



12/18/2017

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

Regarding: Notice of Exempt Modification – Antenna Swap
Property Address: 77 Pease Road, Woodbridge, CT 06525
AT&T Site: CTL02010 / FA: 10034971

Dear Ms. Bachman:

On behalf of AT&T, 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).

AT&T currently maintains a wireless telecommunications facility on an existing monopole at the above-referenced address. American Tower Asset Sub II, LLC c/o American Tower, Inc., owns said facility. The site consists of nine (9) wireless telecommunication antennas at an antenna centerline height of 153-feet on an existing 156 -foot monopole tower. AT&T now intends to remove (3) KMW AM-X-CD-16-65-00T-RET panel antennas on position 3 all sectors, while retaining three (3) Powerwave 7770 panel antennas on positions 1 and 4, all sectors, and install three (3) new CCI HPA-65R-BUU-H6 on position 3 all sectors (for a total of (9) panel antennas), at the 153-foot level. AT&T also intends to install three (3) RRU-32 B2 on the existing antenna masts.

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Beth Heller, First Selectman of the Town of Woodbridge, Terry Gilbertson, Zoning Enforcement Officer of the Town of Woodbridge, Kristine Sullivan, Land Use Analyst, and American Tower, Inc.

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).

1. The proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 115-foot level of the 125-foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require and extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A



cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

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

Sincerely,

Ryan Lynch
Real Estate Specialist | Smartlink, LLC
85 Rangeway Road, Building 3, Suite 102
North Billerica, MA 01862

Enclosures

CC w/ enclosures:

Beth Heller, First Selectman of the Town of Woodbridge
Terry Gilbertson, Zoning Enforcement Officer of the Town of Woodbridge
Kristine Sullivan, Land Use Analyst
American Tower, Inc.

77 PEASE RD

Location 77 PEASE RD

Mblu 2204/ 1410/ 77/ /

Owner JOHNSON KENNETH W

Assessment \$202,580

Appraisal \$289,400

PID 896

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2014	\$197,700	\$91,700	\$289,400

Assessment			
Valuation Year	Improvements	Land	Total
2014	\$138,390	\$64,190	\$202,580

Owner of Record

Owner JOHNSON KENNETH W

Sale Price \$0

Co-Owner

Certificate

Address 77 PEASE RD

Book & Page 608/ 161

WOODBIDGE, CT 06525

Sale Date 10/20/2008

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
JOHNSON KENNETH W	\$0		608/ 161	10/20/2008
JOHNSON JOAN A & KENNETH W	\$0		98/ 082	04/03/1972

Building Information

Building 1 : Section 1

Year Built: 1930

Living Area: 2,379

Building Attributes	
Field	Description
Style	Conventional
Model	Residential
Stories:	1 1/2 Stories

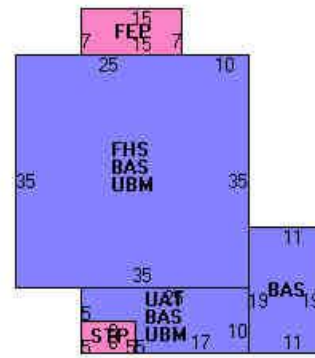
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure:	Gambrel
Roof Cover	Asph/F GlS/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	Plastered
Interior Flr 1	Carpet
Interior Flr 2	Hardwood
Heat Fuel	Propane
Heat Type:	Forced Air-Duc
AC Type:	Central
Total Bedrooms:	4 Bedrooms
Total Bthrms:	2
Total Half Baths:	0
Total Xtra Fixtrs:	1
Total Rooms:	7
Bath Style:	Average
Kitchen Style:	Average
Dormer	

Building Photo



(http://images.vgsi.com/photos/WoodbridgeCTPhotos//\00\00\55

Building Layout



Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	1,644	1,644	
FHS	Half Story, Finished	1,225	735	
FEP	Enclosed Porch	105	0	
STP	Stoop	40	0	
UAT	Attic, Unfinished	210	0	
UBM	Basement, Unfinished	1,435	0	
		4,659	2,379	

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
FPL1	Fireplace	1 UNITS	\$1,800	1

Land

Land Use

Use Code 1010
Description Single Family
Zone A
Neighborhood
Alt Land Appr Category No

Land Line Valuation

Size (Acres) 2.61
Frontage 0
Depth 0
Assessed Value \$64,190
Appraised Value \$91,700

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
FGR4	Garage w Lft			864 S.F	\$18,100	1
BRN3	Barn w Loft			864 S.F.	\$19,000	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$197,700	\$91,700	\$289,400
2015	\$197,700	\$91,700	\$289,400
2013	\$199,000	\$105,400	\$304,400

Assessment			
Valuation Year	Improvements	Land	Total
2016	\$138,390	\$64,190	\$202,580
2015	\$138,390	\$64,190	\$202,580
2013	\$139,300	\$73,780	\$213,080

Ship date: 

Mon 12/18/2017

Smartlink LLC
Ryan Lynch
Building 3, Suite 102
85 Rangeway Road
NORTH BILLERICA, MA US 01862
781 392-4040



Delivered

Signed for by: T.CLE



Actual delivery:

Wed 12/20/2017 12:14 pm

Town of Woodbridge
Beth Heller
11 Meetinghouse Lane
WOODBIDGE, CT US 06525
203 389-3400

Request Notifications

Hold at Location

Obtain Proof of Delivery

More actions ▼

Ship date:
Mon 12/18/2017

Actual delivery:
Wed 12/20/2017 12:14 pm



Delivered

Signed for by: T.CLE



Smartlink LLC
Ryan Lynch
Building 3, Suite 102
85 Rangeway Road
North Billerica, MA US 01862
781 392-4040

Town of Woodbridge
Kristine Sullivan
11 Meetinghouse Lane
WOODBIDGE, CT US 06525
203 389-3400

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Smartlink LLC
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Building 3, Suite 102
85 Rangeway Road
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Town of Woodbridge
Terry Gilbertson
11 Meetinghouse Lane
WOODBIDGE, CT US 06525
203 389-3400

Request Notifications

Hold at Location

Obtain Proof of Delivery

More actions ▼

Tracking Number: 9505510019667353155334

Remove X

On Time

Expected Delivery on

SATURDAY

23 DECEMBER
2017 ⓘ

by
8:00pm ⓘ

Status

 **Delivered**

December 23, 2017 at 9:02 am
DELIVERED, INDIVIDUAL PICKED UP AT POSTAL FACILITY
CHARLOTTE, NC 28275

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[See Less](#) ^

221 Whitney Avenue
6th Floor
New Haven, Connecticut 06511
Phone (203) 786-3131

Ernest V. Lindblad
Director-Marketing



A Division of
Southern New England Telephone

*16-235-9 en Sov
Public Service*

September 5, 1984

SUBJECT: Southern New England Telephone Company
Cellular Antenna Approvals

George Michaels
Building Inspector
Town of Woodbridge
Woodbridge, Connecticut 06525

Dear George:

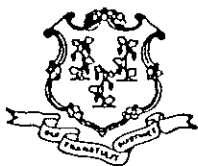
Per my discussion with Sam Speivogel, I am enclosing copies of approvals and legal opinions of laws affecting the construction of this facility. They are:

1. Siting Council Docket No. 44 approvals of the Woodbridge site and other New Haven sites.
2. Town of Westport legal opinion from Assistant Town Attorney on Siting Council jurisdiction over 16-01 company.
3. Town of South Windsor legal opinion from Town Attorney on exemption of public utilities from state or town building codes. We do not need local P/Z commission approval or ZBA approval. We do need a building permit from your department.
4. Copy of appropriate section from State's Public Utility Environmental Standards Act, Chapter 277(a), Section 16-50X.
5. Copy of Public Act 84-249 providing our potential competitors with an even playing field under the Siting Council.

George, please do not hesitate to call me or Peter van Wilgen on 786-3115 if we can provide any additional assistance. We are most anxious to start construction as soon as possible.

E. Lindblad
Attachments

0865M



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

1 CENTRAL PARK PLAZA • NEW BRITAIN, CONN. 06051

PHONE: 827-2604

August 1, 1984

TO: Parties of Record

FROM: Christopher S. Wood *CSW*
Executive Director

RE: Docket No. 44 - An application submitted by The Southern New England Telephone Company for a certificate of environmental compatibility and public need for the construction, maintenance and operation of facilities to provide cellular service in New Haven County.

Enclosed please find copies of the Council's opinion, and decision and order in the above referenced docket.

CSW:kp

cc: Council Members

enclosures

DOCKET NO. 44

AN APPLICATION SUBMITTED BY THE SOUTHERN : CONNECTICUT SITING
NEW ENGLAND TELEPHONE COMPANY FOR A :
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY : COUNCIL
AND PUBLIC NEED FOR THE CONSTRUCTION,
MAINTENANCE AND OPERATION OF FACILITIES TO
PROVIDE CELLULAR SERVICE IN NEW HAVEN COUNTY : July 24, 1984

O P I N I O N

The Southern New England Telephone Company (SNET) applied to the Connecticut Siting Council for a certificate of environmental compatibility and public need for the construction, maintenance, and operation of six telecommunications towers and associated equipment in the towns of Branford, Guilford, Hamden, Milford, Waterbury, and Woodbridge to provide Domestic Cellular Radio Telecommunications service (cellular service) in the New Haven New England County Metropolitan Area (NECMA). Alternate sites were proposed in Branford, Guilford, Milford, and Waterbury. Subsequent to this application, SNET deleted its proposed Hamden site and proposed a site in North Haven as a replacement.

The Council visited proposed and alternative tower sites on April 13 and June 11, 1984. Public hearings were held on this application on June 11, 1984 in Waterbury and Hamden. The Council took administrative notice of its record in its proceedings in Dockets 35 and 40, which also pertain to SNET cellular service.

The Council considered the potential adverse environmental effects of the proposed towers and associated equipment and concludes that they are not sufficient to deny the application. The impact of proposed facilities will be primarily visual. No important historic or recreational facilities are in the immediate vicinity of the proposed facilities.

No regulated wetlands exist on any of the proposed sites, and tree clearing would be minimal.

Radio frequency electromagnetic radiation power densities at the proposed tower sites would be approximately 100 times lower than the present American National Standards Institute standard. Power densities calculated by SNET were based on worst-case assumptions. Such power densities are expected only intermittently, if at all.

In reaching its decision, the Council considered such potential adverse effects of the proposed facilities as their visibility, construction impacts, and compatibility with present and potential surrounding land uses. It is clear that the applicant also considered these matters; several alternative sites were proposed for Council consideration and one site was withdrawn when a better location was obtained. Based on the above considerations, the Council has determined that the proposed sites in Waterbury and Branford are preferable and that the alternative sites in Guilford and Milford are preferable.

The Federal Communications Commission has determined that a public need for the proposed service exists. The Council determined that these facilities are necessary to provide cellular services and to be compatible with future adjacent cellular systems. The use of these facilities to provide cellular service is not contingent on future siting decisions in adjacent areas.

Therefore, the Council will order that a certificate of environmental compatibility and public need be issued for the construction, maintenance, and operation of the telecommunications towers and associated equipment, more particularly specified in the Decision and Order accompanying this Opinion.

DOCKET NO. 44

AN APPLICATION SUBMITTED BY THE SOUTHERN : CONNECTICUT SITING
NEW ENGLAND TELEPHONE COMPANY FOR A :
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY : COUNCIL
AND PUBLIC NEED FOR THE CONSTRUCTION,
MAINTENANCE AND OPERATION OF FACILITIES TO
PROVIDE CELLULAR SERVICE IN NEW HAVEN COUNTY : July 24, 1984

DECISION AND ORDER

Pursuant to the foregoing opinion, the Council hereby directs that a certificate of environmental compatibility and public need as required by section 16-50k of the General Statutes of Connecticut, revisions of 1958, revised to 1983, as amended, be issued to the Southern New England Telephone Company for the construction, operation, and maintenance of a telecommunications tower and associated equipment to provide cellular service at each of the following sites:

Jasudowich tract, Brushy Plain Road, Branford, Connecticut;
Town of Guilford tract, Tanner Marsh Road, Guilford, Connecticut;
Bridgeport Avenue, Milford, Connecticut;
Quagliaro tract, Farmdale Drive, Waterbury, Connecticut;
Pease Road, Woodbridge, Connecticut; and
Dwight Street, North Haven, Connecticut.

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

1. The towers including antennas shall be no taller than necessary to provide the proposed service and in no event shall exceed
 - a) 167' at the Branford site,
 - b) 167' at the Guilford site,
 - c) 117' at the Milford site,
 - d) 167' at the Waterbury site,
 - e) 167' at the Woodbridge site,
 - f) 167' at the North Haven site;
2. A fence not lower than eight feet shall surround each tower and its associated equipment;

3. The applicant or its successor shall notify the Council if and when directional antennas or any other equipment is added to any of these facilities;
4. The applicant or its successor shall permit, in accordance with representations made by it during the proceeding, public or private entities to share space on the facilities, for due consideration received, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing;
5. Unless necessary to comply with condition number six, below, no lights shall be installed on any of these towers;
6. The facilities shall be constructed in accordance with all applicable federal, state, and municipal laws and regulations;
7. The applicant shall submit a development and management plan (D&M) for the Branford, Milford, Woodbridge, and North Haven sites pursuant to sections 16-50j-85 through 16-50j-87 of the regulations of state agencies, except that irrelevant items in section 16-50j-86 need only be identified as such. The D&M plans shall include appropriate evergreen screening of the sites, erosion control measures, reseeding plans, and tree removal plans. The applicant shall comply with the reporting requirements of section 16-50j-87 for all sites;
8. Construction activities shall take place during daylight working hours;
9. This decision and order shall be void and the towers and associated equipment approved herein shall be dismantled and removed, or reapplication for any new use shall be made to the Connecticut

Siting Council before any such new use is made, if the towers do not provide or permanently cease to provide cellular service following completion of construction;

10. This decision and order shall be void if all construction authorized is not completed within three years of the issuance of this decision.

Pursuant to section 16-50p of the General Statutes, we hereby direct that a copy of the opinion and decision and order be served on each person listed below. A notice of the issuance shall be published in the Hartford Courant, New Haven Register, and the Waterbury Republican.

The parties to this proceeding are

The Southern New England Telephone Company (Applicant)
Room 314
227 Church Street
New Haven, Connecticut 06506

ATTENTION: Mr. Peter J. Tyrrell (its attorney)
Senior Attorney

Town of Hamden
Peter F. Villano, Mayor
Shirley Gonzales, Town Planner

represented by:

Mr. Hugh Manke, Esquire
Office of the Town
Attorney
Memorial Town Hall
2372 Whitney Avenue
Hamden, Connecticut 06518

Inland Wetlands Agency
Town of Woodbridge

represented by:

Robert J. Klancko
Chairman
Town Hall
11 Meeting House Lane
Woodbridge, Connecticut 06525

Town Plan and Zoning
Commission
Town of Woodbridge

represented by:

Norman Fineberg
Chairman
Town Hall
11 Meeting House Lane
Woodbridge, Connecticut 06525

The Honorable Peter M. Lerner
State Representative
State of Connecticut
House of Representatives
State Capitol
Hartford, Connecticut 06115

John Menta
Felicia Tencza

represented by:

Ms. Felicia Tencza
580 Gaylord Mountain Road
Hamden, Connecticut 06518

Ms. Renee Robinson
265 Blue Trail
Hamden, Connecticut 06518

(service waived)

Irene L. Wong
Edson H. Mount
Dr. & Mrs. H.M. Fiskio
Dr. & Mrs. Alexander Gottschalk

represented by:

Dr. & Mrs. Alexander Gottschalk
230 Six Rod Highway
Hamden, Connecticut 06518

The Sleeping Giant Park Association

represented by:

Mr. Dag Pfeiffer
President
Box 14
Quinnipiac College
Hamden, Connecticut 06518

West Rock Ridge Park Association

represented by:

Mr. William L. Dohney, Jr., D.D.S.
President
220 Mountain Road
Hamden, Connecticut 06514

Sierra Club

represented by:

Ms. M. Kim Yanoshick
Executive Director
Hartford Chapter
118 Oak Street
Hartford, Connecticut 06106

Quinnipiac College

represented by:

Mr. Richard A. Terry
President
Hamden, Connecticut 06518

Guilford Conservation Commission

represented by:

Ms. Carolyn K. Evans
Chairman
Town Hall
Park Street
Guilford, Connecticut 06437

Mrs. Barbara R. Peterson
Mary & Phil Faust
Anita L. & Richard M. Sullivan

represented by:

Anita L. & Richard M. Sullivan
315 Chestnut Lane
Hamden, Connecticut 06518

Mrs. Pauline H. Hoff

represented by:

Herbert L. Emanuelson, Jr.
Emanuelson and Wynne
205 Church Street
New Haven, Connecticut 06510

Hamden League of Women Voters

represented by:

Mrs. Sherrill Zoller
605 West Woods Road
Hamden, Connecticut 06518
(service waived)

Joan Rosenberg
230 Ridewood Avenue
Hamden, Connecticut 06517

Mr. & Mrs. Richard Sykes
110 Blue Trail
Hamden, Connecticut 06518

Thomas & Claudia Sullivan, Jr.
100 Blue Trail
Hamden, Connecticut 06518

Mr. William N. Pantalone
27 Pease Road
Woodbridge, Connecticut 06525

(service waived)

INTERVENORS

Metromedia Telecommunications
Nutmeg Telecommunications, Inc.
CSI of New Haven
CSI of Stamford
Cellular Communications, Inc.
LIN Cellular Corp.
Cellular Mobile Services
Maxcell Telecommunications, Inc.
Mobile Cellular Telephone, Inc.
Cellular Dynamics
Connecticut Corridor Cellular
Chase/Post Cellular

represented by:

Dwight A. Johnson
Murtha, Cullina, Richter
and Pinney
101 Pearl Street
P.O. Box 3197
Hartford, Connecticut 06103-0197

C E R T I F I C A T I O N

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 24th day of July, 1984.


<u>Council Members</u>	<u>Vote Cast</u>
_____ Gloria Dibble Pond Chairperson	Absent
_____ Commissioner John Downey Designee: Commissioner Peter G. Boucher	Absent
_____ <i>Brian Emerick</i> Commissioner Stanley Pac Designee: Brian Emerick	Yes Absent Abstain
_____ <i>Owen L. Clark</i> Owen L. Clark	Yes
_____ <i>Fred J. Doosy</i> Fred J. Doosy	Yes
_____ <i>Mortimer A. Gelston</i> Mortimer A. Gelston	Yes
_____ <i>James G. Horsfall</i> James G. Horsfall	Yes
_____ Janet Sitty	Absent
_____ <i>Colin C. Tait</i> Colin C. Tait Acting Chairperson	Yes

STATE OF CONNECTICUT)
COUNTY OF HARTFORD)

ss. New Britain, July 24, 1984

I hereby certify that the foregoing is a true and correct copy of the decision and order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:


Christopher S. Wood, Executive Director
Connecticut Siting Council



PROJECT: LTE 2C
SITE NUMBER: CTL02010
FA NUMBER: 10034971
PTN NUMBER: 2051A0D6T8
PACE NUMBER: MRCTB025386
ATC#: 302480
SITE NAME: WOODBRIDGE - PEASE ROAD
SITE ADDRESS: 77 PEASE ROAD
 WOODBRIDGE, CT 06525

550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701

1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

PROJECT INFORMATION

SITE NAME: WOODBRIDGE - PEASE ROAD
SITE NUMBER: CTL02010
SITE ADDRESS: 77 PEASE ROAD
 WOODBRIDGE, CT 06525
FA NUMBER: 10034971
PTN NUMBER: 2051A0D6T8
PACE NUMBER: MRCTB025386
USID NUMBER: 61155
ATC NUMBER: 302480
APPLICANT: AT&T WIRELESS
 550 COCHITUATE ROAD SUITE 550 13 AND 14
 FRAMINGHAM, MA 01701
TOWER OWNER: AMERICAN TOWER CORPORATION
 111 SHILOH ST
 PITTSBURGH, PA 15211
JURISDICTION: TOWN OF WOODBRIDGE
COUNTY: NEW HAVEN
SITE COORDINATES FROM (RFDS)
LATITUDE: 41.3414361°
LONGITUDE: -72.993555°
GROUND ELEV.: 401'
PROPOSED USE: TELECOMMUNICATIONS FACILITY
AT&T RF MANAGER: DEEPAK RATHORE
PHONE: (860) 965-3068
EMAIL: dr701e@att.com

SCOPE OF WORK

LTE 850 WILL BE 2C AT THE SITE WITH BRONZE CONFIGURATION.
 PROPOSED 2C PROJECT SCOPE HEREIN BASED ON RFDS ID # 1831432, VERSION 1.00
 LAST UPDATED 11/09/17.

- (3) NEW ANTENNAS TO REPLACE (3) EXISTING ANTENNAS
- (3) NEW RRUS-32 B2
- UPGRADE DUS TO 5216 AND ADD XMU

- CONTRACTOR SHALL FURNISH ALL MATERIAL WITH THE EXCEPTION OF AT&T SUPPLIED MATERIAL.
- ALL MATERIAL SHALL BE INSTALLED BY THE CONTRACTOR, UNLESS STATED OTHERWISE.

APPLICABLE BUILDING CODES AND STANDARDS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE
 2016 CONNECTICUT STATE BUILDING CODE SUPPLEMENT

ELECTRICAL CODE: 2014 NATIONAL ELECTRIC CODE

- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- ADA ACCESS REQUIREMENTS ARE NOT REQUIRED.
- THIS FACILITY DOES NOT REQUIRE POTABLE WATER AND WILL NOT PRODUCE ANY SEWAGE

REV	DATE	DESCRIPTION	BY
0	10/18/17	90% REVIEW	EB
1	11/30/17	FOR PERMIT	EB

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

SITE LOCATION MAP



NO SCALE

DRAWING INDEX

T	TITLE SHEET
T1	TITLE SHEET
SP1	NOTES AND SPECIFICATIONS
SP2	NOTES AND SPECIFICATIONS
A1	COMPOUND PLAN
A2	EQUIPMENT PLAN
A3	ELEVATIONS
A4	ANTENNA PLANS
A5	EQUIPMENT DETAILS
A6	ANTENNA & CABLE CONFIGURATION
A7	CABLE NOTES AND COLOR CODING
A8	GROUNDING DETAILS

PROJECT CONSULTANTS

PROJECT MANAGER: SMARTLINK
 85 RANGWAY ROAD, SUITE 102
 NORTH BILLERICA, MA 01862
CONTACT: EDWARD WEISSMAN (917) 528-1857
EMAIL: Edward.Weissman@smartlinkllc.com
SITE ACQUISITION: SMARTLINK
 85 RANGWAY ROAD, SUITE 102
 NORTH BILLERICA, MA 01862
CONTACT: SHARON KEEFE (978) 930-3918
EMAIL: Sharon.Keefe@smartlinkllc.com
ENGINEER/ARCHITECT: FULLERTON ENGINEERING
 1100 E. WOODFIELD ROAD, SUITE 500
 SCHAUMBURG, IL 60173
CONTACT: MILEN DIMITROV (847) 908-8439
EMAIL: MDimitrov@FullertonEngineering.com
CONSTRUCTION: SMARTLINK
 85 RANGWAY ROAD, SUITE 102
 NORTH BILLERICA, MA 01862
CONTACT: MARK DONNELLY (617) 515-2080
EMAIL: mark.donnely@smartlinkllc.com

DIRECTIONS

SCAN QR CODE FOR LINK TO SITE LOCATION MAP



NOTE: DRAWING SCALES ARE FOR 11"x17" SHEETS UNLESS OTHERWISE NOTED

SITE NAME
WOODBRIDGE - PEASE ROAD

SITE NUMBER:
CTL02010

SITE ADDRESS
77 PEASE ROAD
WOODBRIDGE, CT 06525

SHEET NAME
TITLE SHEET

SHEET NUMBER
T1

THESE DRAWINGS ARE THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.

GENERAL CONSTRUCTION

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR/CM – SMARTLINK
OWNER – AT&T WIRELESS
2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3. GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14. WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15. CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
17. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.

20. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21. THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
25. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30. CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31. CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
33. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
34. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
36. CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
37. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
38. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
39. NO WHITE STROBE LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.

ANTENNA MOUNTING

40. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL

CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.

41. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
42. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
43. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
44. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
45. CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
46. ALL UNUSED PORTS ON ANY ANTENNAS SHALL BE TERMINATED WITH A 50-OHM LOAD TO ENSURE ANTENNAS PERFORM AS DESIGNED.
47. PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
48. JUMPERS FROM THE TMA'S MUST TERMINATE TO OPPOSITE POLARIZATION'S IN EACH SECTOR.
49. CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO AT&T.
50. TMA'S SHALL BE MOUNTED ON PIPE DIRECTLY BEHIND ANTENNAS AS CLOSE TO ANTENNA AS FEASIBLE IN A VERTICAL POSITION.

TORQUE REQUIREMENTS

51. ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
52. ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
A. RF CONNECTION BOTH SIDES OF THE CONNECTOR.
B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.

FIBER & POWER CABLE MOUNTING

53. THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY SYSTEM, THEY SHALL BE INSTALLED INTO AN INTER DUCT AND A PARTITION BARRIER SHALL BE INSTALLED BETWEEN THE 600 VOLT CABLES AND THE INTER DUCT IN ORDER TO SEGREGATE CABLE TYPES. OPTIC FIBER TRUNK CABLES SHALL HAVE APPROVED CABLE RESTRAINTS EVERY (60) SIXTY FEET AND SECURELY FASTENED TO THE CABLE TRAY SYSTEM. NFPA 70 (NEC) ARTICLE 770 RULES SHALL APPLY.
54. THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY AND SHALL BE SECURED AT INTERVALS NOT EXCEEDING (6) SIX FEET. AN EXCEPTION; WHERE TYPE TC-ER CABLES ARE NOT SUBJECT TO PHYSICAL DAMAGE, CABLES SHALL BE PERMITTED TO MAKE A TRANSITION BETWEEN CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY WHICH ARE SERVING UTILIZATION EQUIPMENT OR DEVICES. A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 336 AND 392 RULES SHALL APPLY.
55. WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, NFPA 70 (NEC) ARTICLE 300 RULES SHALL APPLY.

COAXIAL CABLE NOTES

62. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
63. CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
64. CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION.
65. ALL JUMPERS TO THE ANTENNAS FROM THE MAIN

TRANSMISSION LINE SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 6'-0".

66. ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
67. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
68. CONTRACTOR SHALL GROUND ALL EQUIPMENT INCLUDING ANTENNAS, RET MOTORS, TMA'S, COAX CABLES, AND RET CONTROL CABLES AS A COMPLETE SYSTEM. GROUNDING SHALL BE EXECUTED BY QUALIFIED WIREMEN IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATION AND RECOMMENDATION.
69. CONTRACTOR SHALL PROVIDE STRAIN-RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES, COAX CABLES, AND RET CONTROL CABLES. CABLE STRAIN-RELIEFS AND CABLE SUPPORTS SHALL BE APPROVED FOR THE PURPOSE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
70. CONTRACTOR TO VERIFY THAT EXISTING COAX HANGERS ARE STACKABLE SNAP IN HANGERS. IF EXISTING HANGERS ARE NOT STACKABLE SNAP IN HANGERS THE CONTRACTOR SHALL REPLACE EXISTING HANGERS WITH NEW SNAP IN HANGERS IF APPLICABLE.

GENERAL CABLE AND EQUIPMENT NOTES

71. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMA'S, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
72. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S RECOMMENDATIONS.
73. CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.
74. ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
75. IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:
A. TEMPERATURE SHALL BE ABOVE 50° F.
B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.
C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.
D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS
76. ALL CABLES SHALL BE GROUNDED WITH COAXIAL CABLE GROUND KITS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
A. GROUNDING AT THE ANTENNA LEVEL.
B. GROUNDING AT MID LEVEL, TOWERS WHICH ARE OVER 200'-0", ADDITIONAL CABLE GROUNDING REQUIRED.
C. GROUNDING AT BASE OF TOWER PRIOR TO TURNING HORIZONTAL.
D. GROUNDING OUTSIDE THE EQUIPMENT SHELTER AT ENTRY PORT.
E. GROUNDING INSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
77. ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.



550 COCHITUATE ROAD
SUITE 550 13 AND 14
FRAMINGHAM, MA 01701



1362 MELLON ROAD
SUITE 140
HANOVER, MD 21076



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
COA# PEC.0001444
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
0	10/18/17	90% REVIEW	EB
1	11/30/17	FOR PERMIT	EB

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.



SITE NAME
WOODBIDGE - PEASE ROAD

SITE NUMBER:
CTL02010

SITE ADDRESS
**77 PEASE ROAD
WOODBIDGE, CT 06525**

SHEET NAME
NOTES AND SPECIFICATIONS

SHEET NUMBER
SP1

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NOTICE

Beyond This Point you are entering a controlled area where RF emissions *may exceed* the FCC General Population Exposure Limits.

Follow all posted signs and site guidelines for working in a RF environment.

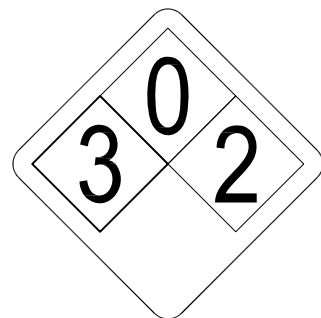
Ref: 47CFR 1.1307(b)

CAUTION

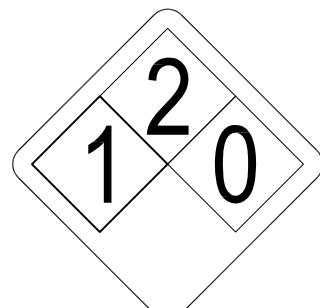
Beyond This Point you are entering a controlled area where RF emissions *may exceed* the FCC Occupational Exposure Limits.

Obey all posted signs and site guidelines for working in a RF environment.

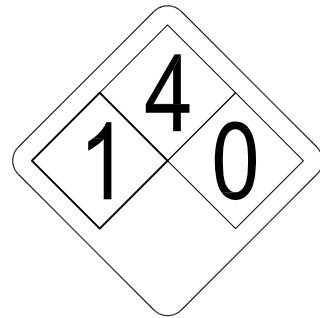
Ref: 47CFR 1.1307(b)



ALERTING SIGN
(FOR CELL SITE BATTERIES)



ALERTING SIGN
(FOR DIESEL FUEL)



ALERTING SIGN
(FOR PROPANE)

550 COCHITUATE ROAD
SUITE 550 13 AND 14
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FULLERTON
ENGINEERING · DESIGN

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ALERTING SIGNS

WARNING!

DANGER DO NOT TOUCH TOWER!

SERIOUS "RF" BURN HAZARD!

MAINTAIN AN ADEQUATE CLEARANCE BETWEEN TOWER SUPPORTS AND GUY WIRES

FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN A RADIO FREQUENCY ENVIRONMENT COULD RESULT IN SERIOUS INJURY. CONTACT CURRENT MAY EXCEED LIMITS PRESCRIBED IN ANSI, IEEE C95.1-1992 FOR CONTROLLED ENVIRONMENTS.

PROPERTY OF AT&T

AUTHORIZED PERSONNEL ONLY

IN CASE OF EMERGENCY, OR PRIOR TO PERFORMING MAINTENANCE ON THIS SITE, CALL 800-638-2822 AND REFERENCE CELL SITE NUMBER _____

ALERTING SIGN

INFO SIGN #4

INFORMATION

AT&T operates telecommunications antennas at this location. Remain at least 3 feet away from any antenna and obey all posted signs.

Contact the owner(s) of the antenna(s) before working closer than 3 feet from the antenna.

Contact AT&T at _____ prior to performing any maintenance or repairs near AT&T antennas. This is Site# _____

Contact the management office if this door/hatch/gate is found unlocked.

INFORMACION

En esta propiedad se ubican antenas de telecomunicaciones operadas por AT&T. Favor mantener una distancia de no menos de 3 pies y obedecer todos los avisos.

Comuníquese con el propietario o los propietarios de las antenas antes de trabajar o caminar a una distancia de menos de 3 pies de la antena.

Comuníquese con AT&T _____ antes de realizar cualquier mantenimiento o reparaciones cerca de la antena de AT&T.

Esta es la estación base maestra. _____

Favor comunicarse con la oficina de la administración del edificio si esta puerta o compuerta se encuentra sin candado.

INFORMATION

ACTIVE ANTENNAS ARE MOUNTED

ON THE OUTSIDE OF THIS BUILDING

BEHIND THIS PANEL

ON THIS STRUCTURE

STAY BACK A MINIMUM OF 3 FEET FROM THESE ANTENNAS

Contact AT&T at _____ and follow their instructions prior to performing any maintenance or repairs closer than 3 feet from the antennas.

This is AT&T site# _____

STAY BACK 3 FEET FROM ANTENNA

GENERAL SIGNAGE GUIDELINES

STRUCTURE TYPE	INFO SIGN #1	INFO SIGN #2	INFO SIGN #3	INFO SIGN #4	STRIPING	NOTICE SIGN	CAUTION SIGN
TOWERS							
MONOPOLE/MONOPINE/MONOPALM	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	CLIMBING SIDE OF THE TOWER	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS			AT THE HEIGHT OF THE FIRST CLIMBING STEP, MIN 9 FT ABOVE GROUND
SEC TOWERS/TOWERS WITH HIGH VOLTAGE	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	CLIMBING SIDE OF THE TOWER	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS			
LIGHT POLES/FLAG POLES	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA AND LESS THAN 9FT ABOVE GROUND	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS			
UTILITY WOOD POLES (JPA)	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA AND LESS THAN 9FT ABOVE GROUND	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS		IF GP MAX VALUE OF MPE AT ANTENNA LEVEL IS: 0-99%; NOTICE SIGN; OVER 99%: CAUTION SIGN AT NO LESS THAN 3FT BELOW ANTENNA AND 9FT ABOVE GROUND	
MICROCELLS MOUNTED ON NON-JPA POLES	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA AND LESS THAN 9FT ABOVE GROUND	ON BACKSIDE OF ANTENNAS	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS		NOTICE OR CAUTION SIGN AT NO LESS THAN 9FT ABOVE GROUND; ONLY IF THE EXPOSURE EXCEEDS 90% OF THE GENERAL PUBLIC EXPOSURE AT EXPOSURE AT 6FT ABOVE GROUND OR AT OUTSIDE OF SURFACE OF ADJACENT BUILDING	
TOWERS							
AT ALL ACCESS POINTS TO THE ROOF	X			X			
ON ANTENNAS	X		X	X			
CONCEALED ANTENNAS	X	X		X			
ANTENNAS MOUNTED FACING OUTSIDE THE BUILDING	X	X		X			
ANTENNAS ON SUPPORT STRUCTURE	X	X		X			
ROOFVIEW GRAPH							
RADIATION AREA IS WITHIN 3FT FROM ANTENNA	X	ADJACENT TO EACH ANTENNA		X		EITHER NOTICE OR CAUTION SIGN (BASED ON ROOFVIEW RESULTS) AT ANTENNA /BARRIER	
RADIATION AREA IS BEYOND 3FT FROM ANTENNA	X	ADJACENT TO EACH ANTENNA		X	DIAGONAL, YELLOW STRIPING AS TO ROOFVIEW GRAPH		
CHURCH STEEPLES	ACCESS TO STEEPLE	ADJACENT TO ANTENNAS IF ANTENNAS ARE CONCEALED	ON BACKSIDE OF ANTENNAS	ACCESS TO STEEPLE			CAUTION SIGN AT THE ANTENNAS
WATER STATIONS	ACCESS TO LADDER	ADJACENT TO ANTENNAS IF ANTENNAS ARE CONCEALED	ON BACKSIDE OF ANTENNAS	ACCESS TO LADDER			CAUTION SIGN BESIDE INFO SIGN #1, MIN. 9FT ABOVE GROUND

NOTES FOR ROOFTOP SITES:

- EITHER NOTICE OR CAUTION SIGNS NEED TO BE POSTED AT EACH SECTOR AS CLOSE AS POSSIBLE TO: THE OUTER EDGE OF THE STRIPED OFF AREA OR THE OUTER ANTENNAS OF THE SECTOR
- IF ROOFVIEWS SHOWS: ONLY BLUE = NOTICE SIGN, BLUE AND YELLOW = CAUTION SIGN, ONLY YELLOW = CAUTION SIGN TO BE INSTALLED
- SHOULD THE REQUIRED STRIPING AREAS INTERFERE WITH ANY STRUCTURE OR EQUIPMENT (A/C, VENTS, ROOF HATCH, DOORS, OTHER ANTENNAS, DISHES, ETC.). PLEASE NOTIFY AT&T TO MODIFY THE STRIPING AREA, PRIOR TO STARTING THE WORK.

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WOODBIDGE - PEASE ROAD

SITE NUMBER:
CTL02010

SITE ADDRESS
**77 PEASE ROAD
WOODBIDGE, CT 06525**

SHEET NAME
NOTES AND SPECIFICATIONS

SHEET NUMBER
SP2

INFO SIGN #1

INFO SIGN #2

INFO SIGN #3

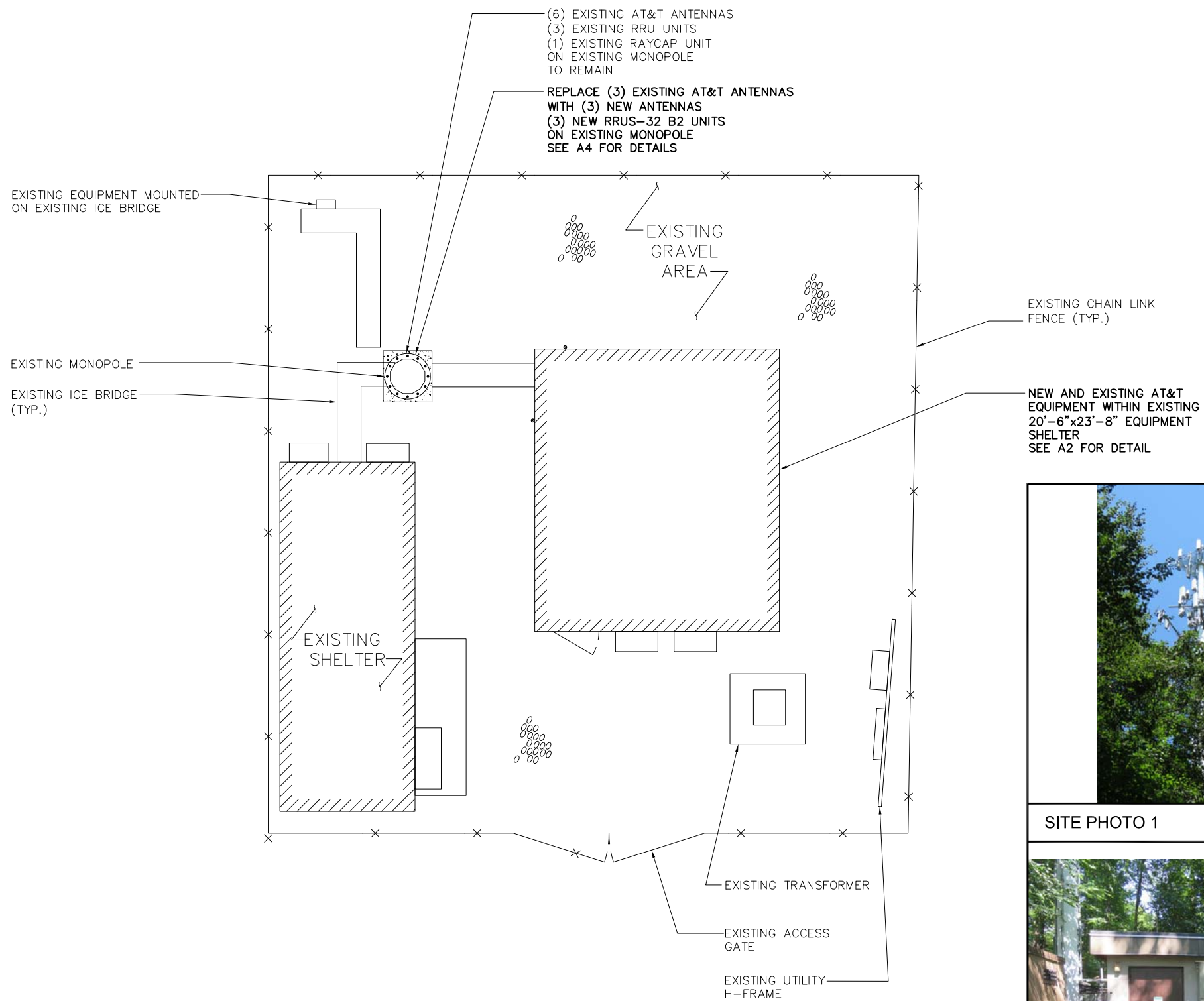
SIGNAGE GUIDELINES CHART

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GRADE LEVEL
AMSL	ABOVE MEAN SEA LEVEL
APPROX	APPROXIMATE
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BTS	BASE TRANSMISSION STATION
CL	CENTERLINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CND	CONDUIT
DWG	DRAWING
FT	FOOT(FEET)
EGB	EQUIPMENT GROUND BAR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ELEV	ELEVATION
EQUIP	EQUIPMENT
(E)	EXISTING
EXT	EXTERIOR
FND	FOUNDATION
F	FIBER
FIF	FACILITY INTERFACE FRAME
GA	GAUGE
GALV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
GSM	GLOBAL SYSTEM FOR MOBILE COMMUNICATION
LTE	LONG TERM EVOLUTION
MAX	MAXIMUM
MCPA	MULTI-CARRIER POWER AMPLIFIER
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MTS	MANUAL TRANSFER SWITCH
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OE/OT	OVERHEAD ELECTRIC/TELCO
PPC	POWER PROTECTION CABINET
PL	PROPERTY LINE
RBS	RADIO BASED STATION
RET	REMOTE ELECTRIC TILT
RRU	REMOTE RADIO UNIT
RGS	RIGID GALVANIZED STEEL
IN	INCH(ES)
INT	INTERIOR
LB(S), #	POUND(S)
SF	SQUARE FOOT
STL	STEEL
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UE/UT	UNDERGROUND ELECTRIC/TELCO
UNO	UNLESS NOTED OTHERWISE
UMTS	UNIVERSAL MOBILE TELE-COMMUNICATION SYSTEM
VIF	VERIFY IN FIELD
W/	WITH
XFMR	TRANSFORMER

SYMBOLS

	REVISION
	WORK POINT
	UTILITY POLE
	COMPRESSED STONE
	BRICK
	CONCRETE
	EARTH
	GRAVEL
	MASONRY
	STEEL
	CENTERLINE
	PROPERTY LINE
	LEASE LINE
	EASEMENT LINE
	CHAIN LINK FENCE
	WOOD FENCE
	BELOW GRADE ELECTRIC
	BELOW GRADE TELEPHONE
	OVERHEAD ELECTRIC/TELEPHONE
	SECTION REFERENCE



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SUITE 140
HANOVER, MD 21076



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SITE NAME

**WOODBIDGE -
PEASE ROAD**

SITE NUMBER:

CTL02010

SITE ADDRESS

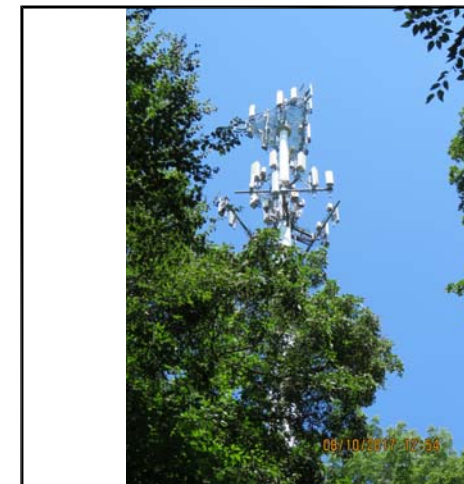
**77 PEASE ROAD
WOODBIDGE, CT 06525**

SHEET NAME

**COMPOUND
PLAN**

SHEET NUMBER

A1



SITE PHOTO 1

SCALE: N.T.S.

2



SITE PHOTO 2

SCALE: N.T.S.

3

COMPOUND PLAN

SCALE: 3/32" = 1'-0"

1



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PEASE ROAD**

SITE NUMBER:

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SITE ADDRESS

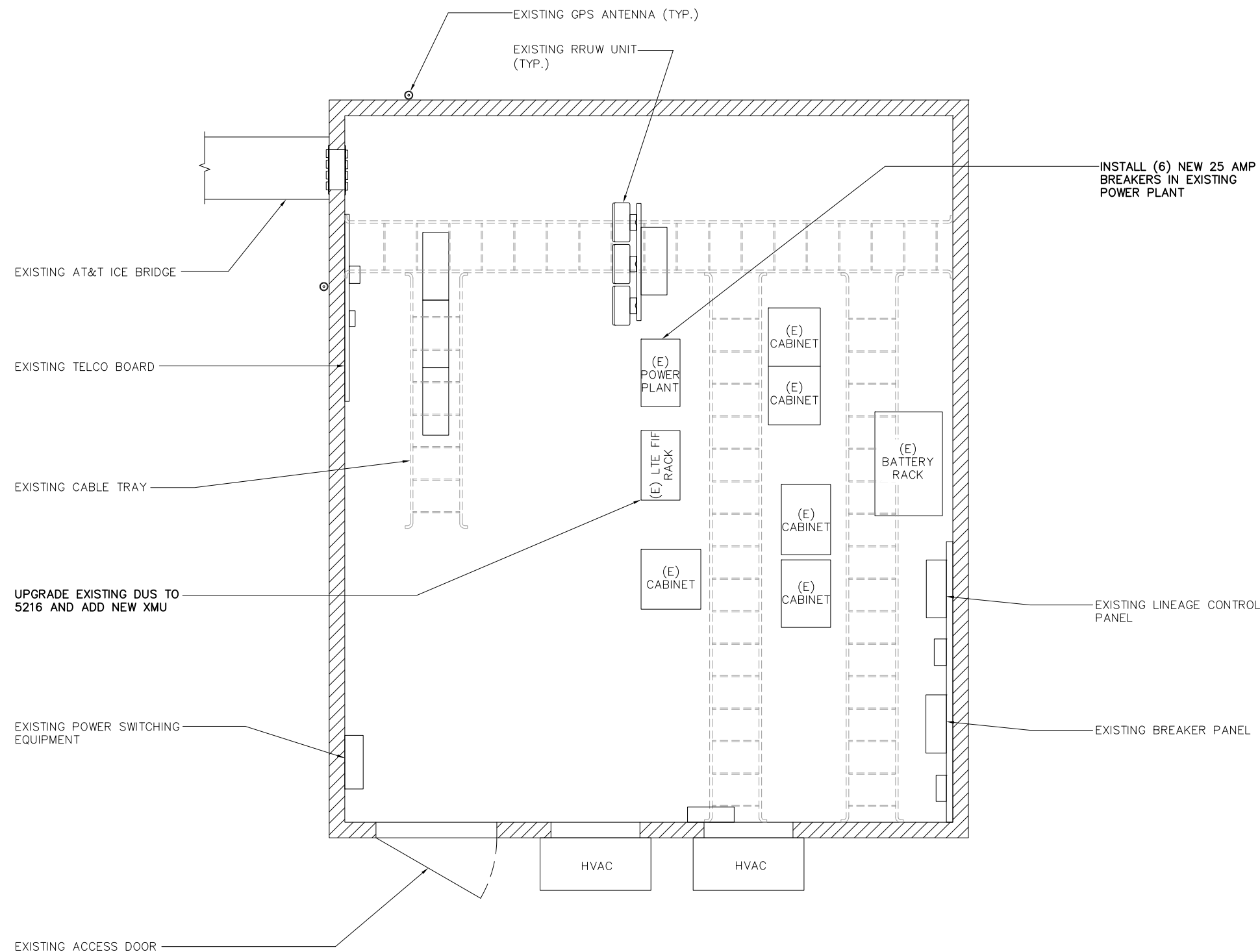
77 PEASE ROAD
WOODBIDGE, CT 06525

SHEET NAME

**EQUIPMENT
PLAN**

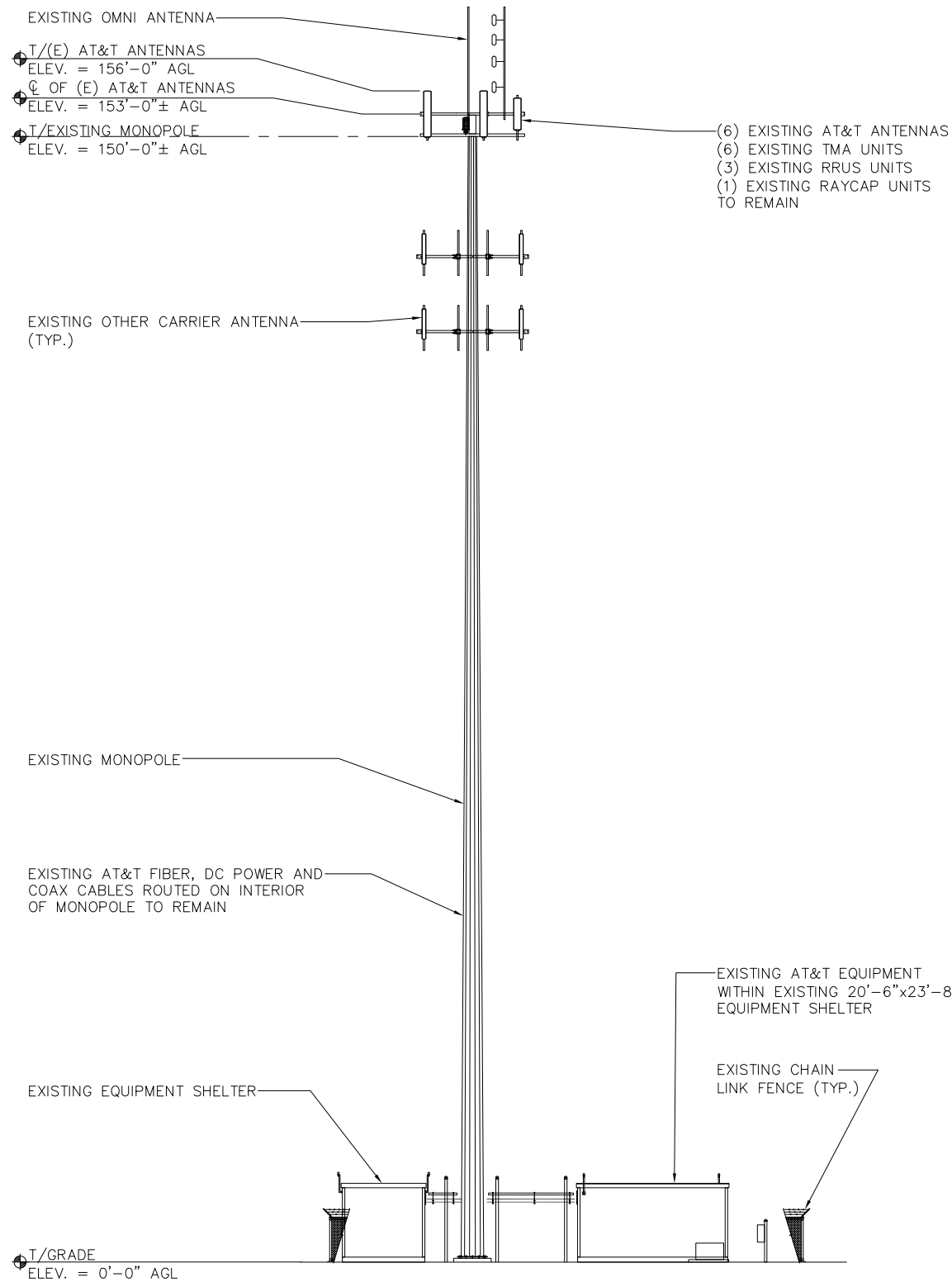
SHEET NUMBER

A2



NOTES:

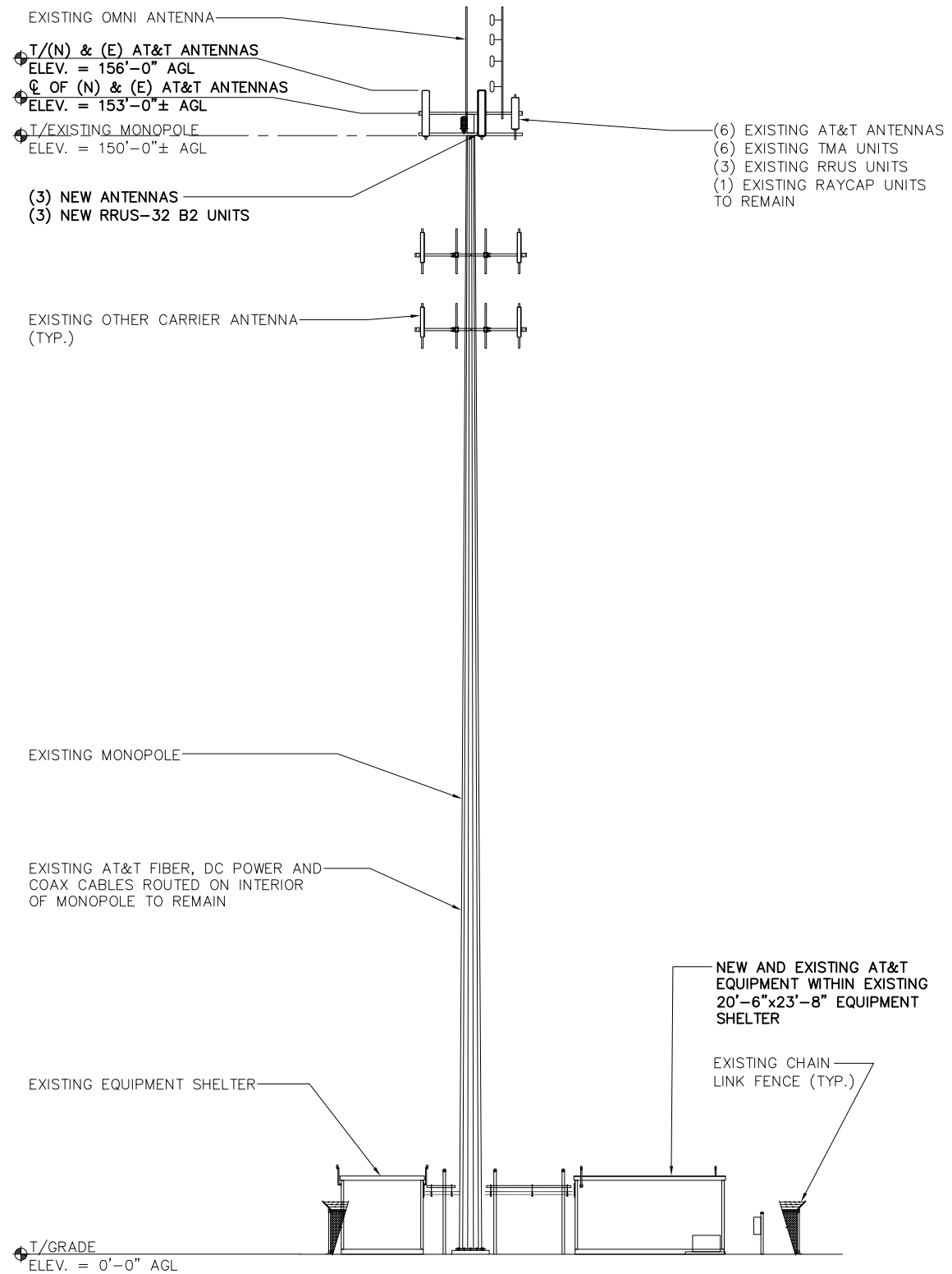
1. CALCULATIONS FOR THE STRUCTURE WERE PREPARED BY OTHERS AND THOSE CALCULATIONS CERTIFY THE CAPACITY OF THE STRUCTURE TO SUPPORT THE NEW EQUIPMENT
2. CALCULATIONS FOR THE ANTENNA MOUNTS WERE PREPARED BY FULLERTON AND THOSE CALCULATIONS CERTIFY THE CAPACITY OF THE STRUCTURE TO SUPPORT THE NEW EQUIPMENT
3. CABLES NOT SHOWN FOR CLARITY



EXISTING ELEVATION

SCALE: 1/16" = 1'-0"

1



NEW ELEVATION

SCALE: 1/16" = 1'-0"

2



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SITE NAME
WOODBIDGE - PEASE ROAD

SITE NUMBER:
CTL02010

SITE ADDRESS
**77 PEASE ROAD
WOODBIDGE, CT 06525**

SHEET NAME
ELEVATIONS

SHEET NUMBER
A3

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PEASE ROAD**

SITE NUMBER:

CTL02010

SITE ADDRESS

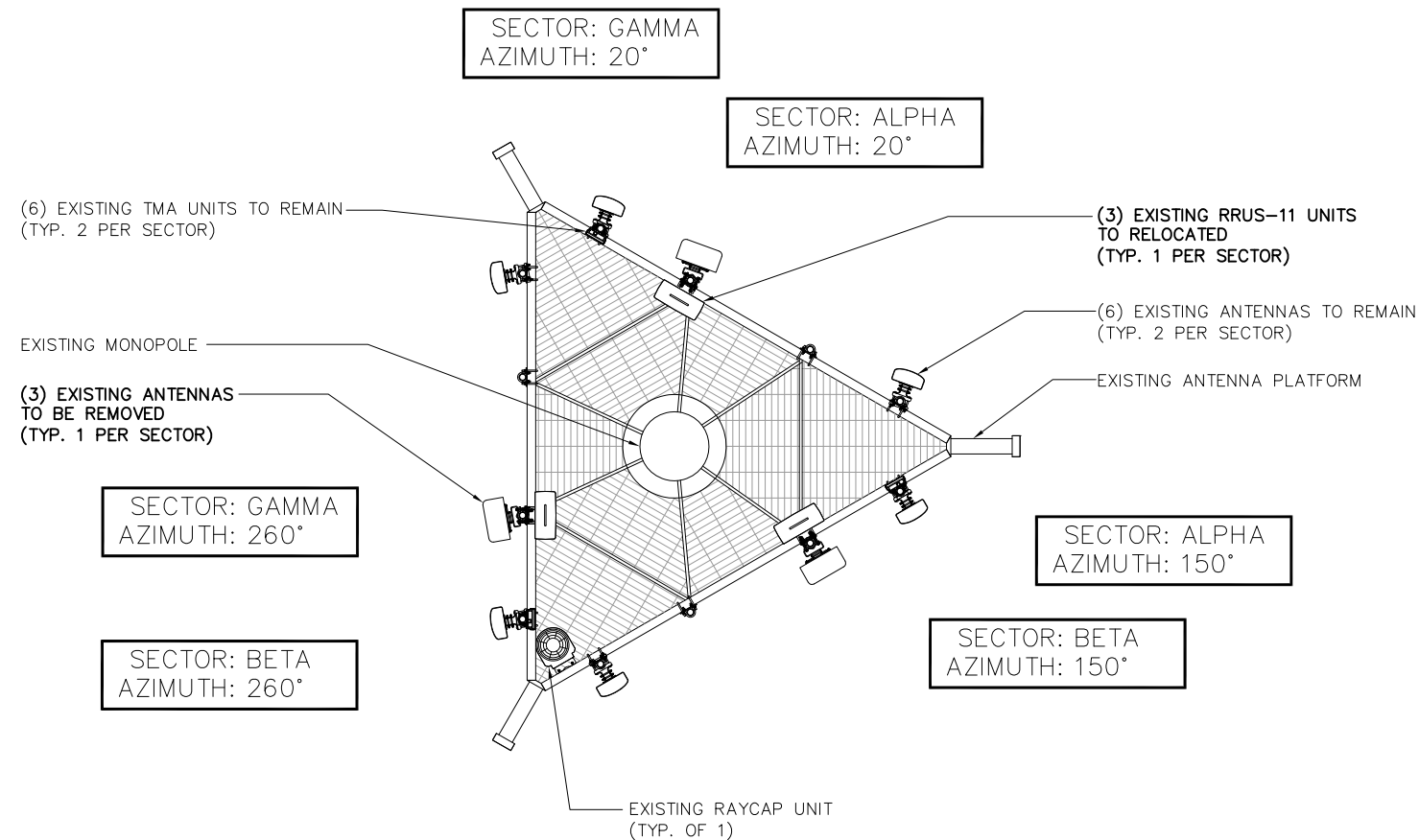
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WOODBIDGE, CT 06525**

SHEET NAME

**ANTENNA
PLANS**

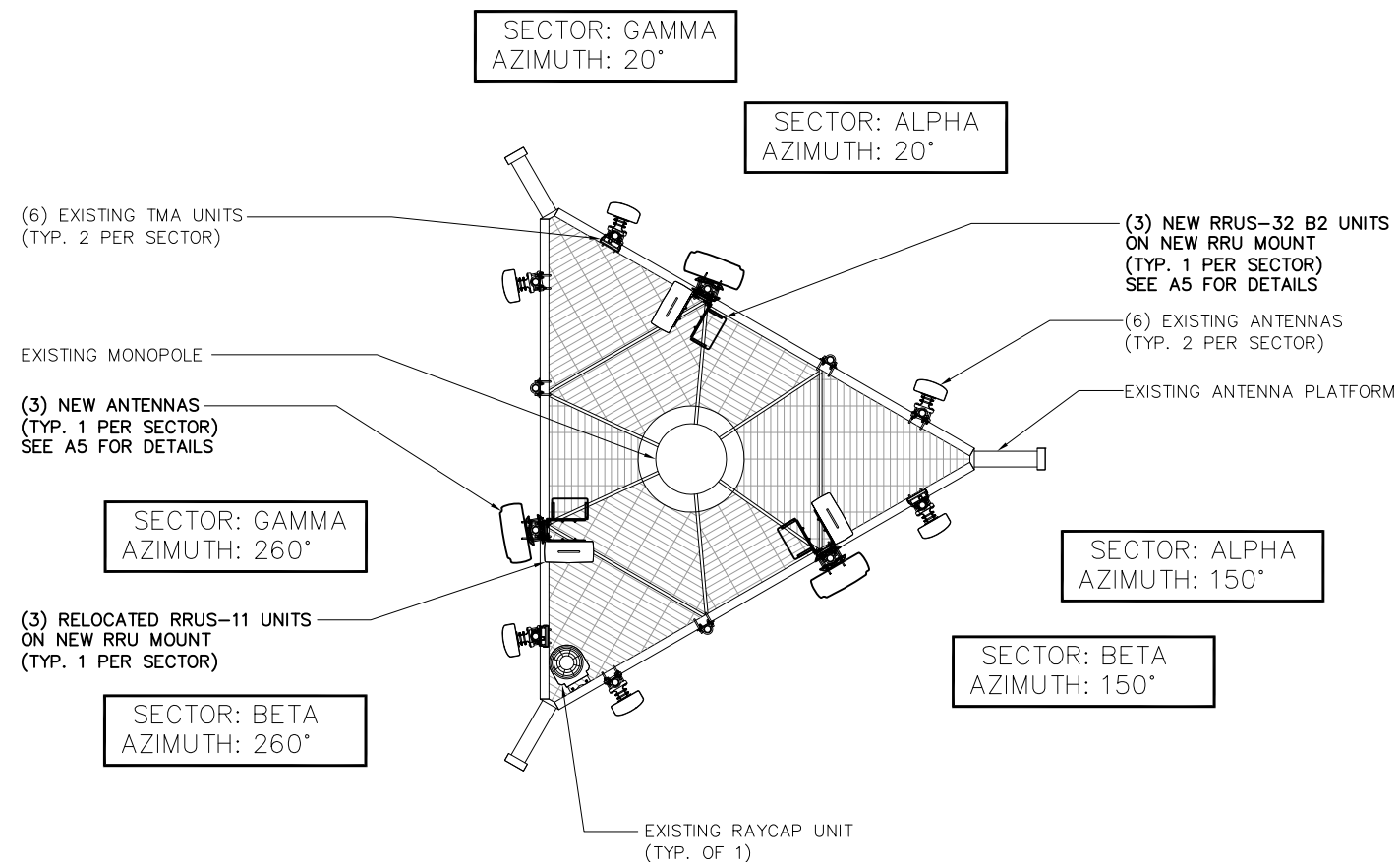
SHEET NUMBER

A4



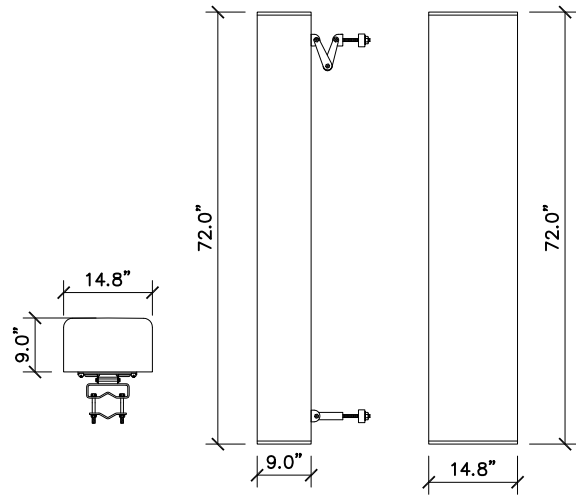
EXISTING ANTENNA PLAN

SCALE: 3/16" = 1'-0" | 1



FINAL ANTENNA PLAN

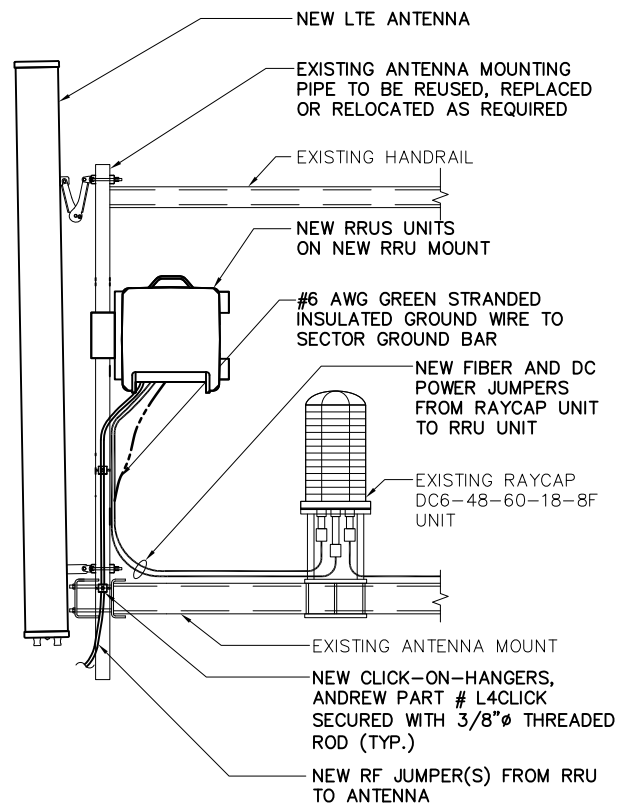
SCALE: 3/16" = 1'-0" | 2



PLAN VIEW SIDE VIEW FRONT VIEW

CCI – HPA-65R-BUU-H6

HEXPORT MULTI-BAND ANTENNA
 FREQUENCY RANGE 698-806 MHz
 824-894 MHz
 1850-1990 MHz
 1710-1755/2110-2170 MHz
 2305-2360 MHz
 ANTENNA WITH BRACKET 51 Lbs
 61 Lbs



ANTENNA SCHEMATIC

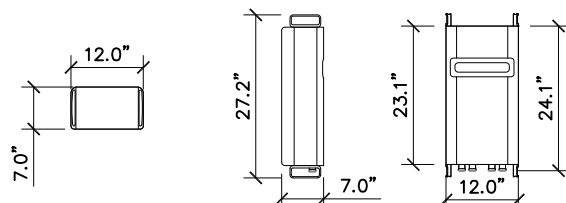
SCALE: N.T.S. 2

NOT USED

SCALE: N.T.S. 3

NOT USED

SCALE: N.T.S. 4



PLAN VIEW SIDE VIEW FRONT VIEW

ERICSSON – RRUS 32 B2

TECHNOLOGIES: FDD, LTE, GSM & WCDMA
 FREQUENCY RANGE: UPLINK 1850-1910 MHz
 DOWNLINK 1930-1990 MHz
 WEIGHT w/SOLAR SHIELD & HANDLE 53 Lbs

NOT USED

SCALE: N.T.S. 6

NOT USED

SCALE: N.T.S. 7

NOT USED

SCALE: N.T.S. 8



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SITE NAME

WOODBIDGE - PEASE ROAD

SITE NUMBER:

CTL02010

SITE ADDRESS

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 WOODBRIDGE, CT 06525

SHEET NAME

EQUIPMENT DETAILS

SHEET NUMBER

A5

RRU SPEC

SCALE: N.T.S. 5

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SITE NAME

**WOODBIDGE -
PEASE ROAD**

SITE NUMBER:

CTL02010

SITE ADDRESS

77 PEASE ROAD
WOODBIDGE, CT 06525

SHEET NAME

**ANTENNA &
CABLE
CONFIGURATION**

SHEET NUMBER

A6

**FINAL ANTENNA CONFIGURATION AND CABLE SCHEDULE
SUPPLIED BY AT&T WIRELESS, FROM RF CONFIG. DATED (11/09/17)**

SECTOR	ANTENNA NUMBER	ANTENNA STATUS & TYPE	ANTENNA MODEL NUMBER	ANTENNA VENDOR	TMA/RRU UNIT	AZIMUTH	ANTENNA CL FROM GROUND	CABLE FEEDER		RAYCAP UNIT
								TYPE	LENGTH	
ALPHA	A-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	150°	153'-0"	1-5/8"φ LDF7-50A	220'-0"	(1) (E) DC6-48-60-18-8F UNIT
	A-2	-	-	-	-	-	-	-	-	
	A-3	(E) LTE1C & (N) 2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT AND (1) NEW RRUS-32 B2 UNIT	20°	153'-0"	(1) EXISTING FIBER CABLE	220'-0"	
								(2) EXISTING DC POWER CABLES	220'-0"	
A-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	150°	153'-0"	1-5/8"φ LDF7-50A	220'-0"	
								1-5/8"φ LDF7-50A	220'-0"	
BETA	B-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	260°	153'-0"	1-5/8"φ LDF7-50A	220'-0"	
	B-2	-	-	-	-	-	-	-	-	
	B-3	(E) LTE1C & (N) 2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT AND (1) NEW RRUS-32 B2 UNIT	150°	153'-0"	SEE ANTENNA A-3 FOR CABLE TYPE AND LENGTH		
	B-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	260°	153'-0"	1-5/8"φ LDF7-50A	
1-5/8"φ LDF7-50A									220'-0"	
GAMMA	C-1	(E) UMTS ANTENNA	7770	POWERWAVE	(2) EXISTING TMA UNITS	20°	153'-0"	1-5/8"φ LDF7-50A	220'-0"	
	C-2	-	-	-	-	-	-	-	-	
	C-3	(E) LTE1C & (N) 2C ANTENNA	HPA-65R-BUU-H6	CCI	(1) EXISTING RRUS-11 UNIT AND (1) NEW RRUS-32 B2 UNIT	260°	153'-0"	SEE ANTENNA A-3 FOR CABLE TYPE AND LENGTH		
	C-4	(E) GSM ANTENNA	7770	POWERWAVE	-	-	20°	153'-0"	1-5/8"φ LDF7-50A	220'-0"
1-5/8"φ LDF7-50A									220'-0"	

LEGEND
(N) - NEW
(E) - EXISTING

1. CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
2. THE SIZE, HEIGHT, AND DIRECTION OF THE ANTENNAS SHALL BE ADJUSTED TO ACHIEVE THE AZIMUTHS SPECIFIED AND LIMIT SHADOWING AND TO MEET THE SYSTEM REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY THE HEIGHT OF THE ANTENNA WITH THE AT&T WIRELESS PROJECT MANAGER.
4. VERIFY TYPE AND SIZE OF TOWER LEG PRIOR TO ORDERING ANY ANTENNA MOUNT.
5. UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL MATERIAL NECESSARY.
6. ANTENNA AZIMUTHS ARE DEGREES OFF OF TRUE NORTH, BEARING CLOCKWISE, IN WHICH ANTENNA FACE IS DIRECTED. ALL ANTENNAS (AND SUPPORTING STRUCTURES AS PRACTICAL) SHALL BE ACCURATELY ORIENTED IN THE SPECIFIED DIRECTION.
7. CONTRACTOR SHALL VERIFY ALL RF INFORMATION PRIOR TO CONSTRUCTION.
8. SWEEP TEST SHALL BE PERFORMED BY GENERAL CONTRACTOR AND SUBMITTED TO AT&T WIRELESS CONSTRUCTION SPECIALIST. TEST SHALL BE PERFORMED PER AT&T WIRELESS STANDARDS.
9. CABLE LENGTHS WERE DETERMINED BASED ON THE DESIGN DRAWING. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
10. CONTRACTOR TO USE ROSENBERGER FIBER LINE HANGER COMPONENTS (OR ENGINEER APPROVED EQUAL).

ANTENNA AND CABLING NOTES

SCALE: N.T.S. 1

RF, DC, & COAX CABLE MARKING LOCATIONS TABLE	
NO	LOCATIONS
1	EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
3	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER.
4	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

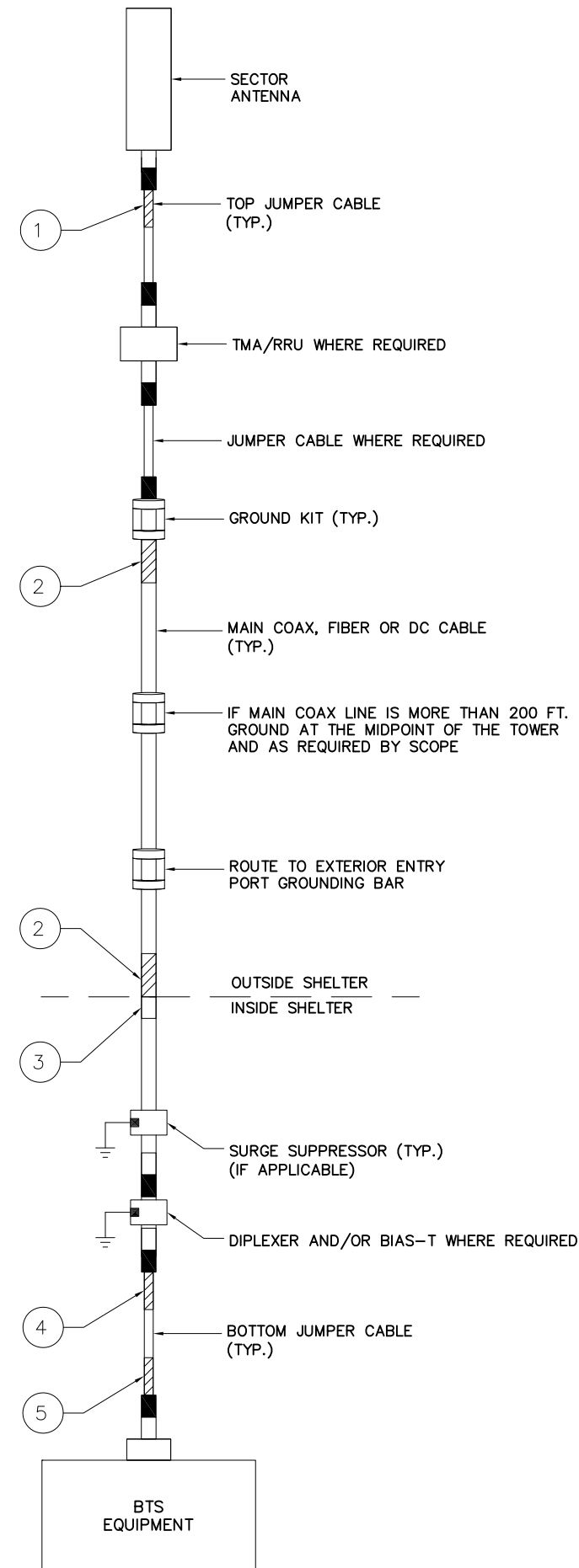
CABLE MARKING DIAGRAM

SCALE: N.T.S. 2

1. THE ANTENNA SYSTEM COAX SHALL BE LABELED WITH VINYL TAPE.
2. THE STANDARD IS BASED ON EIGHT COLORED TAPES-RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE, AND VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
3. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE COLOR CHART".
4. WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN TECHNOLOGIES IS ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING STANDARD. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
5. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) THREE WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
6. ALL COLOR BANDS INSTALLED AT THE TOP OF THE TOWER SHALL BE A MINIMUM OF 3" WIDE, AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE BETWEEN EACH COLOR.
7. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.
8. IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE NEW TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

CABLE MARKING NOTES

SCALE: N.T.S. 3



CABLE COLOR CODING DIAGRAM

SCALE: N.T.S. 4



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SITE NAME
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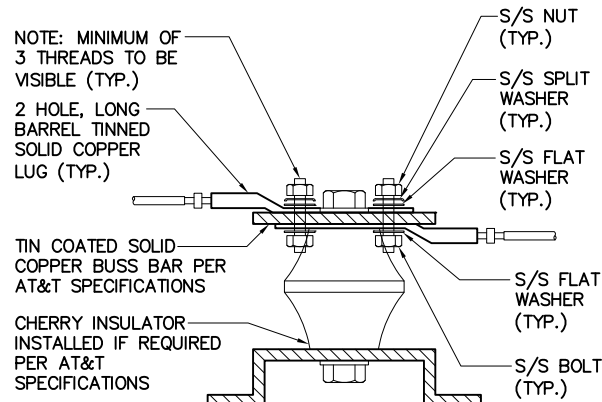
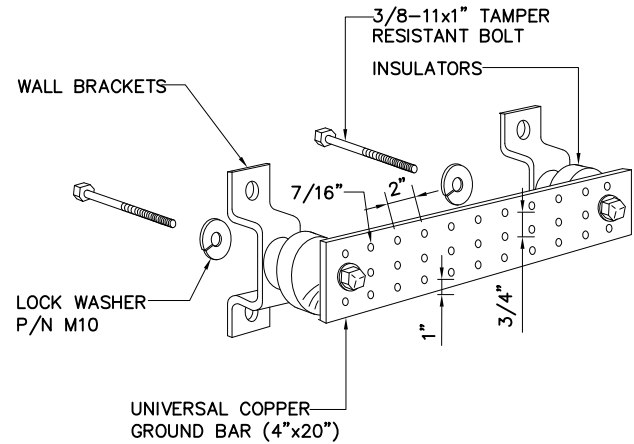
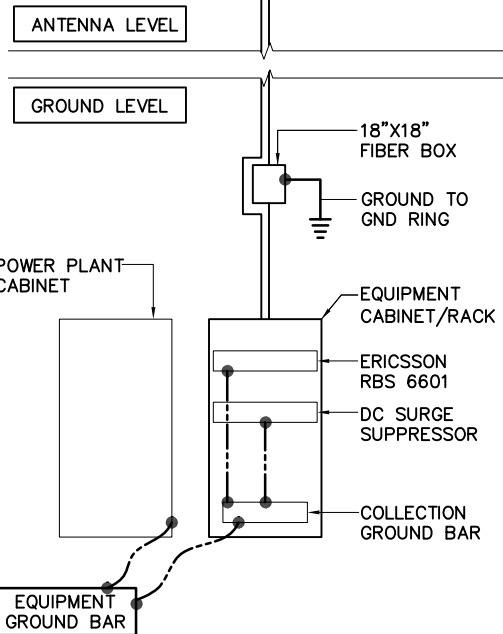
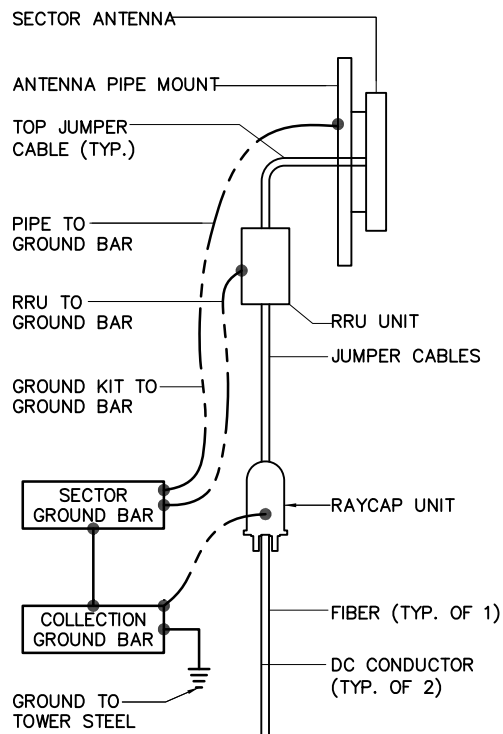
SITE NUMBER:
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SITE ADDRESS
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WOODBIDGE, CT 06525**

SHEET NAME
**CABLE NOTES
AND COLOR
CODING**

SHEET NUMBER
A7

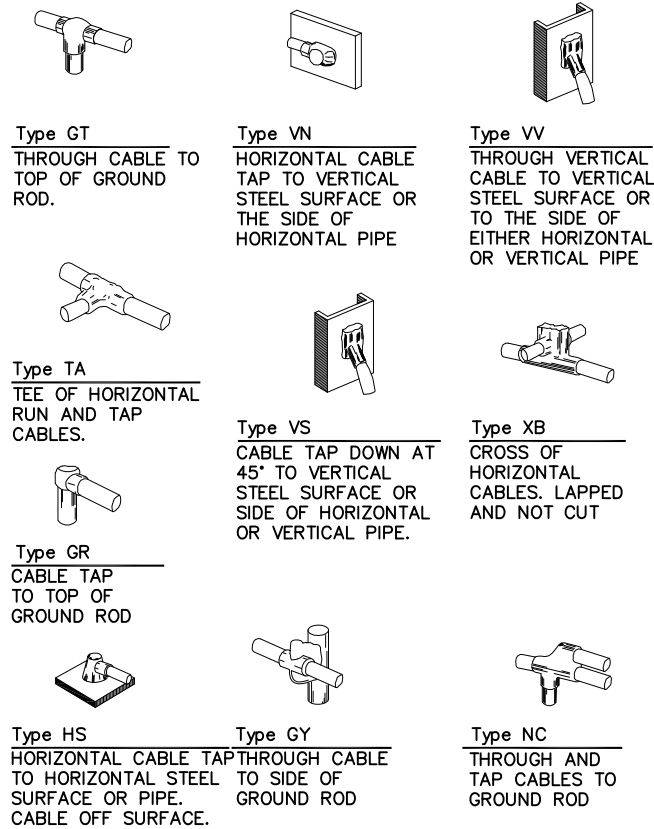
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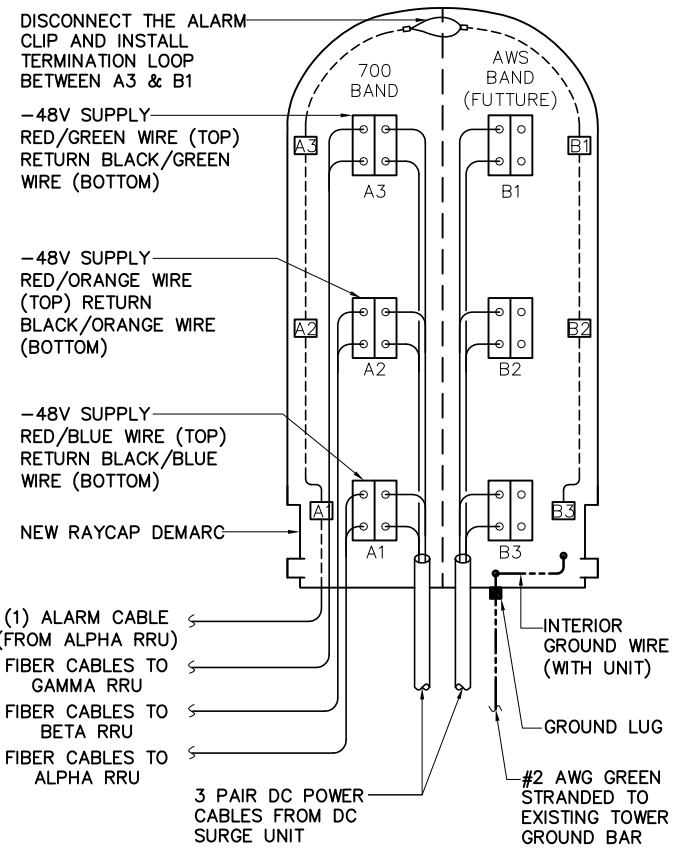
- NOTES:**
1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING SPLIT WASHERS.
 2. COAT WIRE END WITH ANTI-OXIDATION COMPOUND PRIOR TO INSERTION INTO LUG BARREL AND CRIMPING.
 3. APPLY ANTI-OXIDATION COMPOUND BETWEEN ALL LUGS AND BUSS BARS PRIOR TO MATING AND BOLTING.

GROUND BAR DETAIL SCALE: N.T.S. 2

LUG DETAIL SCALE: N.T.S. 3



EXOTHERMIC WELD DETAILS SCALE: N.T.S. 4



RAYCAP DC POWER AND ALARM DET. SCALE: N.T.S. 5

NOT USED SCALE: N.T.S. 6

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SITE NAME
WOODBIDGE - PEASE ROAD

SITE NUMBER:
CTL02010

SITE ADDRESS
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WOODBIDGE, CT 06525

SHEET NAME
GROUNDING DETAILS

SHEET NUMBER
A8

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info@sitesafe.com • www.sitesafe.com



**SmartLink, LLC on behalf of
AT&T Mobility, LLC
Site FA – 10034971
Site ID – CT2010 (MRCTB025386)
USID – 61155
Site Name – Woodbridge-Pease
Road
Site Compliance Report**

**77 Pease Road
Woodbridge, CT 06525**

Latitude: N41-20-29.17
Longitude: W72-59-36.80
Structure Type: Monopole

Report generated date: December 12, 2017
Report by: Leo Romero
Customer Contact: Ryan Lynch

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

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1 General Site Summary

1.1 Report Summary

AT&T Mobility, LLC	Summary
Access to Antennas Locked?	Yes
RF Sign(s) @ access point(s)	No
RF Sign(s) @ antennas	No
Barrier(s) @ sectors	No
Max cumulative simulated RFE level on the Ground Level	<1% General Public Limit at AT&T Mobility, LLC Alpha, Beta and Gamma Sectors
FCC & AT&T Compliant?	Will Be Compliant

The following documents were provided by the client and were utilized to create this report:

RFDS: NEW-ENGLAND_CONNECTICUT_CTV2010_2018-LTE-Next-Carrier_LTE-2C_sp656b_2051A0D6T8_10034971_61155_06-21-2017_Final-Approved_v1.00

CD's: 10034971_AE201_171130_CTL02010_REV1

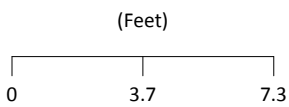
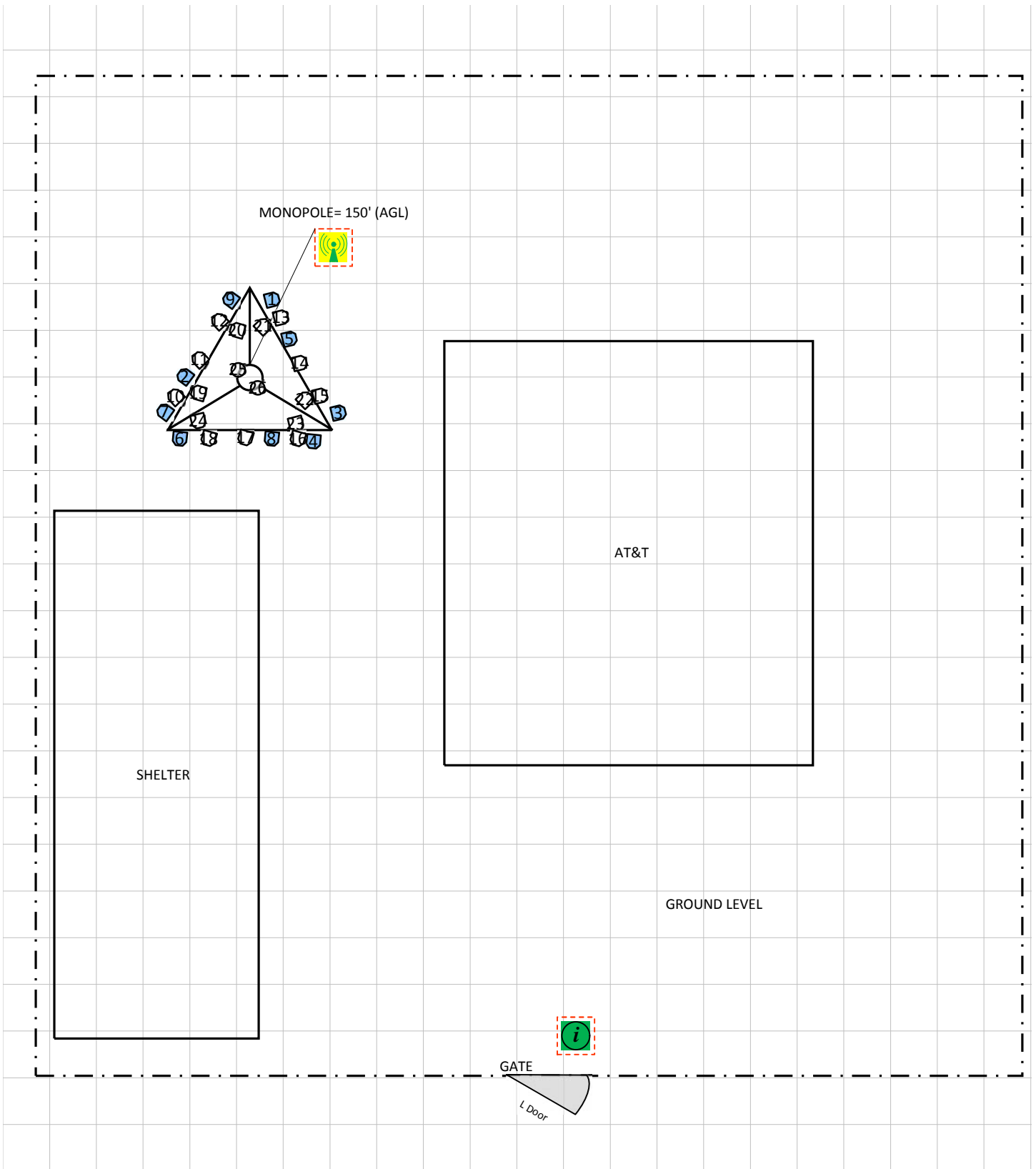
RF Powers Used: RFDS ERP Values

2 Scale Maps of Site

The following diagrams are included:

-) Site Scale Map
-) RF Exposure Diagram
-) AT&T Mobility, LLC Contribution
-) Elevation View

Site Scale Map For: Woodbridge -Pease Road



www.sitesafe.com
 Site Name: Woodbridge -Pease Road
 12/12/2017 1:17:39 PM

Carrier Identification													
	AT&T MOBILITY LLC		VERIZON WIRELESS		T-MOBILE		SPRINT		UNKNOWN CARRIER				
Sign Legend													
	Caution 1		Caution 2		Notice 2		Notice 1		Warning		Info 1		Info 2
Barrier				Proposed Barriers/ Signs		-----		-----					

3 Antenna Inventory

The following antenna inventory on this and the following page, were obtained by the customer and were utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	2G GSM Radio(s)	3G UMTS Radio(s)	4G Radio(s)	Total ERP (Watts)	X	Y	Z (AGL)
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	150	82	4.6	11.51	0	1	0	401.5	28.8'	62.7'	150.7'
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	737	20	66.2	6	11.68	0	0	1	1475.7	24.2'	58.6'	150'
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	1900	20	61.1	6	14.53	0	0	1	4842.1	24.2'	58.6'	150'
3	AT&T MOBILITY LLC (Not in service)	Powerwave 7770	Panel	850	150	82	4.6	11.51	0	0	0	0	32.4'	56.6'	150.7'
4	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	260	82	4.6	11.51	0	1	0	401.5	31'	55.1'	150.7'
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	737	150	66.2	6	11.68	0	0	1	1475.7	29.8'	60.6'	150'
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	1900	150	61.1	6	14.53	0	0	1	4842.1	29.8'	60.6'	150'
6	AT&T MOBILITY LLC (Not in service)	Powerwave 7770	Panel	850	260	82	4.6	11.51	0	0	0	0	23.9'	55.2'	150.7'
7	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	20	82	4.6	11.51	0	1	0	401.5	23.1'	56.7'	150.7'
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	737	260	66.2	6	11.68	0	0	1	1475.7	28.8'	55.2'	150'
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA-65R-BUU-H6	Panel	1900	260	61.1	6	14.53	0	0	1	4842.1	28.8'	55.2'	150'
9	AT&T MOBILITY LLC (Not in service)	Powerwave 7770	Panel	850	20	82	4.6	11.51	0	0	0	0	26.6'	62.7'	150.7'
10	UNKNOWN CARRIER	Generic Panel	Panel	850	30	65	4.6	12.77	-	-	-	1513.9	23.7'	57.5'	140.7'
11	UNKNOWN CARRIER	Generic Panel	Panel	751	30	65	4.6	12.14	-	-	-	982.1	25'	59.5'	140.7'
12	UNKNOWN CARRIER	Generic Panel	Panel	1900	30	65	4.6	15.43	-	-	-	2094.8	26'	61.5'	140.7'
13	UNKNOWN CARRIER	Generic Panel	Panel	850	150	65	4.6	12.77	-	-	-	1513.9	29.3'	61.7'	140.7'
14	UNKNOWN CARRIER	Generic Panel	Panel	751	150	65	4.6	12.14	-	-	-	982.1	30.3'	59.3'	140.7'
15	UNKNOWN CARRIER	Generic Panel	Panel	1900	150	65	4.6	15.43	-	-	-	2094.8	31.4'	57.5'	140.7'
16	UNKNOWN CARRIER	Generic Panel	Panel	850	270	65	4.6	12.77	-	-	-	1513.9	30.2'	55.2'	140.7'
17	UNKNOWN CARRIER	Generic Panel	Panel	751	270	65	4.6	12.14	-	-	-	982.1	27.4'	55.3'	140.7'
18	UNKNOWN CARRIER	Generic Panel	Panel	1900	270	65	4.6	15.43	-	-	-	2094.8	25.4'	55.2'	140.7'
19	UNKNOWN CARRIER	Generic Panel	Panel	1900	0	65	4.6	15.43	-	-	-	2094.8	24.9'	57.7'	130.7'
20	UNKNOWN CARRIER	Generic Panel	Panel	1900	0	65	4.6	15.43	-	-	-	2094.8	27'	61'	130.7'
21	UNKNOWN CARRIER	Generic Panel	Panel	1900	120	65	4.6	15.43	-	-	-	2094.8	28.3'	61.3'	130.7'

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	2G GSM Radio(s)	3G UMTS Radio(s)	4G Radio(s)	Total ERP (Watts)	X	Y	Z (AGL)
22	UNKNOWN CARRIER	Generic Panel	Panel	1900	120	65	4.6	15.43	-	-	-	2094.8	30.6'	57.3'	130.7'
23	UNKNOWN CARRIER	Generic Panel	Panel	1900	240	65	4.6	15.43	-	-	-	2094.8	30.1'	56'	130.7'
24	UNKNOWN CARRIER	Generic Panel	Panel	1900	240	65	4.6	15.43	-	-	-	2094.8	24.9'	56.2'	130.7'
25	UNKNOWN CARRIER	Generic Omni	Omni	450	0	360	20	10.81	-	-	-	100	27'	58.9'	150'
26	UNKNOWN CARRIER	Generic Omni	Omni	450	0	360	20	10.81	-	-	-	100	28.1'	58'	150'

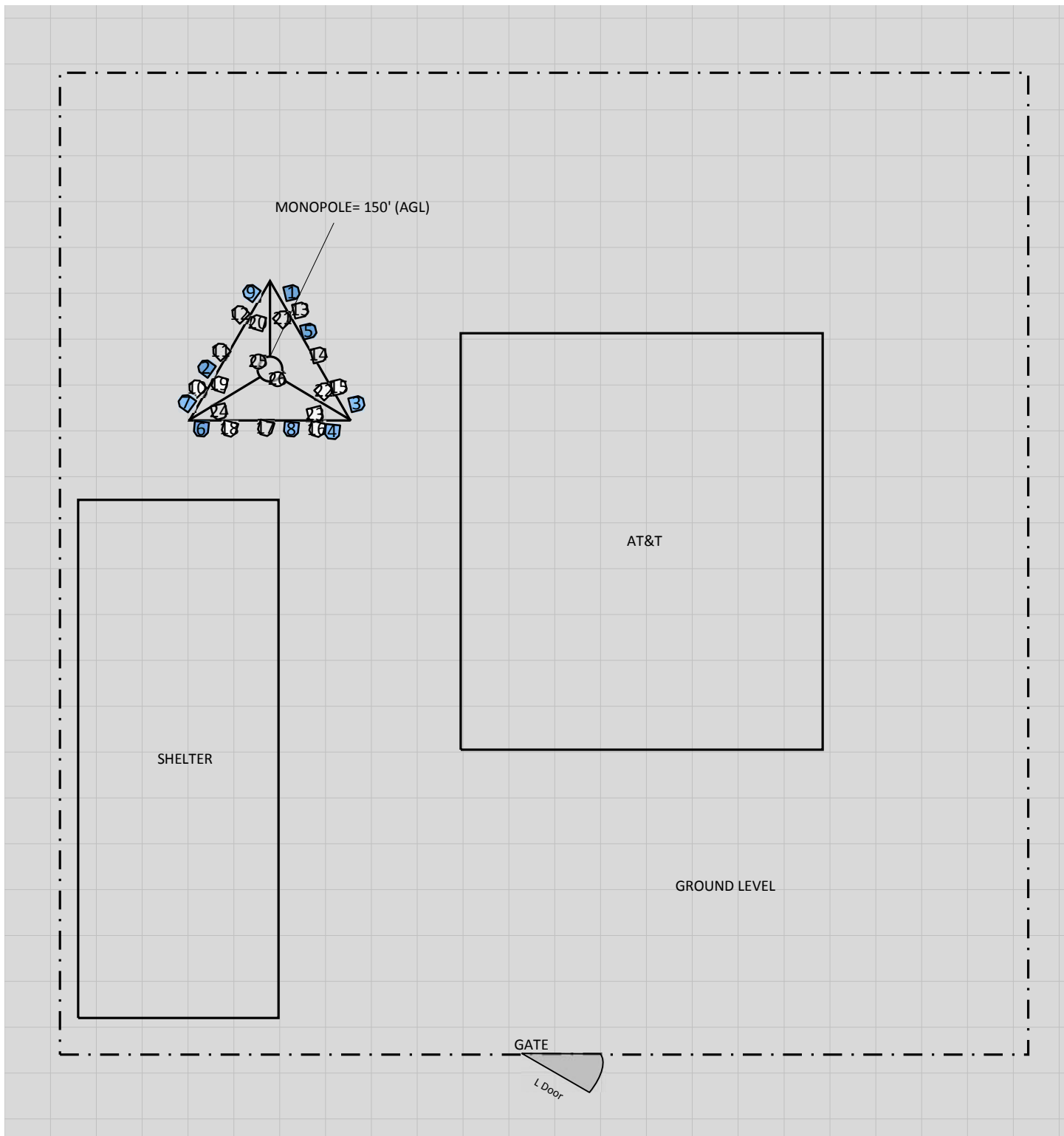
NOTE: X, Y and Z indicate relative position of the bottom of the antenna to the origin location on the site, displayed in the model results diagram. Specifically, the Z reference indicates the bottom of the antenna height **above ground level (AGL)**. The distance to the bottom of the antenna is calculated by subtracting half of the length of the antenna from the antenna centerline. Effective Radiated Power (ERP) is provided by the operator or based on Sitesafe experience. The values used in the modeling may be greater than are currently deployed. For other operators at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to operator, their FCC license and/or antenna information was not available nor could it be secured while on site. Other operator's equipment, antenna models and powers used for modeling are based on obtained information or Sitesafe experience.

4 Emission Predictions

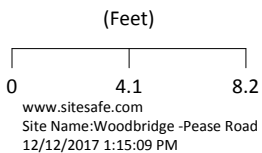
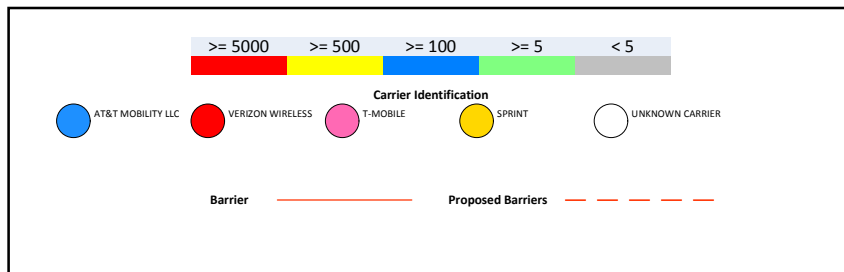
In the RF Exposure Simulations below all heights are reflected with respect to main site level. In most rooftop cases this is the height of the main rooftop and in other cases this can be ground level. Each different height area, rooftop, or platform level is labeled with its height relative to the main site level. Emissions are calculated appropriately based on the relative height and location of that area to all antennas.

The Antenna Inventory heights are referenced to the same level.

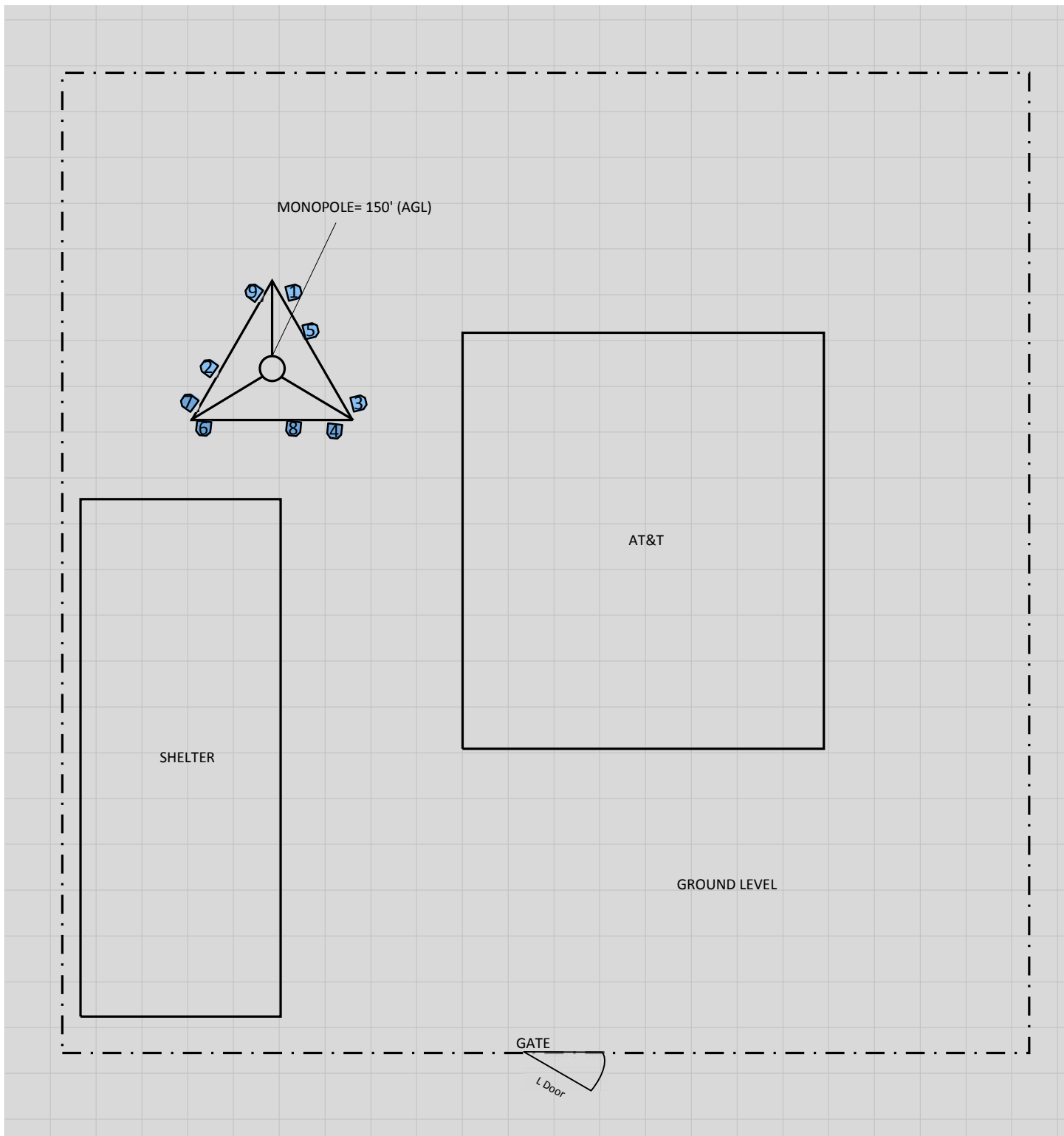
RF Exposure Simulation For: Woodbridge -Pease Road



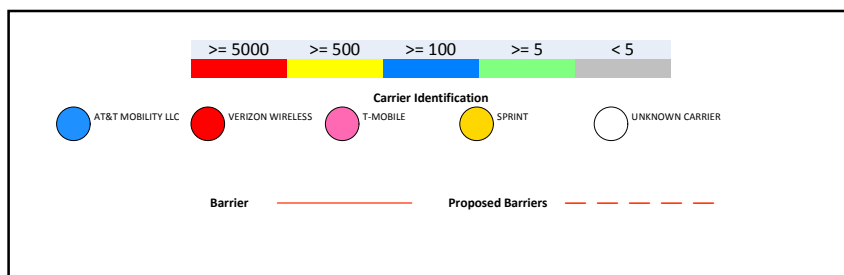
% of FCC Public Exposure Limit
Spatial average 0' - 6'



RF Exposure Simulation For: Woodbridge -Pease Road AT&T Mobility, LLC Contribution



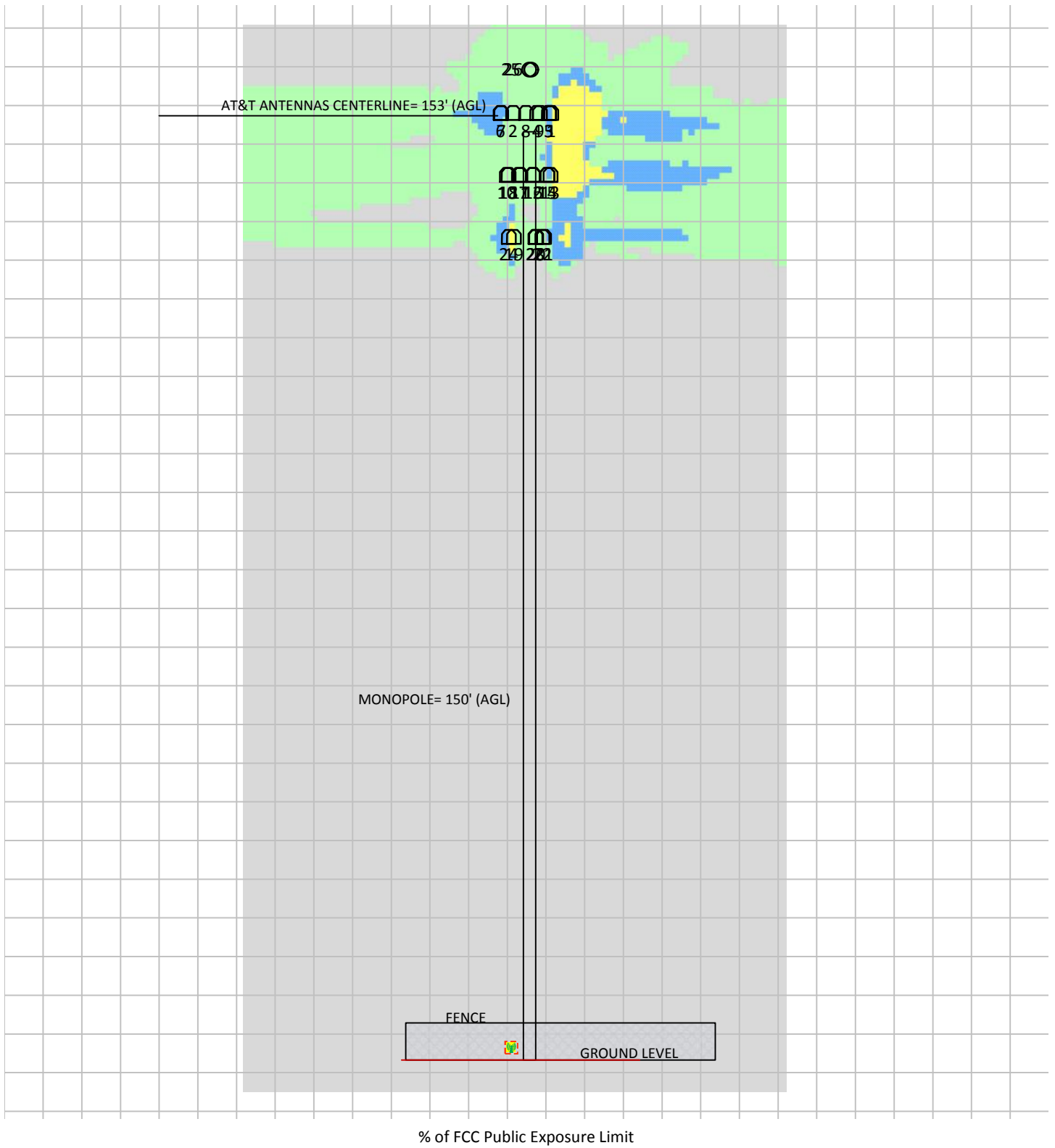
% of FCC Public Exposure Limit
Spatial average 0' - 6'



(Feet)
 0 4.1 8.2
 www.sitesafe.com
 Site Name: Woodbridge -Pease Road
 12/12/2017 1:16:23 PM

SitesafeTC Version: 1.0.0.0 - 0.0.0.266
 Sitesafe OET-65 Model
 Near Field Boundary: 1.5 * Aperture
 Reflection Factor: 1
 Spatially Averaged

RF Exposure Simulation For: Woodbridge -Pease Road Elevation View



% of FCC Public Exposure Limit

<div style="display: flex; justify-content: space-around;"> ≥ 5000 ≥ 500 ≥ 100 ≥ 5 < 5 </div>				
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> ● AT&T MOBILITY LLC </div> <div style="text-align: center;"> ● VERIZON WIRELESS </div> <div style="text-align: center;"> ● T-MOBILE </div> <div style="text-align: center;"> ● SPRINT </div> <div style="text-align: center;"> ● UNKNOWN CARRIER </div> </div>				
Carrier Identification				
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Ⓜ Caution 1 </div> <div style="text-align: center;"> Ⓜ Caution 2 </div> <div style="text-align: center;"> Ⓜ Notice 2 </div> <div style="text-align: center;"> Ⓜ Notice 1 </div> <div style="text-align: center;"> Ⓜ Warning </div> <div style="text-align: center;"> i Info 1 </div> <div style="text-align: center;"> i Info 2 </div> </div>				
Sign Legend				
<div style="display: flex; justify-content: space-around;"> Barrier Proposed Barriers/ Signs </div>				

(Feet)
0 12 23.9
www.sitesafe.com
Site Name: Woodbridge -Pease Road
12/12/2017 1:28:14 PM

SitesafeTC Version: 1.0.0.0 - 0.0.0.266
Sitesafe OET-65 Model
Near Field Boundary: 1.5 * Aperture
Reflection Factor: 1
Single Level (0)

5 Site Compliance

5.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, RF hazard signage and antenna locations, Sitesafe has determined that:

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

The compliance determination is based on General Public RFE levels derived from theoretical modeling, RF signage placement, proposed antenna inventory and the level of restricted access to the antennas at the site. Any deviation from the AT&T Mobility, LLC's proposed deployment plan could result in the site being rendered non-compliant.

Modeling is used for determining compliance and the percentage of MPE contribution.

5.2 Actions for Site Compliance

Based on FCC regulations, common industry practice, and our understanding of AT&T Mobility, LLC RF Safety Policy requirements, this section provides a statement of recommendations for site compliance. Recommendations have been proposed based on our understanding of existing access restrictions, signage, and an analysis of predicted RFE levels.

AT&T Mobility, LLC will be made compliant if the following changes are implemented:

Base of Monopole

Caution 2 sign required.

Compound Gate

Information 1 sign required.

6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of Sitesafe, Inc., in Arlington, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Leo Romero.

December 12, 2017



Appendix A – Statement of Limiting Conditions

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, that Sitesafe became aware of during the normal research involved in creating this report. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data collected by Sitesafe provided by a second party and data collected by Sitesafe, the data will be used.

Appendix B – Regulatory Background Information

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (“OET Bulletin 65”), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or “Controlled environment” and General Public or “Uncontrolled environment”. The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

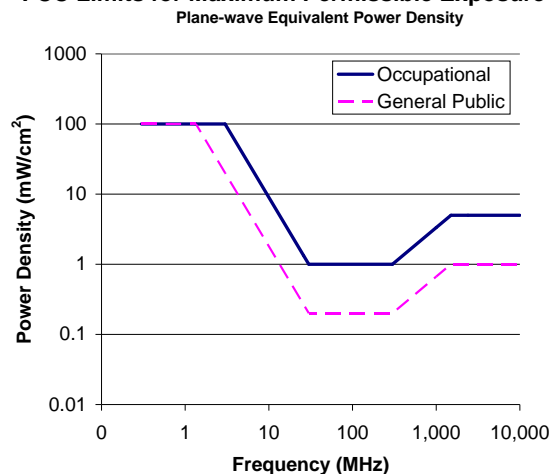
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

FCC Limits for Maximum Permissible Exposure (MPE)



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

- (a) Each employer –
 - (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
 - (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

Appendix C – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

-) Locked door or gate
-) Alarmed door
-) Locked ladder access
-) Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Maintain a 3 foot clearance from all antennas: There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

Site RF Emissions Diagram: Section 4 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

Appendix D – RF Emissions

The RF Emissions Simulation(s) in this report display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix E.

The key at the bottom of each RF Emissions Simulation indicates percentages displayed referenced to FCC General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- J Areas indicated as Gray are predicted to be below 5% of the MPE limits. **Gray represents areas more than 20 times below the most conservative exposure limit.**
- J Green represents areas are predicted to be between 5% and 100% of the MPE limits. **Green areas are accessible to anyone.**
- J Blue represents areas predicted to exceed the General Public MPE limits but are less than Occupational limits. **Blue areas should be accessible only to RF trained workers.**
- J Yellow represents areas predicted to exceed Occupational MPE limits. **Yellow areas should be accessible only to RF trained workers able to assess current exposure levels.**
- J Red represents areas predicted to have exposure more than 10 times the Occupational MPE limits. **Red indicates that the RF levels must be reduced prior to access.** An RF Safety Plan is required which outlines how to reduce the RF energy in these areas prior to access.

Appendix E – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The modeling is based on recommendations from the FCC's OET-65 bulletin with the following variances per AT&T guidance. Reflection has not been considered in the modeling, i.e. the reflection factor is 1.0. The near / far field boundary has been set to 1.5 times the aperture height of the antenna and modeling beyond that point is the lesser of the near field cylindrical model and the far field model taking into account the gain of the antenna.

The site has been modeled with these assumptions to show the maximum RF energy density. Areas modeled with exposure greater than 100% of the General Public MPE level may not actually occur, but are shown as a prediction that could be realized. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

Gain (of an antenna) – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

General Population/Uncontrolled Environment – Defined by the FCC, as an area where exposure to RF energy may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The maximum levels of RF exposure a person may be exposed to without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the

potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency (RF) – The frequencies of electromagnetic waves which are used for radio communications. Approximately 3 kHz to 300 GHz.

Radio Frequency Exposure (RFE) – The amount of RF power density that a person is or might be exposed to.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average power density an average sized human will be exposed to at a location.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix F – References

The following references can be followed for further information about RF Health and Safety.

Sitesafe, Inc.

<http://www.sitesafe.com>

FCC Radio Frequency Safety

<http://www.fcc.gov/encyclopedia/radio-frequency-safety>

National Council on Radiation Protection and Measurements (NCRP)

<http://www.ncrponline.org>

Institute of Electrical and Electronics Engineers, Inc., (IEEE)

<http://www.ieee.org>

American National Standards Institute (ANSI)

<http://www.ansi.org>

Environmental Protection Agency (EPA)

<http://www.epa.gov/radtown/wireless-tech.html>

National Institutes of Health (NIH)

<http://www.niehs.nih.gov/health/topics/agents/emf/>

Occupational Safety and Health Agency (OSHA)

<http://www.osha.gov/SLTC/radiofrequencyradiation/>

International Commission on Non-Ionizing Radiation Protection (ICNIRP)

<http://www.icnirp.org>

World Health Organization (WHO)

<http://www.who.int/peh-emf/en/>

National Cancer Institute

<http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones>

American Cancer Society (ACS)

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED

European Commission Scientific Committee on Emerging and Newly Identified Health Risks

http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_022.pdf

Fairfax County, Virginia Public School Survey

<http://www.fcps.edu/fts/safety-security/RFEESurvey/>

UK Health Protection Agency Advisory Group on Non-ionising Radiation

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368

Norwegian Institute of Public Health

<http://www.fhi.no/dokumenter/545eea7147.pdf>



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CORPORATION

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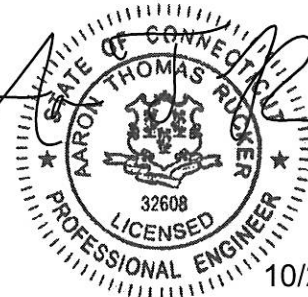
**TOWER
ENGINEERING
PROFESSIONALS**

Structural Analysis Report

Structure : 150 ft Monopole
ATC Site Name : Woodbridge CT 1, CT
ATC Site Number : 302480
Engineering Number : OAA715326_C3_01
Proposed Carrier : AT&T Mobility
Carrier Site Name : Woodbridge Pease Road
Carrier Site Number : CTL02010 / 10034971
Site Location : 77 Pease Road
Woodbridge, CT 06525-2044
41.341400,-72.993600
County : New Haven
Date : October 24, 2017
Max Usage : 87%
Result : Pass

Prepared By:
Sean Rock, E.I.
TEP

Reviewed By:



10/24/2017

COA: PEC.0001553



Table of Contents

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Smith Cullum Acquisition #CT-0016, dated May 15, 2001 AT&T SPEC #AT-8935, dated April 13, 1984
Foundation Drawing	Mapping By ATC, PIT ID#302480, dated April 1, 2009
Geotechnical Report	Johnson Soil Job#15220, dated May 20, 2002
Modifications	Spectrasite Drawing #CT-0016-E1, dated September 19, 2002 ATC Project #40430532, dated May 29, 2007 ATC Project #42299235, dated November 18, 2008 ATC Project #44303434, dated January 18, 2010 ATC Project #447950F2, dated April 2, 2010

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}) / 124 mph (3-Second Gust, V_{ULT})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.19$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

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

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



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	6	Powerwave LGP13519	Platform w/ Handrails	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 3" Conduit	AT&T Mobility
		6	LGP TMA-DD 1900			
		1	Raycap DC6-48-60-18-8F ("Squid")			
		3	Ericsson RRUS 11 (Band 12) (55 lb)			
	6	Powerwave 7770.00	(4) 1 5/8" Coax		Other	
	160.0	1				25' Omni
153.0	1	15' Dipole				
142.0	142.0	1	Scala CL-FM	Flush	(1) 7/8" Coax	Blount Comm.
130.0	130.0	3	Ericsson RRUS 11 B12	Stand-Offs	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex	Metro PCS
		3	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)			
		3	Ericsson AIR B4A/B12P-B8P, 4FT			
119.0	119.0	6	RFS FD9R6004/1C-3L	T-Arms	(12) 1 5/8" Coax (1) 1 5/8" Hybriflex	Verizon
		6	12" x 9" x 6" TMA			
		3	Alcatel-Lucent RRH2x40-AWS			
		3	Antel BXA-171063-8BF-EDIN-X			
		3	Antel BXA-171085-8CF-EDIN-X			
		3	Antel BXA-80063/4CF			
		1	RFS DB-T1-6Z-8AB-OZ			
		3	Antel BXA-70063/6CF_			
107.0	107.0	1	GPS	Flush	(1) 1/2" Coax	
39.0	39.0	1	GPS	Flush	(1) 1/2" Coax	AT&T Mobility

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	3	KMW AM-X-CD-16-65-00T-RET	-	(1) 0.39" Cable	AT&T Mobility

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	3	Ericsson RRUS 32 B2	Platform w/ Handrails	(1) 0.39" Fiber Trunk	AT&T Mobility
		3	CCI HPA-65R-BUU-H6			

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



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	61%	Pass
Shaft	86%	Pass
Base Plate	39%	Pass
Flanges	87%	Pass
Reinforcement	74%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,239.0	25%
Axial (Kips)	58.2	7%

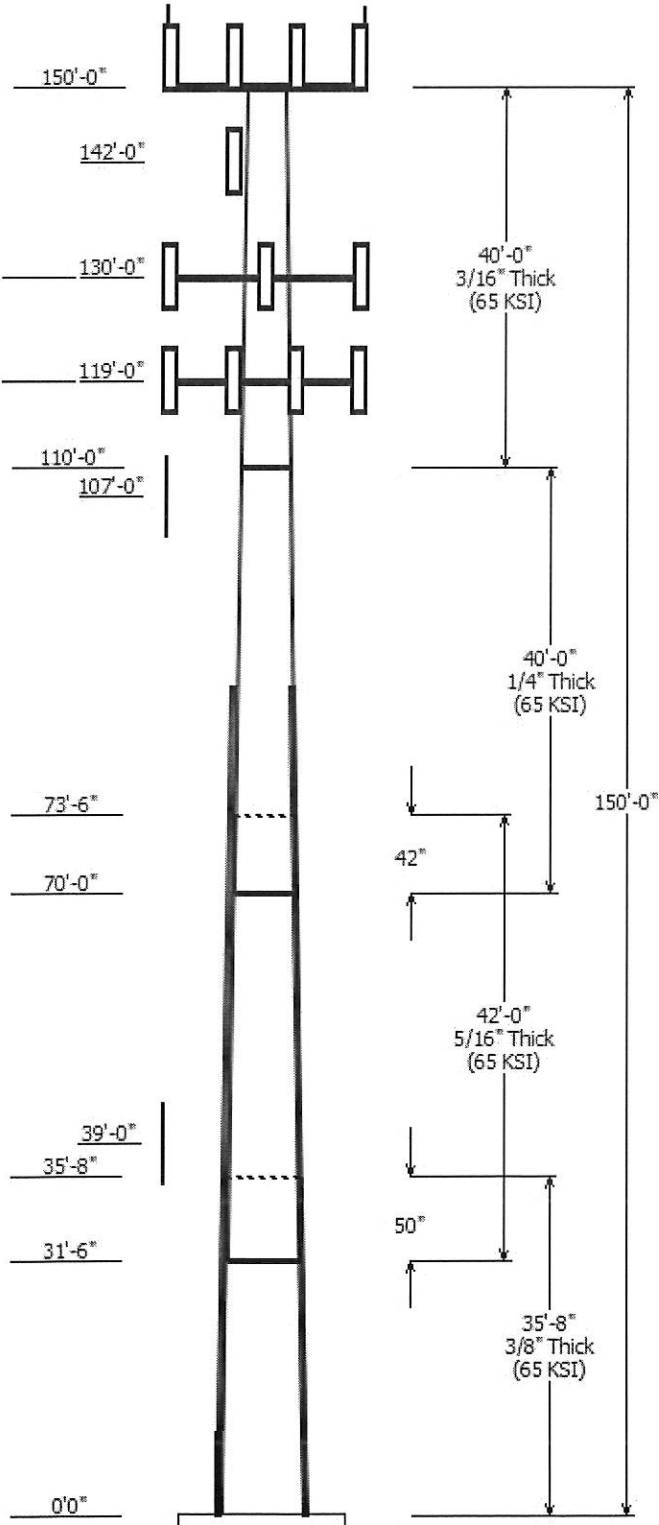
The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
150.0	Ericsson RRUS 32 B2	AT&T Mobility	2.535	2.101
	CCI HPA-65R-BUU-H6			

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

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Job Information	
Pole :	302480
Code:	ANSI/TIA-222-G
Description :	150 ft ITT Meyer Monopole
Client :	AT&T MOBILITY
Struct Class :	II
Location :	Woodbridge CT 1, CT
Shape :	12 Sides
Exposure :	B
Height :	150.00 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.156707(in/ft)

Sections Properties								
Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
		Across Top	Flats Bottom					
1	35.667	31.79	37.38	0.375		0.000	0.156700	65
2	42.000	26.48	33.06	0.313	Slip Joint	50.000	0.156700	65
3	40.000	21.26	27.53	0.250	Slip Joint	42.000	0.156700	65
4	40.000	14.99	21.26	0.188	Butt Joint	0.000	0.156700	65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	153.000	3	Ericsson RRUS 32 B2
150.000	153.000	3	CCI HPA-65R-BUU-H6
150.000	153.000	1	15' Dipole
150.000	160.000	1	25' Omni
150.000	150.000	1	Flat Platform w/ Handrails
150.000	153.000	6	Powerwave 7770.00
150.000	153.000	3	Ericsson RRUS 11 (Band 12) (55
150.000	153.000	1	Raycap DC6-48-60-18-8F
150.000	153.000	6	LGP Allgon TMA-DD 1900
150.000	153.000	6	Powerwave LGP13519
142.000	142.000	1	Scala CL-FM
130.000	130.000	3	Ericsson AIR B4A/B12P-B8P,
130.000	130.000	3	Stand-Off
130.000	130.000	3	Ericsson AIR 21, 1.3M, B2A B4P
130.000	130.000	3	Ericsson RRUS 11 B12
119.000	119.000	6	12" x 9" x 6" TMA
119.000	119.000	3	Amphenol Antel BXA-171085-
119.000	119.000	3	Amphenol Antel BXA-171063-
119.000	119.000	3	Antel BXA-70063/6CF
119.000	119.000	1	RFS DB-T1-6Z-8AB-0Z
119.000	119.000	3	Alcatel-Lucent RRH2x40-AWS
119.000	119.000	6	RFS FD9R6004/1C-3L
119.000	119.000	3	Round T-Arms
119.000	119.000	3	Antel BXA-80063/4CF
107.000	107.000	1	GPS
39.000	39.000	1	GPS

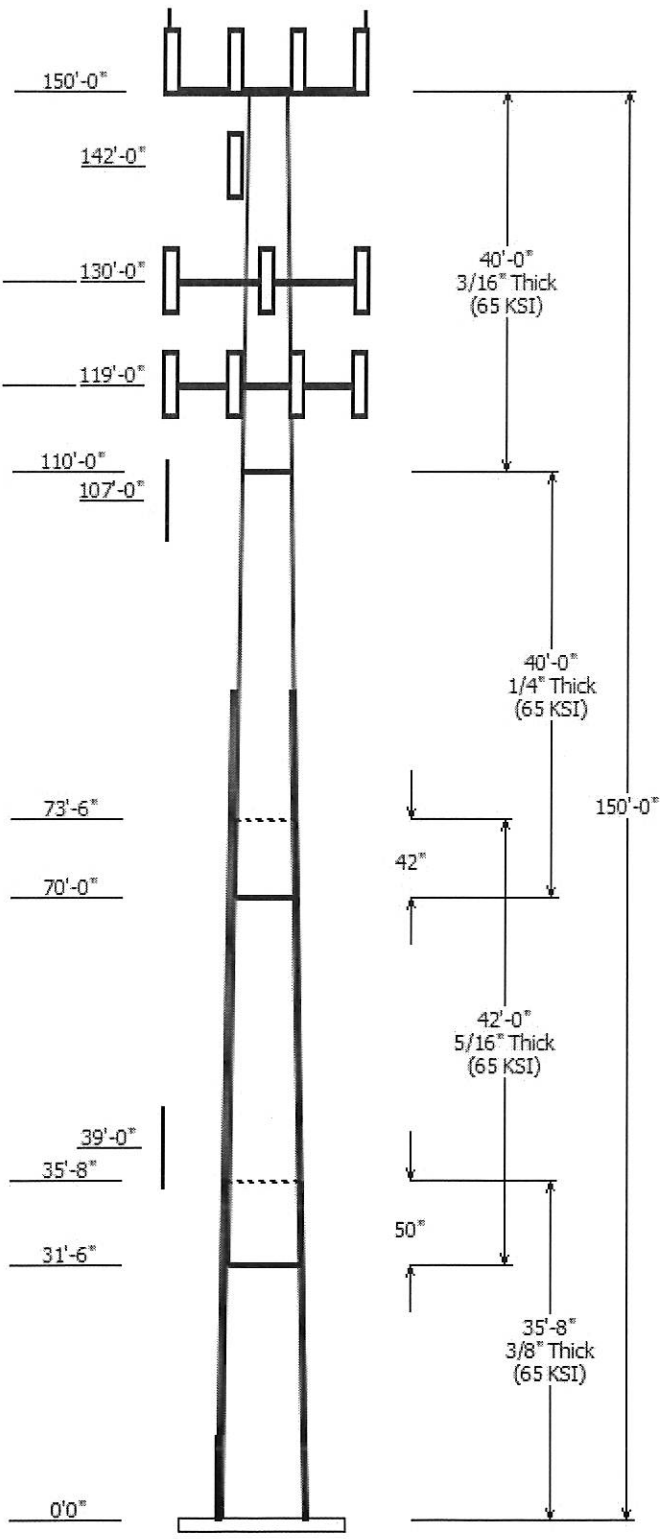
Linear Appurtenance				
Elev (ft)	From	To	Description	Exposed To Wind
33.000	81.000		Plate	Yes
0.000	94.000		#20	Yes
0.000	107.0		1/2" Coax	No
0.000	119.0		1 5/8" Coax	No
0.000	119.0		1 5/8" Hybriflex	No
0.000	130.0		1 5/8" Coax	Yes
0.000	130.0		1 5/8" Hybriflex	Yes
0.000	142.0		7/8" Coax	No
0.000	150.0		0.39" (10mm)	No
0.000	150.0		0.78" (19.7mm) 8	No

0.000	150.0	1 5/8" Coax	No
0.000	150.0	1 5/8" Coax	No
0.000	150.0	3" Conduit	No
0.000	39.000	1/2" Coax	No

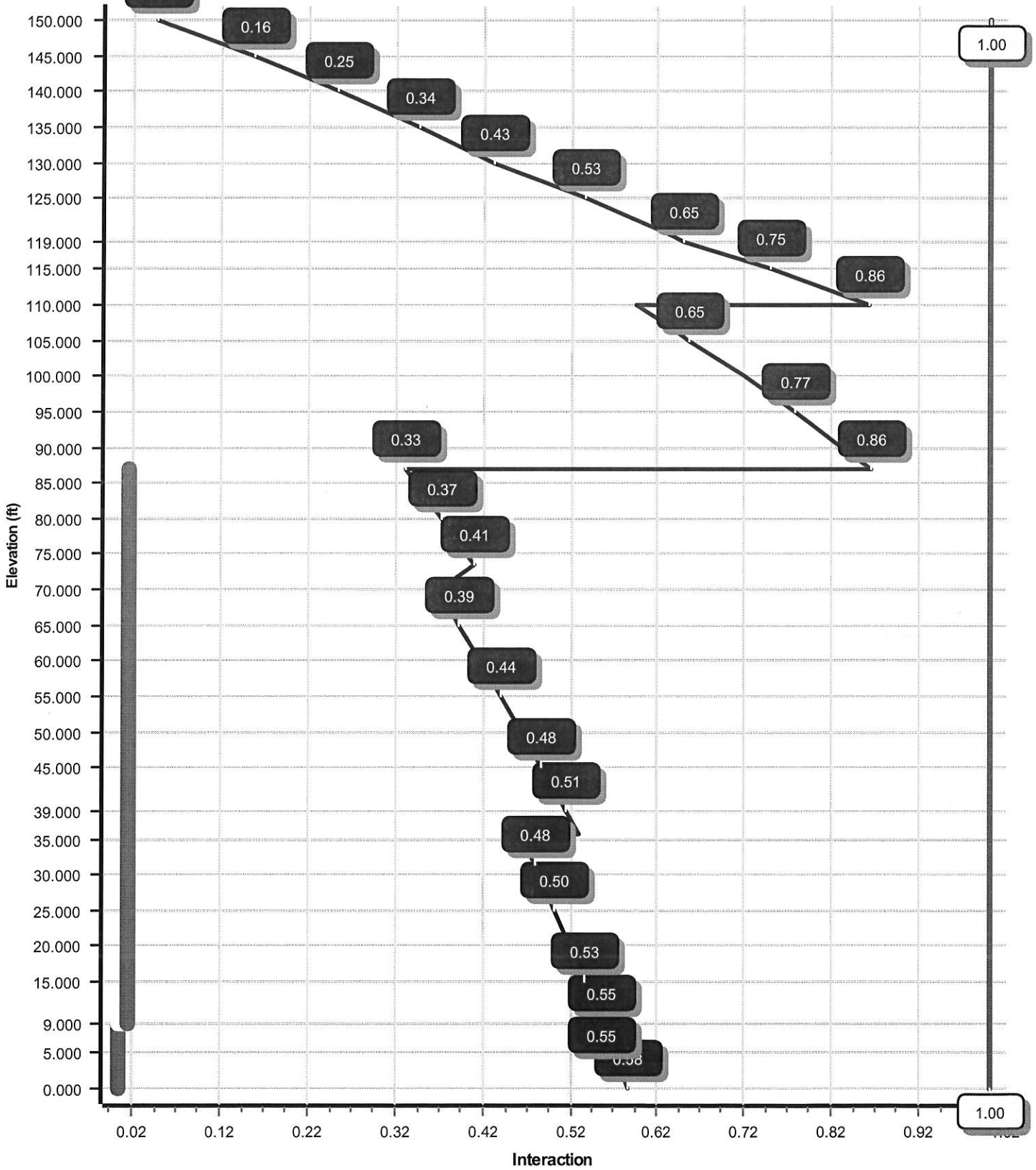
Load Cases	
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions				
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)	
1.2D + 1.6W	2238.99	23.20	35.88	
0.9D + 1.6W	2207.69	23.17	26.90	
1.2D + 1.0Di + 1.0Wi	570.60	5.35	58.17	
(1.2 + 0.2Sds) * DL + E ELFM	144.52	1.17	35.55	
(1.2 + 0.2Sds) * DL + E EMAM	222.97	1.92	35.55	
(0.9 - 0.2Sds) * DL + E ELFM	141.93	1.17	24.63	
(0.9 - 0.2Sds) * DL + E EMAM	218.58	1.92	24.63	
1.0D + 1.0W	538.21	5.66	29.94	

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



Load Case : 1.2D + 1.6W
Max Ratio 86.29% at 86.9 ft



Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

Analysis Parameters

Location:	NEW HAVEN County, CT	Height (ft):	150
Code:	ANSI/TIA-222-G	Base Diameter (in):	37.38
Shape:	12 Sides	Top Diameter (in):	15.00
Pole Type:	Taper	Taper (in/ft) :	0.157
Pole Manufacturer:	ITT Meyer	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:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.60		
T _L (sec):	6	p:	1.3
S _s :	0.190	S ₁ :	0.063
F _a :	1.600	F _v :	2.400
S _{ds} :	0.203	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 0.75 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: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_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	35.667	0.3750	65		0.00	5,014	37.38	0.00	44.68	7810.1	24.03	99.68	31.79	35.67	37.93	4778.8	20.04	84.78	0.156707
2-12	42.000	0.3125	65	Slip	50.00	4,237	33.06	31.50	32.96	4514.1	25.67	105.82	26.48	73.50	26.34	2303.2	20.03	84.76	0.156707
3-12	40.000	0.2500	65	Slip	42.00	2,646	27.53	70.00	21.96	2087.3	26.83	110.14	21.26	110.00	16.92	953.9	20.11	85.07	0.156707
4-12	40.000	0.1875	65	Butt	0.00	1,475	21.26	110.00	12.73	721.8	27.71	113.43	14.99	150.00	8.94	250.4	18.76	79.99	0.156707
Shaft Weight						13,372													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
150.00	15' Dipole	1	45.00	5.640	1.00	211.37	14.566	1.00	0.000	3.000
150.00	25' Omni	1	70.00	7.500	1.00	396.06	16.400	1.00	0.000	10.000
150.00	CCI HPA-65R-BUU-H6	3	51.00	10.360	0.69	298.62	11.024	0.69	0.000	3.000
150.00	Ericsson RRUS 11 (Band 12)	3	55.00	2.520	0.50	135.24	3.164	0.50	0.000	3.000
150.00	Ericsson RRUS 32 B2	3	53.00	2.740	0.50	140.92	3.472	0.50	0.000	3.000
150.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,421.69	63.380	1.00	0.000	0.000
150.00	LGP Allgon TMA-DD 1900	6	10.40	0.590	0.50	31.69	0.827	0.50	0.000	3.000
150.00	Powerwave 7770.00	6	35.00	5.510	0.65	64.27	7.430	0.65	0.000	3.000
150.00	Powerwave LGP13519	6	5.30	0.340	0.50	20.31	0.560	0.50	0.000	3.000
150.00	Raycap DC6-48-60-18-8F	1	31.80	1.280	1.00	124.56	2.852	1.00	0.000	3.000
142.00	Scala CL-FM	1	45.00	5.870	1.00	2,062.10	24.852	1.00	0.000	0.000
130.00	Ericsson AIR 21, 1.3M, B2A	3	91.50	6.040	0.70	255.39	7.113	0.70	0.000	0.000
130.00	Ericsson AIR B4A/B12P-B8P,	3	113.00	7.420	0.70	315.96	8.576	0.70	0.000	0.000
130.00	Ericsson RRUS 11 B12	3	50.70	2.790	0.50	135.41	3.458	0.50	0.000	0.000
130.00	Stand-Off	3	100.00	3.000	0.50	148.08	4.545	0.50	0.000	0.000
119.00	12" x 9" x 6" TMA	6	20.00	1.050	0.50	48.91	1.779	0.50	0.000	0.000
119.00	Alcatel-Lucent RRH2x40-AWS	3	44.00	2.160	0.50	115.27	2.787	0.50	0.000	0.000
119.00	Amphenol Antel BXA-171063-	3	10.50	2.940	0.71	91.15	3.784	0.71	0.000	0.000
119.00	Amphenol Antel BXA-171085-	3	10.50	2.944	0.71	85.20	3.792	0.71	0.000	0.000
119.00	Antel BXA-70063/6CF_	3	17.00	7.730	0.65	179.24	8.786	0.65	0.000	0.000
119.00	Antel BXA-80063/4CF	3	9.90	4.710	0.65	122.56	5.642	0.65	0.000	0.000
119.00	RFS DB-T1-6Z-8AB-0Z	1	44.00	4.800	0.50	183.59	5.651	0.50	0.000	0.000
119.00	RFS FD9R6004/1C-3L	6	3.10	0.370	0.50	15.75	0.574	0.50	0.000	0.000
119.00	Round T-Arms	3	250.00	9.700	0.67	454.29	17.758	0.67	0.000	0.000
107.00	GPS	1	10.00	1.000	1.00	46.75	0.924	1.00	0.000	0.000
39.00	GPS	1	10.00	1.000	1.00	42.01	0.880	1.00	0.000	0.000
Totals		77	5266.90			15,005.76			Number of Loadings : 26	

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	150.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	150.00	2	0.78" (19.7mm) 8	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	150.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	AT&T Mobility
0.00	150.00	4	1 5/8" Coax	1.98	0.82	N	0.00	N	Other
0.00	150.00	1	3" Conduit	3.50	7.58	N	0.00	N	AT&T Mobility
0.00	142.00	1	7/8" Coax	1.09	0.33	N	0.00	N	Blount Communications
0.00	130.00	6	1 5/8" Coax	1.98	0.82	N	0.00	Y	Metro PCS
0.00	130.00	1	1 5/8" Hybriflex	1.98	1.30	N	1.98	Y	Metro PCS
0.00	119.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

0.00	119.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	N	Verizon
0.00	107.00	1	1/2" Coax	0.63	0.15	N	0.00	N	AT&T Mobility
0.00	94.00	4	#20 Reinforcement	2.50	0.00	N	6.02	Y	--
33.00	81.00	4	Plate Reinforcement	1.00	0.00	N	0.00	Y	--
0.00	39.00	1	1/2" Coax	0.63	0.15	N	0.00	N	AT&T Mobility

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	— Intermediate Connections —			Connectors	Continuation?
						Description	Spacing (in)	Len (in)		
0.00	9.00	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	39.0	0.00	5/8" A36 U-Bolt	No
9.00	86.94	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	Yes

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:45 PM

Customer: AT&T MOBILITY

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)	Additional Reinforcing		
												Area (in ²)	Ix (in ⁴)	Weight (lb)
0.00		0.3750	37.380	44.684	7,810.1	24.03	99.68	78.5	403.6	0.0	0.0	19.64	4,958	0.0
5.00		0.3750	36.596	43.737	7,324.4	23.47	97.59	79.1	386.6	0.0	752.2	19.64	4,781	334.0
9.00	Reinf. Top Reinf	0.3750	35.970	42.981	6,950.7	23.02	95.92	79.6	373.3	0.0	590.2	19.64	4,642	267.2
10.00		0.3750	35.813	42.791	6,859.3	22.91	95.50	79.7	370.0	0.0	145.9	19.64	4,607	66.8
15.00		0.3750	35.029	41.845	6,414.3	22.35	93.41	80.3	353.7	0.0	720.0	19.64	4,436	334.0
20.00		0.3750	34.246	40.899	5,989.0	21.79	91.32	80.9	337.8	0.0	703.9	19.64	4,269	334.0
25.00		0.3750	33.462	39.953	5,582.9	21.23	89.23	81.6	322.3	0.0	687.8	19.64	4,105	334.0
30.00		0.3750	32.679	39.007	5,195.6	20.67	87.14	81.9	307.1	0.0	671.7	19.64	3,943	334.0
31.50	Bot - Section 2	0.3750	32.444	38.723	5,083.0	20.50	86.52	81.9	302.7	0.0	198.4	19.64	3,896	100.2
35.00		0.3750	31.895	38.061	4,826.6	20.11	85.05	81.9	292.3	0.0	846.5	19.64	3,911	233.8
35.67	Top - Section 1	0.3125	32.416	32.304	4,249.5	25.12	103.73	77.3	253.3	0.0	159.6	19.64	3,890	44.5
39.00		0.3125	31.893	31.778	4,045.5	24.67	102.06	77.8	245.0	0.0	363.4	19.64	3,785	222.7
40.00		0.3125	31.737	31.621	3,985.5	24.53	101.56	78.0	242.6	0.0	107.9	19.64	3,754	66.8
45.00		0.3125	30.953	30.832	3,694.8	23.86	99.05	78.7	230.6	0.0	531.3	19.64	3,600	334.0
50.00		0.3125	30.170	30.044	3,418.5	23.19	96.54	79.4	218.9	0.0	517.9	19.64	3,449	334.0
55.00		0.3125	29.386	29.255	3,156.4	22.52	94.04	80.2	207.5	0.0	504.5	19.64	3,302	334.0
60.00		0.3125	28.603	28.467	2,908.0	21.85	91.53	80.9	196.4	0.0	491.0	19.64	3,157	334.0
65.00		0.3125	27.819	27.678	2,673.0	21.17	89.02	81.6	185.6	0.0	477.6	19.64	3,016	334.0
70.00	Bot - Section 3	0.3125	27.036	26.890	2,451.0	20.50	86.51	81.9	175.1	0.0	464.2	19.64	2,879	334.0
73.50	Top - Section 2	0.2500	26.987	21.523	1,963.9	26.25	107.95	76.1	140.6	0.0	575.9	19.64	2,870	233.8
75.00		0.2500	26.752	21.334	1,912.6	25.99	107.01	76.4	138.1	0.0	109.4	19.64	2,830	100.2
80.00		0.2500	25.968	20.703	1,747.9	25.15	103.87	77.3	130.0	0.0	357.6	19.64	2,696	334.0
85.00		0.2500	25.185	20.073	1,593.0	24.31	100.74	78.2	122.2	0.0	346.9	19.64	2,566	334.0
86.94	Reinf. Top	0.2500	24.881	19.828	1,535.4	23.99	99.52	78.6	119.2	0.0	131.7	19.64	2,516	129.6
90.00		0.2500	24.401	19.442	1,447.5	23.47	97.61	79.1	114.6	0.0	204.4			
95.00		0.2500	23.618	18.811	1,311.1	22.63	94.47	80.0	107.2	0.0	325.4			
100.00		0.2500	22.834	18.180	1,183.6	21.79	91.34	80.9	100.1	0.0	314.7			
105.00		0.2500	22.051	17.550	1,064.6	20.95	88.20	81.9	93.3	0.0	304.0			
107.00		0.2500	21.737	17.297	1,019.4	20.62	86.95	81.9	90.6	0.0	118.6			
110.00	Top - Section 3	0.2500	21.267	16.919	953.9	20.11	85.07	81.9	86.7	0.0	174.6			
110.00	Bot - Section 4	0.1875	21.267	12.727	721.8	27.71	113.43	74.5	65.6	0.0				
115.00		0.1875	20.484	12.254	644.3	26.59	109.25	75.7	60.8	0.0	212.5			
119.00		0.1875	19.857	11.875	586.4	25.70	105.90	76.7	57.1	0.0	164.2			
120.00		0.1875	19.700	11.781	572.5	25.47	105.07	76.9	56.1	0.0	40.2			
125.00		0.1875	18.917	11.308	506.3	24.35	100.89	78.2	51.7	0.0	196.4			
130.00		0.1875	18.133	10.835	445.4	23.23	96.71	79.4	47.4	0.0	188.4			
135.00		0.1875	17.350	10.362	389.5	22.11	92.53	80.6	43.4	0.0	180.3			
140.00		0.1875	16.566	9.889	338.6	20.99	88.35	81.8	39.5	0.0	172.3			
142.00		0.1875	16.253	9.699	319.5	20.55	86.68	81.9	38.0	0.0	66.7			
145.00		0.1875	15.783	9.416	292.3	19.87	84.17	81.9	35.8	0.0	97.6			
150.00		0.1875	14.999	8.942	250.4	18.76	79.99	81.9	32.3	0.0	156.2			
											13,371.9			5,807.6

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Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

97 mph with No Ice

27 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		269.9	0.0					0.0	0.0	269.9	0.0	0.0	0.0
5.00		481.7	902.6					94.6	640.4	576.3	1,543.0	0.0	0.0
9.00	Reinf. Top Reinf	264.2	708.2					75.7	512.3	339.9	1,220.5	0.0	0.0
10.00		310.8	175.1					18.9	128.1	329.7	303.2	0.0	0.0
15.00		511.2	864.0					94.6	640.4	605.8	1,504.4	0.0	0.0
20.00		499.7	844.7					94.6	640.4	594.4	1,485.1	0.0	0.0
25.00		488.3	825.4					94.6	640.4	582.9	1,465.7	0.0	0.0
30.00		313.1	806.0					94.6	640.4	407.7	1,446.4	0.0	0.0
31.50	Bot - Section 2	244.5	238.0					28.5	192.1	273.0	430.2	0.0	0.0
35.00		205.8	1,015.8					67.5	448.3	273.3	1,464.1	0.0	0.0
35.67	Top - Section 1	199.8	191.5					13.0	85.4	212.8	276.9	0.0	0.0
39.00	Appertunance(s)	216.9	436.1	30.4	0.0	0.0	12.0	65.7	426.9	313.0	875.0	0.0	0.0
40.00		303.1	129.4					19.9	127.9	323.0	257.3	0.0	0.0
45.00		507.3	637.5					101.0	639.5	608.3	1,277.0	0.0	0.0
50.00		509.7	621.4					103.1	639.5	612.8	1,260.9	0.0	0.0
55.00		510.2	605.3					105.1	639.5	615.2	1,244.8	0.0	0.0
60.00		509.1	589.2					106.9	639.5	615.9	1,228.7	0.0	0.0
65.00		506.6	573.2					108.6	639.5	615.1	1,212.6	0.0	0.0
70.00	Bot - Section 3	431.3	557.1					110.1	639.5	541.4	1,196.5	0.0	0.0
73.50	Top - Section 2	255.0	691.1					78.0	447.6	333.0	1,138.8	0.0	0.0
75.00		328.7	131.3					33.6	191.8	362.4	323.1	0.0	0.0
80.00		501.8	429.1					113.0	639.5	614.9	1,068.6	0.0	0.0
85.00		345.2	416.3					114.4	639.5	459.6	1,055.7	0.0	0.0
86.94	Reinf. Top	245.8	158.0					44.7	248.1	290.6	406.2	0.0	0.0
90.00		391.9	245.3					70.9	146.1	462.8	391.4	0.0	0.0
95.00		439.8	390.5					101.2	238.7	541.0	629.2	0.0	0.0
100.00		392.0	377.6					0.0	238.7	392.0	616.3	0.0	0.0
105.00		270.5	364.7					0.0	238.7	270.5	603.4	0.0	0.0
107.00	Appertunance(s)	189.8	142.3	40.6	0.0	0.0	12.0	0.0	95.5	230.4	249.8	0.0	0.0
110.00	Top - Section 3	298.7	209.6					0.0	142.7	298.7	352.2	0.0	0.0
115.00		330.2	255.0					0.0	237.8	330.2	492.8	0.0	0.0
119.00	Appertunance(s)	180.6	197.1	2,174.0	0.0	0.0	1,450.0	0.0	190.2	2,354.6	1,837.2	0.0	0.0
120.00		211.4	48.3					0.0	34.2	211.4	82.5	0.0	0.0
125.00		347.7	235.7					0.0	170.9	347.7	406.6	0.0	0.0
130.00	Appertunance(s)	337.2	226.0	1,306.7	0.0	0.0	1,278.7	0.0	170.9	1,643.8	1,675.7	0.0	0.0
135.00		324.5	216.4					0.0	133.6	324.5	350.0	0.0	0.0
140.00		221.6	206.7					0.0	133.6	221.6	340.3	0.0	0.0
142.00	Appertunance(s)	153.6	80.0	258.2	0.0	0.0	54.0	0.0	53.4	411.9	187.4	0.0	0.0
145.00		239.1	117.1					0.0	79.0	239.1	196.1	0.0	0.0
150.00	Appertunance(s)	147.6	187.4	4,191.2	0.0	8,681.6	3,513.6	0.0	131.6	4,338.8	3,832.6	0.0	0.0
Totals:										23,389.8	35,928.4	0.00	0.00

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Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

97 mph with No Ice

27 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	-35.88	-23.20	0.00	-2,238.99	0.00	2,238.99	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.584
5.00	-34.25	-22.75	0.00	-2,123.01	0.00	2,123.01	3,114.35	1,557.18	4,645.51	2,294.24	0.13	-0.24	0.568
9.00	-32.98	-22.47	0.00	-2,032.01	0.00	2,032.01	3,079.35	1,539.68	4,513.00	2,228.80	0.42	-0.44	0.554
9.00	-32.98	-22.47	0.00	-2,032.01	0.00	2,032.01	3,079.35	1,539.68	4,513.00	2,228.80	0.42	-0.44	0.554
10.00	-32.63	-22.22	0.00	-2,009.54	0.00	2,009.54	3,070.50	1,535.25	4,480.00	2,212.51	0.52	-0.49	0.551
15.00	-31.04	-21.73	0.00	-1,898.43	0.00	1,898.43	3,025.61	1,512.80	4,315.88	2,131.45	1.16	-0.73	0.534
20.00	-29.47	-21.24	0.00	-1,789.76	0.00	1,789.76	2,979.67	1,489.84	4,153.23	2,051.12	2.05	-0.97	0.516
25.00	-27.93	-20.75	0.00	-1,683.56	0.00	1,683.56	2,932.70	1,466.35	3,992.16	1,971.58	3.20	-1.21	0.499
30.00	-26.44	-20.38	0.00	-1,579.83	0.00	1,579.83	2,875.19	1,437.60	3,820.15	1,886.63	4.60	-1.45	0.482
31.50	-25.97	-20.15	0.00	-1,549.26	0.00	1,549.26	2,854.27	1,427.14	3,764.44	1,859.12	5.07	-1.53	0.478
35.00	-24.48	-19.88	0.00	-1,478.74	0.00	1,478.74	2,805.46	1,402.73	3,636.05	1,795.71	6.25	-1.69	0.461
35.67	-24.18	-19.70	0.00	-1,465.49	0.00	1,465.49	2,248.06	1,124.03	2,973.87	1,468.68	6.49	-1.73	0.528
39.00	-23.28	-19.40	0.00	-1,399.84	0.00	1,399.84	2,225.45	1,112.72	2,895.60	1,430.03	7.75	-1.88	0.512
40.00	-22.98	-19.13	0.00	-1,380.44	0.00	1,380.44	2,218.58	1,109.29	2,872.20	1,418.47	8.15	-1.93	0.508
45.00	-21.65	-18.56	0.00	-1,284.82	0.00	1,284.82	2,183.59	1,091.80	2,755.72	1,360.95	10.30	-2.18	0.484
50.00	-20.34	-17.99	0.00	-1,192.00	0.00	1,192.00	2,147.57	1,073.78	2,640.25	1,303.92	12.71	-2.42	0.461
55.00	-19.05	-17.39	0.00	-1,102.07	0.00	1,102.07	2,110.50	1,055.25	2,525.89	1,247.44	15.37	-2.66	0.437
60.00	-17.79	-16.79	0.00	-1,015.10	0.00	1,015.10	2,072.40	1,036.20	2,412.73	1,191.56	18.28	-2.89	0.414
65.00	-16.55	-16.18	0.00	-931.14	0.00	931.14	2,033.25	1,016.63	2,300.88	1,136.32	21.43	-3.12	0.390
70.00	-15.33	-15.62	0.00	-850.24	0.00	850.24	1,982.07	991.03	2,178.35	1,075.80	24.81	-3.34	0.368
73.50	-14.19	-15.25	0.00	-795.57	0.00	795.57	1,473.95	736.97	1,624.53	802.29	27.32	-3.49	0.408
75.00	-13.85	-14.90	0.00	-772.70	0.00	772.70	1,466.27	733.13	1,601.72	791.03	28.43	-3.56	0.399
80.00	-12.77	-14.27	0.00	-698.19	0.00	698.19	1,439.98	719.99	1,526.07	753.67	32.27	-3.78	0.369
85.00	-11.71	-13.77	0.00	-626.85	0.00	626.85	1,412.66	706.33	1,451.06	716.62	36.34	-3.99	0.340
86.94	-11.30	-13.47	0.00	-600.14	0.00	600.14	1,401.78	700.89	1,422.15	702.35	37.98	-4.07	0.328
86.94	-11.30	-13.47	0.00	-600.14	0.00	600.14	1,401.78	700.89	1,422.15	702.35	37.98	-4.07	0.863
90.00	-10.87	-13.04	0.00	-558.93	0.00	558.93	1,384.30	692.15	1,376.80	679.95	40.63	-4.20	0.830
95.00	-10.17	-12.54	0.00	-493.72	0.00	493.72	1,354.89	677.45	1,303.39	643.70	45.30	-4.71	0.775
100.00	-9.49	-12.18	0.00	-431.01	0.00	431.01	1,324.45	662.22	1,230.93	607.91	50.50	-5.22	0.716
105.00	-8.85	-11.91	0.00	-370.10	0.00	370.10	1,292.96	646.48	1,159.52	572.65	56.22	-5.70	0.653
107.00	-8.57	-11.69	0.00	-346.28	0.00	346.28	1,274.99	637.49	1,126.78	556.47	58.64	-5.89	0.629
110.00	-8.18	-11.40	0.00	-311.22	0.00	311.22	1,247.09	623.55	1,077.73	532.25	62.42	-6.16	0.592
110.00	-8.18	-11.40	0.00	-311.22	0.00	311.22	853.22	426.61	741.75	366.32	62.42	-6.16	0.860
115.00	-7.65	-11.08	0.00	-254.20	0.00	254.20	834.98	417.49	698.66	345.04	69.10	-6.59	0.747
119.00	-6.07	-8.55	0.00	-209.89	0.00	209.89	819.63	409.82	664.45	328.15	74.78	-7.00	0.647
120.00	-5.97	-8.36	0.00	-201.35	0.00	201.35	815.69	407.85	655.94	323.94	76.25	-7.10	0.629
125.00	-5.55	-8.00	0.00	-159.56	0.00	159.56	795.37	397.68	613.67	303.07	83.91	-7.54	0.534
130.00	-4.08	-6.17	0.00	-119.55	0.00	119.55	774.00	387.00	571.95	282.46	92.00	-7.94	0.429
135.00	-3.74	-5.82	0.00	-88.69	0.00	88.69	751.59	375.80	530.89	262.19	100.47	-8.27	0.343
140.00	-3.42	-5.56	0.00	-59.58	0.00	59.58	728.15	364.07	490.60	242.29	109.25	-8.54	0.251
142.00	-3.29	-5.13	0.00	-48.45	0.00	48.45	714.94	357.47	472.37	233.29	112.84	-8.63	0.213
145.00	-3.12	-4.87	0.00	-33.05	0.00	33.05	694.02	347.01	444.98	219.76	118.27	-8.74	0.155
150.00	0.00	-4.34	0.00	-8.68	0.00	8.68	659.15	329.57	401.14	198.11	127.46	-8.84	0.044

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Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

27 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		269.9	0.0					0.0	0.0	269.9	0.0	0.0	0.0
5.00		481.7	677.0					94.6	480.3	576.3	1,157.3	0.0	0.0
9.00	Reinf. Top Reinf	264.2	531.1					75.7	384.2	339.9	915.4	0.0	0.0
10.00		310.8	131.3					18.9	96.1	329.7	227.4	0.0	0.0
15.00		511.2	648.0					94.6	480.3	605.8	1,128.3	0.0	0.0
20.00		499.7	633.5					94.6	480.3	594.4	1,113.8	0.0	0.0
25.00		488.3	619.0					94.6	480.3	582.9	1,099.3	0.0	0.0
30.00		313.1	604.5					94.6	480.3	407.7	1,084.8	0.0	0.0
31.50	Bot - Section 2	244.5	178.5					28.5	144.1	273.0	322.6	0.0	0.0
35.00		205.8	761.9					67.5	336.2	273.3	1,098.1	0.0	0.0
35.67	Top - Section 1	199.8	143.6					13.0	64.0	212.8	207.7	0.0	0.0
39.00	Appertunance(s)	216.9	327.1	30.4	0.0	0.0	9.0	65.7	320.2	313.0	656.3	0.0	0.0
40.00		303.1	97.1					19.9	95.9	323.0	193.0	0.0	0.0
45.00		507.3	478.2					101.0	479.6	608.3	957.8	0.0	0.0
50.00		509.7	466.1					103.1	479.6	612.8	945.7	0.0	0.0
55.00		510.2	454.0					105.1	479.6	615.2	933.6	0.0	0.0
60.00		509.1	441.9					106.9	479.6	615.9	921.5	0.0	0.0
65.00		506.6	429.9					108.6	479.6	615.1	909.5	0.0	0.0
70.00	Bot - Section 3	431.3	417.8					110.1	479.6	541.4	897.4	0.0	0.0
73.50	Top - Section 2	255.0	518.3					78.0	335.7	333.0	854.1	0.0	0.0
75.00		328.7	98.4					33.6	143.9	362.4	242.3	0.0	0.0
80.00		501.8	321.8					113.0	479.6	614.9	801.5	0.0	0.0
85.00		345.2	312.2					114.4	479.6	459.6	791.8	0.0	0.0
86.94	Reinf. Top	245.8	118.5					44.7	186.1	290.6	304.6	0.0	0.0
90.00		391.9	184.0					70.9	109.6	462.8	293.6	0.0	0.0
95.00		439.8	292.9					101.2	179.0	541.0	471.9	0.0	0.0
100.00		392.0	283.2					0.0	179.0	392.0	462.2	0.0	0.0
105.00		270.5	273.6					0.0	179.0	270.5	452.6	0.0	0.0
107.00	Appertunance(s)	189.8	106.7	40.6	0.0	0.0	9.0	0.0	71.6	230.4	187.3	0.0	0.0
110.00	Top - Section 3	298.7	157.2					0.0	107.0	298.7	264.2	0.0	0.0
115.00		330.2	191.3					0.0	178.3	330.2	369.6	0.0	0.0
119.00	Appertunance(s)	180.6	147.8	2,174.0	0.0	0.0	1,087.5	0.0	142.7	2,354.6	1,377.9	0.0	0.0
120.00		211.4	36.2					0.0	25.6	211.4	61.9	0.0	0.0
125.00		346.1	176.8					0.0	128.2	346.1	305.0	0.0	0.0
130.00	Appertunance(s)	335.5	169.5	1,306.7	0.0	0.0	959.0	0.0	128.2	1,642.2	1,256.8	0.0	0.0
135.00		324.5	162.3					0.0	100.2	324.5	262.5	0.0	0.0
140.00		221.6	155.0					0.0	100.2	221.6	255.3	0.0	0.0
142.00	Appertunance(s)	153.6	60.0	258.2	0.0	0.0	40.5	0.0	40.1	411.9	140.6	0.0	0.0
145.00		239.1	87.8					0.0	59.2	239.1	147.0	0.0	0.0
150.00	Appertunance(s)	147.6	140.6	4,191.2	0.0	8,681.6	2,635.2	0.0	98.7	4,338.8	2,874.5	0.0	0.0
Totals:										23,386.5	26,946.3	0.00	0.00

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:49 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

27 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	-26.90	-23.17	0.00	-2,207.69	0.00	2,207.69	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.574
5.00	-25.66	-22.69	0.00	-2,091.82	0.00	2,091.82	3,114.35	1,557.18	4,645.51	2,294.24	0.13	-0.24	0.558
9.00	-24.70	-22.40	0.00	-2,001.05	0.00	2,001.05	3,079.35	1,539.68	4,513.00	2,228.80	0.41	-0.43	0.544
9.00	-24.70	-22.40	0.00	-2,001.05	0.00	2,001.05	3,079.35	1,539.68	4,513.00	2,228.80	0.41	-0.43	0.544
10.00	-24.41	-22.13	0.00	-1,978.65	0.00	1,978.65	3,070.50	1,535.25	4,480.00	2,212.51	0.51	-0.48	0.541
15.00	-23.20	-21.61	0.00	-1,868.01	0.00	1,868.01	3,025.61	1,512.80	4,315.88	2,131.45	1.14	-0.72	0.523
20.00	-22.01	-21.09	0.00	-1,759.98	0.00	1,759.98	2,979.67	1,489.84	4,153.23	2,051.12	2.02	-0.96	0.506
25.00	-20.84	-20.57	0.00	-1,654.54	0.00	1,654.54	2,932.70	1,466.35	3,992.16	1,971.58	3.15	-1.19	0.489
30.00	-19.71	-20.19	0.00	-1,551.68	0.00	1,551.68	2,875.19	1,437.60	3,820.15	1,886.63	4.53	-1.43	0.472
31.50	-19.35	-19.95	0.00	-1,521.40	0.00	1,521.40	2,854.27	1,427.14	3,764.44	1,859.12	4.99	-1.50	0.468
35.00	-18.23	-19.68	0.00	-1,451.57	0.00	1,451.57	2,805.46	1,402.73	3,636.05	1,795.71	6.15	-1.67	0.451
35.67	-18.00	-19.49	0.00	-1,438.46	0.00	1,438.46	2,248.06	1,124.03	2,973.87	1,468.68	6.39	-1.70	0.517
39.00	-17.32	-19.19	0.00	-1,373.50	0.00	1,373.50	2,225.45	1,112.72	2,895.60	1,430.03	7.63	-1.85	0.501
40.00	-17.09	-18.90	0.00	-1,354.31	0.00	1,354.31	2,218.58	1,109.29	2,872.20	1,418.47	8.02	-1.90	0.497
45.00	-16.07	-18.32	0.00	-1,259.82	0.00	1,259.82	2,183.59	1,091.80	2,755.72	1,360.95	10.14	-2.14	0.474
50.00	-15.08	-17.74	0.00	-1,168.19	0.00	1,168.19	2,147.57	1,073.78	2,640.25	1,303.92	12.51	-2.38	0.450
55.00	-14.11	-17.14	0.00	-1,079.51	0.00	1,079.51	2,110.50	1,055.25	2,525.89	1,247.44	15.12	-2.61	0.427
60.00	-13.15	-16.53	0.00	-993.81	0.00	993.81	2,072.40	1,036.20	2,412.73	1,191.56	17.98	-2.84	0.404
65.00	-12.21	-15.92	0.00	-911.15	0.00	911.15	2,033.25	1,016.63	2,300.88	1,136.32	21.07	-3.06	0.380
70.00	-11.30	-15.36	0.00	-831.57	0.00	831.57	1,982.07	991.03	2,178.35	1,075.80	24.39	-3.28	0.359
73.50	-10.44	-15.00	0.00	-777.79	0.00	777.79	1,473.95	736.97	1,624.53	802.29	26.85	-3.43	0.398
75.00	-10.18	-14.65	0.00	-755.29	0.00	755.29	1,466.27	733.13	1,601.72	791.03	27.94	-3.49	0.389
80.00	-9.37	-14.02	0.00	-682.05	0.00	682.05	1,439.98	719.99	1,526.07	753.67	31.71	-3.71	0.360
85.00	-8.57	-13.53	0.00	-611.95	0.00	611.95	1,412.66	706.33	1,451.06	716.62	35.71	-3.92	0.330
86.94	-8.27	-13.23	0.00	-585.70	0.00	585.70	1,401.78	700.89	1,422.15	702.35	37.32	-4.00	0.319
86.94	-8.27	-13.23	0.00	-585.70	0.00	585.70	1,401.78	700.89	1,422.15	702.35	37.32	-4.00	0.840
90.00	-7.94	-12.80	0.00	-545.20	0.00	545.20	1,384.30	692.15	1,376.80	679.95	39.92	-4.12	0.808
95.00	-7.40	-12.28	0.00	-481.23	0.00	481.23	1,354.89	677.45	1,303.39	643.70	44.49	-4.62	0.753
100.00	-6.87	-11.91	0.00	-419.81	0.00	419.81	1,324.45	662.22	1,230.93	607.91	49.59	-5.11	0.696
105.00	-6.38	-11.64	0.00	-360.24	0.00	360.24	1,292.96	646.48	1,159.52	572.65	55.19	-5.58	0.634
107.00	-6.17	-11.41	0.00	-336.97	0.00	336.97	1,274.99	637.49	1,126.78	556.47	57.56	-5.77	0.611
110.00	-5.88	-11.13	0.00	-302.73	0.00	302.73	1,247.09	623.55	1,077.73	532.25	61.27	-6.03	0.574
110.00	-5.88	-11.13	0.00	-302.73	0.00	302.73	853.22	426.61	741.75	366.32	61.27	-6.03	0.834
115.00	-5.47	-10.80	0.00	-247.10	0.00	247.10	834.98	417.49	698.66	345.04	67.80	-6.44	0.723
119.00	-4.34	-8.32	0.00	-203.92	0.00	203.92	819.63	409.82	664.45	328.15	73.36	-6.84	0.627
120.00	-4.26	-8.12	0.00	-195.60	0.00	195.60	815.69	407.85	655.94	323.94	74.80	-6.94	0.609
125.00	-3.95	-7.77	0.00	-155.01	0.00	155.01	795.37	397.68	613.67	303.07	82.28	-7.37	0.517
130.00	-2.88	-5.99	0.00	-116.18	0.00	116.18	774.00	387.00	571.95	282.46	90.19	-7.75	0.415
135.00	-2.64	-5.65	0.00	-86.23	0.00	86.23	751.59	375.80	530.89	262.19	98.47	-8.08	0.333
140.00	-2.40	-5.40	0.00	-58.00	0.00	58.00	728.15	364.07	490.60	242.29	107.04	-8.34	0.243
142.00	-2.31	-4.97	0.00	-47.20	0.00	47.20	714.94	357.47	472.37	233.29	110.55	-8.43	0.206
145.00	-2.19	-4.72	0.00	-32.28	0.00	32.28	694.02	347.01	444.98	219.76	115.86	-8.54	0.150
150.00	0.00	-4.34	0.00	-8.68	0.00	8.68	659.15	329.57	401.14	198.11	124.83	-8.64	0.044

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:50 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice	26 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		47.5	0.0					0.0	0.0	47.5	0.0	0.0	0.0
5.00		85.1	1,185.9					29.6	794.4	114.7	1,980.3	0.0	0.0
9.00	Reinf. Top Reinf	46.9	956.1					24.6	649.4	71.5	1,605.4	0.0	0.0
10.00		55.4	238.8					6.2	163.5	61.6	402.3	0.0	0.0
15.00		91.4	1,184.7					31.5	822.5	122.8	2,007.2	0.0	0.0
20.00		89.7	1,169.6					31.9	829.2	121.6	1,998.8	0.0	0.0
25.00		87.9	1,151.5					32.2	834.4	120.2	1,985.9	0.0	0.0
30.00		56.5	1,131.6					32.5	838.7	89.0	1,970.3	0.0	0.0
31.50	Bot - Section 2	44.2	336.2					9.9	252.3	54.1	588.5	0.0	0.0
35.00		37.2	1,247.2					23.7	605.5	60.9	1,852.7	0.0	0.0
35.67	Top - Section 1	36.2	235.7					4.6	117.8	40.8	353.5	0.0	0.0
39.00	Appertunance(s)	39.3	655.0	4.4	0.0	0.0	44.0	23.4	589.9	67.2	1,288.9	0.0	0.0
40.00		55.1	195.2					7.2	177.1	62.2	372.3	0.0	0.0
45.00		92.4	961.0					36.6	887.5	129.0	1,848.6	0.0	0.0
50.00		93.1	940.8					38.0	890.7	131.1	1,831.5	0.0	0.0
55.00		93.5	920.1					39.3	893.6	132.8	1,813.7	0.0	0.0
60.00		93.6	899.0					40.5	896.3	134.1	1,795.2	0.0	0.0
65.00		93.5	877.5					41.6	898.7	135.1	1,776.2	0.0	0.0
70.00	Bot - Section 3	79.8	855.7					42.7	901.0	122.5	1,756.7	0.0	0.0
73.50	Top - Section 2	47.2	901.1					30.5	632.0	77.7	1,533.2	0.0	0.0
75.00		61.1	220.8					13.2	271.2	74.3	492.0	0.0	0.0
80.00		93.5	720.8					44.7	905.2	138.2	1,626.1	0.0	0.0
85.00		64.5	701.5					45.6	872.2	110.1	1,573.7	0.0	0.0
86.94	Reinf. Top	46.1	268.0					17.9	335.4	64.0	603.4	0.0	0.0
90.00		73.7	416.1					28.6	284.2	102.2	700.3	0.0	0.0
95.00		90.5	662.4					41.3	447.1	131.8	1,109.5	0.0	0.0
100.00		89.2	642.5					0.0	374.4	89.2	1,016.9	0.0	0.0
105.00		61.8	622.5					0.0	375.2	61.8	997.7	0.0	0.0
107.00	Appertunance(s)	43.5	244.4	6.2	0.0	0.0	48.8	0.0	150.3	49.7	443.4	0.0	0.0
110.00	Top - Section 3	68.7	360.0					0.0	225.1	68.7	585.2	0.0	0.0
115.00		76.3	498.2					0.0	375.8	76.3	873.9	0.0	0.0
119.00	Appertunance(s)	41.9	386.9	510.1	0.0	0.0	3,713.3	0.0	301.1	552.0	4,401.3	0.0	0.0
120.00		49.3	95.5					0.0	62.0	49.3	157.5	0.0	0.0
125.00		81.0	463.7					0.0	310.3	81.0	774.0	0.0	0.0
130.00	Appertunance(s)	79.1	446.3	265.9	0.0	0.0	2,627.7	0.0	311.0	345.0	3,384.9	0.0	0.0
135.00		77.1	428.8					0.0	133.6	77.1	562.4	0.0	0.0
140.00		52.9	411.2					0.0	133.6	52.9	544.9	0.0	0.0
142.00	Appertunance(s)	37.0	160.6	181.6	0.0	0.0	2,060.4	0.0	53.4	218.5	2,274.5	0.0	0.0
145.00		57.9	235.1					0.0	79.0	57.9	314.1	0.0	0.0
150.00	Appertunance(s)	35.9	375.8	1,029.8	0.0	2,329.1	6,465.5	0.0	131.6	1,065.6	6,972.9	0.0	0.0
Totals:										5,362.07	58,170.0	0.00	0.00

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:52 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice	26 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	-58.17	-5.35	0.00	-570.60	0.00	570.60	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.160
5.00	-56.18	-5.29	0.00	-543.87	0.00	543.87	3,114.35	1,557.18	4,645.51	2,294.24	0.03	-0.06	0.156
9.00	-54.57	-5.24	0.00	-522.73	0.00	522.73	3,079.35	1,539.68	4,513.00	2,228.80	0.11	-0.11	0.153
9.00	-54.57	-5.24	0.00	-522.73	0.00	522.73	3,079.35	1,539.68	4,513.00	2,228.80	0.11	-0.11	0.153
10.00	-54.17	-5.21	0.00	-517.49	0.00	517.49	3,070.50	1,535.25	4,480.00	2,212.51	0.13	-0.12	0.152
15.00	-52.16	-5.14	0.00	-491.42	0.00	491.42	3,025.61	1,512.80	4,315.88	2,131.45	0.30	-0.19	0.148
20.00	-50.15	-5.07	0.00	-465.71	0.00	465.71	2,979.67	1,489.84	4,153.23	2,051.12	0.53	-0.25	0.144
25.00	-48.16	-4.99	0.00	-440.36	0.00	440.36	2,932.70	1,466.35	3,992.16	1,971.58	0.82	-0.31	0.140
30.00	-46.19	-4.92	0.00	-415.40	0.00	415.40	2,875.19	1,437.60	3,820.15	1,886.63	1.18	-0.38	0.136
31.50	-45.60	-4.89	0.00	-408.02	0.00	408.02	2,854.27	1,427.14	3,764.44	1,859.12	1.30	-0.40	0.135
35.00	-43.74	-4.84	0.00	-390.90	0.00	390.90	2,805.46	1,402.73	3,636.05	1,795.71	1.61	-0.44	0.131
35.67	-43.39	-4.81	0.00	-387.68	0.00	387.68	2,248.06	1,124.03	2,973.87	1,468.68	1.67	-0.45	0.150
39.00	-42.10	-4.75	0.00	-371.64	0.00	371.64	2,225.45	1,112.72	2,895.60	1,430.03	2.00	-0.49	0.146
40.00	-41.72	-4.72	0.00	-366.88	0.00	366.88	2,218.58	1,109.29	2,872.20	1,418.47	2.11	-0.50	0.145
45.00	-39.87	-4.62	0.00	-343.29	0.00	343.29	2,183.59	1,091.80	2,755.72	1,360.95	2.67	-0.57	0.139
50.00	-38.03	-4.51	0.00	-320.21	0.00	320.21	2,147.57	1,073.78	2,640.25	1,303.92	3.30	-0.63	0.133
55.00	-36.22	-4.40	0.00	-297.66	0.00	297.66	2,110.50	1,055.25	2,525.89	1,247.44	3.99	-0.70	0.127
60.00	-34.42	-4.28	0.00	-275.68	0.00	275.68	2,072.40	1,036.20	2,412.73	1,191.56	4.76	-0.76	0.121
65.00	-32.64	-4.15	0.00	-254.30	0.00	254.30	2,033.25	1,016.63	2,300.88	1,136.32	5.59	-0.82	0.115
70.00	-30.88	-4.03	0.00	-233.54	0.00	233.54	1,982.07	991.03	2,178.35	1,075.80	6.48	-0.88	0.109
73.50	-29.35	-3.94	0.00	-219.43	0.00	219.43	1,473.95	736.97	1,624.53	802.29	7.14	-0.93	0.122
75.00	-28.85	-3.88	0.00	-213.51	0.00	213.51	1,466.27	733.13	1,601.72	791.03	7.44	-0.94	0.119
80.00	-27.23	-3.75	0.00	-194.10	0.00	194.10	1,439.98	719.99	1,526.07	753.67	8.46	-1.00	0.111
85.00	-25.65	-3.62	0.00	-175.38	0.00	175.38	1,412.66	706.33	1,451.06	716.62	9.54	-1.06	0.103
86.94	-25.05	-3.56	0.00	-168.35	0.00	168.35	1,401.78	700.89	1,422.15	702.35	9.98	-1.09	0.100
86.94	-25.05	-3.56	0.00	-168.35	0.00	168.35	1,401.78	700.89	1,422.15	702.35	9.98	-1.09	0.258
90.00	-24.35	-3.49	0.00	-157.45	0.00	157.45	1,384.30	692.15	1,376.80	679.95	10.69	-1.12	0.249
95.00	-23.23	-3.39	0.00	-140.02	0.00	140.02	1,354.89	677.45	1,303.39	643.70	11.94	-1.27	0.235
100.00	-22.21	-3.33	0.00	-123.07	0.00	123.07	1,324.45	662.22	1,230.93	607.91	13.34	-1.41	0.219
105.00	-21.21	-3.28	0.00	-106.42	0.00	106.42	1,292.96	646.48	1,159.52	572.65	14.90	-1.55	0.202
107.00	-20.76	-3.24	0.00	-99.86	0.00	99.86	1,274.99	637.49	1,126.78	556.47	15.56	-1.60	0.196
110.00	-20.17	-3.19	0.00	-90.14	0.00	90.14	1,247.09	623.55	1,077.73	532.25	16.59	-1.68	0.186
110.00	-20.17	-3.19	0.00	-90.14	0.00	90.14	853.22	426.61	741.75	366.32	16.59	-1.68	0.270
115.00	-19.29	-3.13	0.00	-74.18	0.00	74.18	834.98	417.49	698.66	345.04	18.42	-1.81	0.238
119.00	-14.91	-2.45	0.00	-61.66	0.00	61.66	819.63	409.82	664.45	328.15	19.98	-1.93	0.206
120.00	-14.75	-2.42	0.00	-59.21	0.00	59.21	815.69	407.85	655.94	323.94	20.39	-1.95	0.201
125.00	-13.98	-2.34	0.00	-47.11	0.00	47.11	795.37	397.68	613.67	303.07	22.51	-2.09	0.173
130.00	-10.60	-1.89	0.00	-35.40	0.00	35.40	774.00	387.00	571.95	282.46	24.76	-2.20	0.139
135.00	-10.04	-1.81	0.00	-25.95	0.00	25.95	751.59	375.80	530.89	262.19	27.12	-2.30	0.112
140.00	-9.50	-1.74	0.00	-16.91	0.00	16.91	728.15	364.07	490.60	242.29	29.57	-2.38	0.083
142.00	-7.23	-1.43	0.00	-13.43	0.00	13.43	714.94	357.47	472.37	233.29	30.57	-2.40	0.068
145.00	-6.92	-1.36	0.00	-9.14	0.00	9.14	694.02	347.01	444.98	219.76	32.09	-2.43	0.052
150.00	0.00	-1.07	0.00	-2.33	0.00	2.33	659.15	329.57	401.14	198.11	34.66	-2.46	0.012

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

25 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		64.5	0.0					0.0	0.0	64.5	0.0	0.0	0.0
5.00		115.2	752.2					27.0	533.6	142.2	1,285.8	0.0	0.0
9.00	Reinf. Top Reinf	63.2	590.2					21.6	426.9	84.7	1,017.1	0.0	0.0
10.00		74.3	145.9					5.4	106.7	79.7	252.7	0.0	0.0
15.00		122.2	720.0					27.0	533.6	149.2	1,253.6	0.0	0.0
20.00		119.5	703.9					27.0	533.6	146.5	1,237.5	0.0	0.0
25.00		116.8	687.8					27.0	533.6	143.7	1,221.5	0.0	0.0
30.00		74.9	671.7					27.0	533.6	101.8	1,205.4	0.0	0.0
31.50	Bot - Section 2	58.5	198.4					8.2	160.1	66.6	358.5	0.0	0.0
35.00		49.2	846.5					19.5	373.6	68.7	1,220.1	0.0	0.0
35.67	Top - Section 1	47.8	159.6					3.8	71.2	51.5	230.8	0.0	0.0
39.00	Appertunance(s)	51.9	363.4	7.3	0.0	0.0	10.0	19.2	355.8	78.3	729.2	0.0	0.0
40.00		72.5	107.9					5.8	106.6	78.3	214.4	0.0	0.0
45.00		121.3	531.3					29.8	532.9	151.1	1,064.2	0.0	0.0
50.00		121.9	517.9					30.8	532.9	152.7	1,050.8	0.0	0.0
55.00		122.0	504.5					31.7	532.9	153.7	1,037.4	0.0	0.0
60.00		121.7	491.0					32.5	532.9	154.2	1,023.9	0.0	0.0
65.00		121.1	477.6					33.3	532.9	154.4	1,010.5	0.0	0.0
70.00	Bot - Section 3	103.1	464.2					34.0	532.9	137.2	997.1	0.0	0.0
73.50	Top - Section 2	61.0	575.9					24.2	373.0	85.2	949.0	0.0	0.0
75.00		78.6	109.4					10.5	159.9	89.1	269.2	0.0	0.0
80.00		120.0	357.6					35.4	532.9	155.4	890.5	0.0	0.0
85.00		82.5	346.9					36.0	532.9	118.6	879.8	0.0	0.0
86.94	Reinf. Top	58.8	131.7					14.1	206.8	72.9	338.5	0.0	0.0
90.00		93.7	204.4					22.5	121.7	116.2	326.2	0.0	0.0
95.00		105.2	325.4					31.6	198.9	136.8	524.3	0.0	0.0
100.00		93.7	314.7					0.0	198.9	93.7	513.6	0.0	0.0
105.00		64.7	304.0					0.0	198.9	64.7	502.9	0.0	0.0
107.00	Appertunance(s)	45.4	118.6	9.7	0.0	0.0	10.0	0.0	79.6	55.1	208.1	0.0	0.0
110.00	Top - Section 3	71.4	174.6					0.0	118.9	71.4	293.5	0.0	0.0
115.00		79.0	212.5					0.0	198.2	79.0	410.7	0.0	0.0
119.00	Appertunance(s)	43.2	164.2	519.9	0.0	0.0	1,208.3	0.0	158.5	563.1	1,531.0	0.0	0.0
120.00		50.5	40.2					0.0	28.5	50.5	68.7	0.0	0.0
125.00		82.8	196.4					0.0	142.5	82.8	338.9	0.0	0.0
130.00	Appertunance(s)	80.2	188.4	312.5	0.0	0.0	1,065.6	0.0	142.5	392.7	1,396.4	0.0	0.0
135.00		77.6	180.3					0.0	111.4	77.6	291.7	0.0	0.0
140.00		53.0	172.3					0.0	111.4	53.0	283.6	0.0	0.0
142.00	Appertunance(s)	36.7	66.7	61.8	0.0	0.0	45.0	0.0	44.5	98.5	156.2	0.0	0.0
145.00		57.2	97.6					0.0	65.8	57.2	163.4	0.0	0.0
150.00	Appertunance(s)	35.3	156.2	1,002.2	0.0	2,076.1	2,928.0	0.0	109.7	1,037.6	3,193.9	0.0	0.0
Totals:										5,710.13	29,940.3	0.00	0.00

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:54 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W	Serviceability 60 mph	25 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	-29.94	-5.66	0.00	-538.21	0.00	538.21	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.145
5.00	-28.65	-5.54	0.00	-509.91	0.00	509.91	3,114.35	1,557.18	4,645.51	2,294.24	0.03	-0.06	0.141
9.00	-27.63	-5.47	0.00	-487.74	0.00	487.74	3,079.35	1,539.68	4,513.00	2,228.80	0.10	-0.11	0.137
9.00	-27.63	-5.47	0.00	-487.74	0.00	487.74	3,079.35	1,539.68	4,513.00	2,228.80	0.10	-0.11	0.137
10.00	-27.37	-5.41	0.00	-482.27	0.00	482.27	3,070.50	1,535.25	4,480.00	2,212.51	0.12	-0.12	0.137
15.00	-26.11	-5.28	0.00	-455.23	0.00	455.23	3,025.61	1,512.80	4,315.88	2,131.45	0.28	-0.18	0.132
20.00	-24.87	-5.16	0.00	-428.82	0.00	428.82	2,979.67	1,489.84	4,153.23	2,051.12	0.49	-0.23	0.128
25.00	-23.64	-5.03	0.00	-403.03	0.00	403.03	2,932.70	1,466.35	3,992.16	1,971.58	0.77	-0.29	0.123
30.00	-22.44	-4.94	0.00	-377.88	0.00	377.88	2,875.19	1,437.60	3,820.15	1,886.63	1.10	-0.35	0.119
31.50	-22.08	-4.88	0.00	-370.48	0.00	370.48	2,854.27	1,427.14	3,764.44	1,859.12	1.22	-0.37	0.118
35.00	-20.85	-4.81	0.00	-353.40	0.00	353.40	2,805.46	1,402.73	3,636.05	1,795.71	1.50	-0.41	0.114
35.67	-20.62	-4.77	0.00	-350.19	0.00	350.19	2,248.06	1,124.03	2,973.87	1,468.68	1.56	-0.41	0.130
39.00	-19.89	-4.69	0.00	-334.31	0.00	334.31	2,225.45	1,112.72	2,895.60	1,430.03	1.86	-0.45	0.126
40.00	-19.67	-4.62	0.00	-329.62	0.00	329.62	2,218.58	1,109.29	2,872.20	1,418.47	1.95	-0.46	0.125
45.00	-18.61	-4.48	0.00	-306.50	0.00	306.50	2,183.59	1,091.80	2,755.72	1,360.95	2.47	-0.52	0.119
50.00	-17.55	-4.34	0.00	-284.10	0.00	284.10	2,147.57	1,073.78	2,640.25	1,303.92	3.05	-0.58	0.113
55.00	-16.51	-4.19	0.00	-262.42	0.00	262.42	2,110.50	1,055.25	2,525.89	1,247.44	3.69	-0.64	0.108
60.00	-15.49	-4.04	0.00	-241.48	0.00	241.48	2,072.40	1,036.20	2,412.73	1,191.56	4.38	-0.69	0.102
65.00	-14.48	-3.88	0.00	-221.30	0.00	221.30	2,033.25	1,016.63	2,300.88	1,136.32	5.13	-0.75	0.096
70.00	-13.48	-3.74	0.00	-201.88	0.00	201.88	1,982.07	991.03	2,178.35	1,075.80	5.94	-0.80	0.090
73.50	-12.53	-3.65	0.00	-188.78	0.00	188.78	1,473.95	736.97	1,624.53	802.29	6.54	-0.83	0.100
75.00	-12.26	-3.56	0.00	-183.31	0.00	183.31	1,466.27	733.13	1,601.72	791.03	6.81	-0.85	0.098
80.00	-11.37	-3.41	0.00	-165.49	0.00	165.49	1,439.98	719.99	1,526.07	753.67	7.73	-0.90	0.090
85.00	-10.49	-3.28	0.00	-148.47	0.00	148.47	1,412.66	706.33	1,451.06	716.62	8.70	-0.95	0.083
86.94	-10.15	-3.20	0.00	-142.11	0.00	142.11	1,401.78	700.89	1,422.15	702.35	9.09	-0.97	0.080
86.94	-10.15	-3.20	0.00	-142.11	0.00	142.11	1,401.78	700.89	1,422.15	702.35	9.09	-0.97	0.210
90.00	-9.82	-3.10	0.00	-132.30	0.00	132.30	1,384.30	692.15	1,376.80	679.95	9.72	-1.00	0.202
95.00	-9.29	-2.97	0.00	-116.82	0.00	116.82	1,354.89	677.45	1,303.39	643.70	10.84	-1.12	0.188
100.00	-8.78	-2.88	0.00	-101.98	0.00	101.98	1,324.45	662.22	1,230.93	607.91	12.08	-1.24	0.174
105.00	-8.27	-2.82	0.00	-87.57	0.00	87.57	1,292.96	646.48	1,159.52	572.65	13.44	-1.36	0.159
107.00	-8.06	-2.77	0.00	-81.93	0.00	81.93	1,274.99	637.49	1,126.78	556.47	14.02	-1.40	0.154
110.00	-7.77	-2.70	0.00	-73.64	0.00	73.64	1,247.09	623.55	1,077.73	532.25	14.92	-1.47	0.145
110.00	-7.77	-2.70	0.00	-73.64	0.00	73.64	853.22	426.61	741.75	366.32	14.92	-1.47	0.210
115.00	-7.35	-2.62	0.00	-60.15	0.00	60.15	834.98	417.49	698.66	345.04	16.51	-1.57	0.183
119.00	-5.84	-2.02	0.00	-49.66	0.00	49.66	819.63	409.82	664.45	328.15	17.87	-1.66	0.158
120.00	-5.77	-1.98	0.00	-47.64	0.00	47.64	815.69	407.85	655.94	323.94	18.22	-1.69	0.154
125.00	-5.43	-1.89	0.00	-37.77	0.00	37.77	795.37	397.68	613.67	303.07	20.04	-1.79	0.131
130.00	-4.04	-1.46	0.00	-28.31	0.00	28.31	774.00	387.00	571.95	282.46	21.97	-1.89	0.105
135.00	-3.75	-1.38	0.00	-21.01	0.00	21.01	751.59	375.80	530.89	262.19	23.99	-1.96	0.085
140.00	-3.47	-1.32	0.00	-14.12	0.00	14.12	728.15	364.07	490.60	242.29	26.08	-2.03	0.063
142.00	-3.32	-1.21	0.00	-11.49	0.00	11.49	714.94	357.47	472.37	233.29	26.94	-2.05	0.054
145.00	-3.15	-1.15	0.00	-7.84	0.00	7.84	694.02	347.01	444.98	219.76	28.24	-2.08	0.040
150.00	0.00	-1.04	0.00	-2.08	0.00	2.08	659.15	329.57	401.14	198.11	30.43	-2.10	0.010

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_g):	0.19
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}):	0.20
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):	2.60
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	29.94 k
Seismic Base Shear (E):	1.17 k

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

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
39	147.50	266	5,784	0.027	32	330
38	143.50	163	3,364	0.016	18	203
37	141.00	111	2,211	0.010	12	138
36	137.50	284	5,362	0.025	29	352
35	132.50	292	5,121	0.024	28	362
34	127.50	331	5,378	0.025	30	410
33	122.50	339	5,085	0.024	28	420
32	119.50	69	982	0.005	5	85
31	117.00	323	4,418	0.021	24	400
30	112.50	411	5,197	0.024	29	509
29	108.50	294	3,456	0.016	19	364
28	106.00	198	2,226	0.010	12	246
27	102.50	503	5,283	0.025	29	624
26	97.50	514	4,882	0.023	27	637
25	92.50	524	4,486	0.021	25	650
24	88.47	326	2,553	0.012	14	405
23	85.97	338	2,502	0.012	14	420
22	82.50	880	5,988	0.028	33	1,091
21	77.50	891	5,349	0.025	29	1,105
20	74.25	269	1,484	0.007	8	334
19	71.75	949	4,885	0.023	27	1,177
18	67.50	997	4,543	0.021	25	1,237
17	62.50	1,011	3,947	0.019	22	1,254

Site Number: 302480

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

16	57.50	1,024	3,385	0.016	19	1,270
15	52.50	1,037	2,859	0.013	16	1,287
14	47.50	1,051	2,371	0.011	13	1,304
13	42.50	1,064	1,922	0.009	11	1,320
12	39.50	214	335	0.002	2	266
11	37.33	719	1,002	0.005	6	892
10	35.33	231	288	0.001	2	286
9	33.25	1,220	1,349	0.006	7	1,514
8	30.75	358	339	0.002	2	445
7	27.50	1,205	912	0.004	5	1,495
6	22.50	1,221	618	0.003	3	1,515
5	17.50	1,238	379	0.002	2	1,535
4	12.50	1,254	196	0.001	1	1,555
3	9.50	253	23	0.000	0	313
2	7.00	1,017	50	0.000	0	1,262
1	2.50	1,286	8	0.000	0	1,595
Powerwave LGP13519	150.00	32	716	0.003	4	39
LGP Allgon TMA-DD 19	150.00	62	1,404	0.007	8	77
Raycap DC6-48-60-18-	150.00	32	715	0.003	4	39
Ericsson RRUS 11 (Ba	150.00	165	3,713	0.017	20	205
Ericsson RRUS 32 B2	150.00	159	3,577	0.017	20	197
Powerwave 7770.00	150.00	210	4,725	0.022	26	261
15' Dipole	150.00	45	1,013	0.005	6	56
25' Omni	150.00	70	1,575	0.007	9	87
CCI HPA-65R-BUU-H6	150.00	153	3,443	0.016	19	190
Flat Platform w/ Han	150.00	2,000	45,000	0.212	247	2,481
Scala CL-FM	142.00	45	907	0.004	5	56
Ericsson RRUS 11 B12	130.00	152	2,570	0.012	14	189
Stand-Off	130.00	300	5,070	0.024	28	372
Ericsson AIR 21, 1.3	130.00	275	4,639	0.022	25	341
Ericsson AIR B4A/B12	130.00	339	5,729	0.027	31	421
RFS FD9R6004/1C-3L	119.00	19	263	0.001	1	23
12" x 9" x 6" TMA	119.00	120	1,699	0.008	9	149
Alcatel-Lucent RRH2x	119.00	132	1,869	0.009	10	164
Amphenol Antel BXA-1	119.00	32	446	0.002	2	39
Amphenol Antel BXA-1	119.00	32	446	0.002	2	39
Antel BXA-80063/4CF	119.00	30	421	0.002	2	37
RFS DB-T1-6Z-8AB-0Z	119.00	44	623	0.003	3	55
Antel BXA-70063/6CF_	119.00	51	722	0.003	4	63
Round T-Arms	119.00	750	10,621	0.050	58	930
GPS	107.00	10	114	0.001	1	12
GPS	39.00	10	15	0.000	0	12
		29,940	212,559	1.000	1,168	37,142

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

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)
39	147.50	266	5,784	0.027	32	229
38	143.50	163	3,364	0.016	18	140
37	141.00	111	2,211	0.010	12	96
36	137.50	284	5,362	0.025	29	244
35	132.50	292	5,121	0.024	28	251
34	127.50	331	5,378	0.025	30	284
33	122.50	339	5,085	0.024	28	291
32	119.50	69	982	0.005	5	59
31	117.00	323	4,418	0.021	24	277
30	112.50	411	5,197	0.024	29	353
29	108.50	294	3,456	0.016	19	252
28	106.00	198	2,226	0.010	12	170

Site Number: 302480

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Site Name: Woodbridge CT 1, CT

Engineering Number:OAA715326_C3_01

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Customer: AT&T MOBILITY

27	102.50	503	5,283	0.025	29	432
26	97.50	514	4,882	0.023	27	441
25	92.50	524	4,486	0.021	25	451
24	88.47	326	2,553	0.012	14	280
23	85.97	338	2,502	0.012	14	291
22	82.50	880	5,988	0.028	33	756
21	77.50	891	5,349	0.025	29	765
20	74.25	269	1,484	0.007	8	231
19	71.75	949	4,885	0.023	27	816
18	67.50	997	4,543	0.021	25	857
17	62.50	1,011	3,947	0.019	22	869
16	57.50	1,024	3,385	0.016	19	880
15	52.50	1,037	2,859	0.013	16	892
14	47.50	1,051	2,371	0.011	13	903
13	42.50	1,064	1,922	0.009	11	915
12	39.50	214	335	0.002	2	184
11	37.33	719	1,002	0.005	6	618
10	35.33	231	288	0.001	2	198
9	33.25	1,220	1,349	0.006	7	1,049
8	30.75	358	339	0.002	2	308
7	27.50	1,205	912	0.004	5	1,036
6	22.50	1,221	618	0.003	3	1,050
5	17.50	1,238	379	0.002	2	1,064
4	12.50	1,254	196	0.001	1	1,077
3	9.50	253	23	0.000	0	217
2	7.00	1,017	50	0.000	0	874
1	2.50	1,286	8	0.000	0	1,105
Powerwave LGP13519	150.00	32	716	0.003	4	27
LGP Allgon TMA-DD 19	150.00	62	1,404	0.007	8	54
Raycap DC6-48-60-18-	150.00	32	715	0.003	4	27
Ericsson RRUS 11 (Ba	150.00	165	3,713	0.017	20	142
Ericsson RRUS 32 B2	150.00	159	3,577	0.017	20	137
Powerwave 7770.00	150.00	210	4,725	0.022	26	180
15' Dipole	150.00	45	1,013	0.005	6	39
25' Omni	150.00	70	1,575	0.007	9	60
CCI HPA-65R-BUU-H6	150.00	153	3,443	0.016	19	131
Flat Platform w/ Han	150.00	2,000	45,000	0.212	247	1,719
Scala CL-FM	142.00	45	907	0.004	5	39
Ericsson RRUS 11 B12	130.00	152	2,570	0.012	14	131
Stand-Off	130.00	300	5,070	0.024	28	258
Ericsson AIR 21, 1.3	130.00	275	4,639	0.022	25	236
Ericsson AIR B4A/B12	130.00	339	5,729	0.027	31	291
RFS FD9R6004/1C-3L	119.00	19	263	0.001	1	16
12" x 9" x 6" TMA	119.00	120	1,699	0.008	9	103
Alcatel-Lucent RRH2x	119.00	132	1,869	0.009	10	113
Amphenol Antel BXA-1	119.00	32	446	0.002	2	27
Amphenol Antel BXA-1	119.00	32	446	0.002	2	27
Antel BXA-80063/4CF	119.00	30	421	0.002	2	26
RFS DB-T1-6Z-8AB-0Z	119.00	44	623	0.003	3	38
Antel BXA-70063/6CF_	119.00	51	722	0.003	4	44
Round T-Arms	119.00	750	10,621	0.050	58	645
GPS	107.00	10	114	0.001	1	9
GPS	39.00	10	15	0.000	0	9
		29,940	212,559	1.000	1,168	25,733

Site Number: 302480

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

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

Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.55	-1.17	0.00	-144.52	0.00	144.52	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.045
5.00	-34.28	-1.18	0.00	-138.66	0.00	138.66	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.044
9.00	-33.97	-1.18	0.00	-133.95	0.00	133.95	3,079.35	1,539.68	4,513.00	2,228.80	0.03	-0.03	0.044
9.00	-33.97	-1.18	0.00	-133.95	0.00	133.95	3,079.35	1,539.68	4,513.00	2,228.80	0.03	-0.03	0.044
10.00	-32.42	-1.19	0.00	-132.76	0.00	132.76	3,070.50	1,535.25	4,480.00	2,212.51	0.03	-0.03	0.043
15.00	-30.88	-1.19	0.00	-126.82	0.00	126.82	3,025.61	1,512.80	4,315.88	2,131.45	0.08	-0.05	0.042
20.00	-29.36	-1.20	0.00	-120.86	0.00	120.86	2,979.67	1,489.84	4,153.23	2,051.12	0.13	-0.06	0.041
25.00	-27.87	-1.20	0.00	-114.87	0.00	114.87	2,932.70	1,466.35	3,992.16	1,971.58	0.21	-0.08	0.040
30.00	-27.42	-1.20	0.00	-108.88	0.00	108.88	2,875.19	1,437.60	3,820.15	1,886.63	0.30	-0.10	0.039
31.50	-25.91	-1.19	0.00	-107.08	0.00	107.08	2,854.27	1,427.14	3,764.44	1,859.12	0.33	-0.10	0.039
35.00	-25.62	-1.20	0.00	-102.90	0.00	102.90	2,805.46	1,402.73	3,636.05	1,795.71	0.41	-0.11	0.038
35.67	-24.73	-1.19	0.00	-102.10	0.00	102.10	2,248.06	1,124.03	2,973.87	1,468.68	0.43	-0.12	0.043
39.00	-24.45	-1.19	0.00	-98.13	0.00	98.13	2,225.45	1,112.72	2,895.60	1,430.03	0.51	-0.13	0.042
40.00	-23.13	-1.18	0.00	-96.94	0.00	96.94	2,218.58	1,109.29	2,872.20	1,418.47	0.54	-0.13	0.042
45.00	-21.83	-1.17	0.00	-91.03	0.00	91.03	2,183.59	1,091.80	2,755.72	1,360.95	0.69	-0.15	0.040
50.00	-20.54	-1.16	0.00	-85.17	0.00	85.17	2,147.57	1,073.78	2,640.25	1,303.92	0.85	-0.16	0.038
55.00	-19.27	-1.14	0.00	-79.37	0.00	79.37	2,110.50	1,055.25	2,525.89	1,247.44	1.03	-0.18	0.037
60.00	-18.02	-1.12	0.00	-73.66	0.00	73.66	2,072.40	1,036.20	2,412.73	1,191.56	1.23	-0.20	0.035
65.00	-16.78	-1.10	0.00	-68.05	0.00	68.05	2,033.25	1,016.63	2,300.88	1,136.32	1.45	-0.22	0.033
70.00	-15.60	-1.07	0.00	-62.56	0.00	62.56	1,982.07	991.03	2,178.35	1,075.80	1.68	-0.23	0.031
73.50	-15.27	-1.06	0.00	-58.82	0.00	58.82	1,473.95	736.97	1,624.53	802.29	1.86	-0.24	0.035
75.00	-14.16	-1.03	0.00	-57.22	0.00	57.22	1,466.27	733.13	1,601.72	791.03	1.94	-0.25	0.034
80.00	-13.07	-1.00	0.00	-52.07	0.00	52.07	1,439.98	719.99	1,526.07	753.67	2.20	-0.26	0.032
85.00	-12.65	-0.98	0.00	-47.08	0.00	47.08	1,412.66	706.33	1,451.06	716.62	2.49	-0.28	0.030
86.94	-12.25	-0.97	0.00	-45.18	0.00	45.18	1,401.78	700.89	1,422.15	702.35	2.60	-0.29	0.029
86.94	-12.25	-0.97	0.00	-45.18	0.00	45.18	1,401.78	700.89	1,422.15	702.35	2.60	-0.29	0.073
90.00	-11.60	-0.95	0.00	-42.21	0.00	42.21	1,384.30	692.15	1,376.80	679.95	2.79	-0.30	0.070
95.00	-10.96	-0.92	0.00	-37.48	0.00	37.48	1,354.89	677.45	1,303.39	643.70	3.12	-0.33	0.066
100.00	-10.34	-0.90	0.00	-32.86	0.00	32.86	1,324.45	662.22	1,230.93	607.91	3.49	-0.37	0.062
105.00	-10.09	-0.89	0.00	-28.37	0.00	28.37	1,292.96	646.48	1,159.52	572.65	3.90	-0.41	0.057
107.00	-9.71	-0.87	0.00	-26.60	0.00	26.60	1,274.99	637.49	1,126.78	556.47	4.08	-0.42	0.055
110.00	-9.20	-0.84	0.00	-23.99	0.00	23.99	1,247.09	623.55	1,077.73	532.25	4.35	-0.45	0.052
110.00	-9.20	-0.84	0.00	-23.99	0.00	23.99	853.22	426.61	741.75	366.32	4.35	-0.45	0.076
115.00	-8.80	-0.82	0.00	-19.79	0.00	19.79	834.98	417.49	698.66	345.04	4.84	-0.48	0.068
119.00	-7.22	-0.71	0.00	-16.52	0.00	16.52	819.63	409.82	664.45	328.15	5.25	-0.51	0.059
120.00	-6.80	-0.68	0.00	-15.81	0.00	15.81	815.69	407.85	655.94	323.94	5.36	-0.52	0.057
125.00	-6.39	-0.65	0.00	-12.42	0.00	12.42	795.37	397.68	613.67	303.07	5.92	-0.55	0.049
130.00	-4.71	-0.51	0.00	-9.17	0.00	9.17	774.00	387.00	571.95	282.46	6.52	-0.58	0.039
135.00	-4.35	-0.48	0.00	-6.63	0.00	6.63	751.59	375.80	530.89	262.19	7.14	-0.61	0.031
140.00	-4.22	-0.46	0.00	-4.25	0.00	4.25	728.15	364.07	490.60	242.29	7.79	-0.63	0.023
142.00	-3.96	-0.44	0.00	-3.33	0.00	3.33	714.94	357.47	472.37	233.29	8.05	-0.63	0.020
145.00	-3.63	-0.40	0.00	-2.01	0.00	2.01	694.02	347.01	444.98	219.76	8.46	-0.64	0.014
150.00	0.00	-0.36	0.00	0.00	0.00	0.00	659.15	329.57	401.14	198.11	9.13	-0.65	0.000

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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	-24.63	-1.17	0.00	-141.93	0.00	141.93	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.042
5.00	-23.75	-1.18	0.00	-136.08	0.00	136.08	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.041
9.00	-23.54	-1.18	0.00	-131.38	0.00	131.38	3,079.35	1,539.68	4,513.00	2,228.80	0.03	-0.03	0.041
9.00	-23.54	-1.18	0.00	-131.38	0.00	131.38	3,079.35	1,539.68	4,513.00	2,228.80	0.03	-0.03	0.041
10.00	-22.46	-1.18	0.00	-130.20	0.00	130.20	3,070.50	1,535.25	4,480.00	2,212.51	0.03	-0.03	0.040
15.00	-21.39	-1.18	0.00	-124.29	0.00	124.29	3,025.61	1,512.80	4,315.88	2,131.45	0.07	-0.05	0.039
20.00	-20.34	-1.19	0.00	-118.37	0.00	118.37	2,979.67	1,489.84	4,153.23	2,051.12	0.13	-0.06	0.038
25.00	-19.31	-1.18	0.00	-112.45	0.00	112.45	2,932.70	1,466.35	3,992.16	1,971.58	0.21	-0.08	0.037
30.00	-19.00	-1.19	0.00	-106.53	0.00	106.53	2,875.19	1,437.60	3,820.15	1,886.63	0.30	-0.10	0.036
31.50	-17.95	-1.18	0.00	-104.75	0.00	104.75	2,854.27	1,427.14	3,764.44	1,859.12	0.33	-0.10	0.036
35.00	-17.75	-1.18	0.00	-100.62	0.00	100.62	2,805.46	1,402.73	3,636.05	1,795.71	0.41	-0.11	0.035
35.67	-17.13	-1.17	0.00	-99.84	0.00	99.84	2,248.06	1,124.03	2,973.87	1,468.68	0.42	-0.11	0.040
39.00	-16.94	-1.17	0.00	-95.93	0.00	95.93	2,225.45	1,112.72	2,895.60	1,430.03	0.50	-0.12	0.039
40.00	-16.03	-1.16	0.00	-94.75	0.00	94.75	2,218.58	1,109.29	2,872.20	1,418.47	0.53	-0.13	0.039
45.00	-15.12	-1.15	0.00	-88.93	0.00	88.93	2,183.59	1,091.80	2,755.72	1,360.95	0.67	-0.14	0.037
50.00	-14.23	-1.14	0.00	-83.16	0.00	83.16	2,147.57	1,073.78	2,640.25	1,303.92	0.83	-0.16	0.036
55.00	-13.35	-1.12	0.00	-77.47	0.00	77.47	2,110.50	1,055.25	2,525.89	1,247.44	1.01	-0.18	0.034
60.00	-12.48	-1.10	0.00	-71.86	0.00	71.86	2,072.40	1,036.20	2,412.73	1,191.56	1.21	-0.19	0.032
65.00	-11.62	-1.08	0.00	-66.35	0.00	66.35	2,033.25	1,016.63	2,300.88	1,136.32	1.42	-0.21	0.031
70.00	-10.81	-1.05	0.00	-60.97	0.00	60.97	1,982.07	991.03	2,178.35	1,075.80	1.65	-0.23	0.029
73.50	-10.58	-1.04	0.00	-57.30	0.00	57.30	1,473.95	736.97	1,624.53	802.29	1.82	-0.24	0.033
75.00	-9.81	-1.01	0.00	-55.73	0.00	55.73	1,466.27	733.13	1,601.72	791.03	1.89	-0.24	0.032
80.00	-9.06	-0.98	0.00	-50.68	0.00	50.68	1,439.98	719.99	1,526.07	753.67	2.16	-0.26	0.030
85.00	-8.76	-0.96	0.00	-45.80	0.00	45.80	1,412.66	706.33	1,451.06	716.62	2.44	-0.27	0.028
86.94	-8.48	-0.95	0.00	-43.93	0.00	43.93	1,401.78	700.89	1,422.15	702.35	2.55	-0.28	0.027
86.94	-8.48	-0.95	0.00	-43.93	0.00	43.93	1,401.78	700.89	1,422.15	702.35	2.55	-0.28	0.069
90.00	-8.03	-0.93	0.00	-41.02	0.00	41.02	1,384.30	692.15	1,376.80	679.95	2.73	-0.29	0.066
95.00	-7.59	-0.90	0.00	-36.39	0.00	36.39	1,354.89	677.45	1,303.39	643.70	3.05	-0.33	0.062
100.00	-7.16	-0.87	0.00	-31.89	0.00	31.89	1,324.45	662.22	1,230.93	607.91	3.42	-0.36	0.058
105.00	-6.99	-0.86	0.00	-27.51	0.00	27.51	1,292.96	646.48	1,159.52	572.65	3.82	-0.40	0.053
107.00	-6.73	-0.84	0.00	-25.78	0.00	25.78	1,274.99	637.49	1,126.78	556.47	3.99	-0.41	0.052
110.00	-6.37	-0.82	0.00	-23.25	0.00	23.25	1,247.09	623.55	1,077.73	532.25	4.25	-0.43	0.049
110.00	-6.37	-0.82	0.00	-23.25	0.00	23.25	853.22	426.61	741.75	366.32	4.25	-0.43	0.071
115.00	-6.10	-0.79	0.00	-19.17	0.00	19.17	834.98	417.49	698.66	345.04	4.73	-0.47	0.063
119.00	-5.00	-0.69	0.00	-15.99	0.00	15.99	819.63	409.82	664.45	328.15	5.13	-0.50	0.055
120.00	-4.71	-0.66	0.00	-15.31	0.00	15.31	815.69	407.85	655.94	323.94	5.23	-0.50	0.053
125.00	-4.42	-0.63	0.00	-12.02	0.00	12.02	795.37	397.68	613.67	303.07	5.78	-0.54	0.045
130.00	-3.26	-0.49	0.00	-8.88	0.00	8.88	774.00	387.00	571.95	282.46	6.36	-0.57	0.036
135.00	-3.02	-0.46	0.00	-6.42	0.00	6.42	751.59	375.80	530.89	262.19	6.97	-0.59	0.028
140.00	-2.92	-0.45	0.00	-4.11	0.00	4.11	728.15	364.07	490.60	242.29	7.60	-0.61	0.021
142.00	-2.74	-0.42	0.00	-3.22	0.00	3.22	714.94	357.47	472.37	233.29	7.86	-0.62	0.018
145.00	-2.51	-0.39	0.00	-1.95	0.00	1.95	694.02	347.01	444.98	219.76	8.25	-0.62	0.012
150.00	0.00	-0.36	0.00	0.00	0.00	0.00	659.15	329.57	401.14	198.11	8.91	-0.63	0.000

Site Number: 302480

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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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):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.60
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
39	147.50	266	1.828	1.667	1.025	0.341	79	330
38	143.50	163	1.730	1.238	0.861	0.278	39	203
37	141.00	111	1.670	1.012	0.769	0.242	23	138
36	137.50	284	1.588	0.742	0.654	0.195	48	352
35	132.50	292	1.475	0.441	0.513	0.135	34	362
34	127.50	331	1.366	0.222	0.397	0.084	24	410
33	122.50	339	1.261	0.069	0.302	0.040	12	420
32	119.50	69	1.200	0.004	0.254	0.018	1	85
31	117.00	323	1.150	-0.037	0.219	0.002	1	400
30	112.50	411	1.063	-0.088	0.165	-0.022	-8	509
29	108.50	294	0.989	-0.113	0.126	-0.038	-10	364
28	106.00	198	0.944	-0.120	0.105	-0.046	-8	246
27	102.50	503	0.883	-0.121	0.081	-0.053	-23	624
26	97.50	514	0.799	-0.112	0.053	-0.056	-25	637
25	92.50	524	0.719	-0.092	0.034	-0.051	-23	650
24	88.47	326	0.657	-0.073	0.022	-0.041	-12	405
23	85.97	338	0.621	-0.060	0.017	-0.033	-10	420
22	82.50	880	0.572	-0.043	0.012	-0.020	-15	1,091
21	77.50	891	0.505	-0.018	0.007	0.001	0	1,105
20	74.25	269	0.463	-0.003	0.006	0.014	3	334
19	71.75	949	0.432	0.008	0.006	0.023	19	1,177
18	67.50	997	0.383	0.023	0.007	0.036	31	1,237
17	62.50	1,011	0.328	0.039	0.010	0.047	42	1,254
16	57.50	1,024	0.278	0.050	0.014	0.054	48	1,270
15	52.50	1,037	0.232	0.058	0.019	0.057	52	1,287
14	47.50	1,051	0.190	0.064	0.025	0.058	53	1,304
13	42.50	1,064	0.152	0.068	0.030	0.058	53	1,320
12	39.50	214	0.131	0.069	0.033	0.057	11	266
11	37.33	719	0.117	0.070	0.035	0.056	35	892
10	35.33	231	0.105	0.071	0.037	0.056	11	286
9	33.25	1,220	0.093	0.071	0.038	0.055	59	1,514
8	30.75	358	0.079	0.072	0.040	0.055	17	445
7	27.50	1,205	0.064	0.072	0.041	0.054	56	1,495
6	22.50	1,221	0.043	0.070	0.042	0.052	55	1,515

Site Number: 302480

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

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Customer: AT&T MOBILITY

5	17.50	1,238	0.026	0.067	0.040	0.050	53	1,535
4	12.50	1,254	0.013	0.059	0.034	0.045	49	1,555
3	9.50	253	0.008	0.051	0.029	0.040	9	313
2	7.00	1,017	0.004	0.042	0.023	0.035	31	1,262
1	2.50	1,286	0.001	0.018	0.010	0.017	19	1,595
Powerwave LGP13519	150.00	32	1.890	1.980	1.140	0.383	11	39
LGP Allgon TMA-DD 19	150.00	62	1.890	1.980	1.140	0.383	21	77
Raycap DC6-48-60-18-	150.00	32	1.890	1.980	1.140	0.383	11	39
Ericsson RRUS 11 (Ba	150.00	165	1.890	1.980	1.140	0.383	55	205
Ericsson RRUS 32 B2	150.00	159	1.890	1.980	1.140	0.383	53	197
Powerwave 7770.00	150.00	210	1.890	1.980	1.140	0.383	70	261
15' Dipole	150.00	45	1.890	1.980	1.140	0.383	15	56
25' Omni	150.00	70	1.890	1.980	1.140	0.383	23	87
CCI HPA-65R-BUU-H6	150.00	153	1.890	1.980	1.140	0.383	51	190
Flat Platform w/ Han	150.00	2,000	1.890	1.980	1.140	0.383	664	2,481
Scala CL-FM	142.00	45	1.694	1.099	0.805	0.256	10	56
Ericsson RRUS 11 B12	130.00	152	1.420	0.322	0.452	0.108	14	189
Stand-Off	130.00	300	1.420	0.322	0.452	0.108	28	372
Ericsson AIR 21, 1.3	130.00	275	1.420	0.322	0.452	0.108	26	341
Ericsson AIR B4A/B12	130.00	339	1.420	0.322	0.452	0.108	32	421
RFS FD9R6004/1C-3L	119.00	19	1.190	-0.005	0.247	0.015	0	23
12" x 9" x 6" TMA	119.00	120	1.190	-0.005	0.247	0.015	2	149
Alcatel-Lucent RRH2x	119.00	132	1.190	-0.005	0.247	0.015	2	164
Amphenol Antel BXA-1	119.00	32	1.190	-0.005	0.247	0.015	0	39
Amphenol Antel BXA-1	119.00	32	1.190	-0.005	0.247	0.015	0	39
Antel BXA-80063/4CF	119.00	30	1.190	-0.005	0.247	0.015	0	37
RFS DB-T1-6Z-8AB-0Z	119.00	44	1.190	-0.005	0.247	0.015	1	55
Antel BXA-70063/6CF_	119.00	51	1.190	-0.005	0.247	0.015	1	63
Round T-Arms	119.00	750	1.190	-0.005	0.247	0.015	10	930
GPS	107.00	10	0.962	-0.117	0.113	-0.043	0	12
GPS	39.00	10	0.128	0.070	0.033	0.057	0	12
		29,940	62.222	27.650	22.521	6.560	1,931	37,142

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)
39	147.50	266	1.828	1.667	1.025	0.341	79	229
38	143.50	163	1.730	1.238	0.861	0.278	39	140
37	141.00	111	1.670	1.012	0.769	0.242	23	96
36	137.50	284	1.588	0.742	0.654	0.195	48	244
35	132.50	292	1.475	0.441	0.513	0.135	34	251
34	127.50	331	1.366	0.222	0.397	0.084	24	284
33	122.50	339	1.261	0.069	0.302	0.040	12	291
32	119.50	69	1.200	0.004	0.254	0.018	1	59
31	117.00	323	1.150	-0.037	0.219	0.002	1	277
30	112.50	411	1.063	-0.088	0.165	-0.022	-8	353
29	108.50	294	0.989	-0.113	0.126	-0.038	-10	252
28	106.00	198	0.944	-0.120	0.105	-0.046	-8	170
27	102.50	503	0.883	-0.121	0.081	-0.053	-23	432
26	97.50	514	0.799	-0.112	0.053	-0.056	-25	441
25	92.50	524	0.719	-0.092	0.034	-0.051	-23	451
24	88.47	326	0.657	-0.073	0.022	-0.041	-12	280
23	85.97	338	0.621	-0.060	0.017	-0.033	-10	291
22	82.50	880	0.572	-0.043	0.012	-0.020	-15	756
21	77.50	891	0.505	-0.018	0.007	0.001	0	765
20	74.25	269	0.463	-0.003	0.006	0.014	3	231
19	71.75	949	0.432	0.008	0.006	0.023	19	816
18	67.50	997	0.383	0.023	0.007	0.036	31	857

Site Number: 302480

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Site Name: Woodbridge CT 1, CT

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Customer: AT&T MOBILITY

17	62.50	1,011	0.328	0.039	0.010	0.047	42	869
16	57.50	1,024	0.278	0.050	0.014	0.054	48	880
15	52.50	1,037	0.232	0.058	0.019	0.057	52	892
14	47.50	1,051	0.190	0.064	0.025	0.058	53	903
13	42.50	1,064	0.152	0.068	0.030	0.058	53	915
12	39.50	214	0.131	0.069	0.033	0.057	11	184
11	37.33	719	0.117	0.070	0.035	0.056	35	618
10	35.33	231	0.105	0.071	0.037	0.056	11	198
9	33.25	1,220	0.093	0.071	0.038	0.055	59	1,049
8	30.75	358	0.079	0.072	0.040	0.055	17	308
7	27.50	1,205	0.064	0.072	0.041	0.054	56	1,036
6	22.50	1,221	0.043	0.070	0.042	0.052	55	1,050
5	17.50	1,238	0.026	0.067	0.040	0.050	53	1,064
4	12.50	1,254	0.013	0.059	0.034	0.045	49	1,077
3	9.50	253	0.008	0.051	0.029	0.040	9	217
2	7.00	1,017	0.004	0.042	0.023	0.035	31	874
1	2.50	1,286	0.001	0.018	0.010	0.017	19	1,105
Powerwave LGP13519	150.00	32	1.890	1.980	1.140	0.383	11	27
LGP Allgon TMA-DD 19	150.00	62	1.890	1.980	1.140	0.383	21	54
Raycap DC6-48-60-18-	150.00	32	1.890	1.980	1.140	0.383	11	27
Ericsson RRUS 11 (Ba	150.00	165	1.890	1.980	1.140	0.383	55	142
Ericsson RRUS 32 B2	150.00	159	1.890	1.980	1.140	0.383	53	137
Powerwave 7770.00	150.00	210	1.890	1.980	1.140	0.383	70	180
15' Dipole	150.00	45	1.890	1.980	1.140	0.383	15	39
25' Omni	150.00	70	1.890	1.980	1.140	0.383	23	60
CCI HPA-65R-BUU-H6	150.00	153	1.890	1.980	1.140	0.383	51	131
Flat Platform w/ Han	150.00	2,000	1.890	1.980	1.140	0.383	664	1,719
Scala CL-FM	142.00	45	1.694	1.099	0.805	0.256	10	39
Ericsson RRUS 11 B12	130.00	152	1.420	0.322	0.452	0.108	14	131
Stand-Off	130.00	300	1.420	0.322	0.452	0.108	28	258
Ericsson AIR 21, 1.3	130.00	275	1.420	0.322	0.452	0.108	26	236
Ericsson AIR B4A/B 12	130.00	339	1.420	0.322	0.452	0.108	32	291
RFS FD9R6004/1C-3L	119.00	19	1.190	-0.005	0.247	0.015	0	16
12" x 9" x 6" TMA	119.00	120	1.190	-0.005	0.247	0.015	2	103
Alcatel-Lucent RRH2x	119.00	132	1.190	-0.005	0.247	0.015	2	113
Amphenol Antel BXA-1	119.00	32	1.190	-0.005	0.247	0.015	0	27
Amphenol Antel BXA-1	119.00	32	1.190	-0.005	0.247	0.015	0	27
Antel BXA-80063/4CF	119.00	30	1.190	-0.005	0.247	0.015	0	26
RFS DB-T1-6Z-8AB-0Z	119.00	44	1.190	-0.005	0.247	0.015	1	38
Antel BXA-70063/6CF_	119.00	51	1.190	-0.005	0.247	0.015	1	44
Round T-Arms	119.00	750	1.190	-0.005	0.247	0.015	10	645
GPS	107.00	10	0.962	-0.117	0.113	-0.043	0	9
GPS	39.00	10	0.128	0.070	0.033	0.057	0	9
		29,940	62.222	27.650	22.521	6.560	1,931	25,733

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Customer: AT&T MOBILITY

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	-35.55	-1.92	0.00	-222.97	0.00	222.97	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.065
5.00	-34.28	-1.90	0.00	-213.37	0.00	213.37	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.064
9.00	-33.97	-1.90	0.00	-205.77	0.00	205.77	3,079.35	1,539.68	4,513.00	2,228.80	0.04	-0.04	0.063
9.00	-33.97	-1.90	0.00	-205.77	0.00	205.77	3,079.35	1,539.68	4,513.00	2,228.80	0.04	-0.04	0.063
10.00	-32.41	-1.86	0.00	-203.87	0.00	203.87	3,070.50	1,535.25	4,480.00	2,212.51	0.05	-0.05	0.062
15.00	-30.88	-1.82	0.00	-194.58	0.00	194.58	3,025.61	1,512.80	4,315.88	2,131.45	0.12	-0.07	0.061
20.00	-29.36	-1.77	0.00	-185.50	0.00	185.50	2,979.67	1,489.84	4,153.23	2,051.12	0.21	-0.10	0.059
25.00	-27.87	-1.72	0.00	-176.65	0.00	176.65	2,932.70	1,466.35	3,992.16	1,971.58	0.32	-0.12	0.058
30.00	-27.42	-1.71	0.00	-168.02	0.00	168.02	2,875.19	1,437.60	3,820.15	1,886.63	0.47	-0.15	0.057
31.50	-25.91	-1.66	0.00	-165.45	0.00	165.45	2,854.27	1,427.14	3,764.44	1,859.12	0.51	-0.16	0.056
35.00	-25.62	-1.65	0.00	-159.65	0.00	159.65	2,805.46	1,402.73	3,636.05	1,795.71	0.64	-0.17	0.055
35.67	-24.73	-1.62	0.00	-158.55	0.00	158.55	2,248.06	1,124.03	2,973.87	1,468.68	0.66	-0.18	0.063
39.00	-24.45	-1.61	0.00	-153.16	0.00	153.16	2,225.45	1,112.72	2,895.60	1,430.03	0.79	-0.20	0.062
40.00	-23.13	-1.56	0.00	-151.55	0.00	151.55	2,218.58	1,109.29	2,872.20	1,418.47	0.83	-0.20	0.061
45.00	-21.83	-1.51	0.00	-143.76	0.00	143.76	2,183.59	1,091.80	2,755.72	1,360.95	1.06	-0.23	0.060
50.00	-20.54	-1.46	0.00	-136.21	0.00	136.21	2,147.57	1,073.78	2,640.25	1,303.92	1.31	-0.26	0.058
55.00	-19.27	-1.42	0.00	-128.89	0.00	128.89	2,110.50	1,055.25	2,525.89	1,247.44	1.59	-0.28	0.056
60.00	-18.01	-1.38	0.00	-121.79	0.00	121.79	2,072.40	1,036.20	2,412.73	1,191.56	1.90	-0.31	0.054
65.00	-16.78	-1.35	0.00	-114.90	0.00	114.90	2,033.25	1,016.63	2,300.88	1,136.32	2.24	-0.34	0.052
70.00	-15.60	-1.33	0.00	-108.15	0.00	108.15	1,982.07	991.03	2,178.35	1,075.80	2.61	-0.37	0.051
73.50	-15.26	-1.33	0.00	-103.50	0.00	103.50	1,473.95	736.97	1,624.53	802.29	2.89	-0.39	0.058
75.00	-14.16	-1.32	0.00	-101.50	0.00	101.50	1,466.27	733.13	1,601.72	791.03	3.01	-0.39	0.057
80.00	-13.07	-1.34	0.00	-94.88	0.00	94.88	1,439.98	719.99	1,526.07	753.67	3.44	-0.42	0.054
85.00	-12.65	-1.35	0.00	-88.18	0.00	88.18	1,412.66	706.33	1,451.06	716.62	3.90	-0.45	0.052
86.94	-12.24	-1.36	0.00	-85.57	0.00	85.57	1,401.78	700.89	1,422.15	702.35	4.09	-0.46	0.051
86.94	-12.24	-1.36	0.00	-85.57	0.00	85.57	1,401.78	700.89	1,422.15	702.35	4.09	-0.46	0.131
90.00	-11.59	-1.39	0.00	-81.40	0.00	81.40	1,384.30	692.15	1,376.80	679.95	4.39	-0.48	0.128
95.00	-10.95	-1.42	0.00	-74.45	0.00	74.45	1,354.89	677.45	1,303.39	643.70	4.94	-0.56	0.124
100.00	-10.32	-1.45	0.00	-67.34	0.00	67.34	1,324.45	662.22	1,230.93	607.91	5.56	-0.64	0.119
105.00	-10.08	-1.47	0.00	-60.08	0.00	60.08	1,292.96	646.48	1,159.52	572.65	6.27	-0.71	0.113
107.00	-9.70	-1.48	0.00	-57.14	0.00	57.14	1,274.99	637.49	1,126.78	556.47	6.58	-0.74	0.110
110.00	-9.19	-1.49	0.00	-52.70	0.00	52.70	1,247.09	623.55	1,077.73	532.25	7.06	-0.79	0.106
110.00	-9.19	-1.49	0.00	-52.70	0.00	52.70	853.22	426.61	741.75	366.32	7.06	-0.79	0.155
115.00	-8.79	-1.50	0.00	-45.25	0.00	45.25	834.98	417.49	698.66	345.04	7.92	-0.86	0.142
119.00	-7.20	-1.46	0.00	-39.27	0.00	39.27	819.63	409.82	664.45	328.15	8.68	-0.94	0.128
120.00	-6.78	-1.45	0.00	-37.81	0.00	37.81	815.69	407.85	655.94	323.94	8.88	-0.96	0.125
125.00	-6.37	-1.43	0.00	-30.58	0.00	30.58	795.37	397.68	613.67	303.07	9.93	-1.04	0.109
130.00	-4.69	-1.27	0.00	-23.45	0.00	23.45	774.00	387.00	571.95	282.46	11.06	-1.12	0.089
135.00	-4.33	-1.21	0.00	-17.12	0.00	17.12	751.59	375.80	530.89	262.19	12.26	-1.18	0.071
140.00	-4.20	-1.19	0.00	-11.05	0.00	11.05	728.15	364.07	490.60	242.29	13.53	-1.23	0.051
142.00	-3.94	-1.14	0.00	-8.67	0.00	8.67	714.94	357.47	472.37	233.29	14.05	-1.25	0.043
145.00	-3.61	-1.05	0.00	-5.26	0.00	5.26	694.02	347.01	444.98	219.76	14.84	-1.27	0.029
150.00	0.00	-0.97	0.00	0.00	0.00	0.00	659.15	329.57	401.14	198.11	16.18	-1.28	0.000

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:55 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	-24.63	-1.92	0.00	-218.58	0.00	218.58	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.062
5.00	-23.75	-1.89	0.00	-209.00	0.00	209.00	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.060
9.00	-23.53	-1.89	0.00	-201.42	0.00	201.42	3,079.35	1,539.68	4,513.00	2,228.80	0.04	-0.04	0.059
9.00	-23.53	-1.89	0.00	-201.42	0.00	201.42	3,079.35	1,539.68	4,513.00	2,228.80	0.04	-0.04	0.059
10.00	-22.46	-1.85	0.00	-199.53	0.00	199.53	3,070.50	1,535.25	4,480.00	2,212.51	0.05	-0.05	0.059
15.00	-21.39	-1.80	0.00	-190.30	0.00	190.30	3,025.61	1,512.80	4,315.88	2,131.45	0.11	-0.07	0.058
20.00	-20.34	-1.75	0.00	-181.30	0.00	181.30	2,979.67	1,489.84	4,153.23	2,051.12	0.20	-0.10	0.056
25.00	-19.31	-1.70	0.00	-172.53	0.00	172.53	2,932.70	1,466.35	3,992.16	1,971.58	0.32	-0.12	0.055
30.00	-19.00	-1.69	0.00	-164.02	0.00	164.02	2,875.19	1,437.60	3,820.15	1,886.63	0.46	-0.15	0.054
31.50	-17.95	-1.63	0.00	-161.48	0.00	161.48	2,854.27	1,427.14	3,764.44	1,859.12	0.50	-0.15	0.053
35.00	-17.75	-1.62	0.00	-155.76	0.00	155.76	2,805.46	1,402.73	3,636.05	1,795.71	0.62	-0.17	0.052
35.67	-17.13	-1.59	0.00	-154.68	0.00	154.68	2,248.06	1,124.03	2,973.87	1,468.68	0.65	-0.17	0.060
39.00	-16.94	-1.58	0.00	-149.38	0.00	149.38	2,225.45	1,112.72	2,895.60	1,430.03	0.77	-0.19	0.059
40.00	-16.02	-1.53	0.00	-147.80	0.00	147.80	2,218.58	1,109.29	2,872.20	1,418.47	0.82	-0.20	0.058
45.00	-15.12	-1.48	0.00	-140.14	0.00	140.14	2,183.59	1,091.80	2,755.72	1,360.95	1.04	-0.22	0.056
50.00	-14.23	-1.43	0.00	-132.74	0.00	132.74	2,147.57	1,073.78	2,640.25	1,303.92	1.28	-0.25	0.055
55.00	-13.35	-1.39	0.00	-125.58	0.00	125.58	2,110.50	1,055.25	2,525.89	1,247.44	1.56	-0.28	0.053
60.00	-12.48	-1.35	0.00	-118.64	0.00	118.64	2,072.40	1,036.20	2,412.73	1,191.56	1.86	-0.30	0.051
65.00	-11.62	-1.32	0.00	-111.91	0.00	111.91	2,033.25	1,016.63	2,300.88	1,136.32	2.19	-0.33	0.050
70.00	-10.80	-1.30	0.00	-105.33	0.00	105.33	1,982.07	991.03	2,178.35	1,075.80	2.55	-0.36	0.048
73.50	-10.57	-1.29	0.00	-100.79	0.00	100.79	1,473.95	736.97	1,624.53	802.29	2.82	-0.38	0.055
75.00	-9.81	-1.29	0.00	-98.85	0.00	98.85	1,466.27	733.13	1,601.72	791.03	2.94	-0.38	0.054
80.00	-9.05	-1.31	0.00	-92.39	0.00	92.39	1,439.98	719.99	1,526.07	753.67	3.36	-0.41	0.051
85.00	-8.76	-1.32	0.00	-85.86	0.00	85.86	1,412.66	706.33	1,451.06	716.62	3.81	-0.44	0.049
86.94	-8.48	-1.33	0.00	-83.30	0.00	83.30	1,401.78	700.89	1,422.15	702.35	3.99	-0.45	0.048
86.94	-8.48	-1.33	0.00	-83.30	0.00	83.30	1,401.78	700.89	1,422.15	702.35	3.99	-0.45	0.125
90.00	-8.03	-1.35	0.00	-79.23	0.00	79.23	1,384.30	692.15	1,376.80	679.95	4.29	-0.47	0.122
95.00	-7.58	-1.39	0.00	-72.46	0.00	72.46	1,354.89	677.45	1,303.39	643.70	4.82	-0.55	0.118
100.00	-7.15	-1.41	0.00	-65.53	0.00	65.53	1,324.45	662.22	1,230.93	607.91	5.43	-0.62	0.113
105.00	-6.98	-1.43	0.00	-58.47	0.00	58.47	1,292.96	646.48	1,159.52	572.65	6.12	-0.69	0.107
107.00	-6.72	-1.44	0.00	-55.61	0.00	55.61	1,274.99	637.49	1,126.78	556.47	6.42	-0.73	0.105
110.00	-6.36	-1.45	0.00	-51.30	0.00	51.30	1,247.09	623.55	1,077.73	532.25	6.89	-0.77	0.101
110.00	-6.36	-1.45	0.00	-51.30	0.00	51.30	853.22	426.61	741.75	366.32	6.89	-0.77	0.148
115.00	-6.08	-1.45	0.00	-44.07	0.00	44.07	834.98	417.49	698.66	345.04	7.73	-0.84	0.135
119.00	-4.98	-1.42	0.00	-38.27	0.00	38.27	819.63	409.82	664.45	328.15	8.47	-0.91	0.123
120.00	-4.69	-1.41	0.00	-36.84	0.00	36.84	815.69	407.85	655.94	323.94	8.66	-0.93	0.120
125.00	-4.41	-1.39	0.00	-29.80	0.00	29.80	795.37	397.68	613.67	303.07	9.68	-1.01	0.104
130.00	-3.24	-1.23	0.00	-22.87	0.00	22.87	774.00	387.00	571.95	282.46	10.79	-1.09	0.085
135.00	-3.00	-1.18	0.00	-16.70	0.00	16.70	751.59	375.80	530.89	262.19	11.96	-1.15	0.068
140.00	-2.90	-1.16	0.00	-10.78	0.00	10.78	728.15	364.07	490.60	242.29	13.20	-1.20	0.048
142.00	-2.72	-1.11	0.00	-8.46	0.00	8.46	714.94	357.47	472.37	233.29	13.70	-1.22	0.040
145.00	-2.49	-1.03	0.00	-5.13	0.00	5.13	694.02	347.01	444.98	219.76	14.48	-1.24	0.027
150.00	0.00	-0.97	0.00	0.00	0.00	0.00	659.15	329.57	401.14	198.11	15.78	-1.25	0.000

Site Number: 302480

Code: ANSI/TIA-222-G

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Site Name: Woodbridge CT 1, CT

Engineering Number: OAA715326_C3_01

10/24/2017 5:22:55 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	23.20	0.00	35.88	0.00	0.00	2238.99	86.94	0.86
0.9D + 1.6W	23.17	0.00	26.90	0.00	0.00	2207.69	86.94	0.84
1.2D + 1.0Di + 1.0Wi	5.35	0.00	58.17	0.00	0.00	570.60	110.00	0.27
(1.2 + 0.2Sds) * DL + E ELFM	1.17	0.00	35.55	0.00	0.00	144.52	110.00	0.08
(1.2 + 0.2Sds) * DL + E EMAM	1.92	0.00	35.55	0.00	0.00	222.97	110.00	0.15
(0.9 - 0.2Sds) * DL + E ELFM	1.17	0.00	24.63	0.00	0.00	141.93	110.00	0.07
(0.9 - 0.2Sds) * DL + E EMAM	1.92	0.00	24.63	0.00	0.00	218.58	110.00	0.15
1.0D + 1.0W	5.66	0.00	29.94	0.00	0.00	538.21	110.00	0.21

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Upper Termination Connectors				Lower Termination Connectors				Max Member		
			VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Pu (kip)	phiPn (kip)	Ratio
0.00	9.00	(4) SOL-#20 All Thre	206.8	8.1	16.8	0.0	12.0	0	0	0.0	12.0	0	0	234.7	315.5	0.744
9.00	86.9	(4) SOL-#20 All Thre	262.3	7.9	16.8	139.5	12.0	12	14	0.0	12.0	0	0	226.9	330.5	0.687

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	37.38 in
	Pole Thickness	0.375 in
	Plate Length	44 in
	Plate Thickness	2.5 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance	1382.37 k-in
	Applied	535.75 k-in
	#	0
Stiffeners		

Code Rev. **G**

Date 10/24/2017
 Engineer Sean.Rock
 Site # 302480
 Carrier AT&T MOBILITY

Moment 2239.0 k-ft
 Axial 58.2 k

Bolts	#	8
	Bolt Circle	44 in
	(R)adial / (S)quare	S
	Bolt Gap	6 in
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	A615-75
	Fy	75 ksi
	Fu	100 ksi
	ϕ_s Resistance	259.82 k
Applied	158.98 k	
Reinforcement	#	4
	DYW. Circle	44 in
	Offset Angle	0 °
	Type	#20
	Diameter	2.5 in
	Fu	100 ksi
ϕ_s Resistance	392.70 k	
Applied	167.86 k	
Extra Bolts O	#	4
	Bolt Circle	44 in
	(R)adial / (S)quare	R
	Offset Angle	20 °
	Diameter	1.5 in
	Type	A354-BC
	Fy	109 ksi
	Fu	125 ksi
ϕ_s Resistance	140.53 k	
Applied	76.81 k	

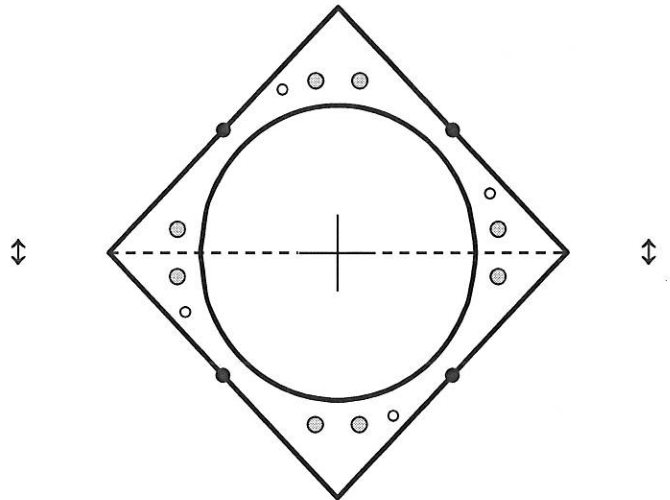


Plate Stress Ratio:
0.39 (Pass)

Bolt Stress Ratio:
0.61 (Pass)

Extra Bolt Stress Ratio:
0.55 (Pass)

Reinforcement Stress Ratio:
0.43 (Pass)

Base/Flange Plate	Plate Type	Flange @ 110.0 ft
	Pole Diameter	21.268 in
	Pole Thickness	0.188 in
	Plate Diameter	28.5 in
	Plate Thickness	1 in
	Plate Fy	36 ksi
	Weld Length	0.1875 in
	ϕ_s Resistance	114.22 k-in
	Applied	68.05 k-in
	Stiffeners	#
	Thickness	0.5 in
	Length	3 in
	Height	4 in
	Chamfer	1 in
	Offset Angle	0°
	Fy	36 ksi

Code Rev. **G**

Date **10/24/2017**
 Engineer **Sean.Rock**
 Site # **302480**
 Carrier **AT&T MOBILITY**

Moment **311.2 k-ft**
 Axial **8.2 k**

Bolts	#	12
	Bolt Circle (R)adial / (S)quare	25.75 in R
	Diameter	1 in
	Hole Diameter	1.25 in
	Type	A325N
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
Applied	47.64 k	
Reinforcement	#	0
Extra Bolts	#	0

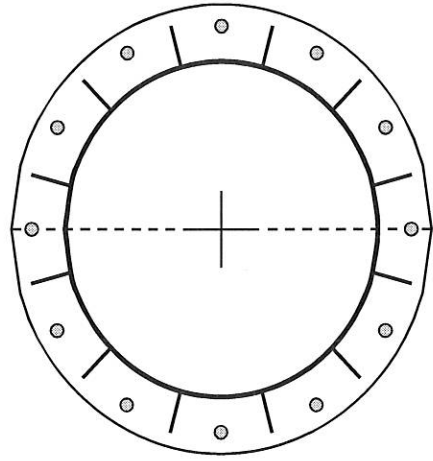


Plate Stress Ratio:
0.60 (Pass)

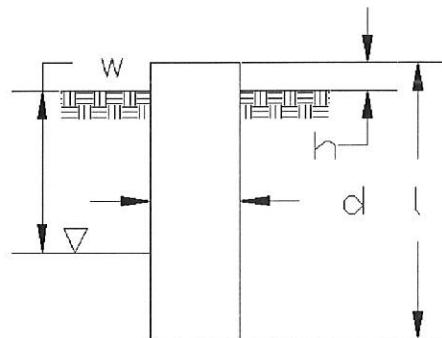
Bolt Stress Ratio:
0.87 (Pass)

Site Name: Woodbridge CT 1, CT
 Site Number: 302480
 Engineer: Sean.Rock
 Engineering Number: OAA715326
 Date: 10/24/17

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? Y
 Moment (M): 2239.0 k-ft
 Shear/Leg (V): 23.2 k
 Axial Load (P): 58.2 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:



5.0 ft
 30.8 ft
 0.3 ft
 2.0 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	4.0	105	0	0	0	0
4.0	7.0	122	0	32	546	0
7.0	10.0	131	0	41	628	0
10.0	15.0	134	0	51	993	0
15.0	31.8	135	0	48	1189	45779

Required Embedment: 20.3 ft - OK, Caisson Embedment Satisfactory
 Volume of Concrete: 608.7 ft³ = 22.5 yd³
 Weight of Concrete (Buoyancy Effect Considered): 56.1 k
 Average Soil Unit Weight: 70.9 pcf
 Skin Friction Resistance: 427.5 k
 Compressive Bearing Resistance: 898.9 k
 Pullout Weight (Minus Concrete Weight): 1024.1 k
 Nominal Uplift Capacity per Leg ($\phi_s T_n$): 282.5 k
 Nominal Compressive Capacity per Leg ($\phi_s P_n$): 994.8 k
 P_u : 73.2 k
 $T_u / \phi_s T_n$: 0.00 Result: OK
 $P_u / \phi_s P_n$: 0.07 Result: OK
 Total Lateral Resistance: 2802.2 k
 Inflection Point (Below Ground Surface): 22.3 ft
 Design Overturning Moment At Inflection Point (M_D): 2761.7 k-ft
 Nominal Moment Capacity ($\phi_s M_n$): 11225.0 k-ft
 $M_D / \phi_s M_n$: 0.25 Result: OK
 ϕ_s : 0.75