



October 14, 2016

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

Regarding: Notice of Exempt Modification – Swap (3) antennas swap (3)
RR s add (3) SBT
Property Address: 41 (a/ka/ 401-411) Lopus Road, Beacon Falls, CT 06403
AT&T Site: CT2003 -Beacon Falls Lopus Road

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 149-foot monopole at the above-referenced address, latitude 41.432833 longitude -73.070222. Said monopole is owned by American Tower Corporation. The existing concrete equipment pad is 230 square feet.

AT&T desires to modify its existing telecommunications facility by swapping (3) antennas, swapping (3) RR s, adding (3) SBTs to the existing configuration. The centerline height of said antennas is and will remain at 168 feet. Antennas are mounted utilizing a sector frame.

Please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72 (b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to The First Selectman of Beacon Falls, Christopher J. Bielik, the landowner the Town of Rock Hill, and to the management company for the monopole, American Tower Corporation.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72 (b)(2). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure. The antennas to be swapped will be installed at the existing height of 145 feet on the 149-foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment, and therefore will not require an extension of the site boundary.
3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above Federal Communications Commission (FCC) safety standard. An RF emissions calculation (attached) for AT&T's modified facility is herein provided.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The self-supported tower and its foundation can support AT&T's proposed modifications (please see attached structural analysis completed by American Tower dated October 12, 2016).

For the foregoing reasons, AT&T respectfully requests that the proposed antenna swap, remote radio head swap and SBT installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

Sarah Snell

Sarah Snell
Site Acquisition Specialist

cc: First Selectman of Beacon Falls Christopher J. Bielik
Town of Beacon Falls, Landowner
American Tower Corporation, Management Company

Town of Beacon Falls

Geographic Information System (GIS)



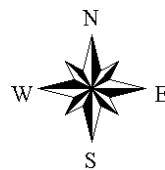
Date Printed: 10/14/2016



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Beacon Falls and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 75 feet





Property Information

Owner	BEACON FALLS TOWN OF
Address	401 LOPUS RD
Mailing Address	10 MAPLE AVE BEACON FALLS , CT 06403
Land Use	- 31
Land Class	3411

Census Tract	3411
Neighborhood	300
Zoning	
Acreage	3.06
Utilities	
Lot Setting/ Desc	/

Photo



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

	Appraised	Assessed
Buildings	321150	224810
Outbuildings		
Improvements		
Extras		
Land	206550	144590
Total	777700	544390
Previous		

Construction Details

Year Built	0
Stories	
Building Style	
Building Use	
Building Condition	
Total Rooms	
Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

EXTERIOR WALLS:

Primary	
Secondary	

INTERIOR WALLS:

Primary	
Secondary	

FLOORS:

Primary	
Secondary	

HEATING/AC:

Heating Type	
Heating Fuel	
AC Type	

BUILDING AREA:

Effective Building Area	
Gross Building Area	
Total Living Area	0

SALES HISTORY:

Sale Date	2/13/1975
Sale Price	0
Book/ Page	/

PROJECT INFORMATION

SCOPE OF WORK: UNMANNED COMMUNICATIONS FACILITY MODIFICATIONS INCLUDING THE REPLACEMENT OF THREE LTE ANTENNAS WITH THREE NEW CCI HPA65RBUUH6 PANELS WITH THE REPLACEMENT OF (3) ERICSSON RRUS-11, WITH NEW (3) RRUS-32, UNITS UNITS ON EXISTING CLAMP RING MOUNT RE-USING EXISTING (1) RAYCAP SURGE ARRESTOR, (1) FIBER TRUNK AND (2) DC TRUNKS.

SITE NUMBER: CT2003

SITE NAME: BEACON FALLS - LOPUS ROAD

SITE ADDRESS: 401 LOPUS ROAD
BEACON FALLS, CT 06403

PROPERTY OWNER: TOWN OF BEACON FALLS
10 MAPLE AVE.
BEACON FALLS, CT 06403

APPLICANT: AT&T MOBILITY
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

CONTACT: TEL 866-915-5600

COORDINATES: LAT. N41°25'58.2"
LONG. W73°04'13.0"

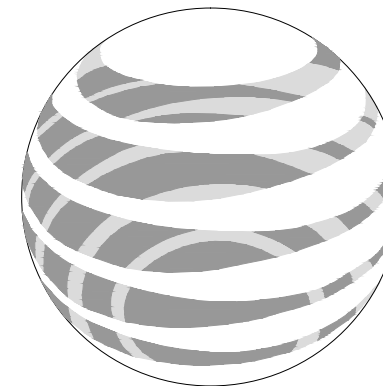
GROUND LEVEL: ±160'

DEED REFERENCE: N/A

SITE PARCEL NO.: N/A

CURRENT ZONING: N/A

HORIZONTAL DATUM: (NAD) 1983



at&t
Mobility

SITE NUMBER: CT2003
SITE NAME: BEACON FALLS - LOPUS RD
PROJECT: BWE 1900

DRAWING INDEX

REV

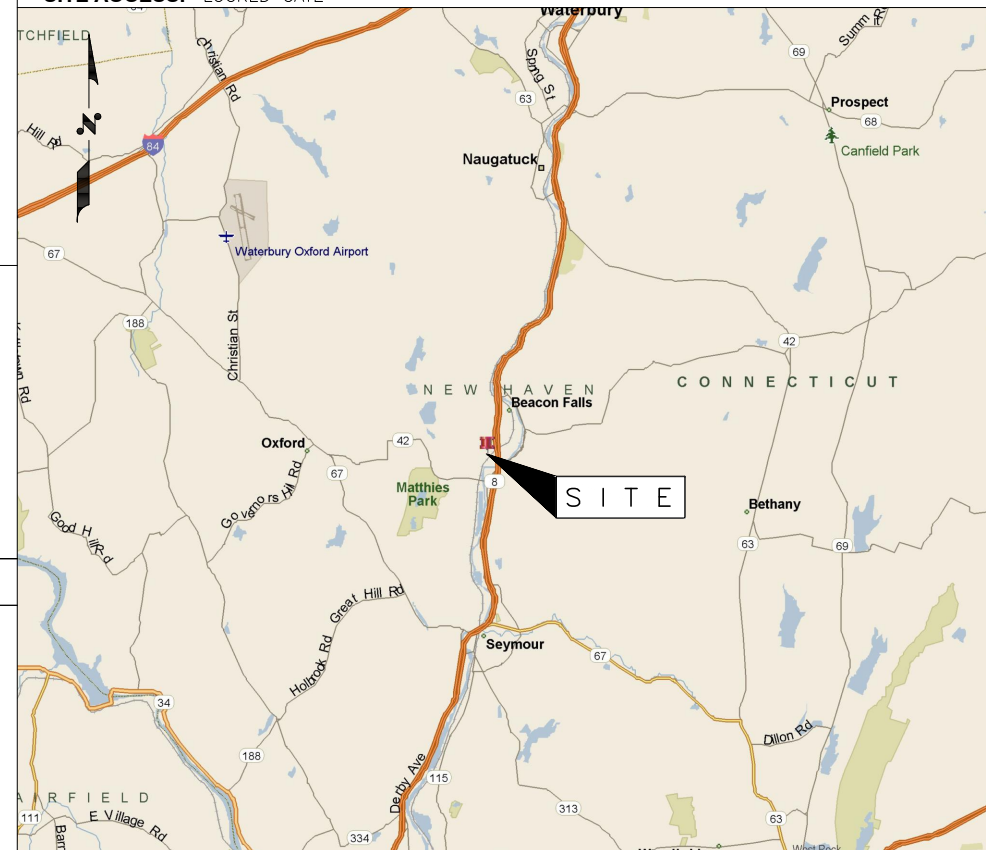
01	TITLE SHEET	1
02	NOTES	1
03	SITE PLAN & EQUIPMENT PLAN	1
04	ELEVATION VIEW & ANTENNA LAYOUT	1
05	GROUNDING DETAILS	1

LOCATION MAP

APPLICABLE BUILDING CODES AND STANDARDS

DIRECTIONS: FROM ROCKY HILL TAKE I-91 S TOWARD NEW HAVEN. TAKE EXIT 18 (I-691 WEST) TOWARD MERIDEN/WATERBURY. MERGE ONTO I-84 WEST. EXIT 19 (RT-8 SOUTH) ON LEFT TOWARD NAUGATUCK/BRIDGEPORT. TAKE EXIT 24 TOWARD RT-42. RIGHT ONTO NORTH MAIN ST. RIGHT ONTO DEPOT ST. RIGHT ONTO RAILROAD AV. END AT LOPUS ROAD.

SITE ACCESS: LOCKED GATE



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

BUILDING CODE:
CONNECTICUT STATE BUILDING CODE

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE LATEST EDITION
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
AMERICAN NATIONAL STANDARDS INSTITUTE/TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA) 222-F OR G AS APPLICABLE, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

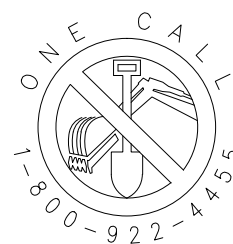
INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

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.



AT LEAST 2 WORKING DAYS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CONNECTICUT ONE CALL SYSTEM AT 1-800-922-4455

CONTACT & UTILITY INFORMATION

CONTACT ENGINEERING:	CONTACT: MIGUEL NOBRE	COMPANY: VRG	PHONE NO.: (508) 981-9590
SITE ACQUISITION:	DAVID COOPER	EMPIRE	(484) 683-5349
CONSTRUCTION:	BILL DANIELS	EMPIRE	(484) 683-5349
UTILITIES:			
POWER:	WORK REQUEST GROUP	NATIONAL GRID	(800) 375-7405
TELCO:	.	VERIZON	(800) 941-9900

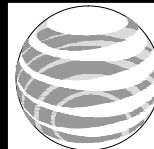


489 Washington Street
Auburn, MA 01501
Tel. (508) 981-9590
Fax (508) 519-8939
mnobre@verticalresourcesgrp.com



EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

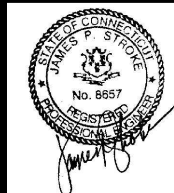
SITE NUMBER: CT2003
SITE NAME: BEACON FALLS LOPUS RD
401 LOPUS ROAD
BEACON FALLS, CT 06403
NEW HANVEN COUNTY



at&t
Mobility

550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
1	09/14/16	FOR CONSTRUCTION	G.A.M.		
2	09/12/16	FOR REVIEW	G.A.M.		
SCALE DESIGNED BY: M.N. DRAWN BY: G.A.M.					



AT&T MOBILITY

TITLE SHEET

JOB NUMBER	DRAWING NUMBER	REV
50-145	01	1

GENERAL NOTES

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – PRIME CONTRACTOR
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T WIRELESS
 OEM – ORIGINAL EQUIPMENT MANUFACTURER
- 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.
- 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.
- DRAWINGS PROVIDED HERE ARE NOT TO SCALE UNLESS OTHERWISE NOTED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. ROUTING OF CONDUIT FOR POWER AND TELCO SHALL BE APPROVED BY OWNER OF SITE.
- 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.
- 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.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

SITE WORK GENERAL NOTES

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, TOP SOIL AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE OWNER SPECIFICATION FOR SITE SIGNAGE.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE TRANSMISSION EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION, SEE DETAIL 303.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 (HOT-DIP) UNLESS NOTED OTHERWISE. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. STEEL FASTENER HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (HOT-DIP)
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI OR APPROVED EQUAL.
- ALL STRUCTURAL STEEL SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000 PSI) MAY BE USED.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
 CONCRETE CAST AGAINST EARTH.....3 IN.
 CONCRETE EXPOSED TO EARTH OR WEATHER:
 #6 AND LARGER2 INCH
 #5 AND SMALLER & WWF.....1 1/2 INCH
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 SLAB AND WALL3/4 INCH
 BEAMS AND COLUMNS.....1 1/2 INCH
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD HILTI OR APPROVED EQUAL.
- CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC 1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
 (A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT,
 (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
 FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7, TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.
- ALL CONCRETE SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL, EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.
- AS AN ALTERNATIVE TO ITEMS 2 AND 3 PROOF ROLL THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/3B) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL, AND COMPACTED AS STATED ABOVE.
- COMPACTION CRITERIA FOR OTHER FILL AREAS ON SITE SHALL MEET THE SAME REQUIREMENTS AS NOTED ABOVE.
- SOIL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

COMPACTION EQUIPMENT:

HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

ELECTRICAL INSTALLATION NOTES

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PERMANENT LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S). NO HAND WRITTEN LABELS ALLOWED.
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED. NO HAND WRITTEN LABELS ALLOWED.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (SIZE 6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

ELECTRICAL INSTALLATION NOTES (cont.)

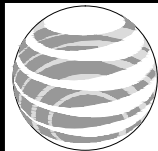
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



489 Washington Street
 Auburn, MA 01501
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 Fax (508) 519 - 8939
 mnobre@verticalresourcesgrp.com

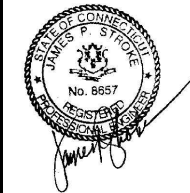


SITE NUMBER: CT2003
SITE NAME: BEACON FALLS LOPUS RD
 401 LOPUS ROAD
 BEACON FALLS, CT 06403
 NEW HANVEN COUNTY



at&t
 Mobility
 550 COCHITUATE RD
 SUITES 13 & 14
 FRAMINGHAM, MA 01701

▲	09/14/16	FOR CONSTRUCTION	G.A.M.		
▲	09/12/16	FOR REVIEW	G.A.M.		
NO.	DATE	REVISION	BY	CHK	APP'D
SCALE		DESIGNED BY: M.N.	DRAWN BY: G.A.M.		



AT&T MOBILITY

NOTES

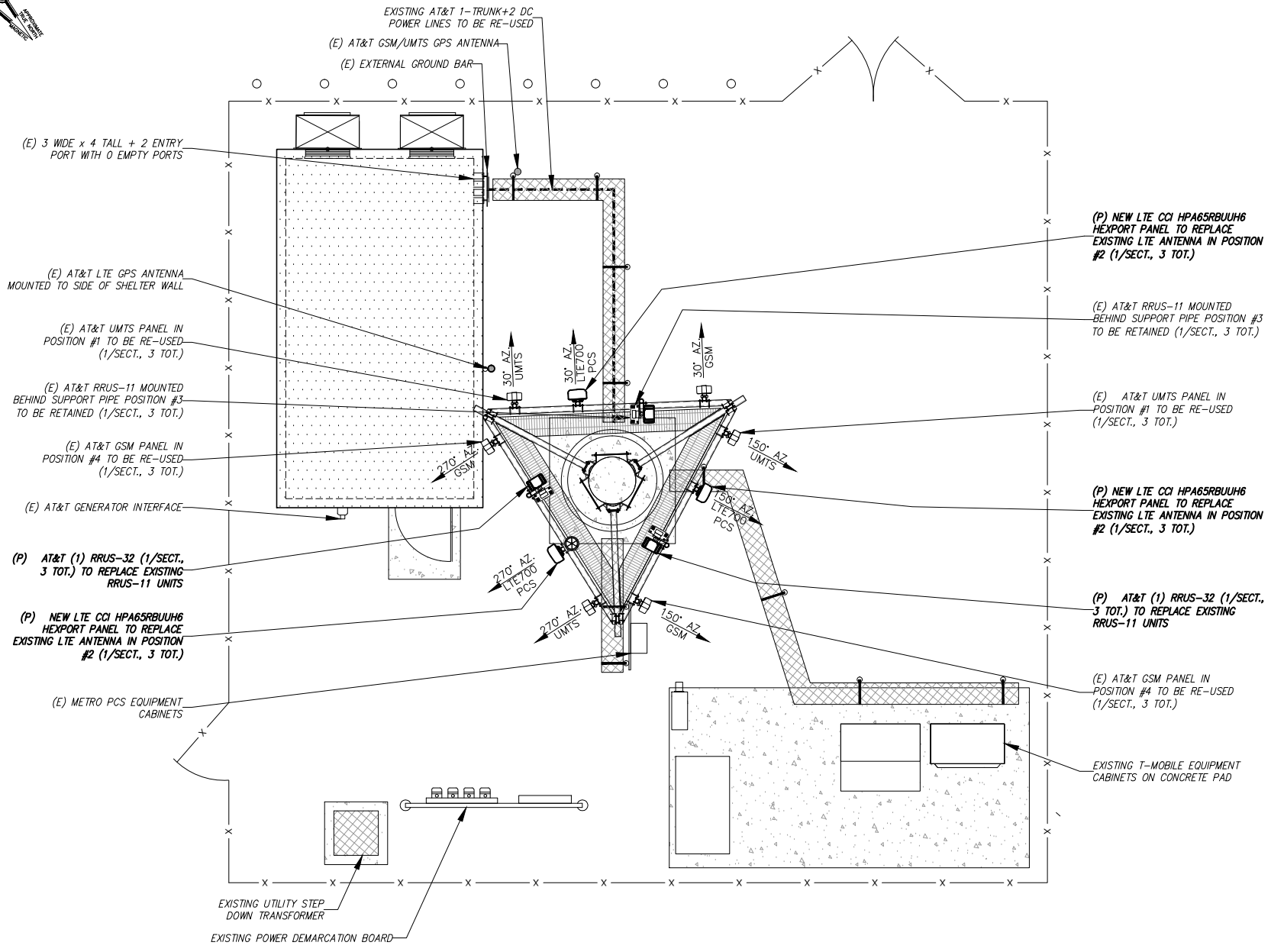
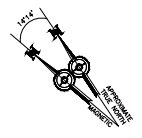
JOB NUMBER	DRAWING NUMBER	REV
50-145	02	1

GENERAL NOTES

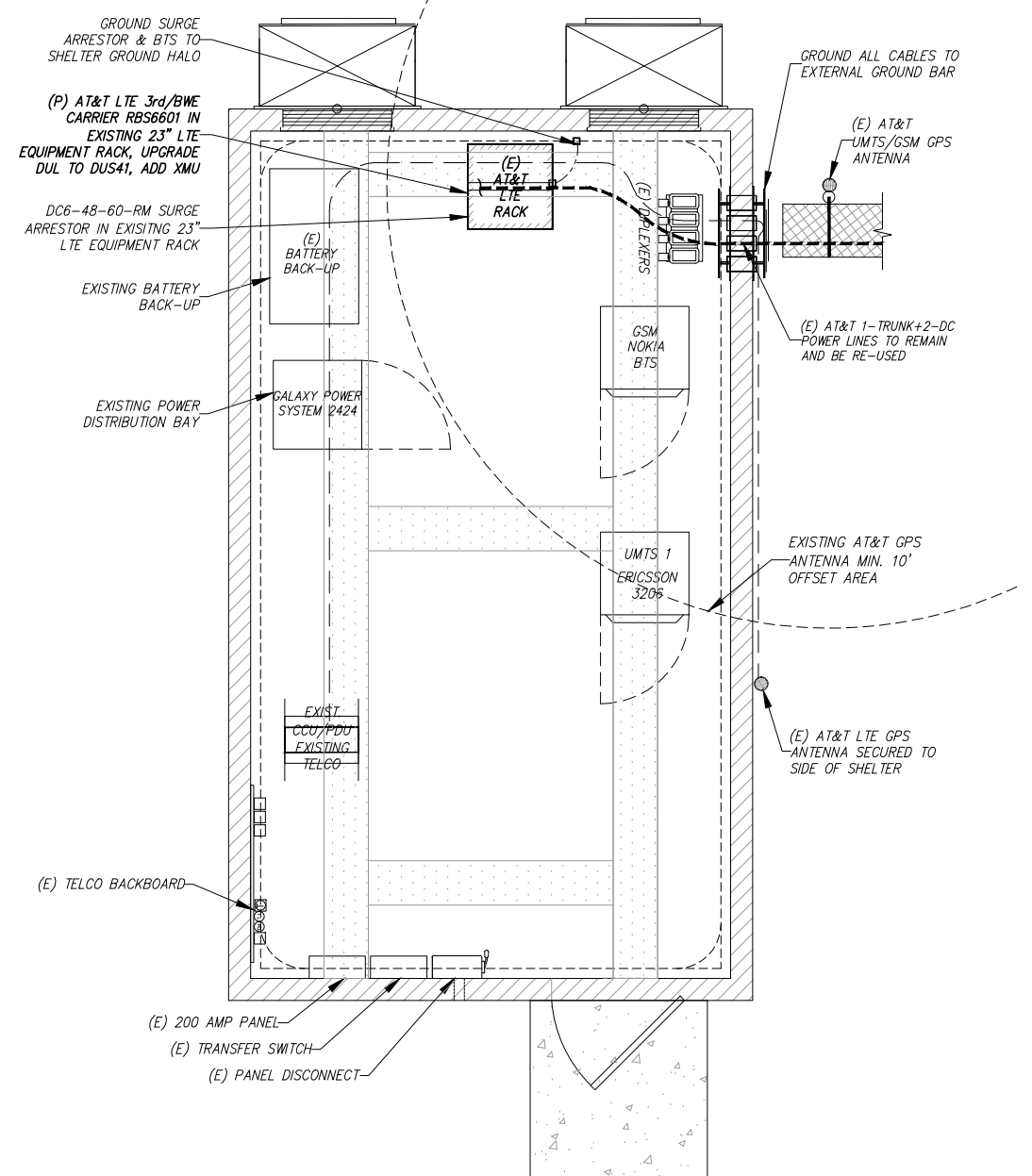
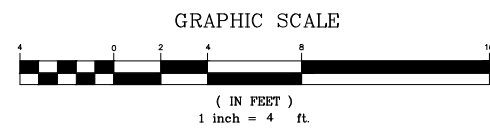
1. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND THE POSITIONS OF ALL EQUIPMENT IN THE COMPOUND ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.

2. THE CELLULAR INSTALLATION IS AN UNMANNED PRIVATE AND SECURED COMPOUND. 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. CONSTRUCTION, MAINTENANCE & OPERATION OF PROPOSED TOWER FACILITY WILL BE HELD IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE & FEDERAL REGULATIONS AND GUIDELINES.



COMPOUND PLAN 1
SCALE: 1" = 4'



EQUIPMENT PLAN 2
SCALE: 1" = 2'

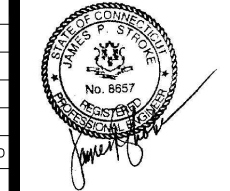
VRG
VERTICAL RESOURCES GRP.
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Tel. (508) 981-9590
Fax (508) 519-8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT2003
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401 LOPUS ROAD
BEACON FALLS, CT 06403
NEW HANVEN COUNTY

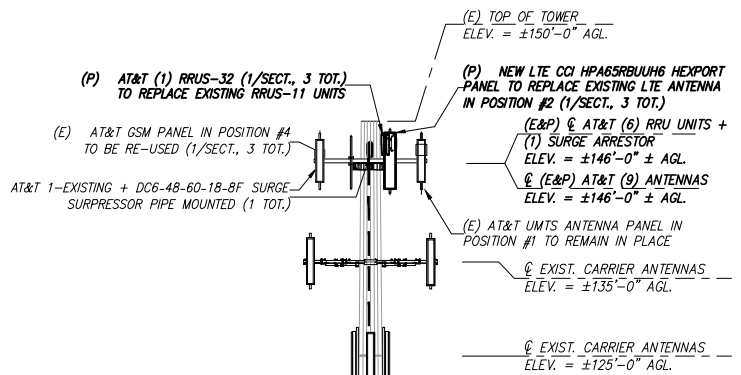
at&t
Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
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SCALE		DESIGNED BY: M.N.	DRAWN BY: G.A.M.		

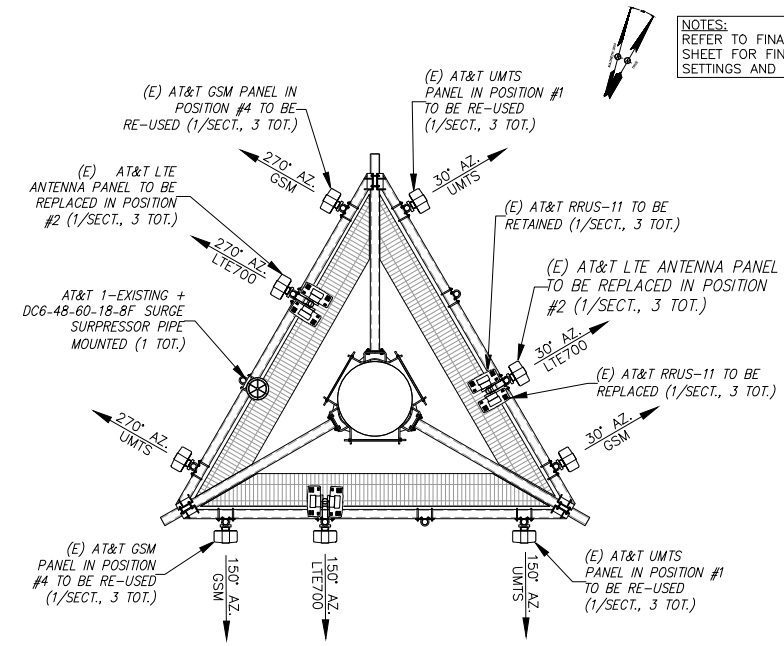


AT&T MOBILITY
SITE PLAN & EQUIPMENT PLAN

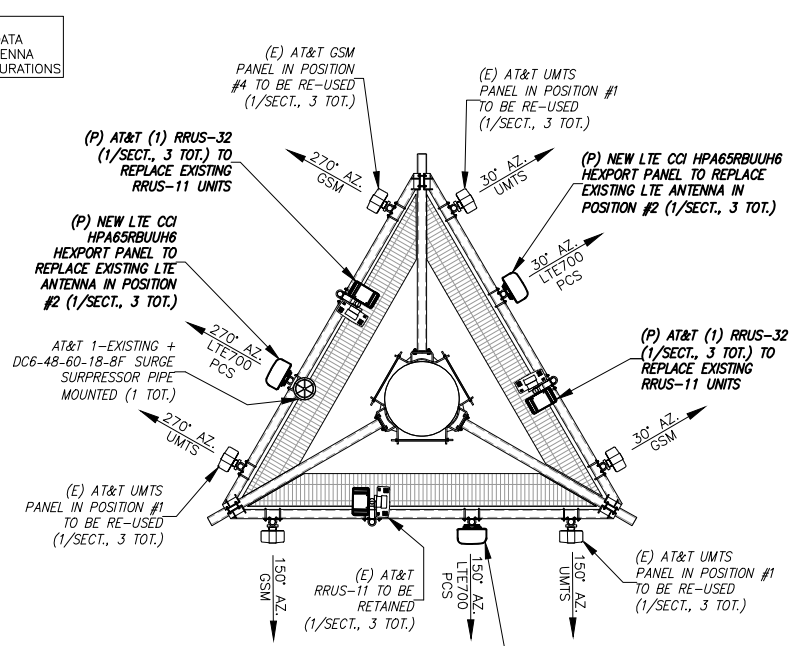
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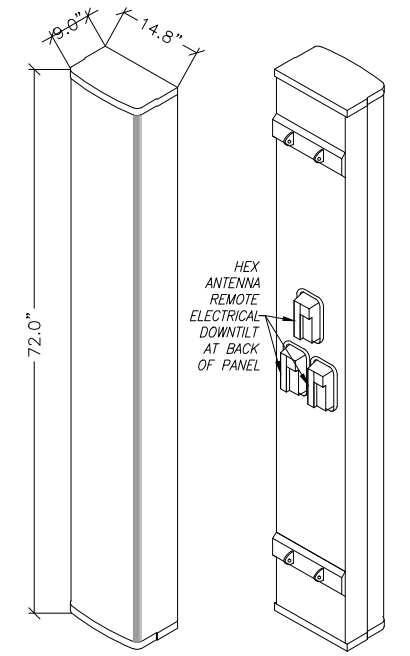
NOTES:
STRUCTURAL ANALYSIS TO DETERMINE TOWERS CAPACITY TO SUPPORT PROPOSED ANTENNAS SHALL BE DONE BY OTHERS



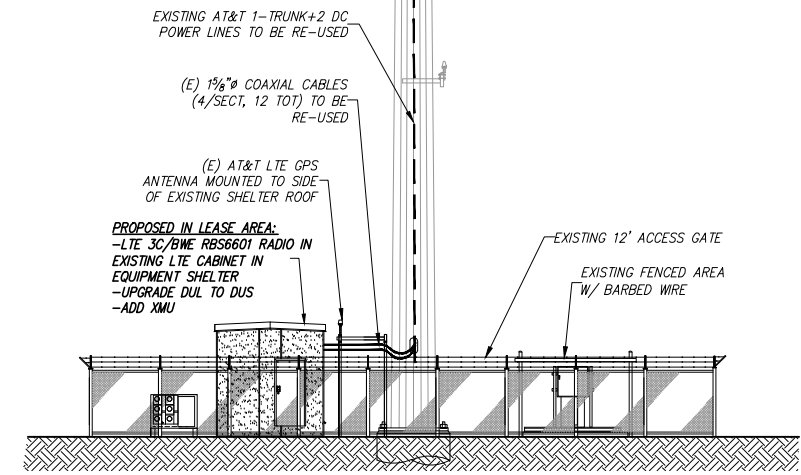
ANTENNA MOUNTING PLAN VIEW 2
SCALE: N.T.S.



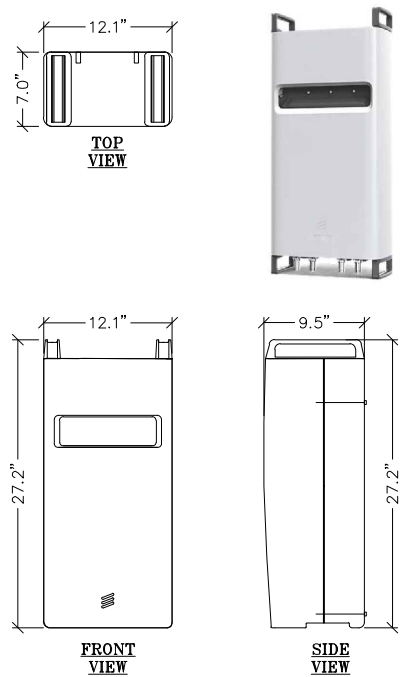
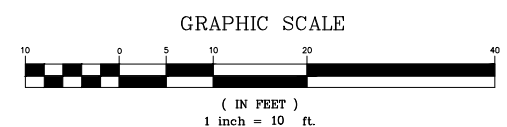
PROPOSED



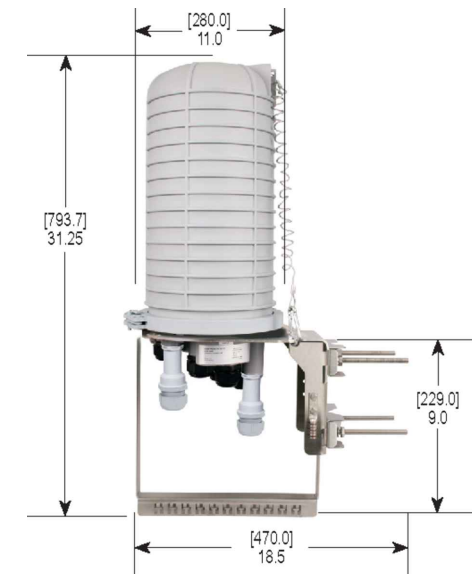
ISOMETRIC FRONT VIEW
ISOMETRIC REAR VIEW
LTE CCI HEXPORT ANTENNA & RET DETAIL 3
SCALE: N.T.S.



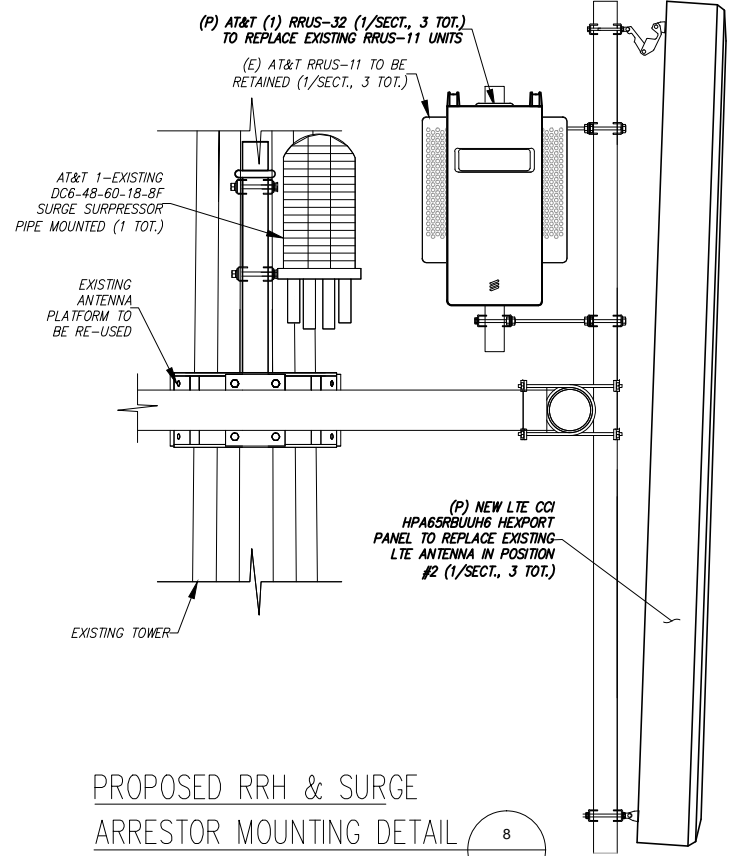
ELEVATION VIEW 1
SCALE: 1" = 10'



PROPOSED ERICSSON DUAL PA RRUS-32 6
SCALE: N.T.S.



RAYCAP SURGE SUPPRESSOR DC64860188F 6
SCALE: N.T.S.



PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL 8
SCALE: N.T.S.

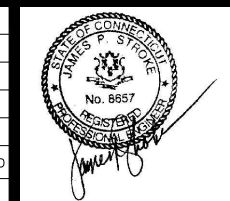
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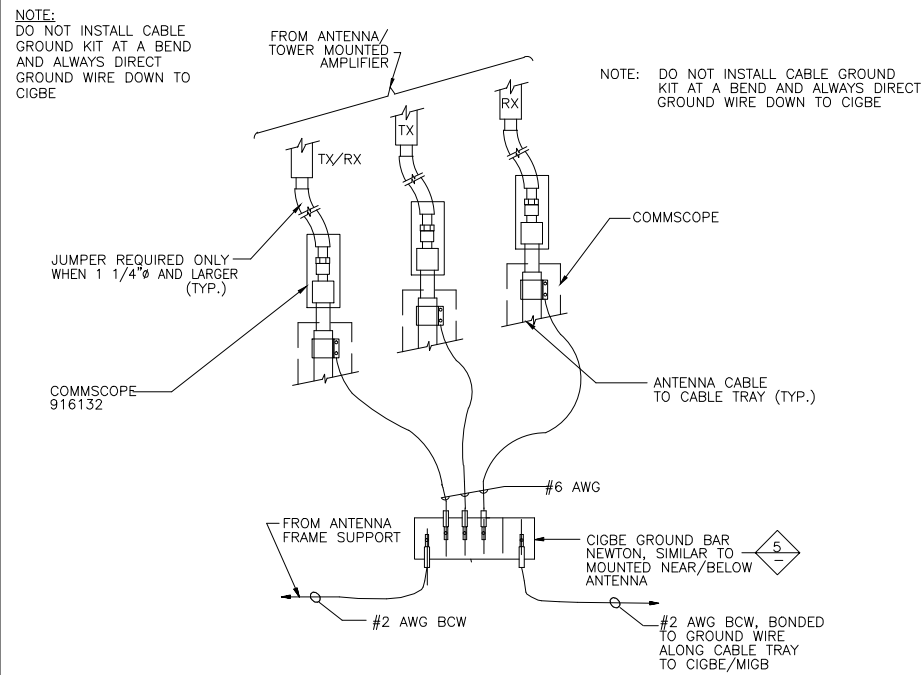
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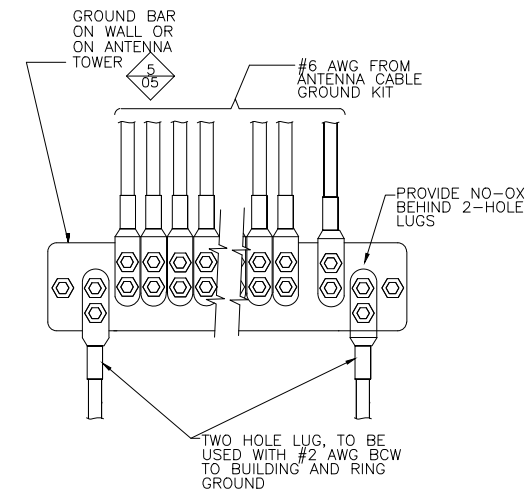


AT&T MOBILITY
ELEVATION VIEW & ANTENNA LAYOUT

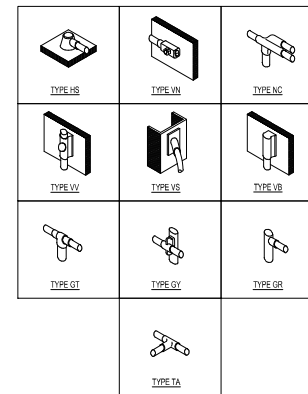
JOB NUMBER	DRAWING NUMBER	REV
50-145	04	1



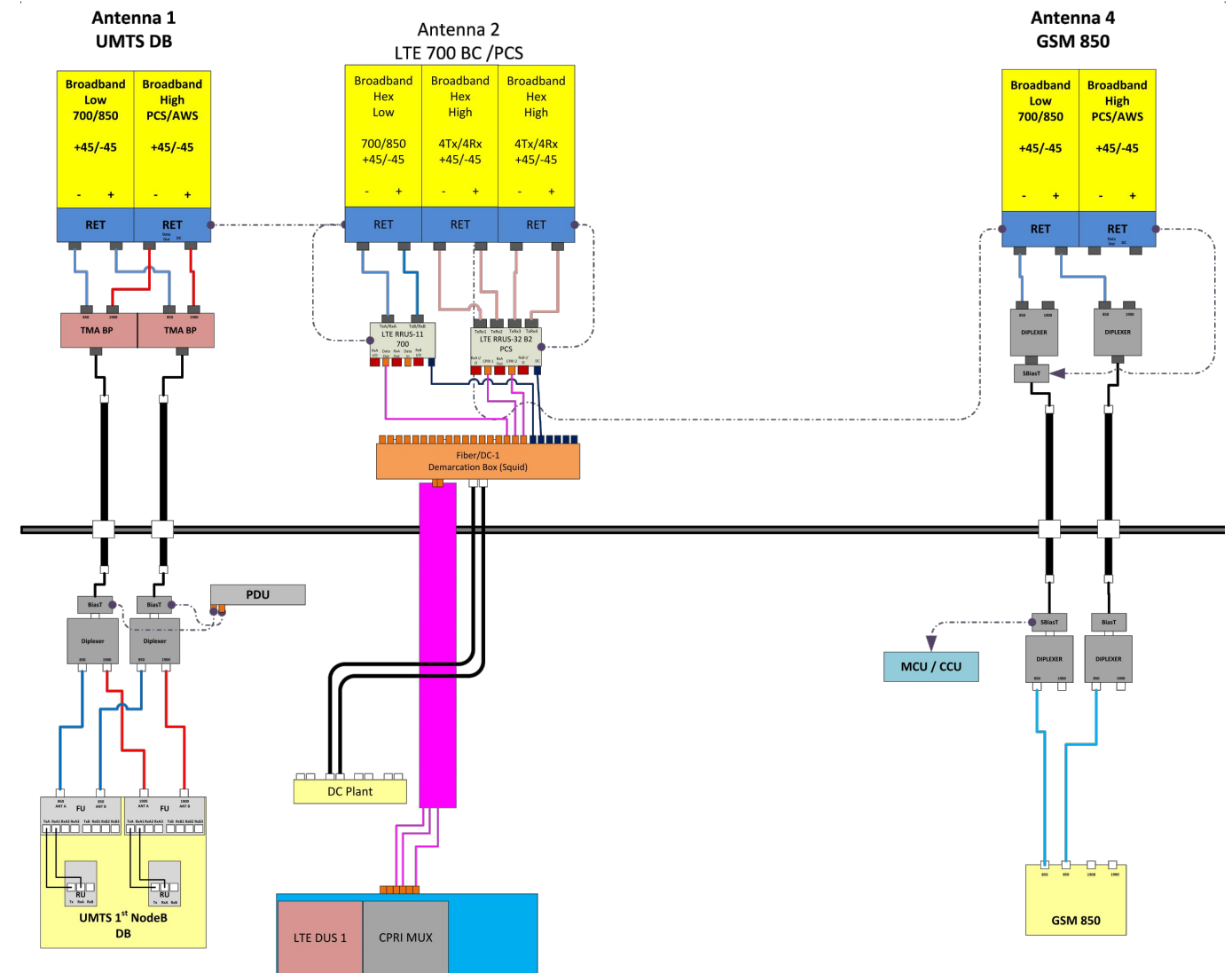
CONNECTION OF GROUND WIRES TO GROUNDING BAR (CIGBE)
SCALE: N.T.S.



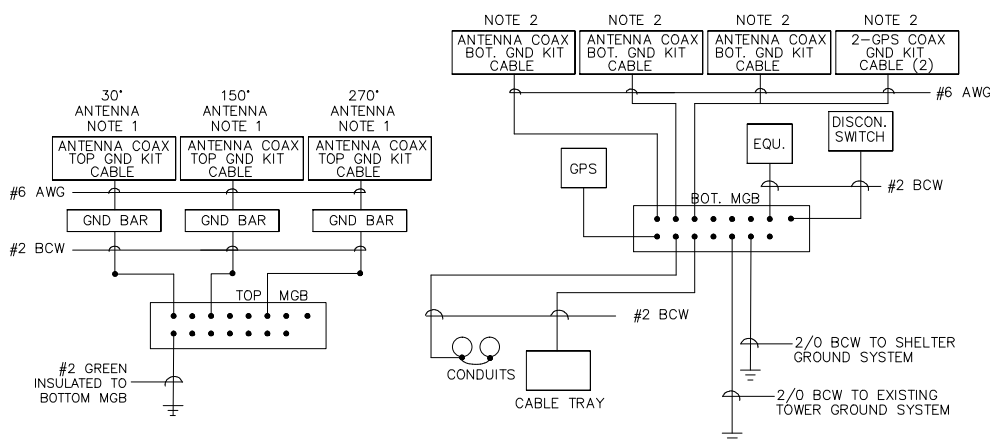
INSTALLATION OF GROUND WIRE TO GROUND BAR
SCALE: N.T.S.



GROUNDING CONNECTION DETAIL
SCALE: N.T.S.



PLUMBING DIAGRAM
SCALE: N.T.S.

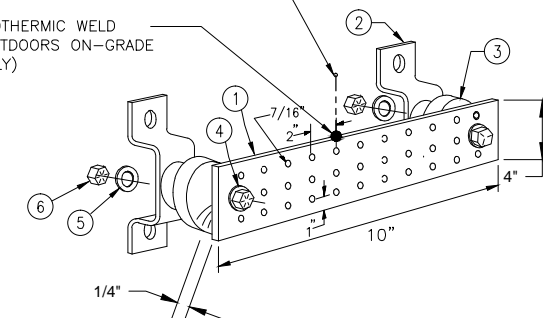


SCHEMATIC GROUNDING DIAGRAM
SCALE: N.T.S.

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C. OR APPROVED EQUAL			
ITEM	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x12"	PRE DRILLED GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	2	3061-4	INSULATORS
④	2	3012-13	5/8"-11x4" H.H.C.S.
⑤	4	3015-8	5/8 LOCKWASHER
⑥	2	3014-8	5/8"-11 HEX NUT

1-2 AWG TO MAIN GROUND BAR (MGB) IN EQUIPMENT SPACE OR BURIED GROUND CONDUCTOR AS APPLICABLE

EXOTHERMIC WELD (OUTDOORS ON-GRADE ONLY)



GROUND BAR DETAIL
SCALE: N.T.S.



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



Structural Analysis Report

Structure : 149 ft Monopole
ATC Site Name : Beacon Falls CT, CT
ATC Site Number : 370641
Engineering Number : OAA686706_C3_01
Proposed Carrier : AT&T Mobility
Carrier Site Name : Beacon Falls Lopus Road
Carrier Site Number : CT2003
Site Location : 401-411 Lopus Road
Beacon Falls, CT 06403-0000
41.432833,-73.070222
County : New Haven
Date : October 12, 2016
Max Usage : 39%
Result : Pass

Prepared By:
Tyler M. Barker
CLS

Reviewed By:

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment	2
Structure Usages	3
Foundations	3
Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 149 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	EEI Job #13674, dated October 14, 2005
Foundation Drawing	EEI Job #13674, dated October 19, 2005
Geotechnical Report	Tectonic Project #3917.BEACON, dated August 17, 2005

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.19$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

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

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
145.5	145.5	6	Powerwave LGP13519	Low Profile Platform	(12) 1 5/8" Coax (1) 2" Conduit	AT&T Mobility
		1	Raycap DC6-48-60-18-8F			
		6	Powerwave LGP21401			
		3	Ericsson RRUS 11 (Band 12)			
		6	Powerwave 7770.00			
130.0	130.0	3	Ericsson KRY 112 144/1	T-Arms	(12) 1 5/8" Coax (1) 1.57" Hybrid	T-Mobile
		6	Ericsson AIR 21			
121.0	121.0	9	RFS APX16DWV-16DWVS-C-A20	Flush	(9) 1 5/8" Coax	Youghiogheny
115.0	115.0	2	Alcatel-Lucent RRH 2X60-1900	Low Profile Platform	(1) 1 5/8" Hybriflex	Verizon
		2	Alcatel-Lucent RRH2x60 700			
		1	RFS DB-B1-6C-12AB-OZ			
		2	Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield			
		4	Andrew HBXX-6517DS-A2M			
4	Commscope LNX-6515DS-A1M					

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
145.5	145.5	3	KMW AM-X-CD-16-65-00T-RET	-	-	AT&T Mobility
		3	Ericsson RRUS 11 (Band 12)			

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
145.5	145.5	3	Kathrein 782 10253	Low Profile Platform	(2) 0.78" 8 AWG 6 (1) 0.39" Fiber Trunk	AT&T Mobility
		6	Powerwave 7020.00 Dual Band RET			
		3	Ericsson RRUS 32 B2			
		3	CCI HPA-65R-BUU-H6			

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	34%	Pass
Shaft	39%	Pass
Base Plate	36%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,762.3	5,079.1	2,249.2	44%
Shear (Kips)	34.9	47.1	21.8	46%

* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
145.5	Kathrein 782 10253	AT&T Mobility	1.094	0.832
	Powerwave 7020.00 Dual Band RET			
	Ericsson RRUS 32 B2			
	CCI HPA-65R-BUU-H6			

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

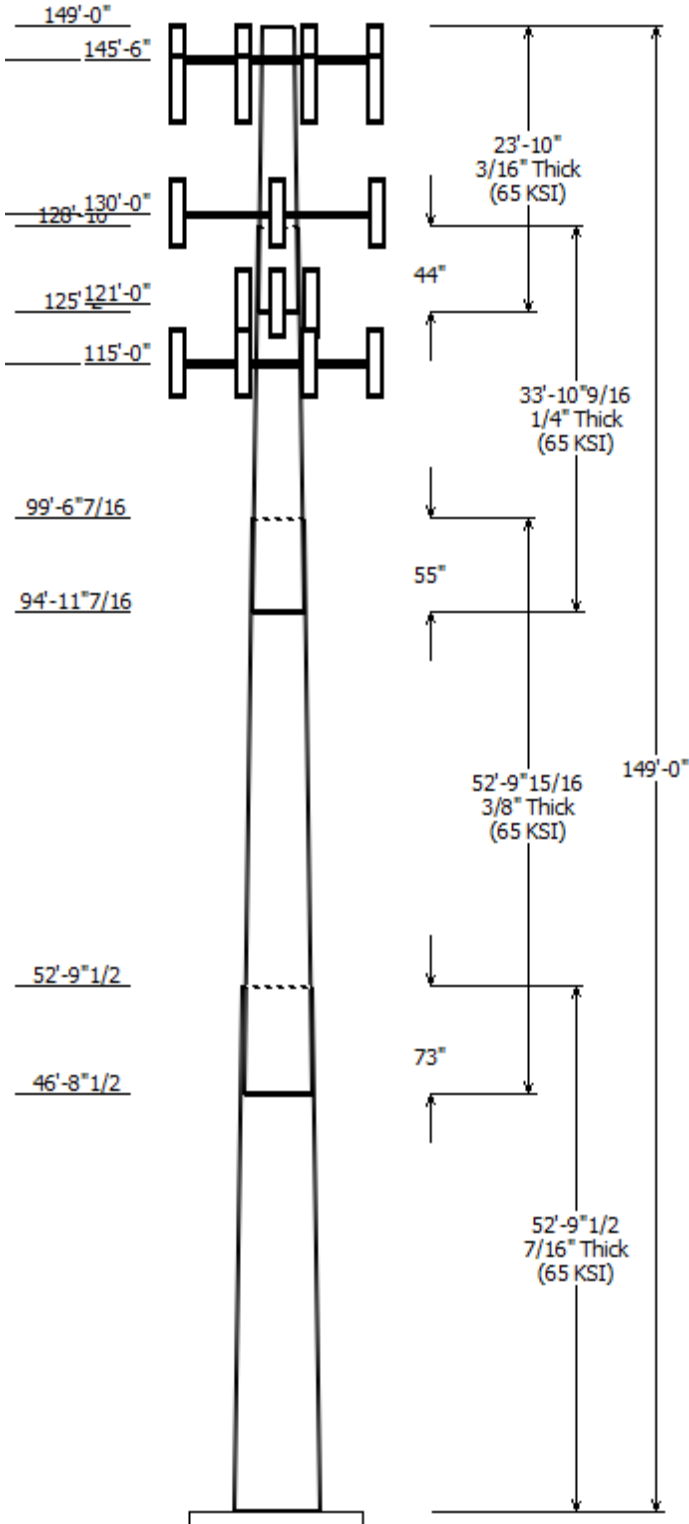
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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 we supply.



Job Information	
Pole :	370641
Code:	ANSI/TIA-222-G
Description :	
Client :	AT&T Mobility
Struct Class :	II
Location :	Beacon Falls CT, CT
Shape :	18 Sides
Exposure :	B
Height :	149.00 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.262584(in/ft)

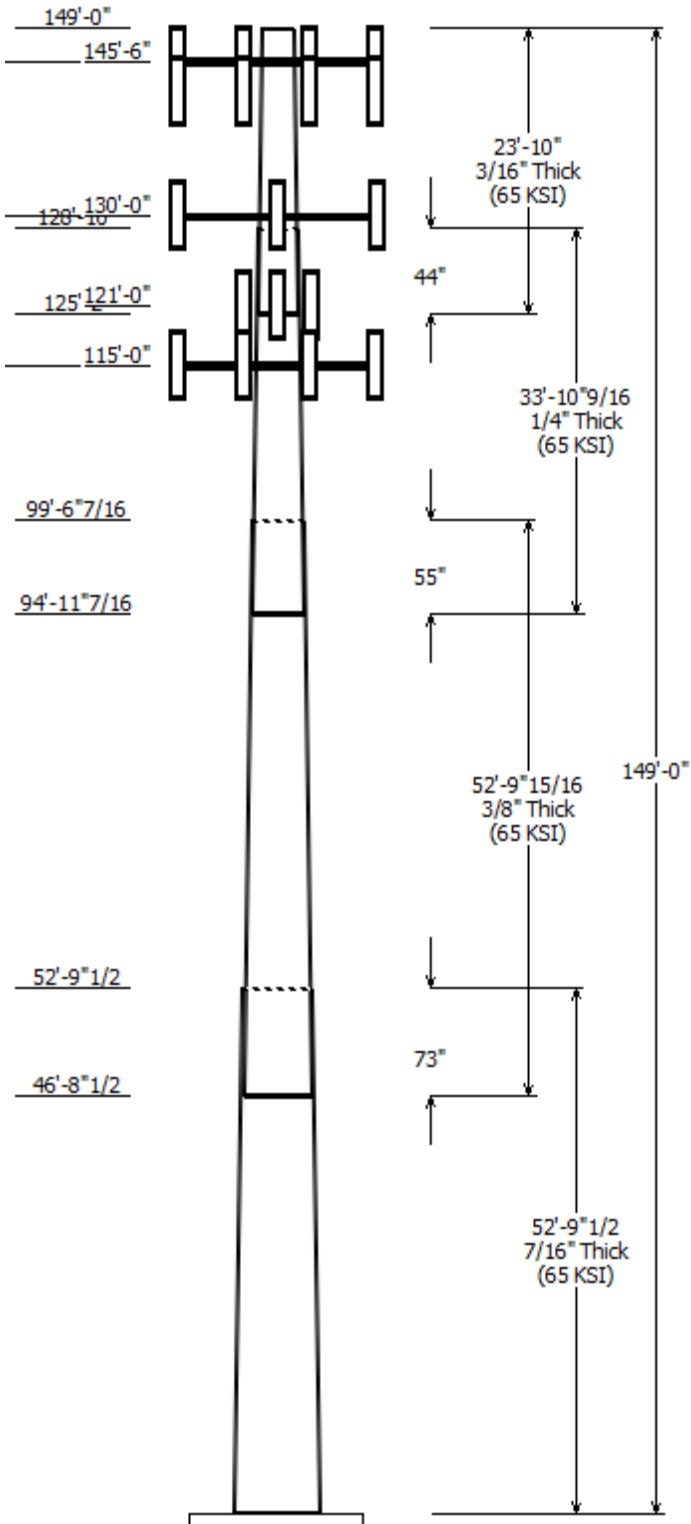
Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Taper (in/ft)	Grade (ksi)
		Across Top	Flats Bottom					
1	52.790	42.13	56.00	0.438		0.000	0.262600	65
2	52.830	30.61	44.48	0.375	Slip Joint	73.000	0.262600	65
3	33.880	23.42	32.31	0.250	Slip Joint	55.000	0.262600	65
4	23.833	18.50	24.75	0.188	Slip Joint	44.000	0.262600	65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
145.500	145.500	3	Ericsson RRUS 32 B2	
145.500	145.500	6	Powerwave 7020.00 Dual Band	
145.500	145.500	3	Kathrein 782 10253	
145.500	145.500	1	Raycap DC6-48-60-18-8F	
145.500	141.000	3	CCI HPA-65R-BUU-H6	
145.500	141.000	6	Powerwave Allgon 7770.00	
145.500	141.000	3	Ericsson RRUS 11 (Band 12)	
145.500	141.000	6	Powerwave Allgon LGP21401	
145.500	145.500	6	Powerwave Allgon LGP13519	
145.500	145.500	1	Flat Low Profile Platform	
130.000	130.000	3	Round T-Arm	
130.000	130.000	6	Ericsson AIR 21	
130.000	130.000	3	Ericsson KRY 112 144/1	
121.000	121.000	9	RFS APX16DWV-16DWVS-C-A20	
115.000	115.000	2	Alcatel-Lucent B66A RRH4x45-	
115.000	115.000	4	Commscope LNX-6515DS-A1M	
115.000	115.000	4	Andrew HBXX-6517DS-A2M	
115.000	115.000	1	RFS DB-B1-6C-12AB-0Z	
115.000	115.000	2	Alcatel-Lucent RRH2x60 700	
115.000	115.000	2	Alcatel-Lucent RRH 2X60-1900	
115.000	115.000	1	Flat Low Profile Platform	

Linear Appurtenance			
From Elev (ft)	To Elev (ft)	Description	Exposed To Wind
0.000	115.0	1 5/8" Hybriflex	No
0.000	121.0	1 5/8" Coax	No
0.000	130.0	1 5/8" Coax	No
0.000	130.0	1.57" Hybrid	No
0.000	145.5	0.39" Fiber Trunk	No
0.000	145.5	0.78" 8 AWG 6	No
0.000	145.5	1 5/8" Coax	No
0.000	145.5	2" Conduit	No

Load Cases	
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method

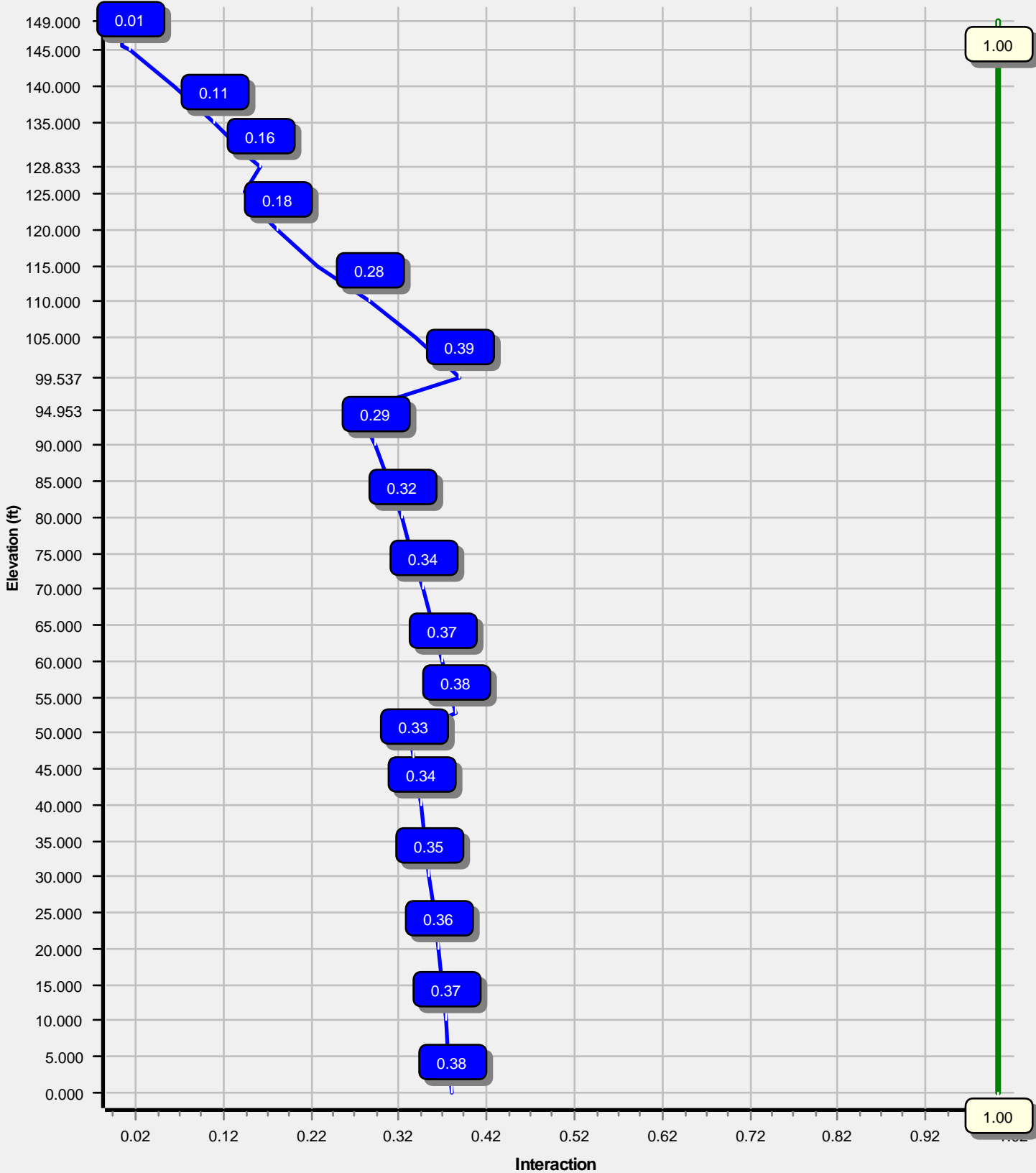
$(1.2 + 0.2Sds) * DL + E$	Seismic Equivalent Modal Analysis Method
$(0.9 - 0.2Sds) * DL + E$	Seismic (Reduced DL) Equivalent Lateral
$(0.9 - 0.2Sds) * DL + E$	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph



Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2249.23	21.80	41.37
0.9D + 1.6W	2233.24	21.79	31.02
1.2D + 1.0Di + 1.0Wi	583.20	5.88	60.58
$(1.2 + 0.2Sds) * DL + E$ ELFM	187.03	1.70	40.99
$(1.2 + 0.2Sds) * DL + E$ EMAM	187.55	1.79	40.99
$(0.9 - 0.2Sds) * DL + E$ ELFM	185.45	1.70	28.36
$(0.9 - 0.2Sds) * DL + E$ EMAM	185.83	1.79	28.36
1.0D + 1.0W	535.49	5.21	34.49

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000

Load Case : 1.2D + 1.6W
Max Ratio 38.56% at 99.5 ft



Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:50 PM

Customer: AT&T Mobility

Analysis Parameters

Location:	New Haven County, CT		
Code:	ANSI/TIA-222-G	Height (ft):	149
Shape:	18 Sides	Base Diameter (in):	56.00
Pole Type:	Taper	Top Diameter (in):	18.50
Pole Manufacturer:		Taper (in/ft) :	0.263

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	1.81		
T _L (sec):	6	p:	1.3
S _s :	0.193	S ₁ :	0.064
F _a :	1.600	F _v :	2.400
S _{ds} :	0.206	S _{d1} :	0.102
		C _s :	0.038
		C _s Max:	0.038
		C _s Min:	0.030

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2S _{ds}) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S _{ds}) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S _{ds}) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S _{ds}) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 370641

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:50 PM

Customer: AT&T Mobility

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	52.790	0.4375	65		0.00	12,130	56.00	0.00	77.15	30093.2	21.16	128.00	42.13	52.79	57.90	12721.9	15.57	96.32	0.262584
2-18	52.830	0.3750	65	Slip	73.00	7,954	44.48	46.71	52.50	12906.4	19.51	118.63	30.61	99.54	35.99	4157.6	12.98	81.64	0.262584
3-18	33.880	0.2500	65	Slip	55.00	2,526	32.31	94.95	25.44	3305.6	21.38	129.27	23.42	128.83	18.39	1247.1	15.11	93.68	0.262584
4-18	23.833	0.1875	65	Slip	44.00	1,035	24.75	125.17	14.62	1115.3	21.87	132.04	18.50	149.00	10.90	461.7	15.99	98.67	0.262584
Shaft Weight						23,646													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)
			Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor		
145.50	CCI HPA-65R-BUU-H6	3	51.00	10.360	0.78	298.18	11.022	0.78	0.000	-4.500
145.50	Ericsson RRUS 11 (Band 12)	3	50.00	2.990	0.67	131.05	3.212	0.67	0.000	-4.500
145.50	Ericsson RRUS 32 B2	3	53.00	3.200	0.67	140.76	3.471	0.67	0.000	0.000
145.50	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,147.13	45.170	1.00	0.000	0.000
145.50	Kathrein 782 10253	3	2.90	0.120	0.50	10.55	0.279	0.50	0.000	0.000
145.50	Powerwave 7020.00 Dual	6	2.20	0.400	0.50	17.84	0.621	0.50	0.000	0.000
145.50	Powerwave Allgon 7770.00	6	35.00	5.880	0.75	169.64	6.562	0.75	0.000	-4.500
145.50	Powerwave Allgon LGP13519	6	5.30	0.340	0.50	20.28	0.560	0.50	0.000	0.000
145.50	Powerwave Allgon LGP21401	6	14.10	1.290	0.50	47.60	1.562	0.50	0.000	-4.500
145.50	Raycap DC6-48-60-18-8F	1	31.80	1.470	1.00	124.39	2.851	1.00	0.000	0.000
130.00	Ericsson AIR 21	6	91.00	6.530	0.86	256.29	7.131	0.86	0.000	0.000
130.00	Ericsson KRY 112 144/1	3	11.00	0.410	0.50	27.02	0.630	0.50	0.000	0.000
130.00	Round T-Arm	3	250.00	9.700	0.67	456.36	17.840	0.67	0.000	0.000
121.00	RFS APX16DWV-16DWVS-C-	9	40.70	7.070	1.00	173.30	7.551	1.00	0.000	0.000
115.00	Alcatel-Lucent B66A	2	56.80	2.540	0.67	125.12	2.476	0.67	0.000	0.000
115.00	Alcatel-Lucent RRH 2X60-	2	43.00	1.880	0.67	107.60	2.441	0.67	0.000	0.000
115.00	Alcatel-Lucent RRH2x60 700	2	56.70	2.150	0.67	125.02	2.476	0.67	0.000	0.000
115.00	Andrew HBXX-6517DS-A2M	4	43.00	8.530	0.80	214.24	11.359	0.80	0.000	0.000
115.00	Commscope LNX-6515DS-	4	50.30	11.440	0.84	305.07	13.055	0.84	0.000	0.000
115.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,130.81	44.688	1.00	0.000	0.000
115.00	RFS DB-B1-6C-12AB-0Z	1	21.40	2.510	0.67	160.35	5.647	0.67	0.000	0.000
Totals		75	6245.00			15,176.72			Number of Loadings : 21	

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	145.50	1	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	145.50	2	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	145.50	12	1 5/8" Coax	1.98	0.82	N	0.00	N	AT&T Mobility
0.00	145.50	1	2" Conduit	2.38	3.65	N	0.00	N	AT&T Mobility
0.00	130.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	130.00	1	1.57" Hybrid	1.57	1.07	N	0.00	N	T-Mobile
0.00	121.00	9	1 5/8" Coax	1.98	0.82	N	0.00	N	Youghiogheny
0.00	115.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	N	Verizon

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

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Customer: AT&T Mobility

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.4375	56.000	77.153	30,093.2	21.16	128.00	76.5	1058.	0.0	0.0
5.00		0.4375	54.687	75.330	28,009.9	20.63	125.00	77.1	1008.	0.0	1,297.2
10.00		0.4375	53.374	73.507	26,025.1	20.10	122.00	77.8	960.4	0.0	1,266.1
15.00		0.4375	52.061	71.683	24,136.3	19.57	119.00	78.4	913.1	0.0	1,235.1
20.00		0.4375	50.748	69.860	22,341.2	19.04	116.00	79.0	867.1	0.0	1,204.1
25.00		0.4375	49.435	68.037	20,637.4	18.51	113.00	79.6	822.2	0.0	1,173.1
30.00		0.4375	48.122	66.214	19,022.5	17.98	109.99	80.2	778.6	0.0	1,142.1
35.00		0.4375	46.810	64.391	17,494.1	17.46	106.99	80.9	736.1	0.0	1,111.1
40.00		0.4375	45.497	62.568	16,049.9	16.93	103.99	81.5	694.8	0.0	1,080.0
45.00		0.4375	44.184	60.745	14,687.4	16.40	100.99	82.1	654.7	0.0	1,049.0
46.71	Bot - Section 2	0.4375	43.736	60.123	14,240.6	16.22	99.97	82.3	641.3	0.0	351.0
50.00		0.4375	42.871	58.922	13,404.3	15.87	97.99	82.6	615.8	0.0	1,249.6
52.79	Top - Section 1	0.3750	42.888	50.600	11,554.4	18.76	114.37	79.3	530.6	0.0	1,039.1
55.00		0.3750	42.308	49.909	11,087.7	18.48	112.82	79.7	516.2	0.0	377.9
60.00		0.3750	40.995	48.346	10,078.5	17.87	109.32	80.4	484.2	0.0	835.8
65.00		0.3750	39.682	46.784	9,132.4	17.25	105.82	81.1	453.3	0.0	809.3
70.00		0.3750	38.369	45.221	8,247.6	16.63	102.32	81.8	423.4	0.0	782.7
75.00		0.3750	37.056	43.658	7,421.8	16.01	98.82	82.6	394.5	0.0	756.1
80.00		0.3750	35.743	42.096	6,653.0	15.40	95.32	82.6	366.6	0.0	729.5
85.00		0.3750	34.430	40.533	5,939.3	14.78	91.81	82.6	339.8	0.0	702.9
90.00		0.3750	33.117	38.970	5,278.5	14.16	88.31	82.6	313.9	0.0	676.3
94.95	Bot - Section 3	0.3750	31.817	37.422	4,674.1	13.55	84.84	82.6	289.3	0.0	643.8
95.00		0.3750	31.805	37.408	4,668.6	13.54	84.81	82.6	289.1	0.0	10.0
99.54	Top - Section 2	0.2500	31.113	24.489	2,947.2	20.53	124.45	77.2	186.6	0.0	951.9
100.0		0.2500	30.992	24.393	2,912.5	20.45	123.97	77.4	185.1	0.0	38.5
105.0		0.2500	29.679	23.351	2,555.0	19.52	118.71	78.4	169.6	0.0	406.2
110.0		0.2500	28.366	22.309	2,228.1	18.60	113.46	79.5	154.7	0.0	388.4
115.0		0.2500	27.053	21.267	1,930.3	17.67	108.21	80.6	140.5	0.0	370.7
120.0		0.2500	25.740	20.226	1,660.3	16.74	102.96	81.7	127.0	0.0	353.0
121.0		0.2500	25.477	20.017	1,609.5	16.56	101.91	81.9	124.4	0.0	68.5
125.0		0.2500	24.427	19.184	1,416.7	15.82	97.71	82.6	114.2	0.0	266.8
125.1	Bot - Section 4	0.2500	24.383	19.149	1,409.1	15.79	97.53	82.6	113.8	0.0	10.9
128.8	Top - Section 3	0.1875	23.795	14.049	989.3	20.97	126.91	76.7	81.9	0.0	413.0
130.0		0.1875	23.489	13.867	951.3	20.68	125.28	77.1	79.8	0.0	55.4
135.0		0.1875	22.176	13.086	799.4	19.44	118.27	78.5	71.0	0.0	229.3
140.0		0.1875	20.863	12.304	664.6	18.21	111.27	80.0	62.7	0.0	216.0
145.0		0.1875	19.550	11.523	545.8	16.97	104.27	81.4	55.0	0.0	202.7
145.5		0.1875	19.419	11.445	534.8	16.85	103.57	81.6	54.2	0.0	19.5
149.0		0.1875	18.500	10.898	461.7	15.99	98.67	82.6	49.2	0.0	133.0
23,645.5											

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

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Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Shaft Segment Forces (Factored)

Seg Top														
Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	384.57	0.650	0.000	0.00	0.000	0.00	214.5	0.0	0.0
5.00		1.00	0.70	16.018	17.62	380.06	0.650	0.000	5.00	23.416	15.22	424.0	0.0	1,556.6
10.00		1.00	0.70	16.018	17.62	371.04	0.650	0.000	5.00	22.860	14.86	413.8	0.0	1,519.4
15.00		1.00	0.70	16.018	17.62	362.03	0.650	0.000	5.00	22.305	14.50	403.6	0.0	1,482.1
20.00		1.00	0.70	16.018	17.62	353.01	0.650	0.000	5.00	21.749	14.14	393.5	0.0	1,444.9
25.00		1.00	0.70	16.018	17.62	343.99	0.650	0.000	5.00	21.194	13.78	383.3	0.0	1,407.7
30.00		1.00	0.70	16.018	17.62	334.98	0.650	0.000	5.00	20.638	13.41	377.5	0.0	1,370.5
35.00		1.00	0.71	16.402	18.04	329.85	0.650	0.000	5.00	20.083	13.05	379.3	0.0	1,333.3
40.00		1.00	0.74	17.087	18.79	327.35	0.650	0.000	5.00	19.527	12.69	383.0	0.0	1,296.0
45.00		1.00	0.77	17.709	19.48	323.77	0.650	0.000	5.00	18.972	12.33	257.9	0.0	1,258.8
46.71	Bot - Section 2	1.00	0.79	18.097	19.90	320.88	0.650	0.000	1.71	6.349	4.13	194.7	0.0	421.2
50.00		1.00	0.80	18.374	20.21	318.49	0.650	0.000	3.29	12.277	7.98	238.2	0.0	1,499.5
52.79	Top - Section 1	1.00	0.81	18.697	20.56	315.36	0.650	0.000	2.79	10.212	6.64	195.6	0.0	1,246.9
55.00		1.00	0.82	18.952	20.84	318.20	0.650	0.000	2.21	7.966	5.18	281.0	0.0	453.5
60.00		1.00	0.84	19.306	21.23	314.02	0.650	0.000	5.00	17.622	11.45	387.6	0.0	1,003.0
65.00		1.00	0.86	19.772	21.74	307.77	0.650	0.000	5.00	17.067	11.09	383.9	0.0	971.1
70.00		1.00	0.88	20.211	22.23	301.04	0.650	0.000	5.00	16.512	10.73	379.2	0.0	939.2
75.00		1.00	0.90	20.628	22.69	293.90	0.650	0.000	5.00	15.956	10.37	373.5	0.0	907.3
80.00		1.00	0.91	21.025	23.12	286.38	0.650	0.000	5.00	15.401	10.01	367.0	0.0	875.4
85.00		1.00	0.93	21.404	23.54	278.53	0.650	0.000	5.00	14.845	9.65	359.7	0.0	843.5
90.00		1.00	0.95	21.767	23.94	270.37	0.650	0.000	5.00	14.290	9.29	350.0	0.0	811.6
94.95	Bot - Section 3	1.00	0.96	22.114	24.32	261.97	0.650	0.000	4.95	13.609	8.85	173.8	0.0	772.6
95.00		1.00	0.97	22.283	24.51	257.65	0.650	0.000	0.05	0.127	0.08	157.8	0.0	12.0
99.54	Top - Section 2	1.00	0.98	22.435	24.67	253.64	0.650	0.000	4.54	12.173	7.91	171.9	0.0	1,142.3
100.0		1.00	0.98	22.598	24.85	253.29	0.650	0.000	0.46	1.217	0.79	182.9	0.0	46.2
105.0		1.00	0.99	22.773	25.05	248.39	0.650	0.000	5.00	12.835	8.34	329.3	0.0	487.4
110.0		1.00	1.00	23.086	25.39	239.26	0.650	0.000	5.00	12.279	7.98	319.0	0.0	466.1
115.0	Appertunance(s)	1.00	1.02	23.387	25.72	229.93	0.650	0.000	5.00	11.724	7.62	308.1	0.0	444.8
120.0		1.00	1.03	23.680	26.04	220.40	0.650	0.000	5.00	11.168	7.26	180.8	0.0	423.6
121.0	Appertunance(s)	1.00	1.04	23.851	26.23	214.59	0.650	0.000	1.00	2.167	1.41	145.5	0.0	82.2
125.0		1.00	1.04	23.991	26.39	209.71	0.650	0.000	4.00	8.446	5.49	120.6	0.0	320.1
125.1	Bot - Section 4	1.00	1.05	24.107	26.51	205.60	0.650	0.000	0.17	0.344	0.22	109.1	0.0	13.0
128.8	Top - Section 3	1.00	1.05	24.212	26.63	201.80	0.650	0.000	3.67	7.532	4.90	136.8	0.0	495.6
130.0	Appertunance(s)	1.00	1.06	24.342	26.77	200.15	0.650	0.000	1.17	2.334	1.52	167.9	0.0	66.5
135.0		1.00	1.07	24.507	26.95	193.94	0.650	0.000	5.00	9.660	6.28	264.4	0.0	275.1
140.0		1.00	1.08	24.767	27.24	183.76	0.650	0.000	5.00	9.105	5.92	251.3	0.0	259.2
145.0		1.00	1.09	25.021	27.52	173.43	0.650	0.000	5.00	8.549	5.56	134.2	0.0	243.2
145.5	Appertunance(s)	1.00	1.09	25.158	27.67	167.69	0.650	0.000	0.50	0.824	0.54	93.0	0.0	23.4
149.0		1.00	1.10	25.257	27.78	163.49	0.650	0.000	3.50	5.615	3.65	81.1	0.0	159.7
Totals:									149.00			10,468.5	0.0	28,374.6

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:50 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
115.0	Alcatel-Lucent RRH 2	2	23.535	25.888	0.67	0.80	2.02	0.000	0.000	83.48	0.00	0.00	103.20
115.0	Alcatel-Lucent RRH2x	2	23.535	25.888	0.67	0.80	2.30	0.000	0.000	95.47	0.00	0.00	136.08
115.0	RFS DB-B1-6C-12AB-	1	23.535	25.888	0.67	0.80	1.35	0.000	0.000	55.73	0.00	0.00	25.68
115.0	Alcatel-Lucent B66A	2	23.535	25.888	0.67	0.80	2.72	0.000	0.000	112.78	0.00	0.00	136.32
115.0	Andrew HBXX-	4	23.535	25.888	0.80	0.80	21.84	0.000	0.000	904.50	0.00	0.00	206.40
115.0	Commscope LNX-	4	23.535	25.888	0.84	0.80	30.75	0.000	0.000	1,273.73	0.00	0.00	241.44
115.0	Flat Low Profile Pla	1	23.535	25.888	1.00	1.00	26.10	0.000	0.000	1,081.09	0.00	0.00	1,800.00
121.0	RFS APX16DWV-	9	23.879	26.267	1.00	1.00	63.63	0.000	0.000	2,674.20	0.00	0.00	439.56
130.0	Ericsson KRY 112 144	3	24.374	26.811	0.50	0.80	0.49	0.000	0.000	21.11	0.00	0.00	39.60
130.0	Ericsson AIR 21	6	24.374	26.811	0.86	0.80	26.96	0.000	0.000	1,156.34	0.00	0.00	655.20
130.0	Round T-Arm	3	24.374	26.811	0.67	0.75	14.62	0.000	0.000	627.28	0.00	0.00	900.00
145.5	Kathrein 782 10253	3	25.171	27.688	0.50	0.80	0.14	0.000	0.000	6.38	0.00	0.00	10.44
145.5	Powerwave Allgon	6	25.171	27.688	0.50	0.80	0.82	0.000	0.000	36.15	0.00	0.00	38.16
145.5	Powerwave 7020.00	6	25.171	27.688	0.50	0.80	0.96	0.000	0.000	42.53	0.00	0.00	15.84
145.5	Powerwave Allgon	6	24.946	27.441	0.50	0.80	3.10	0.000	-4.500	135.93	0.00	-611.68	101.52
145.5	Raycap DC6-48-60-18-	1	25.171	27.688	1.00	0.80	1.18	0.000	0.000	52.10	0.00	0.00	38.16
145.5	Ericsson RRUS 11 (Ba	3	24.946	27.441	0.67	0.80	4.81	0.000	-4.500	211.09	0.00	-949.91	180.00
145.5	Ericsson RRUS 32 B2	3	25.171	27.688	0.67	0.80	5.15	0.000	0.000	227.95	0.00	0.00	190.80
145.5	Powerwave Allgon 777	6	24.946	27.441	0.75	0.80	21.17	0.000	-4.500	929.38	0.00	-4,182.20	252.00
145.5	CCI HPA-65R-BUU-H6	3	24.946	27.441	0.78	0.80	19.39	0.000	-4.500	851.49	0.00	-3,831.69	183.60
145.5	Flat Low Profile Pla	1	25.171	27.688	1.00	0.80	20.88	0.000	0.000	925.00	0.00	0.00	1,800.00
										11,503.68			7,494.00

Load Case: 1.2D + 1.6W	97 mph with No Ice	23 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.20		
Wind Load Factor :1.60		

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.36
5.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.08
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
5.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	21.90
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
5.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	6.42
5.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
5.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.80
10.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.36
10.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.08
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
10.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	21.90
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
10.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	6.42
10.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
10.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.80
15.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.36
15.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.08
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
15.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	21.90
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
15.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	6.42
15.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
15.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.80
20.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.36
20.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.08
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
20.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	21.90
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
20.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	6.42
20.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
20.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.80
25.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.36
25.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.08
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
25.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	21.90
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
25.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	6.42
25.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
25.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.80
30.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.36
30.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.08
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
30.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	21.90
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	59.04
30.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	6.42
30.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
30.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	7.80
35.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	0.36
35.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	7.08
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	59.04

Load Case: 1.2D + 1.6W	97 mph with No Ice	23 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.20		
Wind Load Factor :1.60		

35.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	21.90
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	59.04
35.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	6.42
35.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	44.28
35.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	7.80
40.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	0.36
40.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	7.08
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	59.04
40.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	21.90
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	59.04
40.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	6.42
40.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	44.28
40.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	7.80
45.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	0.36
45.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	7.08
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	59.04
45.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	21.90
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	59.04
45.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	6.42
45.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	44.28
45.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	7.80
46.71	(1) 0.39" Fiber Trunk	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	0.12
46.71	(2) 0.78" 8 AWG 6	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	2.42
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	20.15
46.71	(1) 2" Conduit	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	7.48
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	20.15
46.71	(1) 1.57" Hybrid	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	2.19
46.71	(9) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	15.11
46.71	(1) 1 5/8" Hybriflex	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	2.66
50.00	(1) 0.39" Fiber Trunk	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	0.24
50.00	(2) 0.78" 8 AWG 6	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	4.66
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	38.89
50.00	(1) 2" Conduit	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	14.42
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	38.89
50.00	(1) 1.57" Hybrid	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	4.23
50.00	(9) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	29.17
50.00	(1) 1 5/8" Hybriflex	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	5.14
52.79	(1) 0.39" Fiber Trunk	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	0.20
52.79	(2) 0.78" 8 AWG 6	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	3.95
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	32.94
52.79	(1) 2" Conduit	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	12.22
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	32.94
52.79	(1) 1.57" Hybrid	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	3.58
52.79	(9) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	24.71
52.79	(1) 1 5/8" Hybriflex	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	4.35
55.00	(1) 0.39" Fiber Trunk	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	0.16
55.00	(2) 0.78" 8 AWG 6	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	3.13
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	26.10
55.00	(1) 2" Conduit	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	9.68
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	26.10
55.00	(1) 1.57" Hybrid	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	2.84
55.00	(9) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	19.57
55.00	(1) 1 5/8" Hybriflex	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	3.45
60.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	0.36
60.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	7.08
60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	59.04
60.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	21.90

Load Case: 1.2D + 1.6W		97 mph with No Ice						23 Iterations				
Gust Response Factor :1.10								Wind Importance Factor :1.00				
Dead Load Factor :1.20												
Wind Load Factor :1.60												

60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	59.04
60.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	6.42
60.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	44.28
60.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	7.80
65.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	0.36
65.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	7.08
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	59.04
65.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	21.90
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	59.04
65.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	6.42
65.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	44.28
65.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	7.80
70.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	0.36
70.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	7.08
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	59.04
70.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	21.90
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	59.04
70.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	6.42
70.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	44.28
70.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	7.80
75.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	0.36
75.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	7.08
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	59.04
75.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	21.90
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	59.04
75.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	6.42
75.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	44.28
75.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	7.80
80.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	0.36
80.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	7.08
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	59.04
80.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	21.90
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	59.04
80.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	6.42
80.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	44.28
80.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	7.80
85.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	0.36
85.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	7.08
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	59.04
85.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	21.90
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	59.04
85.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	6.42
85.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	44.28
85.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	7.80
90.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	0.36
90.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	7.08
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	59.04
90.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	21.90
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	59.04
90.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	6.42
90.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	44.28
90.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	7.80
94.95	(1) 0.39" Fiber Trunk	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	0.36
94.95	(2) 0.78" 8 AWG 6	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	7.01
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	58.49
94.95	(1) 2" Conduit	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	21.70
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	58.49

Load Case: 1.2D + 1.6W		97 mph with No Ice						23 Iterations				
Gust Response Factor :1.10								Wind Importance Factor :1.00				
Dead Load Factor :1.20												
Wind Load Factor :1.60												

94.95	(1) 1.57" Hybrid	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	6.36
94.95	(9) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	43.87
94.95	(1) 1 5/8" Hybriflex	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	7.73
95.00	(1) 0.39" Fiber Trunk	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.00
95.00	(2) 0.78" 8 AWG 6	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.07
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.55
95.00	(1) 2" Conduit	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.20
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.55
95.00	(1) 1.57" Hybrid	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.06
95.00	(9) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.41
95.00	(1) 1 5/8" Hybriflex	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.07
99.54	(1) 0.39" Fiber Trunk	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	0.33
99.54	(2) 0.78" 8 AWG 6	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	6.42
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	53.57
99.54	(1) 2" Conduit	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	19.87
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	53.57
99.54	(1) 1.57" Hybrid	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	5.83
99.54	(9) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	40.18
99.54	(1) 1 5/8" Hybriflex	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	7.08
100.0	(1) 0.39" Fiber Trunk	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.03
100.0	(2) 0.78" 8 AWG 6	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.66
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	5.47
100.0	(1) 2" Conduit	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	2.03
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	5.47
100.0	(1) 1.57" Hybrid	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.59
100.0	(9) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	4.10
100.0	(1) 1 5/8" Hybriflex	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.72
105.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	0.36
105.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	7.08
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	59.04
105.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	21.90
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	59.04
105.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	6.42
105.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	44.28
105.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	7.80
110.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	0.36
110.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	7.08
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	59.04
110.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	21.90
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	59.04
110.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	6.42
110.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	44.28
110.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	7.80
115.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	0.36
115.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	7.08
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	59.04
115.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	21.90
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	59.04
115.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	6.42
115.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	44.28
115.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	7.80
120.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	0.36
120.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	7.08
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	59.04
120.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	21.90
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	59.04
120.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	6.42

Load Case: 1.2D + 1.6W	97 mph with No Ice	23 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.20		
Wind Load Factor :1.60		

120.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	44.28
121.0	(1) 0.39" Fiber Trunk	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	0.07
121.0	(2) 0.78" 8 AWG 6	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	1.42
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	11.81
121.0	(1) 2" Conduit	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	4.38
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	11.81
121.0	(1) 1.57" Hybrid	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	1.28
121.0	(9) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	8.86
125.0	(1) 0.39" Fiber Trunk	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	0.29
125.0	(2) 0.78" 8 AWG 6	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	5.66
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	47.23
125.0	(1) 2" Conduit	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	17.52
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	47.23
125.0	(1) 1.57" Hybrid	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	5.14
125.1	(1) 0.39" Fiber Trunk	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.01
125.1	(2) 0.78" 8 AWG 6	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.24
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	1.97
125.1	(1) 2" Conduit	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.73
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	1.97
125.1	(1) 1.57" Hybrid	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.21
128.8	(1) 0.39" Fiber Trunk	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	0.26
128.8	(2) 0.78" 8 AWG 6	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	5.19
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	43.30
128.8	(1) 2" Conduit	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	16.06
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	43.30
128.8	(1) 1.57" Hybrid	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	4.71
130.0	(1) 0.39" Fiber Trunk	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	0.08
130.0	(2) 0.78" 8 AWG 6	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	1.65
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	13.78
130.0	(1) 2" Conduit	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	5.11
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	13.78
130.0	(1) 1.57" Hybrid	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	1.50
135.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	0.36
135.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	7.08
135.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	59.04
135.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	21.90
140.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	0.36
140.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	7.08
140.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	59.04
140.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	21.90
145.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	0.36
145.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	7.08
145.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	59.04
145.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	21.90
145.5	(1) 0.39" Fiber Trunk	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	0.04
145.5	(2) 0.78" 8 AWG 6	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	0.71
145.5	(12) 1 5/8" Coax	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	5.90
145.5	(1) 2" Conduit	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	2.19
Totals:											0.00	5,524.79

Load Case: 1.2D + 1.6W	97 mph with No Ice	23 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.20		
Wind Load Factor :1.60		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		214.5	0.0					0.0	0.0	214.5	0.0	0.0	0.0
5.00		424.0	1,556.6					0.0	205.9	424.0	1,762.5	0.0	0.0
10.00		413.8	1,519.4					0.0	205.9	413.8	1,725.3	0.0	0.0
15.00		403.6	1,482.1					0.0	205.9	403.6	1,688.1	0.0	0.0
20.00		393.5	1,444.9					0.0	205.9	393.5	1,650.8	0.0	0.0
25.00		383.3	1,407.7					0.0	205.9	383.3	1,613.6	0.0	0.0
30.00		377.5	1,370.5					0.0	205.9	377.5	1,576.4	0.0	0.0
35.00		379.3	1,333.3					0.0	205.9	379.3	1,539.2	0.0	0.0
40.00		383.0	1,296.0					0.0	205.9	383.0	1,502.0	0.0	0.0
45.00		257.9	1,258.8					0.0	205.9	257.9	1,464.7	0.0	0.0
46.71	Bot - Section 2	194.7	421.2					0.0	70.3	194.7	491.5	0.0	0.0
50.00		238.2	1,499.5					0.0	135.6	238.2	1,635.2	0.0	0.0
52.79	Top - Section 1	195.6	1,246.9					0.0	114.9	195.6	1,361.8	0.0	0.0
55.00		281.0	453.5					0.0	91.0	281.0	544.5	0.0	0.0
60.00		387.6	1,003.0					0.0	205.9	387.6	1,208.9	0.0	0.0
65.00		383.9	971.1					0.0	205.9	383.9	1,177.0	0.0	0.0
70.00		379.2	939.2					0.0	205.9	379.2	1,145.1	0.0	0.0
75.00		373.5	907.3					0.0	205.9	373.5	1,113.2	0.0	0.0
80.00		367.0	875.4					0.0	205.9	367.0	1,081.3	0.0	0.0
85.00		359.7	843.5					0.0	205.9	359.7	1,049.4	0.0	0.0
90.00		350.0	811.6					0.0	205.9	350.0	1,017.5	0.0	0.0
94.95	Bot - Section 3	173.8	772.6					0.0	204.0	173.8	976.6	0.0	0.0
95.00		157.8	12.0					0.0	1.9	157.8	13.9	0.0	0.0
99.54	Top - Section 2	171.9	1,142.3					0.0	186.8	171.9	1,329.1	0.0	0.0
100.00		182.9	46.2					0.0	19.1	182.9	65.3	0.0	0.0
105.00		329.3	487.4					0.0	205.9	329.3	693.3	0.0	0.0
110.00		319.0	466.1					0.0	205.9	319.0	672.0	0.0	0.0
115.00	Appertunance(s)	308.1	444.8	3,606.8	0.0	0.0	2,649.1	0.0	205.9	3,914.9	3,299.9	0.0	0.0
120.00		180.8	423.6					0.0	198.1	180.8	621.7	0.0	0.0
121.00	Appertunance(s)	145.5	82.2	2,674.2	0.0	0.0	439.6	0.0	39.6	2,819.7	561.3	0.0	0.0
125.00		120.6	320.1					0.0	123.1	120.6	443.2	0.0	0.0
125.17	Bot - Section 4	109.1	13.0					0.0	5.1	109.1	18.2	0.0	0.0
128.83	Top - Section 3	136.8	495.6					0.0	112.8	136.8	608.4	0.0	0.0
130.00	Appertunance(s)	167.9	66.5	1,804.7	0.0	0.0	1,594.8	0.0	35.9	1,972.6	1,697.2	0.0	0.0
135.00		264.4	275.1					0.0	88.4	264.4	363.5	0.0	0.0
140.00		251.3	259.2					0.0	88.4	251.3	347.6	0.0	0.0
145.00		134.2	243.2					0.0	88.4	134.2	331.6	0.0	0.0
145.50	Appertunance(s)	93.0	23.4	3,418.0	0.0	-9,575.5	2,810.5	0.0	8.8	3,511.0	2,842.8	0.0	0.0
149.00		81.1	159.7					0.0	0.0	81.1	159.7	0.0	0.0
Totals:										21,972.1	41,393.4	0.00	0.00

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:52 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-41.37	-21.80	0.00	-2,249.23	0.00	2,249.23	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.378
5.00	-39.57	-21.44	0.00	-2,140.26	0.00	2,140.26	5,229.56	2,614.78	11,654.9	5,836.15	0.06	-0.10	0.374
10.00	-37.81	-21.09	0.00	-2,033.05	0.00	2,033.05	5,144.17	2,572.09	11,184.9	5,600.81	0.22	-0.21	0.370
15.00	-36.08	-20.75	0.00	-1,927.58	0.00	1,927.58	5,056.74	2,528.37	10,719.9	5,367.95	0.50	-0.32	0.366
20.00	-34.39	-20.41	0.00	-1,823.82	0.00	1,823.82	4,967.26	2,483.63	10,260.2	5,137.73	0.89	-0.43	0.362
25.00	-32.74	-20.08	0.00	-1,721.75	0.00	1,721.75	4,875.75	2,437.87	9,806.10	4,910.34	1.40	-0.54	0.357
30.00	-31.13	-19.75	0.00	-1,621.33	0.00	1,621.33	4,782.19	2,391.09	9,357.93	4,685.92	2.03	-0.66	0.353
35.00	-29.56	-19.42	0.00	-1,522.57	0.00	1,522.57	4,686.58	2,343.29	8,916.06	4,464.66	2.78	-0.77	0.347
40.00	-28.02	-19.07	0.00	-1,425.50	0.00	1,425.50	4,588.94	2,294.47	8,480.81	4,246.71	3.66	-0.89	0.342
45.00	-26.53	-18.83	0.00	-1,330.15	0.00	1,330.15	4,489.25	2,244.63	8,052.51	4,032.24	4.66	-1.02	0.336
46.71	-26.03	-18.65	0.00	-1,298.03	0.00	1,298.03	4,454.76	2,227.38	7,907.97	3,959.86	5.03	-1.06	0.334
50.00	-24.37	-18.41	0.00	-1,236.60	0.00	1,236.60	4,377.60	2,188.80	7,614.23	3,812.78	5.79	-1.14	0.330
52.79	-22.99	-18.22	0.00	-1,185.23	0.00	1,185.23	3,613.14	1,806.57	6,305.68	3,157.53	6.48	-1.21	0.382
55.00	-22.42	-17.96	0.00	-1,144.97	0.00	1,144.97	3,578.23	1,789.12	6,158.78	3,083.97	7.06	-1.27	0.378
60.00	-21.18	-17.60	0.00	-1,055.16	0.00	1,055.16	3,497.79	1,748.90	5,830.16	2,919.41	8.47	-1.41	0.368
65.00	-19.97	-17.24	0.00	-967.16	0.00	967.16	3,415.31	1,707.65	5,506.99	2,757.59	10.02	-1.56	0.357
70.00	-18.79	-16.87	0.00	-880.99	0.00	880.99	3,330.78	1,665.39	5,189.62	2,598.67	11.73	-1.70	0.345
75.00	-17.65	-16.51	0.00	-796.64	0.00	796.64	3,243.59	1,621.79	4,877.42	2,442.34	13.59	-1.84	0.332
80.00	-16.54	-16.15	0.00	-714.10	0.00	714.10	3,127.49	1,563.75	4,532.82	2,269.78	15.60	-1.99	0.320
85.00	-15.47	-15.79	0.00	-633.36	0.00	633.36	3,011.40	1,505.70	4,200.83	2,103.54	17.76	-2.13	0.306
90.00	-14.43	-15.43	0.00	-554.42	0.00	554.42	2,895.30	1,447.65	3,881.48	1,943.62	20.07	-2.28	0.290
94.95	-13.44	-15.24	0.00	-477.97	0.00	477.97	2,780.28	1,390.14	3,577.55	1,791.43	22.51	-2.41	0.272
95.00	-13.41	-15.09	0.00	-477.26	0.00	477.26	2,779.20	1,389.60	3,574.75	1,790.03	22.53	-2.41	0.272
99.54	-12.08	-14.88	0.00	-408.79	0.00	408.79	1,702.59	851.29	2,158.67	1,080.94	24.89	-2.54	0.386
100.00	-11.99	-14.71	0.00	-401.89	0.00	401.89	1,698.09	849.05	2,144.41	1,073.80	25.13	-2.55	0.382
105.00	-11.27	-14.39	0.00	-328.33	0.00	328.33	1,648.46	824.23	1,992.11	997.54	27.90	-2.73	0.336
110.00	-10.58	-14.06	0.00	-256.40	0.00	256.40	1,596.78	798.39	1,842.85	922.79	30.85	-2.89	0.285
115.00	-7.47	-10.00	0.00	-186.08	0.00	186.08	1,543.06	771.53	1,696.96	849.74	33.96	-3.03	0.224
120.00	-6.84	-9.79	0.00	-136.09	0.00	136.09	1,487.30	743.65	1,554.78	778.54	37.20	-3.15	0.180
121.00	-6.43	-6.95	0.00	-126.30	0.00	126.30	1,475.91	737.95	1,526.81	764.54	37.86	-3.17	0.170
125.00	-5.99	-6.81	0.00	-98.49	0.00	98.49	1,425.26	712.63	1,412.43	707.26	40.55	-3.25	0.144
125.17	-5.98	-6.71	0.00	-97.35	0.00	97.35	1,422.68	711.34	1,407.29	704.69	40.67	-3.26	0.142
128.83	-5.37	-6.54	0.00	-72.76	0.00	72.76	970.32	485.16	941.18	471.29	43.19	-3.32	0.160
130.00	-3.79	-4.47	0.00	-65.14	0.00	65.14	961.96	480.98	920.87	461.12	44.01	-3.34	0.145
135.00	-3.44	-4.19	0.00	-42.77	0.00	42.77	924.86	462.43	835.07	418.16	47.55	-3.42	0.106
140.00	-3.10	-3.92	0.00	-21.81	0.00	21.81	885.72	442.86	751.58	376.35	51.16	-3.48	0.062
145.00	-2.78	-3.77	0.00	-2.20	0.00	2.20	844.53	422.27	670.72	335.86	54.81	-3.50	0.010
145.50	-0.15	-0.09	0.00	-0.32	0.00	0.32	840.30	420.15	662.79	331.89	55.18	-3.50	0.001
149.00	0.00	-0.08	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	57.75	-3.50	0.000

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:52 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Shaft Segment Forces (Factored)

Seg Top							Ice		Wind		Dead	Tot Dead				
Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Force X (lb)	Load Ice (lb)	Load (lb)		
0.00		1.00	0.70	16.018	17.62	384.57	0.650	0.000	0.00	0.000	0.00	214.5	0.0	0.0		
5.00		1.00	0.70	16.018	17.62	380.06	0.650	0.000	5.00	23.416	15.22	424.0	0.0	1,167.4		
10.00		1.00	0.70	16.018	17.62	371.04	0.650	0.000	5.00	22.860	14.86	413.8	0.0	1,139.5		
15.00		1.00	0.70	16.018	17.62	362.03	0.650	0.000	5.00	22.305	14.50	403.6	0.0	1,111.6		
20.00		1.00	0.70	16.018	17.62	353.01	0.650	0.000	5.00	21.749	14.14	393.5	0.0	1,083.7		
25.00		1.00	0.70	16.018	17.62	343.99	0.650	0.000	5.00	21.194	13.78	383.3	0.0	1,055.8		
30.00		1.00	0.70	16.018	17.62	334.98	0.650	0.000	5.00	20.638	13.41	377.5	0.0	1,027.9		
35.00		1.00	0.71	16.402	18.04	329.85	0.650	0.000	5.00	20.083	13.05	379.3	0.0	999.9		
40.00		1.00	0.74	17.087	18.79	327.35	0.650	0.000	5.00	19.527	12.69	383.0	0.0	972.0		
45.00		1.00	0.77	17.709	19.48	323.77	0.650	0.000	5.00	18.972	12.33	257.9	0.0	944.1		
46.71	Bot - Section 2	1.00	0.79	18.097	19.90	320.88	0.650	0.000	1.71	6.349	4.13	194.7	0.0	315.9		
50.00		1.00	0.80	18.374	20.21	318.49	0.650	0.000	3.29	12.277	7.98	238.2	0.0	1,124.6		
52.79	Top - Section 1	1.00	0.81	18.697	20.56	315.36	0.650	0.000	2.79	10.212	6.64	195.6	0.0	935.2		
55.00		1.00	0.82	18.952	20.84	318.20	0.650	0.000	2.21	7.966	5.18	281.0	0.0	340.1		
60.00		1.00	0.84	19.306	21.23	314.02	0.650	0.000	5.00	17.622	11.45	387.6	0.0	752.3		
65.00		1.00	0.86	19.772	21.74	307.77	0.650	0.000	5.00	17.067	11.09	383.9	0.0	728.3		
70.00		1.00	0.88	20.211	22.23	301.04	0.650	0.000	5.00	16.512	10.73	379.2	0.0	704.4		
75.00		1.00	0.90	20.628	22.69	293.90	0.650	0.000	5.00	15.956	10.37	373.5	0.0	680.5		
80.00		1.00	0.91	21.025	23.12	286.38	0.650	0.000	5.00	15.401	10.01	367.0	0.0	656.6		
85.00		1.00	0.93	21.404	23.54	278.53	0.650	0.000	5.00	14.845	9.65	359.7	0.0	632.6		
90.00		1.00	0.95	21.767	23.94	270.37	0.650	0.000	5.00	14.290	9.29	350.0	0.0	608.7		
94.95	Bot - Section 3	1.00	0.96	22.114	24.32	261.97	0.650	0.000	4.95	13.609	8.85	173.8	0.0	579.4		
95.00		1.00	0.97	22.283	24.51	257.65	0.650	0.000	0.05	0.127	0.08	157.8	0.0	9.0		
99.54	Top - Section 2	1.00	0.98	22.435	24.67	253.64	0.650	0.000	4.54	12.173	7.91	171.9	0.0	856.7		
100.0		1.00	0.98	22.598	24.85	253.29	0.650	0.000	0.46	1.217	0.79	182.9	0.0	34.7		
105.0		1.00	0.99	22.773	25.05	248.39	0.650	0.000	5.00	12.835	8.34	329.3	0.0	365.5		
110.0		1.00	1.00	23.086	25.39	239.26	0.650	0.000	5.00	12.279	7.98	319.0	0.0	349.6		
115.0	Appertunance(s)	1.00	1.02	23.387	25.72	229.93	0.650	0.000	5.00	11.724	7.62	308.1	0.0	333.6		
120.0		1.00	1.03	23.680	26.04	220.40	0.650	0.000	5.00	11.168	7.26	180.8	0.0	317.7		
121.0	Appertunance(s)	1.00	1.04	23.851	26.23	214.59	0.650	0.000	1.00	2.167	1.41	145.5	0.0	61.6		
125.0		1.00	1.04	23.991	26.39	209.71	0.650	0.000	4.00	8.446	5.49	120.6	0.0	240.1		
125.1	Bot - Section 4	1.00	1.05	24.107	26.51	205.60	0.650	0.000	0.17	0.344	0.22	109.1	0.0	9.8		
128.8	Top - Section 3	1.00	1.05	24.212	26.63	201.80	0.650	0.000	3.67	7.532	4.90	136.8	0.0	371.7		
130.0	Appertunance(s)	1.00	1.06	24.342	26.77	200.15	0.650	0.000	1.17	2.334	1.52	167.9	0.0	49.9		
135.0		1.00	1.07	24.507	26.95	193.94	0.650	0.000	5.00	9.660	6.28	264.4	0.0	206.4		
140.0		1.00	1.08	24.767	27.24	183.76	0.650	0.000	5.00	9.105	5.92	251.3	0.0	194.4		
145.0		1.00	1.09	25.021	27.52	173.43	0.650	0.000	5.00	8.549	5.56	134.2	0.0	182.4		
145.5	Appertunance(s)	1.00	1.09	25.158	27.67	167.69	0.650	0.000	0.50	0.824	0.54	93.0	0.0	17.6		
149.0		1.00	1.10	25.257	27.78	163.49	0.650	0.000	3.50	5.615	3.65	81.1	0.0	119.7		
Totals:									149.00					10,468.5	0.0	21,281.0

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:52 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
115.0	Alcatel-Lucent RRH 2	2	23.535	25.888	0.67	0.80	2.02	0.000	0.000	83.48	0.00	0.00	77.40
115.0	Alcatel-Lucent RRH2x	2	23.535	25.888	0.67	0.80	2.30	0.000	0.000	95.47	0.00	0.00	102.06
115.0	RFS DB-B1-6C-12AB-	1	23.535	25.888	0.67	0.80	1.35	0.000	0.000	55.73	0.00	0.00	19.26
115.0	Alcatel-Lucent B66A	2	23.535	25.888	0.67	0.80	2.72	0.000	0.000	112.78	0.00	0.00	102.24
115.0	Andrew HBXX-	4	23.535	25.888	0.80	0.80	21.84	0.000	0.000	904.50	0.00	0.00	154.80
115.0	Commscope LNX-	4	23.535	25.888	0.84	0.80	30.75	0.000	0.000	1,273.73	0.00	0.00	181.08
115.0	Flat Low Profile Pla	1	23.535	25.888	1.00	1.00	26.10	0.000	0.000	1,081.09	0.00	0.00	1,350.00
121.0	RFS APX16DWV-	9	23.879	26.267	1.00	1.00	63.63	0.000	0.000	2,674.20	0.00	0.00	329.67
130.0	Ericsson KRY 112 144	3	24.374	26.811	0.50	0.80	0.49	0.000	0.000	21.11	0.00	0.00	29.70
130.0	Ericsson AIR 21	6	24.374	26.811	0.86	0.80	26.96	0.000	0.000	1,156.34	0.00	0.00	491.40
130.0	Round T-Arm	3	24.374	26.811	0.67	0.75	14.62	0.000	0.000	627.28	0.00	0.00	675.00
145.5	Kathrein 782 10253	3	25.171	27.688	0.50	0.80	0.14	0.000	0.000	6.38	0.00	0.00	7.83
145.5	Powerwave Allgon	6	25.171	27.688	0.50	0.80	0.82	0.000	0.000	36.15	0.00	0.00	28.62
145.5	Powerwave 7020.00	6	25.171	27.688	0.50	0.80	0.96	0.000	0.000	42.53	0.00	0.00	11.88
145.5	Powerwave Allgon	6	24.946	27.441	0.50	0.80	3.10	0.000	-4.500	135.93	0.00	-611.68	76.14
145.5	Raycap DC6-48-60-18-	1	25.171	27.688	1.00	0.80	1.18	0.000	0.000	52.10	0.00	0.00	28.62
145.5	Ericsson RRUS 11 (Ba	3	24.946	27.441	0.67	0.80	4.81	0.000	-4.500	211.09	0.00	-949.91	135.00
145.5	Ericsson RRUS 32 B2	3	25.171	27.688	0.67	0.80	5.15	0.000	0.000	227.95	0.00	0.00	143.10
145.5	Powerwave Allgon 777	6	24.946	27.441	0.75	0.80	21.17	0.000	-4.500	929.38	0.00	-4,182.20	189.00
145.5	CCI HPA-65R-BUU-H6	3	24.946	27.441	0.78	0.80	19.39	0.000	-4.500	851.49	0.00	-3,831.69	137.70
145.5	Flat Low Profile Pla	1	25.171	27.688	1.00	0.80	20.88	0.000	0.000	925.00	0.00	0.00	1,350.00
										11,503.68			5,620.50

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.27
5.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.31
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
5.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	16.42
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
5.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	4.82
5.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	33.21
5.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.85
10.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.27
10.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.31
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
10.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	16.42
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
10.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	4.82
10.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	33.21
10.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.85
15.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.27
15.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.31
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
15.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	16.42
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
15.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	4.82
15.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	33.21
15.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.85
20.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.27
20.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.31
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
20.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	16.42
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
20.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	4.82
20.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	33.21
20.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.85
25.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.27
25.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.31
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
25.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	16.42
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
25.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	4.82
25.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	33.21
25.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.85
30.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	0.27
30.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.31
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
30.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	16.42
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	44.28
30.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	4.82
30.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	33.21
30.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.018	0.000	0.000	0.00	5.85
35.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	0.27
35.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	5.31
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	44.28

Load Case: 0.9D + 1.6W		97 mph with No Ice (Reduced DL)							23 Iterations			
Gust Response Factor :1.10									Wind Importance Factor :1.00			
Dead Load Factor :0.90												
Wind Load Factor :1.60												

35.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	16.42
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	44.28
35.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	4.82
35.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	33.21
35.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	16.402	0.000	0.000	0.00	5.85
40.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	0.27
40.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	5.31
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	44.28
40.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	16.42
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	44.28
40.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	4.82
40.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	33.21
40.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	17.087	0.000	0.000	0.00	5.85
45.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	0.27
45.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	5.31
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	44.28
45.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	16.42
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	44.28
45.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	4.82
45.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	33.21
45.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	17.709	0.000	0.000	0.00	5.85
46.71	(1) 0.39" Fiber Trunk	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	0.09
46.71	(2) 0.78" 8 AWG 6	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	1.81
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	15.11
46.71	(1) 2" Conduit	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	5.61
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	15.11
46.71	(1) 1.57" Hybrid	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	1.64
46.71	(9) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	11.34
46.71	(1) 1 5/8" Hybriflex	No	1.71	0.00	0.00	0.00	0.00	18.097	0.000	0.000	0.00	2.00
50.00	(1) 0.39" Fiber Trunk	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	0.18
50.00	(2) 0.78" 8 AWG 6	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	3.50
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	29.17
50.00	(1) 2" Conduit	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	10.82
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	29.17
50.00	(1) 1.57" Hybrid	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	3.17
50.00	(9) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	21.87
50.00	(1) 1 5/8" Hybriflex	No	3.29	0.00	0.00	0.00	0.00	18.374	0.000	0.000	0.00	3.85
52.79	(1) 0.39" Fiber Trunk	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	0.15
52.79	(2) 0.78" 8 AWG 6	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	2.96
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	24.71
52.79	(1) 2" Conduit	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	9.17
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	24.71
52.79	(1) 1.57" Hybrid	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	2.69
52.79	(9) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	18.53
52.79	(1) 1 5/8" Hybriflex	No	2.79	0.00	0.00	0.00	0.00	18.697	0.000	0.000	0.00	3.26
55.00	(1) 0.39" Fiber Trunk	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	0.12
55.00	(2) 0.78" 8 AWG 6	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	2.35
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	19.57
55.00	(1) 2" Conduit	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	7.26
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	19.57
55.00	(1) 1.57" Hybrid	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	2.13
55.00	(9) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	14.68
55.00	(1) 1 5/8" Hybriflex	No	2.21	0.00	0.00	0.00	0.00	18.952	0.000	0.000	0.00	2.59
60.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	0.27
60.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	5.31
60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	44.28
60.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	16.42

Load Case: 0.9D + 1.6W		97 mph with No Ice (Reduced DL)							23 Iterations			
Gust Response Factor :1.10									Wind Importance Factor :1.00			
Dead Load Factor :0.90												
Wind Load Factor :1.60												

60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	44.28
60.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	4.82
60.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	33.21
60.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	19.306	0.000	0.000	0.00	5.85
65.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	0.27
65.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	5.31
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	44.28
65.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	16.42
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	44.28
65.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	4.82
65.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	33.21
65.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	19.772	0.000	0.000	0.00	5.85
70.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	0.27
70.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	5.31
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	44.28
70.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	16.42
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	44.28
70.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	4.82
70.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	33.21
70.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	20.211	0.000	0.000	0.00	5.85
75.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	0.27
75.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	5.31
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	44.28
75.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	16.42
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	44.28
75.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	4.82
75.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	33.21
75.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	20.628	0.000	0.000	0.00	5.85
80.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	0.27
80.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	5.31
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	44.28
80.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	16.42
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	44.28
80.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	4.82
80.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	33.21
80.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	21.025	0.000	0.000	0.00	5.85
85.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	0.27
85.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	5.31
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	44.28
85.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	16.42
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	44.28
85.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	4.82
85.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	33.21
85.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	21.404	0.000	0.000	0.00	5.85
90.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	0.27
90.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	5.31
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	44.28
90.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	16.42
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	44.28
90.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	4.82
90.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	33.21
90.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	21.767	0.000	0.000	0.00	5.85
94.95	(1) 0.39" Fiber Trunk	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	0.27
94.95	(2) 0.78" 8 AWG 6	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	5.26
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	43.87
94.95	(1) 2" Conduit	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	16.27
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	43.87

Load Case: 0.9D + 1.6W		97 mph with No Ice (Reduced DL)							23 Iterations		
Gust Response Factor :1.10									Wind Importance Factor :1.00		
Dead Load Factor :0.90											
Wind Load Factor :1.60											

94.95	(1) 1.57" Hybrid	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	4.77
94.95	(9) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	32.90
94.95	(1) 1 5/8" Hybriflex	No	4.95	0.00	0.00	0.00	0.00	22.114	0.000	0.000	0.00	5.80
95.00	(1) 0.39" Fiber Trunk	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.00
95.00	(2) 0.78" 8 AWG 6	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.05
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.41
95.00	(1) 2" Conduit	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.15
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.41
95.00	(1) 1.57" Hybrid	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.04
95.00	(9) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.31
95.00	(1) 1 5/8" Hybriflex	No	0.05	0.00	0.00	0.00	0.00	22.283	0.000	0.000	0.00	0.05
99.54	(1) 0.39" Fiber Trunk	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	0.24
99.54	(2) 0.78" 8 AWG 6	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	4.82
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	40.18
99.54	(1) 2" Conduit	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	14.90
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	40.18
99.54	(1) 1.57" Hybrid	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	4.37
99.54	(9) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	30.13
99.54	(1) 1 5/8" Hybriflex	No	4.54	0.00	0.00	0.00	0.00	22.435	0.000	0.000	0.00	5.31
100.0	(1) 0.39" Fiber Trunk	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.03
100.0	(2) 0.78" 8 AWG 6	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.49
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	4.10
100.0	(1) 2" Conduit	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	1.52
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	4.10
100.0	(1) 1.57" Hybrid	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.45
100.0	(9) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	3.08
100.0	(1) 1 5/8" Hybriflex	No	0.46	0.00	0.00	0.00	0.00	22.598	0.000	0.000	0.00	0.54
105.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	0.27
105.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	5.31
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	44.28
105.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	16.42
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	44.28
105.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	4.82
105.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	33.21
105.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	22.773	0.000	0.000	0.00	5.85
110.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	0.27
110.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	5.31
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	44.28
110.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	16.42
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	44.28
110.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	4.82
110.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	33.21
110.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	23.086	0.000	0.000	0.00	5.85
115.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	0.27
115.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	5.31
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	44.28
115.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	16.42
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	44.28
115.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	4.82
115.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	33.21
115.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	23.387	0.000	0.000	0.00	5.85
120.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	0.27
120.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	5.31
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	44.28
120.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	16.42
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	44.28
120.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	4.82

Load Case: 0.9D + 1.6W		97 mph with No Ice (Reduced DL)							23 Iterations		
Gust Response Factor :1.10									Wind Importance Factor :1.00		
Dead Load Factor :0.90											
Wind Load Factor :1.60											

120.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	23.680	0.000	0.000	0.00	33.21
121.0	(1) 0.39" Fiber Trunk	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	0.05
121.0	(2) 0.78" 8 AWG 6	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	1.06
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	8.86
121.0	(1) 2" Conduit	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	3.29
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	8.86
121.0	(1) 1.57" Hybrid	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	0.96
121.0	(9) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	23.851	0.000	0.000	0.00	6.64
125.0	(1) 0.39" Fiber Trunk	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	0.22
125.0	(2) 0.78" 8 AWG 6	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	4.25
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	35.42
125.0	(1) 2" Conduit	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	13.14
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	35.42
125.0	(1) 1.57" Hybrid	No	4.00	0.00	0.00	0.00	0.00	23.991	0.000	0.000	0.00	3.85
125.1	(1) 0.39" Fiber Trunk	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.01
125.1	(2) 0.78" 8 AWG 6	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.18
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	1.48
125.1	(1) 2" Conduit	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.55
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	1.48
125.1	(1) 1.57" Hybrid	No	0.17	0.00	0.00	0.00	0.00	24.107	0.000	0.000	0.00	0.16
128.8	(1) 0.39" Fiber Trunk	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	0.20
128.8	(2) 0.78" 8 AWG 6	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	3.89
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	32.47
128.8	(1) 2" Conduit	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	12.05
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	32.47
128.8	(1) 1.57" Hybrid	No	3.67	0.00	0.00	0.00	0.00	24.212	0.000	0.000	0.00	3.53
130.0	(1) 0.39" Fiber Trunk	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	0.06
130.0	(2) 0.78" 8 AWG 6	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	1.24
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	10.33
130.0	(1) 2" Conduit	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	3.83
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	10.33
130.0	(1) 1.57" Hybrid	No	1.17	0.00	0.00	0.00	0.00	24.342	0.000	0.000	0.00	1.12
135.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	0.27
135.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	5.31
135.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	44.28
135.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	24.507	0.000	0.000	0.00	16.42
140.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	0.27
140.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	5.31
140.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	44.28
140.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	24.767	0.000	0.000	0.00	16.42
145.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	0.27
145.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	5.31
145.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	44.28
145.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	25.021	0.000	0.000	0.00	16.42
145.5	(1) 0.39" Fiber Trunk	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	0.03
145.5	(2) 0.78" 8 AWG 6	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	0.53
145.5	(12) 1 5/8" Coax	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	4.43
145.5	(1) 2" Conduit	No	0.50	0.00	0.00	0.00	0.00	25.158	0.000	0.000	0.00	1.64
Totals:											0.00	4,143.60

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:53 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		214.5	0.0					0.0	0.0	214.5	0.0	0.0	0.0
5.00		424.0	1,167.4					0.0	154.4	424.0	1,321.9	0.0	0.0
10.00		413.8	1,139.5					0.0	154.4	413.8	1,294.0	0.0	0.0
15.00		403.6	1,111.6					0.0	154.4	403.6	1,266.1	0.0	0.0
20.00		393.5	1,083.7					0.0	154.4	393.5	1,238.1	0.0	0.0
25.00		383.3	1,055.8					0.0	154.4	383.3	1,210.2	0.0	0.0
30.00		377.5	1,027.9					0.0	154.4	377.5	1,182.3	0.0	0.0
35.00		379.3	999.9					0.0	154.4	379.3	1,154.4	0.0	0.0
40.00		383.0	972.0					0.0	154.4	383.0	1,126.5	0.0	0.0
45.00		257.9	944.1					0.0	154.4	257.9	1,098.6	0.0	0.0
46.71	Bot - Section 2	194.7	315.9					0.0	52.7	194.7	368.6	0.0	0.0
50.00		238.2	1,124.6					0.0	101.7	238.2	1,226.4	0.0	0.0
52.79	Top - Section 1	195.6	935.2					0.0	86.2	195.6	1,021.4	0.0	0.0
55.00		281.0	340.1					0.0	68.3	281.0	408.4	0.0	0.0
60.00		387.6	752.3					0.0	154.4	387.6	906.7	0.0	0.0
65.00		383.9	728.3					0.0	154.4	383.9	882.8	0.0	0.0
70.00		379.2	704.4					0.0	154.4	379.2	858.8	0.0	0.0
75.00		373.5	680.5					0.0	154.4	373.5	834.9	0.0	0.0
80.00		367.0	656.6					0.0	154.4	367.0	811.0	0.0	0.0
85.00		359.7	632.6					0.0	154.4	359.7	787.1	0.0	0.0
90.00		350.0	608.7					0.0	154.4	350.0	763.1	0.0	0.0
94.95	Bot - Section 3	173.8	579.4					0.0	153.0	173.8	732.4	0.0	0.0
95.00		157.8	9.0					0.0	1.4	157.8	10.4	0.0	0.0
99.54	Top - Section 2	171.9	856.7					0.0	140.1	171.9	996.8	0.0	0.0
100.00		182.9	34.7					0.0	14.3	182.9	49.0	0.0	0.0
105.00		329.3	365.5					0.0	154.4	329.3	520.0	0.0	0.0
110.00		319.0	349.6					0.0	154.4	319.0	504.0	0.0	0.0
115.00	Appertunance(s)	308.1	333.6	3,606.8	0.0	0.0	1,986.8	0.0	154.4	3,914.9	2,474.9	0.0	0.0
120.00		180.8	317.7					0.0	148.6	180.8	466.3	0.0	0.0
121.00	Appertunance(s)	145.5	61.6	2,674.2	0.0	0.0	329.7	0.0	29.7	2,819.7	421.0	0.0	0.0
125.00		120.6	240.1					0.0	92.3	120.6	332.4	0.0	0.0
125.17	Bot - Section 4	109.1	9.8					0.0	3.8	109.1	13.6	0.0	0.0
128.83	Top - Section 3	136.8	371.7					0.0	84.6	136.8	456.3	0.0	0.0
130.00	Appertunance(s)	167.9	49.9	1,804.7	0.0	0.0	1,196.1	0.0	26.9	1,972.6	1,272.9	0.0	0.0
135.00		264.4	206.4					0.0	66.3	264.4	272.6	0.0	0.0
140.00		251.3	194.4					0.0	66.3	251.3	260.7	0.0	0.0
145.00		134.2	182.4					0.0	66.3	134.2	248.7	0.0	0.0
145.50	Appertunance(s)	93.0	17.6	3,418.0	0.0	-9,575.5	2,107.9	0.0	6.6	3,511.0	2,132.1	0.0	0.0
149.00		81.1	119.7					0.0	0.0	81.1	119.7	0.0	0.0
Totals:										21,972.1	31,045.0	0.00	0.00

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:53 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-31.02	-21.79	0.00	-2,233.24	0.00	2,233.24	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.374
5.00	-29.66	-21.41	0.00	-2,124.31	0.00	2,124.31	5,229.56	2,614.78	11,654.9	5,836.15	0.06	-0.10	0.370
10.00	-28.33	-21.05	0.00	-2,017.24	0.00	2,017.24	5,144.17	2,572.09	11,184.9	5,600.81	0.22	-0.21	0.366
15.00	-27.03	-20.69	0.00	-1,912.00	0.00	1,912.00	5,056.74	2,528.37	10,719.9	5,367.95	0.50	-0.32	0.362
20.00	-25.75	-20.34	0.00	-1,808.54	0.00	1,808.54	4,967.26	2,483.63	10,260.2	5,137.73	0.89	-0.43	0.357
25.00	-24.51	-19.99	0.00	-1,706.84	0.00	1,706.84	4,875.75	2,437.87	9,806.10	4,910.34	1.39	-0.54	0.353
30.00	-23.29	-19.65	0.00	-1,606.87	0.00	1,606.87	4,782.19	2,391.09	9,357.93	4,685.92	2.02	-0.65	0.348
35.00	-22.10	-19.30	0.00	-1,508.61	0.00	1,508.61	4,686.58	2,343.29	8,916.06	4,464.66	2.76	-0.77	0.343
40.00	-20.94	-18.95	0.00	-1,412.10	0.00	1,412.10	4,588.94	2,294.47	8,480.81	4,246.71	3.63	-0.89	0.337
45.00	-19.82	-18.70	0.00	-1,317.36	0.00	1,317.36	4,489.25	2,244.63	8,052.51	4,032.24	4.62	-1.01	0.331
46.71	-19.43	-18.52	0.00	-1,285.44	0.00	1,285.44	4,454.76	2,227.38	7,907.97	3,959.86	4.99	-1.05	0.329
50.00	-18.19	-18.28	0.00	-1,224.45	0.00	1,224.45	4,377.60	2,188.80	7,614.23	3,812.78	5.74	-1.13	0.325
52.79	-17.15	-18.09	0.00	-1,173.44	0.00	1,173.44	3,613.14	1,806.57	6,305.68	3,157.53	6.43	-1.20	0.376
55.00	-16.72	-17.83	0.00	-1,133.47	0.00	1,133.47	3,578.23	1,789.12	6,158.78	3,083.97	7.00	-1.26	0.372
60.00	-15.78	-17.46	0.00	-1,044.34	0.00	1,044.34	3,497.79	1,748.90	5,830.16	2,919.41	8.40	-1.40	0.362
65.00	-14.86	-17.09	0.00	-957.07	0.00	957.07	3,415.31	1,707.65	5,506.99	2,757.59	9.94	-1.54	0.352
70.00	-13.97	-16.72	0.00	-871.64	0.00	871.64	3,330.78	1,665.39	5,189.62	2,598.67	11.63	-1.68	0.340
75.00	-13.11	-16.35	0.00	-788.05	0.00	788.05	3,243.59	1,621.79	4,877.42	2,442.34	13.47	-1.83	0.327
80.00	-12.27	-15.99	0.00	-706.29	0.00	706.29	3,127.49	1,563.75	4,532.82	2,269.78	15.46	-1.97	0.315
85.00	-11.46	-15.63	0.00	-626.35	0.00	626.35	3,011.40	1,505.70	4,200.83	2,103.54	17.60	-2.11	0.302
90.00	-10.67	-15.28	0.00	-548.21	0.00	548.21	2,895.30	1,447.65	3,881.48	1,943.62	19.89	-2.25	0.286
94.95	-9.93	-15.08	0.00	-472.54	0.00	472.54	2,780.28	1,390.14	3,577.55	1,791.43	22.30	-2.39	0.267
95.00	-9.91	-14.94	0.00	-471.83	0.00	471.83	2,779.20	1,389.60	3,574.75	1,790.03	22.33	-2.39	0.267
99.54	-8.91	-14.73	0.00	-404.07	0.00	404.07	1,702.59	851.29	2,158.67	1,080.94	24.66	-2.51	0.379
100.00	-8.84	-14.56	0.00	-397.24	0.00	397.24	1,698.09	849.05	2,144.41	1,073.80	24.90	-2.53	0.375
105.00	-8.29	-14.24	0.00	-324.43	0.00	324.43	1,648.46	824.23	1,992.11	997.54	27.65	-2.70	0.331
110.00	-7.77	-13.91	0.00	-253.25	0.00	253.25	1,596.78	798.39	1,842.85	922.79	30.56	-2.86	0.280
115.00	-5.48	-9.89	0.00	-183.69	0.00	183.69	1,543.06	771.53	1,696.96	849.74	33.64	-3.00	0.220
120.00	-5.01	-9.69	0.00	-134.25	0.00	134.25	1,487.30	743.65	1,554.78	778.54	36.85	-3.12	0.176
121.00	-4.74	-6.85	0.00	-124.56	0.00	124.56	1,475.91	737.95	1,526.81	764.54	37.50	-3.14	0.166
125.00	-4.41	-6.72	0.00	-97.14	0.00	97.14	1,425.26	712.63	1,412.43	707.26	40.17	-3.22	0.141
125.17	-4.39	-6.61	0.00	-96.02	0.00	96.02	1,422.68	711.34	1,407.29	704.69	40.28	-3.22	0.139
128.83	-3.94	-6.45	0.00	-71.78	0.00	71.78	970.32	485.16	941.18	471.29	42.78	-3.28	0.157
130.00	-2.78	-4.41	0.00	-64.25	0.00	64.25	961.96	480.98	920.87	461.12	43.59	-3.30	0.142
135.00	-2.52	-4.13	0.00	-42.19	0.00	42.19	924.86	462.43	835.07	418.16	47.09	-3.38	0.104
140.00	-2.27	-3.87	0.00	-21.52	0.00	21.52	885.72	442.86	751.58	376.35	50.66	-3.44	0.060
145.00	-2.03	-3.72	0.00	-2.17	0.00	2.17	844.53	422.27	670.72	335.86	54.28	-3.46	0.009
145.50	-0.11	-0.09	0.00	-0.31	0.00	0.31	840.30	420.15	662.79	331.89	54.64	-3.46	0.001
149.00	0.00	-0.08	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	57.18	-3.47	0.000

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:54 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

22 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Shaft Segment Forces (Factored)

Seg Top								Ice		Wind		Dead	Tot Dead	
Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Force X (lb)	Load Ice (lb)	Load (lb)
0.00		1.00	0.70	4.256	4.682	0.000	1.200	0.000	0.00	0.000	0.00	68.5	0.0	0.0
5.00		1.00	0.70	4.256	4.682	0.000	1.200	1.159	5.00	24.381	29.26	135.7	405.4	1,962.0
10.00		1.00	0.70	4.256	4.682	0.000	1.200	1.293	5.00	23.938	28.73	133.1	443.0	1,962.3
15.00		1.00	0.70	4.256	4.682	0.000	1.200	1.361	5.00	23.439	28.13	130.2	455.5	1,937.7
20.00		1.00	0.70	4.256	4.682	0.000	1.200	1.408	5.00	22.922	27.51	127.3	459.9	1,904.9
25.00		1.00	0.70	4.256	4.682	0.000	1.200	1.444	5.00	22.397	26.88	124.3	460.1	1,867.8
30.00		1.00	0.70	4.256	4.682	0.000	1.200	1.473	5.00	21.866	26.24	122.8	457.6	1,828.0
35.00		1.00	0.71	4.358	4.794	0.000	1.200	1.498	5.00	21.331	25.60	123.7	453.2	1,786.4
40.00		1.00	0.74	4.540	4.994	0.000	1.200	1.519	5.00	20.793	24.95	125.2	447.4	1,743.5
45.00		1.00	0.77	4.705	5.176	0.000	1.200	1.538	5.00	20.254	24.30	84.4	440.6	1,699.4
46.71	Bot - Section 2	1.00	0.79	4.809	5.289	0.000	1.200	1.550	1.71	6.790	8.15	63.9	150.1	571.2
50.00		1.00	0.80	4.882	5.370	0.000	1.200	1.558	3.29	13.132	15.76	78.2	290.5	1,790.0
52.79	Top - Section 1	1.00	0.81	4.968	5.465	0.000	1.200	1.568	2.79	10.941	13.13	64.3	243.6	1,490.5
55.00		1.00	0.82	5.036	5.539	0.000	1.200	1.575	2.21	8.546	10.26	92.5	191.4	644.9
60.00		1.00	0.84	5.130	5.643	0.000	1.200	1.586	5.00	18.944	22.73	127.9	422.9	1,425.9
65.00		1.00	0.86	5.253	5.779	0.000	1.200	1.599	5.00	18.399	22.08	127.1	413.4	1,384.5
70.00		1.00	0.88	5.370	5.907	0.000	1.200	1.611	5.00	17.854	21.43	125.9	403.4	1,342.7
75.00		1.00	0.90	5.481	6.029	0.000	1.200	1.623	5.00	17.308	20.77	124.4	393.1	1,300.4
80.00		1.00	0.91	5.586	6.145	0.000	1.200	1.634	5.00	16.762	20.11	122.7	382.4	1,257.8
85.00		1.00	0.93	5.687	6.256	0.000	1.200	1.644	5.00	16.215	19.46	120.7	371.4	1,214.9
90.00		1.00	0.95	5.784	6.362	0.000	1.200	1.654	5.00	15.668	18.80	117.9	360.1	1,171.7
94.95	Bot - Section 3	1.00	0.96	5.876	6.463	0.000	1.200	1.663	4.95	14.981	17.98	58.6	345.4	1,117.9
95.00		1.00	0.97	5.921	6.513	0.000	1.200	1.667	0.05	0.140	0.17	53.4	3.3	15.3
99.54	Top - Section 2	1.00	0.98	5.961	6.557	0.000	1.200	1.671	4.54	13.436	16.12	58.2	311.3	1,453.5
100.0		1.00	0.98	6.004	6.605	0.000	1.200	1.675	0.46	1.347	1.62	62.2	31.8	78.0
105.0		1.00	0.99	6.051	6.656	0.000	1.200	1.680	5.00	14.235	17.08	112.3	329.9	817.3
110.0		1.00	1.00	6.134	6.747	0.000	1.200	1.688	5.00	13.686	16.42	109.3	317.6	783.8
115.0	Appertunance(s)	1.00	1.02	6.214	6.835	0.000	1.200	1.696	5.00	13.137	15.76	106.1	305.2	750.1
120.0		1.00	1.03	6.292	6.921	0.000	1.200	1.703	5.00	12.587	15.10	62.5	292.6	716.2
121.0	Appertunance(s)	1.00	1.04	6.337	6.971	0.000	1.200	1.707	1.00	2.452	2.94	50.6	58.1	140.3
125.0		1.00	1.04	6.375	7.012	0.000	1.200	1.711	4.00	9.586	11.50	42.0	224.0	544.1
125.1	Bot - Section 4	1.00	1.05	6.405	7.046	0.000	1.200	1.714	0.17	0.392	0.47	38.1	9.3	22.4
128.8	Top - Section 3	1.00	1.05	6.433	7.076	0.000	1.200	1.716	3.67	8.581	10.30	47.8	201.0	696.6
130.0	Appertunance(s)	1.00	1.06	6.468	7.115	0.000	1.200	1.720	1.17	2.668	3.20	59.1	63.3	129.8
135.0		1.00	1.07	6.511	7.163	0.000	1.200	1.724	5.00	11.097	13.32	93.5	257.9	533.0
140.0		1.00	1.08	6.581	7.239	0.000	1.200	1.730	5.00	10.547	12.66	89.7	244.7	503.9
145.0		1.00	1.09	6.648	7.313	0.000	1.200	1.736	5.00	9.996	12.00	48.1	231.3	474.6
145.5	Appertunance(s)	1.00	1.09	6.685	7.353	0.000	1.200	1.740	0.50	0.969	1.16	33.6	23.0	46.5
149.0		1.00	1.10	6.711	7.382	0.000	1.200	1.742	3.50	6.631	7.96	29.4	154.5	314.1
Totals:									149.00			3,495.2	11,049.1	39,423.8

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:54 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

22 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
115.0	Alcatel-Lucent RRH 2	2	6.253	6.879	0.67	0.80	2.62	0.000	0.000	18.00	0.00	0.00	232.40
115.0	Alcatel-Lucent RRH2x	2	6.253	6.879	0.67	0.80	2.65	0.000	0.000	18.26	0.00	0.00	272.72
115.0	RFS DB-B1-6C-12AB-	1	6.253	6.879	0.67	0.80	3.03	0.000	0.000	20.82	0.00	0.00	164.63
115.0	Alcatel-Lucent B66A	2	6.253	6.879	0.67	0.80	2.65	0.000	0.000	18.26	0.00	0.00	272.96
115.0	Andrew HBXX-	4	6.253	6.879	0.80	0.80	29.08	0.000	0.000	200.03	0.00	0.00	689.74
115.0	Commscope LNX-	4	6.253	6.879	0.84	0.80	35.09	0.000	0.000	241.39	0.00	0.00	1,260.54
115.0	Flat Low Profile Pla	1	6.253	6.879	1.00	1.00	44.69	0.000	0.000	307.39	0.00	0.00	2,230.81
121.0	RFS APX16DWV-	9	6.345	6.979	1.00	1.00	67.96	0.000	0.000	474.32	0.00	0.00	1,632.97
130.0	Ericsson KRY 112 144	3	6.476	7.124	0.50	0.80	0.76	0.000	0.000	5.38	0.00	0.00	87.67
130.0	Ericsson AIR 21	6	6.476	7.124	0.86	0.80	29.44	0.000	0.000	209.70	0.00	0.00	1,646.96
130.0	Round T-Arm	3	6.476	7.124	0.67	0.75	26.89	0.000	0.000	191.58	0.00	0.00	1,327.07
145.5	Kathrein 782 10253	3	6.688	7.357	0.50	0.80	0.34	0.000	0.000	2.47	0.00	0.00	33.39
145.5	Powerwave Allgon	6	6.688	7.357	0.50	0.80	1.34	0.000	0.000	9.88	0.00	0.00	128.02
145.5	Powerwave 7020.00	6	6.688	7.357	0.50	0.80	1.49	0.000	0.000	10.96	0.00	0.00	109.65
145.5	Powerwave Allgon	6	6.628	7.291	0.50	0.80	3.75	0.000	-4.500	27.33	0.00	-122.99	302.51
145.5	Raycap DC6-48-60-18-	1	6.688	7.357	1.00	0.80	2.28	0.000	0.000	16.78	0.00	0.00	130.75
145.5	Ericsson RRUS 11 (Ba	3	6.628	7.291	0.67	0.80	5.17	0.000	-4.500	37.66	0.00	-169.47	423.14
145.5	Ericsson RRUS 32 B2	3	6.688	7.357	0.67	0.80	5.58	0.000	0.000	41.06	0.00	0.00	454.07
145.5	Powerwave Allgon 777	6	6.628	7.291	0.75	0.80	23.62	0.000	-4.500	172.22	0.00	-775.00	1,059.84
145.5	CCI HPA-65R-BUU-H6	3	6.628	7.291	0.78	0.80	20.63	0.000	-4.500	150.43	0.00	-676.95	925.13
145.5	Flat Low Profile Pla	1	6.688	7.357	1.00	0.80	36.14	0.000	0.000	265.84	0.00	0.00	2,247.13
										2,439.78			15,632.11

Load Case: 1.2D + 1.0Di + 1.0Wi		50 mph with 0.75 in Radial Ice		22 Iterations	
Gust Response Factor :1.10		Ice Dead Load Factor :1.00		Wind Importance Factor :1.00	
Dead Load Factor :1.20				Ice Importance Factor :1.00	
Wind Load Factor :1.00					

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	0.36
5.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.08
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
5.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	21.90
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
5.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	6.42
5.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	44.28
5.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.80
10.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	0.36
10.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.08
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
10.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	21.90
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
10.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	6.42
10.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	44.28
10.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.80
15.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	0.36
15.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.08
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
15.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	21.90
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
15.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	6.42
15.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	44.28
15.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.80
20.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	0.36
20.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.08
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
20.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	21.90
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
20.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	6.42
20.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	44.28
20.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.80
25.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	0.36
25.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.08
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
25.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	21.90
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
25.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	6.42
25.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	44.28
25.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.80
30.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	0.36
30.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.08
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
30.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	21.90
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	59.04
30.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	6.42
30.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	44.28
30.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.256	0.000	0.000	0.00	7.80
35.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	0.36
35.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	7.08
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	59.04

Load Case: 1.2D + 1.0Di + 1.0Wi			50 mph with 0.75 in Radial Ice						22 Iterations		
Gust Response Factor :1.10			Ice Dead Load Factor :1.00						Wind Importance Factor :1.00		
Dead Load Factor :1.20									Ice Importance Factor :1.00		
Wind Load Factor :1.00											

35.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	21.90
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	59.04
35.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	6.42
35.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	44.28
35.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.358	0.000	0.000	0.00	7.80
40.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	0.36
40.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	7.08
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	59.04
40.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	21.90
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	59.04
40.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	6.42
40.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	44.28
40.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.540	0.000	0.000	0.00	7.80
45.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	0.36
45.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	7.08
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	59.04
45.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	21.90
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	59.04
45.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	6.42
45.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	44.28
45.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	4.705	0.000	0.000	0.00	7.80
46.71	(1) 0.39" Fiber Trunk	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	0.12
46.71	(2) 0.78" 8 AWG 6	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	2.42
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	20.15
46.71	(1) 2" Conduit	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	7.48
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	20.15
46.71	(1) 1.57" Hybrid	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	2.19
46.71	(9) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	15.11
46.71	(1) 1 5/8" Hybriflex	No	1.71	0.00	0.00	0.00	0.00	4.809	0.000	0.000	0.00	2.66
50.00	(1) 0.39" Fiber Trunk	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	0.24
50.00	(2) 0.78" 8 AWG 6	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	4.66
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	38.89
50.00	(1) 2" Conduit	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	14.42
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	38.89
50.00	(1) 1.57" Hybrid	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	4.23
50.00	(9) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	29.17
50.00	(1) 1 5/8" Hybriflex	No	3.29	0.00	0.00	0.00	0.00	4.882	0.000	0.000	0.00	5.14
52.79	(1) 0.39" Fiber Trunk	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	0.20
52.79	(2) 0.78" 8 AWG 6	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	3.95
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	32.94
52.79	(1) 2" Conduit	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	12.22
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	32.94
52.79	(1) 1.57" Hybrid	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	3.58
52.79	(9) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	24.71
52.79	(1) 1 5/8" Hybriflex	No	2.79	0.00	0.00	0.00	0.00	4.968	0.000	0.000	0.00	4.35
55.00	(1) 0.39" Fiber Trunk	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	0.16
55.00	(2) 0.78" 8 AWG 6	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	3.13
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	26.10
55.00	(1) 2" Conduit	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	9.68
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	26.10
55.00	(1) 1.57" Hybrid	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	2.84
55.00	(9) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	19.57
55.00	(1) 1 5/8" Hybriflex	No	2.21	0.00	0.00	0.00	0.00	5.036	0.000	0.000	0.00	3.45
60.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	0.36
60.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	7.08
60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	59.04
60.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	21.90

Load Case: 1.2D + 1.0Di + 1.0Wi			50 mph with 0.75 in Radial Ice						22 Iterations		
Gust Response Factor :1.10			Ice Dead Load Factor :1.00						Wind Importance Factor :1.00		
Dead Load Factor :1.20									Ice Importance Factor :1.00		
Wind Load Factor :1.00											

60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	59.04
60.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	6.42
60.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	44.28
60.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.130	0.000	0.000	0.00	7.80
65.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	0.36
65.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	7.08
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	59.04
65.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	21.90
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	59.04
65.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	6.42
65.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	44.28
65.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.253	0.000	0.000	0.00	7.80
70.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	0.36
70.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	7.08
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	59.04
70.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	21.90
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	59.04
70.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	6.42
70.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	44.28
70.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.370	0.000	0.000	0.00	7.80
75.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	0.36
75.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	7.08
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	59.04
75.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	21.90
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	59.04
75.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	6.42
75.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	44.28
75.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.481	0.000	0.000	0.00	7.80
80.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	0.36
80.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	7.08
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	59.04
80.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	21.90
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	59.04
80.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	6.42
80.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	44.28
80.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.586	0.000	0.000	0.00	7.80
85.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	0.36
85.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	7.08
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	59.04
85.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	21.90
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	59.04
85.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	6.42
85.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	44.28
85.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.687	0.000	0.000	0.00	7.80
90.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	0.36
90.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	7.08
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	59.04
90.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	21.90
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	59.04
90.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	6.42
90.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	44.28
90.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	5.784	0.000	0.000	0.00	7.80
94.95	(1) 0.39" Fiber Trunk	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	0.36
94.95	(2) 0.78" 8 AWG 6	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	7.01
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	58.49
94.95	(1) 2" Conduit	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	21.70
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	58.49

Load Case: 1.2D + 1.0Di + 1.0Wi			50 mph with 0.75 in Radial Ice						22 Iterations		
Gust Response Factor :1.10			Ice Dead Load Factor :1.00						Wind Importance Factor :1.00		
Dead Load Factor :1.20									Ice Importance Factor :1.00		
Wind Load Factor :1.00											

94.95	(1) 1.57" Hybrid	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	6.36
94.95	(9) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	43.87
94.95	(1) 1 5/8" Hybriflex	No	4.95	0.00	0.00	0.00	0.00	5.876	0.000	0.000	0.00	7.73
95.00	(1) 0.39" Fiber Trunk	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.00
95.00	(2) 0.78" 8 AWG 6	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.07
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.55
95.00	(1) 2" Conduit	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.20
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.55
95.00	(1) 1.57" Hybrid	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.06
95.00	(9) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.41
95.00	(1) 1 5/8" Hybriflex	No	0.05	0.00	0.00	0.00	0.00	5.921	0.000	0.000	0.00	0.07
99.54	(1) 0.39" Fiber Trunk	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	0.33
99.54	(2) 0.78" 8 AWG 6	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	6.42
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	53.57
99.54	(1) 2" Conduit	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	19.87
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	53.57
99.54	(1) 1.57" Hybrid	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	5.83
99.54	(9) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	40.18
99.54	(1) 1 5/8" Hybriflex	No	4.54	0.00	0.00	0.00	0.00	5.961	0.000	0.000	0.00	7.08
100.0	(1) 0.39" Fiber Trunk	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	0.03
100.0	(2) 0.78" 8 AWG 6	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	0.66
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	5.47
100.0	(1) 2" Conduit	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	2.03
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	5.47
100.0	(1) 1.57" Hybrid	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	0.59
100.0	(9) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	4.10
100.0	(1) 1 5/8" Hybriflex	No	0.46	0.00	0.00	0.00	0.00	6.004	0.000	0.000	0.00	0.72
105.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	0.36
105.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	7.08
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	59.04
105.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	21.90
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	59.04
105.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	6.42
105.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	44.28
105.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.051	0.000	0.000	0.00	7.80
110.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	0.36
110.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	7.08
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	59.04
110.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	21.90
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	59.04
110.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	6.42
110.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	44.28
110.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.134	0.000	0.000	0.00	7.80
115.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	0.36
115.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	7.08
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	59.04
115.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	21.90
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	59.04
115.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	6.42
115.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	44.28
115.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.214	0.000	0.000	0.00	7.80
120.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	0.36
120.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	7.08
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	59.04
120.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	21.90
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	59.04
120.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	6.42

Load Case: 1.2D + 1.0Di + 1.0Wi			50 mph with 0.75 in Radial Ice							22 Iterations		
Gust Response Factor :1.10			Ice Dead Load Factor :1.00							Wind Importance Factor :1.00		
Dead Load Factor :1.20										Ice Importance Factor :1.00		
Wind Load Factor :1.00												
120.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.292	0.000	0.000	0.00	44.28
121.0	(1) 0.39" Fiber Trunk	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	0.07
121.0	(2) 0.78" 8 AWG 6	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	1.42
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	11.81
121.0	(1) 2" Conduit	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	4.38
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	11.81
121.0	(1) 1.57" Hybrid	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	1.28
121.0	(9) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	6.337	0.000	0.000	0.00	8.86
125.0	(1) 0.39" Fiber Trunk	No	4.00	0.00	0.00	0.00	0.00	6.375	0.000	0.000	0.00	0.29
125.0	(2) 0.78" 8 AWG 6	No	4.00	0.00	0.00	0.00	0.00	6.375	0.000	0.000	0.00	5.66
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	6.375	0.000	0.000	0.00	47.23
125.0	(1) 2" Conduit	No	4.00	0.00	0.00	0.00	0.00	6.375	0.000	0.000	0.00	17.52
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	6.375	0.000	0.000	0.00	47.23
125.0	(1) 1.57" Hybrid	No	4.00	0.00	0.00	0.00	0.00	6.375	0.000	0.000	0.00	5.14
125.1	(1) 0.39" Fiber Trunk	No	0.17	0.00	0.00	0.00	0.00	6.405	0.000	0.000	0.00	0.01
125.1	(2) 0.78" 8 AWG 6	No	0.17	0.00	0.00	0.00	0.00	6.405	0.000	0.000	0.00	0.24
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	6.405	0.000	0.000	0.00	1.97
125.1	(1) 2" Conduit	No	0.17	0.00	0.00	0.00	0.00	6.405	0.000	0.000	0.00	0.73
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	6.405	0.000	0.000	0.00	1.97
125.1	(1) 1.57" Hybrid	No	0.17	0.00	0.00	0.00	0.00	6.405	0.000	0.000	0.00	0.21
128.8	(1) 0.39" Fiber Trunk	No	3.67	0.00	0.00	0.00	0.00	6.433	0.000	0.000	0.00	0.26
128.8	(2) 0.78" 8 AWG 6	No	3.67	0.00	0.00	0.00	0.00	6.433	0.000	0.000	0.00	5.19
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	6.433	0.000	0.000	0.00	43.30
128.8	(1) 2" Conduit	No	3.67	0.00	0.00	0.00	0.00	6.433	0.000	0.000	0.00	16.06
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	6.433	0.000	0.000	0.00	43.30
128.8	(1) 1.57" Hybrid	No	3.67	0.00	0.00	0.00	0.00	6.433	0.000	0.000	0.00	4.71
130.0	(1) 0.39" Fiber Trunk	No	1.17	0.00	0.00	0.00	0.00	6.468	0.000	0.000	0.00	0.08
130.0	(2) 0.78" 8 AWG 6	No	1.17	0.00	0.00	0.00	0.00	6.468	0.000	0.000	0.00	1.65
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	6.468	0.000	0.000	0.00	13.78
130.0	(1) 2" Conduit	No	1.17	0.00	0.00	0.00	0.00	6.468	0.000	0.000	0.00	5.11
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	6.468	0.000	0.000	0.00	13.78
130.0	(1) 1.57" Hybrid	No	1.17	0.00	0.00	0.00	0.00	6.468	0.000	0.000	0.00	1.50
135.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.511	0.000	0.000	0.00	0.36
135.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.511	0.000	0.000	0.00	7.08
135.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.511	0.000	0.000	0.00	59.04
135.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.511	0.000	0.000	0.00	21.90
140.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.581	0.000	0.000	0.00	0.36
140.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.581	0.000	0.000	0.00	7.08
140.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.581	0.000	0.000	0.00	59.04
140.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.581	0.000	0.000	0.00	21.90
145.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.648	0.000	0.000	0.00	0.36
145.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.648	0.000	0.000	0.00	7.08
145.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.648	0.000	0.000	0.00	59.04
145.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.648	0.000	0.000	0.00	21.90
145.5	(1) 0.39" Fiber Trunk	No	0.50	0.00	0.00	0.00	0.00	6.685	0.000	0.000	0.00	0.04
145.5	(2) 0.78" 8 AWG 6	No	0.50	0.00	0.00	0.00	0.00	6.685	0.000	0.000	0.00	0.71
145.5	(12) 1 5/8" Coax	No	0.50	0.00	0.00	0.00	0.00	6.685	0.000	0.000	0.00	5.90
145.5	(1) 2" Conduit	No	0.50	0.00	0.00	0.00	0.00	6.685	0.000	0.000	0.00	2.19
Totals:											0.00	5,524.79

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice	22 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	Wind Importance Factor :1.00
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		68.5	0.0					0.0	0.0	68.5	0.0	0.0	0.0
5.00		135.7	1,962.0					0.0	205.9	135.7	2,167.9	0.0	0.0
10.00		133.1	1,962.3					0.0	205.9	133.1	2,168.2	0.0	0.0
15.00		130.2	1,937.7					0.0	205.9	130.2	2,143.6	0.0	0.0
20.00		127.3	1,904.9					0.0	205.9	127.3	2,110.8	0.0	0.0
25.00		124.3	1,867.8					0.0	205.9	124.3	2,073.7	0.0	0.0
30.00		122.8	1,828.0					0.0	205.9	122.8	2,034.0	0.0	0.0
35.00		123.7	1,786.4					0.0	205.9	123.7	1,992.4	0.0	0.0
40.00		125.2	1,743.5					0.0	205.9	125.2	1,949.4	0.0	0.0
45.00		84.4	1,699.4					0.0	205.9	84.4	1,905.3	0.0	0.0
46.71	Bot - Section 2	63.9	571.2					0.0	70.3	63.9	641.5	0.0	0.0
50.00		78.2	1,790.0					0.0	135.6	78.2	1,925.6	0.0	0.0
52.79	Top - Section 1	64.3	1,490.5					0.0	114.9	64.3	1,605.4	0.0	0.0
55.00		92.5	644.9					0.0	91.0	92.5	735.9	0.0	0.0
60.00		127.9	1,425.9					0.0	205.9	127.9	1,631.8	0.0	0.0
65.00		127.1	1,384.5					0.0	205.9	127.1	1,590.4	0.0	0.0
70.00		125.9	1,342.7					0.0	205.9	125.9	1,548.6	0.0	0.0
75.00		124.4	1,300.4					0.0	205.9	124.4	1,506.3	0.0	0.0
80.00		122.7	1,257.8					0.0	205.9	122.7	1,463.7	0.0	0.0
85.00		120.7	1,214.9					0.0	205.9	120.7	1,420.8	0.0	0.0
90.00		117.9	1,171.7					0.0	205.9	117.9	1,377.6	0.0	0.0
94.95	Bot - Section 3	58.6	1,117.9					0.0	204.0	58.6	1,321.9	0.0	0.0
95.00		53.4	15.3					0.0	1.9	53.4	17.2	0.0	0.0
99.54	Top - Section 2	58.2	1,453.5					0.0	186.8	58.2	1,640.4	0.0	0.0
100.00		62.2	78.0					0.0	19.1	62.2	97.1	0.0	0.0
105.00		112.3	817.3					0.0	205.9	112.3	1,023.2	0.0	0.0
110.00		109.3	783.8					0.0	205.9	109.3	989.7	0.0	0.0
115.00	Appertunance(s)	106.1	750.1	824.2	0.0	0.0	5,123.8	0.0	205.9	930.3	6,079.8	0.0	0.0
120.00		62.5	716.2					0.0	198.1	62.5	914.3	0.0	0.0
121.00	Appertunance(s)	50.6	140.3	474.3	0.0	0.0	1,633.0	0.0	39.6	524.9	1,812.9	0.0	0.0
125.00		42.0	544.1					0.0	123.1	42.0	667.2	0.0	0.0
125.17	Bot - Section 4	38.1	22.4					0.0	5.1	38.1	27.5	0.0	0.0
128.83	Top - Section 3	47.8	696.6					0.0	112.8	47.8	809.5	0.0	0.0
130.00	Appertunance(s)	59.1	129.8	406.7	0.0	0.0	3,061.7	0.0	35.9	465.7	3,227.4	0.0	0.0
135.00		93.5	533.0					0.0	88.4	93.5	621.4	0.0	0.0
140.00		89.7	503.9					0.0	88.4	89.7	592.2	0.0	0.0
145.00		48.1	474.6					0.0	88.4	48.1	562.9	0.0	0.0
145.50	Appertunance(s)	33.6	46.5	734.6	0.0	-1,744.4	5,813.6	0.0	8.8	768.3	5,869.0	0.0	0.0
149.00		29.4	314.1					0.0	0.0	29.4	314.1	0.0	0.0
Totals:										5,934.98	60,580.7	0.00	0.00

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:55 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

22 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-60.58	-5.88	0.00	-583.20	0.00	583.20	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.107
5.00	-58.41	-5.77	0.00	-553.80	0.00	553.80	5,229.56	2,614.78	11,654.9	5,836.15	0.01	-0.03	0.106
10.00	-56.24	-5.66	0.00	-524.94	0.00	524.94	5,144.17	2,572.09	11,184.9	5,600.81	0.06	-0.05	0.105
15.00	-54.09	-5.56	0.00	-496.62	0.00	496.62	5,056.74	2,528.37	10,719.9	5,367.95	0.13	-0.08	0.103
20.00	-51.98	-5.45	0.00	-468.83	0.00	468.83	4,967.26	2,483.63	10,260.2	5,137.73	0.23	-0.11	0.102
25.00	-49.90	-5.35	0.00	-441.56	0.00	441.56	4,875.75	2,437.87	9,806.10	4,910.34	0.36	-0.14	0.100
30.00	-47.87	-5.25	0.00	-414.82	0.00	414.82	4,782.19	2,391.09	9,357.93	4,685.92	0.52	-0.17	0.099
35.00	-45.87	-5.14	0.00	-388.58	0.00	388.58	4,686.58	2,343.29	8,916.06	4,464.66	0.72	-0.20	0.097
40.00	-43.92	-5.03	0.00	-362.88	0.00	362.88	4,588.94	2,294.47	8,480.81	4,246.71	0.94	-0.23	0.095
45.00	-42.01	-4.95	0.00	-337.72	0.00	337.72	4,489.25	2,244.63	8,052.51	4,032.24	1.20	-0.26	0.093
46.71	-41.37	-4.90	0.00	-329.27	0.00	329.27	4,454.76	2,227.38	7,907.97	3,959.86	1.30	-0.27	0.092
50.00	-39.44	-4.83	0.00	-313.13	0.00	313.13	4,377.60	2,188.80	7,614.23	3,812.78	1.49	-0.29	0.091
52.79	-37.84	-4.76	0.00	-299.67	0.00	299.67	3,613.14	1,806.57	6,305.68	3,157.53	1.67	-0.31	0.105
55.00	-37.10	-4.68	0.00	-289.14	0.00	289.14	3,578.23	1,789.12	6,158.78	3,083.97	1.81	-0.33	0.104
60.00	-35.47	-4.57	0.00	-265.73	0.00	265.73	3,497.79	1,748.90	5,830.16	2,919.41	2.17	-0.36	0.101
65.00	-33.87	-4.45	0.00	-242.89	0.00	242.89	3,415.31	1,707.65	5,506.99	2,757.59	2.57	-0.40	0.098
70.00	-32.32	-4.33	0.00	-220.64	0.00	220.64	3,330.78	1,665.39	5,189.62	2,598.67	3.01	-0.43	0.095
75.00	-30.81	-4.22	0.00	-198.97	0.00	198.97	3,243.59	1,621.79	4,877.42	2,442.34	3.48	-0.47	0.091
80.00	-29.35	-4.10	0.00	-177.88	0.00	177.88	3,127.49	1,563.75	4,532.82	2,269.78	3.99	-0.51	0.088
85.00	-27.93	-3.98	0.00	-157.38	0.00	157.38	3,011.40	1,505.70	4,200.83	2,103.54	4.54	-0.54	0.084
90.00	-26.55	-3.87	0.00	-137.46	0.00	137.46	2,895.30	1,447.65	3,881.48	1,943.62	5.13	-0.58	0.080
94.95	-25.23	-3.80	0.00	-118.29	0.00	118.29	2,780.28	1,390.14	3,577.55	1,791.43	5.74	-0.61	0.075
95.00	-25.21	-3.76	0.00	-118.11	0.00	118.11	2,779.20	1,389.60	3,574.75	1,790.03	5.75	-0.61	0.075
99.54	-23.57	-3.69	0.00	-101.07	0.00	101.07	1,702.59	851.29	2,158.67	1,080.94	6.35	-0.64	0.107
100.00	-23.47	-3.64	0.00	-99.36	0.00	99.36	1,698.09	849.05	2,144.41	1,073.80	6.41	-0.64	0.106
105.00	-22.45	-3.53	0.00	-81.18	0.00	81.18	1,648.46	824.23	1,992.11	997.54	7.11	-0.69	0.095
110.00	-21.46	-3.42	0.00	-63.55	0.00	63.55	1,596.78	798.39	1,842.85	922.79	7.85	-0.73	0.082
115.00	-15.39	-2.42	0.00	-46.44	0.00	46.44	1,543.06	771.53	1,696.96	849.74	8.64	-0.76	0.065
120.00	-14.47	-2.35	0.00	-34.35	0.00	34.35	1,487.30	743.65	1,554.78	778.54	9.45	-0.79	0.054
121.00	-12.67	-1.80	0.00	-32.00	0.00	32.00	1,475.91	737.95	1,526.81	764.54	9.62	-0.80	0.050
125.00	-12.00	-1.75	0.00	-24.79	0.00	24.79	1,425.26	712.63	1,412.43	707.26	10.30	-0.82	0.043
125.17	-11.97	-1.72	0.00	-24.50	0.00	24.50	1,422.68	711.34	1,407.29	704.69	10.33	-0.82	0.043
128.83	-11.16	-1.66	0.00	-18.21	0.00	18.21	970.32	485.16	941.18	471.29	10.96	-0.84	0.050
130.00	-7.94	-1.15	0.00	-16.28	0.00	16.28	961.96	480.98	920.87	461.12	11.17	-0.84	0.044
135.00	-7.32	-1.05	0.00	-10.54	0.00	10.54	924.86	462.43	835.07	418.16	12.06	-0.86	0.033
140.00	-6.73	-0.95	0.00	-5.31	0.00	5.31	885.72	442.86	751.58	376.35	12.97	-0.88	0.022
145.00	-6.17	-0.89	0.00	-0.57	0.00	0.57	844.53	422.27	670.72	335.86	13.89	-0.88	0.009
145.50	-0.31	-0.03	0.00	-0.12	0.00	0.12	840.30	420.15	662.79	331.89	13.98	-0.88	0.001
149.00	0.00	-0.03	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	14.63	-0.88	0.000

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:55 PM

Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

22 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Shaft Segment Forces (Factored)

Seg Top														
Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.742	237.87	0.650	0.000	0.00	0.000	0.00	51.3	0.0	0.0
5.00		1.00	0.70	6.129	6.742	235.09	0.650	0.000	5.00	23.416	15.22	101.4	0.0	1,297.2
10.00		1.00	0.70	6.129	6.742	229.51	0.650	0.000	5.00	22.860	14.86	99.0	0.0	1,266.1
15.00		1.00	0.70	6.129	6.742	223.93	0.650	0.000	5.00	22.305	14.50	96.5	0.0	1,235.1
20.00		1.00	0.70	6.129	6.742	218.35	0.650	0.000	5.00	21.749	14.14	94.1	0.0	1,204.1
25.00		1.00	0.70	6.129	6.742	212.78	0.650	0.000	5.00	21.194	13.78	91.7	0.0	1,173.1
30.00		1.00	0.70	6.129	6.742	207.20	0.650	0.000	5.00	20.638	13.41	90.3	0.0	1,142.1
35.00		1.00	0.71	6.276	6.903	204.03	0.650	0.000	5.00	20.083	13.05	90.7	0.0	1,111.1
40.00		1.00	0.74	6.538	7.191	202.48	0.650	0.000	5.00	19.527	12.69	91.6	0.0	1,080.0
45.00		1.00	0.77	6.776	7.453	200.27	0.650	0.000	5.00	18.972	12.33	61.7	0.0	1,049.0
46.71	Bot - Section 2	1.00	0.79	6.924	7.617	198.48	0.650	0.000	1.71	6.349	4.13	46.6	0.0	351.0
50.00		1.00	0.80	7.030	7.733	197.00	0.650	0.000	3.29	12.277	7.98	57.0	0.0	1,249.6
52.79	Top - Section 1	1.00	0.81	7.154	7.869	195.06	0.650	0.000	2.79	10.212	6.64	46.8	0.0	1,039.1
55.00		1.00	0.82	7.251	7.977	196.82	0.650	0.000	2.21	7.966	5.18	67.2	0.0	377.9
60.00		1.00	0.84	7.387	8.126	194.24	0.650	0.000	5.00	17.622	11.45	92.7	0.0	835.8
65.00		1.00	0.86	7.565	8.321	190.37	0.650	0.000	5.00	17.067	11.09	91.8	0.0	809.3
70.00		1.00	0.88	7.733	8.506	186.21	0.650	0.000	5.00	16.512	10.73	90.7	0.0	782.7
75.00		1.00	0.90	7.893	8.682	181.79	0.650	0.000	5.00	15.956	10.37	89.3	0.0	756.1
80.00		1.00	0.91	8.044	8.849	177.14	0.650	0.000	5.00	15.401	10.01	87.8	0.0	729.5
85.00		1.00	0.93	8.189	9.008	172.28	0.650	0.000	5.00	14.845	9.65	86.0	0.0	702.9
90.00		1.00	0.95	8.328	9.161	167.24	0.650	0.000	5.00	14.290	9.29	83.7	0.0	676.3
94.95	Bot - Section 3	1.00	0.96	8.461	9.307	162.04	0.650	0.000	4.95	13.609	8.85	41.6	0.0	643.8
95.00		1.00	0.97	8.526	9.378	159.37	0.650	0.000	0.05	0.127	0.08	37.7	0.0	10.0
99.54	Top - Section 2	1.00	0.98	8.584	9.442	156.89	0.650	0.000	4.54	12.173	7.91	41.1	0.0	951.9
100.0		1.00	0.98	8.646	9.511	156.67	0.650	0.000	0.46	1.217	0.79	43.7	0.0	38.5
105.0		1.00	0.99	8.713	9.585	153.64	0.650	0.000	5.00	12.835	8.34	78.8	0.0	406.2
110.0		1.00	1.00	8.833	9.716	148.00	0.650	0.000	5.00	12.279	7.98	76.3	0.0	388.4
115.0	Appertunance(s)	1.00	1.02	8.948	9.843	142.22	0.650	0.000	5.00	11.724	7.62	73.7	0.0	370.7
120.0		1.00	1.03	9.060	9.966	136.33	0.650	0.000	5.00	11.168	7.26	43.2	0.0	353.0
121.0	Appertunance(s)	1.00	1.04	9.126	10.03	132.74	0.650	0.000	1.00	2.167	1.41	34.8	0.0	68.5
125.0		1.00	1.04	9.179	10.09	129.71	0.650	0.000	4.00	8.446	5.49	28.9	0.0	266.8
125.1	Bot - Section 4	1.00	1.05	9.224	10.14	127.17	0.650	0.000	0.17	0.344	0.22	26.1	0.0	10.9
128.8	Top - Section 3	1.00	1.05	9.264	10.19	124.82	0.650	0.000	3.67	7.532	4.90	32.7	0.0	413.0
130.0	Appertunance(s)	1.00	1.06	9.314	10.24	123.80	0.650	0.000	1.17	2.334	1.52	40.2	0.0	55.4
135.0		1.00	1.07	9.377	10.31	119.96	0.650	0.000	5.00	9.660	6.28	63.2	0.0	229.3
140.0		1.00	1.08	9.476	10.42	113.66	0.650	0.000	5.00	9.105	5.92	60.1	0.0	216.0
145.0		1.00	1.09	9.574	10.53	107.28	0.650	0.000	5.00	8.549	5.56	32.1	0.0	202.7
145.5	Appertunance(s)	1.00	1.09	9.626	10.58	103.72	0.650	0.000	0.50	0.824	0.54	22.2	0.0	19.5
149.0		1.00	1.10	9.664	10.63	101.13	0.650	0.000	3.50	5.615	3.65	19.4	0.0	133.0
Totals:									149.00			2,503.4	0.0	23,645.5

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:56 PM

Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

22 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
115.0	Alcatel-Lucent RRH 2	2	9.005	9.905	0.67	0.80	2.02	0.000	0.000	19.96	0.00	0.00	86.00
115.0	Alcatel-Lucent RRH2x	2	9.005	9.905	0.67	0.80	2.30	0.000	0.000	22.83	0.00	0.00	113.40
115.0	RFS DB-B1-6C-12AB-	1	9.005	9.905	0.67	0.80	1.35	0.000	0.000	13.33	0.00	0.00	21.40
115.0	Alcatel-Lucent B66A	2	9.005	9.905	0.67	0.80	2.72	0.000	0.000	26.97	0.00	0.00	113.60
115.0	Andrew HBXX-	4	9.005	9.905	0.80	0.80	21.84	0.000	0.000	216.30	0.00	0.00	172.00
115.0	Commscope LNX-	4	9.005	9.905	0.84	0.80	30.75	0.000	0.000	304.59	0.00	0.00	201.20
115.0	Flat Low Profile Pla	1	9.005	9.905	1.00	1.00	26.10	0.000	0.000	258.52	0.00	0.00	1,500.00
121.0	RFS APX16DWV-	9	9.136	10.050	1.00	1.00	63.63	0.000	0.000	639.49	0.00	0.00	366.30
130.0	Ericsson KRY 112 144	3	9.326	10.258	0.50	0.80	0.49	0.000	0.000	5.05	0.00	0.00	33.00
130.0	Ericsson AIR 21	6	9.326	10.258	0.86	0.80	26.96	0.000	0.000	276.52	0.00	0.00	546.00
130.0	Round T-Arm	3	9.326	10.258	0.67	0.75	14.62	0.000	0.000	150.00	0.00	0.00	750.00
145.5	Kathrein 782 10253	3	9.631	10.594	0.50	0.80	0.14	0.000	0.000	1.53	0.00	0.00	8.70
145.5	Powerwave Allgon	6	9.631	10.594	0.50	0.80	0.82	0.000	0.000	8.64	0.00	0.00	31.80
145.5	Powerwave 7020.00	6	9.631	10.594	0.50	0.80	0.96	0.000	0.000	10.17	0.00	0.00	13.20
145.5	Powerwave Allgon	6	9.545	10.499	0.50	0.80	3.10	0.000	-4.500	32.51	0.00	-146.27	84.60
145.5	Raycap DC6-48-60-18-	1	9.631	10.594	1.00	0.80	1.18	0.000	0.000	12.46	0.00	0.00	31.80
145.5	Ericsson RRUS 11 (Ba	3	9.545	10.499	0.67	0.80	4.81	0.000	-4.500	50.48	0.00	-227.15	150.00
145.5	Ericsson RRUS 32 B2	3	9.631	10.594	0.67	0.80	5.15	0.000	0.000	54.51	0.00	0.00	159.00
145.5	Powerwave Allgon 777	6	9.545	10.499	0.75	0.80	21.17	0.000	-4.500	222.24	0.00	-1,000.10	210.00
145.5	CCI HPA-65R-BUU-H6	3	9.545	10.499	0.78	0.80	19.39	0.000	-4.500	203.62	0.00	-916.28	153.00
145.5	Flat Low Profile Pla	1	9.631	10.594	1.00	0.80	20.88	0.000	0.000	221.20	0.00	0.00	1,500.00
										2,750.91			6,245.00

Load Case: 1.0D + 1.0W	Serviceability 60 mph	22 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	0.30
5.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.90
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
5.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	18.25
5.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
5.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.35
5.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	36.90
5.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	6.50
10.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	0.30
10.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.90
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
10.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	18.25
10.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
10.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.35
10.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	36.90
10.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	6.50
15.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	0.30
15.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.90
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
15.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	18.25
15.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
15.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.35
15.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	36.90
15.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	6.50
20.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	0.30
20.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.90
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
20.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	18.25
20.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
20.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.35
20.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	36.90
20.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	6.50
25.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	0.30
25.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.90
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
25.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	18.25
25.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
25.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.35
25.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	36.90
25.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	6.50
30.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	0.30
30.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.90
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
30.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	18.25
30.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	49.20
30.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	5.35
30.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	36.90
30.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.129	0.000	0.000	0.00	6.50
35.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	0.30
35.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	5.90
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	49.20

Load Case: 1.0D + 1.0W		Serviceability 60 mph						22 Iterations				
Gust Response Factor :1.10								Wind Importance Factor :1.00				
Dead Load Factor :1.00												
Wind Load Factor :1.00												

35.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	18.25
35.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	49.20
35.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	5.35
35.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	36.90
35.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.276	0.000	0.000	0.00	6.50
40.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	0.30
40.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	5.90
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	49.20
40.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	18.25
40.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	49.20
40.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	5.35
40.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	36.90
40.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.538	0.000	0.000	0.00	6.50
45.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	0.30
45.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	5.90
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	49.20
45.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	18.25
45.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	49.20
45.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	5.35
45.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	36.90
45.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	6.776	0.000	0.000	0.00	6.50
46.71	(1) 0.39" Fiber Trunk	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	0.10
46.71	(2) 0.78" 8 AWG 6	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	2.01
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	16.79
46.71	(1) 2" Conduit	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	6.23
46.71	(12) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	16.79
46.71	(1) 1.57" Hybrid	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	1.83
46.71	(9) 1 5/8" Coax	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	12.60
46.71	(1) 1 5/8" Hybriflex	No	1.71	0.00	0.00	0.00	0.00	6.924	0.000	0.000	0.00	2.22
50.00	(1) 0.39" Fiber Trunk	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	0.20
50.00	(2) 0.78" 8 AWG 6	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	3.89
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	32.41
50.00	(1) 2" Conduit	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	12.02
50.00	(12) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	32.41
50.00	(1) 1.57" Hybrid	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	3.52
50.00	(9) 1 5/8" Coax	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	24.30
50.00	(1) 1 5/8" Hybriflex	No	3.29	0.00	0.00	0.00	0.00	7.030	0.000	0.000	0.00	4.28
52.79	(1) 0.39" Fiber Trunk	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	0.17
52.79	(2) 0.78" 8 AWG 6	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	3.29
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	27.45
52.79	(1) 2" Conduit	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	10.18
52.79	(12) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	27.45
52.79	(1) 1.57" Hybrid	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	2.99
52.79	(9) 1 5/8" Coax	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	20.59
52.79	(1) 1 5/8" Hybriflex	No	2.79	0.00	0.00	0.00	0.00	7.154	0.000	0.000	0.00	3.63
55.00	(1) 0.39" Fiber Trunk	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	0.13
55.00	(2) 0.78" 8 AWG 6	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	2.61
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	21.75
55.00	(1) 2" Conduit	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	8.07
55.00	(12) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	21.75
55.00	(1) 1.57" Hybrid	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	2.36
55.00	(9) 1 5/8" Coax	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	16.31
55.00	(1) 1 5/8" Hybriflex	No	2.21	0.00	0.00	0.00	0.00	7.251	0.000	0.000	0.00	2.87
60.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	0.30
60.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	5.90
60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	49.20
60.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	18.25

Load Case: 1.0D + 1.0W		Serviceability 60 mph						22 Iterations				
Gust Response Factor :1.10								Wind Importance Factor :1.00				
Dead Load Factor :1.00												
Wind Load Factor :1.00												

60.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	49.20
60.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	5.35
60.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	36.90
60.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	7.387	0.000	0.000	0.00	6.50
65.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	0.30
65.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	5.90
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	49.20
65.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	18.25
65.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	49.20
65.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	5.35
65.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	36.90
65.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	7.565	0.000	0.000	0.00	6.50
70.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	0.30
70.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	5.90
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	49.20
70.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	18.25
70.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	49.20
70.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	5.35
70.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	36.90
70.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	7.733	0.000	0.000	0.00	6.50
75.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	0.30
75.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	5.90
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	49.20
75.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	18.25
75.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	49.20
75.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	5.35
75.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	36.90
75.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	7.893	0.000	0.000	0.00	6.50
80.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	0.30
80.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	5.90
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	49.20
80.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	18.25
80.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	49.20
80.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	5.35
80.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	36.90
80.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	8.044	0.000	0.000	0.00	6.50
85.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	0.30
85.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	5.90
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	49.20
85.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	18.25
85.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	49.20
85.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	5.35
85.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	36.90
85.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	8.189	0.000	0.000	0.00	6.50
90.00	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	0.30
90.00	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	5.90
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	49.20
90.00	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	18.25
90.00	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	49.20
90.00	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	5.35
90.00	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	36.90
90.00	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	8.328	0.000	0.000	0.00	6.50
94.95	(1) 0.39" Fiber Trunk	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	0.30
94.95	(2) 0.78" 8 AWG 6	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	5.84
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	48.74
94.95	(1) 2" Conduit	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	18.08
94.95	(12) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	48.74

Load Case: 1.0D + 1.0W		Serviceability 60 mph						22 Iterations				
Gust Response Factor :1.10								Wind Importance Factor :1.00				
Dead Load Factor :1.00												
Wind Load Factor :1.00												

94.95	(1) 1.57" Hybrid	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	5.30
94.95	(9) 1 5/8" Coax	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	36.56
94.95	(1) 1 5/8" Hybriflex	No	4.95	0.00	0.00	0.00	0.00	8.461	0.000	0.000	0.00	6.44
95.00	(1) 0.39" Fiber Trunk	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.00
95.00	(2) 0.78" 8 AWG 6	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.06
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.46
95.00	(1) 2" Conduit	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.17
95.00	(12) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.46
95.00	(1) 1.57" Hybrid	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.05
95.00	(9) 1 5/8" Coax	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.34
95.00	(1) 1 5/8" Hybriflex	No	0.05	0.00	0.00	0.00	0.00	8.526	0.000	0.000	0.00	0.06
99.54	(1) 0.39" Fiber Trunk	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	0.27
99.54	(2) 0.78" 8 AWG 6	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	5.35
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	44.64
99.54	(1) 2" Conduit	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	16.56
99.54	(12) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	44.64
99.54	(1) 1.57" Hybrid	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	4.85
99.54	(9) 1 5/8" Coax	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	33.48
99.54	(1) 1 5/8" Hybriflex	No	4.54	0.00	0.00	0.00	0.00	8.584	0.000	0.000	0.00	5.90
100.0	(1) 0.39" Fiber Trunk	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	0.03
100.0	(2) 0.78" 8 AWG 6	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	0.55
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	4.56
100.0	(1) 2" Conduit	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	1.69
100.0	(12) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	4.56
100.0	(1) 1.57" Hybrid	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	0.50
100.0	(9) 1 5/8" Coax	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	3.42
100.0	(1) 1 5/8" Hybriflex	No	0.46	0.00	0.00	0.00	0.00	8.646	0.000	0.000	0.00	0.60
105.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	0.30
105.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	5.90
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	49.20
105.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	18.25
105.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	49.20
105.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	5.35
105.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	36.90
105.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	8.713	0.000	0.000	0.00	6.50
110.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	0.30
110.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	5.90
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	49.20
110.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	18.25
110.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	49.20
110.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	5.35
110.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	36.90
110.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	8.833	0.000	0.000	0.00	6.50
115.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	0.30
115.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	5.90
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	49.20
115.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	18.25
115.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	49.20
115.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	5.35
115.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	36.90
115.0	(1) 1 5/8" Hybriflex	No	5.00	0.00	0.00	0.00	0.00	8.948	0.000	0.000	0.00	6.50
120.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	0.30
120.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	5.90
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	49.20
120.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	18.25
120.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	49.20
120.0	(1) 1.57" Hybrid	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	5.35

Load Case: 1.0D + 1.0W		Serviceability 60 mph						22 Iterations				
Gust Response Factor :1.10								Wind Importance Factor :1.00				
Dead Load Factor :1.00												
Wind Load Factor :1.00												

120.0	(9) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	9.060	0.000	0.000	0.00	36.90
121.0	(1) 0.39" Fiber Trunk	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	0.06
121.0	(2) 0.78" 8 AWG 6	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	1.18
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	9.84
121.0	(1) 2" Conduit	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	3.65
121.0	(12) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	9.84
121.0	(1) 1.57" Hybrid	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	1.07
121.0	(9) 1 5/8" Coax	No	1.00	0.00	0.00	0.00	0.00	9.126	0.000	0.000	0.00	7.38
125.0	(1) 0.39" Fiber Trunk	No	4.00	0.00	0.00	0.00	0.00	9.179	0.000	0.000	0.00	0.24
125.0	(2) 0.78" 8 AWG 6	No	4.00	0.00	0.00	0.00	0.00	9.179	0.000	0.000	0.00	4.72
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	9.179	0.000	0.000	0.00	39.36
125.0	(1) 2" Conduit	No	4.00	0.00	0.00	0.00	0.00	9.179	0.000	0.000	0.00	14.60
125.0	(12) 1 5/8" Coax	No	4.00	0.00	0.00	0.00	0.00	9.179	0.000	0.000	0.00	39.36
125.0	(1) 1.57" Hybrid	No	4.00	0.00	0.00	0.00	0.00	9.179	0.000	0.000	0.00	4.28
125.1	(1) 0.39" Fiber Trunk	No	0.17	0.00	0.00	0.00	0.00	9.224	0.000	0.000	0.00	0.01
125.1	(2) 0.78" 8 AWG 6	No	0.17	0.00	0.00	0.00	0.00	9.224	0.000	0.000	0.00	0.20
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	9.224	0.000	0.000	0.00	1.64
125.1	(1) 2" Conduit	No	0.17	0.00	0.00	0.00	0.00	9.224	0.000	0.000	0.00	0.61
125.1	(12) 1 5/8" Coax	No	0.17	0.00	0.00	0.00	0.00	9.224	0.000	0.000	0.00	1.64
125.1	(1) 1.57" Hybrid	No	0.17	0.00	0.00	0.00	0.00	9.224	0.000	0.000	0.00	0.18
128.8	(1) 0.39" Fiber Trunk	No	3.67	0.00	0.00	0.00	0.00	9.264	0.000	0.000	0.00	0.22
128.8	(2) 0.78" 8 AWG 6	No	3.67	0.00	0.00	0.00	0.00	9.264	0.000	0.000	0.00	4.33
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	9.264	0.000	0.000	0.00	36.08
128.8	(1) 2" Conduit	No	3.67	0.00	0.00	0.00	0.00	9.264	0.000	0.000	0.00	13.38
128.8	(12) 1 5/8" Coax	No	3.67	0.00	0.00	0.00	0.00	9.264	0.000	0.000	0.00	36.08
128.8	(1) 1.57" Hybrid	No	3.67	0.00	0.00	0.00	0.00	9.264	0.000	0.000	0.00	3.92
130.0	(1) 0.39" Fiber Trunk	No	1.17	0.00	0.00	0.00	0.00	9.314	0.000	0.000	0.00	0.07
130.0	(2) 0.78" 8 AWG 6	No	1.17	0.00	0.00	0.00	0.00	9.314	0.000	0.000	0.00	1.38
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	9.314	0.000	0.000	0.00	11.48
130.0	(1) 2" Conduit	No	1.17	0.00	0.00	0.00	0.00	9.314	0.000	0.000	0.00	4.26
130.0	(12) 1 5/8" Coax	No	1.17	0.00	0.00	0.00	0.00	9.314	0.000	0.000	0.00	11.48
130.0	(1) 1.57" Hybrid	No	1.17	0.00	0.00	0.00	0.00	9.314	0.000	0.000	0.00	1.25
135.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	9.377	0.000	0.000	0.00	0.30
135.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	9.377	0.000	0.000	0.00	5.90
135.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	9.377	0.000	0.000	0.00	49.20
135.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	9.377	0.000	0.000	0.00	18.25
140.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	9.476	0.000	0.000	0.00	0.30
140.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	9.476	0.000	0.000	0.00	5.90
140.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	9.476	0.000	0.000	0.00	49.20
140.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	9.476	0.000	0.000	0.00	18.25
145.0	(1) 0.39" Fiber Trunk	No	5.00	0.00	0.00	0.00	0.00	9.574	0.000	0.000	0.00	0.30
145.0	(2) 0.78" 8 AWG 6	No	5.00	0.00	0.00	0.00	0.00	9.574	0.000	0.000	0.00	5.90
145.0	(12) 1 5/8" Coax	No	5.00	0.00	0.00	0.00	0.00	9.574	0.000	0.000	0.00	49.20
145.0	(1) 2" Conduit	No	5.00	0.00	0.00	0.00	0.00	9.574	0.000	0.000	0.00	18.25
145.5	(1) 0.39" Fiber Trunk	No	0.50	0.00	0.00	0.00	0.00	9.626	0.000	0.000	0.00	0.03
145.5	(2) 0.78" 8 AWG 6	No	0.50	0.00	0.00	0.00	0.00	9.626	0.000	0.000	0.00	0.59
145.5	(12) 1 5/8" Coax	No	0.50	0.00	0.00	0.00	0.00	9.626	0.000	0.000	0.00	4.92
145.5	(1) 2" Conduit	No	0.50	0.00	0.00	0.00	0.00	9.626	0.000	0.000	0.00	1.83
Totals:											0.00	4,604.00

Load Case: 1.0D + 1.0W	Serviceability 60 mph	22 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		51.3	0.0					0.0	0.0	51.3	0.0	0.0	0.0
5.00		101.4	1,297.2					0.0	171.6	101.4	1,468.8	0.0	0.0
10.00		99.0	1,266.1					0.0	171.6	99.0	1,437.7	0.0	0.0
15.00		96.5	1,235.1					0.0	171.6	96.5	1,406.7	0.0	0.0
20.00		94.1	1,204.1					0.0	171.6	94.1	1,375.7	0.0	0.0
25.00		91.7	1,173.1					0.0	171.6	91.7	1,344.7	0.0	0.0
30.00		90.3	1,142.1					0.0	171.6	90.3	1,313.7	0.0	0.0
35.00		90.7	1,111.1					0.0	171.6	90.7	1,282.7	0.0	0.0
40.00		91.6	1,080.0					0.0	171.6	91.6	1,251.6	0.0	0.0
45.00		61.7	1,049.0					0.0	171.6	61.7	1,220.6	0.0	0.0
46.71	Bot - Section 2	46.6	351.0					0.0	58.6	46.6	409.5	0.0	0.0
50.00		57.0	1,249.6					0.0	113.0	57.0	1,362.6	0.0	0.0
52.79	Top - Section 1	46.8	1,039.1					0.0	95.8	46.8	1,134.8	0.0	0.0
55.00		67.2	377.9					0.0	75.8	67.2	453.8	0.0	0.0
60.00		92.7	835.8					0.0	171.6	92.7	1,007.4	0.0	0.0
65.00		91.8	809.3					0.0	171.6	91.8	980.9	0.0	0.0
70.00		90.7	782.7					0.0	171.6	90.7	954.3	0.0	0.0
75.00		89.3	756.1					0.0	171.6	89.3	927.7	0.0	0.0
80.00		87.8	729.5					0.0	171.6	87.8	901.1	0.0	0.0
85.00		86.0	702.9					0.0	171.6	86.0	874.5	0.0	0.0
90.00		83.7	676.3					0.0	171.6	83.7	847.9	0.0	0.0
94.95	Bot - Section 3	41.6	643.8					0.0	170.0	41.6	813.8	0.0	0.0
95.00		37.7	10.0					0.0	1.6	37.7	11.6	0.0	0.0
99.54	Top - Section 2	41.1	951.9					0.0	155.7	41.1	1,107.6	0.0	0.0
100.00		43.7	38.5					0.0	15.9	43.7	54.4	0.0	0.0
105.00		78.8	406.2					0.0	171.6	78.8	577.8	0.0	0.0
110.00		76.3	388.4					0.0	171.6	76.3	560.0	0.0	0.0
115.00	Appertunance(s)	73.7	370.7	862.5	0.0	0.0	2,207.6	0.0	171.6	936.2	2,749.9	0.0	0.0
120.00		43.2	353.0					0.0	165.1	43.2	518.1	0.0	0.0
121.00	Appertunance(s)	34.8	68.5	639.5	0.0	0.0	366.3	0.0	33.0	674.3	467.8	0.0	0.0
125.00		28.9	266.8					0.0	102.6	28.9	369.3	0.0	0.0
125.17	Bot - Section 4	26.1	10.9					0.0	4.3	26.1	15.1	0.0	0.0
128.83	Top - Section 3	32.7	413.0					0.0	94.0	32.7	507.0	0.0	0.0
130.00	Appertunance(s)	40.2	55.4	431.6	0.0	0.0	1,329.0	0.0	29.9	471.7	1,414.3	0.0	0.0
135.00		63.2	229.3					0.0	73.7	63.2	302.9	0.0	0.0
140.00		60.1	216.0					0.0	73.7	60.1	289.6	0.0	0.0
145.00		32.1	202.7					0.0	73.7	32.1	276.3	0.0	0.0
145.50	Appertunance(s)	22.2	19.5	817.4	0.0	-2,289.8	2,342.1	0.0	7.4	839.6	2,369.0	0.0	0.0
149.00		19.4	133.0					0.0	0.0	19.4	133.0	0.0	0.0
Totals:										5,254.26	34,494.5	0.00	0.00

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:57 PM

Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

22 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-34.49	-5.21	0.00	-535.49	0.00	535.49	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.095
5.00	-33.02	-5.12	0.00	-509.44	0.00	509.44	5,229.56	2,614.78	11,654.9	5,836.15	0.01	-0.02	0.094
10.00	-31.58	-5.04	0.00	-483.83	0.00	483.83	5,144.17	2,572.09	11,184.9	5,600.81	0.05	-0.05	0.093
15.00	-30.17	-4.95	0.00	-458.64	0.00	458.64	5,056.74	2,528.37	10,719.9	5,367.95	0.12	-0.08	0.091
20.00	-28.80	-4.87	0.00	-433.88	0.00	433.88	4,967.26	2,483.63	10,260.2	5,137.73	0.21	-0.10	0.090
25.00	-27.45	-4.79	0.00	-409.53	0.00	409.53	4,875.75	2,437.87	9,806.10	4,910.34	0.33	-0.13	0.089
30.00	-26.13	-4.71	0.00	-385.59	0.00	385.59	4,782.19	2,391.09	9,357.93	4,685.92	0.48	-0.16	0.088
35.00	-24.85	-4.62	0.00	-362.06	0.00	362.06	4,686.58	2,343.29	8,916.06	4,464.66	0.66	-0.18	0.086
40.00	-23.60	-4.54	0.00	-338.93	0.00	338.93	4,588.94	2,294.47	8,480.81	4,246.71	0.87	-0.21	0.085
45.00	-22.37	-4.48	0.00	-316.23	0.00	316.23	4,489.25	2,244.63	8,052.51	4,032.24	1.11	-0.24	0.083
46.71	-21.96	-4.44	0.00	-308.58	0.00	308.58	4,454.76	2,227.38	7,907.97	3,959.86	1.20	-0.25	0.083
50.00	-20.60	-4.38	0.00	-293.96	0.00	293.96	4,377.60	2,188.80	7,614.23	3,812.78	1.38	-0.27	0.082
52.79	-19.46	-4.34	0.00	-281.73	0.00	281.73	3,613.14	1,806.57	6,305.68	3,157.53	1.54	-0.29	0.095
55.00	-19.01	-4.27	0.00	-272.15	0.00	272.15	3,578.23	1,789.12	6,158.78	3,083.97	1.68	-0.30	0.094
60.00	-18.00	-4.19	0.00	-250.78	0.00	250.78	3,497.79	1,748.90	5,830.16	2,919.41	2.01	-0.34	0.091
65.00	-17.02	-4.10	0.00	-229.85	0.00	229.85	3,415.31	1,707.65	5,506.99	2,757.59	2.38	-0.37	0.088
70.00	-16.06	-4.01	0.00	-209.35	0.00	209.35	3,330.78	1,665.39	5,189.62	2,598.67	2.79	-0.40	0.085
75.00	-15.13	-3.92	0.00	-189.30	0.00	189.30	3,243.59	1,621.79	4,877.42	2,442.34	3.23	-0.44	0.082
80.00	-14.23	-3.84	0.00	-169.68	0.00	169.68	3,127.49	1,563.75	4,532.82	2,269.78	3.71	-0.47	0.079
85.00	-13.35	-3.75	0.00	-150.49	0.00	150.49	3,011.40	1,505.70	4,200.83	2,103.54	4.22	-0.51	0.076
90.00	-12.50	-3.67	0.00	-131.73	0.00	131.73	2,895.30	1,447.65	3,881.48	1,943.62	4.77	-0.54	0.072
94.95	-11.69	-3.62	0.00	-113.56	0.00	113.56	2,780.28	1,390.14	3,577.55	1,791.43	5.35	-0.57	0.068
95.00	-11.68	-3.59	0.00	-113.39	0.00	113.39	2,779.20	1,389.60	3,574.75	1,790.03	5.36	-0.57	0.068
99.54	-10.57	-3.54	0.00	-97.11	0.00	97.11	1,702.59	851.29	2,158.67	1,080.94	5.92	-0.60	0.096
100.00	-10.51	-3.50	0.00	-95.48	0.00	95.48	1,698.09	849.05	2,144.41	1,073.80	5.98	-0.61	0.095
105.00	-9.93	-3.42	0.00	-77.99	0.00	77.99	1,648.46	824.23	1,992.11	997.54	6.64	-0.65	0.084
110.00	-9.37	-3.34	0.00	-60.89	0.00	60.89	1,596.78	798.39	1,842.85	922.79	7.34	-0.69	0.072
115.00	-6.63	-2.38	0.00	-44.18	0.00	44.18	1,543.06	771.53	1,696.96	849.74	8.08	-0.72	0.056
120.00	-6.11	-2.33	0.00	-32.30	0.00	32.30	1,487.30	743.65	1,554.78	778.54	8.85	-0.75	0.046
121.00	-5.66	-1.65	0.00	-29.97	0.00	29.97	1,475.91	737.95	1,526.81	764.54	9.00	-0.75	0.043
125.00	-5.29	-1.62	0.00	-23.37	0.00	23.37	1,425.26	712.63	1,412.43	707.26	9.64	-0.77	0.037
125.17	-5.27	-1.59	0.00	-23.10	0.00	23.10	1,422.68	711.34	1,407.29	704.69	9.67	-0.77	0.036
128.83	-4.76	-1.55	0.00	-17.27	0.00	17.27	970.32	485.16	941.18	471.29	10.27	-0.79	0.042
130.00	-3.36	-1.06	0.00	-15.46	0.00	15.46	961.96	480.98	920.87	461.12	10.47	-0.79	0.037
135.00	-3.05	-0.99	0.00	-10.15	0.00	10.15	924.86	462.43	835.07	418.16	11.31	-0.81	0.028
140.00	-2.77	-0.93	0.00	-5.18	0.00	5.18	885.72	442.86	751.58	376.35	12.17	-0.83	0.017
145.00	-2.49	-0.90	0.00	-0.52	0.00	0.52	844.53	422.27	670.72	335.86	13.04	-0.83	0.005
145.50	-0.13	-0.02	0.00	-0.07	0.00	0.07	840.30	420.15	662.79	331.89	13.12	-0.83	0.000
149.00	0.00	-0.02	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	13.73	-0.83	0.000

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.04
Upper Limit C_s	0.04
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.81
Redundancy Factor (ρ):	1.30
Seismic Force Distribution Exponent (k):	1.65
Total Unfactored Dead Load:	34.49 k
Seismic Base Shear (E):	1.69 k

Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	147.25	133	512	0.011	18	165
37	145.25	27	101	0.002	4	33
36	142.50	276	1,006	0.021	36	343
35	137.50	290	994	0.021	35	359
34	132.50	303	978	0.021	35	376
33	129.42	85	265	0.006	9	106
32	127.00	507	1,526	0.032	54	629
31	125.08	15	44	0.001	2	19
30	123.00	369	1,055	0.022	38	458
29	120.50	101	280	0.006	10	126
28	117.50	518	1,372	0.029	49	643
27	112.50	542	1,336	0.028	48	673
26	107.50	560	1,280	0.027	46	695
25	102.50	578	1,220	0.026	43	717
24	99.77	54	110	0.002	4	68
23	97.27	1,108	2,145	0.045	76	1,375
22	94.98	12	22	0.000	1	14
21	92.48	814	1,450	0.030	52	1,010
20	87.50	848	1,379	0.029	49	1,052
19	82.50	875	1,290	0.027	46	1,085
18	77.50	901	1,199	0.025	43	1,118
17	72.50	928	1,105	0.023	39	1,151
16	67.50	954	1,010	0.021	36	1,184

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:57 PM

Customer: AT&T Mobility

15	62.50	981	914	0.019	33	1,217
14	57.50	1,007	818	0.017	29	1,250
13	53.90	454	331	0.007	12	563
12	51.40	1,135	766	0.016	27	1,409
11	48.35	1,363	831	0.017	30	1,691
10	45.85	410	229	0.005	8	508
9	42.50	1,221	601	0.013	21	1,515
8	37.50	1,252	501	0.011	18	1,553
7	32.50	1,283	406	0.009	14	1,592
6	27.50	1,314	315	0.007	11	1,630
5	22.50	1,345	231	0.005	8	1,669
4	17.50	1,376	156	0.003	6	1,707
3	12.50	1,407	92	0.002	3	1,746
2	7.50	1,438	40	0.001	1	1,784
1	2.50	1,469	7	0.000	0	1,823
Kathrein 782 10253	145.50	9	33	0.001	1	11
Powerwave Allgon LGP	145.50	32	120	0.003	4	39
Powerwave 7020.00 Du	145.50	13	50	0.001	2	16
Powerwave Allgon LGP	145.50	85	319	0.007	11	105
Raycap DC6-48-60-18-	145.50	32	120	0.003	4	39
Ericsson RRUS 11 (Ba	145.50	150	565	0.012	20	186
Ericsson RRUS 32 B2	145.50	159	599	0.013	21	197
Powerwave Allgon 777	145.50	210	792	0.017	28	261
CCI HPA-65R-BUU-H6	145.50	153	577	0.012	21	190
Flat Low Profile Pla	145.50	1,500	5,654	0.119	201	1,862
Ericsson KRY 112 144	130.00	33	103	0.002	4	41
Ericsson AIR 21	130.00	546	1,708	0.036	61	678
Round T-Arm	130.00	750	2,347	0.049	84	931
RFS APX16DWV-16DWVS-	121.00	366	1,018	0.021	36	455
Alcatel-Lucent RRH 2	115.00	86	220	0.005	8	107
Alcatel-Lucent RRH2x	115.00	113	290	0.006	10	141
RFS DB-B1-6C-12AB-0Z	115.00	21	55	0.001	2	27
Alcatel-Lucent B66A	115.00	114	290	0.006	10	141
Andrew HBXX-6517DS-A	115.00	172	439	0.009	16	213
Commscope LNX-6515DS	115.00	201	514	0.011	18	250
Flat Low Profile Pla	115.00	1,500	3,832	0.081	136	1,862
		34,495	47,564	1.000	1,694	42,814

Load Case (0.9 - 0.2Sds) * DL + E EFLM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	147.25	133	512	0.011	18	114
37	145.25	27	101	0.002	4	23
36	142.50	276	1,006	0.021	36	237
35	137.50	290	994	0.021	35	249
34	132.50	303	978	0.021	35	260
33	129.42	85	265	0.006	9	73
32	127.00	507	1,526	0.032	54	435
31	125.08	15	44	0.001	2	13
30	123.00	369	1,055	0.022	38	317
29	120.50	101	280	0.006	10	87
28	117.50	518	1,372	0.029	49	445
27	112.50	542	1,336	0.028	48	466
26	107.50	560	1,280	0.027	46	481
25	102.50	578	1,220	0.026	43	496
24	99.77	54	110	0.002	4	47
23	97.27	1,108	2,145	0.045	76	951
22	94.98	12	22	0.000	1	10
21	92.48	814	1,450	0.030	52	699

Site Number: 370641

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:57 PM

Customer: AT&T Mobility

20	87.50	848	1,379	0.029	49	728
19	82.50	875	1,290	0.027	46	751
18	77.50	901	1,199	0.025	43	774
17	72.50	928	1,105	0.023	39	797
16	67.50	954	1,010	0.021	36	820
15	62.50	981	914	0.019	33	842
14	57.50	1,007	818	0.017	29	865
13	53.90	454	331	0.007	12	390
12	51.40	1,135	766	0.016	27	975
11	48.35	1,363	831	0.017	30	1,170
10	45.85	410	229	0.005	8	352
9	42.50	1,221	601	0.013	21	1,048
8	37.50	1,252	501	0.011	18	1,075
7	32.50	1,283	406	0.009	14	1,102
6	27.50	1,314	315	0.007	11	1,128
5	22.50	1,345	231	0.005	8	1,155
4	17.50	1,376	156	0.003	6	1,181
3	12.50	1,407	92	0.002	3	1,208
2	7.50	1,438	40	0.001	1	1,235
1	2.50	1,469	7	0.000	0	1,261
Kathrein 782 10253	145.50	9	33	0.001	1	7
Powerwave Allgon LGP	145.50	32	120	0.003	4	27
Powerwave 7020.00 Du	145.50	13	50	0.001	2	11
Powerwave Allgon LGP	145.50	85	319	0.007	11	73
Raycap DC6-48-60-18-	145.50	32	120	0.003	4	27
Ericsson RRUS 11 (Ba	145.50	150	565	0.012	20	129
Ericsson RRUS 32 B2	145.50	159	599	0.013	21	137
Powerwave Allgon 777	145.50	210	792	0.017	28	180
CCI HPA-65R-BUU-H6	145.50	153	577	0.012	21	131
Flat Low Profile Pla	145.50	1,500	5,654	0.119	201	1,288
Ericsson KRY 112 144	130.00	33	103	0.002	4	28
Ericsson AIR 21	130.00	546	1,708	0.036	61	469
Round T-Arm	130.00	750	2,347	0.049	84	644
RFS APX16DWV-16DWVS-	121.00	366	1,018	0.021	36	315
Alcatel-Lucent RRH 2	115.00	86	220	0.005	8	74
Alcatel-Lucent RRH2x	115.00	113	290	0.006	10	97
RFS DB-B1-6C-12AB-0Z	115.00	21	55	0.001	2	18
Alcatel-Lucent B66A	115.00	114	290	0.006	10	98
Andrew HBXX-6517DS-A	115.00	172	439	0.009	16	148
Commscope LNX-6515DS	115.00	201	514	0.011	18	173
Flat Low Profile Pla	115.00	1,500	3,832	0.081	136	1,288
		34,495	47,564	1.000	1,694	29,625

Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.99	-1.70	0.00	-187.03	0.00	187.03	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.039
5.00	-39.21	-1.70	0.00	-178.55	0.00	178.55	5,229.56	2,614.78	11,654.9	5,836.15	0.00	-0.01	0.038
10.00	-37.46	-1.70	0.00	-170.05	0.00	170.05	5,144.17	2,572.09	11,184.9	5,600.81	0.02	-0.02	0.038
15.00	-35.75	-1.70	0.00	-161.53	0.00	161.53	5,056.74	2,528.37	10,719.9	5,367.95	0.04	-0.03	0.037
20.00	-34.08	-1.70	0.00	-153.02	0.00	153.02	4,967.26	2,483.63	10,260.2	5,137.73	0.07	-0.04	0.037
25.00	-32.45	-1.69	0.00	-144.53	0.00	144.53	4,875.75	2,437.87	9,806.10	4,910.34	0.12	-0.05	0.036
30.00	-30.86	-1.68	0.00	-136.07	0.00	136.07	4,782.19	2,391.09	9,357.93	4,685.92	0.17	-0.05	0.035
35.00	-29.31	-1.67	0.00	-127.66	0.00	127.66	4,686.58	2,343.29	8,916.06	4,464.66	0.23	-0.06	0.035
40.00	-27.79	-1.65	0.00	-119.33	0.00	119.33	4,588.94	2,294.47	8,480.81	4,246.71	0.31	-0.07	0.034
45.00	-27.28	-1.64	0.00	-111.08	0.00	111.08	4,489.25	2,244.63	8,052.51	4,032.24	0.39	-0.09	0.034
46.71	-25.59	-1.61	0.00	-108.28	0.00	108.28	4,454.76	2,227.38	7,907.97	3,959.86	0.42	-0.09	0.033
50.00	-24.18	-1.59	0.00	-102.97	0.00	102.97	4,377.60	2,188.80	7,614.23	3,812.78	0.48	-0.10	0.033
52.79	-23.62	-1.58	0.00	-98.54	0.00	98.54	3,613.14	1,806.57	6,305.68	3,157.53	0.54	-0.10	0.038
55.00	-22.37	-1.55	0.00	-95.06	0.00	95.06	3,578.23	1,789.12	6,158.78	3,083.97	0.59	-0.11	0.037
60.00	-21.15	-1.52	0.00	-87.32	0.00	87.32	3,497.79	1,748.90	5,830.16	2,919.41	0.71	-0.12	0.036
65.00	-19.97	-1.48	0.00	-79.74	0.00	79.74	3,415.31	1,707.65	5,506.99	2,757.59	0.84	-0.13	0.035
70.00	-18.81	-1.44	0.00	-72.32	0.00	72.32	3,330.78	1,665.39	5,189.62	2,598.67	0.98	-0.14	0.033
75.00	-17.70	-1.40	0.00	-65.10	0.00	65.10	3,243.59	1,621.79	4,877.42	2,442.34	1.14	-0.15	0.032
80.00	-16.61	-1.36	0.00	-58.09	0.00	58.09	3,127.49	1,563.75	4,532.82	2,269.78	1.30	-0.17	0.031
85.00	-15.56	-1.31	0.00	-51.30	0.00	51.30	3,011.40	1,505.70	4,200.83	2,103.54	1.48	-0.18	0.030
90.00	-14.55	-1.26	0.00	-44.77	0.00	44.77	2,895.30	1,447.65	3,881.48	1,943.62	1.67	-0.19	0.028
94.95	-14.53	-1.26	0.00	-38.54	0.00	38.54	2,780.28	1,390.14	3,577.55	1,791.43	1.88	-0.20	0.027
95.00	-13.16	-1.18	0.00	-38.49	0.00	38.49	2,779.20	1,389.60	3,574.75	1,790.03	1.88	-0.20	0.026
99.54	-13.09	-1.17	0.00	-33.15	0.00	33.15	1,702.59	851.29	2,158.67	1,080.94	2.07	-0.21	0.038
100.00	-12.37	-1.13	0.00	-32.61	0.00	32.61	1,698.09	849.05	2,144.41	1,073.80	2.09	-0.21	0.038
105.00	-11.68	-1.08	0.00	-26.96	0.00	26.96	1,648.46	824.23	1,992.11	997.54	2.32	-0.23	0.034
110.00	-11.01	-1.04	0.00	-21.54	0.00	21.54	1,596.78	798.39	1,842.85	922.79	2.57	-0.24	0.030
115.00	-7.62	-0.77	0.00	-16.36	0.00	16.36	1,543.06	771.53	1,696.96	849.74	2.82	-0.25	0.024
120.00	-7.50	-0.76	0.00	-12.49	0.00	12.49	1,487.30	743.65	1,554.78	778.54	3.09	-0.26	0.021
121.00	-6.58	-0.69	0.00	-11.73	0.00	11.73	1,475.91	737.95	1,526.81	764.54	3.15	-0.26	0.020
125.00	-6.57	-0.69	0.00	-8.98	0.00	8.98	1,425.26	712.63	1,412.43	707.26	3.37	-0.27	0.017
125.17	-5.94	-0.63	0.00	-8.87	0.00	8.87	1,422.68	711.34	1,407.29	704.69	3.38	-0.27	0.017
128.83	-5.83	-0.62	0.00	-6.57	0.00	6.57	970.32	485.16	941.18	471.29	3.59	-0.28	0.020
130.00	-3.81	-0.43	0.00	-5.85	0.00	5.85	961.96	480.98	920.87	461.12	3.66	-0.28	0.017
135.00	-3.45	-0.39	0.00	-3.72	0.00	3.72	924.86	462.43	835.07	418.16	3.95	-0.29	0.013
140.00	-3.10	-0.35	0.00	-1.77	0.00	1.77	885.72	442.86	751.58	376.35	4.26	-0.29	0.008
145.00	-0.17	-0.02	0.00	-0.01	0.00	0.01	844.53	422.27	670.72	335.86	4.56	-0.29	0.000
145.50	0.00	0.00	0.00	0.00	0.00	0.00	840.30	420.15	662.79	331.89	4.59	-0.29	0.000
149.00	0.00	0.00	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	4.81	-0.29	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-28.36	-1.70	0.00	-185.45	0.00	185.45	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.036
5.00	-27.13	-1.70	0.00	-176.97	0.00	176.97	5,229.56	2,614.78	11,654.9	5,836.15	0.00	-0.01	0.036
10.00	-25.92	-1.70	0.00	-168.48	0.00	168.48	5,144.17	2,572.09	11,184.9	5,600.81	0.02	-0.02	0.035
15.00	-24.74	-1.70	0.00	-159.99	0.00	159.99	5,056.74	2,528.37	10,719.9	5,367.95	0.04	-0.03	0.035
20.00	-23.58	-1.69	0.00	-151.51	0.00	151.51	4,967.26	2,483.63	10,260.2	5,137.73	0.07	-0.04	0.034
25.00	-22.45	-1.68	0.00	-143.05	0.00	143.05	4,875.75	2,437.87	9,806.10	4,910.34	0.12	-0.04	0.034
30.00	-21.35	-1.67	0.00	-134.64	0.00	134.64	4,782.19	2,391.09	9,357.93	4,685.92	0.17	-0.05	0.033
35.00	-20.28	-1.66	0.00	-126.28	0.00	126.28	4,686.58	2,343.29	8,916.06	4,464.66	0.23	-0.06	0.033
40.00	-19.23	-1.64	0.00	-118.00	0.00	118.00	4,588.94	2,294.47	8,480.81	4,246.71	0.30	-0.07	0.032
45.00	-18.88	-1.63	0.00	-109.82	0.00	109.82	4,489.25	2,244.63	8,052.51	4,032.24	0.39	-0.08	0.031
46.71	-17.71	-1.60	0.00	-107.04	0.00	107.04	4,454.76	2,227.38	7,907.97	3,959.86	0.42	-0.09	0.031
50.00	-16.73	-1.57	0.00	-101.77	0.00	101.77	4,377.60	2,188.80	7,614.23	3,812.78	0.48	-0.09	0.031
52.79	-16.34	-1.56	0.00	-97.38	0.00	97.38	3,613.14	1,806.57	6,305.68	3,157.53	0.54	-0.10	0.035
55.00	-15.48	-1.53	0.00	-93.93	0.00	93.93	3,578.23	1,789.12	6,158.78	3,083.97	0.58	-0.11	0.035
60.00	-14.63	-1.50	0.00	-86.26	0.00	86.26	3,497.79	1,748.90	5,830.16	2,919.41	0.70	-0.12	0.034
65.00	-13.81	-1.47	0.00	-78.75	0.00	78.75	3,415.31	1,707.65	5,506.99	2,757.59	0.83	-0.13	0.033
70.00	-13.02	-1.43	0.00	-71.41	0.00	71.41	3,330.78	1,665.39	5,189.62	2,598.67	0.97	-0.14	0.031
75.00	-12.24	-1.39	0.00	-64.26	0.00	64.26	3,243.59	1,621.79	4,877.42	2,442.34	1.12	-0.15	0.030
80.00	-11.49	-1.34	0.00	-57.33	0.00	57.33	3,127.49	1,563.75	4,532.82	2,269.78	1.29	-0.16	0.029
85.00	-10.76	-1.29	0.00	-50.62	0.00	50.62	3,011.40	1,505.70	4,200.83	2,103.54	1.47	-0.18	0.028
90.00	-10.06	-1.24	0.00	-44.16	0.00	44.16	2,895.30	1,447.65	3,881.48	1,943.62	1.66	-0.19	0.026
94.95	-10.05	-1.24	0.00	-38.02	0.00	38.02	2,780.28	1,390.14	3,577.55	1,791.43	1.86	-0.20	0.025
95.00	-9.10	-1.16	0.00	-37.96	0.00	37.96	2,779.20	1,389.60	3,574.75	1,790.03	1.86	-0.20	0.024
99.54	-9.06	-1.16	0.00	-32.69	0.00	32.69	1,702.59	851.29	2,158.67	1,080.94	2.05	-0.21	0.036
100.00	-8.56	-1.11	0.00	-32.15	0.00	32.15	1,698.09	849.05	2,144.41	1,073.80	2.07	-0.21	0.035
105.00	-8.08	-1.07	0.00	-26.58	0.00	26.58	1,648.46	824.23	1,992.11	997.54	2.30	-0.22	0.032
110.00	-7.61	-1.02	0.00	-21.23	0.00	21.23	1,596.78	798.39	1,842.85	922.79	2.54	-0.24	0.028
115.00	-5.27	-0.76	0.00	-16.13	0.00	16.13	1,543.06	771.53	1,696.96	849.74	2.79	-0.25	0.022
120.00	-5.19	-0.75	0.00	-12.32	0.00	12.32	1,487.30	743.65	1,554.78	778.54	3.06	-0.26	0.019
121.00	-4.56	-0.68	0.00	-11.56	0.00	11.56	1,475.91	737.95	1,526.81	764.54	3.11	-0.26	0.018
125.00	-4.54	-0.68	0.00	-8.86	0.00	8.86	1,425.26	712.63	1,412.43	707.26	3.33	-0.27	0.016
125.17	-4.11	-0.62	0.00	-8.74	0.00	8.74	1,422.68	711.34	1,407.29	704.69	3.34	-0.27	0.015
128.83	-4.03	-0.61	0.00	-6.47	0.00	6.47	970.32	485.16	941.18	471.29	3.55	-0.27	0.018
130.00	-2.63	-0.42	0.00	-5.76	0.00	5.76	961.96	480.98	920.87	461.12	3.62	-0.28	0.015
135.00	-2.38	-0.38	0.00	-3.66	0.00	3.66	924.86	462.43	835.07	418.16	3.91	-0.28	0.011
140.00	-2.15	-0.35	0.00	-1.74	0.00	1.74	885.72	442.86	751.58	376.35	4.21	-0.29	0.007
145.00	-0.11	-0.02	0.00	-0.01	0.00	0.01	844.53	422.27	670.72	335.86	4.51	-0.29	0.000
145.50	0.00	0.00	0.00	0.00	0.00	0.00	840.30	420.15	662.79	331.89	4.54	-0.29	0.000
149.00	0.00	0.00	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	4.75	-0.29	0.000

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:57 PM

Customer: AT&T Mobility

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	1.81
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
38	147.25	133	1.846	1.755	1.058	0.366	42	165
37	145.25	27	1.796	1.521	0.970	0.333	8	33
36	142.50	276	1.729	1.234	0.859	0.291	70	343
35	137.50	290	1.610	0.808	0.683	0.220	55	359
34	132.50	303	1.495	0.488	0.536	0.158	42	376
33	129.42	85	1.426	0.335	0.459	0.125	9	106
32	127.00	507	1.373	0.235	0.405	0.101	44	629
31	125.08	15	1.332	0.167	0.365	0.083	1	19
30	123.00	369	1.288	0.104	0.326	0.066	21	458
29	120.50	101	1.236	0.041	0.283	0.046	4	126
28	117.50	518	1.175	-0.017	0.237	0.026	12	643
27	112.50	542	1.077	-0.082	0.173	0.000	0	673
26	107.50	560	0.984	-0.114	0.123	-0.018	-9	695
25	102.50	578	0.894	-0.122	0.085	-0.028	-14	717
24	99.77	54	0.847	-0.119	0.068	-0.030	-1	68
23	97.27	1,108	0.805	-0.113	0.055	-0.029	-28	1,375
22	94.98	12	0.768	-0.105	0.045	-0.028	0	14
21	92.48	814	0.728	-0.095	0.036	-0.025	-17	1,010
20	87.50	848	0.652	-0.071	0.021	-0.014	-11	1,052
19	82.50	875	0.579	-0.045	0.012	-0.001	-1	1,085
18	77.50	901	0.511	-0.020	0.008	0.013	10	1,118
17	72.50	928	0.447	0.002	0.006	0.026	21	1,151
16	67.50	954	0.388	0.022	0.007	0.037	30	1,184
15	62.50	981	0.333	0.037	0.010	0.044	37	1,217
14	57.50	1,007	0.281	0.049	0.014	0.049	42	1,250
13	53.90	454	0.247	0.056	0.017	0.050	20	563
12	51.40	1,135	0.225	0.059	0.020	0.051	50	1,409
11	48.35	1,363	0.199	0.063	0.023	0.051	60	1,691
10	45.85	410	0.179	0.065	0.026	0.051	18	508
9	42.50	1,221	0.154	0.068	0.030	0.050	53	1,515
8	37.50	1,252	0.120	0.070	0.034	0.049	53	1,553
7	32.50	1,283	0.090	0.071	0.038	0.048	53	1,592
6	27.50	1,314	0.064	0.072	0.041	0.046	52	1,630
5	22.50	1,345	0.043	0.071	0.042	0.044	52	1,669

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10/12/2016 10:28:57 PM

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4	17.50	1,376	0.026	0.067	0.040	0.042	50	1,707
3	12.50	1,407	0.013	0.059	0.034	0.037	45	1,746
2	7.50	1,438	0.005	0.044	0.025	0.029	36	1,784
1	2.50	1,469	0.001	0.018	0.010	0.013	16	1,823
Kathrein 782 10253	145.50	9	1.802	1.549	0.981	0.337	3	11
Powerwave Allgon LGP	145.50	32	1.802	1.549	0.981	0.337	9	39
Powerwave 7020.00 Du	145.50	13	1.802	1.549	0.981	0.337	4	16
Powerwave Allgon LGP	145.50	85	1.802	1.549	0.981	0.337	25	105
Raycap DC6-48-60-18-	145.50	32	1.802	1.549	0.981	0.337	9	39
Ericsson RRUS 11 (Ba	145.50	150	1.802	1.549	0.981	0.337	44	186
Ericsson RRUS 32 B2	145.50	159	1.802	1.549	0.981	0.337	47	197
Powerwave Allgon 777	145.50	210	1.802	1.549	0.981	0.337	61	261
CCI HPA-65R-BUU-H6	145.50	153	1.802	1.549	0.981	0.337	45	190
Flat Low Profile Pla	145.50	1,500	1.802	1.549	0.981	0.337	439	1,862
Ericsson KRY 112 144	130.00	33	1.439	0.361	0.473	0.131	4	41
Ericsson AIR 21	130.00	546	1.439	0.361	0.473	0.131	62	678
Round T-Arm	130.00	750	1.439	0.361	0.473	0.131	85	931
RFS APX16DWV-	121.00	366	1.246	0.053	0.291	0.050	16	455
Alcatel-Lucent RRH 2	115.00	86	1.126	-0.054	0.203	0.012	1	107
Alcatel-Lucent RRH2x	115.00	113	1.126	-0.054	0.203	0.012	1	141
RFS DB-B1-6C-12AB-OZ	115.00	21	1.126	-0.054	0.203	0.012	0	27
Alcatel-Lucent B66A	115.00	114	1.126	-0.054	0.203	0.012	1	141
Andrew HBXX-6517DS-A	115.00	172	1.126	-0.054	0.203	0.012	2	213
Commscope LNX-	115.00	201	1.126	-0.054	0.203	0.012	2	250
Flat Low Profile Pla	115.00	1,500	1.126	-0.054	0.203	0.012	16	1,862
		34,495	58.433	22.923	20.169	6.274	1,801	42,814

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
38	147.25	133	1.846	1.755	1.058	0.366	42	114
37	145.25	27	1.796	1.521	0.970	0.333	8	23
36	142.50	276	1.729	1.234	0.859	0.291	70	237
35	137.50	290	1.610	0.808	0.683	0.220	55	249
34	132.50	303	1.495	0.488	0.536	0.158	42	260
33	129.42	85	1.426	0.335	0.459	0.125	9	73
32	127.00	507	1.373	0.235	0.405	0.101	44	435
31	125.08	15	1.332	0.167	0.365	0.083	1	13
30	123.00	369	1.288	0.104	0.326	0.066	21	317
29	120.50	101	1.236	0.041	0.283	0.046	4	87
28	117.50	518	1.175	-0.017	0.237	0.026	12	445
27	112.50	542	1.077	-0.082	0.173	0.000	0	466
26	107.50	560	0.984	-0.114	0.123	-0.018	-9	481
25	102.50	578	0.894	-0.122	0.085	-0.028	-14	496
24	99.77	54	0.847	-0.119	0.068	-0.030	-1	47
23	97.27	1,108	0.805	-0.113	0.055	-0.029	-28	951
22	94.98	12	0.768	-0.105	0.045	-0.028	0	10
21	92.48	814	0.728	-0.095	0.036	-0.025	-17	699
20	87.50	848	0.652	-0.071	0.021	-0.014	-11	728
19	82.50	875	0.579	-0.045	0.012	-0.001	-1	751
18	77.50	901	0.511	-0.020	0.008	0.013	10	774
17	72.50	928	0.447	0.002	0.006	0.026	21	797
16	67.50	954	0.388	0.022	0.007	0.037	30	820
15	62.50	981	0.333	0.037	0.010	0.044	37	842
14	57.50	1,007	0.281	0.049	0.014	0.049	42	865
13	53.90	454	0.247	0.056	0.017	0.050	20	390
12	51.40	1,135	0.225	0.059	0.020	0.051	50	975
11	48.35	1,363	0.199	0.063	0.023	0.051	60	1,170

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10/12/2016 10:28:57 PM

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10	45.85	410	0.179	0.065	0.026	0.051	18	352
9	42.50	1,221	0.154	0.068	0.030	0.050	53	1,048
8	37.50	1,252	0.120	0.070	0.034	0.049	53	1,075
7	32.50	1,283	0.090	0.071	0.038	0.048	53	1,102
6	27.50	1,314	0.064	0.072	0.041	0.046	52	1,128
5	22.50	1,345	0.043	0.071	0.042	0.044	52	1,155
4	17.50	1,376	0.026	0.067	0.040	0.042	50	1,181
3	12.50	1,407	0.013	0.059	0.034	0.037	45	1,208
2	7.50	1,438	0.005	0.044	0.025	0.029	36	1,235
1	2.50	1,469	0.001	0.018	0.010	0.013	16	1,261
Kathrein 782 10253	145.50	9	1.802	1.549	0.981	0.337	3	7
Powerwave Allgon LGP	145.50	32	1.802	1.549	0.981	0.337	9	27
Powerwave 7020.00 Du	145.50	13	1.802	1.549	0.981	0.337	4	11
Powerwave Allgon LGP	145.50	85	1.802	1.549	0.981	0.337	25	73
Raycap DC6-48-60-18-	145.50	32	1.802	1.549	0.981	0.337	9	27
Ericsson RRUS 11 (Ba	145.50	150	1.802	1.549	0.981	0.337	44	129
Ericsson RRUS 32 B2	145.50	159	1.802	1.549	0.981	0.337	47	137
Powerwave Allgon 777	145.50	210	1.802	1.549	0.981	0.337	61	180
CCI HPA-65R-BUU-H6	145.50	153	1.802	1.549	0.981	0.337	45	131
Flat Low Profile Pla	145.50	1,500	1.802	1.549	0.981	0.337	439	1,288
Ericsson KRY 112 144	130.00	33	1.439	0.361	0.473	0.131	4	28
Ericsson AIR 21	130.00	546	1.439	0.361	0.473	0.131	62	469
Round T-Arm	130.00	750	1.439	0.361	0.473	0.131	85	644
RFS APX16DWV-	121.00	366	1.246	0.053	0.291	0.050	16	315
Alcatel-Lucent RRH 2	115.00	86	1.126	-0.054	0.203	0.012	1	74
Alcatel-Lucent RRH2x	115.00	113	1.126	-0.054	0.203	0.012	1	97
RFS DB-B1-6C-12AB-OZ	115.00	21	1.126	-0.054	0.203	0.012	0	18
Alcatel-Lucent B66A	115.00	114	1.126	-0.054	0.203	0.012	1	98
Andrew HBXX-6517DS-A	115.00	172	1.126	-0.054	0.203	0.012	2	148
Commscope LNX-	115.00	201	1.126	-0.054	0.203	0.012	2	173
Flat Low Profile Pla	115.00	1,500	1.126	-0.054	0.203	0.012	16	1,288
		34,495	58.433	22.923	20.169	6.274	1,801	29,625

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.99	-1.79	0.00	-187.55	0.00	187.55	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.039
5.00	-39.21	-1.76	0.00	-178.61	0.00	178.61	5,229.56	2,614.78	11,654.9	5,836.15	0.00	-0.01	0.038
10.00	-37.46	-1.72	0.00	-169.83	0.00	169.83	5,144.17	2,572.09	11,184.9	5,600.81	0.02	-0.02	0.038
15.00	-35.75	-1.67	0.00	-161.24	0.00	161.24	5,056.74	2,528.37	10,719.9	5,367.95	0.04	-0.03	0.037
20.00	-34.08	-1.63	0.00	-152.88	0.00	152.88	4,967.26	2,483.63	10,260.2	5,137.73	0.07	-0.04	0.037
25.00	-32.45	-1.58	0.00	-144.75	0.00	144.75	4,875.75	2,437.87	9,806.10	4,910.34	0.12	-0.05	0.036
30.00	-30.86	-1.53	0.00	-136.86	0.00	136.86	4,782.19	2,391.09	9,357.93	4,685.92	0.17	-0.05	0.036
35.00	-29.31	-1.48	0.00	-129.22	0.00	129.22	4,686.58	2,343.29	8,916.06	4,464.66	0.23	-0.06	0.035
40.00	-27.79	-1.43	0.00	-121.83	0.00	121.83	4,588.94	2,294.47	8,480.81	4,246.71	0.31	-0.08	0.035
45.00	-27.28	-1.41	0.00	-114.68	0.00	114.68	4,489.25	2,244.63	8,052.51	4,032.24	0.39	-0.09	0.035
46.71	-25.59	-1.35	0.00	-112.27	0.00	112.27	4,454.76	2,227.38	7,907.97	3,959.86	0.42	-0.09	0.034
50.00	-24.18	-1.30	0.00	-107.81	0.00	107.81	4,377.60	2,188.80	7,614.23	3,812.78	0.49	-0.10	0.034
52.79	-23.62	-1.29	0.00	-104.18	0.00	104.18	3,613.14	1,806.57	6,305.68	3,157.53	0.54	-0.10	0.040
55.00	-22.37	-1.24	0.00	-101.34	0.00	101.34	3,578.23	1,789.12	6,158.78	3,083.97	0.59	-0.11	0.039
60.00	-21.15	-1.21	0.00	-95.12	0.00	95.12	3,497.79	1,748.90	5,830.16	2,919.41	0.71	-0.12	0.039
65.00	-19.97	-1.18	0.00	-89.07	0.00	89.07	3,415.31	1,707.65	5,506.99	2,757.59	0.85	-0.13	0.038
70.00	-18.81	-1.16	0.00	-83.17	0.00	83.17	3,330.78	1,665.39	5,189.62	2,598.67	0.99	-0.15	0.038
75.00	-17.70	-1.15	0.00	-77.36	0.00	77.36	3,243.59	1,621.79	4,877.42	2,442.34	1.15	-0.16	0.037
80.00	-16.61	-1.15	0.00	-71.60	0.00	71.60	3,127.49	1,563.75	4,532.82	2,269.78	1.33	-0.18	0.037
85.00	-15.56	-1.17	0.00	-65.83	0.00	65.83	3,011.40	1,505.70	4,200.83	2,103.54	1.52	-0.19	0.036
90.00	-14.55	-1.18	0.00	-60.00	0.00	60.00	2,895.30	1,447.65	3,881.48	1,943.62	1.73	-0.20	0.036
94.95	-14.53	-1.19	0.00	-54.14	0.00	54.14	2,780.28	1,390.14	3,577.55	1,791.43	1.95	-0.22	0.035
95.00	-13.16	-1.21	0.00	-54.09	0.00	54.09	2,779.20	1,389.60	3,574.75	1,790.03	1.95	-0.22	0.035
99.54	-13.09	-1.21	0.00	-48.60	0.00	48.60	1,702.59	851.29	2,158.67	1,080.94	2.17	-0.23	0.053
100.00	-12.37	-1.23	0.00	-48.04	0.00	48.04	1,698.09	849.05	2,144.41	1,073.80	2.19	-0.24	0.052
105.00	-11.68	-1.24	0.00	-41.91	0.00	41.91	1,648.46	824.23	1,992.11	997.54	2.45	-0.26	0.049
110.00	-11.00	-1.24	0.00	-35.72	0.00	35.72	1,596.78	798.39	1,842.85	922.79	2.73	-0.28	0.046
115.00	-7.62	-1.19	0.00	-29.53	0.00	29.53	1,543.06	771.53	1,696.96	849.74	3.04	-0.30	0.040
120.00	-7.49	-1.18	0.00	-23.59	0.00	23.59	1,487.30	743.65	1,554.78	778.54	3.36	-0.32	0.035
121.00	-6.58	-1.14	0.00	-22.41	0.00	22.41	1,475.91	737.95	1,526.81	764.54	3.43	-0.32	0.034
125.00	-6.56	-1.14	0.00	-17.83	0.00	17.83	1,425.26	712.63	1,412.43	707.26	3.71	-0.34	0.030
125.17	-5.93	-1.10	0.00	-17.64	0.00	17.64	1,422.68	711.34	1,407.29	704.69	3.72	-0.34	0.029
128.83	-5.83	-1.09	0.00	-13.62	0.00	13.62	970.32	485.16	941.18	471.29	3.98	-0.35	0.035
130.00	-3.80	-0.88	0.00	-12.35	0.00	12.35	961.96	480.98	920.87	461.12	4.07	-0.35	0.031
135.00	-3.44	-0.83	0.00	-7.93	0.00	7.93	924.86	462.43	835.07	418.16	4.45	-0.37	0.023
140.00	-3.10	-0.76	0.00	-3.80	0.00	3.80	885.72	442.86	751.58	376.35	4.84	-0.38	0.014
145.00	-0.16	-0.04	0.00	-0.02	0.00	0.02	844.53	422.27	670.72	335.86	5.24	-0.38	0.000
145.50	0.00	0.00	0.00	0.00	0.00	0.00	840.30	420.15	662.79	331.89	5.28	-0.38	0.000
149.00	0.00	0.00	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	5.56	-0.38	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-28.36	-1.79	0.00	-185.83	0.00	185.83	5,312.91	2,656.45	12,129.5	6,073.81	0.00	0.00	0.036
5.00	-27.13	-1.75	0.00	-176.90	0.00	176.90	5,229.56	2,614.78	11,654.9	5,836.15	0.00	-0.01	0.035
10.00	-25.92	-1.71	0.00	-168.13	0.00	168.13	5,144.17	2,572.09	11,184.9	5,600.81	0.02	-0.02	0.035
15.00	-24.74	-1.67	0.00	-159.56	0.00	159.56	5,056.74	2,528.37	10,719.9	5,367.95	0.04	-0.03	0.035
20.00	-23.58	-1.62	0.00	-151.23	0.00	151.23	4,967.26	2,483.63	10,260.2	5,137.73	0.07	-0.04	0.034
25.00	-22.45	-1.57	0.00	-143.14	0.00	143.14	4,875.75	2,437.87	9,806.10	4,910.34	0.12	-0.04	0.034
30.00	-21.35	-1.52	0.00	-135.30	0.00	135.30	4,782.19	2,391.09	9,357.93	4,685.92	0.17	-0.05	0.033
35.00	-20.28	-1.47	0.00	-127.70	0.00	127.70	4,686.58	2,343.29	8,916.06	4,464.66	0.23	-0.06	0.033
40.00	-19.23	-1.42	0.00	-120.37	0.00	120.37	4,588.94	2,294.47	8,480.81	4,246.71	0.30	-0.07	0.033
45.00	-18.88	-1.40	0.00	-113.28	0.00	113.28	4,489.25	2,244.63	8,052.51	4,032.24	0.39	-0.08	0.032
46.71	-17.71	-1.34	0.00	-110.89	0.00	110.89	4,454.76	2,227.38	7,907.97	3,959.86	0.42	-0.09	0.032
50.00	-16.73	-1.29	0.00	-106.48	0.00	106.48	4,377.60	2,188.80	7,614.23	3,812.78	0.48	-0.10	0.032
52.79	-16.34	-1.27	0.00	-102.88	0.00	102.88	3,613.14	1,806.57	6,305.68	3,157.53	0.54	-0.10	0.037
55.00	-15.48	-1.23	0.00	-100.07	0.00	100.07	3,578.23	1,789.12	6,158.78	3,083.97	0.59	-0.11	0.037
60.00	-14.63	-1.19	0.00	-93.92	0.00	93.92	3,497.79	1,748.90	5,830.16	2,919.41	0.71	-0.12	0.036
65.00	-13.81	-1.17	0.00	-87.95	0.00	87.95	3,415.31	1,707.65	5,506.99	2,757.59	0.84	-0.13	0.036
70.00	-13.02	-1.15	0.00	-82.12	0.00	82.12	3,330.78	1,665.39	5,189.62	2,598.67	0.98	-0.15	0.036
75.00	-12.24	-1.14	0.00	-76.40	0.00	76.40	3,243.59	1,621.79	4,877.42	2,442.34	1.14	-0.16	0.035
80.00	-11.49	-1.14	0.00	-70.72	0.00	70.72	3,127.49	1,563.75	4,532.82	2,269.78	1.32	-0.17	0.035
85.00	-10.76	-1.15	0.00	-65.03	0.00	65.03	3,011.40	1,505.70	4,200.83	2,103.54	1.51	-0.19	0.034
90.00	-10.06	-1.17	0.00	-59.29	0.00	59.29	2,895.30	1,447.65	3,881.48	1,943.62	1.71	-0.20	0.034
94.95	-10.05	-1.17	0.00	-53.51	0.00	53.51	2,780.28	1,390.14	3,577.55	1,791.43	1.93	-0.22	0.033
95.00	-9.10	-1.19	0.00	-53.46	0.00	53.46	2,779.20	1,389.60	3,574.75	1,790.03	1.93	-0.22	0.033
99.54	-9.06	-1.20	0.00	-48.04	0.00	48.04	1,702.59	851.29	2,158.67	1,080.94	2.14	-0.23	0.050
100.00	-8.56	-1.21	0.00	-47.49	0.00	47.49	1,698.09	849.05	2,144.41	1,073.80	2.17	-0.23	0.049
105.00	-8.08	-1.22	0.00	-41.44	0.00	41.44	1,648.46	824.23	1,992.11	997.54	2.42	-0.25	0.046
110.00	-7.61	-1.22	0.00	-35.34	0.00	35.34	1,596.78	798.39	1,842.85	922.79	2.70	-0.28	0.043
115.00	-5.27	-1.18	0.00	-29.24	0.00	29.24	1,543.06	771.53	1,696.96	849.74	3.00	-0.30	0.038
120.00	-5.18	-1.17	0.00	-23.37	0.00	23.37	1,487.30	743.65	1,554.78	778.54	3.32	-0.32	0.034
121.00	-4.55	-1.13	0.00	-22.20	0.00	22.20	1,475.91	737.95	1,526.81	764.54	3.39	-0.32	0.032
125.00	-4.54	-1.13	0.00	-17.67	0.00	17.67	1,425.26	712.63	1,412.43	707.26	3.66	-0.33	0.028
125.17	-4.10	-1.09	0.00	-17.48	0.00	17.48	1,422.68	711.34	1,407.29	704.69	3.68	-0.33	0.028
128.83	-4.03	-1.08	0.00	-13.50	0.00	13.50	970.32	485.16	941.18	471.29	3.94	-0.35	0.033
130.00	-2.63	-0.88	0.00	-12.25	0.00	12.25	961.96	480.98	920.87	461.12	4.02	-0.35	0.029
135.00	-2.38	-0.82	0.00	-7.87	0.00	7.87	924.86	462.43	835.07	418.16	4.40	-0.36	0.021
140.00	-2.14	-0.75	0.00	-3.77	0.00	3.77	885.72	442.86	751.58	376.35	4.79	-0.38	0.012
145.00	-0.11	-0.04	0.00	-0.02	0.00	0.02	844.53	422.27	670.72	335.86	5.18	-0.38	0.000
145.50	0.00	0.00	0.00	0.00	0.00	0.00	840.30	420.15	662.79	331.89	5.22	-0.38	0.000
149.00	0.00	0.00	0.00	0.00	0.00	0.00	809.65	404.83	607.80	304.35	5.50	-0.38	0.000

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:57 PM

Customer: AT&T Mobility

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	21.80	0.00	41.37	0.00	0.00	2249.23	99.54	0.39
0.9D + 1.6W	21.79	0.00	31.02	0.00	0.00	2233.24	99.54	0.38
1.2D + 1.0Di + 1.0Wi	5.88	0.00	60.58	0.00	0.00	583.20	0.00	0.11
(1.2 + 0.2Sds) * DL + E ELFM	1.70	0.00	40.99	0.00	0.00	187.03	0.00	0.04
(1.2 + 0.2Sds) * DL + E EMAM	1.79	0.00	40.99	0.00	0.00	187.55	99.54	0.05
(0.9 - 0.2Sds) * DL + E ELFM	1.70	0.00	28.36	0.00	0.00	185.45	0.00	0.04
(0.9 - 0.2Sds) * DL + E EMAM	1.79	0.00	28.36	0.00	0.00	185.83	99.54	0.05
1.0D + 1.0W	5.21	0.00	34.49	0.00	0.00	535.49	99.54	0.10

Site Number: 370641

Code: ANSI/TIA-222-G

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Site Name: Beacon Falls CT, CT

Engineering Number: OAA686706_C3_01

10/12/2016 10:28:57 PM

Customer: AT&T Mobility

Base Summary

Reactions

Original Design			Analysis			Moment Design %
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	
3,762.30	38.90	34.90	2,249.23	60.58	21.80	44.28

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
60.0	2.500	71.000	Round	0	0.00	8.887	268.82	749.83	0.36

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
65.00	20	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	86.08	260.00	0.34	80.02	260.00	0.32



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

AT&T Existing Facility

Site ID: CT2003

Beacon Falls - Lopus Rd
401 Lopus Road
Beacon Falls, CA 06403

September 21, 2016

EBI Project Number: 6216004193

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	2.83 %



September 21, 2016

AT&T Mobility – New England
Attn: Cameron Syme, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT2003 – Beacon Falls - Lopus Rd**

EBI Consulting was directed to analyze the proposed AT&T facility located at **401 Lopus Road, Beacon Falls, CA**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately $467 \mu\text{W}/\text{cm}^2$ and $567 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at **401 Lopus Road, Beacon Falls, CA**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 UMTS channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 UMTS channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 LTE channels (700 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 5) 2 GSM channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **Powerwave 7770** and the **CCI HPA-65R-BUU-H6** for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **146 feet** above ground level (AGL) for **Sector A**, **146 feet** above ground level (AGL) for **Sector B** and **146 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.



AT&T Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Powerwave 7770	Make / Model:	Powerwave 7770	Make / Model:	Powerwave 7770
Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd
Height (AGL):	146 feet	Height (AGL):	146 feet	Height (AGL):	146 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts
ERP (W):	2,140.89	ERP (W):	2,140.89	ERP (W):	2,140.89
Antenna A1 MPE%	0.51 %	Antenna B1 MPE%	0.51 %	Antenna C1 MPE%	0.51 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	CCI HPA-65R-BUU-H6	Make / Model:	CCI HPA-65R-BUU-H6	Make / Model:	CCI HPA-65R-BUU-H6
Gain:	11.95 / 14.75 dBd	Gain:	11.95 / 14.75 dBd	Gain:	11.95 / 14.75 dBd
Height (AGL):	146 feet	Height (AGL):	146 feet	Height (AGL):	146 feet
Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	240 Watts	Total TX Power(W):	240 Watts	Total TX Power(W):	240 Watts
ERP (W):	5,462.56	ERP (W):	5,462.56	ERP (W):	5,462.56
Antenna A2 MPE%	1.40 %	Antenna B2 MPE%	1.40 %	Antenna C2 MPE%	1.40 %
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Powerwave 7770	Make / Model:	Powerwave 7770	Make / Model:	Powerwave 7770
Gain:	11.4 dBd	Gain:	11.4 dBd	Gain:	11.4 dBd
Height (AGL):	146 feet	Height (AGL):	146 feet	Height (AGL):	146 feet
Frequency Bands	850 MHz	Frequency Bands	850 MHz	Frequency Bands	850 MHz
Channel Count	2	Channel Count	2	Channel Count	2
Total TX Power(W):	60 Watts	Total TX Power(W):	60 Watts	Total TX Power(W):	60 Watts
ERP (W):	828.23	ERP (W):	828.23	ERP (W):	828.23
Antenna A3 MPE%	0.27 %	Antenna B3 MPE%	0.27 %	Antenna C3 MPE%	0.27 %

Site Composite MPE%	
Carrier	MPE%
AT&T – Max per sector	2.17 %
Town of Beacom Falls	0.00 %
T-Mobile	0.66 %
Site Total MPE %:	2.83 %

AT&T Sector A Total:	2.17 %
AT&T Sector B Total:	2.17 %
AT&T Sector C Total:	2.17 %
Site Total:	2.83 %

AT&T _ Frequency Band / Technology Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	414.12	146	1.52	850 MHz	567	0.27%
AT&T 1900 MHz (PCS) UMTS	2	656.33	146	2.41	1900 MHz (PCS)	1000	0.24%
AT&T 700 MHz LTE	2	940.05	146	3.45	700 MHz	467	0.74%
AT&T 1900 MHz (PCS) LTE	2	1,791.23	146	6.57	1900 MHz (PCS)	1000	0.66%
AT&T 850 MHz GSM	2	414.12	146	1.52	850 MHz	567	0.27%
						Total:	2.17%



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	2.17 %
Sector B:	2.17 %
Sector C:	2.17 %
AT&T Maximum Total (per sector):	2.17 %
Site Total:	2.83 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **2.83 %** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.