



August 6, 2020

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

Re: Notice of Exempt Modification New Cingular Wireless PCS, LLC ("AT&T") Site CT2135
168 Catoona Lane, Stamford, CT 06902 (the "Property")
Latitude: 41.0522139 N Longitude: 73.5631381W

Dear Ms. Bachman:

AT&T currently maintains (12) antennas at the 235-foot level on the existing 301-foot self-support tower ("Tower") at 168 Catoona Lane in Stamford CT. The tower and property are owned by American Towers, Inc. ("ATC"). AT&T intends to modify its facility by replacing (3) antennas with (3) BSA-M65R-BUU-H6K antennas and replacing (5) RRUs with (2) 4415 B30 & (2) 8843 B2 B66A RRUs & (1) 4449 B5/B12 and add (1) RRU E2 B29 . The height of AT&Ts existing and proposed antennas & RRUs is 235'.

The facility was approved by the City of Stamford back in the 1960's. A copy of the original zoning is not available. AT&T (SNET Cellular) received CT Siting Council approval on July 19, 1988.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ("R.C.S.A") §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with to R.C.S.A §16-50j-73, a copy of this letter is being mailed to the Honorable David Martin, Mayor, City of Stamford, David W. Woods, PhD, Deputy Director of Planning, FACIP, City of Stamford, and to American Tower, Inc as tower & property owner via email.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an 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 modified facility 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 foundation can support the proposed loading.

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

Sincerely,

Hollis M. Redding

Hollis M. Redding
SAI Communications, LLC
12 Industrial Way
Salem, NH 03079
Mobile: 860-834-6964
hredding@saigrp.com

Enclosures

Cc: The Honorable David Martin, Mayor, City of Stamford
David W. Woods, PhD, FAICP, Deputy Director of Planning, City of Stamford
ATC Towers, Inc. as tower & property owner

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*							15.57%
AT&T LTE 700	1	1478	233	0.0103	737	0.4913	0.21%
AT&T LTE 1900	1	4842	233	0.0338	1900	1.0000	0.34%
AT&T LTE 700	1	2951	233	0.0206	737	0.4913	0.42%
AT&T LTE AWS	1	5070	233	0.0354	2100	1.0000	0.35%
AT&T LTE 700	1	1476	233	0.0103	737	0.4913	0.21%
AT&T LTE 850	1	1000	233	0.0070	850	0.5667	0.12%
AT&T LTE WCS	1	1285	233	0.0090	2300	1.0000	0.09%
AT&T UMTS	1	255	232.7	0.0018	850	0.5667	0.03%
Site Total							17.34%

*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*							15.57%
AT&T LTE 700	2	1476	233	0.0202	719	0.4793	0.42%
AT&T LTE 850	1	1476	233	0.0101	855	0.5700	0.18%
AT&T LTE 1900	2	4842	233	0.0664	1930	1.0000	0.66%
AT&T LTE 700	1	2951	233	0.0202	777	0.5180	0.39%
AT&T LTE AWS	1	5070	233	0.0348	2133	1.0000	0.35%
AT&T LTE WCS	1	1285	233	0.0088	2360	1.0000	0.09%
Site Total							17.66%

*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

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING LATTICE:

- NEW AT&T ANTENNAS: BSA-M65R-BUU-H6K (TOTAL OF 3, PER GAMMA SECTOR).
- NEW AT&T RRUS: B5/B12 4449 (850/700) (TOTAL OF 1, PER GAMMA SECTOR).
- NEW AT&T RRUS: 8843 B2/B66A (PCS/AWS) (TOTAL OF 2 PER GAMMA SECTOR).
- NEW AT&T RRUS: RRUS-E2 B29 (700) (TOTAL OF 1 PER F SECTOR).
- EXISTING AT&T RRUS: RRUS-E2 B29 (700) (TOTAL OF 1 PER GAMMA SECTOR) (TO BE RELOCATED FROM SHELTER TO TOWER).
- NEW AT&T RRUS: 4415 B30 (WCS) (TOTAL OF 2 PER GAMMA SECTOR).
- NEW AT&T DC & FIBER SURGE ARRESTOR DC6-48-60-18-8C-EV (TOTAL OF 1) AND DC ONLY SURGE ARRESTOR DC6-48-60-0-8C-EV (TOTAL OF 1) WITH (4) DC POWER & (1) FIBER RUN.
- PROPOSED NEW MOUNT FRAME KIT 14' HD V-BOOM SABRE P/N C10857278C (TOTAL OF 1 PER GAMMA/F SECTOR).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- ADD 2ND XMU
- ADD DC12 & FIBER MANAGEMENT BOX.

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNAS: SBNHH-1D65A (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T ANTENNAS: EPBQ-654L8H6-L2 (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T ANTENNAS: OPA-65R-LCUU-H4 (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T RRUS: RRUS-11 B12 (700) (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T RRUS: RRUS-32 B2 (PCS) (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T RRUS: 4426 B66 (AWS) (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T RRUS: RRUS-11 B5 (850) (TOTAL OF 1 PER GAMMA SECTOR).
- EXISTING AT&T (2) 1-5/8" COAX CABLES.

ITEMS TO REMAIN:

- EXISTING AT&T RRUS: 4478 B14 (700) (TO BE REUSED) (TOTAL OF 1 PER GAMMA SECTOR).
- (9) ANTENNAS, (11) RRU'S, (3) TMA'S (2) SURGE ARRESTOR, (10) COAX CABLES, (6) DC POWER & (3) FIBER.

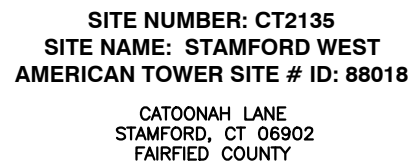
SITE ADDRESS:	CATOONAH LANE STAMFORD, CT 06902		
LATITUDE:	41.052213° N,	41° 03' 07.97" N	
LONGITUDE:	73.563138° W,	73° 33' 47.29" W	
TYPE OF SITE:	LATTICE / INDOOR		
STRUCTURE HEIGHT:	301'-0"±		
RAD CENTER:	235'-0"±		
CURRENT USE:	TELECOMMUNICATIONS FACILITY		
PROPOSED USE:	TELECOMMUNICATIONS FACILITY		

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	EXISTING ANTENNA LAYOUT	1
A-3	PROPOSED ANTENNA LAYOUT	1
A-4	ELEVATION & DETAILS	1
A-5	DETAILS	1
SN-1	STRUCTURAL NOTES	1
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1
RF-2	RF PLUMBING DIAGRAM	1

H D G | **HUDSON**
Design Group LLC

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586



VICINITY MAP

GENERAL NOTES

GET ON 1-91 S FROM ENTERPRISE DR. HEAD SOUTHEAST TOWARD CAPITAL BLVD
TURN LEFT ONTO CAPITAL BLVD. USE THE LEFT LANE TO TURN LEFT ONTO STATE HWY 411
TURN LEFT TO MERGE ONTO 1-91 S. FOLLOW 1-91 S, CT-15 S AND 1-95 S TO GRENHART RD IN
STAMFORD. TAKE EXIT 6 FROM 1-95 S. MERGE ONTO 1-91 S. TAKE EXIT 17 TO MERGE ONTO CT-15
S/WILBUR CROSS PKWY. CONTINUE TO FOLLOW CT-15 S. TAKE EXIT 52 FOR STATE ROUTE 108
S/STATE ROUTE 8 S TOWARD BRIDGEPORT. KEEP LEFT, FOLLOW SIGNS FOR CT-8 S/BRIDGEPORT AND
MERGE ONTO CT-8 S. TAKE THE INTERSTATE 95 S EXIT TOWARD N.Y. CITY. MERGE ONTO 1-95 S.
TAKE EXIT 6 FOR WEST AVE. TAKE WEST AVE AND W MAIN ST TO MYANO LN. USE THE RIGHT LANE
TO MERGE ONTO GRENHART RD. TURN RIGHT ONTO WEST AVE. TURN LEFT ONTO W MAIN ST. TURN
RIGHT ONTO MYANO LN. CATOONA LN STAMFORD, CT



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 PRIOR

COMMONWEALTH OF MASSACHUSETTS
DANIEL P. HAMM
Professional Engineer
No. 40720
REGISTERED
PROFESSIONAL ENGINEER

C OPH
C DIR
APP'D
A

SITE
CT2

AT&T

TITLE SHEET
RF MOD UPGRADE

1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	OPH		TITLE SHEET		
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DRH		RF MOD UPGRADE		
NO.	DATE	REVISIONS	BY	CHK	APP'D		SITE NUMBER	DRAWING NUMBER	REV
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: GA			CT2135	T-1	1	

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 STANDARDS) 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 AND #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 AWG 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

1. FOR THE PURPOSE OF THE PROPOSAL, 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-EN TRAINED 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 ($F_y = 36$ ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E ($F_y = 36$ ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP 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.

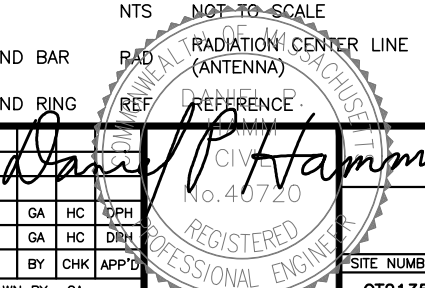
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

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					

				AT&T					
SUED FOR CONSTRUCTION				GA	HC	DPH	GENERAL NOTES		
SUED FOR REVIEW				GA	HC	DPH	RF MOD UPGRADE		
REVISIONS				BY	CHK	APP'D	SITE NUMBER		DRAWING NUMBER
DESIGNED BY: HC				DRAWN BY: GA			CT2135		GN-1



SITE NUMBER: CT2135
SITE NAME: STAMFORD WEST
AMERICAN TOWER SITE # ID: 88018

CATOONAH LANE
STAMFORD, CT 06902
FAIRFIED COUNTY



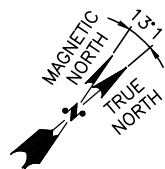
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

						AT&T	
1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	OPH	GENERAL NOTES	
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DPH	RF MOD UPGRADE	
NO.	DATE	REVISIONS	BY	CHK	APP'D	SITE NUMBER	DRAWING NUMBER
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: GA			CT2135	GN-1

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

AN ANALYSIS FOR THE CAPACITY OF
EXISTING **ANTENNA MOUNT** TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY: HUDSON
DESIGN GROUP, LLC.
DATED: JUNE 17, 2020

REFER TO STRUCTURAL ANALYSIS
BY: AMERICAN TOWER CORPORATION
DATED: JULY 22, 2020 FOR THE
CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0'

$$\frac{1}{A-1}$$

0 4'-0" 8'-0" 16'-0" 24'-0"

A diagram illustrating the relationship between Magnetic North, True North, and a compass needle. A vertical line represents True North. A line representing Magnetic North is shown at an angle of 13.1 degrees west of True North. A compass needle is shown pointing towards Magnetic North.

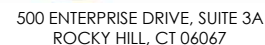
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

2
A-

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845

12 INDUSTRIAL WAY
SALEM, NH 03079

CATOONAH LANE
STAMFORD, CT 06902
FAIRFIED COUNTY



1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	DPH
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: GA		

PLAN

3"=1'-0"

6"=1'-0"

2

A

0 1'-4" 2'-8" 5'

DANIEL P. HAM
REGISTERED PROFESSIONAL ENGINEER
No. 40720

GA	HC	OPH
GA	HC	DIR
BY	CHK	APP'D

DRAWN BY: GA

SITE

CT

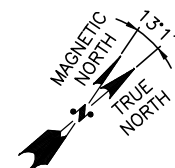
COMPOUND & EQUIPMENT PLANS
RF MOD UPGRADE

SITE NUMBER	DRAWING NUMBER	REVISION
CT2135	A-1	1

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

AN ANALYSIS FOR THE CAPACITY OF
EXISTING **ANTENNA MOUNT** TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY: HUDSON
DESIGN GROUP, LLC.
DATED: JUNE 17, 2020

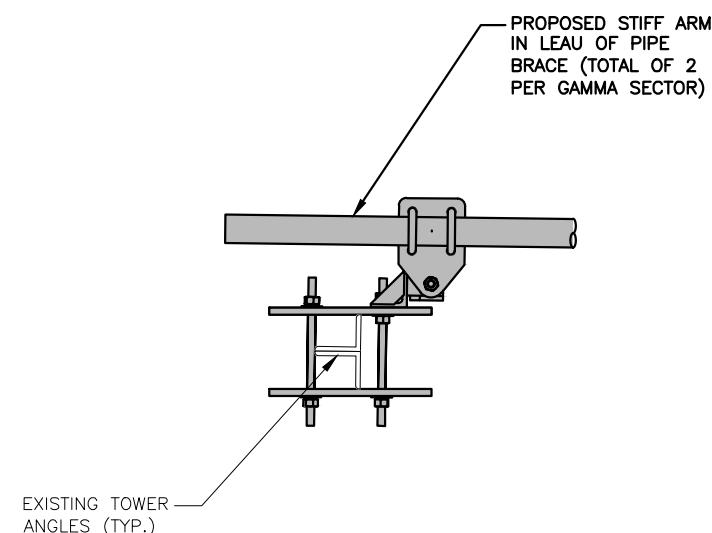
REFER TO STRUCTURAL ANALYSIS
BY: AMERICAN TOWER CORPORATION
DATED: JULY 22, 2020 FOR THE
CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



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

AN ANALYSIS FOR THE CAPACITY OF
EXISTING **ANTENNA MOUNT** TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY: HUDSON
DESIGN GROUP, LLC.
DATED: JUNE 17, 2020

REFER TO STRUCTURAL ANALYSIS
BY: AMERICAN TOWER CORPORATION
DATED: JULY 22, 2020 FOR THE
CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



NOTE:

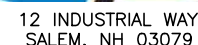
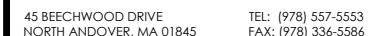
EXISTING ANTENNAS AND MOUNT
FRAME TO BE ROTATED TO MATCH
LTE AZIMUTHS.

22x34 SCALE: 1-1/2"=1'-0"
11x17 SCALE: 3/4"=1'-0"

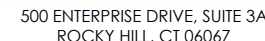
$$\frac{2}{A-3}$$

PROPOSED ANTENNA LAYOUT

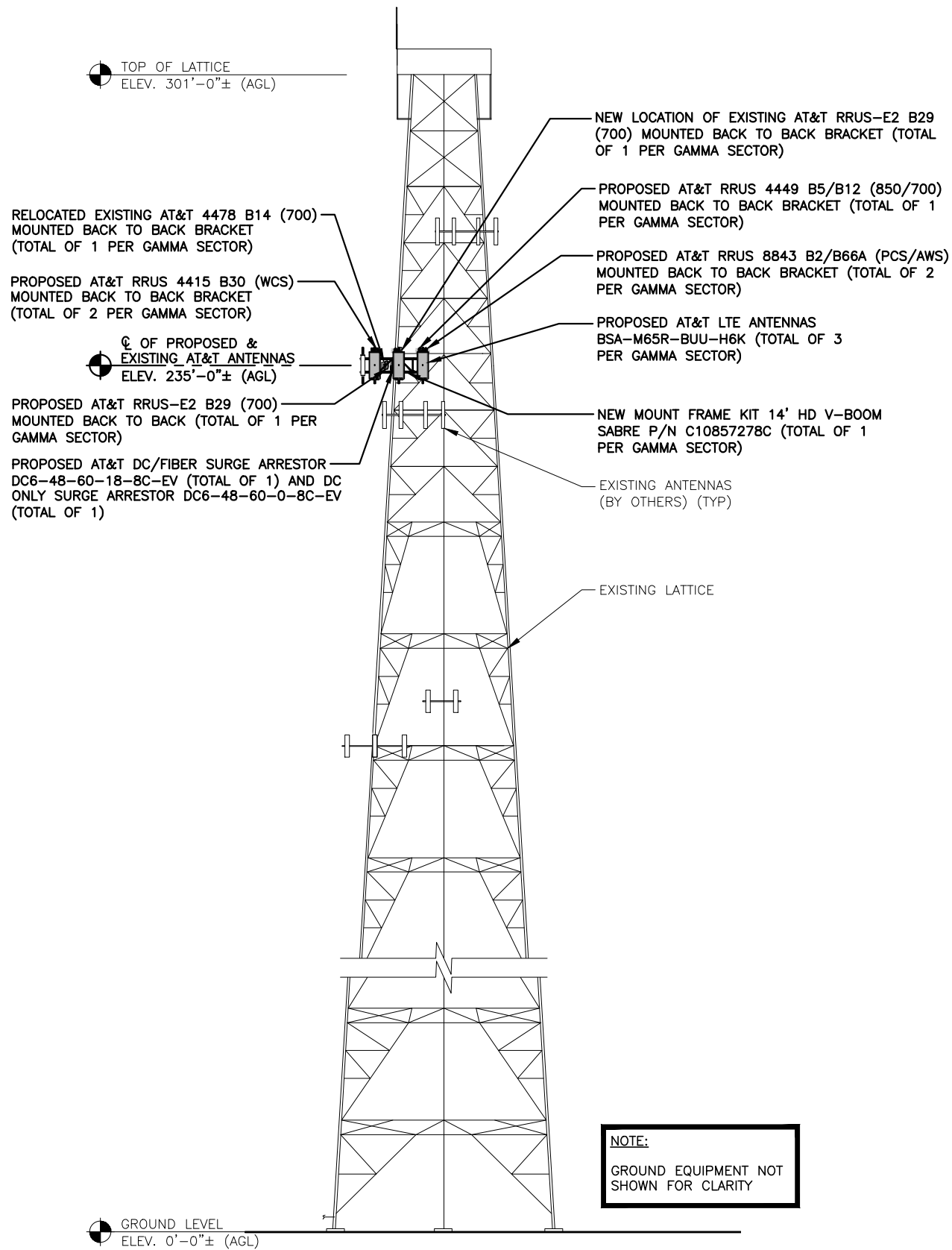
1
A-3



CATOONAH LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY



										AT&T	
1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	OPH						
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DIR						
NO.		DATE	REVISIONS		BY	CHK	APP'D	SITE NUMBER		DRAWING NUMBER	
SCALE:		AS SHOWN	DESIGNED BY: HC		DRAWN BY: GA			CT2135	A-3		1



ELEVATION

22x34 SCALE: 3/32"=1'-0" A-2

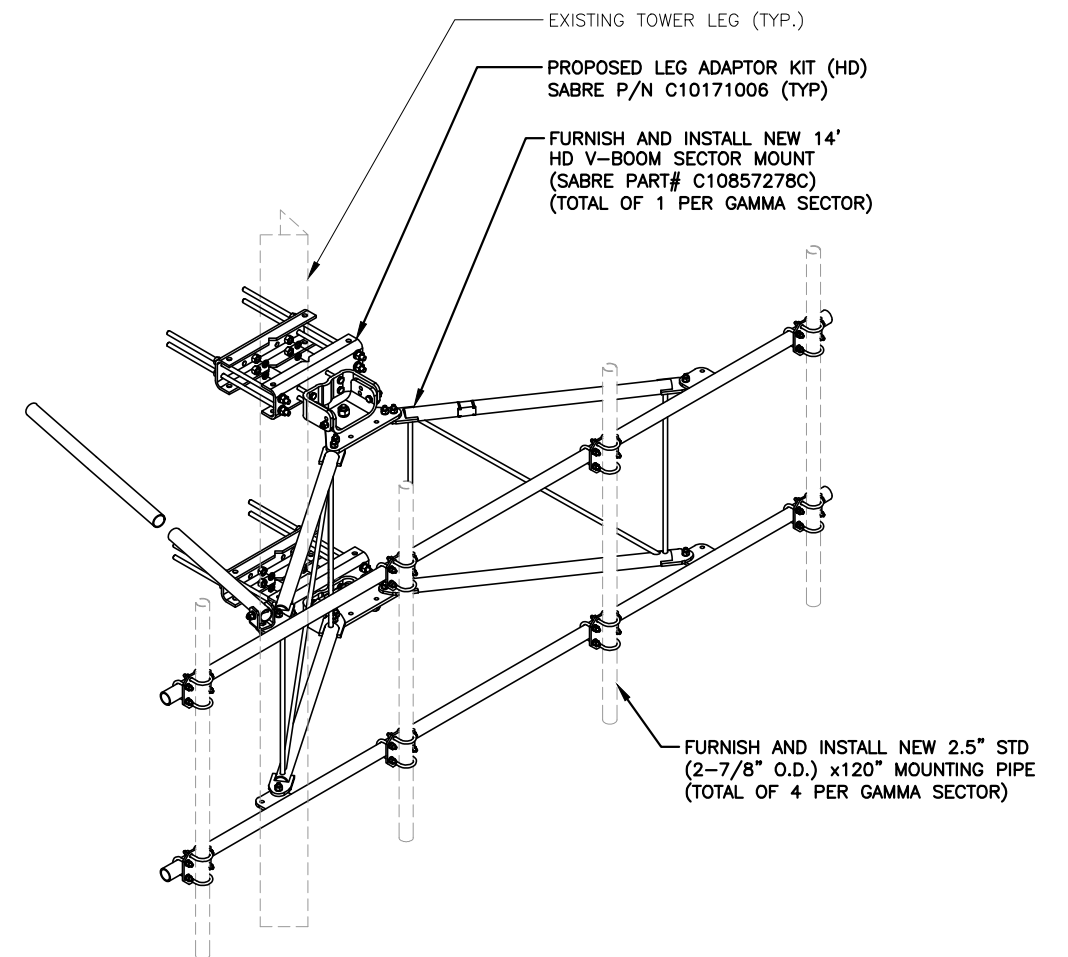
11x17 SCALE: 3/64"=1'-0" 3

0 5'-4" 10'-8" 21'-4" 32'-0"

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

NOTE:
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BY: AMERICAN TOWER CORPORATION
DATED: JULY 22, 2020 FOR THE
CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



14' HD V-BOOM DETAIL 2
SCALE: N.T.S. A-4

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA CL HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	LTE 700 BC/PCS	SBNHH-1D65A	55x11.9x7.1	235'-0"±	0°	-	(1)(E) RRUS-11 B12 (700) (1)(E) RRUS-32 B2 (PCS)	-	(2)(E) DC POWER & (1) FIBER	(E) (1) RAYCAP DC6-48-60-18-8F
A2	EXISTING	LTE 700 B (1)/AWS	EPBQ-654L8H6-L2	73x21x6.3	235'-0"±	0°	-	(1)(E) 4478 B14 (700) (1)(E) 4426 B66 (AWS)	-	-	
A3	EXISTING	LTE WCS/LTE 850/700 DE	OPA-65R-LCUU-H4	48x14.4x7.3	235'-0"±	0°	-	(1)(E) RRUS-E2 B29 (700) (1)(E) RRUS-11 B5 (850) (1)(E) RRUS-32 B30 (WCS)	-	(2)1-5/8 COAX	
A4	EXISTING	UMTS 850	7770	55x11x5	235'-0"±	143°	(1)(E) TT19-08BP111-001	-	-	(2)1-5/8 COAX	
B1	EXISTING	LTE 700 BC/PCS	SBNHH-1D65A	55x11.9x7.1	235'-0"±	120°	-	(1)(E) RRUS-11 B12 (700) (1)(E) RRUS-32 B2 (PCS)	-	(2)(E) DC POWER & (1) FIBER	(E) (1) RAYCAP DC6-48-60-18-8F
B2	EXISTING	LTE 700 B (1)/AWS	EPBQ-654L8H6-L2	73x21x6.3	235'-0"±	120°	-	(1)(E) 4478 B14 (700) (1)(E) 4426 B66 (AWS)	-	-	
B3	EXISTING	LTE WCS/LTE 850/700 DE	OPA-65R-LCUU-H4	48x14.4x7.3	235'-0"±	120°	-	(1)(E) RRUS-E2 B29 (700) (1)(E) RRUS-11 B5 (850) (1)(E) RRUS-32 B30 (WCS)	-	(2)1-5/8 COAX	
B4	EXISTING	UMTS 850	7770	55x11x5	235'-0"±	263°	(1)(E) TT19-08BP111-001	-	-	(2)1-5/8 COAX	
C1	PROPOSED	LTE 850/700 BC/PCS	BSA-M65R-BUU-H6K	72x28.5x9.7	235'-0"±	240°	-	(1)(P) 4449 B5/B12 (850/700) (1)(P) 8843 B2/B66A (PCS/AWS)	17.9X13.2X10.4 14.9X13.2X10.9	(2)(E) DC POWER & (1) FIBER	(P) (1) RAYCAP DC6-48-60-0-8C-EV (P) (1) RAYCAP DC6-48-60-18-8C
C2	PROPOSED	LTE 700 B14/AWS	BSA-M65R-BUU-H6K	72X28.5X9.7	235'-0"±	240°	-	(1)(E) 4478 B14 (700)	-	(4)(P) DC POWER & (1) FIBER	
C3	PROPOSED	LTE 700 DE/WCS	BSA-M65R-BUU-H6K	72X28.5X9.7	235'-0"±	240°	-	(1)(E) RRUS-E2 B29 (700) (1)(P) 4415 B30 (WCS)	16.5X13.4X5.9	-	
C4	EXISTING	UMTS 850	7770	55x11x5	235'-0"±	23°	(1)(E) TT19-08BP111-001	-	-	(2)1-5/8 COAX	
F1	ANTENNAS SHARED WITH GAMMA SECTOR							(1)(P) 8843 B2/B66A (PCS/AWS)	14.9X13.2X10.9	-	
F2								(1)(P) RRUS-E2 B29 (700)	20.4X18.5X7.5	-	
F3								(1)(P) 4415 B30 (WCS)	16.5X13.4X5.9	-	
F4										-	

NOTE:

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

NOTE:

AN ANALYSIS FOR THE CAPACITY OF EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC.
DATED: JUNE 17, 2020

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: AMERICAN TOWER CORPORATION DATED: JULY 22, 2020 FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

RRU CHART		
QUANTITY	MODEL	SIZE (L x W x D)
1(P)	4449 (850/700)	17.9"x13.2"x10.4"
2(P)	8843 (PCS/AWS)	14.9"x13.2"x10.9"
3(E)	4478 B14 (700)	18.1"x13.4"x8.3"
2(P)	4415 B30 (WCS)	16.5"x13.4"x5.9"
2(E)	4426	14.9"x13.2"x5.8"
4(E)	RRUS-32 (WCS)	27.2"x12.1"x7.0"
3(E) 1(P)	RRUS-E2 B29 (700)	20.4"x18.5"x7.5"
4(E)	RRUS-11	19.7"x17.0"x7.2"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:
SEE RFDS FOR RRH
FREQUENCY AND
MODEL NUMBER

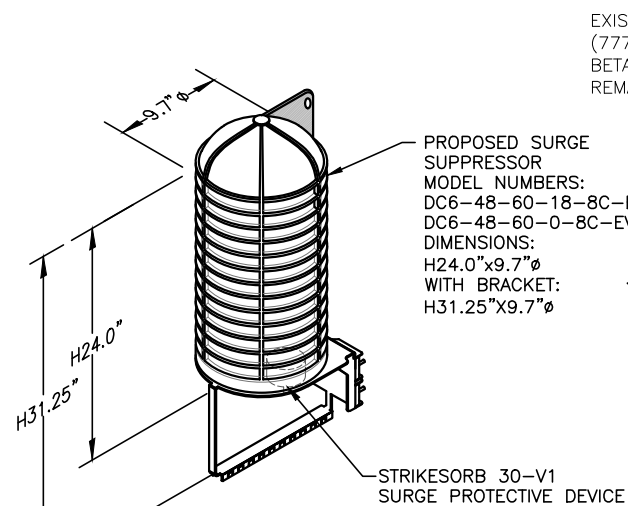
PROPOSED RRU REFER TO THE
FINAL RFDS AND CHART FOR
QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S
SPECIFICATIONS.

PROPOSED RRUS DETAIL
SCALE: N.T.S

FINAL ANTENNA SCHEDULE

SCALE: N.T.S



DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S

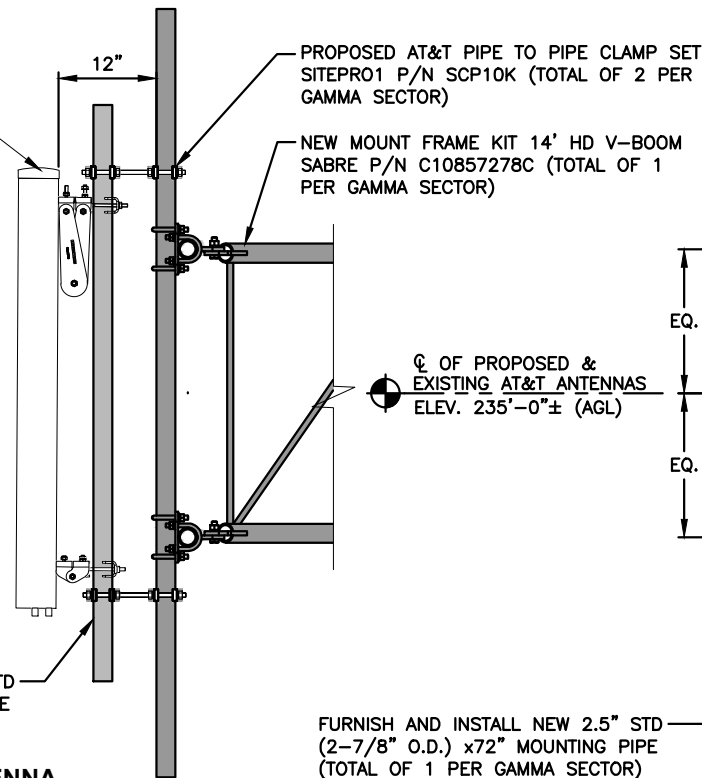
EXISTING AT&T UMTS ANTENNAS
(7770) (TYP. OF 1 PER ALPHA &
BETA SECTOR, TOTAL OF 2) (TO
REMAIN)

CL OF PROPOSED &
EXISTING AT&T ANTENNAS
ELEV. 235'-0"± (AGL)

FURNISH AND INSTALL NEW 2.5" STD
(2-7/8" O.D.) x72" MOUNTING PIPE
(TOTAL OF 1 PER GAMMA SECTOR)

EXISTING UMTS ANTENNA MOUNTING DETAIL

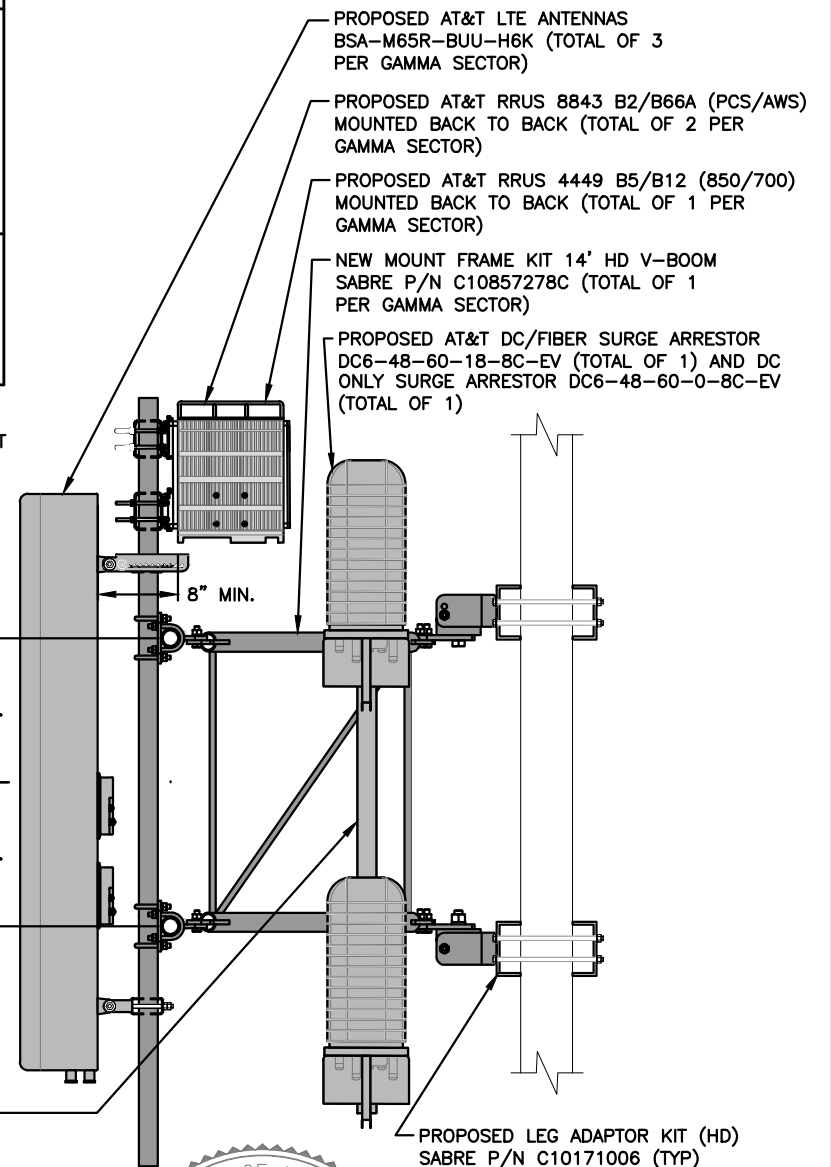
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"



FURNISH AND INSTALL NEW 2.5" STD
(2-7/8" O.D.) x72" MOUNTING PIPE
(TOTAL OF 1 PER GAMMA SECTOR)

PROPOSED LTE ANTENNA MOUNTING DETAIL

22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"



SITE NUMBER: CT2135
SITE NAME: STAMFORD WEST
AMERICAN TOWER SITE # ID: 88018

CATOONAH LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY



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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	OPH
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DIR

SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: GA



AT&T

DETAILS
RF MOD UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT2135	A-5	1



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



12 INDUSTRIAL WAY
SALEM, NH 03079

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 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 D.I.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-HY 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.

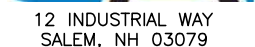
GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

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.

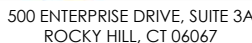
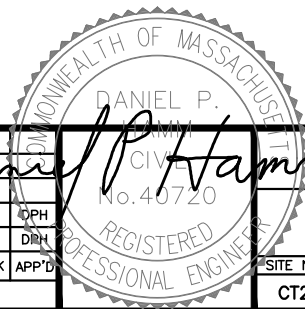
H D G | **HUDSON**
Design Group LLC

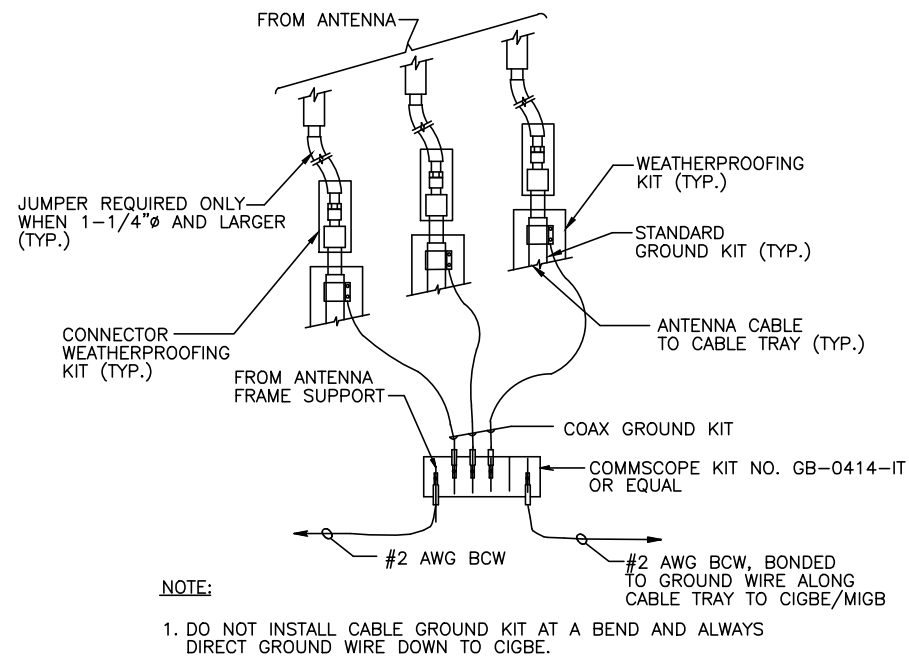
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586



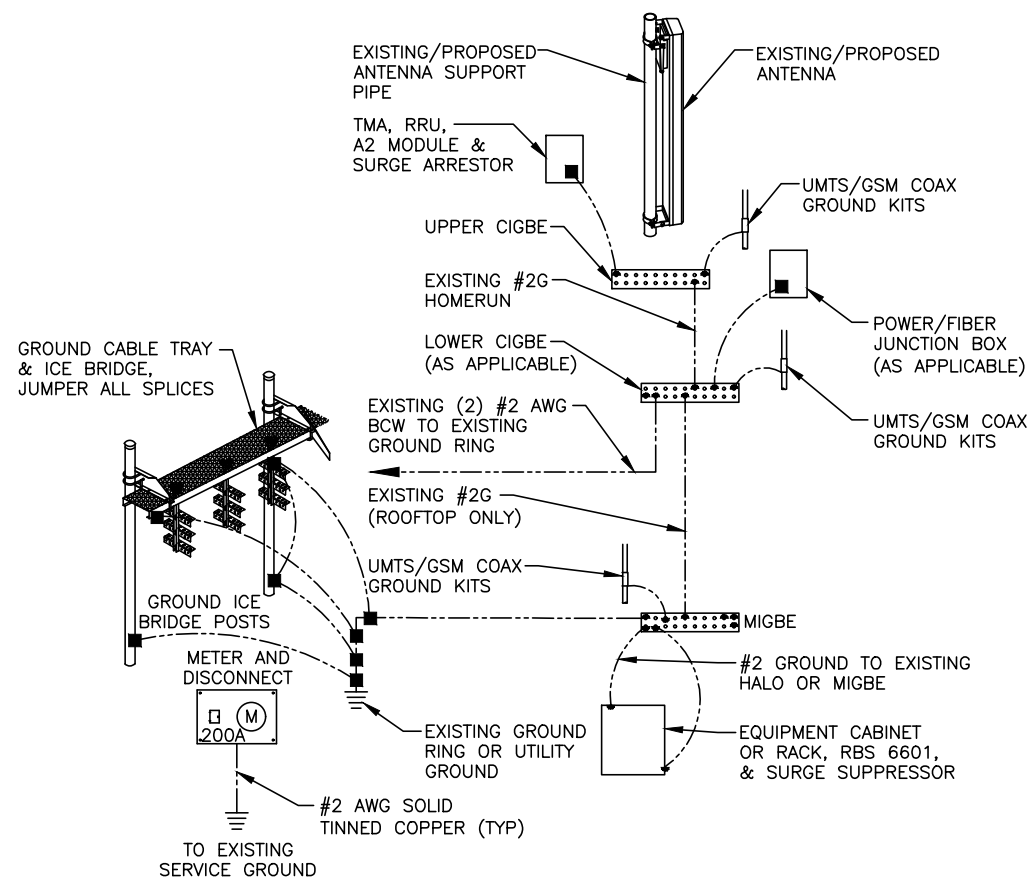
CATOONAH LANE
STAMFORD, CT 06902
FAIRFIED COUNTY

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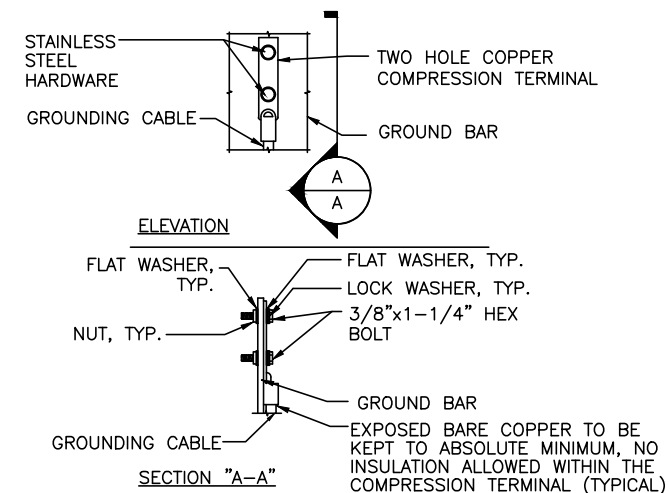
GROUND WIRE TO GROUND BAR CONNECTION DETAIL
SCALE: N.T.S

1
G-1



GROUNDING RISER DIAGRAM
SCALE: N.T.S

2
G-1



- 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
SCALE: N.T.S

3
G-1

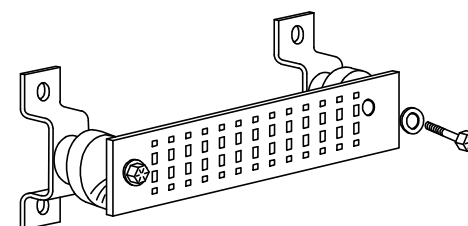
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

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

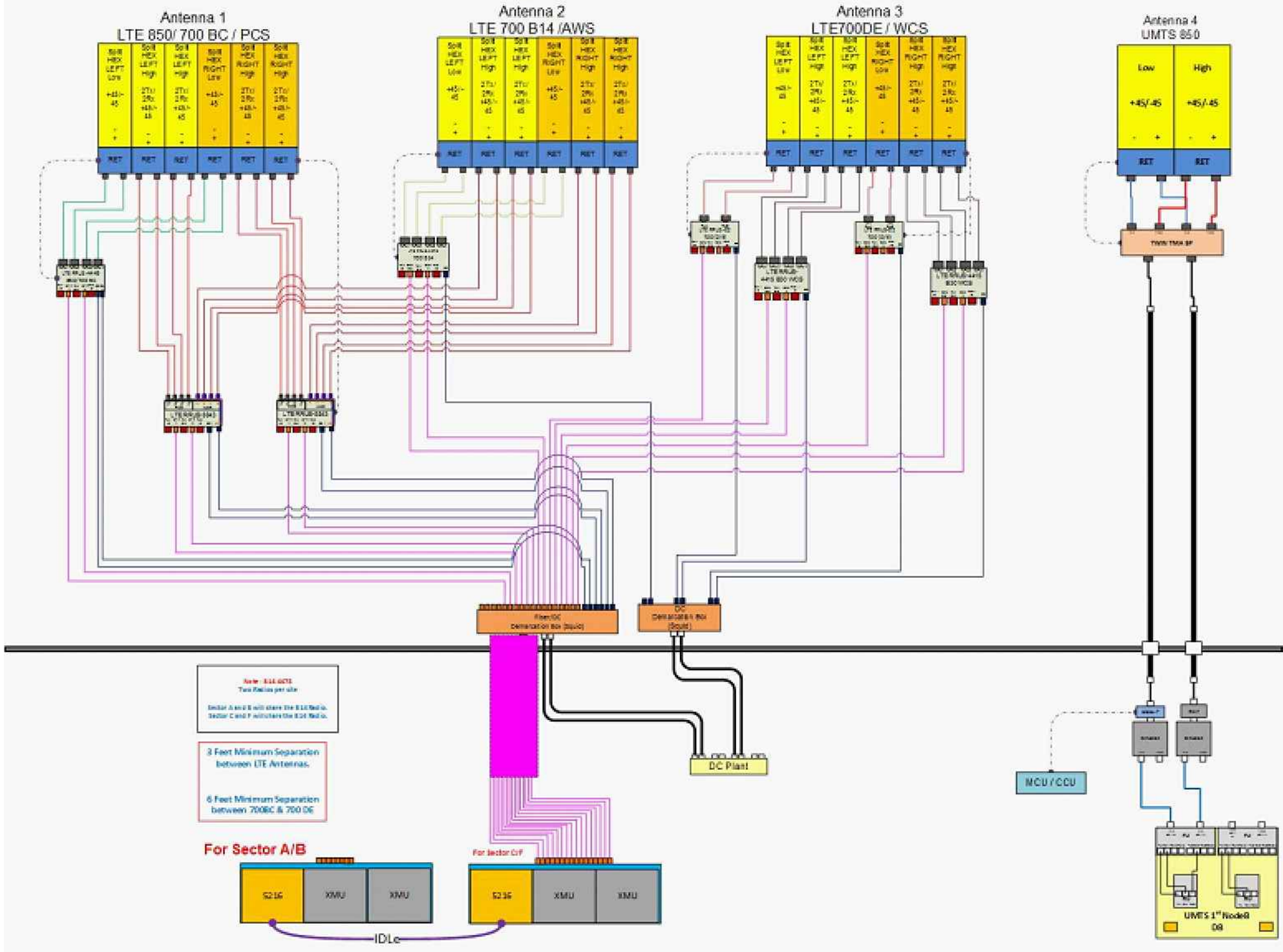
INTERIOR GROUND RING (#2 AWG)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
BUILDING STEEL (IF AVAILABLE) (#2 AWG)



GROUND BAR - DETAIL (AS REQUIRED)
SCALE: N.T.S

4
G-1

GAMMA SECTOR

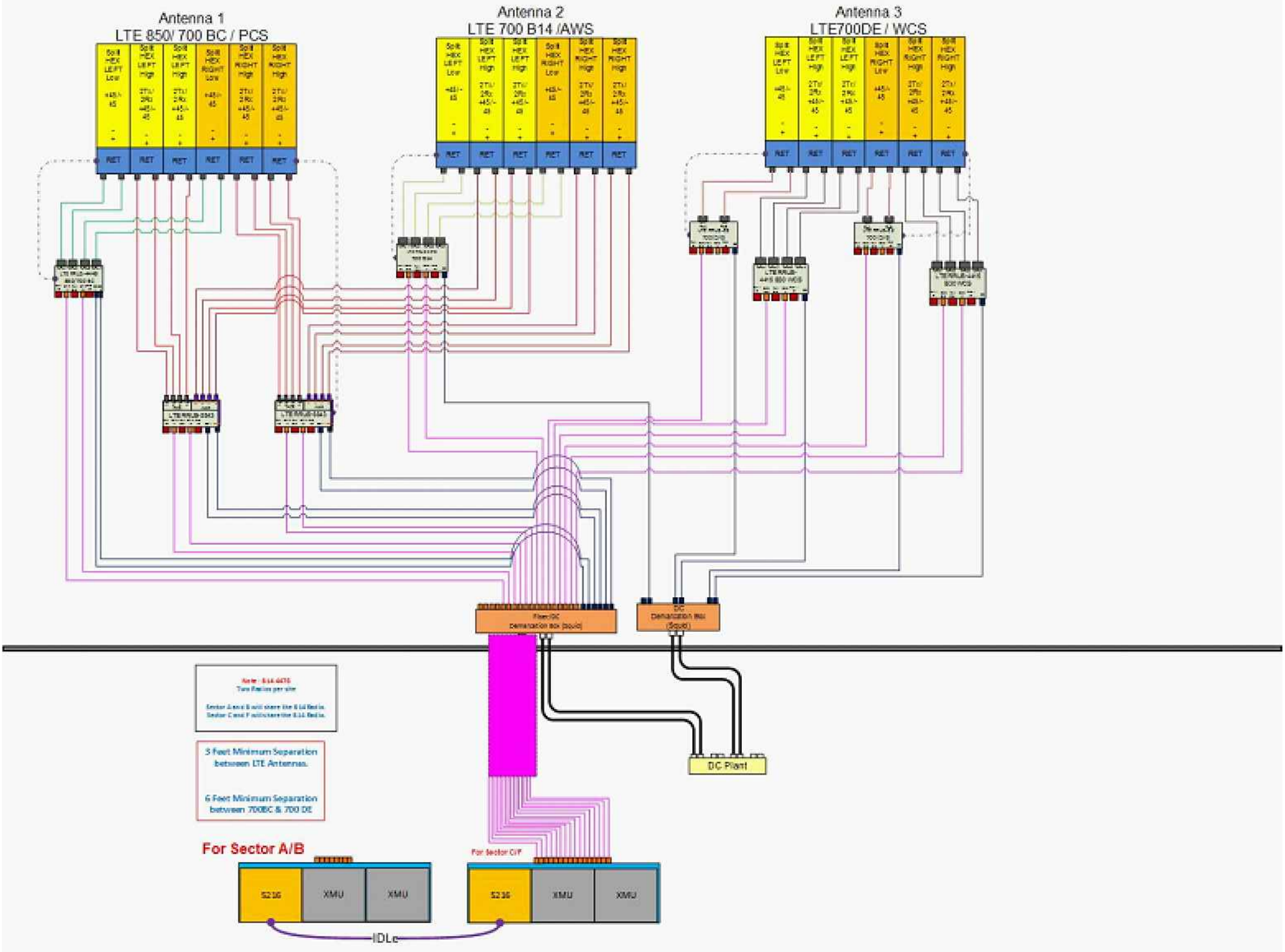


RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	DPH
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DPH
SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: GA					

AT&T		
RF PLUMBING DIAGRAM RF MOD UPGRADE		
SITE NUMBER	DRAWING NUMBER	REV
CT2135	RF-1	1

F SECTOR



RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-2

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

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/28/20	ISSUED FOR CONSTRUCTION	GA	HC	DPH
A	07/07/20	ISSUED FOR REVIEW	GA	HC	DPH
SCALE: AS SHOWN			DESIGNED BY: HC		
			DRAWN BY: GA		

AT&T		
RF PLUMBING DIAGRAM RF MOD UPGRADE		
SITE NUMBER	DRAWING NUMBER	REV
CT2135	RF-2	1



AMERICAN TOWER®
C O R P O R A T I O N

Structural Analysis Report

Structure : 300 ft Self Supported Tower
ATC Site Name : Stamford (Katoona), CT
ATC Asset Number : 88018
Engineering Number : OAA759352_C3_01
Proposed Carrier : AT&T Mobility
Carrier Site Name : Stamford West
Carrier Site Number : CT2135
Site Location : 168 Catoona Lane
Stamford, CT 06902-4573
41.052800,-73.563000
County : Fairfield
Date : July 22, 2020
Max Usage : 91%
Result : Pass

Prepared By:
Robert D. Barrett, E.I.
Structural Engineer II

Robert D. Barrett

Reviewed By:



COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2-3
Equipment to be Removed.....	4
Proposed Equipment	4
Structure Usages	5
Foundations	5
Standard Conditions	6
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 300 ft self supported tower to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	CSEI Analysis, ATC Eng. #73123451, dated September 28, 2005
Foundation Drawing	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Geotechnical Report	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Modifications	ATC Eng. #42439132, dated September 26, 2008 ATC Eng. #44209632, dated December 2, 2009
Mount Analysis	Hudson Design Group Site #CT2135, dated June 17, 2020

Analysis

The tower was analyzed using Power Line Systems, Inc. tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	93 mph (3-Second Gust, V_{asd}) / 120 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
338.0	1	TX RX Systems 101-68-10-X-03N	Platform with Handrails	(1) 1 1/4" Coax	Marcus
324.0	1	Generic 15' Omni-Grid		(1) 1 5/8" Coax	Communications LLC
320.0	1	Generic 12' Omni		-	Other
311.0	1	Generic Radio/ODU		-	Marcus Communications LLC
307.0	1	Generic Radio/ODU		(1) 1/2" Coax	Other
	1	Generic 3' HP Dish			
303.0	-	-		(5) 7/8" Coax	Clearwire Corporation
300.0	3	DragonWave A-ANT-18G-2-C			
	3	DragonWave Horizon Compact			
	1	Generic 4' Std. Dish		(1) 7/8" Coax	Marcus Communications LLC
292.0	1	Procom CXL 900-3LW	Side Arm	(1) 7/8" Coax	Sigfox S.A.
	1	Generic 5" x 3" x 2" Cavity Filter			
	1	Generic Low Noise Amplifier			
275.0	1	Rohde & Schwarz ADD090	Side Arm	(2) 7/8" Coax	US Dept of Homeland Security
270.0	1	Dielectric TLP-08M-2E	Side Arm	-	Other
268.0	2	Til-Tek TA-2350-DAB	Leg	(1) 1 5/8" Coax	Sirius XM Radio Inc.
265.0	3	RFS ATMAA1412D-1A20	Sector Frames	(2) 1 1/4" Fiber (1) 1 5/8" Fiber (12) 1 5/8" Coax	T-MOBILE
	3	Ericsson Radio 4449 B12,B71			
	3	Ericsson AIR-32 B2A/B66Aa			
	3	Ericsson Air 3246 B66			
	3	RFS APXVAARR24_43-U-NA20			
260.0	-	-	-	(1) EW20	Sirius XM Radio Inc.
250.0	1	Sinclair SC281-L	Side Arm	(1) 7/8" Coax	US Dept of Homeland Security
245.0	1	Sinclair SC381-HL	Side Arm	(1) 7/8" Coax	
235.0	2	Ericsson RRUS 4426 B66	-	(2) 0.39" Fiber Trunk (4) 0.74" 8 AWG 7 (2) 0.78" 8 AWG 6 (10) 1 5/8" Coax	AT&T Mobility
	3	Ericsson RRUS 4478 B14			
	2	Ericsson RRUS 32 B2			
	2	Ericsson RRUS E2 B29			
	2	Andrew SBNHH-1D65A			
	2	CCI OPA-65R-LCUU-H4			
	2	KMW EPBQ-654L8H6-L2			
	1	Raycap DC6-48-60-18-8F ("Squid")			
	3	Powerwave Allgon TT19-08BP111-001			
	3	Powerwave Allgon 7770.00			
210.0	1	Sinclair SC281-L	Side Arm	(1) 7/8" Coax	US Dept of Homeland Security
200.0	2	TX RX Systems 101-68-10-X-03N	Side Arms	(2) 1 1/4" Coax	Marcus Communications Llc
193.0	2	Antel BCD-87010 ____	Side Arms	(3) 7/8" Coax	Spok Holdings, Inc.
	1	Generic 30" x 30" Reflector			



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
175.0	1	Generic 12" x 12" Junction Box	Leg	(2) 2" Conduit (6) 5/16" Coax	Clearwire Corporation
171.0	3	Argus LLPX310R	T-Arms		
	3	NextNet BTS-2500			
165.0	15	Generic RCU (Remote Control Unit)	Leg	(12) 1 5/8" Coax (1) 3/8" Coax	Metro PCS Inc
	6	Kathrein Scala 800 10504			
150.0	3	Alcatel-Lucent 800 MHz RRH	Sector Frames	(5) 1 1/4" Hybriflex Cable (1) 1.7" Hybrid	Sprint Nextel
	3	RFS IBC1900HB-2			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVTM14-C-I20			
	3	RFS APXVSP18-C-A20			
	6	Alcatel-Lucent 1900MHz RRH			
	3	Alcatel-Lucent ALU 800MHz External Notch Filter			
	3	Nokia 2.5G MAA - AAHC(64T64R)			
142.0	1	Antel BCD-87010 ____ 4°	Side Arm	(1) 7/8" Coax	Sensus Usa Inc.
135.0	1	L-com HG908U-PRO	Stand-Off	(1) 0.38" Cat 5e (1) 1/2" Coax	Senet, Inc.
130.0	1	Tycon ENC-DC	Side Arm	-	
120.0	1	Channel Master Type 120	Stand-Off	(1) 1/2" Coax	Spok Holdings, Inc.
107.0	1	TX RX Systems 101-68-10-X-03N	Side Arm	(1) 1 1/4" Coax	Marcus Communications LLC
92.0	3	Alcatel-Lucent RRH4x45-B66 w/o Solar Shield	Sector Frames	(3) 1 1/4" Hybriflex Cable (2) 1 5/8" Hybriflex	Verizon Wireless
	2	RFS DB-T1-6Z-8AB-OZ			
	1	RFS DB-T1-6Z-8AB-OZ			
	6	Andrew SBNHH-1D65B			
	3	Alcatel-Lucent RRH2X60-1900A-4R			
	3	Alcatel-Lucent RRH2x60 700			
	6	Generic 72" x 14" Panel			
25.0	1	Til-Tek TA-2324-LHCP	Leg	(1) 7/8" Coax	Sirius XM Radio Inc.
6.0	1	Channel Master Type 120	Leg	(1) 1/2" Coax	Spok Holdings, Inc.
	1	Trimble Acutime 2000		(1) 1/4" Coax	



Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
235.0	6	CCI TPX-070821	Sector Frames	(2) 1 5/8" Coax	AT&T Mobility
	3	Powerwave Allgon TT19-08BP111-001			
	2	Raycap DC2-48-60-0-9E			
	6	Ericsson RRUS A2			
	1	Ericsson RRUS 4426 B66			
	3	Ericsson RRUS-11 800 MHz			
	1	KMW EPBQ-654L8H6-L2			
	1	Ericsson RRUS 32 B2			
	1	Ericsson RRUS E2 B29			
	3	Ericsson RRUS-11			
	1	Andrew SBNHH-1D65A			
	1	CCI OPA-65R-LCUU-H4			
	3	Ericsson RRUS 32 (50.8 lbs)			

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
235.0	1	Raycap DC6-48-60-0-8C-EV	Sabre C10857278C Sector Frames	(1) 0.39" Fiber Trunk (4) 0.96" Cable	AT&T Mobility
	2	Raycap DC6-48-60-18-8F ("Squid")			
	2	Ericsson RRUS 8843 B2, B66A			
	2	Ericsson RRUS 4415 B30			
	1	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC6-48-60-18-8C			
	2	Ericsson RRUS 32 B30 (53 lbs)			
	2	Ericsson RRUS 11 B5			
	2	Ericsson RRUS 11 B12			
	3	CCI BSA-M65R-BUU-H6 (101 lbs)			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax stacked on top of existing AT&T Mobility coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	73%	Pass
Diagonals	83%	Pass
Truss Diagonals	89%	Pass
Horizontals	77%	Pass
Truss Horizontals	91%	Pass
Anchor Bolts	49%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	325.0	84%
Axial (Kips)	459.8	5%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

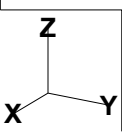
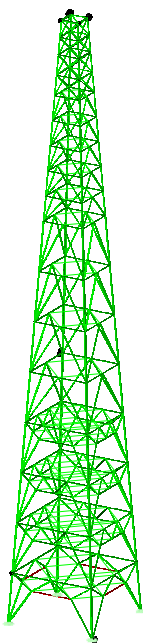
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively “American Tower”) are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Project Name : 88818 - Stamford (Katoona), CT
Project Notes: OAA759352_C3_01 - AT&T Mobility
Project File : C:\Users\robert.barrett\Desktop\2020.07.22 - AT&T Mobility - OAA759352_C3_01.tow
Date run : 11:41:28 PM Wednesday, July 22, 2020
by : Tower Version 16.01
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-G-1
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: C:\Users\robert.barrett\Desktop\2020.07.22 - AT&T Mobility - OAA759352_C3_01\2020.07.22 - AT&T Mobility - OAA759352_C3_01.eia

*** Analysis Results:

Maximum element usage is 91.21% for Angle "LH 3X" in load case "W -45"

Foundation Design Forces For All Load Cases:

Note: Loads are factored.

Load Case	Foundation Description	Axial Force (kips)	Shear Force (kips)	Bending Moment (ft-k)	Foundation Usage %
W 0	0P	332.93	49.01	5.18	0.00
W 0	0X	323.18	47.60	4.86	0.00
W 0	0XY	199.09	35.77	5.39	0.00
W 0	0Y	-195.03	36.25	5.67	0.00
W 180	0P	-192.06	36.25	5.74	0.00
W 180	0X	-192.39	35.47	5.50	0.00
W 180	0XY	320.19	47.64	4.96	0.00
W 180	0Y	326.26	48.55	5.25	0.00
W 45	0P	459.75	64.56	4.66	0.00
W 45	0X	63.18	22.38	5.05	0.00
W 45	0XY	-325.00	53.12	5.98	0.00
W 45	0Y	64.06	22.37	5.62	0.00
W -45	0P	69.11	23.86	5.97	0.00
W -45	0X	451.88	63.69	4.70	0.00
W -45	0XY	61.83	21.49	5.39	0.00
W -45	0Y	-320.83	52.95	6.05	0.00
W 90	0P	323.26	49.28	5.22	0.00
W 90	0X	-195.48	36.42	5.71	0.00
W 90	0XY	-198.87	35.78	5.40	0.00
W 90	0Y	323.08	47.64	4.86	0.00
W -90	0P	-192.65	36.64	5.77	0.00
W -90	0X	327.52	48.70	5.28	0.00
W -90	0XY	320.12	47.61	4.93	0.00
W -90	0Y	193.00	35.47	4.48	0.00
W 0 Ice	0P	197.21	24.72	1.50	0.00
W 0 Ice	0X	191.70	24.16	1.36	0.00
W 0 Ice	0XY	39.05	3.85	3.14	0.00
W 0 Ice	0Y	43.27	4.00	3.22	0.00
W 180 Ice	0P	47.86	4.33	3.30	0.00
W 180 Ice	0X	44.52	4.16	3.25	0.00
W 180 Ice	0XY	187.02	24.08	1.35	0.00
W 180 Ice	0Y	191.83	24.42	1.52	0.00
W 45 Ice	0P	234.94	30.08	0.41	0.00
W 45 Ice	0X	117.53	13.70	2.53	0.00
W 45 Ice	0XY	1.66	5.05	3.52	0.00
W 45 Ice	0Y	117.11	13.71	2.51	0.00
W -45 Ice	0P	122.21	14.22	2.64	0.00
W -45 Ice	0X	229.85	29.69	0.39	0.00
W -45 Ice	0XY	113.26	13.61	2.44	0.00
W -45 Ice	0Y	5.92	4.90	3.60	0.00
W 90 Ice	0P	197.30	24.77	1.52	0.00
W 90 Ice	0X	43.76	4.03	3.24	0.00
W 90 Ice	0XY	39.12	3.87	3.14	0.00
W 90 Ice	0Y	191.06	24.14	1.35	0.00
W -90 Ice	0P	47.72	4.34	3.30	0.00
W -90 Ice	0X	192.72	24.48	1.54	0.00
W -90 Ice	0XY	186.99	24.07	1.34	0.00
W -90 Ice	0Y	43.08	4.12	3.24	0.00

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	0P	-44.09	-21.41	-332.93	49.01	0.88	-5.18	5.18	-2.94	0.00
W 0	0X	-42.31	21.82	-323.18	47.60	0.56	-4.83	4.86	2.16	0.00
W 0	0XY	-32.84	-14.18	199.09	35.77	0.50	-5.37	5.39	1.98	0.00
W 0	0Y	-33.75	13.24	195.03	36.25	-0.35	-5.66	5.67	-1.95	0.00
W 180	0P	33.84	12.99	192.06	36.25	-0.33	5.73	5.74	1.84	0.00
W 180	0X	32.72	-13.70	192.39	35.47	0.50	5.48	5.50	-1.99	0.00
W 180	0XY	42.41	21.69	-320.19	47.64	0.55	4.93	4.96	-2.17	0.00
W 180	0Y	43.75	-20.95	-326.26	48.55	0.88	5.18	5.25	2.17	0.00
W 45	0P	-45.56	-45.74	-459.75	64.56	3.32	-3.27	4.66	0.13	0.00
W 45	0X	-19.45	-11.09	-63.18	22.38	4.45	-3.49	5.05	3.01	0.00
W 45	0XY	-37.54	37.59	-325.00	53.12	4.23	-4.22	5.98	-0.00	0.00
W 45	0Y	-10.86	-19.55	-64.06	22.37	3.50	-4.40	5.62	-3.01	0.00
W -45	0P	-20.70	11.86	-69.11	23.86	-4.68	-3.70	5.97	-3.06	0.00
W -45	0X	-44.16	45.89	-451.88	63.69	-3.55	-3.97	4.70	0.61	0.00
W -45	0XY	-10.16	18.94	-61.83	21.49	-3.39	4.19	5.39	3.63	0.00
W -45	0Y	-38.06	36.81	320.83	52.95	-4.12	-4.42	6.05	0.83	0.00
W 90	0P	-21.33	-44.42	-333.26	49.28	5.14	0.91	5.22	2.16	0.00
W 90	0X	13.23	33.94	-195.48	36.42	5.70	0.34	5.71	1.94	0.00
W 90	0XY	-14.21	-32.83	198.87	35.78	5.37	-0.51	5.40	-1.99	0.00
W 90	0Y	21.91	-42.31	-323.08	47.64	4.83	-0.53	4.86	-2.16	0.00
W -90	0P	12.97	34.27	192.65	36.64	-5.76	0.32	5.77	-1.96	0.00
W -90	0X	-20.92	43.08	-327.52	48.70	5.20	0.92	5.28	2.17	0.00
W -90	0XY	21.79	42.32	-320.12	47.61	-4.91	-0.51	4.93	2.17	0.00
W -90	0Y	-13.81	32.67	193.00	35.47	-5.45	-0.52	5.48	2.00	0.00
W 0 Ice	0P	-20.34	14.05	197.21	24.72	1.49	0.15	1.50	0.57	0.00
W 0 Ice	0X	-19.61	14.12	191.70	24.16	1.36	-0.07	1.36	0.58	0.00
W 0 Ice	0XY	-2.06	3.25	-39.05	3.85	1.39	-2.81	3.14	0.57	0.00
W 0 Ice	0Y	-2.05	-3.43	-43.27	4.00	-1.43	-2.89	3.22	-0.55	0.00
W 180 Ice	0P	2.04	-3.82	-47.86	4.33	-2.98	3.38	3.30	0.55	0.00
W 180 Ice	0X	2.07	3.61	-44.52	4.16	1.40	2.93	3.25	-0.59	0.00
W 180 Ice	0XY	19.68	13.88	-187.02	24.08	1.34	0.19	1.35	-0.59	0.00
W 180 Ice	0Y	20.23	13.67	191.83	24.42	1.50	0.24	1.52	0.60	0.00
W 45 Ice	0P	-21.24	-21.30	-234.94	30.08	-0.28	0.30	0.41	0.02	0.00
W 45 Ice	0X	-12.92	4.58	-117.53	13.70	2.51	0.32	2.53	0.85	0.00
W 45 Ice	0XY	-3.56	-3.59	-1.66	5.05	2.49	-2.49	3.52	-0.00	0.00
W 45 Ice	0Y	4.61	-12.91	-117.11	13.71	-0.31	-2.49	2.51	-0.85	0.00
W -45 Ice	0P	-13.50	-4.45	-122.21	14.22	-2.63	0.25	2.64	-0.87	0.00
W -45 Ice	0X	-20.67	21.31	-229.85	29.69	0.17	0.36	0.39	-0.61	0.00
W -45 Ice	0XY	4.62	12.80	-113.26	13.61	0.25	-2.43	2.44	0.86	0.00
W -45 Ice	0Y	-3.48	3.45	-5.92	4.90	-2.55	-2.54	3.60	0.02	0.00
W 90 Ice	0P	-14.01	-20.43	-197.30	24.77	0.17	1.51	1.52	0.59	0.00
W 90 Ice	0X	-3.46	-2.08	-43.76	4.03	2.90	1.44	3.24	0.55	0.00
W 90 Ice	0XY	3.26	-2.08	-39.12	3.87	2.82	-1.39	3.14	-0.57	0.00
W 90 Ice	0Y	14.12	-19.58	-191.06	24.14	0.07	-1.34	1.35	-0.58	0.00
W -90 Ice	0P	-3.80	2.18	-47.72	4.34	-2.98	1.42	3.30	-0.57	0.00
W -90 Ice	0X	-13.68	20.30	-192.72	24.48	-0.24	1.52	1.54	-0.60	0.00
W -90 Ice	0XY	13.93	19.63	-186.99	24.07	-0.17	-1.32	1.34	0.59	0.00
W -90 Ice	0Y	3.56	2.08	-43.08	4.12	-2.92	-1.40	3.24	0.59	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Origin	Leg Force	In Residual Shear	Residual Shear	Residual Shear	Total	Total	Total
Joint	Member	Leg Dir.	Perpendicular	Horizontal	Long.	Force	Force	Force
			(kips)	(kips)	(kips)	(kips)	(kips)	(kips)
W 0	0P	L 1P	325.59	23.55	0.87	-44.09	-21.41	-332.93
W 0	0X	L 1X	325.901	22.410	22.460	-1.887	-42.31	21.82
W 0	0XY	L 1XY	-201.229	20.606	20.653	1.900	-32.84	-14.18
W 0	0Y	L 1Y	-197.179	21.707	21.753	-1.211	-33.75	13.24
W 180	0P	L 1P	-194.216	-21.909	-21.926	-1.149	33.84	12.99
W 180	0X	L 1X	-194.519	20.887	20.934	1.836	32.72	-13.70
W 180	0XY	L 1XY	322.919	22.701	22.752	-1.943	42.41	21.69
W 180	0Y	L 1Y	320.999	23.640	23.688	0.829	43.75	-20.95
W 45	0P	L 1P	463.620	24.370	24.462	17.387	-45.56	-45.74
W 45	0X	L 1X	63.455	21.593	21.593	14.983	-19.45	-11.09
W 45	0XY	L 1XY	-328.388	24.684	24.778	17.544	-37.54	-37.59
W 45	0Y	L 1Y	64.352	21.512	21.512	15.602	-10.86	-19.55
W -45	0P	L 1P	69.392	23.025	23.025	-16.117	-20.70	11.86
W -45	0X	L 1X	455.705	24.206	24.297	-18.023	-44.16	45.89
W -45	0XY	L 1XY	197.179	23.967	23.967	-1.149	33.84	12.99
W -45	0Y	L 1Y	-324.220	24.883	24.978	-17.022	-38.06	36.81
W 90	0P	L 1P	336.036	23.839	23.887	0.779	-23.874	-21.33
W 90	0X	L 1X	-197.179	21.913	21.913	-1.211	-33.75	13.24
W 90	0XY	L 1XY	-201.008	20.616	20.663	1.945	-32.84	-14.18
W 90	0Y	L 1Y	325.804	22.424	22.474	-1.984	-33.86	-12.97
W -90	0P	L 1P	-194.828	-22.365	-22.412	-1.093	-22.385	12.97

W -90	ØX	1X	L 1X	330.270	23.748	23.796	0.720	-23.785	-20.92	43.98	-327.52
W -90	ØXY	1XY	L 1XY	222.852	22.677	22.686	-2.056	-22.584	21.79	42.32	-320.12
W -90	ØY	1Y	L 1Y	-195.128	20.807	20.854	1.911	-20.766	-13.81	32.67	193.00
W 0 Ice	ØP	1P	L 1P	198.580	8.368	8.391	8.176	1.885	-20.34	-14.05	-197.21
W 0 Ice	ØX	1X	L 1X	193.046	8.097	8.121	7.799	-2.296	-19.61	14.12	-191.70
W 0 Ice	ØXY	1XY	L 1XY	38.989	4.543	4.549	4.471	-0.837	-2.06	3.25	-39.85
W 0 Ice	ØY	1Y	L 1Y	43.188	4.777	4.783	4.722	0.759	-2.05	-3.43	-43.27
W 180 Ice	ØX	1X	L 1X	47.793	5.060	5.067	-4.992	0.865	2.04	-3.82	-47.86
W 180 Ice	ØY	1Y	L 1Y	118.157	4.866	4.875	4.815	-0.863	2.07	3.61	-44.52
W 180 Ice	ØXY	1XY	L 1XY	188.373	8.450	8.475	-8.142	-2.350	19.68	13.88	-187.02
W 180 Ice	ØY	1Y	L 1Y	193.192	8.579	8.602	-8.404	1.838	20.23	-13.67	-191.83
W 45 Ice	ØP	1P	L 1P	236.065	9.554	9.590	6.750	6.813	-21.24	-21.38	-234.94
W 45 Ice	ØX	1X	L 1X	236.065	9.554	9.590	6.750	6.813	-21.24	-21.38	-234.94
W 45 Ice	ØXY	1XY	L 1XY	1.212	5.177	5.196	3.661	3.687	-3.56	-3.59	-1.66
W 45 Ice	ØY	1Y	L 1Y	117.744	6.257	6.259	2.611	5.089	4.61	-12.91	-117.11
W -45 Ice	ØP	1P	L 1P	222.852	8.717	8.729	5.908	-3.089	-13.50	-4.45	-122.21
W -45 Ice	ØX	1X	L 1X	231.559	9.618	9.655	6.498	-7.141	-20.67	21.31	-229.85
W -45 Ice	ØXY	1XY	L 1XY	113.901	6.277	6.280	2.368	-5.817	4.62	12.80	-113.26
W -45 Ice	ØY	1Y	L 1Y	5.471	5.392	5.413	3.844	-3.811	-3.46	3.45	-5.92
W 90 Ice	ØP	1P	L 1P	198.580	8.842	8.869	1.842	8.266	-14.61	-20.43	-197.39
W 90 Ice	ØX	1X	L 1X	43.679	4.827	4.834	0.759	4.774	-3.46	-2.08	-43.76
W 90 Ice	ØXY	1XY	L 1XY	39.041	4.564	4.570	-0.847	4.491	3.26	-2.08	-39.12
W 90 Ice	ØY	1Y	L 1Y	192.407	8.123	8.143	2.335	7.806	14.12	-19.58	-191.06
W -90 Ice	ØP	1P	L 1P	47.649	5.112	5.118	0.858	-5.046	-3.80	2.10	-47.72
W -90 Ice	ØX	1X	L 1X	194.079	8.585	8.608	1.792	-8.419	-13.68	20.30	-192.72
W -90 Ice	ØXY	1XY	L 1XY	188.344	8.417	8.442	-2.396	-8.095	13.93	19.63	-186.99
W -90 Ice	ØY	1Y	L 1Y	43.725	4.850	4.856	-0.858	-4.780	3.56	2.08	-43.80

Overturning Moment Summary For All Load Cases:

Load Case	Transverse Moment (ft-k)	Longitudinal Moment (ft-k)	Torsional Moment (ft-k)	Resultant Moment (ft-k)	Transverse Force (kips)	Longitudinal Force (kips)	Vertical Force (kips)
W 0	317.554	-24155.482	92.701	24157.489	0.532	152.988	261.988
W 180	147.051	23710.873	-90.818	23711.329	-0.833	-152.764	261.988
W 45	18069.512	-18029.062	-5.842	25525.562	133.963	113.404	261.988
W 45	-17695.846	-17939.846	148.421	25135.149	-113.487	113.085	261.988
W 90	24165.812	-312.039	-110.035	24167.826	153.595	0.411	261.988
W -90	-23765.921	-178.141	114.342	23766.588	-153.241	-0.637	261.988
W 0 Ice	223.708	-223.708	22.329	7055.146	0.112	44.065	471.234
W 180 Ice	187.772	6588.874	-21.916	6591.549	-0.097	-44.019	471.234
W 45 Ice	5355.942	-5375.085	-1.785	7587.993	33.220	33.183	471.234
W -45 Ice	-4944.577	5356.185	35.063	7289.551	-33.114	33.639	471.234
W 90 Ice	7026.009	-7026.009	-26.649	7030.580	44.169	0.080	471.234
W -90 Ice	-6628.232	-222.070	27.473	6631.951	-44.118	-0.008	471.234

EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft²)	Face Adjust Factor	AF Adjust Factor	Ar Adjust Factor	Dead Load (kips)
291.4-300.0	300.000	291.417	8	20	9.00	10.06	81.79	1.1220	1.1220	1.1220	1.346
282.8-291.4	291.417	282.834	8	16	10.06	11.12	90.88	1.2150	1.2150	1.2150	1.458
272.7-282.8	282.834	272.712	12	16	11.12	12.37	119.40	1.1970	1.1970	1.1970	1.436
262.5-272.7	272.767	262.500	12	24	12.37	13.63	132.15	1.2030	1.2030	1.2030	1.444
250.0-262.5	262.500	250.000	16	24	13.63	15.17	179.95	1.2010	1.2010	1.2010	1.441
237.5-250.0	250.000	237.500	16	24	15.17	16.71	199.22	1.2070	1.2070	1.2070	1.440
225.0-237.5	237.500	225.000	16	24	16.71	18.25	218.49	1.2130	1.2130	1.2130	1.456
212.5-225.0	225.000	212.500	16	24	18.25	19.79	237.76	1.2190	1.2190	1.2190	1.463
200.0-212.5	212.500	200.000	16	24	19.79	21.33	257.63	1.2250	1.2250	1.2250	1.478
175.0-200.0	200.000	175.000	16	24	21.33	23.12	271.87	1.2320	1.2320	1.2320	1.470
150.0-175.0	175.000	150.000	16	24	24.42	27.50	348.96	1.2570	1.2570	1.2570	1.509
125.0-150.0	150.000	125.000	16	24	27.50	30.58	426.04	1.2660	1.2660	1.2660	1.519
100.0-125.0	125.000	100.000	16	24	30.58	33.67	503.13	1.2760	1.2760	1.2760	1.535
75.00-100.0	100.000	75.000	36	76	33.67	36.75	880.21	1.2760	1.2760	1.2760	1.531
50.00-75.00	75.000	50.000	36	76	36.75	39.83	957.29	1.2790	1.2790	1.2790	1.535
25.00-50.00	50.000	25.000	32	68	39.83	42.92	1034.38	1.2820	1.2820	1.2820	1.539
0.00-25.00	25.000	0.000	28	40	42.92	46.00	1111.46	1.3210	1.3210	1.3210	1.586

Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Angle Desc.	Group Angle Type	Angle Size	Steel Strength	Max Usage	Max Use Control	Comp. In Member	Comp. Force	Comp. Control Case	L/r	Comp. Connect.	Comp. Connect.	RLX	RLY	RLZ	L/r	KL/r	Length	Curve	No. Bolts	No. Of Bolt Comp.
				(ksi)	%			(kips)			(kips)	(kips)					(ft)				
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	73.41	Comp 73.41	L 1P	-404.253	W 45	464.114	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1	0	
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	69.27	Comp 69.27	L 2P	-344.034	W 45	464.114	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1	0	
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	64.15	Comp 64.15	L 3P	-297.797	W 45	464.114	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1	0	
Leg S4	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	59.95	Comp 59.95	L 4P	-249.471	W 45	416.121	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1	0	
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	69.09	Comp 69.09	L 5P	-238.841	W 45	345.671	0.000	0.000	0.333	0.333	0.333	63.93	63.93	25.095	1	0	
Leg S6	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	57.43	Comp 57.43	L 6P	-198.516	W 45	345.671	0.000	0.000	0.333	0.333	0.333	63.93	63.93	25.095	1	0	
Leg S7	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	53.19	Comp 53.19	L 7P	-159.048	W 45	299.714	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.095	1	0	
Leg S8	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	48.91	Comp 48.91	L 8P	-123.129	W 45	251.771	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.095	1	0	
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	38.74	Comp 38.74	L 10P	-85.193	W 45	219.900	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.547	1	0	
Leg S10	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	40.70	Comp 40.70	L 11P	-68.432	W 45	168.148	0.000	0.000	0.500	0.500	0.500	63.80	63.80	12.547	1	0	
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	39.89	Comp 39.89	L 12P	-51.944	W 45	168.148	0.000	0.000	0.500	0.500	0.500	63.80	63.80	12.547	1	0	
Leg S12	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	27.14	Comp 27.14	L 13P	-36.040	W 45	132.797	0.000	0.000	0.500	0.500	0.500	63.26	63.26	12.547	1	0	
Leg S13	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	24.86	Comp 24.86	L 14P	-27.478	W 45	110.546	0.000	0.000	0.500	0.500	0.500	62.10	62.10	10.206	1	0	
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	16.38	Comp 16.38	L 15P	-18.105	W 45	110.546	0.000	0.000	0.500	0.500	0.500	62.10	62.10	10.206	1	0	
Leg S15	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	11.17	Comp 11.17	L 16P	-9.487	W 45	84.920	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0	
Leg S17	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	5.64	Comp 5.64	L 17P	-4.787	W 45	84.920	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0	
Diag S1	B/B L3"x4"x0.3125"	DAS	4X3X0.31	36.0	75.30	Comp 75.30	D 2X	-46.083	W -90	61.196	0.000	0.000	0.310	0.310	0.310	122.84	122.84	21.786	6	0	
Diag S2	B/B L3"x3"x0.25"	DAS	3.5X3X0.25	36.0	81.10	Comp 81.10	D 4X	-51.491	W -90	63.493	0.000	0.000	0.310	0.310	0.310	94.31	94.31	20.916	6	0	
Diag S3	B/B L2.5"x3"x0.25"	DAS	3.5X2.5X0.25	36.0	83.23	Comp 83.23	D 6X	-50.960	W -90	48.311	0.000	0.000	0.333	0.333	0.333	111.82	111.82	20.550	1	0	
Diag S4	B/B L2.5"x3"x0.25"	DAS	3.5X2.5X0.25	36.0	82.67	Comp 82.67	D 8X	-51.336	W -90	49.384	0.000	0.000	0.333	0.333	0.333	109.94	109.94	20.204	1	0	
Diag S5	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	69.32	Comp 69.32	D 1X	-31.593	W -90	45.574	0.000	0.000	0.333	0.333	0.333	134.71	129.05	30.178	6	0	
Diag S6	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	65.81	Comp 65.81	D 11X	-38.931	W -90	46.997	0.000	0.000	0.333	0.333	0.333	131.00	126.76	29.346	6	0	
Diag S7	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	58.96	Comp 58.96	D 13X	-28.580	W -90	48.336	0.000	0.000	0.333	0.333	0.333	127.55	124.24	28.573	6	0	
Diag S8	B/B L2.5"x3"x0.25"	DAS	3.5X3.5X0.25	36.0	62.29	Comp 62.29	D 15X	-27.098	W -90	43.503	0.000	0.000	0.333	0.333	0.333	148.20	132.43	27.862	6	0	
Diag S9	B/B L2.5"x3"x0.25"	DAS	3.5X3.5X0.25	36.0	58.96	Comp 58.96	D 17X	-23.435	W -90	43.503	0.000	0.000	0.333	0.333	0.333	148.20	132.43	27.862	6	0	
Diag S10	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	55.82	Comp 55.82	D 19P	-14.237	W -90	25.507	0.000	0.000	0.500	0.500	0.500	166.96	145.19	15.964	6	0	
Diag S11	B/B L2.5"x2"x0.25"	DAS	2.5X2X0.25	36.0	48.91	Comp 48.91	D 21P	-14.188	W -90	17.975	0.000	0.000	0.500	0.500	0.500	166.96	145.19	15.964	6	0	
Diag S12	B/B L2.5"x2"x0.25"	DAS	2.5X2X0.25	36.0	45.82	Comp 45.82	D 23P	-14.188	W -90	17.975	0.000	0.000	0.500	0.500	0.500	166.96	145.19	15.964	6	0	
Diag S13	B/B L2.5"x2"x0.25"	DAS	2.5X2X0.25	36.0	42.28	Comp 42.28	D 25P	-11.454	W -90	18.399	0.000	0.000	0.500	0.500	0.500	187.90	161.76	14.491	6	0	
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	32.66	Comp 32.66	D 28X	-6.297	W -90	19.003	0.000	0.000	0.520	0.520	0.520	148.48	141.74	16.514	6	0	
Diag S15	L 3" x 3" x 0.25"	SAE	3.5X3X0.25	36.0	22.24	Comp 22.24	D 30X	-4.651	W -90	26.914	0.000	0.000	0.520	0.520	0.520	139.78	133.11	15.566	6	0	
Diag S16	L 3" x 3" x 0.25"	SAE	3.5X3X0.25	36.0	19.65	Comp 19.65	D 32X	-3.687	W -90	26.914	0.000	0.000	0.520	0.520	0.520	139.78	133.11	15.566	6	0	
Diag S17	L 3" x 3" x 0.25"	SAE	3.5X3X0.25	36.0	12.94	Comp 12.94	D 33X	-2.423	W -90	18.723	0.000	0.000	0.520	0.520	0.520	135.30	131.69	12.438	6	0	
Horiz 1	B/B L3"x2"x0.5"x0.25"	DAL	3.5X2.5X0.25	36.0	77.44	Comp 77.44	L 1P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 2	B/B L3"x2"x0.5"x0.25"	DAL	3.5X2.5X0.25	36.0	74.49	Comp 74.49	L 2P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 3	B/B L3"x2"x0.5"x0.25"	DAL	3.5X2.5X0.25	36.0	71.49	Comp 71.49	L 3P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 4	B/B L3"x2"x0.5"x0.25"	DAL	3.5X2.5X0.25	36.0	68.49	Comp 68.49	L 4P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 5	B/B L3"x2"x0.5"x0.25"	DAL	3.5X2.5X0.25	36.0	65.49	Comp 65.49	L 5P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 6	B/B L3"x2"x0.5"x0.25"	DAL	3.5X2.5X0.25	36.0	62.49	Comp 62.49	L 6P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 7	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	59.49	Comp 59.49	L 7P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 8	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	56.49	Comp 56.49	L 8P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 9	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	53.49	Comp 53.49	L 9P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 10	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	50.49	Comp 50.49	L 10P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 11	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	47.49	Comp 47.49	L 11P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 12	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	44.49	Comp 44.49	L 12P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 13	B/B L2.5"x2"x0.5"x0.25"	DAL	2.5X2.5X0.25	36.0	41.49	Comp 41.49	L 13P	-36.721	W -90	47.439	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.856	5	0	
Horiz 14	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 15	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 16	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 17	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 18	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 19	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 20	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 21	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 22	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0	9.254	0.000	0.000	0.500	0.500	0.500	197.15	178.83	12.371	5	0	
Horiz 23	L 3" x 2" x 5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens 7.9	T 27Y	-0.536	W 0												

Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	73.41	Comp	50.63	L 1XY	274.437	W 45	542.051	0.000	0.000	0.000	25.095	0	0.000	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	69.27	Comp	44.13	L 2XY	239.219	W 45	542.051	0.000	0.000	0.000	25.095	0	0.000	0
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	64.15	Comp	38.09	L 3XY	206.486	W 45	542.051	0.000	0.000	0.000	25.095	0	0.000	0
Leg S4	L 8" x 8" x 1"	SAE	8X8X1	36.0	59.95	Comp	35.76	L 4XY	173.789	W 45	485.999	0.000	0.000	0.000	25.095	0	0.000	0
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	69.09	Comp	39.61	L 5XY	169.784	W 45	428.651	0.000	0.000	0.000	25.095	0	0.000	0
Leg S6	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	57.43	Comp	32.52	L 6XY	139.395	W 45	428.651	0.000	0.000	0.000	25.095	0	0.000	0
Leg S7	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	53.19	Comp	29.73	L 7XY	110.192	W 45	370.655	0.000	0.000	0.000	25.095	0	0.000	0
Leg S8	L 8" x 8" x 0.625"	SAE	8X8X0.63	36.0	48.91	Comp	26.11	L 8XY	81.381	W 45	311.364	0.000	0.000	0.000	25.095	0	0.000	0
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	47.51	Comp	24.78	L 9XY	67.801	W 45	273.456	0.000	0.000	0.000	12.547	0	0.000	0
Leg S10	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	38.74	Comp	19.84	L 10XY	54.241	W 45	273.456	0.000	0.000	0.000	12.547	0	0.000	0
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	40.78	Comp	19.59	L 11XY	40.813	W 45	208.332	0.000	0.000	0.000	12.547	0	0.000	0
Leg S12	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	38.89	Comp	13.74	L 12XY	28.631	W 45	208.332	0.000	0.000	0.000	12.547	0	0.000	0
Leg S13	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	27.14	Comp	10.34	L 13XY	16.952	W 45	163.944	0.000	0.000	0.000	12.547	0	0.000	0
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	24.86	Comp	9.55	L 14XY	12.940	W 45	135.432	0.000	0.000	0.000	10.206	0	0.000	0
Leg S15	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	16.38	Comp	4.40	L 15XY	5.964	W 45	135.432	0.000	0.000	0.000	10.206	0	0.000	0
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	11.17	Comp	2.44	L 16XY	2.399	W 45	98.172	0.000	0.000	0.000	8.616	0	0.000	0
Leg S17	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	5.64	Comp	0.00	L 17Y	0.000		98.172	0.000	0.000	0.000	8.616	0	0.000	0
Diag S1	B/B L3"x4"x0.3125"	DAS	4X3X0.31	36.0	75.30	Comp	30.02	D 2P	40.660	W -90	135.432	0.000	0.000	0.000	21.786	0	0.000	0
Diag S2	B/B L3"x3"x0.25"	DAS	3.5X3X0.25	36.0	81.18	Comp	42.97	D 4P	43.579	W -90	161.412	0.000	0.000	0.000	28.916	0	0.000	0
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	83.23	Comp	46.64	D 6P	43.518	W -90	93.312	0.000	0.000	0.000	29.558	0	0.000	0
Diag S4	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	82.67	Comp	45.98	D 8P	42.905	W -90	93.312	0.000	0.000	0.000	28.284	0	0.000	0
Diag S5	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	69.32	Comp	26.56	D 9P	29.084	W -90	109.512	0.000	0.000	0.000	36.178	0	0.000	0
Diag S6	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	65.81	Comp	25.94	D 11P	28.497	W -90	109.512	0.000	0.000	0.000	29.346	0	0.000	0
Diag S7	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	58.96	Comp	24.06	D 13P	26.350	W -90	109.512	0.000	0.000	0.000	28.573	0	0.000	0
Diag S8	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	62.29	Comp	23.43	D 15P	25.659	W -90	109.512	0.000	0.000	0.000	27.864	0	0.000	0
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	33.45	Comp	18.79	D 17P	14.489	W -90	77.112	0.000	0.000	0.000	16.451	0	0.000	0
Diag S10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	55.82	Comp	17.23	D 19X	13.286	W 90	77.112	0.000	0.000	0.000	15.962	0	0.000	0
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	78.93	Comp	19.39	D 21X	13.378	W 90	69.012	0.000	0.000	0.000	15.495	0	0.000	0
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	68.23	Comp	16.44	D 24P	11.343	W 180	69.012	0.000	0.000	0.000	15.054	0	0.000	0
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	62.28	Comp	15.63	D 26Y	10.783	W 0	69.012	0.000	0.000	0.000	14.641	0	0.000	0
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	32.66	Comp	8.76	D 28X	4.795	W 90	54.756	0.000	0.000	0.000	16.514	0	0.000	0
Diag S15	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	22.24	Comp	6.23	D 29Y	3.410	W 0	54.756	0.000	0.000	0.000	15.546	0	0.000	0
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	17.65	Comp	4.62	D 31Y	2.154	W 0	46.656	0.000	0.000	0.000	13.640	0	0.000	0
Diag S17	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	12.94	Comp	3.51	D 33Y	1.637	W 0	46.656	0.000	0.000	0.000	12.836	0	0.000	0
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	77.44	Comp	42.85	H 1X	39.984	W -90	93.312	0.000	0.000	0.000	21.458	0	0.000	0
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	53.45	Comp	45.48	H 3X	42.434	W -90	93.312	0.000	0.000	0.000	13.278	0	0.000	0
Horiz 3	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	47.34	Comp	42.87	H 5X	40.083	W -90	93.312	0.000	0.000	0.000	12.258	0	0.000	0
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	74.09	Comp	42.17	H 7P	35.935	W 90	85.212	0.000	0.000	0.000	11.222	0	0.000	0
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	71.18	Comp	18.89	H 9P	16.098	W 90	85.212	0.000	0.000	0.000	15.292	0	0.000	0
Horiz 6	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	55.75	Comp	16.86	H 11P	14.370	W 90	85.212	0.000	0.000	0.000	13.750	0	0.000	0
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	59.21	Comp	15.65	H 13X	12.068	W -90	77.112	0.000	0.000	0.000	12.208	0	0.000	0
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	43.94	Comp	14.28	H 15P	11.015	W 90	77.112	0.000	0.000	0.000	10.667	0	0.000	0
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	35.09	Comp	12.37	H 17P	9.542	W 90	77.112	0.000	0.000	0.000	9.896	0	0.000	0
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	26.46	Comp	10.71	H 19P	8.257	W 90	77.112	0.000	0.000	0.000	9.125	0	0.000	0
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.39	Comp	10.14	H 22P	7.815	W 0	77.112	0.000	0.000	0.000	8.354	0	0.000	0
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	17.72	Comp	8.62	H 24P	6.646	W 0	77.112	0.000	0.000	0.000	7.583	0	0.000	0
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	12.22	Comp	7.74	H 25X	5.966	W -90	77.112	0.000	0.000	0.000	6.813	0	0.000	0
Horiz 14	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	6.01	Tens	6.01	H 28P	2.551	W 45	42.444	0.000	0.000	0.000	12.371	0	0.000	0
Horiz 15	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	1.72	Tens	1.72	H 29P	1.464	W 0	85.212	0.000	0.000	0.000	11.117	0	0.000	0
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	2.36	Tens	2.36	H 31P	1.000	W 0	42.444	0.000	0.000	0.000	10.059	0	0.000	0
Horiz 17		CBX11.5		36.0	1.01	Comp	0.48	H 33P	0.527	W 90	109.512	0.000	0.000	0.000	9.000	0	0.000	0
LD 1	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	64.26	Comp	24.98	LD 2Y	19.260	W -45	77.112	0.000	0.000	0.000	12.836	0	0.000	0
LD 2	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	74.16	Comp	40.93	LD 3P	44.822	W -90	109.512	0.000	0.000	0.000	12.836	0	0.000	0
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	88.76	Comp	31.20	LD 7P	21.530	W -90	69.012	0.000	0.000	0.000	11.516	0	0.000	0
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	82.54	Comp	42.93	LD 9P	29.084	W -90	69.012	0.000	0.000	0.000	8.187	0	0.000	0
LD 6	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	69.46	Comp	40.10	LD 11X	37.422	W -90	93.312	0.000	0.000	0.000	9.681	0	0.000	0
LD 7	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	55.92	Comp	22.65	LD 14Y	21.138	W -45	93.312	0.000	0.000	0.000	16.941	0	0.000	0
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	81.93	Comp	42.89	LD 15P	29.846	W -90	69.012	0.000	0.000	0.000	8.044	0	0.000	0
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	80.50	Comp	47.24	LD 17X	36.426	W -90	77.112	0.000	0.000	0.000	9.336	0	0.000	0
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	53.47	Comp	22.53	LD 20Y	21.027	W -45	93.312	0.000	0.000	0.000	10.387	0	0.000	0
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	80.43	Comp	41.48	LD 21P	28.627	W -90	69.012	0.000	0.000	0.000	7.909	0	0.000	0
LD 12	B/B L2.5"x2"x0.375"	DAE	2.5X2.5X0.38	36.0	66.79	Comp	31.58	LD 23X	35.501	W -90	112.428	0.000	0.000	0.000	9.008	0	0.000	0
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	11.28	Tens	11.28	LH 1Y	9.611	W 0	85.212	0.000	0.000	0.000	21.458	0	0.000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	91.21	Comp	27.95	LH 3P	23.814	W -90	85.212	0.000	0.000	0.000	10.808	0	0.000	0
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.38	36.0	66.21	Comp	18.32	LH 6Y	22.789	W -45	124.416	0.000	0.000	0.000	10.005	0	0.000	0

Site #: 88018		Engineer: RDB		Windspeed: No Ice: 93 mph		Ice: 50 mph		Taper: -0.123333		Taper Change: 300		ft								
Name: Stamford (Katoona), CT		Date: 07/22/20		Carrier: AT&T Mobility				FW @ Base: 46.00		FW @ Top: 9		ft								
Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)	Spreadsheet Version Last Updated: 11/12/2014								
												# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)	# Sub-Brace	
0	XY-Symmetry	23	23	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	7.033	25	1	1	0	46	3	
1	XY-Symmetry	21.45833333	21.45833333	25	Free	Free	Free	Free	Free	Free		2	7.033	25	2	2	25	42.91666667	3	NOTES
2	XY-Symmetry	19.91666667	19.91666667	50	Free	Free	Free	Free	Free	Free		2	7.033	25	2	3	50	39.83333333	3	Types:
3	XY-Symmetry	18.375	18.375	75	Free	Free	Free	Free	Free	Free		2	7.033	25	2	4	75	36.75	3	1: Built up Horiz. w/ A
4	XY-Symmetry	16.83333333	16.83333333	100	Free	Free	Free	Free	Free	Free				25	A	5	100	33.66666667	2	2: Built up Horiz. w/ M
5	XY-Symmetry	15.29166667	15.29166667	125	Free	Free	Free	Free	Free	Free				25	A	6	125	30.58333333	2	A: Typical A brace
6	XY-Symmetry	13.75	13.75	150	Free	Free	Free	Free	Free	Free				25	A	7	150	27.5	2	X: Typical X brace
7	XY-Symmetry	12.20833333	12.20833333	175	Free	Free	Free	Free	Free	Free				25	A	8	175	24.41666667	2	
8	XY-Symmetry	10.66666667	10.66666667	200	Free	Free	Free	Free	Free	Free				12.5	A	9	200	21.33333333	1	Drop: Use only for types 1 & 2
9	XY-Symmetry	9.895833333	9.895833333	212.5	Free	Free	Free	Free	Free	Free				12.5	A	10	212.5	19.79166667	1	
10	XY-Symmetry	9.125	9.125	225	Free	Free	Free	Free	Free	Free				12.5	A	11	225	18.25	1	# Sections: 17
11	XY-Symmetry	8.354166667	8.354166667	237.5	Free	Free	Free	Free	Free	Free				12.5	A	12	237.5	16.70833333	1	
12	XY-Symmetry	7.583333333	7.583333333	250	Free	Free	Free	Free	Free	Free				12.5	A	13	250	15.16666667	1	
13	XY-Symmetry	6.8125	6.8125	262.5	Free	Free	Free	Free	Free	Free		1	10.167	X	14	262.5	13.625	1		
14	XY-Symmetry	6.185535	6.185535	272.667	Free	Free	Free	Free	Free	Free		1	10.167	X	15	272.667	12.37107	1		
15	XY-Symmetry	5.55857	5.55857	282.834	Free	Free	Free	Free	Free	Free		1	8.583	X	16	282.834	11.11714	1		
16	XY-Symmetry	5.029285	5.029285	291.417	Free	Free	Free	Free	Free	Free				8.583	X	17	291.417	10.05857	1	
17	XY-Symmetry	4.5	4.5	300	Free	Free	Free	Free	Free	Free						18	300	9		
A1	Y-Symmetry	21.45833333	0	25	Free	Free	Free	Free	Free	Free										
A2	X-Symmetry	0	21.45833333	25	Free	Free	Free	Free	Free	Free										
A3	XY-Symmetry	19.91666667	6.638888889	50	Free	Free	Free	Free	Free	Free										
A4	XY-Symmetry	6.638888889	19.91666667	50	Free	Free	Free	Free	Free	Free										
A5	XY-Symmetry	18.375	6.125	75	Free	Free	Free	Free	Free	Free										
A6	XY-Symmetry	6.125	18.375	75	Free	Free	Free	Free	Free	Free										
A7	XY-Symmetry	16.83333333	5.611111111	100	Free	Free	Free	Free	Free	Free										
A8	XY-Symmetry	5.611111111	16.83333333	100	Free	Free	Free	Free	Free	Free										
A9	Y-Symmetry	15.29166667	0	125	Free	Free	Free	Free	Free	Free										
A10	X-Symmetry	0	15.29166667	125	Free	Free	Free	Free	Free	Free										
A11	Y-Symmetry	13.75	0	150	Free	Free	Free	Free	Free	Free										
A12	X-Symmetry	0	13.75	150	Free	Free	Free	Free	Free	Free										
A13	Y-Symmetry	12.20833333	0	175	Free	Free	Free	Free	Free	Free										
A14	X-Symmetry	0	12.20833333	175	Free	Free	Free	Free	Free	Free										
A15	Y-Symmetry	10.66666667	0	200	Free	Free	Free	Free	Free	Free										
A16	X-Symmetry	0	10.66666667	200	Free	Free	Free	Free	Free	Free										
A17	Y-Symmetry	9.895833333	0	212.5	Free	Free	Free	Free	Free	Free										
A18	X-Symmetry	0	9.895833333	212.5	Free	Free	Free	Free	Free	Free										
A19	Y-Symmetry	9.125	0	225	Free	Free	Free	Free	Free	Free										
A20	X-Symmetry	0	9.125	225	Free	Free	Free	Free	Free	Free										
A21	Y-Symmetry	8.354166667	0	237.5	Free	Free	Free	Free	Free	Free										
A22	X-Symmetry	0	8.354166667	237.5	Free	Free	Free	Free	Free	Free										
A23	Y-Symmetry	7.583333333	0	250	Free	Free	Free	Free	Free	Free										
A24	X-Symmetry	0	7.583333333	250	Free	Free	Free	Free	Free	Free										
A25	Y-Symmetry	6.8125	0	262.5	Free	Free	Free	Free	Free	Free										
A26	X-Symmetry	0	6.8125	262.5	Free	Free	Free	Free	Free	Free										
H1	XY-Symmetry	21.892035	10.72916667	17.967	Free	Free	Free	Free	Free	Free										
H2	XY-Symmetry	10.72916667	21.892035	17.967	Free	Free	Free	Free	Free	Free										
H5	XY-Symmetry	20.35036833	10.807895	42.967	Free	Free	Free	Free	Free	Free										
H6	XY-Symmetry	10.807895	20.35036833	42.967	Free	Free	Free	Free	Free	Free										
H7	Y-Symmetry	20.35036833	0	42.967	Free	Free	Free	Free	Free	Free										
H8	X-Symmetry	0	20.35036833	42.967	Free	Free	Free	Free	Free	Free										
H9	XY-Symmetry	18.80870167	10.00487167	67.967	Free	Free	Free	Free	Free	Free										
H10	XY-Symmetry	10.00487167	18.80870167	67.967	Free	Free	Free	Free	Free	Free										
H11	Y-Symmetry	18.80870167	0	67.967	Free	Free	Free	Free	Free	Free										
H12	X-Symmetry	0	18.80870167	67.967	Free	Free	Free	Free	Free	Free										
H13	XY-Symmetry	17.267035	9.201848333	92.967	Free	Free	Free	Free	Free	Free										
H14	XY-Symmetry	9.201848333	17.267035	92.967	Free	Free	Free	Free	Free	Free										
H15	Y-Symmetry	17.267035	0	92.967	Free	Free	Free	Free	Free	Free										
H16	X-Symmetry	0	17.267035	92.967	Free	Free	Free	Free	Free	Free										

NOTES

Types:

1: Built up Horizs. w/ A

2: Built up Horizs. w/ M

A: Typical A brace

X: Typical X brace

Drop: Use only for types 1 & 2

Sections: 17

Legs

Site No.:	88018
Engineer:	RDB
Date:	07/22/2020
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-25.00	L	8	1.125	36
2	25.00-50.00	L	8	1.125	36
3	50.00-75.00	L	8	1.125	36
4	75.00-100.0	L	8	1	36
5	100.0-125.0	L	8	0.875	36
6	125.0-150.0	L	8	0.875	36
7	150.0-175.0	L	8	0.75	36
8	175.0-200.0	L	8	0.625	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.75	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.5625	36
13	250.0-262.5	L	6	0.4375	36
14	262.5-272.7	L	5	0.4375	36
15	272.7-282.8	L	5	0.4375	36
16	282.8-291.4	L	5	0.3125	36
17	291.4-300.0	L	5	0.3125	36

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifferized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88018
Engineer:	RDB
Date:	07/22/2020
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	4	0.3125	36	
2	25.00-50.00	2L		3	3.5	0.25	36	
3	50.00-75.00	2L		2.5	3.5	0.25	36	
4	75.00-100.0	2L		2.5	3.5	0.25	36	
5	100.0-125.0	2L		3	4	0.25	36	
6	125.0-150.0	2L		3	4	0.25	36	
7	150.0-175.0	2L		3	4	0.25	36	
8	175.0-200.0	2L		3.5	3.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-262.5	2L		2.5	2	0.25	36	
14	262.5-272.7	L		3.5	3.5	0.25	36	
15	272.7-282.8	L		3.5	3.5	0.25	36	
16	282.8-291.4	L		3	3	0.25	36	
17	291.4-300.0	L		3	3	0.25	36	

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88018
Engineer:	RDB
Date:	07/22/2020
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	
1	0.000-25.00	2L		3.5	2.5	0.25	36	
2	25.00-50.00	2L		3.5	2.5	0.25	36	
3	50.00-75.00	2L		3.5	2.5	0.25	36	
4	75.00-100.0	2L		3	2.5	0.25	36	
5	100.0-125.0	2L		3	2.5	0.25	36	
6	125.0-150.0	2L		3	2.5	0.25	36	
7	150.0-175.0	2L		2.5	2.5	0.25	36	
8	175.0-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2.5	0.25	36	
12	237.5-250.0	2L		2.5	2.5	0.25	36	
13	250.0-262.5	2L		2.5	2.5	0.25	36	
14	262.5-272.7	L		3	2.5	0.25	36	
15	272.7-282.8	2L		3	2.5	0.25	36	
16	282.8-291.4	L		3	2.5	0.25	36	
17	291.4-300.0	C		8	11.5		36	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88018
Engineer:	RDB
Date:	07/22/2020
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.
Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-25.00	2L		3	2	0.25	36
2	0.000-25.00	2L		4	3	0.25	36
3	25.00-50.00	2L		2.5	2	0.25	36
4	25.00-50.00	2L		2.5	2	0.25	36
5	25.00-50.00	2L		3	3	0.25	36
6	50.00-75.00	2L		3	3	0.25	36
7	50.00-75.00	2L		2.5	2	0.25	36
8	50.00-75.00	2L		3	2	0.25	36
9	75.00-100.0	2L		3	3	0.25	36
10	75.00-100.0	2L		2.5	2	0.25	36
11	75.00-100.0	2L		2.5	2.5	0.375	36

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Site No.:	88018
Engineer:	RDB
Date:	07/22/2020
Carrier:	AT&T Mobility

[illegible]

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
 [2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero
 [3] Applies to Single-Angle and Double-Angle Shapes only.
 [4] Applies to Double-Angle Shapes only.
 [5] Applies to Single-Angle Shapes only.

Site No.:	88018
Engineer:	RDB
Date:	07/22/20
Carrier:	AT&T Mobility

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lb/ft)	Part of Face Solidity Ratio (Yes/No)	Include in Wind Load (Yes/No)
1 Ladder	0	300	1	Flat	1.5	6.0	6	Yes	Yes
2 Short Ladder	8.3333	33.3333	2	Flat	1.5	6.0	6	Yes	Yes
3 Short Ladder	8.3333	33.3333	2	Flat	1.5	6.0	6	Yes	Yes
5 WG	5	300	1	Flat	1.5	6.0	6	Yes	Yes
6 WG	5	272	1	Flat	1.5	6.0	6	Yes	Yes
7 WG	5	235	1	Flat	1.5	6.0	6	Yes	Yes
8 WG	5	223	1	Flat	1.5	6.0	6	Yes	Yes
9 WG	5	160	1	Flat	1.5	6.0	6	Yes	Yes
10 Marcus Communications LLC	5	300	1	Round	1.55	4.9	0.63	Yes	Yes
11 Marcus Communications LLC	5	300	1	Round	1.98	6.2	0.82	Yes	Yes
12 Marcus Communications LLC	5	300	1	Round	1.09	3.4	0.33	Yes	Yes
13 Other	5	300	1	Round	0.63	2.0	0.15	Yes	Yes
14 Clearwire Corporation	5	300	5	Round	1.09	3.4	0.33	Yes	Yes
15 Sigfox S.A.	5	292	1	Round	1.09	3.4	0.33	Yes	Yes
16 US Dept Of Homeland Security	5	275	2	Round	1.09	3.4	0.33	Yes	Yes
17 Sirius XM Radio Inc.	5	270	1	Round	1.98	6.2	0.82	Yes	Yes
18 T-Mobile	5	267	1	Round	0.32	1.0	0.06	No	No
19 T-Mobile	5	267	1	Round	0.39	1.3	0.04	No	No
20 T-Mobile	5	265	1	Flat	8.19	43.7	9.84	Yes	Yes
21 T-Mobile	5	265	2	Round	1.25	3.9	1.05	Yes	Yes
22 T-Mobile	5	265	1	Round	1.63	5.1	1.61	No	No
23 Sirius XM Radio Inc.	5	260	1	Round	5.02	15.8	1.85	No	No
24 US Dept Of Homeland Security	5	250	1	Round	1.09	3.4	0.33	Yes	Yes
25 US Dept Of Homeland Security	5	246	1	Round	1.09	3.4	0.33	Yes	Yes
26 AT&T Mobility	5	235	1	Flat	8.19	43.7	8.2	Yes	Yes
27 AT&T Mobility	5	235	1	Round	0.78	2.8	0.51	No	No
28 AT&T Mobility	5	235	2	Round	0.78	2.5	0.59	Yes	Yes
29 AT&T Mobility	5	235	1	Round	1.85	6.8	1.96	No	No
30 AT&T Mobility	5	235	1	Round	2.4	8.8	3.52	No	No
31 US Dept Of Homeland Security	5	207	1	Round	1.09	3.4	0.33	Yes	Yes
32 Marcus Communications LLC	5	200	2	Round	1.55	4.9	0.63	Yes	Yes
33 Spok Holdings, Inc.	5	193	2	Round	1.09	3.4	0.33	Yes	Yes
34 Spok Holdings, Inc.	5	193	1	Round	1.09	3.4	0.33	Yes	Yes
35 Clearwire Corporation	5	171	2	Round	2.38	7.5	3.65	Yes	Yes
36 Clearwire Corporation	5	171	6	Round	0.31	1.0	0.05	Yes	Yes
37 Metro PCS Inc	5	165	1	Flat	8.19	43.7	9.84	Yes	Yes
38 Metro PCS Inc	5	165	1	Round	0.38	1.2	0.23	Yes	Yes
39 Metro PCS Inc	5	165	1	Round	0.44	1.4	0.08	Yes	Yes
40 Sprint Nextel	5	150	5	Round	1.54	4.8	1.0	Yes	Yes
41 Sprint Nextel	5	150	1	Round	1.7	5.3	1.8	Yes	Yes
42 Sensus USA Inc.	5	139	1	Round	1.09	3.4	0.3	Yes	Yes
43 Senet, Inc.	5	135	1	Round	0.38	1.2	0.2	Yes	Yes
44 Senet, Inc.	5	135	1	Round	0.63	2.0	0.2	Yes	Yes
45 Spok Holdings, Inc.	5	120	1	Round	0.63	2.0	0.2	Yes	Yes
46 Marcus Communications LLC	5	107	1	Round	1.55	4.9	0.6	Yes	Yes
47 Verizon Wireless	5	92	3	Round	1.54	4.8	1.0	Yes	Yes
48 Sirius XM Radio Inc.	5	22	1	Round	1.09	3.4	0.3	Yes	Yes
49 Spok Holdings, Inc.	0	6	1	Round	0.63	2.0	0.2	Yes	Yes
50 Spok Holdings, Inc.	0	6	1	Round	0.34	1.1	0.1	Yes	Yes

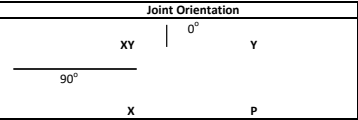
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Description	From	To	Quantity	Face #	Coax Width	Coax Shape	% Exposed	Spacing	Shape (Round/Flat)	Block Width	Block Depth	Perimeter	Unit	In Face Zone (Yes/No)	Include in Wind Load (Yes/No)
	(ft)	(ft)		(1-4, D)	(in)	(Block / Flat / Ind)				(# coax)	(# coax)	(in)	Weight (lb/ft)		
Ladder	0	300	1	B	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
Short Ladder	8.3333	33.3333	2	1	1.50	Flat	100		Flat	2	1	6.0	6	Yes	Yes
Short Ladder	8.3333	33.3333	2	3	1.50	Flat	100		Flat	2	1	6.0	6	Yes	Yes
														No	No
WG	5	300	1	2	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
WG	5	272	1	3	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
WG	5	235	1	1	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
WG	5	223	1	2	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
WG	5	160	1	1	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
Marcus Communications LLC	5	300	1	B	1.55	Ind	100		Round	1	1	4.9	0.63	Yes	Yes
Marcus Communications LLC	5	300	1	B	1.98	Ind	100		Round	1	1	6.2	0.82	Yes	Yes
Marcus Communications LLC	5	300	1	B	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
Other	5	300	1	B	0.52	Ind	100		Round	1	1	2.0	0.15	Yes	Yes
Clearwire Corporation	5	300	5	2	1.09	Ind	100		Round	5	1	3.4	0.33	Yes	Yes
Sigfox S.A.	5	292	1	3	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
US Dept Of Homeland Security	5	275	2	2	1.09	Ind	100		Round	2	1	3.4	0.33	Yes	Yes
Sirius XM Radio Inc.	5	270	1	4	1.98	Ind	100		Round	1	1	6.2	0.82	Yes	Yes
T-Mobile	5	267	1	4	0.32	Ind	0		Round	1	1	1.0	0.06	No	No
T-Mobile	5	267	2	4	0.26	Ind	0		Round	1	2	1.3	0.04	No	No
T-Mobile	5	265	12	4	1.98	Block	41	1	Flat	5	3	43.7	9.84	Yes	Yes
T-Mobile	5	265	2	4	1.25	Ind	100		Round	2	1	3.9	1.05	Yes	Yes
T-Mobile	5	265	1	4	1.63	Ind	0		Round	1	1	5.1	1.61	No	No
Sirius XM Radio Inc.	5	260	1	4	5.02	Ind	0		Round	1	1	15.8	1.85	No	No
US Dept Of Homeland Security	5	250	1	2	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
US Dept Of Homeland Security	5	246	1	2	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
AT&T Mobility	5	235	10	1	1.98	Block	60	1	Flat	6	2	43.7	8.2	Yes	Yes
AT&T Mobility	5	235	3	1	0.39	Ind	0		Round	1	3	2.8	0.51	No	No
AT&T Mobility	5	235	2	1	0.78	Ind	100		Round	2	1	2.5	0.59	Yes	Yes
AT&T Mobility	5	235	4	1	0.74	Ind	0		Round	1	4	6.8	1.96	No	No
AT&T Mobility	5	235	4	1	0.96	Ind	0		Round	1	4	8.8	3.52	No	No
US Dept Of Homeland Security	5	207	1	2	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
Marcus Communications LLC	5	200	2	B	1.55	Ind	100		Round	2	1	4.9	0.63	Yes	Yes
Spok Holdings, Inc.	5	193	2	B	1.09	Ind	100		Round	2	1	3.4	0.33	Yes	Yes
Spok Holdings, Inc.	5	193	1	B	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
Clearwire Corporation	5	171	2	2	2.38	Ind	100		Round	2	1	7.5	3.65	Yes	Yes
Clearwire Corporation	5	171	6	2	0.31	Ind	100		Round	6	1	1.0	0.05	Yes	Yes
Metro PCS Inc	5	165	12	1	1.98	Block	50	1	Flat	6	2	43.7	9.84	Yes	Yes
Metro PCS Inc	5	165	1	1	0.38	Ind	100		Round	1	1	1.2	0.23	Yes	Yes
Metro PCS Inc	5	165	1	1	0.44	Ind	100		Round	1	1	1.4	0.08	Yes	Yes
Sprint Nextel	5	150	5	2	1.54	Ind	100		Round	5	1	4.8	1	Yes	Yes
Sprint Nextel	5	150	1	2	1.70	Ind	100		Round	1	1	5.3	1.78	Yes	Yes
Sensus USA Inc.	5	139	1	B	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
Senet, Inc.	5	135	1	3	0.38	Ind	100		Round	1	1	1.2	0.23	Yes	Yes
Senet, Inc.	5	135	1	3	0.63	Ind	100		Round	1	1	2.0	0.15	Yes	Yes
Spok Holdings, Inc.	5	120	1	B	0.63	Ind	100		Round	1	1	2.0	0.15	Yes	Yes
Marcus Communications LLC	5	107	1	B	1.55	Ind	100		Round	1	1	4.9	0.63	Yes	Yes
Verizon Wireless	5	92	3	4	1.54	Ind	100		Round	3	1	4.8	1	Yes	Yes
Sirius XM Radio Inc.	5	22	1	4	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
Spok Holdings, Inc.	0	6	1	B	0.63	Ind	100		Round	1	1	2.0	0.15	Yes	Yes
Spok Holdings, Inc.	0	6	1	B	0.34	Ind	100		Round	1	1	1.1	0.06	Yes	Yes
														No	No
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														No	No
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Dishes

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Dish Number	Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Staus
1	311	4	51.4	S	XY	
2	307	3	0	H	Y	
3	303	2	90	H	XY	
4	303	2	180	H	X	
5	303	2	270	H	P	
6	120	4	90	S	XY	
7	22	2	197	R	X	
8	6	4	270	S	P	
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Site No.:	88018
Engineer:	RDB
Date:	07/22/20
Carrier:	AT&T Mobility

Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
4' STD 1 @ 311'	17XY	4 ft STD Dish	51.4
3' HP 2 @ 307'	17Y	3 ft HP Dish	0
2' HP 3 @ 303'	17XY	2 ft HP Dish	90
2' HP 4 @ 303'	17X	2 ft HP Dish	180
2' HP 5 @ 303'	17P	2 ft HP Dish	270
4' STD 6 @ 120'	5XY	4 ft STD Dish	90
2' RAD 7 @ 22'	1X	2 ft RAD Dish	197
4' STD 8 @ 6'	0P	4 ft STD Dish	270

Site #:	88018
Name:	AT&T Mobility

Engineer:	RDB
Date:	07/22/20

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
L 1	Leg S1		XY-Symmetry	0P	1P	1	4	0.28132	0.28132	0.28132
L 2	Leg S2		XY-Symmetry	1P	2P	1	4	0.28132	0.28132	0.28132
L 3	Leg S3		XY-Symmetry	2P	3P	1	4	0.28132	0.28132	0.28132
L 4	Leg S4		XY-Symmetry	3P	4P	1	4	0.28132	0.28132	0.28132
L 5	Leg S5		XY-Symmetry	4P	5P	1	4	0.333333333	0.333333333	0.333333333
L 6	Leg S6		XY-Symmetry	5P	6P	1	4	0.333333333	0.333333333	0.333333333
L 7	Leg S7		XY-Symmetry	6P	7P	1	4	0.333333333	0.333333333	0.333333333
L 8	Leg S8		XY-Symmetry	7P	8P	1	4	0.333333333	0.333333333	0.333333333
L 9	Leg S9		XY-Symmetry	8P	9P	1	4	0.5	0.5	0.5
L 10	Leg S10		XY-Symmetry	9P	10P	1	4	0.5	0.5	0.5
L 11	Leg S11		XY-Symmetry	10P	11P	1	4	0.5	0.5	0.5
L 12	Leg S12		XY-Symmetry	11P	12P	1	4	0.5	0.5	0.5
L 13	Leg S13		XY-Symmetry	12P	13P	1	4	0.5	0.5	0.5
L 14	Leg S14		XY-Symmetry	13P	14P	1	4	0.5	0.5	0.5
L 15	Leg S15		XY-Symmetry	14P	15P	1	4	0.5	0.5	0.5
L 16	Leg S16		XY-Symmetry	15P	16P	1	4	0.5	0.5	0.5
L 17	Leg S17		XY-Symmetry	16P	17P	1	4	0.5	0.5	0.5
D 1	Diag S1		XY-Symmetry	0P	H2P	1	6	0.31	0.92	0.31
D 2	Diag S1		XY-Symmetry	0P	H1P	1	6	0.31	0.92	0.31
D 3	Diag S2		XY-Symmetry	1P	H6P	1	6	0.31	0.62	0.31
D 4	Diag S2		XY-Symmetry	1P	H5P	1	6	0.31	0.62	0.31
D 5	Diag S3		XY-Symmetry	2P	H10P	1	6	0.333333333	0.666666667	0.333333333
D 6	Diag S3		XY-Symmetry	2P	H9P	1	6	0.333333333	0.666666667	0.333333333
D 7	Diag S4		XY-Symmetry	3P	H14P	1	6	0.333333333	0.666666667	0.333333333
D 8	Diag S4		XY-Symmetry	3P	H13P	1	6	0.333333333	0.666666667	0.333333333
D 9	Diag S5		XY-Symmetry	4P	A9P	1	6	0.333333333	0.666666667	0.333333333
D 10	Diag S5		XY-Symmetry	4P	A10P	1	6	0.333333333	0.666666667	0.333333333
D 11	Diag S6		XY-Symmetry	5P	A11P	1	6	0.333333333	0.666666667	0.333333333
D 12	Diag S6		XY-Symmetry	5P	A12P	1	6	0.333333333	0.666666667	0.333333333
D 13	Diag S7		XY-Symmetry	6P	A13P	1	6	0.333333333	0.666666667	0.333333333
D 14	Diag S7		XY-Symmetry	6P	A14P	1	6	0.333333333	0.666666667	0.333333333
D 15	Diag S8		XY-Symmetry	7P	A15P	1	6	0.333333333	0.666666667	0.333333333
D 16	Diag S8		XY-Symmetry	7P	A16P	1	6	0.333333333	0.666666667	0.333333333
D 17	Diag S9		XY-Symmetry	8P	A17P	1	6	0.32	0.59	0.32
D 18	Diag S9		XY-Symmetry	8P	A18P	1	6	0.32	0.59	0.32
D 19	Diag S10		XY-Symmetry	9P	A19P	1	6	0.5	1	0.5
D 20	Diag S10		XY-Symmetry	9P	A20P	1	6	0.5	1	0.5
D 21	Diag S11		XY-Symmetry	10P	A21P	1	6	0.48	0.96	0.48
D 22	Diag S11		XY-Symmetry	10P	A22P	1	6	0.48	0.96	0.48
D 23	Diag S12		XY-Symmetry	11P	A23P	1	6	0.5	1	0.5
D 24	Diag S12		XY-Symmetry	11P	A24P	1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	A25P	1	6	0.5	1	0.5
D 26	Diag S13		XY-Symmetry	12P	A26P	1	6	0.5	1	0.5
D 27	Diag S14		XY-Symmetry	13P	14Y	2	5	0.52	0.52	0.52
D 28	Diag S14		XY-Symmetry	13P	14X	2	5	0.52	0.52	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y	2	5	0.52	0.52	0.52
D 30	Diag S15		XY-Symmetry	14P	15X	2	5	0.52	0.52	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y	2	5	0.52	0.52	0.52
D 32	Diag S16		XY-Symmetry	15P	16X	2	5	0.52	0.52	0.52
D 33	Diag S17		XY-Symmetry	16P	17Y	2	5	0.52	0.52	0.52
D 34	Diag S17		XY-Symmetry	16P	17X	2	5	0.52	0.52	0.52
H 1	Horiz 1		XY-Symmetry	1P	A1P	1	6	0.48	0.48	0.48
H 2	Horiz 1		XY-Symmetry	1P	A2P	1	6	0.48	0.48	0.48
H 3	Horiz 2		XY-Symmetry	2P	A3P	1	6	0.5	0.5	0.5
H 4	Horiz 2		XY-Symmetry	2P	A4P	1	6	0.5	0.5	0.5
H 5	Horiz 3		XY-Symmetry	3P	A5P	1	6	0.5	0.5	0.5
H 6	Horiz 3		XY-Symmetry	3P	A6P	1	6	0.5	0.5	0.5
H 7	Horiz 4		XY-Symmetry	4P	A7P	1	6	0.47	0.94	0.47
H 8	Horiz 4		XY-Symmetry	4P	A8P	1	6	0.47	0.94	0.47
H 9	Horiz 5		XY-Symmetry	5P	A9P	1	6	1	1	1
H 10	Horiz 5		XY-Symmetry	5P	A10P	1	6	1	1	1
H 11	Horiz 6		XY-Symmetry	6P	A11P	1	6	1	1	1
H 12	Horiz 6		XY-Symmetry	6P	A12P	1	6	1	1	1
H 13	Horiz 7		XY-Symmetry	7P	A13P	1	6	1	1	1
H 14	Horiz 7		XY-Symmetry	7P	A14P	1	6	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ	
H 15	Horiz 8		XY-Symmetry	8P	A15P		1	6	1	1	1
H 16	Horiz 8		XY-Symmetry	8P	A16P		1	6	1	1	1
H 17	Horiz 9		XY-Symmetry	9P	A17P		1	6	1	1	1
H 18	Horiz 9		XY-Symmetry	9P	A18P		1	6	1	1	1
H 19	Horiz 10		XY-Symmetry	10P	A19P		1	6	1	1	1
H 20	Horiz 10		XY-Symmetry	10P	A20P		1	6	1	1	1
H 21	Horiz 11		XY-Symmetry	11P	A21P		1	6	1	1	1
H 22	Horiz 11		XY-Symmetry	11P	A22P		1	6	1	1	1
H 23	Horiz 12		XY-Symmetry	12P	A23P		1	6	1	1	1
H 24	Horiz 12		XY-Symmetry	12P	A24P		1	6	1	1	1
H 25	Horiz 13		XY-Symmetry	13P	A25P		1	6	1	1	1
H 26	Horiz 13		XY-Symmetry	13P	A26P		1	6	1	1	1
H 27	Horiz 14		Y-Symmetry	14P	14X		3	5	0.5	1	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y		3	5	0.5	1	0.5
H 29	Horiz 15		Y-Symmetry	15P	15X		1	6	0.5	1	0.5
H 30	Horiz 15		X-Symmetry	15P	15Y		1	6	0.5	1	0.5
H 31	Horiz 16		Y-Symmetry	16P	16X		3	5	0.5	1	0.5
H 32	Horiz 16		X-Symmetry	16P	16Y		3	5	0.5	1	0.5
H 33	Horiz 17		Y-Symmetry	17P	17X		3	5	1	1	1
H 34	Horiz 17		X-Symmetry	17P	17Y		3	5	1	1	1
H 37	Horiz 2		Y-Symmetry	A3P	A3X		1	6	0.5	1	0.5
H 38	Horiz 2		X-Symmetry	A4P	A4Y		1	6	0.5	1	0.5
H 39	Horiz 3		Y-Symmetry	A5P	A5X		1	6	0.5	1	0.5
H 40	Horiz 3		X-Symmetry	A6P	A6Y		1	6	0.5	1	0.5
H 41	Horiz 4		Y-Symmetry	A7P	A7X		1	6	0.5	1	0.5
H 42	Horiz 4		X-Symmetry	A8P	A8Y		1	6	0.5	1	0.5
LH 1	LH 1		Y-Symmetry	H1P	H1X		1	6	100	100	100
LH 2	LH 1		X-Symmetry	H2P	H2Y		1	6	100	100	100
LH 3	LH 2		XY-Symmetry	H5P	H7P		1	6	1	2	1
LH 4	LH 2		XY-Symmetry	H6P	H8P		1	6	1	2	1
LH 5	LH 3		XY-Symmetry	H9P	H11P		1	6	1	2	1
LH 6	LH 3		XY-Symmetry	H10P	H12P		1	6	1	2	1
LH 7	LH 4		XY-Symmetry	H13P	H15P		1	6	0.998	1.995	0.998
LH 8	LH 4		XY-Symmetry	H14P	H16P		1	6	0.998	1.995	0.998
LD 1	LD 1		XY-Symmetry	H1P	1P		1	6	0.85	0.85	0.85
LD 2	LD 1		XY-Symmetry	H2P	1P		1	6	0.85	0.85	0.85
LD 3	LD 2		XY-Symmetry	H1P	A1P		1	6	0.82	0.82	0.82
LD 4	LD 2		XY-Symmetry	H2P	A2P		1	6	0.82	0.82	0.82
LD 7	LD 4		XY-Symmetry	H5P	2P		1	6	0.87	0.87	0.87
LD 8	LD 4		XY-Symmetry	H6P	2P		1	6	0.87	0.87	0.87
LD 9	LD 5		XY-Symmetry	H5P	A3P		1	6	0.8	0.8	0.8
LD 10	LD 5		XY-Symmetry	H6P	A4P		1	6	0.8	0.8	0.8
LD 11	LD 6		XY-Symmetry	A3P	H7P		1	6	0.84	0.84	0.84
LD 12	LD 6		XY-Symmetry	A4P	H8P		1	6	0.84	0.84	0.84
LD 13	LD 7		XY-Symmetry	H9P	3P		1	6	0.865	0.865	0.865
LD 14	LD 7		XY-Symmetry	H10P	3P		1	6	0.865	0.865	0.865
LD 15	LD 8		XY-Symmetry	H9P	A5P		1	6	0.82	0.82	0.82
LD 16	LD 8		XY-Symmetry	H10P	A6P		1	6	0.82	0.82	0.82
LD 17	LD 9		XY-Symmetry	A5P	H11P		1	6	0.82	0.82	0.82
LD 18	LD 9		XY-Symmetry	A6P	H12P		1	6	0.82	0.82	0.82
LD 19	LD 10		XY-Symmetry	H13P	4P		1	6	0.86	0.86	0.86
LD 20	LD 10		XY-Symmetry	H14P	4P		1	6	0.86	0.86	0.86
LD 21	LD 11		XY-Symmetry	H13P	A7P		1	6	0.82	0.82	0.82
LD 22	LD 11		XY-Symmetry	H14P	A8P		1	6	0.82	0.82	0.82
LD 23	LD 12		XY-Symmetry	A7P	H15P		1	6	0.85	0.85	0.85
LD 24	LD 12		XY-Symmetry	A8P	H16P		1	6	0.85	0.85	0.85
BR 1	DUM 1		XY-Symmetry	A1P	A2P		1	4	1	1	1
BR 3	DUM 1		XY-Symmetry	A3P	A4P		1	4	1	1	1
BR 4	DUM 1		XY-Symmetry	A3P	A4XY		1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P		1	4	1	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY		1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P		1	4	1	1	1
BR 8	DUM 1		XY-Symmetry	A7P	A8XY		1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
BR 9	DUM 1		XY-Symmetry	A9P	A10P	1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P	1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P	1	4	1	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P	1	4	1	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P	1	4	1	1	1
BR 19	DUM 1		XY-Symmetry	A19P	A20P	1	4	1	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P	1	4	1	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P	1	4	1	1	1
BR 25	DUM 1		XY-Symmetry	A25P	A26P	1	4	1	1	1
BR 61	DUM 1		XY-Symmetry	H1P	H2P	1	4	1	1	1
BR 62	DUM 1		XY-Symmetry	H1P	H2XY	1	4	1	1	1
BR 64	DUM 1		XY-Symmetry	H5P	H6P	1	4	1	1	1
BR 65	DUM 1		XY-Symmetry	H5P	H6XY	1	4	1	1	1
BR 66	DUM 1		XY-Symmetry	H7P	H8P	1	4	1	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 69	DUM 1		XY-Symmetry	H11P	H12P	1	4	1	1	1
BR 70	DUM 1		XY-Symmetry	H13P	H14P	1	4	1	1	1
BR 71	DUM 1		XY-Symmetry	H13P	H14XY	1	4	1	1	1
BR 72	DUM 1		XY-Symmetry	H15P	H16P	1	4	1	1	1

Ice Thick:	0.75	in
Topographic Category (1-4):	1	
Exposure Category (B-D):	B	
Structure Class (1-3):	2	
Height of Crest (H) if Topo Cat. >1	0	ft
Load Factor; Wind:	1.6	
Load Factor; Dead:	1.2	

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Carrier:	AT&T Mobility

No.	Elevation (ft)	C _u A _c		Force		Force (Ice)		Weight		Weight (Ice)		60 Azi Mult.	Force mean		F (Ice) mean		Height Flag	Sum of Forces (No	
		(ft ²)	(ft ²)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)		60 Azi.	180 Azi.					
1	300	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00									
	300	80.00	108.00	2766.817	675.492	10800	14040	1.00	1521.75	371.52	1.5033333	2766.817067							
2	283	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5033343								
	283	70.00	94.50	2380.948	581.286	9600	12480	1.00	1309.52	319.71	1.5035336	2380.948376							
3	212.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5035346								
	212.5	45.00	60.75	1410.307	344.313	6000	7800	1.00	775.67	189.37	1.5047059	1410.307249							
4	100	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5047069								
	100	45.00	60.75	1137.058	277.602	6000	7800	1.00	625.38	152.68	1.5100000	1137.05799							
5								1.00			1.5100010								
								1.00											
6	338	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00									
	338	5.53	7.47	197.886	48.312	84	109	1.00	108.84	26.57	1.5029586	197.8856442							
7	324	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5029596								
	324	13.41	18.10	474.099	115.747	90	117	1.00	260.75	63.66	1.5030864	474.0988274							
8	320	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5030874								
	320	3.60	4.86	126.824	30.963	48	62	1.00	69.75	17.03	1.5031250	126.8239182							
9	311	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031260								
	311	0.80	1.08	27.954	6.825	36	47	1.00	15.37	3.75	1.5032154	27.95430955							
10	307	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5032164								
	307	0.80	1.08	27.851	6.800	36	47	1.00	15.32	3.74	1.5032573	27.85110819							
11	303	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5032583								
	303	0.22	0.29	7.457	1.821	13	17	1.00	4.10	1.00	1.5033003	7.456990624							
12	292	0.14	0.40	4.736	2.508	2	19	1.00	2.60	1.38	1.5033013								
	292	0.17	0.23	5.834	1.424	2	2	1.00	3.21	0.78	1.5033013	10.57030079							
13	292	0.17	0.35	5.720	2.157	2	10	1.00	3.15	1.19	1.5033023								
	292	6.30	8.51	216.211	52.786	180	234	1.00	118.92	29.03	1.5034247	232.5008585							
14	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034257								
	275	5.20	7.02	175.427	42.829	180	234	1.00	96.48	23.56	1.5036364	175.4272562							
15	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5036374								
	275	20.76	28.03	700.360	170.986	106	138	1.00	385.20	94.04	1.5036364	875.7868408							
16	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5036374								
	270	22.75	30.71	763.481	186.397	156	203	1.00	419.91	102.52	1.5037037	763.4811011							
17	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037047								
	270	5.20	7.02	174.510	42.605	180	234	1.00	95.98	23.43	1.5037037	937.9910671							
18	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037047								
	270	2.68	3.62	89.940	21.958	36	47	1.00	49.47	12.08	1.5037037	1027.930819							
19	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037047								
	270	9.36	12.64	282.706	69.020	360	468	1.00	155.49	37.96	1.5037037	1310.636964							
20	267	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037047								
	267	0.78	1.05	26.093	6.370	11	14	1.00	14.35	3.50	1.5037453	26.09306304							
21	265	1.20	1.81	40.057	10.934	47	90	1.00	22.03	6.01	1.5037463								
	265	2.46	3.32	65.694	16.038	266	346	1.00	36.13	8.82	1.5037736	105.7505576							
22	265	13.15	16.50	438.882	99.633	648	1042	1.00	241.38	54.80	1.5037746								
	265	18.87	18.72	370.295	90.404	476	619	1.00	203.66	49.72	1.5037736	914.9274941							
23	265	30.61	36.51	1021.681	220.404	460	1145	1.00	561.92	121.22	1.5037746								
	265	35.98	48.57	900.757	219.911	1440	1872	1.00	495.42	120.95	1.5037736	2837.366302							
24	250	10.46	13.68	343.344	81.202	95	615	1.00	188.84	44.66	1.5037746								
	250	5.20	7.02	170.715	41.678	180	234	1.00	93.89	22.92	1.5040000	514.0587784							
25	246	5.56	7.49	181.735	44.237	56	340	1.00	99.95	24.33	1.5040010								
	246	5.20	7.02	169.930	41.487	180	234	1.00	93.46	22.82	1.5040650	351.6645299							
26	235	8.59	10.71	277.170	62.480	126	322	1.00	152.44	34.36	1.5040660								
	235	8.00	10.81	206.532	50.423	98	128	1.00	113.59	27.73	1.5042553	483.7017798							
27	235	6.42	8.28	207.190	48.319	137	361	1.00	113.95	26.58	1.5042563								
	235	27.65	37.33	713.494	174.193	1552	2018	1.00	392.42	95.81	1.5042553	1404.385669							
28	235	12.92	15.91	416.701	92.779	175	596	1.00	229.19	51.03	1.5042563								
	235	31.33	42.29	808.415	197.367	364	473	1.00	444.63	108.55	1.5042553	2629.502067							
29	235	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5042563								
	235	35.98	48.57	870.362	212.491	1440	1872	1.00	478.70	116.87	1.5042553	3499.863906							
30	207	10.46	13.68	325.319	76.939	95	604	1.00	178.93	42.32	1.5042563								
	207	5.20	7.02	161.752	39.490	180	234	1.00	88.96	21.72	1.5048309	487.0716767							
31	200	11.06	15.93	340.670	88.708	168	482	1.00	187.37	48.79	1.5048319								
	200	9.36	12.64	259.476	63.349	360	468	1.00	142.71	34.84	1.5050000	600.1458282							
32	193	5.81	9.26	177.045	51.055	64	236	1.00	97.38	28.08	1.5050010								
	193	9.36	12.64	256.848	62.707	360	468	1.00	141.27	34.49	1.5051813	433.8935049							
33	193	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5051823								
	193	7.50	10.13	228.675	55.829	36	47	1.00	125.77	30.71	1.5051813	662.5687569							
34	175	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5051823								
	175	1.20	1.62	35.579	8.686	12	16	1.00	19.57	4.78	1.5057143	35.57875845							
35	171	2.18	3.11	64.236	16.545	126	210	1.00	35.33	9.10	1.5057153								
	171	8.11	10.95	191.051	46.643	103	134	1.00	105.08	25.65	1.5058480	255.2867387							
36	171	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5058490								
	171	25.93	35.00	572.779	139.839	900	1170	1.00	315.03	76.91	1.5058480	828.066216							
37	150	6.46	8.58	183.146	44.020	373	577	1.00	100.73	24.21	1.5058490								
	150	15.84	21.38	359.523	87.774	683	888	1.00	197.74	48.28	1.5066667	542.6695676							
38	150	13.29	15.74	377.014	80.752	205	484	1.00	207.36	44.41	1.5066677								
	150	40.28	54.37	856.996	209.227	1440	1872	1.00	471.35	115.08	1.5066667	1776.679138							
39	139	2.90	4.63	80.599	23.242	32	192	1.00	44.33	12.78	1.5066677								
	139	5.20	7.02	144.356	35.243	180	234	1.00	79.40	19.38	1.5071942	224.9547542							
40	135	0.79	1.51	21.680	7.508	5	57	1.00	11.92	4.13	1.5071952								
	135	5.20	7.02	143.157	34.950	180	234	1.00	78.74	19.22	1.5074074	164.8366753							
41	130	0.78	1.22	21.221	5.986	5	31	1.00	11.67	3.29	1.5074084								
	130	2.50	3.38	68.087	16.623	96	125	1.00	37.45	9.14	1.5076923	89.30768555							
42	107	5.53	7.96	142.459	37.095	84	360	1.00	78.35	20.40	1.5076933								
	10																		

Foundation

Design Loads (Factored)

Compression/Leg:	459.75	k
Uplift/Leg:	325.00	k
Shear/Leg:	64.56	k

Face Width @ Top of Pier (d_1):	4.00	ft
Face Width @ Bottom of Pier (d_2):	8.00	ft
Total Length of Pier (l):	8.00	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	18.00	ft
Length of Pad (L):	18.00	ft
Thickness of Pad (t):	3.00	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	100.0	pcf
Unit Weight of Soil (Below Water Table):	37.6	pcf
Friction Angle of Uplift (A):	20	°
Ultimate Compressive Bearing Pressure:	40000	psf
Ultimate Skin Friction:	197	psf

Volume Pier (Total):	298.67	ft ³
Volume Pad (Total):	972.00	ft ³
Volume Soil (Total):	2935.41	ft ³
Volume Pier (Buoyant):	0.00	ft ³
Volume Pad (Buoyant):	0.00	ft ³
Volume Soil (Buoyant):	0.00	ft ³
Weight Pier:	44.80	k
Weight Pad:	145.80	k
Weight Soil:	293.54	k
Uplift Skin Friction:	31.91	k

Uplift Check

ϕ s Uplift Resistance (k)	Ratio	Result
387.04	0.84	OK

Axial Check

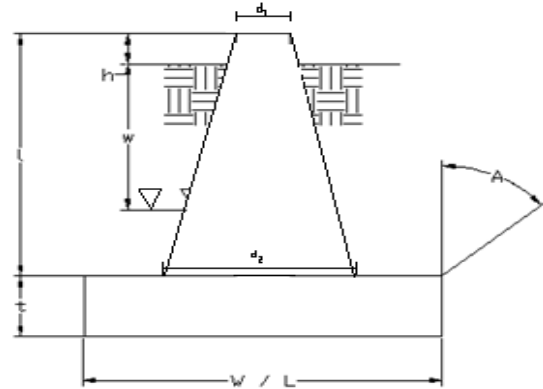
ϕ s Axial Resistance (k)	Ratio	Result
9720.00	0.05	OK

Anchor Bolt Check

Bolt Diameter (in)	2.25
# of Bolts	6
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	C

Usage Ratio	Result
0.49	OK

Site No.:	88018
Engineer:	RDB
Date:	07/22/20
Carrier:	AT&T Mobility



June 17, 2020



SAI Communications
12 Industrial Way
Salem NH, 03079

RE: Site Number: CT2135 (Cell Site Capacity Upgrade)
 FA Number: 10034997
 PACE Number: MRCTB047452
 PT Number: 2051A0VHRR
 Site Name: STAMFORD WEST
 Site Address: Catoonah Lane
 Stamford, CT 06092

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/RRH mount to determine its capability of supporting the following additional loading:

- (1) 7770 Antenna (55.0"x11.0"x5.0" - Wt. = 35 lbs. /each)
- (1) B14 4478 RRH (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)
- (1) RRUS-E2 B29 RRH (20.4"x18.5"x7.5" – Wt. = 53 lbs. /each)
- (1) TT19-08BP111-001 TMA (9.9"x6.7"x5.4" - Wt. = 16 lbs. /each)
- **(3) BSA-M65R-BUU-H6-K Antennas (72.0"x28.5"x9.7" – Wt. = 101 lbs. /each)**
- **(1) 4449 B5/B12 RRH (17.9"x13.2"x9.5" – Wt. = 71 lbs. /each)**
- **(2) 8843 B2/B66A RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each)**
- **(2) 4415 B30 RRH's (16.5"x13.4"x5.9" – Wt. = 46 lbs. /each)**
- **(1) RRUS-E2 B29 RRH (20.4"x18.5"x7.5" – Wt. = 53 lbs. /each)**
- **(2) Squid Surge Arrestors (24.0"x9.7"Ø – Wt. = 33 lbs. /each) (tower mounted)**

**Proposed equipment shown in bold*

Mount fabrication drawings prepared by Sabre Industries Towers and Poles, P/N C10857278C, dated November 5, 2018 were used to perform this analysis. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mounts on April 30, 2020.

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 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.22 in was used for this analysis.
- HDG considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.
- 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 1.
- 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 evaluation, we have determined that the New Sabre Industries C10857278C mount **IS CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Proposed Mount Rating (Gamma sector)	3	LC7	93%	PASS

Reference Documents:

- Mount fabrication drawings prepared by Sabre Industries Towers and Poles, P/N C10857278C, dated November 5, 2018.

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.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing 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:

** Existing Mount (to be removed and replaced) (typ. of Gamma sector)*





HUDSON
Design Group LLC

Wind & Ice Calculations

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

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

$$K_z = 1.261$$

$$\begin{aligned} z &= 235 \text{ (ft)} \\ z_g &= 1200 \text{ (ft)} \\ \alpha &= 7.0 \end{aligned}$$

$$K_{zmin} \leq K_z \leq 2.01$$

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

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

$$K_{zt} = \text{\#DIV/0!}$$

(If Category 1 then $K_{zt} = 1.0$)

$$\text{Category} = 1$$

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

$$K_h = \text{\#DIV/0!}$$

$$K_c = 0.9 \text{ (from Table 2-4)}$$

$$K_t = \text{\#DIV/0!} \text{ (from Table 2-5)}$$

$$f = \text{\#DIV/0!} \text{ (from Table 2-5)}$$

$$z = 235$$

$$z_s = 53 \text{ (Mean elevation of base of structure above sea level)}$$

$$H = \text{\#DIV/0!} \text{ (Ht. of the crest above surrounding terrain)}$$

$$K_{zt} = 1.00 \text{ (from 2.6.6.2.1)}$$

$$K_e = 1.00 \text{ (from 2.6.8)}$$

2.6.10 Design Ice Thickness

Max Ice Thickness =

Importance Factor =

$$t_i = 1.00 \text{ in}$$

$$I = 1.0 \text{ (from Table 2-3)}$$

$$K_{iz} = 1.22 \text{ (from Sec. 2.6.10)}$$

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

$$t_{iz} = 1.22 \text{ in}$$

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



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

$h =$ 301

$G_h =$ 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

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

$G_h =$ 1.35

$G_h =$ 1.00

2.6.11.2 Design Wind Force on Appurtenances

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

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

$q_z =$ 44.09

$q_z (ice) =$ 7.66

$q_z (30) =$ 2.76

$K_z =$ 1.261 (from 2.6.5.2)

$K_{zt} =$ 1.0 (from 2.6.6.2.1)

$K_s =$ 1.0 (from 2.6.7)

$K_e =$ 1.00 (from 2.6.8)

$K_d =$ 0.95 (from Table 2-2)

$V_{max} =$ 120 mph (Ultimate Wind Speed)

$V_{max (ice)} =$ 50 mph

$V_{30} =$ 30 mph

Table 2-2

Structure Type	Wind Direction Probability Factor, K_d
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: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



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		$1.2 - 2.8(r_s) \geq 0.85$	$1.4 - 4.0(r_s) \geq 0.90$	$2.0 - 6.0(r_s) \geq 1.25$
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	$39 \leq C \leq 78$ (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 = 1.22 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)
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	243	54	15
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	2.53	1.20	755	147	47
B14 4478 RRH	18.1	13.4	8.3	1.68	1.35	1.20	89	21	6
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.10	1.20	139	30	9
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.36	1.20	87	20	5
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.20	72	17	5
4415 B30 RRH	16.5	13.4	5.9	1.54	1.23	1.20	81	19	5
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	1.83	1.20	20	6	1
3/4" Round Bar	0.8	12.0		0.06	0.06	0.70	2	2	0
2" Pipe	2.4	12.0		0.20	0.20	0.70	6	3	0

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 30 (deg)

Ice Thickness = 1.22 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	243	129	214
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	755	302	642
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	89	55	81
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	139	57	118
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	87	62	81
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	72	60	69
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	81	36	70
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	20	24	21

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.36	2.96	4.28	7.73	1.28	1.42	52	32	47
BSA-M65R-BUU-H6-K Antenna	74.4	30.9	12.1	15.99	6.27	2.41	6.13	1.20	1.36	147	65	127
B14 4478 RRH	20.5	15.8	10.7	2.26	1.53	1.30	1.91	1.20	1.20	21	14	19
RRUS-E2 RRH	22.8	20.9	9.9	3.32	1.58	1.09	2.30	1.20	1.20	30	14	26
4449 B5/B12 RRH	20.3	15.6	11.9	2.21	1.69	1.30	1.70	1.20	1.20	20	15	19
8843 B2/B66A RRH	17.3	15.6	13.3	1.88	1.61	1.11	1.30	1.20	1.20	17	15	17
4415 B30 RRH	18.9	15.8	8.3	2.08	1.10	1.20	2.27	1.20	1.20	19	10	17
TT19-08BP111-001 TMA	12.3	7.8	9.1	0.67	0.78	1.57	1.35	1.20	1.20	6	7	6

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	15	8	13
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	47	19	40
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	3	5
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	9	4	7
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	5	4	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
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	4
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	1	2	1

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.22 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	243	129	158
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	755	302	415
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	89	55	64
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	139	57	77
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	87	62	69
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	72	60	63
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	81	36	47
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	20	24	23

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.36	2.96	4.28	7.73	1.28	1.42	52	32	37
BSA-M65R-BUU-H6-K Antenna	74.4	30.9	12.1	15.99	6.27	2.41	6.13	1.20	1.36	147	65	86
B14 4478 RRH	20.5	15.8	10.7	2.26	1.53	1.30	1.91	1.20	1.20	21	14	16
RRUS-E2 RRH	22.8	20.9	9.9	3.32	1.58	1.09	2.30	1.20	1.20	30	14	18
4449 B5/B12 RRH	20.3	15.6	11.9	2.21	1.69	1.30	1.70	1.20	1.20	20	15	17
8843 B2/B66A RRH	17.3	15.6	13.3	1.88	1.61	1.11	1.30	1.20	1.20	17	15	15
4415 B30 RRH	18.9	15.8	8.3	2.08	1.10	1.20	2.27	1.20	1.20	19	10	12
TT19-08BP111-001 TMA	12.3	7.8	9.1	0.67	0.78	1.57	1.35	1.20	1.20	6	7	7

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	15	8	10
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	47	19	26
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	3	4
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	9	4	5
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	5	4	4
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
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	3
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	1	2	1

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 90 (deg)

Ice Thickness = 1.22 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	243	129	129
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	755	302	302
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	89	55	55
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	139	57	57
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	87	62	62
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	72	60	60
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	81	36	36
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	20	24	24

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.36	2.96	4.28	7.73	1.28	1.42	52	32	32
BSA-M65R-BUU-H6-K Antenna	74.4	30.9	12.1	15.99	6.27	2.41	6.13	1.20	1.36	147	65	65
B14 4478 RRH	20.5	15.8	10.7	2.26	1.53	1.30	1.91	1.20	1.20	21	14	14
RRUS-E2 RRH	22.8	20.9	9.9	3.32	1.58	1.09	2.30	1.20	1.20	30	14	14
4449 B5/B12 RRH	20.3	15.6	11.9	2.21	1.69	1.30	1.70	1.20	1.20	20	15	15
8843 B2/B66A RRH	17.3	15.6	13.3	1.88	1.61	1.11	1.30	1.20	1.20	17	15	15
4415 B30 RRH	18.9	15.8	8.3	2.08	1.10	1.20	2.27	1.20	1.20	19	10	10
TT19-08BP111-001 TMA	12.3	7.8	9.1	0.67	0.78	1.57	1.35	1.20	1.20	6	7	7

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	15	8	8
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	47	19	19
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	3	3
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	9	4	4
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	5	4	4
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
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	2
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	1	2	2

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



WIND LOADS

Angle =	120	(deg)	Ice Thickness =	1.22	in.	Equivalent Angle =	300	(deg)
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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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	243	129	158
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	755	302	415
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	89	55	64
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	139	57	77
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	87	62	69
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	72	60	63
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	81	36	47
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	20	24	23

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.36	2.96	4.28	7.73	1.28	1.42	52	32	37
BSA-M65R-BUU-H6-K Antenna	74.4	30.9	12.1	15.99	6.27	2.41	6.13	1.20	1.36	147	65	86
B14 4478 RRH	20.5	15.8	10.7	2.26	1.53	1.30	1.91	1.20	1.20	21	14	16
RRUS-E2 RRH	22.8	20.9	9.9	3.32	1.58	1.09	2.30	1.20	1.20	30	14	18
4449 B5/B12 RRH	20.3	15.6	11.9	2.21	1.69	1.30	1.70	1.20	1.20	20	15	17
8843 B2/B66A RRH	17.3	15.6	13.3	1.88	1.61	1.11	1.30	1.20	1.20	17	15	15
4415 B30 RRH	18.9	15.8	8.3	2.08	1.10	1.20	2.27	1.20	1.20	19	10	12
TT19-08BP111-001 TMA	12.3	7.8	9.1	0.67	0.78	1.57	1.35	1.20	1.20	6	7	7

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	15	8	10
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	47	19	26
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	3	4
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	9	4	5
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	5	4	4
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
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	3
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	1	2	1

Date: 6/17/2020
 Project Name: CT2135
 Project No.: STAMFORD WEST
 Designed By: CL Checked By: MSC



WIND LOADS

Angle =	150	(deg)	Ice Thickness =	1.22	in.	Equivalent Angle =	330	(deg)
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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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	243	129	214
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	755	302	642
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	89	55	81
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	139	57	118
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	87	62	81
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	72	60	69
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	81	36	70
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	20	24	21

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.36	2.96	4.28	7.73	1.28	1.42	52	32	47
BSA-M65R-BUU-H6-K Antenna	74.4	30.9	12.1	15.99	6.27	2.41	6.13	1.20	1.36	147	65	127
B14 4478 RRH	20.5	15.8	10.7	2.26	1.53	1.30	1.91	1.20	1.20	21	14	19
RRUS-E2 RRH	22.8	20.9	9.9	3.32	1.58	1.09	2.30	1.20	1.20	30	14	26
4449 B5/B12 RRH	20.3	15.6	11.9	2.21	1.69	1.30	1.70	1.20	1.20	20	15	19
8843 B2/B66A RRH	17.3	15.6	13.3	1.88	1.61	1.11	1.30	1.20	1.20	17	15	17
4415 B30 RRH	18.9	15.8	8.3	2.08	1.10	1.20	2.27	1.20	1.20	19	10	17
TT19-08BP111-001 TMA	12.3	7.8	9.1	0.67	0.78	1.57	1.35	1.20	1.20	6	7	6

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	15	8	13
BSA-M65R-BUU-H6-K Antenna	72.0	28.5	9.7	14.25	4.85	2.53	7.42	1.20	1.41	47	19	40
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	3	5
RRUS-E2 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	9	4	7
4449 B5/B12 RRH	17.9	13.2	9.5	1.64	1.18	1.36	1.88	1.20	1.20	5	4	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
4415 B30 RRH	16.5	13.4	5.9	1.54	0.68	1.23	2.80	1.20	1.21	5	2	4
TT19-08BP111-001 TMA	9.9	5.4	6.7	0.37	0.46	1.83	1.48	1.20	1.20	1	2	1

Date: 6/17/2020

Project Name: CT2135

Project No.: STAMFORD WEST

Designed By: CL Checked By: MSC



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ICE WEIGHT CALCULATIONS

Thickness of ice: 1.22 in.
Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:

Height (in): 55.0
Width (in): 11.0
Depth (in): 5.0

Total weight of ice on object: 91 lbs

Weight of object: 35.0 lbs

Combined weight of ice and object: 126 lbs

BSA-M65R-BUU-H6-K Antenna

Weight of ice based on total radial SF area:

Height (in): 72.0
Width (in): 28.5
Depth (in): 9.7

Total weight of ice on object: 280 lbs

Weight of object: 101.0 lbs

Combined weight of ice and object: 381 lbs

B14 4478 RRH

Weight of ice based on total radial SF area:

Height (in): 18.1
Width (in): 13.4
Depth (in): 8.3

Total weight of ice on object: 38 lbs

Weight of object: 60.0 lbs

Combined weight of ice and object: 98 lbs

RRUS-E2 RRH

Weight of ice based on total radial SF area:

Height (in): 20.4
Width (in): 18.5
Depth (in): 7.5

Total weight of ice on object: 54 lbs

Weight of object: 53.0 lbs

Combined weight of ice and object: 107 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:

Height (in): 17.9
Width (in): 13.2
Depth (in): 9.5

Total weight of ice on object: 39 lbs

Weight of object: 71.0 lbs

Combined weight of ice and object: 110 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: 34 lbs

Weight of object: 72.0 lbs

Combined weight of ice and object: 106 lbs

4415 B30 RRH

Weight of ice based on total radial SF area:

Height (in): 16.5
Width (in): 13.4
Depth (in): 5.9

Total weight of ice on object: 33 lbs

Weight of object: 46.0 lbs

Combined weight of ice and object: 79 lbs

TT19-08BP111-001 TMA

Weight of ice based on total radial SF area:

Height (in): 9.9
Width (in): 5.4
Depth (in): 6.7

Total weight of ice on object: 12 lbs

Weight of object: 16.0 lbs

Combined weight of ice and object: 28 lbs

2" pipe

Per foot weight of ice:

diameter (in): 2.38

Per foot weight of ice on object: 5 plf

3/4" Round Bar

Per foot weight of ice:

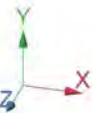
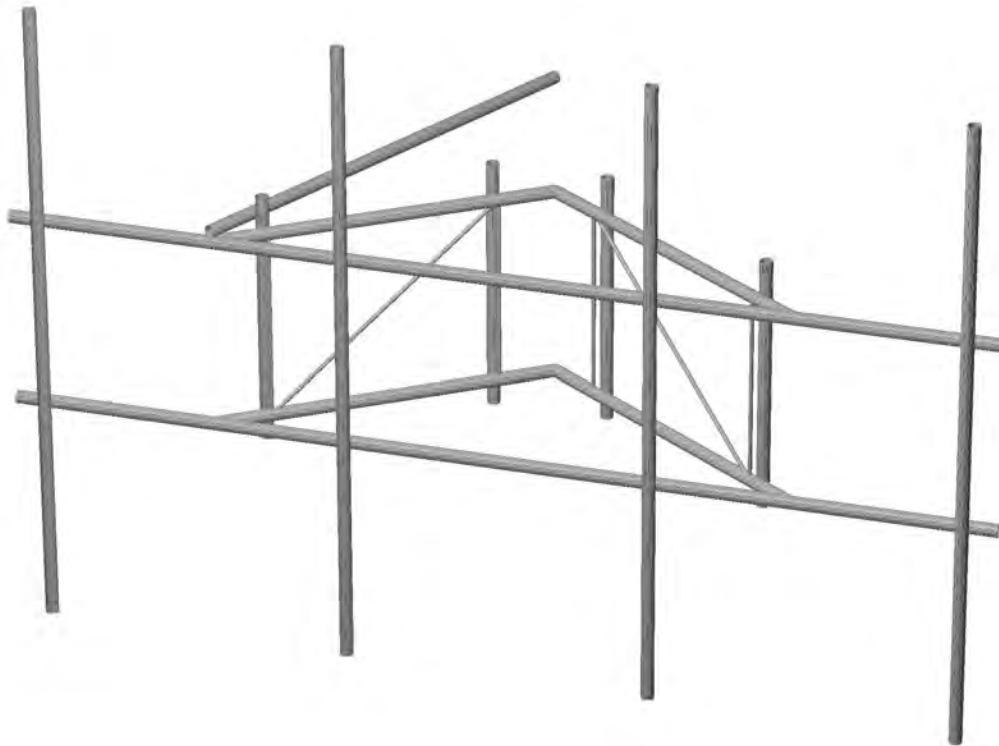
diameter (in): 0.75

Per foot weight of ice on object: 3 plf



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Design Group LLC

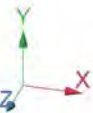
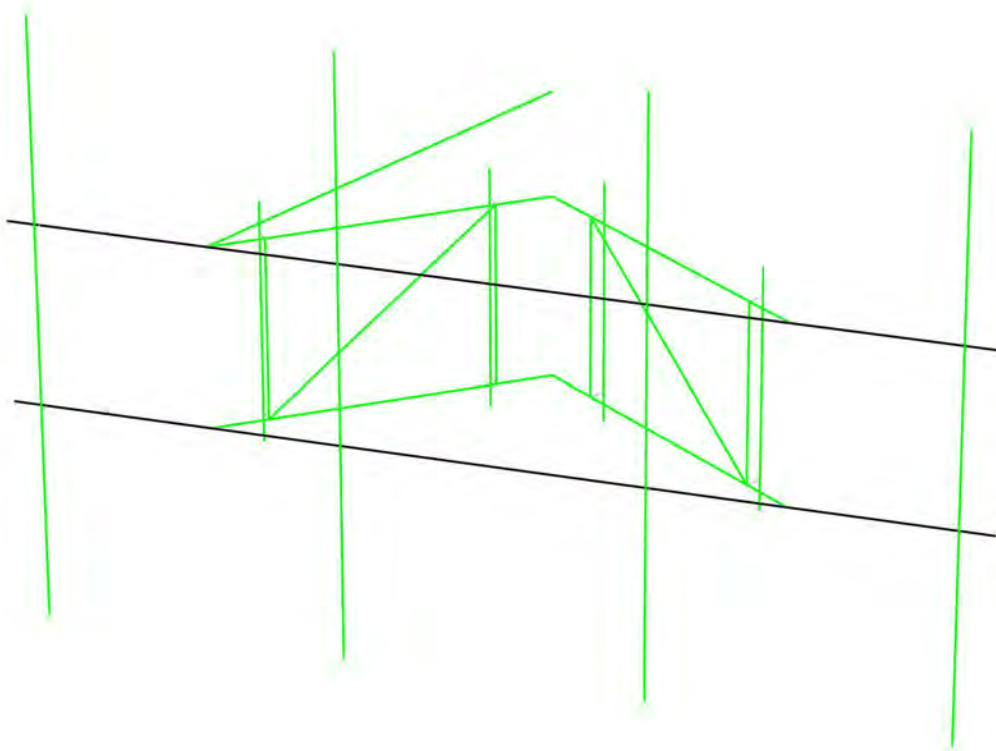
Mount Calculations (New Conditions)

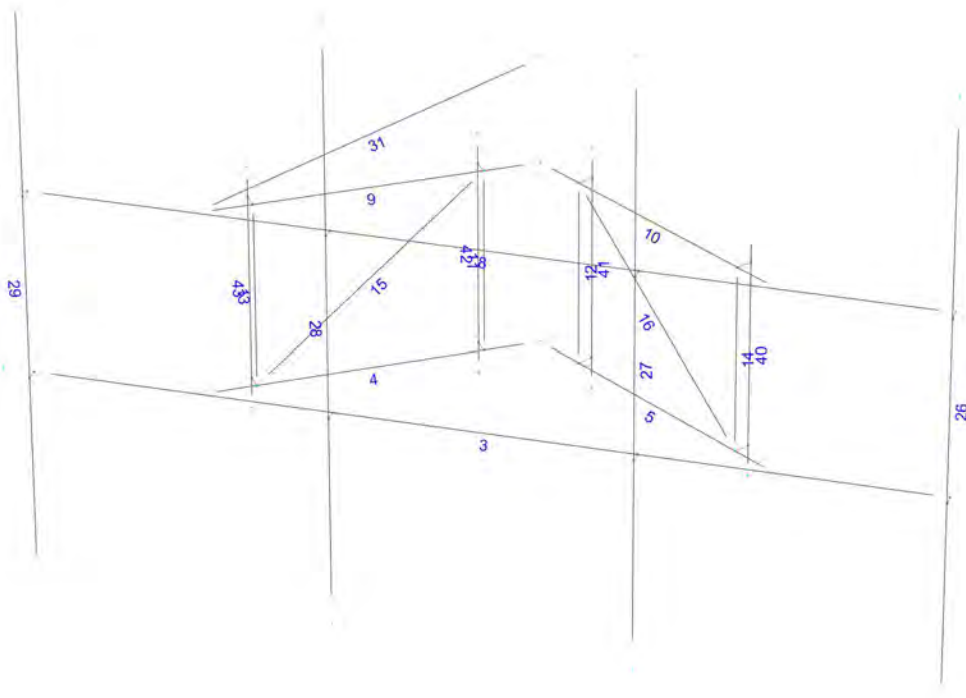




Design status

-  Not designed
-  Error on design
-  Design O.K.
-  With warnings







Current Date: 6/17/2020 4:15 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2135\Gamma Sector (Capacity Upgrade).retx

Load data

GLOSSARY

Comb : Indicates if load condition is a load combination

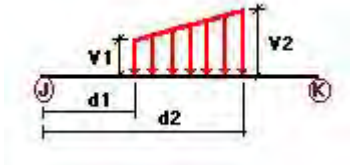
Load Conditions

Condition	Description	Comb.	Category
D	Dead Load	No	DL
Wo	Wind Load (NO ICE)	No	WIND
W30	WL 30deg	No	WIND
W60	WL 60deg	No	WIND
W90	WL 90deg	No	WIND
W120	WL 120deg	No	WIND
W150	WL 150deg	No	WIND
Di	Ice Load	No	LL
WI0	WL ICE 0deg	No	WIND
WI30	WL ICE 30deg	No	WIND
WI60	WL ICE 60deg	No	WIND
WI90	WL ICE 90deg	No	WIND
WI120	WL ICE 120deg	No	WIND
WI150	WL ICE 150deg	No	WIND
WL0	WL 30 mph 0deg	No	WIND
WL30	WL 30 mph 30deg	No	WIND
WL60	WL 30 mph 60deg	No	WIND
WL90	WL 30 mph 90deg	No	WIND
WL120	WL 30 mph 120deg	No	WIND
WL150	WL 30 mph 150deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load Right End of Mount	No	LL
LL3	250 lb Live Load Left 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
LC1	1.2D+Wo	Yes	
LC2	1.2D+W30	Yes	
LC3	1.2D+W60	Yes	
LC4	1.2D+W90	Yes	
LC5	1.2D+W120	Yes	
LC6	1.2D+W150	Yes	
LC7	1.2D-Wo	Yes	
LC8	1.2D-W30	Yes	
LC9	1.2D-W60	Yes	
LC10	1.2D-W90	Yes	
LC11	1.2D-W120	Yes	
LC12	1.2D-W150	Yes	
LC13	0.9D+Wo	Yes	
LC14	0.9D+W30	Yes	
LC15	0.9D+W60	Yes	
LC16	0.9D+W90	Yes	
LC17	0.9D+W120	Yes	

LC18	0.9D+W150	Yes
LC19	0.9D-Wo	Yes
LC20	0.9D-W30	Yes
LC21	0.9D-W60	Yes
LC22	0.9D-W90	Yes
LC23	0.9D-W120	Yes
LC24	0.9D-W150	Yes
LC25	1.2D+Di+W10	Yes
LC26	1.2D+Di+W130	Yes
LC27	1.2D+Di+W160	Yes
LC28	1.2D+Di+W190	Yes
LC29	1.2D+Di+W1120	Yes
LC30	1.2D+Di+W1150	Yes
LC31	1.2D+Di-W10	Yes
LC32	1.2D+Di-W130	Yes
LC33	1.2D+Di-W160	Yes
LC34	1.2D+Di-W190	Yes
LC35	1.2D+Di-W1120	Yes
LC36	1.2D+Di-W1150	Yes
LC38	1.2D+1.5LL1	Yes
LC39	1.2D+1.5LL2	Yes
LC40	1.2D+1.5LL3	Yes
LC41	1.2D+WL0+1.5LLa1	Yes
LC42	1.2D+WL30+1.5LLa1	Yes
LC43	1.2D+WL60+1.5LLa1	Yes
LC44	1.2D+WL90+1.5LLa1	Yes
LC45	1.2D+WL120+1.5LLa1	Yes
LC46	1.2D+WL150+1.5LLa1	Yes
LC47	1.2D-WL0+1.5LLa1	Yes
LC48	1.2D-WL30+1.5LLa1	Yes
LC49	1.2D-WL60+1.5LLa1	Yes
LC50	1.2D-WL90+1.5LLa1	Yes
LC51	1.2D-WL120+1.5LLa1	Yes
LC52	1.2D-WL150+1.5LLa1	Yes
LC53	1.2D+WL0+1.5LLa2	Yes
LC54	1.2D+WL30+1.5LLa2	Yes
LC55	1.2D+WL60+1.5LLa2	Yes
LC56	1.2D+WL90+1.5LLa2	Yes
LC57	1.2D+WL120+1.5LLa2	Yes
LC58	1.2D+WL150+1.5LLa2	Yes
LC59	1.2D-WL0+1.5LLa2	Yes
LC60	1.2D-WL30+1.5LLa2	Yes
LC61	1.2D-WL60+1.5LLa2	Yes
LC62	1.2D-WL90+1.5LLa2	Yes
LC63	1.2D-WL120+1.5LLa2	Yes
LC64	1.2D-WL150+1.5LLa2	Yes
LC65	1.2D+WL0+1.5LLa3	Yes
LC66	1.2D+WL30+1.5LLa3	Yes
LC67	1.2D+WL60+1.5LLa3	Yes
LC68	1.2D+WL90+1.5LLa3	Yes
LC69	1.2D+WL120+1.5LLa3	Yes
LC70	1.2D+WL150+1.5LLa3	Yes
LC71	1.2D-WL0+1.5LLa3	Yes
LC72	1.2D-WL30+1.5LLa3	Yes
LC73	1.2D-WL60+1.5LLa3	Yes
LC74	1.2D-WL90+1.5LLa3	Yes
LC75	1.2D-WL120+1.5LLa3	Yes
LC76	1.2D-WL150+1.5LLa3	Yes
LC77	1.2D+WL0+1.5LLa4	Yes
LC78	1.2D+WL30+1.5LLa4	Yes

LC79	1.2D+WL60+1.5LLa4	Yes
LC80	1.2D+WL90+1.5LLa4	Yes
LC81	1.2D+WL120+1.5LLa4	Yes
LC82	1.2D+WL150+1.5LLa4	Yes
LC83	1.2D-WL0+1.5LLa4	Yes
LC84	1.2D-WL30+1.5LLa4	Yes
LC85	1.2D-WL60+1.5LLa4	Yes
LC86	1.2D-WL90+1.5LLa4	Yes
LC87	1.2D-WL120+1.5LLa4	Yes
LC88	1.2D-WL150+1.5LLa4	Yes

Distributed force on members

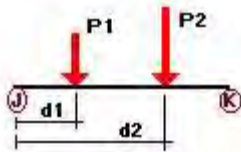


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	3	z	-0.006	-0.006	0.00	No	100.00	Yes
	4	z	-0.006	-0.006	0.00	No	100.00	Yes
	5	z	-0.006	-0.006	0.00	No	100.00	Yes
	8	z	-0.006	-0.006	0.00	No	100.00	Yes
	9	z	-0.006	-0.006	0.00	No	100.00	Yes
	10	z	-0.006	-0.006	0.00	No	100.00	Yes
	11	z	-0.002	-0.002	0.00	No	100.00	Yes
	12	z	-0.002	-0.002	0.00	No	100.00	Yes
	13	z	-0.002	-0.002	0.00	No	100.00	Yes
	14	z	-0.002	-0.002	0.00	No	100.00	Yes
	15	z	-0.002	-0.002	0.00	No	100.00	Yes
	16	z	-0.002	-0.002	0.00	No	100.00	Yes
	26	z	-0.006	-0.006	0.00	No	100.00	Yes
	27	z	-0.006	-0.006	0.00	No	100.00	Yes
	28	z	-0.006	-0.006	0.00	No	100.00	Yes
	29	z	-0.006	-0.006	0.00	No	100.00	Yes
	31	z	-0.006	-0.006	0.00	No	100.00	Yes
	40	z	-0.006	-0.006	0.00	No	100.00	Yes
	41	z	-0.006	-0.006	0.00	No	100.00	Yes
	42	z	-0.006	-0.006	0.00	No	100.00	Yes
	43	z	-0.006	-0.006	0.00	No	100.00	Yes
W30	3	z	-0.006	-0.006	0.00	No	100.00	Yes
	4	z	-0.006	-0.006	0.00	No	100.00	Yes
	5	z	-0.006	-0.006	0.00	No	100.00	Yes
	8	z	-0.006	-0.006	0.00	No	100.00	Yes
	9	z	-0.006	-0.006	0.00	No	100.00	Yes
	10	z	-0.006	-0.006	0.00	No	100.00	Yes
	11	z	-0.002	-0.002	0.00	No	100.00	Yes
	12	z	-0.002	-0.002	0.00	No	100.00	Yes
	13	z	-0.002	-0.002	0.00	No	100.00	Yes
	14	z	-0.002	-0.002	0.00	No	100.00	Yes
	15	z	-0.002	-0.002	0.00	No	100.00	Yes
	16	z	-0.002	-0.002	0.00	No	100.00	Yes
	26	z	-0.006	-0.006	0.00	No	100.00	Yes
	27	z	-0.006	-0.006	0.00	No	100.00	Yes

W60	28	z	-0.006	-0.006	0.00	No	100.00	Yes
	29	z	-0.006	-0.006	0.00	No	100.00	Yes
	31	z	-0.006	-0.006	0.00	No	100.00	Yes
	40	z	-0.006	-0.006	0.00	No	100.00	Yes
	41	z	-0.006	-0.006	0.00	No	100.00	Yes
	42	z	-0.006	-0.006	0.00	No	100.00	Yes
	43	z	-0.006	-0.006	0.00	No	100.00	Yes
	3	x	-0.006	-0.006	0.00	No	100.00	Yes
	4	x	-0.006	-0.006	0.00	No	100.00	Yes
	5	x	-0.006	-0.006	0.00	No	100.00	Yes
	8	x	-0.006	-0.006	0.00	No	100.00	Yes
	9	x	-0.006	-0.006	0.00	No	100.00	Yes
	10	x	-0.006	-0.006	0.00	No	100.00	Yes
	11	x	-0.002	-0.002	0.00	No	100.00	Yes
	12	x	-0.002	-0.002	0.00	No	100.00	Yes
W90	13	x	-0.002	-0.002	0.00	No	100.00	Yes
	14	x	-0.002	-0.002	0.00	No	100.00	Yes
	15	x	-0.002	-0.002	0.00	No	100.00	Yes
	16	x	-0.002	-0.002	0.00	No	100.00	Yes
	26	x	-0.006	-0.006	0.00	No	100.00	Yes
	27	x	-0.006	-0.006	0.00	No	100.00	Yes
	28	x	-0.006	-0.006	0.00	No	100.00	Yes
	29	x	-0.006	-0.006	0.00	No	100.00	Yes
	31	x	-0.006	-0.006	0.00	No	100.00	Yes
	40	x	-0.006	-0.006	0.00	No	100.00	Yes
	41	x	-0.006	-0.006	0.00	No	100.00	Yes
	42	x	-0.006	-0.006	0.00	No	100.00	Yes
	43	x	-0.006	-0.006	0.00	No	100.00	Yes
	3	x	-0.006	-0.006	0.00	No	100.00	Yes
	4	x	-0.006	-0.006	0.00	No	100.00	Yes
W120	5	x	-0.006	-0.006	0.00	No	100.00	Yes
	8	x	-0.006	-0.006	0.00	No	100.00	Yes
	9	x	-0.006	-0.006	0.00	No	100.00	Yes
	10	x	-0.006	-0.006	0.00	No	100.00	Yes
	11	x	-0.002	-0.002	0.00	No	100.00	Yes
	12	x	-0.002	-0.002	0.00	No	100.00	Yes
	13	x	-0.002	-0.002	0.00	No	100.00	Yes
	14	x	-0.002	-0.002	0.00	No	100.00	Yes
	15	x	-0.002	-0.002	0.00	No	100.00	Yes
	26	x	-0.006	-0.006	0.00	No	100.00	Yes
	27	x	-0.006	-0.006	0.00	No	100.00	Yes
	28	x	-0.006	-0.006	0.00	No	100.00	Yes
	29	x	-0.006	-0.006	0.00	No	100.00	Yes
	31	x	-0.006	-0.006	0.00	No	100.00	Yes
	40	x	-0.006	-0.006	0.00	No	100.00	Yes

W150	16	x	-0.002	-0.002	0.00	No	100.00	Yes
	26	x	-0.006	-0.006	0.00	No	100.00	Yes
	27	x	-0.006	-0.006	0.00	No	100.00	Yes
	28	x	-0.006	-0.006	0.00	No	100.00	Yes
	29	x	-0.006	-0.006	0.00	No	100.00	Yes
	31	x	-0.006	-0.006	0.00	No	100.00	Yes
	40	x	-0.006	-0.006	0.00	No	100.00	Yes
	41	x	-0.006	-0.006	0.00	No	100.00	Yes
	42	x	-0.006	-0.006	0.00	No	100.00	Yes
	43	x	-0.006	-0.006	0.00	No	100.00	Yes
	3	z	0.006	0.006	0.00	No	100.00	Yes
	4	z	0.006	0.006	0.00	No	100.00	Yes
	5	z	0.006	0.006	0.00	No	100.00	Yes
	8	z	0.006	0.006	0.00	No	100.00	Yes
	9	z	0.006	0.006	0.00	No	100.00	Yes
	10	z	0.006	0.006	0.00	No	100.00	Yes
	11	z	0.002	0.002	0.00	No	100.00	Yes
	12	z	0.002	0.002	0.00	No	100.00	Yes
	13	z	0.002	0.002	0.00	No	100.00	Yes
	14	z	0.002	0.002	0.00	No	100.00	Yes
	15	z	0.002	0.002	0.00	No	100.00	Yes
	16	z	0.002	0.002	0.00	No	100.00	Yes
	26	z	0.006	0.006	0.00	No	100.00	Yes
	27	z	0.006	0.006	0.00	No	100.00	Yes
	28	z	0.006	0.006	0.00	No	100.00	Yes
	29	z	0.006	0.006	0.00	No	100.00	Yes
	31	z	0.006	0.006	0.00	No	100.00	Yes
	40	z	0.006	0.006	0.00	No	100.00	Yes
Di	41	z	0.006	0.006	0.00	No	100.00	Yes
	42	z	0.006	0.006	0.00	No	100.00	Yes
	43	z	0.006	0.006	0.00	No	100.00	Yes
	3	y	-0.005	-0.005	0.00	No	100.00	Yes
	4	y	-0.005	-0.005	0.00	No	100.00	Yes
	5	y	-0.005	-0.005	0.00	No	100.00	Yes
	8	y	-0.005	-0.005	0.00	No	100.00	Yes
	9	y	-0.005	-0.005	0.00	No	100.00	Yes
	10	y	-0.005	-0.005	0.00	No	100.00	Yes
	11	y	-0.003	-0.003	0.00	No	100.00	Yes
	12	y	-0.003	-0.003	0.00	No	100.00	Yes
	13	y	-0.003	-0.003	0.00	No	100.00	Yes
	14	y	-0.003	-0.003	0.00	No	100.00	Yes
	15	y	-0.003	-0.003	0.00	No	100.00	Yes
	16	y	-0.003	-0.003	0.00	No	100.00	Yes
	26	y	-0.005	-0.005	0.00	No	100.00	Yes
	27	y	-0.005	-0.005	0.00	No	100.00	Yes
	28	y	-0.005	-0.005	0.00	No	100.00	Yes
	29	y	-0.005	-0.005	0.00	No	100.00	Yes
	31	y	-0.005	-0.005	0.00	No	100.00	Yes
	40	y	-0.005	-0.005	0.00	No	100.00	Yes
	41	y	-0.005	-0.005	0.00	No	100.00	Yes
	42	y	-0.005	-0.005	0.00	No	100.00	Yes
	43	y	-0.005	-0.005	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
D	26	y	-0.051	3.00	No
		y	-0.051	8.00	No
	27	y	-0.051	3.00	No
		y	-0.051	8.00	No
	28	y	-0.051	3.00	No
		y	-0.051	8.00	No
	29	y	-0.018	3.50	No
		y	-0.018	7.50	No
		y	-0.016	8.50	No
	40	y	-0.072	1.50	No
		y	-0.072	3.00	No
	41	y	-0.071	1.50	No
		y	-0.06	3.00	No
	42	y	-0.053	1.50	No
		y	-0.053	3.00	No
	43	y	-0.046	1.50	No
		y	-0.046	3.00	No
Wo	26	z	-0.378	3.00	No
		z	-0.378	8.00	No
	27	z	-0.378	3.00	No
		z	-0.378	8.00	No
	28	z	-0.378	3.00	No
		z	-0.378	8.00	No
	29	z	-0.122	3.50	No
		z	-0.122	7.50	No
		z	-0.02	8.50	No
	40	z	-0.072	1.50	No
		z	-0.072	3.00	No
	41	z	-0.087	1.50	No
		z	-0.089	3.00	No
	42	z	-0.139	1.50	No
		z	-0.139	3.00	No
	43	z	-0.081	1.50	No
		z	-0.081	3.00	No
W30	26	3	-0.321	3.00	No
		3	-0.321	8.00	No
	27	3	-0.321	3.00	No
		3	-0.321	8.00	No
	28	3	-0.321	3.00	No
		3	-0.321	8.00	No
	29	3	-0.107	3.50	No
		3	-0.107	7.50	No
		3	-0.021	8.50	No
	40	3	-0.069	1.50	No
		3	-0.069	3.00	No
	41	3	-0.081	1.50	No
		3	-0.081	3.00	No
	42	3	-0.118	1.50	No
		3	-0.118	3.00	No
	43	3	-0.07	1.50	No
		3	-0.07	3.00	No
W60	26	3	-0.208	3.00	No
		3	-0.208	8.00	No
	27	3	-0.208	3.00	No

		3	-0.208	8.00	No
	28	3	-0.208	3.00	No
		3	-0.208	8.00	No
	29	3	-0.079	3.50	No
		3	-0.079	7.50	No
		3	-0.023	8.50	No
	40	3	-0.063	1.50	No
		3	-0.063	3.00	No
	41	3	-0.069	1.50	No
		3	-0.064	3.00	No
	42	3	-0.077	1.50	No
		3	-0.077	3.00	No
	43	3	-0.047	1.50	No
		3	-0.047	3.00	No
W90	26	x	-0.151	3.00	No
		x	-0.151	8.00	No
	27	x	-0.151	3.00	No
		x	-0.151	8.00	No
	28	x	-0.151	3.00	No
		x	-0.151	8.00	No
	29	x	-0.065	3.50	No
		x	-0.065	7.50	No
		x	-0.024	8.50	No
	40	x	-0.06	1.50	No
		x	-0.06	3.00	No
	41	x	-0.062	1.50	No
		x	-0.055	3.00	No
	42	x	-0.057	1.50	No
		x	-0.057	3.00	No
	43	x	-0.036	1.50	No
		x	-0.036	3.00	No
W120	26	2	-0.208	3.00	No
		2	-0.208	8.00	No
	27	2	-0.208	3.00	No
		2	-0.208	8.00	No
	28	2	-0.208	3.00	No
		2	-0.208	8.00	No
	29	2	-0.079	3.50	No
		2	-0.079	7.50	No
		2	-0.023	8.50	No
	40	2	-0.063	1.50	No
		2	-0.063	3.00	No
	41	2	-0.069	1.50	No
		2	-0.064	3.00	No
	42	2	-0.077	1.50	No
		2	-0.077	3.00	No
	43	2	-0.047	1.50	No
		2	-0.047	3.00	No
W150	26	2	-0.321	3.00	No
		2	-0.321	8.00	No
	27	2	-0.321	3.00	No
		2	-0.321	8.00	No
	28	2	-0.321	3.00	No
		2	-0.321	8.00	No
	29	2	-0.107	3.50	No
		2	-0.107	7.50	No
		2	-0.021	8.50	No
	40	2	-0.069	1.50	No
		2	-0.069	3.00	No
	41	2	-0.081	1.50	No

		2	-0.081	3.00	No
	42	2	-0.118	1.50	No
		2	-0.118	3.00	No
	43	2	-0.07	1.50	No
		2	-0.07	3.00	No
Di	26	y	-0.14	3.00	No
		y	-0.14	8.00	No
	27	y	-0.14	3.00	No
		y	-0.14	8.00	No
	28	y	-0.14	3.00	No
		y	-0.14	8.00	No
	29	y	-0.046	3.50	No
		y	-0.046	7.50	No
		y	-0.012	8.50	No
	40	y	-0.034	1.50	No
		y	-0.034	3.00	No
	41	y	-0.039	1.50	No
		y	-0.038	3.00	No
	42	y	-0.054	1.50	No
		y	-0.054	3.00	No
	43	y	-0.033	1.50	No
		y	-0.033	3.00	No
W10	26	z	-0.074	3.00	No
		z	-0.074	8.00	No
	27	z	-0.074	3.00	No
		z	-0.074	8.00	No
	28	z	-0.074	3.00	No
		z	-0.074	8.00	No
	29	z	-0.027	3.50	No
		z	-0.027	7.50	No
		z	-0.006	8.50	No
	40	z	-0.017	1.50	No
		z	-0.017	3.00	No
	41	z	-0.02	1.50	No
		z	-0.021	3.00	No
	42	z	-0.03	1.50	No
		z	-0.03	3.00	No
	43	z	-0.019	1.50	No
		z	-0.019	3.00	No
W130	26	3	-0.064	3.00	No
		3	-0.064	8.00	No
	27	3	-0.064	3.00	No
		3	-0.064	8.00	No
	28	3	-0.064	3.00	No
		3	-0.064	8.00	No
	29	3	-0.024	3.50	No
		3	-0.024	7.50	No
		3	-0.006	8.50	No
	40	3	-0.017	1.50	No
		3	-0.017	3.00	No
	41	3	-0.019	1.50	No
		3	-0.019	3.00	No
	42	3	-0.026	1.50	No
		3	-0.026	3.00	No
	43	3	-0.017	1.50	No
		3	-0.017	3.00	No
W160	26	3	-0.043	3.00	No
		3	-0.043	8.00	No
	27	3	-0.043	3.00	No
		3	-0.043	8.00	No

WI90	28	3	-0.043	3.00	No
		3	-0.043	8.00	No
	29	3	-0.019	3.50	No
		3	-0.019	7.50	No
		3	-0.007	8.50	No
	40	3	-0.015	1.50	No
		3	-0.015	3.00	No
	41	3	-0.017	1.50	No
		3	-0.016	3.00	No
	42	3	-0.018	1.50	No
		3	-0.018	3.00	No
	43	3	-0.012	1.50	No
		3	-0.012	3.00	No
	26	x	-0.033	3.00	No
		x	-0.033	8.00	No
	27	x	-0.033	3.00	No
		x	-0.033	8.00	No
	28	x	-0.033	3.00	No
		x	-0.033	8.00	No
	29	x	-0.016	3.50	No
WI120		x	-0.016	7.50	No
		x	-0.007	8.50	No
	40	x	-0.015	1.50	No
		x	-0.015	3.00	No
	41	x	-0.015	1.50	No
		x	-0.014	3.00	No
	42	x	-0.014	1.50	No
		x	-0.014	3.00	No
	43	x	-0.01	1.50	No
		x	-0.01	3.00	No
	26	2	-0.043	3.00	No
		2	-0.043	8.00	No
	27	2	-0.043	3.00	No
		2	-0.043	8.00	No
	28	2	-0.043	3.00	No
		2	-0.043	8.00	No
	29	2	-0.019	3.50	No
		2	-0.019	7.50	No
		2	-0.007	8.50	No
	40	2	-0.015	1.50	No
WI150		2	-0.015	3.00	No
	41	2	-0.017	1.50	No
		2	-0.016	3.00	No
	42	2	-0.018	1.50	No
		2	-0.018	3.00	No
	43	2	-0.012	1.50	No
		2	-0.012	3.00	No
	26	2	-0.064	3.00	No
		2	-0.064	8.00	No
	27	2	-0.064	3.00	No
		2	-0.064	8.00	No
	28	2	-0.064	3.00	No
		2	-0.064	8.00	No
	29	2	-0.024	3.50	No
		2	-0.024	7.50	No
		2	-0.006	8.50	No
	40	2	-0.017	1.50	No
		2	-0.017	3.00	No
	41	2	-0.019	1.50	No
		2	-0.019	3.00	No

WL0	42	2	-0.026	1.50	No
		2	-0.026	3.00	No
	43	2	-0.017	1.50	No
		2	-0.017	3.00	No
	26	z	-0.024	3.00	No
		z	-0.024	8.00	No
	27	z	-0.024	3.00	No
		z	-0.024	8.00	No
	28	z	-0.024	3.00	No
		z	-0.024	8.00	No
WL30	29	z	-0.008	3.50	No
		z	-0.008	7.50	No
		z	-0.001	8.50	No
	40	z	-0.005	1.50	No
		z	-0.005	3.00	No
	41	z	-0.005	1.50	No
		z	-0.006	3.00	No
	42	z	-0.009	1.50	No
		z	-0.009	3.00	No
	43	z	-0.005	1.50	No
WL60		z	-0.005	3.00	No
	26	3	-0.02	3.00	No
		3	-0.02	8.00	No
	27	3	-0.02	3.00	No
		3	-0.02	8.00	No
	28	3	-0.02	3.00	No
		3	-0.02	8.00	No
	29	3	-0.007	3.50	No
		3	-0.007	7.50	No
		3	-0.001	8.50	No
WL90	40	3	-0.004	1.50	No
		3	-0.004	3.00	No
	41	3	-0.005	1.50	No
		3	-0.005	3.00	No
	42	3	-0.007	1.50	No
		3	-0.007	3.00	No
	43	3	-0.004	1.50	No
		3	-0.004	3.00	No
	26	3	-0.013	3.00	No
		3	-0.013	8.00	No
WL90	27	3	-0.013	3.00	No
		3	-0.013	8.00	No
	28	3	-0.013	3.00	No
		3	-0.013	8.00	No
	29	3	-0.005	3.50	No
		3	-0.005	7.50	No
		3	-0.001	8.50	No
	40	3	-0.004	1.50	No
		3	-0.004	3.00	No
	41	3	-0.004	1.50	No
WL90		3	-0.004	3.00	No
	42	3	-0.005	1.50	No
		3	-0.005	3.00	No
	43	3	-0.003	1.50	No
		3	-0.003	3.00	No
	26	x	-0.01	3.00	No
		x	-0.01	8.00	No
	27	x	-0.01	3.00	No
		x	-0.01	8.00	No
	28	x	-0.01	3.00	No

		x	-0.01	8.00	No
	29	x	-0.004	3.50	No
		x	-0.004	7.50	No
		x	-0.002	8.50	No
	40	x	-0.004	1.50	No
		x	-0.004	3.00	No
	41	x	-0.004	1.50	No
		x	-0.003	3.00	No
	42	x	-0.004	1.50	No
		x	-0.004	3.00	No
	43	x	-0.002	1.50	No
		x	-0.002	3.00	No
WL120	26	2	-0.013	3.00	No
		2	-0.013	8.00	No
	27	2	-0.013	3.00	No
		2	-0.013	8.00	No
	28	2	-0.013	3.00	No
		2	-0.013	8.00	No
	29	2	-0.005	3.50	No
		2	-0.005	7.50	No
		2	-0.001	8.50	No
	40	2	-0.004	1.50	No
		2	-0.004	3.00	No
	41	2	-0.004	1.50	No
		2	-0.004	3.00	No
	42	2	-0.005	1.50	No
		2	-0.005	3.00	No
	43	2	-0.003	1.50	No
		2	-0.003	3.00	No
WL150	26	2	-0.02	3.00	No
		2	-0.02	8.00	No
	27	2	-0.02	3.00	No
		2	-0.02	8.00	No
	28	2	-0.02	3.00	No
		2	-0.02	8.00	No
	29	2	-0.007	3.50	No
		2	-0.007	7.50	No
		2	-0.001	8.50	No
	40	2	-0.004	1.50	No
		2	-0.004	3.00	No
	41	2	-0.005	1.50	No
		2	-0.005	3.00	No
	42	2	-0.007	1.50	No
		2	-0.007	3.00	No
	43	2	-0.004	1.50	No
		2	-0.004	3.00	No
LL1	3	y	-0.25	7.50	No
LL2	3	y	-0.25	15.00	No
LL3	3	y	-0.25	0.00	No
LLa1	26	y	-0.25	5.00	No
LLa2	27	y	-0.25	5.00	No
LLa3	28	y	-0.25	5.00	No
LLa4	29	y	-0.25	5.00	No

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
D	Dead Load	No	0.00	-1.00	0.00
Wo	Wind Load (NO ICE)	No	0.00	0.00	0.00
W30	WL 30deg	No	0.00	0.00	0.00
W60	WL 60deg	No	0.00	0.00	0.00
W90	WL 90deg	No	0.00	0.00	0.00
W120	WL 120deg	No	0.00	0.00	0.00
W150	WL 150deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
WI0	WL ICE 0deg	No	0.00	0.00	0.00
WI30	WL ICE 30deg	No	0.00	0.00	0.00
WI60	WL ICE 60deg	No	0.00	0.00	0.00
WI90	WL ICE 90deg	No	0.00	0.00	0.00
WI120	WL ICE 120deg	No	0.00	0.00	0.00
WI150	WL ICE 150deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30deg	No	0.00	0.00	0.00
WL60	WL 30 mph 60deg	No	0.00	0.00	0.00
WL90	WL 30 mph 90deg	No	0.00	0.00	0.00
WL120	WL 30 mph 120deg	No	0.00	0.00	0.00
WL150	WL 30 mph 150deg	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 Right End of Mount	No	0.00	0.00	0.00
LL3	250 lb Live Load Left 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
LC1	1.2D+Wo	Yes	0.00	0.00	0.00
LC2	1.2D+W30	Yes	0.00	0.00	0.00
LC3	1.2D+W60	Yes	0.00	0.00	0.00
LC4	1.2D+W90	Yes	0.00	0.00	0.00
LC5	1.2D+W120	Yes	0.00	0.00	0.00
LC6	1.2D+W150	Yes	0.00	0.00	0.00
LC7	1.2D-Wo	Yes	0.00	0.00	0.00
LC8	1.2D-W30	Yes	0.00	0.00	0.00
LC9	1.2D-W60	Yes	0.00	0.00	0.00
LC10	1.2D-W90	Yes	0.00	0.00	0.00
LC11	1.2D-W120	Yes	0.00	0.00	0.00
LC12	1.2D-W150	Yes	0.00	0.00	0.00
LC13	0.9D+Wo	Yes	0.00	0.00	0.00
LC14	0.9D+W30	Yes	0.00	0.00	0.00
LC15	0.9D+W60	Yes	0.00	0.00	0.00
LC16	0.9D+W90	Yes	0.00	0.00	0.00
LC17	0.9D+W120	Yes	0.00	0.00	0.00
LC18	0.9D+W150	Yes	0.00	0.00	0.00
LC19	0.9D-Wo	Yes	0.00	0.00	0.00
LC20	0.9D-W30	Yes	0.00	0.00	0.00
LC21	0.9D-W60	Yes	0.00	0.00	0.00
LC22	0.9D-W90	Yes	0.00	0.00	0.00
LC23	0.9D-W120	Yes	0.00	0.00	0.00
LC24	0.9D-W150	Yes	0.00	0.00	0.00
LC25	1.2D+Di+WI0	Yes	0.00	0.00	0.00
LC26	1.2D+Di+WI30	Yes	0.00	0.00	0.00
LC27	1.2D+Di+WI60	Yes	0.00	0.00	0.00
LC28	1.2D+Di+WI90	Yes	0.00	0.00	0.00
LC29	1.2D+Di+WI120	Yes	0.00	0.00	0.00
LC30	1.2D+Di+WI150	Yes	0.00	0.00	0.00
LC31	1.2D+Di-WI0	Yes	0.00	0.00	0.00
LC32	1.2D+Di-WI30	Yes	0.00	0.00	0.00

LC33	1.2D+Di-WI60	Yes	0.00	0.00	0.00
LC34	1.2D+Di-WI90	Yes	0.00	0.00	0.00
LC35	1.2D+Di-WI120	Yes	0.00	0.00	0.00
LC36	1.2D+Di-WI150	Yes	0.00	0.00	0.00
LC38	1.2D+1.5LL1	Yes	0.00	0.00	0.00
LC39	1.2D+1.5LL2	Yes	0.00	0.00	0.00
LC40	1.2D+1.5LL3	Yes	0.00	0.00	0.00
LC41	1.2D+WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC42	1.2D+WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC43	1.2D+WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC44	1.2D+WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC45	1.2D+WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC46	1.2D+WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC47	1.2D-WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC48	1.2D-WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC49	1.2D-WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC50	1.2D-WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC51	1.2D-WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC52	1.2D-WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC53	1.2D+WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC54	1.2D+WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC55	1.2D+WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC56	1.2D+WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC57	1.2D+WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC58	1.2D+WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC59	1.2D-WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC60	1.2D-WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC61	1.2D-WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC62	1.2D-WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC63	1.2D-WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC64	1.2D-WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC65	1.2D+WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC66	1.2D+WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC67	1.2D+WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC68	1.2D+WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC69	1.2D+WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC70	1.2D+WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC71	1.2D-WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC72	1.2D-WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC73	1.2D-WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC74	1.2D-WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC75	1.2D-WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC76	1.2D-WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC77	1.2D+WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC78	1.2D+WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC79	1.2D+WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC80	1.2D+WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC81	1.2D+WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC82	1.2D+WL150+1.5LLa4	Yes	0.00	0.00	0.00
LC83	1.2D-WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC84	1.2D-WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC85	1.2D-WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC86	1.2D-WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC87	1.2D-WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC88	1.2D-WL150+1.5LLa4	Yes	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
D	0.00	0.00	0.00
Wo	0.00	0.00	0.00
W30	0.00	0.00	0.00
W60	0.00	0.00	0.00
W90	0.00	0.00	0.00
W120	0.00	0.00	0.00
W150	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
WI60	0.00	0.00	0.00
WI90	0.00	0.00	0.00
WI120	0.00	0.00	0.00
WI150	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
WL60	0.00	0.00	0.00
WL90	0.00	0.00	0.00
WL120	0.00	0.00	0.00
WL150	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LL3	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
LC1	0.00	0.00	0.00
LC2	0.00	0.00	0.00
LC3	0.00	0.00	0.00
LC4	0.00	0.00	0.00
LC5	0.00	0.00	0.00
LC6	0.00	0.00	0.00
LC7	0.00	0.00	0.00
LC8	0.00	0.00	0.00
LC9	0.00	0.00	0.00
LC10	0.00	0.00	0.00
LC11	0.00	0.00	0.00
LC12	0.00	0.00	0.00
LC13	0.00	0.00	0.00
LC14	0.00	0.00	0.00
LC15	0.00	0.00	0.00
LC16	0.00	0.00	0.00
LC17	0.00	0.00	0.00
LC18	0.00	0.00	0.00
LC19	0.00	0.00	0.00
LC20	0.00	0.00	0.00
LC21	0.00	0.00	0.00
LC22	0.00	0.00	0.00
LC23	0.00	0.00	0.00
LC24	0.00	0.00	0.00
LC25	0.00	0.00	0.00
LC26	0.00	0.00	0.00
LC27	0.00	0.00	0.00
LC28	0.00	0.00	0.00
LC29	0.00	0.00	0.00
LC30	0.00	0.00	0.00
LC31	0.00	0.00	0.00
LC32	0.00	0.00	0.00
LC33	0.00	0.00	0.00

LC34	0.00	0.00	0.00
LC35	0.00	0.00	0.00
LC36	0.00	0.00	0.00
LC38	0.00	0.00	0.00
LC39	0.00	0.00	0.00
LC40	0.00	0.00	0.00
LC41	0.00	0.00	0.00
LC42	0.00	0.00	0.00
LC43	0.00	0.00	0.00
LC44	0.00	0.00	0.00
LC45	0.00	0.00	0.00
LC46	0.00	0.00	0.00
LC47	0.00	0.00	0.00
LC48	0.00	0.00	0.00
LC49	0.00	0.00	0.00
LC50	0.00	0.00	0.00
LC51	0.00	0.00	0.00
LC52	0.00	0.00	0.00
LC53	0.00	0.00	0.00
LC54	0.00	0.00	0.00
LC55	0.00	0.00	0.00
LC56	0.00	0.00	0.00
LC57	0.00	0.00	0.00
LC58	0.00	0.00	0.00
LC59	0.00	0.00	0.00
LC60	0.00	0.00	0.00
LC61	0.00	0.00	0.00
LC62	0.00	0.00	0.00
LC63	0.00	0.00	0.00
LC64	0.00	0.00	0.00
LC65	0.00	0.00	0.00
LC66	0.00	0.00	0.00
LC67	0.00	0.00	0.00
LC68	0.00	0.00	0.00
LC69	0.00	0.00	0.00
LC70	0.00	0.00	0.00
LC71	0.00	0.00	0.00
LC72	0.00	0.00	0.00
LC73	0.00	0.00	0.00
LC74	0.00	0.00	0.00
LC75	0.00	0.00	0.00
LC76	0.00	0.00	0.00
LC77	0.00	0.00	0.00
LC78	0.00	0.00	0.00
LC79	0.00	0.00	0.00
LC80	0.00	0.00	0.00
LC81	0.00	0.00	0.00
LC82	0.00	0.00	0.00
LC83	0.00	0.00	0.00
LC84	0.00	0.00	0.00
LC85	0.00	0.00	0.00
LC86	0.00	0.00	0.00
LC87	0.00	0.00	0.00
LC88	0.00	0.00	0.00



Current Date: 6/17/2020 4:15 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2135\Gamma Sector (Capacity Upgrade).retx

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2D+Wo
LC2=1.2D+W30
LC3=1.2D+W60
LC4=1.2D+W90
LC5=1.2D+W120
LC6=1.2D+W150
LC7=1.2D-Wo
LC8=1.2D-W30
LC9=1.2D-W60
LC10=1.2D-W90
LC11=1.2D-W120
LC12=1.2D-W150
LC13=0.9D+Wo
LC14=0.9D+W30
LC15=0.9D+W60
LC16=0.9D+W90
LC17=0.9D+W120
LC18=0.9D+W150
LC19=0.9D-Wo
LC20=0.9D-W30
LC21=0.9D-W60
LC22=0.9D-W90
LC23=0.9D-W120
LC24=0.9D-W150
LC25=1.2D+Di+W10
LC26=1.2D+Di+W130
LC27=1.2D+Di+W160
LC28=1.2D+Di+W190
LC29=1.2D+Di+W120
LC30=1.2D+Di+W150
LC31=1.2D+Di-W10
LC32=1.2D+Di-W130
LC33=1.2D+Di-W160
LC34=1.2D+Di-W190
LC35=1.2D+Di-W120
LC36=1.2D+Di-W150
LC38=1.2D+1.5LL1
LC39=1.2D+1.5LL2
LC40=1.2D+1.5LL3
LC41=1.2D+WL0+1.5LLa1
LC42=1.2D+WL30+1.5LLa1
LC43=1.2D+WL60+1.5LLa1
LC44=1.2D+WL90+1.5LLa1
LC45=1.2D+WL120+1.5LLa1
LC46=1.2D+WL150+1.5LLa1
LC47=1.2D-WL0+1.5LLa1
LC48=1.2D-WL30+1.5LLa1
LC49=1.2D-WL60+1.5LLa1
LC50=1.2D-WL90+1.5LLa1
LC51=1.2D-WL120+1.5LLa1
LC52=1.2D-WL150+1.5LLa1
LC53=1.2D+WL0+1.5LLa2

LC54=1.2D+WL30+1.5LLa2
 LC55=1.2D+WL60+1.5LLa2
 LC56=1.2D+WL90+1.5LLa2
 LC57=1.2D+WL120+1.5LLa2
 LC58=1.2D+WL150+1.5LLa2
 LC59=1.2D-WL0+1.5LLa2
 LC60=1.2D-WL30+1.5LLa2
 LC61=1.2D-WL60+1.5LLa2
 LC62=1.2D-WL90+1.5LLa2
 LC63=1.2D-WL120+1.5LLa2
 LC64=1.2D-WL150+1.5LLa2
 LC65=1.2D+WL0+1.5LLa3
 LC66=1.2D+WL30+1.5LLa3
 LC67=1.2D+WL60+1.5LLa3
 LC68=1.2D+WL90+1.5LLa3
 LC69=1.2D+WL120+1.5LLa3
 LC70=1.2D+WL150+1.5LLa3
 LC71=1.2D-WL0+1.5LLa3
 LC72=1.2D-WL30+1.5LLa3
 LC73=1.2D-WL60+1.5LLa3
 LC74=1.2D-WL90+1.5LLa3
 LC75=1.2D-WL120+1.5LLa3
 LC76=1.2D-WL150+1.5LLa3
 LC77=1.2D+WL0+1.5LLa4
 LC78=1.2D+WL30+1.5LLa4
 LC79=1.2D+WL60+1.5LLa4
 LC80=1.2D+WL90+1.5LLa4
 LC81=1.2D+WL120+1.5LLa4
 LC82=1.2D+WL150+1.5LLa4
 LC83=1.2D-WL0+1.5LLa4
 LC84=1.2D-WL30+1.5LLa4
 LC85=1.2D-WL60+1.5LLa4
 LC86=1.2D-WL90+1.5LLa4
 LC87=1.2D-WL120+1.5LLa4
 LC88=1.2D-WL150+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
PIPE 2x0.154		26	LC1 at 66.67%	0.61	OK	Eq. H1-1b
		27	LC7 at 66.67%	0.61	OK	Eq. H1-1b
		28	LC1 at 66.67%	0.61	OK	Eq. H1-1b
		29	LC40 at 64.58%	0.43	OK	Eq. H1-1b
		31	LC18 at 100.00%	0.51	OK	Eq. H1-1a
		40	LC39 at 85.42%	0.18	OK	Eq. H1-1b
		41	LC6 at 85.42%	0.12	OK	Eq. H1-1b
		42	LC12 at 85.42%	0.12	OK	Eq. H1-1b
		43	LC40 at 85.42%	0.16	OK	Eq. H1-1b
PIPE 2x0.218XS		3	LC7 at 78.57%	0.93	With warnings	Eq. H1-1a
		4	LC12 at 100.00%	0.37	OK	Eq. H1-1b
		5	LC6 at 100.00%	0.38	OK	Eq. H1-1b
		8	LC18 at 21.43%	0.68	With warnings	Eq. H1-1a
		9	LC12 at 0.00%	0.29	OK	Eq. H1-1b
		10	LC30 at 100.00%	0.29	OK	Eq. H1-1b
RndBar 3_4		11	LC25 at 0.00%	0.28	OK	Eq. H1-1a
		12	LC26 at 100.00%	0.36	OK	Eq. H1-1a
		13	LC40 at 100.00%	0.32	OK	Eq. H1-1a
		14	LC31 at 0.00%	0.40	OK	Eq. H1-1a
		15	LC36 at 0.00%	0.15	OK	Eq. Sec. D2
		16	LC30 at 0.00%	0.20	OK	Eq. Sec. D2



Current Date: 6/17/2020 4:15 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2135\Gamma Sector (Capacity Upgrade).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
2	7.50	0.00	0.00	0
3	-7.50	0.00	0.00	0
8	-4.40	0.00	0.00	0
9	4.40	0.00	0.00	0
10	0.00	0.00	-3.00	0
16	7.50	3.00	0.00	0
17	-7.50	3.00	0.00	0
22	-4.40	3.00	0.00	0
23	4.40	3.00	0.00	0
24	0.00	3.00	-3.00	0
33	-7.00	6.50	0.20	0
34	7.00	6.50	0.20	0
35	-7.00	-3.50	0.20	0
36	7.00	-3.50	0.20	0
42	2.33	6.50	0.20	0
43	2.33	-3.50	0.20	0
48	-2.33	6.50	0.20	0
49	-2.33	-3.50	0.20	0
51	-1.00	3.00	-6.50	0
76	3.8167	3.50	-0.70	0
77	0.8833	3.50	-2.70	0

78	-0.8833	3.50	-2.70	0
79	-3.8167	3.50	-0.70	0
80	3.8167	-0.50	-0.70	0
81	0.8833	-0.50	-2.70	0
82	-0.8833	-0.50	-2.70	0
83	-3.8167	-0.50	-0.70	0
11	-3.6667	0.00	-0.50	0
28	-0.7333	3.00	-2.50	0
27	0.7333	3.00	-2.50	0
12	3.6667	0.00	-0.50	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
10	1	1	1	1	1	1
24	1	1	1	1	1	1
51	1	1	1	0	0	0

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
3	3	2		PIPE 2x0.218XS	A53 GrB SABRE 50	0.00	0.00	0.00
4	8	10		PIPE 2x0.218XS	A53 GrB SABRE 50	0.00	0.00	0.00
5	9	10		PIPE 2x0.218XS	A53 GrB SABRE 50	0.00	0.00	0.00
8	17	16		PIPE 2x0.218XS	A53 GrB SABRE 50	0.00	0.00	0.00
9	22	24		PIPE 2x0.218XS	A53 GrB SABRE 50	0.00	0.00	0.00
10	23	24		PIPE 2x0.218XS	A53 GrB SABRE 50	0.00	0.00	0.00
11	14	28		RndBar 3_4	A572 Gr50	0.00	0.00	0.00
12	27	13		RndBar 3_4	A572 Gr50	0.00	0.00	0.00
13	25	11		RndBar 3_4	A572 Gr50	0.00	0.00	0.00
14	12	26		RndBar 3_4	A572 Gr50	0.00	0.00	0.00
15	28	11		RndBar 3_4	A572 Gr50	0.00	0.00	0.00
16	27	12		RndBar 3_4	A572 Gr50	0.00	0.00	0.00
26	34	36		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
27	42	43		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
28	48	49		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
29	33	35		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
31	22	51		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
40	76	80		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
41	77	81		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
42	78	82		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
43	79	83		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
12	315.00	0	0.00	0.00	0.00
26	315.00	0	0.00	0.00	0.00
27	315.00	0	0.00	0.00	0.00
28	315.00	0	0.00	0.00	0.00
29	315.00	0	0.00	0.00	0.00
40	315.00	0	0.00	0.00	0.00
41	315.00	0	0.00	0.00	0.00
42	315.00	0	0.00	0.00	0.00
43	315.00	0	0.00	0.00	0.00

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
31	0.00	2.00	0.00	0.00	2.00	0.00

Hinges

Member	Node-J				Node-K				TOR	AXL	Axial rigidity
	M33	M22	V3	V2	M33	M22	V3	V2			
15	0	0	0	0	0	0	0	0	0	0	Tension only
16	0	0	0	0	0	0	0	0	0	0	Tension only

168 CATOONA LANE

Location 168 CATOONA LANE

Mblu 000/ 0370/ / /

Acct# 000-0370

Owner AMERICAN TOWERS INC

Assessment \$3,019,920

Appraisal \$4,314,160

PID 116

Building Count 2

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$422,560	\$3,891,600	\$4,314,160
Assessment			
Valuation Year	Improvements	Land	Total
2019	\$295,800	\$2,724,120	\$3,019,920

Owner of Record

Owner AMERICAN TOWERS INC
Co-Owner
Address PO BOX 723597
ATLANTA, GA 31139

Sale Price \$1,040,050
Book & Page 5456/0339
Sale Date 02/17/2000

Ownership History

Ownership History			
Owner	Sale Price	Book & Page	Sale Date
AMERICAN TOWERS INC	\$1,040,050	5456/0339	02/17/2000
AMERICAN T & T CO	\$0	1128/0268	03/15/1968

Building Information

Building 1 : Section 1

Year Built: 1968
Living Area: 3,249

Building Attributes	
Field	Description
STYLE	Telephone Bldg

MODEL	Comm/Ind
Grade	C
Stories:	1
Occupancy	1.00
Exterior Wall 1	Reinforc Concr
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	T&G/Rubber
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	Gas/LP
Heating Type	Hot Air-no Duc
AC Type	Central
Struct Class	
Bldg Use	Industrial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflid 218	
Usrflid 219	
1st Floor Use:	300C
Heat/AC	Heat/AC Pkgs
Frame Type	Masonry
Baths/Plumbing	None
Ceiling/Wall	Ceil & Wall
Rooms/Prtns	Average
Wall Height	15.00
% Comn Wall	

Building 2 : Section 1

Year Built: 1989
Living Area: 600

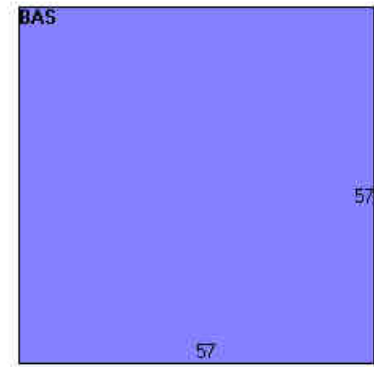
Building Attributes : Bldg 2 of 2	
Field	Description
STYLE	Telephone Bldg
MODEL	Comm/Ind
Grade	C
Stories:	1
Occupancy	1.00

Building Photo



(<http://images.vgsi.com/photos/StamfordCTPhotos//A00\11\89\56.jpg>)

Building Layout



(http://images.vgsi.com/photos/StamfordCTPhotos//Sketches/116_116.jpg)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	3,249	3,249
		3,249	3,249

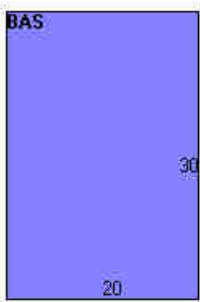
Exterior Wall 1	Reinforc Concr
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	T&G/Rubber
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	Gas/LP
Heating Type	Hot Air-no Duc
AC Type	Central
Struct Class	
Bldg Use	Industrial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflid 218	
Usrflid 219	
1st Floor Use:	300C
Heat/AC	Heat/AC Pkgs
Frame Type	FireProofSteel
Baths/Plumbing	None
Ceiling/Wall	Ceil & Wall
Rooms/Prtns	Average
Wall Height	10.00
% Comn Wall	

Building Photo



(http://images.vgsi.com/photos/StamfordCTPhotos//default.jpg)

Building Layout



(http://images.vgsi.com/photos/StamfordCTPhotos//Sketches/116_36833.jp

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	600	600
		600	600

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use

Use Code	300C
Description	Industrial MDL-94
Zone	MZN

Land Line Valuation

Size (Acres)	3.64
Depth	
Assessed Value	\$2,724,120

Neighborhood 0300
Alt Land Appr No
Category

Appraised Value \$3,891,600

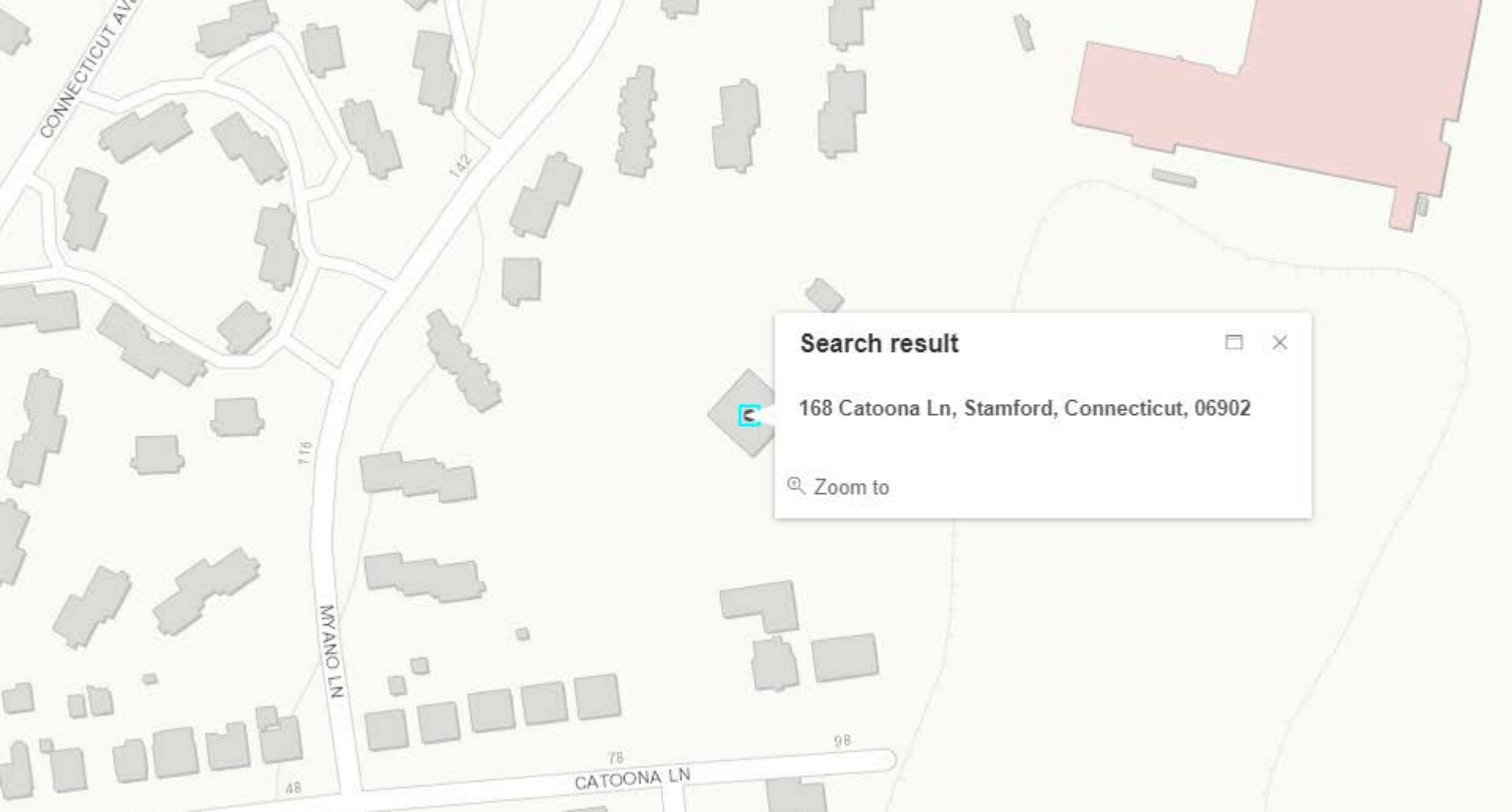
Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
AP1	Fence Chn Lk			2400.00 L.F.	\$20,700	1
LP4	Pavng Asphlt			3880.00 S.F	\$4,660	1
CEL1	Cell Tower			1.00 SITES	\$146,250	1
CSDH	Cell Equipment			240.00 S.F.	\$7,300	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$422,560	\$3,891,600	\$4,314,160
2018	\$422,560	\$3,891,600	\$4,314,160
2017	\$422,560	\$3,891,600	\$4,314,160

Assessment			
Valuation Year	Improvements	Land	Total
2019	\$295,800	\$2,724,120	\$3,019,920
2018	\$295,800	\$2,724,120	\$3,019,920
2017	\$295,800	\$2,724,120	\$3,019,920



Search result



168 Catoona Ln, Stamford, Connecticut, 06902

Zoom to



LETTER OF AUTHORIZATION

ATC SITE # / NAME/PROJECT: 88018/Stamford (Katoona)/ OAA759352
SITE ADDRESS: 168 Catoona Lane, Stamford, CT 06904
APN: STAM-000000-000000-000370
LICENSEE: AT&T Mobility d/b/a New Cingular Wireless PCS, LLC

I, Margaret Robinson, Senior Counsel for American Tower*, owner of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize AT&T Mobility d/b/a New Cingular Wireless PCS, LLC, its successors and assigns, and/or its agent, (collectively, the "Licensee") to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use or building permit application(s) as may be required by the applicable permitting authorities for Licensee's telecommunications' installation.

We understand that this application may be denied, modified, or approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

Signature:

Print Name: Margaret Robinson
Senior Counsel
American Tower*

NOTARY BLOCK

Commonwealth of MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Senior Counsel for American Tower*, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

WITNESS my hand and official seal, this 31st day of July, 2020.

NOTARY SEAL

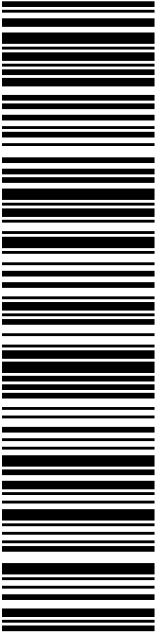


GERARD T. HEFFRON
Notary Public
Commonwealth of Massachusetts
My Commission Expires
August 9, 2024

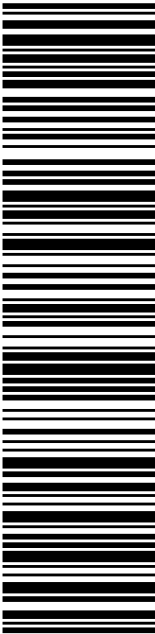
Notary Public

My Commission Expires: August 9, 2024

*American Tower includes all affiliates and subsidiaries of American Tower Corporation.

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9405 5036 9930 0482 2284 65			
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Carrier -- Leave if No Response		C024	
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USPS TRACKING #			
			
9405 5036 9930 0482 2284 89			
Electronic Rate Approved #038555749			



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MERIDEN CT 06450-4723

Expected Delivery Date: 08/07/20

0005

Carrier -- Leave if No Response

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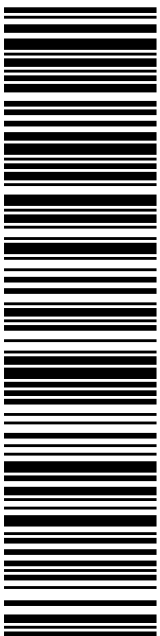
SHIP

TO:

MELANIE A BACHMAN, EXEC DIR
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQ

NEW BRITAIN CT 06051-2655

USPS TRACKING #



9405 5036 9930 0482 2285 02

Electronic Rate Approved #038555749

Cut on dotted line.



Hollis Redding

To: Lia.Bobek@americantower.com
Subject: AT&T Wireless CSC Exempt Mod filing 168 Catoona Lane, Stamford, CT ATC project number OAA759941

Hi Lia-

Attached please find the exempt modification that was filed with the CT Siting Council today, August 6, 2020 for the above mentioned site. Thank you. Hollis

Hollis M. Redding



SAI Communications LLC
Mobile: 860-834-6964
hredding@saigrp.com