



July 6, 2017

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

Regarding: Notice of Exempt Modification – Addition of Three Remote Radio Heads (“RRUs”)
Property Address: 56 Ruops Road (aka 5 Barbara Road) Tolland, CT 06084
AT&T Site: CT1037

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 155-foot monopole at the above-referenced address, latitude 41.873300, longitude -72.338300. Said monopole is owned by American Tower Corporation. The existing equipment shelter is 22.8’ by 24.8’, totaling 565.44 square feet.

AT&T desires to modify its existing telecommunications facility by adding three (3) Remote Radio Heads (“RRUs”) with A2 modules attached. The centerline height of said antennas is and will remain at 149 feet. Antennas are mounted utilizing a platform with handrails

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 Town Manager of Tolland, Steven R. Werbner, and to the Director of Planning and Development, Heidi Samokar, AICP. A copy of this letter is also being sent to the tower and property owner 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 149 feet on the 155-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-support tower and its foundation can support AT&T's proposed modifications (please see attached structural analysis completed by American Tower dated June 30, 2017).

For the foregoing reasons, AT&T respectfully requests that the proposed diplexer swap 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: Steven R. Webner, Town Manager (municipality)
Heidi Samokar, AICP, Director of Planning & Development
American Tower Corporation (landowner & tower owner)



Property Information

Property ID 23/E/051
Location 1 EAGLE HILL
Owner TOWN OF TOLLAND



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

Town of Tolland, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Properties updated 07/06/2017

56 RUOPS ROAD

Location 56 RUOPS ROAD

Mblu 23/ E/ 51/ /

Acct# 5384

Owner TOWN OF TOLLAND

Assessment \$985,200

Appraisal \$1,407,400

PID 3892

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2014	\$124,100	\$1,283,300	\$1,407,400
Assessment			
Valuation Year	Improvements	Land	Total
2014	\$86,900	\$898,300	\$985,200

Owner of Record

Owner TOWN OF TOLLAND
Co-Owner C/O SPECTRASITE COMMUNICATIONS
Address PO BOX 723597
 ATLANTA, GA 31139

Sale Price \$0
Certificate
Book & Page 819/ 81
Sale Date 04/24/2003
Instrument 15

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
TOWN OF TOLLAND	\$0		819/ 81	15	04/24/2003

Building Information

Building 1 : Section 1

Year Built: 1989
Living Area: 1,132
Replacement Cost: \$139,802
Building Percent 85
Good:
Replacement Cost
Less Depreciation: \$118,800

Building Attributes	
Field	Description

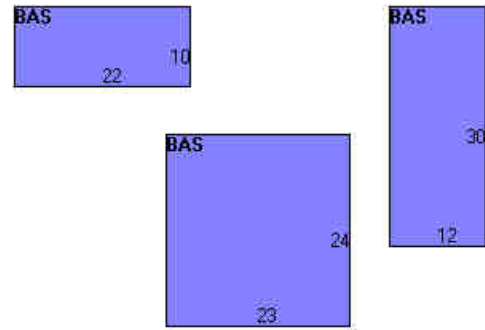
STYLE	Communications Bld
MODEL	Ind/Comm
Grade	Average
Stories:	1
Occupancy	1
Ext Wall 1	Poly-Steel/Con
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Hot Air-no Duc
AC Type	Heat Pump
Bldg Use	Industrial
Total Rooms	
Total Bedrms	
Total Baths	
Solar	
1st Floor Use:	300
Heat/AC	Heat/AC Pkg
Frame Type	Masonry
Baths/Plumbing	None
Ceiling/Wall	None
Rooms/Prtns	Light
Wall Height	8
% Comn Wall	

Building Photo



(<http://images.vgsi.com/photos/TollandCTPhotos//\00\00\63\46>).

Building Layout



Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	Main Floor	1,132	1,132
		1,132	1,132

Extra Features

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

Land

Land Use

Use Code	300
Description	Industrial
Zone	RDD

Land Line Valuation

Size (Acres)	0.78
Frontage	2973
Depth	

Neighborhood 350C
Alt Land Appr No
Category

Assessed Value \$898,300
Appraised Value \$1,283,300

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
FN	FENCE	CL8	8' Chain Link	380 L.F.	\$5,300	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$124,100	\$1,283,300	\$1,407,400
2014	\$124,100	\$1,283,300	\$1,407,400
2013	\$107,300	\$487,400	\$594,700

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$86,900	\$898,300	\$985,200
2014	\$86,900	\$898,300	\$985,200
2013	\$75,100	\$341,200	\$416,300

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WIRELESS COMMUNICATIONS FACILITY

CT1037 - LTE 2C

TOLLAND EAST CENTRAL

AMERICAN TOWER CO. SITE NO.: 302495

5 BARBARA ROAD

TOLLAND, CT 06084

GENERAL NOTES

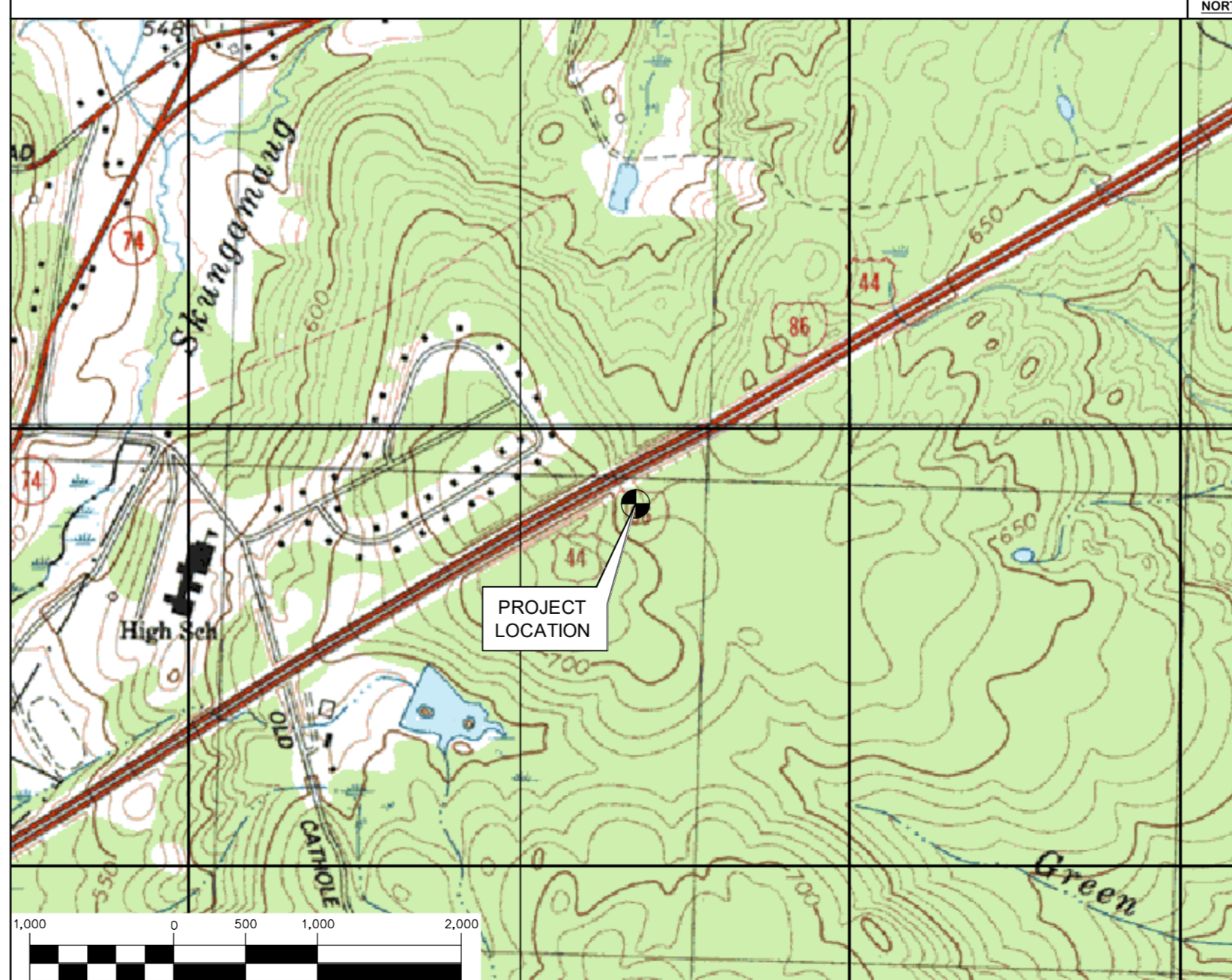
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE, INCLUDING THE TIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2016 CONNECTICUT FIRE SAFETY CODE AND, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. THE COMPOUND, TOWER, PRIMARY GROUND RING, ELECTRICAL SERVICE TO THE METER BANK AND TELEPHONE SERVICE TO THE DEMARCATION POINT ARE PROVIDED BY SITE OWNER. AS BUILT FIELD CONDITIONS REGARDING THESE ITEMS SHALL BE CONFIRMED BY THE CONTRACTOR. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE AT&T CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
21. CONTRACTOR SHALL COMPLY WITH OWNERS ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.

SITE DIRECTIONS

FROM: 500 ENTERPRISE DRIVE ROCKY HILL, CONNECTICUT	TO: 5 BARBARA ROAD TOLLAND, CONNECTICUT
1. HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD	0.36 MI
2. TURN LEFT ONTO CAPITAL BLVD	0.27 MI
3. TURN LEFT ONTO WEST ST	0.16 MI
4. TURN LEFT TO MERGE ONTO I-91 N TOWARD HARTFORD	7.79 MI
5. MERGE ONTO CT-15 N/WILBUR CROSS HWY N VIA EXIT 29 TOWARD I-84 E/E HARTFORD/BOSTON.	2.14 MI
6. CT-15 N/WILBUR CROSS HWY N BECOMES I-84 E/US-6 E/WILBUR CROSS HWY N.	1.50 MI
7. KEEP LEFT TO TAKE I-84 E/WILBUR CROSS HWY N TOWARD BOSTON.	14.45 MI
8. TAKE THE CT-195 EXIT, EXIT 68, TOWARD TOLLAND/MANSFIELD.	0.27 MI
9. TURN RIGHT ONTO MERROW RD/CT-195.	0.41 MI
10. TAKE THE 1ST LEFT ONTO RHODES RD.	1.14 MI
11. RHODES RD BECOMES ANTHONY RD.	0.27 MI
12. TURN LEFT ONTO KATE LN.	0.78 MI
13. TAKE THE 2ND LEFT ONTO RYAN RD.	0.20 MI
14. TAKE THE 2ND RIGHT ONTO BARBARA RD.	0.04 MI
15. 5 BARBARA RD IS ON THE LEFT	

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:
 - A. INSTALL (3) NEW RRUS-12 BEHIND EXISTING POSITION 3 ANTENNAS
 - B. REMOVE AND REPLACE EXISTING DUL-DUS UPGRADE AND INSTALL NEW 5216 UNIT.
 - C. DECOMMISSION EXISTING GSM CABINET

PROJECT INFORMATION

AT&T SITE NUMBER:	CT1037
AT&T SITE NAME:	TOLLAND EAST CENTRAL
SITE ADDRESS:	AMERICAN TOWER CO. SITE NO.: 302495 5 BARBARA ROAD TOLLAND, CT 06084
LESSEE/APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
ENGINEER:	CENITEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT 06405
PROJECT COORDINATES:	LATITUDE: 41°-52'-23.96" N LONGITUDE: 72°-20'-17.89" W GROUND ELEVATION: ±693' AMSL COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 1-A PREPARED FOR AT&T MOBILITY BY EBI CONSULTING DATED JUNE 1, 2012

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	A
N-1	NOTES, SPECIFICATIONS AND DETAILS	A
C-1	PLANS AND ELEVATION	A
C-2	LTE 2C EQUIPMENT DETAILS	A
E-1	LTE SCHEMATIC DIAGRAM AND NOTES	A
E-2	LTE WIRING DIAGRAM	A
E-3	TYPICAL ELECTRICAL DETAILS	A

PROFESSIONAL ENGINEER SEAL



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Centered on Solutions™
(203) 488-0360
(203) 488-8387 / Fax
63-2 North Branford Road
Branford, CT 06405
www.CenitekEng.com

AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
TOLLAND EAST CENTRAL
CT1037 - LTE 2C
5 BARBARA ROAD
TOLLAND, CT 06084

DATE: 06/06/17
SCALE: AS NOTED
JOB NO. 17004.25

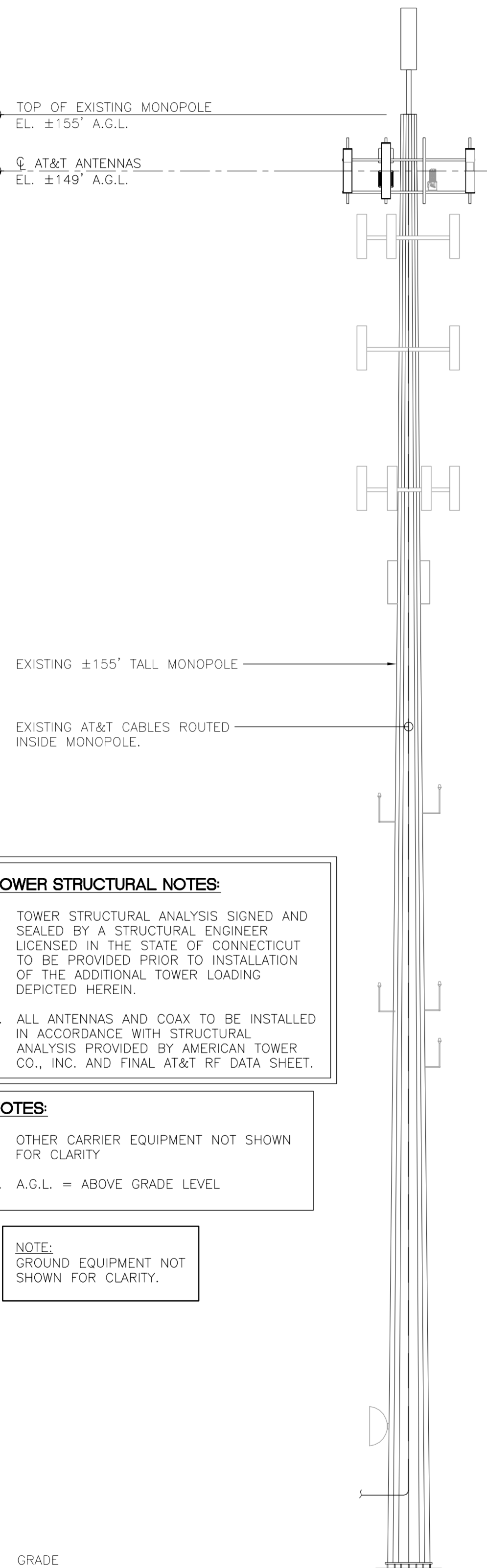
TITLE SHEET

T-1
Sheet No. 1 of 7

REV. DATE DRAWN BY/CHK'D BY/ISSUED FOR CLIENT REVIEW
A 06/15/17 KAWJR CAG
PRELIMINARY CDs -

TOP OF EXISTING MONOPOLE
EL. ±155' A.G.L.

AT&T ANTENNAS
EL. ±149' A.G.L.



TOWER STRUCTURAL NOTES:

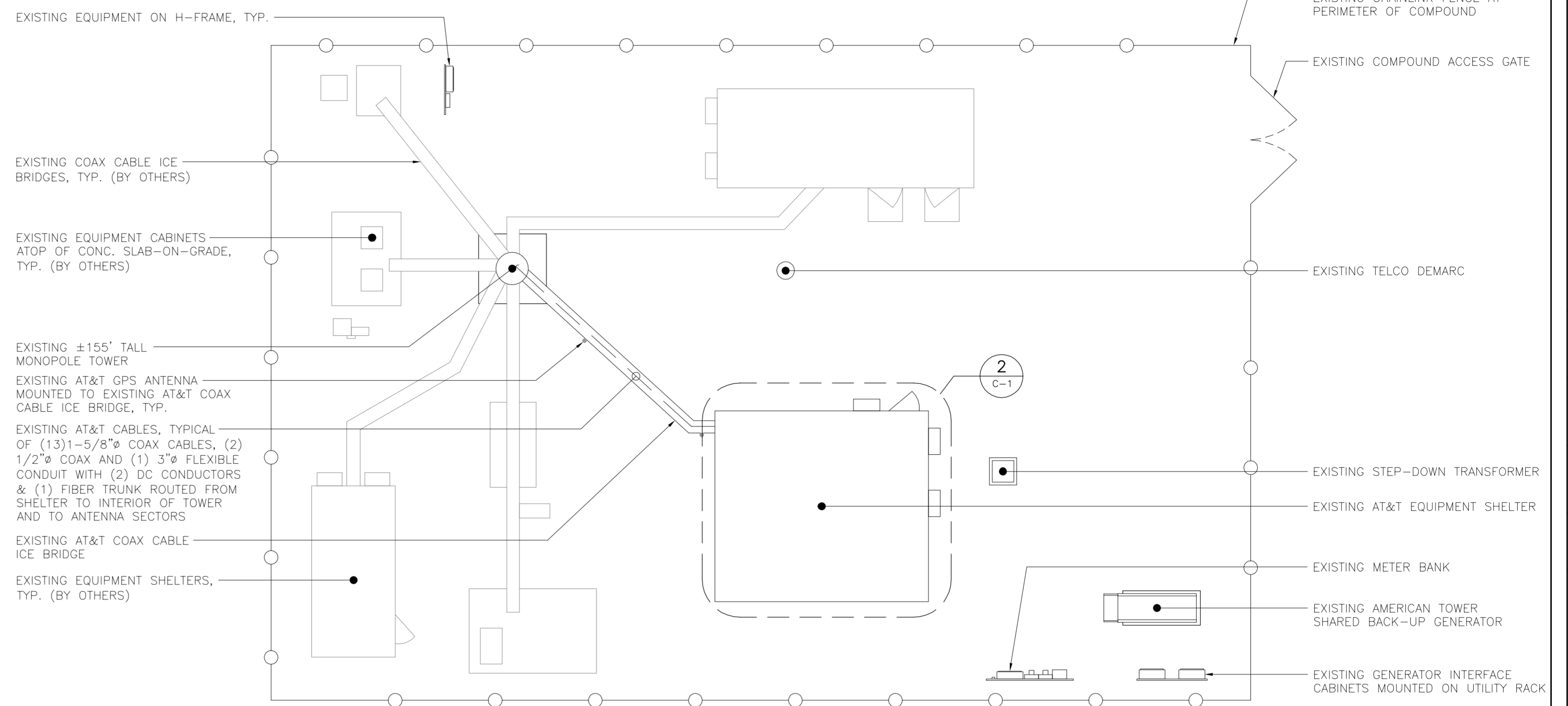
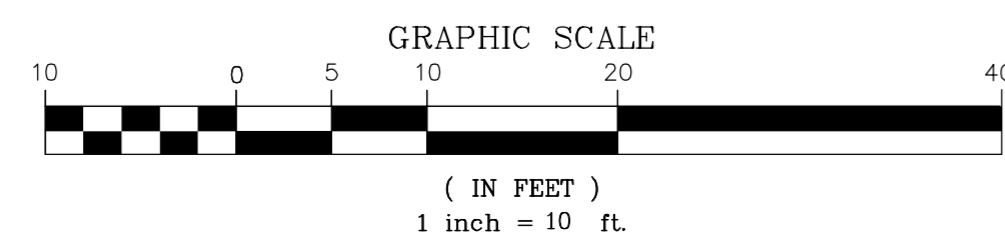
1. TOWER STRUCTURAL ANALYSIS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE PROVIDED PRIOR TO INSTALLATION OF THE ADDITIONAL TOWER LOADING DEPICTED HEREIN.
2. ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER CO., INC. AND FINAL AT&T RF DATA SHEET.

NOTES:

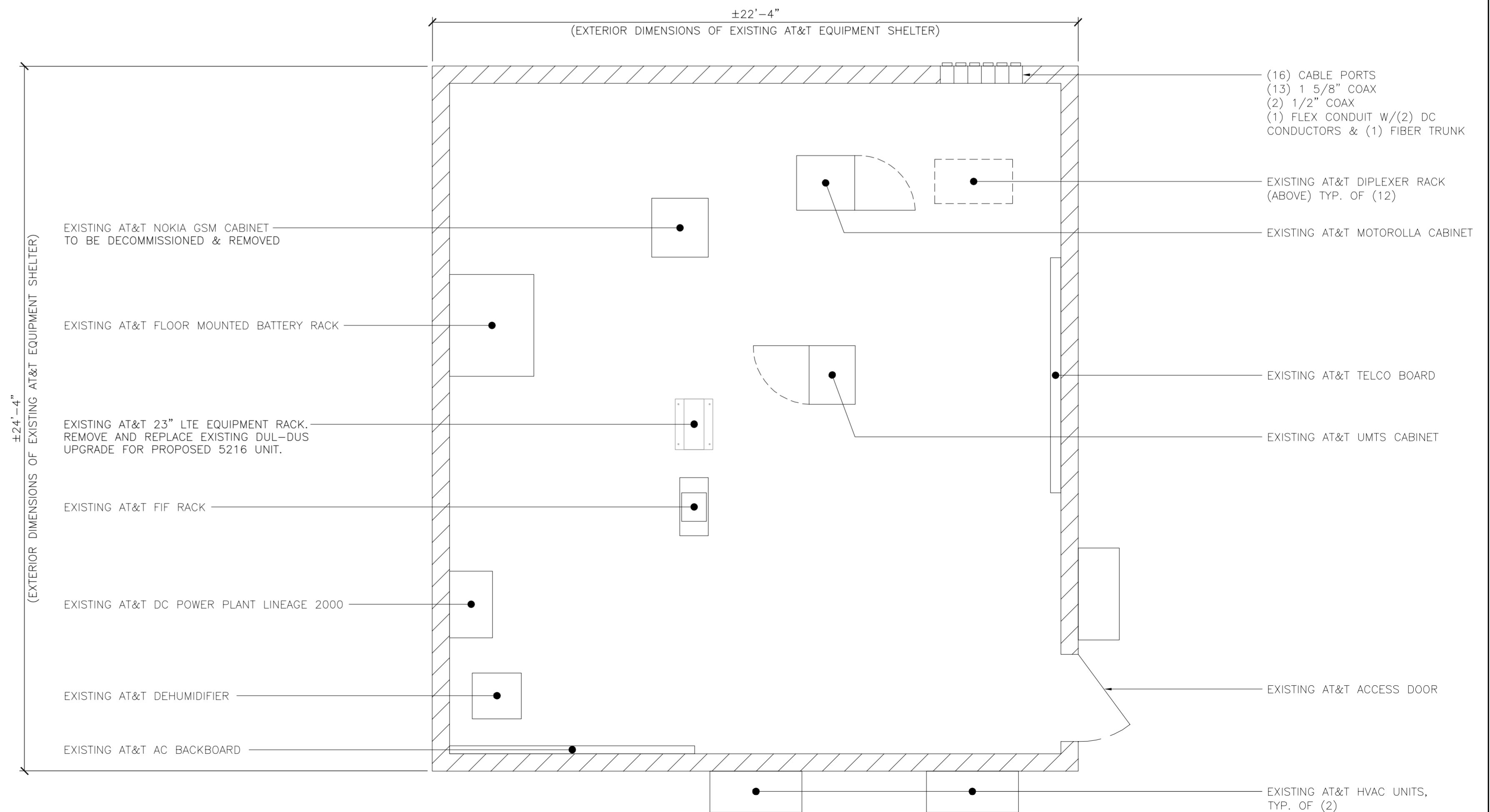
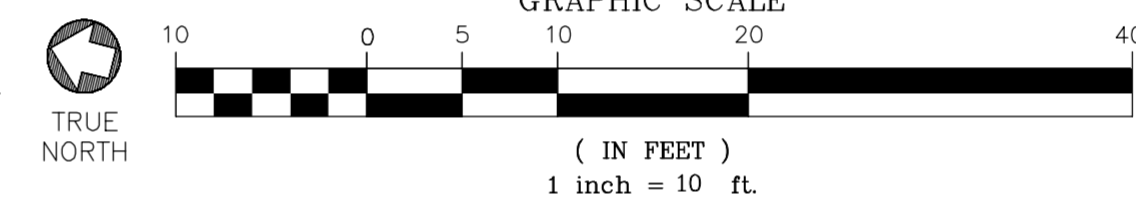
1. OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
2. A.G.L. = ABOVE GRADE LEVEL

NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

3 TOWER ELEVATION
C-1 SCALE: 1" = 10'



1 COMPOUND PLAN
C-1 SCALE: 1" = 10'



2 EQUIPMENT LAYOUT PLAN
C-1 SCALE: 3/8" = 1'-0"



REV.	DATE	DRAWN BY/CHK'D	CAG	DESCRIPTION
A	06/15/17	KAWUR		PRELIMINARY CDS - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL



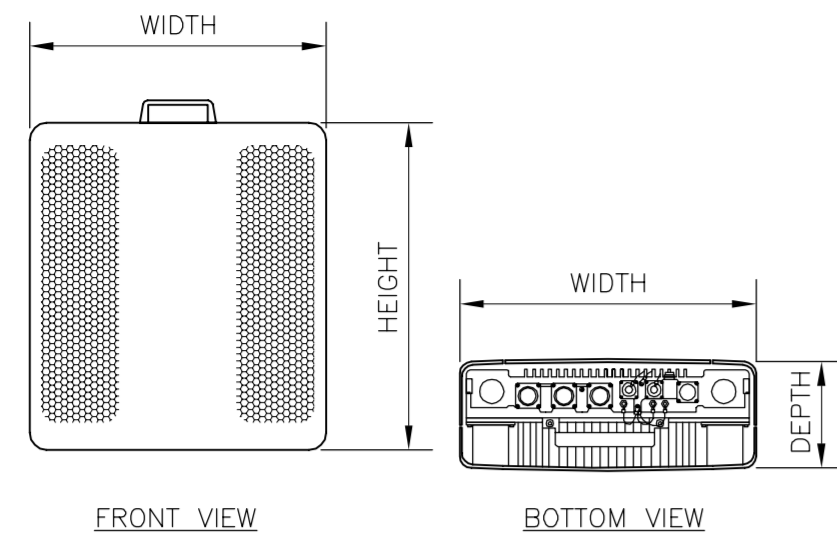
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(203) 488-8387 Fax
632 North Branford Road
Branford, CT 06405
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PLANS AND ELEVATION

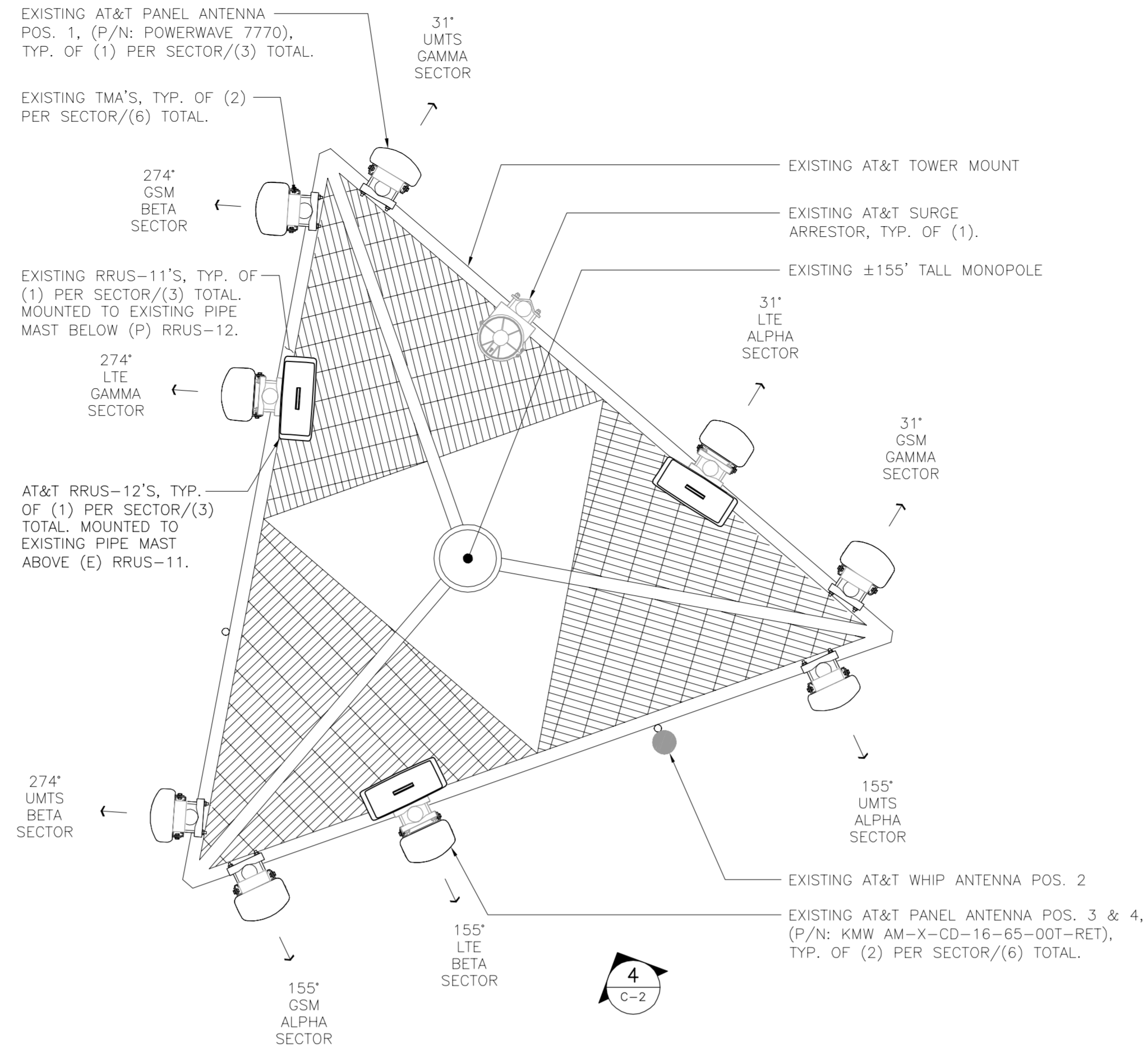
C-1



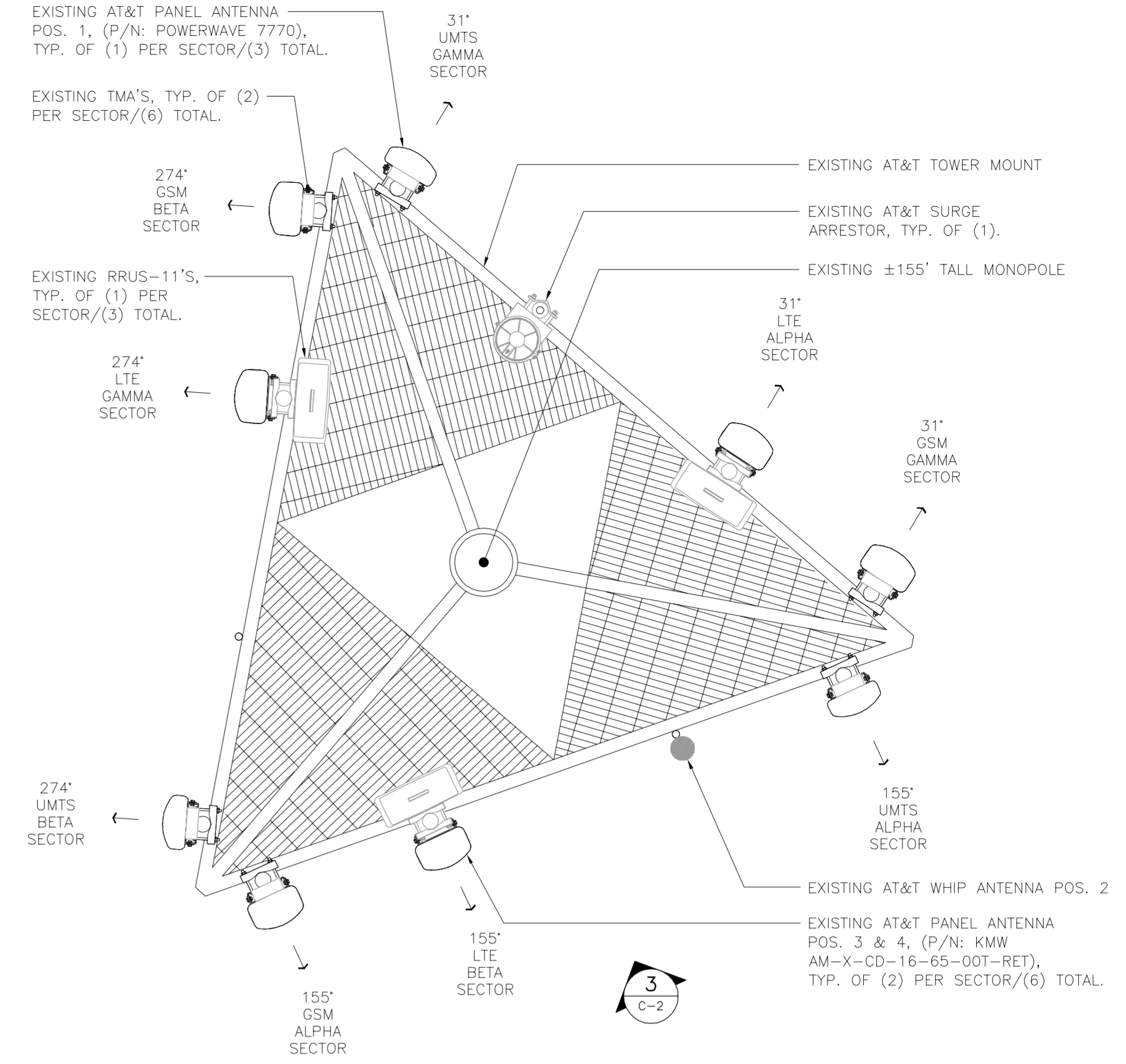
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 12	20.4"L x 18.5"W x 7.5"D	50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

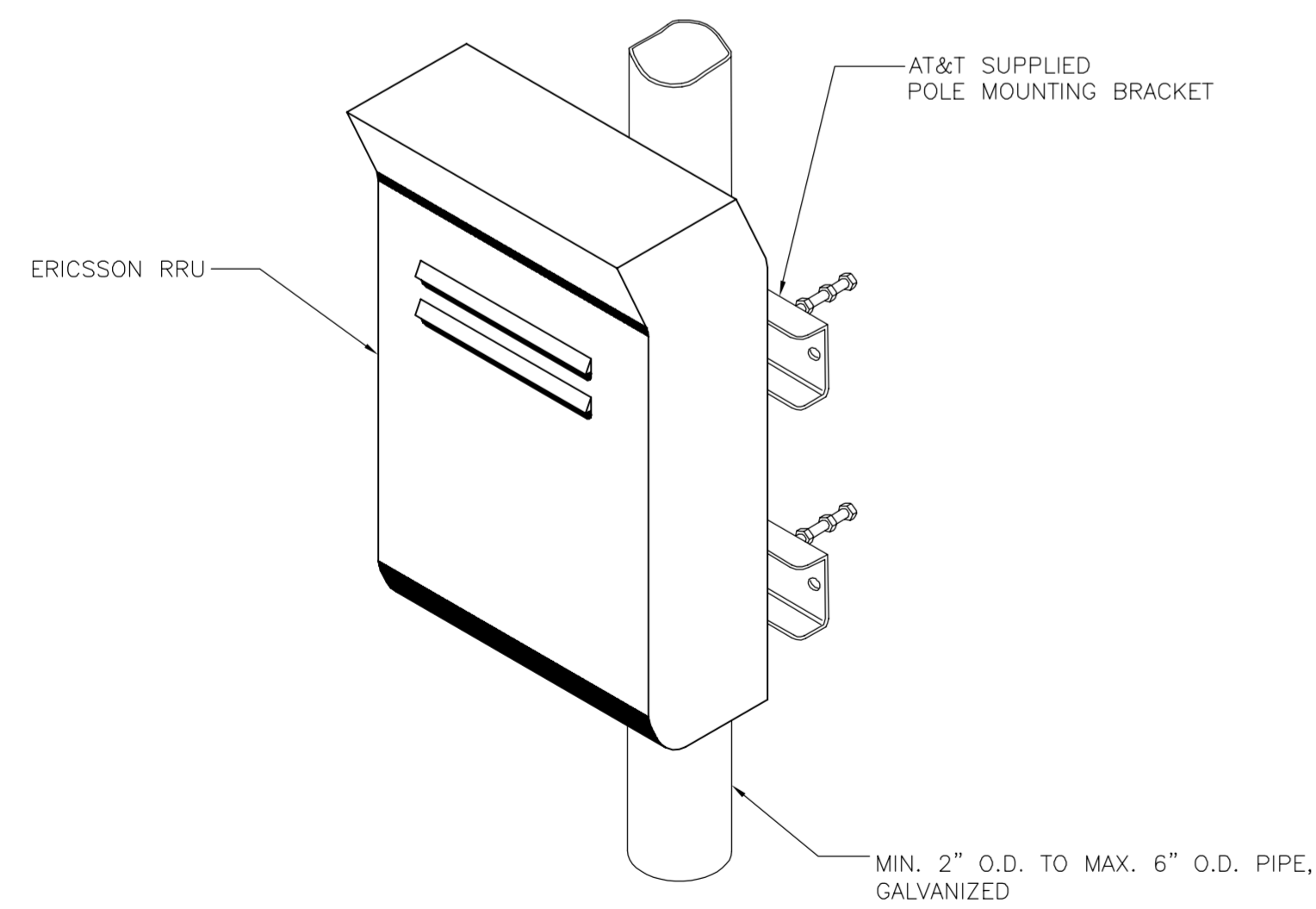
5 ERICSSON RRUS 12 DETAIL
SCALE: 1" = 1'-0"



2 PROPOSED ANTENNA PLAN
SCALE: 1/2" = 1'-0" NORTH



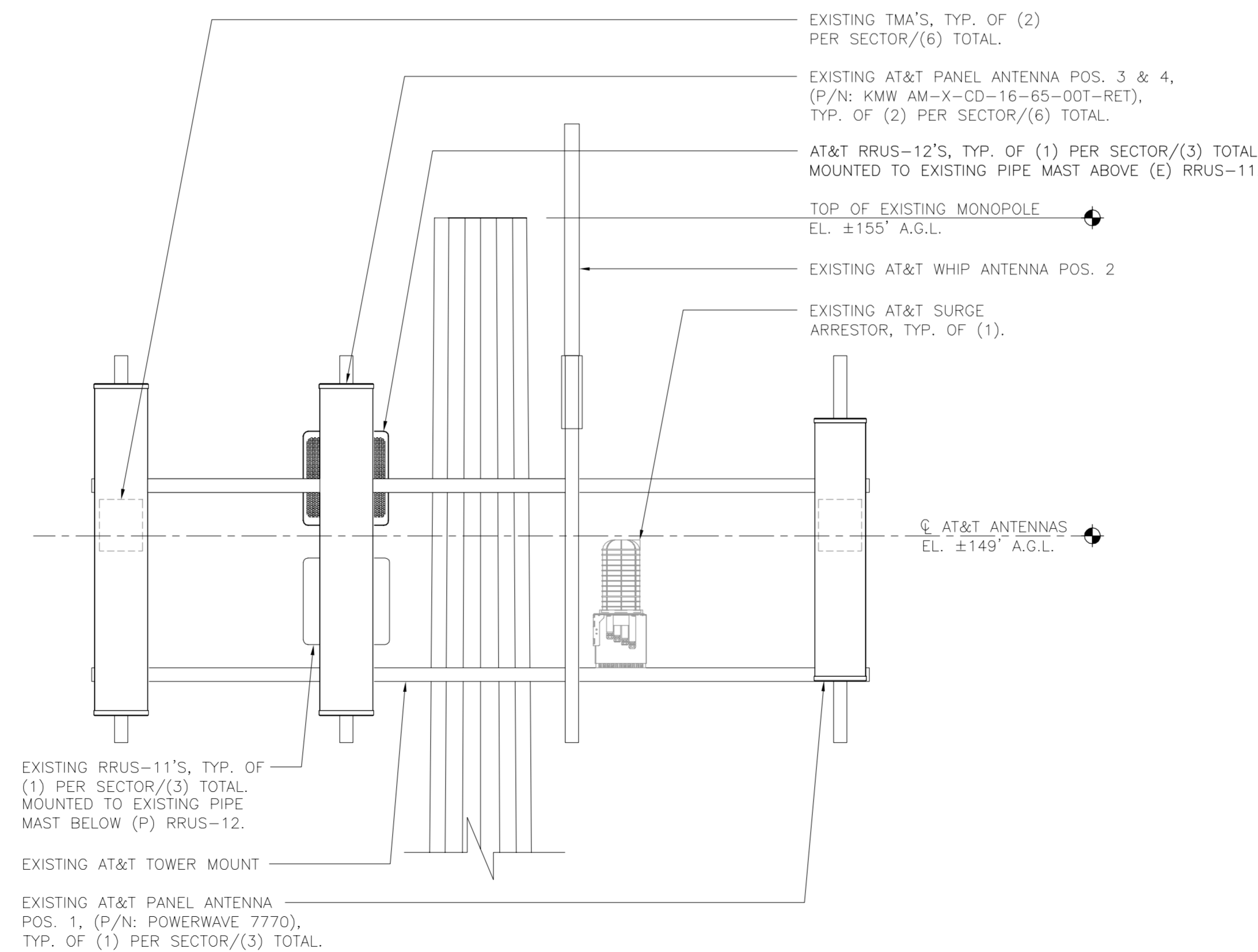
1 EXISTING ANTENNA PLAN
SCALE: 1/2" = 1'-0" NORTH



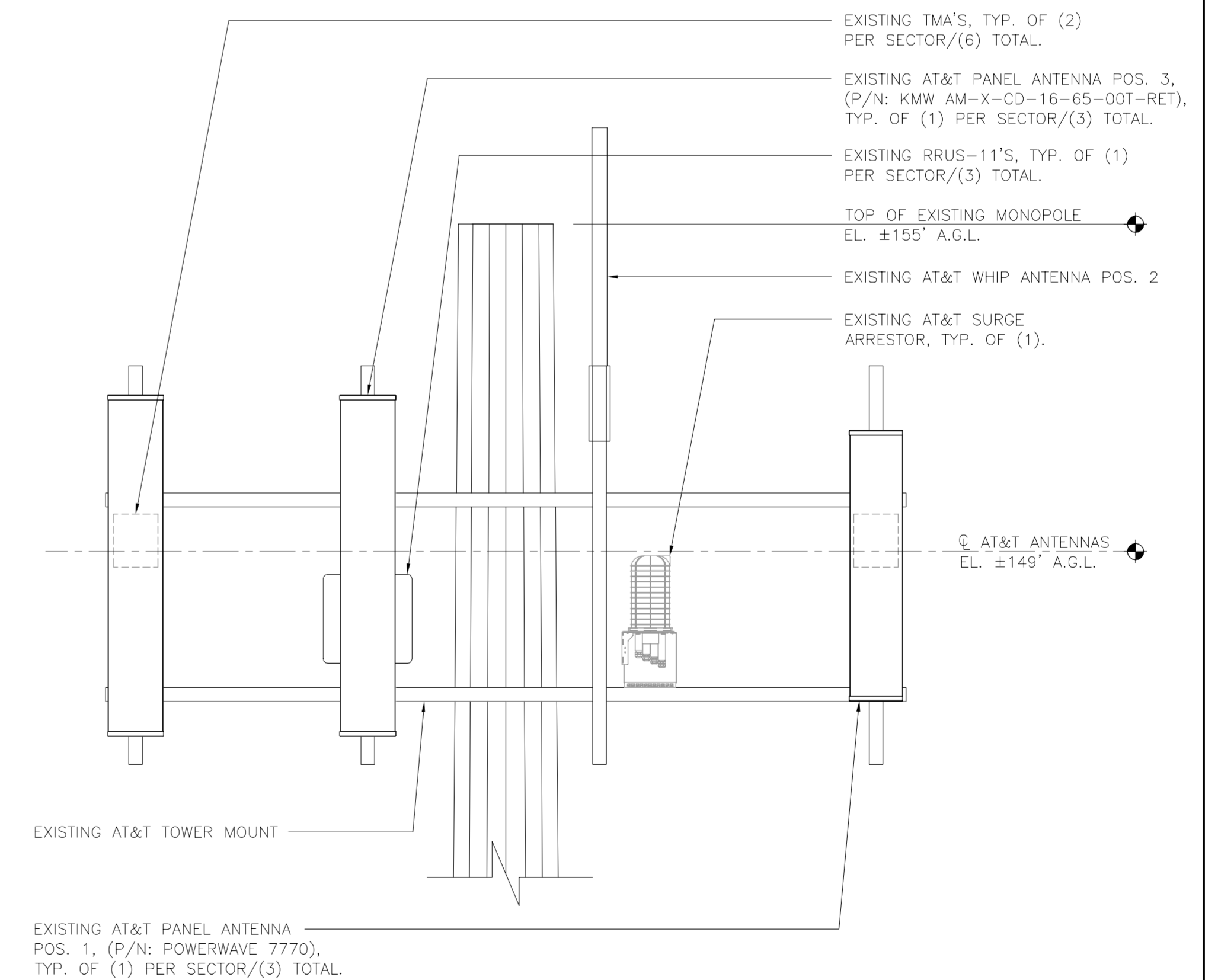
ISOMETRIC VIEW

- NOTES:
- AT&T SHALL SUPPLY RRU, AND RRU POLE-MOUNTING BRACKET. CONTRACTOR SHALL SUPPLY POLE/PIPE AND INSTALL ALL MOUNTING HARDWARE INCLUDING ERICSSON RRU POLE-MOUNTING BRACKET. CONTRACTOR SHALL INSTALLS RRU AND MAKES CABLE TERMINATIONS.
 - NO PAINTING OF THE RRU OR SOLAR SHIELD IS ALLOWED.

6 TYPICAL RRUS MOUNTING DETAILS
SCALE: NTS



4 PROPOSED ANTENNA ELEVATION
SCALE: 1/2" = 1'-0"



3 EXISTING ANTENNA ELEVATION
SCALE: 1/2" = 1'-0"

REV.	DATE	DRAWN BY/CHK'D	CAG	ISSUED FOR	DESCRIPTION
A	06/15/17	KAWJR			PRELIMINARY CDs -
					ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL



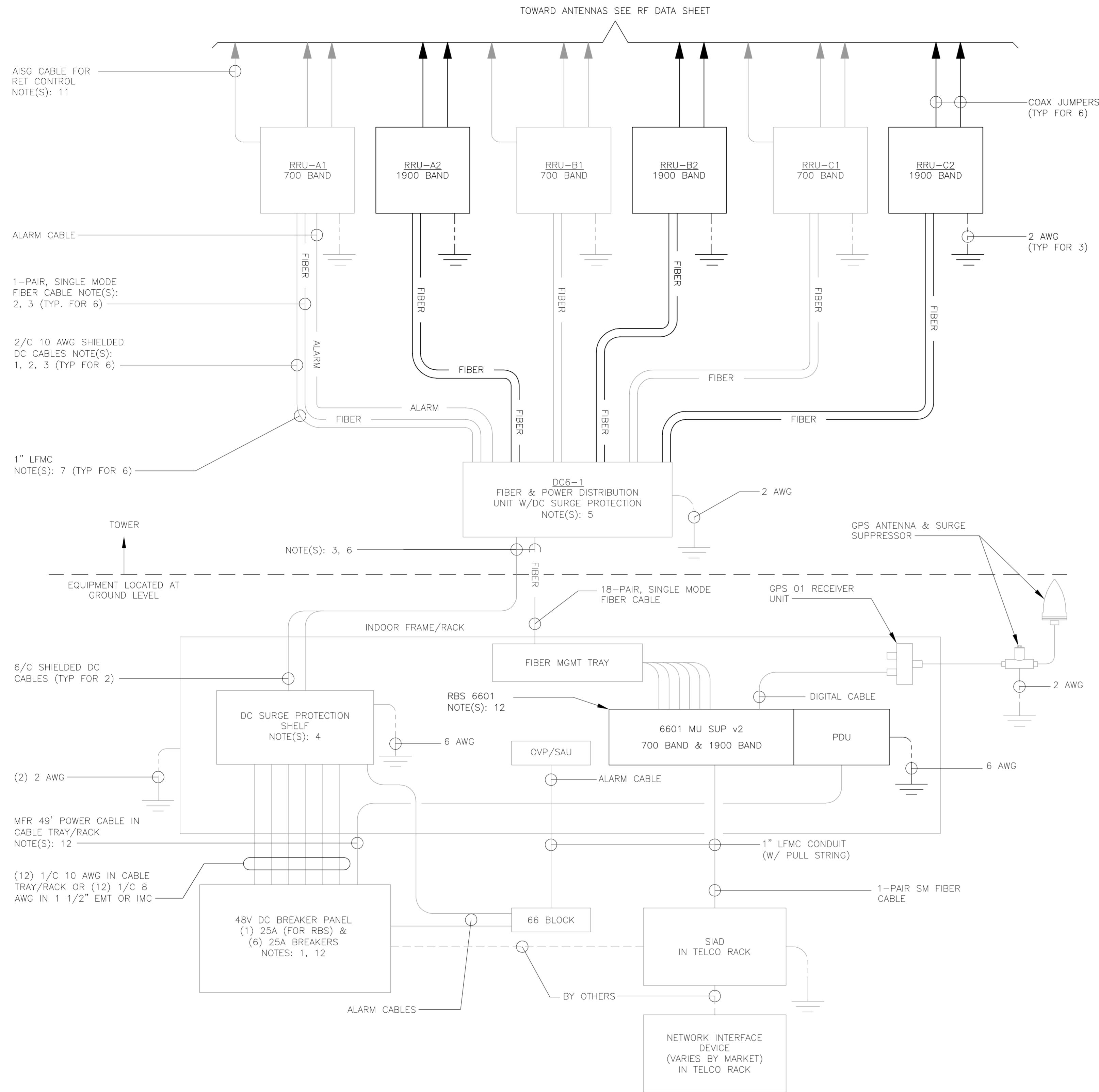
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LTE 2C
EQUIPMENT
DETAILS

C-2



1 LTE SCHEMATIC DIAGRAM
E-1 NOT TO SCALE

LTE SCHEMATIC DIAGRAM NOTES:

- BREAKERS TO BE TAGGED AND LOCKED OUT. A 20A (MIN.) OR 30A (MAX.) BREAKER FOR RRUs MAY BE SUBSTITUTED FOR THE RECOMMENDED 25A BREAKER. SIZE 12 CONDUCTORS MAY BE USED ONLY WITH 20A BREAKERS.
- LEAVE COILED AND PROTECTED UNTIL TERMINATED.
- DC AND FIBER CABLE SHALL BE ROUTED WITH THE EXISTING COAX CABLE.
- DC SURGE PROTECTION SHELF SHALL BE RAYCAP DCx-48-60-RM.
- FIBER & DC DISTRIBUTION BOX W/DC SURGE PROTECTION SHALL BE RAYCAP DC6-48-60-18-8F.
- SUPPORT FIBER & DC POWER CABLES WITH SNAP-IN HANGERS SPACED NO GREATER THAN 3 FEET APART ON TOWER. SUPPORT FIBER AND DC POWER CABLES INSIDE MONOPOLE WITH CABLE HOISTING GRIPS AT 250 FT MAXIMUM INTERVALS. DRESS CABLES TO PREVENT CONTACT WITH ENTRANCE AND EXIT OPENINGS.
- CONDUIT TO BE USED ON A TOWER IF THE RRU IS MORE THAN 10' FROM THE DISTRIBUTION UNITS. MAX CABLE LENGTH IS 16 FEET.
- SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELCOFLEX® OR KS24194", COPPER, UL LISTED RHH NON-HALOGEN, LOW SMOKE WITH BRAIDED COVER, TYPE TC (1/0 AND LARGER). UNLESS OTHERWISE NOTED, STRANDING SHALL BE CLASS B (TYPE III) FOR CABLES SIZES 14, 12 & 10 AWG AND CLASS I (TYPE IV) FOR SIZES 8 AWG AND LARGER. CABLES SHALL BE COLOR CODED RED FOR +24V, BLUE FOR -48V AND GRAY FOR 24V AND 48V RETURN CONDUCTORS. MULTI-CONDUCTOR DC POWER CABLES SHALL BE COPPER, CLASS B STRANDING WITH FLAME RETARDANT PVC JACKET, TYPE TC, UL LISTED FOR 90°C DRY/75°C WET INSTALLATION.
- GROUNDING WIRES SHALL BE COPPER, GREEN THHN/THWN UL LISTED FOR 90°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 6 AWG UNLESS NOTED OTHERWISE.
- FIBER OPTIC CABLES SHALL BE INSTALLED IN FLEXIBLE CONDUIT AS SCOPED BY MARKET.
- RET CONTROL FROM THE RRU IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY.
- RBS 6601 VARIANT 2 REQUIRES A 25A BREAKER AND 10 AWG (MIN.) CONDUCTORS. REPLACE EXISTING 15A OR 20A BREAKERS AND 12 AWG CONDUCTORS WHEN UPGRADING AN EXISTING RBS 6601 VARIANT 1.

ELECTRICAL NOTES

- PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
- CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
- MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
- PRIOR TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY EXISTING AVAILABLE CAPACITY FOR PROPOSED INSTALLATION. IF INADEQUATE CAPACITY IS AVAILABLE, CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING ELECTRIC SERVICE.
- CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LIGHTNING PROTECTION SYSTEM AND ENSURE THAT IT IS IN COMPLIANCE WITH NEC, AND SITE OWNER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE PRESENTED TO OWNER'S REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
- ALL TRANSMISSION TOWER SITES CONTAIN AN EXTENSIVE BURIED GROUNDING SYSTEM. ALL GROUNDING WORK MUST BE COORDINATED WITH, AND APPROVED BY, THE TOWER OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
- PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
- ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION.
- MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
- THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNER'S REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
- THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
- DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
- ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
- GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
- EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
- CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).

TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

- CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:
 - TEST 1: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM. THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:
 - TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
 - CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
 - GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.
- TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNERS CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.
- THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.
- CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

REV.	DATE	DRAWN BY	CHECK'D BY	DESCRIPTION
A	06/15/17	KAWUR	CAG	PRELIMINARY CDs - ISSUED FOR CLIENT REVIEW

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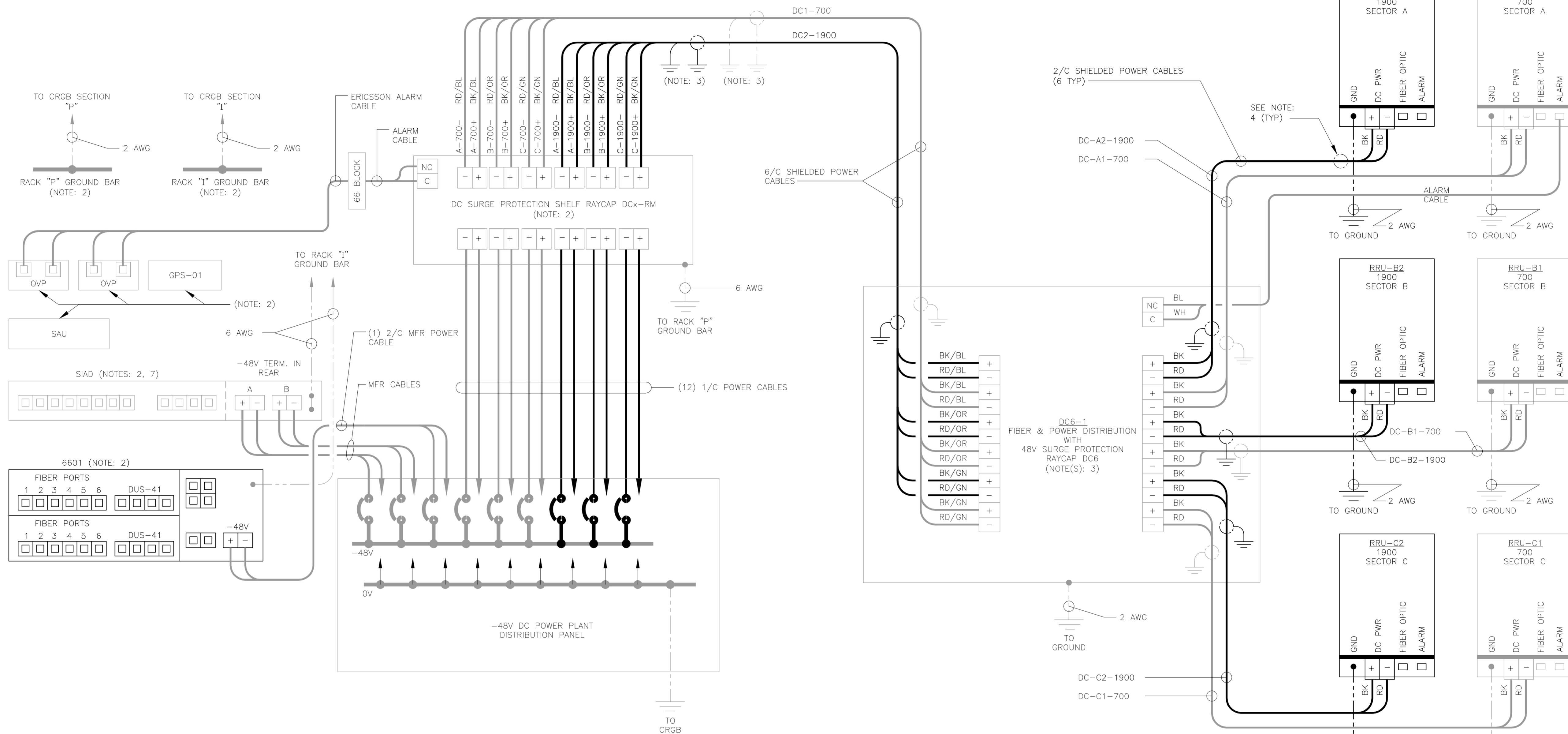
AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
TOLLAND EAST CENTRAL
CT1037 - LTE 2C
5 BARBARA ROAD
TOLLAND, CT 06084

DATE: 06/06/17
SCALE: AS NOTED
JOB NO. 17004.25

LTE SCHEMATIC DIAGRAM AND NOTES

E-1

Sheet No. 5 of 7



1 LTE WIRING DIAGRAM
E-2 NOT TO SCALE

LTE WIRING DIAGRAM NOTES:

1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY PULL BOX IF USED. LABEL SHALL BE DURABLE, SELF ADHESIVE, WRAPPED LONGITUDINALLY ALONG THE CABLE AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY; I.E. "A-1900+". CABLE AND WIRE LABELS SHOWN ARE REPRESENTATIVE AND MAY BE MODIFIED AS DIRECTED BY AT&T.
2. INSTALL ON BASEBAND EQUIPMENT RACK.
3. THE BARE GROUND WIRE OF EACH MULTI-CONDUCTOR CABLE SHALL BE CONNECTED TO THE "P" GROUND BAR ON THE RACK. WHEN A SHIELDED CABLE IS USED, THE DRAIN WIRE ALSO SHALL BE CONNECTED TO THE "P" GROUND BAR.
4. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN-TERMINATED AT RRU AND DC POWER PLANT.
5. SEE LTE SCHEMATIC DIAGRAM DETAIL 1/E-1 FOR BREAKER RATING.

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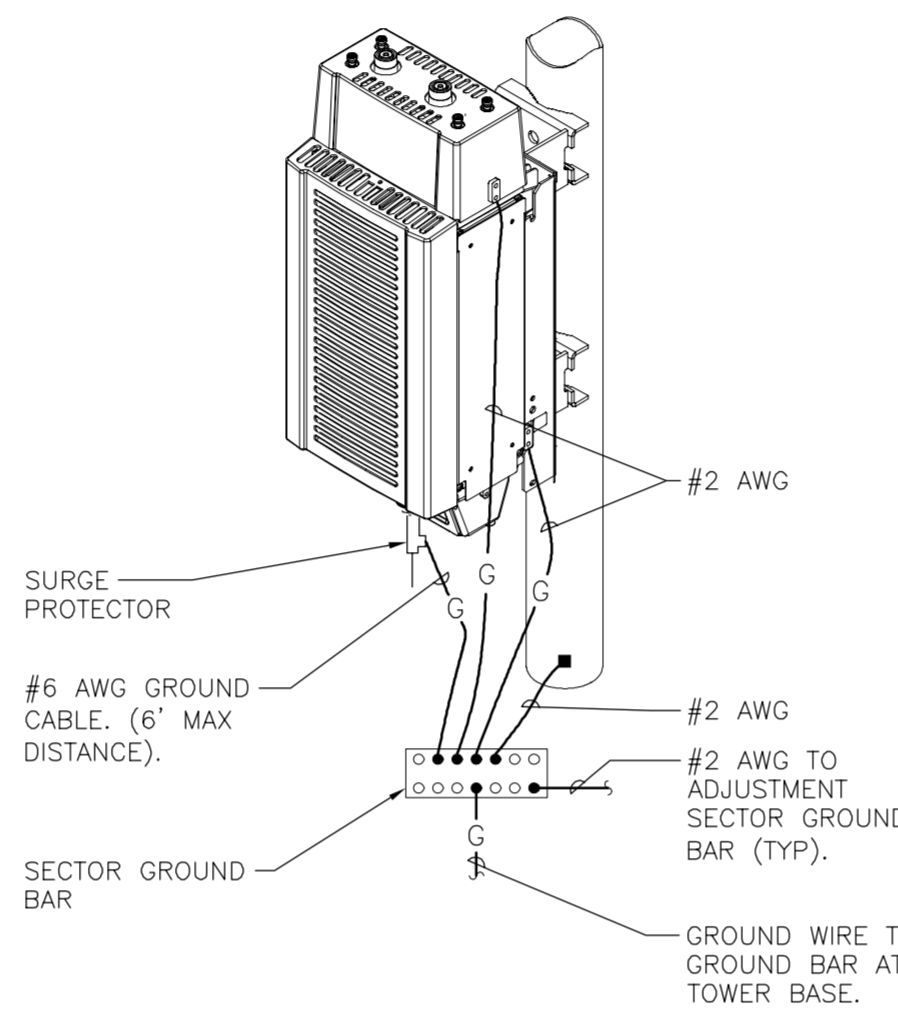
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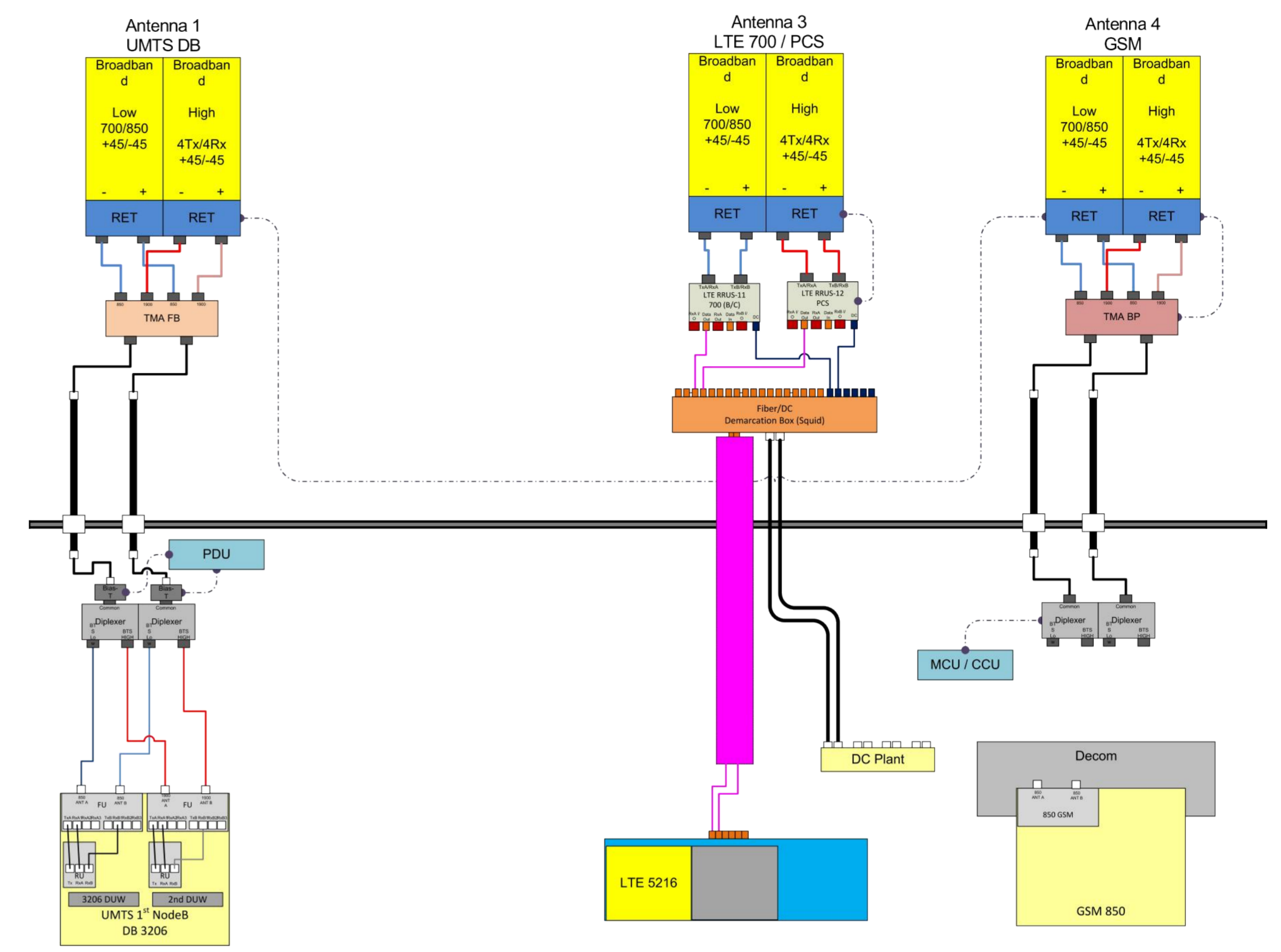
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LTE WIRING DIAGRAM

EACH RRR CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:
 1. AT TOP OF THE CABINET
 2. AT RIGHT SIDE OF THE CABINET.



2 RRU POLE MOUNT GROUNING
 E-3 NOT TO SCALE



1 RF PLUMBING DIAGRAM
 E-3 NOT TO SCALE

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DATE: 06/06/17
 SCALE: AS NOTED
 JOB NO. 17004.25

TYPICAL ELECTRICAL DETAILS

E-3
 Sheet No. 7 of 7



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 155 ft Monopole
ATC Site Name : Tolland CT, CT
ATC Site Number : 302495
Engineering Number : OAA705198_C3_01
Proposed Carrier : AT&T Mobility
Carrier Site Name : Tolland East Central
Carrier Site Number : CT1037
Site Location : 56 Rouns Road
Tolland, CT 06084-3116
41.873300,-72.338300
County : Tolland
Date : June 29, 2017
Max Usage : 80%
Result : Pass

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

Robert D. Barrett

Reviewed By:



Jun 30 2017 11:26 AM **cosign**

COA: PEC.0001553



Table of Contents

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Supporting Documents	1
Analysis	1
Conclusion.....	1
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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 155 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	EEI Drawing #GS50842 Rev 1, dated June 24, 1998
Foundation Drawing	EEI Drawing #F3503-150.N, dated March 2, 1998
Geotechnical Report	ASR Project #12-06077, dated December 1, 2006
Modifications	Spectrasite Drawing #CT-0031-M1, dated November 15, 2004

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, V_{asd}) / 125 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" 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:	$S_s = 0.17$, $S_1 = 0.06$
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					
155.0	164.0	3	EMS RR90-17-02DP	Canister	(6) 1 5/8" Coax	T-Mobile
	159.0	6	Ericsson KRY 112 71/x			
149.0	152.0	1	7' Omni	Platform w/ Handrails	(1) 1 1/4" Coax	Spok Holdings
	149.0	1	Andrew ABT-D MDF-ADBH		(12) 1 1/4" Coax (2) 0.78" 8 AWG 6 (1) 3" Conduit	AT&T Mobility
		3	Powerwave 7020.00 Dual Band RET			
		6	Kathrein 782-10250			
		6	CCI DTMAPB7819VG12A			
		3	Ericsson RRUS 11 (Band 12)			
		3	Powerwave 7770.00			
		6	KMW AM-X-CD-16-65-00T-RET			
143.0	143.0	3	Alcatel-Lucent RRH2X60-AWS	Platform w/ Handrails	(15) 1 5/8" Coax (1) 1 5/8" Hybriflex	Verizon
		6	Swedcom ALP 9212-N			
		1	RFS DB-T1-6Z-8AB-0Z			
		6	Andrew HBXX-6516DS-A2M			
		3	Andrew LNX-6513DS-A1M			
133.0	133.0	5	Decibel 980H65T2E-M	Platform w/ Handrails	(9) 1 5/8" Coax	Sprint Nextel
		4	Decibel DB980H90A-KL			
123.0	123.0	12	Decibel DB844H90E-A	Platform w/ Handrails	(12) 1 1/4" Coax	Metro PCS
107.0	107.0	3	Commscope LNX-6515DS-VTM	Flush	(6) 1 1/4" Coax	
105.0	105.0	3	Kathrein Smart Bias Tee		-	
83.0	83.0	1	GPS	Stand-Off	(1) 1/2" Coax	T-Mobile
63.0	63.0	2	GPS	Stand-Offs	(2) 1/2" Coax	Sprint Nextel
52.0	52.0	1	2" x 4" GPS	Stand-Off	(1) 1/2" Coax	
17.0	17.0	1	4' Std. Dish	Flush	(1) 0.27" RG-6/U	Spok Holdings

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
149.0	149.0	-	-	-	(1) 0.39" Cable	AT&T Mobility

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
149.0	149.0	1	Raycap DC6-48-60-18-8F	Platform w/ Handrails	(1) 0.39" Fiber Trunk	AT&T Mobility
		3	Ericsson RRUS-12 800 MHz		(1) 3/8" RET Control Cable	

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	72%	Pass
Shaft	80%	Pass
Base Plate	53%	Pass
Flanges	20%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	3,611.6	77%
Axial (Kips)	93.6	5%
Shear (Kips)	33.2	55%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
149.0	Raycap DC6-48-60-18-8F	AT&T Mobility	2.449	1.790
	Ericsson RRUS-12 800 MHz			
17.0	4' Std. Dish	Spok Holdings	0.028	0.190

*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:

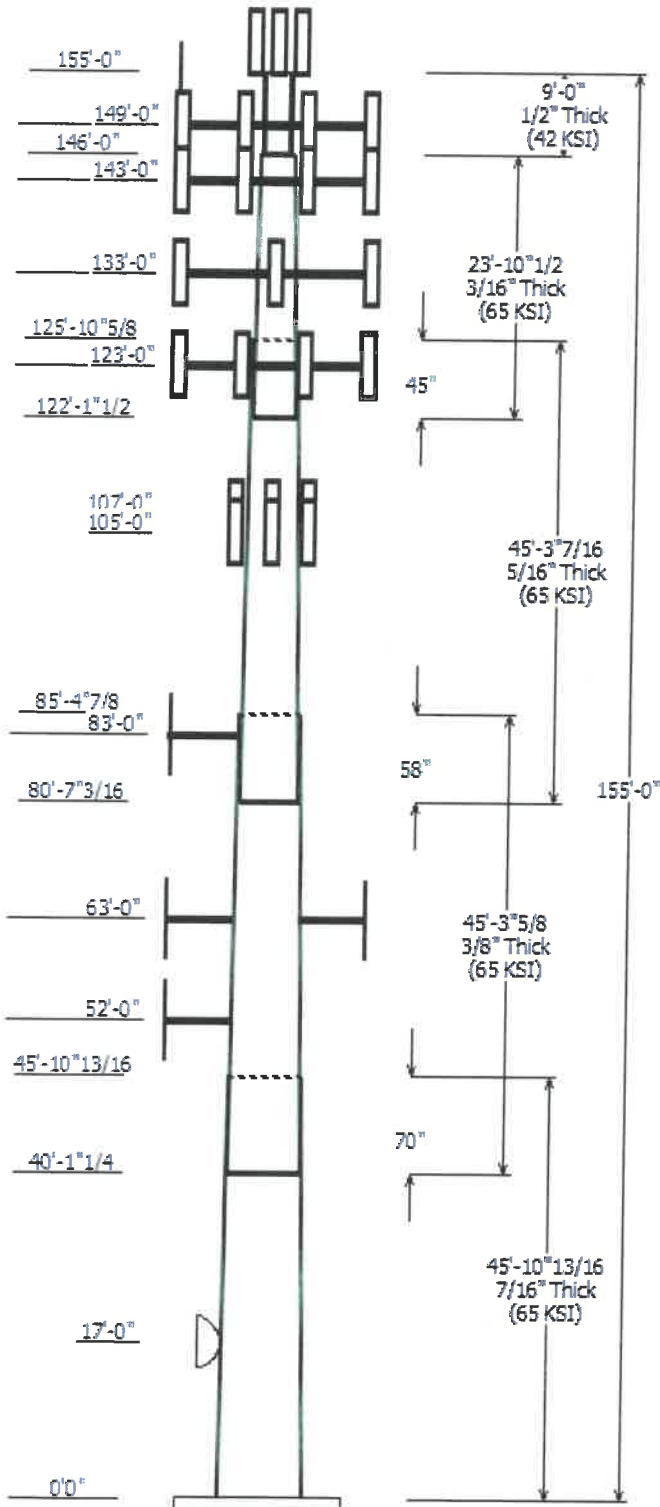
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements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

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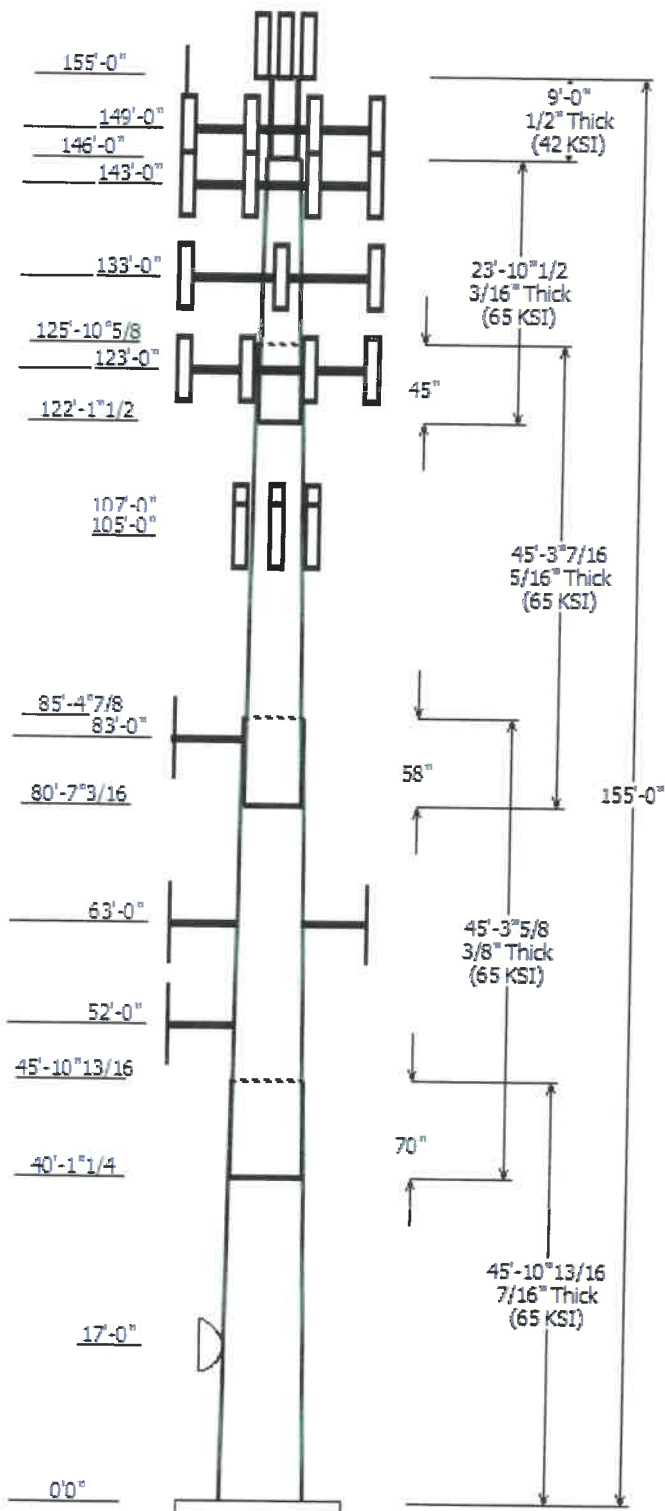


Job Information	
Pole :	302495
Code :	ANSI/TIA-222-G
Description :	EEL 155' Monopole - Model verified 4/25/12
Client :	AT&T Mobility
Struct Class :	II
Location :	Tolland CT, CT
Shape :	12 Sides
Exposure :	B
Height :	155.00 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.21061 (in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap Length (in)	Taper (in/ft)	Steel (ksi)
		Accross Top	Flats Bottom					
1	45.898	40.33	50.00	0.438		0.000	0.210600	65
2	45.302	32.76	42.30	0.375	Slip Joint	69.531	0.210600	65
3	45.286	24.86	34.40	0.313	Slip Joint	57.688	0.210600	65
4	23.878	21.00	26.02	0.188	Slip Joint	45.156	0.210600	65
5	9.000	16.00	16.00	0.500	Butt Joint	0.000	0.000000	42

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
155.000	155.000	1	Canister	
155.000	159.000	6	Ericsson KRY 112 71/x	
155.000	164.000	3	EMS RR90-17-02DP	
149.000	149.000	3	Ericsson RRUS-12 800 MHz	
149.000	149.000	1	Raycap DC6-48-60-18-8F	
149.000	152.000	1	7' Omni	
149.000	149.000	3	Powerwave Allgon 7770.00	
149.000	149.000	1	Flat Platform w/ Handrails	
149.000	149.000	3	Powerwave Allgon 7020.00	
149.000	149.000	6	KMW AM-X-CD-16-65-00T-RET	
149.000	149.000	3	Ericsson RRUS 11 (Band 12)	
149.000	149.000	6	CCI DTMAPB7819VG12A	
149.000	149.000	6	Kathrein Scala 782-10250	
149.000	149.000	1	Andrew ABT-DMDF-ADBH	
143.000	143.000	1	Flat Platform w/ Handrails	
143.000	143.000	3	Andrew LNX-6513DS-A1M	
143.000	143.000	6	Andrew HBXX-6516DS-A2M	
143.000	143.000	1	RFS DB-T1-6Z-8AB-0Z	
143.000	143.000	6	Swedcom ALP 9212-N	
143.000	143.000	3	Alcatel-Lucent RRH2X60-AWS	
133.000	133.000	1	Flat Platform w/ Handrails	
133.000	133.000	4	Decibel DB980H90A-KL	
133.000	133.000	5	Decibel 980H65T2E-M	
123.000	123.000	12	Decibel DB844H90E-A	
123.000	123.000	1	Flat Platform w/ Handrails	
107.000	107.000	3	Commscope LNX-6515DS-VTM	
105.000	105.000	3	Kathrein Smart Bias Tee	
83.000	83.000	1	Stand-Off	
83.000	83.000	1	GPS	
63.000	63.000	2	Stand-Off	
63.000	63.000	2	GPS	
52.000	52.000	1	Stand-Off	
52.000	52.000	1	2" x 4" GPS	
17.000	17.000	1	4' Std. Dish	

Linear Appurtenance			
From Elev (ft)	To Elev (ft)	Description	Exposed To Wind
120.0	149.0	Climbing Ladder	Yes
0.000	155.0	1 5/8" Coax	No
0.000	17.000	0.27" RG-6/U	Yes



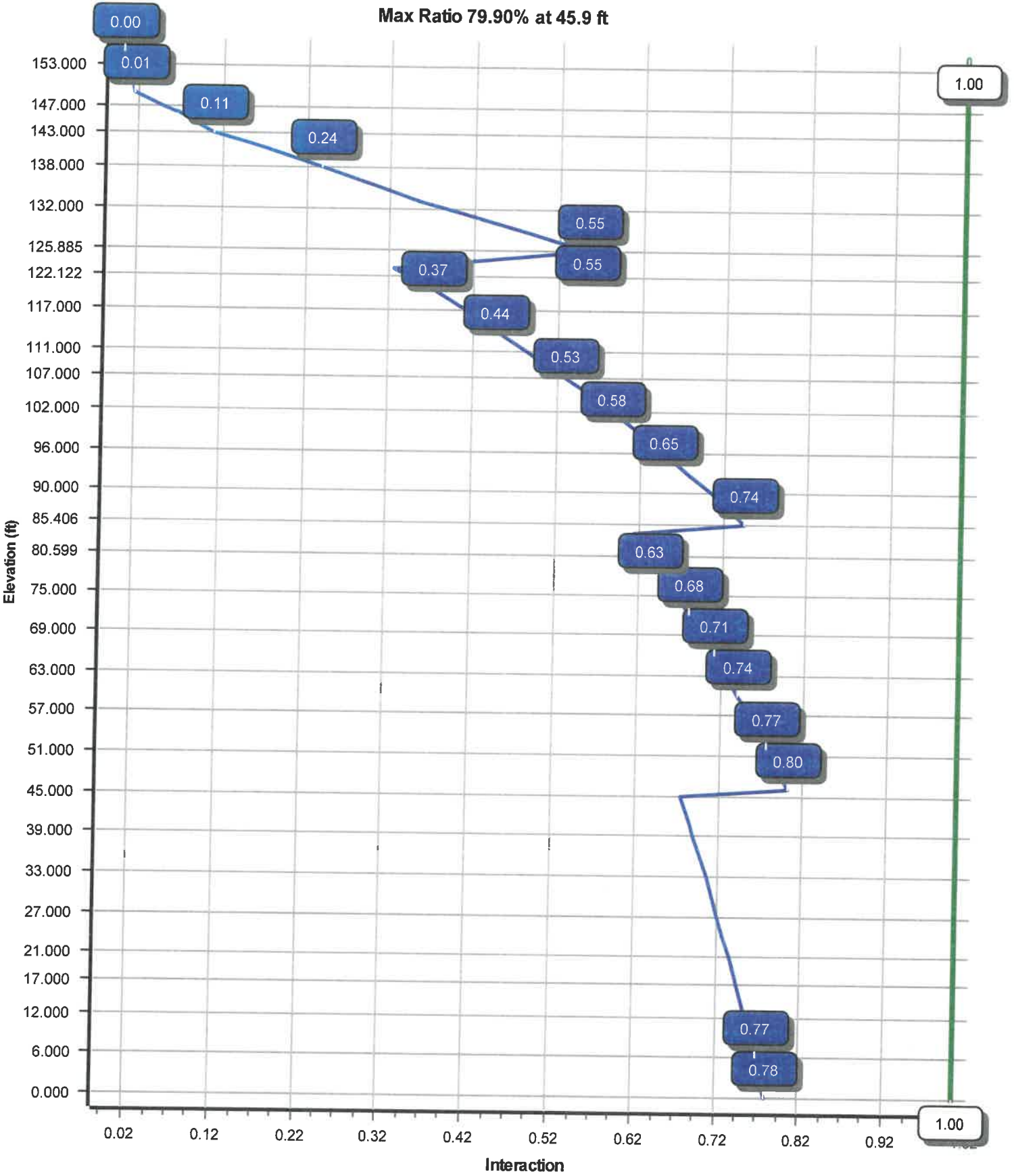
0.000	52.000	1/2" Coax	Yes
0.000	63.000	1/2" Coax	Yes
0.000	83.000	1/2" Coax	Yes
0.000	107.0	1 1/4" Coax	Yes
0.000	123.0	1 1/4" Coax	No
0.000	133.0	1 5/8" Coax	No
0.000	143.0	1 5/8" Coax	Yes
0.000	143.0	1 5/8" Coax	No
0.000	143.0	1 5/8" Hybriflex	Yes
0.000	149.0	0.39" Fiber Trunk	No
0.000	149.0	0.78" 8 AWG 6	No
0.000	149.0	1 1/4" Coax	No
0.000	149.0	1 1/4" Coax	Yes
0.000	149.0	1 1/4" Coax	No
0.000	149.0	3" Conduit	No
0.000	149.0	3/8" RET Control	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 1.00 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	3611.64	33.13	50.46
0.9D + 1.6W	3530.40	32.91	37.83
1.2D + 1.0Di + 1.0Wi	995.61	8.12	93.58
(1.2 + 0.2Sds) * DL + E ELFM	216.24	1.64	50.99
(1.2 + 0.2Sds) * DL + E EMAM	303.42	2.46	50.99
(0.9 - 0.2Sds) * DL + E ELFM	211.90	1.64	35.55
(0.9 - 0.2Sds) * DL + E EMAM	296.96	2.46	35.55
1.0D + 1.0W	850.51	7.87	42.08

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	17.00	0.336	0.190

Load Case : 1.2D + 1.6W
Max Ratio 79.90% at 45.9 ft



Site Number: 302495 Code: ANSI/TIA-222-G © 2007 - 2017 by ATC IP LLC. All rights reserved.
 Site Name: Tolland CT, CT Engineering Number: OAA705198_C3_01 6/29/2017 5:56:05 PM
 Customer: AT&T Mobility

Analysis Parameters

Location:	Tolland County, CT	Height (ft):	155
Code:	ANSI/TIA-222-G	Base Diameter (in):	50.00
Shape:	12 Sides. Sect 5: Round	Top Diameter (in):	16.00
Pole Type:	Custom	Taper (in/ft) :	0.211
Pole Manufacturer:	EEL	Rotation (deg) :	0.00

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:	1.00 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.79		
T _L (sec):	6	p:	1.3
S _s :	0.175	S ₁ :	0.063
F _a :	1.600	F _v :	2.400
S _{ds} :	0.187	S _{d1} :	0.101
		C _s :	0.030
		C _s Max:	0.030
		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 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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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)
1-12	45.898	0.4375	65		0.00	9,841	50.00	0.00	69.82	21891.7	27.94	114.29	40.33	45.90	56.20	11418.1	22.02	92.19	0.210616
2-12	45.302	0.3750	65	Slip	69.53	6,917	42.30	40.10	50.63	11360.5	27.55	112.81	32.76	85.41	39.11	5235.8	20.73	87.37	0.210616
3-12	45.286	0.3125	65	Slip	57.69	4,546	34.40	80.60	34.30	5087.0	26.82	110.08	24.86	125.89	24.70	1900.2	18.64	79.56	0.210616
4-12	23.878	0.1875	65	Slip	45.16	1,144	26.02	122.12	15.60	1329.8	34.52	138.82	21.00	146.00	12.57	694.7	27.33	112.00	0.210616
5-R	9.000	0.5000	42	Butt	0.00	746	16.00	146.00	24.35	731.7	0.00	32.00	16.00	155.00	24.35	731.7	0.00	32.00	0.000000
Shaft Weight						23,194													

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		
155.00	Canister	1	500.00	9.800	1.00	897.56	13.175	1.00	0.000	0.000
155.00	EMS RR90-17-02DP	3	13.50	4.360	0.01	158.35	5.725	0.01	0.000	9.000
155.00	Ericsson KRY 112 71/x	6	13.20	0.730	0.01	53.56	1.162	0.01	0.000	4.000
149.00	7' Omni	1	25.00	2.100	1.00	168.52	4.247	1.00	0.000	3.000
149.00	Andrew ABT-D MDF-ADB H	1	1.10	0.050	0.50	10.90	0.202	0.50	0.000	0.000
149.00	CCI DTMABP7819VG12A	6	19.20	0.970	0.50	70.27	1.569	0.50	0.000	0.000
149.00	Ericsson RRUS 11 (Band 12)	3	50.00	2.570	0.67	167.31	3.464	0.67	0.000	0.000
149.00	Ericsson RRUS-12 800 MHz	3	60.00	2.700	0.67	186.41	3.625	0.67	0.000	0.000
149.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,896.23	70.382	1.00	0.000	0.000
149.00	Kathrein Scala 782-10250	6	6.40	0.520	0.50	36.64	0.913	0.50	0.000	0.000
149.00	KMW AM-X-CD-16-65-00T-	6	48.50	8.020	0.67	316.98	9.782	0.67	0.000	0.000
149.00	Powerwave Allgon 7020.00	3	2.20	0.400	0.50	27.26	0.742	0.50	0.000	0.000
149.00	Powerwave Allgon 7770.00	3	35.00	5.510	0.65	228.78	6.949	0.65	0.000	0.000
149.00	Raycap DC6-48-60-18-8F	1	31.80	1.280	1.00	165.01	3.096	1.00	0.000	0.000
143.00	Alcatel-Lucent RRH2X60-	3	44.00	1.880	0.50	140.77	2.677	0.50	0.000	0.000
143.00	Andrew HBXX-6516DS-A2M	6	30.60	5.420	0.67	234.87	6.805	0.67	0.000	0.000
143.00	Andrew LNX-6513DS-A1M	3	31.10	5.850	0.69	254.04	7.301	0.69	0.000	0.000
143.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,888.40	70.267	1.00	0.000	0.000
143.00	RFS DB-T1-6Z-8AB-OZ	1	44.00	4.800	0.67	245.88	5.984	0.67	0.000	0.000
143.00	Swedcom ALP 9212-N	6	26.70	4.520	0.90	235.40	12.625	0.90	0.000	0.000
133.00	Decibel 980H65T2E-M	5	8.50	3.800	0.67	140.91	5.207	0.67	0.000	0.000
133.00	Decibel DB980H90A-KL	4	8.50	3.800	0.67	140.91	5.207	0.67	0.000	0.000
133.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,875.37	70.075	1.00	0.000	0.000
123.00	Decibel DB844H90E-A	12	10.00	3.800	0.72	165.62	5.011	0.72	0.000	0.000
123.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,860.80	69.860	1.00	0.000	0.000
107.00	Commscope LNX-6515DS-	3	50.30	11.450	0.84	407.80	13.597	0.84	0.000	0.000
105.00	Kathrein Smart Bias Tee	3	3.31	0.090	0.50	14.35	0.314	0.50	0.000	0.000
83.00	GPS	1	10.00	1.000	1.00	62.74	1.066	1.00	0.000	0.000
83.00	Stand-Off	1	75.00	2.500	1.00	140.72	4.691	1.00	0.000	0.000
63.00	GPS	2	10.00	1.000	1.00	60.64	1.048	1.00	0.000	0.000
63.00	Stand-Off	2	75.00	2.500	0.90	138.85	4.628	0.90	0.000	0.000
52.00	2" x 4" GPS	1	5.00	0.040	1.00	14.61	0.246	1.00	0.000	0.000
52.00	Stand-Off	1	75.00	2.500	1.00	137.73	4.591	1.00	0.000	0.000
17.00	4' Std. Dish	1	188.00	20.910	1.00	523.75	24.022	1.00	0.000	0.000
Totals		102	11057.23			31,984.36			Number of Loadings : 34	

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Projected Width Flat (in)	Exposed To Wind	Carrier	
0.00	155.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	149.00	1	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility

Site Number: 302495

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

0.00	149.00	2	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	149.00	9	1 1/4" Coax	1.55	0.63	N	0.00	N	AT&T Mobility
0.00	149.00	3	1 1/4" Coax	1.55	0.63	N	1.55	Y	AT&T Mobility
0.00	149.00	1	1 1/4" Coax	1.55	0.63	N	0.00	N	Spok Holdings, Inc.
0.00	149.00	1	3" Conduit	3.50	7.58	N	0.00	N	AT&T Mobility
0.00	149.00	1	3/8" RET Control Cable	0.38	0.23	N	0.00	N	AT&T Mobility
120.00	149.00	1	Climbing Ladder	2.00	6.90	N	2.00	Y	--
0.00	143.00	3	1 5/8" Coax	1.98	0.82	N	1.98	Y	Verizon Wireless
0.00	143.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon Wireless
0.00	143.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	Y	Verizon Wireless
0.00	133.00	9	1 5/8" Coax	1.98	0.82	N	0.00	N	Sprint Nextel
0.00	123.00	12	1 1/4" Coax	1.55	0.63	N	0.00	N	Sprint Nextel
0.00	107.00	6	1 1/4" Coax	1.55	0.63	N	0.00	Y	Metro PCS Inc
0.00	83.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	T-Mobile
0.00	63.00	2	1/2" Coax	0.63	0.15	N	0.00	Y	Sprint Nextel
0.00	52.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	Sprint Nextel
0.00	17.00	1	0.27" RG-6/U	0.27	0.04	N	0.00	Y	Spok Holdings, Inc.

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

Segment Properties (Max Len : 3. 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	50.000	69.821	21,891.7	27.94	114.29	74.2	845.8	0.0	0.0
3.00		0.4375	49.368	68.931	21,065.1	27.56	112.84	74.7	824.3	0.0	708.2
6.00		0.4375	48.736	68.041	20,259.5	27.17	111.40	75.1	803.1	0.0	699.1
9.00		0.4375	48.104	67.151	19,474.8	26.78	109.95	75.5	782.1	0.0	690.0
12.00		0.4375	47.473	66.261	18,710.5	26.40	108.51	75.9	761.4	0.0	681.0
15.00		0.4375	46.841	65.371	17,966.6	26.01	107.06	76.3	741.0	0.0	671.9
17.00		0.4375	46.420	64.777	17,481.7	25.75	106.10	76.6	727.5	0.0	442.9
18.00		0.4375	46.209	64.480	17,242.6	25.62	105.62	76.8	720.9	0.0	219.9
21.00		0.4375	45.577	63.590	16,538.3	25.23	104.18	77.2	701.0	0.0	653.7
24.00		0.4375	44.945	62.700	15,853.5	24.85	102.73	77.6	681.4	0.0	644.6
27.00		0.4375	44.313	61.810	15,187.9	24.46	101.29	78.0	662.1	0.0	635.5
30.00		0.4375	43.682	60.920	14,541.1	24.07	99.84	78.5	643.1	0.0	626.4
33.00		0.4375	43.050	60.030	13,913.0	23.69	98.40	78.9	624.3	0.0	617.3
36.00		0.4375	42.418	59.140	13,303.2	23.30	96.95	79.3	605.9	0.0	608.3
39.00		0.4375	41.786	58.250	12,711.5	22.91	95.51	79.7	587.7	0.0	599.2
40.10	Bot - Section 2	0.4375	41.553	57.922	12,498.3	22.77	94.98	79.9	581.1	0.0	218.2
42.00		0.4375	41.154	57.360	12,137.7	22.53	94.07	80.1	569.8	0.0	696.9
45.00		0.4375	40.522	56.469	11,581.3	22.14	92.62	80.6	552.1	0.0	1,089.0
45.90	Top - Section 1	0.3750	41.083	49.155	10,397.1	26.68	109.55	75.6	488.9	0.0	322.9
48.00		0.3750	40.640	48.620	10,061.7	26.36	108.37	76.0	478.3	0.0	349.6
51.00		0.3750	40.009	47.858	9,595.4	25.91	106.69	76.5	463.3	0.0	492.4
52.00		0.3750	39.798	47.603	9,443.2	25.76	106.13	76.6	458.4	0.0	162.4
54.00		0.3750	39.377	47.095	9,143.7	25.46	105.00	77.0	448.6	0.0	322.2
57.00		0.3750	38.745	46.332	8,706.5	25.00	103.32	77.4	434.1	0.0	476.9
60.00		0.3750	38.113	45.569	8,283.4	24.55	101.63	77.9	419.9	0.0	469.1
63.00		0.3750	37.481	44.806	7,874.3	24.10	99.95	78.4	405.9	0.0	461.3
66.00		0.3750	36.849	44.043	7,478.8	23.65	98.26	78.9	392.1	0.0	453.5
69.00		0.3750	36.217	43.280	7,096.9	23.20	96.58	79.4	378.5	0.0	445.7
72.00		0.3750	35.586	42.517	6,728.1	22.75	94.89	79.9	365.3	0.0	437.9
75.00		0.3750	34.954	41.754	6,372.4	22.30	93.21	80.4	352.2	0.0	430.1
78.00		0.3750	34.322	40.991	6,029.4	21.84	91.53	80.9	339.4	0.0	422.3
80.60	Bot - Section 3	0.3750	33.775	40.330	5,742.4	21.45	90.07	81.3	328.5	0.0	359.6
81.00		0.3750	33.690	40.228	5,699.0	21.39	89.84	81.4	326.8	0.0	101.7
83.00		0.3750	33.269	39.719	5,485.5	21.09	88.72	81.7	318.5	0.0	503.5
84.00		0.3750	33.058	39.465	5,380.8	20.94	88.16	81.9	314.4	0.0	249.3
85.41	Top - Section 2	0.3125	33.387	33.281	4,647.0	25.95	106.84	76.4	268.9	0.0	348.0
87.00		0.3125	33.051	32.943	4,507.0	25.66	105.76	76.7	263.4	0.0	179.6
90.00		0.3125	32.420	32.308	4,251.0	25.12	103.74	77.3	253.3	0.0	333.1
93.00		0.3125	31.788	31.672	4,004.9	24.58	101.72	77.9	243.4	0.0	326.6
96.00		0.3125	31.156	31.036	3,768.6	24.03	99.70	78.5	233.7	0.0	320.1
99.00		0.3125	30.524	30.400	3,541.7	23.49	97.68	79.1	224.2	0.0	313.6
102.0		0.3125	29.892	29.765	3,324.1	22.95	95.65	79.7	214.8	0.0	307.1
105.0		0.3125	29.260	29.129	3,115.6	22.41	93.63	80.3	205.7	0.0	300.6
107.0		0.3125	28.839	28.705	2,981.5	22.05	92.28	80.7	199.7	0.0	196.8
108.0		0.3125	28.628	28.493	2,916.0	21.87	91.61	80.9	196.8	0.0	97.3
111.0		0.3125	27.997	27.857	2,725.1	21.33	89.59	81.5	188.0	0.0	287.6
114.0		0.3125	27.365	27.221	2,542.7	20.78	87.57	81.9	179.5	0.0	281.1
117.0		0.3125	26.733	26.586	2,368.7	20.24	85.55	81.9	171.2	0.0	274.6
120.0		0.3125	26.101	25.950	2,202.8	19.70	83.52	81.9	163.0	0.0	268.1
122.1	Bot - Section 4	0.3125	25.654	25.500	2,090.2	19.32	82.09	81.9	157.4	0.0	185.8
123.0		0.3125	25.469	25.314	2,044.8	19.16	81.50	81.9	155.1	0.0	122.3
125.8	Top - Section 3	0.1875	25.236	15.123	1,211.2	33.38	134.59	68.3	92.7	0.0	395.8
126.0		0.1875	25.212	15.109	1,207.7	33.35	134.47	68.3	92.5	0.0	5.9
129.0		0.1875	24.580	14.727	1,118.5	32.45	131.10	69.3	87.9	0.0	152.3
132.0		0.1875	23.949	14.346	1,033.8	31.54	127.73	70.3	83.4	0.0	148.4
133.0		0.1875	23.738	14.219	1,006.6	31.24	126.60	70.6	81.9	0.0	48.6
135.0		0.1875	23.317	13.964	953.5	30.64	124.36	71.3	79.0	0.0	95.9
138.0		0.1875	22.685	13.583	877.5	29.74	120.99	72.3	74.7	0.0	140.6

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Customer: AT&T Mobility

141.0		0.1875	22.053	13.201	805.6	28.84	117.62	73.3	70.6	0.0	136.7
143.0		0.1875	21.632	12.947	759.9	28.23	115.37	73.9	67.9	0.0	89.0
144.0		0.1875	21.421	12.820	737.8	27.93	114.25	74.2	66.5	0.0	43.8
146.0	Top - Section 4	0.1875	21.000	12.566	694.7	27.33	112.00	74.9	63.9	0.0	86.4
146.0	Bot - Section 5	0.5000	16.000	24.347	731.7	0.00	32.00	42.0	91.5	120.2	
147.0		0.5000	16.000	24.347	731.7	0.00	32.00	42.0	91.5	120.2	82.8
149.0		0.5000	16.000	24.347	731.7	0.00	32.00	42.0	91.5	120.2	165.7
150.0		0.5000	16.000	24.347	731.7	0.00	32.00	42.0	91.5	120.2	82.8
153.0		0.5000	16.000	24.347	731.7	0.00	32.00	42.0	91.5	120.2	248.5
155.0		0.5000	16.000	24.347	731.7	0.00	32.00	42.0	91.5	120.2	165.7
											23,194.0

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

29 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		181.3	0.0					0.0	0.0	181.3	0.0	0.0	0.0
3.00		360.2	849.9					0.0	198.4	360.2	1,048.3	0.0	0.0
6.00		355.6	839.0					0.0	198.4	355.6	1,037.4	0.0	0.0
9.00		351.0	828.0					0.0	198.4	351.0	1,026.5	0.0	0.0
12.00		346.4	817.1					0.0	198.4	346.4	1,015.6	0.0	0.0
15.00		285.5	806.2					0.0	198.4	285.5	1,004.7	0.0	0.0
17.00	Appertunance(s)	169.7	531.4	589.5	0.0	0.0	225.6	0.0	132.3	759.2	889.3	0.0	0.0
18.00		223.8	263.9					0.0	66.1	223.8	330.0	0.0	0.0
21.00		332.6	784.4					0.0	198.3	332.6	982.7	0.0	0.0
24.00		327.9	773.5					0.0	198.3	327.9	971.8	0.0	0.0
27.00		323.3	762.6					0.0	198.3	323.3	960.9	0.0	0.0
30.00		321.1	751.7					0.0	198.3	321.1	950.0	0.0	0.0
33.00		323.0	740.8					0.0	198.3	323.0	939.1	0.0	0.0
36.00		326.2	729.9					0.0	198.3	326.2	928.2	0.0	0.0
39.00		224.4	719.0					0.0	198.3	224.4	917.3	0.0	0.0
40.10	Bot - Section 2	166.9	261.9					0.0	73.0	166.9	334.9	0.0	0.0
42.00		275.1	836.3					0.0	125.3	275.1	961.6	0.0	0.0
45.00		219.6	1,306.8					0.0	198.3	219.6	1,505.1	0.0	0.0
45.90	Top - Section 1	169.5	387.4					0.0	59.4	169.5	446.8	0.0	0.0
48.00		288.7	419.5					0.0	138.9	288.7	558.4	0.0	0.0
51.00		226.6	590.9					0.0	198.3	226.6	789.2	0.0	0.0
52.00	Appertunance(s)	170.1	194.9	83.9	0.0	0.0	96.0	0.0	66.1	253.9	357.0	0.0	0.0
54.00		283.4	386.7					0.0	131.8	283.4	518.5	0.0	0.0
57.00		339.8	572.2					0.0	197.7	339.8	770.0	0.0	0.0
60.00		339.2	562.9					0.0	197.7	339.2	760.6	0.0	0.0
63.00	Appertunance(s)	338.3	553.5	211.0	0.0	0.0	204.0	0.0	197.7	549.3	955.3	0.0	0.0
66.00		337.1	544.2					0.0	196.7	337.1	740.9	0.0	0.0
69.00		335.5	534.9					0.0	196.7	335.5	731.5	0.0	0.0
72.00		333.7	525.5					0.0	196.7	333.7	722.2	0.0	0.0
75.00		331.6	516.2					0.0	196.7	331.6	712.8	0.0	0.0
78.00		307.4	506.8					0.0	196.7	307.4	703.5	0.0	0.0
80.60	Bot - Section 3	164.5	431.5					0.0	170.4	164.5	601.9	0.0	0.0
81.00		133.6	122.1					0.0	26.3	133.6	148.3	0.0	0.0
83.00	Appertunance(s)	166.8	604.1	132.1	0.0	0.0	102.0	0.0	131.1	298.9	837.3	0.0	0.0
84.00		133.6	299.2					0.0	65.4	133.6	364.6	0.0	0.0
85.41	Top - Section 2	165.9	417.6					0.0	91.9	165.9	509.5	0.0	0.0
87.00		252.7	215.5					0.0	104.2	252.7	319.7	0.0	0.0
90.00		329.1	399.7					0.0	196.1	329.1	595.8	0.0	0.0
93.00		327.7	391.9					0.0	196.1	327.7	588.0	0.0	0.0
96.00		326.2	384.1					0.0	196.1	326.2	580.2	0.0	0.0
99.00		324.5	376.3					0.0	196.1	324.5	572.4	0.0	0.0
102.00		322.7	368.5					0.0	196.1	322.7	564.6	0.0	0.0
105.00	Appertunance(s)	267.6	360.7	5.4	0.0	0.0	11.9	0.0	196.1	273.0	568.8	0.0	0.0
107.00	Appertunance(s)	159.9	236.2	1,170.8	0.0	0.0	181.1	0.0	130.8	1,330.7	548.0	0.0	0.0
108.00		212.0	116.8					0.0	60.8	212.0	177.6	0.0	0.0
111.00		316.5	345.1					0.0	182.5	316.5	527.7	0.0	0.0
114.00		314.2	337.4					0.0	182.5	314.2	519.9	0.0	0.0
117.00		311.8	329.6					0.0	182.5	311.8	512.1	0.0	0.0

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

6/29/2017 5:56:10 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

29 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

120.00		274.8	321.8					0.0	182.5	274.8	504.3	0.0	0.0
122.12	Bot - Section 4	169.2	222.9					61.2	146.7	230.4	369.6	0.0	0.0
123.00	Appertunance(s)	211.3	146.8	2,830.1	0.0	0.0	2,544.0	25.4	60.7	3,066.8	2,751.4	0.0	0.0
125.89	Top - Section 3	168.0	475.0					83.9	173.3	251.9	648.3	0.0	0.0
126.00		171.3	7.1					3.3	6.9	174.6	14.0	0.0	0.0
129.00		326.8	182.7					87.8	180.1	414.6	362.9	0.0	0.0
132.00		215.1	178.1					88.4	180.1	303.5	358.2	0.0	0.0
133.00	Appertunance(s)	158.6	58.3	2,572.8	0.0	0.0	2,491.8	29.6	60.0	2,761.0	2,610.2	0.0	0.0
135.00		260.8	115.1					59.4	102.4	320.2	217.5	0.0	0.0
138.00		307.4	168.7					89.6	153.6	397.0	322.3	0.0	0.0
141.00		251.5	164.1					90.1	153.6	341.7	317.6	0.0	0.0
143.00	Appertunance(s)	147.7	106.8	3,996.3	0.0	0.0	3,135.7	60.4	102.4	4,204.4	3,344.9	0.0	0.0
144.00		144.2	52.6					0.0	34.9	144.2	87.5	0.0	0.0
146.00	Top - Section 4	131.5	103.7					0.0	69.7	131.5	173.4	0.0	0.0
147.00		106.7	99.4					21.7	34.9	128.4	134.3	0.0	0.0
149.00	Appertunance(s)	89.1	198.8	3,990.9	0.0	282.6	3,532.9	43.5	69.7	4,123.4	3,801.5	0.0	0.0
150.00		71.6	99.4					0.0	5.9	71.6	105.3	0.0	0.0
153.00		89.8	298.3					0.0	17.7	89.8	316.0	0.0	0.0
155.00	Appertunance(s)	36.0	198.8	450.1	0.0	61.9	743.6	0.0	11.8	486.1	954.3	0.0	0.0
									Totals:	33,252.1	50,499.7	0.00	0.00

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

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Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

29 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

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	-50.46	-33.13	0.00	-3,611.64	0.00	3,611.64	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.778
3.00	-49.33	-32.89	0.00	-3,512.25	0.00	3,512.25	4,631.78	2,315.89	9,346.21	4,615.74	0.05	-0.14	0.772
6.00	-48.21	-32.65	0.00	-3,413.57	0.00	3,413.57	4,597.82	2,298.91	9,156.81	4,522.21	0.18	-0.28	0.766
9.00	-47.11	-32.41	0.00	-3,315.62	0.00	3,315.62	4,563.18	2,281.59	8,967.87	4,428.89	0.40	-0.42	0.759
12.00	-46.02	-32.17	0.00	-3,218.39	0.00	3,218.39	4,527.86	2,263.93	8,779.43	4,335.83	0.71	-0.56	0.753
15.00	-44.95	-31.97	0.00	-3,121.87	0.00	3,121.87	4,491.86	2,245.93	8,591.56	4,243.05	1.11	-0.71	0.746
17.00	-44.03	-31.26	0.00	-3,057.93	0.00	3,057.93	4,467.49	2,233.75	8,466.65	4,181.36	1.43	-0.81	0.741
18.00	-43.65	-31.10	0.00	-3,026.68	0.00	3,026.68	4,455.19	2,227.60	8,404.31	4,150.57	1.60	-0.86	0.739
21.00	-42.59	-30.86	0.00	-2,933.37	0.00	2,933.37	4,417.85	2,208.92	8,217.72	4,058.43	2.19	-1.00	0.733
24.00	-41.55	-30.63	0.00	-2,840.78	0.00	2,840.78	4,379.82	2,189.91	8,031.86	3,966.64	2.87	-1.15	0.726
27.00	-40.51	-30.39	0.00	-2,748.90	0.00	2,748.90	4,341.13	2,170.56	7,846.78	3,875.23	3.64	-1.30	0.719
30.00	-39.49	-30.15	0.00	-2,657.73	0.00	2,657.73	4,301.75	2,150.88	7,662.53	3,784.23	4.51	-1.45	0.712
33.00	-38.48	-29.91	0.00	-2,567.28	0.00	2,567.28	4,261.70	2,130.85	7,479.16	3,693.68	5.47	-1.61	0.704
36.00	-37.48	-29.66	0.00	-2,477.56	0.00	2,477.56	4,220.97	2,110.49	7,296.73	3,603.58	6.53	-1.76	0.697
39.00	-36.52	-29.47	0.00	-2,388.59	0.00	2,388.59	4,179.57	2,089.78	7,115.28	3,513.97	7.69	-1.92	0.689
40.10	-36.15	-29.34	0.00	-2,356.05	0.00	2,356.05	4,164.16	2,082.08	7,048.76	3,481.12	8.14	-1.98	0.686
42.00	-35.13	-29.11	0.00	-2,300.43	0.00	2,300.43	4,137.49	2,068.74	6,934.89	3,424.88	8.95	-2.08	0.680
45.00	-33.58	-28.90	0.00	-2,213.09	0.00	2,213.09	4,094.73	2,047.37	6,755.59	3,336.33	10.31	-2.24	0.672
45.90	-33.10	-28.76	0.00	-2,187.13	0.00	2,187.13	3,345.43	1,672.72	5,614.65	2,772.86	10.73	-2.29	0.799
48.00	-32.48	-28.53	0.00	-2,126.69	0.00	2,126.69	3,324.15	1,662.07	5,517.72	2,724.99	11.76	-2.40	0.791
51.00	-31.65	-28.33	0.00	-2,041.11	0.00	2,041.11	3,293.20	1,646.60	5,379.77	2,656.86	13.33	-2.58	0.778
52.00	-31.26	-28.11	0.00	-2,012.78	0.00	2,012.78	3,282.73	1,641.36	5,333.90	2,634.21	13.87	-2.64	0.774
54.00	-30.68	-27.88	0.00	-1,956.56	0.00	1,956.56	3,261.57	1,630.78	5,242.36	2,589.00	15.00	-2.75	0.765
57.00	-29.84	-27.60	0.00	-1,872.90	0.00	1,872.90	3,229.26	1,614.63	5,105.54	2,521.44	16.79	-2.93	0.752
60.00	-29.01	-27.31	0.00	-1,790.10	0.00	1,790.10	3,196.28	1,598.14	4,969.37	2,454.19	18.69	-3.11	0.739
63.00	-28.01	-26.80	0.00	-1,708.16	0.00	1,708.16	3,162.62	1,581.31	4,833.91	2,387.28	20.70	-3.29	0.725
66.00	-27.20	-26.51	0.00	-1,627.77	0.00	1,627.77	3,128.28	1,564.14	4,699.19	2,320.75	22.83	-3.47	0.710
69.00	-26.41	-26.21	0.00	-1,548.25	0.00	1,548.25	3,093.27	1,546.64	4,565.29	2,254.62	25.07	-3.66	0.696
72.00	-25.63	-25.91	0.00	-1,469.63	0.00	1,469.63	3,057.58	1,528.79	4,432.24	2,188.92	27.43	-3.84	0.680
75.00	-24.86	-25.61	0.00	-1,391.90	0.00	1,391.90	3,021.22	1,510.61	4,300.11	2,123.66	29.89	-4.02	0.664
78.00	-24.11	-25.32	0.00	-1,315.07	0.00	1,315.07	2,984.18	1,492.09	4,168.95	2,058.89	32.48	-4.20	0.647
80.60	-23.48	-25.15	0.00	-1,249.26	0.00	1,249.26	2,951.54	1,475.77	4,056.14	2,003.18	34.80	-4.36	0.632
81.00	-23.31	-25.04	0.00	-1,239.18	0.00	1,239.18	2,946.46	1,473.23	4,038.81	1,994.61	35.17	-4.38	0.629
83.00	-22.46	-24.71	0.00	-1,189.10	0.00	1,189.10	2,920.94	1,460.47	3,952.64	1,952.06	37.03	-4.50	0.617
84.00	-22.07	-24.58	0.00	-1,164.39	0.00	1,164.39	2,908.96	1,454.48	3,910.94	1,931.47	37.98	-4.56	0.611
85.41	-21.54	-24.40	0.00	-1,129.84	0.00	1,129.84	2,288.86	1,144.43	3,120.34	1,541.02	39.34	-4.65	0.743
87.00	-21.18	-24.18	0.00	-1,090.94	0.00	1,090.94	2,274.94	1,137.47	3,069.59	1,515.95	40.90	-4.75	0.729
90.00	-20.53	-23.87	0.00	-1,018.40	0.00	1,018.40	2,248.22	1,124.11	2,974.43	1,468.96	43.95	-4.95	0.703
93.00	-19.89	-23.56	0.00	-946.78	0.00	946.78	2,220.81	1,110.41	2,879.80	1,422.23	47.11	-5.14	0.675
96.00	-19.27	-23.25	0.00	-876.09	0.00	876.09	2,192.74	1,096.37	2,785.75	1,375.78	50.40	-5.34	0.646
99.00	-18.65	-22.94	0.00	-806.34	0.00	806.34	2,163.98	1,081.99	2,692.34	1,329.64	53.81	-5.53	0.616
102.00	-18.05	-22.62	0.00	-737.54	0.00	737.54	2,134.56	1,067.28	2,599.61	1,283.85	57.34	-5.71	0.583
105.00	-17.46	-22.33	0.00	-669.69	0.00	669.69	2,104.45	1,052.22	2,507.63	1,238.42	60.98	-5.89	0.550
107.00	-17.02	-20.98	0.00	-625.02	0.00	625.02	2,084.00	1,042.00	2,446.74	1,208.36	63.48	-6.01	0.526
108.00	-16.82	-20.78	0.00	-604.05	0.00	604.05	2,073.67	1,036.83	2,416.44	1,193.39	64.74	-6.07	0.515
111.00	-16.27	-20.46	0.00	-541.70	0.00	541.70	2,042.21	1,021.11	2,326.10	1,148.77	68.60	-6.24	0.480
114.00	-15.73	-20.13	0.00	-480.33	0.00	480.33	2,006.48	1,003.24	2,232.66	1,102.63	72.57	-6.40	0.444
117.00	-15.21	-19.80	0.00	-419.93	0.00	419.93	1,959.62	979.81	2,129.00	1,051.43	76.63	-6.55	0.408
120.00	-14.70	-19.50	0.00	-360.53	0.00	360.53	1,912.75	956.38	2,027.81	1,001.46	80.78	-6.69	0.368
122.12	-14.34	-19.25	0.00	-319.14	0.00	319.14	1,879.60	939.80	1,957.71	966.84	83.77	-6.78	0.338
123.00	-11.95	-15.89	0.00	-302.25	0.00	302.25	1,865.89	932.94	1,929.08	952.70	85.02	-6.82	0.324

Site Number: 302495

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

29 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

125.89	-11.32	-15.57	0.00	-256.40	0.00	256.40	929.68	464.84	961.73	474.96	89.17	-6.93	0.553
126.00	-11.31	-15.42	0.00	-254.62	0.00	254.62	929.29	464.65	960.40	474.31	89.33	-6.94	0.550
129.00	-10.96	-14.99	0.00	-208.37	0.00	208.37	918.88	459.44	925.49	457.06	93.73	-7.10	0.469
132.00	-10.62	-14.66	0.00	-163.41	0.00	163.41	907.79	453.90	890.46	439.76	98.23	-7.24	0.384
133.00	-8.36	-11.60	0.00	-148.75	0.00	148.75	903.95	451.97	878.77	433.99	99.75	-7.29	0.353
135.00	-8.17	-11.27	0.00	-125.55	0.00	125.55	896.03	448.02	855.37	422.43	102.81	-7.36	0.307
138.00	-7.89	-10.84	0.00	-91.75	0.00	91.75	883.59	441.80	820.26	405.10	107.46	-7.46	0.236
141.00	-7.61	-10.47	0.00	-59.22	0.00	59.22	870.48	435.24	785.20	387.78	112.16	-7.53	0.162
143.00	-4.84	-5.86	0.00	-38.28	0.00	38.28	861.36	430.68	761.88	376.27	115.32	-7.57	0.108
144.00	-4.77	-5.71	0.00	-32.41	0.00	32.41	856.69	428.34	750.24	370.52	116.90	-7.58	0.093
146.00	-4.62	-5.56	0.00	-20.99	0.00	20.99	847.12	423.56	727.02	359.05	120.07	-7.60	0.064
146.00	-4.62	-5.56	0.00	-20.99	0.00	20.99	920.33	460.16	575.46	378.52	120.07	-7.60	0.061
147.00	-4.50	-5.41	0.00	-15.43	0.00	15.43	920.33	460.16	575.46	378.52	121.66	-7.61	0.046
149.00	-1.28	-0.82	0.00	-4.32	0.00	4.32	920.33	460.16	575.46	378.52	124.84	-7.62	0.013
150.00	-1.18	-0.74	0.00	-3.50	0.00	3.50	920.33	460.16	575.46	378.52	126.43	-7.62	0.011
153.00	-0.88	-0.61	0.00	-1.28	0.00	1.28	920.33	460.16	575.46	378.52	131.20	-7.62	0.004
155.00	0.00	-0.49	0.00	-0.06	0.00	0.06	920.33	460.16	575.46	378.52	134.39	-7.62	0.000

Site Number: 302495

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Site Name: Tolland CT, CT

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Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 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		181.3	0.0					0.0	0.0	181.3	0.0	0.0	0.0
3.00		360.2	637.4					0.0	148.8	360.2	786.2	0.0	0.0
6.00		355.6	629.2					0.0	148.8	355.6	778.0	0.0	0.0
9.00		351.0	621.0					0.0	148.8	351.0	769.9	0.0	0.0
12.00		346.4	612.9					0.0	148.8	346.4	761.7	0.0	0.0
15.00		285.5	604.7					0.0	148.8	285.5	753.5	0.0	0.0
17.00	Appertunance(s)	169.7	398.6	589.5	0.0	0.0	169.2	0.0	99.2	759.2	667.0	0.0	0.0
18.00		223.8	197.9					0.0	49.6	223.8	247.5	0.0	0.0
21.00		332.6	588.3					0.0	148.7	332.6	737.0	0.0	0.0
24.00		327.9	580.1					0.0	148.7	327.9	728.9	0.0	0.0
27.00		323.3	572.0					0.0	148.7	323.3	720.7	0.0	0.0
30.00		321.1	563.8					0.0	148.7	321.1	712.5	0.0	0.0
33.00		323.0	555.6					0.0	148.7	323.0	704.3	0.0	0.0
36.00		326.2	547.4					0.0	148.7	326.2	696.2	0.0	0.0
39.00		224.4	539.3					0.0	148.7	224.4	688.0	0.0	0.0
40.10	Bot - Section 2	166.9	196.4					0.0	54.7	166.9	251.2	0.0	0.0
42.00		275.1	627.2					0.0	94.0	275.1	721.2	0.0	0.0
45.00		219.6	980.1					0.0	148.7	219.6	1,128.8	0.0	0.0
45.90	Top - Section 1	169.5	290.6					0.0	44.5	169.5	335.1	0.0	0.0
48.00		288.7	314.6					0.0	104.2	288.7	418.8	0.0	0.0
51.00		226.6	443.2					0.0	148.7	226.6	591.9	0.0	0.0
52.00	Appertunance(s)	170.1	146.2	83.9	0.0	0.0	72.0	0.0	49.6	253.9	267.7	0.0	0.0
54.00		283.4	290.0					0.0	98.9	283.4	388.9	0.0	0.0
57.00		339.8	429.2					0.0	148.3	339.8	577.5	0.0	0.0
60.00		339.2	422.2					0.0	148.3	339.2	570.5	0.0	0.0
63.00	Appertunance(s)	338.3	415.2	211.0	0.0	0.0	153.0	0.0	148.3	549.3	716.5	0.0	0.0
66.00		337.1	408.1					0.0	147.5	337.1	555.6	0.0	0.0
69.00		335.5	401.1					0.0	147.5	335.5	548.6	0.0	0.0
72.00		333.7	394.1					0.0	147.5	333.7	541.6	0.0	0.0
75.00		331.6	387.1					0.0	147.5	331.6	534.6	0.0	0.0
78.00		307.4	380.1					0.0	147.5	307.4	527.6	0.0	0.0
80.60	Bot - Section 3	164.4	323.6					0.0	127.8	164.4	451.4	0.0	0.0
81.00		132.9	91.5					0.0	19.7	132.9	111.3	0.0	0.0
83.00	Appertunance(s)	165.7	453.1	132.1	0.0	0.0	76.5	0.0	98.3	297.8	627.9	0.0	0.0
84.00		132.3	224.4					0.0	49.0	132.3	273.4	0.0	0.0
85.41	Top - Section 2	164.3	313.2					0.0	69.0	164.3	382.1	0.0	0.0
87.00		249.9	161.6					0.0	78.1	249.9	239.8	0.0	0.0
90.00		324.0	299.7					0.0	147.1	324.0	446.8	0.0	0.0
93.00		320.7	293.9					0.0	147.1	320.7	441.0	0.0	0.0
96.00		317.2	288.1					0.0	147.1	317.2	435.2	0.0	0.0
99.00		313.5	282.2					0.0	147.1	313.5	429.3	0.0	0.0
102.00		309.6	276.4					0.0	147.1	309.6	423.5	0.0	0.0
105.00	Appertunance(s)	255.3	270.5	5.4	0.0	0.0	8.9	0.0	147.1	260.7	426.6	0.0	0.0
107.00	Appertunance(s)	151.8	177.1	1,170.8	0.0	0.0	135.8	0.0	98.1	1,322.6	411.0	0.0	0.0
108.00		200.0	87.6					0.0	45.6	200.0	133.2	0.0	0.0
111.00		297.1	258.9					0.0	136.9	297.1	395.7	0.0	0.0
114.00		292.6	253.0					0.0	136.9	292.6	389.9	0.0	0.0
117.00		288.0	247.2					0.0	136.9	288.0	384.1	0.0	0.0

Site Number: 302495
 Site Name: Tolland CT, CT
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G
 Engineering Number: OAA705198_C3_01

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 6/29/2017 5:56:15 PM

Load Case: 0.9D + 1.6W 97 mph with No Ice (Reduced DL) 28 Iterations

Gust Response Factor :1.10 Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

120.00		262.3	241.3					0.0	136.9	262.3	378.2	0.0	0.0
122.12	Bot - Section 4	169.2	167.2					61.2	110.0	230.4	277.2	0.0	0.0
123.00	Appertunance(s)	211.3	110.1	2,830.1	0.0	0.0	1,908.0	25.4	45.5	3,066.8	2,063.6	0.0	0.0
125.89	Top - Section 3	168.0	356.2					83.9	129.9	251.9	486.2	0.0	0.0
126.00		171.3	5.3					3.3	5.2	174.6	10.5	0.0	0.0
129.00		326.8	137.1					87.8	135.1	414.6	272.2	0.0	0.0
132.00		215.1	133.6					88.4	135.1	303.5	268.7	0.0	0.0
133.00	Appertunance(s)	158.6	43.7	2,572.8	0.0	0.0	1,868.8	29.6	45.0	2,761.0	1,957.6	0.0	0.0
135.00		260.8	86.3					59.4	76.8	320.2	163.1	0.0	0.0
138.00		307.4	126.5					89.6	115.2	397.0	241.7	0.0	0.0
141.00		251.5	123.0					90.1	115.2	341.7	238.2	0.0	0.0
143.00	Appertunance(s)	140.5	80.1	3,996.3	0.0	0.0	2,351.8	60.4	76.8	4,197.1	2,508.7	0.0	0.0
144.00		122.0	39.5					0.0	26.2	122.0	65.6	0.0	0.0
146.00	Top - Section 4	116.5	77.7					0.0	52.3	116.5	130.1	0.0	0.0
147.00		106.7	74.6					21.7	26.2	128.4	100.7	0.0	0.0
149.00	Appertunance(s)	89.1	149.1	3,990.9	0.0	282.6	2,649.7	43.5	52.3	4,123.4	2,851.1	0.0	0.0
150.00		71.6	74.6					0.0	4.4	71.6	79.0	0.0	0.0
153.00		89.8	223.7					0.0	13.3	89.8	237.0	0.0	0.0
155.00	Appertunance(s)	36.0	149.1	450.1	0.0	61.9	557.7	0.0	8.9	486.1	715.7	0.0	0.0
Totals:									33,045.3	37,874.7	0.00	0.00	

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

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	-37.83	-32.91	0.00	-3,530.40	0.00	3,530.40	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.758
3.00	-36.97	-32.64	0.00	-3,431.67	0.00	3,431.67	4,631.78	2,315.89	9,346.21	4,615.74	0.04	-0.14	0.752
6.00	-36.12	-32.36	0.00	-3,333.77	0.00	3,333.77	4,597.82	2,298.91	9,156.81	4,522.21	0.17	-0.27	0.745
9.00	-35.27	-32.09	0.00	-3,236.68	0.00	3,236.68	4,563.18	2,281.59	8,967.87	4,428.89	0.39	-0.41	0.739
12.00	-34.43	-31.83	0.00	-3,140.39	0.00	3,140.39	4,527.86	2,263.93	8,779.43	4,335.83	0.69	-0.55	0.732
15.00	-33.62	-31.60	0.00	-3,044.92	0.00	3,044.92	4,491.86	2,245.93	8,591.56	4,243.05	1.09	-0.69	0.725
17.00	-32.92	-30.88	0.00	-2,981.72	0.00	2,981.72	4,467.49	2,233.75	8,466.65	4,181.36	1.40	-0.79	0.721
18.00	-32.63	-30.70	0.00	-2,950.84	0.00	2,950.84	4,455.19	2,227.60	8,404.31	4,150.57	1.57	-0.84	0.718
21.00	-31.82	-30.44	0.00	-2,858.73	0.00	2,858.73	4,417.85	2,208.92	8,217.72	4,058.43	2.14	-0.98	0.712
24.00	-31.02	-30.18	0.00	-2,767.42	0.00	2,767.42	4,379.82	2,189.91	8,031.86	3,966.64	2.80	-1.12	0.705
27.00	-30.23	-29.92	0.00	-2,676.89	0.00	2,676.89	4,341.13	2,170.56	7,846.78	3,875.23	3.55	-1.27	0.698
30.00	-29.45	-29.66	0.00	-2,587.14	0.00	2,587.14	4,301.75	2,150.88	7,662.53	3,784.23	4.40	-1.42	0.691
33.00	-28.68	-29.39	0.00	-2,498.18	0.00	2,498.18	4,261.70	2,130.85	7,479.16	3,693.68	5.34	-1.57	0.683
36.00	-27.91	-29.12	0.00	-2,410.01	0.00	2,410.01	4,220.97	2,110.49	7,296.73	3,603.58	6.38	-1.72	0.676
39.00	-27.18	-28.92	0.00	-2,322.67	0.00	2,322.67	4,179.57	2,089.78	7,115.28	3,513.97	7.50	-1.87	0.668
40.10	-26.89	-28.78	0.00	-2,290.73	0.00	2,290.73	4,164.16	2,082.08	7,048.76	3,481.12	7.94	-1.93	0.665
42.00	-26.12	-28.54	0.00	-2,236.17	0.00	2,236.17	4,137.49	2,068.74	6,934.89	3,424.88	8.73	-2.03	0.659
45.00	-24.95	-28.32	0.00	-2,150.55	0.00	2,150.55	4,094.73	2,047.37	6,755.59	3,336.33	10.05	-2.18	0.651
45.90	-24.58	-28.17	0.00	-2,125.11	0.00	2,125.11	3,345.43	1,672.72	5,614.65	2,772.86	10.47	-2.23	0.774
48.00	-24.11	-27.93	0.00	-2,065.90	0.00	2,065.90	3,324.15	1,662.07	5,517.72	2,724.99	11.47	-2.34	0.766
51.00	-23.47	-27.72	0.00	-1,982.12	0.00	1,982.12	3,293.20	1,646.60	5,379.77	2,656.86	13.00	-2.51	0.753
52.00	-23.17	-27.49	0.00	-1,954.40	0.00	1,954.40	3,282.73	1,641.36	5,333.90	2,634.21	13.53	-2.57	0.749
54.00	-22.73	-27.25	0.00	-1,899.41	0.00	1,899.41	3,261.57	1,630.78	5,242.36	2,589.00	14.63	-2.68	0.741
57.00	-22.09	-26.95	0.00	-1,817.66	0.00	1,817.66	3,229.26	1,614.63	5,105.54	2,521.44	16.37	-2.86	0.728
60.00	-21.45	-26.65	0.00	-1,736.81	0.00	1,736.81	3,196.28	1,598.14	4,969.37	2,454.19	18.22	-3.03	0.715
63.00	-20.69	-26.12	0.00	-1,656.87	0.00	1,656.87	3,162.62	1,581.31	4,833.91	2,387.28	20.18	-3.21	0.701
66.00	-20.07	-25.82	0.00	-1,578.50	0.00	1,578.50	3,128.28	1,564.14	4,699.19	2,320.75	22.25	-3.38	0.687
69.00	-19.47	-25.51	0.00	-1,501.06	0.00	1,501.06	3,093.27	1,546.64	4,565.29	2,254.62	24.43	-3.56	0.672
72.00	-18.87	-25.20	0.00	-1,424.53	0.00	1,424.53	3,057.58	1,528.79	4,432.24	2,188.92	26.72	-3.73	0.657
75.00	-18.28	-24.89	0.00	-1,348.94	0.00	1,348.94	3,021.22	1,510.61	4,300.11	2,123.66	29.12	-3.91	0.642
78.00	-17.71	-24.60	0.00	-1,274.28	0.00	1,274.28	2,984.18	1,492.09	4,168.95	2,058.89	31.63	-4.08	0.625
80.60	-17.23	-24.43	0.00	-1,210.35	0.00	1,210.35	2,951.54	1,475.77	4,056.14	2,003.18	33.89	-4.24	0.610
81.00	-17.10	-24.31	0.00	-1,200.56	0.00	1,200.56	2,946.46	1,473.23	4,038.81	1,994.61	34.25	-4.26	0.608
83.00	-16.46	-23.99	0.00	-1,151.95	0.00	1,151.95	2,920.94	1,460.47	3,952.64	1,952.06	36.06	-4.38	0.596
84.00	-16.17	-23.85	0.00	-1,127.96	0.00	1,127.96	2,908.96	1,454.48	3,910.94	1,931.47	36.98	-4.44	0.590
85.41	-15.76	-23.68	0.00	-1,094.42	0.00	1,094.42	2,288.86	1,144.43	3,120.34	1,541.02	38.30	-4.52	0.718
87.00	-15.49	-23.46	0.00	-1,056.67	0.00	1,056.67	2,274.94	1,137.47	3,069.59	1,515.95	39.82	-4.61	0.704
90.00	-14.99	-23.15	0.00	-986.30	0.00	986.30	2,248.22	1,124.11	2,974.43	1,468.96	42.78	-4.81	0.679
93.00	-14.50	-22.84	0.00	-916.87	0.00	916.87	2,220.81	1,110.41	2,879.80	1,422.23	45.86	-5.00	0.652
96.00	-14.02	-22.53	0.00	-848.36	0.00	848.36	2,192.74	1,096.37	2,785.75	1,375.78	49.06	-5.19	0.623
99.00	-13.55	-22.22	0.00	-780.77	0.00	780.77	2,163.98	1,081.99	2,692.34	1,329.64	52.37	-5.37	0.594
102.00	-13.09	-21.91	0.00	-714.11	0.00	714.11	2,134.56	1,067.28	2,599.61	1,283.85	55.80	-5.55	0.563
105.00	-12.64	-21.64	0.00	-648.38	0.00	648.38	2,104.45	1,052.22	2,507.63	1,238.42	59.34	-5.72	0.530
107.00	-12.34	-20.30	0.00	-605.09	0.00	605.09	2,084.00	1,042.00	2,446.74	1,208.36	61.76	-5.84	0.507
108.00	-12.19	-20.11	0.00	-584.79	0.00	584.79	2,073.67	1,036.83	2,416.44	1,193.39	62.98	-5.90	0.496
111.00	-11.77	-19.81	0.00	-524.45	0.00	524.45	2,042.21	1,021.11	2,326.10	1,148.77	66.73	-6.06	0.463
114.00	-11.36	-19.51	0.00	-465.02	0.00	465.02	2,006.48	1,003.24	2,232.66	1,102.63	70.59	-6.21	0.428
117.00	-10.96	-19.21	0.00	-406.49	0.00	406.49	1,959.62	979.81	2,129.00	1,051.43	74.53	-6.36	0.393
120.00	-10.58	-18.92	0.00	-348.87	0.00	348.87	1,912.75	956.38	2,027.81	1,001.46	78.56	-6.50	0.354
122.12	-10.31	-18.68	0.00	-308.71	0.00	308.71	1,879.60	939.80	1,957.71	966.84	81.47	-6.59	0.325
123.00	-8.59	-15.40	0.00	-292.32	0.00	292.32	1,865.89	932.94	1,929.08	952.70	82.68	-6.62	0.312

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

6/29/2017 5:56:15 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor 1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

125.89	-8.12	-15.10	0.00	-247.88	0.00	247.88	929.68	464.84	961.73	474.96	86.70	-6.73	0.532
126.00	-8.11	-14.94	0.00	-246.15	0.00	246.15	929.29	464.65	960.40	474.31	86.87	-6.73	0.529
129.00	-7.85	-14.52	0.00	-201.32	0.00	201.32	918.88	459.44	925.49	457.06	91.14	-6.89	0.450
132.00	-7.60	-14.20	0.00	-157.77	0.00	157.77	907.79	453.90	890.46	439.76	95.51	-7.03	0.368
133.00	-5.99	-11.22	0.00	-143.58	0.00	143.58	903.95	451.97	878.77	433.99	96.98	-7.07	0.338
135.00	-5.85	-10.89	0.00	-121.14	0.00	121.14	896.03	448.02	855.37	422.43	99.95	-7.15	0.294
138.00	-5.64	-10.48	0.00	-88.46	0.00	88.46	883.59	441.80	820.26	405.10	104.46	-7.24	0.225
141.00	-5.44	-10.11	0.00	-57.03	0.00	57.03	870.48	435.24	785.20	387.78	109.03	-7.31	0.154
143.00	-3.49	-5.63	0.00	-36.81	0.00	36.81	861.36	430.68	761.88	376.27	112.09	-7.34	0.102
144.00	-3.44	-5.50	0.00	-31.18	0.00	31.18	856.69	428.34	750.24	370.52	113.62	-7.36	0.088
146.00	-3.32	-5.37	0.00	-20.18	0.00	20.18	847.12	423.56	727.02	359.05	116.70	-7.38	0.060
146.00	-3.32	-5.37	0.00	-20.18	0.00	20.18	920.33	460.16	575.46	378.52	116.70	-7.38	0.057
147.00	-3.24	-5.23	0.00	-14.81	0.00	14.81	920.33	460.16	575.46	378.52	118.24	-7.38	0.043
149.00	-0.94	-0.77	0.00	-4.07	0.00	4.07	920.33	460.16	575.46	378.52	121.33	-7.39	0.012
150.00	-0.87	-0.69	0.00	-3.29	0.00	3.29	920.33	460.16	575.46	378.52	122.87	-7.39	0.010
153.00	-0.65	-0.57	0.00	-1.21	0.00	1.21	920.33	460.16	575.46	378.52	127.51	-7.39	0.004
155.00	0.00	-0.49	0.00	-0.06	0.00	0.06	920.33	460.16	575.46	378.52	130.59	-7.40	0.000

Site Number: 302495

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

6/29/2017 5:56:16 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

28 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		38.2	0.0					0.0	0.0	38.2	0.0	0.0	0.0
3.00		76.1	1,139.9					0.0	355.9	76.1	1,495.7	0.0	0.0
6.00		75.6	1,159.6					0.0	381.2	75.6	1,540.9	0.0	0.0
9.00		74.9	1,161.9					0.0	394.6	74.9	1,556.5	0.0	0.0
12.00		74.1	1,158.4					0.0	404.1	74.1	1,562.5	0.0	0.0
15.00		61.2	1,152.0					0.0	411.5	61.2	1,563.5	0.0	0.0
17.00	Appertunance(s)	36.4	764.0	112.5	0.0	0.0	472.4	0.0	277.8	148.9	1,514.2	0.0	0.0
18.00		48.1	380.8					0.0	135.1	48.1	515.8	0.0	0.0
21.00		71.6	1,134.3					0.0	408.4	71.6	1,542.7	0.0	0.0
24.00		70.8	1,123.9					0.0	412.6	70.8	1,536.5	0.0	0.0
27.00		69.9	1,112.8					0.0	416.4	69.9	1,529.2	0.0	0.0
30.00		69.6	1,101.1					0.0	419.8	69.6	1,521.0	0.0	0.0
33.00		70.1	1,089.0					0.0	423.0	70.1	1,512.0	0.0	0.0
36.00		71.0	1,076.5					0.0	425.9	71.0	1,502.4	0.0	0.0
39.00		48.9	1,063.6					0.0	428.6	48.9	1,492.2	0.0	0.0
40.10	Bot - Section 2	36.4	388.8					0.0	158.4	36.4	547.2	0.0	0.0
42.00		60.0	1,056.7					0.0	272.7	60.0	1,329.4	0.0	0.0
45.00		47.9	1,652.7					0.0	433.5	47.9	2,086.2	0.0	0.0
45.90	Top - Section 1	37.1	491.0					0.0	130.3	37.1	621.3	0.0	0.0
48.00		63.2	660.2					0.0	305.5	63.2	965.7	0.0	0.0
51.00		49.7	931.3					0.0	437.8	49.7	1,369.1	0.0	0.0
52.00	Appertunance(s)	37.3	308.3	26.5	0.0	0.0	168.3	0.0	146.4	63.9	623.0	0.0	0.0
54.00		62.3	611.8					0.0	280.2	62.3	892.0	0.0	0.0
57.00		74.9	906.4					0.0	421.8	74.9	1,328.1	0.0	0.0
60.00		74.9	893.7					0.0	423.4	74.9	1,317.1	0.0	0.0
63.00	Appertunance(s)	74.8	880.8	55.6	0.0	0.0	433.0	0.0	425.0	130.4	1,738.8	0.0	0.0
66.00		74.7	867.9					0.0	402.2	74.7	1,270.1	0.0	0.0
69.00		74.5	854.8					0.0	403.5	74.5	1,258.3	0.0	0.0
72.00		74.3	841.6					0.0	404.7	74.3	1,246.3	0.0	0.0
75.00		74.0	828.3					0.0	405.9	74.0	1,234.2	0.0	0.0
78.00		68.8	815.0					0.0	407.0	68.8	1,222.0	0.0	0.0
80.60	Bot - Section 3	36.8	695.5					0.0	353.5	36.8	1,049.0	0.0	0.0
81.00		29.8	163.5					0.0	54.6	29.8	218.1	0.0	0.0
83.00	Appertunance(s)	37.1	808.7	36.1	0.0	0.0	220.5	0.0	272.7	73.2	1,301.8	0.0	0.0
84.00		29.7	401.1					0.0	129.4	29.7	530.4	0.0	0.0
85.41	Top - Section 2	36.9	559.8					0.0	182.1	36.9	741.9	0.0	0.0
87.00		56.3	375.5					0.0	206.6	56.3	582.1	0.0	0.0
90.00		73.1	696.3					0.0	389.5	73.1	1,085.8	0.0	0.0
93.00		72.5	684.1					0.0	390.4	72.5	1,074.5	0.0	0.0
96.00		71.9	671.9					0.0	391.2	71.9	1,063.1	0.0	0.0
99.00		71.3	659.6					0.0	392.0	71.3	1,051.6	0.0	0.0
102.00		70.6	647.2					0.0	392.8	70.6	1,040.0	0.0	0.0
105.00	Appertunance(s)	58.4	634.8	3.2	0.0	0.0	45.0	0.0	393.6	61.5	1,073.4	0.0	0.0
107.00	Appertunance(s)	34.8	416.9	230.9	0.0	0.0	1,253.6	0.0	262.8	265.7	1,933.2	0.0	0.0
108.00		46.0	206.7					0.0	103.3	46.0	310.0	0.0	0.0
111.00		68.4	609.8					0.0	310.3	68.4	920.1	0.0	0.0
114.00		67.6	597.2					0.0	310.8	67.6	908.0	0.0	0.0
117.00		66.8	584.6					0.0	311.2	66.8	895.8	0.0	0.0

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

6/29/2017 5:56:20 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

28 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

120.00		56.4	571.9					0.0	311.7	56.4	883.6	0.0	0.0
122.12	Bot - Section 4	32.9	397.5					34.9	260.0	67.8	657.5	0.0	0.0
123.00	Appertunance(s)	41.1	219.5	717.6	0.0	0.0	5,822.2	14.5	107.6	773.2	6,149.3	0.0	0.0
125.89	Top - Section 3	32.7	709.4					47.9	328.0	80.6	1,037.4	0.0	0.0
126.00		33.5	16.4					1.9	13.0	35.4	29.4	0.0	0.0
129.00		64.0	421.3					50.3	341.6	114.3	762.9	0.0	0.0
132.00		42.3	411.6					50.7	342.1	93.0	753.7	0.0	0.0
133.00	Appertunance(s)	31.3	135.7	671.3	0.0	0.0	5,108.9	17.0	114.1	719.6	5,358.7	0.0	0.0
135.00		51.6	267.4					34.1	210.8	85.7	478.2	0.0	0.0
138.00		61.1	392.1					51.5	316.6	112.6	708.6	0.0	0.0
141.00		50.2	382.2					51.9	317.1	102.1	699.3	0.0	0.0
143.00	Appertunance(s)	29.8	250.0	1,165.9	0.0	0.0	7,942.3	34.8	211.7	1,230.5	8,404.0	0.0	0.0
144.00		29.4	123.7					0.0	60.9	29.4	184.6	0.0	0.0
146.00	Top - Section 4	27.2	243.4					0.0	121.9	27.2	365.3	0.0	0.0
147.00		22.9	151.4					12.7	61.0	35.6	212.3	0.0	0.0
149.00	Appertunance(s)	22.9	302.8	991.1	0.0	94.9	8,752.1	25.5	122.0	1,039.6	9,177.0	0.0	0.0
150.00		30.7	151.5					0.0	5.9	30.7	157.4	0.0	0.0
153.00		38.5	454.7					0.0	17.7	38.5	472.4	0.0	0.0
155.00	Appertunance(s)	15.5	303.3	100.5	0.0	13.9	1,567.9	0.0	11.8	116.0	1,883.0	0.0	0.0
									Totals:	8,122.43	93,587.4	0.00	0.00

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

28 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 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	-93.58	-8.12	0.00	-995.61	0.00	995.61	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.231
3.00	-92.08	-8.10	0.00	-971.27	0.00	971.27	4,631.78	2,315.89	9,346.21	4,615.74	0.01	-0.04	0.230
6.00	-90.54	-8.09	0.00	-946.97	0.00	946.97	4,597.82	2,298.91	9,156.81	4,522.21	0.05	-0.08	0.229
9.00	-88.98	-8.07	0.00	-922.71	0.00	922.71	4,563.18	2,281.59	8,967.87	4,428.89	0.11	-0.12	0.228
12.00	-87.41	-8.05	0.00	-898.50	0.00	898.50	4,527.86	2,263.93	8,779.43	4,335.83	0.20	-0.16	0.227
15.00	-85.84	-8.04	0.00	-874.35	0.00	874.35	4,491.86	2,245.93	8,591.56	4,243.05	0.31	-0.20	0.225
17.00	-84.32	-7.91	0.00	-858.27	0.00	858.27	4,467.49	2,233.75	8,466.65	4,181.36	0.40	-0.22	0.224
18.00	-83.80	-7.90	0.00	-850.36	0.00	850.36	4,455.19	2,227.60	8,404.31	4,150.57	0.44	-0.24	0.224
21.00	-82.26	-7.89	0.00	-826.65	0.00	826.65	4,417.85	2,208.92	8,217.72	4,058.43	0.61	-0.28	0.222
24.00	-80.71	-7.87	0.00	-802.99	0.00	802.99	4,379.82	2,189.91	8,031.86	3,966.64	0.80	-0.32	0.221
27.00	-79.18	-7.85	0.00	-779.39	0.00	779.39	4,341.13	2,170.56	7,846.78	3,875.23	1.01	-0.36	0.219
30.00	-77.65	-7.83	0.00	-755.86	0.00	755.86	4,301.75	2,150.88	7,662.53	3,784.23	1.26	-0.41	0.218
33.00	-76.13	-7.80	0.00	-732.38	0.00	732.38	4,261.70	2,130.85	7,479.16	3,693.68	1.53	-0.45	0.216
36.00	-74.63	-7.78	0.00	-708.97	0.00	708.97	4,220.97	2,110.49	7,296.73	3,603.58	1.82	-0.50	0.214
39.00	-73.13	-7.75	0.00	-685.64	0.00	685.64	4,179.57	2,089.78	7,115.28	3,513.97	2.15	-0.54	0.213
40.10	-72.58	-7.74	0.00	-677.08	0.00	677.08	4,164.16	2,082.08	7,048.76	3,481.12	2.28	-0.56	0.212
42.00	-71.25	-7.71	0.00	-662.41	0.00	662.41	4,137.49	2,068.74	6,934.89	3,424.88	2.50	-0.59	0.211
45.00	-69.16	-7.68	0.00	-639.27	0.00	639.27	4,094.73	2,047.37	6,755.59	3,336.33	2.89	-0.63	0.209
45.90	-68.53	-7.66	0.00	-632.37	0.00	632.37	3,345.43	1,672.72	5,614.65	2,772.86	3.01	-0.65	0.249
48.00	-67.56	-7.64	0.00	-616.26	0.00	616.26	3,324.15	1,662.07	5,517.72	2,724.99	3.30	-0.68	0.246
51.00	-66.19	-7.61	0.00	-593.34	0.00	593.34	3,293.20	1,646.60	5,379.77	2,656.86	3.74	-0.73	0.243
52.00	-65.57	-7.57	0.00	-585.73	0.00	585.73	3,282.73	1,641.36	5,333.90	2,634.21	3.90	-0.75	0.242
54.00	-64.67	-7.55	0.00	-570.59	0.00	570.59	3,261.57	1,630.78	5,242.36	2,589.00	4.22	-0.78	0.240
57.00	-63.33	-7.51	0.00	-547.95	0.00	547.95	3,229.26	1,614.63	5,105.54	2,521.44	4.73	-0.83	0.237
60.00	-62.01	-7.47	0.00	-525.43	0.00	525.43	3,196.28	1,598.14	4,969.37	2,454.19	5.27	-0.89	0.234
63.00	-60.27	-7.37	0.00	-503.01	0.00	503.01	3,162.62	1,581.31	4,833.91	2,387.28	5.84	-0.94	0.230
66.00	-58.99	-7.33	0.00	-480.90	0.00	480.90	3,128.28	1,564.14	4,699.19	2,320.75	6.45	-0.99	0.226
69.00	-57.73	-7.29	0.00	-458.91	0.00	458.91	3,093.27	1,546.64	4,565.29	2,254.62	7.09	-1.05	0.222
72.00	-56.48	-7.24	0.00	-437.05	0.00	437.05	3,057.58	1,528.79	4,432.24	2,188.92	7.76	-1.10	0.218
75.00	-55.24	-7.20	0.00	-415.33	0.00	415.33	3,021.22	1,510.61	4,300.11	2,123.66	8.47	-1.15	0.214
78.00	-54.01	-7.15	0.00	-393.74	0.00	393.74	2,984.18	1,492.09	4,168.95	2,058.89	9.22	-1.21	0.209
80.60	-52.96	-7.12	0.00	-375.16	0.00	375.16	2,951.54	1,475.77	4,056.14	2,003.18	9.89	-1.26	0.205
81.00	-52.74	-7.10	0.00	-372.31	0.00	372.31	2,946.46	1,473.23	4,038.81	1,994.61	9.99	-1.26	0.205
83.00	-51.44	-7.02	0.00	-358.10	0.00	358.10	2,920.94	1,460.47	3,952.64	1,952.06	10.53	-1.30	0.201
84.00	-50.91	-7.00	0.00	-351.08	0.00	351.08	2,908.96	1,454.48	3,910.94	1,931.47	10.81	-1.32	0.199
85.41	-50.16	-6.97	0.00	-341.24	0.00	341.24	2,288.86	1,144.43	3,120.34	1,541.02	11.20	-1.34	0.243
87.00	-49.57	-6.94	0.00	-330.13	0.00	330.13	2,274.94	1,137.47	3,069.59	1,515.95	11.65	-1.37	0.240
90.00	-48.48	-6.89	0.00	-309.31	0.00	309.31	2,248.22	1,124.11	2,974.43	1,468.96	12.53	-1.43	0.232
93.00	-47.40	-6.84	0.00	-288.63	0.00	288.63	2,220.81	1,110.41	2,879.80	1,422.23	13.45	-1.49	0.224
96.00	-46.34	-6.79	0.00	-268.11	0.00	268.11	2,192.74	1,096.37	2,785.75	1,375.78	14.41	-1.55	0.216
99.00	-45.28	-6.73	0.00	-247.75	0.00	247.75	2,163.98	1,081.99	2,692.34	1,329.64	15.41	-1.61	0.207
102.00	-44.24	-6.68	0.00	-227.55	0.00	227.55	2,134.56	1,067.28	2,599.61	1,283.85	16.44	-1.67	0.198
105.00	-43.16	-6.62	0.00	-207.52	0.00	207.52	2,104.45	1,052.22	2,507.63	1,238.42	17.50	-1.72	0.188
107.00	-41.23	-6.31	0.00	-194.28	0.00	194.28	2,084.00	1,042.00	2,446.74	1,208.36	18.24	-1.76	0.181
108.00	-40.92	-6.28	0.00	-187.97	0.00	187.97	2,073.67	1,036.83	2,416.44	1,193.39	18.61	-1.78	0.177
111.00	-40.00	-6.22	0.00	-169.12	0.00	169.12	2,042.21	1,021.11	2,326.10	1,148.77	19.74	-1.83	0.167
114.00	-39.09	-6.16	0.00	-150.45	0.00	150.45	2,006.48	1,003.24	2,232.66	1,102.63	20.91	-1.88	0.156
117.00	-38.19	-6.09	0.00	-131.98	0.00	131.98	1,959.62	979.81	2,129.00	1,051.43	22.11	-1.93	0.145
120.00	-37.30	-6.03	0.00	-113.70	0.00	113.70	1,912.75	956.38	2,027.81	1,001.46	23.33	-1.97	0.133
122.12	-36.65	-5.95	0.00	-100.90	0.00	100.90	1,879.60	939.80	1,957.71	966.84	24.22	-2.00	0.124
123.00	-30.53	-4.98	0.00	-95.68	0.00	95.68	1,865.89	932.94	1,929.08	952.70	24.59	-2.01	0.117

Site Number: 302495
 Site Name: Tolland CT, CT
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G
 Engineering Number: OAA705198_C3_01

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 6/29/2017 5:56:21 PM

Load Case: 1.2D + 1.0Di + 1.0Wi				50 mph with 1.00 in Radial Ice				28 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													
125.89	-29.49	-4.87	0.00	-81.32	0.00	81.32	929.68	464.84	961.73	474.96	25.81	-2.05	0.203
126.00	-29.46	-4.85	0.00	-80.76	0.00	80.76	929.29	464.65	960.40	474.31	25.86	-2.05	0.202
129.00	-28.70	-4.73	0.00	-66.22	0.00	66.22	918.88	459.44	925.49	457.06	27.17	-2.10	0.176
132.00	-27.95	-4.62	0.00	-52.04	0.00	52.04	907.79	453.90	890.46	439.76	28.51	-2.15	0.149
133.00	-22.62	-3.71	0.00	-47.41	0.00	47.41	903.95	451.97	878.77	433.99	28.96	-2.16	0.134
135.00	-22.14	-3.62	0.00	-40.00	0.00	40.00	896.03	448.02	855.37	422.43	29.87	-2.19	0.119
138.00	-21.44	-3.49	0.00	-29.15	0.00	29.15	883.59	441.80	820.26	405.10	31.25	-2.22	0.096
141.00	-20.74	-3.36	0.00	-18.69	0.00	18.69	870.48	435.24	785.20	387.78	32.66	-2.24	0.072
143.00	-12.39	-1.81	0.00	-11.96	0.00	11.96	861.36	430.68	761.88	376.27	33.60	-2.25	0.046
144.00	-12.21	-1.77	0.00	-10.16	0.00	10.16	856.69	428.34	750.24	370.52	34.07	-2.26	0.042
146.00	-11.84	-1.73	0.00	-6.62	0.00	6.62	847.12	423.56	727.02	359.05	35.02	-2.26	0.032
146.00	-11.84	-1.73	0.00	-6.62	0.00	6.62	920.33	460.16	575.46	378.52	35.02	-2.26	0.030
147.00	-11.63	-1.69	0.00	-4.89	0.00	4.89	920.33	460.16	575.46	378.52	35.49	-2.27	0.026
149.00	-2.50	-0.28	0.00	-1.42	0.00	1.42	920.33	460.16	575.46	378.52	36.44	-2.27	0.006
150.00	-2.35	-0.25	0.00	-1.14	0.00	1.14	920.33	460.16	575.46	378.52	36.91	-2.27	0.006
153.00	-1.88	-0.19	0.00	-0.39	0.00	0.39	920.33	460.16	575.46	378.52	38.34	-2.27	0.003
155.00	0.00	-0.12	0.00	-0.01	0.00	0.01	920.33	460.16	575.46	378.52	39.29	-2.27	0.000

Site Number: 302495
 Site Name: Tolland CT, CT
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G
 Engineering Number: OAA705198_C3_01

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Load Case: 1.0D + 1.0W Serviceability 60 mph 27 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		43.3	0.0										
3.00		86.1	708.2					0.0	0.0	43.3	0.0	0.0	0.0
6.00		85.0	699.1					0.0	165.4	86.1	873.6	0.0	0.0
9.00		83.9	690.0					0.0	165.4	85.0	864.5	0.0	0.0
12.00		82.8	681.0					0.0	165.4	83.9	855.4	0.0	0.0
15.00		68.3	671.9					0.0	165.4	82.8	846.3	0.0	0.0
17.00	Appertunance(s)	40.6	442.9	141.0	0.0	0.0	188.0	0.0	165.4	68.3	837.2	0.0	0.0
18.00		53.5	219.9					0.0	110.2	181.6	741.1	0.0	0.0
21.00		79.5	653.7					0.0	55.1	53.5	275.0	0.0	0.0
24.00		78.4	644.6					0.0	165.2	79.5	818.9	0.0	0.0
27.00		77.3	635.5					0.0	165.2	78.4	809.8	0.0	0.0
30.00		76.8	626.4					0.0	165.2	77.3	800.8	0.0	0.0
33.00		77.2	617.3					0.0	165.2	76.8	791.7	0.0	0.0
36.00		78.0	608.3					0.0	165.2	77.2	782.6	0.0	0.0
39.00		53.7	599.2					0.0	165.2	78.0	773.5	0.0	0.0
40.10	Bot - Section 2	39.9	218.2					0.0	165.2	53.7	764.4	0.0	0.0
42.00		65.8	696.9					0.0	60.8	39.9	279.1	0.0	0.0
45.00		52.5	1,089.0					0.0	104.4	65.8	801.3	0.0	0.0
45.90	Top - Section 1	40.5	322.9					0.0	165.2	52.5	1,254.3	0.0	0.0
48.00		69.0	349.6					0.0	49.5	40.5	372.3	0.0	0.0
51.00		54.2	492.4					0.0	115.8	69.0	465.4	0.0	0.0
52.00	Appertunance(s)	40.7	162.4	20.1	0.0	0.0	80.0	0.0	165.2	54.2	657.7	0.0	0.0
54.00		67.8	322.2					0.0	55.1	60.7	297.5	0.0	0.0
57.00		81.3	476.9					0.0	109.9	67.8	432.1	0.0	0.0
60.00		81.1	469.1					0.0	164.8	81.3	641.7	0.0	0.0
63.00	Appertunance(s)	80.9	461.3	50.5	0.0	0.0	170.0	0.0	164.8	81.1	633.9	0.0	0.0
66.00		80.6	453.5					0.0	164.8	131.4	796.1	0.0	0.0
69.00		80.2	445.7					0.0	163.9	80.6	617.4	0.0	0.0
72.00		79.8	437.9					0.0	163.9	80.2	609.6	0.0	0.0
75.00		79.3	430.1					0.0	163.9	79.8	601.8	0.0	0.0
78.00		73.5	422.3					0.0	163.9	79.3	594.0	0.0	0.0
80.60	Bot - Section 3	39.3	359.6					0.0	163.9	73.5	586.2	0.0	0.0
81.00		31.8	101.7					0.0	142.0	39.3	501.6	0.0	0.0
83.00	Appertunance(s)	39.6	503.5	31.6	0.0	0.0	85.0	0.0	21.9	31.8	123.6	0.0	0.0
84.00		31.6	249.3					0.0	109.3	71.2	697.7	0.0	0.0
85.41	Top - Section 2	39.3	348.0					0.0	54.5	31.6	303.8	0.0	0.0
87.00		59.8	179.6					0.0	76.6	39.3	424.6	0.0	0.0
90.00		77.5	333.1					0.0	86.8	59.8	266.4	0.0	0.0
93.00		76.7	326.6					0.0	163.4	77.5	496.5	0.0	0.0
96.00		75.9	320.1					0.0	163.4	76.7	490.0	0.0	0.0
99.00		75.0	313.6					0.0	163.4	75.9	483.5	0.0	0.0
102.00		74.0	307.1					0.0	163.4	75.0	477.0	0.0	0.0
105.00	Appertunance(s)	61.0	300.6	1.3	0.0	0.0	9.9	0.0	163.4	74.0	470.5	0.0	0.0
107.00	Appertunance(s)	36.3	196.8	280.0	0.0	0.0	150.9	0.0	163.4	62.3	474.0	0.0	0.0
108.00		47.8	97.3					0.0	109.0	316.3	456.7	0.0	0.0
111.00		71.0	287.6					0.0	50.7	47.8	148.0	0.0	0.0
114.00		70.0	281.1					0.0	152.1	71.0	439.7	0.0	0.0
117.00		68.9	274.6					0.0	152.1	70.0	433.2	0.0	0.0
								0.0	152.1	68.9	426.7	0.0	0.0

Site Number: 302495
 Site Name: Tolland CT, CT
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G
 Engineering Number: OAA705198_C3_01

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Load Case: 1.0D + 1.0W Serviceability 60 mph 27 Iterations
 Gust Response Factor :1.10 Wind Importance Factor :1.00
 Dead Load Factor :1.00
 Wind Load Factor :1.00

120.00		62.7	268.1					0.0	152.1	62.7	420.2	0.0	0.0
122.12	Bot - Section 4	40.5	185.8					14.6	122.2	55.1	308.0	0.0	0.0
123.00	Appertunance(s)	50.5	122.3	676.8	0.0	0.0	2,120.0	6.1	50.5	733.4	2,292.8	0.0	0.0
125.89	Top - Section 3	40.2	395.8					20.1	144.4	60.2	540.2	0.0	0.0
126.00		41.0	5.9					0.8	5.7	41.8	11.6	0.0	0.0
129.00		78.1	152.3					21.0	150.1	99.1	302.4	0.0	0.0
132.00		51.4	148.4					21.1	150.1	72.6	298.5	0.0	0.0
133.00	Appertunance(s)	37.9	48.6	615.2	0.0	0.0	2,076.5	7.1	50.0	660.3	2,175.1	0.0	0.0
135.00		62.4	95.9					14.2	85.3	76.6	181.2	0.0	0.0
138.00		73.5	140.6					21.4	128.0	94.9	268.6	0.0	0.0
141.00		60.1	136.7					21.6	128.0	81.7	264.7	0.0	0.0
143.00	Appertunance(s)	33.6	89.0	955.6	0.0	0.0	2,613.1	14.4	85.3	1,003.7	2,787.4	0.0	0.0
144.00		29.2	43.8					0.0	29.1	29.2	72.9	0.0	0.0
146.00	Top - Section 4	27.9	86.4					0.0	58.1	27.9	144.5	0.0	0.0
147.00		25.5	82.8					5.2	29.1	30.7	111.9	0.0	0.0
149.00	Appertunance(s)	21.3	165.7	954.3	0.0	67.6	2,944.1	10.4	58.1	986.0	3,167.9	0.0	0.0
150.00		17.1	82.8					0.0	4.9	17.1	87.8	0.0	0.0
153.00		21.5	248.5					0.0	14.8	21.5	263.3	0.0	0.0
155.00	Appertunance(s)	8.6	165.7	107.6	0.0	14.8	619.7	0.0	9.8	116.2	795.2	0.0	0.0
									Totals:	7,902.23	42,083.0	0.00	0.00

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

27 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

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	-42.08	-7.87	0.00	-850.51	0.00	850.51	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.190
3.00	-41.20	-7.81	0.00	-826.90	0.00	826.90	4,631.78	2,315.89	9,346.21	4,615.74	0.01	-0.03	0.188
6.00	-40.33	-7.74	0.00	-803.48	0.00	803.48	4,597.82	2,298.91	9,156.81	4,522.21	0.04	-0.07	0.186
9.00	-39.47	-7.68	0.00	-780.24	0.00	780.24	4,563.18	2,281.59	8,967.87	4,428.89	0.09	-0.10	0.185
12.00	-38.62	-7.62	0.00	-757.19	0.00	757.19	4,527.86	2,263.93	8,779.43	4,335.83	0.17	-0.13	0.183
15.00	-37.78	-7.57	0.00	-734.33	0.00	734.33	4,491.86	2,245.93	8,591.56	4,243.05	0.26	-0.17	0.181
17.00	-37.04	-7.40	0.00	-719.19	0.00	719.19	4,467.49	2,233.75	8,466.65	4,181.36	0.34	-0.19	0.180
18.00	-36.76	-7.36	0.00	-711.79	0.00	711.79	4,455.19	2,227.60	8,404.31	4,150.57	0.38	-0.20	0.180
21.00	-35.94	-7.30	0.00	-689.72	0.00	689.72	4,417.85	2,208.92	8,217.72	4,058.43	0.52	-0.24	0.178
24.00	-35.13	-7.24	0.00	-667.83	0.00	667.83	4,379.82	2,189.91	8,031.86	3,966.64	0.68	-0.27	0.176
27.00	-34.32	-7.18	0.00	-646.13	0.00	646.13	4,341.13	2,170.56	7,846.78	3,875.23	0.86	-0.31	0.175
30.00	-33.52	-7.12	0.00	-624.60	0.00	624.60	4,301.75	2,150.88	7,662.53	3,784.23	1.06	-0.34	0.173
33.00	-32.74	-7.05	0.00	-603.25	0.00	603.25	4,261.70	2,130.85	7,479.16	3,693.68	1.29	-0.38	0.171
36.00	-31.96	-6.99	0.00	-582.09	0.00	582.09	4,220.97	2,110.49	7,296.73	3,603.58	1.54	-0.41	0.169
39.00	-31.19	-6.95	0.00	-561.12	0.00	561.12	4,179.57	2,089.78	7,115.28	3,513.97	1.81	-0.45	0.167
40.10	-30.91	-6.91	0.00	-553.45	0.00	553.45	4,164.16	2,082.08	7,048.76	3,481.12	1.92	-0.47	0.166
42.00	-30.11	-6.86	0.00	-540.34	0.00	540.34	4,137.49	2,068.74	6,934.89	3,424.88	2.11	-0.49	0.165
45.00	-28.85	-6.81	0.00	-519.77	0.00	519.77	4,094.73	2,047.37	6,755.59	3,336.33	2.42	-0.53	0.163
45.90	-28.48	-6.77	0.00	-513.66	0.00	513.66	3,345.43	1,672.72	5,614.65	2,772.86	2.52	-0.54	0.194
48.00	-28.01	-6.71	0.00	-499.43	0.00	499.43	3,324.15	1,662.07	5,517.72	2,724.99	2.77	-0.56	0.192
51.00	-27.35	-6.67	0.00	-479.28	0.00	479.28	3,293.20	1,646.60	5,379.77	2,656.86	3.13	-0.61	0.189
52.00	-27.05	-6.61	0.00	-472.62	0.00	472.62	3,282.73	1,641.36	5,333.90	2,634.21	3.26	-0.62	0.188
54.00	-26.61	-6.56	0.00	-459.39	0.00	459.39	3,261.57	1,630.78	5,242.36	2,589.00	3.53	-0.65	0.186
57.00	-25.97	-6.49	0.00	-439.72	0.00	439.72	3,229.26	1,614.63	5,105.54	2,521.44	3.95	-0.69	0.182
60.00	-25.33	-6.42	0.00	-420.26	0.00	420.26	3,196.28	1,598.14	4,969.37	2,454.19	4.40	-0.73	0.179
63.00	-24.53	-6.29	0.00	-401.01	0.00	401.01	3,162.62	1,581.31	4,833.91	2,387.28	4.87	-0.77	0.176
66.00	-23.91	-6.22	0.00	-382.14	0.00	382.14	3,128.28	1,564.14	4,699.19	2,320.75	5.37	-0.82	0.172
69.00	-23.30	-6.15	0.00	-363.47	0.00	363.47	3,093.27	1,546.64	4,565.29	2,254.62	5.90	-0.86	0.169
72.00	-22.69	-6.08	0.00	-345.02	0.00	345.02	3,057.58	1,528.79	4,432.24	2,188.92	6.45	-0.90	0.165
75.00	-22.10	-6.01	0.00	-326.79	0.00	326.79	3,021.22	1,510.61	4,300.11	2,123.66	7.03	-0.94	0.161
78.00	-21.51	-5.94	0.00	-308.78	0.00	308.78	2,984.18	1,492.09	4,168.95	2,058.89	7.64	-0.99	0.157
80.60	-21.00	-5.90	0.00	-293.35	0.00	293.35	2,951.54	1,475.77	4,056.14	2,003.18	8.19	-1.02	0.154
81.00	-20.88	-5.87	0.00	-290.98	0.00	290.98	2,946.46	1,473.23	4,038.81	1,994.61	8.27	-1.03	0.153
83.00	-20.18	-5.79	0.00	-279.25	0.00	279.25	2,920.94	1,460.47	3,952.64	1,952.06	8.71	-1.06	0.150
84.00	-19.88	-5.76	0.00	-273.46	0.00	273.46	2,908.96	1,454.48	3,910.94	1,931.47	8.93	-1.07	0.148
85.41	-19.45	-5.72	0.00	-265.35	0.00	265.35	2,288.86	1,144.43	3,120.34	1,541.02	9.25	-1.09	0.181
87.00	-19.18	-5.67	0.00	-256.24	0.00	256.24	2,274.94	1,137.47	3,069.59	1,515.95	9.62	-1.11	0.177
90.00	-18.68	-5.60	0.00	-239.23	0.00	239.23	2,248.22	1,124.11	2,974.43	1,468.96	10.34	-1.16	0.171
93.00	-18.19	-5.52	0.00	-222.45	0.00	222.45	2,220.81	1,110.41	2,879.80	1,422.23	11.08	-1.21	0.165
96.00	-17.70	-5.45	0.00	-205.88	0.00	205.88	2,192.74	1,096.37	2,785.75	1,375.78	11.85	-1.25	0.158
99.00	-17.22	-5.38	0.00	-189.53	0.00	189.53	2,163.98	1,081.99	2,692.34	1,329.64	12.66	-1.30	0.151
102.00	-16.75	-5.31	0.00	-173.39	0.00	173.39	2,134.56	1,067.28	2,599.61	1,283.85	13.49	-1.34	0.143
105.00	-16.28	-5.24	0.00	-157.47	0.00	157.47	2,104.45	1,052.22	2,507.63	1,238.42	14.34	-1.38	0.135
107.00	-15.83	-4.92	0.00	-146.98	0.00	146.98	2,084.00	1,042.00	2,446.74	1,208.36	14.93	-1.41	0.129
108.00	-15.68	-4.88	0.00	-142.06	0.00	142.06	2,073.67	1,036.83	2,416.44	1,193.39	15.23	-1.43	0.127
111.00	-15.23	-4.81	0.00	-127.43	0.00	127.43	2,042.21	1,021.11	2,326.10	1,148.77	16.14	-1.47	0.118
114.00	-14.80	-4.73	0.00	-113.02	0.00	113.02	2,006.48	1,003.24	2,232.66	1,102.63	17.07	-1.50	0.110
117.00	-14.37	-4.66	0.00	-98.82	0.00	98.82	1,959.62	979.81	2,129.00	1,051.43	18.03	-1.54	0.101
120.00	-13.95	-4.59	0.00	-84.83	0.00	84.83	1,912.75	956.38	2,027.81	1,001.46	19.01	-1.57	0.092
122.12	-13.64	-4.53	0.00	-75.08	0.00	75.08	1,879.60	939.80	1,957.71	966.84	19.71	-1.59	0.085
123.00	-11.37	-3.74	0.00	-71.10	0.00	71.10	1,865.89	932.94	1,929.08	952.70	20.00	-1.60	0.081

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number:OAA705198_C3_01

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Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

27 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

125.89	-10.83	-3.67	0.00	-60.30	0.00	60.30	929.68	464.84	961.73	474.96	20.98	-1.63	0.139
126.00	-10.82	-3.63	0.00	-59.88	0.00	59.88	929.29	464.65	960.40	474.31	21.02	-1.63	0.138
129.00	-10.52	-3.53	0.00	-48.99	0.00	48.99	918.88	459.44	925.49	457.06	22.06	-1.67	0.119
132.00	-10.22	-3.45	0.00	-38.41	0.00	38.41	907.79	453.90	890.46	439.76	23.12	-1.70	0.099
133.00	-8.07	-2.73	0.00	-34.96	0.00	34.96	903.95	451.97	878.77	433.99	23.47	-1.71	0.090
135.00	-7.89	-2.65	0.00	-29.50	0.00	29.50	896.03	448.02	855.37	422.43	24.20	-1.73	0.079
138.00	-7.62	-2.55	0.00	-21.55	0.00	21.55	883.59	441.80	820.26	405.10	25.29	-1.75	0.062
141.00	-7.36	-2.46	0.00	-13.90	0.00	13.90	870.48	435.24	785.20	387.78	26.40	-1.77	0.044
143.00	-4.60	-1.37	0.00	-8.98	0.00	8.98	861.36	430.68	761.88	376.27	27.14	-1.78	0.029
144.00	-4.53	-1.34	0.00	-7.61	0.00	7.61	856.69	428.34	750.24	370.52	27.51	-1.78	0.026
146.00	-4.39	-1.31	0.00	-4.93	0.00	4.93	847.12	423.56	727.02	359.05	28.26	-1.79	0.019
146.00	-4.39	-1.31	0.00	-4.93	0.00	4.93	920.33	460.16	575.46	378.52	28.26	-1.79	0.018
147.00	-4.28	-1.27	0.00	-3.62	0.00	3.62	920.33	460.16	575.46	378.52	28.64	-1.79	0.014
149.00	-1.14	-0.19	0.00	-1.00	0.00	1.00	920.33	460.16	575.46	378.52	29.39	-1.79	0.004
150.00	-1.05	-0.17	0.00	-0.81	0.00	0.81	920.33	460.16	575.46	378.52	29.76	-1.79	0.003
153.00	-0.79	-0.14	0.00	-0.30	0.00	0.30	920.33	460.16	575.46	378.52	30.89	-1.79	0.002
155.00	0.00	-0.12	0.00	-0.01	0.00	0.01	920.33	460.16	575.46	378.52	31.64	-1.79	0.000

Site Number: 302495
 Site Name: Tolland CT, CT
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G
 Engineering Number: OAA705198_C3_01

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Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_g):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_1):	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}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.79
Redundancy Factor (ρ):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	42.08 k
Seismic Base Shear (E):	1.64 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)
66	154.00	176	4,163	0.011	18	217
65	151.50	263	6,043	0.016	26	326
64	149.50	88	1,962	0.005	8	109
63	148.00	224	4,902	0.013	21	277
62	146.50	112	2,402	0.006	10	138
61	145.00	145	3,038	0.008	13	179
60	143.50	73	1,501	0.004	6	90
59	142.00	174	3,515	0.009	15	216
58	139.50	265	5,151	0.014	22	328
57	136.50	269	5,004	0.013	22	332
56	134.00	181	3,254	0.009	14	224
55	132.50	99	1,732	0.005	7	122
54	130.50	299	5,084	0.013	22	369
53	127.50	302	4,916	0.013	21	374
52	125.94	12	184	0.000	1	14
51	124.44	540	8,366	0.022	36	668
50	122.56	173	2,596	0.007	11	214
49	121.06	308	4,515	0.012	20	381
48	118.50	420	5,901	0.016	26	520
47	115.50	427	5,693	0.015	25	528
46	112.50	433	5,483	0.014	24	536
45	109.50	440	5,272	0.014	23	544
44	107.50	148	1,711	0.005	7	183

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43	106.00	306	3,435	0.009	15	378
42	103.50	464	4,971	0.013	21	574
41	100.50	471	4,752	0.013	21	582
40	97.50	477	4,535	0.012	20	590
39	94.50	484	4,318	0.011	19	598
38	91.50	490	4,102	0.011	18	606
37	88.50	496	3,889	0.010	17	614
36	86.20	266	1,980	0.005	9	330
35	84.70	425	3,046	0.008	13	525
34	83.50	304	2,118	0.006	9	376
33	82.00	613	4,120	0.011	18	758
32	80.80	124	807	0.002	3	153
31	79.30	502	3,154	0.008	14	621
30	76.50	586	3,431	0.009	15	725
29	73.50	594	3,209	0.008	14	735
28	70.50	602	2,991	0.008	13	745
27	67.50	610	2,777	0.007	12	754
26	64.50	617	2,568	0.007	11	764
25	61.50	626	2,368	0.006	10	775
24	58.50	634	2,169	0.006	9	784
23	55.50	642	1,976	0.005	9	794
22	53.00	432	1,214	0.003	5	535
21	51.50	217	577	0.002	2	269
20	49.50	658	1,611	0.004	7	814
19	46.95	465	1,026	0.003	4	576
18	45.45	372	769	0.002	3	461
17	43.50	1,254	2,373	0.006	10	1,552
16	41.05	801	1,350	0.004	6	992
15	39.55	279	437	0.001	2	345
14	37.50	764	1,075	0.003	5	946
13	34.50	774	921	0.002	4	957
12	31.50	783	777	0.002	3	968
11	28.50	792	643	0.002	3	980
10	25.50	801	521	0.001	2	991
9	22.50	810	410	0.001	2	1,002
8	19.50	819	311	0.001	1	1,013
7	17.50	275	84	0.000	0	340
6	16.00	553	142	0.000	1	684
5	13.50	837	153	0.000	1	1,036
4	10.50	846	93	0.000	0	1,047
3	7.50	855	48	0.000	0	1,058
2	4.50	864	18	0.000	0	1,070
1	1.50	874	2	0.000	0	1,081
Ericsson KRY 112 71/	155.00	79	1,903	0.005	8	98
EMS RR90-17-02DP	155.00	41	973	0.003	4	50
Canister	155.00	500	12,013	0.032	52	619
Andrew ABT-D MDF-ADBH	149.00	1	24	0.000	0	1
Powerwave Allgon 702	149.00	7	147	0.000	1	8
Kathrein Scala 782-1	149.00	38	853	0.002	4	48
CCI DTMAPB7819VG12A	149.00	115	2,558	0.007	11	143
Raycap DC6-48-60-18-	149.00	32	706	0.002	3	39
7' Omni	149.00	25	555	0.001	2	31
Ericsson RRUS 11 (Ba	149.00	150	3,330	0.009	14	186
Ericsson RRUS-12 800	149.00	180	3,996	0.011	17	223
Powerwave Allgon 777	149.00	105	2,331	0.006	10	130
KMW AM-X-CD-16-65-00	149.00	291	6,460	0.017	28	360
Flat Platform w/ Han	149.00	2,000	44,402	0.117	192	2,475
Alcatel-Lucent RRH2X	143.00	132	2,699	0.007	12	163
Swedcom ALP 9212-N	143.00	160	3,276	0.009	14	198
RFS DB-T1-6Z-8AB-0Z	143.00	44	900	0.002	4	54
Andrew HBXX-6516DS-A	143.00	184	3,754	0.010	16	227
Andrew LNX-6513DS-A1	143.00	93	1,908	0.005	8	115
Flat Platform w/ Han	143.00	2,000	40,898	0.108	177	2,475
Decibel 980H65T2E-M	133.00	43	752	0.002	3	53

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Decibel DB980H90A-KL	133.00	34	601	0.002	3	42
Flat Platform w/ Han	133.00	2,000	35,378	0.093	153	2,475
Decibel DB844H90E-A	123.00	120	1,815	0.005	8	148
Flat Platform w/ Han	123.00	2,000	30,258	0.080	131	2,475
Commscope LNX-6515DS	107.00	151	1,728	0.005	7	187
Kathrein Smart Bias	105.00	10	109	0.000	0	12
GPS	83.00	10	69	0.000	0	12
Stand-Off	83.00	75	517	0.001	2	93
GPS	63.00	20	79	0.000	0	25
Stand-Off	63.00	150	595	0.002	3	186
2" x 4" GPS	52.00	5	14	0.000	0	6
Stand-Off	52.00	75	203	0.001	1	93
4' Std. Dish	17.00	188	54	0.000	0	233
		42,083	379,518	1.000	1,641	52,071

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)
66	154.00	176	4,163	0.011	18	151
65	151.50	263	6,043	0.016	26	227
64	149.50	88	1,962	0.005	8	76
63	148.00	224	4,902	0.013	21	193
62	146.50	112	2,402	0.006	10	97
61	145.00	145	3,038	0.008	13	125
60	143.50	73	1,501	0.004	6	63
59	142.00	174	3,515	0.009	15	150
58	139.50	265	5,151	0.014	22	228
57	136.50	269	5,004	0.013	22	232
56	134.00	181	3,254	0.009	14	156
55	132.50	99	1,732	0.005	7	85
54	130.50	299	5,084	0.013	22	258
53	127.50	302	4,916	0.013	21	261
52	125.94	12	184	0.000	1	10
51	124.44	540	8,366	0.022	36	466
50	122.56	173	2,596	0.007	11	149
49	121.06	308	4,515	0.012	20	266
48	118.50	420	5,901	0.016	26	363
47	115.50	427	5,693	0.015	25	368
46	112.50	433	5,483	0.014	24	374
45	109.50	440	5,272	0.014	23	379
44	107.50	148	1,711	0.005	7	128
43	106.00	306	3,435	0.009	15	264
42	103.50	464	4,971	0.013	21	400
41	100.50	471	4,752	0.013	21	406
40	97.50	477	4,535	0.012	20	412
39	94.50	484	4,318	0.011	19	417
38	91.50	490	4,102	0.011	18	423
37	88.50	496	3,889	0.010	17	428
36	86.20	266	1,980	0.005	9	230
35	84.70	425	3,046	0.008	13	366
34	83.50	304	2,118	0.006	9	262
33	82.00	613	4,120	0.011	18	529
32	80.80	124	807	0.002	3	107
31	79.30	502	3,154	0.008	14	433
30	76.50	586	3,431	0.009	15	506
29	73.50	594	3,209	0.008	14	512
28	70.50	602	2,991	0.008	13	519
27	67.50	610	2,777	0.007	12	526
26	64.50	617	2,568	0.007	11	533

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25	61.50	626	2,368	0.006	10	540
24	58.50	634	2,169	0.006	9	547
23	55.50	642	1,976	0.005	9	554
22	53.00	432	1,214	0.003	5	373
21	51.50	217	577	0.002	2	188
20	49.50	658	1,611	0.004	7	567
19	46.95	465	1,026	0.003	4	401
18	45.45	372	769	0.002	3	321
17	43.50	1,254	2,373	0.006	10	1,082
16	41.05	801	1,350	0.004	6	691
15	39.55	279	437	0.001	2	241
14	37.50	764	1,075	0.003	5	659
13	34.50	774	921	0.002	4	667
12	31.50	783	777	0.002	3	675
11	28.50	792	643	0.002	3	683
10	25.50	801	521	0.001	2	691
9	22.50	810	410	0.001	2	699
8	19.50	819	311	0.001	1	706
7	17.50	275	84	0.000	0	237
6	16.00	553	142	0.000	1	477
5	13.50	837	153	0.000	1	722
4	10.50	846	93	0.000	0	730
3	7.50	855	48	0.000	0	738
2	4.50	864	18	0.000	0	746
1	1.50	874	2	0.000	0	754
Ericsson KRY 112 71/	155.00	79	1,903	0.005	8	68
EMS RR90-17-02DP	155.00	41	973	0.003	4	35
Canister	155.00	500	12,013	0.032	52	431
Andrew ABT-DMDF-ADBH	149.00	1	24	0.000	0	1
Powerwave Allgon 702	149.00	7	147	0.000	1	6
Kathrein Scala 782-1	149.00	38	853	0.002	4	33
CCI DTMABP7819VG12A	149.00	115	2,558	0.007	11	99
Raycap DC6-48-60-18-	149.00	32	706	0.002	3	27
7' Omni	149.00	25	555	0.001	2	22
Ericsson RRUS 11 (Ba	149.00	150	3,330	0.009	14	129
Ericsson RRUS-12 800	149.00	180	3,996	0.011	17	155
Powerwave Allgon 777	149.00	105	2,331	0.006	10	91
KMW AM-X-CD-16-65-00	149.00	291	6,460	0.017	28	251
Flat Platform w/ Han	149.00	2,000	44,402	0.117	192	1,725
Alcatel-Lucent RRH2X	143.00	132	2,699	0.007	12	114
Swedcom ALP 9212-N	143.00	160	3,276	0.009	14	138
RFS DB-T1-6Z-8AB-0Z	143.00	44	900	0.002	4	38
Andrew HBXX-6516DS-A	143.00	184	3,754	0.010	16	158
Andrew LNX-6513DS-A1	143.00	93	1,908	0.005	8	80
Flat Platform w/ Han	143.00	2,000	40,898	0.108	177	1,725
Decibel 980H65T2E-M	133.00	43	752	0.002	3	37
Decibel DB980H90A-KL	133.00	34	601	0.002	3	29
Flat Platform w/ Han	133.00	2,000	35,378	0.093	153	1,725
Decibel DB844H90E-A	123.00	120	1,815	0.005	8	104
Flat Platform w/ Han	123.00	2,000	30,258	0.080	131	1,725
Commscope LNX-6515DS	107.00	151	1,728	0.005	7	130
Kathrein Smart Bias	105.00	10	109	0.000	0	9
GPS	83.00	10	69	0.000	0	9
Stand-Off	83.00	75	517	0.001	2	65
GPS	63.00	20	79	0.000	0	17
Stand-Off	63.00	150	595	0.002	3	129
2" x 4" GPS	52.00	5	14	0.000	0	4
Stand-Off	52.00	75	203	0.001	1	65
4' Std. Dish	17.00	188	54	0.000	0	162
		42,083	379,518	1.000	1,641	36,304

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Load Case (1.2 + 0.2Sds) * DL + E E LFM 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	-50.99	-1.64	0.00	-216.24	0.00	216.24	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.057
3.00	-49.92	-1.65	0.00	-211.31	0.00	211.31	4,631.78	2,315.89	9,346.21	4,615.74	0.00	-0.01	0.057
6.00	-48.86	-1.66	0.00	-206.36	0.00	206.36	4,597.82	2,298.91	9,156.81	4,522.21	0.01	-0.02	0.056
9.00	-47.81	-1.66	0.00	-201.39	0.00	201.39	4,563.18	2,281.59	8,967.87	4,428.89	0.02	-0.03	0.056
12.00	-46.78	-1.67	0.00	-196.40	0.00	196.40	4,527.86	2,263.93	8,779.43	4,335.83	0.04	-0.03	0.056
15.00	-46.09	-1.67	0.00	-191.39	0.00	191.39	4,491.86	2,245.93	8,591.56	4,243.05	0.07	-0.04	0.055
17.00	-45.52	-1.68	0.00	-188.05	0.00	188.05	4,467.49	2,233.75	8,466.65	4,181.36	0.09	-0.05	0.055
18.00	-44.51	-1.68	0.00	-186.37	0.00	186.37	4,455.19	2,227.60	8,404.31	4,150.57	0.10	-0.05	0.055
21.00	-43.50	-1.68	0.00	-181.33	0.00	181.33	4,417.85	2,208.92	8,217.72	4,058.43	0.13	-0.06	0.055
24.00	-42.51	-1.69	0.00	-176.28	0.00	176.28	4,379.82	2,189.91	8,031.86	3,966.64	0.17	-0.07	0.054
27.00	-41.53	-1.69	0.00	-171.22	0.00	171.22	4,341.13	2,170.56	7,846.78	3,875.23	0.22	-0.08	0.054
30.00	-40.56	-1.69	0.00	-166.15	0.00	166.15	4,301.75	2,150.88	7,662.53	3,784.23	0.27	-0.09	0.053
33.00	-39.61	-1.69	0.00	-161.08	0.00	161.08	4,261.70	2,130.85	7,479.16	3,693.68	0.33	-0.10	0.053
36.00	-38.66	-1.69	0.00	-156.00	0.00	156.00	4,220.97	2,110.49	7,296.73	3,603.58	0.40	-0.11	0.052
39.00	-38.32	-1.69	0.00	-150.92	0.00	150.92	4,179.57	2,089.78	7,115.28	3,513.97	0.47	-0.12	0.052
40.10	-37.32	-1.69	0.00	-149.05	0.00	149.05	4,164.16	2,082.08	7,048.76	3,481.12	0.50	-0.12	0.052
42.00	-35.77	-1.68	0.00	-145.85	0.00	145.85	4,137.49	2,068.74	6,934.89	3,424.88	0.55	-0.13	0.051
45.00	-35.31	-1.68	0.00	-140.80	0.00	140.80	4,094.73	2,047.37	6,755.59	3,336.33	0.63	-0.14	0.051
45.90	-34.74	-1.68	0.00	-139.29	0.00	139.29	3,345.43	1,672.72	5,614.65	2,772.86	0.66	-0.14	0.061
48.00	-33.92	-1.68	0.00	-135.76	0.00	135.76	3,324.15	1,662.07	5,517.72	2,724.99	0.72	-0.15	0.060
51.00	-33.65	-1.68	0.00	-130.74	0.00	130.74	3,293.20	1,646.60	5,379.77	2,656.86	0.82	-0.16	0.059
52.00	-33.02	-1.67	0.00	-129.06	0.00	129.06	3,282.73	1,641.36	5,333.90	2,634.21	0.85	-0.16	0.059
54.00	-32.22	-1.67	0.00	-125.72	0.00	125.72	3,261.57	1,630.78	5,242.36	2,589.00	0.92	-0.17	0.058
57.00	-31.44	-1.66	0.00	-120.72	0.00	120.72	3,229.26	1,614.63	5,105.54	2,521.44	1.03	-0.18	0.058
60.00	-30.66	-1.65	0.00	-115.74	0.00	115.74	3,196.28	1,598.14	4,969.37	2,454.19	1.15	-0.19	0.057
63.00	-29.69	-1.64	0.00	-110.77	0.00	110.77	3,162.62	1,581.31	4,833.91	2,387.28	1.28	-0.21	0.056
66.00	-28.94	-1.63	0.00	-105.85	0.00	105.85	3,128.28	1,564.14	4,699.19	2,320.75	1.41	-0.22	0.055
69.00	-28.19	-1.62	0.00	-100.94	0.00	100.94	3,093.27	1,546.64	4,565.29	2,254.62	1.55	-0.23	0.054
72.00	-27.45	-1.61	0.00	-96.07	0.00	96.07	3,057.58	1,528.79	4,432.24	2,188.92	1.70	-0.24	0.053
75.00	-26.73	-1.60	0.00	-91.23	0.00	91.23	3,021.22	1,510.61	4,300.11	2,123.66	1.86	-0.25	0.052
78.00	-26.11	-1.59	0.00	-86.43	0.00	86.43	2,984.18	1,492.09	4,168.95	2,058.89	2.02	-0.27	0.051
80.60	-25.96	-1.59	0.00	-82.30	0.00	82.30	2,951.54	1,475.77	4,056.14	2,003.18	2.17	-0.28	0.050
81.00	-25.20	-1.57	0.00	-81.67	0.00	81.67	2,946.46	1,473.23	4,038.81	1,994.61	2.19	-0.28	0.049
83.00	-24.72	-1.56	0.00	-78.53	0.00	78.53	2,920.94	1,460.47	3,952.64	1,952.06	2.31	-0.29	0.049
84.00	-24.19	-1.54	0.00	-76.97	0.00	76.97	2,908.96	1,454.48	3,910.94	1,931.47	2.37	-0.29	0.048
85.41	-23.86	-1.54	0.00	-74.80	0.00	74.80	2,288.86	1,144.43	3,120.34	1,541.02	2.46	-0.30	0.059
87.00	-23.25	-1.52	0.00	-72.36	0.00	72.36	2,274.94	1,137.47	3,069.59	1,515.95	2.56	-0.30	0.058
90.00	-22.64	-1.50	0.00	-67.80	0.00	67.80	2,248.22	1,124.11	2,974.43	1,468.96	2.75	-0.31	0.056
93.00	-22.04	-1.49	0.00	-63.29	0.00	63.29	2,220.81	1,110.41	2,879.80	1,422.23	2.95	-0.33	0.054
96.00	-21.45	-1.47	0.00	-58.83	0.00	58.83	2,192.74	1,096.37	2,785.75	1,375.78	3.16	-0.34	0.053
99.00	-20.87	-1.45	0.00	-54.42	0.00	54.42	2,163.98	1,081.99	2,692.34	1,329.64	3.38	-0.35	0.051
102.00	-20.29	-1.43	0.00	-50.07	0.00	50.07	2,134.56	1,067.28	2,599.61	1,283.85	3.61	-0.37	0.049
105.00	-19.90	-1.41	0.00	-45.79	0.00	45.79	2,104.45	1,052.22	2,507.63	1,238.42	3.84	-0.38	0.046
107.00	-19.53	-1.40	0.00	-42.96	0.00	42.96	2,084.00	1,042.00	2,446.74	1,208.36	4.00	-0.39	0.045
108.00	-18.99	-1.38	0.00	-41.56	0.00	41.56	2,073.67	1,036.83	2,416.44	1,193.39	4.08	-0.39	0.044
111.00	-18.45	-1.35	0.00	-37.44	0.00	37.44	2,042.21	1,021.11	2,326.10	1,148.77	4.33	-0.40	0.042
114.00	-17.93	-1.33	0.00	-33.38	0.00	33.38	2,006.48	1,003.24	2,232.66	1,102.63	4.59	-0.41	0.039
117.00	-17.41	-1.30	0.00	-29.41	0.00	29.41	1,959.62	979.81	2,129.00	1,051.43	4.85	-0.42	0.037
120.00	-17.02	-1.28	0.00	-25.50	0.00	25.50	1,912.75	956.38	2,027.81	1,001.46	5.12	-0.43	0.034
122.12	-16.81	-1.27	0.00	-22.79	0.00	22.79	1,879.60	939.80	1,957.71	966.84	5.32	-0.44	0.033
123.00	-13.52	-1.07	0.00	-21.67	0.00	21.67	1,865.89	932.94	1,929.08	952.70	5.40	-0.44	0.030
125.89	-13.51	-1.07	0.00	-18.59	0.00	18.59	929.68	464.84	961.73	474.96	5.67	-0.45	0.054
126.00	-13.13	-1.05	0.00	-18.46	0.00	18.46	929.29	464.65	960.40	474.31	5.68	-0.45	0.053
129.00	-12.76	-1.03	0.00	-15.32	0.00	15.32	918.88	459.44	925.49	457.06	5.97	-0.46	0.047
132.00	-12.64	-1.02	0.00	-12.25	0.00	12.25	907.79	453.90	890.46	439.76	6.26	-0.47	0.042
133.00	-9.85	-0.82	0.00	-11.23	0.00	11.23	903.95	451.97	878.77	433.99	6.36	-0.48	0.037

Site Number: 302495

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

135.00	-9.52	-0.80	0.00	-9.58	0.00	9.58	896.03	448.02	855.37	422.43	6.56	-0.48	0.033
138.00	-9.19	-0.78	0.00	-7.19	0.00	7.19	883.59	441.80	820.26	405.10	6.87	-0.49	0.028
141.00	-8.97	-0.76	0.00	-4.86	0.00	4.86	870.48	435.24	785.20	387.78	7.18	-0.50	0.023
143.00	-5.65	-0.49	0.00	-3.34	0.00	3.34	861.36	430.68	761.88	376.27	7.39	-0.50	0.015
144.00	-5.47	-0.48	0.00	-2.85	0.00	2.85	856.69	428.34	750.24	370.52	7.49	-0.50	0.014
146.00	-5.33	-0.47	0.00	-1.89	0.00	1.89	847.12	423.56	727.02	359.05	7.70	-0.50	0.012
146.00	-5.33	-0.47	0.00	-1.89	0.00	1.89	920.33	460.16	575.46	378.52	7.70	-0.50	0.011
147.00	-5.06	-0.44	0.00	-1.42	0.00	1.42	920.33	460.16	575.46	378.52	7.81	-0.50	0.009
149.00	-1.31	-0.12	0.00	-0.53	0.00	0.53	920.33	460.16	575.46	378.52	8.02	-0.50	0.003
150.00	-0.98	-0.09	0.00	-0.41	0.00	0.41	920.33	460.16	575.46	378.52	8.12	-0.50	0.002
153.00	-0.77	-0.07	0.00	-0.14	0.00	0.14	920.33	460.16	575.46	378.52	8.44	-0.50	0.001
155.00	0.00	-0.06	0.00	0.00	0.00	0.00	920.33	460.16	575.46	378.52	8.65	-0.50	0.000

Site Number: 302495

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

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

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	-35.55	-1.64	0.00	-211.90	0.00	211.90	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.053
3.00	-34.80	-1.65	0.00	-206.98	0.00	206.98	4,631.78	2,315.89	9,346.21	4,615.74	0.00	-0.01	0.052
6.00	-34.07	-1.65	0.00	-202.04	0.00	202.04	4,597.82	2,298.91	9,156.81	4,522.21	0.01	-0.02	0.052
9.00	-33.34	-1.66	0.00	-197.08	0.00	197.08	4,563.18	2,281.59	8,967.87	4,428.89	0.02	-0.02	0.052
12.00	-32.61	-1.66	0.00	-192.11	0.00	192.11	4,527.86	2,263.93	8,779.43	4,335.83	0.04	-0.03	0.052
15.00	-32.14	-1.66	0.00	-187.14	0.00	187.14	4,491.86	2,245.93	8,591.56	4,243.05	0.07	-0.04	0.051
17.00	-31.74	-1.66	0.00	-183.81	0.00	183.81	4,467.49	2,233.75	8,466.65	4,181.36	0.08	-0.05	0.051
18.00	-31.03	-1.67	0.00	-182.15	0.00	182.15	4,455.19	2,227.60	8,404.31	4,150.57	0.09	-0.05	0.051
21.00	-30.33	-1.67	0.00	-177.15	0.00	177.15	4,417.85	2,208.92	8,217.72	4,058.43	0.13	-0.06	0.051
24.00	-29.64	-1.67	0.00	-172.15	0.00	172.15	4,379.82	2,189.91	8,031.86	3,966.64	0.17	-0.07	0.050
27.00	-28.96	-1.67	0.00	-167.14	0.00	167.14	4,341.13	2,170.56	7,846.78	3,875.23	0.22	-0.08	0.050
30.00	-28.28	-1.67	0.00	-162.13	0.00	162.13	4,301.75	2,150.88	7,662.53	3,784.23	0.27	-0.09	0.049
33.00	-27.61	-1.67	0.00	-157.12	0.00	157.12	4,261.70	2,130.85	7,479.16	3,693.68	0.33	-0.10	0.049
36.00	-26.95	-1.67	0.00	-152.11	0.00	152.11	4,220.97	2,110.49	7,296.73	3,603.58	0.39	-0.11	0.049
39.00	-26.71	-1.67	0.00	-147.10	0.00	147.10	4,179.57	2,089.78	7,115.28	3,513.97	0.46	-0.12	0.048
40.10	-26.02	-1.66	0.00	-145.26	0.00	145.26	4,164.16	2,082.08	7,048.76	3,481.12	0.49	-0.12	0.048
42.00	-24.94	-1.66	0.00	-142.10	0.00	142.10	4,137.49	2,068.74	6,934.89	3,424.88	0.54	-0.13	0.048
45.00	-24.62	-1.65	0.00	-137.14	0.00	137.14	4,094.73	2,047.37	6,755.59	3,336.33	0.62	-0.14	0.047
45.90	-24.22	-1.65	0.00	-135.65	0.00	135.65	3,345.43	1,672.72	5,614.65	2,772.86	0.64	-0.14	0.056
48.00	-23.65	-1.65	0.00	-132.18	0.00	132.18	3,324.15	1,662.07	5,517.72	2,724.99	0.71	-0.15	0.056
51.00	-23.46	-1.65	0.00	-127.24	0.00	127.24	3,293.20	1,646.60	5,379.77	2,656.86	0.80	-0.16	0.055
52.00	-23.02	-1.64	0.00	-125.60	0.00	125.60	3,282.73	1,641.36	5,333.90	2,634.21	0.83	-0.16	0.055
54.00	-22.47	-1.63	0.00	-122.31	0.00	122.31	3,261.57	1,630.78	5,242.36	2,589.00	0.90	-0.17	0.054
57.00	-21.92	-1.63	0.00	-117.41	0.00	117.41	3,229.26	1,614.63	5,105.54	2,521.44	1.01	-0.18	0.053
60.00	-21.38	-1.62	0.00	-112.53	0.00	112.53	3,196.28	1,598.14	4,969.37	2,454.19	1.13	-0.19	0.053
63.00	-20.70	-1.61	0.00	-107.67	0.00	107.67	3,162.62	1,581.31	4,833.91	2,387.28	1.25	-0.20	0.052
66.00	-20.17	-1.60	0.00	-102.84	0.00	102.84	3,128.28	1,564.14	4,699.19	2,320.75	1.38	-0.21	0.051
69.00	-19.65	-1.59	0.00	-98.05	0.00	98.05	3,093.27	1,546.64	4,565.29	2,254.62	1.52	-0.22	0.050
72.00	-19.14	-1.58	0.00	-93.29	0.00	93.29	3,057.58	1,528.79	4,432.24	2,188.92	1.66	-0.24	0.049
75.00	-18.63	-1.56	0.00	-88.56	0.00	88.56	3,021.22	1,510.61	4,300.11	2,123.66	1.81	-0.25	0.048
78.00	-18.20	-1.55	0.00	-83.88	0.00	83.88	2,984.18	1,492.09	4,168.95	2,058.89	1.97	-0.26	0.047
80.60	-18.09	-1.55	0.00	-79.85	0.00	79.85	2,951.54	1,475.77	4,056.14	2,003.18	2.12	-0.27	0.046
81.00	-17.57	-1.53	0.00	-79.23	0.00	79.23	2,946.46	1,473.23	4,038.81	1,994.61	2.14	-0.27	0.046
83.00	-17.23	-1.52	0.00	-76.17	0.00	76.17	2,920.94	1,460.47	3,952.64	1,952.06	2.25	-0.28	0.045
84.00	-16.86	-1.50	0.00	-74.65	0.00	74.65	2,908.96	1,454.48	3,910.94	1,931.47	2.31	-0.28	0.044
85.41	-16.63	-1.50	0.00	-72.54	0.00	72.54	2,288.86	1,144.43	3,120.34	1,541.02	2.40	-0.29	0.054
87.00	-16.21	-1.48	0.00	-70.15	0.00	70.15	2,274.94	1,137.47	3,069.59	1,515.95	2.49	-0.29	0.053
90.00	-15.78	-1.46	0.00	-65.72	0.00	65.72	2,248.22	1,124.11	2,974.43	1,468.96	2.68	-0.31	0.052
93.00	-15.36	-1.45	0.00	-61.33	0.00	61.33	2,220.81	1,110.41	2,879.80	1,422.23	2.88	-0.32	0.050
96.00	-14.95	-1.43	0.00	-56.99	0.00	56.99	2,192.74	1,096.37	2,785.75	1,375.78	3.08	-0.33	0.048
99.00	-14.55	-1.41	0.00	-52.71	0.00	52.71	2,163.98	1,081.99	2,692.34	1,329.64	3.30	-0.34	0.046
102.00	-14.15	-1.39	0.00	-48.49	0.00	48.49	2,134.56	1,067.28	2,599.61	1,283.85	3.52	-0.36	0.044
105.00	-13.87	-1.37	0.00	-44.33	0.00	44.33	2,104.45	1,052.22	2,507.63	1,238.42	3.75	-0.37	0.042
107.00	-13.62	-1.36	0.00	-41.59	0.00	41.59	2,084.00	1,042.00	2,446.74	1,208.36	3.90	-0.38	0.041
108.00	-13.24	-1.33	0.00	-40.23	0.00	40.23	2,073.67	1,036.83	2,416.44	1,193.39	3.98	-0.38	0.040
111.00	-12.86	-1.31	0.00	-36.23	0.00	36.23	2,042.21	1,021.11	2,326.10	1,148.77	4.22	-0.39	0.038
114.00	-12.50	-1.28	0.00	-32.31	0.00	32.31	2,006.48	1,003.24	2,232.66	1,102.63	4.47	-0.40	0.036
117.00	-12.13	-1.26	0.00	-28.45	0.00	28.45	1,959.62	979.81	2,129.00	1,051.43	4.73	-0.41	0.033
120.00	-11.87	-1.24	0.00	-24.68	0.00	24.68	1,912.75	956.38	2,027.81	1,001.46	4.99	-0.42	0.031
122.12	-11.72	-1.23	0.00	-22.05	0.00	22.05	1,879.60	939.80	1,957.71	966.84	5.18	-0.43	0.029
123.00	-9.42	-1.04	0.00	-20.97	0.00	20.97	1,865.89	932.94	1,929.08	952.70	5.26	-0.43	0.027
125.89	-9.41	-1.04	0.00	-17.98	0.00	17.98	929.68	464.84	961.73	474.96	5.52	-0.44	0.048
126.00	-9.15	-1.01	0.00	-17.86	0.00	17.86	929.29	464.65	960.40	474.31	5.53	-0.44	0.048
129.00	-8.90	-0.99	0.00	-14.82	0.00	14.82	918.88	459.44	925.49	457.06	5.81	-0.45	0.042
132.00	-8.81	-0.98	0.00	-11.85	0.00	11.85	907.79	453.90	890.46	439.76	6.10	-0.46	0.037
133.00	-6.86	-0.80	0.00	-10.86	0.00	10.86	903.95	451.97	878.77	433.99	6.20	-0.46	0.033

Site Number: 302495

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Customer: AT&T Mobility

135.00	-6.63	-0.77	0.00	-9.27	0.00	9.27	896.03	448.02	855.37	422.43	6.39	-0.47	0.029
138.00	-6.40	-0.75	0.00	-6.95	0.00	6.95	883.59	441.80	820.26	405.10	6.69	-0.48	0.024
141.00	-6.25	-0.73	0.00	-4.70	0.00	4.70	870.48	435.24	785.20	387.78	6.99	-0.48	0.019
143.00	-3.94	-0.48	0.00	-3.23	0.00	3.23	861.36	430.68	761.88	376.27	7.19	-0.49	0.013
144.00	-3.81	-0.46	0.00	-2.76	0.00	2.76	856.69	428.34	750.24	370.52	7.30	-0.49	0.012
146.00	-3.72	-0.45	0.00	-1.83	0.00	1.83	847.12	423.56	727.02	359.05	7.50	-0.49	0.009
146.00	-3.72	-0.45	0.00	-1.83	0.00	1.83	920.33	460.16	575.46	378.52	7.50	-0.49	0.009
147.00	-3.53	-0.43	0.00	-1.38	0.00	1.38	920.33	460.16	575.46	378.52	7.60	-0.49	0.007
149.00	-0.91	-0.12	0.00	-0.52	0.00	0.52	920.33	460.16	575.46	378.52	7.81	-0.49	0.002
150.00	-0.69	-0.09	0.00	-0.40	0.00	0.40	920.33	460.16	575.46	378.52	7.91	-0.49	0.002
153.00	-0.53	-0.07	0.00	-0.14	0.00	0.14	920.33	460.16	575.46	378.52	8.22	-0.49	0.001
155.00	0.00	-0.06	0.00	0.00	0.00	0.00	920.33	460.16	575.46	378.52	8.42	-0.49	0.000

Site Number: 302495

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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):	0.17
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}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.79
Redundancy Factor (ρ):	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)
66	154.00	176	1.866	1.854	1.094	0.338	51	217
65	151.50	263	1.806	1.564	0.987	0.301	69	326
64	149.50	88	1.758	1.356	0.907	0.273	21	109
63	148.00	224	1.723	1.212	0.851	0.253	49	277
62	146.50	112	1.688	1.079	0.797	0.233	23	138
61	145.00	145	1.654	0.955	0.746	0.215	27	179
60	143.50	73	1.620	0.842	0.697	0.196	12	90
59	142.00	174	1.586	0.737	0.652	0.179	27	216
58	139.50	265	1.531	0.580	0.580	0.151	35	328
57	136.50	269	1.466	0.420	0.503	0.121	28	332
56	134.00	181	1.413	0.308	0.445	0.097	15	224
55	132.50	99	1.381	0.249	0.413	0.084	7	122
54	130.50	299	1.340	0.179	0.372	0.067	17	369
53	127.50	302	1.279	0.092	0.318	0.044	11	374
52	125.94	12	1.248	0.055	0.292	0.033	0	14
51	124.44	540	1.218	0.023	0.269	0.023	11	668
50	122.56	173	1.182	-0.012	0.241	0.011	2	214
49	121.06	308	1.153	-0.035	0.221	0.003	1	381
48	118.50	420	1.105	-0.067	0.190	-0.010	-4	520
47	115.50	427	1.049	-0.094	0.157	-0.023	-9	528
46	112.50	433	0.996	-0.111	0.129	-0.034	-13	536
45	109.50	440	0.943	-0.120	0.105	-0.042	-16	544
44	107.50	148	0.909	-0.122	0.091	-0.046	-6	183
43	106.00	306	0.884	-0.121	0.081	-0.048	-13	378
42	103.50	464	0.843	-0.118	0.067	-0.050	-20	574
41	100.50	471	0.795	-0.111	0.052	-0.051	-21	582
40	97.50	477	0.748	-0.100	0.040	-0.049	-20	590
39	94.50	484	0.703	-0.088	0.030	-0.044	-18	598
38	91.50	490	0.659	-0.074	0.023	-0.037	-16	606
37	88.50	496	0.616	-0.059	0.016	-0.029	-12	614
36	86.20	266	0.585	-0.047	0.013	-0.021	-5	330
35	84.70	425	0.564	-0.040	0.011	-0.016	-6	525
34	83.50	304	0.548	-0.034	0.010	-0.012	-3	376
33	82.00	613	0.529	-0.027	0.008	-0.006	-3	758

Site Number: 302495

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32	80.80	124	0.514	-0.021	0.008	-0.002	0	153
31	79.30	502	0.495	-0.014	0.007	0.004	2	621
30	76.50	586	0.460	-0.002	0.006	0.014	7	725
29	73.50	594	0.425	0.010	0.006	0.023	12	735
28	70.50	602	0.391	0.021	0.007	0.032	16	745
27	67.50	610	0.358	0.030	0.008	0.038	20	754
26	64.50	617	0.327	0.039	0.010	0.044	23	764
25	61.50	626	0.298	0.046	0.012	0.048	26	775
24	58.50	634	0.269	0.052	0.015	0.050	28	784
23	55.50	642	0.242	0.057	0.018	0.052	29	794
22	53.00	432	0.221	0.060	0.021	0.053	20	535
21	51.50	217	0.209	0.062	0.022	0.053	10	269
20	49.50	658	0.193	0.064	0.024	0.053	30	814
19	46.95	465	0.173	0.066	0.027	0.053	21	576
18	45.45	372	0.162	0.067	0.028	0.053	17	461
17	43.50	1,254	0.149	0.068	0.030	0.053	57	1,552
16	41.05	801	0.133	0.069	0.033	0.052	36	992
15	39.55	279	0.123	0.070	0.034	0.052	13	345
14	37.50	764	0.111	0.070	0.036	0.052	34	946
13	34.50	774	0.094	0.071	0.038	0.051	34	957
12	31.50	783	0.078	0.072	0.040	0.050	34	968
11	28.50	792	0.064	0.072	0.041	0.049	34	980
10	25.50	801	0.051	0.071	0.042	0.049	34	991
9	22.50	810	0.040	0.070	0.042	0.048	33	1,002
8	19.50	819	0.030	0.068	0.041	0.046	33	1,013
7	17.50	275	0.024	0.066	0.039	0.045	11	340
6	16.00	553	0.020	0.064	0.038	0.044	21	684
5	13.50	837	0.014	0.060	0.035	0.042	30	1,036
4	10.50	846	0.009	0.053	0.030	0.038	28	1,047
3	7.50	855	0.004	0.043	0.024	0.032	24	1,058
2	4.50	864	0.002	0.029	0.016	0.024	18	1,070
1	1.50	874	0.000	0.011	0.006	0.010	8	1,081
Ericsson KRY 112 71/	155.00	79	1.890	1.980	1.140	0.353	24	98
EMS RR90-17-02DP	155.00	41	1.890	1.980	1.140	0.353	12	50
Canister	155.00	500	1.890	1.980	1.140	0.353	153	619
Andrew ABT-DMDF-	149.00	1	1.747	1.306	0.888	0.266	0	1
Powerwave Allgon 702	149.00	7	1.747	1.306	0.888	0.266	2	8
Kathrein Scala 782-1	149.00	38	1.747	1.306	0.888	0.266	9	48
CCI DTMAPB7819VG12A	149.00	115	1.747	1.306	0.888	0.266	27	143
Raycap DC6-48-60-18-	149.00	32	1.747	1.306	0.888	0.266	7	39
7' Omni	149.00	25	1.747	1.306	0.888	0.266	6	31
Ericsson RRUS 11 (Ba	149.00	150	1.747	1.306	0.888	0.266	35	186
Ericsson RRUS-12 800	149.00	180	1.747	1.306	0.888	0.266	42	223
Powerwave Allgon 777	149.00	105	1.747	1.306	0.888	0.266	24	130
KMW AM-X-CD-16-65-00	149.00	291	1.747	1.306	0.888	0.266	67	360
Flat Platform w/ Han	149.00	2,000	1.747	1.306	0.888	0.266	461	2,475
Alcatel-Lucent RRH2X	143.00	132	1.609	0.806	0.682	0.191	22	163
Swedcom ALP 9212-N	143.00	160	1.609	0.806	0.682	0.191	26	198
RFS DB-T1-6Z-8AB-0Z	143.00	44	1.609	0.806	0.682	0.191	7	54
Andrew HBXX-6516DS-A	143.00	184	1.609	0.806	0.682	0.191	30	227
Andrew LNX-6513DS-A1	143.00	93	1.609	0.806	0.682	0.191	15	115
Flat Platform w/ Han	143.00	2,000	1.609	0.806	0.682	0.191	330	2,475
Decibel 980H65T2E-M	133.00	43	1.392	0.268	0.423	0.088	3	53
Decibel DB980H90A-KL	133.00	34	1.392	0.268	0.423	0.088	3	42
Flat Platform w/ Han	133.00	2,000	1.392	0.268	0.423	0.088	153	2,475
Decibel DB844H90E-A	123.00	120	1.190	-0.004	0.248	0.014	1	148
Flat Platform w/ Han	123.00	2,000	1.190	-0.004	0.248	0.014	24	2,475
Commscope LNX-	107.00	151	0.901	-0.122	0.088	-0.047	-6	187
Kathrein Smart Bias	105.00	10	0.867	-0.121	0.075	-0.049	0	12
GPS	83.00	10	0.542	-0.032	0.009	-0.010	0	12
Stand-Off	83.00	75	0.542	-0.032	0.009	-0.010	-1	93
GPS	63.00	20	0.312	0.042	0.011	0.046	1	25
Stand-Off	63.00	150	0.312	0.042	0.011	0.046	6	186
2" x 4" GPS	52.00	5	0.213	0.061	0.022	0.053	0	6

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Stand-Off	52.00	75	0.213	0.061	0.022	0.053	3	93
4' Std. Dish	17.00	188	0.023	0.065	0.039	0.045	7	233
		42,083	90.082	37.594	31.520	8.959	2,461	52,071

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)
66	154.00	176	1.866	1.854	1.094	0.338	51	151
65	151.50	263	1.806	1.564	0.987	0.301	69	227
64	149.50	88	1.758	1.356	0.907	0.273	21	76
63	148.00	224	1.723	1.212	0.851	0.253	49	193
62	146.50	112	1.688	1.079	0.797	0.233	23	97
61	145.00	145	1.654	0.955	0.746	0.215	27	125
60	143.50	73	1.620	0.842	0.697	0.196	12	63
59	142.00	174	1.586	0.737	0.652	0.179	27	150
58	139.50	265	1.531	0.580	0.580	0.151	35	228
57	136.50	269	1.466	0.420	0.503	0.121	28	232
56	134.00	181	1.413	0.308	0.445	0.097	15	156
55	132.50	99	1.381	0.249	0.413	0.084	7	85
54	130.50	299	1.340	0.179	0.372	0.067	17	258
53	127.50	302	1.279	0.092	0.318	0.044	11	261
52	125.94	12	1.248	0.055	0.292	0.033	0	10
51	124.44	540	1.218	0.023	0.269	0.023	11	466
50	122.56	173	1.182	-0.012	0.241	0.011	2	149
49	121.06	308	1.153	-0.035	0.221	0.003	1	266
48	118.50	420	1.105	-0.067	0.190	-0.010	-4	363
47	115.50	427	1.049	-0.094	0.157	-0.023	-9	368
46	112.50	433	0.996	-0.111	0.129	-0.034	-13	374
45	109.50	440	0.943	-0.120	0.105	-0.042	-16	379
44	107.50	148	0.909	-0.122	0.091	-0.046	-6	128
43	106.00	306	0.884	-0.121	0.081	-0.048	-13	264
42	103.50	464	0.843	-0.118	0.067	-0.050	-20	400
41	100.50	471	0.795	-0.111	0.052	-0.051	-21	406
40	97.50	477	0.748	-0.100	0.040	-0.049	-20	412
39	94.50	484	0.703	-0.088	0.030	-0.044	-18	417
38	91.50	490	0.659	-0.074	0.023	-0.037	-16	423
37	88.50	496	0.616	-0.059	0.016	-0.029	-12	428
36	86.20	266	0.585	-0.047	0.013	-0.021	-5	230
35	84.70	425	0.564	-0.040	0.011	-0.016	-6	366
34	83.50	304	0.548	-0.034	0.010	-0.012	-3	262
33	82.00	613	0.529	-0.027	0.008	-0.006	-3	529
32	80.80	124	0.514	-0.021	0.008	-0.002	0	107
31	79.30	502	0.495	-0.014	0.007	0.004	2	433
30	76.50	586	0.460	-0.002	0.006	0.014	7	506
29	73.50	594	0.425	0.010	0.006	0.023	12	512
28	70.50	602	0.391	0.021	0.007	0.032	16	519
27	67.50	610	0.358	0.030	0.008	0.038	20	526
26	64.50	617	0.327	0.039	0.010	0.044	23	533
25	61.50	626	0.298	0.046	0.012	0.048	26	540
24	58.50	634	0.269	0.052	0.015	0.050	28	547
23	55.50	642	0.242	0.057	0.018	0.052	29	554
22	53.00	432	0.221	0.060	0.021	0.053	20	373
21	51.50	217	0.209	0.062	0.022	0.053	10	188
20	49.50	658	0.193	0.064	0.024	0.053	30	567
19	46.95	465	0.173	0.066	0.027	0.053	21	401
18	45.45	372	0.162	0.067	0.028	0.053	17	321
17	43.50	1,254	0.149	0.068	0.030	0.053	57	1,082
16	41.05	801	0.133	0.069	0.033	0.052	36	691

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15	39.55	279	0.123	0.070	0.034	0.052	13	241
14	37.50	764	0.111	0.070	0.036	0.052	34	659
13	34.50	774	0.094	0.071	0.038	0.051	34	667
12	31.50	783	0.078	0.072	0.040	0.050	34	675
11	28.50	792	0.064	0.072	0.041	0.049	34	683
10	25.50	801	0.051	0.071	0.042	0.049	34	691
9	22.50	810	0.040	0.070	0.042	0.048	33	699
8	19.50	819	0.030	0.068	0.041	0.046	33	706
7	17.50	275	0.024	0.066	0.039	0.045	11	237
6	16.00	553	0.020	0.064	0.038	0.044	21	477
5	13.50	837	0.014	0.060	0.035	0.042	30	722
4	10.50	846	0.009	0.053	0.030	0.038	28	730
3	7.50	855	0.004	0.043	0.024	0.032	24	738
2	4.50	864	0.002	0.029	0.016	0.024	18	746
1	1.50	874	0.000	0.011	0.006	0.010	8	754
Ericsson KRY 112 71/	155.00	79	1.890	1.980	1.140	0.353	24	68
EMS RR90-17-02DP	155.00	41	1.890	1.980	1.140	0.353	12	35
Canister	155.00	500	1.890	1.980	1.140	0.353	153	431
Andrew ABT-DMDF-	149.00	1	1.747	1.306	0.888	0.266	0	1
Powerwave Allgon 702	149.00	7	1.747	1.306	0.888	0.266	2	6
Kathrein Scala 782-1	149.00	38	1.747	1.306	0.888	0.266	9	33
CCI DTMAPB7819VG12A	149.00	115	1.747	1.306	0.888	0.266	27	99
Raycap DC6-48-60-18-	149.00	32	1.747	1.306	0.888	0.266	7	27
7' Omni	149.00	25	1.747	1.306	0.888	0.266	6	22
Ericsson RRUS 11 (Ba	149.00	150	1.747	1.306	0.888	0.266	35	129
Ericsson RRUS-12 800	149.00	180	1.747	1.306	0.888	0.266	42	155
Powerwave Allgon 777	149.00	105	1.747	1.306	0.888	0.266	24	91
KMW AM-X-CD-16-65-00	149.00	291	1.747	1.306	0.888	0.266	67	251
Flat Platform w/ Han	149.00	2,000	1.747	1.306	0.888	0.266	461	1,725
Alcatel-Lucent RRH2X	143.00	132	1.609	0.806	0.682	0.191	22	114
Swedcom ALP 9212-N	143.00	160	1.609	0.806	0.682	0.191	26	138
RFS DB-T1-6Z-8AB-0Z	143.00	44	1.609	0.806	0.682	0.191	7	38
Andrew HBXX-6516DS-A	143.00	184	1.609	0.806	0.682	0.191	30	158
Andrew LNX-6513DS-A1	143.00	93	1.609	0.806	0.682	0.191	15	80
Flat Platform w/ Han	143.00	2,000	1.609	0.806	0.682	0.191	330	1,725
Decibel 980H65T2E-M	133.00	43	1.392	0.268	0.423	0.088	3	37
Decibel DB980H90A-KL	133.00	34	1.392	0.268	0.423	0.088	3	29
Flat Platform w/ Han	133.00	2,000	1.392	0.268	0.423	0.088	153	1,725
Decibel DB844H90E-A	123.00	120	1.190	-0.004	0.248	0.014	1	104
Flat Platform w/ Han	123.00	2,000	1.190	-0.004	0.248	0.014	24	1,725
Commscope LNX-	107.00	151	0.901	-0.122	0.088	-0.047	-6	130
Kathrein Smart Bias	105.00	10	0.867	-0.121	0.075	-0.049	0	9
GPS	83.00	10	0.542	-0.032	0.009	-0.010	0	9
Stand-Off	83.00	75	0.542	-0.032	0.009	-0.010	-1	65
GPS	63.00	20	0.312	0.042	0.011	0.046	1	17
Stand-Off	63.00	150	0.312	0.042	0.011	0.046	6	129
2" x 4" GPS	52.00	5	0.213	0.061	0.022	0.053	0	4
Stand-Off	52.00	75	0.213	0.061	0.022	0.053	3	65
4' Std. Dish	17.00	188	0.023	0.065	0.039	0.045	7	162
		42,083	90.082	37.594	31.520	8.959	2,461	36,304

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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	-50.99	-2.46	0.00	-303.42	0.00	303.42	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.075
3.00	-49.92	-2.45	0.00	-296.05	0.00	296.05	4,631.78	2,315.89	9,346.21	4,615.74	0.00	-0.01	0.075
6.00	-48.86	-2.44	0.00	-288.70	0.00	288.70	4,597.82	2,298.91	9,156.81	4,522.21	0.01	-0.02	0.074
9.00	-47.81	-2.42	0.00	-281.39	0.00	281.39	4,563.18	2,281.59	8,967.87	4,428.89	0.03	-0.04	0.074
12.00	-46.78	-2.40	0.00	-274.14	0.00	274.14	4,527.86	2,263.93	8,779.43	4,335.83	0.06	-0.05	0.074
15.00	-46.09	-2.38	0.00	-266.95	0.00	266.95	4,491.86	2,245.93	8,591.56	4,243.05	0.09	-0.06	0.073
17.00	-45.52	-2.37	0.00	-262.19	0.00	262.19	4,467.49	2,233.75	8,466.65	4,181.36	0.12	-0.07	0.073
18.00	-44.51	-2.34	0.00	-259.82	0.00	259.82	4,455.19	2,227.60	8,404.31	4,150.57	0.14	-0.07	0.073
21.00	-43.50	-2.32	0.00	-252.79	0.00	252.79	4,417.85	2,208.92	8,217.72	4,058.43	0.19	-0.09	0.072
24.00	-42.51	-2.29	0.00	-245.85	0.00	245.85	4,379.82	2,189.91	8,031.86	3,966.64	0.24	-0.10	0.072
27.00	-41.53	-2.26	0.00	-238.98	0.00	238.98	4,341.13	2,170.56	7,846.78	3,875.23	0.31	-0.11	0.071
30.00	-40.56	-2.24	0.00	-232.18	0.00	232.18	4,301.75	2,150.88	7,662.53	3,784.23	0.38	-0.12	0.071
33.00	-39.60	-2.21	0.00	-225.47	0.00	225.47	4,261.70	2,130.85	7,479.16	3,693.68	0.47	-0.14	0.070
36.00	-38.66	-2.18	0.00	-218.84	0.00	218.84	4,220.97	2,110.49	7,296.73	3,603.58	0.56	-0.15	0.070
39.00	-38.31	-2.18	0.00	-212.29	0.00	212.29	4,179.57	2,089.78	7,115.28	3,513.97	0.66	-0.17	0.070
40.10	-37.32	-2.14	0.00	-209.88	0.00	209.88	4,164.16	2,082.08	7,048.76	3,481.12	0.70	-0.17	0.069
42.00	-35.77	-2.09	0.00	-205.82	0.00	205.82	4,137.49	2,068.74	6,934.89	3,424.88	0.77	-0.18	0.069
45.00	-35.31	-2.07	0.00	-199.56	0.00	199.56	4,094.73	2,047.37	6,755.59	3,336.33	0.88	-0.19	0.068
45.90	-34.73	-2.06	0.00	-197.70	0.00	197.70	3,345.43	1,672.72	5,614.65	2,772.86	0.92	-0.20	0.082
48.00	-33.92	-2.03	0.00	-193.38	0.00	193.38	3,324.15	1,662.07	5,517.72	2,724.99	1.01	-0.21	0.081
51.00	-33.65	-2.03	0.00	-187.29	0.00	187.29	3,293.20	1,646.60	5,379.77	2,656.86	1.15	-0.22	0.081
52.00	-33.01	-2.00	0.00	-185.26	0.00	185.26	3,282.73	1,641.36	5,333.90	2,634.21	1.19	-0.23	0.080
54.00	-32.22	-1.98	0.00	-181.26	0.00	181.26	3,261.57	1,630.78	5,242.36	2,589.00	1.29	-0.24	0.080
57.00	-31.44	-1.96	0.00	-175.32	0.00	175.32	3,229.26	1,614.63	5,105.54	2,521.44	1.45	-0.26	0.079
60.00	-30.66	-1.94	0.00	-169.45	0.00	169.45	3,196.28	1,598.14	4,969.37	2,454.19	1.62	-0.27	0.079
63.00	-29.69	-1.91	0.00	-163.64	0.00	163.64	3,162.62	1,581.31	4,833.91	2,387.28	1.79	-0.29	0.078
66.00	-28.93	-1.90	0.00	-157.90	0.00	157.90	3,128.28	1,564.14	4,699.19	2,320.75	1.98	-0.31	0.077
69.00	-28.19	-1.88	0.00	-152.22	0.00	152.22	3,093.27	1,546.64	4,565.29	2,254.62	2.18	-0.33	0.077
72.00	-27.45	-1.88	0.00	-146.56	0.00	146.56	3,057.58	1,528.79	4,432.24	2,188.92	2.39	-0.34	0.076
75.00	-26.72	-1.87	0.00	-140.94	0.00	140.94	3,021.22	1,510.61	4,300.11	2,123.66	2.62	-0.36	0.075
78.00	-26.10	-1.88	0.00	-135.32	0.00	135.32	2,984.18	1,492.09	4,168.95	2,058.89	2.85	-0.38	0.074
80.60	-25.95	-1.88	0.00	-130.44	0.00	130.44	2,951.54	1,475.77	4,056.14	2,003.18	3.06	-0.40	0.074
81.00	-25.19	-1.88	0.00	-129.69	0.00	129.69	2,946.46	1,473.23	4,038.81	1,994.61	3.10	-0.40	0.074
83.00	-24.71	-1.89	0.00	-125.93	0.00	125.93	2,920.94	1,460.47	3,952.64	1,952.06	3.27	-0.41	0.073
84.00	-24.18	-1.89	0.00	-124.04	0.00	124.04	2,908.96	1,454.48	3,910.94	1,931.47	3.35	-0.42	0.073
85.41	-23.85	-1.90	0.00	-121.38	0.00	121.38	2,288.86	1,144.43	3,120.34	1,541.02	3.48	-0.43	0.089
87.00	-23.24	-1.91	0.00	-118.36	0.00	118.36	2,274.94	1,137.47	3,069.59	1,515.95	3.63	-0.44	0.088
90.00	-22.63	-1.93	0.00	-112.63	0.00	112.63	2,248.22	1,124.11	2,974.43	1,468.96	3.91	-0.46	0.087
93.00	-22.03	-1.95	0.00	-106.83	0.00	106.83	2,220.81	1,110.41	2,879.80	1,422.23	4.21	-0.48	0.085
96.00	-21.44	-1.98	0.00	-100.97	0.00	100.97	2,192.74	1,096.37	2,785.75	1,375.78	4.52	-0.51	0.083
99.00	-20.86	-2.00	0.00	-95.04	0.00	95.04	2,163.98	1,081.99	2,692.34	1,329.64	4.84	-0.53	0.081
102.00	-20.28	-2.02	0.00	-89.04	0.00	89.04	2,134.56	1,067.28	2,599.61	1,283.85	5.18	-0.55	0.079
105.00	-19.89	-2.04	0.00	-82.98	0.00	82.98	2,104.45	1,052.22	2,507.63	1,238.42	5.53	-0.57	0.076
107.00	-19.52	-2.05	0.00	-78.90	0.00	78.90	2,084.00	1,042.00	2,446.74	1,208.36	5.77	-0.59	0.075
108.00	-18.98	-2.07	0.00	-76.85	0.00	76.85	2,073.67	1,036.83	2,416.44	1,193.39	5.90	-0.59	0.074
111.00	-18.44	-2.08	0.00	-70.65	0.00	70.65	2,042.21	1,021.11	2,326.10	1,148.77	6.28	-0.62	0.071
114.00	-17.91	-2.09	0.00	-64.42	0.00	64.42	2,006.48	1,003.24	2,232.66	1,102.63	6.67	-0.64	0.067
117.00	-17.39	-2.09	0.00	-58.15	0.00	58.15	1,959.62	979.81	2,129.00	1,051.43	7.08	-0.66	0.064
120.00	-17.01	-2.09	0.00	-51.87	0.00	51.87	1,912.75	956.38	2,027.81	1,001.46	7.50	-0.68	0.061
122.12	-16.80	-2.09	0.00	-47.43	0.00	47.43	1,879.60	939.80	1,957.71	966.84	7.80	-0.69	0.058
123.00	-13.50	-2.02	0.00	-45.60	0.00	45.60	1,865.89	932.94	1,929.08	952.70	7.93	-0.70	0.055
125.89	-13.49	-2.02	0.00	-39.77	0.00	39.77	929.68	464.84	961.73	474.96	8.36	-0.71	0.098
126.00	-13.11	-2.01	0.00	-39.54	0.00	39.54	929.29	464.65	960.40	474.31	8.37	-0.71	0.098
129.00	-12.74	-1.99	0.00	-33.52	0.00	33.52	918.88	459.44	925.49	457.06	8.83	-0.74	0.087
132.00	-12.62	-1.98	0.00	-27.56	0.00	27.56	907.79	453.90	890.46	439.76	9.30	-0.76	0.077
133.00	-9.83	-1.77	0.00	-25.57	0.00	25.57	903.95	451.97	878.77	433.99	9.46	-0.77	0.070

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

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Customer: AT&T Mobility

135.00	-9.50	-1.74	0.00	-22.02	0.00	22.02	896.03	448.02	855.37	422.43	9.79	-0.78	0.063
138.00	-9.17	-1.71	0.00	-16.79	0.00	16.79	883.59	441.80	820.26	405.10	10.29	-0.80	0.052
141.00	-8.96	-1.68	0.00	-11.66	0.00	11.66	870.48	435.24	785.20	387.78	10.80	-0.82	0.040
143.00	-5.64	-1.19	0.00	-8.30	0.00	8.30	861.36	430.68	761.88	376.27	11.14	-0.82	0.029
144.00	-5.46	-1.16	0.00	-7.12	0.00	7.12	856.69	428.34	750.24	370.52	11.31	-0.83	0.026
146.00	-5.32	-1.14	0.00	-4.80	0.00	4.80	847.12	423.56	727.02	359.05	11.66	-0.83	0.020
146.00	-5.32	-1.14	0.00	-4.80	0.00	4.80	920.33	460.16	575.46	378.52	11.66	-0.83	0.018
147.00	-5.05	-1.08	0.00	-3.66	0.00	3.66	920.33	460.16	575.46	378.52	11.83	-0.83	0.015
149.00	-1.31	-0.33	0.00	-1.49	0.00	1.49	920.33	460.16	575.46	378.52	12.18	-0.83	0.005
150.00	-0.98	-0.26	0.00	-1.17	0.00	1.17	920.33	460.16	575.46	378.52	12.36	-0.83	0.004
153.00	-0.76	-0.20	0.00	-0.40	0.00	0.40	920.33	460.16	575.46	378.52	12.88	-0.83	0.002
155.00	0.00	-0.19	0.00	0.00	0.00	0.00	920.33	460.16	575.46	378.52	13.23	-0.84	0.000

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

6/29/2017 5:56:27 PM

Customer: AT&T Mobility

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	-35.55	-2.46	0.00	-296.96	0.00	296.96	4,665.07	2,332.54	9,536.02	4,709.48	0.00	0.00	0.071
3.00	-34.80	-2.44	0.00	-289.59	0.00	289.59	4,631.78	2,315.89	9,346.21	4,615.74	0.00	-0.01	0.070
6.00	-34.07	-2.43	0.00	-282.26	0.00	282.26	4,597.82	2,298.91	9,156.81	4,522.21	0.01	-0.02	0.070
9.00	-33.33	-2.41	0.00	-274.97	0.00	274.97	4,563.18	2,281.59	8,967.87	4,428.89	0.03	-0.03	0.069
12.00	-32.61	-2.38	0.00	-267.75	0.00	267.75	4,527.86	2,263.93	8,779.43	4,335.83	0.06	-0.05	0.069
15.00	-32.13	-2.37	0.00	-260.61	0.00	260.61	4,491.86	2,245.93	8,591.56	4,243.05	0.09	-0.06	0.069
17.00	-31.73	-2.35	0.00	-255.88	0.00	255.88	4,467.49	2,233.75	8,466.65	4,181.36	0.12	-0.07	0.068
18.00	-31.03	-2.32	0.00	-253.53	0.00	253.53	4,455.19	2,227.60	8,404.31	4,150.57	0.13	-0.07	0.068
21.00	-30.33	-2.29	0.00	-246.56	0.00	246.56	4,417.85	2,208.92	8,217.72	4,058.43	0.18	-0.08	0.068
24.00	-29.64	-2.27	0.00	-239.68	0.00	239.68	4,379.82	2,189.91	8,031.86	3,966.64	0.24	-0.10	0.067
27.00	-28.95	-2.24	0.00	-232.88	0.00	232.88	4,341.13	2,170.56	7,846.78	3,875.23	0.30	-0.11	0.067
30.00	-28.28	-2.21	0.00	-226.17	0.00	226.17	4,301.75	2,150.88	7,662.53	3,784.23	0.37	-0.12	0.066
33.00	-27.61	-2.18	0.00	-219.54	0.00	219.54	4,261.70	2,130.85	7,479.16	3,693.68	0.46	-0.13	0.066
36.00	-26.95	-2.15	0.00	-213.01	0.00	213.01	4,220.97	2,110.49	7,296.73	3,603.58	0.54	-0.15	0.065
39.00	-26.71	-2.14	0.00	-206.56	0.00	206.56	4,179.57	2,089.78	7,115.28	3,513.97	0.64	-0.16	0.065
40.10	-26.02	-2.11	0.00	-204.19	0.00	204.19	4,164.16	2,082.08	7,048.76	3,481.12	0.68	-0.17	0.065
42.00	-24.94	-2.05	0.00	-200.20	0.00	200.20	4,137.49	2,068.74	6,934.89	3,424.88	0.75	-0.18	0.064
45.00	-24.61	-2.04	0.00	-194.05	0.00	194.05	4,094.73	2,047.37	6,755.59	3,336.33	0.86	-0.19	0.064
45.90	-24.21	-2.02	0.00	-192.22	0.00	192.22	3,345.43	1,672.72	5,614.65	2,772.86	0.90	-0.19	0.077
48.00	-23.65	-1.99	0.00	-187.99	0.00	187.99	3,324.15	1,662.07	5,517.72	2,724.99	0.98	-0.20	0.076
51.00	-23.46	-1.98	0.00	-182.02	0.00	182.02	3,293.20	1,646.60	5,379.77	2,656.86	1.12	-0.22	0.076
52.00	-23.02	-1.96	0.00	-180.04	0.00	180.04	3,282.73	1,641.36	5,333.90	2,634.21	1.16	-0.22	0.075
54.00	-22.46	-1.93	0.00	-176.12	0.00	176.12	3,261.57	1,630.78	5,242.36	2,589.00	1.26	-0.24	0.075
57.00	-21.91	-1.91	0.00	-170.32	0.00	170.32	3,229.26	1,614.63	5,105.54	2,521.44	1.41	-0.25	0.074
60.00	-21.37	-1.89	0.00	-164.58	0.00	164.58	3,196.28	1,598.14	4,969.37	2,454.19	1.58	-0.27	0.074
63.00	-20.69	-1.86	0.00	-158.92	0.00	158.92	3,162.62	1,581.31	4,833.91	2,387.28	1.75	-0.28	0.073
66.00	-20.17	-1.84	0.00	-153.34	0.00	153.34	3,128.28	1,564.14	4,699.19	2,320.75	1.93	-0.30	0.073
69.00	-19.65	-1.83	0.00	-147.80	0.00	147.80	3,093.27	1,546.64	4,565.29	2,254.62	2.13	-0.32	0.072
72.00	-19.14	-1.82	0.00	-142.31	0.00	142.31	3,057.58	1,528.79	4,432.24	2,188.92	2.33	-0.34	0.071
75.00	-18.63	-1.82	0.00	-136.84	0.00	136.84	3,021.22	1,510.61	4,300.11	2,123.66	2.55	-0.35	0.071
78.00	-18.20	-1.82	0.00	-131.39	0.00	131.39	2,984.18	1,492.09	4,168.95	2,058.89	2.78	-0.37	0.070
80.60	-18.09	-1.82	0.00	-126.66	0.00	126.66	2,951.54	1,475.77	4,056.14	2,003.18	2.99	-0.39	0.069
81.00	-17.56	-1.82	0.00	-125.93	0.00	125.93	2,946.46	1,473.23	4,038.81	1,994.61	3.02	-0.39	0.069
83.00	-17.22	-1.83	0.00	-122.29	0.00	122.29	2,920.94	1,460.47	3,952.64	1,952.06	3.18	-0.40	0.069
84.00	-16.86	-1.83	0.00	-120.46	0.00	120.46	2,908.96	1,454.48	3,910.94	1,931.47	3.27	-0.41	0.068
85.41	-16.63	-1.84	0.00	-117.88	0.00	117.88	2,288.86	1,144.43	3,120.34	1,541.02	3.39	-0.42	0.084
87.00	-16.20	-1.85	0.00	-114.95	0.00	114.95	2,274.94	1,137.47	3,069.59	1,515.95	3.53	-0.43	0.083
90.00	-15.78	-1.87	0.00	-109.39	0.00	109.39	2,248.22	1,124.11	2,974.43	1,468.96	3.81	-0.45	0.081
93.00	-15.36	-1.89	0.00	-103.78	0.00	103.78	2,220.81	1,110.41	2,879.80	1,422.23	4.10	-0.47	0.080
96.00	-14.95	-1.91	0.00	-98.10	0.00	98.10	2,192.74	1,096.37	2,785.75	1,375.78	4.40	-0.49	0.078
99.00	-14.54	-1.94	0.00	-92.36	0.00	92.36	2,163.98	1,081.99	2,692.34	1,329.64	4.71	-0.51	0.076
102.00	-14.14	-1.96	0.00	-86.55	0.00	86.55	2,134.56	1,067.28	2,599.61	1,283.85	5.04	-0.53	0.074
105.00	-13.86	-1.97	0.00	-80.67	0.00	80.67	2,104.45	1,052.22	2,507.63	1,238.42	5.39	-0.56	0.072
107.00	-13.61	-1.99	0.00	-76.73	0.00	76.73	2,084.00	1,042.00	2,446.74	1,208.36	5.62	-0.57	0.070
108.00	-13.23	-2.00	0.00	-74.74	0.00	74.74	2,073.67	1,036.83	2,416.44	1,193.39	5.74	-0.58	0.069
111.00	-12.85	-2.01	0.00	-68.74	0.00	68.74	2,042.21	1,021.11	2,326.10	1,148.77	6.11	-0.60	0.066
114.00	-12.48	-2.02	0.00	-62.70	0.00	62.70	2,006.48	1,003.24	2,232.66	1,102.63	6.50	-0.62	0.063
117.00	-12.12	-2.03	0.00	-56.62	0.00	56.62	1,959.62	979.81	2,129.00	1,051.43	6.89	-0.64	0.060
120.00	-11.85	-2.03	0.00	-50.54	0.00	50.54	1,912.75	956.38	2,027.81	1,001.46	7.30	-0.66	0.057
122.12	-11.70	-2.03	0.00	-46.24	0.00	46.24	1,879.60	939.80	1,957.71	966.84	7.60	-0.67	0.054
123.00	-9.41	-1.96	0.00	-44.46	0.00	44.46	1,865.89	932.94	1,929.08	952.70	7.72	-0.68	0.052
125.89	-9.40	-1.96	0.00	-38.80	0.00	38.80	929.68	464.84	961.73	474.96	8.14	-0.69	0.092
126.00	-9.14	-1.95	0.00	-38.57	0.00	38.57	929.29	464.65	960.40	474.31	8.15	-0.69	0.091
129.00	-8.88	-1.94	0.00	-32.71	0.00	32.71	918.88	459.44	925.49	457.06	8.60	-0.72	0.081
132.00	-8.79	-1.93	0.00	-26.91	0.00	26.91	907.79	453.90	890.46	439.76	9.06	-0.74	0.071
133.00	-6.85	-1.73	0.00	-24.98	0.00	24.98	903.95	451.97	878.77	433.99	9.21	-0.75	0.065

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135.00	-6.62	-1.70	0.00	-21.51	0.00	21.51	896.03	448.02	855.37	422.43	9.53	-0.76	0.058
138.00	-6.39	-1.67	0.00	-16.40	0.00	16.40	883.59	441.80	820.26	405.10	10.02	-0.78	0.048
141.00	-6.24	-1.64	0.00	-11.41	0.00	11.41	870.48	435.24	785.20	387.78	10.51	-0.79	0.037
143.00	-3.93	-1.16	0.00	-8.13	0.00	8.13	861.36	430.68	761.88	376.27	10.84	-0.80	0.026
144.00	-3.80	-1.13	0.00	-6.97	0.00	6.97	856.69	428.34	750.24	370.52	11.01	-0.80	0.023
146.00	-3.71	-1.11	0.00	-4.70	0.00	4.70	847.12	423.56	727.02	359.05	11.35	-0.81	0.017
146.00	-3.71	-1.11	0.00	-4.70	0.00	4.70	920.33	460.16	575.46	378.52	11.35	-0.81	0.016
147.00	-3.51	-1.06	0.00	-3.59	0.00	3.59	920.33	460.16	575.46	378.52	11.52	-0.81	0.013
149.00	-0.91	-0.32	0.00	-1.47	0.00	1.47	920.33	460.16	575.46	378.52	11.86	-0.81	0.005
150.00	-0.68	-0.25	0.00	-1.15	0.00	1.15	920.33	460.16	575.46	378.52	12.03	-0.81	0.004
153.00	-0.53	-0.20	0.00	-0.39	0.00	0.39	920.33	460.16	575.46	378.52	12.54	-0.81	0.002
155.00	0.00	-0.19	0.00	0.00	0.00	0.00	920.33	460.16	575.46	378.52	12.88	-0.81	0.000

Site Number: 302495

Code: ANSI/TIA-222-G

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Site Name: Tolland CT, CT

Engineering Number: OAA705198_C3_01

6/29/2017 5:56:27 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	33.13	0.00	50.46	0.00	0.00	3611.64	45.90	0.80
0.9D + 1.6W	32.91	0.00	37.83	0.00	0.00	3530.40	45.90	0.77
1.2D + 1.0Di + 1.0Wi	8.12	0.00	93.58	0.00	0.00	995.61	45.90	0.25
(1.2 + 0.2Sds) * DL + E ELFM	1.64	0.00	50.99	0.00	0.00	216.24	45.90	0.06
(1.2 + 0.2Sds) * DL + E EMAM	2.46	0.00	50.99	0.00	0.00	303.42	125.89	0.10
(0.9 - 0.2Sds) * DL + E ELFM	1.64	0.00	35.55	0.00	0.00	211.90	45.90	0.06
(0.9 - 0.2Sds) * DL + E EMAM	2.46	0.00	35.55	0.00	0.00	296.96	125.89	0.09
1.0D + 1.0W	7.87	0.00	42.08	0.00	0.00	850.51	45.90	0.19

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	50 in
	Pole Thickness	0.4375 in
	Plate Diameter	65 in
	Plate Thickness	2 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance Applied	996.01 k-in
		525.06 k-in
Stiffeners	#	8 Show
	Thickness	0.75 in
	Length	5 in
	Height	12 in
	Chamfer	0.5 in
	Offset Angle	0°
	Fy	36 ksi

Code Rev. **G**

Date **6/29/2017**
 Engineer **RDB**
 Site # **302495**
 Carrier **AT&T Mobility**

Moment **3611.6 k-ft**
 Axial **50.5 k**

Bolts	#	16	
	Bolt Circle (R)adial / (S)quare	59 in R	
	Diameter	2.25 in	
	Hole Diameter	2.75 in	
	Type	A615 Gr 75	
	Fy	75 ksi	
	Fu	100 ksi	
	ϕ_s Resistance Applied	259.82 k 186.69 k	
	Reinforcement	#	0
		#	0
Extra Bolts	0		

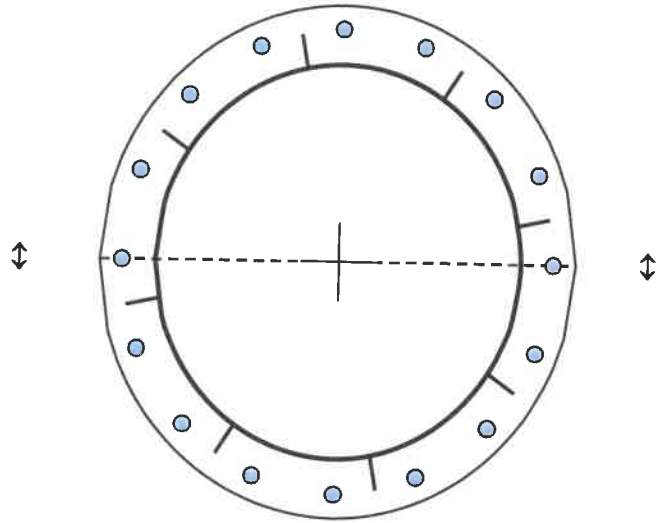


Plate Stress Ratio:
0.53 (Pass)

Bolt Stress Ratio:
0.72 (Pass)

Base/Flange Plate	Plate Type	Flange @ 146.0 ft
	Pole Diameter	16 in
	Pole Thickness	0.5 in
	Plate Diameter	28.5 in
	Plate Thickness	1 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance Applied	56.55 k-in
		11.49 k-in
	#	0
Stiffeners	#	0

Code Rev. **G**

Date **6/29/2017**
 Engineer **RDB**
 Site # **302495**
 Carrier **AT&T Mobility**

Moment **21.0 k-ft**
 Axial **4.6 k**

Required Flange Thickness:
0.45 in OK

Bolts	#	12
	Bolt Circle (R)adial / (S)quare	25.75 in R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance Applied	54.52 k
		2.87 k
	#	0
Reinforcement	#	0
Extra Bolts	#	0

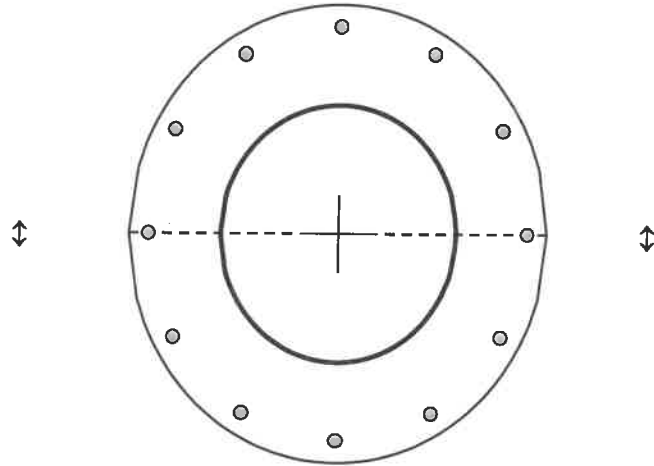


Plate Stress Ratio:
0.20 (Pass)

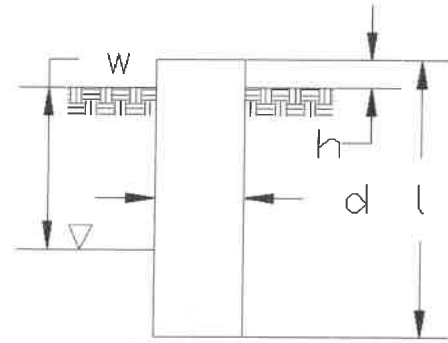
Bolt Stress Ratio:
0.05 (Pass)

Site Name: Tollard CT, CT
 Site Number: 302495
 Engineer: RDB
 Engineering Number: OAA705198_C3_01
 Date: 06/29/17

Program Last Updated: 5/13/2014
 American Tower Corporation

Design Base Loads (Factored) - Analysis per TIA-222-G Standards

Analyze or Design a Foundation? Analyze
 Foundation Mapped: N
 Moment (M): 3611.6 k-ft
 Shear/Leg (V): 33.1 k
 Axial Load (P): 50.5 k
 Uplift/Leg (U): 0.0 k
 Tower Type (GT / SST / MP): MP
 Diameter of Caisson (d):
 Caisson Embedment (L-h):
 Caisson Height Above Ground (h):
 Depth Below Ground Surface to Water Table (w):
 Unit Weight of Concrete:
 Unit Weight of Water:
 Tension Skin Friction/Compression Skin Friction:
 Pullout Angle:



7.0 ft
 30.0 ft
 0.5 ft
 3.0 ft
 150.0 pcf
 62.4 pcf
 0.75
 30.0 degrees

Engineer Notes

Soil Mechanical Properties

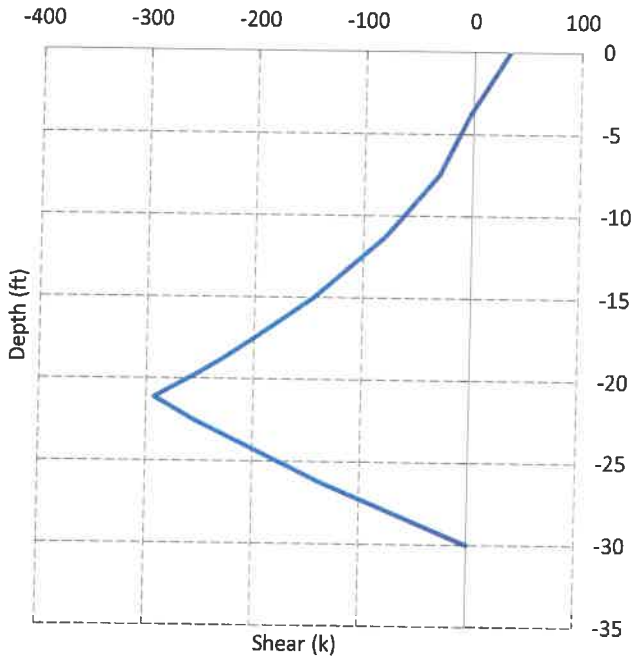
Depth (ft)		γ_{soil}	Cohesion	ϕ	Ultimate Skin	Ultimate Bearing
Top	Bottom	(pcf)	(psf)	(degree)	Friction (psf)	Pressure (psf)
0.0	3.0	105	0	0	0	0
3.0	5.0	127	0	37	0	0
5.0	10.0	133	0	40	832	0
10.0	31.0	137	0	40	1668	34021

Volume of Concrete: 1173.8 ft³ = 43.5 yd³
 Weight of Concrete (Buoyancy Effect Considered): 111.2 k
 Average Soil Unit Weight: 76.3 pcf
 Skin Friction Resistance: 825.1 k
 Compressive Bearing Resistance: 1309.3 k
 Pullout Weight (Minus Concrete Weight): 1155.1 k
 Nominal Uplift Capacity per Leg ($\phi_s T_n$): 547.5 k
 Nominal Compressive Capacity per Leg ($\phi_s P_n$): 1600.8 k
 P_u : 74.8 k
 $T_u / \phi_s T_n$: 0.00 Result: OK
 $P_u / \phi_s P_n$: 0.05 Result: OK
 Total Lateral Resistance: 2862.3 k
 Inflection Point (Below Ground Surface): 21.1 ft
 Design Overturning Moment At Inflection Point (M_D): 4327.7 k-ft
 Nominal Moment Capacity ($\phi_s M_n$): 12424.5 k-ft
 $M_D / \phi_s M_n$: 0.35 Result: OK
 ϕ_s : 0.75

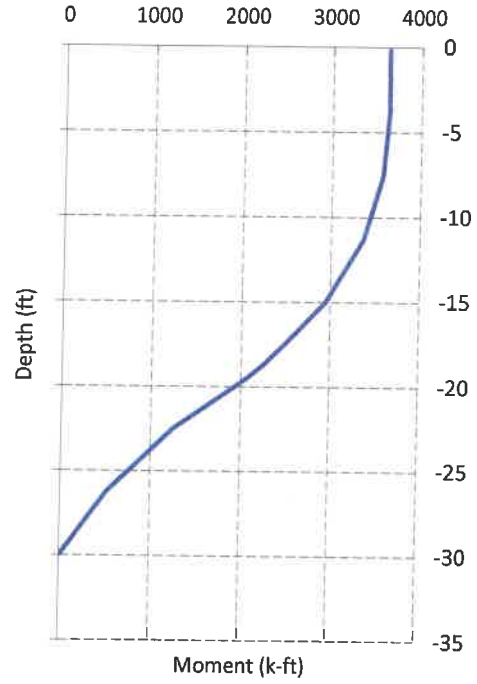
Caisson Strength Capacity

Concrete Compressive Strength (f'_c):	4000 psi
Vertical Steel Rebar Size #:	11
Vertical Steel Rebar Area:	1.56 in ²
# of Vertical Steel Rebars:	18
Vertical Steel Rebar Yield Strength (F_y):	60 ksi
Horizontal Tie / Stirrup Size #:	5
Horizontal Tie / Stirrup Area:	0.31 in ²
Design Horizontal Tie / Stirrup Spacing:	12.0 in
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60 ksi
Rebar Cage Diameter:	76.0 in
Strength Bending/Tension Reduction Factor (ϕ_B):	0.90 ACI318-05 - 9.3.2.1
Strength Shear Reduction Factor (ϕ_V):	0.75 ACI318-05 - 9.3.2.3
Strength Compression Reduction Factor (ϕ_C):	0.65 ACI318-05 - 9.3.2.2
Steel Elastic Modulus:	29000 ksi
Design Moment (M_u):	3635.8 k-ft
Nominal Moment Capacity ($\phi_B M_n$):	4700.7 k-ft - ACI318-005 - 10.2
$M_u/\phi_B M_n$:	0.77 Result: OK
Design Shear (V_u):	292.5 k
Nominal Shear Capacity ($\phi_V V_n$):	528.1 k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u/\phi_V V_n$:	0.55 Result: OK
Design Tension (T_u):	0.0 k
Nominal Tension Capacity ($\phi_T T_n$):	1516.3 k - ACI318-05 - 10.2
$T_u/\phi_T T_n$:	0.00 Result: OK
Design Compression (P_u):	74.8 k
Nominal Compression Capacity ($\phi_P P_n$):	9748.2 k - ACI318-05 - 10.3.6.2
$P_u/\phi_P P_n$:	0.01 Result: OK
Bending Reinforcement Ratio:	0.005 ACI318-05 - 10.8.4 & 10.9.1
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.77 Result: OK

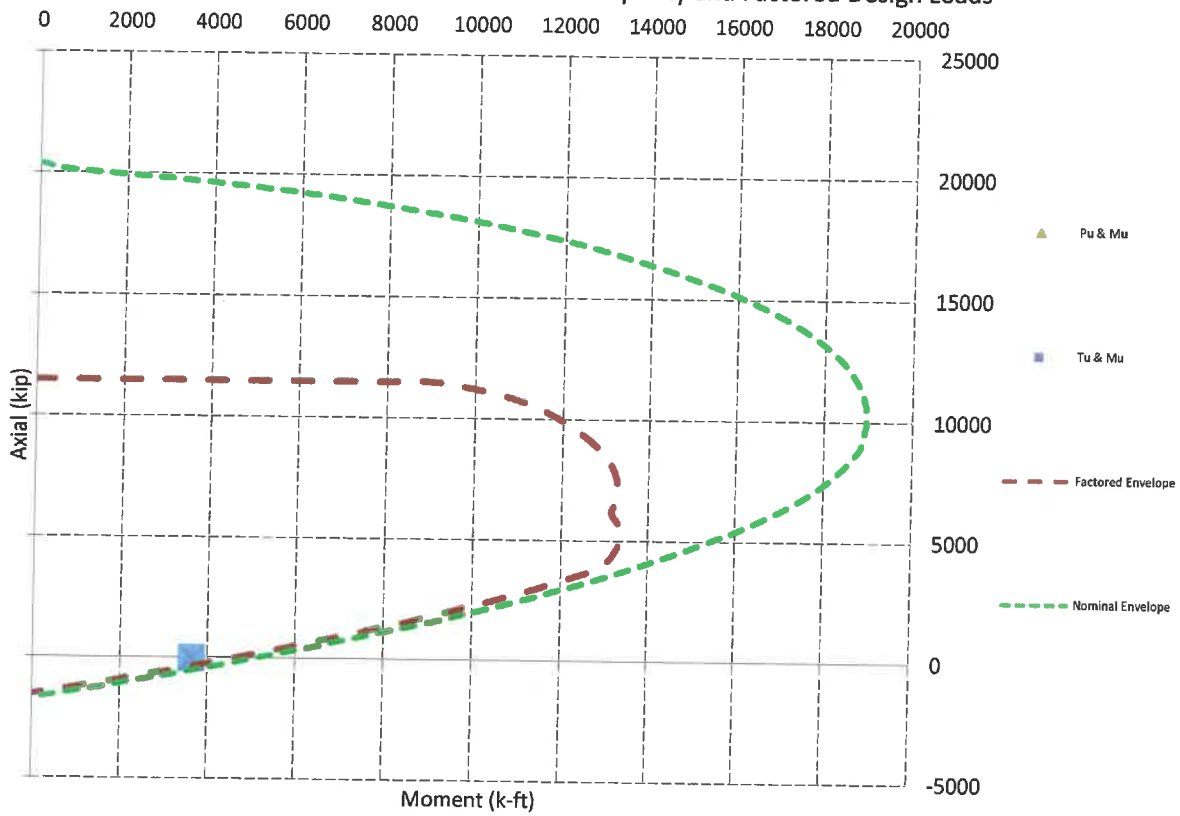
Design Factored Shear / Depth



Design Factored Moment / Depth



Nominal and Factored Moment Capacity and Factored Design Loads





Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT1073

Tolland East Central
5 Barbara Road
Tolland, CT 6084

July 6, 2017

Centerline Communications Project Number: 950006-062

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	8.50 %



July 6, 2017

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

Emissions Analysis for Site: **CT1073 – Tolland East Central**

Centerline Communications, LLC (“Centerline”) was directed to analyze the proposed AT&T facility located at **5 Barbara Road, Tolland, CT**, 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 population 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 population 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.

Population 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 performed for the proposed AT&T Wireless antenna facility located at **5 Barbara Road, Tolland, CT**, 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.

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. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
UMTS	1900 MHz (PCS)	2	30
LTE	700 MHz	2	60
LTE	1900 MHz (PCS)	2	60
GSM	850 MHz	2	30
GSM	1900 MHz (PCS)	2	30

Table 1: Channel Data Table



The following antennas listed in *Table 2* were used in the modeling 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.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Powerwave 7770	149
A	2	KMW AM-X-CD-16-65-00T-RET	149
A	3	KMW AM-X-CD-16-65-00T-RET	149
B	1	Powerwave 7770	149
B	2	KMW AM-X-CD-16-65-00T-RET	149
B	3	KMW AM-X-CD-16-65-00T-RET	149
C	1	Powerwave 7770	149
C	2	KMW AM-X-CD-16-65-00T-RET	149
C	3	KMW AM-X-CD-16-65-00T-RET	149

Table 2: Antenna Data

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

RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.49
Antenna A2	KMW AM-X-CD-16-65-00T-RET	700 MHz / 1900 MHz (PCS)	13.35 / 15.25	4	240	6,614.85	1.68
Antenna A3	KMW AM-X-CD-16-65-00T-RET	850 MHz / 1900 MHz (PCS)	13.85 / 15.25	4	120	3,465.76	0.80
Sector A Composite MPE%							2.98
Antenna B1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.49
Antenna B2	KMW AM-X-CD-16-65-00T-RET	700 MHz / 1900 MHz (PCS)	13.35 / 15.25	4	240	6,614.85	1.68
Antenna B3	KMW AM-X-CD-16-65-00T-RET	850 MHz / 1900 MHz (PCS)	13.85 / 15.25	4	120	3,465.76	0.80
Sector B Composite MPE%							2.98
Antenna C1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.49
Antenna C2	KMW AM-X-CD-16-65-00T-RET	700 MHz / 1900 MHz (PCS)	13.35 / 15.25	4	240	6,614.85	1.68
Antenna C3	KMW AM-X-CD-16-65-00T-RET	850 MHz / 1900 MHz (PCS)	13.85 / 15.25	4	120	3,465.76	0.80
Sector C Composite MPE%							2.98

Table 3: AT&T Emissions Levels



The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	MPE%
AT&T – Max Sector Value	2.98 %
T-Mobile / Voicestream	1.90 %
Verizon Wireless	2.83 %
Sprint	0.35 %
Nextel	0.44 %
Site Total MPE %:	8.50 %

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	2.98 %
AT&T Sector B Total:	2.98 %
AT&T Sector C Total:	2.98 %
Site Total:	8.50 %

Table 5: Site MPE Summary



FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology (All Sectors)	# 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	149	1.46	850 MHz	567	0.26%
AT&T 1900 MHz (PCS) UMTS	2	656.33	149	2.31	1900 MHz (PCS)	1000	0.23%
AT&T 700 MHz LTE	2	1,297.63	149	4.56	700 MHz	467	0.98%
AT&T 1900 MHz (PCS) LTE	2	2,009.79	149	7.07	1900 MHz (PCS)	1000	0.71%
AT&T 850 MHz GSM	2	727.98	149	2.56	850 MHz	567	0.45%
AT&T 1900 MHz (PCS) GSM	2	1,004.90	149	3.53	1900 MHz (PCS)	1000	0.35%
						Total:	2.98%

Table 6: AT&T Maximum Sector MPE Power Values



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population 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 population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	2.98 %
Sector B:	2.98 %
Sector C:	2.98 %
AT&T Maximum Total (per sector):	2.98 %
Site Total:	8.50 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **8.50 %** of the allowable FCC established general population 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.

A handwritten signature in black ink, appearing to read 'Scott Heffernan', is positioned above the contact information.

Scott Heffernan
RF Engineering Director
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767

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Steven R. Werbner, Town Manager
Tolland Town Council
21 Tolland Green
Tolland, CT 06084

PS Form 3811, July 2015

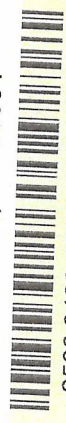
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Steven R. Werbner, Town Manager
Tolland Town Council
21 Tolland Green
Tolland, CT 06084



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PS Form 3811, July 2015

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 Hicks Memorial Municipal Center
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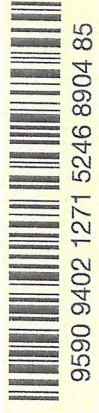
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- Complete items 1, 2, and 3.
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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Heidi Samokar, AICP
 Director of Planning & Development
 Hicks Memorial Municipal Center
 21 Tolland Green, 3rd Level
 Tolland, CT 06084



2. Article Number (Transfer from service label)

7015 1520 0002 7639 5975

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Address
 X *Heidi Samokar*
 B. Received by (Printed Name) C. Date of Delivery
 Sue Litwin 7/7/17
 D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below:

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery
 - Signature Confirmation
 - Signature Confirmation Restricted Delivery
 - Priority Mail Express®
 - Registered Mail™
 - Registered Mail Restricted Delivery
 - Return Receipt for Merchandise
 - Signature Confirmation Restricted Delivery
 - Signature Confirmation Restricted Delivery

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com

WOBURN, MA 01801

Certified Mail Fee	\$3.35
Extra Services & Fees (check box, add fee as appropriate)	\$7.75
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$2.45
Total Postage	\$8.55

American Tower Corporation
Attn: Shawn Dunn, Acct. Proj. Mgr.
10 Presidential Way
Woburn, MA 01801



Postmark
Here

Street and Apt.
City, State, ZIP
PS Form 3800


4465 6E92 2000 025T 5T02

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

American Tower Corporation
 Attn: Shawn Dunn, Acct. Proj. Mgr.
 10 Presidential Way
 Woburn, MA 01801



9590 9402 1271 5246 8905 22

2. Article Number ()
7015 1

PS Form 3811, 4

COMPLETE THIS SECTION ON DELIVERY

A. Signature *[Signature]* Agent Address

B. Received by (Printed Name) *[Name]* C. Date of Delivery *7/11/17*

D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below:

3. Service Type

Adult Signature Registered Mail™
 Adult Signature Restricted Delivery Registered Mail Restrict Delivery
 Certified Mail® Certified Mail Restricted Delivery
 Certified Mail Restricted Delivery Merchandise
 Collect on Delivery Collect on Delivery Restricted Delivery
 Signature Confirmation Signature Confirmation