QC Development
PO Box 916
Storrs, CT 06268
860-670-9068
Mark.Roberts@QCDevelopment.net

April 10, 2020

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

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T) – CT1050
82 Tyrone Rd, Pomfret, CT 06258
N 41.89023056
W 71.95561111

Dear Ms. Bachman:

AT&T currently maintains six (6) antennas at the 154-foot level of the existing 154-foot Monopole at 82 Tyrone Road, Pomfret, CT. The tower is owned by Crown Castle and the property is owned by The Pomfret School. This filing replaces EM-CING-112-190701 due to changes in AT&T's proposed antenna equipment loading, which resulted in a passing Tower Structural Analysis without the need for Tower Modifications.

AT&T now intends to remove one (1) Andrew antenna, two (2) KMW antennas and three (3) Powerwave antennas and replace them with three (3) CCI DMP65R-BU6DA antennas and three (3) Andrew NNH4-65B-R6 antennas. AT&T will also swap six (6) Ericsson RRUS-11 for (3) Ericsson 4449-B5/B12s and (3) Ericsson 8843 B2/B66 Remote Radio Units (RRU) and add three (3) Ericsson RRUS-32 RRUs. The new antennas and RRUs will also be installed at the 154-foot level of the tower.

This facility was approved by the Siting Council in Docket # 142 on June 20, 1991. This approval included no condition(s) that could feasibly be violated by this modification, including total facility height or mounting restrictions. This modification therefore complies with the aforementioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Maureen A. Nicholson, First Selectman for the Town of Pomfret, and the Pomfret Building Department as well as the property and tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

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

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

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

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,

Mark Roberts
QC Development
Consultant for AT&T

Attachments

Cc: Maureen A. Nicholson - Elected Official
Joseph Pajak – Building Inspector
Pomfret School Inc. – Property Owner
Crown Castle - Tower Owner (via e-mail)

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							0%
AT&T GSM	1	283	152	0.0048	880	0.5867	0.08%
AT&T UMTS	2	565	152	0.0191	880	0.5867	0.32%
AT&T UMTS	4	525	152	0.0354	1900	1.0000	0.35%
AT&T LTE	1	1771	154	0.0291	734	0.4893	0.59%
AT&T LTE	2	875	152	0.0295	1900	1.0000	0.30%
Site Total							1.65%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							0%
AT&T UMTS	1	267	150	0.0046	850	0.5667	0.08%
AT&T LTE	1	1476	150	0.0256	700	0.4667	0.55%
AT&T LTE	1	1000	150	0.0173	850	0.5667	0.31%
AT&T 5G	1	1000	150	0.0173	850	0.5667	0.31%
AT&T LTE	2	3664	150	0.1271	1900	1.0000	1.27%
AT&T LTE	1	3837	150	0.0665	2100	1.0000	0.67%
AT&T LTE	1	1285	150	0.0223	2300	1.0000	0.22%
Site Total							3.40%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:
- NEW AT&T ANTENNAS (NNH4-65B-R6) @ POS.1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS (DMP65R-BU6D) @ POS.4 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS 4449 B5/B12 (700/850) @ POS.4 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS 8843 B2/B66A (PCS/AWS) @ POS.4 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS 32 B30 (WCS) @ POS.1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW DC/FIBER (DC6-48-60-18-8C-EV) WITH (2) DC POWER & (1) FIBER RUN (TOTAL OF 1) & DC ONLY (DC6-48-60-0-8C-EV) (TOTAL OF 1) WITH (2) DC POWER.
- INSTALL NEW MOUNTING PLATFORM, SITEPRO1 PART# RMQP-12-H5.
- INSTALL NEW HANDRAIL KIT, SITEPRO1 PART# HRK12-3HD.

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:
- UPGRADE DUL TO 5216.
- ADD (1) XMU.
- ADD (1) IDLe.
- ADD RBS 6630 FOR 5G.
- ADD DC12.

ITEMS TO BE REMOVED:
- EXISTING AT&T ANTENNAS: (7770) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS: (SBNH-1D6565C) (TOTAL OF 1 PER ALPHA SECTOR).
- EXISTING AT&T ANTENNAS: (AM-X-CD-17-65-00T-RET) (TYP. OF 1 PER BETA & GAMMA SECTOR, TOTAL OF 2).
- EXISTING AT&T RRUS: RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-11 B2 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T TMA'S: DTMABP7819VG12A (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T DIPLEXER: DBC2055F1V1-2 (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO REMAIN:
- (1) SURGE ARRESTOR, (6) COAX CABLES, (2) DC POWER & (1) FIBER.

SITE ADDRESS:	82 TYRONE ROAD POMFRET, CT 06258
LATITUDE:	41.890241° N 41° 53' 24.87" N
LONGITUDE:	71.955611° W 71° 57' 20.19" W
TYPE OF SITE:	MONOPOLE / INDOOR EQUIPMENT
TOWER HEIGHT:	155'-0"±
RAD CENTER:	150'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

DRAWING INDEX

CCI SITE #: 841292
CCI SITE NAME: POMFRET-TYRONE RD

SITE NUMBER: CT1050

SITE NAME: POMFRET-TYRONE RD

FA CODE: 10035021

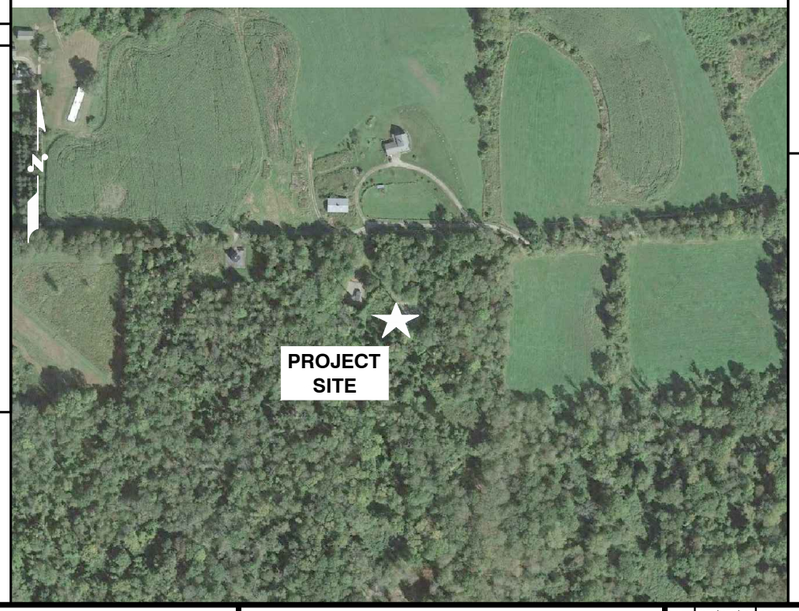
PACE ID: MRCTB008300, MRCTB027239, MRCTB038296, MRCTB038299, MRCTB038302

PROJECT: LTE 3C_4C_5C & ANTENNA MODIFICATIONS 2020 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

I -84 EAST TO I-384 EAST TO RT 44 EAST TO POMFRET. TAKE RIGHT ON TO RT 44 AT INTERSECTION WITH RT 169 (BLINKING LIGHT) AND CONTINUE EAST. TYRONE ROAD WILL BE ON YOUR RIGHT. TAKE RIGHT ONO TYRONE RD.. FOLLOW TO MAILBOX FOR 82 TYRONE RD SITE IS AT TOP OF DRIVEWAY ON LEFT, WE ARE THE ONLY CARRIER ON THIS TOWER. GROUND LEVEL SHELTER. GATE COMBO IS 0043



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

72 HOURS

CALL
BEFORE YOU DIG
CALL TOLL FREE 1-800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

TITLE SHEET
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	T-1	4

GROUNDING NOTES

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

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

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

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

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

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

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

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

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

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

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

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

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – SAI
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY

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

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

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

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

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

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

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

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

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

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

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

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

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

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

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."

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

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

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

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

    BUILDING CODE: IBC 2015 WITH 2018 CT STATE BUILDING CODE AMENDMENTS
    ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)

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

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

    AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

    TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

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

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1050
SITE NAME: POMFRET-TYRONE RD
CCI SITE NUMBER: 841292

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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

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GENERAL NOTES
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

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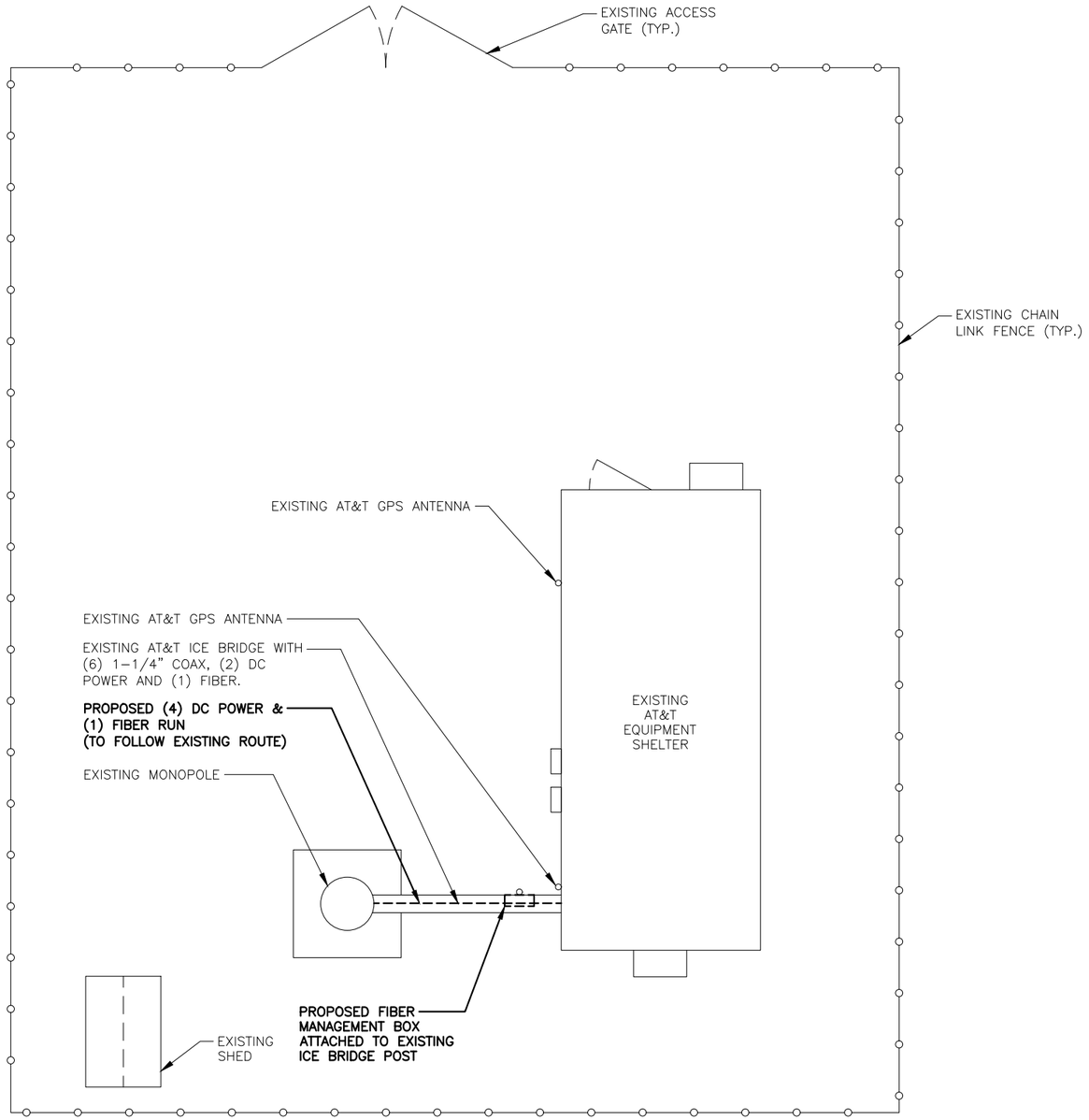
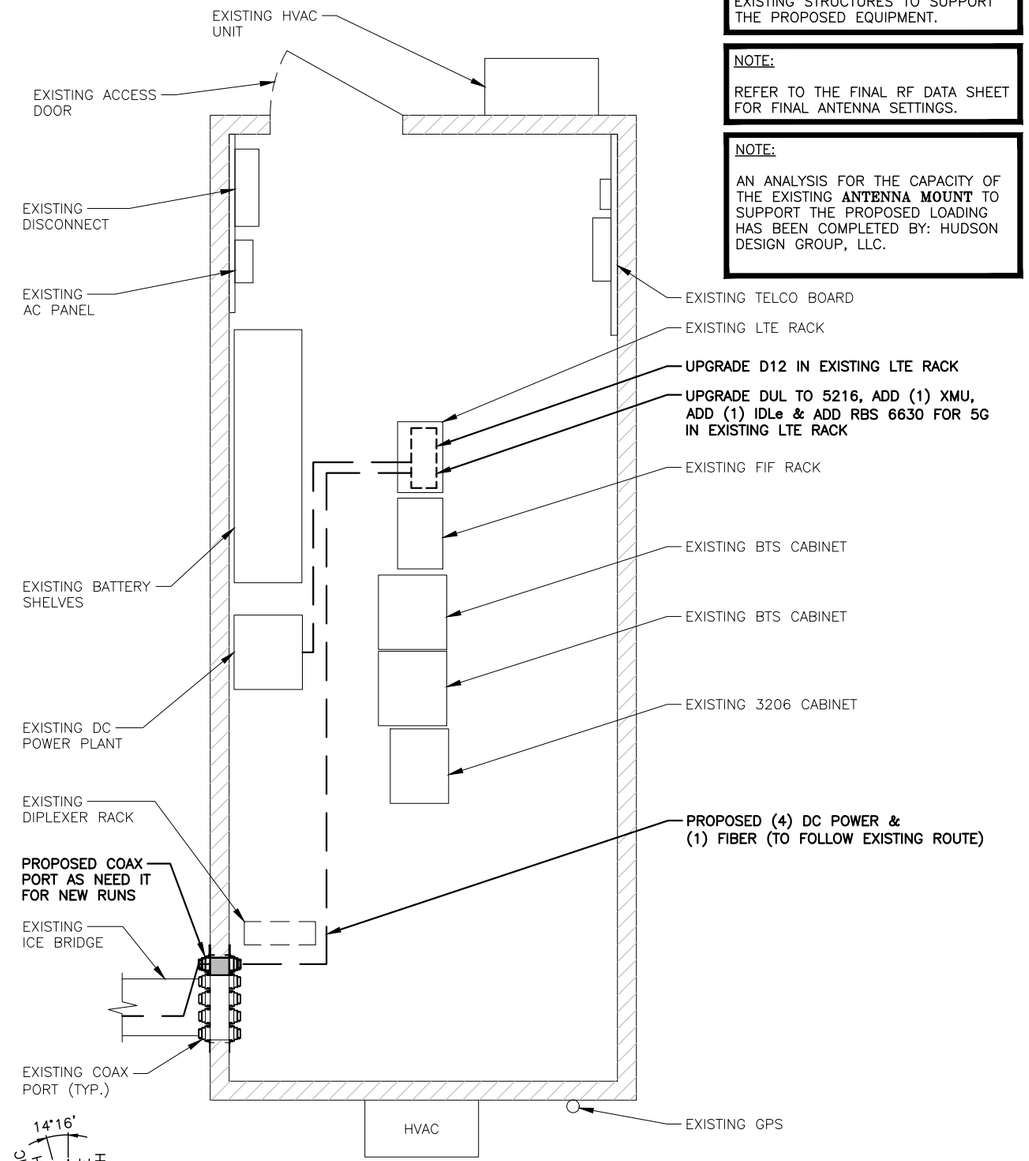


COMPOUND PLAN (1 / A-1)
22x34 SCALE: 1/4"=1'-0"
11x17 SCALE: 1/8"=1'-0"

0 2'-0" 4'-0" 8'-0" 12'-0"



EQUIPMENT PLAN (2 / A-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

0 1'-0" 2'-0" 4'-0" 6'-0"

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: TOWER ENGINEERING PROFESSIONALS DATED: JUNE 07, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC.

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

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SALEM, NH 03079

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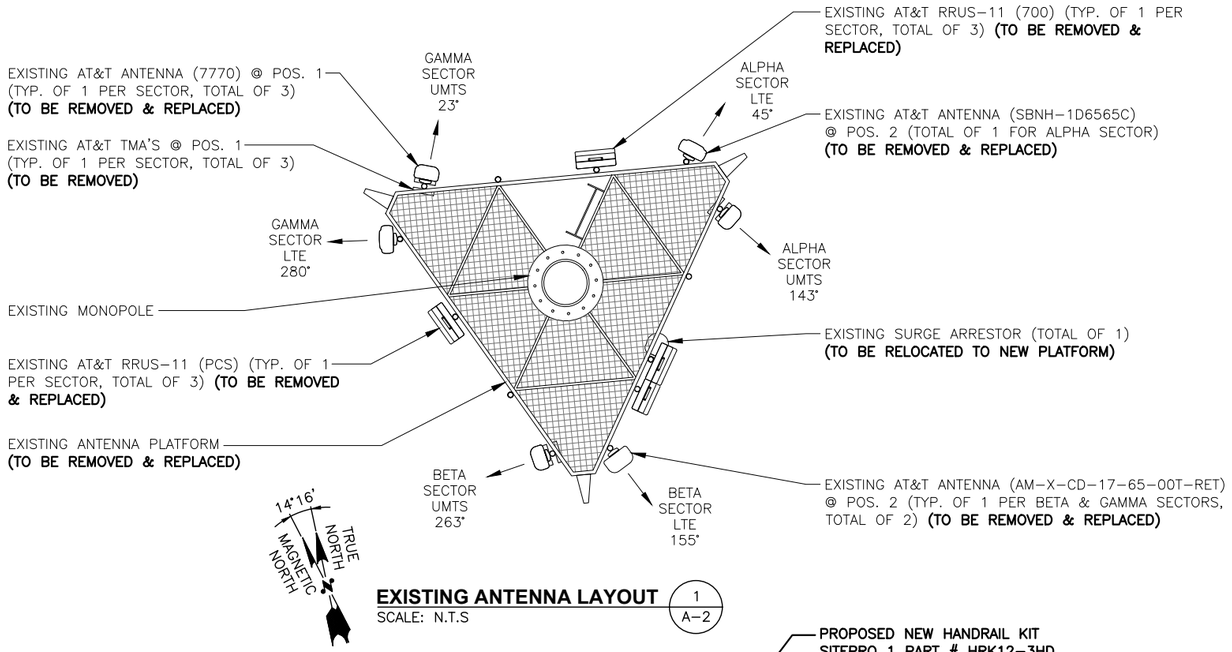
STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

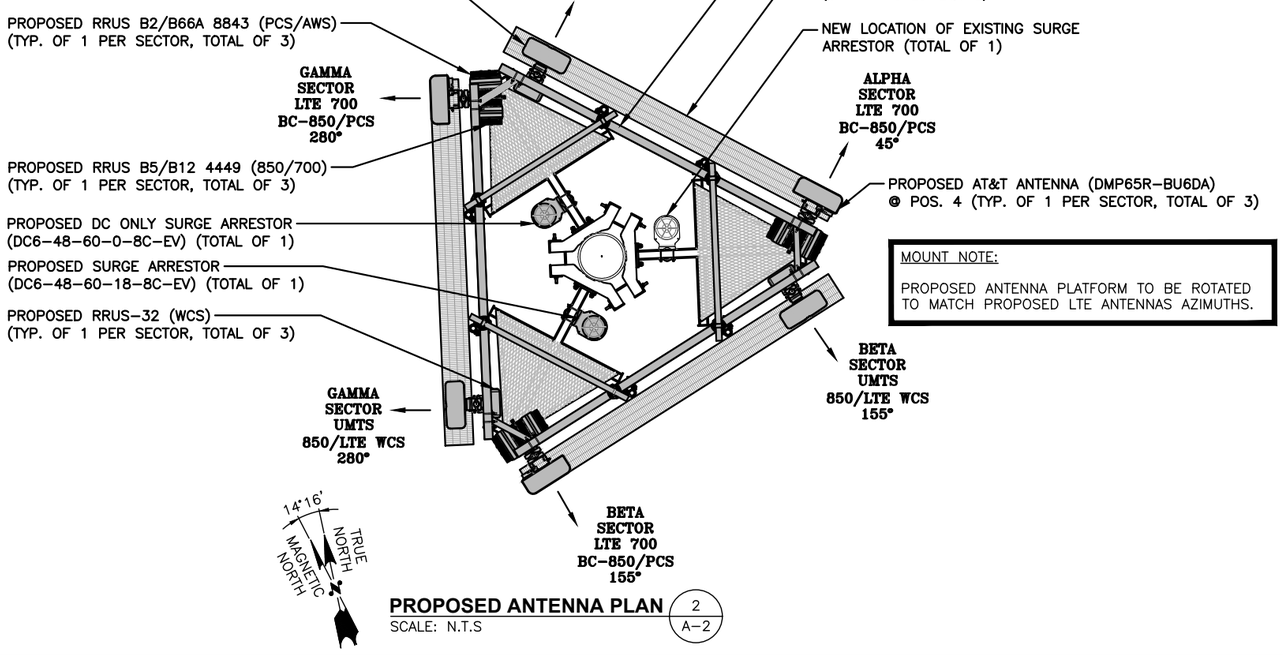
AT&T

COMPOUND & EQUIPMENT PLAN
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	A-1	4



EXISTING ANTENNA LAYOUT (1 / A-2)
SCALE: N.T.S



MOUNT NOTE:

PROPOSED ANTENNA PLATFORM TO BE ROTATED TO MATCH PROPOSED LTE ANTENNAS AZIMUTHS.

PROPOSED ANTENNA PLAN (2 / A-2)
SCALE: N.T.S

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: TOWER ENGINEERING PROFESSIONALS DATED: JUNE 07, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC.

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1050
SITE NAME: POMFRET-TYRONE RD
CCI SITE NUMBER: 841292

82 TYRONE ROAD
POMFRET, CT 06258
WINDHAM COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
4	03/17/20	ISSUED FOR CONSTRUCTION	RP	HC	DPH
3	02/05/20	ISSUED FOR CONSTRUCTION	CP	HC	DPH
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B	03/22/18	ISSUED FOR PERMITTING	MR	HC	DPH
A	02/06/18	ISSUED FOR REVIEW	TB	HC	DPH

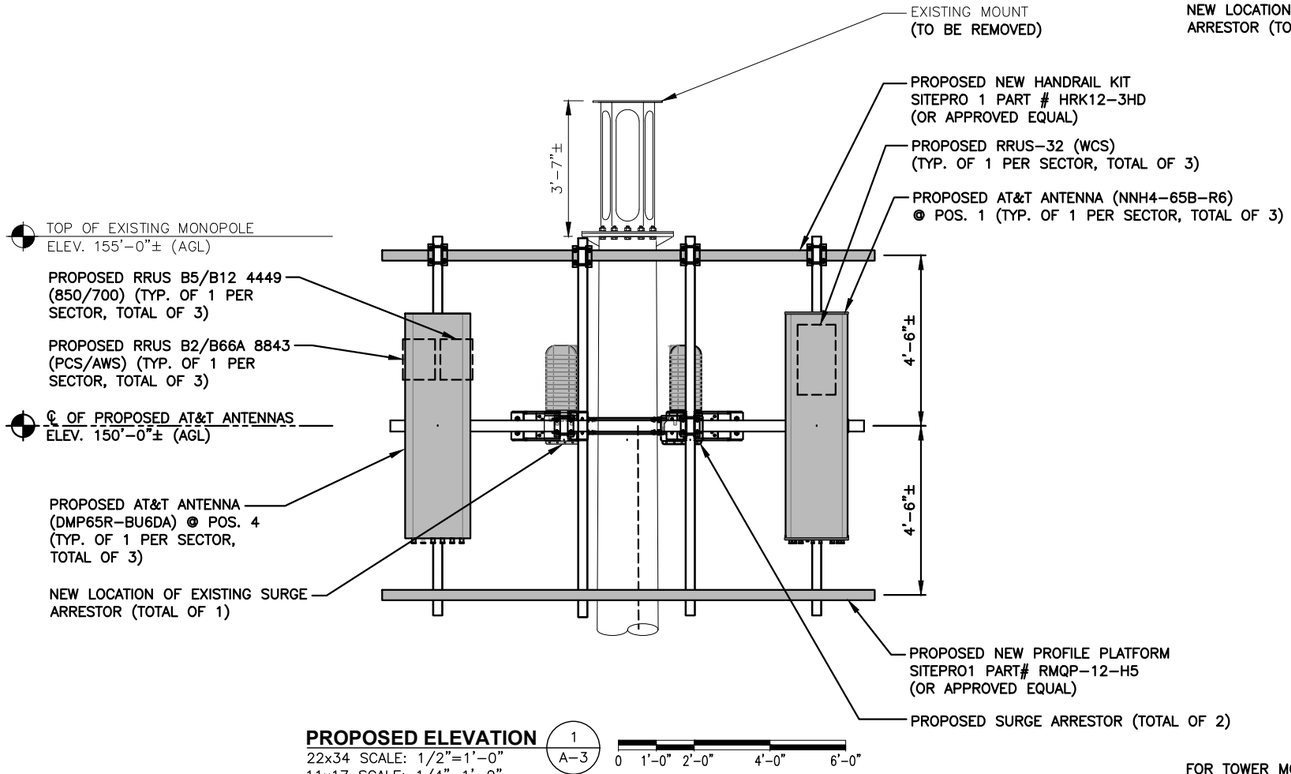
SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

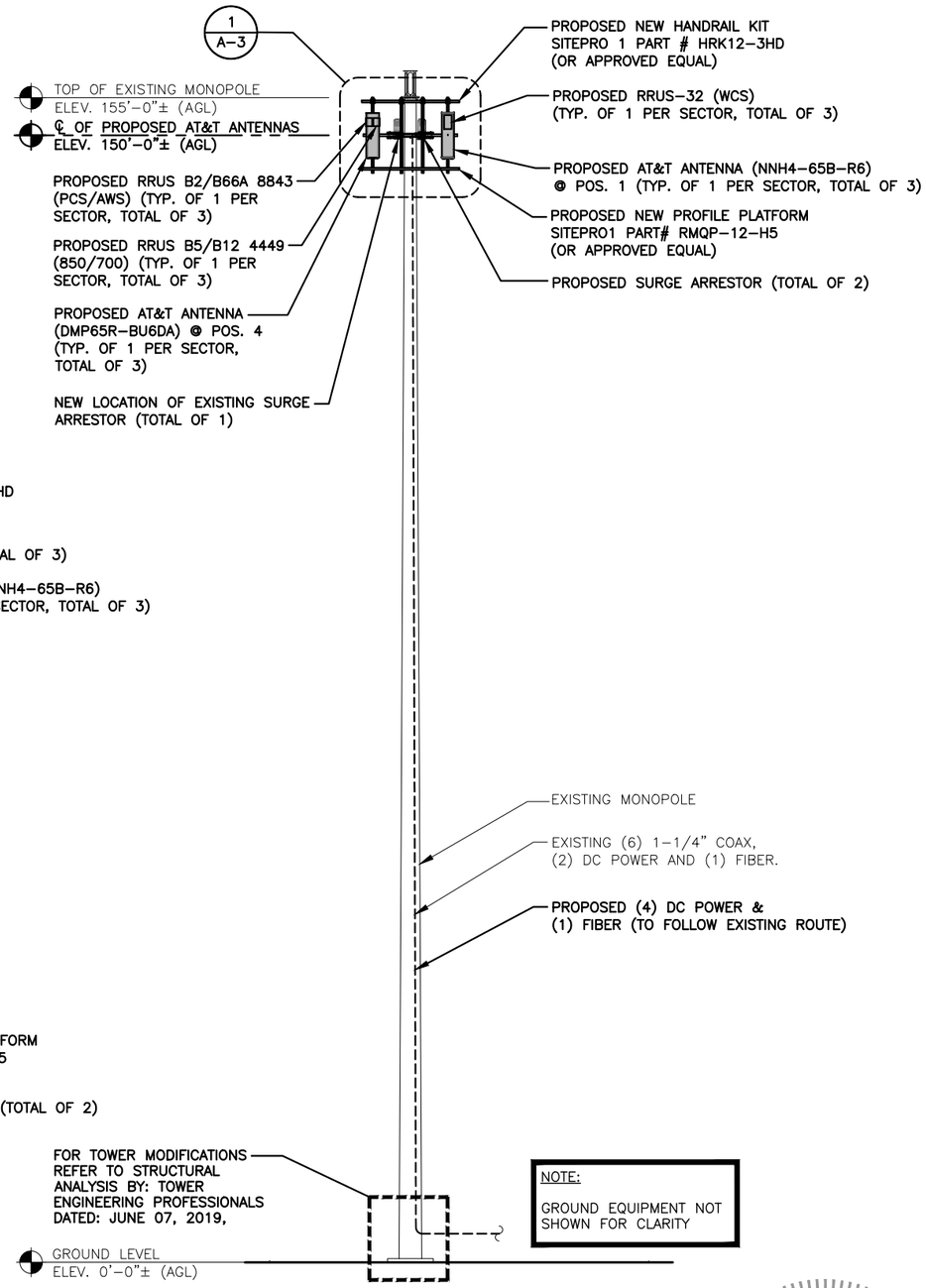
AT&T

ANTENNA LAYOUTS
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	A-2	4



PROPOSED ELEVATION (1 / A-3)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"
0 1'-0" 2'-0" 4'-0" 6'-0"



NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

ELEVATION (2 / A-3)
22x34 SCALE: 1"=10'
11x17 SCALE: 1"=20'
0 5' 10' 20' 30'

NOTE:
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NOTE:
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NOTE:
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A	02/06/18	ISSUED FOR REVIEW	TB	HC	DPH

SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

ELEVATION
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	A-3	4

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	PROPOSED	UMTS 850/LTE WCS	NNH4-65B-R6	72x19.6x7.8	150'-0"±	45°	–	(P)(1) RRUS-32 B30 (WCS)	27.2x12.1x7.0	(2)1-1/4 COAX	(E) (1) RAYCAP DC6-48-60-18-8F
A2	–	–	–	–	–	–	–	–	–	(2)(E) DC POWER & (1) FIBER	
A3	–	–	–	–	–	–	–	–	–	–	
A4	PROPOSED	LTE 700 BC-850/PCS	DMP65R-BU6DA	71.2x20.7x7.7	150'-0"±	45°	–	(P)(1) 4449 B5/B12 (850/700) (P)(1) BB43 B2/B66A (PCS/AWS)	17.9x13.2x10.4 14.9x13.2x10.9	–	
B1	PROPOSED	UMTS 850/LTE WCS	NNH4-65B-R6	72x19.6x7.8	150'-0"±	155°	–	(P)(1) RRUS-32 B30 (WCS)	27.2x12.1x7.0	(2)1-1/4 COAX	(P) (1) RAYCAP DC6-48-60-18-8C-EV
B2	–	–	–	–	–	–	–	–	–	–	
B3	–	–	–	–	–	–	–	–	–	–	
B4	PROPOSED	LTE 700 BC-850/PCS	DMP65R-BU6DA	71.2x20.7x7.7	150'-0"±	155°	–	(P)(1) 4449 B5/B12 (850/700) (P)(1) BB43 B2/B66A (PCS/AWS)	17.9x13.2x10.4 14.9x13.2x10.9	(P)(2) DC & (1) FIBER	
C1	PROPOSED	UMTS 850/LTE WCS	NNH4-65B-R6	72x19.6x7.8	150'-0"±	280°	–	(P)(1) RRUS-32 B30 (WCS)	27.2x12.1x7.0	(2)1-1/4 COAX	(P) (1) RAYCAP DC6-48-60-0-8C-EV
C2	–	–	–	–	–	–	–	–	–	–	
C3	–	–	–	–	–	–	–	–	–	–	
C4	PROPOSED	LTE 700 BC-850/PCS	DMP65R-BU6DA	71.2x20.7x7.7	150'-0"±	280°	–	(P)(1) 4449 B5/B12 (850/700) (P)(1) BB43 B2/B66A (PCS/AWS)	17.9x13.2x10.4 14.9x13.2x10.9	(P)(2) DC	

FINAL ANTENNA CONFIGURATION (1 / A-4)
SCALE: N.T.S

NOTE:
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NOTE:
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NOTE:
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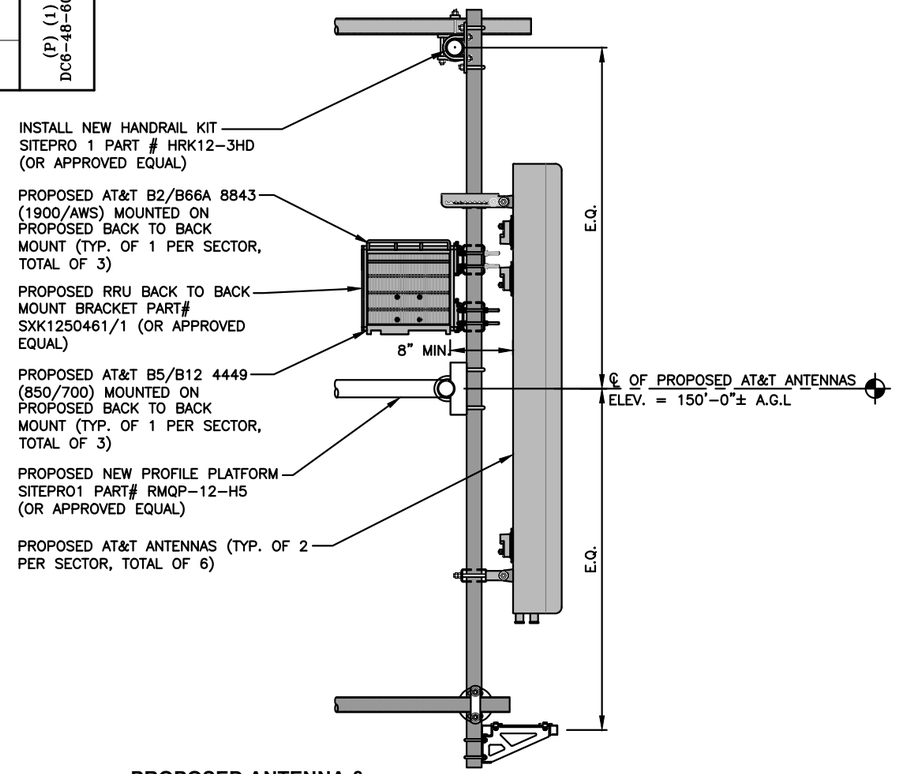
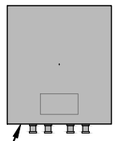


PROPOSED ANTENNA & RRU MOUNTING DETAIL (5 / A-4)
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"
0 0'-6" 1'-0" 2'-0" 3'-0"

RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
3(P)	4449 (850/700)	17.9"x13.2"x10.4"
3(P)	8843 (PCS/AWS)	14.9"x13.2"x10.9"
3(P)	RRUS-32 (WCS)	27.2"x12.1"x7.0"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

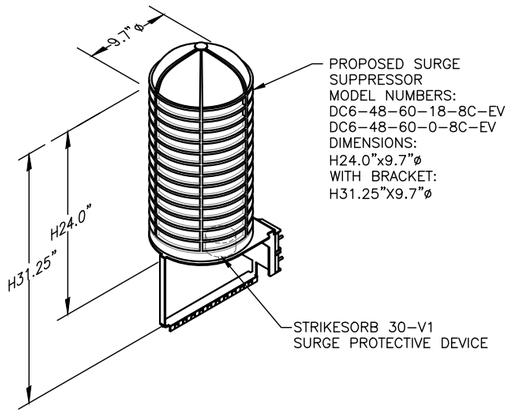


NOTE:
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

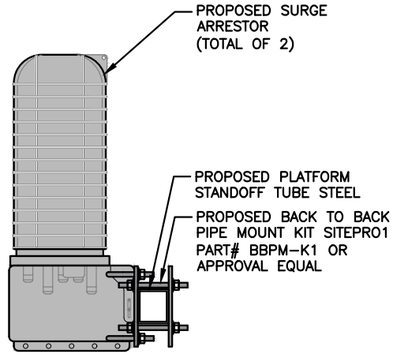
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL (2 / A-3)
SCALE: N.T.S



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL (3 / A-3)
SCALE: N.T.S



PROPOSED SURGE ARRESTOR MOUNTING DETAIL (4 / A-4)
SCALE: N.T.S

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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	A-4	4

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS [1]
N/A	MATERIAL SPECIFICATIONS REPORT [2]
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS [3]
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS [4]
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION [5]
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS [6]
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

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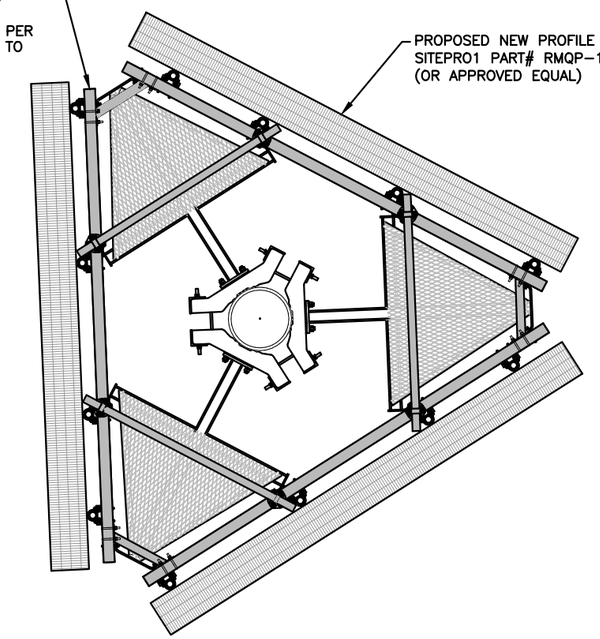
SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

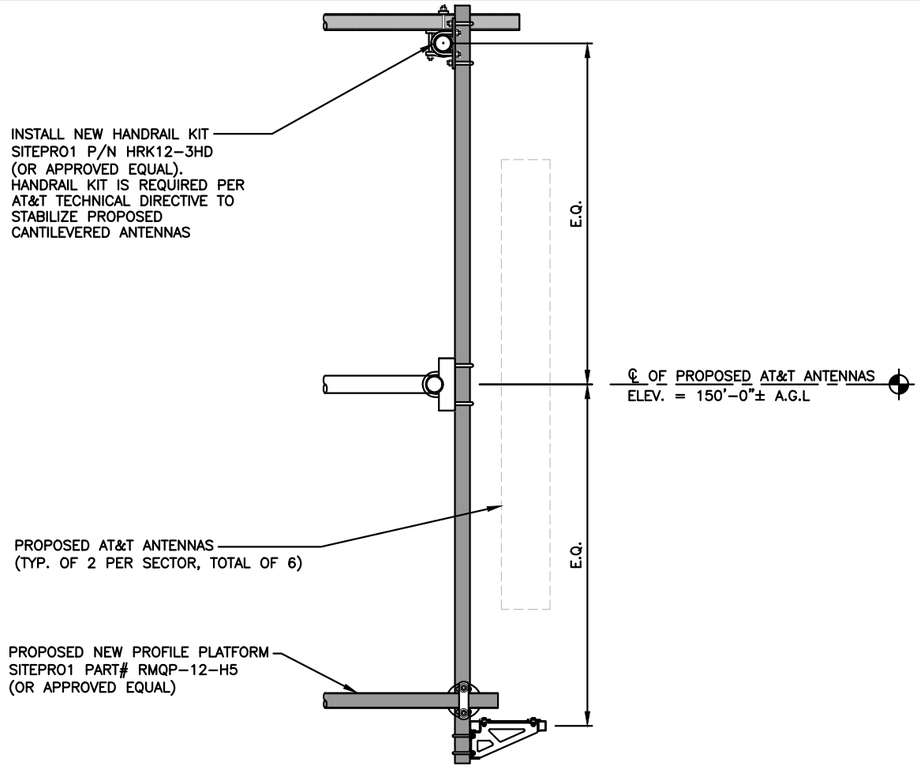
STRUCTURAL NOTES
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	SN-1	4



PLATFORM REINFORCEMENT PLAN (1 / S-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

0 1'-0" 2'-0" 4'-0" 6'-0"



PLATFORM REINFORCEMENT PLAN (2 / S-1)
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

0 0'-6" 1'-0" 2'-0" 3'-0"

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: TOWER ENGINEERING PROFESSIONALS DATED: JUNE 07, 2019, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:

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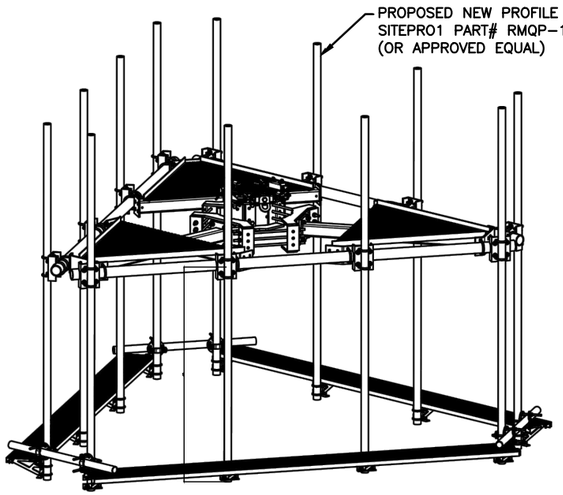
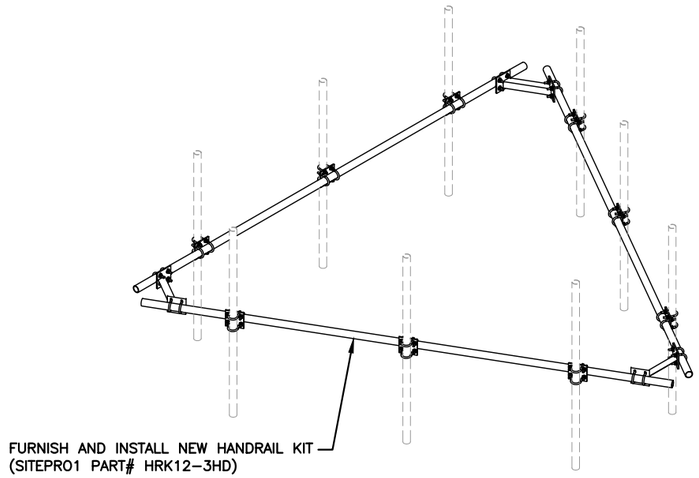


PROPOSED LOW PROFILE PLATFORM RMQP-12-H5 (3 / S-1)
SCALE: N.T.S



HANDRAIL KIT DETAIL (4 / S-1)
SCALE: N.T.S

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

SITE NUMBER: CT1050
SITE NAME: POMFRET-TYRONE RD
CCI SITE NUMBER: 841292

82 TYRONE ROAD
POMFRET, CT 06258
WINDHAM COUNTY

NO.	DATE	REVISIONS	BY	CHK	APP'D
4	03/17/20	ISSUED FOR CONSTRUCTION	RP	HC	DPH
3	02/05/20	ISSUED FOR CONSTRUCTION	GA	HC	DPH
2	06/21/19	ISSUED FOR CONSTRUCTION	AM	HC	DPH
1	04/02/18	ISSUED FOR CONSTRUCTION	EB	HC	DPH
B	03/22/18	ISSUED FOR PERMITTING	MR	HC	DPH
A	02/06/18	ISSUED FOR REVIEW	TB	HC	DPH

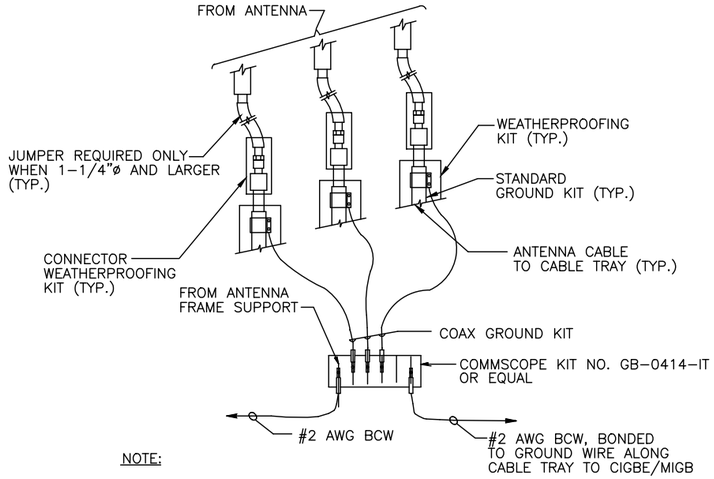
SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

MOUNT MODIFICATION DESIGN
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	S-1	4

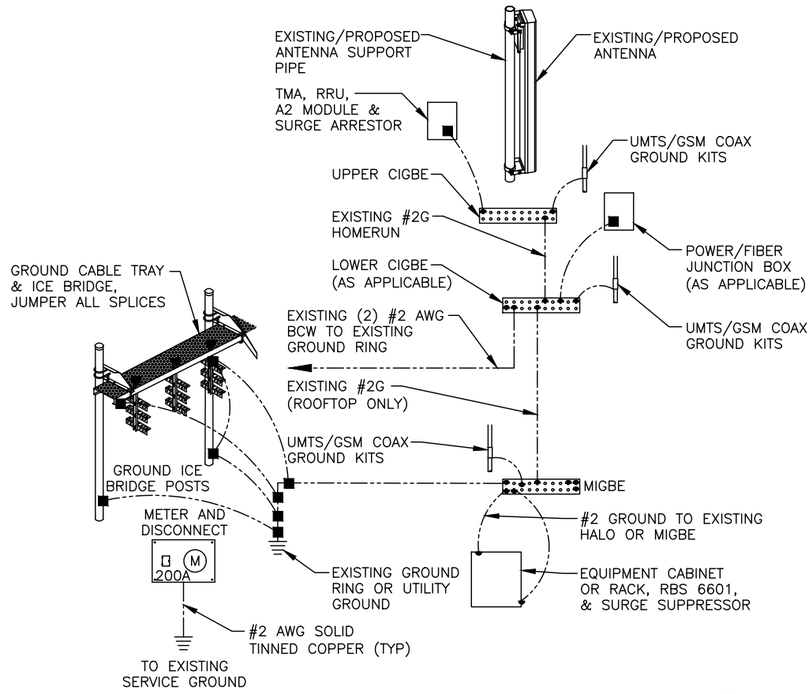


NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

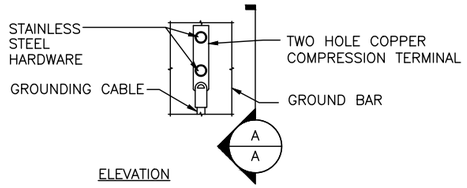
GROUND WIRE TO GROUND BAR CONNECTION DETAIL (1 / G-1)

SCALE: N.T.S



GROUNDING RISER DIAGRAM (2 / G-1)

SCALE: N.T.S



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

TYPICAL GROUND BAR CONNECTION DETAIL (3 / G-1)

SCALE: N.T.S

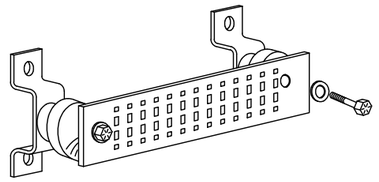
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
+24V POWER SUPPLY RETURN BAR (#2 AWG)
-48V POWER SUPPLY RETURN BAR (#2 AWG)
RECTIFIER FRAMES.

SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (#2 AWG)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
BUILDING STEEL (IF AVAILABLE) (#2 AWG)



GROUND BAR - DETAIL (AS REQUIRED) (4 / G-1)

SCALE: N.T.S

HUDSON Design Group LLC
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12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1050
SITE NAME: POMFRET-TYRONE RD
CCI SITE NUMBER: 841292

82 TYRONE ROAD
POMFRET, CT 06258
WINDHAM COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
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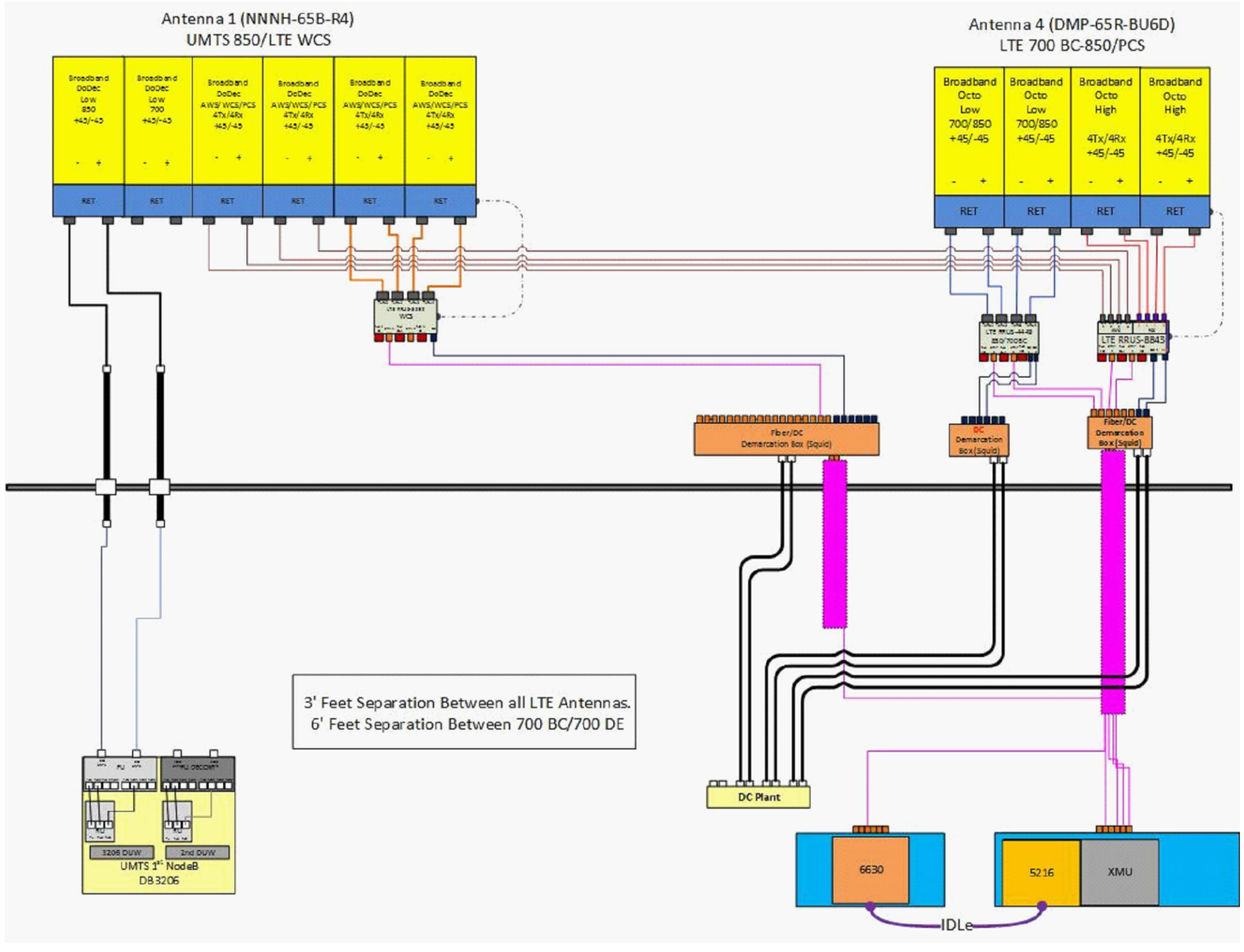
SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

GROUNDING DETAILS
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	G-1	4



RF PLUMBING DIAGRAM (1 / RF–1)
SCALE: N.T.S

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

HUDSON Design Group LLC
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NORTH ANDOVER, MA 01845
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12 INDUSTRIAL WAY
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SITE NUMBER: CT1050
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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: TB

AT&T

RF PLUMBING DIAGRAM
(LTE 3C_4C_5C & ANTENNA MODIFICATIONS)

SITE NUMBER	DRAWING NUMBER	REV
CT1050	RF–1	4

Date: **February 26, 2020**

Chanhdara Ratsavong
Crown Castle
6325 Ardrey Kell Rd., Suite 600
Charlotte, NC 28277

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351

Subject: Structural Analysis Report

Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	CT1050
	Carrier Site Name:	Pomfret-Tyrone Rd
Crown Castle Designation:	**Crown Castle BU Number:**	841292
	Crown Castle Site Name:	Pomfret-Tyrone Rd
	Crown Castle JDE Job Number:	601136
	Crown Castle Work Order Number:	1832566
	Crown Castle Order Number:	513226 Rev. 1
Engineering Firm Designation:	**TEP Project Number:**	131599.384410
Site Data:	**82 Tyrone Road, Pomfret, Windham County, CT 06258** **Latitude *41° 53' 24.90"*, Longitude *-71° 57' 20.20"*** **150 Foot - Monopole Tower**	

Dear Chanhdara Ratsavong,

Tower Engineering Professionals is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC5: Proposed Equipment Configuration ***Sufficient Capacity- 99.6%**

***The structure has sufficient capacity once the loading changes, described in the Recommendations section of this report, are completed.**

This analysis utilizes an ultimate 3-second gust wind speed of 130 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Cooper Bowen, E.I. / SMA

Respectfully submitted by:

Aaron T. Rucker, P.E.

Electronic Copy

02/27/2020

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 150-ft monopole tower designed by ITT Meyer. The tower has been modified per reinforcement drawings prepared by GPD Group in October of 2013. All information provided to TEP was assumed to be accurate and complete.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	130 mph
Exposure Category:	C
Topographic Factor:	1.0
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
150.0	150.0	3	CCI Antennas	DMP65R-BU6D w/ Mount Pipe	2 6 6	3/8 3/4 1-1/4
		3	Commscope	NNH4-65B-R6 w/ Mount Pipe		
		3	CCI Antennas	DTMABP7819VG12A		
		3	Ericsson	RRUS 32 B2		
		3	Ericsson	RRUS 4449 B5/B12		
		3	Ericsson	RRUS 8843 B2/B66A		
		1	Raycap	DC6-48-60-0-8C-EV		
		2	Raycap	DC6-48-60-18-8F		
		1	SitePro1	RMQP-12-H5		
		1	SitePro1	HRK12-3HD		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
104.0	104.0	1	Sinclair	SRL-210C-2	1	3/8
		1	Ericsson	KRY 112 144/2		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Geotechnical Report	Clarence Welti Associates, Inc.	5121526	CCISites
Supplemental Geotechnical Report	GPD Group	5121526	CCISites
Foundation Mapping Report	FDH Engineering, Inc.	5403014	CCISites
Tower Manufacturer Drawings	ITT Meyer	5342387	CCISites
Tower Mapping Report	GPD Group & Northeast Towers	5342387	CCISites
Tower Reinforcement Drawings	GPD Group	5340765	CCISites
Post-Modification Inspection	Hudson Design Group, LLC	5403264	CCISites

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

3.2) Assumptions

1) The tower and foundation were built and maintained in accordance with the manufacturer's specification.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2, and the referenced drawings.
3) Based on the tower mapping completed by GPD Group & Northeast Towers (CCI Doc ID 5342387), the monopole was determined to be a 150-ft Type B Mast designed by ITT Meyer, Inc., with the 1/4" top pole section wall thickness option. TEP assumed the pole geometry according to this mast design type.
4) The bridge stiffener modifications designed by GPD Group in October of 2013 (CCI Doc ID 5340765) were assumed to share load across the original flange connection at 110-ft.
5) The foundation steel reinforcement was assumed to be the minimum required per ACI 318.
6) The following material grades were assumed:
   a) Flange plate: ASTM A36
   b) Concrete compressive strength: f'c = 3 ksi
   c) Foundation flexural reinforcement: fy = 60 ksi

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)[1,2]

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP15.25x14.5x0.25	Pole	20.9%	Pass
145 - 140	Pole	TP16x15.25x0.25	Pole	37.8%	Pass
140 - 135	Pole	TP16.75x16x0.25	Pole	52.6%	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
135 - 130	Pole	TP17.5x16.75x0.25	Pole	65.7%	Pass
130 - 129.25	Pole	TP17.613x17.5x0.25	Pole	67.5%	Pass
129.25 - 129	Pole + Reinf.	TP17.65x17.613x0.6	Reinf. 6 Bolt-Shaft Bearing	40.9%	Pass
129 - 124	Pole + Reinf.	TP18.4x17.65x0.575	Reinf. 6 Tension Rupture	43.8%	Pass
124 - 119	Pole + Reinf.	TP19.15x18.4x0.5625	Reinf. 6 Tension Rupture	50.9%	Pass
119 - 114	Pole + Reinf.	TP19.9x19.15x0.55	Reinf. 6 Tension Rupture	57.8%	Pass
114 - 110.5	Pole + Reinf.	TP20.425x19.9x0.5375	Reinf. 6 Bolt-Shaft Bearing	70.2%	Pass
110.5 - 110.25	Pole + Reinf.	TP20.463x20.425x0.85	Pole	43.0%	Pass
110.25 - 110	Pole + Reinf.	TP20.5x20.462x0.925	Reinf. 7 Compression	38.6%	Pass
110 - 109.5	Pole + Reinf.	TP20.576x20.5x0.925	Reinf. 7 Connection	40.3%	Pass
109.5 - 109.25	Pole + Reinf.	TP20.613x20.576x0.6375	Reinf. 5 Tension Rupture	46.4%	Pass
109.25 - 104.25	Pole + Reinf.	TP21.37x20.613x0.6125	Reinf. 5 Tension Rupture	51.5%	Pass
104.25 - 99.25	Pole + Reinf.	TP22.126x21.37x0.6	Reinf. 5 Tension Rupture	56.8%	Pass
99.25 - 94.25	Pole + Reinf.	TP22.882x22.126x0.5875	Reinf. 5 Tension Rupture	61.9%	Pass
94.25 - 90.25	Pole + Reinf.	TP23.487x22.882x0.575	Reinf. 5 Tension Rupture	65.9%	Pass
90.25 - 90	Pole + Reinf.	TP23.525x23.487x0.575	Reinf. 4 Tension Rupture	66.2%	Pass
90 - 85	Pole + Reinf.	TP24.281x23.525x0.5625	Reinf. 4 Tension Rupture	71.0%	Pass
85 - 80	Pole + Reinf.	TP25.038x24.281x0.55	Reinf. 4 Tension Rupture	75.7%	Pass
80 - 75	Pole + Reinf.	TP25.794x25.038x0.5375	Reinf. 4 Tension Rupture	80.1%	Pass
75 - 73.26	Pole + Reinf.	TP26.55x25.794x0.5375	Reinf. 4 Tension Rupture	81.6%	Pass
73.26 - 69	Pole + Reinf.	TP26.2x25.557x0.675	Reinf. 3 Tension Rupture	64.5%	Pass
69 - 64	Pole + Reinf.	TP26.955x26.2x0.6625	Reinf. 3 Tension Rupture	67.7%	Pass
64 - 59	Pole + Reinf.	TP27.71x26.955x0.65	Reinf. 3 Tension Rupture	70.9%	Pass
59 - 56.5	Pole + Reinf.	TP28.088x27.71x0.6375	Reinf. 3 Tension Rupture	72.5%	Pass
56.5 - 56.25	Pole + Reinf.	TP28.126x28.088x0.6375	Reinf. 2 Tension Rupture	72.6%	Pass
56.25 - 51.25	Pole + Reinf.	TP28.881x28.126x0.6375	Reinf. 2 Tension Rupture	75.8%	Pass
51.25 - 46.25	Pole + Reinf.	TP29.636x28.881x0.625	Reinf. 2 Tension Rupture	78.8%	Pass
46.25 - 41.25	Pole + Reinf.	TP30.391x29.636x0.6125	Reinf. 2 Tension Rupture	81.8%	Pass
41.25 - 36.25	Pole + Reinf.	TP31.146x30.391x0.6	Reinf. 2 Tension Rupture	84.7%	Pass
36.25 - 33.93	Pole + Reinf.	TP32.09x31.146x0.6	Reinf. 2 Tension Rupture	86.0%	Pass
33.93 - 28.93	Pole + Reinf.	TP31.627x30.871x0.6625	Reinf. 2 Tension Rupture	82.9%	Pass
28.93 - 28.75	Pole + Reinf.	TP31.654x31.627x0.6625	Reinf. 2 Tension Rupture	83.0%	Pass
28.75 - 28.5	Pole + Reinf.	TP31.692x31.654x0.6625	Reinf. 1 Tension Rupture	83.1%	Pass
28.5 - 23.5	Pole + Reinf.	TP32.448x31.692x0.65	Reinf. 1 Tension Rupture	85.5%	Pass
23.5 - 18.5	Pole + Reinf.	TP33.204x32.448x0.65	Reinf. 1 Tension Rupture	87.8%	Pass
18.5 - 13.5	Pole + Reinf.	TP33.959x33.204x0.6375	Reinf. 1 Tension Rupture	90.0%	Pass
13.5 - 8.5	Pole + Reinf.	TP34.715x33.959x0.6375	Reinf. 1 Tension Rupture	92.1%	Pass
8.5 - 3.5	Pole + Reinf.	TP35.471x34.715x0.625	Reinf. 1 Tension Rupture	94.1%	Pass
3.5 - 2.75	Pole + Reinf.	TP35.584x35.471x0.625	Reinf. 1 Tension Rupture	94.4%	Pass
2.75 - 2.5	Pole	TP35.622x35.584x0.375	Pole	98.6%	Pass
2.5 - 0	Pole	TP36x35.622x0.375	Pole	99.6%	Pass
				Summary	
			Pole	99.6%	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
			Reinforcement	94.4%	Pass
			Overall	**99.6%**	**Pass**

Table 5 - Tower Component Stresses vs. Capacity - LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Flange Connection	110.0	45.7	Pass
1,2	Anchor Rods	-	68.3	Pass
1,2	Base Plate	-	62.2	Pass
1,2	Base Foundation Soil Interaction	-	74.3	Pass
1,2	Base Foundation Structural	-	78.5	Pass

Structure Rating (max from all components) =	**99.6%**

Notes:
1) See additional documentation in "Appendix C - Additional Calculations" for calculations supporting the % capacity listed.
2) Rating per TIA-222-H Section 15.5

4.1) Recommendations

1) If the load differs from that described in Tables 1 and 2 of this report, the referenced drawings, or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
2) The tower and its foundation have sufficient capacity to carry the proposed load configuration. In order for the results of this analysis to be considered valid, the loading modification, as follows, must be completed.

   Loading Changes:

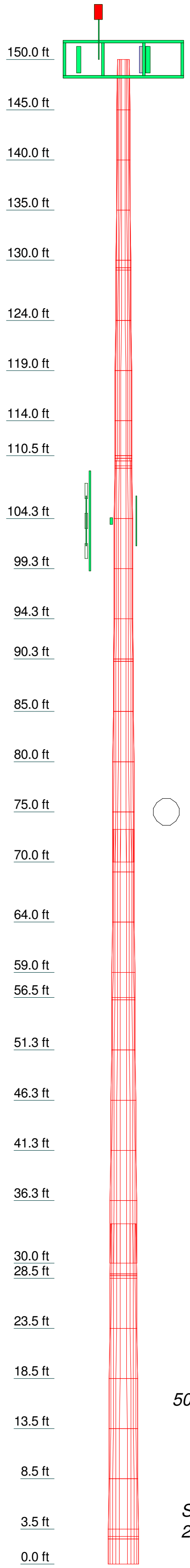
   a) The (3) Ericsson RRUS 32 B2's at the 150-ft elevation are installed directly behind the panel antennas and oriented such that they are completely shielded from the front, but not the sides.
   b) The (3) Ericsson RRUS 4449 B5/B12's's at the 150-ft elevation are installed directly behind the panel antennas and oriented such that they are completely shielded from the front, but not the sides.
   c) The (3) Ericsson RRUS 8843 B2/B66A's at the 150-ft elevation are installed directly behind the panel antennas and oriented such that they are completely shielded from the front, but not the sides.
   d) The (3) CCI Antennas DTMABP7819VG12A's at the 150-ft elevation are installed directly behind the panel antennas and oriented such that they are completely shielded from the front, but not the sides.

   No structural modifications are required at this time provided that the above-listed changes are completed.

APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.00	12	0.250		14.500	15.250	A36	0.2
2	5.00	12	0.250		15.250	16.000	A36	0.2
3	5.00	12	0.250		16.000	16.750	A36	0.2
4	5.00	12	0.250		16.750	17.500	A36	0.2
5, 6	[illegible]	12	[illegible]		[illegible]	[illegible]	A36	[illegible]
7	5.00	12	0.578		17.650	18.400	A36	0.5
8	5.00	12	0.563		18.400	19.150	A36	0.5
9	5.00	12	0.550		19.150	19.900	A36	0.5
10	3.50	12	0.537		19.900	[illegible]	A36	0.4
11–14	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
15	5.00	12	[illegible]		[illegible]	[illegible]		0.6
16	5.00	12	0.600		21.370	22.126		0.6
17	5.00	12	0.588		22.126	22.882		0.6
18	4.00	12	0.575		22.882	[illegible]		0.5
19	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
20	5.00	12	[illegible]		23.525	24.281		0.7
21	5.00	12	0.550		24.281	25.038		0.7
22	5.00	12	0.537		25.038	25.794		0.7
23	[illegible]	12	0.537	3.26	25.794	[illegible]		0.7
24	[illegible]	12	[illegible]		[illegible]	[illegible]		0.7
25	5.00	12	0.662		[illegible]	[illegible]		0.9
26	5.00	12	0.650		26.955	27.710		0.9
27, 28	[illegible]	12	[illegible]		[illegible]	[illegible]	A572-65	[illegible]
29	5.00	12	[illegible]		28.126	28.881	A572-65	0.9
30	5.00	12	0.625		28.881	29.636	A572-65	0.9
31	5.00	12	0.613		29.636	30.391	A572-65	0.9
32	5.00	12	0.600		30.391	31.146	A572-65	0.9
33	[illegible]	12	0.600	3.93	31.146	32.090	A572-65	1.2
34–36	[illegible]	12	[illegible]		[illegible]	[illegible]	A572-65	[illegible]
37	5.00	12	[illegible]		[illegible]	[illegible]	A572-65	1.1
38	5.00	12	0.650		32.448	33.204	A572-65	1.1
39	5.00	12	0.637		33.204	33.959	A572-65	1.1
40	5.00	12	0.637		33.959	34.715	A572-65	1.1
41	5.00	12	0.625		34.715	35.471	A572-65	1.1
42–44	[illegible]	12	[illegible]		[illegible]	[illegible]	A572-65	[illegible]
								23.2



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Windham County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 130 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft

ALL REACTIONS ARE FACTORED

AXIAL 52 K
SHEAR 5 K
MOMENT 491 kip-ft
TORQUE 1 kip-ft
50 mph WIND - 1.500 in ICE

AXIAL 34 K
SHEAR 25 K
MOMENT 2270 kip-ft
TORQUE 4 kip-ft
REACTIONS - 130 mph WIND

Tower Engineering Professionals, Inc.
326 Tryon Road
Raleigh, NC 27603
Phone: (919) 661-6351
FAX: (919) 661-6350

Tower Engineering Professionals

Job: ***Pomfret-Tyrone Rd (BU 841292)***		
Project: ***TEP No. 131599.384410***		
Client: Crown Castle	Drawn by: SMA	App'd:
Code: TIA-222-H	Date: 02/26/20	Scale: NTS
Path: C:\Users\smarsenault\Desktop\Pomfret (841292) Review\Issued Docs\841292_1832566_LC5.eri		Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in Windham County, Connecticut.
Tower base elevation above sea level: 682.00 ft.
Basic wind speed of 130 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.05.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	150.00-145.00	5.00	0.000	12	14.500	15.250	0.250	1.000	A36 (36 ksi)
L2	145.00-140.00	5.00	0.000	12	15.250	16.000	0.250	1.000	A36 (36 ksi)
L3	140.00-135.00	5.00	0.000	12	16.000	16.750	0.250	1.000	A36 (36 ksi)
L4	135.00-130.00	5.00	0.000	12	16.750	17.500	0.250	1.000	A36 (36 ksi)
L5	130.00-129.25	0.75	0.000	12	17.500	17.613	0.250	1.000	A36 (36 ksi)
L6	129.25-129.00	0.25	0.000	12	17.613	17.650	0.600	2.400	A36 (36 ksi)
L7	129.00-124.00	5.00	0.000	12	17.650	18.400	0.575	2.300	A36 (36 ksi)
L8	124.00-119.00	5.00	0.000	12	18.400	19.150	0.563	2.250	A36 (36 ksi)
L9	119.00-114.00	5.00	0.000	12	19.150	19.900	0.550	2.200	A36 (36 ksi)
L10	114.00-110.50	3.50	0.000	12	19.900	20.425	0.537	2.150	A36 (36 ksi)
L11	110.50-110.25	0.25	0.000	12	20.425	20.462	0.850	3.400	A36 (36 ksi)
L12	110.25-110.00	0.25	0.000	12	20.462	20.500	0.925	3.700	A572-65 (65 ksi)
L13	110.00-109.50	0.50	0.000	12	20.500	20.576	0.925	3.700	A572-65 (65 ksi)
L14	109.50-109.25	0.25	0.000	12	20.576	20.613	0.637	2.550	A572-65 (65 ksi)
L15	109.25-104.25	5.00	0.000	12	20.613	21.370	0.613	2.450	A572-65 (65 ksi)
L16	104.25-99.25	5.00	0.000	12	21.370	22.126	0.600	2.400	A572-65 (65 ksi)
L17	99.25-94.25	5.00	0.000	12	22.126	22.882	0.588	2.350	A572-65 (65 ksi)
L18	94.25-90.25	4.00	0.000	12	22.882	23.487	0.575	2.300	A572-65 (65 ksi)
L19	90.25-90.00	0.25	0.000	12	23.487	23.525	0.575	2.300	A572-65 (65 ksi)
L20	90.00-85.00	5.00	0.000	12	23.525	24.281	0.563	2.250	A572-65 (65 ksi)
L21	85.00-80.00	5.00	0.000	12	24.281	25.038	0.550	2.200	A572-65 (65 ksi)
L22	80.00-75.00	5.00	0.000	12	25.038	25.794	0.537	2.150	A572-65 (65 ksi)
L23	75.00-70.00	5.00	3.260	12	25.794	26.550	0.537	2.150	A572-65 (65 ksi)
L24	70.00-69.00	4.26	0.000	12	25.557	26.200	0.675	2.700	A572-65 (65 ksi)
L25	69.00-64.00	5.00	0.000	12	26.200	26.955	0.662	2.650	A572-65 (65 ksi)
L26	64.00-59.00	5.00	0.000	12	26.955	27.710	0.650	2.600	A572-65 (65 ksi)
L27	59.00-56.50	2.50	0.000	12	27.710	28.088	0.637	2.550	A572-65 (65 ksi)
L28	56.50-56.25	0.25	0.000	12	28.088	28.126	0.637	2.550	A572-65 (65 ksi)
L29	56.25-51.25	5.00	0.000	12	28.126	28.881	0.637	2.550	A572-65 (65 ksi)
L30	51.25-46.25	5.00	0.000	12	28.881	29.636	0.625	2.500	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L31	46.25-41.25	5.00	0.000	12	29.636	30.391	0.613	2.450	A572-65 (65 ksi)
L32	41.25-36.25	5.00	0.000	12	30.391	31.146	0.600	2.400	A572-65 (65 ksi)
L33	36.25-30.00	6.25	3.930	12	31.146	32.090	0.600	2.400	A572-65 (65 ksi)
L34	30.00-28.93	5.00	0.000	12	30.871	31.627	0.662	2.650	A572-65 (65 ksi)
L35	28.93-28.75	0.18	0.000	12	31.627	31.654	0.662	2.650	A572-65 (65 ksi)
L36	28.75-28.50	0.25	0.000	12	31.654	31.692	0.662	2.650	A572-65 (65 ksi)
L37	28.50-23.50	5.00	0.000	12	31.692	32.448	0.650	2.600	A572-65 (65 ksi)
L38	23.50-18.50	5.00	0.000	12	32.448	33.204	0.650	2.600	A572-65 (65 ksi)
L39	18.50-13.50	5.00	0.000	12	33.204	33.959	0.637	2.550	A572-65 (65 ksi)
L40	13.50-8.50	5.00	0.000	12	33.959	34.715	0.637	2.550	A572-65 (65 ksi)
L41	8.50-3.50	5.00	0.000	12	34.715	35.471	0.625	2.500	A572-65 (65 ksi)
L42	3.50-2.75	0.75	0.000	12	35.471	35.584	0.625	2.500	A572-65 (65 ksi)
L43	2.75-2.50	0.25	0.000	12	35.584	35.622	0.375	1.500	A572-65 (65 ksi)
L44	2.50-0.00	2.50		12	35.622	36.000	0.375	1.500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	14.923	11.471	297.322	5.101	7.511	39.585	602.454	5.646	3.216	12.864
	15.700	12.075	346.781	5.370	7.900	43.899	702.673	5.943	3.417	13.668
L2	15.700	12.075	346.781	5.370	7.900	43.899	702.673	5.943	3.417	13.668
	16.476	12.679	401.443	5.638	8.288	48.437	813.432	6.240	3.618	14.472
L3	16.476	12.679	401.443	5.638	8.288	48.437	813.432	6.240	3.618	14.472
	17.253	13.283	461.566	5.907	8.677	53.197	935.258	6.537	3.819	15.276
L4	17.253	13.283	461.566	5.907	8.677	53.197	935.258	6.537	3.819	15.276
	18.029	13.886	527.411	6.176	9.065	58.181	1068.678	6.834	4.020	16.08
L5	18.029	13.886	527.411	6.176	9.065	58.181	1068.678	6.834	4.020	16.08
	18.146	13.977	537.797	6.216	9.123	58.948	1089.723	6.879	4.050	16.201
L6	18.022	32.868	1214.220	6.090	9.123	133.090	2460.340	16.177	3.112	5.187
	18.061	32.941	1222.267	6.104	9.143	133.688	2476.645	16.212	3.122	5.204
L7	18.070	31.614	1176.500	6.113	9.143	128.682	2383.907	15.560	3.189	5.546
	18.846	33.003	1338.438	6.381	9.531	140.427	2712.038	16.243	3.390	5.896
L8	18.851	32.308	1312.098	6.386	9.531	137.663	2658.666	15.901	3.424	6.087
	19.627	33.667	1484.661	6.654	9.920	149.668	3008.326	16.570	3.625	6.444
L9	19.632	32.941	1454.599	6.659	9.920	146.637	2947.412	16.212	3.658	6.651
	20.408	34.269	1637.749	6.927	10.308	158.878	3318.524	16.866	3.859	7.017
L10	20.412	33.512	1603.632	6.932	10.308	155.569	3249.392	16.493	3.893	7.242
	20.956	34.420	1737.644	7.120	10.580	164.236	3520.938	16.941	4.033	7.504
L11	20.846	53.577	2620.391	7.008	10.580	247.670	5309.622	26.369	3.196	3.76
	20.884	53.679	2635.479	7.021	10.600	248.640	5340.196	26.419	3.206	3.772
L12	20.858	58.192	2835.108	6.994	10.599	267.478	5744.698	28.640	3.005	3.249

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	20.897	58.304	2851.602	7.008	10.619	268.538	5778.118	28.696	3.015	3.259
L13	20.897	58.304	2851.602	7.008	10.619	268.538	5778.118	28.696	3.015	3.259
	20.975	58.529	2884.780	7.035	10.658	270.664	5845.346	28.806	3.035	3.281
L14	21.077	40.928	2076.706	7.138	10.658	194.846	4207.969	20.144	3.806	5.97
	21.116	41.006	2088.544	7.151	10.678	195.598	4231.956	20.182	3.816	5.986
L15	21.125	39.447	2014.183	7.160	10.678	188.633	4081.282	19.415	3.883	6.339
	21.907	40.938	2251.404	7.431	11.069	203.388	4561.955	20.149	4.086	6.67
L16	21.912	40.127	2209.444	7.436	11.069	199.597	4476.932	19.749	4.119	6.865
	22.695	41.588	2459.684	7.706	11.461	214.609	4983.986	20.468	4.322	7.203
L17	22.699	40.745	2412.638	7.711	11.461	210.504	4888.660	20.054	4.355	7.413
	23.482	42.176	2675.801	7.981	11.853	225.749	5421.899	20.758	4.558	7.758
L18	23.487	41.302	2623.277	7.986	11.853	221.318	5315.470	20.327	4.591	7.985
	24.113	42.422	2842.558	8.203	12.166	233.641	5759.793	20.879	4.754	8.267
L19	24.113	42.422	2842.558	8.203	12.166	233.641	5759.793	20.879	4.754	8.267
	24.152	42.492	2856.655	8.216	12.186	234.422	5788.357	20.913	4.764	8.285
L20	24.156	41.591	2799.122	8.221	12.186	229.701	5671.780	20.470	4.797	8.528
	24.939	42.961	3084.890	8.491	12.578	245.267	6250.824	21.144	5.000	8.889
L21	24.944	42.028	3021.109	8.496	12.578	240.196	6121.585	20.685	5.033	9.152
	25.727	43.367	3319.234	8.767	12.969	255.928	6725.668	21.344	5.236	9.52
L22	25.731	42.403	3248.767	8.771	12.969	250.494	6582.882	20.870	5.270	9.804
	26.514	43.712	3558.991	9.042	13.361	266.368	7211.481	21.514	5.472	10.181
L23	26.514	43.712	3558.991	9.042	13.361	266.368	7211.481	21.514	5.472	10.181
	27.297	45.021	3888.361	9.312	13.753	282.730	7878.873	22.158	5.675	10.558
L24	26.730	54.081	4273.636	8.908	13.238	322.819	8659.545	26.617	5.040	7.467
	26.886	55.479	4613.775	9.138	13.572	339.955	9348.758	27.305	5.213	7.722
L25	26.891	54.478	4534.990	9.143	13.572	334.150	9189.120	26.813	5.246	7.919
	27.673	56.089	4949.271	9.413	13.963	354.459	10028.564	27.605	5.449	8.224
L26	27.677	55.057	4862.817	9.417	13.963	348.268	9853.386	27.097	5.482	8.434
	28.459	56.638	5293.713	9.688	14.354	368.797	10726.498	27.875	5.684	8.745
L27	28.463	55.574	5199.109	9.692	14.354	362.206	10534.805	27.352	5.718	8.969
	28.854	56.349	5419.670	9.827	14.550	372.497	10981.721	27.733	5.819	9.128
L28	28.854	56.349	5419.670	9.827	14.550	372.497	10981.721	27.733	5.819	9.128
	28.893	56.427	5442.063	9.841	14.569	373.534	11027.095	27.771	5.829	9.144
L29	28.893	56.427	5442.063	9.841	14.569	373.534	11027.095	27.771	5.829	9.144
	29.675	57.977	5902.971	10.111	14.960	394.576	11961.019	28.534	6.032	9.461
L30	29.679	56.865	5794.914	10.116	14.960	387.353	11742.066	27.987	6.065	9.704
	30.461	58.385	6272.020	10.386	15.351	408.563	12708.813	28.735	6.267	10.028
L31	30.465	57.241	6154.528	10.390	15.351	400.909	12470.742	28.173	6.301	10.287
	31.247	58.731	6647.495	10.661	15.743	422.263	13469.627	28.905	6.503	10.618
L32	31.251	57.556	6520.036	10.665	15.743	414.166	13211.360	28.327	6.537	10.895
	32.033	59.015	7028.485	10.936	16.134	435.640	14241.617	29.045	6.739	11.232
L33	32.033	59.015	7028.485	10.936	16.134	435.640	14241.617	29.045	6.739	11.232
	33.010	60.839	7700.360	11.273	16.623	463.246	15603.018	29.943	6.992	11.654
L34	32.342	64.443	7506.484	10.815	15.991	469.407	15210.172	31.717	6.498	9.808
	32.509	66.056	8084.072	11.085	16.383	493.445	16380.522	32.511	6.701	10.114
L35	32.509	66.056	8084.072	11.085	16.383	493.445	16380.522	32.511	6.701	10.114
	32.537	66.114	8105.400	11.095	16.397	494.322	16423.738	32.539	6.708	10.125
L36	32.537	66.114	8105.400	11.095	16.397	494.322	16423.738	32.539	6.708	10.125
	32.577	66.194	8135.084	11.109	16.417	495.541	16483.885	32.579	6.718	10.14
L37	32.581	64.971	7991.241	11.113	16.417	486.779	16192.422	31.977	6.752	10.387
	33.363	66.553	8589.226	11.384	16.808	511.018	17404.100	32.755	6.954	10.699
L38	33.363	66.553	8589.226	11.384	16.808	511.018	17404.100	32.755	6.954	10.699
	34.146	68.135	9216.321	11.654	17.200	535.847	18674.764	33.534	7.157	11.01
L39	34.150	66.850	9049.500	11.659	17.200	526.148	18336.741	32.902	7.190	11.279
	34.933	68.402	9694.255	11.929	17.591	551.091	19643.189	33.665	7.393	11.596
L40	34.933	68.402	9694.255	11.929	17.591	551.091	19643.189	33.665	7.393	11.596
	35.715	69.953	10368.930	12.200	17.982	576.613	21010.263	34.429	7.595	11.914
L41	35.719	68.607	10176.808	12.204	17.982	565.929	20620.973	33.766	7.629	12.206
	36.502	70.128	10868.754	12.475	18.374	591.530	22023.043	34.515	7.831	12.53
L42	36.502	70.128	10868.754	12.475	18.374	591.530	22023.043	34.515	7.831	12.53
	36.619	70.356	10975.176	12.515	18.433	595.419	22238.681	34.627	7.862	12.579
L43	36.707	42.515	6727.392	12.605	18.433	364.971	13631.519	20.925	8.532	22.751

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	36.746	42.561	6749.075	12.618	18.452	365.759	13675.455	20.947	8.542	22.778
L44	36.746	42.561	6749.075	12.618	18.452	365.759	13675.455	20.947	8.542	22.778
	37.138	43.017	6968.474	12.754	18.648	373.685	14120.018	21.172	8.643	23.048

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 150.00-145.00				1	1	1			
L2 145.00-140.00				1	1	1			
L3 140.00-135.00				1	1	1			
L4 135.00-130.00				1	1	1			
L5 130.00-129.25				1	1	1			
L6 129.25-129.00				1	1	0.881238			
L7 129.00-124.00				1	1	0.897866			
L8 124.00-119.00				1	1	0.898101			
L9 119.00-114.00				1	1	0.899935			
L10 114.00-110.50				1	1	0.908254			
L11 110.50-110.25				1	1	0.582953			
L12 110.25-110.00				1	1	0.53723			
L13 110.00-109.50				1	1	0.536203			
L14 109.50-109.25				1	1	0.888201			
L15 109.25-104.25				1	1	0.904531			
L16 104.25-99.25				1	1	0.905038			
L17 99.25-94.25				1	1	0.906857			
L18 94.25-90.25				1	1	0.91308			
L19 90.25-90.00				1	1	0.912292			
L20 90.00-85.00				1	1	0.916511			
L21 85.00-80.00				1	1	0.921952			
L22 80.00-75.00				1	1	0.928604			
L23 75.00-70.00				1	1	0.923825			
L24 70.00-69.00				1	1	0.920803			
L25 69.00-64.00				1	1	0.924334			
L26 64.00-59.00				1	1	0.928802			

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L27 59.00-56.50				1	1	0.940299			
L28 56.50-56.25				1	1	0.939681			
L29 56.25-51.25				1	1	0.927664			
L30 51.25-46.25				1	1	0.934195			
L31 46.25-41.25				1	1	0.941626			
L32 41.25-36.25				1	1	0.949963			
L33 36.25-30.00				1	1	0.945097			
L34 30.00-28.93				1	1	0.950305			
L35 28.93-28.75				1	1	0.949968			
L36 28.75-28.50				1	1	0.9495			
L37 28.50-23.50				1	1	0.95809			
L38 23.50-18.50				1	1	0.949242			
L39 18.50-13.50				1	1	0.958881			
L40 13.50-8.50				1	1	0.950661			
L41 8.50-3.50				1	1	0.961309			
L42 3.50-2.75				1	1	0.960138			
L43 2.75-2.50				1	1	1			
L44 2.50-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
misc Safety Line 3/8	A	No	Surface Ar (CaAa)	150.00 - 0.00	1	1	0.500 0.500	0.375		0.220
*** PL 1.25x5	A	No	Surface Af (CaAa)	30.75 - 0.00	1	1	0.250 0.250	5.000	12.500	0.000
PL 1.25x5	C	No	Surface Af (CaAa)	30.75 - 0.00	1	1	0.500 0.500	5.000	12.500	0.000
PL 1.25x5	C	No	Surface Af (CaAa)	30.75 - 0.00	1	1	-0.250 -0.250	5.000	12.500	0.000
PL 1.25x5	B	No	Surface Af (CaAa)	30.75 - 0.00	1	1	0.000 0.000	5.000	12.500	0.000
* PL 1.25x5	A	No	Surface Af (CaAa)	58.50 - 28.50	1	1	0.500 0.500	5.000	12.500	0.000
PL 1.25x5	A	No	Surface Af (CaAa)	58.50 - 28.50	1	1	-0.250 -0.250	5.000	12.500	0.000

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
PL 1.25x5	C	No	Surface Af (CaAa)	58.50 - 28.50	1	1	0.000 0.000	5.000	12.500	0.000
PL 1.25x5	B	No	Surface Af (CaAa)	58.50 - 28.50	1	1	0.250 0.250	5.000	12.500	0.000
*										
PL 1.25x5	A	No	Surface Af (CaAa)	74.25 - 56.25	1	1	0.250 0.250	5.000	12.500	0.000
PL 1.25x5	C	No	Surface Af (CaAa)	74.25 - 56.25	1	1	0.500 0.500	5.000	12.500	0.000
PL 1.25x5	C	No	Surface Af (CaAa)	74.25 - 56.25	1	1	-0.250 -0.250	5.000	12.500	0.000
PL 1.25x5	B	No	Surface Af (CaAa)	74.25 - 56.25	1	1	0.000 0.000	5.000	12.500	0.000
*										
PL 1.25x4	A	No	Surface Af (CaAa)	91.75 - 72.00	1	1	0.500 0.500	4.000	10.500	0.000
PL 1.25x4	A	No	Surface Af (CaAa)	91.75 - 72.00	1	1	-0.250 -0.250	4.000	10.500	0.000
PL 1.25x4	C	No	Surface Af (CaAa)	91.75 - 72.00	1	1	0.000 0.000	4.000	10.500	0.000
PL 1.25x4	B	No	Surface Af (CaAa)	91.75 - 72.00	1	1	0.250 0.250	4.000	10.500	0.000
*										
PL 1.25x4	A	No	Surface Af (CaAa)	109.75 - 90.00	1	1	0.250 0.250	4.000	10.500	0.000
PL 1.25x4	C	No	Surface Af (CaAa)	109.75 - 90.00	1	1	0.500 0.500	4.000	10.500	0.000
PL 1.25x4	C	No	Surface Af (CaAa)	109.75 - 90.00	1	1	-0.250 -0.250	4.000	10.500	0.000
PL 1.25x4	B	No	Surface Af (CaAa)	109.75 - 90.00	1	1	0.000 0.000	4.000	10.500	0.000
*										
PL 1.25" x 3"	A	No	Surface Af (CaAa)	130.25 - 110.25	1	1	0.250 0.250	3.000	8.500	0.000
PL 1.25" x 3"	C	No	Surface Af (CaAa)	130.25 - 110.25	1	1	0.500 0.500	3.000	8.500	0.000
PL 1.25" x 3"	C	No	Surface Af (CaAa)	130.25 - 110.25	1	1	-0.250 -0.250	3.000	8.500	0.000
PL 1.25" x 3"	B	No	Surface Af (CaAa)	130.25 - 110.25	1	1	0.000 0.000	3.000	8.500	0.000
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
150									
LDF6-50A(1-1/4)	C	No	No	Inside Pole	150.00 - 0.00	6	No Ice	0.00	0.600
							1/2" Ice	0.00	0.600
							1" Ice	0.00	0.600
							2" Ice	0.00	0.600
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	150.00 - 0.00	6	No Ice	0.00	0.584
							1/2" Ice	0.00	0.584
							1" Ice	0.00	0.584
							2" Ice	0.00	0.584

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
FB-L98B-034-XXX(3/8)	C	No	No	Inside Pole	150.00 - 0.00	2	No Ice	0.00	0.057
							1/2" Ice	0.00	0.057
							1" Ice	0.00	0.057
							2" Ice	0.00	0.057
104									
LDF2-50(3/8)	C	No	No	Inside Pole	104.00 - 0.00	1	No Ice	0.00	0.080
							1/2" Ice	0.00	0.080
							1" Ice	0.00	0.080
							2" Ice	0.00	0.080
***									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	150.00-145.00	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.04
L2	145.00-140.00	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.04
L3	140.00-135.00	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.04
L4	135.00-130.00	A	0.000	0.000	0.313	0.000	0.00
		B	0.000	0.000	0.125	0.000	0.00
		C	0.000	0.000	0.250	0.000	0.04
L5	130.00-129.25	A	0.000	0.000	0.403	0.000	0.00
		B	0.000	0.000	0.375	0.000	0.00
		C	0.000	0.000	0.750	0.000	0.01
L6	129.25-129.00	A	0.000	0.000	0.134	0.000	0.00
		B	0.000	0.000	0.125	0.000	0.00
		C	0.000	0.000	0.250	0.000	0.00
L7	129.00-124.00	A	0.000	0.000	2.688	0.000	0.00
		B	0.000	0.000	2.500	0.000	0.00
		C	0.000	0.000	5.000	0.000	0.04
L8	124.00-119.00	A	0.000	0.000	2.688	0.000	0.00
		B	0.000	0.000	2.500	0.000	0.00
		C	0.000	0.000	5.000	0.000	0.04
L9	119.00-114.00	A	0.000	0.000	2.688	0.000	0.00
		B	0.000	0.000	2.500	0.000	0.00
		C	0.000	0.000	5.000	0.000	0.04
L10	114.00-110.50	A	0.000	0.000	1.881	0.000	0.00
		B	0.000	0.000	1.750	0.000	0.00
		C	0.000	0.000	3.500	0.000	0.03
L11	110.50-110.25	A	0.000	0.000	0.134	0.000	0.00
		B	0.000	0.000	0.125	0.000	0.00
		C	0.000	0.000	0.250	0.000	0.00
L12	110.25-110.00	A	0.000	0.000	0.009	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L13	110.00-109.50	A	0.000	0.000	0.185	0.000	0.00
		B	0.000	0.000	0.167	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	0.333	0.000	0.00
L14	109.50-109.25	A	0.000	0.000	0.176	0.000	0.00
		B	0.000	0.000	0.167	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.00
L15	109.25-104.25	A	0.000	0.000	3.521	0.000	0.00
		B	0.000	0.000	3.333	0.000	0.00
		C	0.000	0.000	6.667	0.000	0.04
L16	104.25-99.25	A	0.000	0.000	3.521	0.000	0.00
		B	0.000	0.000	3.333	0.000	0.00
		C	0.000	0.000	6.667	0.000	0.04
L17	99.25-94.25	A	0.000	0.000	3.521	0.000	0.00
		B	0.000	0.000	3.333	0.000	0.00
		C	0.000	0.000	6.667	0.000	0.04
L18	94.25-90.25	A	0.000	0.000	4.817	0.000	0.00
		B	0.000	0.000	3.667	0.000	0.00
		C	0.000	0.000	6.333	0.000	0.03
L19	90.25-90.00	A	0.000	0.000	0.509	0.000	0.00
		B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	0.500	0.000	0.00
L20	90.00-85.00	A	0.000	0.000	6.854	0.000	0.00
		B	0.000	0.000	3.333	0.000	0.00
		C	0.000	0.000	3.333	0.000	0.04
L21	85.00-80.00	A	0.000	0.000	6.854	0.000	0.00
		B	0.000	0.000	3.333	0.000	0.00
		C	0.000	0.000	3.333	0.000	0.04
L22	80.00-75.00	A	0.000	0.000	6.854	0.000	0.00
		B	0.000	0.000	3.333	0.000	0.00
		C	0.000	0.000	3.333	0.000	0.04
L23	75.00-70.00	A	0.000	0.000	7.729	0.000	0.00
		B	0.000	0.000	5.542	0.000	0.00
		C	0.000	0.000	9.083	0.000	0.04
L24	70.00-69.00	A	0.000	0.000	0.871	0.000	0.00
		B	0.000	0.000	0.833	0.000	0.00
		C	0.000	0.000	1.667	0.000	0.01
L25	69.00-64.00	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L26	64.00-59.00	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L27	59.00-56.50	A	0.000	0.000	5.510	0.000	0.00
		B	0.000	0.000	3.750	0.000	0.00
		C	0.000	0.000	5.833	0.000	0.02
L28	56.50-56.25	A	0.000	0.000	0.634	0.000	0.00
		B	0.000	0.000	0.417	0.000	0.00
		C	0.000	0.000	0.625	0.000	0.00
L29	56.25-51.25	A	0.000	0.000	8.521	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	4.167	0.000	0.04
L30	51.25-46.25	A	0.000	0.000	8.521	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	4.167	0.000	0.04
L31	46.25-41.25	A	0.000	0.000	8.521	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	4.167	0.000	0.04
L32	41.25-36.25	A	0.000	0.000	8.521	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	4.167	0.000	0.04
L33	36.25-30.00	A	0.000	0.000	11.276	0.000	0.00
		B	0.000	0.000	5.833	0.000	0.00
		C	0.000	0.000	6.458	0.000	0.05

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L34	30.00-28.93	A	0.000	0.000	2.715	0.000	0.00
		B	0.000	0.000	1.783	0.000	0.00
		C	0.000	0.000	2.675	0.000	0.01
L35	28.93-28.75	A	0.000	0.000	0.457	0.000	0.00
		B	0.000	0.000	0.300	0.000	0.00
		C	0.000	0.000	0.450	0.000	0.00
L36	28.75-28.50	A	0.000	0.000	0.634	0.000	0.00
		B	0.000	0.000	0.417	0.000	0.00
		C	0.000	0.000	0.625	0.000	0.00
L37	28.50-23.50	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L38	23.50-18.50	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L39	18.50-13.50	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L40	13.50-8.50	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L41	8.50-3.50	A	0.000	0.000	4.354	0.000	0.00
		B	0.000	0.000	4.167	0.000	0.00
		C	0.000	0.000	8.333	0.000	0.04
L42	3.50-2.75	A	0.000	0.000	0.653	0.000	0.00
		B	0.000	0.000	0.625	0.000	0.00
		C	0.000	0.000	1.250	0.000	0.01
L43	2.75-2.50	A	0.000	0.000	0.218	0.000	0.00
		B	0.000	0.000	0.208	0.000	0.00
		C	0.000	0.000	0.417	0.000	0.00
L44	2.50-0.00	A	0.000	0.000	2.177	0.000	0.00
		B	0.000	0.000	2.083	0.000	0.00
		C	0.000	0.000	4.167	0.000	0.02

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	150.00-145.00	A	1.481	0.000	0.000	1.668	0.000	0.02
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.04
L2	145.00-140.00	A	1.476	0.000	0.000	1.663	0.000	0.02
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.04
L3	140.00-135.00	A	1.471	0.000	0.000	1.658	0.000	0.02
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.04
L4	135.00-130.00	A	1.465	0.000	0.000	1.851	0.000	0.02
		B		0.000	0.000	0.198	0.000	0.00
		C		0.000	0.000	0.397	0.000	0.04
L5	130.00-129.25	A	1.462	0.000	0.000	0.842	0.000	0.01
		B		0.000	0.000	0.594	0.000	0.01
		C		0.000	0.000	1.189	0.000	0.02
L6	129.25-129.00	A	1.461	0.000	0.000	0.281	0.000	0.00
		B		0.000	0.000	0.198	0.000	0.00
		C		0.000	0.000	0.396	0.000	0.01
L7	129.00-124.00	A	1.458	0.000	0.000	5.604	0.000	0.06

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	3.958	0.000	0.04
		C		0.000	0.000	7.917	0.000	0.12
L8	124.00-119.00	A	1.452	0.000	0.000	5.592	0.000	0.06
		B		0.000	0.000	3.952	0.000	0.04
		C		0.000	0.000	7.905	0.000	0.12
L9	119.00-114.00	A	1.446	0.000	0.000	5.580	0.000	0.06
		B		0.000	0.000	3.946	0.000	0.04
		C		0.000	0.000	7.893	0.000	0.11
L10	114.00-110.50	A	1.441	0.000	0.000	3.899	0.000	0.04
		B		0.000	0.000	2.759	0.000	0.03
		C		0.000	0.000	5.517	0.000	0.08
L11	110.50-110.25	A	1.439	0.000	0.000	0.278	0.000	0.00
		B		0.000	0.000	0.197	0.000	0.00
		C		0.000	0.000	0.394	0.000	0.01
L12	110.25-110.00	A	1.438	0.000	0.000	0.081	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L13	110.00-109.50	A	1.438	0.000	0.000	0.401	0.000	0.00
		B		0.000	0.000	0.239	0.000	0.00
		C		0.000	0.000	0.477	0.000	0.01
L14	109.50-109.25	A	1.437	0.000	0.000	0.320	0.000	0.00
		B		0.000	0.000	0.239	0.000	0.00
		C		0.000	0.000	0.477	0.000	0.01
L15	109.25-104.25	A	1.434	0.000	0.000	6.388	0.000	0.06
		B		0.000	0.000	4.767	0.000	0.04
		C		0.000	0.000	9.534	0.000	0.12
L16	104.25-99.25	A	1.427	0.000	0.000	6.375	0.000	0.06
		B		0.000	0.000	4.760	0.000	0.04
		C		0.000	0.000	9.521	0.000	0.12
L17	99.25-94.25	A	1.420	0.000	0.000	6.360	0.000	0.06
		B		0.000	0.000	4.753	0.000	0.04
		C		0.000	0.000	9.506	0.000	0.12
L18	94.25-90.25	A	1.413	0.000	0.000	7.925	0.000	0.07
		B		0.000	0.000	5.221	0.000	0.05
		C		0.000	0.000	9.018	0.000	0.11
L19	90.25-90.00	A	1.410	0.000	0.000	0.791	0.000	0.01
		B		0.000	0.000	0.474	0.000	0.00
		C		0.000	0.000	0.711	0.000	0.01
L20	90.00-85.00	A	1.406	0.000	0.000	11.071	0.000	0.10
		B		0.000	0.000	4.739	0.000	0.04
		C		0.000	0.000	4.739	0.000	0.08
L21	85.00-80.00	A	1.397	0.000	0.000	11.046	0.000	0.10
		B		0.000	0.000	4.731	0.000	0.04
		C		0.000	0.000	4.731	0.000	0.08
L22	80.00-75.00	A	1.389	0.000	0.000	11.020	0.000	0.10
		B		0.000	0.000	4.722	0.000	0.04
		C		0.000	0.000	4.722	0.000	0.08
L23	75.00-70.00	A	1.379	0.000	0.000	11.936	0.000	0.11
		B		0.000	0.000	7.542	0.000	0.07
		C		0.000	0.000	12.256	0.000	0.14
L24	70.00-69.00	A	1.374	0.000	0.000	1.423	0.000	0.01
		B		0.000	0.000	1.109	0.000	0.01
		C		0.000	0.000	2.218	0.000	0.03
L25	69.00-64.00	A	1.368	0.000	0.000	7.089	0.000	0.06
		B		0.000	0.000	5.534	0.000	0.05
		C		0.000	0.000	11.068	0.000	0.13
L26	64.00-59.00	A	1.357	0.000	0.000	7.068	0.000	0.06
		B		0.000	0.000	5.524	0.000	0.05
		C		0.000	0.000	11.047	0.000	0.13
L27	59.00-56.50	A	1.348	0.000	0.000	7.937	0.000	0.07
		B		0.000	0.000	4.964	0.000	0.04

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	7.721	0.000	0.08
L28	56.50-56.25	A	1.345	0.000	0.000	0.903	0.000	0.01
		B		0.000	0.000	0.551	0.000	0.00
		C		0.000	0.000	0.827	0.000	0.01
L29	56.25-51.25	A	1.339	0.000	0.000	12.537	0.000	0.11
		B		0.000	0.000	5.505	0.000	0.05
		C		0.000	0.000	5.505	0.000	0.08
L30	51.25-46.25	A	1.326	0.000	0.000	12.498	0.000	0.11
		B		0.000	0.000	5.492	0.000	0.05
		C		0.000	0.000	5.492	0.000	0.08
L31	46.25-41.25	A	1.311	0.000	0.000	12.455	0.000	0.10
		B		0.000	0.000	5.478	0.000	0.04
		C		0.000	0.000	5.478	0.000	0.08
L32	41.25-36.25	A	1.296	0.000	0.000	12.408	0.000	0.10
		B		0.000	0.000	5.462	0.000	0.04
		C		0.000	0.000	5.462	0.000	0.08
L33	36.25-30.00	A	1.275	0.000	0.000	16.250	0.000	0.13
		B		0.000	0.000	7.619	0.000	0.06
		C		0.000	0.000	8.435	0.000	0.11
L34	30.00-28.93	A	1.261	0.000	0.000	3.807	0.000	0.03
		B		0.000	0.000	2.329	0.000	0.02
		C		0.000	0.000	3.494	0.000	0.04
L35	28.93-28.75	A	1.258	0.000	0.000	0.638	0.000	0.01
		B		0.000	0.000	0.391	0.000	0.00
		C		0.000	0.000	0.586	0.000	0.01
L36	28.75-28.50	A	1.257	0.000	0.000	0.886	0.000	0.01
		B		0.000	0.000	0.542	0.000	0.00
		C		0.000	0.000	0.814	0.000	0.01
L37	28.50-23.50	A	1.245	0.000	0.000	6.844	0.000	0.06
		B		0.000	0.000	5.412	0.000	0.04
		C		0.000	0.000	10.823	0.000	0.12
L38	23.50-18.50	A	1.219	0.000	0.000	6.791	0.000	0.05
		B		0.000	0.000	5.385	0.000	0.04
		C		0.000	0.000	10.771	0.000	0.12
L39	18.50-13.50	A	1.186	0.000	0.000	6.726	0.000	0.05
		B		0.000	0.000	5.353	0.000	0.04
		C		0.000	0.000	10.705	0.000	0.11
L40	13.50-8.50	A	1.142	0.000	0.000	6.639	0.000	0.05
		B		0.000	0.000	5.309	0.000	0.04
		C		0.000	0.000	10.618	0.000	0.11
L41	8.50-3.50	A	1.075	0.000	0.000	6.504	0.000	0.05
		B		0.000	0.000	5.242	0.000	0.03
		C		0.000	0.000	10.483	0.000	0.11
L42	3.50-2.75	A	1.007	0.000	0.000	0.955	0.000	0.01
		B		0.000	0.000	0.776	0.000	0.00
		C		0.000	0.000	1.552	0.000	0.02
L43	2.75-2.50	A	0.990	0.000	0.000	0.317	0.000	0.00
		B		0.000	0.000	0.258	0.000	0.00
		C		0.000	0.000	0.516	0.000	0.00
L44	2.50-0.00	A	0.919	0.000	0.000	3.096	0.000	0.02
		B		0.000	0.000	2.543	0.000	0.01
		C		0.000	0.000	5.086	0.000	0.05

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	150.00-145.00	0.000	-0.229	0.000	-1.177
L2	145.00-140.00	0.000	-0.229	0.000	-1.190
L3	140.00-135.00	0.000	-0.229	0.000	-1.201
L4	135.00-130.00	0.052	-0.408	0.050	-1.322
L5	130.00-129.25	0.410	-1.615	0.448	-2.191
L6	129.25-129.00	0.412	-1.624	0.450	-2.202
L7	129.00-124.00	0.417	-1.643	0.457	-2.235
L8	124.00-119.00	0.426	-1.681	0.470	-2.296
L9	119.00-114.00	0.436	-1.717	0.482	-2.356
L10	114.00-110.50	0.443	-1.746	0.493	-2.406
L11	110.50-110.25	0.447	-1.763	0.498	-2.432
L12	110.25-110.00	0.000	-0.231	0.000	-1.256
L13	110.00-109.50	0.414	-1.675	0.389	-2.188
L14	109.50-109.25	0.509	-1.981	0.539	-2.522
L15	109.25-104.25	0.515	-2.003	0.546	-2.555
L16	104.25-99.25	0.526	-2.045	0.560	-2.616
L17	99.25-94.25	0.536	-2.086	0.573	-2.676
L18	94.25-90.25	0.923	-1.296	0.978	-1.750
L19	90.25-90.00	1.337	-0.414	1.403	-0.727
L20	90.00-85.00	1.710	1.613	1.655	1.090
L21	85.00-80.00	1.745	1.646	1.687	1.113
L22	80.00-75.00	1.775	1.674	1.719	1.137
L23	75.00-70.00	1.173	-1.089	1.250	-1.441
L24	70.00-69.00	0.643	-2.480	0.674	-3.044
L25	69.00-64.00	0.649	-2.505	0.682	-3.075
L26	64.00-59.00	0.660	-2.546	0.695	-3.130
L27	59.00-56.50	1.481	-0.775	1.539	-1.117
L28	56.50-56.25	1.619	-0.488	1.680	-0.797
L29	56.25-51.25	2.088	1.992	1.985	1.427
L30	51.25-46.25	2.120	2.023	2.017	1.454
L31	46.25-41.25	2.151	2.053	2.047	1.480
L32	41.25-36.25	2.182	2.082	2.078	1.507
L33	36.25-30.00	2.169	1.637	2.072	1.114
L34	30.00-28.93	1.758	-0.530	1.834	-0.857
L35	28.93-28.75	1.762	-0.531	1.838	-0.855
L36	28.75-28.50	1.763	-0.531	1.839	-0.856
L37	28.50-23.50	0.722	-2.784	0.768	-3.426
L38	23.50-18.50	0.731	-2.819	0.778	-3.465
L39	18.50-13.50	0.740	-2.853	0.788	-3.499
L40	13.50-8.50	0.749	-2.887	0.797	-3.526
L41	8.50-3.50	0.757	-2.920	0.805	-3.540
L42	3.50-2.75	0.762	-2.938	0.808	-3.532
L43	2.75-2.50	0.762	-2.938	0.808	-3.524
L44	2.50-0.00	0.764	-2.947	0.808	-3.499

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	3	Safety Line 3/8	145.00 - 150.00	1.0000	1.0000
L2	3	Safety Line 3/8	140.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L3	3	Safety Line 3/8	135.00 - 145.00	1.0000	1.0000
L4	3	Safety Line 3/8	130.00 - 140.00	1.0000	1.0000
L4	36	PL 1.25" x 3"	130.00 - 135.00	1.0000	1.0000
L4	37	PL 1.25" x 3"	130.00 - 130.25	1.0000	1.0000
L4	38	PL 1.25" x 3"	130.00 - 130.25	1.0000	1.0000
L4	39	PL 1.25" x 3"	130.00 - 130.25	1.0000	1.0000
L5	3	Safety Line 3/8	129.25 - 130.00	1.0000	1.0000
L5	36	PL 1.25" x 3"	129.25 - 130.00	1.0000	1.0000
L5	37	PL 1.25" x 3"	129.25 - 130.00	1.0000	1.0000
L5	38	PL 1.25" x 3"	129.25 - 130.00	1.0000	1.0000
L5	39	PL 1.25" x 3"	129.25 - 130.00	1.0000	1.0000
L6	3	Safety Line 3/8	129.00 - 129.25	1.0000	1.0000
L6	36	PL 1.25" x 3"	129.00 - 129.25	1.0000	1.0000
L6	37	PL 1.25" x 3"	129.00 - 129.25	1.0000	1.0000
L6	38	PL 1.25" x 3"	129.00 - 129.25	1.0000	1.0000
L6	39	PL 1.25" x 3"	129.00 - 129.25	1.0000	1.0000
L7	3	Safety Line 3/8	124.00 - 129.00	1.0000	1.0000
L7	36	PL 1.25" x 3"	124.00 - 129.00	1.0000	1.0000
L7	37	PL 1.25" x 3"	124.00 - 129.00	1.0000	1.0000
L7	38	PL 1.25" x 3"	124.00 - 129.00	1.0000	1.0000
L7	39	PL 1.25" x 3"	124.00 - 129.00	1.0000	1.0000
L8	3	Safety Line 3/8	119.00 - 124.00	1.0000	1.0000
L8	36	PL 1.25" x 3"	119.00 - 124.00	1.0000	1.0000
L8	37	PL 1.25" x 3"	119.00 - 124.00	1.0000	1.0000
L8	38	PL 1.25" x 3"	119.00 - 124.00	1.0000	1.0000
L8	39	PL 1.25" x 3"	119.00 - 124.00	1.0000	1.0000
L9	3	Safety Line 3/8	114.00 - 119.00	1.0000	1.0000
L9	36	PL 1.25" x 3"	114.00 - 119.00	1.0000	1.0000
L9	37	PL 1.25" x 3"	114.00 - 119.00	1.0000	1.0000
L9	38	PL 1.25" x 3"	114.00 - 119.00	1.0000	1.0000
L9	39	PL 1.25" x 3"	114.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			119.00		
L10	3	Safety Line 3/8	110.50 - 114.00	1.0000	1.0000
L10	36	PL 1.25" x 3"	110.50 - 114.00	1.0000	1.0000
L10	37	PL 1.25" x 3"	110.50 - 114.00	1.0000	1.0000
L10	38	PL 1.25" x 3"	110.50 - 114.00	1.0000	1.0000
L10	39	PL 1.25" x 3"	110.50 - 114.00	1.0000	1.0000
L11	3	Safety Line 3/8	110.25 - 110.50	1.0000	1.0000
L11	36	PL 1.25" x 3"	110.25 - 110.50	1.0000	1.0000
L11	37	PL 1.25" x 3"	110.25 - 110.50	1.0000	1.0000
L11	38	PL 1.25" x 3"	110.25 - 110.50	1.0000	1.0000
L11	39	PL 1.25" x 3"	110.25 - 110.50	1.0000	1.0000
L12	3	Safety Line 3/8	110.00 - 110.25	1.0000	1.0000
L13	3	Safety Line 3/8	109.50 - 110.00	1.0000	1.0000
L13	31	PL 1.25x4	109.50 - 109.75	1.0000	1.0000
L13	32	PL 1.25x4	109.50 - 109.75	1.0000	1.0000
L13	33	PL 1.25x4	109.50 - 109.75	1.0000	1.0000
L13	34	PL 1.25x4	109.50 - 109.75	1.0000	1.0000
L14	3	Safety Line 3/8	109.25 - 109.50	1.0000	1.0000
L14	31	PL 1.25x4	109.25 - 109.50	1.0000	1.0000
L14	32	PL 1.25x4	109.25 - 109.50	1.0000	1.0000
L14	33	PL 1.25x4	109.25 - 109.50	1.0000	1.0000
L14	34	PL 1.25x4	109.25 - 109.50	1.0000	1.0000
L15	3	Safety Line 3/8	104.25 - 109.25	1.0000	1.0000
L15	31	PL 1.25x4	104.25 - 109.25	1.0000	1.0000
L15	32	PL 1.25x4	104.25 - 109.25	1.0000	1.0000
L15	33	PL 1.25x4	104.25 - 109.25	1.0000	1.0000
L15	34	PL 1.25x4	104.25 - 109.25	1.0000	1.0000
L16	3	Safety Line 3/8	99.25 - 104.25	1.0000	1.0000
L16	31	PL 1.25x4	99.25 - 104.25	1.0000	1.0000
L16	32	PL 1.25x4	99.25 - 104.25	1.0000	1.0000
L16	33	PL 1.25x4	99.25 - 104.25	1.0000	1.0000
L16	34	PL 1.25x4	99.25 - 104.25	1.0000	1.0000
L17	3	Safety Line 3/8	94.25 - 99.25	1.0000	1.0000
L17	31	PL 1.25x4	94.25 - 99.25	1.0000	1.0000
L17	32	PL 1.25x4	94.25 - 99.25	1.0000	1.0000
L17	33	PL 1.25x4	94.25 - 99.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L17	34	PL 1.25x4	94.25 - 99.25	1.0000	1.0000
L18	3	Safety Line 3/8	90.25 - 94.25	1.0000	1.0000
L18	26	PL 1.25x4	90.25 - 91.75	1.0000	1.0000
L18	27	PL 1.25x4	90.25 - 91.75	1.0000	1.0000
L18	28	PL 1.25x4	90.25 - 91.75	1.0000	1.0000
L18	29	PL 1.25x4	90.25 - 91.75	1.0000	1.0000
L18	31	PL 1.25x4	90.25 - 94.25	1.0000	1.0000
L18	32	PL 1.25x4	90.25 - 94.25	1.0000	1.0000
L18	33	PL 1.25x4	90.25 - 94.25	1.0000	1.0000
L18	34	PL 1.25x4	90.25 - 94.25	1.0000	1.0000
L19	3	Safety Line 3/8	90.00 - 90.25	1.0000	1.0000
L19	26	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	27	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	28	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	29	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	31	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	32	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	33	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L19	34	PL 1.25x4	90.00 - 90.25	1.0000	1.0000
L20	3	Safety Line 3/8	85.00 - 90.00	1.0000	1.0000
L20	26	PL 1.25x4	85.00 - 90.00	1.0000	1.0000
L20	27	PL 1.25x4	85.00 - 90.00	1.0000	1.0000
L20	28	PL 1.25x4	85.00 - 90.00	1.0000	1.0000
L20	29	PL 1.25x4	85.00 - 90.00	1.0000	1.0000
L21	3	Safety Line 3/8	80.00 - 85.00	1.0000	1.0000
L21	26	PL 1.25x4	80.00 - 85.00	1.0000	1.0000
L21	27	PL 1.25x4	80.00 - 85.00	1.0000	1.0000
L21	28	PL 1.25x4	80.00 - 85.00	1.0000	1.0000
L21	29	PL 1.25x4	80.00 - 85.00	1.0000	1.0000
L22	3	Safety Line 3/8	75.00 - 80.00	1.0000	1.0000
L22	26	PL 1.25x4	75.00 - 80.00	1.0000	1.0000
L22	27	PL 1.25x4	75.00 - 80.00	1.0000	1.0000
L22	28	PL 1.25x4	75.00 - 80.00	1.0000	1.0000
L22	29	PL 1.25x4	75.00 - 80.00	1.0000	1.0000
L23	3	Safety Line 3/8	70.00 - 75.00	1.0000	1.0000
L23	21	PL 1.25x5	70.00 - 74.25	1.0000	1.0000
L23	22	PL 1.25x5	70.00 - 74.25	1.0000	1.0000
L23	23	PL 1.25x5	70.00 - 74.25	1.0000	1.0000
L23	24	PL 1.25x5	70.00 - 74.25	1.0000	1.0000
L23	26	PL 1.25x4	72.00 - 75.00	1.0000	1.0000
L23	27	PL 1.25x4	72.00 - 75.00	1.0000	1.0000
L23	28	PL 1.25x4	72.00 - 75.00	1.0000	1.0000
L23	29	PL 1.25x4	72.00 - 75.00	1.0000	1.0000
L25	3	Safety Line 3/8	64.00 - 69.00	1.0000	1.0000
L25	21	PL 1.25x5	64.00 - 69.00	1.0000	1.0000
L25	22	PL 1.25x5	64.00 - 69.00	1.0000	1.0000
L25	23	PL 1.25x5	64.00 - 69.00	1.0000	1.0000
L25	24	PL 1.25x5	64.00 - 69.00	1.0000	1.0000
L26	3	Safety Line 3/8	59.00 - 64.00	1.0000	1.0000
L26	21	PL 1.25x5	59.00 - 64.00	1.0000	1.0000
L26	22	PL 1.25x5	59.00 - 64.00	1.0000	1.0000
L26	23	PL 1.25x5	59.00 - 64.00	1.0000	1.0000
L26	24	PL 1.25x5	59.00 - 64.00	1.0000	1.0000
L27	3	Safety Line 3/8	56.50 - 59.00	1.0000	1.0000
L27	16	PL 1.25x5	56.50 - 58.50	1.0000	1.0000
L27	17	PL 1.25x5	56.50 - 58.50	1.0000	1.0000
L27	18	PL 1.25x5	56.50 - 58.50	1.0000	1.0000
L27	19	PL 1.25x5	56.50 - 58.50	1.0000	1.0000
L27	21	PL 1.25x5	56.50 - 59.00	1.0000	1.0000
L27	22	PL 1.25x5	56.50 - 59.00	1.0000	1.0000
L27	23	PL 1.25x5	56.50 - 59.00	1.0000	1.0000
L27	24	PL 1.25x5	56.50 - 59.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L28	3	Safety Line 3/8	56.25 - 56.50	1.0000	1.0000
L28	16	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	17	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	18	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	19	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	21	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	22	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	23	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L28	24	PL 1.25x5	56.25 - 56.50	1.0000	1.0000
L29	3	Safety Line 3/8	51.25 - 56.25	1.0000	1.0000
L29	16	PL 1.25x5	51.25 - 56.25	1.0000	1.0000
L29	17	PL 1.25x5	51.25 - 56.25	1.0000	1.0000
L29	18	PL 1.25x5	51.25 - 56.25	1.0000	1.0000
L29	19	PL 1.25x5	51.25 - 56.25	1.0000	1.0000
L30	3	Safety Line 3/8	46.25 - 51.25	1.0000	1.0000
L30	16	PL 1.25x5	46.25 - 51.25	1.0000	1.0000
L30	17	PL 1.25x5	46.25 - 51.25	1.0000	1.0000
L30	18	PL 1.25x5	46.25 - 51.25	1.0000	1.0000
L30	19	PL 1.25x5	46.25 - 51.25	1.0000	1.0000
L31	3	Safety Line 3/8	41.25 - 46.25	1.0000	1.0000
L31	16	PL 1.25x5	41.25 - 46.25	1.0000	1.0000
L31	17	PL 1.25x5	41.25 - 46.25	1.0000	1.0000
L31	18	PL 1.25x5	41.25 - 46.25	1.0000	1.0000
L31	19	PL 1.25x5	41.25 - 46.25	1.0000	1.0000
L32	3	Safety Line 3/8	36.25 - 41.25	1.0000	1.0000
L32	16	PL 1.25x5	36.25 - 41.25	1.0000	1.0000
L32	17	PL 1.25x5	36.25 - 41.25	1.0000	1.0000
L32	18	PL 1.25x5	36.25 - 41.25	1.0000	1.0000
L32	19	PL 1.25x5	36.25 - 41.25	1.0000	1.0000
L33	3	Safety Line 3/8	30.00 - 36.25	1.0000	1.0000
L33	11	PL 1.25x5	30.00 - 30.75	1.0000	1.0000
L33	12	PL 1.25x5	30.00 - 30.75	1.0000	1.0000
L33	13	PL 1.25x5	30.00 - 30.75	1.0000	1.0000
L33	14	PL 1.25x5	30.00 - 30.75	1.0000	1.0000
L33	16	PL 1.25x5	30.00 - 36.25	1.0000	1.0000
L33	17	PL 1.25x5	30.00 - 36.25	1.0000	1.0000
L33	18	PL 1.25x5	30.00 - 36.25	1.0000	1.0000
L33	19	PL 1.25x5	30.00 - 36.25	1.0000	1.0000
L35	3	Safety Line 3/8	28.75 - 28.93	1.0000	1.0000
L35	11	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	12	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	13	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	14	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	16	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	17	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	18	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L35	19	PL 1.25x5	28.75 - 28.93	1.0000	1.0000
L36	3	Safety Line 3/8	28.50 - 28.75	1.0000	1.0000
L36	11	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	12	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	13	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	14	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	16	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	17	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	18	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L36	19	PL 1.25x5	28.50 - 28.75	1.0000	1.0000
L37	3	Safety Line 3/8	23.50 - 28.50	1.0000	1.0000
L37	11	PL 1.25x5	23.50 - 28.50	1.0000	1.0000
L37	12	PL 1.25x5	23.50 - 28.50	1.0000	1.0000
L37	13	PL 1.25x5	23.50 - 28.50	1.0000	1.0000
L37	14	PL 1.25x5	23.50 - 28.50	1.0000	1.0000
L38	3	Safety Line 3/8	18.50 - 23.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L38	11	PL 1.25x5	18.50 - 23.50	1.0000	1.0000
L38	12	PL 1.25x5	18.50 - 23.50	1.0000	1.0000
L38	13	PL 1.25x5	18.50 - 23.50	1.0000	1.0000
L38	14	PL 1.25x5	18.50 - 23.50	1.0000	1.0000
L39	3	Safety Line 3/8	13.50 - 18.50	1.0000	1.0000
L39	11	PL 1.25x5	13.50 - 18.50	1.0000	1.0000
L39	12	PL 1.25x5	13.50 - 18.50	1.0000	1.0000
L39	13	PL 1.25x5	13.50 - 18.50	1.0000	1.0000
L39	14	PL 1.25x5	13.50 - 18.50	1.0000	1.0000
L40	3	Safety Line 3/8	8.50 - 13.50	1.0000	1.0000
L40	11	PL 1.25x5	8.50 - 13.50	1.0000	1.0000
L40	12	PL 1.25x5	8.50 - 13.50	1.0000	1.0000
L40	13	PL 1.25x5	8.50 - 13.50	1.0000	1.0000
L40	14	PL 1.25x5	8.50 - 13.50	1.0000	1.0000
L41	3	Safety Line 3/8	3.50 - 8.50	1.0000	1.0000
L41	11	PL 1.25x5	3.50 - 8.50	1.0000	1.0000
L41	12	PL 1.25x5	3.50 - 8.50	1.0000	1.0000
L41	13	PL 1.25x5	3.50 - 8.50	1.0000	1.0000
L41	14	PL 1.25x5	3.50 - 8.50	1.0000	1.0000
L42	3	Safety Line 3/8	2.75 - 3.50	1.0000	1.0000
L42	11	PL 1.25x5	2.75 - 3.50	1.0000	1.0000
L42	12	PL 1.25x5	2.75 - 3.50	1.0000	1.0000
L42	13	PL 1.25x5	2.75 - 3.50	1.0000	1.0000
L42	14	PL 1.25x5	2.75 - 3.50	1.0000	1.0000
L43	3	Safety Line 3/8	2.50 - 2.75	1.0000	1.0000
L43	11	PL 1.25x5	2.50 - 2.75	1.0000	1.0000
L43	12	PL 1.25x5	2.50 - 2.75	1.0000	1.0000
L43	13	PL 1.25x5	2.50 - 2.75	1.0000	1.0000
L43	14	PL 1.25x5	2.50 - 2.75	1.0000	1.0000
L44	3	Safety Line 3/8	0.00 - 2.50	1.0000	1.0000
L44	11	PL 1.25x5	0.00 - 2.50	1.0000	1.0000
L44	12	PL 1.25x5	0.00 - 2.50	1.0000	1.0000
L44	13	PL 1.25x5	0.00 - 2.50	1.0000	1.0000
L44	14	PL 1.25x5	0.00 - 2.50	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
***									
2.4" Dia x 5-ft Pipe	C	From Centroid-Leg	4.00 -2.000 2.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.20 1.50 1.81 2.47	1.20 1.50 1.81 2.47	0.02 0.03 0.04 0.08
(2) 3" x 6" SideLight	C	From Centroid-Leg	4.00 -2.000 4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.09 0.14 0.19 0.34	0.09 0.14 0.19 0.34	0.00 0.00 0.00 0.01
150									
DMP65R-BU6D w/ Mount	A	From	4.00	23.000	150.00	No Ice	11.96	5.97	0.11

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pipe		Centroid-Leg	-6.000 0.000			1/2" Ice 1" Ice 2" Ice	12.70 13.46 15.02	6.63 7.30 8.69	0.20 0.30 0.53
DMP65R-BU6D w/ Mount Pipe	B	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.96 12.70 13.46 15.02	5.97 6.63 7.30 8.69	0.11 0.20 0.30 0.53
DMP65R-BU6D w/ Mount Pipe	C	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.96 12.70 13.46 15.02	5.97 6.63 7.30 8.69	0.11 0.20 0.30 0.53
NNH4-65B-R6 w/ Mount Pipe	A	From Centroid-Leg	4.00 6.000 0.000	45.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	7.55 8.04 8.53 9.56	4.23 4.67 5.12 6.05	0.12 0.21 0.30 0.53
NNH4-65B-R6 w/ Mount Pipe	B	From Centroid-Leg	4.00 6.000 0.000	35.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	7.55 8.04 8.53 9.56	4.23 4.67 5.12 6.05	0.12 0.21 0.30 0.53
NNH4-65B-R6 w/ Mount Pipe	B	From Centroid-Leg	4.00 6.000 0.000	40.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	7.55 8.04 8.53 9.56	4.23 4.67 5.12 6.05	0.12 0.21 0.30 0.53
DTMABP7819VG12A	A	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.34 0.42 0.51 0.71	0.02 0.03 0.04 0.06
DTMABP7819VG12A	B	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.34 0.42 0.51 0.71	0.02 0.03 0.04 0.06
DTMABP7819VG12A	C	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.34 0.42 0.51 0.71	0.02 0.03 0.04 0.06
RRUS 32 B2	A	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.67 1.86 2.05 2.46	0.05 0.07 0.10 0.16
RRUS 32 B2	B	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.67 1.86 2.05 2.46	0.05 0.07 0.10 0.16
RRUS 32 B2	C	From Centroid-Leg	4.00 -6.000 0.000	23.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.67 1.86 2.05 2.46	0.05 0.07 0.10 0.16
DC6-48-60-0-8C-EV	C	From Centroid-Leg	4.00 2.000 0.000	40.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.74 2.96 3.20 3.68	4.78 5.06 5.35 5.95	0.03 0.06 0.10 0.20
DC6-48-60-18-8F	A	From Centroid-Leg	4.00 2.000 0.000	45.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.21 1.89 2.11 2.57	1.21 1.89 2.11 2.57	0.03 0.05 0.08 0.14
DC6-48-60-18-8F	B	From Centroid-Leg	4.00 2.000	35.000	150.00	No Ice 1/2" Ice	1.21 1.89	1.21 1.89	0.03 0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		g	0.000			1" Ice	2.11	2.11	0.08
						2" Ice	2.57	2.57	0.14
RRUS 4449 B5/B12	A	From Centroid-Leg	4.00 6.000 0.000	45.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.41 1.56 1.73 2.07	0.07 0.09 0.11 0.16
RRUS 4449 B5/B12	B	From Centroid-Leg	4.00 6.000 0.000	35.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.41 1.56 1.73 2.07	0.07 0.09 0.11 0.16
RRUS 4449 B5/B12	C	From Centroid-Leg	4.00 6.000 0.000	40.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.41 1.56 1.73 2.07	0.07 0.09 0.11 0.16
RRUS 8843 B2/B66A	A	From Centroid-Leg	4.00 6.000 0.000	45.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.35 1.50 1.65 1.99	0.07 0.09 0.11 0.16
RRUS 8843 B2/B66A	B	From Centroid-Leg	4.00 6.000 0.000	35.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.35 1.50 1.65 1.99	0.07 0.09 0.11 0.16
RRUS 8843 B2/B66A	C	From Centroid-Leg	4.00 6.000 0.000	40.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.35 1.50 1.65 1.99	0.07 0.09 0.11 0.16
(2) 2.4" Dia. x 10-ft Mount Pipe	A	From Centroid-Leg	4.00 0.000 0.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.38 3.40 4.45 5.91	2.38 3.40 4.45 5.91	0.04 0.05 0.08 0.15
(2) 2.4" Dia. x 10-ft Mount Pipe	B	From Centroid-Leg	4.00 0.000 0.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.38 3.40 4.45 5.91	2.38 3.40 4.45 5.91	0.04 0.05 0.08 0.15
(2) 2.4" Dia. x 10-ft Mount Pipe	C	From Centroid-Leg	4.00 0.000 0.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.38 3.40 4.45 5.91	2.38 3.40 4.45 5.91	0.04 0.05 0.08 0.15
2.4" x 63" Pipe (Horizontal)	A	From Centroid-Face	4.00 0.000 -4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.26 1.61 1.93 2.61	0.05 0.08 0.12 0.21	0.00 0.01 0.03 0.06
2.4" x 63" Pipe (Horizontal)	B	From Centroid-Face	4.00 0.000 -4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.26 1.61 1.93 2.61	0.05 0.08 0.12 0.21	0.00 0.01 0.03 0.06
2.4" x 63" Pipe (Horizontal)	C	From Centroid-Face	4.00 0.000 -4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.26 1.61 1.93 2.61	0.05 0.08 0.12 0.21	0.00 0.01 0.03 0.06
2.4" Dia x 6-ft Pipe (Horizontal)	A	From Centroid-Face	4.00 0.000 2.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.44 1.93 2.30 3.07	0.05 0.08 0.12 0.21	0.02 0.03 0.05 0.09
2.4" Dia x 6-ft Pipe (Horizontal)	B	From Centroid-Face	4.00 0.000 2.000	0.000	150.00	No Ice 1/2" Ice 1" Ice	1.44 1.93 2.30	0.05 0.08 0.12	0.02 0.03 0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	3.07	0.21	0.09
2.4" Dia x 6-ft Pipe (Horizontal)	C	From Centroid-Face	4.00 0.000 2.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.44 1.93 2.30 3.07	0.05 0.08 0.12 0.21	0.02 0.03 0.05 0.09
L2x2x1/4"x12.5'x1' Walkway (Horizontal)	A	From Centroid-Leg	4.00 0.000 -4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 3.35 4.20 5.94	0.20 0.28 0.37 0.57	0.19 0.26 0.35 0.55
L2x2x1/4"x12.5'x1' Walkway (Horizontal)	B	From Centroid-Leg	4.00 0.000 -4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 3.35 4.20 5.94	0.20 0.28 0.37 0.57	0.19 0.26 0.35 0.55
L2x2x1/4"x12.5'x1' Walkway (Horizontal)	C	From Centroid-Leg	4.00 0.000 -4.000	0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 3.35 4.20 5.94	0.20 0.28 0.37 0.57	0.19 0.26 0.35 0.55
Platform Mount [LP 303-1_HR-1]	C	None		0.000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	17.09 21.47 25.72 33.96	17.09 21.47 25.72 33.96	1.50 1.88 2.35 3.52
*** **104** SRL-210C-2	C	From Leg	3.00 0.000 0.000	30.000	104.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.60 6.80 9.00 13.40	4.60 6.80 9.00 13.40	0.06 0.13 0.20 0.34
KRY 112 144/2	C	From Leg	0.50 0.000 0.000	30.000	104.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.48 0.57 0.66 0.88	0.23 0.30 0.38 0.55	0.01 0.01 0.02 0.04
(2) HSS 1-5/8" x 1-5/8" x60"	C	From Leg	0.50 0.000 0.000	0.000	104.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.35 1.93 2.34 3.09	1.35 1.93 2.34 3.09	0.01 0.02 0.03 0.07
***									
110-ft Bridge Stiffener	A	From Leg	0.50 0.000 0.000	0.000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.08 1.97 2.86 4.65	2.38 4.00 5.63 8.88	0.09 0.10 0.11 0.13
110-ft Bridge Stiffener	B	From Face	0.50 0.000 0.000	0.000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.08 1.97 2.86 4.65	2.38 4.00 5.63 8.88	0.09 0.10 0.11 0.13
110-ft Bridge Stiffener	B	From Leg	0.50 0.000 0.000	0.000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.08 1.97 2.86 4.65	2.38 4.00 5.63 8.88	0.09 0.10 0.11 0.13
110-ft Bridge Stiffener	C	From Leg	0.50 0.000 0.000	0.000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.08 1.97 2.86 4.65	2.38 4.00 5.63 8.88	0.09 0.10 0.11 0.13
*** ** *									

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	150 - 145	Pole	Max Tension	26	0.00	0.00	0.00
			Max. Compression	26	-10.72	-2.69	-4.96
			Max. Mx	8	-4.17	-28.86	-1.34
			Max. My	14	-4.09	-0.99	-31.56
			Max. Vy	8	5.90	-28.86	-1.34
			Max. Vx	14	6.31	-0.99	-31.56
			Max. Torque	8			-3.17
L2	145 - 140	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-11.20	-2.72	-5.05
			Max. Mx	8	-4.44	-59.34	-1.44
			Max. My	14	-4.35	-1.05	-64.07
			Max. Vy	8	6.29	-59.34	-1.44
			Max. Vx	14	6.70	-1.05	-64.07
			Max. Torque	8			-3.17
L3	140 - 135	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-11.69	-2.75	-5.13
			Max. Mx	8	-4.73	-91.76	-1.53
			Max. My	14	-4.64	-1.10	-98.53
			Max. Vy	8	6.69	-91.76	-1.53
			Max. Vx	14	7.09	-1.10	-98.53
			Max. Torque	8			-3.17
L4	135 - 130	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-12.20	-2.76	-5.20
			Max. Mx	8	-5.04	-126.17	-1.61
			Max. My	14	-4.96	-1.16	-134.98
			Max. Vy	8	7.09	-126.17	-1.61
			Max. Vx	14	7.49	-1.16	-134.98
			Max. Torque	8			-3.17
L5	130 - 129.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-12.31	-2.76	-5.21
			Max. Mx	8	-5.08	-131.52	-1.63
			Max. My	14	-5.01	-1.17	-140.63
			Max. Vy	8	7.17	-131.52	-1.63
			Max. Vx	14	7.57	-1.17	-140.63
			Max. Torque	8			-3.17
L6	129.25 - 129	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-12.35	-2.76	-5.22
			Max. Mx	8	-5.12	-133.31	-1.63
			Max. My	14	-5.04	-1.17	-142.53
			Max. Vy	8	7.19	-133.31	-1.63
			Max. Vx	14	7.60	-1.17	-142.53
			Max. Torque	8			-3.17
L7	129 - 124	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-13.34	-2.77	-5.30
			Max. Mx	8	-5.71	-170.73	-1.71
			Max. My	14	-5.63	-1.22	-181.99
			Max. Vy	8	7.78	-170.73	-1.71
			Max. Vx	14	8.19	-1.22	-181.99
			Max. Torque	8			-3.17
L8	124 - 119	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-14.35	-2.77	-5.38
			Max. Mx	8	-6.32	-211.10	-1.80
			Max. My	14	-6.25	-1.28	-224.41
			Max. Vy	8	8.38	-211.10	-1.80
			Max. Vx	14	8.79	-1.28	-224.41
			Max. Torque	8			-3.17
L9	119 - 114	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-15.38	-2.77	-5.45
			Max. Mx	8	-6.96	-254.49	-1.88
			Max. My	14	-6.88	-1.33	-269.85

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	8	8.98	-254.49	-1.88
			Max. Vx	14	9.40	-1.33	-269.85
			Max. Torque	8			-3.16
L10	114 - 110.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-16.11	-2.77	-5.50
			Max. Mx	8	-7.41	-286.67	-1.94
			Max. My	14	-7.33	-1.37	-303.48
			Max. Vy	8	9.41	-286.67	-1.94
			Max. Vx	14	9.83	-1.37	-303.48
			Max. Torque	8			-3.16
L11	110.5 - 110.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-16.16	-2.77	-5.51
			Max. Mx	8	-7.45	-289.03	-1.94
			Max. My	14	-7.37	-1.37	-305.94
			Max. Vy	8	9.44	-289.03	-1.94
			Max. Vx	14	9.86	-1.37	-305.94
			Max. Torque	8			-3.16
L12	110.25 - 110	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-16.20	-2.77	-5.51
			Max. Mx	8	-7.48	-291.39	-1.95
			Max. My	14	-7.40	-1.38	-308.41
			Max. Vy	8	9.47	-291.39	-1.95
			Max. Vx	14	9.88	-1.38	-308.41
			Max. Torque	8			-3.16
L13	110 - 109.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-16.83	-2.92	-5.43
			Max. Mx	8	-7.92	-296.42	-1.91
			Max. My	14	-7.84	-1.50	-313.47
			Max. Vy	8	9.84	-296.42	-1.91
			Max. Vx	14	10.28	-1.50	-313.47
			Max. Torque	8			-3.09
L14	109.5 - 109.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-16.89	-2.92	-5.43
			Max. Mx	8	-7.96	-298.88	-1.92
			Max. My	14	-7.88	-1.51	-316.04
			Max. Vy	8	9.87	-298.88	-1.92
			Max. Vx	14	10.32	-1.51	-316.04
			Max. Torque	8			-3.09
L15	109.25 - 104.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-18.07	-2.92	-5.51
			Max. Mx	8	-8.72	-349.87	-2.12
			Max. My	14	-8.64	-1.69	-369.25
			Max. Vy	8	10.53	-349.87	-2.12
			Max. Vx	14	10.97	-1.69	-369.25
			Max. Torque	8			-3.09
L16	104.25 - 99.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-19.66	-1.85	-6.20
			Max. Mx	8	-9.56	-405.88	-2.42
			Max. My	14	-9.48	-1.70	-427.83
			Max. Vy	8	11.61	-405.88	-2.42
			Max. Vx	14	12.04	-1.70	-427.83
			Max. Torque	8			-3.68
L17	99.25 - 94.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-20.88	-1.84	-6.28
			Max. Mx	8	-10.36	-465.57	-2.63
			Max. My	14	-10.29	-1.88	-489.68
			Max. Vy	8	12.28	-465.57	-2.63
			Max. Vx	14	12.71	-1.88	-489.68
			Max. Torque	8			-3.67
L18	94.25 - 90.25	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-21.92	-1.83	-6.33
			Max. Mx	8	-11.02	-515.74	-2.79
			Max. My	14	-10.95	-2.02	-541.58
			Max. Vy	8	12.82	-515.74	-2.79
			Max. Vx	14	13.25	-2.02	-541.58
			Max. Torque	8			-3.67
L19	90.25 - 90	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21.99	-1.82	-6.33
			Max. Mx	8	-11.07	-518.94	-2.80
			Max. My	14	-10.99	-2.03	-544.89
			Max. Vy	8	12.85	-518.94	-2.80
			Max. Vx	14	13.28	-2.03	-544.89
			Max. Torque	8			-3.67
L20	90 - 85	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.24	-1.81	-6.36
			Max. Mx	8	-11.92	-584.53	-3.00
			Max. My	14	-11.85	-2.21	-612.59
			Max. Vy	8	13.39	-584.53	-3.00
			Max. Vx	14	13.80	-2.21	-612.59
			Max. Torque	8			-3.67
L21	85 - 80	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.50	-1.79	-6.38
			Max. Mx	8	-12.79	-652.81	-3.20
			Max. My	14	-12.72	-2.39	-682.86
			Max. Vy	8	13.93	-652.81	-3.20
			Max. Vx	14	14.32	-2.39	-682.86
			Max. Torque	8			-3.67
L22	80 - 75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.78	-1.76	-6.39
			Max. Mx	8	-13.68	-723.74	-3.40
			Max. My	14	-13.62	-2.57	-755.70
			Max. Vy	8	14.46	-723.74	-3.40
			Max. Vx	14	14.83	-2.57	-755.70
			Max. Torque	8			-3.67
L23	75 - 70	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-26.26	-1.75	-6.41
			Max. Mx	8	-13.98	-749.10	-3.47
			Max. My	14	-13.93	-2.63	-781.71
			Max. Vy	8	14.71	-749.10	-3.47
			Max. Vx	14	15.08	-2.63	-781.71
			Max. Torque	8			-3.66
L24	70 - 69	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-28.30	-1.73	-6.45
			Max. Mx	8	-15.45	-813.14	-3.64
			Max. My	14	-15.39	-2.78	-847.34
			Max. Vy	8	15.36	-813.14	-3.64
			Max. Vx	14	15.74	-2.78	-847.34
			Max. Torque	8			-3.66
L25	69 - 64	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.84	-1.71	-6.52
			Max. Mx	8	-16.56	-891.65	-3.84
			Max. My	14	-16.51	-2.96	-927.72
			Max. Vy	8	16.06	-891.65	-3.84
			Max. Vx	14	16.43	-2.96	-927.72
			Max. Torque	8			-3.66
L26	64 - 59	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.38	-1.70	-6.58
			Max. Mx	8	-17.70	-973.62	-4.03
			Max. My	14	-17.65	-3.14	-1011.55
			Max. Vy	8	16.75	-973.62	-4.03
			Max. Vx	14	17.12	-3.14	-1011.55

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	8			-3.66
L27	59 - 56.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.24	-1.68	-6.60
			Max. Mx	8	-18.27	-1015.91	-4.13
			Max. My	14	-18.22	-3.23	-1054.78
			Max. Vy	8	17.11	-1015.91	-4.13
			Max. Vx	14	17.48	-3.23	-1054.78
			Max. Torque	8			-3.66
L28	56.5 - 56.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.33	-1.67	-6.61
			Max. Mx	8	-18.34	-1020.19	-4.14
			Max. My	14	-18.29	-3.24	-1059.15
			Max. Vy	8	17.13	-1020.19	-4.14
			Max. Vx	14	17.51	-3.24	-1059.15
			Max. Torque	8			-3.66
L29	56.25 - 51.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.90	-1.64	-6.60
			Max. Mx	8	-19.51	-1107.12	-4.33
			Max. My	14	-19.47	-3.42	-1147.94
			Max. Vy	8	17.65	-1107.12	-4.33
			Max. Vx	14	18.02	-3.42	-1147.94
			Max. Torque	8			-3.66
L30	51.25 - 46.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-35.50	-1.61	-6.60
			Max. Mx	8	-20.72	-1196.57	-4.52
			Max. My	14	-20.67	-3.60	-1239.24
			Max. Vy	8	18.15	-1196.57	-4.52
			Max. Vx	14	18.52	-3.60	-1239.24
			Max. Torque	8			-3.66
L31	46.25 - 41.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-37.10	-1.58	-6.59
			Max. Mx	8	-21.94	-1288.49	-4.70
			Max. My	14	-21.90	-3.78	-1333.00
			Max. Vy	8	18.64	-1288.49	-4.70
			Max. Vx	14	19.01	-3.78	-1333.00
			Max. Torque	8			-3.65
L32	41.25 - 36.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-38.73	-1.55	-6.58
			Max. Mx	8	-23.19	-1382.82	-4.89
			Max. My	14	-23.15	-3.95	-1429.17
			Max. Vy	8	19.12	-1382.82	-4.89
			Max. Vx	14	19.48	-3.95	-1429.17
			Max. Torque	8			-3.65
L33	36.25 - 30	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.50	-1.53	-6.57
			Max. Mx	8	-23.77	-1427.39	-4.97
			Max. My	14	-23.74	-4.04	-1474.58
			Max. Vy	8	19.33	-1427.39	-4.97
			Max. Vx	14	19.70	-4.04	-1474.58
			Max. Torque	8			-3.65
L34	30 - 28.93	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.43	-1.49	-6.57
			Max. Mx	8	-26.04	-1525.40	-5.16
			Max. My	14	-26.01	-4.21	-1574.41
			Max. Vy	8	19.91	-1525.40	-5.16
			Max. Vx	14	20.27	-4.21	-1574.41
			Max. Torque	8			-3.65
L35	28.93 - 28.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.50	-1.49	-6.57
			Max. Mx	8	-26.09	-1528.98	-5.16
			Max. My	14	-26.07	-4.22	-1578.06

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	8	19.92	-1528.98	-5.16
			Max. Vx	14	20.28	-4.22	-1578.06
			Max. Torque	8			-3.65
L36	28.75 - 28.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.59	-1.49	-6.57
			Max. Mx	8	-26.16	-1533.96	-5.17
			Max. My	14	-26.14	-4.23	-1583.13
			Max. Vy	8	19.95	-1533.96	-5.17
			Max. Vx	14	20.32	-4.23	-1583.13
			Max. Torque	8			-3.65
L37	28.5 - 23.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.36	-1.46	-6.60
			Max. Mx	8	-27.57	-1635.18	-5.35
			Max. My	14	-27.54	-4.40	-1686.16
			Max. Vy	8	20.55	-1635.18	-5.35
			Max. Vx	14	20.91	-4.40	-1686.16
			Max. Torque	8			-3.65
L38	23.5 - 18.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46.15	-1.43	-6.62
			Max. Mx	8	-29.00	-1739.26	-5.53
			Max. My	14	-28.98	-4.58	-1792.03
			Max. Vy	8	21.11	-1739.26	-5.53
			Max. Vx	14	21.47	-4.58	-1792.03
			Max. Torque	8			-3.65
L39	18.5 - 13.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.94	-1.40	-6.65
			Max. Mx	8	-30.46	-1846.04	-5.71
			Max. My	14	-30.44	-4.75	-1900.60
			Max. Vy	8	21.63	-1846.04	-5.71
			Max. Vx	14	21.99	-4.75	-1900.60
			Max. Torque	8			-3.65
L40	13.5 - 8.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.74	-1.37	-6.67
			Max. Mx	8	-31.94	-1955.42	-5.88
			Max. My	14	-31.93	-4.92	-2011.73
			Max. Vy	8	22.15	-1955.42	-5.88
			Max. Vx	14	22.50	-4.92	-2011.73
			Max. Torque	8			-3.65
L41	8.5 - 3.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.54	-1.35	-6.69
			Max. Mx	8	-33.45	-2067.37	-6.04
			Max. My	14	-33.44	-5.09	-2125.42
			Max. Vy	8	22.66	-2067.37	-6.04
			Max. Vx	14	23.01	-5.09	-2125.42
			Max. Torque	8			-3.65
L42	3.5 - 2.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.81	-1.34	-6.70
			Max. Mx	8	-33.68	-2084.38	-6.07
			Max. My	14	-33.68	-5.12	-2142.70
			Max. Vy	8	22.74	-2084.38	-6.07
			Max. Vx	14	23.08	-5.12	-2142.70
			Max. Torque	8			-3.65
L43	2.75 - 2.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.87	-1.34	-6.70
			Max. Mx	8	-33.74	-2090.07	-6.08
			Max. My	14	-33.73	-5.13	-2148.47
			Max. Vy	8	22.75	-2090.07	-6.08
			Max. Vx	14	23.10	-5.13	-2148.47
			Max. Torque	8			-3.65
L44	2.5 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-52.50	-1.33	-6.71

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	8	-34.27	-2147.19	-6.16
			Max. My	14	-34.27	-5.21	-2206.44
			Max. Vy	8	22.98	-2147.19	-6.16
			Max. Vx	14	23.33	-5.21	-2206.44
			Max. Torque	8			-3.65

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	33	52.50	-0.01	-4.57
	Max. H_x	20	34.29	22.95	0.03
	Max. H_z	2	34.29	0.03	23.29
	Max. M_x	2	2202.68	0.03	23.29
	Max. M_z	8	2147.19	-22.95	-0.03
	Max. Torsion	20	3.65	22.95	0.03
	Min. Vert	7	25.72	-19.20	11.27
	Min. H_x	8	34.29	-22.95	-0.03
	Min. H_z	15	25.72	-0.03	-23.29
	Min. M_x	14	-2206.44	-0.03	-23.29
	Min. M_z	20	-2145.45	22.95	0.03
	Min. Torsion	8	-3.65	-22.95	-0.03

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	28.57	0.00	0.00	1.50	-0.69	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	34.29	-0.03	-23.29	-2202.68	3.43	-0.65
0.9 Dead+1.0 Wind 0 deg - No Ice	25.72	-0.03	-23.29	-2170.90	3.61	-0.69
1.2 Dead+1.0 Wind 30 deg - No Ice	34.29	12.13	-21.39	-1977.76	-1109.44	1.26
0.9 Dead+1.0 Wind 30 deg - No Ice	25.72	12.13	-21.39	-1949.69	-1093.31	1.20
1.2 Dead+1.0 Wind 60 deg - No Ice	34.29	19.20	-11.27	-1071.01	-1808.21	2.83
0.9 Dead+1.0 Wind 60 deg - No Ice	25.72	19.20	-11.27	-1055.85	-1781.77	2.77
1.2 Dead+1.0 Wind 90 deg - No Ice	34.29	22.95	0.03	6.16	-2147.19	3.65
0.9 Dead+1.0 Wind 90 deg - No Ice	25.72	22.95	0.03	5.59	-2115.72	3.60
1.2 Dead+1.0 Wind 120 deg - No Ice	34.29	21.08	12.39	1149.85	-1929.78	3.48
0.9 Dead+1.0 Wind 120 deg - No Ice	25.72	21.08	12.39	1132.77	-1901.87	3.46
1.2 Dead+1.0 Wind 150 deg - No Ice	34.29	11.13	19.59	1868.58	-1049.27	2.39
0.9 Dead+1.0 Wind 150 deg -	25.72	11.13	19.59	1840.82	-1033.82	2.40

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
No Ice						
1.2 Dead+1.0 Wind 180 deg - No Ice	34.29	0.03	23.29	2206.44	-5.21	0.65
0.9 Dead+1.0 Wind 180 deg - No Ice	25.72	0.03	23.29	2173.64	-4.90	0.69
1.2 Dead+1.0 Wind 210 deg - No Ice	34.29	-12.13	21.39	1981.51	1107.71	-1.27
0.9 Dead+1.0 Wind 210 deg - No Ice	25.72	-12.13	21.39	1952.42	1092.06	-1.21
1.2 Dead+1.0 Wind 240 deg - No Ice	34.29	-19.20	11.27	1074.72	1806.50	-2.83
0.9 Dead+1.0 Wind 240 deg - No Ice	25.72	-19.20	11.27	1058.55	1780.53	-2.77
1.2 Dead+1.0 Wind 270 deg - No Ice	34.29	-22.95	-0.03	-2.49	2145.45	-3.65
0.9 Dead+1.0 Wind 270 deg - No Ice	25.72	-22.95	-0.03	-2.92	2114.45	-3.60
1.2 Dead+1.0 Wind 300 deg - No Ice	34.29	-21.08	-12.39	-1146.18	1927.99	-3.48
0.9 Dead+1.0 Wind 300 deg - No Ice	25.72	-21.08	-12.39	-1130.10	1900.58	-3.45
1.2 Dead+1.0 Wind 330 deg - No Ice	34.29	-11.13	-19.59	-1864.85	1047.46	-2.38
0.9 Dead+1.0 Wind 330 deg - No Ice	25.72	-11.13	-19.59	-1838.11	1032.51	-2.39
1.2 Dead+1.0 Ice+1.0 Temp	52.50	0.00	0.00	6.71	-1.33	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	52.50	-0.01	-4.57	-477.81	-0.02	-0.13
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	52.50	2.26	-3.99	-414.61	-238.02	0.34
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	52.50	3.87	-2.26	-232.97	-407.78	0.72
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	52.50	4.50	0.01	8.09	-474.25	0.90
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	52.50	3.94	2.32	251.57	-413.93	0.85
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	52.50	2.25	3.94	424.64	-237.53	0.56
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	52.50	0.01	4.57	491.35	-2.67	0.13
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	52.50	-2.26	3.99	428.15	235.33	-0.34
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	52.50	-3.87	2.26	246.50	405.09	-0.72
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	52.50	-4.50	-0.01	5.44	471.56	-0.91
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	52.50	-3.94	-2.32	-238.04	411.24	-0.85
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	52.50	-2.25	-3.94	-411.11	234.83	-0.57
Dead+Wind 0 deg - Service	28.57	-0.01	-4.67	-437.36	0.14	-0.14
Dead+Wind 30 deg - Service	28.57	2.43	-4.29	-392.62	-221.46	0.25
Dead+Wind 60 deg - Service	28.57	3.85	-2.26	-212.00	-360.48	0.57
Dead+Wind 90 deg - Service	28.57	4.60	0.01	2.41	-427.98	0.74
Dead+Wind 120 deg - Service	28.57	4.23	2.49	230.12	-384.78	0.71
Dead+Wind 150 deg - Service	28.57	2.23	3.93	373.15	-209.42	0.49
Dead+Wind 180 deg - Service	28.57	0.01	4.67	440.46	-1.58	0.14
Dead+Wind 210 deg - Service	28.57	-2.43	4.29	395.73	220.03	-0.25
Dead+Wind 240 deg - Service	28.57	-3.85	2.26	215.10	359.05	-0.57
Dead+Wind 270 deg - Service	28.57	-4.60	-0.01	0.69	426.55	-0.74
Dead+Wind 300 deg - Service	28.57	-4.23	-2.49	-227.02	383.35	-0.71

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Dead+Wind 330 deg - Service	28.57	-2.23	-3.93	-370.05	207.99	-0.49

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-28.57	0.00	-0.00	28.57	-0.00	0.000%
2	-0.03	-34.29	-23.29	0.03	34.29	23.29	0.000%
3	-0.03	-25.72	-23.29	0.03	25.72	23.29	0.000%
4	12.13	-34.29	-21.39	-12.13	34.29	21.39	0.000%
5	12.13	-25.72	-21.39	-12.13	25.72	21.39	0.000%
6	19.20	-34.29	-11.27	-19.20	34.29	11.27	0.000%
7	19.20	-25.72	-11.27	-19.20	25.72	11.27	0.000%
8	22.95	-34.29	0.03	-22.95	34.29	-0.03	0.000%
9	22.95	-25.72	0.03	-22.95	25.72	-0.03	0.000%
10	21.08	-34.29	12.39	-21.08	34.29	-12.39	0.000%
11	21.08	-25.72	12.39	-21.08	25.72	-12.39	0.000%
12	11.13	-34.29	19.59	-11.13	34.29	-19.59	0.000%
13	11.13	-25.72	19.59	-11.13	25.72	-19.59	0.000%
14	0.03	-34.29	23.29	-0.03	34.29	-23.29	0.000%
15	0.03	-25.72	23.29	-0.03	25.72	-23.29	0.000%
16	-12.13	-34.29	21.39	12.13	34.29	-21.39	0.000%
17	-12.13	-25.72	21.39	12.13	25.72	-21.39	0.000%
18	-19.20	-34.29	11.27	19.20	34.29	-11.27	0.000%
19	-19.20	-25.72	11.27	19.20	25.72	-11.27	0.000%
20	-22.95	-34.29	-0.03	22.95	34.29	0.03	0.000%
21	-22.95	-25.72	-0.03	22.95	25.72	0.03	0.000%
22	-21.08	-34.29	-12.39	21.08	34.29	12.39	0.000%
23	-21.08	-25.72	-12.39	21.08	25.72	12.39	0.000%
24	-11.13	-34.29	-19.59	11.13	34.29	19.59	0.000%
25	-11.13	-25.72	-19.59	11.13	25.72	19.59	0.000%
26	0.00	-52.50	0.00	-0.00	52.50	-0.00	0.000%
27	-0.01	-52.50	-4.57	0.01	52.50	4.57	0.000%
28	2.26	-52.50	-3.99	-2.26	52.50	3.99	0.000%
29	3.87	-52.50	-2.26	-3.87	52.50	2.26	0.000%
30	4.50	-52.50	0.01	-4.50	52.50	-0.01	0.000%
31	3.94	-52.50	2.32	-3.94	52.50	-2.32	0.000%
32	2.25	-52.50	3.94	-2.25	52.50	-3.94	0.000%
33	0.01	-52.50	4.57	-0.01	52.50	-4.57	0.000%
34	-2.26	-52.50	3.99	2.26	52.50	-3.99	0.000%
35	-3.87	-52.50	2.26	3.87	52.50	-2.26	0.000%
36	-4.50	-52.50	-0.01	4.50	52.50	0.01	0.000%
37	-3.94	-52.50	-2.32	3.94	52.50	2.32	0.000%
38	-2.25	-52.50	-3.94	2.25	52.50	3.94	0.000%
39	-0.01	-28.57	-4.67	0.01	28.57	4.67	0.000%
40	2.43	-28.57	-4.29	-2.43	28.57	4.29	0.000%
41	3.85	-28.57	-2.26	-3.85	28.57	2.26	0.000%
42	4.60	-28.57	0.01	-4.60	28.57	-0.01	0.000%
43	4.23	-28.57	2.49	-4.23	28.57	-2.49	0.000%
44	2.23	-28.57	3.93	-2.23	28.57	-3.93	0.000%
45	0.01	-28.57	4.67	-0.01	28.57	-4.67	0.000%
46	-2.43	-28.57	4.29	2.43	28.57	-4.29	0.000%
47	-3.85	-28.57	2.26	3.85	28.57	-2.26	0.000%
48	-4.60	-28.57	-0.01	4.60	28.57	0.01	0.000%
49	-4.23	-28.57	-2.49	4.23	28.57	2.49	0.000%
50	-2.23	-28.57	-3.93	2.23	28.57	3.93	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000852
2	Yes	6	0.00000001	0.00013910
3	Yes	6	0.00000001	0.00005025
4	Yes	7	0.00000001	0.00038834
5	Yes	7	0.00000001	0.00008645
6	Yes	7	0.00000001	0.00032498
7	Yes	7	0.00000001	0.00007314
8	Yes	6	0.00000001	0.00086592
9	Yes	6	0.00000001	0.00029011
10	Yes	7	0.00000001	0.00040878
11	Yes	7	0.00000001	0.00009179
12	Yes	7	0.00000001	0.00033495
13	Yes	7	0.00000001	0.00007483
14	Yes	6	0.00000001	0.00007619
15	Yes	5	0.00000001	0.00060516
16	Yes	7	0.00000001	0.00036249
17	Yes	7	0.00000001	0.00007970
18	Yes	7	0.00000001	0.00037582
19	Yes	7	0.00000001	0.00008655
20	Yes	6	0.00000001	0.00080155
21	Yes	6	0.00000001	0.00026910
22	Yes	7	0.00000001	0.00034571
23	Yes	7	0.00000001	0.00007542
24	Yes	7	0.00000001	0.00037584
25	Yes	7	0.00000001	0.00008624
26	Yes	5	0.00000001	0.00048003
27	Yes	7	0.00000001	0.00026132
28	Yes	7	0.00000001	0.00038009
29	Yes	7	0.00000001	0.00035565
30	Yes	7	0.00000001	0.00028099
31	Yes	7	0.00000001	0.00042292
32	Yes	7	0.00000001	0.00039349
33	Yes	7	0.00000001	0.00027972
34	Yes	7	0.00000001	0.00038575
35	Yes	7	0.00000001	0.00040002
36	Yes	7	0.00000001	0.00027355
37	Yes	7	0.00000001	0.00035537
38	Yes	7	0.00000001	0.00037209
39	Yes	5	0.00000001	0.00009546
40	Yes	6	0.00000001	0.00006266
41	Yes	5	0.00000001	0.00067064
42	Yes	5	0.00000001	0.00053872
43	Yes	6	0.00000001	0.00007667
44	Yes	5	0.00000001	0.00070841
45	Yes	5	0.00000001	0.00009027
46	Yes	5	0.00000001	0.00081732
47	Yes	6	0.00000001	0.00006341
48	Yes	5	0.00000001	0.00052563
49	Yes	5	0.00000001	0.00077463
50	Yes	5	0.00000001	0.00097751

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 145	25.767	46	1.549	0.021
L2	145 - 140	24.165	46	1.531	0.017
L3	140 - 135	22.591	46	1.491	0.014
L4	135 - 130	21.065	46	1.434	0.012
L5	130 - 129.25	19.602	46	1.365	0.010
L6	129.25 - 129	19.389	46	1.353	0.009
L7	129 - 124	19.318	46	1.352	0.009
L8	124 - 119	17.923	46	1.314	0.008
L9	119 - 114	16.569	46	1.273	0.007
L10	114 - 110.5	15.260	46	1.228	0.007
L11	110.5 - 110.25	14.373	46	1.194	0.006
L12	110.25 - 110	14.310	46	1.192	0.006
L13	110 - 109.5	14.248	46	1.191	0.006
L14	109.5 - 109.25	14.123	46	1.188	0.006
L15	109.25 - 104.25	14.061	46	1.186	0.006
L16	104.25 - 99.25	12.843	46	1.141	0.006
L17	99.25 - 94.25	11.674	46	1.093	0.005
L18	94.25 - 90.25	10.556	46	1.042	0.005
L19	90.25 - 90	9.701	46	1.000	0.004
L20	90 - 85	9.649	46	0.997	0.004
L21	85 - 80	8.634	46	0.942	0.004
L22	80 - 75	7.678	46	0.884	0.003
L23	75 - 70	6.783	46	0.825	0.003
L24	73.26 - 69	6.486	46	0.804	0.003
L25	69 - 64	5.780	46	0.775	0.003
L26	64 - 59	4.996	46	0.722	0.002
L27	59 - 56.5	4.267	46	0.668	0.002
L28	56.5 - 56.25	3.925	46	0.641	0.002
L29	56.25 - 51.25	3.891	46	0.638	0.002
L30	51.25 - 46.25	3.252	46	0.583	0.002
L31	46.25 - 41.25	2.672	46	0.526	0.001
L32	41.25 - 36.25	2.151	46	0.469	0.001
L33	36.25 - 30	1.690	46	0.410	0.001
L34	33.93 - 28.93	1.498	46	0.383	0.001
L35	28.93 - 28.75	1.112	46	0.349	0.001
L36	28.75 - 28.5	1.099	46	0.347	0.001
L37	28.5 - 23.5	1.081	46	0.344	0.001
L38	23.5 - 18.5	0.750	46	0.287	0.001
L39	18.5 - 13.5	0.479	46	0.231	0.001
L40	13.5 - 8.5	0.267	46	0.173	0.000
L41	8.5 - 3.5	0.116	46	0.117	0.000
L42	3.5 - 2.75	0.023	46	0.059	0.000
L43	2.75 - 2.5	0.015	46	0.051	0.000
L44	2.5 - 0	0.012	46	0.046	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.00	2.4" Dia x 5-ft Pipe	46	25.767	1.549	0.021	9565
110.00	110-ft Bridge Stiffener	46	14.248	1.191	0.006	6461
104.00	SRL-210C-2	46	12.783	1.138	0.006	6021

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 145	128.730	16	7.659	0.103
L2	145 - 140	120.784	16	7.589	0.086
L3	140 - 135	112.964	16	7.409	0.071
L4	135 - 130	105.371	16	7.148	0.058
L5	130 - 129.25	98.083	16	6.820	0.047
L6	129.25 - 129	97.021	16	6.766	0.046
L7	129 - 124	96.668	16	6.758	0.045
L8	124 - 119	89.710	16	6.578	0.041
L9	119 - 114	82.951	16	6.375	0.037
L10	114 - 110.5	76.413	16	6.152	0.033
L11	110.5 - 110.25	71.979	16	5.984	0.031
L12	110.25 - 110	71.667	16	5.976	0.031
L13	110 - 109.5	71.355	16	5.968	0.031
L14	109.5 - 109.25	70.733	16	5.953	0.031
L15	109.25 - 104.25	70.422	16	5.942	0.030
L16	104.25 - 99.25	64.335	16	5.717	0.028
L17	99.25 - 94.25	58.488	16	5.478	0.025
L18	94.25 - 90.25	52.897	16	5.225	0.023
L19	90.25 - 90	48.618	16	5.013	0.021
L20	90 - 85	48.356	16	5.000	0.020
L21	85 - 80	43.275	16	4.724	0.018
L22	80 - 75	38.487	16	4.436	0.016
L23	75 - 70	34.004	16	4.138	0.014
L24	73.26 - 69	32.518	16	4.033	0.014
L25	69 - 64	28.979	16	3.890	0.013
L26	64 - 59	25.049	16	3.625	0.011
L27	59 - 56.5	21.399	16	3.353	0.010
L28	56.5 - 56.25	19.681	16	3.214	0.010
L29	56.25 - 51.25	19.514	16	3.201	0.009
L30	51.25 - 46.25	16.310	16	2.923	0.008
L31	46.25 - 41.25	13.399	16	2.640	0.007
L32	41.25 - 36.25	10.787	16	2.352	0.006
L33	36.25 - 30	8.478	16	2.059	0.005
L34	33.93 - 28.93	7.511	16	1.923	0.005
L35	28.93 - 28.75	5.575	16	1.750	0.004
L36	28.75 - 28.5	5.510	16	1.740	0.004
L37	28.5 - 23.5	5.419	16	1.726	0.004
L38	23.5 - 18.5	3.762	16	1.440	0.003
L39	18.5 - 13.5	2.402	16	1.157	0.003
L40	13.5 - 8.5	1.341	16	0.870	0.002
L41	8.5 - 3.5	0.580	16	0.585	0.001
L42	3.5 - 2.75	0.117	16	0.298	0.001
L43	2.75 - 2.5	0.074	16	0.255	0.001
L44	2.5 - 0	0.061	16	0.232	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.00	2.4" Dia x 5-ft Pipe	16	128.730	7.659	0.103	2331
110.00	110-ft Bridge Stiffener	16	71.355	5.968	0.031	1333
104.00	SRL-210C-2	16	64.036	5.706	0.028	1236

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	150 - 145 (1)	TP15.25x14.5x0.25	5.00	0.00	0.0	12.075	-4.09	391.23	0.010
L2	145 - 140 (2)	TP16x15.25x0.25	5.00	0.00	0.0	12.679	-4.35	410.79	0.011
L3	140 - 135 (3)	TP16.75x16x0.25	5.00	0.00	0.0	13.283	-4.64	430.35	0.011
L4	135 - 130 (4)	TP17.5x16.75x0.25	5.00	0.00	0.0	13.886	-4.96	449.92	0.011
L5	130 - 129.25 (5)	TP17.613x17.5x0.25	0.75	0.00	0.0	13.977	-5.01	452.85	0.011
L6	129.25 - 129 (6)	TP17.65x17.613x0.6	0.25	0.00	0.0	32.941	-5.04	1067.28	0.005
L7	129 - 124 (7)	TP18.4x17.65x0.575	5.00	0.00	0.0	33.003	-5.63	1069.30	0.005
L8	124 - 119 (8)	TP19.15x18.4x0.563	5.00	0.00	0.0	33.667	-6.25	1090.80	0.006
L9	119 - 114 (9)	TP19.9x19.15x0.55	5.00	0.00	0.0	34.269	-6.88	1110.31	0.006
L10	114 - 110.5 (10)	TP20.425x19.9x0.538	3.50	0.00	0.0	34.420	-7.33	1115.22	0.007
L11	110.5 - 110.25 (11)	TP20.463x20.425x0.85	0.25	0.00	0.0	53.679	-7.37	1739.21	0.004
L12	110.25 - 110 (12)	TP20.5x20.462x0.925	0.25	0.00	0.0	58.304	-7.40	3410.79	0.002
L13	110 - 109.5 (13)	TP20.576x20.5x0.925	0.50	0.00	0.0	58.529	-7.84	3423.97	0.002
L14	109.5 - 109.25 (14)	TP20.613x20.576x0.638	0.25	0.00	0.0	41.006	-7.88	2398.83	0.003
L15	109.25 - 104.25 (15)	TP21.37x20.613x0.613	5.00	0.00	0.0	40.938	-8.64	2394.89	0.004
L16	104.25 - 99.25 (16)	TP22.126x21.37x0.6	5.00	0.00	0.0	41.588	-9.48	2432.90	0.004
L17	99.25 - 94.25 (17)	TP22.882x22.126x0.588	5.00	0.00	0.0	42.176	-10.29	2467.29	0.004
L18	94.25 - 90.25 (18)	TP23.487x22.882x0.575	4.00	0.00	0.0	42.422	-10.95	2481.68	0.004
L19	90.25 - 90 (19)	TP23.525x23.487x0.575	0.25	0.00	0.0	42.492	-10.99	2485.78	0.004
L20	90 - 85 (20)	TP24.281x23.525x0.563	5.00	0.00	0.0	42.961	-11.85	2513.19	0.005
L21	85 - 80 (21)	TP25.038x24.281x0.55	5.00	0.00	0.0	43.367	-12.72	2536.99	0.005
L22	80 - 75 (22)	TP25.794x25.038x0.538	5.00	0.00	0.0	43.712	-13.62	2557.17	0.005
L23	75 - 70 (23)	TP26.55x25.794x0.538	5.00	0.00	0.0	44.168	-13.93	2583.81	0.005
L24	70 - 69 (24)	TP26.2x25.557x0.675	4.26	0.00	0.0	55.479	-15.39	3245.53	0.005
L25	69 - 64 (25)	TP26.955x26.2x0.663	5.00	0.00	0.0	56.089	-16.51	3281.22	0.005
L26	64 - 59 (26)	TP27.71x26.955x0.65	5.00	0.00	0.0	56.638	-17.61	3313.30	0.005
L27	59 - 56.5 (27)	TP28.088x27.71x0.638	2.50	0.00	0.0	56.349	-18.19	3296.42	0.006
L28	56.5 - 56.25 (28)	TP28.126x28.088x0.638	0.25	0.00	0.0	56.426	-18.25	3300.95	0.006
L29	56.25 - 51.25 (29)	TP28.881x28.126x0.638	5.00	0.00	0.0	57.977	-19.42	3391.63	0.006
L30	51.25 - 46.25	TP29.636x28.881x0.625	5.00	0.00	0.0	58.384	-20.62	3415.49	0.006

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L31	46.25 - 41.25 (30)	TP30.391x29.636x0.613	5.00	0.00	0.0	58.731	-21.85	3435.75	0.006
L32	41.25 - 36.25 (31)	TP31.146x30.391x0.6	5.00	0.00	0.0	59.015	-23.10	3452.39	0.007
L33	36.25 - 30 (32)	TP32.09x31.146x0.6	6.25	0.00	0.0	59.692	-23.69	3491.98	0.007
L34	30 - 28.93 (33)	TP31.627x30.871x0.663	5.00	0.00	0.0	66.055	-25.95	3864.25	0.007
L35	28.93 - 28.75 (34)	TP31.654x31.627x0.663	0.18	0.00	0.0	66.114	-26.01	3867.64	0.007
L36	28.75 - 28.5 (35)	TP31.692x31.654x0.663	0.25	0.00	0.0	66.194	-26.08	3872.36	0.007
L37	28.5 - 23.5 (36)	TP32.448x31.692x0.65	5.00	0.00	0.0	66.553	-27.50	3893.36	0.007
L38	23.5 - 18.5 (37)	TP33.204x32.448x0.65	5.00	0.00	0.0	68.135	-28.94	3985.90	0.007
L39	18.5 - 13.5 (38)	TP33.959x33.204x0.638	5.00	0.00	0.0	68.402	-30.42	4001.50	0.008
L40	13.5 - 8.5 (39)	TP34.715x33.959x0.638	5.00	0.00	0.0	69.953	-31.91	4092.25	0.008
L41	8.5 - 3.5 (40)	TP35.471x34.715x0.625	5.00	0.00	0.0	70.128	-33.43	4102.46	0.008
L42	3.5 - 2.75 (41)	TP35.584x35.471x0.625	0.75	0.00	0.0	70.356	-33.67	4115.81	0.008
L43	2.75 - 2.5 (42)	TP35.622x35.584x0.375	0.25	0.00	0.0	42.561	-33.73	2489.81	0.014
L44	2.5 - 0 (43)	TP36x35.622x0.375 4.8.2 (1.05 CR) - 44	2.50	0.00	0.0	43.017	-34.26	2516.51	0.014

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	150 - 145 (1)	TP15.25x14.5x0.25	31.58	149.35	0.211	0.00	149.35	0.000
L2	145 - 140 (2)	TP16x15.25x0.25	64.08	164.78	0.389	0.00	164.78	0.000
L3	140 - 135 (3)	TP16.75x16x0.25	98.54	180.98	0.544	0.00	180.98	0.000
L4	135 - 130 (4)	TP17.5x16.75x0.25	134.99	197.93	0.682	0.00	197.93	0.000
L5	130 - 129.25 (5)	TP17.613x17.5x0.25	140.63	200.54	0.701	0.00	200.54	0.000
L6	129.25 - 129 (6)	TP17.65x17.613x0.6	142.53	454.81	0.313	0.00	454.81	0.000
L7	129 - 124 (7)	TP18.4x17.65x0.575	181.99	477.73	0.381	0.00	477.73	0.000
L8	124 - 119 (8)	TP19.15x18.4x0.563	224.41	509.17	0.441	0.00	509.17	0.000
L9	119 - 114 (9)	TP19.9x19.15x0.55	269.86	540.50	0.499	0.00	540.50	0.000
L10	114 - 110.5 (10)	TP20.425x19.9x0.538	303.48	558.73	0.543	0.00	558.73	0.000
L11	110.5 - 110.25 (11)	TP20.463x20.425x0.85	305.94	845.88	0.362	0.00	845.88	0.000
L12	110.25 - 110 (12)	TP20.5x20.462x0.925	308.41	1649.49	0.187	0.00	1649.49	0.000
L13	110 - 109.5 (13)	TP20.576x20.5x0.925	313.47	1662.55	0.189	0.00	1662.55	0.000
L14	109.5 - 109.25 (14)	TP20.613x20.576x0.638	316.05	1201.46	0.263	0.00	1201.46	0.000
L15	109.25 - 104.25 (15)	TP21.37x20.613x0.613	369.25	1249.31	0.296	0.00	1249.31	0.000
L16	104.25 - 99.25 (16)	TP22.126x21.37x0.6	427.84	1318.23	0.325	0.00	1318.23	0.000
L17	99.25 - 94.25 (17)	TP22.882x22.126x0.588	489.69	1386.67	0.353	0.00	1386.67	0.000
L18	94.25 - 90.25 (18)	TP23.487x22.882x0.575	541.58	1435.14	0.377	0.00	1435.14	0.000
L19	90.25 - 90 (19)	TP23.525x23.487x0.575	544.90	1439.93	0.378	0.00	1439.93	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L20	90 - 85 (20)	TP24.281x23.525x0.563	612.60	1506.55	0.407	0.00	1506.55	0.000
L21	85 - 80 (21)	TP25.038x24.281x0.55	682.87	1572.03	0.434	0.00	1572.03	0.000
L22	80 - 75 (22)	TP25.794x25.038x0.538	755.71	1636.17	0.462	0.00	1636.17	0.000
L23	75 - 70 (23)	TP26.55x25.794x0.538	781.71	1670.80	0.468	0.00	1670.80	0.000
L24	70 - 69 (24)	TP26.2x25.557x0.675	847.34	2088.18	0.406	0.00	2088.18	0.000
L25	69 - 64 (25)	TP26.955x26.2x0.663	927.73	2177.27	0.426	0.00	2177.27	0.000
L26	64 - 59 (26)	TP27.71x26.955x0.65	1012.53	2265.33	0.447	0.00	2265.33	0.000
L27	59 - 56.5 (27)	TP28.088x27.71x0.638	1056.73	2288.06	0.462	0.00	2288.06	0.000
L28	56.5 - 56.25 (28)	TP28.126x28.088x0.638	1061.21	2294.43	0.463	0.00	2294.43	0.000
L29	56.25 - 51.25 (29)	TP28.881x28.126x0.638	1152.45	2423.68	0.475	0.00	2423.68	0.000
L30	51.25 - 46.25 (30)	TP29.636x28.881x0.625	1247.06	2509.60	0.497	0.00	2509.60	0.000
L31	46.25 - 41.25 (31)	TP30.391x29.636x0.613	1344.99	2593.75	0.519	0.00	2593.75	0.000
L32	41.25 - 36.25 (32)	TP31.146x30.391x0.6	1446.17	2675.92	0.540	0.00	2675.92	0.000
L33	36.25 - 30 (33)	TP32.09x31.146x0.6	1494.20	2738.26	0.546	0.00	2738.26	0.000
L34	30 - 28.93 (34)	TP31.627x30.871x0.663	1600.28	3030.99	0.528	0.00	3030.99	0.000
L35	28.93 - 28.75 (35)	TP31.654x31.627x0.663	1604.16	3036.38	0.528	0.00	3036.38	0.000
L36	28.75 - 28.5 (36)	TP31.692x31.654x0.663	1609.56	3043.86	0.529	0.00	3043.86	0.000
L37	28.5 - 23.5 (37)	TP32.448x31.692x0.65	1719.15	3138.93	0.548	0.00	3138.93	0.000
L38	23.5 - 18.5 (38)	TP33.204x32.448x0.65	1831.58	3291.44	0.556	0.00	3291.44	0.000
L39	18.5 - 13.5 (39)	TP33.959x33.204x0.638	1946.68	3385.07	0.575	0.00	3385.07	0.000
L40	13.5 - 8.5 (40)	TP34.715x33.959x0.638	2064.35	3541.84	0.583	0.00	3541.84	0.000
L41	8.5 - 3.5 (41)	TP35.471x34.715x0.625	2184.55	3633.47	0.601	0.00	3633.47	0.000
L42	3.5 - 2.75 (42)	TP35.584x35.471x0.625	2202.80	3657.36	0.602	0.00	3657.36	0.000
L43	2.75 - 2.5 (43)	TP35.622x35.584x0.375	2208.89	2150.95	1.027	0.00	2150.95	0.000
L44	2.5 - 0 (44)	TP36x35.622x0.375	2270.12	2189.31	1.037	0.00	2189.31	0.000

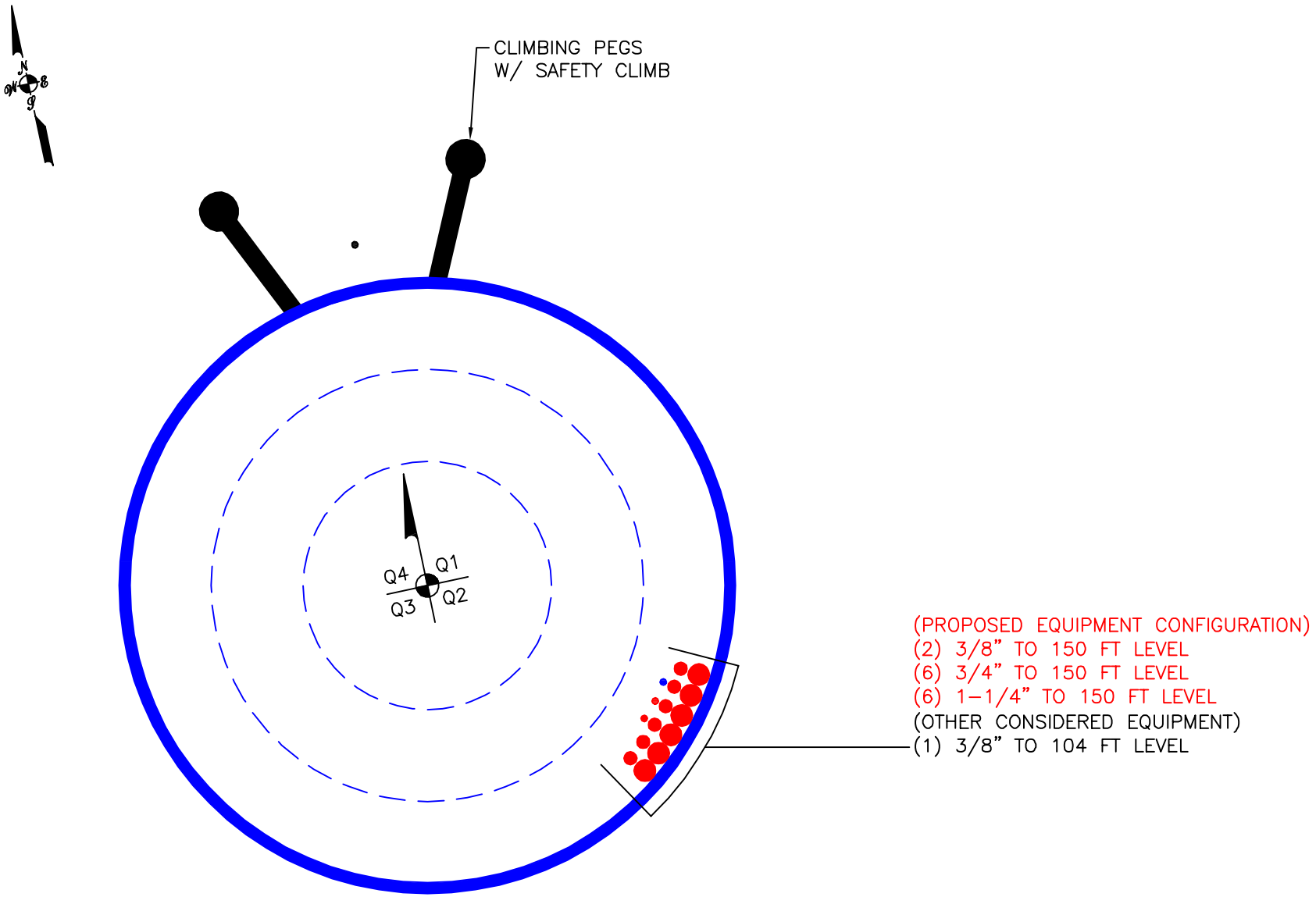
Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	150 - 145 (1)	TP15.25x14.5x0.25	6.31	117.37	0.054	0.22	154.86	0.001
L2	145 - 140 (2)	TP16x15.25x0.25	6.70	123.24	0.054	0.22	170.74	0.001
L3	140 - 135 (3)	TP16.75x16x0.25	7.09	129.11	0.055	0.22	187.38	0.001
L4	135 - 130 (4)	TP17.5x16.75x0.25	7.49	134.97	0.056	0.22	204.81	0.001
L5	130 - 129.25 (5)	TP17.613x17.5x0.25	7.57	135.85	0.056	0.22	207.49	0.001
L6	129.25 - 129 (6)	TP17.65x17.613x0.6	7.60	320.18	0.024	0.22	480.20	0.000
L7	129 - 124 (7)	TP18.4x17.65x0.575	8.19	320.79	0.026	0.22	502.98	0.000
L8	124 - 119 (8)	TP19.15x18.4x0.563	8.79	327.24	0.027	0.22	535.04	0.000
L9	119 - 114 (9)	TP19.9x19.15x0.55	9.40	333.09	0.028	0.22	566.95	0.000
L10	114 - 110.5 (10)	TP20.425x19.9x0.538	9.83	334.57	0.029	0.22	585.28	0.000
L11	110.5 - 110.25 (11)	TP20.463x20.425x0.85	9.86	521.76	0.019	0.22	900.13	0.000
L12	110.25 - 110 (12)	TP20.5x20.462x0.925	9.88	1023.24	0.010	0.22	1761.88	0.000
L13	110 - 109.5	TP20.576x20.5x0.925	10.28	1027.19	0.010	0.36	1775.53	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L14	109.5 - 109.25 (13)	TP20.613x20.576x0.638	10.32	719.65	0.014	0.36	1264.53	0.000
L15	109.25 - 104.25 (14)	TP21.37x20.613x0.613	10.97	718.47	0.015	0.36	1311.83	0.000
L16	104.25 - 99.25 (15)	TP22.126x21.37x0.6	12.04	729.87	0.017	0.65	1382.00	0.000
L17	99.25 - 94.25 (16)	TP22.882x22.126x0.588	12.71	740.19	0.017	0.65	1451.59	0.000
L18	94.25 - 90.25 (17)	TP23.487x22.882x0.575	13.25	744.51	0.018	0.65	1500.49	0.000
L19	90.25 - 90 (18)	TP23.525x23.487x0.575	13.28	745.73	0.018	0.65	1505.45	0.000
L20	90 - 85 (19)	TP24.281x23.525x0.563	13.80	753.96	0.018	0.65	1573.03	0.000
L21	85 - 80 (20)	TP25.038x24.281x0.55	14.32	761.10	0.019	0.65	1639.40	0.000
L22	80 - 75 (21)	TP25.794x25.038x0.538	14.83	767.15	0.019	0.65	1704.31	0.000
L23	75 - 70 (22)	TP26.55x25.794x0.538	15.08	775.14	0.019	0.65	1740.02	0.000
L24	70 - 69 (23)	TP26.2x25.557x0.675	15.74	973.66	0.016	0.65	2186.13	0.000
L25	69 - 64 (24)	TP26.955x26.2x0.663	16.43	984.37	0.017	0.65	2276.64	0.000
L26	64 - 59 (25)	TP27.71x26.955x0.65	17.51	993.99	0.018	1.27	2366.01	0.001
L27	59 - 56.5 (26)	TP28.088x27.71x0.638	17.88	988.92	0.018	1.27	2387.88	0.001
L28	56.5 - 56.25 (27)	TP28.126x28.088x0.638	17.91	990.28	0.018	1.27	2394.46	0.001
L29	56.25 - 51.25 (28)	TP28.881x28.126x0.638	18.60	1017.49	0.018	1.27	2527.82	0.001
L30	51.25 - 46.25 (29)	TP29.636x28.881x0.625	19.27	1024.65	0.019	1.27	2614.79	0.000
L31	46.25 - 41.25 (30)	TP30.391x29.636x0.613	19.93	1030.72	0.019	1.27	2699.89	0.000
L32	41.25 - 36.25 (31)	TP31.146x30.391x0.6	20.57	1035.72	0.020	1.27	2782.89	0.000
L33	36.25 - 30 (32)	TP32.09x31.146x0.6	20.86	1047.60	0.020	1.27	2847.10	0.000
L34	30 - 28.93 (33)	TP31.627x30.871x0.663	21.58	1159.27	0.019	1.27	3157.57	0.000
L35	28.93 - 28.75 (34)	TP31.654x31.627x0.663	21.60	1160.29	0.019	1.27	3163.13	0.000
L36	28.75 - 28.5 (35)	TP31.692x31.654x0.663	21.63	1161.71	0.019	1.27	3170.84	0.000
L37	28.5 - 23.5 (36)	TP32.448x31.692x0.65	22.22	1168.01	0.019	1.27	3266.97	0.000
L38	23.5 - 18.5 (37)	TP33.204x32.448x0.65	22.78	1195.77	0.019	1.27	3424.11	0.000
L39	18.5 - 13.5 (38)	TP33.959x33.204x0.638	23.29	1200.45	0.019	1.27	3518.64	0.000
L40	13.5 - 8.5 (39)	TP34.715x33.959x0.638	23.80	1227.68	0.019	1.27	3680.06	0.000
L41	8.5 - 3.5 (40)	TP35.471x34.715x0.625	24.31	1230.74	0.020	1.27	3772.40	0.000
L42	3.5 - 2.75 (41)	TP35.584x35.471x0.625	24.38	1234.74	0.020	1.27	3796.99	0.000
L43	2.75 - 2.5 (42)	TP35.622x35.584x0.375	24.40	746.94	0.033	1.27	2315.86	0.001
L44	2.5 - 0 (43)	TP36x35.622x0.375	24.62	754.95	0.033	1.27	2365.78	0.001

APPENDIX B

BASE LEVEL DRAWING


CLIMBING PEGS
W/ SAFETY CLIMB
Q1
Q2
Q3
Q4
(PROPOSED EQUIPMENT CONFIGURATION)
(2) 3/8" TO 150 FT LEVEL
(6) 3/4" TO 150 FT LEVEL
(6) 1-1/4" TO 150 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 3/8" TO 104 FT LEVEL

APPENDIX C

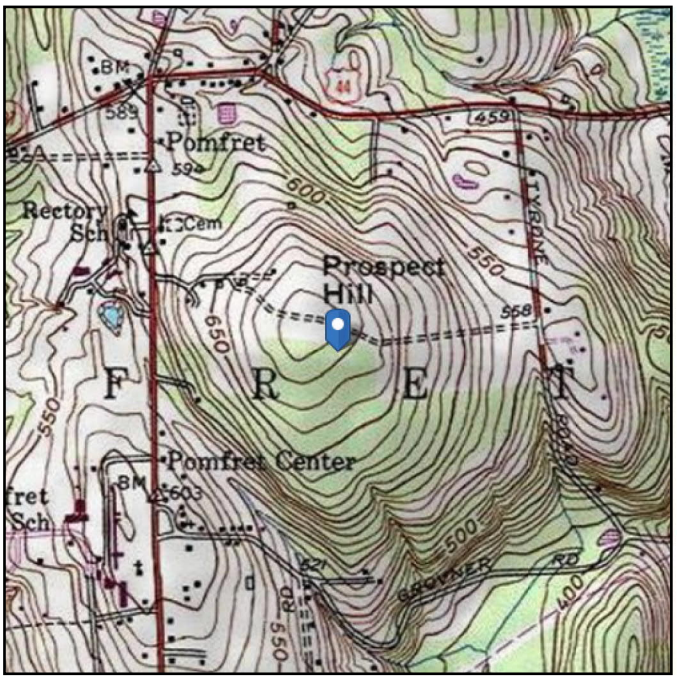
ADDITIONAL CALCULATIONS

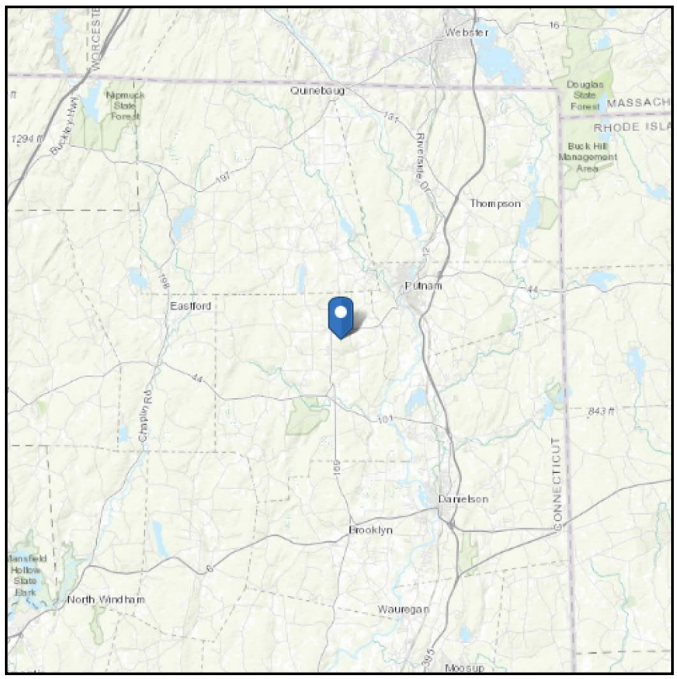
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 681.63 ft (NAVD 88)
Latitude: 41.89025
Longitude: -71.955611





Wind

Results:

Wind Speed:	128 Vmph	130 Vmph per jurisdiction
10-year MRI	78 Vmph	
25-year MRI	88 Vmph	
50-year MRI	96 Vmph	
100-year MRI	104 Vmph	

Data Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

Date Accessed: Tue Feb 18 2020

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

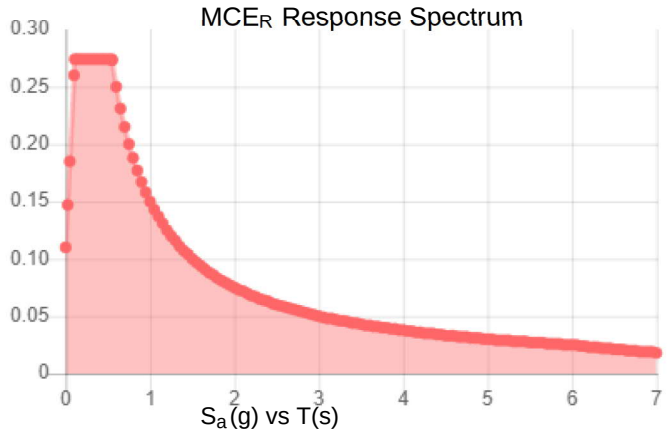
Seismic

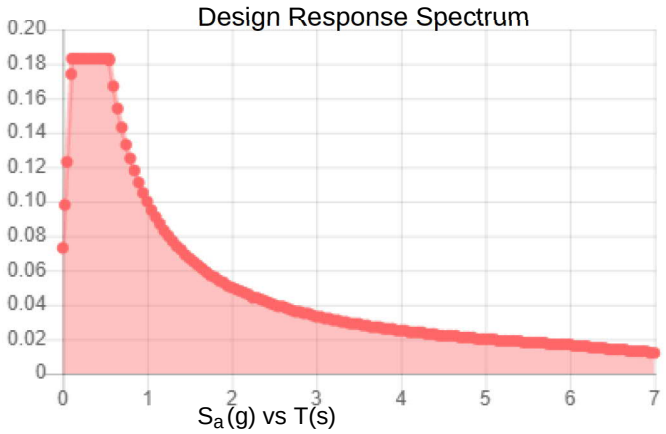
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.172	S_{DS} :	0.183
S_1 :	0.063	S_{D1} :	0.1
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.085
S_{MS} :	0.274	PGA_M :	0.136
S_{M1} :	0.15	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Tue Feb 18 2020

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Tue Feb 18 2020

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

CCIpole

per TIA-222- H

Site BU: 841292

Work Order: 1832566

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	150	40	0	12	14.5	20.5	0.25	Auto	A36
2	110	40	3.26	12	20.50	26.55	0.25	Auto	A572-65
3	73.26	43.26	3.93	12	25.56	32.09	0.3125	Auto	A572-65
4	33.93	33.93	0	12	30.87	36	0.375	Auto	A572-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12
1	2.75	28.75	plate	1.25" x 5" Plate	4		x			x			x			x	
2	28.75	56.5	plate	1.25" x 5" Plate	4	x			x			x			x		
3	56.5	72.25	plate	1.25" x 5" Plate	4		x			x			x			x	
4	72.25	90.25	plate	1.25" x 4" Plate	4	x			x			x			x		
5	90.25	109.5	plate	1.25" x 4" Plate	4		x			x			x			x	
6	110.5	129.25	plate	1.25" x 3" Plate	4		x			x			x			x	
7	109.5	110.5	plate	(FJ) 1.25" x 3"	4	x					x			x	x		
8																	
9																	
10																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L_u (in)	Net Area (in^2)	Bolt Hole Size (in)	Reinforcement Material
1	5	1.25	6.25	0.625	24.000	24.000	18.000	4.688	1.1875	A572-65
2	5	1.25	6.25	0.625	24.000	24.000	18.000	4.688	1.1875	A572-65
3	5	1.25	6.25	0.625	24.000	24.000	18.000	4.688	1.1875	A572-65
4	4	1.25	5	0.625	18.000	18.000	18.000	3.438	1.1875	A572-65
5	4	1.25	5	0.625	18.000	18.000	18.000	3.438	1.1875	A572-65
6	3	1.25	3.75	0.625	12.000	12.000	18.000	2.188	1.1875	A572-65
7	1.25	3	3.75	6.5	n/a	n/a	8.000	3.750	0.0000	A572-65

TNX Geometry Input

Increment (ft): 5

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	150 - 145	5		12	14.500	15.250	0.25	A36	1.000
2	145 - 140	5		12	15.250	16.000	0.25	A36	1.000
3	140 - 135	5		12	16.000	16.750	0.25	A36	1.000
4	135 - 130	5		12	16.750	17.500	0.25	A36	1.000
5	130 - 129.25	0.75		12	17.500	17.613	0.25	A36	1.000
6	129.25 - 129	0.25		12	17.613	17.650	0.6	A36	0.881
7	129 - 124	5		12	17.650	18.400	0.575	A36	0.898
8	124 - 119	5		12	18.400	19.150	0.5625	A36	0.898
9	119 - 114	5		12	19.150	19.900	0.55	A36	0.900
10	114 - 110.5	3.5		12	19.900	20.425	0.5375	A36	0.908
11	110.5 - 110.25	0.25		12	20.425	20.463	0.85	A36	0.583
12	110.25 - 110	0.25	0	12	20.462	20.500	0.925	A572-65	0.537
13	110 - 109.5	0.5		12	20.500	20.576	0.925	A572-65	0.536
14	109.5 - 109.25	0.25		12	20.576	20.613	0.6375	A572-65	0.888
15	109.25 - 104.25	5		12	20.613	21.370	0.6125	A572-65	0.905
16	104.25 - 99.25	5		12	21.370	22.126	0.6	A572-65	0.905
17	99.25 - 94.25	5		12	22.126	22.882	0.5875	A572-65	0.907
18	94.25 - 90.25	4		12	22.882	23.487	0.575	A572-65	0.913
19	90.25 - 90	0.25		12	23.487	23.525	0.575	A572-65	0.912
20	90 - 85	5		12	23.525	24.281	0.5625	A572-65	0.917
21	85 - 80	5		12	24.281	25.038	0.55	A572-65	0.922
22	80 - 75	5		12	25.038	25.794	0.5375	A572-65	0.929
23	75 - 73.26	5	3.26	12	25.794	26.550	0.5375	A572-65	0.924
24	73.26 - 69	4.26		12	25.557	26.200	0.675	A572-65	0.921
25	69 - 64	5		12	26.200	26.955	0.6625	A572-65	0.924
26	64 - 59	5		12	26.955	27.710	0.65	A572-65	0.929
27	59 - 56.5	2.5		12	27.710	28.088	0.6375	A572-65	0.940
28	56.5 - 56.25	0.25		12	28.088	28.126	0.6375	A572-65	0.940
29	56.25 - 51.25	5		12	28.126	28.881	0.6375	A572-65	0.928
30	51.25 - 46.25	5		12	28.881	29.636	0.625	A572-65	0.934
31	46.25 - 41.25	5		12	29.636	30.391	0.6125	A572-65	0.942
32	41.25 - 36.25	5		12	30.391	31.146	0.6	A572-65	0.950
33	36.25 - 33.93	6.25	3.93	12	31.146	32.090	0.6	A572-65	0.945
34	33.93 - 28.93	5		12	30.871	31.627	0.6625	A572-65	0.950
35	28.93 - 28.75	0.18		12	31.627	31.654	0.6625	A572-65	0.950
36	28.75 - 28.5	0.25		12	31.654	31.692	0.6625	A572-65	0.950
37	28.5 - 23.5	5		12	31.692	32.448	0.65	A572-65	0.958
38	23.5 - 18.5	5		12	32.448	33.204	0.65	A572-65	0.949
39	18.5 - 13.5	5		12	33.204	33.959	0.6375	A572-65	0.959
40	13.5 - 8.5	5		12	33.959	34.715	0.6375	A572-65	0.951
41	8.5 - 3.5	5		12	34.715	35.471	0.625	A572-65	0.961
42	3.5 - 2.75	0.75		12	35.471	35.584	0.625	A572-65	0.960
43	2.75 - 2.5	0.25		12	35.584	35.622	0.375	A572-65	1.000
44	2.5 - 0	2.5		12	35.622	36.000	0.375	A572-65	1.000

TNX Section Forces

Increment (ft): 5

	Section Height (ft)	TNX Output P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	150 - 145	4.09	31.58	6.31
2	145 - 140	4.35	64.08	6.70
3	140 - 135	4.64	98.54	7.09
4	135 - 130	4.96	134.99	7.49
5	130 - 129.25	5.01	140.64	7.57
6	129.25 - 129	5.04	142.53	7.60
7	129 - 124	5.63	181.99	8.19
8	124 - 119	6.25	224.41	8.79
9	119 - 114	6.88	269.85	9.40
10	114 - 110.5	7.33	303.48	9.83
11	110.5 - 110.25	7.37	305.94	9.86
12	110.25 - 110	7.40	308.41	9.88
13	110 - 109.5	7.84	313.47	10.28
14	109.5 - 109.25	7.88	316.05	10.32
15	109.25 - 104.25	8.64	369.25	10.97
16	104.25 - 99.25	9.48	427.84	12.04
17	99.25 - 94.25	10.29	489.69	12.71
18	94.25 - 90.25	10.95	541.58	13.25
19	90.25 - 90	10.99	544.90	13.28
20	90 - 85	11.85	612.60	13.80
21	85 - 80	12.72	682.87	14.32
22	80 - 75	13.62	755.71	14.83
23	75 - 73.26	13.93	781.71	15.08
24	73.26 - 69	15.39	847.34	15.74
25	69 - 64	16.51	927.72	16.43
26	64 - 59	17.61	1012.52	17.51
27	59 - 56.5	18.19	1056.74	17.88
28	56.5 - 56.25	18.25	1061.21	17.91
29	56.25 - 51.25	19.42	1152.45	18.60
30	51.25 - 46.25	20.62	1247.06	19.27
31	46.25 - 41.25	21.85	1344.99	19.93
32	41.25 - 36.25	23.10	1446.17	20.57
33	36.25 - 33.93	23.69	1494.20	20.86
34	33.93 - 28.93	25.95	1600.27	21.58
35	28.93 - 28.75	26.01	1604.16	21.60
36	28.75 - 28.5	26.08	1609.56	21.63
37	28.5 - 23.5	27.50	1719.15	22.22
38	23.5 - 18.5	28.94	1831.58	22.78
39	18.5 - 13.5	30.42	1946.69	23.29
40	13.5 - 8.5	31.91	2064.35	23.80
41	8.5 - 3.5	33.43	2184.55	24.31
42	3.5 - 2.75	33.67	2202.80	24.38
43	2.75 - 2.5	33.73	2208.89	24.40
44	2.5 - 0	34.26	2270.12	24.62

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP15.25x14.5x0.25	Pole	20.9%	Pass
145 - 140	Pole	TP16x15.25x0.25	Pole	37.8%	Pass
140 - 135	Pole	TP16.75x16x0.25	Pole	52.6%	Pass
135 - 130	Pole	TP17.5x16.75x0.25	Pole	65.7%	Pass
130 - 129.25	Pole	TP17.613x17.5x0.25	Pole	67.5%	Pass
129.25 - 129	Pole + Reinf.	TP17.65x17.613x0.6	Reinf. 6 Bolt-Shaft Bearing	40.9%	Pass
129 - 124	Pole + Reinf.	TP18.4x17.65x0.575	Reinf. 6 Tension Rupture	43.8%	Pass
124 - 119	Pole + Reinf.	TP19.15x18.4x0.5625	Reinf. 6 Tension Rupture	50.9%	Pass
119 - 114	Pole + Reinf.	TP19.9x19.15x0.55	Reinf. 6 Tension Rupture	57.8%	Pass
114 - 110.5	Pole + Reinf.	TP20.425x19.9x0.5375	Reinf. 6 Bolt-Shaft Bearing	70.2%	Pass
110.5 - 110.25	Pole + Reinf.	TP20.463x20.425x0.85	Pole	43.0%	Pass
110.25 - 110	Pole + Reinf.	TP20.5x20.462x0.925	Reinf. 7 Compression	38.6%	Pass
110 - 109.5	Pole + Reinf.	TP20.576x20.5x0.925	Reinf. 7 Connection	40.3%	Pass
109.5 - 109.25	Pole + Reinf.	TP20.613x20.576x0.6375	Reinf. 5 Tension Rupture	46.4%	Pass
109.25 - 104.25	Pole + Reinf.	TP21.37x20.613x0.6125	Reinf. 5 Tension Rupture	51.5%	Pass
104.25 - 99.25	Pole + Reinf.	TP22.126x21.37x0.6	Reinf. 5 Tension Rupture	56.8%	Pass
99.25 - 94.25	Pole + Reinf.	TP22.882x22.126x0.5875	Reinf. 5 Tension Rupture	61.9%	Pass
94.25 - 90.25	Pole + Reinf.	TP23.487x22.882x0.575	Reinf. 5 Tension Rupture	65.9%	Pass
90.25 - 90	Pole + Reinf.	TP23.525x23.487x0.575	Reinf. 4 Tension Rupture	66.2%	Pass
90 - 85	Pole + Reinf.	TP24.281x23.525x0.5625	Reinf. 4 Tension Rupture	71.0%	Pass
85 - 80	Pole + Reinf.	TP25.038x24.281x0.55	Reinf. 4 Tension Rupture	75.7%	Pass
80 - 75	Pole + Reinf.	TP25.794x25.038x0.5375	Reinf. 4 Tension Rupture	80.1%	Pass
75 - 73.26	Pole + Reinf.	TP26.55x25.794x0.5375	Reinf. 4 Tension Rupture	81.6%	Pass
73.26 - 69	Pole + Reinf.	TP26.2x25.557x0.675	Reinf. 3 Tension Rupture	64.5%	Pass
69 - 64	Pole + Reinf.	TP26.955x26.2x0.6625	Reinf. 3 Tension Rupture	67.7%	Pass
64 - 59	Pole + Reinf.	TP27.71x26.955x0.65	Reinf. 3 Tension Rupture	70.9%	Pass
59 - 56.5	Pole + Reinf.	TP28.088x27.71x0.6375	Reinf. 3 Tension Rupture	72.5%	Pass
56.5 - 56.25	Pole + Reinf.	TP28.126x28.088x0.6375	Reinf. 2 Tension Rupture	72.6%	Pass
56.25 - 51.25	Pole + Reinf.	TP28.881x28.126x0.6375	Reinf. 2 Tension Rupture	75.8%	Pass
51.25 - 46.25	Pole + Reinf.	TP29.636x28.881x0.625	Reinf. 2 Tension Rupture	78.8%	Pass
46.25 - 41.25	Pole + Reinf.	TP30.391x29.636x0.6125	Reinf. 2 Tension Rupture	81.8%	Pass
41.25 - 36.25	Pole + Reinf.	TP31.146x30.391x0.6	Reinf. 2 Tension Rupture	84.7%	Pass
36.25 - 33.93	Pole + Reinf.	TP32.09x31.146x0.6	Reinf. 2 Tension Rupture	86.0%	Pass
33.93 - 28.93	Pole + Reinf.	TP31.627x30.871x0.6625	Reinf. 2 Tension Rupture	82.9%	Pass
28.93 - 28.75	Pole + Reinf.	TP31.654x31.627x0.6625	Reinf. 2 Tension Rupture	83.0%	Pass
28.75 - 28.5	Pole + Reinf.	TP31.692x31.654x0.6625	Reinf. 1 Tension Rupture	83.1%	Pass
28.5 - 23.5	Pole + Reinf.	TP32.448x31.692x0.65	Reinf. 1 Tension Rupture	85.5%	Pass
23.5 - 18.5	Pole + Reinf.	TP33.204x32.448x0.65	Reinf. 1 Tension Rupture	87.8%	Pass
18.5 - 13.5	Pole + Reinf.	TP33.959x33.204x0.6375	Reinf. 1 Tension Rupture	90.0%	Pass
13.5 - 8.5	Pole + Reinf.	TP34.715x33.959x0.6375	Reinf. 1 Tension Rupture	92.1%	Pass
8.5 - 3.5	Pole + Reinf.	TP35.471x34.715x0.625	Reinf. 1 Tension Rupture	94.1%	Pass
3.5 - 2.75	Pole + Reinf.	TP35.584x35.471x0.625	Reinf. 1 Tension Rupture	94.4%	Pass
2.75 - 2.5	Pole	TP35.622x35.584x0.375	Pole	98.6%	Pass
2.5 - 0	Pole	TP36x35.622x0.375	Pole	99.6%	Pass
				Summary	
			Pole	99.6%	Pass
			Reinforcement	94.4%	Pass
			Overall	99.6%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity*							
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7
150 - 145	347	n/a	347	12.06	n/a	12.06	20.9%							
145 - 140	402	n/a	402	12.66	n/a	12.66	37.8%							
140 - 135	462	n/a	462	13.26	n/a	13.26	52.6%							
135 - 130	528	n/a	528	13.87	n/a	13.87	65.7%							
130 - 129.25	539	n/a	539	13.96	n/a	13.96	67.5%							
129.25 - 129	542	676	1218	13.99	15.00	28.99	29.3%						40.9%	
129 - 124	615	731	1346	14.59	15.00	29.59	35.2%						43.8%	
124 - 119	695	787	1482	15.19	15.00	30.19	41.0%						50.9%	
119 - 114	781	845	1626	15.80	15.00	30.80	46.7%						57.8%	
114 - 110.5	845	887	1732	16.22	15.00	31.22	50.6%						70.2%	
110.5 - 110.25	981	1723	2704	16.25	15.00	31.25	43.0%							39.7%
110.25 - 110	887	2015	2902	16.28	15.00	31.28	20.2%							38.6%
110 - 109.5	897	2024	2921	16.34	15.00	31.34	20.4%							40.3%
109.5 - 109.25	869	1210	2078	16.37	20.00	36.37	24.6%					46.4%		
109.25 - 104.25	969	1294	2263	16.98	20.00	36.98	27.6%					51.5%		
104.25 - 99.25	1077	1381	2458	17.58	20.00	37.58	30.9%					56.8%		
99.25 - 94.25	1193	1471	2663	18.19	20.00	38.19	34.1%					61.9%		
94.25 - 90.25	1291	1544	2835	18.68	20.00	38.68	36.6%					65.9%		
90.25 - 90	1297	1549	2846	18.71	20.00	38.71	36.8%				66.2%			
90 - 85	1428	1644	3072	19.32	20.00	39.32	40.0%				71.0%			
85 - 80	1567	1742	3309	19.93	20.00	39.93	43.2%				75.7%			
80 - 75	1715	1843	3558	20.53	20.00	40.53	46.3%				80.1%			
75 - 73.26	1768	1879	3647	20.74	20.00	40.74	47.4%				81.6%			
73.26 - 69	2231	2382	4614	26.01	25.00	51.01	37.9%			64.5%				
69 - 64	2432	2514	4946	26.77	25.00	51.77	40.1%			67.7%				
64 - 59	2645	2649	5294	27.53	25.00	52.53	42.5%			70.9%				
59 - 56.5	2756	2717	5473	27.91	25.00	52.91	43.6%			72.5%				
56.5 - 56.25	2767	2724	5492	27.95	25.00	52.95	43.7%		72.6%					
56.25 - 51.25	2999	2865	5863	28.71	25.00	53.71	46.1%		75.8%					
51.25 - 46.25	3243	3009	6252	29.46	25.00	54.46	48.4%		78.8%					
46.25 - 41.25	3500	3156	6656	30.22	25.00	55.22	50.8%		81.8%					
41.25 - 36.25	3770	3307	7077	30.98	25.00	55.98	53.1%		84.7%					
36.25 - 33.93	3900	3379	7279	31.33	25.00	56.33	54.2%		86.0%					
33.93 - 28.93	4711	3406	8116	37.68	25.00	62.68	49.2%		82.9%					
28.93 - 28.75	4723	3411	8134	37.72	25.00	62.72	49.3%		83.0%					
28.75 - 28.5	4740	3419	8159	37.76	25.00	62.76	49.3%	83.1%						
28.5 - 23.5	5092	3576	8668	38.67	25.00	63.67	51.2%	85.5%						
23.5 - 18.5	5460	3737	9198	39.58	25.00	64.58	53.0%	87.8%						
18.5 - 13.5	5846	3902	9748	40.50	25.00	65.50	54.7%	90.0%						
13.5 - 8.5	6250	4070	10320	41.41	25.00	66.41	56.5%	92.1%						
8.5 - 3.5	6672	4242	10913	42.32	25.00	67.32	58.2%	94.1%						
3.5 - 2.75	6737	4268	11004	42.45	25.00	67.45	58.4%	94.4%						
2.75 - 2.5	6758	n/a	6758	42.50	n/a	42.50	98.6%							
2.5 - 0	6978	n/a	6978	42.96	n/a	42.96	99.6%							

Note: Section capacity checked in 5 degree increments.
Rating per TIA-222-H Section 15.5.

Monopole Flange Plate Connection

Elevation = 110 ft.

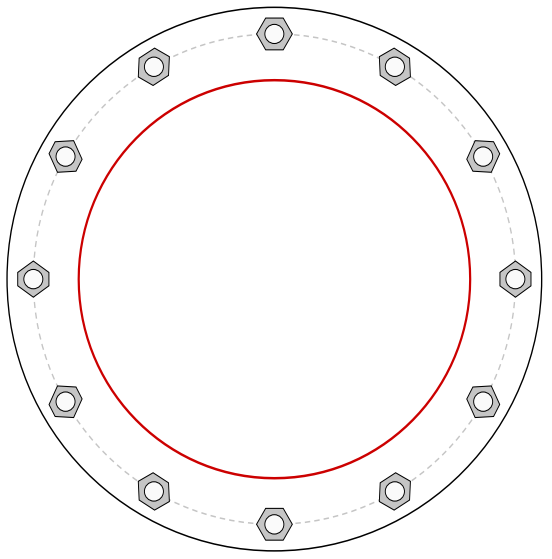
BU #	841292
Site Name	Pomfret-Tyrone Rd
Order #	513226 Rev. 1

TIA-222 Revision	H

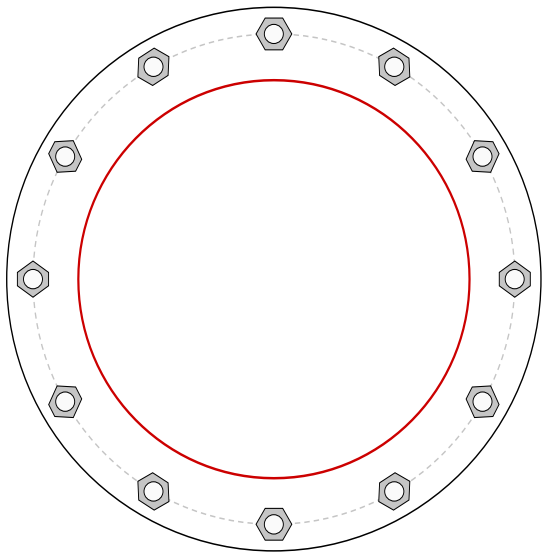
Applied Loads	
Moment (kip-ft)	94.27
Axial Force (kips)	3.85
Shear Force (kips)	5.14

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(12) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 25.25" BC

Top Plate Data

28" OD x 1" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

28" OD x 1" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

20.5" x 0.25" 12-sided pole (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Pole Data

20.5" x 0.25" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	14.60	
Allowable (kips)	54.54	
Stress Rating:	**25.5%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	15.55	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**45.7%**	**Pass**
Tension Side Stress Rating:	**20.6%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	15.55	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**45.7%**	**Pass**
Tension Side Stress Rating:	**20.6%**	**Pass**

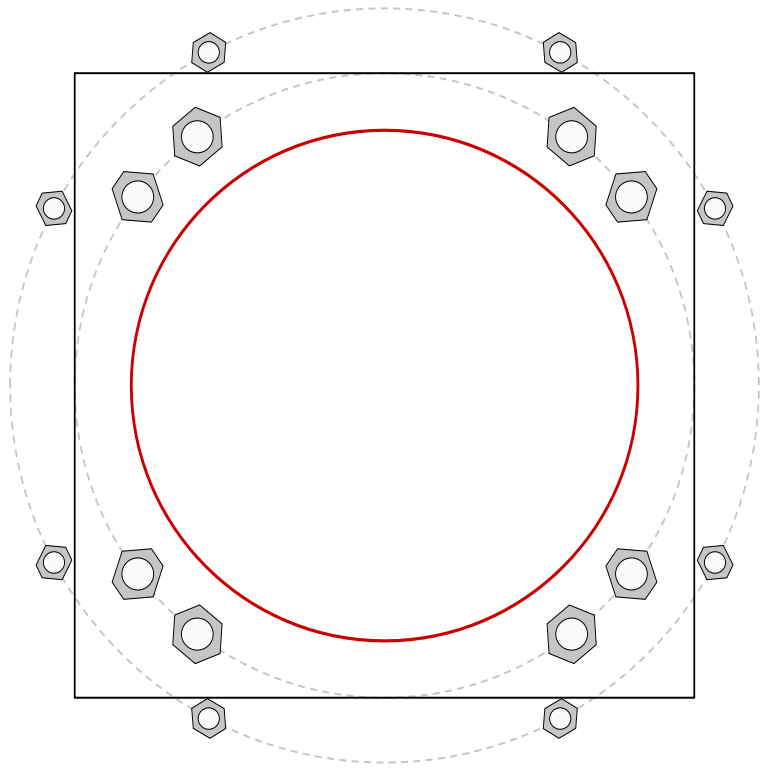
Monopole Base Plate Connection

Site Info	
BU #	841292
Site Name	Pomfret-Tyrone Rd
Order #	513226 Rev. 1

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	2.25

Applied Loads	
Moment (kip-ft)	2270.00
Axial Force (kips)	34.00
Shear Force (kips)	25.00

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (8) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 44" BC

Anchor Spacing: 6 in

GROUP 2: (8) 1-1/2" ø bolts (F1554-105 N; Fy=105 ksi, Fu=125 ksi) on 53.17" BC

Base Plate Data

44" OD x 2.5" Plate (A572-60; Fy=60 ksi, Fu=75 ksi)

Stiffener Data

N/A

Pole Data

36" x 0.375" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_c = 192.18	ϕPn_c = 268.39	**Stress Rating**
Vu = 3.13	ϕVn = 120.77	**68.3%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_c = 100.49	ϕPn_c = 167	**Stress Rating**
Vu = 0	ϕVn = 75.15	**57.3%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	35.29	(Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	**62.2%**	**Pass**

TOWER ENGINEERING PROFESSIONALS

JOB:	Pomfret-Tyrone Rd (BU 841292); TEP No. 131599.384410		
SHEET NUMBER:	1	OF	2
CALCULATED BY:	CJB	DATE	2/26/2020
CHECKED BY:	SMA	DATE	2/26/2020

Pad and Pier Foundation for Monopole - TIA-222-H - Perpendicular to Wind Direction

(For pads of unequal side dimensions and eccentric tower location)

q_a, ALLOWABLE SOIL PRESS. (ksf)	6.00
NET or GROSS	NET
SAFETY FACTOR IN q_a	2
SOIL DENSITY (pcf)	64

$\varphi^* q_n$ = 9.00 ksf

F'c (ksi)	3
Fy (ksi)	60

Base Reactions LC1: 1.2D + 1.6W

M, MOMENT (k-ft)	2270.00
P_t, TOTAL DOWNLOAD (k)	34.00
H, HORIZONTAL SHEAR (k)	25.00
Tower Eccentricity , e_{LT} (ft)	0.0
Tower Eccentricity , e_{BT} (ft)	0.0

Base Reaction LC 2: 0.9D + 1.6W

M (k-ft)	2270.0
P_t (k)	25.5
H (k)	25.0

Try:	L (ft.)	B (ft.)	t (ft.)	Depth to top of pad (ft.)	Pier dia./width (ft.)	Pier Height, h (cu.ft.)	Pier Shape
	22.0	20.0	3.0	5.0	6.0	5.5	Square

W_m, Weight of Mat (k) =	198.0
W_p, Weight of Pier (k) =	29.7
W_s, Weight of Soil (k) =	129.3

Concrete Vol. (cu ft) 56.22

CHECK BEARING PRESSURE for LC1: 1.2D + 1.6W

P = P_t + Wf + Ws =	462.4 k
e_L =	5.37 ft
L/4 =	5.50 ft
L' =	22.00 ft
e_B =	5.37 ft
B/4 =	5.00 ft
B' =	9.26 ft
Orthogonal: q_{max} =	1.76 ksf
Diag. Axis: q_{max} =	2.07 ksf

***Capacity:** **22.0%**

CHECK BEARING STABILITY FOR LC2: 0.9D +1.6W

90° Axis	**$M_{\varphi qn}$ * =**	3180.5 k-ft
	$M_{ot}/M_{\varphi qn}$ =	0.78
Diag. Axis	**$M_{\varphi qn}$ =**	3607.7 k-ft
	$M_{ot}/M_{\varphi qn}$ =	0.69

***Capacity:** **74.3%**

* **$M_{\varphi qn}$ is the overturning moment at which $q_{max} = \varphi q_n$**

CHECK OVERTURNING: LC2 CONTROLS

$M_{st}=(P_t+0.9W_p)*(B/2-e_{BT})+(0.9W_{m+s}*B/2)$ =	3467.8 k-ft
M_{ot} = M+H*(t+h) =	2482.5 k-ft
M_{ot}/M_{st} =	0.72

***Capacity:** **68.2%**

JOB:	Pomfret-Tyrone Rd (BU 841292); TEP No. 131599.384410		
SHEET NUMBER:	2	OF	2
CALCULATED BY:	CJB	DATE	2/26/2020
CHECKED BY:	SMA	DATE	2/26/2020

CHECK BEAM SHEAR

Vu =	172.6 k	
φV_c =	696.8 k	
Vu_{max} =	77.3 k	(Dowel force from bearing pressure)
φVn =	317.6 k	(Dowel shear-friction strength)

***Capacity:** **23.6%**

CALCULATE REINFORCING REQUIRED

F'c = 3.0 ksi Fy = 60.0 ksi

Temp & Shrinkage reinforcing, $A_{s,t}$ = 0.78 in^2/ft (ACI 318 Sec. 10.5.4)

BOTTOM REINFORCING

Bar Size = 7

Bar Spacing, c-c: 9.1

d = 32.13 in.

Mu= 622.0 in-k/ft Mu= 1038.9 k-ft

φM_n= 2457.6 k-ft

φMn=0.9*As*Fy*d(1-0.59*As*Fy/(b*d*F'c))

Solution: As,req = 0.36 in^2/ft

Check, As = 0.79 in^2/ft

***Capacity:** **43.6%**

TOP REINFORCING

Bar Size = 7

Bar Spacing, c-c: 9.1

d= 32.13 in.

Mu= 347.0 in-k/ft Mu= 578.3 k-ft

φM_n= 2457.6 k-ft

φMn=0.9*As*Fy*d(1-0.59*As*Fy/(b*d*F'c))

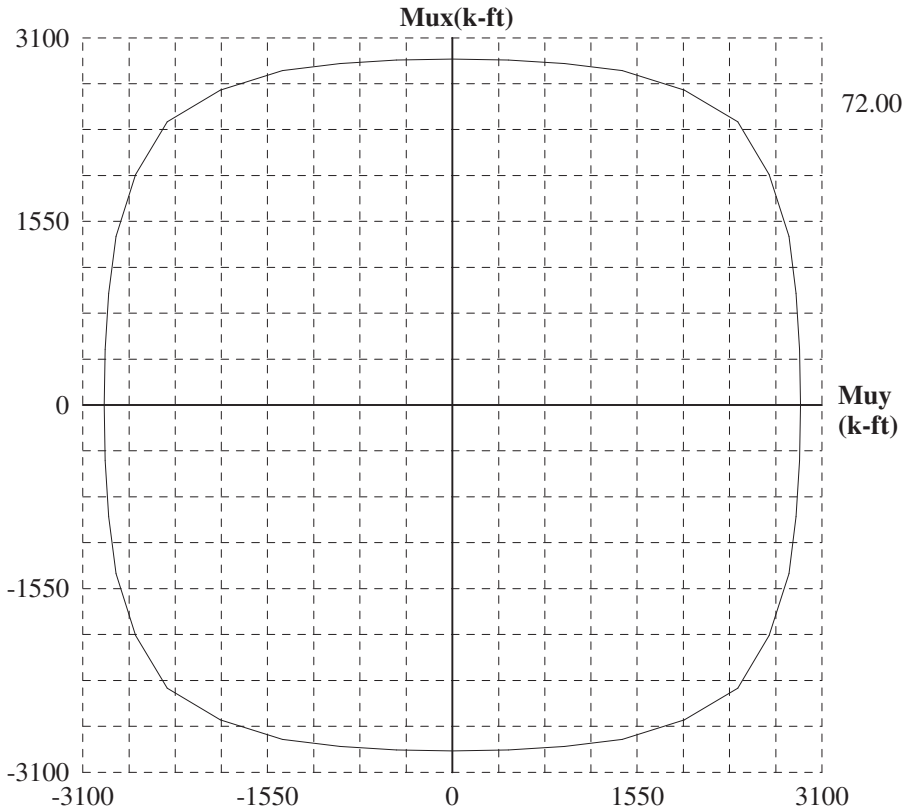
Solution: As,req = 0.20 in^2/ft

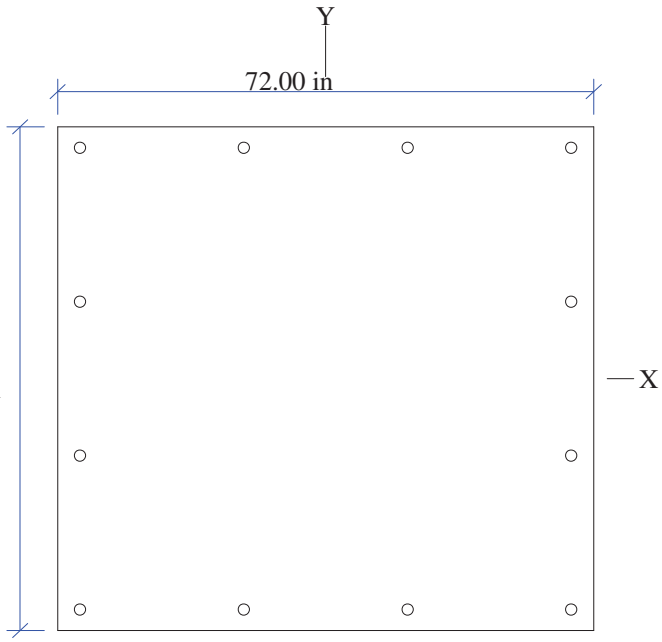
Check, As = 0.79 in^2/ft

***Capacity:** **24.2%**

*Rating per TIA-H

Mu = 2407.5
Capacity = Mu/Phi*Mn/1.05 = 78.5%





Rebar Data:
Layer_1
Rebar num. = 12
Rebar As = 1.56 in^2
Dist_Col_Face = 3 in
3 Spa. @ 22.00 in [Hor.]
3 Spa. @ 22.00 in [Vrt.]

Interact. Data:

P =34
ø = 0.896
+øMyo=2920k-ft
-øMyo=-2920k-ft
+øMxo=2920k-ft
-øMxo=-2920k-ft

Section Data:
Column Area = 5184 in^2
Rebar Area = 18.72 in^2
Rebar Index = 0.36 %

Material Data:
F'c = 3 ksi
Fy = 60 ksi
Conf. Reinf.--> Ties

Rcolumn (v1.01)
License: Freeware
Mx/My Interaction Diagram(Load Factor)

August 27, 2019
November 20, 2019 (Rev. 1)
January 28, 2020 (Rev. 2)
March 18, 2020 (Rev. 3)

SAI Communications
12 Industrial Way
Salem NH, 03079

RE:		
	Site Number:	CT1050 (LTE 3C)
	FA Number:	10035021
	PACE Number:	MRCTB008300
	PTN Number:	2051A0EKJJ
	Site Name:	POMFRET-TYRONE RD.
	Site Address:	82 Tyrone Road Pomfret, CT 06258

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by SAI Communications to perform a mount analysis on the new AT&T antenna mount to determine its capability of supporting the following equipment loading:

- (1) Squid Surge Arrestor (24.0"x9.7" ø – Wt. = 33 lbs. /each)
- **(3) NNH4-65B-R6 Antennas (72.0"x19.6"x7.8"– Wt. = 84 lbs. /each)**
- **(3) DMP65R-BU6D Antennas (71.2"x20.7"x7.7" – Wt. = 80 lbs. /each)**
- **(3) 4449 B5/B12 RRH's (14.9"x13.2"x10.4" – Wt. = 73 lbs. /each)**
- **(3) 8843 B2/B66A RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each)**
- **(3) RRUS-32 B2 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each)**
- **(2) Squid Surge Arrestor (24.0"x9.7" ø – Wt. = 33 lbs. /each)**

  **Proposed Loading Shown in Bold.*

Mount fabrication drawings prepared by SitePro1, RMQP-12-H5, dated November 1, 2017 were used to perform this analysis.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R13.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 130 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.50 in. An escalated ice thickness of 1.75 in was used for this analysis.
- HDG considers this site to be exposure category C; tower is located near large, flat, open, terrain/grasslands.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.

Based on our analysis, we have determined that the new SitePro1 RMQP-12-H5 mount **IS CAPABLE** of supporting the proposed antenna installation with the following modification:

- **Install new handrail kit, SitePro1 P/N HRK12-3HD (or approved equal). Handrail kit is required per AT&T Technical Directive to stabilize existing cantilevered antennas.**

	Member(s)	Controlling Load Case	Stress Ratio	Pass/Fail
New (LTE 3C/4C/5C) Mount Rating	141	LC2	42%	**PASS**

Reference Documents:

- Fabrication drawings prepared by SitePro1, P/N RMQP-12-H5, dated November 1, 2017.
- Fabrication drawings prepared by SitePro1, P/N HRK12-3HD, dated April 7, 2015.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities. Contractor to perform pre-inspection prior to construction.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The proposed mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

Michael Cabral
Vice President

Daniel P. Hamm, PE
Principal

FIELD PHOTOS:

(To be removed and replaced)






p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 203.208.3919 f: 203.234.6398 a: 110 Washington Avenue, 4th Floor, North Haven CT 06473

HUDSON
Design Group LLC

Wind & Ice
Calculations

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW **Checked By:** MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01 (z/z_g)^{2/\alpha}$

		z=	150 (ft)
		z_g=	900 (ft)
K_z=	**1.378**	α=	9.5

Kzmin ≤ Kz ≤ 2.01

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$K_{zt} = [1+(K_c K_t/K_h)]^2$ $K_h = e^{(f*z/H)}$

K_{zt}=	**1.666345788**	K_h=	1.8221188
		K_c=	1 (from Table 2-4)
(If Category 1 then K_{zt} =1.0)		K_t=	0.53 (from Table 2-5)
		f=	2 (from Table 2-5)
Category=	1	z=	150
		z_s=	680 (Mean elevation of base of structure above sea level)
		H=	500 (Ht. of the crest above surrounding terrain)
		K_{zt}=	1.00 (from 2.6.6.2.1)
		K_e=	0.98 (from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness =		t_i =	1.50 in
Importance Factor =		I=	1.0 (from Table 2-3)
		K_{iz} =	1.16 (from Sec. 2.6.10)

$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$ t_{iz} = 1.75 in

Date: 1/23/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW **Checked By:** MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01\ (z/z_g)^{2/\alpha}$

		z=	150 (ft)
		z_g=	900 (ft)
K_z=	**1.378**	α=	9.5

$Kzmin \le Kz \le 2.01$

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$K_{zt} = [1+(K_c K_t/K_h)]^2$

$K_h = e^{(f*z/H)}$

K_{zt}=	**1.666345788**	K_h=	1.8221188
		K_c=	1 (from Table 2-4)
(If Category 1 then K_{zt} =1.0)		K_t=	0.53 (from Table 2-5)
		f=	2 (from Table 2-5)
Category=	1	z=	150
		z_s=	680 (Mean elevation of base of structure above sea level)
		H=	500 (Ht. of the crest above surrounding terrain)
		K_{zt}=	1.00 (from 2.6.6.2.1)
		K_e=	0.98 (from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness =		t_i =	1.50 in
Importance Factor =		I=	1.0 (from Table 2-3)
		K_{iz} =	1.16 (from Sec. 2.6.10)

$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$

t_{iz} = 1.75 in

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

G_h = 1.0 Latticed Structures > 600 ft

G_h = 0.85 Latticed Structures 450 ft or less

G_h = 0.85 + 0.15 [h/150 - 3.0] h= ht. of structure

h=	154	G_h=	0.85

2.6.9.2 Guyed Masts G_h= 0.85

2.6.9.3 Pole Structures G_h= 1.1

2.6.9 Appurtenances G_h= 1.0

2.6.9.4 Structures Supported on Other Structures

(Cantilivered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

G_h=	1.35	Gh=	1.00

2.6.11.2 Design Wind Force on Appurtenances

$F = q_z * G_h * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

		K_z=	1.378	(from 2.6.5.2)
		K_{zt}=	1.0	(from 2.6.6.2.1)
		K_s=	1.0	(from 2.6.7)
q_z=	55.28	K_e=	0.98	(from 2.6.8)
$q_{z\ (ice)}$=	8.18	K_d=	0.95	(from Table 2-2)
$q_{z\ (30)}$=	2.94	V_{max}=	130	mph (Ultimate Wind Speed)
		$V_{max\ (ice)}$=	50	mph
		V_{30}=	30	mph

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		1.2 - 2.8(r_s) ≥ 0.85	1.4 - 4.0(r_s) ≥ 0.90	2.0 - 6.0(r_s) ≥ 1.25
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	39 ≤ C ≤ 78 (Transitional)	$4.14/(C^{0.485})$	$3.66/(C^{0.415})$	$46.8/(C^{1.0})$
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
(Aspect ratio is independent of the spacing between support points of a linear appurtenance,

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = **1.75** in | **Angle = 0 (deg)** | **Equivalent Angle = 180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.67	1.25	**678**	**124**	**36**
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.44	1.24	**703**	**127**	**37**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	2.25	1.20	**152**	**33**	**8**
RRUS-32 B2 RRH (Shielded)	27.2	0.0	7.0	0.00	0.00	1.20	**0**	**7**	**0**
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.13	1.20	**91**	**21**	**5**
4449 B5/B12 RRH (Side)	14.9	10.4	13.2	1.08	0.00	1.20	**71**	**17**	**4**
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.20	**91**	**21**	**5**
8843 B2/B66A RRH (Side)	14.9	10.9	13.2	1.13	0.00	1.20	**75**	**18**	**4**
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	**63**	**14**	**3**
2" Pipe	2.4	12.0		0.20	0.20	1.20	**13**	**6**	**1**
3" Pipe	3.5	12.0		0.29	0.29	1.20	**19**	**7**	**1**
4x4 HSS	4.0	12.0		0.33	0.33	1.25	**23**	**8**	**1**
2x2 Angle	2.0	12.0		0.17	0.17	2.00	**18**	**10**	**1**

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	30	(deg)	Ice Thickness =	1.75	in.	Equivalent Angle =	210	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	**678**	**318**	**588**
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	**703**	**310**	**604**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	**152**	**92**	**137**
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	**81**	**92**	**84**
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	**91**	**71**	**86**
4449 B5/B12 RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	**45**	**91**	**57**
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	**91**	**75**	**87**
8843 B2/B66A RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	**45**	**91**	**57**
WIND LOADS WITH ICE:												
NNH4-65B-R6 Antenna	75.5	23.1	11.3	12.10	5.92	3.27	6.69	1.23	1.39	**122**	**67**	**108**
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	**126**	**66**	**111**
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	**33**	**22**	**30**
RRUS-32 B2 RRH (Shielded)	30.7	7.8	10.5	1.66	2.24	3.94	2.93	1.26	1.22	**17**	**22**	**18**
4449 B5/B12 RRH	18.4	16.7	13.9	2.13	1.77	1.10	1.32	1.20	1.20	**21**	**17**	**20**
4449 B5/B12 RRH (Side)	18.4	8.3	16.7	1.07	2.13	2.20	1.10	1.20	1.20	**10**	**21**	**13**
8843 B2/B66A RRH	18.4	16.7	14.4	2.13	1.84	1.10	1.28	1.20	1.20	**21**	**18**	**20**
8843 B2/B66A RRH (Side)	18.4	8.3	16.7	1.07	2.13	2.20	1.10	1.20	1.20	**10**	**21**	**13**
WIND LOADS AT 30 MPH:												
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	**36**	**17**	**31**
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	**37**	**17**	**32**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	**8**	**5**	**7**
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	**4**	**5**	**4**
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	**5**	**4**	**5**
4449 B5/B12 RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	**2**	**5**	**3**
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	**5**	**4**	**5**
8843 B2/B66A RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	**2**	**5**	**3**

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	60	(deg)	Ice Thickness =	1.75	in.	Equivalent Angle =	240	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	678	318	408
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	703	310	408
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	152	92	107
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	116	92	98
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	91	71	76
4449 B5/B12 RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	68	91	85
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	91	75	79
8843 B2/B66A RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	68	91	85

WIND LOADS WITH ICE:

NNH4-65B-R6 Antenna	75.5	23.1	11.3	12.10	5.92	3.27	6.69	1.23	1.39	122	67	81
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	126	66	81
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	22	25
RRUS-32 B2 RRH (Shielded)	30.7	11.7	10.5	2.49	2.24	2.62	2.93	1.21	1.22	25	22	23
4449 B5/B12 RRH	18.4	16.7	13.9	2.13	1.77	1.10	1.32	1.20	1.20	21	17	18
4449 B5/B12 RRH (Side)	18.4	12.5	16.7	1.60	2.13	1.47	1.10	1.20	1.20	16	21	20
8843 B2/B66A RRH	18.4	16.7	14.4	2.13	1.84	1.10	1.28	1.20	1.20	21	18	19
8843 B2/B66A RRH (Side)	18.4	12.5	16.7	1.60	2.13	1.47	1.10	1.20	1.20	16	21	20

WIND LOADS AT 30 MPH:

NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	36	17	22
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	17	22
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	6
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	6	5	5
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	4
4449 B5/B12 RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	4	5	5
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
8843 B2/B66A RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	4	5	5

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	90	(deg)	Ice Thickness =	1.75	in.	Equivalent Angle =	270	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	678	318	318
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	703	310	310
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	152	92	92
RRUS-32 B2 RRH (Shielded)	27.2	0.0	7.0	0.00	1.32	0.00	3.89	1.20	1.26	0	92	92
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	91	71	71
4449 B5/B12 RRH (Side)	14.9	10.4	13.2	1.08	1.37	1.43	1.13	1.20	1.20	71	91	91
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	91	75	75
8843 B2/B66A RRH (Side)	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	75	91	91

WIND LOADS WITH ICE:

NNH4-65B-R6 Antenna	75.5	23.1	11.3	12.10	5.92	3.27	6.69	1.23	1.39	122	67	67
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	126	66	66
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	22	22
RRUS-32 B2 RRH (Shielded)	30.7	3.5	10.5	0.74	2.24	8.79	2.93	1.46	1.22	9	22	22
4449 B5/B12 RRH	18.4	16.7	13.9	2.13	1.77	1.10	1.32	1.20	1.20	21	17	17
4449 B5/B12 RRH (Side)	18.4	13.9	16.7	1.77	2.13	1.32	1.10	1.20	1.20	17	21	21
8843 B2/B66A RRH	18.4	16.7	14.4	2.13	1.84	1.10	1.28	1.20	1.20	21	18	18
8843 B2/B66A RRH (Side)	18.4	14.4	16.7	1.84	2.13	1.28	1.10	1.20	1.20	18	21	21

WIND LOADS AT 30 MPH:

NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	36	17	17
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	17	17
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	5
RRUS-32 B2 RRH (Shielded)	27.2	0.0	7.0	0.00	1.32	0.00	3.89	1.20	1.26	0	5	5
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	4
4449 B5/B12 RRH (Side)	14.9	10.4	13.2	1.08	1.37	1.43	1.13	1.20	1.20	4	5	5
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
8843 B2/B66A RRH (Side)	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	4	5	5

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	120	(deg)	Ice Thickness =	1.75	in.	Equivalent Angle =	300	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	**678**	**318**	**408**
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	**703**	**310**	**408**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	**152**	**92**	**107**
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	**116**	**92**	**98**
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	**91**	**71**	**76**
4449 B5/B12 RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	**68**	**91**	**85**
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	**91**	**75**	**79**
8843 B2/B66A RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	**68**	**91**	**85**

WIND LOADS WITH ICE:

NNH4-65B-R6 Antenna	75.5	23.1	11.3	12.10	5.92	3.27	6.69	1.23	1.39	**122**	**67**	**81**
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	**126**	**66**	**81**
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	**33**	**22**	**25**
RRUS-32 B2 RRH (Shielded)	30.7	11.7	10.5	2.49	2.24	2.62	2.93	1.21	1.22	**25**	**22**	**23**
4449 B5/B12 RRH	18.4	16.7	13.9	2.13	1.77	1.10	1.32	1.20	1.20	**21**	**17**	**18**
4449 B5/B12 RRH (Side)	18.4	12.5	16.7	1.60	2.13	1.47	1.10	1.20	1.20	**16**	**21**	**20**
8843 B2/B66A RRH	18.4	16.7	14.4	2.13	1.84	1.10	1.28	1.20	1.20	**21**	**18**	**19**
8843 B2/B66A RRH (Side)	18.4	12.5	16.7	1.60	2.13	1.47	1.10	1.20	1.20	**16**	**21**	**20**

WIND LOADS AT 30 MPH:

NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	**36**	**17**	**22**
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	**37**	**17**	**22**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	**8**	**5**	**6**
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	**6**	**5**	**5**
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	**5**	**4**	**4**
4449 B5/B12 RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	**4**	**5**	**5**
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	**5**	**4**	**4**
8843 B2/B66A RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	**4**	**5**	**5**

Date: 1/28/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	150	(deg)	Ice Thickness =	1.75	in.	Equivalent Angle =	330	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	678	318	588
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	703	310	604
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	152	92	137
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	81	92	84
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	91	71	86
4449 B5/B12 RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	45	91	57
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	91	75	87
8843 B2/B66A RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	45	91	57

WIND LOADS WITH ICE:

NNH4-65B-R6 Antenna	75.5	23.1	11.3	12.10	5.92	3.27	6.69	1.23	1.39	122	67	108
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	126	66	111
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	22	30
RRUS-32 B2 RRH (Shielded)	30.7	7.8	10.5	1.66	2.24	3.94	2.93	1.26	1.22	17	22	18
4449 B5/B12 RRH	18.4	16.7	13.9	2.13	1.77	1.10	1.32	1.20	1.20	21	17	20
4449 B5/B12 RRH (Side)	18.4	8.3	16.7	1.07	2.13	2.20	1.10	1.20	1.20	10	21	13
8843 B2/B66A RRH	18.4	16.7	14.4	2.13	1.84	1.10	1.28	1.20	1.20	21	18	20
8843 B2/B66A RRH (Side)	18.4	8.3	16.7	1.07	2.13	2.20	1.10	1.20	1.20	10	21	13

WIND LOADS AT 30 MPH:

NNH4-65B-R6 Antenna	72.0	19.6	7.8	9.80	3.90	3.67	9.23	1.25	1.47	36	17	31
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	17	32
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	7
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	4	5	4
4449 B5/B12 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	5
4449 B5/B12 RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	2	5	3
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
8843 B2/B66A RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	2	5	3

Date: 1/23/2020
Project Name: POMFRET-TYRONE RD.
Project No.: CT1050
Designed By: LBW **Checked By:** MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 1.75 in.
Density of ice: 56 pcf

NNH4-65B-R6 Antenna

Weight of ice based on total radial SF area:

Height (in):	72.0	
Width (in):	19.6	
Depth (in):	7.8	
Total weight of ice on object:		293 lbs
Weight of object:	84.0 lbs	
Combined weight of ice and object:		377 lbs

DMP65R-BU6DA Antenna

Weight of ice based on total radial SF area:

Height (in):	71.2	
Width (in):	20.7	
Depth (in):	7.7	
Total weight of ice on object:		302 lbs
Weight of object:	80.0 lbs	
Combined weight of ice and object:		382 lbs

RRUS-32 B2 RRH

Weight of ice based on total radial SF area:

Height (in):	27.2	
Width (in):	12.1	
Depth (in):	7.0	
Total weight of ice on object:		76 lbs
Weight of object:	60.0 lbs	
Combined weight of ice and object:		136 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:

Height (in):	14.9	
Width (in):	13.2	
Depth (in):	10.4	
Total weight of ice on object:		49 lbs
Weight of object:	73.0 lbs	
Combined weight of ice and object:		122 lbs

8843 B2/B66A RRH

Weight of ice based on total radial SF area:

Height (in):	14.9	
Width (in):	13.2	
Depth (in):	10.9	
Total weight of ice on object:		50 lbs
Weight of object:	72.0 lbs	
Combined weight of ice and object:		122 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:

Depth (in):	24.0	
Diameter(in):	9.7	
Total weight of ice on object:		49 lbs
Weight of object:	33 lbs	
Combined weight of ice and object:		82 lbs

2" pipe

Per foot weight of ice:

diameter (in):	2.38	
Per foot weight of ice on object:		9 plf

3" Pipe

Per foot weight of ice:

diameter (in):	3.5	
Per foot weight of ice on object:		11 plf

HSS 4x4

Weight of ice based on total radial SF area:

Height (in):	4	
Width (in):	4	
Per foot weight of ice on object:		16 plf

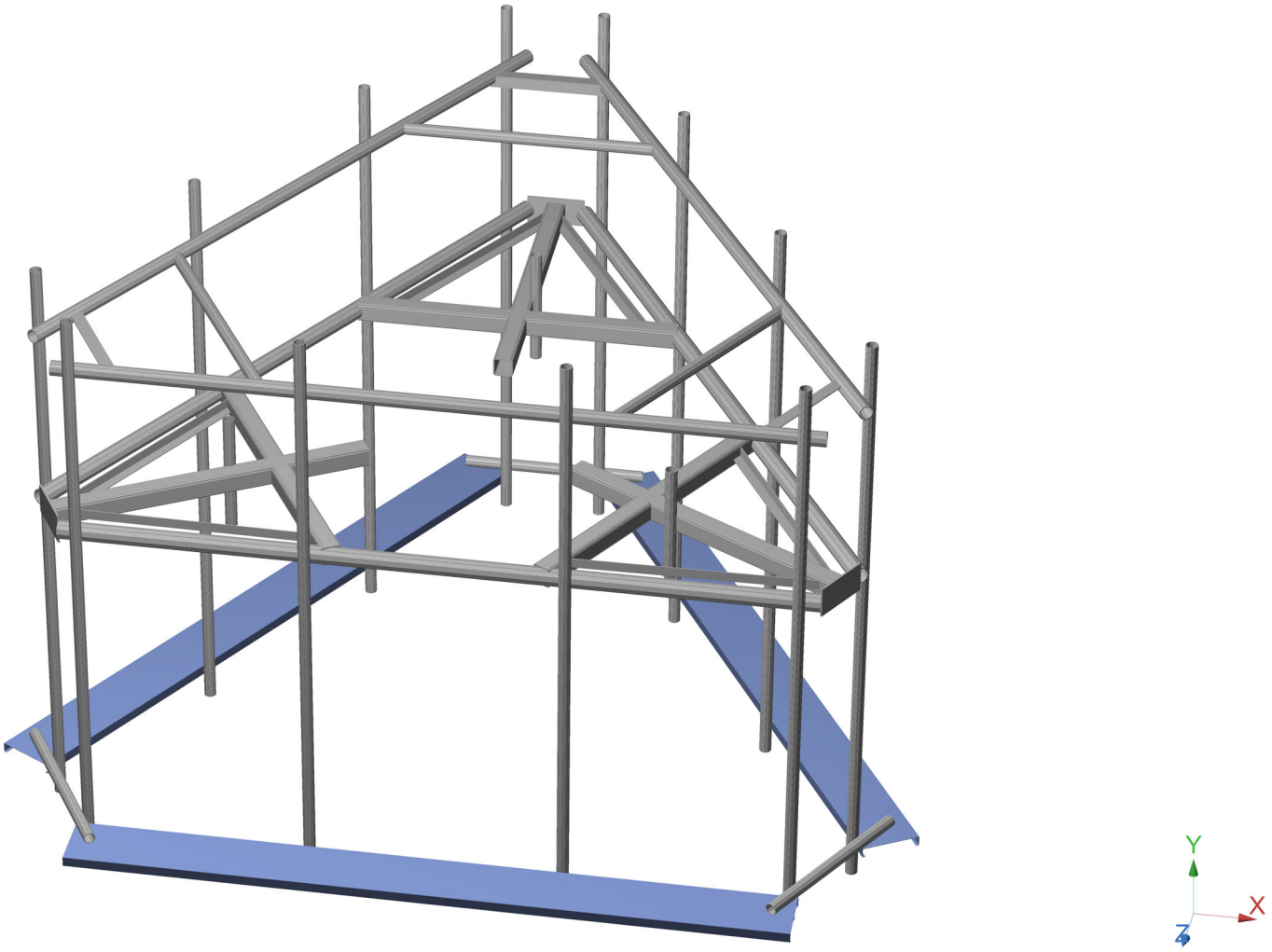
L 2x2 Angles

Weight of ice based on total radial SF area:

Height (in):	2	
Width (in):	2	
Per foot weight of ice on object:		10 plf

HUDSON
Design Group LLC

Mount Calculations
(Existing Conditions)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Current Date: 3/18/2020 1:46 PM
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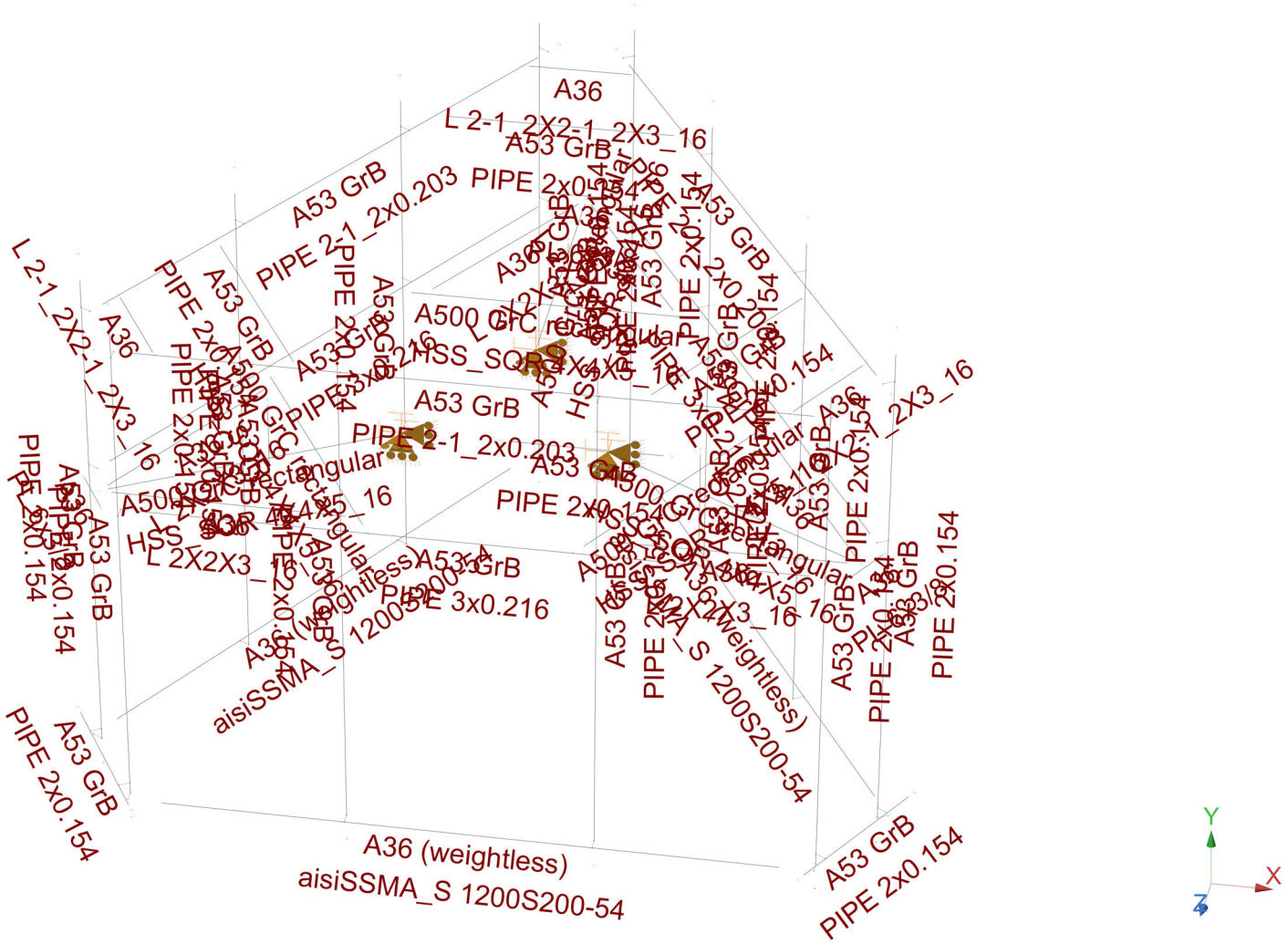

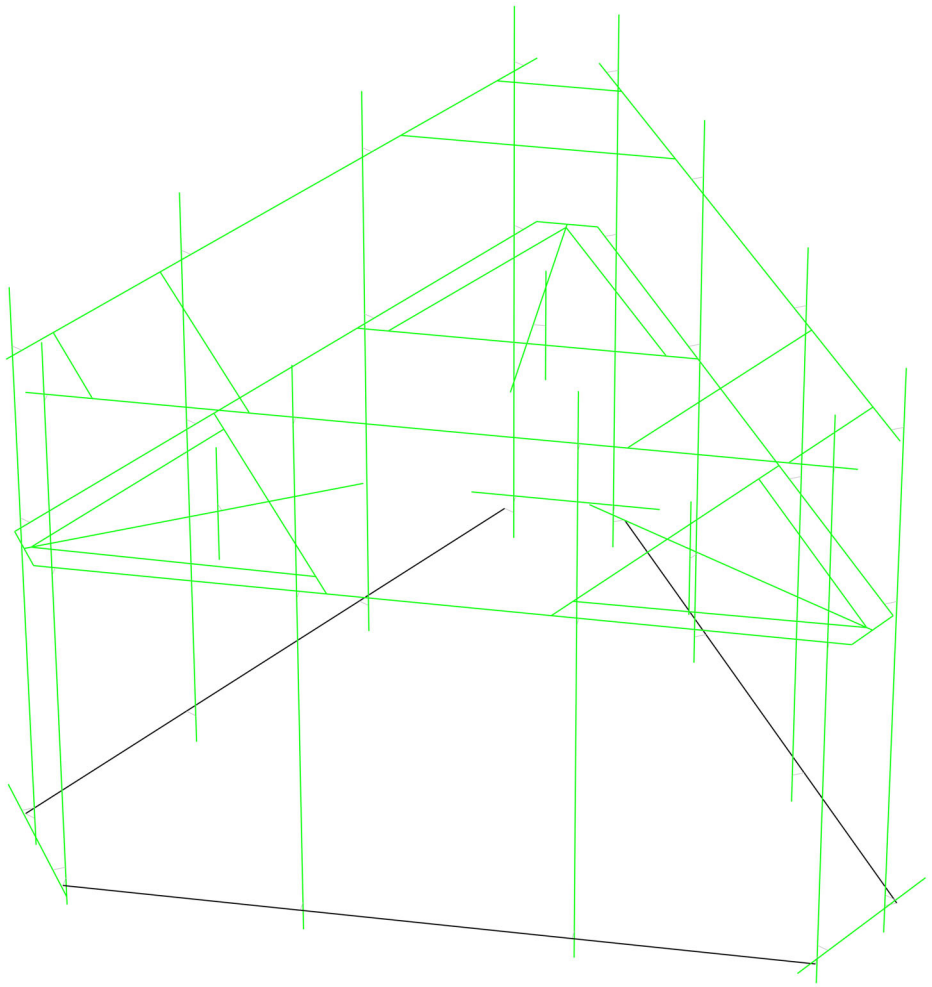

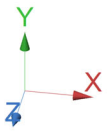
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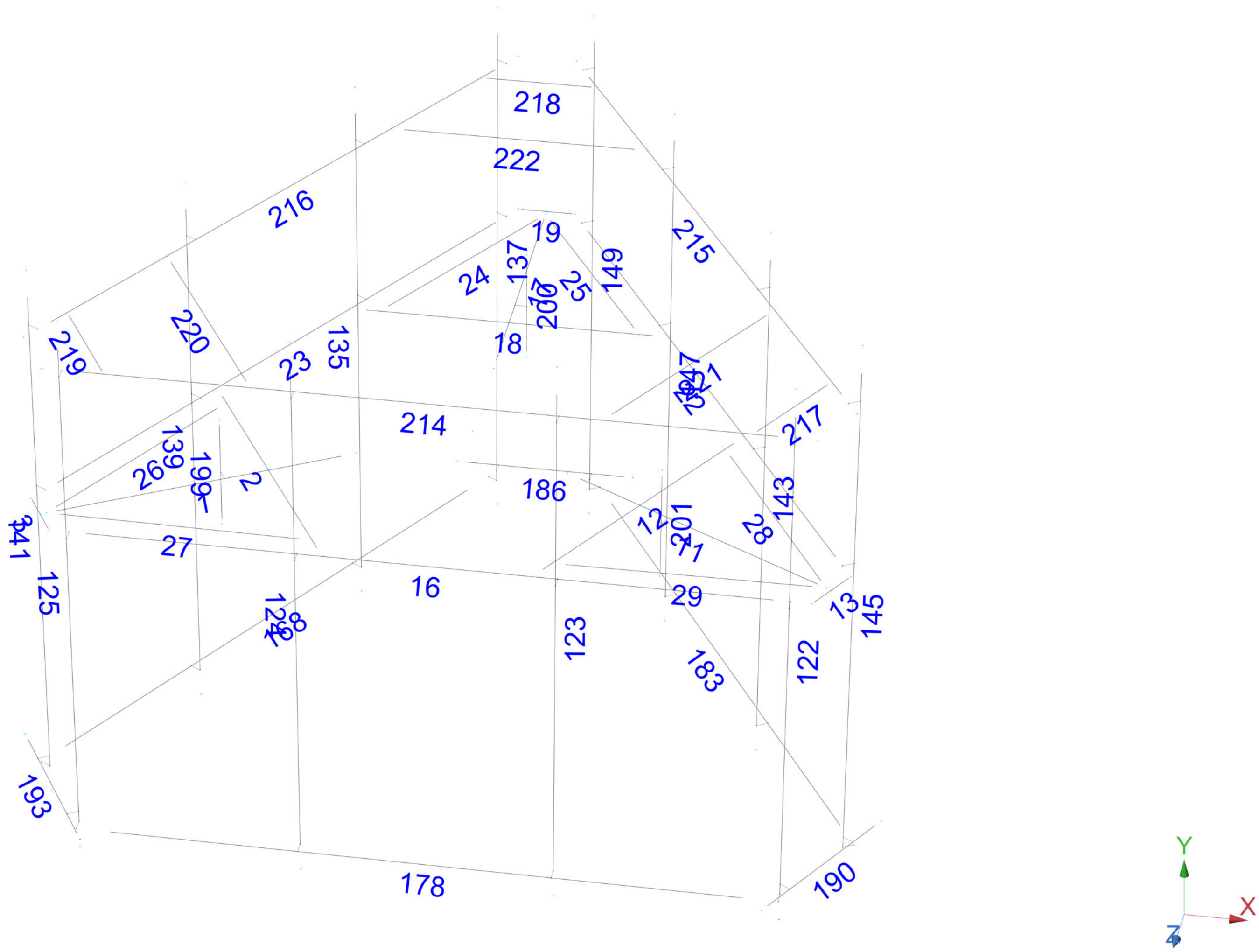

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Load data

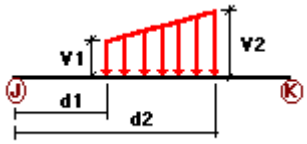
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL

Distributed force on members

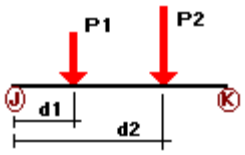


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	1	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	11	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	16	y	-0.01	-0.01	0.00	Yes	37.00	Yes
		y	-0.01	-0.01	63.00	Yes	100.00	Yes
	17	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	22	y	-0.01	-0.01	0.00	Yes	37.00	Yes
		y	-0.01	-0.01	63.00	Yes	100.00	Yes
	23	y	-0.01	-0.01	0.00	Yes	37.00	Yes
		y	-0.01	-0.01	63.00	Yes	100.00	Yes
W0	1	z	-0.023	0.00	0.00	No	0.00	No
	11	z	-0.023	0.00	0.00	No	0.00	No
	16	z	-0.019	0.00	0.00	No	0.00	No
	17	z	-0.023	0.00	0.00	No	0.00	No
	22	z	-0.019	0.00	0.00	No	0.00	No

	23	z	-0.019	0.00	0.00	No	0.00	No
	24	z	-0.018	0.00	0.00	No	0.00	No
	25	z	-0.018	0.00	0.00	No	0.00	No
	26	z	-0.018	0.00	0.00	No	0.00	No
	27	z	-0.018	0.00	0.00	No	0.00	No
	28	z	-0.018	0.00	0.00	No	0.00	No
	29	z	-0.018	0.00	0.00	No	0.00	No
	123	z	-0.013	0.00	0.00	No	0.00	No
	124	z	-0.013	0.00	0.00	No	0.00	No
	135	z	-0.013	0.00	0.00	No	0.00	No
	137	z	-0.013	0.00	0.00	No	0.00	No
	139	z	-0.013	0.00	0.00	No	0.00	No
	141	z	-0.013	0.00	0.00	No	0.00	No
	143	z	-0.013	0.00	0.00	No	0.00	No
	145	z	-0.013	0.00	0.00	No	0.00	No
	147	z	-0.013	0.00	0.00	No	0.00	No
	149	z	-0.013	0.00	0.00	No	0.00	No
	199	z	-0.013	0.00	0.00	No	0.00	No
	200	z	-0.013	0.00	0.00	No	0.00	No
	201	z	-0.013	0.00	0.00	No	0.00	No
	214	z	-0.014	0.00	0.00	No	0.00	No
	215	z	-0.014	0.00	0.00	No	0.00	No
	216	z	-0.014	0.00	0.00	No	0.00	No
	220	z	-0.013	0.00	0.00	No	0.00	No
	221	z	-0.013	0.00	0.00	No	0.00	No
	222	z	-0.013	0.00	0.00	No	0.00	No
W30	1	x	-0.023	0.00	0.00	No	0.00	No
	11	x	-0.023	0.00	0.00	No	0.00	No
	17	x	-0.023	0.00	0.00	No	0.00	No
	22	x	-0.019	0.00	0.00	No	0.00	No
	23	x	-0.019	0.00	0.00	No	0.00	No
	24	x	-0.018	0.00	0.00	No	0.00	No
	25	x	-0.018	0.00	0.00	No	0.00	No
	26	x	-0.018	0.00	0.00	No	0.00	No
	27	x	-0.018	0.00	0.00	No	0.00	No
	28	x	-0.018	0.00	0.00	No	0.00	No
	29	x	-0.018	0.00	0.00	No	0.00	No
	122	x	-0.013	0.00	0.00	No	0.00	No
	123	x	-0.013	0.00	0.00	No	0.00	No
	124	x	-0.013	0.00	0.00	No	0.00	No
	125	x	-0.013	0.00	0.00	No	0.00	No
	135	x	-0.013	0.00	0.00	No	0.00	No
	137	x	-0.013	0.00	0.00	No	0.00	No
	139	x	-0.013	0.00	0.00	No	0.00	No
	141	x	-0.013	0.00	0.00	No	0.00	No
	199	x	-0.013	0.00	0.00	No	0.00	No
	200	x	-0.013	0.00	0.00	No	0.00	No
	201	x	-0.013	0.00	0.00	No	0.00	No
	215	x	-0.014	0.00	0.00	No	0.00	No
	216	x	-0.014	0.00	0.00	No	0.00	No
	220	x	-0.013	0.00	0.00	No	0.00	No
	221	x	-0.013	0.00	0.00	No	0.00	No
Di	1	y	-0.016	0.00	0.00	No	0.00	No
	2	y	-0.016	0.00	0.00	No	0.00	No
	11	y	-0.016	0.00	0.00	No	0.00	No
	12	y	-0.016	0.00	0.00	No	0.00	No
	16	y	-0.011	0.00	0.00	No	0.00	No
	17	y	-0.016	0.00	0.00	No	0.00	No
	18	y	-0.016	0.00	0.00	No	0.00	No
	22	y	-0.011	0.00	0.00	No	0.00	No

23	y	-0.011	0.00	0.00	No	0.00	No
24	y	-0.01	0.00	0.00	No	0.00	No
25	y	-0.01	0.00	0.00	No	0.00	No
26	y	-0.01	0.00	0.00	No	0.00	No
27	y	-0.01	0.00	0.00	No	0.00	No
28	y	-0.01	0.00	0.00	No	0.00	No
29	y	-0.01	0.00	0.00	No	0.00	No
122	y	-0.009	0.00	0.00	No	0.00	No
123	y	-0.009	0.00	0.00	No	0.00	No
124	y	-0.009	0.00	0.00	No	0.00	No
125	y	-0.009	0.00	0.00	No	0.00	No
135	y	-0.009	0.00	0.00	No	0.00	No
137	y	-0.009	0.00	0.00	No	0.00	No
139	y	-0.009	0.00	0.00	No	0.00	No
141	y	-0.009	0.00	0.00	No	0.00	No
143	y	-0.009	0.00	0.00	No	0.00	No
145	y	-0.009	0.00	0.00	No	0.00	No
147	y	-0.009	0.00	0.00	No	0.00	No
149	y	-0.009	0.00	0.00	No	0.00	No
199	y	-0.009	0.00	0.00	No	0.00	No
200	y	-0.009	0.00	0.00	No	0.00	No
201	y	-0.009	0.00	0.00	No	0.00	No
214	y	-0.01	0.00	0.00	No	0.00	No
215	y	-0.01	0.00	0.00	No	0.00	No
216	y	-0.01	0.00	0.00	No	0.00	No
220	y	-0.009	0.00	0.00	No	0.00	No
221	y	-0.009	0.00	0.00	No	0.00	No
222	y	-0.009	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	122	y	-0.042	1.00	No
		y	-0.042	6.00	No
		y	-0.06	2.00	No
	125	y	-0.04	1.00	No
		y	-0.04	6.00	No
		y	-0.145	2.00	No
	137	y	-0.04	1.00	No
		y	-0.04	6.00	No
		y	-0.145	2.00	No
	141	y	-0.042	1.00	No
		y	-0.042	6.00	No
		y	-0.06	2.00	No
	145	y	-0.04	1.00	No
		y	-0.04	6.00	No
		y	-0.145	2.00	No
	149	y	-0.042	1.00	No
		y	-0.042	6.00	No

		y	-0.06	2.00	No
	199	y	-0.033	0.50	No
	200	y	-0.033	0.50	No
	201	y	-0.033	0.50	No
W0	122	z	-0.34	1.00	No
		z	-0.34	6.00	No
	125	z	-0.352	1.00	No
		z	-0.352	6.00	No
		z	-0.146	2.00	No
	137	z	-0.205	1.00	No
		z	-0.205	6.00	No
		z	-0.085	2.00	No
	141	z	-0.204	1.00	No
		z	-0.204	6.00	No
		z	-0.098	2.00	No
	145	z	-0.205	1.00	No
		z	-0.205	6.00	No
		z	-0.085	2.00	No
	149	z	-0.204	1.00	No
		z	-0.204	6.00	No
		z	-0.098	2.00	No
	199	z	-0.063	0.50	No
	200	z	-0.063	0.50	No
	201	z	-0.063	0.50	No
W30	122	x	-0.159	1.00	No
		x	-0.159	6.00	No
		x	-0.092	2.00	No
	125	x	-0.156	1.00	No
		x	-0.156	6.00	No
		x	-0.091	2.00	No
	137	x	-0.303	1.00	No
		x	-0.303	6.00	No
		x	-0.057	2.00	No
	141	x	-0.295	1.00	No
		x	-0.295	6.00	No
		x	-0.084	2.00	No
	145	x	-0.303	1.00	No
		x	-0.303	6.00	No
		x	-0.057	2.00	No
	149	x	-0.295	1.00	No
		x	-0.295	6.00	No
		x	-0.084	2.00	No
	199	x	-0.063	0.50	No
	200	x	-0.063	0.50	No
	201	x	-0.063	0.50	No
Di	122	y	-0.147	1.00	No
		y	-0.147	6.00	No
		y	-0.076	2.00	No
	125	y	-0.151	1.00	No
		y	-0.151	6.00	No
		y	-0.099	2.00	No
	137	y	-0.151	1.00	No
		y	-0.151	6.00	No
		y	-0.099	2.00	No
	141	y	-0.147	1.00	No
		y	-0.147	6.00	No
		y	-0.076	2.00	No
	145	y	-0.151	1.00	No
		y	-0.076	6.00	No
		y	-0.099	2.00	No

	149	y	-0.147	1.00	No
		y	-0.147	6.00	No
		y	-0.076	2.00	No
	199	y	-0.049	0.50	No
	200	y	-0.049	0.50	No
	201	y	-0.049	0.50	No
Wi0	122	z	-0.062	1.00	No
		z	-0.062	6.00	No
		z	-0.007	2.00	No
	125	z	-0.064	1.00	No
		z	-0.064	6.00	No
		z	-0.035	2.00	No
	137	z	-0.041	1.00	No
		z	-0.041	6.00	No
		z	-0.02	2.00	No
	141	z	-0.041	1.00	No
		z	-0.041	6.00	No
		z	-0.023	2.00	No
	145	z	-0.041	1.00	No
		z	-0.041	6.00	No
		z	-0.02	2.00	No
	149	z	-0.041	1.00	No
		z	-0.041	6.00	No
		z	-0.023	2.00	No
	199	z	-0.014	0.50	No
	200	z	-0.014	0.50	No
	201	z	-0.014	0.50	No
Wi30	122	x	-0.034	1.00	No
		x	-0.034	6.00	No
		x	-0.022	2.00	No
	125	x	-0.033	1.00	No
		x	-0.033	6.00	No
		x	-0.021	2.00	No
	137	x	-0.056	1.00	No
		x	-0.056	6.00	No
		x	-0.013	2.00	No
	141	x	-0.055	1.00	No
		x	-0.055	6.00	No
		x	-0.018	2.00	No
	145	x	-0.056	1.00	No
		x	-0.056	6.00	No
		x	-0.013	2.00	No
	149	x	-0.055	1.00	No
		x	-0.055	6.00	No
		x	-0.018	2.00	No
	199	x	-0.014	0.50	No
	200	x	-0.014	0.50	No
	201	x	-0.014	0.50	No
WL0	122	z	-0.019	1.00	No
		z	-0.019	6.00	No
	125	z	-0.019	1.00	No
		z	-0.019	6.00	No
		z	-0.008	2.00	No
	137	z	-0.011	1.00	No
		z	-0.011	6.00	No
		z	-0.005	2.00	No
	141	z	-0.011	1.00	No
		z	-0.011	6.00	No
		z	-0.005	2.00	No
	145	z	-0.011	1.00	No

		z	-0.011	6.00	No
		z	-0.005	2.00	No
	149	z	-0.011	1.00	No
		z	-0.011	6.00	No
		z	-0.005	2.00	No
	199	z	-0.003	0.50	No
	200	z	-0.003	0.50	No
	201	z	-0.003	0.50	No
WL30	122	x	-0.009	1.00	No
		x	-0.009	6.00	No
		x	-0.005	2.00	No
	125	x	-0.009	1.00	No
		x	-0.009	6.00	No
		x	-0.005	2.00	No
	137	x	-0.017	1.00	No
		x	-0.017	6.00	No
		x	-0.003	2.00	No
	141	x	-0.016	1.00	No
		x	-0.016	6.00	No
		x	-0.004	2.00	No
	145	x	-0.017	1.00	No
		x	-0.017	6.00	No
		x	-0.003	2.00	No
	149	x	-0.016	1.00	No
		x	-0.016	6.00	No
		x	-0.004	2.00	No
	199	x	-0.003	0.50	No
	200	x	-0.003	0.50	No
	201	x	-0.003	0.50	No
LL1	16	y	-0.25	6.00	No
LL2	16	y	-0.25	0.00	No
LLa1	122	y	-0.25	5.00	No
LLa2	123	y	-0.25	5.00	No
LLa3	124	y	-0.25	5.00	No
LLa4	125	y	-0.25	5.00	No

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
W0	0.00	0.00	0.00
W30	0.00	0.00	0.00
Di	0.00	0.00	0.00
Wi0	0.00	0.00	0.00
Wi30	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00

Current Date: 3/18/2020 1:49 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1050\Descoped\Rev. 3\CT1050 (Descoped) (Rev. 3).retx

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+W0
LC2=1.2DL+W30
LC3=1.2DL-W0
LC4=1.2DL-W30
LC5=0.9DL+W0
LC6=0.9DL+W30
LC7=0.9DL-W0
LC8=0.9DL-W30
LC9=1.2DL+Di+Wi0
LC10=1.2DL+Di+Wi30
LC11=1.2DL+Di-Wi0
LC12=1.2DL+Di-Wi30
LC13=1.2DL
LC15=1.2DL+1.5LL1
LC16=1.2DL+1.5LL2
LC17=1.2DL+WL0+1.5LLa1
LC18=1.2DL+WL30+1.5LLa1
LC19=1.2DL-WL0+1.5LLa1
LC20=1.2DL-WL30+1.5LLa1
LC21=1.2DL+WL0+1.5LLa2
LC22=1.2DL+WL30+1.5LLa2
LC23=1.2DL-WL0+1.5LLa2
LC24=1.2DL-WL30+1.5LLa2
LC25=1.2DL+WL0+1.5LLa3
LC26=1.2DL+WL30+1.5LLa3
LC27=1.2DL-WL0+1.5LLa3
LC28=1.2DL-WL30+1.5LLa3
LC29=1.2DL+WL0+1.5LLa4
LC30=1.2DL+WL30+1.5LLa4
LC31=1.2DL-WL0+1.5LLa4
LC32=1.2DL-WL30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	aisiSSMA_S 1200S200-54	**168**	LC9 at 31.25%	**0.34**	**With warnings**	Sec. C5.2
		178	LC10 at 31.25%	0.33	With warnings	Sec. C5.2
		183	LC12 at 31.25%	0.32	With warnings	Sec. C5.2
	HSS_SQR 4X4X5_16	**1**	LC11 at 0.00%	**0.26**	**OK**	Eq. H1-1b
		2	LC11 at 50.00%	0.11	OK	Eq. H1-1b
		11	LC12 at 0.00%	0.25	OK	Eq. H1-1b
		12	LC12 at 50.00%	0.11	OK	Eq. H1-1b
		17	LC9 at 0.00%	0.26	OK	Eq. H1-1b
		18	LC9 at 50.00%	0.11	OK	Eq. H1-1b
	L 2-1_2X2-1_2X3_16	**217**	LC1 at 0.00%	0.27	OK	Sec. F1
		218	LC4 at 100.00%	0.28	OK	Sec. F1
		219	LC1 at 100.00%	**0.29**	**OK**	Sec. F1
	L 2X2X3_16	**24**	LC1 at 0.00%	0.18	OK	Eq. H2-1
		25	LC1 at 0.00%	0.18	OK	Eq. H2-1

	26	LC6 at 0.00%	0.21	OK	Eq. H2-1
	27	LC7 at 0.00%	**0.23**	**OK**	Eq. H2-1
	28	LC8 at 0.00%	0.20	OK	Eq. H2-1
	29	LC7 at 100.00%	0.22	OK	Eq. H2-1
PIPE 2-1_2x0.203	**214**	LC12 at 32.64%	0.14	OK	Eq. H1-1b
	215	LC12 at 67.36%	0.14	OK	Eq. H1-1b
	216	LC9 at 67.36%	**0.15**	**OK**	Eq. H1-1b
PIPE 2x0.154	**122**	LC3 at 40.00%	0.32	OK	Eq. H1-1b
	123	LC2 at 39.06%	0.33	OK	Eq. H1-1b
	124	LC4 at 39.06%	0.32	OK	Eq. H1-1b
	125	LC3 at 40.00%	0.34	OK	Eq. H1-1b
	135	LC3 at 39.06%	0.39	OK	Eq. H1-1b
	137	LC4 at 40.00%	0.40	OK	Eq. H1-1b
	139	LC4 at 39.06%	0.36	OK	Eq. H1-1b
	141	LC2 at 40.00%	**0.42**	**OK**	Eq. H1-1b
	143	LC2 at 39.06%	0.34	OK	Eq. H1-1b
	145	LC4 at 40.00%	0.39	OK	Eq. H1-1b
	147	LC3 at 39.06%	0.38	OK	Eq. H1-1b
	149	LC3 at 38.75%	0.38	OK	Eq. H1-1b
	186	LC4 at 75.00%	0.07	OK	Eq. H1-1b
	190	LC3 at 75.00%	0.06	OK	Eq. H1-1b
	193	LC3 at 25.00%	0.07	OK	Eq. H1-1b
	199	LC4 at 46.88%	0.02	OK	Eq. H1-1b
	200	LC3 at 46.88%	0.02	OK	Eq. H1-1b
	201	LC2 at 46.88%	0.02	OK	Eq. H1-1b
	220	LC1 at 0.00%	0.11	OK	Eq. H1-1b
	221	LC1 at 0.00%	0.10	OK	Eq. H1-1b
	222	LC2 at 0.00%	0.09	OK	Eq. H1-1b
PIPE 3x0.216	**16**	LC9 at 67.86%	0.12	OK	Eq. H1-1b
	22	LC4 at 36.61%	0.14	OK	Eq. H1-1b
	23	LC1 at 36.61%	**0.14**	**OK**	Eq. H1-1b
PL 6x3/8	**3**	LC4 at 50.00%	**0.12**	**OK**	Eq. H1-1b
	13	LC1 at 50.00%	0.12	OK	Eq. H1-1b
	19	LC3 at 50.00%	0.11	OK	Eq. H1-1b

Current Date: 3/18/2020 1:49 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1050\Descoped\Rev. 3\CT1050 (Descoped) (Rev. 3).retx

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
3	-1.732	0.00	1.00	0
4	-3.0311	0.00	1.75	0
5	-6.348	0.00	3.665	0
6	-1.6766	0.00	4.0961	0
7	-4.3856	0.00	-0.5961	0
8	-6.098	0.00	4.098	0
9	-6.598	0.00	3.232	0
10	-4.1371	0.00	-0.1656	0
11	-1.9251	0.00	3.6656	0
15	0.00	0.00	0.00	0
28	1.7321	0.00	1.00	0
29	3.0311	0.00	1.75	0
30	6.348	0.00	3.665	0
31	4.3856	0.00	-0.5961	0
32	1.6766	0.00	4.0961	0
33	6.598	0.00	3.232	0
34	6.098	0.00	4.098	0
35	1.9251	0.00	3.6656	0
36	4.1371	0.00	-0.1656	0
39	1.75E-06	0.00	-2.00	0
40	1.75E-06	0.00	-3.50	0

41	1.75E-06	0.00	-7.33	0
42	-2.709	0.00	-3.50	0
43	2.709	0.00	-3.50	0
45	0.50	0.00	-7.33	0
46	2.212	0.00	-3.50	0
47	-2.212	0.00	-3.50	0
375	1.75E-06	0.00	-7.2245	0
377	-6.2566	0.00	3.6122	0
379	6.2566	0.00	3.6122	0
580	-2.083	-6.00	4.2961	0
581	-5.768	-6.00	4.298	0
583	2.083	-6.00	4.2961	0
584	-2.083	4.00	4.2961	0
585	-5.768	4.00	4.298	0
586	5.768	4.00	4.298	0
587	2.083	4.00	4.2961	0
606	-2.679	-6.00	-3.952	0
607	-2.679	4.00	-3.952	0
610	-0.8382	-6.00	-7.1442	0
611	-0.8382	4.00	-7.1442	0
614	-4.762	-6.00	-0.3441	0
615	-4.762	4.00	-0.3441	0
618	-6.6062	-6.00	2.8462	0
619	-6.6062	4.00	2.8462	0
622	4.762	-6.00	-0.3441	0
623	4.762	4.00	-0.3441	0
627	6.6062	4.00	2.8462	0
630	2.679	-6.00	-3.952	0
631	2.679	4.00	-3.952	0
634	0.8382	-6.00	-7.1442	0
635	0.8382	4.00	-7.1442	0
694	6.7777	-5.50	2.7472	0
700	1.5882	-5.30	-7.3442	0
701	-1.5882	-5.30	-7.3442	0
708	5.5662	-5.30	5.0475	0
709	7.1544	-5.30	2.2967	0
712	6.7794	-5.30	2.9462	0
714	-7.1544	-5.30	2.2967	0
727	0.20	1.00	-4.0898	0
729	0.20	-1.00	-4.0898	0
733	3.4419	1.00	2.2181	0
734	3.4419	-1.00	2.2181	0
736	-3.7762	1.00	1.9492	0
737	-3.7762	-1.00	1.9492	0
738	-6.098	3.00	4.098	0
741	-6.598	3.00	3.232	0
748	-0.50	3.00	-7.33	0
751	0.50	3.00	-7.33	0
758	6.598	3.00	3.232	0
761	6.098	3.00	4.098	0
768	-5.098	3.00	4.098	0
769	5.098	3.00	4.098	0
770	-1.00	3.00	-6.464	0
771	-6.098	3.00	2.366	0
772	6.098	3.00	2.366	0
773	1.00	3.00	-6.464	0
774	-2.768	3.00	4.098	0
775	2.768	3.00	4.098	0
776	-2.165	3.00	-4.4461	0
777	-4.933	3.00	0.3481	0

778	4.933	3.00	0.3481	0
779	2.165	3.00	-4.4461	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
3	1	1	1	1	1	1
28	1	1	1	1	1	1
39	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	lg factor
1	3	5		HSS_SQR 4X4X5_16	A500 GrC rectangular	0.00	0.00	0.00
2	7	6		HSS_SQR 4X4X5_16	A500 GrC rectangular	0.00	0.00	0.00
3	8	9		PL 6x3/8	A36	0.00	0.00	0.00
11	28	30		HSS_SQR 4X4X5_16	A500 GrC rectangular	0.00	0.00	0.00
12	32	31		HSS_SQR 4X4X5_16	A500 GrC rectangular	0.00	0.00	0.00
13	33	34		PL 6x3/8	A36	0.00	0.00	0.00
16	34	8		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
17	39	41		HSS_SQR 4X4X5_16	A500 GrC rectangular	0.00	0.00	0.00
18	43	42		HSS_SQR 4X4X5_16	A500 GrC rectangular	0.00	0.00	0.00
19	44	45		PL 6x3/8	A36	0.00	0.00	0.00
22	33	45		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
23	44	9		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
24	47	375		L 2X2X3_16	A36	0.00	0.00	0.00
25	46	375		L 2X2X3_16	A36	0.00	0.00	0.00
26	10	377		L 2X2X3_16	A36	0.00	0.00	0.00
27	11	377		L 2X2X3_16	A36	0.00	0.00	0.00
28	36	379		L 2X2X3_16	A36	0.00	0.00	0.00
29	379	35		L 2X2X3_16	A36	0.00	0.00	0.00
122	586	582		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
123	587	583		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
124	584	580		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
125	585	581		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
135	607	606		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
137	611	610		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
139	615	614		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
141	619	618		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
143	623	622		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
145	627	626		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
147	631	630		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
149	635	634		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
168	670	654		aisiSSMA_S 1200S200-54	A36 (weightless)	0.00	0.00	0.00
178	686	682		aisiSSMA_S 1200S200-54	A36 (weightless)	0.00	0.00	0.00
183	694	690		aisiSSMA_S 1200S200-54	A36 (weightless)	0.00	0.00	0.00
186	701	700		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
190	709	708		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
193	715	714		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
199	736	737		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

200	727	729	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
201	733	734	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
214	738	761	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
215	758	751	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
216	748	741	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
217	769	772	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
218	773	770	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
219	771	768	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
220	774	777	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
221	775	778	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
222	779	776	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
25	270.00	0	0.00	0.00	0.00
26	270.00	0	0.00	0.00	0.00
122	0.00	2	-1.00	0.00	0.00
123	0.00	2	-1.00	0.00	0.00
124	0.00	2	-1.00	0.00	0.00
125	0.00	2	-1.00	0.00	0.00
135	0.00	2	0.50	0.00	-0.866
137	0.00	2	0.50	0.00	-0.866
139	0.00	2	0.50	0.00	-0.866
141	0.00	2	0.50	0.00	-0.866
143	0.00	2	0.50	0.00	0.866
145	0.00	2	0.50	0.00	0.866
147	0.00	2	0.50	0.00	0.866
149	0.00	2	0.50	0.00	0.866
168	90.00	0	0.00	0.00	0.00
178	90.00	0	0.00	0.00	0.00
183	90.00	0	0.00	0.00	0.00
199	0.00	2	1.00	0.00	0.00
200	0.00	2	1.00	0.00	0.00
201	0.00	2	1.00	0.00	0.00
217	90.00	0	0.00	0.00	0.00
218	90.00	0	0.00	0.00	0.00
219	90.00	0	0.00	0.00	0.00

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
168	-3.3301	0.00	-4.2321	-5.3301	0.00	-0.7679
178	-2.00	0.00	5.00	2.00	0.00	5.00
183	5.3301	0.00	-0.7679	3.3301	0.00	-4.2321

84 TYRONE RD

Location	84 TYRONE RD	**Mblu**	19/ C/ 001.00/A /
Acct#	P0001998	**Owner**	POMFRET SCHOOL INC
Assessment	$966,100	**Appraisal**	$1,380,100
PID	784	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,380,100	$0	$1,380,100

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$966,100	$0	$966,100

Owner of Record

Owner	POMFRET SCHOOL INC	**Sale Price**	$0
Co-Owner	C/O CINGULAR WIRELESS	**Certificate**	
		Book & Page	0051/0282
		Sale Date	02/24/1981

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
POMFRET SCHOOL INC	$0		0051/0282	02/24/1981

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost
Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Baths:	
Half Baths:	
Xtra Fixtrs:	
Total Rooms:	
Extra Kitchens	
Whirlpool	
Fireplace	
Xtra Opening	
Blocked FPL	
Gas Fireplace	

Building Photo

(http://images.vgsi.com/photos/PomfretCTPhotos//\00\00\38/08.jpg)

Building Layout

Building Layout

(http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/784

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	4300
Description	TEL TWR MDL-00
Zone	RR
Neighborhood	600
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0
Frontage	0
Depth	0
Assessed Value	$0
Appraised Value	$0

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
SHD5	Shed-Cell			312 SF	$56,200	1
	CELL TOWER			9	$1,322,500	1
FN4	FENCE-8' CHAIN			260 L.F.	$1,400	1

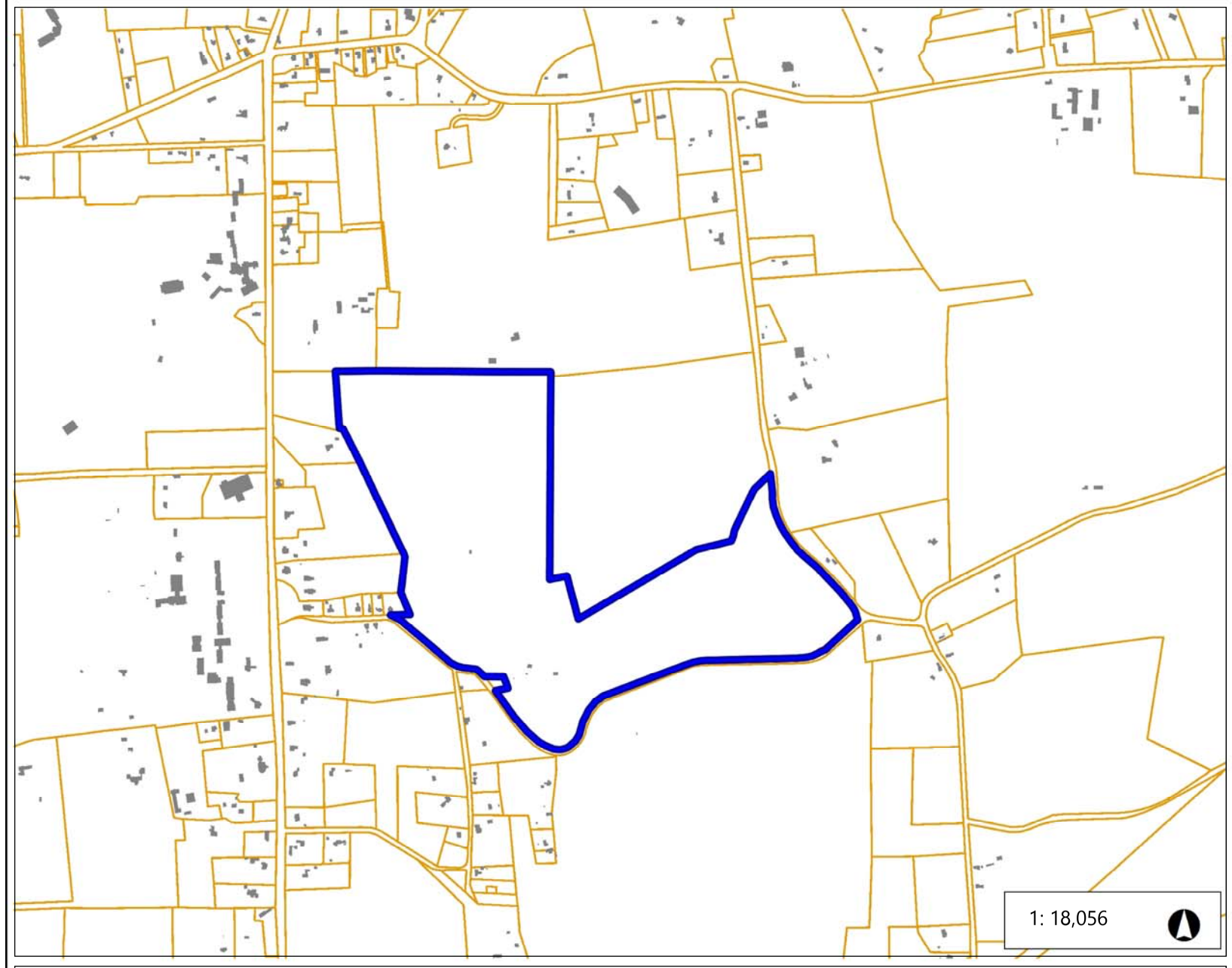
Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$1,380,100	$0	$1,380,100
2017	$1,380,100	$0	$1,380,100
2016	$1,380,100	$0	$1,380,100

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$966,100	$0	$966,100
2017	$966,100	$0	$966,100
2016	$966,100	$0	$966,100

neccog

Neccog GIS Site



Legend

- Town
- Buildings 2012
- Parcels

Notes

84 TYRONE ROAD, POMFRET

0.6 0 0.28 0.6 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

DOCKET NO. 142 - An application of Springwich Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telephone tower and associated equipment in the Town of Pomfret, Connecticut.

Connecticut

Siting

Council

June 20, 1991

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a cellular telecommunications tower and equipment building at the proposed Pomfret, Connecticut, alternate site 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 section 16-50k of the Connecticut General Statutes (CGS), be issued to the Springwich Cellular Limited Partnership (Springwich), for the construction, operation, and maintenance of a cellular telecommunications tower, associated equipment, and building at the proposed alternate site in Pomfret, Connecticut.

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

1. The facility shall be constructed in accordance with the State of Connecticut Basic Building Code.

2. The self-supporting monopole tower shall be no taller than necessary to provide the proposed communications service and in no event shall the tower exceed a total height of 167 feet above ground level, with antennas and appurtenances.

3. The Certificate holder shall prepare a D&M plan for this site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M plan shall include detailed plans of the tower, tower foundation, tower pedestal,

equipment building, access road, and security fence. In addition, the D&M plan shall include detailed plans for clearing with techniques to minimize vegetation clearing; a site plan reorienting the facility, utilities, and access easements to avoid inland wetlands; and detailed plans for erosion and sedimentation control.

4. The Certificate Holder shall comply with any existing and future radio frequency (RF) standard promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.

6. 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.

7. If the facility does not initially provide, or permanently ceases to provide cellular service following completion of construction, this Decision and Order shall be void, and the tower and all associated equipment shall be dismantled and removed or reapplication for any new use shall be made to the Council before any such new use is made.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to CGS section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Norwich Bulletin.

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 State Agencies.

The party to this proceeding is:

PARTY	ITS REPRESENTATIVE
The Springwich Cellular Limited Partnership 555 Long Wharf Drive New Haven, CT 06506	Peter J. Tyrrell Senior Attorney SNET Cellular, Inc. 227 Church Street, Room 1021 New Haven, CT 06506 (203) 771-7381

SMH:bw

0045A

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case in DOCKET NO. 142 - An application of Springwich Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telephone tower and associated equipment in the Town of Pomfret, Connecticut, or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut the 20th day of June 1991.

Council Members	Vote Cast
Mortimer A. Gelston Mortimer A. Gelston Chairman	Yes
_____ Commissioner Peter Boucher Designee: Mark Marcus	Yes
Brian J. Emerick Commissioner Timothy R.E. Keeney Designee: Brian Emerick	Yes
Harry E. Covey Harry E. Covey	Yes
Gloria Dibble Pond Gloria Dibble Pond	Yes
Daniel P. Lynch, Jr. Daniel P. Lynch, Jr.	Yes
_____ Paulann H. Sheets	Absent
William H. Smith William H. Smith	Yes
Colin C. Tait Colin C. Tait	Yes

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PRIORITY MAIL 1-DAY™

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MARK J ROBERTS
QC DEVELOPMENT
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STORRS CT 06268-0916

0024

Carrier -- Leave if No Response

R003

SHIP TO: MAUREEN A NICHOLSON
TOWN OF POMFRET
5 HAVEN RD
CC: MR JOSEPH PAJAK
POMFRET CTR CT 06259-1741

USPS TRACKING #

9405 5036 9930 0322 0082 26

Electronic Rate Approved #038555749

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Instructions

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Trans. #:	489415728
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Ship Date:	04/11/2020
Expected Delivery Date:	04/13/2020

Priority Mail® Postage:	**$7.75**
Total:	**$7.75**

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QC DEVELOPMENT
PO BOX 916
STORRS CT 06268-0916

To: MAUREEN A NICHOLSON
TOWN OF POMFRET
5 HAVEN RD
CC: MR JOSEPH PAJAK
POMFRET CTR CT 06259-1741

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

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MARK J ROBERTS
QC DEVELOPMENT
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SHIP TO:
POMFRET SCHOOL INC.
398 POMFRET ST
POMFRET CTR CT 06259

USPS TRACKING #

9405 5036 9930 0322 0082 33

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