0.000	0.000	748.45	0.00	0.00
25	79.00	RDIDC-9181-OF-48	1	27.065	29.771	0.54	0.80	1.08	19.71	0.000	0.000	51.32	0.00	0.00
26	79.00	TA08025-B605	3	27.065	29.771	0.54	0.80	3.15	202.50	0.000	0.000	150.13	0.00	0.00
27	79.00	TA08025-B604	3	27.065	29.771	0.54	0.80	3.15	172.53	0.000	0.000	150.13	0.00	0.00
28	79.00	MX08FRO665-21	3	27.065	29.771	0.59	0.80	22.18	174.15	0.000	0.000	1056.63	0.00	0.00
29	73.00	12 FT Branches	1	26.624	29.287	1.00	1.00	82.60	1247.40	0.000	0.000	3870.54	0.00	0.00
							Totals:		**14,638.96**			**37,735.53**		

Total Applied Force Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Load Case: 0.9D + 1.6W 96 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 15

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		613.90	2047.70	0.00	0.00
10.00		600.07	2002.13	0.00	0.00
15.00		593.48	1956.57	0.00	0.00
20.00		613.62	1911.01	0.00	0.00
25.00		626.33	1865.45	0.00	0.00
27.25		281.67	824.59	0.00	0.00
30.00		354.01	1987.02	0.00	0.00
35.00		651.36	3542.15	0.00	0.00
35.50		64.41	349.20	0.00	0.00
40.00		586.37	1588.00	0.00	0.00
45.00		650.88	1721.16	0.00	0.00
50.00		647.30	1675.60	0.00	0.00
55.00		641.95	1630.04	0.00	0.00
60.00		642.78	2368.72	0.00	0.00
62.25		285.36	1043.63	0.00	0.00
65.00		346.73	440.44	0.00	0.00
70.00		625.33	783.14	0.00	0.00
73.00	(1) attachments	4239.74	1706.35	0.00	0.00
75.00		243.63	301.41	0.00	0.00
79.00	(11) attachments	2639.79	1934.78	0.00	0.00
80.00		119.13	144.67	0.00	0.00
82.70	(1) attachments	8014.28	2821.45	0.00	0.00
85.00		269.49	323.62	0.00	0.00
87.00	(20) attachments	4750.77	3420.52	0.00	4545.22
90.00		344.44	403.46	0.00	0.00
95.00		564.24	654.21	0.00	0.00
97.20	(1) attachments	7728.05	2395.63	0.00	0.00
99.00	(53) attachments	8422.24	3639.94	0.00	0.00
100.00		108.28	119.51	0.00	0.00
105.00		534.44	583.89	0.00	0.00
107.90	(1) attachments	2589.47	976.22	0.00	0.00
108.00	(3) attachments	488.67	160.81	0.00	251.13
109.00	(1) attachments	1121.43	254.38	0.00	0.00
	Totals:	**51,003.64**	**47,577.41**	**0.00**	**4,796.35**

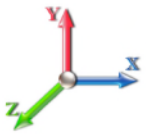
Calculated Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 0.9D + 1.6W 96 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 15

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	-47.54	-51.04	0.00	-4199.4	0.00	4199.43	9612.09	4806.04	26304.5	13171.8	0.00	0.000	0.000	0.324
5.00	-45.42	-50.48	0.00	-3944.2	0.00	3944.25	9453.86	4726.93	25284.3	12660.9	0.04	-0.078	0.000	0.316
10.00	-43.36	-49.94	0.00	-3691.8	0.00	3691.83	9292.97	4646.48	24276.8	12156.4	0.17	-0.156	0.000	0.308
15.00	-41.33	-49.39	0.00	-3442.1	0.00	3442.15	9129.41	4564.70	23282.4	11658.5	0.37	-0.234	0.000	0.300
20.00	-39.36	-48.83	0.00	-3195.1	0.00	3195.18	8945.81	4472.90	22258.5	11145.8	0.66	-0.313	0.000	0.291
25.00	-37.45	-48.22	0.00	-2951.0	0.00	2951.05	8724.74	4362.37	21166.6	10599.0	1.03	-0.391	0.000	0.283
27.25	-36.59	-47.96	0.00	-2842.5	0.00	2842.55	8625.26	4312.63	20684.1	10357.4	1.23	-0.426	0.000	0.279
30.00	-34.56	-47.63	0.00	-2710.6	0.00	2710.65	8503.68	4251.84	20102.1	10066.0	1.49	-0.470	0.000	0.273
35.00	-30.99	-46.97	0.00	-2472.5	0.00	2472.51	8282.61	4141.30	19065.0	9546.71	2.02	-0.546	0.000	0.263
35.50	-30.61	-46.92	0.00	-2449.0	0.00	2449.03	8444.72	4222.36	19822.8	9926.18	2.08	-0.554	0.000	0.250
40.00	-28.97	-46.35	0.00	-2237.8	0.00	2237.88	8245.77	4122.88	18894.9	9461.50	2.63	-0.622	0.000	0.240
45.00	-27.21	-45.72	0.00	-2006.1	0.00	2006.12	8024.70	4012.35	17889.9	8958.25	3.32	-0.691	0.000	0.227
50.00	-25.49	-45.08	0.00	-1777.5	0.00	1777.54	7803.63	3901.82	16912.3	8468.76	4.08	-0.757	0.000	0.213
55.00	-23.82	-44.44	0.00	-1552.1	0.00	1552.17	7582.57	3791.28	15962.3	7993.02	4.91	-0.821	0.000	0.197
60.00	-21.43	-43.77	0.00	-1329.9	0.00	1329.99	7361.50	3680.75	15039.7	7531.04	5.81	-0.881	0.000	0.180
62.25	-20.37	-43.48	0.00	-1231.4	0.00	1231.49	3116.45	1558.23	6440.45	3225.01	6.23	-0.907	0.000	0.389
65.00	-19.88	-43.15	0.00	-1111.9	0.00	1111.91	3089.39	1544.69	6278.97	3144.15	6.76	-0.938	0.000	0.361
70.00	-19.06	-42.54	0.00	-896.15	0.00	896.15	3038.11	1519.05	5986.03	2997.46	7.80	-1.032	0.000	0.306
73.00	-17.40	-38.28	0.00	-768.54	0.00	768.54	3006.06	1503.03	5810.85	2909.74	8.47	-1.084	0.000	0.271
75.00	-17.07	-38.04	0.00	-691.98	0.00	691.98	2984.16	1492.08	5694.37	2851.42	8.93	-1.116	0.000	0.249
79.00	-15.17	-35.37	0.00	-539.81	0.00	539.81	2939.09	1469.54	5462.31	2735.21	9.89	-1.172	0.000	0.203
80.00	-15.02	-35.26	0.00	-504.44	0.00	504.44	2927.55	1463.78	5404.50	2706.27	10.14	-1.185	0.000	0.192
82.70	-12.35	-27.19	0.00	-409.24	0.00	409.24	2895.88	1447.94	5248.88	2628.34	10.82	-1.216	0.000	0.160
85.00	-12.02	-26.92	0.00	-346.70	0.00	346.70	2868.28	1434.14	5116.91	2562.26	11.41	-1.239	0.000	0.140
87.00	-8.70	-22.10	0.00	-288.31	0.00	288.31	2843.82	1421.91	5002.62	2505.03	11.93	-1.257	0.000	0.118
90.00	-8.30	-21.75	0.00	-222.02	0.00	222.02	2806.34	1403.17	4832.08	2419.63	12.73	-1.279	0.000	0.095
95.00	-7.65	-21.17	0.00	-113.27	0.00	113.27	2741.73	1370.87	4550.54	2278.65	14.09	-1.305	0.000	0.053
97.20	-5.43	-13.39	0.00	-66.69	0.00	66.69	2712.46	1356.23	4427.82	2217.20	14.69	-1.312	0.000	0.032
99.00	-1.98	-4.89	0.00	-42.59	0.00	42.59	2688.12	1344.06	4327.98	2167.21	15.19	-1.315	0.000	0.020
100.00	-1.87	-4.78	0.00	-37.70	0.00	37.70	2674.46	1337.23	4272.75	2139.55	15.46	-1.317	0.000	0.018
105.00	-1.29	-4.23	0.00	-13.81	0.00	13.81	2604.52	1302.26	3999.24	2002.59	16.85	-1.322	0.000	0.007
107.90	-0.38	-1.62	0.00	-1.54	0.00	1.54	2562.73	1281.37	3842.75	1924.23	17.65	-1.323	0.000	0.001
108.00	-0.23	-1.13	0.00	-1.13	0.00	1.13	2561.28	1280.64	3837.38	1921.54	17.68	-1.323	0.000	0.001
109.00	0.00	-1.12	0.00	0.00	0.00	0.00	2546.65	1273.32	3783.83	1894.73	17.95	-1.323	0.000	0.000

Wind Loading - Shaft

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 15

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	1.410	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.687	5.00	29.573	35.49	201.7	713.3	3384.2
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.792	5.00	29.026	34.83	198.0	742.1	3352.4
15.00		1.00	0.86	5.232	5.76	0.00	1.200	1.860	5.00	28.449	34.14	196.5	753.8	3303.3
20.00		1.00	0.91	5.540	6.09	0.00	1.200	1.912	5.00	27.857	33.43	203.7	757.2	3245.9
25.00		1.00	0.95	5.795	6.37	0.00	1.200	1.953	5.00	27.256	32.71	208.5	755.7	3183.7
27.25	Bot - Section 2	1.00	0.97	5.897	6.49	0.00	1.200	1.969	2.25	12.064	14.48	93.9	339.2	1412.0
30.00		1.00	0.99	6.013	6.61	0.00	1.200	1.988	2.75	14.870	17.84	118.0	421.5	3038.3
35.00		1.00	1.02	6.206	6.83	0.00	1.200	2.017	5.00	26.570	31.88	217.6	759.4	5422.9
35.50	Top - Section 1	1.00	1.02	6.224	6.85	0.00	1.200	2.020	0.50	2.622	3.15	21.5	75.9	535.5
40.00		1.00	1.05	6.378	7.02	0.00	1.200	2.044	4.50	23.333	28.00	196.4	675.4	2739.4
45.00		1.00	1.07	6.534	7.19	0.00	1.200	2.068	5.00	25.342	30.41	218.6	740.0	2975.6
50.00		1.00	1.10	6.678	7.35	0.00	1.200	2.089	5.00	24.725	29.67	218.0	728.3	2903.1
55.00	Bot - Section 3	1.00	1.12	6.811	7.49	0.00	1.200	2.109	5.00	24.107	28.93	216.7	715.6	2829.7
60.00		1.00	1.14	6.934	7.63	0.00	1.200	2.127	5.00	23.752	28.50	217.4	710.3	3809.3
62.25	Top - Section 2	1.00	1.15	6.988	7.69	0.00	1.200	2.134	2.25	10.484	12.58	96.7	316.8	1681.6
65.00		1.00	1.16	7.050	7.76	0.00	1.200	2.144	2.75	12.644	15.17	117.7	382.8	937.4
70.00		1.00	1.18	7.160	7.88	0.00	1.200	2.159	5.00	22.510	27.01	212.7	681.0	1665.9
73.00	Appurtenance(s)	1.00	1.19	7.222	7.94	0.00	1.200	2.168	3.00	13.206	15.85	125.9	403.0	979.4
75.00		1.00	1.19	7.263	7.99	0.00	1.200	2.174	2.00	8.679	10.41	83.2	266.2	644.3
79.00	Appurtenance(s)	1.00	1.21	7.342	8.08	0.00	1.200	2.185	4.00	17.061	20.47	165.3	522.0	1263.8
80.00		1.00	1.21	7.361	8.10	0.00	1.200	2.188	1.00	4.202	5.04	40.8	129.9	312.3
82.70	Appurtenance(s)	1.00	1.22	7.412	8.15	0.00	1.200	2.195	2.70	11.222	13.47	109.8	345.8	832.2
85.00		1.00	1.23	7.454	8.20	0.00	1.200	2.201	2.30	9.416	11.30	92.7	291.0	698.4
87.00	Appurtenance(s)	1.00	1.23	7.491	8.24	0.00	1.200	2.206	2.00	8.080	9.70	79.9	250.4	599.4
90.00		1.00	1.24	7.544	8.30	0.00	1.200	2.214	3.00	11.934	14.32	118.8	369.4	883.8
95.00		1.00	1.25	7.629	8.39	0.00	1.200	2.225	5.00	19.392	23.27	195.3	598.2	1431.2
97.20	Appurtenance(s)	1.00	1.26	7.666	8.43	0.00	1.200	2.230	2.20	8.333	10.00	84.3	259.8	616.7
99.00	Appurtenance(s)	1.00	1.27	7.695	8.46	0.00	1.200	2.234	1.80	6.728	8.07	68.3	210.2	497.9
100.00		1.00	1.27	7.711	8.48	0.00	1.200	2.237	1.00	3.703	4.44	37.7	116.1	274.2
105.00		1.00	1.28	7.790	8.57	0.00	1.200	2.248	5.00	18.141	21.77	186.5	562.2	1334.5
107.90	Appurtenance(s)	1.00	1.29	7.834	8.62	0.00	1.200	2.254	2.90	10.234	12.28	105.8	319.9	753.9
108.00	Appurtenance(s)	1.00	1.29	7.836	8.62	0.00	1.200	2.254	0.10	0.349	0.42	3.6	11.0	25.8
109.00	Appurtenance(s)	1.00	1.29	7.851	8.64	0.00	1.200	2.256	1.00	3.477	4.17	36.0	109.5	256.6
								Totals:	**109.00**			**4,487.9**		**57,824.3**

Discrete Appurtenance Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 15

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa 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	109.00	Top Hat	1	7.851	8.636	1.00	1.00	38.05	640.75	0.000	0.000	328.58	0.00	0.00
2	108.00	Pipe	1	7.836	8.619	1.00	1.00	13.11	295.18	0.000	0.000	113.03	0.00	0.00
3	108.00	HPD2-4.7	1	7.851	8.636	1.00	1.00	5.48	116.16	0.000	1.000	47.30	0.00	47.30
4	108.00	BA6312-1	1	7.869	8.656	1.00	1.00	1.92	57.03	0.000	2.200	16.61	0.00	36.55
5	107.90	6 FT Branches	1	7.834	8.618	1.00	1.00	85.57	2882.09	0.000	0.000	737.38	0.00	0.00
6	99.00	HPA-65R-BUU-H8	12	7.695	8.464	0.63	0.80	114.39	5659.32	0.000	0.000	968.26	0.00	0.00
7	99.00	RRUS-12	6	7.695	8.464	0.54	0.80	11.40	852.63	0.000	0.000	96.49	0.00	0.00
8	99.00	Raycap DC2-48-60-18-8F	5	7.695	8.464	0.80	0.80	5.92	498.09	0.000	0.000	50.14	0.00	0.00
9	99.00	T-Arms	3	7.695	8.464	0.56	0.75	35.73	2272.56	0.000	0.000	302.42	0.00	0.00
10	99.00	RRUS-A2	6	7.695	8.464	0.54	0.80	9.99	368.85	0.000	0.000	84.57	0.00	0.00
11	99.00	RRUS-32	6	7.695	8.464	0.54	0.80	11.88	1103.80	0.000	0.000	100.54	0.00	0.00
12	99.00	RRUS-E2	6	7.695	8.464	0.54	0.80	13.14	1206.70	0.000	0.000	111.26	0.00	0.00
13	99.00	RRUS-11	9	7.695	8.464	0.54	0.80	16.28	1641.64	0.000	0.000	137.80	0.00	0.00
14	97.20	8 FT Branches	1	7.666	8.432	1.00	1.00	284.77	9363.22	0.000	0.000	2401.24	0.00	0.00
15	87.00	T-Arm Mount (Site Pro1	1	7.491	8.240	1.00	1.00	107.88	6092.09	0.000	0.000	888.94	0.00	0.00
16	87.00	Commscope	3	7.526	8.279	0.66	0.80	19.41	949.81	0.000	2.000	160.68	0.00	321.35
17	87.00	Samsung MT6407-77A	3	7.526	8.279	0.56	0.80	9.81	739.28	0.000	2.000	81.23	0.00	162.46
18	87.00	Commscope	3	7.526	8.279	0.66	0.80	19.41	960.97	0.000	2.000	160.68	0.00	321.35
19	87.00	Raycap	1	7.473	8.220	0.80	0.80	3.87	206.38	0.000	-1.000	31.78	0.00	-31.78
20	87.00	Samsung B2/B66A	3	7.526	8.279	0.54	0.80	4.14	461.09	0.000	2.000	34.30	0.00	68.61
21	87.00	Samsung B5/B13	3	7.526	8.279	0.54	0.80	4.14	461.09	0.000	2.000	34.30	0.00	68.61
22	87.00	Samsung CBRS RRH -	3	7.526	8.279	0.54	0.80	3.51	94.98	0.000	2.000	29.08	0.00	58.16
23	82.70	10 FT Branches	1	7.412	8.153	1.00	1.00	300.49	10705.12	0.000	0.000	2449.93	0.00	0.00
24	79.00	MC-K6M-6-96 (3 Sectors)	1	7.342	8.076	0.75	1.00	40.43	1944.38	0.000	0.000	326.54	0.00	0.00
25	79.00	RDIDC-9181-OF-48	1	7.342	8.076	0.54	0.80	1.46	80.25	0.000	0.000	11.78	0.00	0.00
26	79.00	TA08025-B605	3	7.342	8.076	0.54	0.80	4.28	428.67	0.000	0.000	34.57	0.00	0.00
27	79.00	TA08025-B604	3	7.342	8.076	0.54	0.80	4.28	383.92	0.000	0.000	34.57	0.00	0.00
28	79.00	MX08FRO665-21	3	7.342	8.076	0.59	0.80	25.44	1123.20	0.000	0.000	205.45	0.00	0.00
29	73.00	12 FT Branches	1	7.222	7.945	1.00	1.00	154.24	5453.31	0.000	0.000	1225.35	0.00	0.00
							Totals:		**57,042.58**			**11,204.82**		

Total Applied Force Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 15

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		201.74	3443.51	0.00	0.00
10.00		198.01	3411.65	0.00	0.00
15.00		196.47	3362.54	0.00	0.00
20.00		203.71	3305.20	0.00	0.00
25.00		208.49	3242.94	0.00	0.00
27.25		93.91	1438.68	0.00	0.00
30.00		118.04	3070.88	0.00	0.00
35.00		217.65	5482.22	0.00	0.00
35.50		21.54	541.46	0.00	0.00
40.00		196.44	2792.71	0.00	0.00
45.00		218.59	3034.85	0.00	0.00
50.00		217.95	2962.41	0.00	0.00
55.00		216.73	2888.94	0.00	0.00
60.00		217.41	3868.58	0.00	0.00
62.25		96.70	1708.27	0.00	0.00
65.00		117.67	970.04	0.00	0.00
70.00		212.74	1725.17	0.00	0.00
73.00	(1) attachments	1351.25	6468.27	0.00	0.00
75.00		83.21	668.04	0.00	0.00
79.00	(11) attachments	778.26	5271.64	0.00	0.00
80.00		40.83	322.74	0.00	0.00
82.70	(1) attachments	2559.73	11565.65	0.00	0.00
85.00		92.65	722.51	0.00	0.00
87.00	(20) attachments	1500.88	10586.06	0.00	968.77
90.00		118.83	907.31	0.00	0.00
95.00		195.28	1470.43	0.00	0.00
97.20	(1) attachments	2485.56	9997.15	0.00	0.00
99.00	(53) attachments	1919.82	14115.56	0.00	0.00
100.00		37.69	275.42	0.00	0.00
105.00		186.54	1340.69	0.00	0.00
107.90	(1) attachments	843.21	3639.57	0.00	0.00
108.00	(3) attachments	180.56	494.30	0.00	83.85
109.00	(1) attachments	364.61	897.40	0.00	0.00
	Totals:	**15,692.69**	**115,992.80**	**0.00**	**1,052.62**

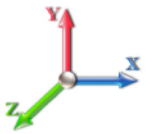
Calculated Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 15

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	-115.9	-15.72	0.00	-1292.8	0.00	1292.85	9612.09	4806.04	26304.5	13171.8	0.00	0.000	0.000	0.110
5.00	-112.5	-15.56	0.00	-1214.2	0.00	1214.26	9453.86	4726.93	25284.3	12660.9	0.01	-0.024	0.000	0.108
10.00	-109.1	-15.41	0.00	-1136.4	0.00	1136.45	9292.97	4646.48	24276.8	12156.4	0.05	-0.048	0.000	0.105
15.00	-105.7	-15.25	0.00	-1059.4	0.00	1059.42	9129.41	4564.70	23282.4	11658.5	0.12	-0.072	0.000	0.102
20.00	-102.4	-15.09	0.00	-983.15	0.00	983.15	8945.81	4472.90	22258.5	11145.8	0.20	-0.096	0.000	0.100
25.00	-99.19	-14.90	0.00	-907.72	0.00	907.72	8724.74	4362.37	21166.6	10599.0	0.32	-0.120	0.000	0.097
27.25	-97.75	-14.83	0.00	-874.19	0.00	874.19	8625.26	4312.63	20684.1	10357.4	0.38	-0.131	0.000	0.096
30.00	-94.68	-14.73	0.00	-833.42	0.00	833.42	8503.68	4251.84	20102.1	10066.0	0.46	-0.145	0.000	0.094
35.00	-89.19	-14.52	0.00	-759.77	0.00	759.77	8282.61	4141.30	19065.0	9546.71	0.62	-0.168	0.000	0.090
35.50	-88.65	-14.51	0.00	-752.51	0.00	752.51	8444.72	4222.36	19822.8	9926.18	0.64	-0.170	0.000	0.086
40.00	-85.85	-14.34	0.00	-687.20	0.00	687.20	8245.77	4122.88	18894.9	9461.50	0.81	-0.191	0.000	0.083
45.00	-82.81	-14.14	0.00	-615.50	0.00	615.50	8024.70	4012.35	17889.9	8958.25	1.02	-0.212	0.000	0.079
50.00	-79.85	-13.94	0.00	-544.80	0.00	544.80	7803.63	3901.82	16912.3	8468.76	1.26	-0.233	0.000	0.075
55.00	-76.95	-13.74	0.00	-475.10	0.00	475.10	7582.57	3791.28	15962.3	7993.02	1.51	-0.252	0.000	0.070
60.00	-73.08	-13.52	0.00	-406.43	0.00	406.43	7361.50	3680.75	15039.7	7531.04	1.79	-0.271	0.000	0.064
62.25	-71.37	-13.42	0.00	-376.01	0.00	376.01	3116.45	1558.23	6440.45	3225.01	1.92	-0.279	0.000	0.140
65.00	-70.40	-13.33	0.00	-339.10	0.00	339.10	3089.39	1544.69	6278.97	3144.15	2.08	-0.288	0.000	0.131
70.00	-68.67	-13.13	0.00	-272.48	0.00	272.48	3038.11	1519.05	5986.03	2997.46	2.40	-0.317	0.000	0.114
73.00	-62.21	-11.76	0.00	-233.09	0.00	233.09	3006.06	1503.03	5810.85	2909.74	2.60	-0.333	0.000	0.101
75.00	-61.54	-11.68	0.00	-209.58	0.00	209.58	2984.16	1492.08	5694.37	2851.42	2.74	-0.342	0.000	0.094
79.00	-56.27	-10.88	0.00	-162.86	0.00	162.86	2939.09	1469.54	5462.31	2735.21	3.04	-0.359	0.000	0.079
80.00	-55.94	-10.85	0.00	-151.97	0.00	151.97	2927.55	1463.78	5404.50	2706.27	3.12	-0.363	0.000	0.075
82.70	-44.39	-8.22	0.00	-122.69	0.00	122.69	2895.88	1447.94	5248.88	2628.34	3.32	-0.372	0.000	0.062
85.00	-43.67	-8.12	0.00	-103.79	0.00	103.79	2868.28	1434.14	5116.91	2562.26	3.51	-0.379	0.000	0.056
87.00	-33.09	-6.56	0.00	-86.58	0.00	86.58	2843.82	1421.91	5002.62	2505.03	3.67	-0.385	0.000	0.046
90.00	-32.19	-6.44	0.00	-66.91	0.00	66.91	2806.34	1403.17	4832.08	2419.63	3.91	-0.391	0.000	0.039
95.00	-30.72	-6.23	0.00	-34.73	0.00	34.73	2741.73	1370.87	4550.54	2278.65	4.32	-0.399	0.000	0.026
97.20	-20.74	-3.68	0.00	-21.02	0.00	21.02	2712.46	1356.23	4427.82	2217.20	4.51	-0.401	0.000	0.017
99.00	-6.64	-1.66	0.00	-14.40	0.00	14.40	2688.12	1344.06	4327.98	2167.21	4.66	-0.402	0.000	0.009
100.00	-6.36	-1.62	0.00	-12.74	0.00	12.74	2674.46	1337.23	4272.75	2139.55	4.75	-0.403	0.000	0.008
105.00	-5.02	-1.42	0.00	-4.64	0.00	4.64	2604.52	1302.26	3999.24	2002.59	5.17	-0.405	0.000	0.004
107.90	-1.39	-0.55	0.00	-0.51	0.00	0.51	2562.73	1281.37	3842.75	1924.23	5.41	-0.405	0.000	0.001
108.00	-0.89	-0.37	0.00	-0.37	0.00	0.37	2561.28	1280.64	3837.38	1921.54	5.42	-0.405	0.000	0.001
109.00	0.00	-0.36	0.00	0.00	0.00	0.00	2546.65	1273.32	3783.83	1894.73	5.51	-0.405	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 20

Load Case:	1.2D + 1.0E							**Iterations**	14
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.78		**SA**	0.08	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.01	0.01	0.00	
5.00		2225.8	0.01	0.05	0.03	30.05	
10.00		2175.1	0.02	0.06	0.04	40.30	
15.00		2124.5	0.04	0.07	0.04	45.07	
20.00		2073.9	0.07	0.07	0.04	47.87	
25.00		2023.3	0.11	0.07	0.04	50.24	
27.25	Bot - Section 2	893.98	0.12	0.07	0.03	22.92	
30.00		2180.6	0.15	0.07	0.03	58.03	
35.00		3886.3	0.20	0.06	0.02	109.48	
35.50	Top - Section 1	383.06	0.21	0.06	0.02	10.84	
40.00		1719.9	0.26	0.05	0.02	49.89	
45.00		1863.0	0.33	0.04	0.01	53.12	
50.00		1812.3	0.41	0.02	0.01	47.51	
55.00	Bot - Section 3	1761.7	0.49	-0.01	0.01	38.76	
60.00		2582.5	0.58	-0.05	0.01	42.46	
62.25	Top - Section 2	1137.3	0.62	-0.06	0.02	15.75	
65.00		462.21	0.68	-0.08	0.03	5.06	
70.00		820.76	0.79	-0.11	0.05	6.27	
73.00	Appurtenance(s)	1866.3	0.86	-0.12	0.07	14.47	
75.00		315.14	0.90	-0.12	0.09	2.84	
79.00	Appurtenance(s)	2110.2	1.00	-0.11	0.13	31.70	
80.00		152.00	1.02	-0.10	0.14	2.63	
82.70	Appurtenance(s)	3111.3	1.09	-0.07	0.18	78.77	
85.00		339.47	1.16	-0.03	0.22	11.63	
87.00	Appurtenance(s)	3783.1	1.21	0.01	0.26	165.28	
90.00		428.67	1.29	0.11	0.33	26.08	
95.00		694.20	1.44	0.36	0.47	67.83	
97.20	Appurtenance(s)	2647.4	1.51	0.52	0.55	310.46	
99.00	Appurtenance(s)	4032.6	1.56	0.67	0.62	543.64	
100.00		131.75	1.59	0.76	0.66	19.13	
105.00		643.57	1.76	1.34	0.90	130.92	
107.90	Appurtenance(s)	1081.6	1.85	1.79	1.07	262.02	
108.00	Appurtenance(s)	178.57	1.86	1.80	1.08	43.51	
109.00	Appurtenance(s)	282.64	1.89	1.98	1.14	72.90	
	Totals:	**51,925.5**				**2,457.4**	**Total Wind:** **51,003.6**

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

Calculated Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Load Case:	1.2D + 1.0E							**Iterations**	14
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.78	**SA**	0.08	**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	-63.44	-2.46	0.00	-200.17	0.00	200.17	9612.09	4806.04	26304.5	13171.8		0.00	0.00	0.022
5.00	-60.71	-2.43	0.00	-187.87	0.00	187.87	9453.86	4726.93	25284.3	12660.9		0.00	0.00	0.021
10.00	-58.04	-2.40	0.00	-175.71	0.00	175.71	9292.97	4646.48	24276.8	12156.4		0.01	-0.01	0.021
15.00	-55.43	-2.35	0.00	-163.73	0.00	163.73	9129.41	4564.70	23282.4	11658.5		0.02	-0.01	0.020
20.00	-52.88	-2.31	0.00	-151.96	0.00	151.96	8945.81	4472.90	22258.5	11145.8		0.03	-0.01	0.020
25.00	-50.39	-2.26	0.00	-140.41	0.00	140.41	8724.74	4362.37	21166.6	10599.0		0.05	-0.02	0.019
27.25	-49.29	-2.24	0.00	-135.32	0.00	135.32	8625.26	4312.63	20684.1	10357.4		0.06	-0.02	0.019
30.00	-46.64	-2.18	0.00	-129.17	0.00	129.17	8503.68	4251.84	20102.1	10066.0		0.07	-0.02	0.018
35.00	-41.92	-2.07	0.00	-118.25	0.00	118.25	8282.61	4141.30	19065.0	9546.71		0.10	-0.03	0.017
35.50	-41.45	-2.06	0.00	-117.22	0.00	117.22	8444.72	4222.36	19822.8	9926.18		0.10	-0.03	0.017
40.00	-39.34	-2.01	0.00	-107.94	0.00	107.94	8245.77	4122.88	18894.9	9461.50		0.13	-0.03	0.016
45.00	-37.04	-1.96	0.00	-97.87	0.00	97.87	8024.70	4012.35	17889.9	8958.25		0.16	-0.03	0.016
50.00	-34.81	-1.91	0.00	-88.06	0.00	88.06	7803.63	3901.82	16912.3	8468.76		0.19	-0.04	0.015
55.00	-32.63	-1.88	0.00	-78.48	0.00	78.48	7582.57	3791.28	15962.3	7993.02		0.23	-0.04	0.014
60.00	-29.48	-1.83	0.00	-69.10	0.00	69.10	7361.50	3680.75	15039.7	7531.04		0.28	-0.04	0.013
62.25	-28.08	-1.82	0.00	-64.98	0.00	64.98	3116.45	1558.23	6440.45	3225.01		0.30	-0.04	0.029
65.00	-27.50	-1.81	0.00	-59.98	0.00	59.98	3089.39	1544.69	6278.97	3144.15		0.32	-0.05	0.028
70.00	-26.45	-1.81	0.00	-50.92	0.00	50.92	3038.11	1519.05	5986.03	2997.46		0.37	-0.05	0.026
73.00	-24.18	-1.79	0.00	-45.50	0.00	45.50	3006.06	1503.03	5810.85	2909.74		0.41	-0.05	0.024
75.00	-23.78	-1.79	0.00	-41.91	0.00	41.91	2984.16	1492.08	5694.37	2851.42		0.43	-0.06	0.023
79.00	-21.20	-1.76	0.00	-34.75	0.00	34.75	2939.09	1469.54	5462.31	2735.21		0.48	-0.06	0.020
80.00	-21.00	-1.75	0.00	-32.99	0.00	32.99	2927.55	1463.78	5404.50	2706.27		0.49	-0.06	0.019
82.70	-17.24	-1.67	0.00	-28.26	0.00	28.26	2895.88	1447.94	5248.88	2628.34		0.53	-0.06	0.017
85.00	-16.81	-1.66	0.00	-24.41	0.00	24.41	2868.28	1434.14	5116.91	2562.26		0.56	-0.06	0.015
87.00	-12.25	-1.49	0.00	-21.09	0.00	21.09	2843.82	1421.91	5002.62	2505.03		0.58	-0.06	0.013
90.00	-11.71	-1.46	0.00	-16.62	0.00	16.62	2806.34	1403.17	4832.08	2419.63		0.62	-0.07	0.011
95.00	-10.84	-1.40	0.00	-9.30	0.00	9.30	2741.73	1370.87	4550.54	2278.65		0.70	-0.07	0.008
97.20	-7.65	-1.08	0.00	-6.23	0.00	6.23	2712.46	1356.23	4427.82	2217.20		0.73	-0.07	0.006
99.00	-2.79	-0.53	0.00	-4.28	0.00	4.28	2688.12	1344.06	4327.98	2167.21		0.75	-0.07	0.003
100.00	-2.63	-0.51	0.00	-3.75	0.00	3.75	2674.46	1337.23	4272.75	2139.55		0.77	-0.07	0.003
105.00	-1.85	-0.38	0.00	-1.19	0.00	1.19	2604.52	1302.26	3999.24	2002.59		0.84	-0.07	0.001
107.90	-0.55	-0.12	0.00	-0.08	0.00	0.08	2562.73	1281.37	3842.75	1924.23		0.88	-0.07	0.000
108.00	-0.34	-0.07	0.00	-0.07	0.00	0.07	2561.28	1280.64	3837.38	1921.54		0.89	-0.07	0.000
109.00	0.00	-0.07	0.00	0.00	0.00	0.00	2546.65	1273.32	3783.83	1894.73		0.90	-0.07	0.000

Seismic Segment Forces (Factored)

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 22

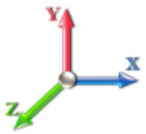
Load Case:	0.9D + 1.0E							**Iterations**	14
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.78		**SA**	0.08	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.01	0.01	0.00	
5.00		2225.8	0.01	0.05	0.03	30.05	
10.00		2175.1	0.02	0.06	0.04	40.30	
15.00		2124.5	0.04	0.07	0.04	45.07	
20.00		2073.9	0.07	0.07	0.04	47.87	
25.00		2023.3	0.11	0.07	0.04	50.24	
27.25	Bot - Section 2	893.98	0.12	0.07	0.03	22.92	
30.00		2180.6	0.15	0.07	0.03	58.03	
35.00		3886.3	0.20	0.06	0.02	109.48	
35.50	Top - Section 1	383.06	0.21	0.06	0.02	10.84	
40.00		1719.9	0.26	0.05	0.02	49.89	
45.00		1863.0	0.33	0.04	0.01	53.12	
50.00		1812.3	0.41	0.02	0.01	47.51	
55.00	Bot - Section 3	1761.7	0.49	-0.01	0.01	38.76	
60.00		2582.5	0.58	-0.05	0.01	42.46	
62.25	Top - Section 2	1137.3	0.62	-0.06	0.02	15.75	
65.00		462.21	0.68	-0.08	0.03	5.06	
70.00		820.76	0.79	-0.11	0.05	6.27	
73.00	Appurtenance(s)	1866.3	0.86	-0.12	0.07	14.47	
75.00		315.14	0.90	-0.12	0.09	2.84	
79.00	Appurtenance(s)	2110.2	1.00	-0.11	0.13	31.70	
80.00		152.00	1.02	-0.10	0.14	2.63	
82.70	Appurtenance(s)	3111.3	1.09	-0.07	0.18	78.77	
85.00		339.47	1.16	-0.03	0.22	11.63	
87.00	Appurtenance(s)	3783.1	1.21	0.01	0.26	165.28	
90.00		428.67	1.29	0.11	0.33	26.08	
95.00		694.20	1.44	0.36	0.47	67.83	
97.20	Appurtenance(s)	2647.4	1.51	0.52	0.55	310.46	
99.00	Appurtenance(s)	4032.6	1.56	0.67	0.62	543.64	
100.00		131.75	1.59	0.76	0.66	19.13	
105.00		643.57	1.76	1.34	0.90	130.92	
107.90	Appurtenance(s)	1081.6	1.85	1.79	1.07	262.02	
108.00	Appurtenance(s)	178.57	1.86	1.80	1.08	43.51	
109.00	Appurtenance(s)	282.64	1.89	1.98	1.14	72.90	
	Totals:	**51,925.5**				**2,457.4**	**Total Wind:** **51,003.6**

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

Calculated Forces

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

Load Case:	0.9D + 1.0E							**Iterations**	14
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.78	**SA**	0.08			**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	-47.58	-2.46	0.00	-199.73	0.00	199.73	9612.09	4806.04	26304.5	13171.8		0.00	0.00	0.020
5.00	-45.53	-2.43	0.00	-187.43	0.00	187.43	9453.86	4726.93	25284.3	12660.9		0.00	0.00	0.020
10.00	-43.53	-2.39	0.00	-175.28	0.00	175.28	9292.97	4646.48	24276.8	12156.4		0.01	-0.01	0.019
15.00	-41.57	-2.35	0.00	-163.31	0.00	163.31	9129.41	4564.70	23282.4	11658.5		0.02	-0.01	0.019
20.00	-39.66	-2.31	0.00	-151.55	0.00	151.55	8945.81	4472.90	22258.5	11145.8		0.03	-0.01	0.018
25.00	-37.79	-2.26	0.00	-140.03	0.00	140.03	8724.74	4362.37	21166.6	10599.0		0.05	-0.02	0.018
27.25	-36.97	-2.23	0.00	-134.95	0.00	134.95	8625.26	4312.63	20684.1	10357.4		0.06	-0.02	0.017
30.00	-34.98	-2.18	0.00	-128.80	0.00	128.80	8503.68	4251.84	20102.1	10066.0		0.07	-0.02	0.017
35.00	-31.44	-2.07	0.00	-117.92	0.00	117.92	8282.61	4141.30	19065.0	9546.71		0.10	-0.03	0.016
35.50	-31.09	-2.06	0.00	-116.88	0.00	116.88	8444.72	4222.36	19822.8	9926.18		0.10	-0.03	0.015
40.00	-29.50	-2.01	0.00	-107.62	0.00	107.62	8245.77	4122.88	18894.9	9461.50		0.13	-0.03	0.015
45.00	-27.78	-1.96	0.00	-97.58	0.00	97.58	8024.70	4012.35	17889.9	8958.25		0.16	-0.03	0.014
50.00	-26.11	-1.91	0.00	-87.80	0.00	87.80	7803.63	3901.82	16912.3	8468.76		0.19	-0.04	0.014
55.00	-24.48	-1.87	0.00	-78.26	0.00	78.26	7582.57	3791.28	15962.3	7993.02		0.23	-0.04	0.013
60.00	-22.11	-1.83	0.00	-68.90	0.00	68.90	7361.50	3680.75	15039.7	7531.04		0.28	-0.04	0.012
62.25	-21.06	-1.81	0.00	-64.79	0.00	64.79	3116.45	1558.23	6440.45	3225.01		0.30	-0.04	0.027
65.00	-20.62	-1.81	0.00	-59.81	0.00	59.81	3089.39	1544.69	6278.97	3144.15		0.32	-0.05	0.026
70.00	-19.84	-1.80	0.00	-50.78	0.00	50.78	3038.11	1519.05	5986.03	2997.46		0.37	-0.05	0.023
73.00	-18.13	-1.79	0.00	-45.37	0.00	45.37	3006.06	1503.03	5810.85	2909.74		0.41	-0.05	0.022
75.00	-17.83	-1.78	0.00	-41.80	0.00	41.80	2984.16	1492.08	5694.37	2851.42		0.43	-0.06	0.021
79.00	-15.90	-1.75	0.00	-34.66	0.00	34.66	2939.09	1469.54	5462.31	2735.21		0.48	-0.06	0.018
80.00	-15.75	-1.75	0.00	-32.91	0.00	32.91	2927.55	1463.78	5404.50	2706.27		0.49	-0.06	0.018
82.70	-12.93	-1.67	0.00	-28.19	0.00	28.19	2895.88	1447.94	5248.88	2628.34		0.52	-0.06	0.015
85.00	-12.61	-1.66	0.00	-24.36	0.00	24.36	2868.28	1434.14	5116.91	2562.26		0.55	-0.06	0.014
87.00	-9.19	-1.49	0.00	-21.04	0.00	21.04	2843.82	1421.91	5002.62	2505.03		0.58	-0.06	0.012
90.00	-8.78	-1.46	0.00	-16.58	0.00	16.58	2806.34	1403.17	4832.08	2419.63		0.62	-0.07	0.010
95.00	-8.13	-1.39	0.00	-9.28	0.00	9.28	2741.73	1370.87	4550.54	2278.65		0.69	-0.07	0.007
97.20	-5.73	-1.08	0.00	-6.22	0.00	6.22	2712.46	1356.23	4427.82	2217.20		0.73	-0.07	0.005
99.00	-2.09	-0.53	0.00	-4.28	0.00	4.28	2688.12	1344.06	4327.98	2167.21		0.75	-0.07	0.003
100.00	-1.97	-0.51	0.00	-3.75	0.00	3.75	2674.46	1337.23	4272.75	2139.55		0.77	-0.07	0.002
105.00	-1.39	-0.38	0.00	-1.19	0.00	1.19	2604.52	1302.26	3999.24	2002.59		0.84	-0.07	0.001
107.90	-0.42	-0.12	0.00	-0.08	0.00	0.08	2562.73	1281.37	3842.75	1924.23		0.88	-0.07	0.000
108.00	-0.25	-0.07	0.00	-0.07	0.00	0.07	2561.28	1280.64	3837.38	1921.54		0.88	-0.07	0.000
109.00	0.00	-0.07	0.00	0.00	0.00	0.00	2546.65	1273.32	3783.83	1894.73		0.90	-0.07	0.000

Wind Loading - Shaft

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 15

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	315.14	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	308.12	0.650	0.000	5.00	28.168	18.31	149.9	0.0	2225.8
10.00		1.00	0.85	7.442	8.19	301.10	0.650	0.000	5.00	27.533	17.90	146.5	0.0	2175.2
15.00		1.00	0.86	7.534	8.29	295.89	0.650	0.000	5.00	26.898	17.48	144.9	0.0	2124.6
20.00		1.00	0.91	7.978	8.78	297.21	0.650	0.000	5.00	26.264	17.07	149.8	0.0	2073.9
25.00		1.00	0.95	8.345	9.18	296.53	0.650	0.000	5.00	25.629	16.66	152.9	0.0	2023.3
27.25	Bot - Section 2	1.00	0.97	8.492	9.34	295.76	0.650	0.000	2.25	11.326	7.36	68.8	0.0	894.0
30.00		1.00	0.99	8.659	9.53	294.50	0.650	0.000	2.75	13.959	9.07	86.4	0.0	2180.6
35.00		1.00	1.02	8.936	9.83	291.48	0.650	0.000	5.00	24.889	16.18	159.0	0.0	3886.3
35.50	Top - Section 1	1.00	1.02	8.962	9.86	291.13	0.650	0.000	0.50	2.454	1.60	15.7	0.0	383.1
40.00		1.00	1.05	9.184	10.10	294.19	0.650	0.000	4.50	21.800	14.17	143.2	0.0	1720.0
45.00		1.00	1.07	9.410	10.35	289.88	0.650	0.000	5.00	23.619	15.35	158.9	0.0	1863.0
50.00		1.00	1.10	9.616	10.58	285.07	0.650	0.000	5.00	22.985	14.94	158.0	0.0	1812.4
55.00	Bot - Section 3	1.00	1.12	9.807	10.79	279.83	0.650	0.000	5.00	22.350	14.53	156.7	0.0	1761.8
60.00		1.00	1.14	9.986	10.98	274.23	0.650	0.000	5.00	21.980	14.29	156.9	0.0	2582.5
62.25	Top - Section 2	1.00	1.15	10.062	11.07	271.60	0.650	0.000	2.25	9.684	6.29	69.7	0.0	1137.4
65.00		1.00	1.16	10.153	11.17	271.73	0.650	0.000	2.75	11.661	7.58	84.7	0.0	462.2
70.00		1.00	1.18	10.310	11.34	265.56	0.650	0.000	5.00	20.710	13.46	152.7	0.0	820.8
73.00	Appurtenance(s)	1.00	1.19	10.400	11.44	261.74	0.650	0.000	3.00	12.122	7.88	90.1	0.0	480.3
75.00		1.00	1.19	10.459	11.50	259.14	0.650	0.000	2.00	7.954	5.17	59.5	0.0	315.1
79.00	Appurtenance(s)	1.00	1.21	10.572	11.63	253.85	0.650	0.000	4.00	15.604	10.14	118.0	0.0	618.1
80.00		1.00	1.21	10.600	11.66	252.51	0.650	0.000	1.00	3.837	2.49	29.1	0.0	152.0
82.70	Appurtenance(s)	1.00	1.22	10.673	11.74	248.84	0.650	0.000	2.70	10.234	6.65	78.1	0.0	405.3
85.00		1.00	1.23	10.734	11.81	245.67	0.650	0.000	2.30	8.572	5.57	65.8	0.0	339.5
87.00	Appurtenance(s)	1.00	1.23	10.787	11.87	242.89	0.650	0.000	2.00	7.345	4.77	56.6	0.0	290.8
90.00		1.00	1.24	10.863	11.95	238.66	0.650	0.000	3.00	10.827	7.04	84.1	0.0	428.7
95.00		1.00	1.25	10.986	12.08	231.47	0.650	0.000	5.00	17.537	11.40	137.8	0.0	694.2
97.20	Appurtenance(s)	1.00	1.26	11.038	12.14	228.26	0.650	0.000	2.20	7.515	4.88	59.3	0.0	297.4
99.00	Appurtenance(s)	1.00	1.27	11.081	12.19	225.61	0.650	0.000	1.80	6.058	3.94	48.0	0.0	239.7
100.00		1.00	1.27	11.104	12.21	224.14	0.650	0.000	1.00	3.330	2.16	26.4	0.0	131.8
105.00		1.00	1.28	11.218	12.34	216.66	0.650	0.000	5.00	16.268	10.57	130.5	0.0	643.6
107.90	Appurtenance(s)	1.00	1.29	11.281	12.41	212.26	0.650	0.000	2.90	9.145	5.94	73.8	0.0	361.7
108.00	Appurtenance(s)	1.00	1.29	11.284	12.41	212.11	0.650	0.000	0.10	0.312	0.20	2.5	0.0	12.3
109.00	Appurtenance(s)	1.00	1.29	11.305	12.44	210.58	0.650	0.000	1.00	3.101	2.02	25.1	0.0	122.6
								Totals:	**109.00**			**3,239.3**		**35,660.0**

Discrete Appurtenance Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 15

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa 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	109.00	Top Hat	1	11.305	12.436	1.00	1.00	20.00	160.00	0.000	0.000	248.72	0.00	0.00
2	108.00	Pipe	1	11.284	12.412	1.00	1.00	5.00	137.25	0.000	0.000	62.06	0.00	0.00
3	108.00	HPD2-4.7	1	11.305	12.436	1.00	1.00	3.96	27.00	0.000	1.000	49.25	0.00	49.25
4	108.00	BA6312-1	1	11.331	12.464	1.00	1.00	0.44	2.00	0.000	2.200	5.48	0.00	12.07
5	107.90	6 FT Branches	1	11.281	12.410	1.00	1.00	45.00	720.00	0.000	0.000	558.43	0.00	0.00
6	99.00	HPA-65R-BUU-H8	12	11.081	12.189	0.63	0.80	98.44	816.00	0.000	0.000	1199.87	0.00	0.00
7	99.00	RRUS-12	6	11.081	12.189	0.54	0.80	8.68	360.00	0.000	0.000	105.84	0.00	0.00
8	99.00	Raycap DC2-48-60-18-8F	5	11.081	12.189	0.80	0.80	3.68	159.00	0.000	0.000	44.85	0.00	0.00
9	99.00	T-Arms	3	11.081	12.189	0.56	0.75	16.88	1200.00	0.000	0.000	205.69	0.00	0.00
10	99.00	RRUS-A2	6	11.081	12.189	0.54	0.80	5.98	127.20	0.000	0.000	72.91	0.00	0.00
11	99.00	RRUS-32	6	11.081	12.189	0.54	0.80	8.81	318.00	0.000	0.000	107.41	0.00	0.00
12	99.00	RRUS-E2	6	11.081	12.189	0.54	0.80	10.13	356.40	0.000	0.000	123.48	0.00	0.00
13	99.00	RRUS-11	9	11.081	12.189	0.54	0.80	12.16	456.30	0.000	0.000	148.17	0.00	0.00
14	97.20	8 FT Branches	1	11.038	12.142	1.00	1.00	150.50	2350.00	0.000	0.000	1827.42	0.00	0.00
15	87.00	T-Arm Mount (Site Pro1	1	10.787	11.865	1.00	1.00	41.68	2419.26	0.000	0.000	494.54	0.00	0.00
16	87.00	Commscope	3	10.838	11.921	0.66	0.80	16.10	121.80	0.000	2.000	191.88	0.00	383.76
17	87.00	Samsung MT6407-77A	3	10.838	11.921	0.56	0.80	7.90	261.30	0.000	2.000	94.13	0.00	188.26
18	87.00	Commscope	3	10.838	11.921	0.66	0.80	16.10	131.10	0.000	2.000	191.88	0.00	383.76
19	87.00	Raycap	1	10.761	11.837	0.80	0.80	3.03	32.00	0.000	-1.000	35.89	0.00	-35.89
20	87.00	Samsung B2/B66A	3	10.838	11.921	0.54	0.80	3.02	253.50	0.000	2.000	36.04	0.00	72.08
21	87.00	Samsung B5/B13	3	10.838	11.921	0.54	0.80	3.02	253.50	0.000	2.000	36.04	0.00	72.08
22	87.00	Samsung CBRS RRH -	3	10.838	11.921	0.54	0.80	1.91	19.80	0.000	2.000	22.81	0.00	45.62
23	82.70	10 FT Branches	1	10.673	11.741	1.00	1.00	160.00	2706.00	0.000	0.000	1878.51	0.00	0.00
24	79.00	MC-K6M-6-96 (3 Sectors)	1	10.572	11.629	0.75	1.00	15.71	860.00	0.000	0.000	182.73	0.00	0.00
25	79.00	RDIDC-9181-OF-48	1	10.572	11.629	0.54	0.80	1.08	21.90	0.000	0.000	12.53	0.00	0.00
26	79.00	TA08025-B605	3	10.572	11.629	0.54	0.80	3.15	225.00	0.000	0.000	36.65	0.00	0.00
27	79.00	TA08025-B604	3	10.572	11.629	0.54	0.80	3.15	191.70	0.000	0.000	36.65	0.00	0.00
28	79.00	MX08FRO665-21	3	10.572	11.629	0.59	0.80	22.18	193.50	0.000	0.000	257.97	0.00	0.00
29	73.00	12 FT Branches	1	10.400	11.440	1.00	1.00	82.60	1386.00	0.000	0.000	944.96	0.00	0.00
							Totals:		**16,265.51**			**9,212.78**		

Total Applied Force Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 15

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		149.88	2275.22	0.00	0.00
10.00		146.50	2224.59	0.00	0.00
15.00		144.89	2173.97	0.00	0.00
20.00		149.81	2123.34	0.00	0.00
25.00		152.91	2072.72	0.00	0.00
27.25		68.77	916.21	0.00	0.00
30.00		86.43	2207.81	0.00	0.00
35.00		159.02	3935.72	0.00	0.00
35.50		15.73	388.00	0.00	0.00
40.00		143.16	1764.45	0.00	0.00
45.00		158.91	1912.40	0.00	0.00
50.00		158.03	1861.78	0.00	0.00
55.00		156.73	1811.15	0.00	0.00
60.00		156.93	2631.91	0.00	0.00
62.25		69.67	1159.59	0.00	0.00
65.00		84.65	489.38	0.00	0.00
70.00		152.67	870.16	0.00	0.00
73.00	(1) attachments	1035.09	1895.95	0.00	0.00
75.00		59.48	334.90	0.00	0.00
79.00	(11) attachments	644.48	2149.75	0.00	0.00
80.00		29.08	160.74	0.00	0.00
82.70	(1) attachments	1956.61	3134.95	0.00	0.00
85.00		65.79	359.58	0.00	0.00
87.00	(20) attachments	1159.86	3800.58	0.00	1109.67
90.00		84.09	448.29	0.00	0.00
95.00		137.75	726.90	0.00	0.00
97.20	(1) attachments	1886.73	2661.82	0.00	0.00
99.00	(53) attachments	2056.21	4044.38	0.00	0.00
100.00		26.44	132.79	0.00	0.00
105.00		130.48	648.77	0.00	0.00
107.90	(1) attachments	632.19	1084.69	0.00	0.00
108.00	(3) attachments	119.30	178.67	0.00	61.31
109.00	(1) attachments	273.79	282.64	0.00	0.00
	Totals:	**12,452.06**	**52,863.79**	**0.00**	**1,170.98**

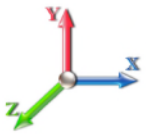
Calculated Forces

Structure:	CT22077-A	**Code:**	EIA/TIA-222-G	9/23/2021	
Site Name:	East Hartford (465 Hill St)	**Exposure:**	C		
Height:	109.00 (ft)	**Crest Height:**	0.00		
Base Elev:	1.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 15

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	-52.86	-12.46	0.00	-1026.0	0.00	1026.07	9612.09	4806.04	26304.5	13171.8	0.00	0.000	0.000	0.083
5.00	-50.58	-12.33	0.00	-963.77	0.00	963.77	9453.86	4726.93	25284.3	12660.9	0.01	-0.019	0.000	0.081
10.00	-48.35	-12.20	0.00	-902.13	0.00	902.13	9292.97	4646.48	24276.8	12156.4	0.04	-0.038	0.000	0.079
15.00	-46.18	-12.06	0.00	-841.15	0.00	841.15	9129.41	4564.70	23282.4	11658.5	0.09	-0.057	0.000	0.077
20.00	-44.05	-11.93	0.00	-780.83	0.00	780.83	8945.81	4472.90	22258.5	11145.8	0.16	-0.076	0.000	0.075
25.00	-41.97	-11.78	0.00	-721.19	0.00	721.19	8724.74	4362.37	21166.6	10599.0	0.25	-0.095	0.000	0.073
27.25	-41.06	-11.72	0.00	-694.69	0.00	694.69	8625.26	4312.63	20684.1	10357.4	0.30	-0.104	0.000	0.072
30.00	-38.84	-11.64	0.00	-662.46	0.00	662.46	8503.68	4251.84	20102.1	10066.0	0.36	-0.115	0.000	0.070
35.00	-34.91	-11.48	0.00	-604.28	0.00	604.28	8282.61	4141.30	19065.0	9546.71	0.49	-0.133	0.000	0.068
35.50	-34.52	-11.46	0.00	-598.54	0.00	598.54	8444.72	4222.36	19822.8	9926.18	0.51	-0.135	0.000	0.064
40.00	-32.75	-11.33	0.00	-546.95	0.00	546.95	8245.77	4122.88	18894.9	9461.50	0.64	-0.152	0.000	0.062
45.00	-30.83	-11.17	0.00	-490.32	0.00	490.32	8024.70	4012.35	17889.9	8958.25	0.81	-0.169	0.000	0.059
50.00	-28.97	-11.02	0.00	-434.46	0.00	434.46	7803.63	3901.82	16912.3	8468.76	1.00	-0.185	0.000	0.055
55.00	-27.16	-10.86	0.00	-379.38	0.00	379.38	7582.57	3791.28	15962.3	7993.02	1.20	-0.201	0.000	0.051
60.00	-24.52	-10.70	0.00	-325.08	0.00	325.08	7361.50	3680.75	15039.7	7531.04	1.42	-0.215	0.000	0.047
62.25	-23.36	-10.63	0.00	-301.01	0.00	301.01	3116.45	1558.23	6440.45	3225.01	1.52	-0.222	0.000	0.101
65.00	-22.87	-10.55	0.00	-271.79	0.00	271.79	3089.39	1544.69	6278.97	3144.15	1.65	-0.229	0.000	0.094
70.00	-22.00	-10.40	0.00	-219.06	0.00	219.06	3038.11	1519.05	5986.03	2997.46	1.91	-0.252	0.000	0.080
73.00	-20.11	-9.36	0.00	-187.87	0.00	187.87	3006.06	1503.03	5810.85	2909.74	2.07	-0.265	0.000	0.071
75.00	-19.77	-9.30	0.00	-169.15	0.00	169.15	2984.16	1492.08	5694.37	2851.42	2.18	-0.273	0.000	0.066
79.00	-17.62	-8.65	0.00	-131.96	0.00	131.96	2939.09	1469.54	5462.31	2735.21	2.42	-0.286	0.000	0.054
80.00	-17.46	-8.62	0.00	-123.31	0.00	123.31	2927.55	1463.78	5404.50	2706.27	2.48	-0.290	0.000	0.052
82.70	-14.33	-6.65	0.00	-100.04	0.00	100.04	2895.88	1447.94	5248.88	2628.34	2.64	-0.297	0.000	0.043
85.00	-13.97	-6.58	0.00	-84.75	0.00	84.75	2868.28	1434.14	5116.91	2562.26	2.79	-0.303	0.000	0.038
87.00	-10.18	-5.40	0.00	-70.48	0.00	70.48	2843.82	1421.91	5002.62	2505.03	2.92	-0.307	0.000	0.032
90.00	-9.73	-5.32	0.00	-54.27	0.00	54.27	2806.34	1403.17	4832.08	2419.63	3.11	-0.313	0.000	0.026
95.00	-9.00	-5.18	0.00	-27.69	0.00	27.69	2741.73	1370.87	4550.54	2278.65	3.44	-0.319	0.000	0.015
97.20	-6.35	-3.27	0.00	-16.30	0.00	16.30	2712.46	1356.23	4427.82	2217.20	3.59	-0.321	0.000	0.010
99.00	-2.32	-1.20	0.00	-10.41	0.00	10.41	2688.12	1344.06	4327.98	2167.21	3.71	-0.321	0.000	0.006
100.00	-2.19	-1.17	0.00	-9.21	0.00	9.21	2674.46	1337.23	4272.75	2139.55	3.78	-0.322	0.000	0.005
105.00	-1.54	-1.03	0.00	-3.37	0.00	3.37	2604.52	1302.26	3999.24	2002.59	4.12	-0.323	0.000	0.002
107.90	-0.46	-0.40	0.00	-0.38	0.00	0.38	2562.73	1281.37	3842.75	1924.23	4.31	-0.323	0.000	0.000
108.00	-0.28	-0.28	0.00	-0.28	0.00	0.28	2561.28	1280.64	3837.38	1921.54	4.32	-0.323	0.000	0.000
109.00	0.00	-0.27	0.00	0.00	0.00	0.00	2546.65	1273.32	3783.83	1894.73	4.39	-0.323	0.000	0.000

Final Analysis Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 28

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 96 mph Wind	51.0	0.00	63.40	0.00	0.00	4208.51
0.9D + 1.6W 96 mph Wind	51.0	0.00	47.54	0.00	0.00	4199.43
1.2D + 1.0Di + 1.0Wi 50 mph Wind	15.7	0.00	115.99	0.00	0.00	1292.85
1.2D + 1.0E	2.5	0.00	63.44	0.00	0.00	200.17
0.9D + 1.0E	2.5	0.00	47.58	0.00	0.00	199.73
1.0D + 1.0W 60 mph Wind	12.5	0.00	52.86	0.00	0.00	1026.07

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 96 mph Wind	-27.38	-43.60	0.00	-1235.1	0.00	-1235.1	3116.45	1558.2	6440.45	3225.01	62.25	0.393
0.9D + 1.6W 96 mph Wind	-20.37	-43.48	0.00	-1231.4	0.00	-1231.4	3116.45	1558.2	6440.45	3225.01	62.25	0.389
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.37	-13.42	0.00	-376.01	0.00	-376.01	3116.45	1558.2	6440.45	3225.01	62.25	0.140
1.2D + 1.0E	-28.08	-1.82	0.00	-64.98	0.00	-64.98	3116.45	1558.2	6440.45	3225.01	62.25	0.029
0.9D + 1.0E	-21.06	-1.81	0.00	-64.79	0.00	-64.79	3116.45	1558.2	6440.45	3225.01	62.25	0.027
1.0D + 1.0W 60 mph Wind	-23.36	-10.63	0.00	-301.01	0.00	-301.01	3116.45	1558.2	6440.45	3225.01	62.25	0.101

Base Plate Summary

Structure:	CT22077-A		**Code:**	EIA/TIA-222-G	9/23/2021
Site Name:	East Hartford (465 Hill St)		**Exposure:**	C	
Height:	109.00 (ft)		**Crest Height:**	0.00	
Base Elev:	1.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Reactions

Original Design

Moment (kip-ft):	6146.00
Axial (kip):	108.40
Shear (kip):	64.60

Analysis

Moment (kip-ft):	4208.51
Axial (kip):	63.40
Shear (kip):	51.05
Moment Design %:	68.48

Base Plate

Yield (ksi):	50.00
Width (in):	81.50
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	11.56
Moment (kip-in):	380.35
Allow Stress (ksi):	67.50
Applied Stress (ksi):	21.60
Stress Ratio:	0.32

Anchor Bolts

Bolt Circle:	75.50
Number Bolts:	30.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00

Compression

Force (kip):	93.05
Allowable (kip):	260.00
Ratio:	0.37

Tension

Force (kip):	85.32
Allowable (kip):	260.00
Ratio:	0.34

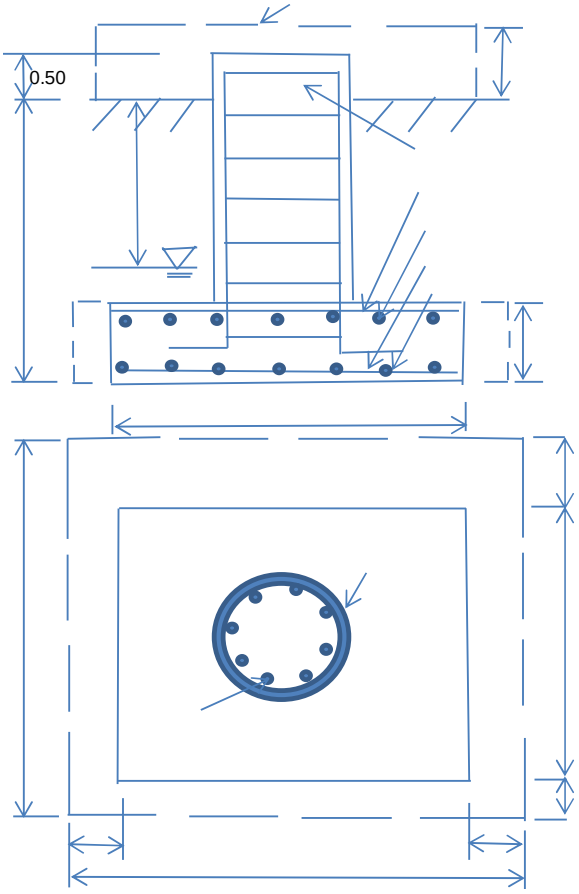
Monopole Mat Foundation Design

				Date
Customer Name:	Verizon	**EIA/TIA Standard:**	EIA-222-G	
Site Name:		**Structure Height (Ft.):**	110	
Site Number:		**Engineer Name:**	A. Hagos	
Engr. Number:		**Engineer Login ID:**		

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis



Base Reactions (Factored):

Axial Load (Kips):	63.4	Shear Force (Kips):	
Uplift Force (Kips):	0.0	Moment (Kips-ft):	
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	
Length of Pad (ft.):	32	Width of Pad (ft.):	
Final Length of pad (ft)	32.0	Final width of pad (ft):	

Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):		
Vertical Rebar Size #:		Tie / Stirrup Size #:		
Qty. of Vertical Rebars:	48	Tie Spacing (in):		
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):		
Concrete Cover (in.):		Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	63	Qty. of Rebar in Pad (W):		
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	63	Qty. of Rebar in Pad (W):		
Apply 1.35 factor for e/w Per G:				

Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:		Pcf	
Water Table B.G.S. (ft):	22.0	Unit Weight of Water:		pcf	Angle from Top of Pad:
Ultimate Bearing Pressure (psf):	8000	Ultimate Skin Friction:		Psf	Angle from Bottm of Pad:
Consider Friction for O.T.M. (Y/N):		Consider Friction for bearing (Y/N):			Angle from Bottm of Pad:
Consider soil hor. resist. for OTM.:		Reduction factor on the maximum soil bearing pressure:			

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

Total Dry Soil Volume (cu. Ft.):	2921.20	Total Dry Soil Weight (Kips):	
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	
Total Effective Soil Weight (Kips):	350.54	Weight from the Concrete Block at Top (K):	
Total Dry Concrete Volume (cu. Ft.):	3247.93	Total Dry Concrete Weight (Kips):	
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	
Total Effective Concrete Weight (Kips):	487.19	Total Vertical Load on Base (Kips):	

Check Soil Capacities:

Load/ Capacity Ratio

Calculated Maxium Net Soil Pressure under the base (psf):	<	Allowable Factored Soil Bearing (psf):	6000	
Allowable Foundation Overturning Resistance (kips-ft.):		Design Factored Momont (kips-ft):		
Factor of Safety Against Overturning (O. R. Moment/Design Moment):				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	

Load/ Capacity Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):			Tie / Stirrup Area (sq. in./each):	
Calculated Moment Capacity (Mn,Kips-Ft):			Design Factored Moment (Mu, Kips-Ft	
Calculated Shear Capacity (Kips):		>	Design Factored Shear (Kips):	
Calculated Tension Capacity (Tn, Kips):		>	Design Factored Tension (Tu Kips):	
Calculated Compression Capacity (Pn, Kips):		>	Design Factored Axial Load (Pu Kips):	
Moment & Axial Strength Combination:		OK!	Check Tie Spacing (Design/Required):	
Pier Reinforcement Ratio:			Reinforcement Ratio is satisfied per ACI	

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):			One-Way Factored Shear (L-D. Kips):	283.8
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):	269.6
Lower Steel Pad Reinforcement Ratio (L-Direct.):			Lower Steel Pad Reinf. Ratio (W-Direc	
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):			Moment at Bottom (L-Dir. K-Ft):	
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):			Moment at Bottom (W-Dir. 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-Dir.):	
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):			Moment at the top (L-Dir K-Ft):	
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):			Moment at the top (W-Dir K-Ft):	
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):			Moment at the top (C-C Dir. K-Ft):	

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1683.4	k-ft.	Max. factored shear stress v_{u_CD}	Psi
Max. factored shear stress v_{u_AB}	9.9	Psi	Factored shear Strength ϕv_n	Psi
Max. factored shear stress v_u	9.9	Psi	Check Usage of Punching Shear Capacity:	OK!

ProTerra DESIGN GROUP, LLC

Date: 7/20/2021

verizon

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

Subject: **Mount Structural Analysis Report**

Verizon Wireless Designation: **Site Name:** East Hartford 10 CT

Site Data: **465 Hills Street, East Hartford, CT 06108**
Latitude 41 44' 26.73", Longitude -72

We are pleased to submit this **"Mount Structural Analysis Report"** 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 (55.7%)**
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

Reviewed By: Jesse Moreno, PE
Digitally signed by Jesse Moreno, PE
Date: 2021.07.21 17:54:44 -04'00'

Proterra Design Group, LLC

1117 Perimeter Center West, Suite E500,
Atlanta, GA 30338
Tel: (770) 693-0835

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	125 mph *√0.6 = 97 mph (ASD)
Ice Loading	1.00” with 50 mph Wind
Risk Category	
Topographic Factor	Kzt = 1.0

Table 1.1 – Existing and Final Appurtenance Configuration for Verizon

Qty	Model
	Commscope NHH-65B-R2B – Antennas
	Commscope NHHSS-65B-R2B – Antennas
	Samsung MT6407-77A – Antennas
	Samsung B2/B66A RRH-BR049 – RRHs
	Samsung B5/B13 RRH-BR04C – RRHs
	Samsung CBRS RRH-RT4401-48A – RRHs
	Raycap RVZDC-6627-PF-48 – Squids

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
Email	ProTerra Design Group, LLC	
Equipment Loading	ProTerra Design Group, LLC	
Mount Photos	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 available photos 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 around the antenna 1" dimension is added considering the artificial green wraps.
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
Base Perimeter Pipe		Pass
Antenna Mount Pipe		Pass
Main Support Tube		Pass
Platform Base Corner Pipe		Pass

Platform Mount: The existing platform mount has **adequate** capacity for the proposed changes by Verizon. For the code specified load combinations and as a maximum, the mount members are stressed to of their structural capacity.

CLIENT: Verizon

PROJECT: East Hartford 10 CT

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

Tower Height	100.00	ft	Type of Mount: Platform
Basic Wind Speed, V	97	mph (=Ultimate Speed*Sqrt(0.6))	
Basic Wind Speed with Ice, V_i	50	mph	
Maintanence Load Factor, L_{FM}	0.0957	Load Factor for Maint. Load Cases (Basic Wind Speed=30 mph)	
Design Ice Thickness, t_i	1	inches	

Table 2-3 Importance Factors

Structure Classification	Wind Load Without Ice	Wind Load With Ice	Ice Thickness	Earthquake
II	1	1	1	1

1

Table 2-4 Exposure Category Coefficients

Exposure Category	Zg	α	Kzmin	Ke	m
C	900	9.5	0.85	1	0.6

Table 2-5 Topographic Categories

Kzt 1.000

Table 2-2 Wind Directionality Factor, Kd

Structure Type	Kd	
2	0.95	DOES NOT CHANGE
Monopole		

Gust Effect Factor Gh

Structure Type	Gh	
2	1.00	DOES NOT CHANGE
Monopole		

Shielding Factor, Ka

Structure Type	Ka	
	0.90	DOES NOT CHANGE
Monopole		

Seismic Factors

Ss	0.18	
S1	0.064	
Fa	1.6	
Fv	2.4	
R	2	Truss or Pole

CLIENT: Verizon

PROJECT: East Hartford 10 CT

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

Rad Center 90.00 ft

Antenna AND Mount Without Ice

Mounting Pole	Height (ft)	Model Number	#	Weight (lbs)	H (in)	*W (in)	D (in)	Ka	**A_N (ft2)	***A_T (ft2)	Aspect (FRONT)	Aspect (SIDE)	Ca (FRONT)	Ca (SIDE)	K_z	q_z (psf)	Pounds: Wind Load (Front)	Wind Load (Side)	Dead Load	Total Wind Load (Front)	Total Wind Load (Side)	Total Dead Load	Lateral Load (Seismic)	Vertical Load (Seismic)
Pos. 1		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0	0	0	0	0	0
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				0	**0**	**0**	**0**	**0**
Pos.2 for front wind	**90.00**	Commscope NHH-65B-R2B	2	43.7	72.0	11.9	7.1	0.90	5.92	3.54	6.07	10.16	1.36	1.51	1.238	28.3	410.3	271.8	87.302	531	342	285	23	11
	90.00	Samsung B2/B66A RRH-BR049	1	97.5	15.0	15.0	10.0	0.90	1.56	1.04	1.00	1.50	1.20	1.20	1.238	28.3	47.8	31.9	97.5					
	90.00	Samsung B5/13 RRH-BR04C	1	82.0	15.0	15.0	8.1	0.90	1.56	0.84	1.00	1.85	1.20	1.20	1.238	28.3	47.8	25.8	82					
	90.00	RT4401-48A	1	18.6	13.9	8.6	4.2	0.90	0.83	0.41	1.62	3.31	1.20	1.24	1.238	28.3	25.4	12.8	18.6					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				266	**172**	**143**	**12**	**5**
Pos.2 for side wind	**90.00**	Commscope NHH-65B-R2B	1	43.7	72.0	11.9	7.1	0.90	5.92	3.54	6.07	10.16	1.36	1.51	1.238	28.3	205.1	135.9	43.651	326	206	242	20	9
	90.00	Samsung B2/B66A RRH-BR049	1	97.5	15.0	15.0	10.0	0.90	1.56	1.04	1.00	1.50	1.20	1.20	1.238	28.3	47.8	31.9	97.5					
	90.00	Samsung B5/13 RRH-BR04C	1	82.0	15.0	15.0	8.1	0.90	1.56	0.84	1.00	1.85	1.20	1.20	1.238	28.3	47.8	25.8	82					
	90.00	RT4401-48A	1	18.6	13.9	8.6	4.2	0.90	0.83	0.41	1.62	3.31	1.20	1.24	1.238	28.3	25.4	12.8	18.6					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				164	**104**	**121**	**10**	**5**
Pos.3	**90.00**	Samsung MT6407-77A	1	81.6	35.1	16.1	5.5	0.90	3.92	1.34	2.18	6.38	1.20	1.37	1.238	28.3	120.1	46.9	81.6	120	47	82	7	3
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				61	**24**	**41**	**3**	**2**
Junction Box		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0	97	64	32	3	1
	90.00	RAYCAP RVZDC-6627-PF-48	1	32.0	28.9	15.7	10.3	0.90	3.16	2.07	1.84	2.81	1.20	1.21	1.238	28.3	96.7	64.1	32					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				49	**33**	**16**	**1**	**1**
Pos.4		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0	0	0	0	0	0
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				0	**0**	**0**	**0**	**0**

* Enter N/A in the W column for front sheilded apurtanances.
** A_N is the product of H and W
*** A_T is the product of H and D

Mount	Height (ft)	Member	*L (in)	**W (in)	D (in)	Weight (lb/ft)	*** Ca	K_z	q_z (psf)	Wind Load (PLF)	Lateral Load (Seismic)	Vertical Load (Seismic)
	90.00	3.0 STD Pipe	12.00	3.50	0.00		1.20	1.238	25.5	9	-	-
	90.00	4.0 STD Pipe	12.00	4.50	0.00		1.20	1.238	25.5	11	-	-
	90.00	2.0 STD Pipe	12.00	2.38	0.00		1.20	1.238	25.5	6	-	-
	90.00	L2x2x3	0.00	2.00	2.00		-	-	-	-	-	-
	90.00	L2.5x2.5x3	0.00	2.50	2.50		-	-	-	-	-	-
	90.00	Angle Diagonal	0.00	0.00	0.00		-	-	-	-	-	-
	90.00	HSS 4x4x4	0.00	4.00	4.00		-	-	-	-	-	-
	90.00	PL 6 x 1/2"	0.00	0.50	6.00		-	-	-	-	-	-
	90.00	Tube Radial (4x4)	0.00	4.00	4.00		-	-	-	-	-	-
	90.00	Double Angle (LL2.5x2.5x3x0)	0.00	5.00	2.50		-	-	-	-	-	-
	90.00	Double Angle (LL3x3x4x0)	0.00	3.00	3.00		-	-	-	-	-	-
	90.00	Channel (Weak Axis Bending)	0.00	0.00	0.00		-	-	-	-	-	-
	90.00	Invert U 5.375x3.625x.375	0.00	3.63	5.38		-	-	-	-	-	-

* The dimension L is the longest dimension of the member
** The dimension W is the height or width of the member that resists wind load
*** Ca will equal 1.2 for round members and 2.0 for flat members

CLIENT: Verizon

PROJECT: East Hartford 10 CT

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

ti (in) 2.211072 Kiz 1.1055359 reduction 0.2657

Antenna AND Mount With Ice

Mounting Pole	Height (ft)	Model Number	#	H (in)	W (in)	D (in)	Ka	*A_N (ft2)	*A_T (ft2)	*Volume Ice (ft3)	*Weight Ice (lbs)	**Ca (FRONT)	**Ca (SIDE)	Kz	q_z (psf)	Pounds: Ice Wind Load (Front)	Ice Wind Load (Side)	Combined Wind Load (Front)	Combined Wind Load (Side)	Ice Dead Load	**Total Wind Load (Front)	**Total Wind Load (Side)	Total Ice Load
Pos. 1		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			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	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 for front wind	90.00	Commscope NHH-65B-R2B	2	72.0	11.9	7.1	0.90	2.71	2.56	4.78	267.76	0.75	0.79	1.238	7.5	27.5	27.5	136.5	99.7	536	183	130	783
	90.00	Samsung B2/B66A RRH-BR049	1	15.0	15.0	10.0	0.90	1.06	0.90	1.85	103.39	0.70	0.70	1.238	7.5	5.0	4.3	17.7	12.8	103			
	90.00	Samsung B5/13 RRH-BR04C	1	15.0	15.0	8.1	0.90	1.06	0.85	1.68	94.02	0.70	0.70	1.238	7.5	5.0	4.0	17.7	10.9	94			
	90.00	RT4401-48A	1	13.9	8.6	4.2	0.90	0.83	0.69	0.90	50.40	0.70	0.70	1.238	7.5	3.9	3.3	10.7	6.7	50			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					92	66	392
Pos.2 for side wind	90.00	Commscope NHH-65B-R2B	1	72.0	11.9	7.1	0.90	2.71	2.56	4.78	267.76	0.75	0.79	1.238	7.5	13.7	13.7	68.2	49.9	268	114	80	516
	90.00	Samsung B2/B66A RRH-BR049	1	15.0	15.0	10.0	0.90	1.06	0.90	1.85	103.39	0.70	0.70	1.238	7.5	5.0	4.3	17.7	12.8	103			
	90.00	Samsung B5/13 RRH-BR04C	1	15.0	15.0	8.1	0.90	1.06	0.85	1.68	94.02	0.70	0.70	1.238	7.5	5.0	4.0	17.7	10.9	94			
	90.00	RT4401-48A	1	13.9	8.6	4.2	0.90	0.83	0.69	0.90	50.40	0.70	0.70	1.238	7.5	3.9	3.3	10.7	6.7	50			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					58	41	258
Pos.3	90.00	Samsung MT6407-77A	1	35.1	16.1	5.5	0.90	1.71	1.38	2.86	160.08	0.70	0.73	1.238	7.5	8.1	6.9	40.0	19.3	160	40	19	160
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					20	10	81
Junction Box		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	33	23	169
	90.00	RAYCAP RVZDC-6627-PF-48	1	28.9	15.7	10.3	0.90	1.51	1.34	3.02	168.84	0.70	0.70	1.238	7.5	7.1	6.4	32.8	23.4	169			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					17	12	85
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			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	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

* A_N A_T, Volume Ice and Weight Ice are calculated per unit

** Ca will equal 1.2 for all ice load calculations

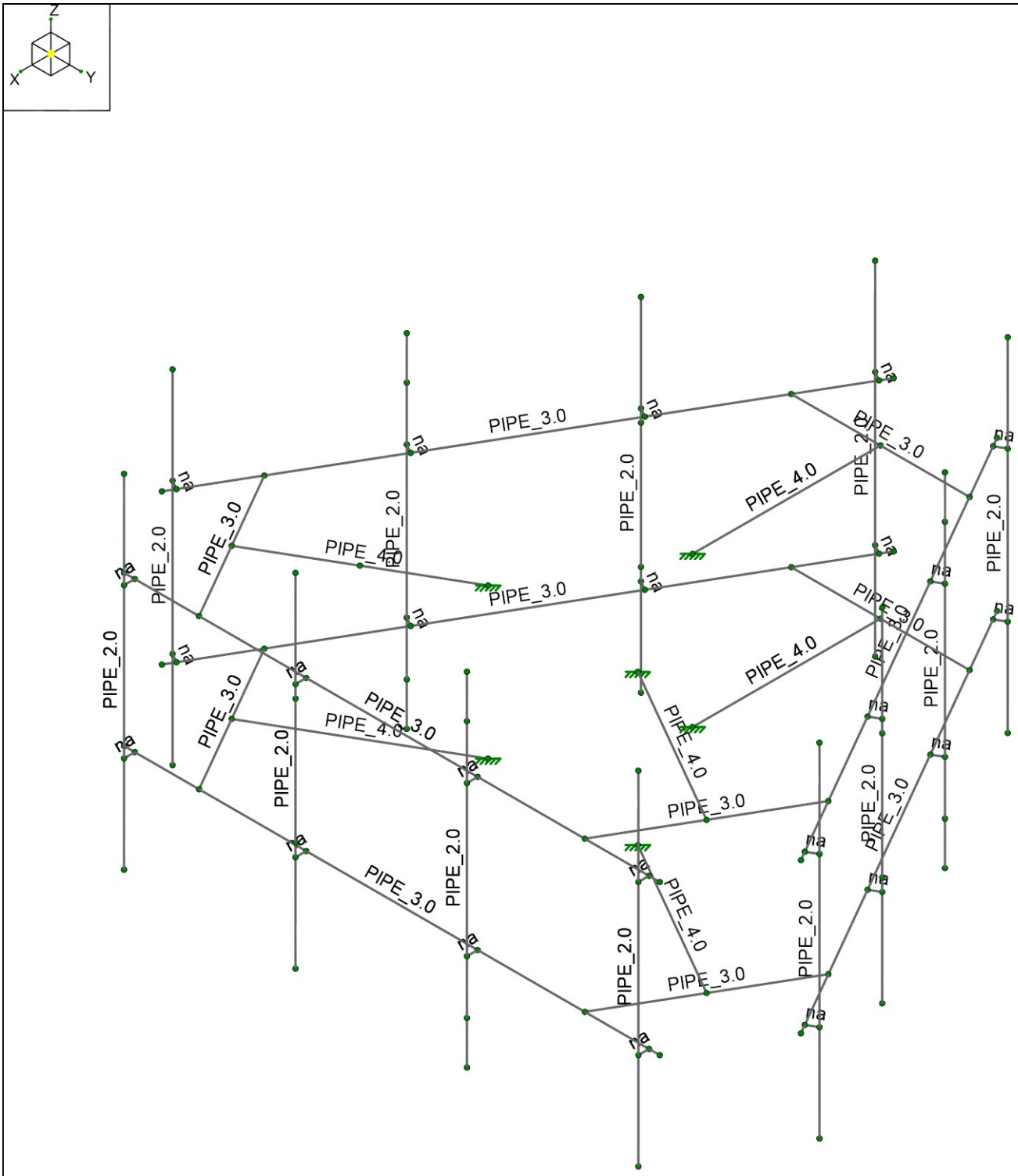
Mount	Height (ft)	Member	*L (in)	**W (in)	D (in)	***A_N (ft2)	Volume Ice (ft3)	Weight Ice (lbs)	****Ca (FRONT)	Kz	q_z (psf)	PLF: Ice Wind Load (Front)	Combined Wind Load (Front)	Ice Dead Load
	90.00	3.0 STD Pipe	12.00	3.50	0.00	0.61	0.28	15.43	1.20	1.238	6.8	5.0	7.3	15
	90.00	4.0 STD Pipe	12.00	4.50	0.00	0.64	0.32	18.13	1.20	1.238	6.8	5.2	8.3	18
	90.00	2.0 STD Pipe	12.00	2.38	0.00	0.58	0.22	12.40	1.20	1.238	6.8	4.7	6.3	12
	90.00	L2x2x3	0.00	2.00	2.00	-	-	-	-	-	-	-	-	-
	90.00	L2.5x2.5x3	0.00	2.50	2.50	-	-	-	-	-	-	-	-	-
	90.00	Angle Diagonal	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-
	90.00	HSS 4x4x4	0.00	4.00	4.00	-	-	-	-	-	-	-	-	-
	90.00	PL 6 x 1/2"	0.00	0.50	6.00	-	-	-	-	-	-	-	-	-
	90.00	Tube Radial (4x4)	0.00	4.00	4.00	-	-	-	-	-	-	-	-	-
	90.00	Double Angle (LL2.5x2.5x3x0)	0.00	5.00	2.50	-	-	-	-	-	-	-	-	-
	90.00	Double Angle (LL3x3x4x0)	0.00	3.00	3.00	-	-	-	-	-	-	-	-	-
	90.00	Channel (Weak Axis Bending)	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-
	90.00	Invert U 5.375x3.625x.375	0.00	3.63	5.38	-	-	-	-	-	-	-	-	-

* The dimension L is the longest dimension of the member

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

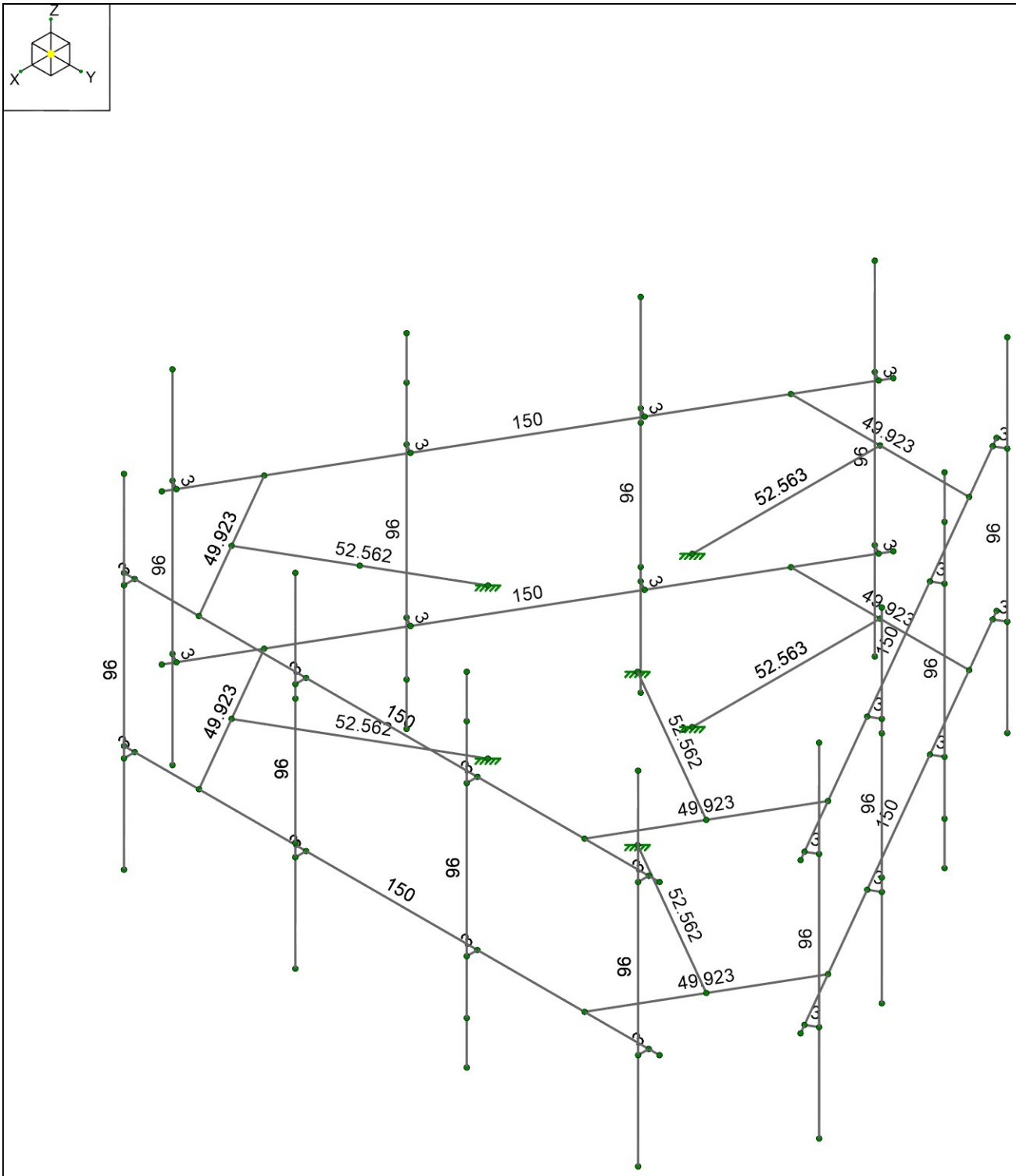
*** A_N is the area of ice built up on the LW plane

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



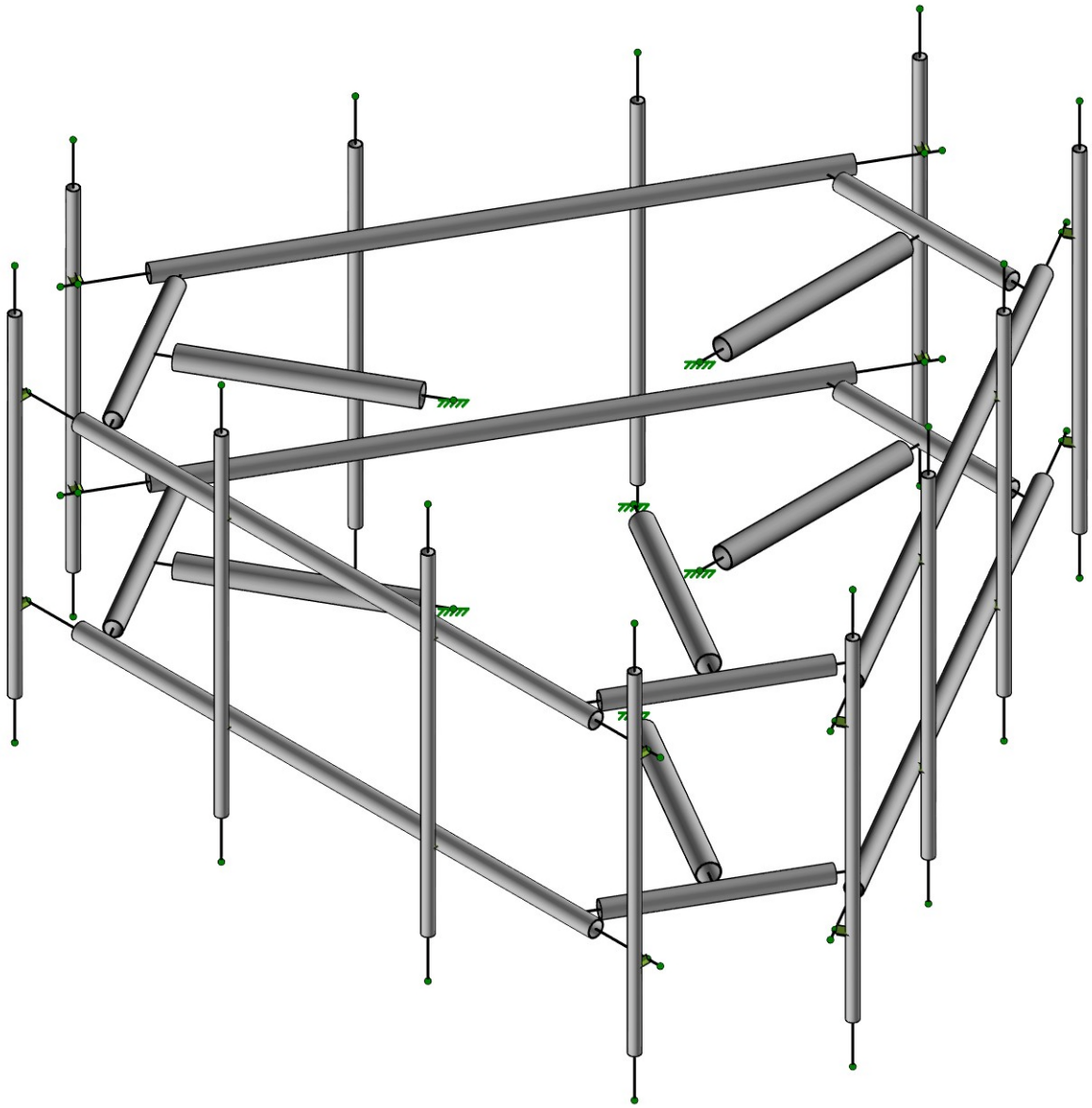
Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-1
AS		Jul 20, 2021
2078010		East Hartford 10 CT.R3D



Member Length (in) Displayed
Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-2
AS		Jul 20, 2021
2078010		East Hartford 10 CT.R3D



Envelope Only Solution

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AS		Jul 20, 2021
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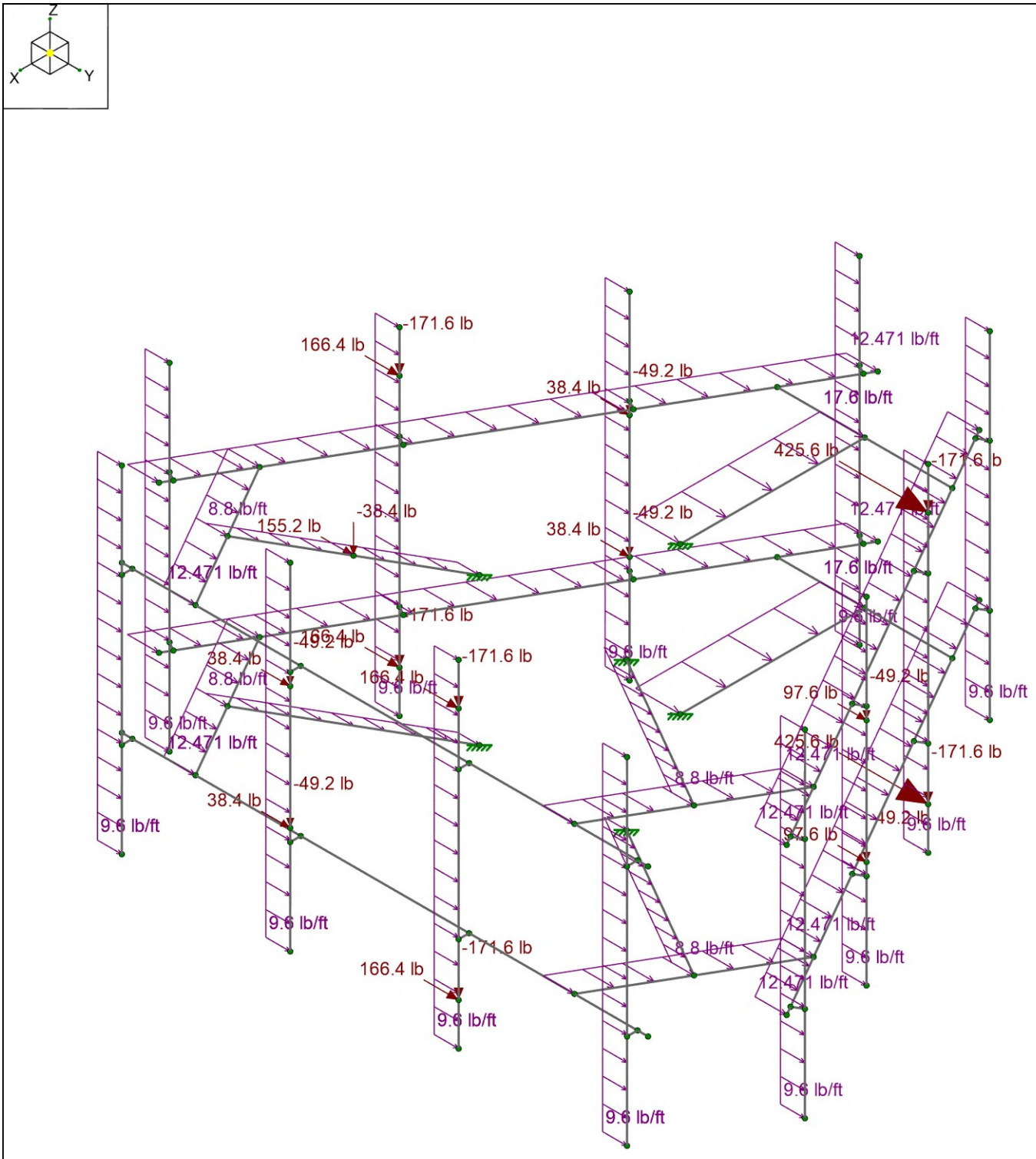
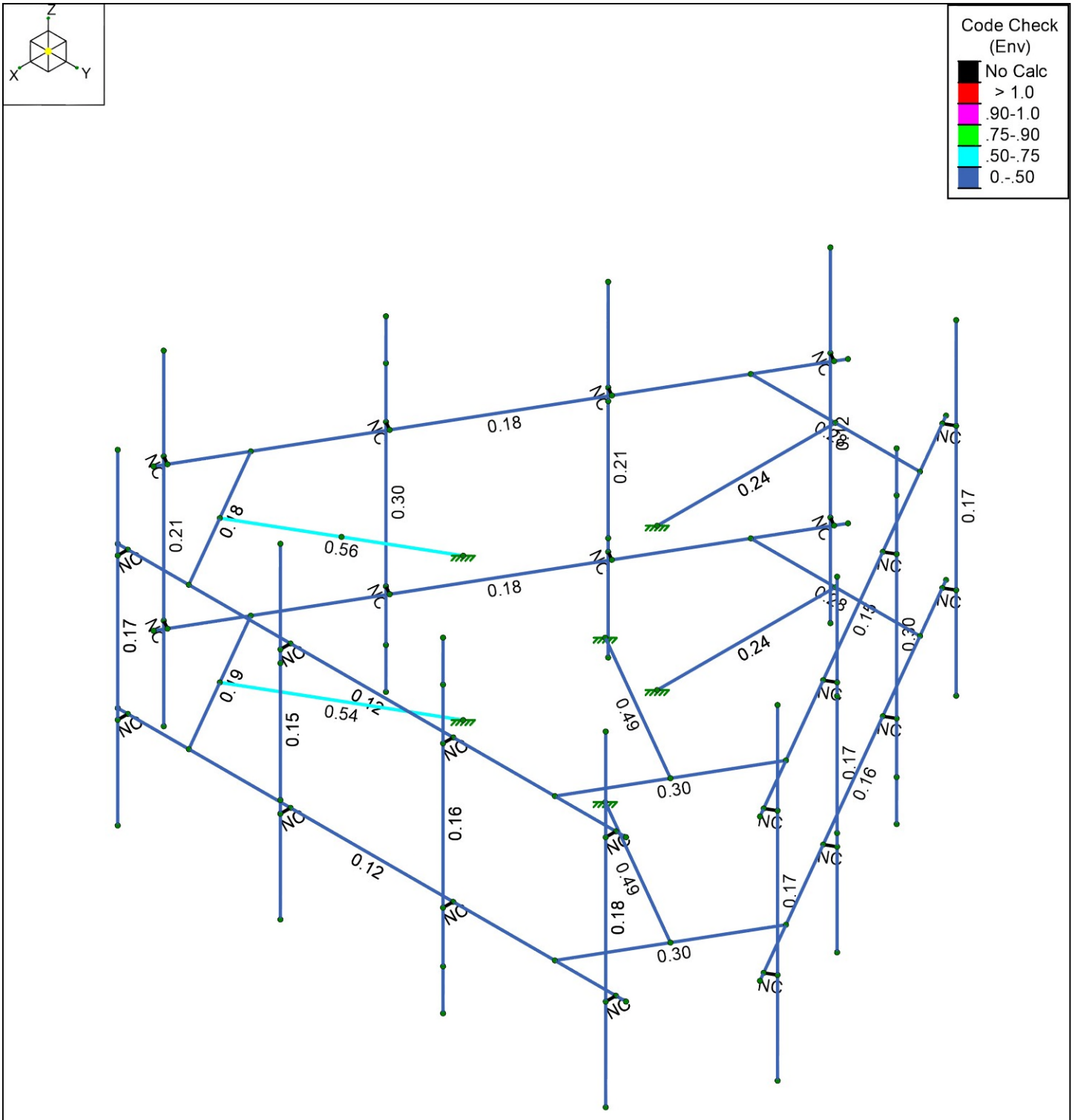


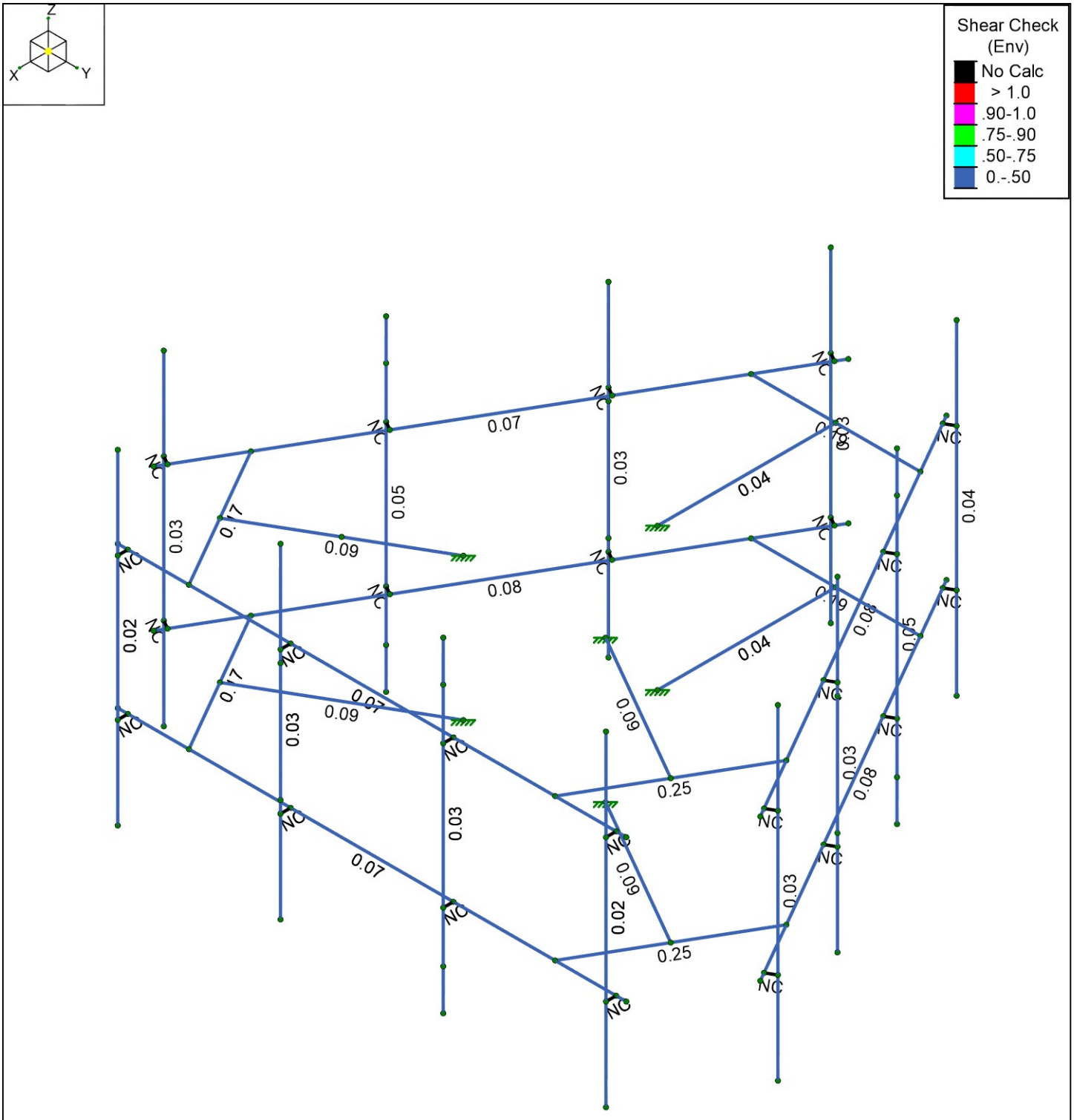
Loads: LC 1, DL + WL (NO ICE) 0 Degree
Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-4
AS		Jul 20, 2021
2078010		East Hartford 10 CT.R3D



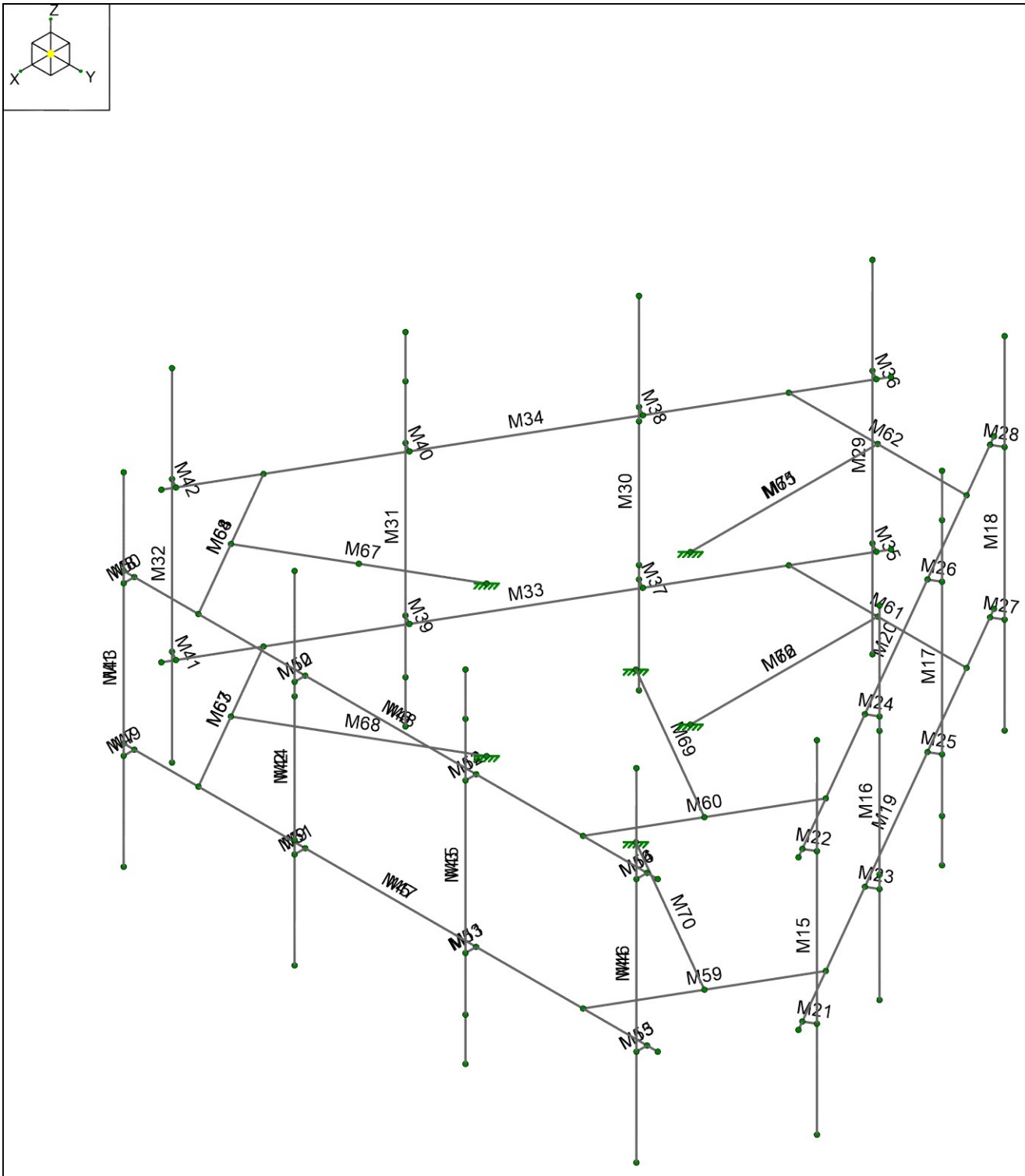
Member Code Checks Displayed (Enveloped)
Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-5
AS		Jul 20, 2021
2078010		East Hartford 10 CT.R3D



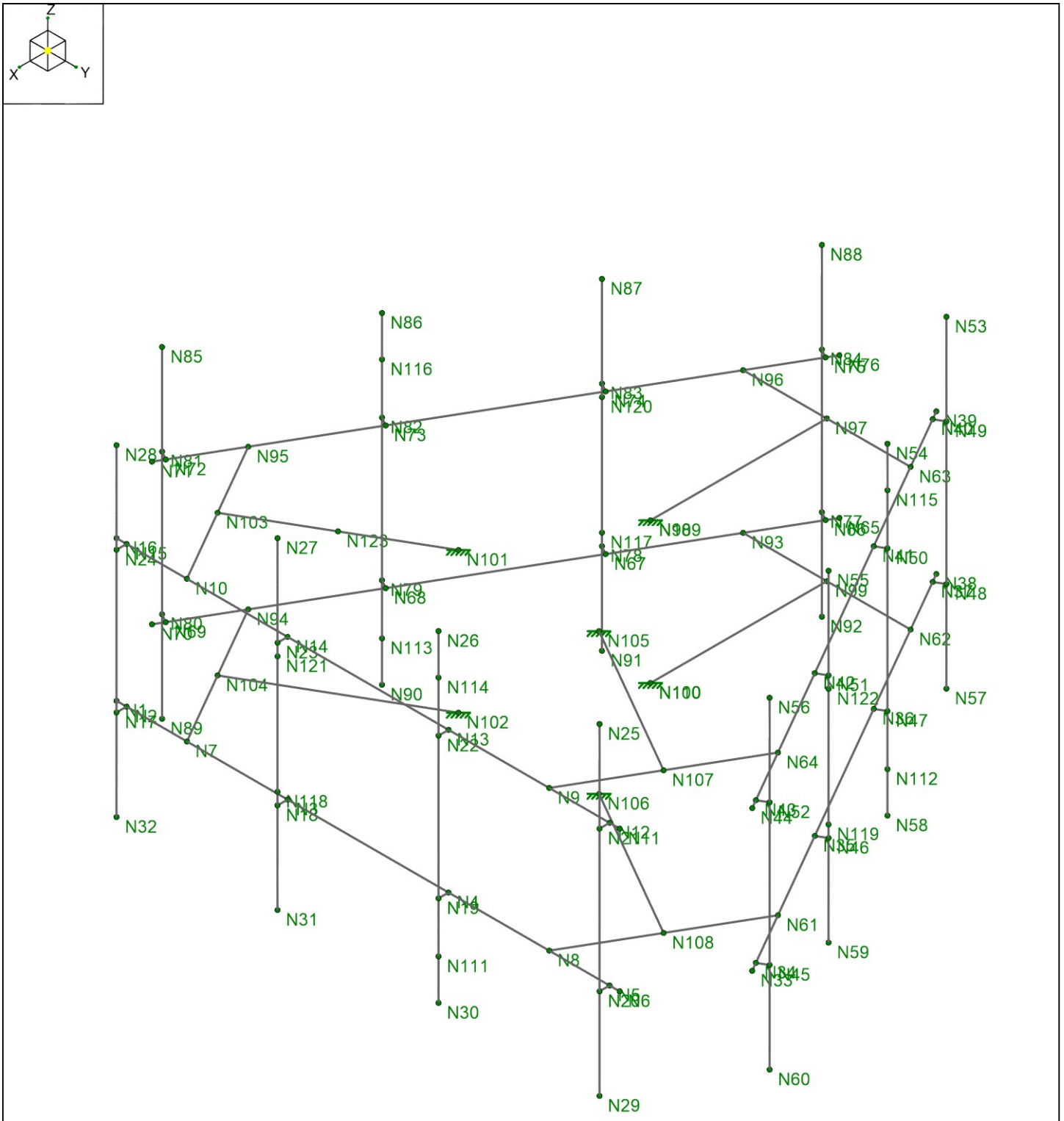
Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-6
AS		Jul 20, 2021
2078010		East Hartford 10 CT.R3D



Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-7
AS		Jul 20, 2021
2078010		East Hartford 10 CT.R3D



Envelope Only Solution

ProTerra//EFI	East Hartford 10 CT	SK-8
AS		Jul 20, 2021
2078010		East Hartford 10 CT.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	Yes
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	XY

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 15th (360-16): ASD
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
Parme 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
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

Model Settings (Continued)

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_tX	0.035
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	8.5
R X	8.5
Ω_0Z	1
Ω_0X	1
C_dZ	4
C_dX	4
ρ Z	1
ρ X	1

Project Grid Lines

No Data to Print...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	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	1.1
3	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N32	N28		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
2	M2	N31	N27		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
3	M3	N30	N26		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
4	M4	N29	N25		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
5	M5	N1	N6		PIPE_3.0	Column	Pipe	A53 Gr.B	Typical
6	M6	N16	N11		PIPE_3.0	Column	Pipe	A53 Gr.B	Typical
7	M7	N2	N17		RIGID	None	None	RIGID	Typical
8	M8	N15	N24		RIGID	None	None	RIGID	Typical
9	M9	N3	N18		RIGID	None	None	RIGID	Typical
10	M10	N14	N23		RIGID	None	None	RIGID	Typical
11	M11	N4	N19		RIGID	None	None	RIGID	Typical
12	M12	N13	N22		RIGID	None	None	RIGID	Typical
13	M13	N5	N20		RIGID	None	None	RIGID	Typical
14	M14	N12	N21		RIGID	None	None	RIGID	Typical
15	M15	N60	N56	120	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
16	M16	N59	N55	120	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
17	M17	N58	N54	120	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
18	M18	N57	N53	120	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
19	M19	N33	N38		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
20	M20	N44	N39		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
21	M21	N34	N45		RIGID	None	None	RIGID	Typical
22	M22	N43	N52		RIGID	None	None	RIGID	Typical
23	M23	N35	N46		RIGID	None	None	RIGID	Typical
24	M24	N42	N51		RIGID	None	None	RIGID	Typical
25	M25	N36	N47		RIGID	None	None	RIGID	Typical
26	M26	N41	N50		RIGID	None	None	RIGID	Typical
27	M27	N37	N48		RIGID	None	None	RIGID	Typical
28	M28	N40	N49		RIGID	None	None	RIGID	Typical
29	M29	N92	N88	240	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
30	M30	N91	N87	240	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
31	M31	N90	N86	240	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
32	M32	N89	N85	240	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
33	M33	N65	N70		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
34	M34	N76	N71		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
35	M35	N66	N77		RIGID	None	None	RIGID	Typical
36	M36	N75	N84		RIGID	None	None	RIGID	Typical
37	M37	N67	N78		RIGID	None	None	RIGID	Typical
38	M38	N74	N83		RIGID	None	None	RIGID	Typical
39	M39	N68	N79		RIGID	None	None	RIGID	Typical
40	M40	N73	N82		RIGID	None	None	RIGID	Typical
41	M41	N69	N80		RIGID	None	None	RIGID	Typical
42	M42	N72	N81		RIGID	None	None	RIGID	Typical
43	M43	N32	N28		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
44	M44	N31	N27		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
45	M45	N30	N26		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
46	M46	N29	N25		PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
47	M47	N1	N6		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
48	M48	N16	N11		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
49	M49	N2	N17		RIGID	None	None	RIGID	Typical
50	M50	N15	N24		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
51	M51	N3	N18		RIGID	None	None	RIGID	Typical
52	M52	N14	N23		RIGID	None	None	RIGID	Typical
53	M53	N4	N19		RIGID	None	None	RIGID	Typical
54	M54	N13	N22		RIGID	None	None	RIGID	Typical
55	M55	N5	N20		RIGID	None	None	RIGID	Typical
56	M56	N12	N21		RIGID	None	None	RIGID	Typical
57	M57	N7	N94		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
58	M58	N10	N95		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
59	M59	N61	N8		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
60	M60	N64	N9		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
61	M61	N93	N62		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
62	M62	N96	N63		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
63	M63	N7	N94		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
64	M64	N10	N95		PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
65	M65	N97	N98		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
66	M66	N99	N100		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
67	M67	N103	N101		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
68	M68	N104	N102		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
69	M69	N107	N105		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
70	M70	N108	N106		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
71	M71	N97	N109		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical
72	M72	N99	N110		PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Seismic DR
1	M1	Yes	** NA **	None
2	M2	Yes	** NA **	None
3	M3	Yes	** NA **	None
4	M4	Yes	** NA **	None
5	M5	Yes	** NA **	None
6	M6	Yes	** NA **	None
7	M7	Yes	** NA **	None
8	M8	Yes	** NA **	None
9	M9	Yes	** NA **	None
10	M10	Yes	** NA **	None
11	M11	Yes	** NA **	None
12	M12	Yes	** NA **	None
13	M13	Yes	** NA **	None
14	M14	Yes	** NA **	None
15	M15	Yes	** NA **	None
16	M16	Yes	** NA **	None
17	M17	Yes	** NA **	None
18	M18	Yes	** NA **	None
19	M19	Yes	Default	None
20	M20	Yes	Default	None
21	M21	Yes	** NA **	None
22	M22	Yes	** NA **	None
23	M23	Yes	** NA **	None
24	M24	Yes	** NA **	None
25	M25	Yes	** NA **	None
26	M26	Yes	** NA **	None
27	M27	Yes	** NA **	None
28	M28	Yes	** NA **	None
29	M29	Yes	** NA **	None
30	M30	Yes	** NA **	None
31	M31	Yes	** NA **	None
32	M32	Yes	** NA **	None
33	M33	Yes	Default	None
34	M34	Yes	Default	None
35	M35	Yes	** NA **	None
36	M36	Yes	** NA **	None
37	M37	Yes	** NA **	None
38	M38	Yes	** NA **	None
39	M39	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Seismic DR
40	M40	Yes	** NA **	None
41	M41	Yes	** NA **	None
42	M42	Yes	** NA **	None
43	M43	Yes	** NA **	None
44	M44	Yes	** NA **	None
45	M45	Yes	** NA **	None
46	M46	Yes	** NA **	None
47	M47	Yes	Default	None
48	M48	Yes	Default	None
49	M49	Yes	** NA **	None
50	M50	Yes	** NA **	None
51	M51	Yes	** NA **	None
52	M52	Yes	** NA **	None
53	M53	Yes	** NA **	None
54	M54	Yes	** NA **	None
55	M55	Yes	** NA **	None
56	M56	Yes	** NA **	None
57	M57	Yes	Default	None
58	M58	Yes	Default	None
59	M59	Yes	Default	None
60	M60	Yes	Default	None
61	M61	Yes	Default	None
62	M62	Yes	Default	None
63	M63	Yes	Default	None
64	M64	Yes	Default	None
65	M65	Yes	Default	None
66	M66	Yes	Default	None
67	M67	Yes	Default	None
68	M68	Yes	Default	None
69	M69	Yes	Default	None
70	M70	Yes	Default	None
71	M71	Yes	Default	None
72	M72	Yes	Default	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Function
1	M1	PIPE_2.0	96	Lbyy	Lateral
2	M2	PIPE_2.0	96	Lbyy	Lateral
3	M3	PIPE_2.0	96	Lbyy	Lateral
4	M4	PIPE_2.0	96	Lbyy	Lateral
5	M5	PIPE_3.0	150	Lbyy	Lateral
6	M6	PIPE_3.0	150	Lbyy	Lateral
7	M15	PIPE_2.0	96	Lbyy	Lateral
8	M16	PIPE_2.0	96	Lbyy	Lateral
9	M17	PIPE_2.0	96	Lbyy	Lateral
10	M18	PIPE_2.0	96	Lbyy	Lateral
11	M19	PIPE_3.0	150	Lbyy	Lateral
12	M20	PIPE_3.0	150	Lbyy	Lateral
13	M29	PIPE_2.0	96	Lbyy	Lateral
14	M30	PIPE_2.0	96	Lbyy	Lateral
15	M31	PIPE_2.0	96	Lbyy	Lateral
16	M32	PIPE_2.0	96	Lbyy	Lateral
17	M33	PIPE_3.0	150	Lbyy	Lateral
18	M34	PIPE_3.0	150	Lbyy	Lateral
19	M43	PIPE_2.0	96	Lbyy	Lateral
20	M44	PIPE_2.0	96	Lbyy	Lateral
21	M45	PIPE_2.0	96	Lbyy	Lateral
22	M46	PIPE_2.0	96	Lbyy	Lateral
23	M47	PIPE_3.0	150	Lbyy	Lateral
24	M48	PIPE_3.0	150	Lbyy	Lateral
25	M57	PIPE_3.0	49.923	Lbyy	Lateral
26	M58	PIPE_3.0	49.923	Lbyy	Lateral
27	M59	PIPE_3.0	49.923	Lbyy	Lateral
28	M60	PIPE_3.0	49.923	Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lcomp top [in]	Function
29	M61	PIPE_3.0	49.923	Lbyy	Lateral
30	M62	PIPE_3.0	49.923	Lbyy	Lateral
31	M63	PIPE_3.0	49.923	Lbyy	Lateral
32	M64	PIPE_3.0	49.923	Lbyy	Lateral
33	M65	PIPE_4.0	52.563	Lbyy	Lateral
34	M66	PIPE_4.0	52.563	Lbyy	Lateral
35	M67	PIPE_4.0	52.562	Lbyy	Lateral
36	M68	PIPE_4.0	52.562	Lbyy	Lateral
37	M69	PIPE_4.0	52.562	Lbyy	Lateral
38	M70	PIPE_4.0	52.562	Lbyy	Lateral
39	M71	PIPE_4.0	52.563	Lbyy	Lateral
40	M72	PIPE_4.0	52.563	Lbyy	Lateral

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N1	60	-75	0	
2	N2	60	-72	0	
3	N3	60	-24	0	
4	N4	60	24	0	
5	N5	60	72	0	
6	N6	60	75	0	
7	N7	60	-54	0	
8	N8	60	54	0	
9	N9	60	54	42	
10	N10	60	-54	42	
11	N11	60	75	42	
12	N12	60	72	42	
13	N13	60	24	42	
14	N14	60	-24	42	
15	N15	60	-72	42	
16	N16	60	-75	42	
17	N17	63	-72	0	
18	N18	63	-24	0	
19	N19	63	24	0	
20	N20	63	72	0	
21	N21	63	72	42	
22	N22	63	24	42	
23	N23	63	-24	42	
24	N24	63	-72	42	
25	N25	63	72	69	
26	N26	63	24	69	
27	N27	63	-24	69	
28	N28	63	-72	69	
29	N29	63	72	-27	
30	N30	63	24	-27	
31	N31	63	-24	-27	
32	N32	63	-72	-27	
33	N33	34.951905	89.461524	0	
34	N34	32.353829	87.961524	0	
35	N35	-9.21539	63.961524	0	
36	N36	-50.78461	39.961524	0	
37	N37	-92.353829	15.961524	0	
38	N38	-94.951905	14.461524	0	
39	N39	-94.951905	14.461524	42	
40	N40	-92.353829	15.961524	42	
41	N41	-50.78461	39.961524	42	
42	N42	-9.21539	63.961524	42	
43	N43	32.353829	87.961524	42	
44	N44	34.951905	89.461524	42	
45	N45	30.853829	90.5596	0	
46	N46	-10.71539	66.5596	0	
47	N47	-52.28461	42.5596	0	
48	N48	-93.853829	18.5596	0	
49	N49	-93.853829	18.5596	42	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
50	N50	-52.28461	42.5596	42	
51	N51	-10.71539	66.5596	42	
52	N52	30.853829	90.5596	42	
53	N53	-93.853829	18.5596	69	
54	N54	-52.28461	42.5596	69	
55	N55	-10.71539	66.5596	69	
56	N56	30.853829	90.5596	69	
57	N57	-93.853829	18.5596	-27	
58	N58	-52.28461	42.5596	-27	
59	N59	-10.71539	66.5596	-27	
60	N60	30.853829	90.5596	-27	
61	N61	16.765372	78.961524	0	
62	N62	-76.765372	24.961524	0	
63	N63	-76.765372	24.961524	42	
64	N64	16.765372	78.961524	42	
65	N65	-94.951905	-14.461524	0	
66	N66	-92.353829	-15.961524	0	
67	N67	-50.78461	-39.961524	0	
68	N68	-9.21539	-63.961524	0	
69	N69	32.353829	-87.961524	0	
70	N70	34.951905	-89.461524	0	
71	N71	34.951905	-89.461524	42	
72	N72	32.353829	-87.961524	42	
73	N73	-9.21539	-63.961524	42	
74	N74	-50.78461	-39.961524	42	
75	N75	-92.353829	-15.961524	42	
76	N76	-94.951905	-14.461524	42	
77	N77	-93.853829	-18.5596	0	
78	N78	-52.28461	-42.5596	0	
79	N79	-10.71539	-66.5596	0	
80	N80	30.853829	-90.5596	0	
81	N81	30.853829	-90.5596	42	
82	N82	-10.71539	-66.5596	42	
83	N83	-52.28461	-42.5596	42	
84	N84	-93.853829	-18.5596	42	
85	N85	30.853829	-90.5596	69	
86	N86	-10.71539	-66.5596	69	
87	N87	-52.28461	-42.5596	69	
88	N88	-93.853829	-18.5596	69	
89	N89	30.853829	-90.5596	-27	
90	N90	-10.71539	-66.5596	-27	
91	N91	-52.28461	-42.5596	-27	
92	N92	-93.853829	-18.5596	-27	
93	N93	-76.765372	-24.961524	0	
94	N94	16.765372	-78.961524	0	
95	N95	16.765372	-78.961524	42	
96	N96	-76.765372	-24.961524	42	
97	N97	-76.765372	-0.	42	
98	N98	-24.202872	0.00001	42	
99	N99	-76.765372	-0.	0	
100	N100	-24.202872	0.00001	0	
101	N101	12.101436	-20.960302	42	
102	N102	12.101436	-20.960302	0	
103	N103	38.382686	-66.480762	42	
104	N104	38.382686	-66.480762	0	
105	N105	12.101436	20.960302	42	
106	N106	12.101436	20.960302	0	
107	N107	38.382686	66.480762	42	
108	N108	38.382686	66.480762	0	
109	N109	-24.202872	-0.	42	
110	N110	-24.202872	-0.	0	
111	N111	63	24	-15	
112	N112	-52.28461	42.5596	-15	
113	N113	-10.71539	-66.5596	-15	
114	N114	63	24	57	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
115	N115	-52.28461	42.5596	57	
116	N116	-10.71539	-66.5596	57	
117	N117	-52.28461	-42.5596	3.5	
118	N118	63	-24	3.5	
119	N119	-10.71539	66.5596	3.5	
120	N120	-52.28461	-42.5596	38.5	
121	N121	63	-24	38.5	
122	N122	-10.71539	66.5596	38.5	
123	N123	25.242061	-43.720532	42	

Node Boundary Conditions

	Y [k/in]	X Rot [k-ft/rad]	X [k/in]	Z Rot [k-ft/rad]	Z [k/in]	Node Label	Y Rot [k-ft/rad]
1	Reaction	Reaction	Reaction	Reaction	Reaction	N98	Reaction
2	Reaction	Reaction	Reaction	Reaction	Reaction	N100	Reaction
3	Reaction	Reaction	Reaction	Reaction	Reaction	N101	Reaction
4	Reaction	Reaction	Reaction	Reaction	Reaction	N102	Reaction
5	Reaction	Reaction	Reaction	Reaction	Reaction	N105	Reaction
6	Reaction	Reaction	Reaction	Reaction	Reaction	N106	Reaction
7	Reaction	Reaction	Reaction	Reaction	Reaction	N109	Reaction
8	Reaction	Reaction	Reaction	Reaction	Reaction	N110	Reaction

Basic Load Cases

	BLC Description	Category	Z Gravity	Nodal	Distributed
1	DEAD LOAD	None	-1	13	
2	DEAD LOAD ICE	None		13	40
3	WIND LOAD (NO ICE) FRONT	None		13	40
4	WIND LOAD (NO ICE) SIDE	None		13	40
5	WIND LOAD (ICE) FRONT	None		13	40
6	WIND LOAD (ICE) SIDE	None		13	40
7	LIVE LOAD 1	None		1	
8	LIVE LOAD 2	None		1	
9	LIVE LOAD 3	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	EQ Horizontal X	None			
15	EQ Horizontal Y	None			
16	EQ Vertical	None			

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

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N115	L	Z	-143
2	N112	L	Z	-143
3	N113	L	Z	-143
4	N116	L	Z	-143
5	N111	L	Z	-143
6	N114	L	Z	-143
7	N122	L	Z	-41
8	N119	L	Z	-41
9	N120	L	Z	-41
10	N117	L	Z	-41
11	N121	L	Z	-41
12	N118	L	Z	-41
13	N123	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*s²/in, lb*s²*in)]
1	N115	L	Z	-392
2	N112	L	Z	-392
3	N113	L	Z	-392
4	N116	L	Z	-392
5	N111	L	Z	-392
6	N114	L	Z	-392
7	N122	L	Z	-81
8	N119	L	Z	-81
9	N120	L	Z	-81
10	N117	L	Z	-81
11	N121	L	Z	-81
12	N118	L	Z	-81
13	N123	L	Z	-169

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*s²/in, lb*s²*in)]
1	N115	L	Y	266
2	N112	L	Y	266
3	N113	L	Y	104
4	N116	L	Y	104
5	N111	L	Y	104
6	N114	L	Y	104
7	N122	L	Y	61
8	N119	L	Y	61
9	N120	L	Y	24
10	N117	L	Y	24
11	N121	L	Y	24
12	N118	L	Y	24
13	N123	L	Y	97

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*s²/in, lb*s²*in)]
1	N115	L	X	104
2	N112	L	X	104
3	N113	L	X	266
4	N116	L	X	266
5	N111	L	X	266
6	N114	L	X	266
7	N122	L	X	24
8	N119	L	X	24
9	N120	L	X	61
10	N117	L	X	61
11	N121	L	X	61
12	N118	L	X	61
13	N123	L	X	64

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

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N115	L	Y	92
2	N112	L	Y	92
3	N113	L	Y	41
4	N116	L	Y	41
5	N111	L	Y	41
6	N114	L	Y	41
7	N122	L	Y	20
8	N119	L	Y	20
9	N120	L	Y	10
10	N117	L	Y	10
11	N121	L	Y	10
12	N118	L	Y	10

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*s²/in, lb*s²*in)]
13	N123	L	Y	33

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

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N115	L	X	41
2	N112	L	X	41
3	N113	L	X	92
4	N116	L	X	92
5	N111	L	X	92
6	N114	L	X	92
7	N122	L	X	10
8	N119	L	X	10
9	N120	L	X	20
10	N117	L	X	20
11	N121	L	X	20
12	N118	L	X	20
13	N123	L	X	23

Node Loads and Enforced Displacements (BLC 7 : LIVE LOAD 1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N32	L	Z	-250

Node Loads and Enforced Displacements (BLC 8 : LIVE LOAD 2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N31	L	Z	-250

Node Loads and Enforced Displacements (BLC 9 : LIVE LOAD 3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N30	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*s²/in, lb*s²*in)]
1	N32	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*s²/in, lb*s²*in)]
1	N31	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*s²/in, lb*s²*in)]
1	N30	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*s²/in, lb*s²*in)]
1	N29	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	M32	Z	-12	-12	0	%100
2	M29	Z	-12	-12	0	%100
3	M16	Z	-12	-12	0	%100
4	M43	Z	-12	-12	0	%100
5	M30	Z	-12	-12	0	%100
6	M4	Z	-12	-12	0	%100
7	M3	Z	-12	-12	0	%100
8	M31	Z	-12	-12	0	%100
9	M46	Z	-12	-12	0	%100
10	M2	Z	-12	-12	0	%100
11	M15	Z	-12	-12	0	%100
12	M18	Z	-12	-12	0	%100
13	M1	Z	-12	-12	0	%100
14	M17	Z	-12	-12	0	%100
15	M45	Z	-12	-12	0	%100
16	M44	Z	-12	-12	0	%100
17	M60	Z	-15	-15	0	%100
18	M61	Z	-15	-15	0	%100
19	M63	Z	-15	-15	0	%100
20	M62	Z	-15	-15	0	%100
21	M6	Z	-15	-15	0	%100
22	M34	Z	-15	-15	0	%100
23	M5	Z	-15	-15	0	%100
24	M47	Z	-15	-15	0	%100
25	M20	Z	-15	-15	0	%100
26	M64	Z	-15	-15	0	%100
27	M19	Z	-15	-15	0	%100
28	M59	Z	-15	-15	0	%100
29	M33	Z	-15	-15	0	%100
30	M48	Z	-15	-15	0	%100
31	M57	Z	-15	-15	0	%100
32	M58	Z	-15	-15	0	%100
33	M70	Z	-18	-18	0	%100
34	M72	Z	-18	-18	0	%100
35	M67	Z	-18	-18	0	%100
36	M65	Z	-18	-18	0	%100
37	M68	Z	-18	-18	0	%100
38	M71	Z	-18	-18	0	%100
39	M66	Z	-18	-18	0	%100
40	M69	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	M32	PY	6	6	0	%100
2	M17	PY	6	6	0	%100
3	M15	PY	6	6	0	%100
4	M31	PY	6	6	0	%100
5	M30	PY	6	6	0	%100
6	M4	PY	6	6	0	%100
7	M45	PY	6	6	0	%100
8	M29	PY	6	6	0	%100
9	M1	PY	6	6	0	%100
10	M43	PY	6	6	0	%100
11	M18	PY	6	6	0	%100
12	M3	PY	6	6	0	%100
13	M46	PY	6	6	0	%100
14	M44	PY	6	6	0	%100
15	M16	PY	6	6	0	%100
16	M2	PY	6	6	0	%100
17	M58	PY	9	9	0	%100
18	M34	PY	9	9	0	%100
19	M19	PY	9	9	0	%100
20	M63	PY	9	9	0	%100

Member Distributed Loads (BLC 3 : WIND LOAD (NO 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, %)]
21	M60	PY	9	9	0	%100
22	M57	PY	9	9	0	%100
23	M20	PY	9	9	0	%100
24	M61	PY	9	9	0	%100
25	M47	PY	9	9	0	%100
26	M6	PY	9	9	0	%100
27	M64	PY	9	9	0	%100
28	M59	PY	9	9	0	%100
29	M33	PY	9	9	0	%100
30	M5	PY	9	9	0	%100
31	M62	PY	9	9	0	%100
32	M48	PY	9	9	0	%100
33	M68	PY	11	11	0	%100
34	M66	PY	11	11	0	%100
35	M69	PY	11	11	0	%100
36	M70	PY	11	11	0	%100
37	M65	PY	11	11	0	%100
38	M71	PY	11	11	0	%100
39	M72	PY	11	11	0	%100
40	M67	PY	11	11	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	M32	PX	6	6	0	%100
2	M29	PX	6	6	0	%100
3	M16	PX	6	6	0	%100
4	M43	PX	6	6	0	%100
5	M30	PX	6	6	0	%100
6	M4	PX	6	6	0	%100
7	M3	PX	6	6	0	%100
8	M31	PX	6	6	0	%100
9	M46	PX	6	6	0	%100
10	M2	PX	6	6	0	%100
11	M15	PX	6	6	0	%100
12	M18	PX	6	6	0	%100
13	M1	PX	6	6	0	%100
14	M17	PX	6	6	0	%100
15	M45	PX	6	6	0	%100
16	M44	PX	6	6	0	%100
17	M60	PX	9	9	0	%100
18	M61	PX	9	9	0	%100
19	M63	PX	9	9	0	%100
20	M62	PX	9	9	0	%100
21	M6	PX	9	9	0	%100
22	M34	PX	9	9	0	%100
23	M5	PX	9	9	0	%100
24	M47	PX	9	9	0	%100
25	M20	PX	9	9	0	%100
26	M64	PX	9	9	0	%100
27	M19	PX	9	9	0	%100
28	M59	PX	9	9	0	%100
29	M33	PX	9	9	0	%100
30	M48	PX	9	9	0	%100
31	M57	PX	9	9	0	%100
32	M58	PX	9	9	0	%100
33	M70	PX	11	11	0	%100
34	M72	PX	11	11	0	%100
35	M67	PX	11	11	0	%100
36	M65	PX	11	11	0	%100
37	M68	PX	11	11	0	%100
38	M71	PX	11	11	0	%100
39	M66	PX	11	11	0	%100
40	M69	PX	11	11	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	M32	PY	6.3	6.3	0	%100
2	M29	PY	6.3	6.3	0	%100
3	M16	PY	6.3	6.3	0	%100
4	M43	PY	6.3	6.3	0	%100
5	M30	PY	6.3	6.3	0	%100
6	M4	PY	6.3	6.3	0	%100
7	M3	PY	6.3	6.3	0	%100
8	M31	PY	6.3	6.3	0	%100
9	M46	PY	6.3	6.3	0	%100
10	M2	PY	6.3	6.3	0	%100
11	M15	PY	6.3	6.3	0	%100
12	M18	PY	6.3	6.3	0	%100
13	M1	PY	6.3	6.3	0	%100
14	M17	PY	6.3	6.3	0	%100
15	M45	PY	6.3	6.3	0	%100
16	M44	PY	6.3	6.3	0	%100
17	M60	PY	7.3	7.3	0	%100
18	M61	PY	7.3	7.3	0	%100
19	M63	PY	7.3	7.3	0	%100
20	M62	PY	7.3	7.3	0	%100
21	M6	PY	7.3	7.3	0	%100
22	M34	PY	7.3	7.3	0	%100
23	M5	PY	7.3	7.3	0	%100
24	M47	PY	7.3	7.3	0	%100
25	M20	PY	7.3	7.3	0	%100
26	M64	PY	7.3	7.3	0	%100
27	M19	PY	7.3	7.3	0	%100
28	M59	PY	7.3	7.3	0	%100
29	M33	PY	7.3	7.3	0	%100
30	M48	PY	7.3	7.3	0	%100
31	M57	PY	7.3	7.3	0	%100
32	M58	PY	7.3	7.3	0	%100
33	M70	PY	8.3	8.3	0	%100
34	M72	PY	8.3	8.3	0	%100
35	M67	PY	8.3	8.3	0	%100
36	M65	PY	8.3	8.3	0	%100
37	M68	PY	8.3	8.3	0	%100
38	M71	PY	8.3	8.3	0	%100
39	M66	PY	8.3	8.3	0	%100
40	M69	PY	8.3	8.3	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	M32	PX	6.3	6.3	0	%100
2	M29	PX	6.3	6.3	0	%100
3	M16	PX	6.3	6.3	0	%100
4	M43	PX	6.3	6.3	0	%100
5	M30	PX	6.3	6.3	0	%100
6	M4	PX	6.3	6.3	0	%100
7	M3	PX	6.3	6.3	0	%100
8	M31	PX	6.3	6.3	0	%100
9	M46	PX	6.3	6.3	0	%100
10	M2	PX	6.3	6.3	0	%100
11	M15	PX	6.3	6.3	0	%100
12	M18	PX	6.3	6.3	0	%100
13	M1	PX	6.3	6.3	0	%100
14	M17	PX	6.3	6.3	0	%100
15	M45	PX	6.3	6.3	0	%100
16	M44	PX	6.3	6.3	0	%100
17	M60	PX	7.3	7.3	0	%100
18	M61	PX	7.3	7.3	0	%100
19	M63	PX	7.3	7.3	0	%100
20	M62	PX	7.3	7.3	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, %)]
21	M6	PX	7.3	7.3	0	%100
22	M34	PX	7.3	7.3	0	%100
23	M5	PX	7.3	7.3	0	%100
24	M47	PX	7.3	7.3	0	%100
25	M20	PX	7.3	7.3	0	%100
26	M64	PX	7.3	7.3	0	%100
27	M19	PX	7.3	7.3	0	%100
28	M59	PX	7.3	7.3	0	%100
29	M33	PX	7.3	7.3	0	%100
30	M48	PX	7.3	7.3	0	%100
31	M57	PX	7.3	7.3	0	%100
32	M58	PX	7.3	7.3	0	%100
33	M70	PX	8.3	8.3	0	%100
34	M72	PX	8.3	8.3	0	%100
35	M67	PX	8.3	8.3	0	%100
36	M65	PX	8.3	8.3	0	%100
37	M68	PX	8.3	8.3	0	%100
38	M71	PX	8.3	8.3	0	%100
39	M66	PX	8.3	8.3	0	%100
40	M69	PX	8.3	8.3	0	%100

Member Area Loads

No Data to Print...

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 L1+30MPH WL FRONT	Yes	Y	1	1.2	10	1.5	3	0.096		
29	DL + MAIN L2+30MPH WL FRONT	Yes	Y	1	1.2	11	1.5	3	0.096		
30	DL + MAIN L3+30MPH WL FRONT	Yes	Y	1	1.2	12	1.5	3	0.096		
31	DL + MAIN L4+30MPH WL FRONT	Yes	Y	1	1.2	13	1.5	3	0.096		
32	DL + MAIN L1+30MPH WL SIDE	Yes	Y	1	1.2	10	1.5	4	0.096		
33	DL + MAIN L2+30MPH WL SIDE	Yes	Y	1	1.2	11	1.5	4	0.096		
34	DL + MAIN L3+30MPH WL SIDE	Yes	Y	1	1.2	12	1.5	4	0.096		
35	DL + MAIN L4+30MPH WL SIDE	Yes	Y	1	1.2	13	1.5	4	0.096		
36	DL + MAIN L1+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	10	1.5	3	-0.096		
37	DL + MAIN L2+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	11	1.5	3	-0.096		
38	DL + MAIN L3+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	12	1.5	3	-0.096		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
39	DL + MAIN L4+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	13	1.5	3	-0.096		
40	DL + MAIN L1+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	10	1.5	4	-0.096		
41	DL + MAIN L2+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	11	1.5	4	-0.096		
42	DL + MAIN L3+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	12	1.5	4	-0.096		
43	DL + MAIN L4+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	13	1.5	4	-0.096		

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	N98	max	381.432	9	376.041	7	815.102	18	0.141	19	2.577	18	0.956	1
2		min	-498.705	3	-388.391	1	238.466	12	0.015	1	0.756	12	-0.926	7
3	N100	max	495.878	9	388.406	7	815.35	24	0.14	14	2.573	24	0.926	1
4		min	-379.673	3	-375.688	1	238.426	6	0.014	8	0.756	6	-0.957	7
5	N101	max	1020.784	10	1156.407	7	2104.668	14	-1.508	9	-0.938	7	1.962	9
6		min	-1198.296	4	-1043.458	1	632.544	9	-4.964	13	-3.025	24	-2.174	3
7	N102	max	1114.588	10	902.221	7	1958.002	20	-1.472	3	-0.928	1	2.053	9
8		min	-936.22	4	-1015.528	1	604.269	3	-4.798	21	-2.924	18	-1.837	3
9	N105	max	715.181	10	496.549	8	1679.973	21	4.327	21	-0.842	4	1.528	5
10		min	-890.1	4	-586.012	2	500.578	3	1.305	3	-2.86	22	-1.286	11
11	N106	max	886.935	10	581.61	8	1677.488	15	4.319	15	-0.841	10	1.287	5
12		min	-711.376	4	-492.574	2	497.961	9	1.306	9	-2.855	16	-1.528	11
13	N109	max	381.432	9	376.041	7	815.102	18	0.141	19	2.577	18	0.956	1
14		min	-498.705	3	-388.391	1	238.466	12	0.015	1	0.756	12	-0.926	7
15	N110	max	495.878	9	388.406	7	815.35	24	0.14	14	2.573	24	0.926	1
16		min	-379.673	3	-375.688	1	238.426	6	0.014	8	0.756	6	-0.957	7
17	Totals:	max	5480.198	10	4646.988	7	10619.378	16						
18		min	-5480.184	4	-4646.988	1	3446.415	10						

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	N1	max	0.046	3	0.027	3	-0.114	8	1.303e-3	28	2.422e-3	22	1.496e-3	11
2		min	-0.055	9	-0.027	9	-0.361	13	-2.575e-4	39	6.707e-4	5	-1.534e-3	5
3	N2	max	0.049	3	0.027	3	-0.114	8	1.303e-3	28	2.422e-3	22	1.496e-3	11
4		min	-0.058	9	-0.027	9	-0.36	24	-2.575e-4	39	6.707e-4	5	-1.534e-3	5
5	N3	max	0.121	4	0.027	3	-0.115	9	5.197e-4	40	2.697e-3	22	1.746e-3	10
6		min	-0.14	10	-0.027	9	-0.365	14	-1.004e-3	34	3.952e-4	4	-1.481e-3	4
7	N4	max	0.128	4	0.027	3	-0.121	10	7.506e-4	29	3.136e-3	22	1.582e-3	4
8		min	-0.148	10	-0.027	9	-0.394	16	-7.852e-4	39	-3.018e-4	4	-1.813e-3	10
9	N5	max	0.021	6	0.027	3	-0.116	10	3.912e-4	36	2.877e-3	22	2.724e-3	4
10		min	-0.033	24	-0.027	9	-0.371	17	-1.213e-3	31	3.999e-4	4	-2.645e-3	10
11	N6	max	0.018	7	0.027	3	-0.116	10	3.911e-4	36	2.877e-3	22	2.724e-3	4
12		min	-0.033	24	-0.027	9	-0.371	18	-1.213e-3	31	3.999e-4	4	-2.645e-3	10
13	N7	max	0.071	4	0.027	3	-0.111	2	1.346e-3	40	3.345e-3	22	1.7e-3	11
14		min	-0.08	10	-0.027	9	-0.349	23	-3.635e-4	34	9.778e-4	5	-1.511e-3	5
15	N8	max	0.056	4	0.027	3	-0.117	10	6.25e-4	33	3.911e-3	22	2.71e-3	4
16		min	-0.067	10	-0.027	9	-0.373	17	-1.18e-3	43	6.681e-4	4	-2.897e-3	10
17	N9	max	0.067	4	0.028	3	-0.117	5	6.262e-4	41	3.903e-3	16	2.907e-3	4
18		min	-0.056	10	-0.027	9	-0.373	22	-1.172e-3	35	6.544e-4	10	-2.726e-3	10
19	N10	max	0.081	4	0.028	3	-0.11	7	1.337e-3	32	3.272e-3	16	1.511e-3	11
20		min	-0.073	10	-0.028	9	-0.35	24	-3.649e-4	42	9.44e-4	10	-1.704e-3	5
21	N11	max	0.033	18	0.028	3	-0.117	4	3.905e-4	28	2.87e-3	16	2.649e-3	4
22		min	-0.018	1	-0.027	9	-0.371	22	-1.207e-3	39	3.923e-4	10	-2.734e-3	10
23	N12	max	0.033	18	0.028	3	-0.117	4	3.906e-4	28	2.87e-3	16	2.65e-3	4
24		min	-0.021	12	-0.027	9	-0.372	21	-1.207e-3	39	3.923e-4	10	-2.734e-3	10
25	N13	max	0.148	4	0.028	3	-0.122	4	7.454e-4	37	3.127e-3	16	1.827e-3	4
26		min	-0.128	10	-0.027	9	-0.394	22	-7.813e-4	31	-3.291e-4	10	-1.596e-3	10
27	N14	max	0.141	4	0.028	3	-0.116	5	5.179e-4	32	2.654e-3	16	1.467e-3	10
28		min	-0.123	10	-0.028	9	-0.366	23	-9.965e-4	42	3.478e-4	10	-1.737e-3	4
29	N15	max	0.059	3	0.028	3	-0.114	6	1.293e-3	36	2.359e-3	16	1.535e-3	11
30		min	-0.051	9	-0.028	9	-0.36	24	-2.617e-4	31	6.285e-4	10	-1.501e-3	5
31	N16	max	0.056	3	0.028	3	-0.114	5	1.293e-3	36	2.359e-3	16	1.535e-3	11
32		min	-0.048	9	-0.028	9	-0.362	23	-2.616e-4	31	6.285e-4	10	-1.501e-3	5
33	N17	max	0.049	3	0.026	2	-0.116	7	1.303e-3	28	2.422e-3	22	1.496e-3	11
34		min	-0.058	9	-0.026	8	-0.367	24	-2.575e-4	39	6.707e-4	5	-1.534e-3	5

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
35	N18	max	0.121	4	0.025	2	-0.119	8	5.197e-4	40	2.697e-3	22	1.746e-3	10
36		min	-0.14	10	-0.025	8	-0.373	24	-1.004e-3	34	3.952e-4	4	-1.481e-3	4
37	N19	max	0.128	4	0.031	3	-0.127	8	7.506e-4	29	3.136e-3	22	1.582e-3	4
38		min	-0.148	10	-0.032	9	-0.402	22	-7.852e-4	39	-3.018e-4	4	-1.813e-3	10
39	N20	max	0.021	6	0.035	3	-0.12	8	3.912e-4	36	2.877e-3	22	2.724e-3	4
40		min	-0.033	24	-0.035	9	-0.379	21	-1.213e-3	31	3.999e-4	4	-2.645e-3	10
41	N21	max	0.033	18	0.035	3	-0.12	8	3.906e-4	28	2.87e-3	16	2.65e-3	4
42		min	-0.021	12	-0.035	9	-0.379	21	-1.207e-3	39	3.923e-4	10	-2.734e-3	10
43	N22	max	0.148	4	0.033	3	-0.127	8	7.454e-4	37	3.127e-3	16	1.827e-3	4
44		min	-0.128	10	-0.032	9	-0.402	22	-7.813e-4	31	-3.291e-4	10	-1.596e-3	10
45	N23	max	0.141	4	0.025	2	-0.119	8	5.179e-4	32	2.654e-3	16	1.467e-3	10
46		min	-0.123	10	-0.026	8	-0.373	24	-9.965e-4	42	3.478e-4	10	-1.737e-3	4
47	N24	max	0.059	3	0.026	2	-0.116	7	1.293e-3	36	2.359e-3	16	1.535e-3	11
48		min	-0.051	9	-0.026	8	-0.367	24	-2.617e-4	31	6.285e-4	10	-1.501e-3	5
49	N25	max	0.111	17	0.042	35	-0.12	8	3.992e-4	36	2.99e-3	16	2.65e-3	4
50		min	-0.008	11	-0.037	9	-0.379	21	-1.216e-3	31	2.119e-4	10	-2.734e-3	10
51	N26	max	0.245	4	0.047	2	-0.127	8	1.073e-3	7	3.915e-3	4	1.827e-3	4
52		min	-0.178	10	-0.052	8	-0.402	22	-8.407e-4	1	-2.157e-3	10	-1.596e-3	10
53	N27	max	0.178	4	0.038	13	-0.119	8	5.225e-4	36	2.773e-3	16	1.467e-3	10
54		min	-0.117	10	-0.022	36	-0.373	24	-1.034e-3	13	1.674e-4	10	-1.737e-3	4
55	N28	max	0.1	15	0.027	2	-0.116	7	1.304e-3	36	2.478e-3	16	1.535e-3	11
56		min	-0.037	9	-0.042	36	-0.367	24	-2.725e-4	31	4.482e-4	10	-1.501e-3	5
57	N29	max	0.008	5	0.036	3	-0.12	8	3.996e-4	28	2.994e-3	22	2.724e-3	4
58		min	-0.112	23	-0.042	43	-0.379	21	-1.21e-3	39	2.195e-4	4	-2.645e-3	10
59	N30	max	0.176	4	0.052	2	-0.127	8	1.075e-3	1	3.889e-3	10	1.582e-3	4
60		min	-0.244	10	-0.046	8	-0.402	22	-8.426e-4	7	-2.127e-3	4	-1.813e-3	10
61	N31	max	0.114	4	0.022	28	-0.119	8	5.243e-4	28	2.814e-3	22	1.746e-3	10
62		min	-0.177	10	-0.039	19	-0.373	24	-1.055e-3	19	2.147e-4	4	-1.481e-3	4
63	N32	max	0.033	3	0.042	28	-0.116	7	1.302e-3	28	2.54e-3	22	1.496e-3	11
64		min	-0.101	21	-0.027	8	-0.367	24	-2.683e-4	39	4.989e-4	4	-1.534e-3	5
65	N33	max	0.027	3	0.021	10	-0.105	6	-3.429e-4	2	8.031e-4	31	1.716e-3	6
66		min	-0.034	9	-0.019	4	-0.331	21	-1.705e-3	20	-3.338e-5	6	-1.882e-3	12
67	N34	max	0.026	3	0.024	11	-0.104	36	-3.429e-4	2	8.031e-4	31	1.716e-3	6
68		min	-0.033	9	-0.022	5	-0.327	21	-1.705e-3	20	-3.342e-5	6	-1.882e-3	12
69	N35	max	0.053	5	0.099	12	-0.095	36	1.986e-4	12	2.33e-4	31	1.848e-3	6
70		min	-0.057	11	-0.102	6	-0.309	24	-1.167e-3	18	-1.17e-3	19	-1.607e-3	12
71	N36	max	0.054	5	0.103	12	-0.088	7	8.322e-4	1	9.802e-4	12	1.714e-3	12
72		min	-0.057	11	-0.107	6	-0.292	24	-2.954e-3	19	-5.697e-4	6	-1.86e-3	6
73	N37	max	0.009	4	0.021	2	-0.058	36	-4.115e-4	12	2.374e-4	1	2.072e-3	11
74		min	-0.01	10	-0.028	8	-0.195	13	-2.483e-3	18	-3.146e-4	7	-1.659e-3	5
75	N38	max	0.008	3	0.019	2	-0.057	36	-4.115e-4	12	2.373e-4	1	2.072e-3	11
76		min	-0.009	9	-0.028	8	-0.191	13	-2.483e-3	18	-3.146e-4	7	-1.659e-3	5
77	N39	max	0.009	3	0.027	2	-0.057	28	-4.122e-4	6	2.391e-4	7	1.657e-3	11
78		min	-0.008	9	-0.019	8	-0.192	17	-2.478e-3	24	-3.155e-4	1	-2.073e-3	5
79	N40	max	0.01	4	0.028	2	-0.058	28	-4.123e-4	6	2.391e-4	7	1.657e-3	11
80		min	-0.009	10	-0.021	8	-0.195	18	-2.478e-3	24	-3.154e-4	1	-2.073e-3	5
81	N41	max	0.057	5	0.107	12	-0.088	1	8.33e-4	7	9.809e-4	6	1.858e-3	12
82		min	-0.054	11	-0.103	6	-0.292	18	-2.959e-3	13	-5.691e-4	12	-1.713e-3	6
83	N42	max	0.057	5	0.102	12	-0.095	28	1.974e-4	6	2.307e-4	39	1.607e-3	6
84		min	-0.053	11	-0.099	6	-0.309	19	-1.164e-3	24	-1.172e-3	13	-1.848e-3	12
85	N43	max	0.033	3	0.022	11	-0.104	2	-3.43e-4	36	8.016e-4	39	1.881e-3	6
86		min	-0.026	9	-0.024	5	-0.328	20	-1.698e-3	14	-3.121e-5	12	-1.715e-3	12
87	N44	max	0.033	3	0.019	10	-0.105	1	-3.43e-4	36	8.017e-4	39	1.881e-3	6
88		min	-0.026	9	-0.021	4	-0.331	20	-1.698e-3	14	-3.117e-5	12	-1.715e-3	12
89	N45	max	0.027	3	0.026	11	-0.105	28	-3.429e-4	2	8.031e-4	31	1.716e-3	6
90		min	-0.034	9	-0.024	5	-0.331	20	-1.705e-3	20	-3.342e-5	6	-1.882e-3	12
91	N46	max	0.049	5	0.102	12	-0.096	28	1.986e-4	12	2.33e-4	31	1.848e-3	6
92		min	-0.054	11	-0.105	6	-0.313	20	-1.167e-3	18	-1.17e-3	19	-1.607e-3	12
93	N47	max	0.059	6	0.101	12	-0.09	28	8.322e-4	1	9.802e-4	12	1.714e-3	12
94		min	-0.062	12	-0.105	6	-0.297	18	-2.954e-3	19	-5.697e-4	6	-1.86e-3	6
95	N48	max	0.012	4	0.02	2	-0.06	40	-4.115e-4	12	2.374e-4	1	2.072e-3	11
96		min	-0.014	10	-0.028	8	-0.201	16	-2.483e-3	18	-3.146e-4	7	-1.659e-3	5
97	N49	max	0.014	4	0.028	2	-0.06	40	-4.123e-4	6	2.391e-4	7	1.657e-3	11
98		min	-0.012	10	-0.02	8	-0.201	16	-2.478e-3	24	-3.154e-4	1	-2.073e-3	5
99	N50	max	0.062	6	0.105	12	-0.09	40	8.33e-4	7	9.809e-4	6	1.858e-3	12

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
100		min	-0.058	12	-0.101	6	-0.297	18	-2.959e-3	13	-5.691e-4	12	-1.713e-3	6
101	N51	max	0.054	5	0.104	12	-0.096	28	1.974e-4	6	2.307e-4	39	1.607e-3	6
102		min	-0.049	11	-0.102	6	-0.313	20	-1.164e-3	24	-1.172e-3	13	-1.848e-3	12
103	N52	max	0.034	3	0.024	11	-0.105	32	-3.43e-4	36	8.016e-4	39	1.881e-3	6
104		min	-0.027	9	-0.026	5	-0.331	20	-1.698e-3	14	-3.121e-5	12	-1.715e-3	12
105	N53	max	0.02	5	0.089	14	-0.06	40	-2.56e-4	6	2.969e-4	6	1.657e-3	11
106		min	-0.019	11	-0.008	7	-0.201	16	-2.587e-3	13	-3.731e-4	12	-2.073e-3	5
107	N54	max	0.114	5	0.24	1	-0.091	40	4.309e-3	7	2.175e-3	5	1.858e-3	12
108		min	-0.099	11	-0.192	7	-0.297	18	-5.94e-3	1	-1.763e-3	11	-1.713e-3	6
109	N55	max	0.052	5	0.131	12	-0.096	28	3.636e-4	7	2.307e-4	39	1.607e-3	6
110		min	-0.065	11	-0.11	6	-0.313	20	-1.274e-3	13	-1.237e-3	23	-1.848e-3	12
111	N56	max	0.039	3	0.054	24	-0.105	32	-1.892e-4	8	8.118e-4	35	1.881e-3	6
112		min	-0.029	9	-0.013	5	-0.331	20	-1.815e-3	13	-1.838e-4	11	-1.715e-3	12
113	N57	max	0.019	5	0.009	1	-0.06	40	-2.552e-4	12	2.967e-4	12	2.072e-3	11
114		min	-0.02	11	-0.089	20	-0.201	16	-2.591e-3	19	-3.74e-4	6	-1.659e-3	5
115	N58	max	0.099	5	0.191	1	-0.091	28	4.3e-3	1	2.171e-3	11	1.714e-3	12
116		min	-0.113	11	-0.239	7	-0.297	18	-5.927e-3	7	-1.761e-3	5	-1.86e-3	6
117	N59	max	0.065	5	0.11	12	-0.096	28	3.658e-4	1	2.33e-4	31	1.848e-3	6
118		min	-0.052	11	-0.131	6	-0.313	20	-1.278e-3	19	-1.239e-3	17	-1.607e-3	12
119	N60	max	0.029	3	0.013	11	-0.105	28	-1.866e-4	2	8.133e-4	43	1.716e-3	6
120		min	-0.039	9	-0.054	18	-0.331	20	-1.82e-3	19	-1.857e-4	5	-1.882e-3	12
121	N61	max	0.029	4	0.049	12	-0.096	40	-6.411e-4	28	9.867e-4	31	1.932e-3	6
122		min	-0.037	10	-0.045	6	-0.306	16	-2.6e-3	19	-1.121e-4	8	-1.897e-3	12
123	N62	max	0.022	5	0.044	1	-0.066	36	-7.437e-4	12	3.327e-4	1	2.075e-3	12
124		min	-0.027	11	-0.045	7	-0.219	14	-3.555e-3	18	-4.236e-4	7	-1.875e-3	6
125	N63	max	0.027	5	0.045	1	-0.066	28	-7.447e-4	6	3.341e-4	7	1.871e-3	12
126		min	-0.022	11	-0.044	7	-0.219	19	-3.547e-3	24	-4.244e-4	1	-2.078e-3	6
127	N64	max	0.037	4	0.045	12	-0.096	32	-6.404e-4	36	9.827e-4	39	1.896e-3	6
128		min	-0.029	10	-0.049	6	-0.307	21	-2.592e-3	13	-1.075e-4	2	-1.932e-3	12
129	N65	max	0.018	4	0.059	11	-0.05	31	1.444e-3	14	5.652e-5	11	2.076e-3	3
130		min	-0.02	10	-0.054	5	-0.171	17	4.068e-4	9	-2.924e-4	17	-2.421e-3	9
131	N66	max	0.021	4	0.055	11	-0.051	35	1.444e-3	14	5.656e-5	11	2.076e-3	3
132		min	-0.023	10	-0.051	5	-0.172	16	4.068e-4	9	-2.923e-4	17	-2.421e-3	9
133	N67	max	0.071	3	0.083	2	-0.072	35	2.212e-3	15	1.213e-3	20	1.753e-3	3
134		min	-0.075	9	-0.081	8	-0.239	21	3.658e-4	9	1.587e-4	1	-1.59e-3	9
135	N68	max	0.079	3	0.091	2	-0.092	35	1.834e-3	14	6.699e-4	10	1.181e-3	8
136		min	-0.083	9	-0.089	8	-0.311	21	-3.325e-4	8	-1.103e-3	4	-1.37e-3	2
137	N69	max	0.063	4	0.032	3	-0.108	35	2.199e-3	14	9.157e-4	32	1.518e-3	7
138		min	-0.069	10	-0.033	9	-0.349	23	4.538e-4	43	-1.777e-5	11	-1.347e-3	1
139	N70	max	0.063	4	0.031	4	-0.11	31	2.199e-3	14	9.157e-4	32	1.518e-3	7
140		min	-0.069	10	-0.032	10	-0.353	23	4.538e-4	43	-1.772e-5	11	-1.347e-3	1
141	N71	max	0.07	4	0.033	4	-0.11	39	2.122e-3	21	9.156e-4	28	1.359e-3	7
142		min	-0.064	10	-0.032	10	-0.353	24	4.265e-4	3	-2.512e-5	6	-1.529e-3	1
143	N72	max	0.07	4	0.035	3	-0.108	39	2.122e-3	21	9.155e-4	28	1.359e-3	7
144		min	-0.064	10	-0.033	9	-0.349	24	4.265e-4	3	-2.516e-5	6	-1.529e-3	1
145	N73	max	0.084	3	0.09	2	-0.092	43	1.813e-3	20	6.965e-4	4	1.358e-3	8
146		min	-0.081	9	-0.092	8	-0.312	14	-3.797e-4	2	-1.112e-3	10	-1.16e-3	2
147	N74	max	0.076	3	0.082	2	-0.072	39	2.2e-3	21	1.215e-3	14	1.605e-3	3
148		min	-0.072	9	-0.083	8	-0.239	14	3.351e-4	3	1.51e-4	7	-1.777e-3	9
149	N75	max	0.023	4	0.051	11	-0.051	43	1.439e-3	20	5.773e-5	5	2.427e-3	3
150		min	-0.021	10	-0.055	5	-0.172	15	4.036e-4	3	-2.811e-4	23	-2.09e-3	9
151	N76	max	0.02	4	0.054	11	-0.05	39	1.439e-3	20	5.769e-5	5	2.427e-3	3
152		min	-0.018	10	-0.058	5	-0.171	14	4.036e-4	3	-2.812e-4	23	-2.09e-3	9
153	N77	max	0.026	4	0.057	11	-0.052	31	1.444e-3	14	5.656e-5	11	2.076e-3	3
154		min	-0.029	10	-0.052	5	-0.176	15	4.068e-4	9	-2.923e-4	17	-2.421e-3	9
155	N78	max	0.075	3	0.08	2	-0.072	35	2.212e-3	15	1.213e-3	20	1.753e-3	3
156		min	-0.079	9	-0.079	8	-0.242	13	3.658e-4	9	1.587e-4	1	-1.59e-3	9
157	N79	max	0.077	3	0.093	2	-0.093	35	1.834e-3	14	6.699e-4	10	1.181e-3	8
158		min	-0.081	9	-0.09	8	-0.316	24	-3.325e-4	8	-1.103e-3	4	-1.37e-3	2
159	N80	max	0.063	4	0.033	3	-0.109	35	2.199e-3	14	9.157e-4	32	1.518e-3	7
160		min	-0.069	10	-0.035	9	-0.354	24	4.538e-4	43	-1.777e-5	11	-1.347e-3	1
161	N81	max	0.069	4	0.036	3	-0.109	35	2.122e-3	21	9.155e-4	28	1.359e-3	7
162		min	-0.064	10	-0.035	9	-0.354	24	4.265e-4	3	-2.516e-5	6	-1.529e-3	1
163	N82	max	0.082	3	0.091	2	-0.093	35	1.813e-3	20	6.965e-4	4	1.358e-3	8
164		min	-0.078	9	-0.094	8	-0.316	23	-3.797e-4	2	-1.112e-3	10	-1.16e-3	2

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
165	N83	max	0.08	3	0.08	2	-0.072	35	2.2e-3	21	1.215e-3	14	1.605e-3	3
166		min	-0.076	9	-0.081	8	-0.242	24	3.351e-4	3	1.51e-4	7	-1.777e-3	9
167	N84	max	0.029	4	0.053	11	-0.052	31	1.439e-3	20	5.773e-5	5	2.427e-3	3
168		min	-0.026	10	-0.057	5	-0.176	15	4.036e-4	3	-2.811e-4	23	-2.09e-3	9
169	N85	max	0.074	4	0.026	3	-0.109	35	2.225e-3	20	9.156e-4	28	1.359e-3	7
170		min	-0.062	10	-0.07	21	-0.354	24	3.042e-4	2	-3.074e-5	8	-1.529e-3	1
171	N86	max	0.175	4	0.13	2	-0.093	35	2.655e-3	7	4.173e-3	4	1.358e-3	8
172		min	-0.183	10	-0.159	8	-0.316	23	-1.679e-3	1	-4.589e-3	10	-1.16e-3	2
173	N87	max	0.096	3	0.072	2	-0.072	35	2.299e-3	20	1.302e-3	15	1.605e-3	3
174		min	-0.073	9	-0.11	8	-0.242	24	2.241e-4	2	6.113e-5	9	-1.777e-3	9
175	N88	max	0.034	4	0.042	11	-0.052	31	1.553e-3	19	2.14e-4	5	2.427e-3	3
176		min	-0.034	10	-0.07	5	-0.176	15	2.437e-4	1	-3.976e-4	22	-2.09e-3	9
177	N89	max	0.061	4	0.072	15	-0.109	35	2.305e-3	13	9.15e-4	36	1.518e-3	7
178		min	-0.073	10	-0.024	9	-0.354	24	3.52e-4	8	1.317e-6	2	-1.347e-3	1
179	N90	max	0.181	4	0.157	2	-0.093	35	2.628e-3	1	4.138e-3	10	1.181e-3	8
180		min	-0.174	10	-0.127	8	-0.316	24	-1.643e-3	7	-4.57e-3	4	-1.37e-3	2
181	N91	max	0.072	3	0.109	2	-0.072	35	2.311e-3	14	1.3e-3	21	1.753e-3	3
182		min	-0.095	9	-0.072	8	-0.242	13	2.519e-4	8	6.838e-5	3	-1.59e-3	9
183	N92	max	0.034	4	0.071	11	-0.052	31	1.559e-3	13	2.128e-4	11	2.076e-3	3
184		min	-0.034	10	-0.041	5	-0.176	15	2.44e-4	7	-4.087e-4	16	-2.421e-3	9
185	N93	max	0.038	4	0.044	1	-0.055	35	2.11e-3	15	1.64e-5	40	2.22e-3	3
186		min	-0.043	10	-0.045	7	-0.183	24	5.509e-4	43	-3.748e-4	15	-2.436e-3	9
187	N94	max	0.064	4	0.045	3	-0.096	35	3.309e-3	14	1.202e-3	32	1.504e-3	7
188		min	-0.071	10	-0.048	9	-0.32	23	8.03e-4	43	-7.662e-5	11	-1.537e-3	1
189	N95	max	0.072	4	0.049	3	-0.097	43	3.244e-3	21	1.202e-3	40	1.547e-3	7
190		min	-0.065	10	-0.046	9	-0.32	15	7.801e-4	3	-7.083e-5	5	-1.512e-3	1
191	N96	max	0.044	4	0.045	1	-0.055	43	2.106e-3	22	1.701e-5	32	2.447e-3	3
192		min	-0.038	10	-0.044	7	-0.183	17	5.491e-4	35	-3.644e-4	21	-2.241e-3	9
193	N97	max	0	3	0.045	1	-0.045	12	-6.148e-5	1	-1.064e-3	30	7.246e-4	6
194		min	0	9	-0.043	7	-0.152	18	-5.847e-4	19	-3.535e-3	17	-7.38e-4	12
195	N98	max	0	3	0	1	0	12	0	1	0	12	0	7
196		min	0	9	0	7	0	18	0	19	0	18	0	1
197	N99	max	0	3	0.044	1	-0.045	6	-5.975e-5	8	-1.064e-3	38	7.374e-4	6
198		min	0	9	-0.045	7	-0.152	24	-5.834e-4	14	-3.529e-3	24	-7.271e-4	12
199	N100	max	0	3	0	1	0	6	0	8	0	6	0	7
200		min	0	9	0	7	0	24	0	14	0	24	0	1
201	N101	max	0	4	0	1	0	9	0	13	0	24	0	3
202		min	0	10	0	7	0	14	0	9	0	7	0	9
203	N102	max	0	4	0	1	0	3	0	21	0	18	0	3
204		min	0	10	0	7	0	20	0	3	0	1	0	9
205	N103	max	0.071	3	0.041	3	-0.094	8	4.589e-3	14	3.327e-3	22	4.2e-4	4
206		min	-0.064	9	-0.037	9	-0.302	13	1.272e-3	43	9.652e-4	4	-4.207e-4	10
207	N104	max	0.062	4	0.036	3	-0.094	3	4.643e-3	23	3.355e-3	15	4.361e-4	4
208		min	-0.069	10	-0.04	9	-0.3	22	1.279e-3	35	9.612e-4	10	-4.399e-4	10
209	N105	max	0	4	0	2	0	3	0	3	0	22	0	11
210		min	0	10	0	8	0	21	0	21	0	4	0	5
211	N106	max	0	4	0	2	0	9	0	9	0	16	0	11
212		min	0	10	0	8	0	15	0	15	0	10	0	5
213	N107	max	0.047	5	0.022	11	-0.09	3	-1.455e-3	28	4.308e-3	23	1.459e-4	3
214		min	-0.039	11	-0.027	5	-0.295	21	-4.859e-3	19	1.252e-3	5	-1.774e-4	19
215	N108	max	0.039	5	0.027	11	-0.09	9	-1.455e-3	36	4.302e-3	17	1.773e-4	13
216		min	-0.047	11	-0.022	5	-0.295	16	-4.852e-3	23	1.252e-3	11	-1.397e-4	9
217	N109	max	0	3	0	1	0	12	0	1	0	12	0	7
218		min	0	9	0	7	0	18	0	19	0	18	0	1
219	N110	max	0	3	0	1	0	6	0	8	0	6	0	7
220		min	0	9	0	7	0	24	0	14	0	24	0	1
221	N111	max	0.151	4	0.04	2	-0.127	8	1.059e-3	1	3.873e-3	10	1.582e-3	4
222		min	-0.197	10	-0.038	8	-0.402	22	-8.331e-4	39	-2.111e-3	4	-1.813e-3	10
223	N112	max	0.078	5	0.142	12	-0.091	28	4.284e-3	1	2.157e-3	11	1.714e-3	12
224		min	-0.087	11	-0.171	6	-0.297	18	-5.911e-3	7	-1.747e-3	5	-1.86e-3	6
225	N113	max	0.126	4	0.126	2	-0.093	35	2.612e-3	1	4.122e-3	10	1.181e-3	8
226		min	-0.124	10	-0.108	8	-0.316	24	-1.627e-3	7	-4.554e-3	4	-1.37e-3	2
227	N114	max	0.198	4	0.038	2	-0.127	8	1.057e-3	7	3.899e-3	4	1.827e-3	4
228		min	-0.152	10	-0.041	8	-0.402	22	-8.304e-4	31	-2.141e-3	10	-1.596e-3	10
229	N115	max	0.088	5	0.171	12	-0.091	40	4.294e-3	7	2.161e-3	5	1.858e-3	12

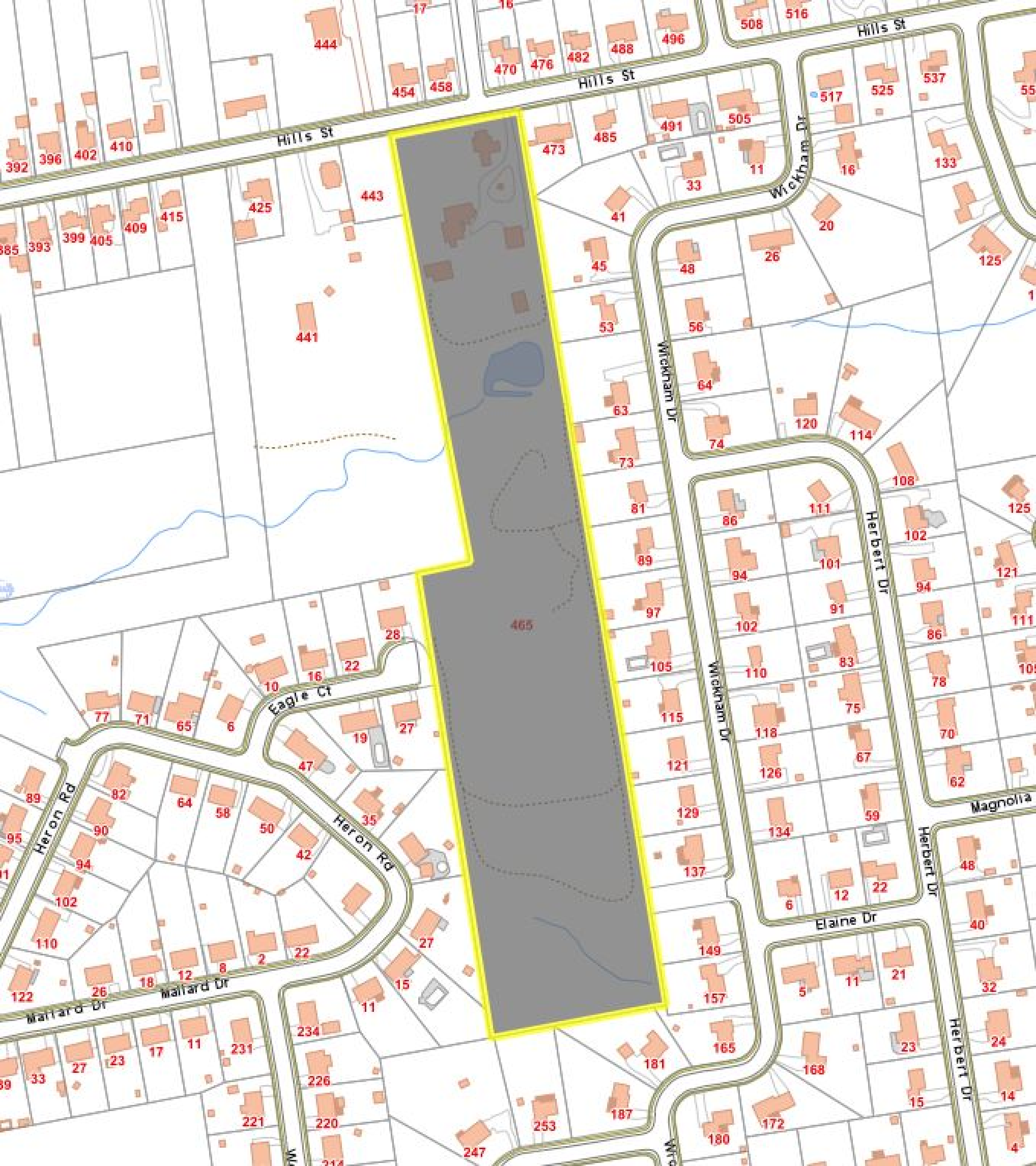
Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
230		min	-0.078	11	-0.143	6	-0.297	18	-5.924e-3	1	-1.749e-3	11	-1.713e-3	6
231	N116	max	0.125	4	0.11	2	-0.093	35	2.639e-3	7	4.157e-3	4	1.358e-3	8
232		min	-0.128	10	-0.128	8	-0.316	23	-1.663e-3	1	-4.573e-3	10	-1.16e-3	2
233	N117	max	0.076	3	0.078	2	-0.072	35	1.271e-3	15	8.129e-4	19	1.74e-3	3
234		min	-0.078	9	-0.08	8	-0.242	13	1.441e-4	9	7.764e-5	1	-1.605e-3	9
235	N118	max	0.123	4	0.026	2	-0.119	8	4.25e-4	36	2.14e-3	22	1.723e-3	10
236		min	-0.136	10	-0.024	8	-0.373	24	-6.438e-4	31	3.467e-4	4	-1.502e-3	4
237	N119	max	0.048	5	0.101	12	-0.096	28	1.819e-4	12	2.554e-4	31	1.828e-3	6
238		min	-0.055	11	-0.102	6	-0.313	20	-7.578e-4	18	-4.833e-4	19	-1.627e-3	12
239	N120	max	0.079	3	0.08	2	-0.072	35	1.26e-3	21	8.18e-4	13	1.617e-3	3
240		min	-0.077	9	-0.078	8	-0.242	24	1.192e-4	3	6.403e-5	7	-1.762e-3	9
241	N121	max	0.137	4	0.025	2	-0.119	8	4.236e-4	28	2.107e-3	16	1.49e-3	10
242		min	-0.124	10	-0.027	8	-0.373	24	-6.421e-4	39	2.92e-4	10	-1.715e-3	4
243	N122	max	0.055	5	0.102	12	-0.096	28	1.799e-4	6	2.534e-4	39	1.627e-3	6
244		min	-0.048	11	-0.101	6	-0.313	20	-7.54e-4	24	-4.836e-4	13	-1.827e-3	12
245	N123	max	0.034	3	0.02	3	-0.036	9	5.952e-3	14	3.769e-3	23	2.164e-3	3
246		min	-0.031	9	-0.018	9	-0.115	13	1.824e-3	9	1.168e-3	5	-1.953e-3	9

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M67	PIPE_4.0	0.557	52.562	15	0.091	52.562	15	87689.644	93240	10.631	10.631	2.247	H1-1b
2	M68	PIPE_4.0	0.54	52.562	22	0.086	52.562	21	87689.644	93240	10.631	10.631	2.189	H1-1b
3	M70	PIPE_4.0	0.494	52.562	23	0.093	52.562	23	87689.644	93240	10.631	10.631	2.169	H1-1b
4	M69	PIPE_4.0	0.493	52.562	17	0.093	52.562	17	87689.644	93240	10.631	10.631	2.169	H1-1b
5	M17	PIPE_2.0	0.304	69	1	0.049	69	7	14916.096	32130	1.872	1.872	1.672	H1-1b
6	M31	PIPE_2.0	0.304	69	10	0.05	69	4	14916.096	32130	1.872	1.872	1.666	H1-1b
7	M59	PIPE_3.0	0.297	24.962	22	0.247	24.962	16	59435.168	65205	5.749	5.749	1.441	H1-1b
8	M60	PIPE_3.0	0.296	24.962	16	0.248	24.962	22	59435.168	65205	5.749	5.749	1.441	H1-1b
9	M61	PIPE_3.0	0.283	24.962	21	0.188	24.962	24	59435.168	65205	5.749	5.749	1.382	H1-1b
10	M62	PIPE_3.0	0.282	24.962	15	0.188	24.962	18	59435.168	65205	5.749	5.749	1.382	H1-1b
11	M71	PIPE_4.0	0.245	52.562	18	0.044	52.562	19	87689.644	93240	10.631	10.631	2.123	H1-1b
12	M65	PIPE_4.0	0.245	52.563	18	0.044	52.563	19	87689.644	93240	10.631	10.631	2.123	H1-1b
13	M72	PIPE_4.0	0.244	52.562	24	0.044	52.562	13	87689.644	93240	10.631	10.631	2.123	H1-1b
14	M66	PIPE_4.0	0.244	52.563	24	0.044	52.563	13	87689.644	93240	10.631	10.631	2.123	H1-1b
15	M30	PIPE_2.0	0.212	27	13	0.034	69	18	14916.096	32130	1.872	1.872	3	H1-1b
16	M32	PIPE_2.0	0.208	27	13	0.033	27	13	14916.096	32130	1.872	1.872	3	H1-1b
17	M57	PIPE_3.0	0.188	24.962	23	0.173	24.962	24	59435.168	65205	5.749	5.749	1.336	H1-1b
18	M63	PIPE_3.0	0.188	24.962	23	0.173	24.962	24	59435.168	65205	5.749	5.749	1.336	H1-1b
19	M33	PIPE_3.0	0.185	128.125	16	0.076	128.125	21	28250.554	65205	5.749	5.749	2.625	H1-1b
20	M58	PIPE_3.0	0.183	24.962	17	0.171	24.962	18	59435.168	65205	5.749	5.749	1.335	H1-1b
21	M64	PIPE_3.0	0.183	24.962	17	0.171	24.962	18	59435.168	65205	5.749	5.749	1.335	H1-1b
22	M4	PIPE_2.0	0.18	69	16	0.024	27	22	14916.096	32130	1.872	1.872	3	H1-1b
23	M46	PIPE_2.0	0.18	69	16	0.024	27	22	14916.096	32130	1.872	1.872	3	H1-1b
24	M34	PIPE_3.0	0.178	128.125	22	0.074	128.125	15	28250.554	65205	5.749	5.749	2.614	H1-1b
25	M15	PIPE_2.0	0.175	69	13	0.028	69	13	14916.096	32130	1.872	1.872	3	H1-1b
26	M18	PIPE_2.0	0.173	69	24	0.042	27	19	14916.096	32130	1.872	1.872	3	H1-1b
27	M1	PIPE_2.0	0.169	27	23	0.021	27	22	14916.096	32130	1.872	1.872	3	H1-1b
28	M43	PIPE_2.0	0.169	27	23	0.021	27	22	14916.096	32130	1.872	1.872	3	H1-1b
29	M16	PIPE_2.0	0.169	27	18	0.032	69	23	14916.096	32130	1.872	1.872	3	H1-1b
30	M3	PIPE_2.0	0.159	69	4	0.028	69	4	14916.096	32130	1.872	1.872	3	H1-1b
31	M45	PIPE_2.0	0.159	69	4	0.028	69	4	14916.096	32130	1.872	1.872	3	H1-1b
32	M19	PIPE_3.0	0.157	128.125	20	0.083	128.125	13	28250.554	65205	5.749	5.749	2.471	H1-1b
33	M20	PIPE_3.0	0.153	128.125	13	0.082	128.125	19	28250.554	65205	5.749	5.749	2.471	H1-1b
34	M2	PIPE_2.0	0.148	27	21	0.032	27	21	14916.096	32130	1.872	1.872	3	H1-1b
35	M44	PIPE_2.0	0.148	27	21	0.032	27	21	14916.096	32130	1.872	1.872	3	H1-1b
36	M5	PIPE_3.0	0.121	21.875	21	0.072	129.688	22	28250.554	65205	5.749	5.749	2.65	H1-1b
37	M47	PIPE_3.0	0.121	21.875	21	0.072	129.688	22	28250.554	65205	5.749	5.749	2.65	H1-1b
38	M6	PIPE_3.0	0.119	21.875	15	0.072	129.688	16	28250.554	65205	5.749	5.749	2.637	H1-1b
39	M48	PIPE_3.0	0.119	21.875	15	0.072	129.688	16	28250.554	65205	5.749	5.749	2.637	H1-1b
40	M29	PIPE_2.0	0.116	69	20	0.031	27	14	14916.096	32130	1.872	1.872	3	H1-1b

ATTACHMENT 5



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Herbert Dr
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Herbert Dr
Magnolia
Elaine Dr
Eagle Ct
Heron Rd
Heron Rd
Mallard Dr
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Town of East Hartford Property Summary Report

465 HILLS ST

MAP LOT:	63-348	**CAMA PID:**	6670
LOCATION:	465 HILLS ST		
OWNER NAME:	LW REALTY LLC		

OWNER OF RECORD
LW REALTY LLC 6 ANDREWS ST BRISTOL, CT 06010

LIVING AREA:	2643	**ZONING:**	R2	**ACREAGE:**	11.94

SALES HISTORY

OWNER	BOOK / PAGE	SALE DATE	SALE PRICE
LW REALTY LLC	4013/324	17-Jul-2021	$400,000.00
GENESIS EAST HARTFORD CT LLC	3939/289	04-Nov-2020	$625,000.00
HENRY J KRAUSE REVOCABLE TRUST C/O HEIDI K MCNAMAR	3226/0014	24-Jan-2011	$0.00
KRAUSE HENRY J MC NAMAR HEIDI K TRUSTEE	3110/0056	14-Jul-2009	$0.00
KRAUSE HENRY & EST OF ELSIE C/O HEIDI K MC NAMAR	3007/0136	23-Apr-2008	$0.00

CURRENT PARCEL ASSESSMENT

TOTAL:	$427,630.00	**IMPROVEMENTS:**	$271,900.00	**LAND:**	$155,730.00

ASSESSING HISTORY

FISCAL YEAR	TOTAL VALUE	IMPROVEMENT VALUE	LAND VALUE
2019	$427,630.00	$271,900.00	$155,730.00
2018	$427,630.00	$271,900.00	$155,730.00
2017	$427,630.00	$271,900.00	$155,730.00
2016	$427,630.00	$271,900.00	$155,730.00
2015	$417,180.00	$261,450.00	$155,730.00

Town of East Hartford Property Summary Report

465 HILLS ST

MAP LOT:	63-348	**CAMA PID:**	6670
LOCATION:	465 HILLS ST		
OWNER NAME:	LW REALTY LLC		

BUILDING # 1

YEAR BUILT	1850	**EXT WALL 1**	Clapboard
STYLE	Colonial	**INT WALLS 1**	Plaster
MODEL	Residential	**HEAT FUEL**	Gas
STORIES	2.0	**HEAT TYPE**	Hot Water
OCCUPANCY	One Family	**AC TYPE**	None
ROOF	Gable	**BEDROOMS**	3
ROOF COVER	Asphalt	**FULL BATHS**	1
FLOOR COVER 1	Hardwood	**HALF BATHS**	1
% BSMT	100	**TOTAL ROOMS**	8
% FIN BSMT	0	**% REC RM**	0
% SEMI FIN	0	**% ATTIC FINISH**	0
BSMT GARAGE		**FIREPLACES**	1

EXTRA FEATURES

DESCRIPTION	CODE	UNITS
Garage	FGR1	1x1152 (1152.00 S.F.)
1 Story Barn	BRN1	1x540 (540.00 SF)
1 Story Barn	BRN1	1x340 (340.00 SF)
Inground Pool - Typical	SPL1	1x800 (800.00 S.F.)
Gazebo	GAZ	1x120 (120.00 S.F.)
Garage	FGR1	1x252 (252.00 S.F.)
1 Story Barn	BRN1	1x828 (828.00 SF)

Town of East Hartford Property Summary Report

465 HILLS ST

MAP LOT:	63-348	**CAMA PID:**	6670
LOCATION:	465 HILLS ST		
OWNER NAME:	LW REALTY LLC		

BUILDING # 2

YEAR BUILT	1940	**EXT WALL 1**	Concr/Cinder
STYLE	Retail - Single	**INT WALLS 1**	Metal
MODEL	Comm/Ind	**HEAT FUEL**	Oil
STORIES	01	**HEAT TYPE**	Steam
OCCUPANCY	Commercial	**AC TYPE**	None
ROOF	Gable	**BEDROOMS**	
ROOF COVER	Vinyl - 50 yr	**FULL BATHS**	
FLOOR COVER 1	Asphalt Tile	**HALF BATHS**	
% BSMT	null	**TOTAL ROOMS**	
% FIN BSMT	null	**% REC RM**	null
% SEMI FIN		**% ATTIC FINISH**	null
BSMT GARAGE	null	**FIREPLACES**	null

EXTRA FEATURES

DESCRIPTION	CODE	UNITS
Semifin Area	SFA	2292.00 S.F.

EXTRA FEATURES

DESCRIPTION	CODE	UNITS
Concrete Slab-Reinforced	PAV3	12x24 (288.00 S.F.)

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

EAST HARTFORD 10

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103			neopost 10/05/2021 US POSTAGE $002.99 ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

OLD STATE HOUSE STATION 06103
OCT - 5 2021
USPS

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Marcia Leclerc, Mayor Town of East Hartford 740 Main Street East Hartford, CT 06108				
2.	Eileen Buckheit, Development Director Town of East Hartford 740 Main Street East Hartford, CT 06108				
3.	LW Realty LLC 6 Andrews Street Bristol, CT 06010				
4.					
5.					
6.					