December 6, 2019

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

Re:	**Notice of Exempt Modification – Antenna Replacement / RRU Add**
Property Address:	**36 Mohawk Mountain, Cornwall, CT 06753**
Applicant:	**AT&T Mobility, LLC**

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 consisting of nine (9) wireless telecommunication antennas at a center line height of 65 feet on an existing self-support tower owned by American Tower Corporation, 10 Presidential Way, Woburn, MA 01801. AT&T now intends to replace (2) existing Powerwave 7770 55" Panel Antennas with (2) new CCI DMP65R-BU6DA 6' Panel Antennas, replace (1) existing Powerwave 7770 55" Panel Antennas with (1) new CCI DMP65R-BU4DA 6' Panel Antennas, replace (2) existing CCI HPA-65R-BUU-H6 with (2) new CCI DMP65R-BU6DA, replace (1) existing CCI HPA-65R-BUU-H6 with (1) new CCI DMP65R-BU4DA, remove (3) RRUS-11 B12, add (3) new RRUS-4478 B14, add (3) new RRUS-4449 B5/B12 and add (1) DC6-48-60-18-8F Squid with (1) new Fiber cable and (2) new DC cables, all at the existing centerline of 65 feet.

Attached is a summary of the planned modifications including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

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. § 16-5I0j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to:

- Gordon M. Ridgway – First Selectman, Town of Cornwall, CT at 26 Pine St. Cornwall, CT 06753
- Karen Nelson – Zoning Enforcement Officer, Town of Cornwall, CT at 26 Pine St. Cornwall, CT 06753
- American Tower Corporation – Structure and property Owner, at 10 Presidential Way, Woburn, MA 01801

The following is a list of subsequent decisions by the Connecticut Siting Council:

EM-CING-031-130116 – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 36 Mohawk Mountain Road, Cornwall, Connecticut.

EM-AT&T-031-170428 – AT&T notice of intent to modify an existing telecommunications facility located at 36 Mohawk Mountain, Cornwall, Connecticut.

EM-ATC-031-190306 - American Tower Corporation (ATC) notice of intent to modify an existing telecommunications facility located at 36 Mohawk Mountain Road (a/k/a Toomey Road), Cornwall, Connecticut.

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 additional antennas will be installed at the 65-foot level of the existing Self Support tower.
2. The proposed modifications will involve changes to ground-mounted equipment, however these changes will not require an 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,

Katie Benson | Real Estate Specialist
Smartlink
(m) 603.620.9904
(f) 443.221.2962

85 Rangeway Road – Bldg 3
Suite 102
North Billerica MA, 01862

CC w/enclosures:

- Gordon M. Ridgway – First Selectman, Town of Cornwall, CT at 26 Pine St. Cornwall, CT 06753
- Karen Nelson – Zoning Enforcement Officer, Town of Cornwall, CT at 26 Pine St. Cornwall, CT 06753
- American Tower Corporation – Structure and property Owner, at 10 Presidential Way, Woburn, MA 01801

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
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E-Mail: siting.council@po.state.ct.us
Web Site: www.state.ct.us/csc/index.htm

January 3, 2002

Richard Greene
Senior Wireless Designer
Edward and Kelcey
One Church Street, 3rd Floor
New Haven, CT 06510

RE: **EM-AT&T-005-018-031-055-068-092-111-125-153-162-168-011121** - Edwards and Kelcey on behalf of AT&T Wireless notice of intent to modify existing telecommunications facilities located at twelve sites throughout the State of Connecticut.

Dear Mr. Greene:

At a public meeting held on January 3, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify the Litchfield-Kent (L04); Mohawk Mountain (L12); Pine Meadows (L14); and North Kent (L17) sites of the proposed twelve existing telecommunications facilities, eight of which were previously approved on December 17, 2001, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notices dated November 20, 2001, December 10, 2001, and December 21, 2001. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/laf

c: See attached list

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List Attachment:

Honorable Dolores R. Schiesel, First Selectman, Town of Kent
Judith Wick, Zoning Enforcement Officer, Town of Kent
Honorable James P. O'Leary, First Selectman, Town of Goshen
Martin Connor, Town Planner, Town of Goshen
Honorable Michael D. Fox, First Selectman, Town of Barkhamsted
Karl Nilsen, Zoning Enforcement Officer, Town of Barkhamsted
Honorable P. Robert Moeller, First Selectman, Town of Sharon
Elizabeth H. Casey, Zoning Enforcement Officer, Town of Sharon
Honorable Gorden M. Ridgway, First Selectman, Town of Cornwall
Ruth Mucahy, Zoning Enforcement Officer, Town of Cornwall

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

December 13, 2001

Richard Greene
Senior Wireless Designer
Edward and Kelcey
One Church Street, 3rd Floor
New Haven, CT 06510

RE: **EM-AT&T-005-018-031-055-068-092-111-125-153-162-168-011121** - Edwards and Kelcey on behalf of AT&T Wireless notice of intent to modify existing telecommunications facilities located at twelve sites throughout the State of Connecticut.

Dear Mr. Greene:

At a public meeting held on December 11, 2001, the Connecticut Siting Council (Council) acknowledged your notice to modify eight of the proposed twelve existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies. The Litchfield-Kent (L04); Mohawk Mountain (L12); Pine Meadows (L14); and North Kent (L17) sites will be presented at a future Council meeting after requested information is received.

The proposed modifications are to be implemented as specified here and in your notice dated November 20, 2001. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/laf

c: See attached list

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Honorable John F. Arcelaschi, Mayor, Town of Winchester
Anthony Cannavo, Planning and Zoning Chairman, Town of Winchester
Margaret A. Johnson, Town Manager, Town of Winchester
Honorable Rosalie G. Loughran, Chairman of the Town Council, Town of Watertown
Mary Barton, Zoning Enforcement Officer, Town of Watertown
Charles T. O'Conner, Jr., Town Manager, Town of Watertown
Honorable David C. Mischke, Mayor, Town of Plymouth
William Kuehn, Town Planner, Town of Plymouth
Honorable Richard W. Crane, First Selectman, Town of Woodbury
Christopher S. Wood, Town Planner, Town of Woodbury
Honorable Arthur J. Peitler, Mayor, Town of New Milford
David, N. Hubbard, Planning and Econ. Director, Town of New Milford
Honorable Dolores R. Schiesel, First Selectman, Town of Kent
Judith Wick, Zoning Enforcement Officer, Town of Kent
Honorable James P. O'Leary, First Selectman, Town of Goshen
Martin Connor, Town Planner, Town of Goshen
Honorable Katherine L. Rieger, First Selectman, Town of New Hartford
Karl Nilsen, Zoning Enforcement Officer, Town of New Hartford
Honorable Michael D. Fox, First Selectman, Town of Barkhamsted
Karl Nilsen, Zoning Enforcement Officer, Town of Barkhamsted
Honorable P. Robert Moeller, First Selectman, Town of Sharon
Elizabeth H. Casey, Zoning Enforcement Officer, Town of Sharon
Honorable Martin J. Foncello, Jr., First Selectmen, Town of Brookfield
Clare Ann Walsh, Land Use Enforcement Officer, Town of Brookfield
Heather Paton, Land Use Office, Town of Brookfield

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CHRISTOPHER B. FISHER (also CT)
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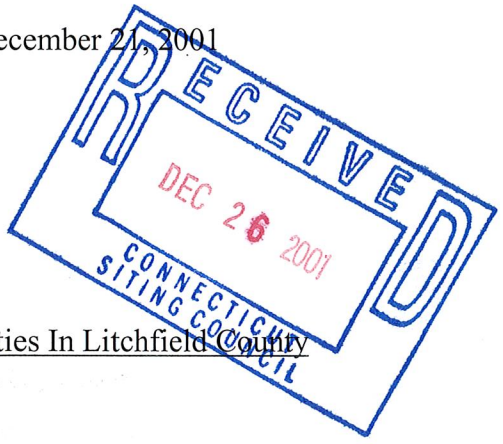
CHAUNCEY L. WALKER (also CA)
ROBERT L. WOLFE
DAVID E. WORBY

Of Counsel
MICHAEL R. EDELMAN
ANDREW A. GLICKSON (also CT)
ROBERT L. OSAR (also TX)
MARYANN M. PALERMO
ROBERT C. SCHNEIDER
LOUIS R. TAFFERA

December 21, 2001



VIA FEDERAL EXPRESS
Robert Mercier
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: AT&T Exempt Modification Filings For Facilities In Litchfield County

Dear Mr. Mercier:

On behalf of Litchfield Acquisition Corporation d/b/a AT&T Wireless ("AT&T") enclosed please find additional information that you had requested with respect to the Notice of Exempt Modifications that were filed with the Council by Edwards & Kelcey on November 27, 2001:

1. As noted in our December 10, 2001 correspondence with respect to AT&T Site L04, Bulls Bridge Road, Kent, Edwards & Kelcey and AT&T have confirmed that based on their information, AT&T's antennas are at 152' centerline on this existing tower facility with SCLP (Cingular) located at the 170' level (this is consistent with the Council's inventory).

2. AT&T Site L12 Mohawk State Forest, West Goshen - AT&T Wireless believes that this tower is owned by AT&T Long Lines which no longer has a corporate relationship with AT&T Wireless.

3. AT&T Site L14, 127 New Hartford Road, Barkhamsted - Annexed hereto is a revised report by RF Emissions Experts, dated December 19, 2001 with AT&T, Nextel and Cingular included as approved by the Council in 1998. As you may know, Sprint is

currently processing an application for an amended certificate and has included calculations in their filing for all carriers should a modified facility be approved by the Council.

4. AT&T Site L17, Herb Road, Sharon – Annexed hereto is a revised report by RF Emissions Experts, dated December 20, 2001 including AT&T, Nextel and Cingular as approved by the Council in 1998. At this time the State Police are not proposing to use the tower and as such have been excluded from the calculations provided by AT&T.

We would appreciate it if these notices were placed on the next available agenda of the Council for acknowledgement.

Thank you for your continued assistance. Please do not hesitate to contact me, should you require any additional information or have any questions.

Very truly yours,

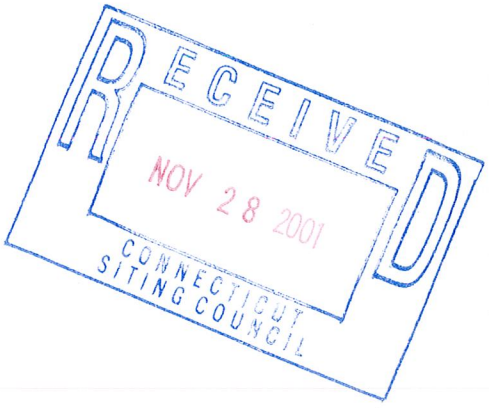
Christopher B. Fisher

cc: Carmen Chapman, AT&T
Richard Greene, E&K
Darryl Hendrickson, Bechtel

C&F&W:

Edwards AND Kelcey

Engineering
Consulting
Construction
Value Engineering
Real Estate Services



November 27th, 2001

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT. 06051

RE: Notice of Intent to modify an existing telecommunication facility at Mohawk State Forest West Goshen, CT. (Site ID: L12).

Dear Mr. Gelston:

On behalf of AT&T Wireless, Edwards and Kelcey is enclosing 20 copies of an RF study that was recently done on the above site as well as 20 - ½ size drawing of our modifications to the site.

The changes we are proposing will have no visual changes to the site. One antenna will be changed out and replaced with a new one, same shape, size and weight. New radio equipment will be installed in an enclosed shelter.

The drawings were stamped by a structural engineer on the cover stating that no changes were required for this site.

In conclusion Edwards and Kelcey on behalf of AT&T Wireless Service Petition for a declaratory ruling that no amendment to the Certificate of Environmental Compatibility and public need is required for modifications to a facility located at Mohawk State Forest in West Goshen, CT.

Thank you for your consideration of this matter

Very truly yours,

EDWARDS AND KELCEY

Richard Greene
Senior Wireless Designer

EM-AT&T-005-018-031-055-068-092-096-111-125-153-162-168-011121

Cc: Rob Davis

One Church Street, 3rd Floor
New Haven, Connecticut 06510

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Edwards AND Kelcey

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Consulting
Construction
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Real Estate Services

EM-AT&T-005-018-031-055-068-092-096-111-125-153-162-168-011121

November 20th, 2001

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT. 06051

RE: Request by Edwards And Kelcey for an order to approve the AT&T Wireless 1900 MHZ System for cellsites named below

Dear Mr. Gelston:

Enclosed you will find 20 copies of 12 cellsite RF reports and 20 copies of ½ size construction drawings showing the changes we will be making at these sites. As well as a statement on the cover of each drawing set stating that these changes will have no additional structural effect on the tower structure. We will be removing one panel on each sector and replacing it with one the same size, shape and weight.

Cellsite numbers involved in this study are as follows:

L02 Plymouth
L03 Watertown
L04 Litchfield-Kent
L05 Winstead
L06 New Milford
L07 Woodbury
L09 Cornwall
L12 Mohawk Mountain
L13 Brookfield
L14 Pine Meadows
L16 Nepaug
L17 North Kent

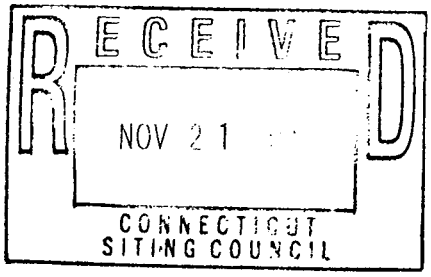
In conclusion we are requesting the approval by the siting council for the addition of the AT&T Wireless 1900 MHZ System.

Thank you for your consideration of this matter

Very truly yours,

EDWARDS AND KELCEY

Richard Greene
Senior Wireless Designer



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RF Emissions Experts

AN EDWARDS AND KELCEY SERVICE

Analysis and Report of RF Exposure Levels and Compliance with FCC Regulations

Mohawk Mountain Site
Mohawk State Forest
West Goshen, CT
Site ID: L12

Prepared for

AT&T Wireless

November 15, 2001

EDWARDS AND KELCEY
299 Madison Avenue - PO Box 1936
Morristown, NJ 07962-1936

Tel: 973-267-8830 Fax: 973-267-3555
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Internet: http://www.ekcorp.com

RF Emissions Experts
AN EDWARDS AND KELCEY SERVICE

FCC RF COMPLIANCE ANALYSIS FOR

AT&T Wireless

Mohawk Mountain, CT Tower

This site compliance report is organized as follows:

- Site Technical Data
- Analysis Method and Assumptions
- The FCC RF Radiation Exposure Regulations
- Applicable Formulas
- Analysis Results
- Conclusion

SITE TECHNICAL DATA (adding one 1900 MHz antenna per sector to an existing 800 MHz facility – data reflects additional 1900 MHz system)

Facility type	Existing 79 ft. tower
Transmit frequency band (proposed additional band)	1965 - 1975 MHz
Replacement Antenna type	Allgon 7262
Antenna major dimension (length)	4.3 ft.
Maximum antenna gain	14.0 dBd
Antenna centerline height	48 ft. above ground level
Total number of 1900 MHz antennas added	2 (1 per sector)
Number of 1900 MHz channels per antenna	2 channels
Maximum ERP per channel	150 watts
Antenna downtilt	2 degrees (mechanical)
Existing carriers on tower	AT&T microwave antennas, (see report)

ANALYSIS METHOD AND ASSUMPTIONS

Type of analysis	Maximum / ground-level
Area analyzed	0' to 500' from tower
Classification of area	Uncontrolled (gen. pop.)
FCC Maximum Permissible Exposure (MPE) limit	1.000 mW/ cm^2 (1900 MHz)
Mathematical model	Point source, far field
Assumed ground reflection factor	100%
Assumed human height	6'0"
Vertical antenna discrimination included	from Ant. Mfr. data

THE FCC RF RADIATION EXPOSURE REGULATIONS

This RF exposure analysis is based on the current FCC guidelines for human exposure to RF fields, which represent the consensus of federal agencies responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Health and Safety Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.1301 *et seq* of its Rules and Regulations. Those guidelines specify maximum permissible exposure (MPE) levels for both occupational and general population exposure on a continuous basis, as well as averaging times for each of those categories when and if exposure exceeds the specified continuous exposure limits. (The concept of averaging time will be ignored in this analysis, as the results show the potential exposure levels are far below those permitted even for continuous exposure.)

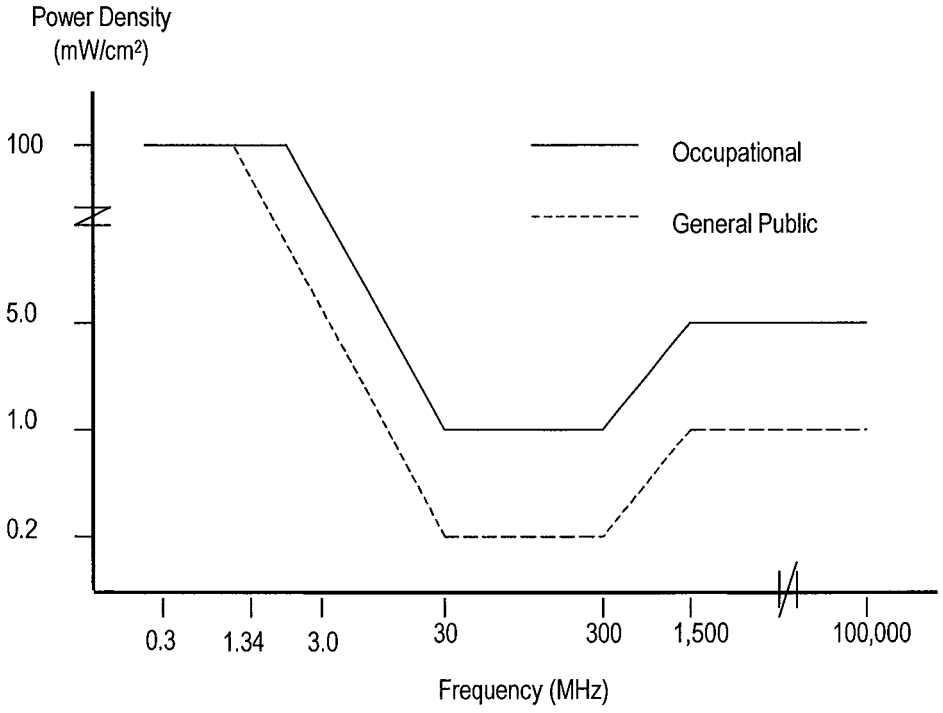
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus the general population MPE limit has a built-in safety factor of more than 50. Continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects on humans.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The more popularly used reference unit is power density, as it is more easily understood. One milliwatt per square centimeter is approximately the energy impinging on an area roughly one-fourth the size of a dime from a light bulb emitting ten thousand times less than the energy of a common 100-watt bulb. The table below lists the FCC limits for both occupational and general population exposure to different radio frequencies.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The figure below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



FCC MPE limits – graphical representation

The FCC makes it clear that the MPE limits apply only in accessible areas. Fundamentally, in areas that are considered normally inaccessible, the exposure issue is moot.

APPLICABLE FORMULAS

According to FCC OET Bulletin 65, different mathematical models apply to different distances around an antenna. At the height of the antenna, the breakpoint is the "far-field distance", calculated as the ratio of the square of the major dimension of the antenna divided by the signal wavelength . Beyond the far-field distance at the height of the antenna, as well as at ground-level underneath the antenna, a "far-field point source" model applies; within that distance, a "near-field cylindrical model applies. The subsections below provide background on the two applicable models in the 1900 MHz band.

Far-Field Point Source Model

(1) $S\ [mW/cm^2] = (4 * EIRP_{max} * VertAntDisc(\phi)) / (4 * \pi * R^2_{cm})$

(2) FCC MPE limit = $1.000\ mW/cm^2$

(3) $MPE\% = 100 * (S / 1.000)$

where:

S	=	Calculated power density
4 (in numerator)	=	100% field ground reflection effect (has $[1 + 1]^2 = 4$ effect on power density)
$EIRP_{max}$	=	Maximum effective isotropically radiated power (Note: EIRP is 64% higher than ERP, which is referenced to a half-wave dipole)
VertAntDisc(ϕ)	=	Numeric factor for antenna discrimination (EIRP reduction) in the vertical plane, applicable at downward angle ϕ to a 6' human standing on ground, calculated at distances from 0' to 500' away from the antenna
R	=	Straight-line distance from antenna to 6' human
MPE%	=	Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population

Near-Field Cylindrical Model

(1) $S\ [mW/cm^2] = (P_i * ACF / (2 \pi R\ h)$

(2) FCC MPE limit = 1.000 mW/cm^2

(3) MPE% = 100 * (S / 1.000)

where:

S	=	Calculated power density
P_i	=	Total power input to the antenna, in mW
ACF	=	Antenna correction factor (adjustment to near-field power density calculation to compensate for the antenna mounting height above ground level and resulting partial-body exposure; see Richard Tell article listed in the References)
R	=	Straight-line distance from antenna to 6' human
h	=	Subtended height of the antenna, in cm
MPE%	=	Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population

ANALYSIS RESULTS – GROUND-LEVEL

AT&T Wireless will add two (2) 1900 MHz antennas (one in each of two sectors) to a facility presently transmitting in the 800 MHz band. This analysis will reflect the additional RF emissions from the 1900 MHz antennas.

The table on the following page summarizes the results of the calculations using the site data, method and far-field point source formula described above. Note that the information on the vertical antenna discrimination has been taken from the antenna manufacturer's specification sheets. In addition, note that while the tabular distances are listed in feet, the calculations translate these units into centimeters, to match the FCC specification of MPE units. Also note that the value for 'G dist' is the distance along the ground in feet, from the base of the tower.

1900 MHz Antenna Array (AT&T Wireless)					
G dist	**R dist**	**V angle**	**V disc**	**mW/cm^2**	**GPMPE%**
0	39.0	88.0	0.025	0.0028	0.279
20	43.8	60.9	0.025	0.0022	0.221
40	55.9	42.3	0.020	0.0011	0.108
60	71.6	31.0	0.020	0.0007	0.066
80	89.0	24.0	0.020	0.0004	0.042
100	107.3	19.3	0.040	0.0006	0.058
120	126.2	16.0	0.040	0.0004	0.042
140	145.3	13.6	0.040	0.0003	0.032
160	164.7	11.7	0.040	0.0002	0.025
180	184.2	10.2	0.040	0.0002	0.020
200	203.8	9.0	1.000	0.0041	0.406
220	223.4	8.1	1.000	0.0034	0.338
240	243.1	7.2	1.000	0.0029	0.285
260	262.9	6.5	1.000	0.0024	0.244
280	282.7	5.9	1.000	0.0021	0.211
300	302.5	5.4	1.000	0.0018	0.184
320	322.4	4.9	1.000	0.0016	0.162
340	342.2	4.5	1.000	0.0014	0.144
360	362.1	4.2	1.000	0.0013	0.129
380	382.0	3.9	1.000	0.0012	0.116
400	401.9	3.6	1.000	0.0010	0.104
420	421.8	3.3	1.000	0.0009	0.095
440	441.7	3.1	1.000	0.0009	0.086
460	461.7	2.8	1.000	0.0008	0.079
480	481.6	2.6	1.000	0.0007	0.073
500	501.5	2.5	1.000	0.0007	0.067

Table 1. AT&T Wireless 1900 MHz ground level RF power density & percent-of-MPE calculations

CONCLUSION

The calculations presented above demonstrate that the maximum potential exposure level around the existing tower induced by the additional 1900 MHz AT&T Wireless system is 0.0041 mW/cm^2, which represents 0.406% of the FCC limit for continuous exposure of the general population.

On February 9, 1995 an RF Report was submitted to the Connecticut Siting Council by AT&T Bell Laboratories on behalf of Cellular One (now AT&T Wireless), the last collocator on the tower. At that time, a collective worst case exposure level of 0.0059 mW/cm^2 or 1.018% of the FCC standard was reported. (see attached) When added to the additional level expected from the proposed AT&T Wireless 1900 MHz system of 0.406%, the resultant cumulative level of 1.424% is still safe for continuous exposure of the general population based on FCC standards.

Therefore, the addition of the AT&T Wireless 1900 MHz system to the existing facility will not create a significant risk of cumulative exposure to RF emissions to the general population. And, according to the calculations, the AT&T Wireless facility is in compliance with the FCC regulations (FCC OET Bulletin 65) concerning the control of potential RF exposure.

CERTIFICATION

This report was prepared by George Burylo, Director – Engineering Services. The undersigned certifies that the analysis provided herein is consistent with the applicable FCC Rules and Regulations and accepted industry practice.

George Burylo
Director – Engineering Services

November 15, 2001

REFERENCES

47 CFR, FCC Rules and Regulations, Section 1.1301 *et seq*.

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

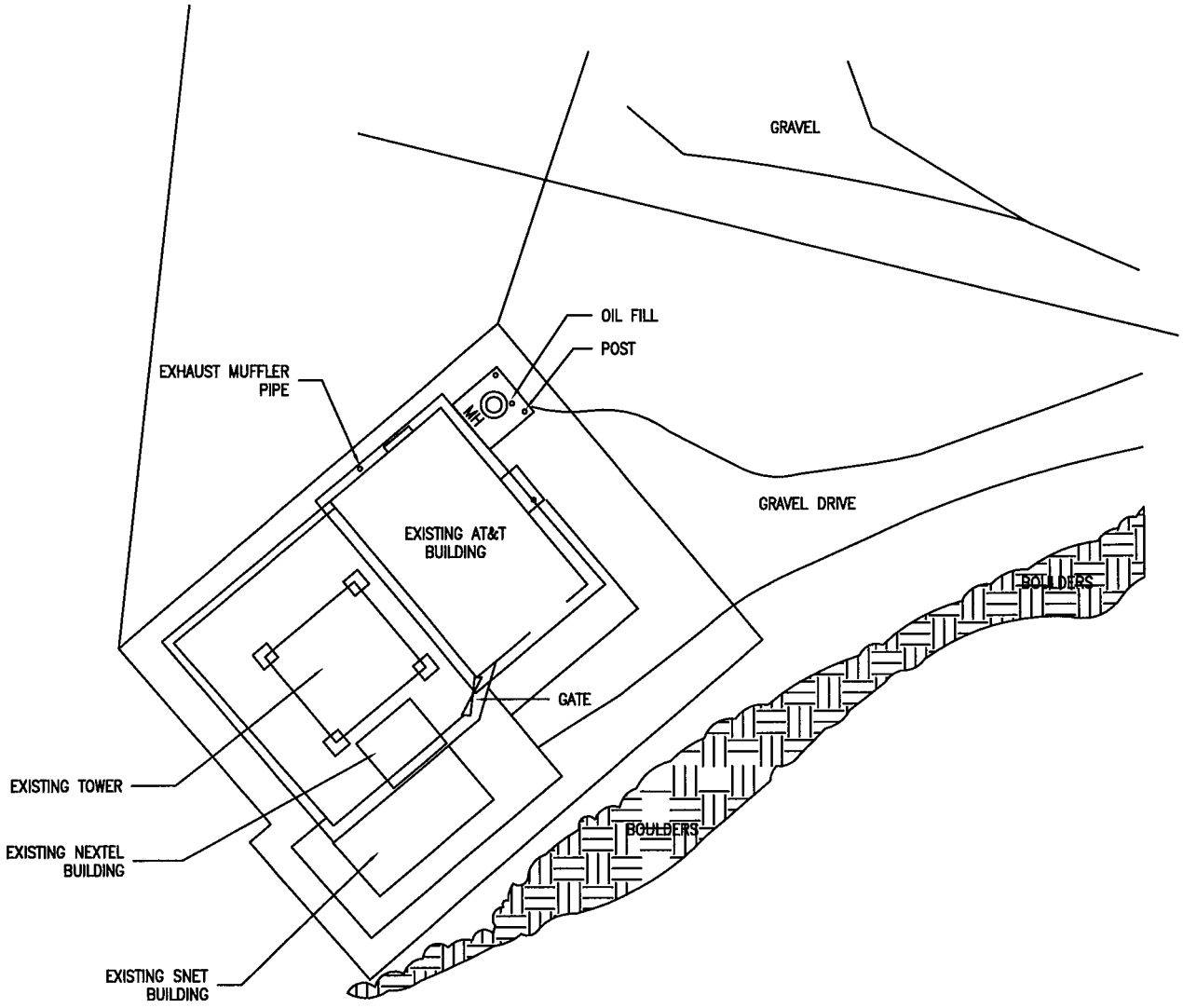
FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

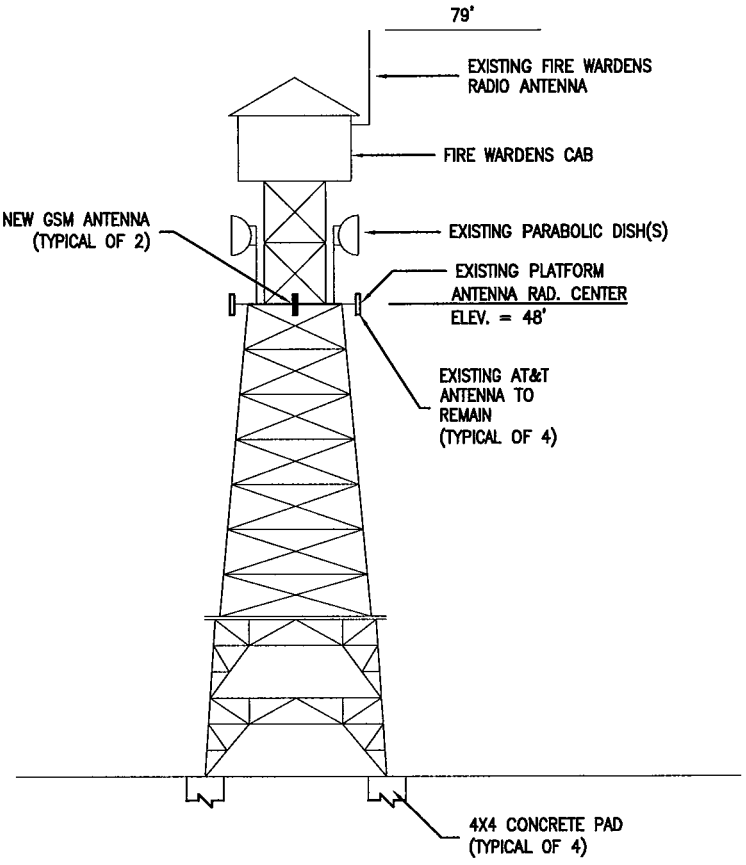
FCC Office of Engineering and Technology (OET) Bulletin 56, "Questions and Answers About Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields", Fourth Edition, August 1999.

Richard Tell, "CTIA's EME Design and Operation Considerations for Wireless Antenna Sites", November 15, 1996.

Site Data



SITE ID NO:	Edwards AND Kelcey WE'LL TAKE YOU THERE	AT&T WIRELESS COMMUNICATIONS FACILITY	Dwg. No. SK-1
Designed by:		SITE ADDRESS: MOWHALK MOUNTAIN MOHAWK STATE FOREST WEST GOSHEN, CT	REV. DATE: DESCRIPTION
Drawn by:			Scale: Date: 11/05/01
Checked by:			Job No. File No. Dwg. of 1
Approved by:			



SITE ID NO:	Edwards AND Kelcey WE'LL TAKE YOU THERE	AT&T WIRELESS COMMUNICATIONS FACILITY	Dwg. No. SK-2
Designed by:			
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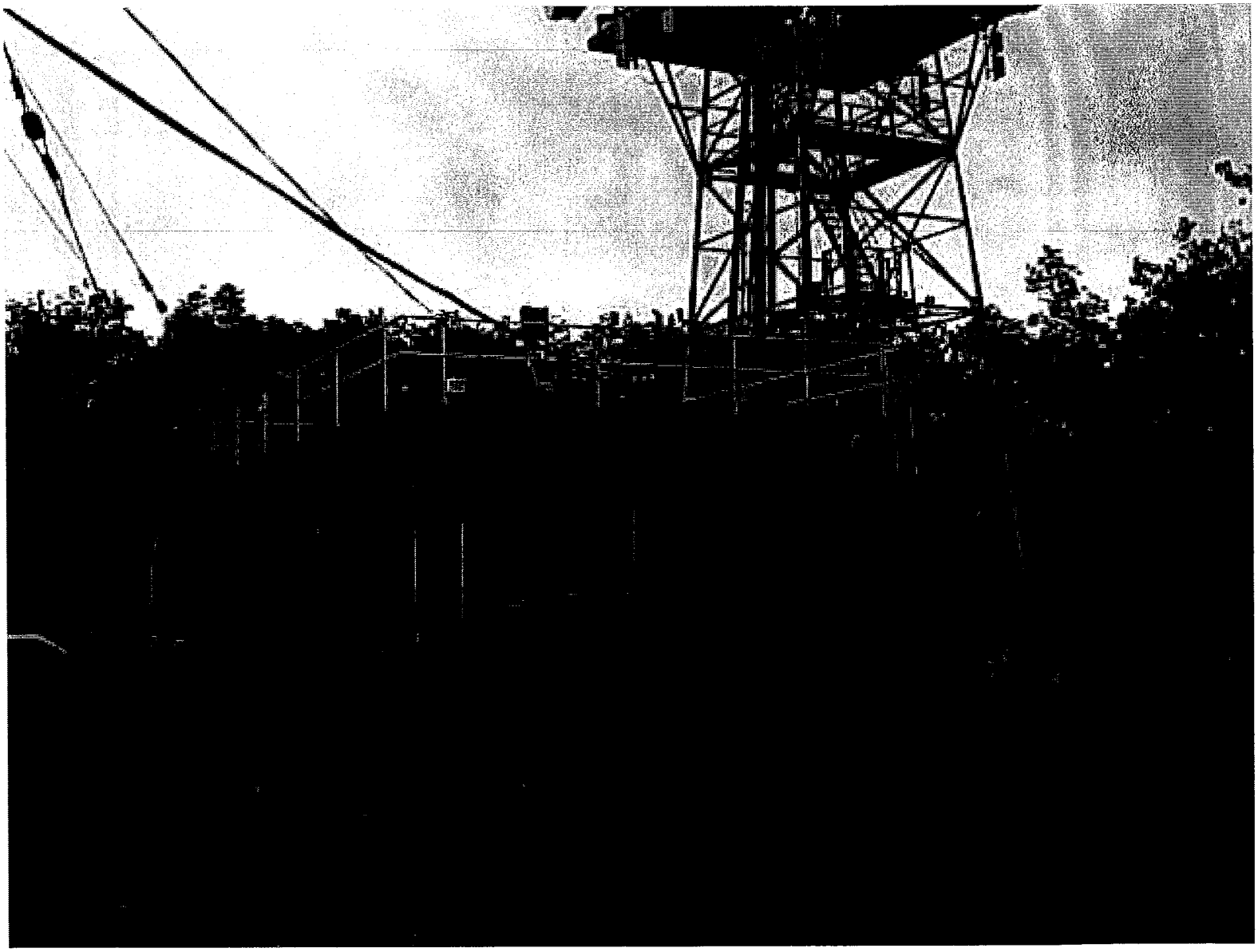
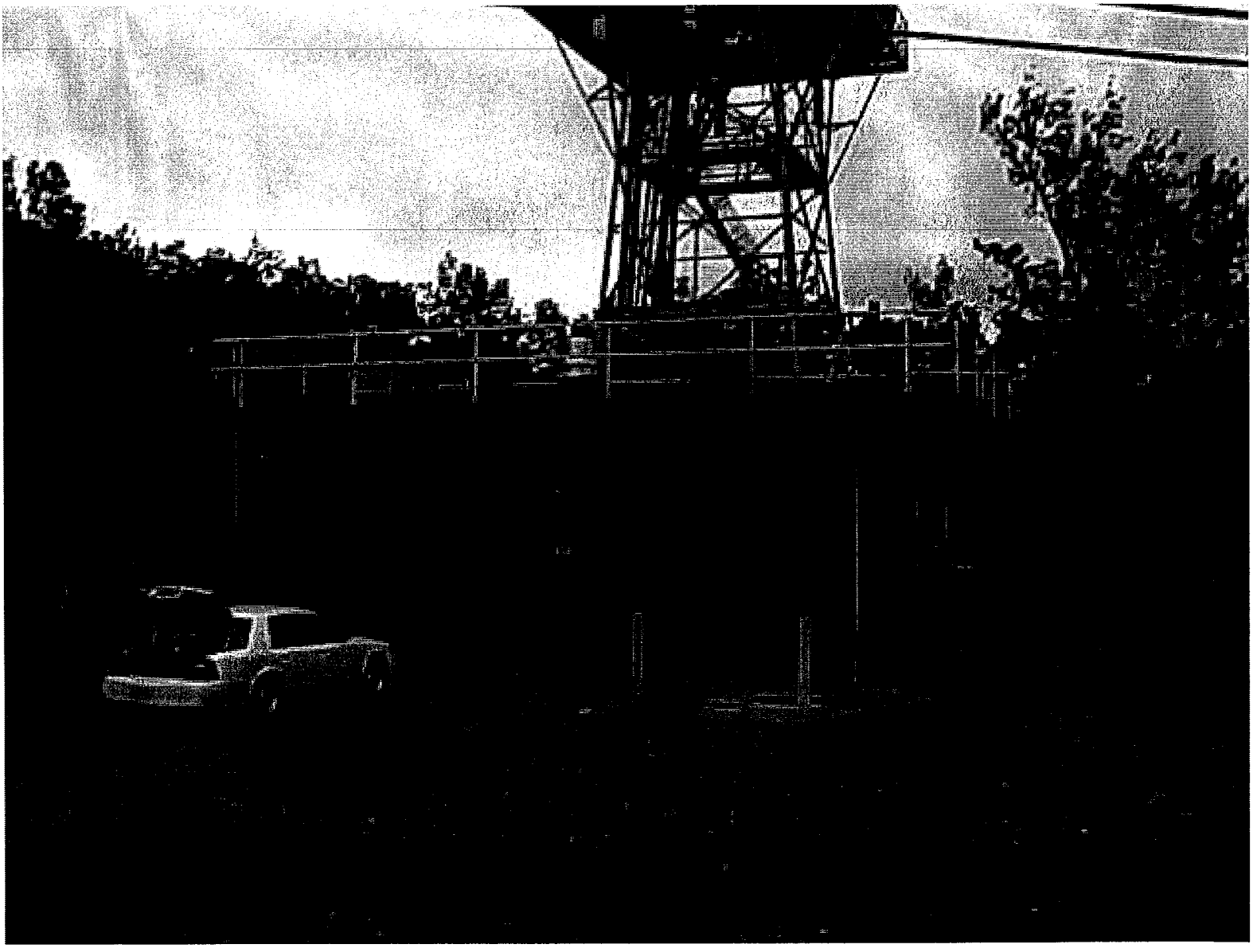
Checked by:			Scale: Date: 11/05/01
Approved by:			Job No. File No. Dwg. of 1

299 Madison Avenue, PO Box 1936
Morristown, New Jersey 07962-1936

Tel 973.267.8830 x1250
Fax 973.267.3555
Email burylo@ekmail.com
Web www.ekcorp.com





AT&T Bell Laboratories

Safety Analysis of the Electromagnetic Environment in the Vicinity of an Existing and Proposed Cellular Radio Installation, Cell Site L12: AT&T Mohawk Mountain Tower, Cornwall, Connecticut

Radiation Protection and Product Safety Department
AT&T Bell Laboratories
Murray Hill, New Jersey 07974-0636

Summary

This report is a safety analysis of the electromagnetic environment surrounding the existing cellular radio site and the one proposed for installation in Cornwall, CT. CellularOne antennas and Southern New England Telephone (SNET) antennas will be colocated on this tower. The analysis utilizes engineering data provided by CellularOne, together with well-established analytical techniques for estimating the radiofrequency (RF) electromagnetic fields associated with the cellular antennas. Worst-case assumptions were used to ensure safe-side estimates, i.e., the actual values will be significantly lower than the corresponding analytical values. The analysis indicates that the maximum level of RF energy to which the public may be exposed is below all applicable health and safety limits.

Specifically, in all normally accessible areas in the neighborhood surrounding the tower, the maximum levels of RF energy associated with the CellularOne antennas will be at least 366 times below the exposure limits of OSHA, ANSI, IEEE, NCRP, and the limits of all states that regulate RF exposure. The combined maximum levels of RF energy associated with both the CellularOne and SNET antennas will be at least 95 times below these exposure limits.

Prepared for
John Farrell
CellularOne
15 East Midland Avenue
Paramus, New Jersey 07652-2931

February 9, 1995

1. Introduction

This report was prepared in response to a request from Cellular**One** for a safety analysis of the radiofrequency (RF) electromagnetic environment in the vicinity of an existing and proposed cellular-radio installation, and an opinion regarding the concern for public health associated with long-term exposure in this environment.

2. Technical Data

Cellular Radio

The proposed Cellular**One** cellular system, to be located on AT&T's Mohawk Mountain tower, Cornwall, CT, will ultimately consist of two directional transmitting antennas (Swedcom Allgon Model ALP9212-N) mounted on the tower at an antenna centerline height of approximately 47.8 ft above grade. Each transmitting antenna will operate at frequencies between 869-894 million hertz (MHz). These frequencies were formerly allocated for UHF television. Two receiving antennas will also be mounted at approximately the same height. (This is a two sector cell-site configuration.)

A maximum of two transmitters (channels) could be connected to each Cellular**One** transmitting antenna. The effective radiated power (ERP) is limited to 250 watts per channel which corresponds to a maximum antenna input power of less than 16 watts per channel. Hence, the actual total radiated power will be less than 32 watts.

The existing Southern New England Telephone (SNET) cellular system, which is also located on the tower, consists of three directional transmitting antennas (Swedcom Allgon Model ALP9212-N) mounted at an antenna centerline height of approximately 53 ft above grade. Each transmitting antenna operates at frequencies between 869-894 million hertz (MHz). Six receiving antennas are also mounted at approximately the same height.

A maximum of nineteen channels could be connected to each SNET transmitting antenna. The effective radiated power (ERP) is limited to 100 watts per channel which corresponds to a maximum antenna input power of less than 7 watts per channel. Hence, the actual total radiated power will be less than 133 watts (assuming the maximum number of transmitters are installed and operate simultaneously and continuously, which is rarely, if ever, the case).

Microwave Radio

The existing AT&T microwave system operates at an extremely low power (less than 5 watts) and, unlike the pattern of other antennas, the energy from the microwave antenna is propagated in a very narrow, well collimated beam (the beam divergence is less than two degrees) similar to that of a searchlight. Moreover, in order for a microwave system to function, a clear, unobstructed line-of-sight path must exist between the transmitting and receiving antennas. Thus, buildings and, hence, people cannot be located near the tower on the axis of the transmitting antennas. *Consequently, public exposure to electromagnetic energy from the microwave antennas is insignificant.* This has been verified during studies in which measurements were made in the vicinity of a number of representative microwave towers, most of which contained a large number of transmitting antennas[1].

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1. Petersen, R.C., Electromagnetic Radiation from Selected Telecommunications Systems, *Proc. of the IEEE,* Vol. 68, No. 1. 1980

These are extremely low power systems when compared with other familiar radio systems, such as AM, FM, and television broadcast, which operate upwards of 50,000 watts. Figure 1 is a diagram of the electromagnetic spectrum which also lists common uses of RF energy.

3. Environmental Levels of RF Energy

The antenna pattern from a cellular-radio antenna is such that the energy is propagated in a relatively narrow beam (in the vertical plane) which is directed toward the horizon. The reason for this is to provide uniform coverage. Hence, levels of RF energy directly under the antennas are not remarkably different from the levels at points more distant.

For the case at hand, the maximum potential exposure levels associated with the proposed Cellular**One** installation can be readily calculated at any point in a plane at any height above grade. Based on the information provided, and an antenna gain of approximately 14.15 dBi, the maximum power density at any point in a horizontal plane 6 ft above grade will be less than 1.5 millionths of a watt per centimeter squared (1.5 $\mu W/cm^2$).

Based on the information provided for the SNET system, and an antenna gain of approximately 14.15 dBi, the maximum power density at any point in a horizontal plane 6 ft above grade will be less than 4.4 $\mu W/cm^2$.

The above values are the theoretical *maxima* that could occur and are not typical values. The calculations include the effect of field reinforcement from in-phase reflections, and the assumption was made that all transmitters operate simultaneously and continuously (which is not the usual case). Because of the intermittent nature of the transmission from these antennas, the actual time-weighted-average values will be lower than those above. Although the above values are obtained analytically, experience has shown that the technique used is extremely conservative. That is, the measured power density levels have always been found to be smaller than the corresponding calculated levels[2]. Furthermore, levels inside nearby homes and buildings will be lower than those immediately outside because of the high attenuation of common building material at these frequencies and, hence, will not be significantly different from normal ambient levels.

4. Comparison with Standards

Table 1 shows the cellular radio RF power density levels calculated near the cell-site, and the pertinent federal, state and consensus exposure limits for human exposure to RF energy. The various exposure limits range from 550 $\mu W/cm^2$ (for public exposure) to 10,000 $\mu W/cm^2$ (occupational exposure), while the corresponding calculated maximum power density levels in the environment around the existing and proposed antennas are 1.5 $\mu W/cm^2$ (at 6 ft above grade) for the Cellular**One** system and 4.4 $\mu W/cm^2$ (at 6 ft above grade) for the SNET system. The corresponding maximum power densities for both systems combined will be 5.9 $\mu W/cm^2$ at 6 ft above grade. The power density in the main beam will be less than 10 $\mu W/cm^2$ at any distance greater than 190 ft from the antennas.

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2. Petersen, R.C., and Testagrossa, P.A., Radiofrequency Fields Associated with Cellular-Radio Cell-Site Antennas, *Bioelectromagnetics*, Vol. 13 No. 6 (1992).

Table 1
Comparison of Radiofrequency Exposure Limits with Calculated Exposure Levels for the Existing and Proposed Cellular Radio Antennas

Organization/Government Agency	Exposure Population	Exposure Limits ($\mu W/cm^2$)
Occupational Safety & Health Administration (OSHA - 29 CFR 1910.97)	Occupational	10,000
American National Standards Institute (ANSI C95.1 - 1982)	Occupational	2,700
	Public	2,700
Institute of Electrical and Electronic Engineers† (ANSI/IEEE C95.1-1992)	Occupational	2,700
	Public	550
National Council on Radiation Protection & Measurements.. (NCRP Report 86 - 1986)	Occupational	2,700
	Public	550
U.S. Federal Communications Commission†† (requires FCC licensees to comply with ANSI C95.1-1982)	Occupational	2,700
	Public	2,700
New Jersey Administrative Code (NJAC 7:28-42)	Public	2,700
Massachusetts Department of Health (106 CMR 122)	Public	550
New York State, Department of Health (follows NCRP Report 86)	Public	550

Calculated Levels Near the Existing and Proposed Installation	Power Density ($\mu W/cm^2$)
CellularOne system, 6 ft above grade	< 1.5
SNET system, 6 ft above grade	< 4.4
Combined systems, 6 ft above grade	< 5.9
In the main beam, at any distance greater than 190 ft from the antennas	< 10.0

† Latest revision of ANSI C95.1 - 1982.

†† Because of the low transmitter power, the FCC has categorically excluded cellular-radio from hazard analyses by the licensee.

5. Discussion of Health Standards

Recently, press coverage has suggested an association between health effects and exposure to magnetic fields from electric-power distribution lines, and from the use of hand-held cellular telephones. This press coverage has heightened concern among some members of the public about the possibility that health effects may be associated with *any* exposure to electromagnetic energy. Many people feel uneasy about new or unfamiliar technology and often want absolute proof that something is safe. Such absolute guarantees are not possible since it is virtually impossible to prove that something does *not* exist. However, sound judgements can be made as to the safety of a physical agent based on knowledge of the pertinent scientific literature. This is exactly how health standards are developed.

All unequivocal scientific evidence indicates that biological effects associated with exposure to RF energy are threshold effects, i.e., unless the exposure level is sufficiently high the effect will not occur regardless of exposure duration. (Unlike ionizing radiation, e.g., X-rays and nuclear radiation, repeated exposures to low level RF radiation, or nonionizing radiation, are not cumulative.) Thus, it is relatively straightforward to derive safety limits. By adding safety factors to the level at which the most sensitive effect occurs, conservative exposure guides have been developed to ensure safety.

At present, there are close to 10,000 reports in the scientific literature which address the subject of RF bioeffects. These reports, most of which describe the results of epidemiological studies and animal studies, have been critically reviewed by leading researchers in the field and all new studies are continuously being reviewed by various groups and organizations whose interest is developing health standards. These include the U.S. Environmental Protection Agency, the National Institute for Occupational Safety and Health, the National Council on Radiation Protection and Measurements, the American National Standards Institute, the International Radiation Protection Association under the sponsorship of the World Health Organization, and the National Radiological Protection Board in the UK. All of these groups have recently either reaffirmed existing health standards, developed and adopted new health standards, or proposed health standards for exposure to RF energy.

For example, in 1986 the National Council on Radiation Protection and Measurements (NCRP) published recommended limits for occupational and public exposure[3]. These recommendations were based on the results of an extensive critical review of the scientific literature by a committee of the leading researchers in the field of bioelectromagnetics. The literature selected included many controversial studies reporting effects at low levels. The results of all studies selected were weighed and analyzed and an exposure guide of approximately 2,700 $\mu W/cm^2$ (at cellular-radio frequencies) was recommended for continuous occupational exposure and approximately 550 $\mu W/cm^2$ for continuous exposure of the public. (Although the State of New York does not have a regulatory program for the RF portion of the electromagnetic spectrum, the New York Department of Health (DOH) compares potential exposure levels with the recommendations of the NCRP to assess public safety.)

In July of 1986 the Environmental Protection Agency published a notice in the *Federal Register*, calling for public comment on recommended guidance for exposure of the *public.*[4] Three different limits, ranging from approximately 270 to 2,700 $\mu W/cm^2$, were proposed. Further, the maximum permissible exposure limits proposed by the Institute of Electrical and Electronics Engineers Standards Coordinating Committee SCC-28 (formerly ANSI Committee C95), were approved by the IEEE Standards Board on September 26, 1991[5], and approved by ANSI on November 18, 1992. These limits, which resulted from an extensive critical review of the scientific literature, are identical to the 1982 ANSI RFPGs[6] for occupational exposure and approximately 550 $\mu W/cm^2$ for exposure of the general public at cellular-radio frequencies. Also in implementing the National Environmental Policy Act[7] regarding potentially hazardous RF radiation from radio services regulated by the Federal Communications Commission (FCC), the FCC categorically excluded land mobile services, including cellular radio, from hazard analyses because "individually or cumulatively they do not have a significant effect on the quality of the human environment"[8]. The FCC pointed out there was no evidence of excessive exposure to RF radiation during routine normal operation of these radio services. More recently, the World Health

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3. NCRP - *Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields,* NCRP Report No. 86, National Council on Radiation Protection and Measurements, Bethesda, MD.
4. Federal Register, Vol. 51, No. 146, Wednesday, July 30, 1986.
5. IEEE *Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,* ANSI/IEEE C95.1-1992, Institute of Electrical and Electronics Engineers, Piscataway, NJ.
6. American National Standard *Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz,* ANSI C95.1-1982, American National Standards Institute, New York, NY.
7. Although there are no federal limits *per se,* in order to fulfill its obligation under the National Environmental Policy Act, the FCC requires licensees to comply with the 1982 ANSI C95.1 limits.
8. Action by the Commission February 12, 1987, by Second Report and Order (FCC 87-63), and Third Notice of Proposed Rulemaking (FCC 87-64). General Docket No. 79-144.

Organization's International Commission on Non-Ionizing Radiation Protection[9], and the National Radiological Protection Board in the United Kingdom[10], independently developed and published guidelines similar to those of ANSI/IEEE. Finally, what was formerly the USSR, which traditionally had the lowest exposure guides, twice revised upward its limits for public exposure. Thus, there is a converging consensus of the world's scientific community as to what constitutes safe levels of exposure.

With respect to the existing and proposed cellular-radio systems, be assured that the *actual* exposure levels in the vicinity of the Cornwall, CT installation will be below any health standard used anywhere in the world and literally thousands of times below any level reported to be associated with any verifiable functional change in humans or laboratory animals. This holds true even when all transmitters operate simultaneously and continuously (which is not the normal operating mode). Power density levels of this magnitude are not even a subject of speculation with regard to an association with adverse health effects.

6. For Further Information

Anyone interested can obtain additional information about the environmental impact of cellular-radio from:

Dr. Robert Cleveland, Jr.
Federal Communications Office of
Engineering and Technology
Room 7002
1919 M Street NW
Washington, DC 20554
(202)653-8169

7. Conclusion

A safety analysis has been performed with respect to potential public exposure to RF energy in the environment surrounding the existing cellular radio site and the one proposed for installation in Cornwall, CT. Cellular**One** antennas and Southern New England Telephone (SNET) antennas will be colocated on this monopole. The analysis utilizes engineering data provided by Cellular**One**, together with well-established analytical techniques for estimating the radiofrequency (RF) electromagnetic fields associated with the cellular antennas. Worst-case assumptions were used to ensure safe-side estimates, i.e., the actual values will be significantly lower than the corresponding analytical values. The analysis indicates that the maximum level of RF energy to which the public may be exposed is below all applicable health and safety limits.

Specifically, in all normally accessible areas in the neighborhood surrounding the tower, the maximum levels of RF energy associated with the Cellular**One** antennas will be at least 366 times below the exposure limits of OSHA, ANSI, IEEE, NCRP, and the limits of all states that regulate RF exposure. The combined maximum levels of RF energy associated with both the Cellular**One** and SNET antennas will be at least 95 times below these exposure limits.

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9. *Electromagnetic Fields (300 Hz to 300 GHz)*, Environmental Health Criteria 137, World Health Organization, Geneva, Switzerland, 1993.

10. *Board Statement on Restrictions on Human Exposure to Static and Time Varying Electromagnetic Fields and Radiation*, Documents of the NRPB, National Radiological Protection Board, Chilton, Didcot, Oxon, United Kingdom, 1993.

Springwich Cellular Limited Partnership
227 Church Street
New Haven, Connecticut 06510
Phone (203) 771-7381

SNET

Peter J. Tyrrell
Senior Attorney

May 23, 1994

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
136 Main Street, Suite 401
New Britain, CT 06051

Dear Chairman Gelston:

Enclosed please find a Notice of Intent to Modify an Exempt Tower and Associated Equipment for facilities owned and operated by the American Telephone and Telegraph Company (AT&T) in Cornwall, Connecticut. The site is located atop Mohawk Mountain in Mohawk Mountain State Park. The Springwich Cellular Limited Partnership (SCLP) proposes to add antennas to the existing tower and locate a modular equipment shelter at the tower base. The site will be used to provide cellular communications coverage in and around the Cornwall area.

The attached pages detail the required information. As is shown in the attachment, the proposed addition meets all the necessary criteria established in the Regulations of Connecticut State Agencies Section 16-50j-72 (b) (2), and is thus an exempt facility pursuant to Section 16-50j-73.

Please record me as counsel for SCLP in this matter and in all correspondence from the Council.

Thank you for your cooperation.

Very truly yours,

Peter J. Tyrrell

Copies to: Honorable Gordon M. Ridgeway, First Selectman
Town of Cornwall

Mr. Dick Harris, State of Connecticut,
Department of Environmental Protection

Mr. Jeff Burkland, American Telephone & Telegraph

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Cornwall

Pursuant to Section 16-50i (a) (5) of the Connecticut General Statutes and Section 16-50j-72 (b) (2), as amended, of the Regulations of Connecticut State Agencies, the Springwich Cellular Limited Partnership (SCLP) hereby notifies the Connecticut Siting Council that it intends to modify an existing telecommunications facility by adding cellular service antennas to an existing communications tower and locating a pre-fabricated equipment building adjacent to the tower structure. The site is located atop Mohawk Mountain in Cornwall, inside Mohawk Mountain State Park.

Background

The proposed location is the site of a 79 foot lattice communications tower owned and operated by AT&T. In 1952, AT&T was granted an easement to utilize the site, which is owned by the State of Connecticut Department of Environmental Protection (DEP). In January 1994, the easement was modified by AT&T and the DEP to allow SCLP to utilize the site.

The existing facility is a main backbone site in AT&T's Northeast microwave transmission network.

Discussion

SCLP proposes to install nine directional antennas at the sixty foot level of the existing tower to expand and improve cellular system coverage in the Cornwall area. A new twelve foot by twenty-six foot pre-fabricated equipment building will be located at the base of the tower, adjacent to AT&T's equipment building. The new structure will house SCLP's cellular radio equipment.

The power density in the microwave and cellular frequency bands is set forth below. The levels shown indicate the total power density in milliwatts per square centimeter, and have been calculated at the tower base.

Service	Power Density	Antenna Height	ANSI/ Connecticut Standard	Percent of Standard
Cellular	0.1064	60'	0.5867	18.14
Microwave	3.437×10^{-10}	40'	2.6667	1.28×10^{-8}

The current Connecticut (and ANSI) power density level standards for non-ionizing radiation are shown above. The levels demonstrated in this case are well below the standards.

Conclusion

The proposed addition does not constitute a "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i (d). This is because there is no change in the buildings height. There is no extension of the boundaries of the site. There will be no increase in noise levels at the site's boundary by six decibels or more, and the total radio frequency electromagnetic radiation is not at or above the standard set forth in Section 22 (a) - 162 of the Connecticut General Statutes. This addition will not have a substantially adverse environment effect.

For the reasons discussed above, SCLP requests that the Council acknowledge that this Notice of Modification meets the Council's exemption criteria.

AT&T

AT&T WIRELESS SERVICES, LLC

SITE NUMBER:L12
SITE NAME:MOHAWK MOUNTAIN

DRAWING INDEX

		REV.
24623-313-CT-L12-01	TITLE SHEET	0
24623-313-CT-L12-02	SITE LAYOUT	0
24623-313-CT-L12-03	EQUIPMENT ROOM LAYOUT & NOTES	0
24623-313-CT-L12-04	ELEVATION AND ANTENNA AZIMUTH	0
24623-313-CT-L12-05	ANTENNA SCHEMATIC AND BILL OF MATERIALS	0
24623-313-CT-L12-06	STANDARD DETAILS	0
24623-313-CT-L12-07	STANDARD DETAILS	0

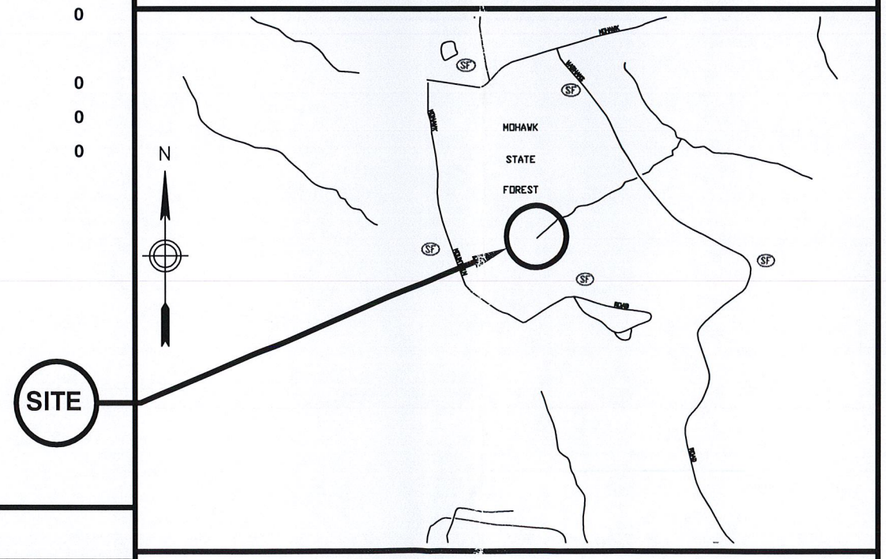
STRUCTURAL REVIEW

EXISTING TOWER/FOUNDATION AND BUILDING (AS APPLICABLE) HAVE BEEN EVALUATED FOR THE REPLACEMENT/ADDITION OF EQUIPMENT, ANTENNA AND COAX CABLES. NO STRUCTURAL MODIFICATIONS ARE REQUIRED

DIRECTIONS

TAKE THE GARDEN STATE PKWY NORTH TO I-287 EAST TO AND ACROSS THE TAPPEN ZEE BRIDGE. GET ON I-287 EAST THEN THE FIRST EXIT FOR THE SAW MILL PKWY NORTH. TAKE SAW MILL TO I-684 NORTH. CONT. ON 684 NORTH TO I-84 EAST (DANBARY). TAKE I-84 EAST TO EXIT 20 (ROUTE 8 NORTH). TAKE RT 8 NORTH TO EXIT 44 (TORRINGTON) @ 2nd LIGHT GO LEFT ONTO RT. 4 WEST. CONT. ON RT. 4 WEST FOR 2.7 MILES AFTER THE CIRCLE. THERE IS A LAKE ON RIGHT, SHORTLY AFTER YOU WILL GO LEFT TO ALLYN RD.

VICINITY MAP



NOT TO SCALE

PROJECT INFORMATION

SCOPE OF WORK:	UPGRADE EQUIPMENT TO 3G SPECIFICATIONS
SITE ADDRESS:	MOHAWK STATE FOREST END OF ALLYN RD WEST GOSHEN, CT 06756
PROPERTY OWNER:	STATE OF CONNECTICUT DEPT. OF ENVIRONMENTAL PROTECTION 79 ELM STREET HARTFORD, CT 06102-5066
CONTACT PERSON:	TIMOTHY KEENEY
APPLICANT:	AT&T 15 EAST MIDLAND AVE. PARAMUS, NJ 07652
LATITUDE:	41.8214
LONGITUDE:	-73.2972
ELEVATION:	1651'
JURISDICTION:	GOSHEN, CT
TAX I.D. NUMBER:	
CURRENT USE:	WIRELESS TELECOMMUNICATIONS FACILITY
PROPOSED USE:	NO CHANGE
ZONING DISTRICT:	
STRUCTURE HEIGHT:	74'
ANTENNA RAD CENTER:	48'
RF DATASHEET:	08/26/01 (REV. 3)
RF ENGINEER:	TONY HOUWELING LUCENT TECHNOLOGIES (973) 386-8621
ANTENNA LOCATION:	LATTICE TOWER
EQUIPMENT LOCATION:	AT&T EQUIPMENT BUILDING
GENERAL CONTRACTOR:	EK TECHNOLOGY THOMAS E. SMITH 299 MADISON AVENUE MORRISTOWN, NJ 07962 973-267-8830

STATE OF CONNECTICUT
THOMAS R. CABANA
No. 21784
LICENSED PROFESSIONAL ENGINEER

THOMAS R. CABANA
P.E. No. 21784 — DATE 11/19/01

Edwards AND Kelcey
EDWARDS AND KELCEY, INC.
1247 WARD AVENUE
WEST CHESTER, PA 19380-4259
E & K PROJ.#: 020015.011
CONTACT: ROB DAVIS
PHONE: (401) 272-1969

SITE NAME: MOHAWK MOUNTAIN
SITE#: L12
MOHAWK ST. FOREST(AT END OF ALLYN ROAD)
WEST GOSHEN, CONNECTICUT

AT&T
15 EAST MIDLAND AVE.
PARAMUS, NJ 07652

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	08/24/01	ISSUED FOR CONSTRUCTION	DPD	PDC	RLD

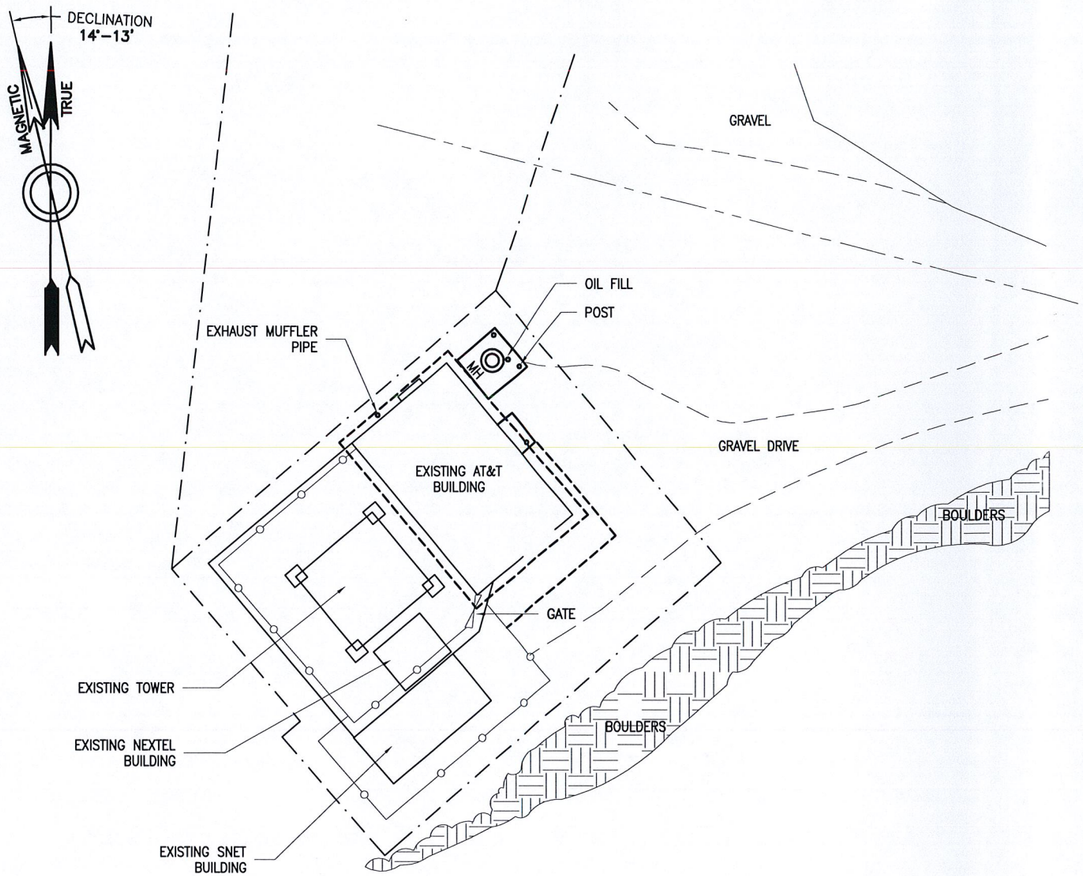
SCALE AS SHOWN | DESIGNED | DRAWN

L12 - MOHAWK MOUNTAIN

TITLE SHEET

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L12-01	0

070201



NOTE:
COMPLETENESS AND ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES MUST BE VERIFIED PRIOR TO ANY EARTH MOVING ACTIVITIES.

SITE PLAN (1/02)
SCALE: N.T.S.

STATE OF CONNECTICUT
THOMAS R. CABANA
No. 21784
LICENSED
PROFESSIONAL ENGINEER

THOMAS R. CABANA
P.E. No. 21784
11/19/01 DATE

Edwards AND Kelcey
EDWARDS AND KELCEY, INC.
1247 WARD AVENUE
WEST CHESTER, PA 19380–4259
E & K PROJ.#: 020015.011
CONTACT: ROB DAVIS
PHONE: (401) 272–1969

SITE NAME: MOHAWK MOUNTAIN
SITE#: L12
MOHAWK ST. FOREST(AT END OF ALLYN ROAD)
WEST GOSHEN, CONNECTICUT

AT&T
AT&T
15 EAST MIDLAND AVE.
PARAMUS, NJ 07652

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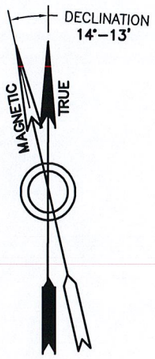
0	08/24/01	ISSUED FOR CONSTRUCTION	DPD	PDC	RLD

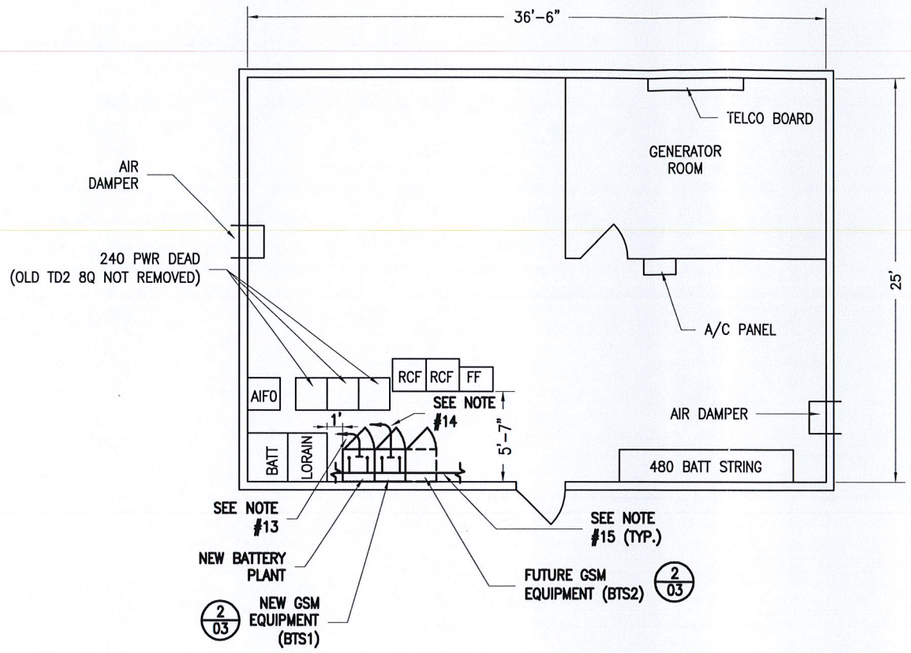
SCALE AS SHOWN | DESIGNED | DRAWN

L12 - MOHAWK MOUNTAIN
SITE
LAYOUT

JOB NO.	DRAWING NUMBER	REV
24623–313	CT–L12–02	0

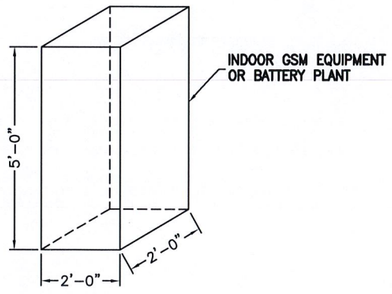
070201





*NOTE:
DIMENSION FOR REFERENCE ONLY.
3'–0" MINIMUM CLEARANCE REQUIRED.

EQUIPMENT PLAN
SCALE: N.T.S.
1/03



TYPICAL LUCENT GSM EQUIPMENT/BATTERY PLANT
NOT TO SCALE
2/03

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NATIONAL STATE, CITY, AND LOCAL CODES, STANDARDS, AND AMENDMENTS.
2. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM INFORMATION AND DRAWINGS PROVIDED BY CONTRACTOR. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
3. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
4. ALL ITEMS OTHER THAN WHAT IS NOTED IN THE BILL OF MATERIALS FOR ANTENNAS, WILL BE PROVIDED BY THE SUBCONTRACTOR.
5. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
6. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF SPECIFICATIONS LISTED BELOW.
7. FIELD ROUTE ALL CONDUITS, CABLES, ETC. AS REQUIRED. CONFIRM THE EXACT ROUTING WITH THE ON–SITE CONTRACTOR CONSTRUCTION MANAGER PRIOR TO THE START OF WORK .
8. ALL DAMAGE TO THE EXISTING STRUCTURE DURING THE CELL SITE UPGRADE MUST BE MADE GOOD TO THE PRE–CONSTRUCTION CONDITION OR BETTER .
9. REMOVE AND CLEAN UP ANY DEBRIS OR MATERIAL FROM THE SITE THROUGHOUT THE DURATION OF THE CONTRACT UPON COMPLETION OF THE WORK AS DIRECTED BY THE CONTRACTOR.
10. THIS CELL SITE IS IN FULL COMMERCIAL OPERATION, THE SUBCONTRACTOR IS NOT TO DISRUPT THE EXISTING SITE'S NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR AND SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
11. SINCE THIS SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
12. WHEN OTHER CARRIERS ARE PRESENT ON THE SAME STRUCTURE MAINTAIN 10' HORIZONTAL SEPARATION AND 5' VERTICAL SEPARATION BETWEEN CARRIERS.
13. POWER:
    SUBCONTRACTOR TO PROVIDE & INSTALL 3 DP 25 AMP BREAKERS. SUBCONTRACTOR TO FIELD ROUTE 6–#10 STRANDED WIRES AND 1–#10 STRANDED GREEN INSULATED GROUND WIRE 1–INCH EMT FROM AC PANEL TO A 8X8X4–INCH JUNCTION BOX NEAR EQUIPMENT LOCATION. SUBCONTRACTOR TO RUN FLEX CONDUIT FROM JUNCTION BOX TO 3–FEET ABOVE GROUND.
14. TELCO:
    SUBCONTRACTOR TO PROVIDE, INSTALL, & FIELD ROUTE (1.5 MBIT/s) CAT 5E T–1 LINE FROM THE NETWORK INTERFACE UNIT (NIU) TO LUCENT BTS CABINET PER DETAIL 1016A. CONNECTION TO CABINET WILL BE MADE BY LUCENT.
15. GROUND:
    SUBCONTRACTOR SHALL PROVIDE PIG TAIL WITH 2–HOLE LUG (DETAIL 508) FOR GROUNDING THE LUCENT GSM (BTS AND POWER) CABINET FRAMES TO EXISTING HALO GROUND RING USING #6 AWG STRANDED AND INSULATED GREEN COPPER WIRE WITH COMPRESSION TYPE CONNECTOR. IF CONNECTION TO HALO IS NOT FEASIBLE, PROVIDE #6 AWG STRANDED & INSULATED GREEN COPPER WIRE FROM LUCENT GSM (BTS AND POWER) CABINET FRAMES TO MASTER GROUND BAR (DETAIL 509) AND TERMINATE WITH 2–HOLE LUG PER DETAIL 508. PROVIDE 2 GROUNDS PER CABINET. CONNECTION TO CABINET WILL BE MADE BY LUCENT.
16. CLEARANCE:
    GSM CABINET SHOULD HAVE A MINIMUM OF 36–INCH FRONT CLEARANCE.

REFERENCE SPECIFICATIONS:

1. 24623–033–3PS–A00Z–00002, SCOPE OF WORK (EXHIBIT "D") FOR GENERAL CONSTRUCTION SERVICES.
2. 24623–033–3PS–A00Z–00005, (EXHIBIT "E") FOR GENERAL CONSTRUCTION SERVICES.

STATE OF CONNECTICUT
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LICENSED PROFESSIONAL ENGINEER

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SITE NAME: MOHAWK MOUNTAIN
SITE#: L12
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AT&T
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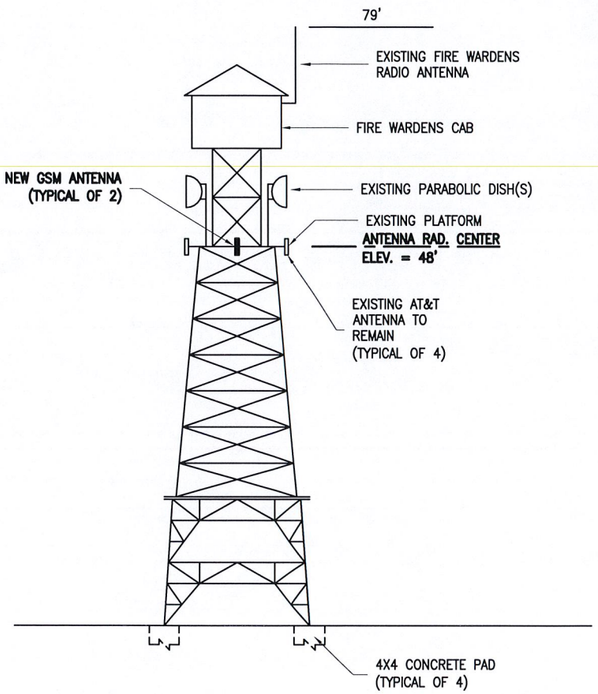
SCALE AS SHOWN | DESIGNED | DRAWN

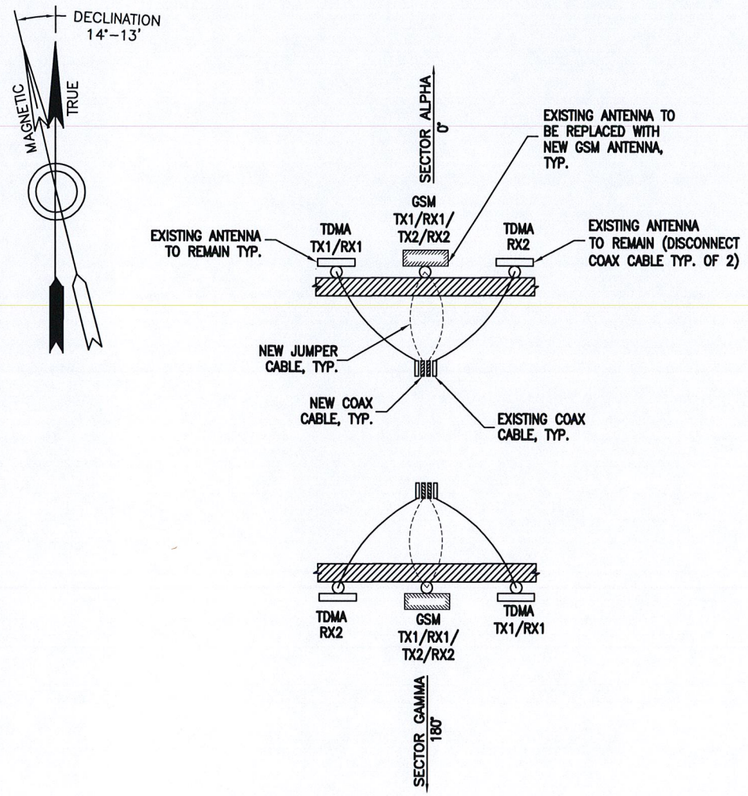
L12 - MOHAWK MOUNTAIN
EQUIPMENT ROOM
LAYOUT AND NOTES

JOB NO.	DRAWING NUMBER	REV
24623–313	CT–L12–03	0

070203



ELEVATION
SCALE: N.T.S.
1/04



NOTE:
1. SEE SHEET 05 FOR SPECIFIC ANTENNA/COAX CONFIGURATION.

2. ROUTE NEW COAX CABLES ALONGSIDE EXISTING CABLES UNLESS OTHERWISE NOTED ON PLANS.

TYPICAL ANTENNA ORIENTATION PLAN
NOT TO SCALE
2/04

STATE OF CONNECTICUT
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No. 21784
LICENSED PROFESSIONAL ENGINEER

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SCALE AS SHOWN | DESIGNED | DRAWN

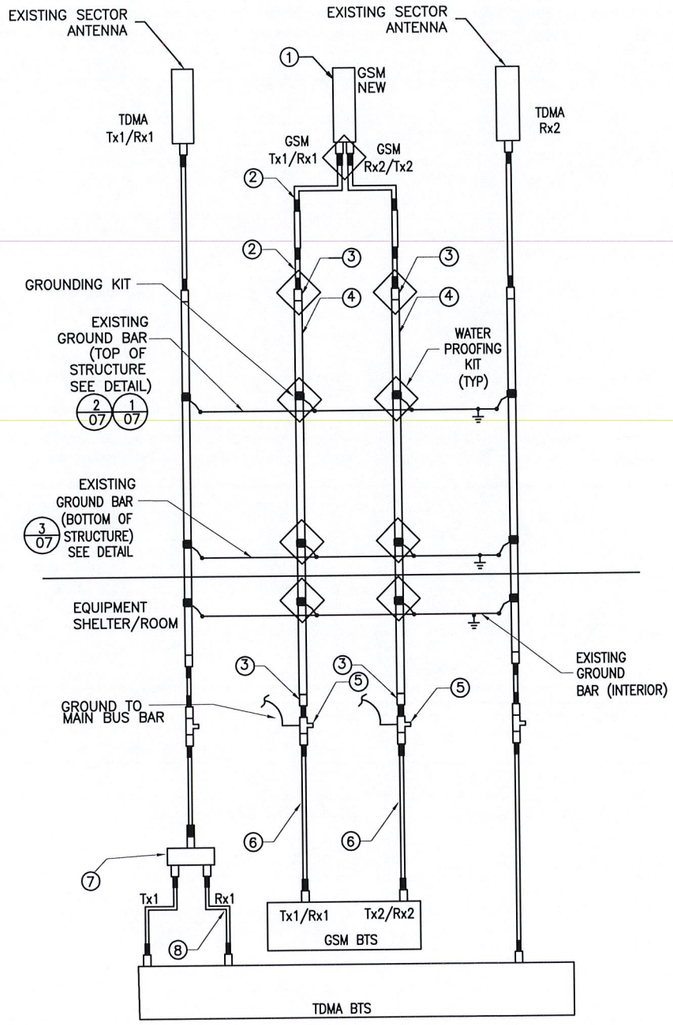
L12 - MOHAWK MOUNTAIN

ELEVATION AND ANTENNA AZIMUTH

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L12-04	0

070201

6 5 4 3 2



3/4 VDP
ANTENNA CONFIGURATION
NOT TO SCALE

BILL OF MATERIALS

ITEM NO.	ITEM DESCRIPTION	SYS.	SECTOR ALPHA AZIMUTH 0°			SECTOR BETA AZIMUTH 180°			TOTAL QUANTITY	SUPPLIED BY
			TDMA TX1/RX1	GSM TX1/RX1 TX2/RX2	TDMA RX2	TDMA TX1/RX1	GSM TX1/RX1 TX2/RX2	TDMA RX2		
1	ANTENNA		ALP9212 EXISTING	ALGON 7262.01 NEW (51.2"x5"x3.2")	ALP9212 EXISTING	ALP9212 EXISTING	ALGON 7262.01 NEW (51.2"x5"x3.2")	ALP9212 EXISTING	2	BECHTEL
	MECHANICAL DOWNTILT			2 DEG.			2 DEG.			
2	STANDARD HELIAX JUMPER LDF 1/2" JUMPER, DIN MALE/DIN MALE			L4A-PDMDM-6			L4A-PDMDM-6		4	BECHTEL
3	STANDARD HELIAX UNATTACHED CONNECTOR, DIN FEMALE			L5PDF-RPC			L5PDF-RPC		4	BECHTEL
4	MAIN COAXIAL CABLE (LENGTH)			LDF5-50A (110'-7/8") 2-NEW			LDF5-50A (106'-7/8") 2-NEW		432'(7/8")	BECHTEL
5	SURGE ARRESTOR			APTDC-BDFDM-SAT NEW			APTDC-BDFDM-SAT NEW		2	BECHTEL
6	1/2" JUMPER, DIN MALE/DIN MALE			L4A-PDMDM-25 NEW			L4A-PDMDM-25 NEW		TBD	TBD
7	DUPLEXER								TBD	TBD
8	1/2" JUMPER, DIN MALE/ DIN MALE								TBD	TBD
9	LOW NOISE AMPLIFIER									BECHTEL
	ID TAG			ALPHA A2/A3 ATTWS GSM			BETA B2/B3 ATTWS GSM			SUB CONTRACTOR
	COLOR CODE			2/3 RED			2/3 BLUE			SUB CONTRACTOR

1. SUBCONTRACTOR SHALL VERIFY THE ACTUAL LENGTH IN THE FIELD BEFORE INSTALLATION
2. TAG (SEE DETAIL 5 ON SHEET 06) & COLOR CODE ALL MAIN CABLES AT LOCATIONS PER AWS TOWER/ANTENNA CABLE MARKING STANDARD:
   - TOP OF TOWER END OF MAIN COAX
   - BOTTOM OF TOWER SHELTER EXTERIOR AT CABLE ENTRY PORT
   - WAVE GUIDE PORT SHELTER INTERIOR AT CABLE ENTRY PORT
   - DIRECTLY BEFORE AND AFTER RF EQUIPMENT (DUPLEXERS, DIPLEXERS, ETC.)
   - END OF INTERIOR JUMPERS AT BTS EQUIPMENT
3. ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWN TILT MOUNTING BRACKETS SUPPLIED BY ANTENNA MANUFACTURER
4. PRIOR APPROVAL IS REQUIRED BEFORE PERFORMING ANY WORK ON EXISTING CELL SITE EQUIPMENT
5. CONTRACTOR SHALL PROVIDE ALL GROUNDING KITS AND WEATHER PROOFING KITS.
6. INFORMATION TAKEN FROM RF DATASHEET, REV. 3

STATE OF CONNECTICUT
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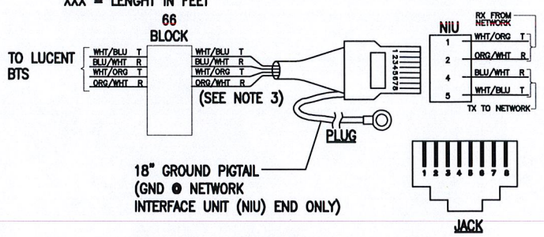
SCALE AS SHOWN | DESIGNED | DRAWN

L12 - MOHAWK MOUNTAIN
ANTENNA SCHEMATIC AND BILL OF MATERIALS

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L12-05	0

070201

* VENDOR:
CDS DATACOM INC.
214-340-9199
INDOOR SINGLE ENDED P/N C00411482-XXX
OUTDOOR SINGLE ENDED P/N C00411492-XXX
XXX = LENGHT IN FEET



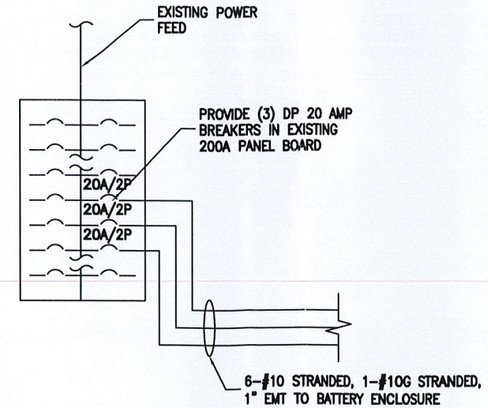
RJ48C 8 PIN CONNECTOR

* T1 CABLE MUST BE CDS DATACOM (NO SUBSTITUTION)

NOTES:

1. THE CABLE IS SUITABLE FOR LUCENT FLEXENT SITE GSM BTS.
2. THE CABLE IS A STRAIGHT-THROUGH CABLE WITH IDENTICAL CONNECTOR IF MODULAR PLUG USED AT BOTH ENDS.
3. PAIRS 3&4 NOT SHOWN/ USED FOR RJ48C BUT ARE TERMINATED IN MODULAR PLUG PER ANSI/TIA/EIA (T568B).

T-1/PCM
CONNECTOR PINOUT (1016) 1/06
NOT TO SCALE

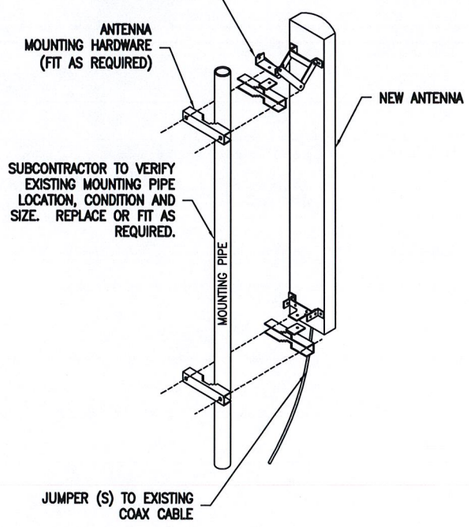


ONE
LINE DIAGRAM 2/06
NOT TO SCALE

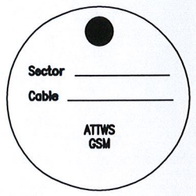
EXISITNG 200A PANEL					
DESCRIPTION	BREAKER	CIRCUIT	CIRCUIT	BREAKER	DESCRIPTION
UNK	60	1	2	30	RECTIFIER #4
UNK	60	3	4		
EXHAUST FAN	60	5	6	30	RECTIFIER #5
SPARE	60	7	8		
SPARE	60	9	10	30	RECTIFIER #6
SPARE	60	11	12		
RECTIFIER #1	60	13	14	20	UNK
		15	16	**20**	**NEW GSM**
RECTIFIER #2	60	17	18		
		19	20	**20**	**NEW GSM**
RECTIFIER #3	60	21	22		
		23	24	**20**	**NEW GSM**
SPARE		25	26		
SPARE		27	28		SPARE
SPARE		29	30		SPARE
SPARE		31	32		SPARE
SPARE		33	34		SPARE
SPARE		35	36		SPARE
SPARE		37	38	100	SURGE SUPPRESSOR
SPARE		39	40		
SURGE ARRESTER					

NOTE: SUBCONTRACTOR SHALL VERIFY IN FIELD AND MAKE ADJUSTMENTS IF NECESSARY

PANEL SCHEDULE 3/06
NOT TO SCALE

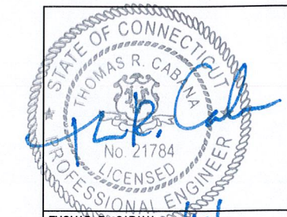


ANTENNA
MOUNT DETAIL 4/06
NOT TO SCALE



NOTE:
TAG SHALL BE MADE OF STEEL OR EQUIVALENT AND ATTACHED TO CABLE WITH CORROSION PROOF WIRE.

TAG LABELING 5/06
NOT TO SCALE



THOMAS R. CABANA
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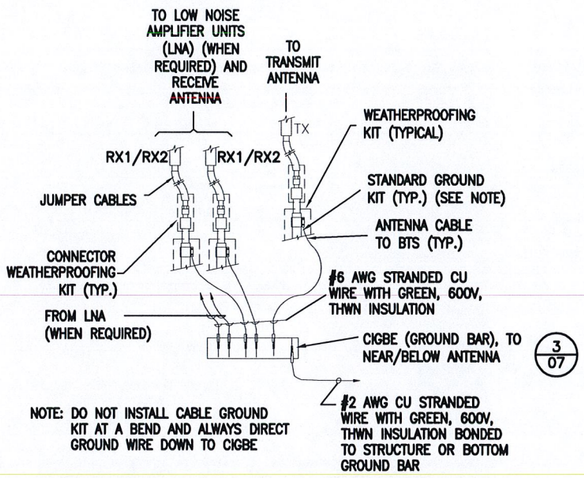
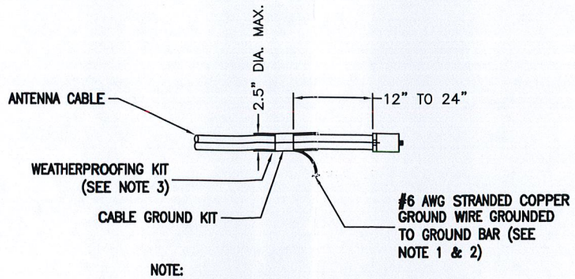
L12 - MOHAWK MOUNTAIN
STANDARD
DETAILS

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L12-06	0

070201



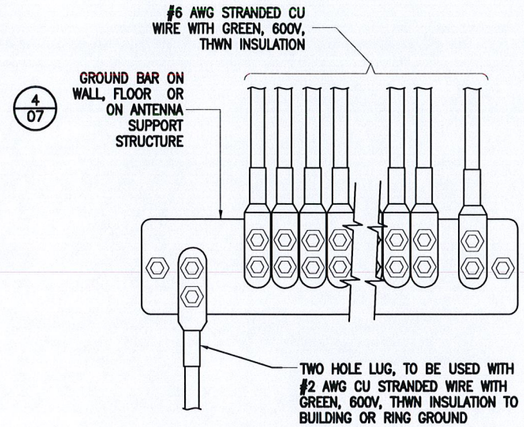
CONNECTION OF GROUND WIRE TO GROUND BAR (522A) 1/07
NOT TO SCALE



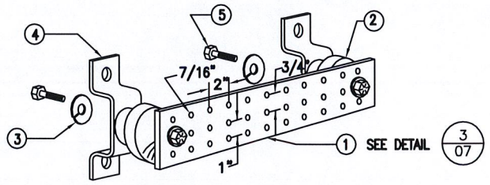
NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE (513A) 2/07
NOT TO SCALE



INSTALLATION OF GROUND WIRE TO GROUND BAR (508A) 3/07
NOT TO SCALE



LEGEND

1– COPPER GROUND BAR, ¼"X 4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.

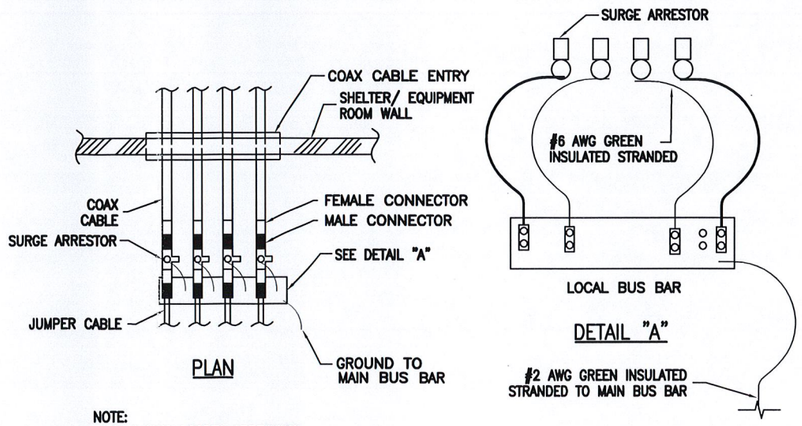
2– INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4

3– 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8

4– WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056

5– 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

GROUND BAR DETAIL (509) 4/07
NOT TO SCALE



NOTE:
1. 4 MAX. LOOPED ARRESTORS

SURGE ARRESTOR GROUNDING DETAIL (527) 5/07
NOT TO SCALE

STATE OF CONNECTICUT
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L12 - MOHAWK MOUNTAIN

STANDARD DETAILS

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L12-07	0

6 5 4 3 2

07120101

SHEET INDEX

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I–90 WEST/MASSACHUETTS TURNPIKE. HEAD NORTHEAST TOWARD LEGGATT MCCALL CONN. TURN LEFT ONTO LEGGATT MCCALL CONN. CONTINUE ONTO BURR STREET. TURN LEFT ONTO COCHITUATE ROAD. USE THE RIGHT LANE TO TAKE THE RAMP TO I–90 EAST/MASSPIKE WEST/SPRINGFIELD/BOSTON. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I–90 WEST/MASSACHUETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I–90 WEST/MASSACHUETTS TURNPIKE. FOLLOW I–90 WEST/MASSACHUETTS TURNPIKE AND I–84 TO STATE HWY 508 IN FARMINGTON. TAKE EXIT 39 FROM I–84. MERGE ONTO I–90 WEST/MASSACHUETTS TURNPIKE. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I–84 TOWARD US–20/HARTFORD/NEW YORK CITY. CONTINUE ONTO I–84. USE THE RIGHT 2 LANES TO TAKE EXIT 39 TOWARD FARMINGTON/CT–4. TAKE CT–4 WEST TO MAHAWK MOUNTAIN ROAD IN CORNWALL. CONTINUE ONTO STATE HWY 508. STATE HWY 508 TURNS SLIGHTLY RIGHT AND BECOMES CT–4 WEST. SLIGHTLY RIGHT TO STAY ON CT–4 WEST. TURN LEFT ONTO CT–4. TURN RIGHT ONTO CT–4 WEST/BRIDGE PARK ROAD. TURN LEFT ONTO EAST MAIN STREET. TURN RIGHT ONTO EAST ELM STREET. CONTINUE ONTO MIGEON AVE. CONTINUE ONTO CT–4 WEST/GOSHEN ROAD. AT THE TRAFFIC CIRCLE, CONTINUE STRAIGHT ONTO CT–4. TURN LEFT ONTO ALLYN ROAD. CONTINUE ONTO MOHAWK MOUNTAIN ROAD.

LOCATION MAP

PROJECT

LTE 3C/4C/RETROFIT

SITE NAME

CORNWALL

CELL SITE ID

CTL01025

FA SITE NUMBER

10035044

PACE ID

MRCTB040565/MRCTB040492
MRCTB040730/MRCTB039876

SITE ADDRESS

36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

STRUCTURE TYPE

SELF SUPPORT

PROJECT TEAM

smartlink

PROJECT MANAGER

INFINIGY

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

ENGINEER

SCOPE OF WORK (PER LTE RFDS, DATED 05/23/2019 V1.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- FACILITY HAS NO PLUMBING OR REFRIGERANTS.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

TOWER
- REMOVE (6) PANEL ANTENNAS
- INSTALL (6) PANEL ANTENNAS
- REMOVE (3) RRUS–11 B12
- INSTALL (3) 4449 B2/B66A
- INSTALL (3) B14 4478
- REMOVE (3) TMAs
- INSTALL (1) DC6 SQUID W/ (1) FIBER AND (2) DC CABLES
- INSTALL MOUNT MODIFICATIONS

GROUND
- SWAP DUS WITH 6630
- ADD IDLe CABLE
- ADD 5G 6630
- REMOVE (6) DIPLEXERS

PROJECT SUMMARY

SITE NAME:	CORNWALL	
CELL SITE ID:	CTL01025	
FA SITE #:	10035044	
SITE ADDRESS:	36 MOHAWK MOUNTAIN CORNWALL, CT 06753	
COUNTY:	LITCHFIELD	
SITE COORDINATES: LATITUDE:	41.8212981° N	(NAD 83)
LONGITUDE:	73.2964431° W	(NAD 83)
RAD CENTER	±65'	(AGL)
LANDLORD:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801	
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD. FRAMINGHAM, MA 01701	
CLIENT REPRESENTATIVE:	SMARTLINK, LLC 85 RANGEWAY RD., BUILDING 3, SUITE 102 NORTH BILLERICA, MA 01862	
CONTACT:	EDWARD WEISSMAN (917)528–1857	
ENGINEER:	INFINIGY 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205	
CONTACT:	ALEX WELLER (518) 690–0790	
BUILDING CODE:	2018 CT STATE BUILDING CODE 2015 INTERNATIONAL BUILDING CODE ANSI/TIA–222 G 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE 2017 NFPA 70	
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE (LATEST EDITION)	

811 Know what's below. Call before you dig.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG
TOLL FREE: 1-800-922-4455 OR www.cbyd.com
CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

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at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
12/03/2019
24705
LICENSED PROFESSIONAL ENGINEER

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CTL01025
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36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 12/03/19

CD

Drawing Title
TITLE PAGE

Drawing Number
T1

GENERAL NOTES

PART 1 – GENERAL REQUIREMENTS

1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").
D. AND NFPA 101 (LIFE SAFETY CODE).
E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).

1.2 DEFINITIONS:
A: WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
B: COMPANY: AT&T CORPORATION
C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
D: CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
E: THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.

1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.7 NOTICE TO PROCEED:
A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – EXECUTION

2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.

2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

PART 3 – RECEIPT OF MATERIAL & EQUIPMENT

3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.

4.5 CONDUCT TESTING AS REQUIRED HEREIN.

PART 5 – TESTS AND INSPECTIONS

5.1 TESTS AND INSPECTIONS:
A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.

C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.

D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.

E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.

F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.

G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

PART 6 – TRENCHING AND BACKFILLING

6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.

A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.

B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.

C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.

E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.

F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.

G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
F	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
T	TRANSFORMER
M	KILOWATT HOUR METER
JB	JUNCTION BOX
PB	PULL BOX TO NEC/TELCO STANDARDS
----------	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
OR	GROUND ROD
OR	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
G	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
# / #	REPRESENTS DETAIL NUMBER / REF. DRAWING NUMBER

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

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CORNWALL, CT 06753

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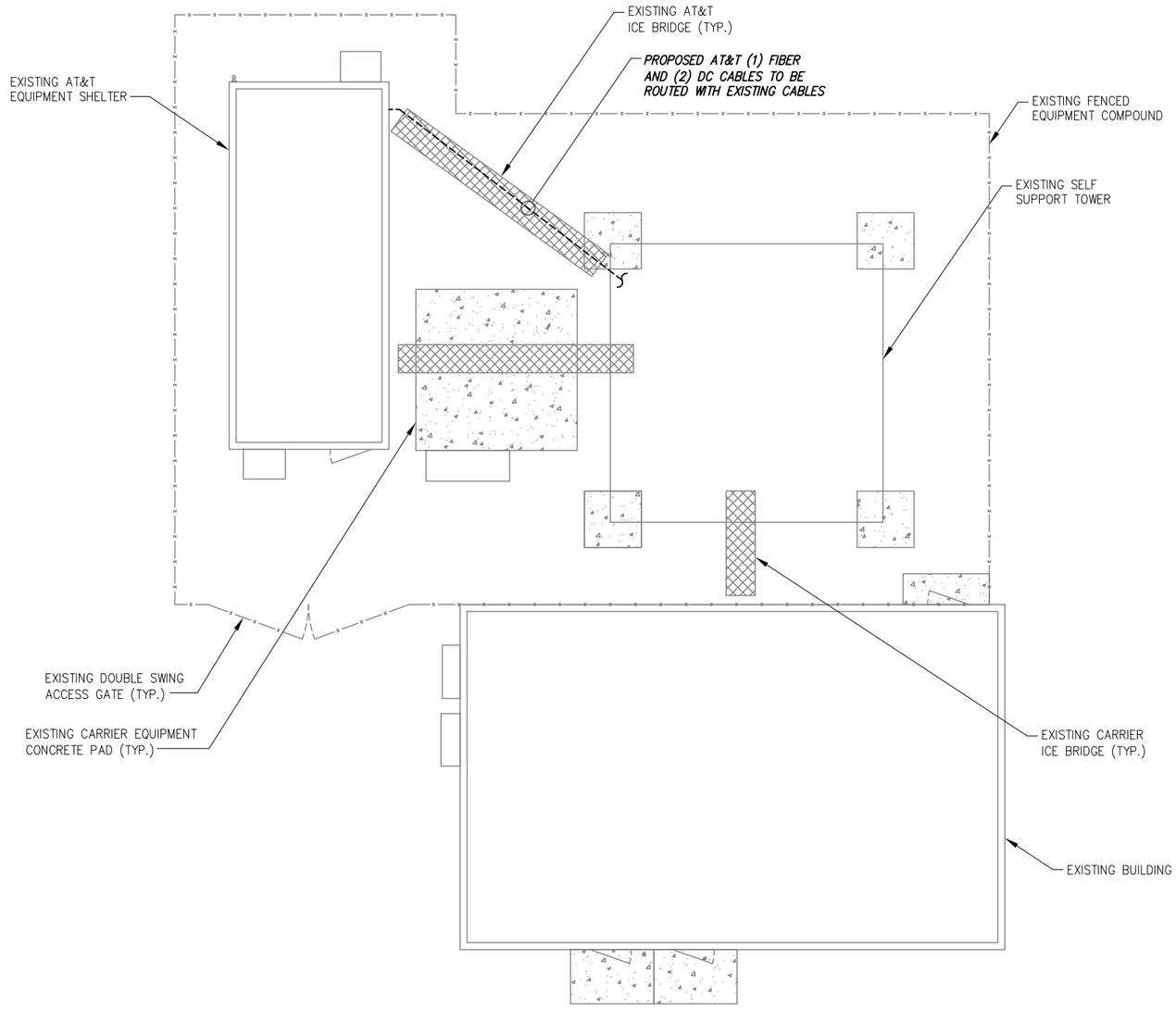
Drawing Title
GENERAL NOTES

Drawing Number
C1



TRUE NORTH

1 SITE PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
10' 5' 0 5' 10'
SCALE (11x17): 1" = 10'-0"
SCALE (22x34): 1" = 5'-0"

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

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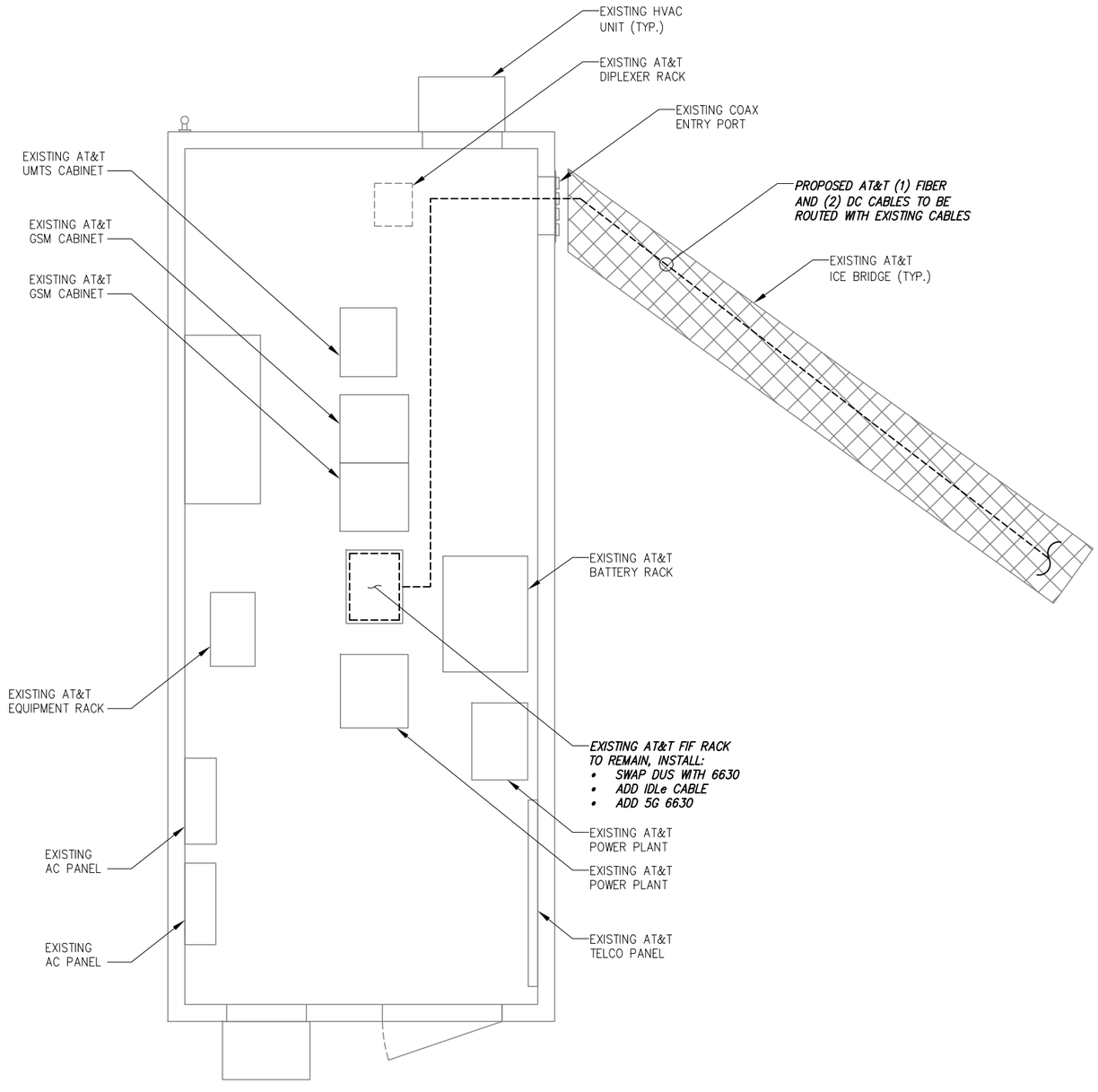
Drawing Title
OVERALL SITE PLAN

Drawing Number
C2



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

TRUE NORTH

2 ENLARGED EQUIPMENT PLAN
SCALE: AS NOTED

GRAPHIC SCALE:

4' 2' 0 2' 4'

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

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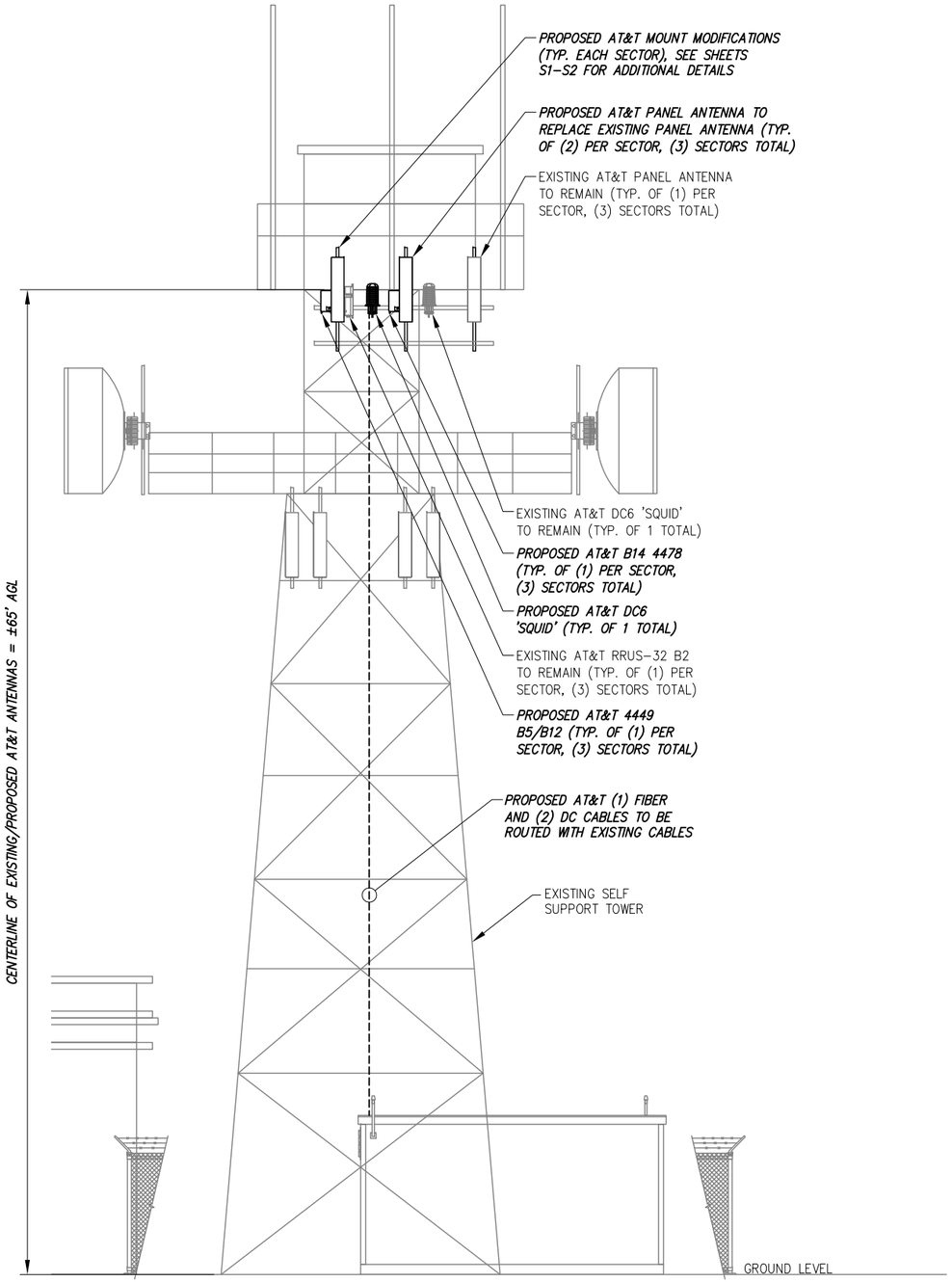
Drawing Title
ENLARGED SITE PLAN

Drawing Number
C2A



1 ELEVATION VIEW
NOT TO SCALE

NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:
- *INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.*
- *FOR STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNTS, SEE 'POST MOD MOUNT ANALYSIS' COMPLETED BY INFINIGY, DATED 12/02/19. SEE SHEETS S1-S2 FOR MODIFICATION DETAILS*

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 05/23/19, V 1.00

SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/ DIPLEXER	RRUS	AZIMUTH	ANTENNA ℄ HEIGHT	CABLE FEEDER TYPE	CABLE FEEDER LENGTH	RAYCAP UNIT
ALPHA	A-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) TT19-08BP111-001	--	141°	±65'	(2) (E) 1-5/8" COAX CABLES	±110'	(1) (E) DC6 'SQUID' *(1) (P) DC6 'SQUID'*
	A-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	A-3	*(P) LTE 700*	*CCI DMP65R-BU6DA*	--	*(1) (P) B14 4478*	*51°*	*±65'*	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	A-4	*(P) LTE 700/850/ 1900/5G 850*	*CCI DMP65R-BU6DA*	--	(1) (E) RRUS-32 B2 *(1) (P) 4449 B5/B12*	*51°*	*±65'*	SEE A-3 FOR CABLE INFORMTION	--	
BETA	B-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) TT19-08BP111-001	--	256°	±65'	(2) (E) 1-5/8" COAX CABLES	±110'	
	B-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	B-3	*(P) LTE 700*	*CCI DMP65R-BU6DA*	--	*(1) (P) B14 4478*	*161°*	*±65'*	*(1) (P) FIBER CABLE (2) (P) DC CABLES*	--	
	B-4	*(P) LTE 700/850/ 1900/5G 850*	*CCI DMP65R-BU6DA*	--	(1) (E) RRUS-32 B2 *(1) (P) 4449 B5/B12*	*161°*	*±65'*	SEE A-3 FOR CABLE INFORMTION	--	
GAMMA	G-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) TT19-08BP111-001	--	21°	±65'	(2) (E) 1-5/8" COAX CABLES	±110'	
	G-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	G-3	*(P) LTE 700*	*CCI DMP65R-BU4DA*	--	*(1) (P) B14 4478*	*281°*	*±65'*	SEE A-3 FOR CABLE INFORMTION	--	
	G-4	*(P) LTE 700/850/ 1900/5G 850*	*CCI DMP65R-BU4DA*	--	(1) (E) RRUS-32 B2 *(1) (P) 4449 B5/B12*	*281°*	*±65'*	SEE A-3 FOR CABLE INFORMTION	--	

2 AT&T ANTENNA SCHEDULE
NOT TO SCALE

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STATE OF CONNECTICUT
JOHN S. STEVENS
12/03/2019
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	12/03/19
1	ISSUED FOR PERMIT	ASW	10/23/19
0	ISSUED FOR REVIEW	BMM	08/27/19

Drawn: BMM Date: 08/27/19
Designed: ASW Date: 08/27/19
Checked: AJD Date: 08/27/19

Project Number: 499-006

Project Title:
CORNWALL
CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

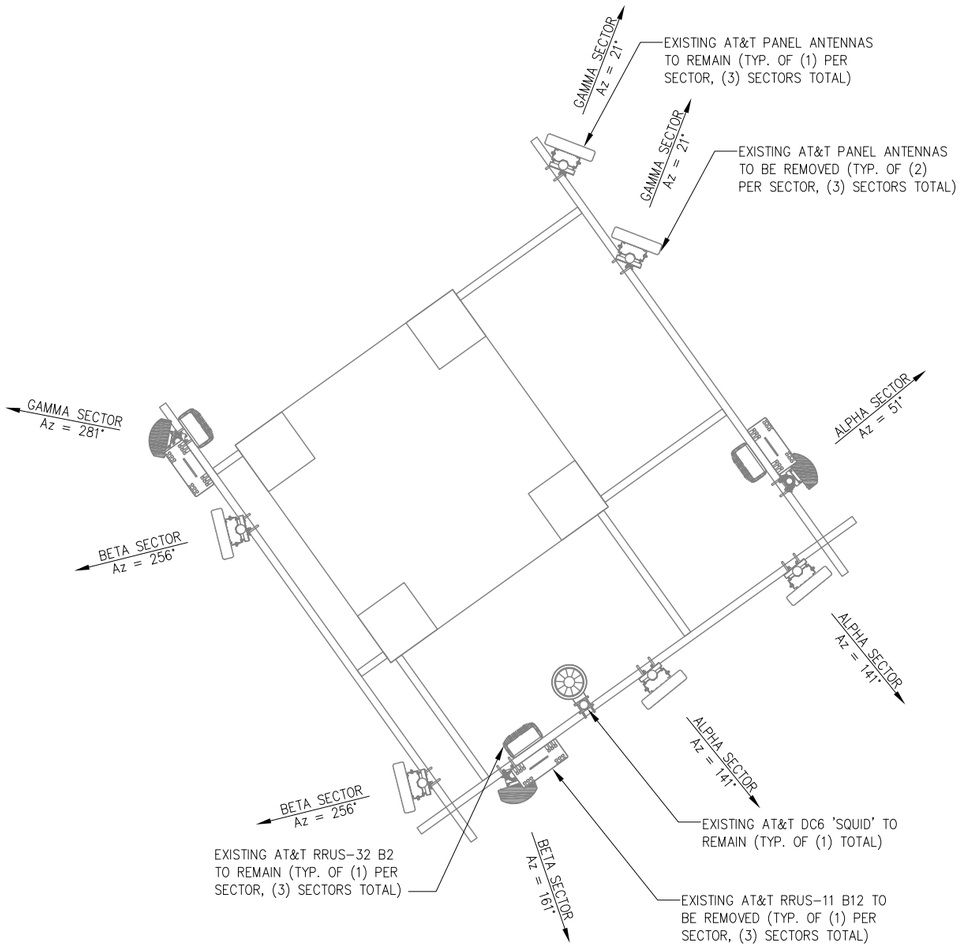
Drawing Scale: AS NOTED
Date: 12/03/19
CD

Drawing Title
ELEVATION VIEW

Drawing Number
C3

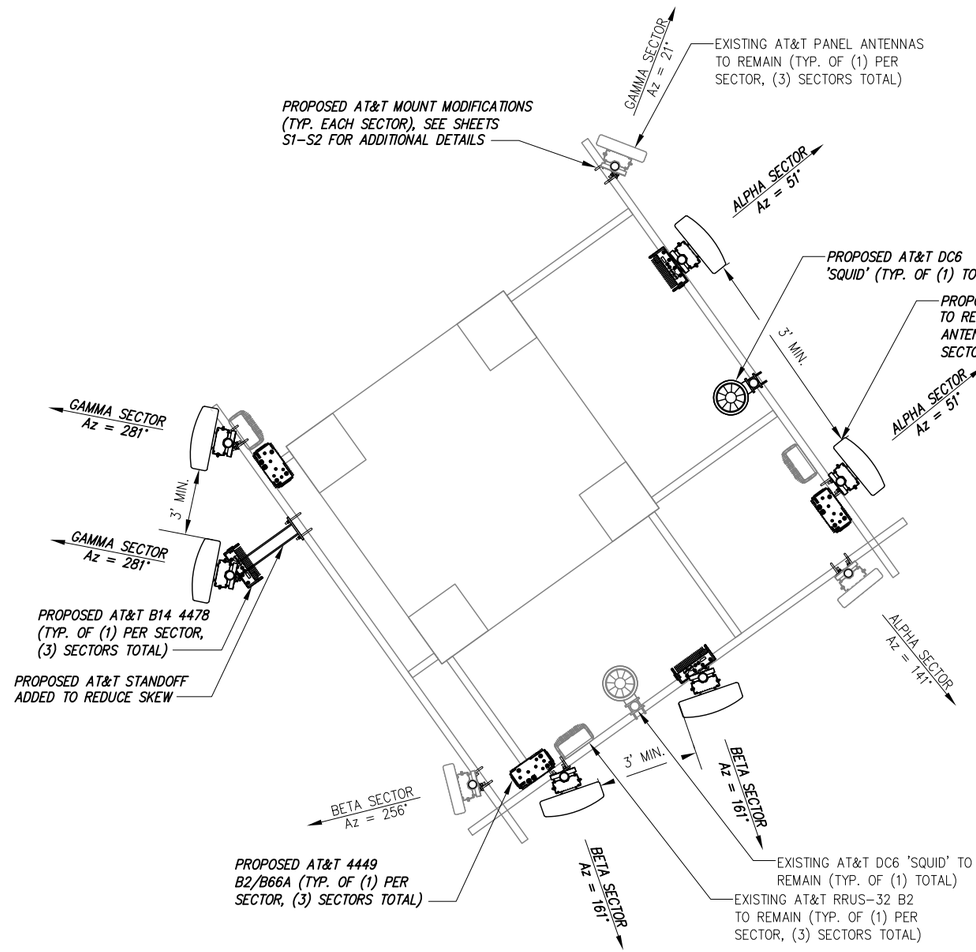
NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:
- *INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.*
- *FOR STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNTS, SEE 'POST MOD MOUNT ANALYSIS' COMPLETED BY INFINIGY, DATED 12/02/19. SEE SHEETS S1-S2 FOR MODIFICATION DETAILS*



N
TRUE NORTH

1 EXISTING ANTENNA ORIENTATION PLAN
NOT TO SCALE



N
TRUE NORTH

2 PROPOSED ANTENNA ORIENTATION PLAN
NOT TO SCALE

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No.	Submittal / Revision	App'd	Date
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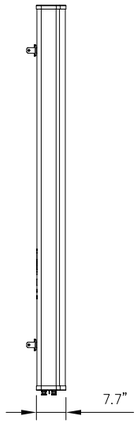
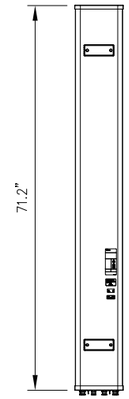
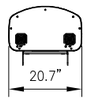
CD

Drawing Title
ANTENNA ORIENTATION PLAN

Drawing Number
C4



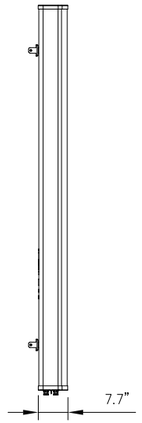


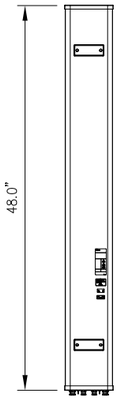


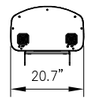
SIDE REAR TOP

CCI MODEL NO.:	DMP65R-BU6DA
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(71.2"x20.7"x7.7")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	79.4 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
NOT TO SCALE



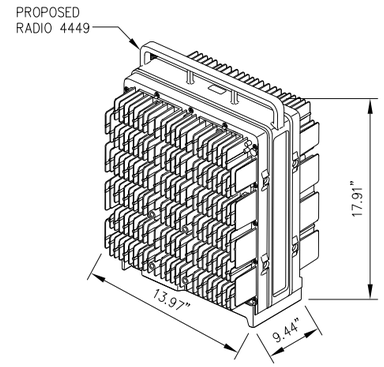




SIDE REAR TOP

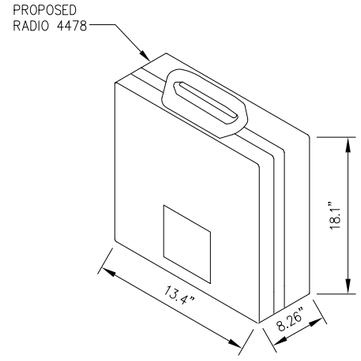
CCI MODEL NO.:	DMP65R-BU4DA
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(48.0"x20.7"x7.7")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	67.9 LBS
CONNECTOR:	7-16 DIN FEMALE

2 ANTENNA DETAIL
NOT TO SCALE



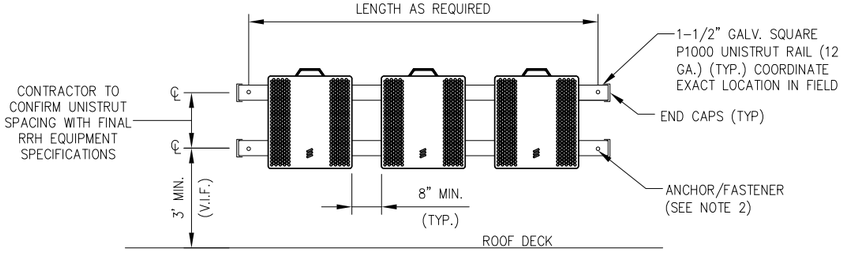
RADIO 4449 SPECIFICATIONS
- HxWxD, (INCHES) : 17.91"x13.97"x9.44"
- WEIGHT (LBS) : 70.54
- COLOR : GRAY

3 ERICSSON RADIO 4449 DETAIL
NOT TO SCALE



RADIO 4478-B14 SPECIFICATIONS
- HxWxD, (INCHES) : 18.1"x13.4"x8.26"
- WEIGHT (LBS) : 59.5
- COLOR : GRAY

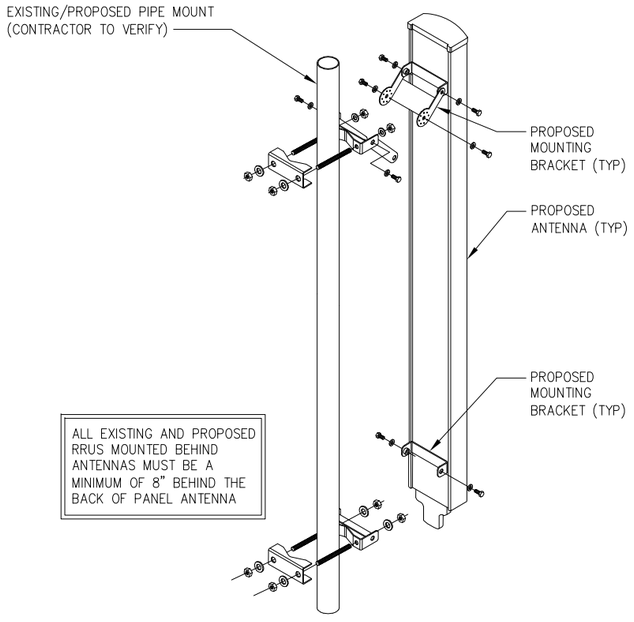
4 ERICSSON RADIO 4478-B14 DETAIL
NOT TO SCALE



NOTES:
1. A SUPPORT FOR A SINGLE RRH SHALL HAVE A MINIMUM OF TWO ANCHORS/FASTENERS FOR EACH UNISTRUT CHANNEL.
2. INSTALL ANCHORS/FASTENERS A MAXIMUM OF 2'-0" ON CENTERS.
   - WOOD STUDS – 5/8"ø LAG BOLT W/ 3.5" EMBEDMENT IN WOOD
   - CONCRETE – 1/2"ø HILTI KWIK BOLT III W/ 3-5/8" EMBEDMENT OR EQUIVALENT
   - THROUGH BOLT – 1/2"ø A36/A307 THREADED ROD W/ NUTS AND WASHERS

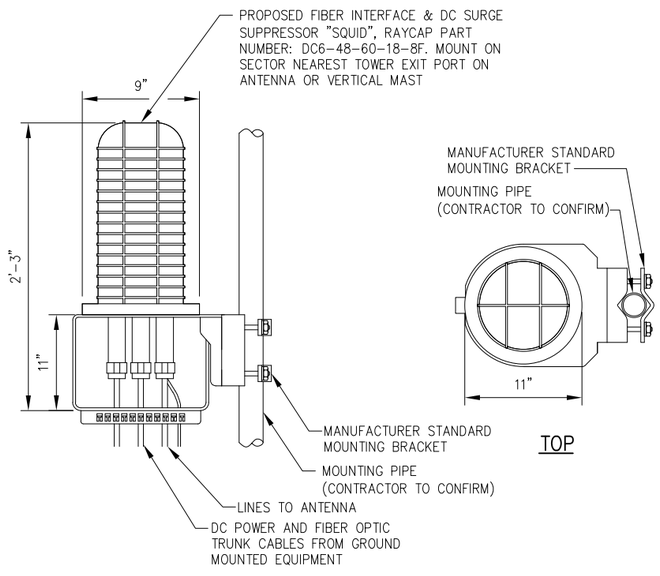
   ANCHORS AND UNISTRUT CHANNEL SHALL HAVE HOT-DIPPED GALVANIZED FINISH.
3. MOUNT RRH TO UNISTRUT WITH 3/8"ø UNISTRUT BOLTING HARDWARE AND SPRING NUTS. TYPICAL FOUR PER BRACKET. SUBCONTRACTOR SHALL SUPPLY.

5 TYPICAL RRU MOUNTING DETAIL
NOT TO SCALE



ALL EXISTING AND PROPOSED RRUS MOUNTED BEHIND ANTENNAS MUST BE A MINIMUM OF 8" BEHIND THE BACK OF PANEL ANTENNA

6 ANTENNA MOUNTING DETAIL
NOT TO SCALE



7 SQUID DETAIL
NOT TO SCALE

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12/03/2019

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Project Number: 499-006

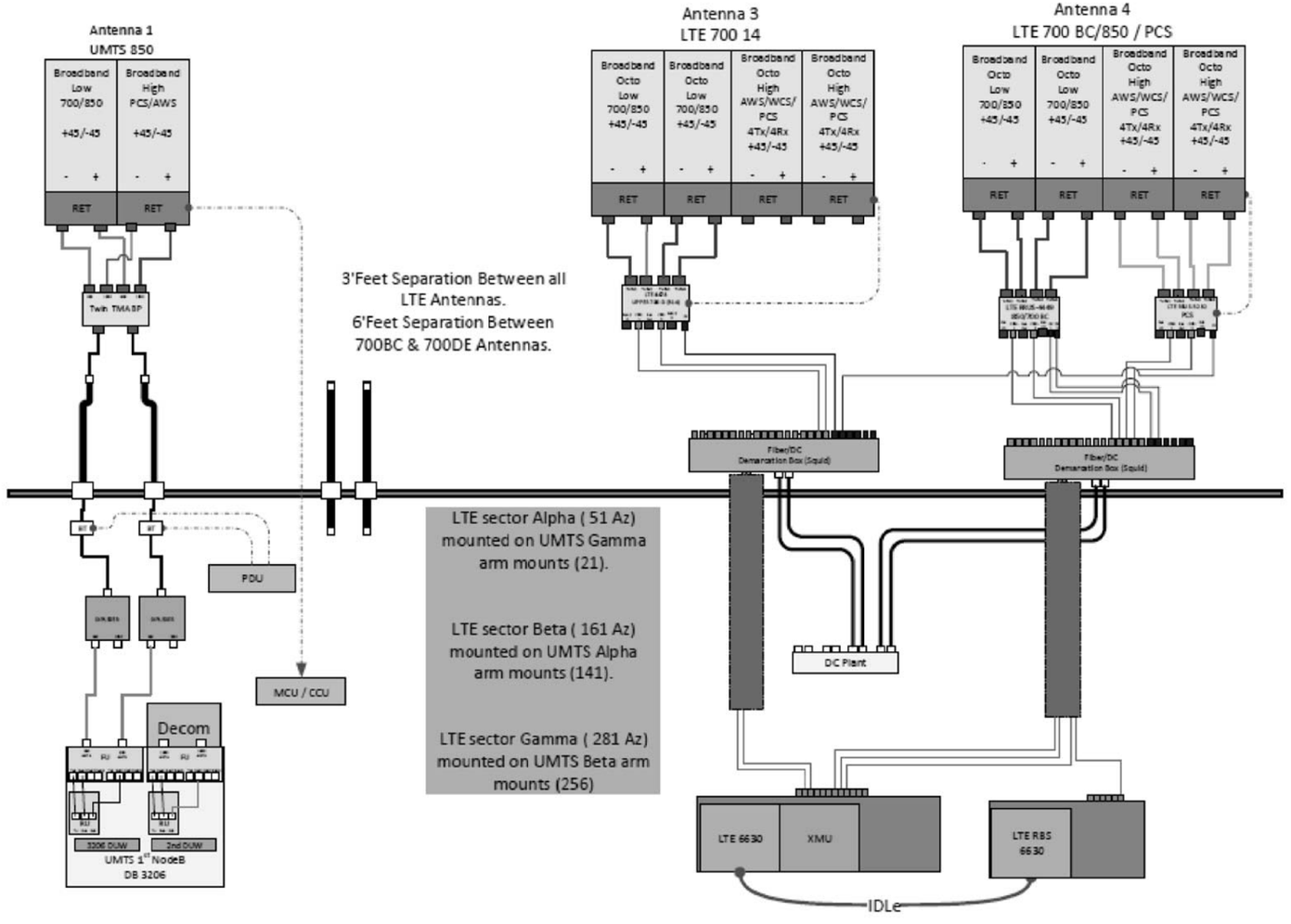
Project Title:
CORNWALL
CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 12/03/19
CD

Drawing Title
EQUIPMENT DETAILS

Drawing Number
C5



ALPHA/BETA/GAMMA

1 — PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS, DATED 05/23/2019, V1.00

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12/03/2019

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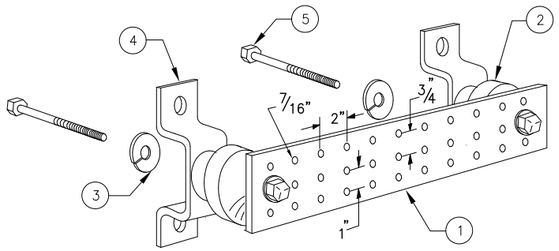
Drawing Title
PLUMBING DIAGRAM

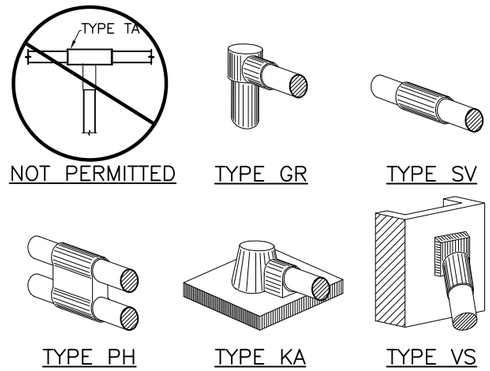
Drawing Number
C6



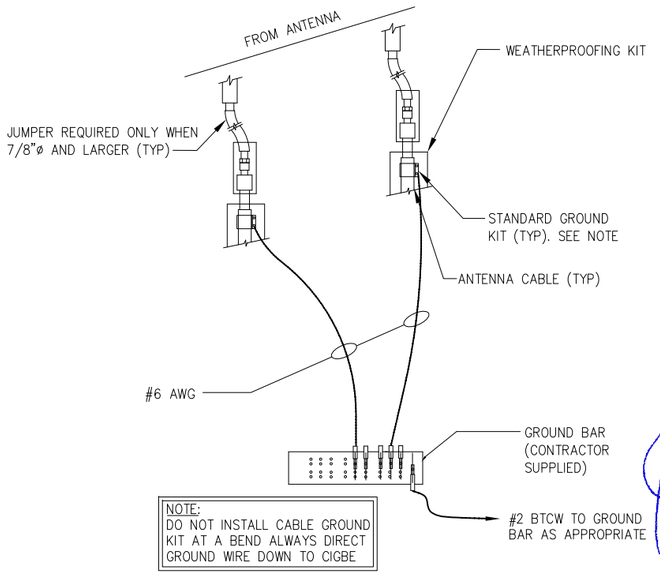
LEGEND

1 – SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2 – INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061–4
3 – 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015–8
4 – WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A–6056
5 – 5/8–11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012–1
6 – GROUND BAR SHALL BE SIZED TO ACCOMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
7 – GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
8 – GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
9 – HARDWARE DIAMETER SHALL BE MINIMUM 3/8"

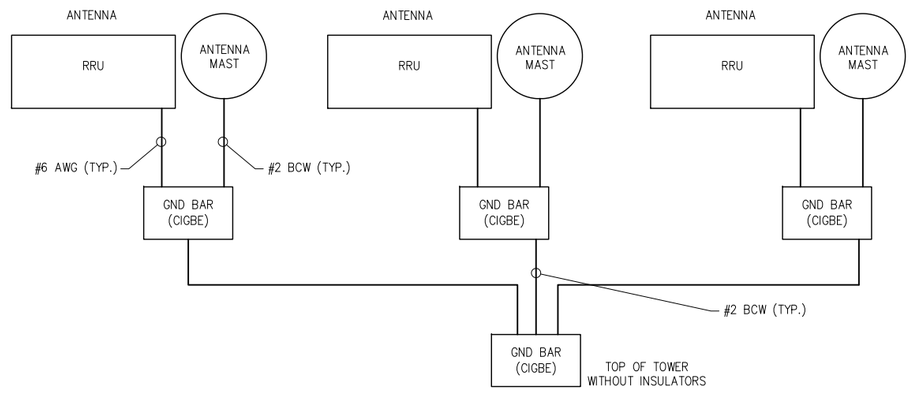
1 — GROUND BAR
NOT TO SCALE



2 — CADWELDS (TYPICAL)
NOT TO SCALE



3 — CONNECTION OF GROUND WIRES TO GROUNDING BARS @ ANTENNAS
NOT TO SCALE



4 — SCHEMATIC DIAGRAM GROUNDING SYSTEM
NOT TO SCALE

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CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
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CD

Drawing Title
GROUNDING DETAILS

Drawing Number
C7

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
   - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325-X. Fu=120 KSI, U.N.O.
   - U-BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT-TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE – HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE – HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE – RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"-20 LOW CARBON STEEL COPPER-FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8-16 UNC	8 FT-LBS	4 FT-LBS
1/2-13 UNC	18 FT-LBS	8 FT-LBS
5/8-11 UNC	35 FT-LBS	16 FT-LBS
3/4-10 UNC	50 FT-LBS	24 FT-LBS
1-8 UNC	110 FT-LBS	50 FT-LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE – CL* BOLT TO END	2.0-4.0	3.0
EDGE DISTANCE – CL* BOLT TO SIDE	1.5-3.5	2.5
BOLT PITCH – CL* TO CL*	4.0-5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F-1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
   - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

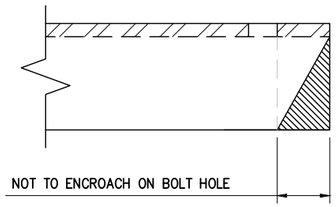
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
   b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD.
   c. MECHANICAL AND EPOXIED ANCHORAGES.
   d. FIBER REINFORCED POLYMER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



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STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
12-02-19

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	TM	11/21/19

Drawn: LAM Date: 11/21/19
Designed: TM Date: 11/21/19
Checked: BA Date: 11/21/19

Project Number: 499-006

Project Title:
CORNWALL
CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 11/21/19
SD

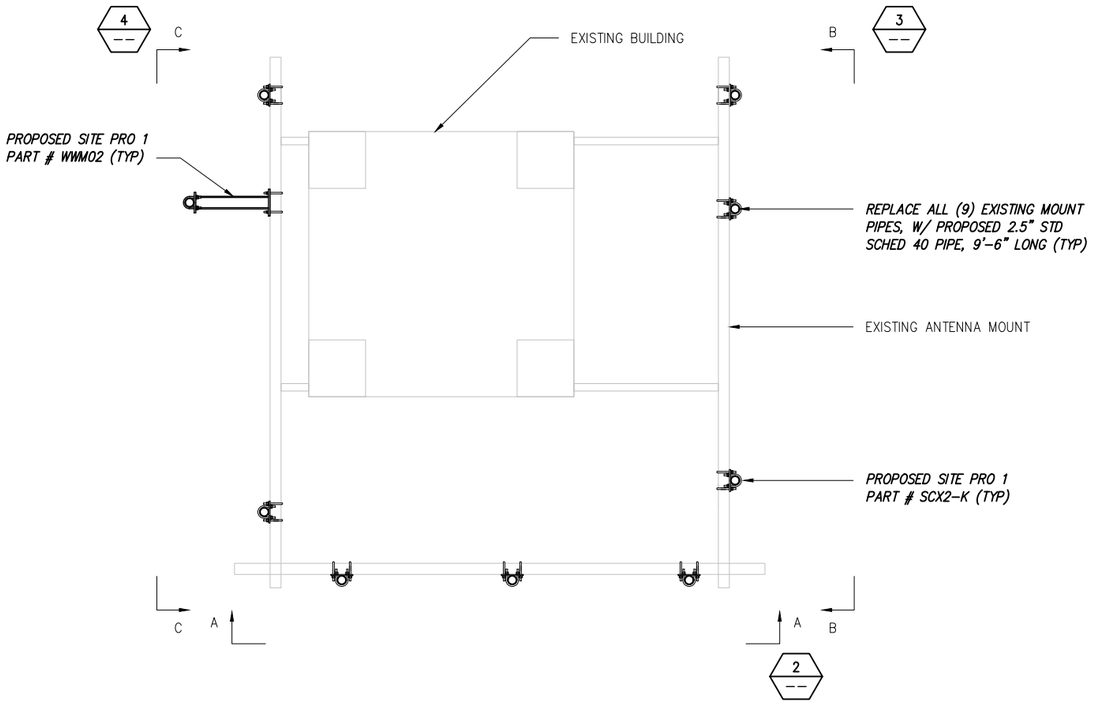
Drawing Title
GENERAL NOTES

Drawing Number
S1

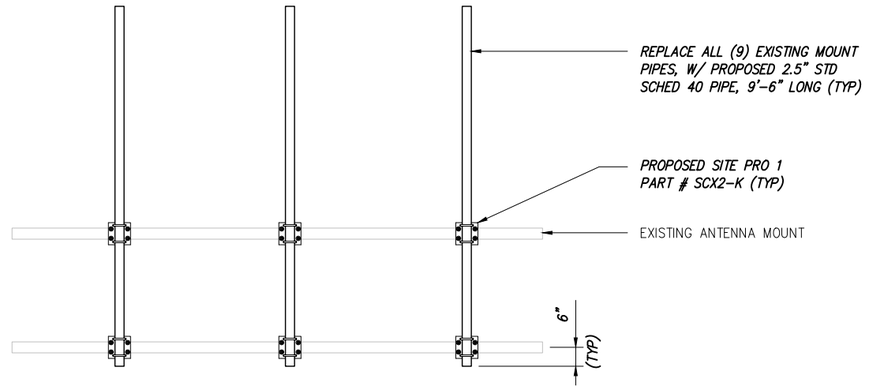
NOTE:
1. VARIOUS EXISTING CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. ALL SITE PRO 1 PARTS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, EXCEPT OTHERWISE NOTED.

3. PROPOSED SITE PRO 1 PART # WWM02 MODIFICATION IS FOR GAMMA SECTOR ONLY



1 PLAN VIEW
SCALE: NOT TO SCALE



2 SECTION A-A
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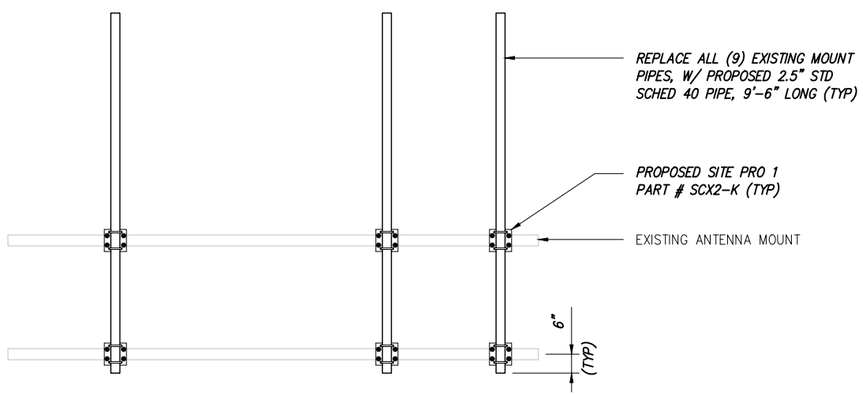

3 SECTION B-B
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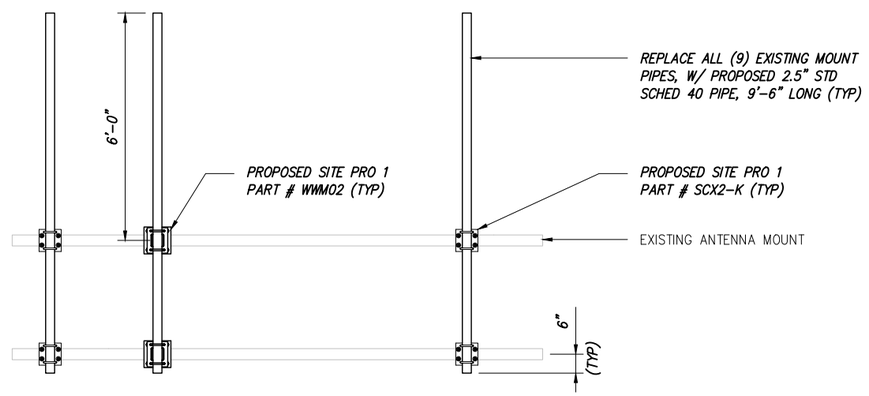

4 SECTION C-C
SCALE: NOT TO SCALE

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Project Number: 499-006

Project Title:
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CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 11/21/19
SD

Drawing Title
MOUNT MODIFICATIONS

Drawing Number
S2

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**65 ft Self Supported Tower**
ATC Site Name	:	**CORNWALL CT, CT**
ATC Asset Number	:	**88009**
Engineering Number	:	**OAA752048_C3_02**
Proposed Carrier	:	**AT&T MOBILITY**
Carrier Site Name	:	**Cornwall**
Carrier Site Number	:	**CTL01025**
Site Location	:	**36 Toomey Rd.** **Cornwall, CT 06759-4232** **41.821300,-73.296400**
County	:	**Litchfield**
Date	:	**December 16, 2019**
Max Usage	:	**101%**
Result	:	**Pass**

Prepared By:
Rohith Koduru
Structural Engineer

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 65 ft self supported tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	CSEI ATC Engineering #26472221, dated September 19, 2006
Foundation Drawing	Mapping by TEP Project #74252-101870, dated November 22, 2016
Geotechnical Report	FDH Project #16PWAQ1600, dated November 30, 2016
Modifications	ATC Project #OAA687939_C6_07, dated November 6, 2017
Mount Analysis	Infinigy Job #1106-A0001-B, dated December 2, 2019

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:	90 mph (3-Second Gust, V_{asd}) / 115 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	3
Crest Height:	214 ft
Spectral Response:	Ss = 0.18, 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

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
75.0	1	Generic 12' Dipole	Leg	-	OTHER
74.0	1	Generic 18' Omni	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
72.0	1	Generic 6' Omni	Leg	-	OTHER
69.0	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield	Side Arms	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	RFS APXVSPP18-C-A20			
	3	Commscope DT465B-2XR			
	3	Alcatel-Lucent 800 MHz RRH			
	3	Alcatel-Lucent RRH2x50-08			
	3	Alcatel-Lucent RRH2x40 (700)			
65.0	3	Powerwave Allgon 7770.00A	Sector Frame	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax	AT&T MOBILITY
	3	Ericsson RRUS 32 (50.8 lbs)			
	6	Powerwave Allgon TT19-08BP111-001			
	1	Raycap DC6-48-60-18-8F			
	1	Andrew ABT-DFDM-ADB			
63.0	1	Sinclair SV228-HF2SNM	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
59.0	4	Generic 10' Dish w/ Radome	Leg	-	OTHER
57.0	3	RFS APXVAARR24_43-U-NA20	T-Arm	(3) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	RFS APX16DWV-16DWVS-E-A20			
	3	Ericsson RRUS 11 B2			
	3	Ericsson RRUS 11 B4			
	3	Ericsson Radio 4449 B12,B71			
48.0	3	Decibel 776QNB120EXM	Platform with Handrails	(3) 1/2" Coax (12) 7/8" Coax (2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	ALLTEL COMMUNICATIONS, LLC
47.0	6	Antel LPA-80063/6CF			
46.0	6	Commscope JAHH-65B-R3B			
	6	Andrew DB846F65ZAXY			
	1	RFS DB-C1-12C-24AB-0Z			
	3	Alcatel-Lucent B66a RRH4x45 (AWS-3)			
	3	Alcatel-Lucent B25 RRH4x30-4R			
	3	Alcatel-Lucent B13 RRH4x30-4R			
	3	Nokia B5 RRH4x40-850			

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
65.0	3	Ericsson RRUS 11 (Band 12)	-	-	AT&T MOBILITY
	2	CCI HPA-65R-BUU-H6			
	1	Andrew SBNHH-1D65A (33.5 lbs)			
	3	Powerwave Allgon 7770.00A			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
65.0	3	Ericsson RRUS 4478 B14	Sector Frame with Site Pro #SCX2-K	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6	AT&T MOBILITY
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC6-48-60-18			
	2	CCI DMP65R-BU4D			
	4	CCI DMP65R-BU6DA			

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

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

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	58%	Pass
Diagonals	101%	Pass
Horizontals	39%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	87.11	32%
Axial (Kips)	113.14	3%
Total Shear (Kips)	59.8	16%

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, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
65.0	Ericsson RRUS 4478 B14	AT&T MOBILITY	0.282	1.634	0.698
	Ericsson RRUS 4449 B5, B12				
	Raycap DC6-48-60-18				
	CCI DMP65R-BU4D				
	CCI DMP65R-BU6DA				
63.0	Sinclair SV228-HF2SNM	US DEPT OF HOMELAND SECURITY			
59.0	Generic 10' Dish w/ Radome	Other	0.203	1.635	1.201

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

Standard Conditions

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

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

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

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

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

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

Quadrant 1

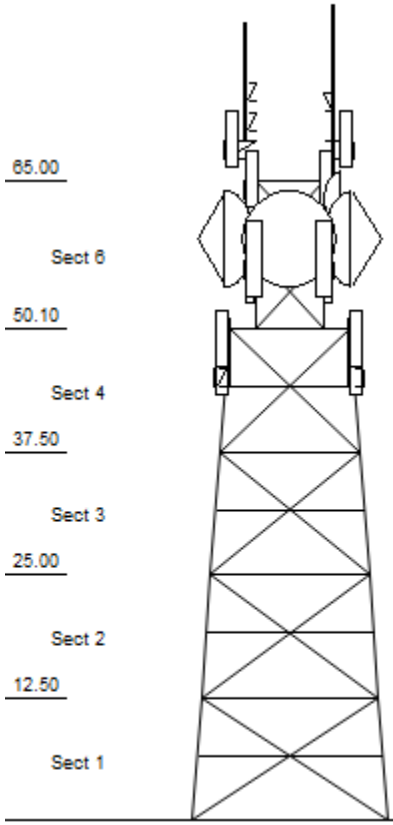
Job Information

Client : AT&T MOBILITY			
Tower : 88009	Location : CORNWALL CT,	Base Width :	20.00 ft
Code : ANSI/TIA-222-G		Top Width :	7.00 ft
		Tower Ht :	65.00 ft
		Shape :	Square

Loads: 90 mph no ice
40 mph w/ 3/4" radial ice
Site Class: D Ss: 0.18 S1: 0.06
60 mph Serviceability

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1 - 2	SAE 33 ksi	6X6X0.625	SAU 36 ksi 4X3X0.25	DAL 36 ksi 3X2.5X0.25
3	SAE 33 ksi	6X6X0.5	SAU 36 ksi 3.5X3X0.25	DAL 36 ksi 3.5X3X0.3125
4	SAE 33 ksi	6X6X0.5	SAE 36 ksi 3.5x3.5x0.25	DAL 36 ksi 3.5X3X0.3125
5	SAE 33 ksi	6X6X0.5		
6	SAE 33 ksi	6X6X0.5	SAU 36 ksi 3X2X0.25	DAL 36 ksi 2.5X2X0.25



Discrete Appurtenance

Elev (ft)	Type	Qty	Description
75.00	Whip	1	Generic 12' Dipole
74.00	Whip	1	Generic 18' Omni
72.00	Whip	1	Generic 6' Omni
69.00	Straight Arm	6	Generic Flat Side Arm
69.00	Panel	3	Commscope DT465B-2XR
69.00	Panel	3	RFS APXVSPP18-C-A20
69.00		3	Alcatel-Lucent TD-RRH8x20-25 w
69.00		3	Alcatel-Lucent 800 MHz RRH
69.00		3	Alcatel-Lucent RRH2x40 (700)
69.00		3	Alcatel-Lucent RRH2x50-08
65.00	Other	1	Fire Warden Cabin
65.00	Panel	4	CCI DMP65R-BU6DA
65.00	Panel	2	CCI DMP65R-BU4D
65.00	Panel	3	Powerwave Allgon 7770.00A
65.00		1	Raycap DC6-48-60-18
65.00		3	Ericsson RRUS 32 (50.8 lbs)
65.00		3	Ericsson RRUS 4449 B5, B12
65.00		3	Ericsson RRUS 4478 B14
65.00		1	Raycap DC6-48-60-18-8F
65.00		6	Powerwave Allgon TT19-08BP111-
65.00		1	Andrew ABT-DFDM-ADB
65.00	Other	3	Round Sector Frame w/ Modifica
63.00	Dish	1	Sinclair SV228-HF2SNM
62.00	Platform	1	Platform with Handrails
59.00	Dish	4	Generic 10' Dish w/ Radome
57.00	Panel	3	RFS APXVAARR24_43-U-NA20
57.00	Panel	3	RFS APX16DWV-16DWVS-E-A20
57.00		3	Ericsson RRUS 11 B2
57.00		3	Ericsson RRUS 11 B4
57.00		3	Ericsson Radio 4449 B12,B71
56.00	Mounting Frame	3	T-Arm
50.00	Platform	1	Platfrom w/ Handrails
48.00	Panel	3	Decibel 776QNB120EXM
47.00	Panel	6	Antel LPA-80063/6CF
46.00	Panel	6	Commscope JAHH-65B-R3B
46.00	Panel	6	Andrew DB846F65ZAXY
46.00		1	RFS DB-C1-12C-24AB-0Z
46.00		3	Alcatel-Lucent B66a RRH4x45 (A
46.00		3	Alcatel-Lucent B25 RRH4x30-4R
46.00		3	Alcatel-Lucent B13 RRH4x30-4R
46.00		3	Nokia B5 RRH4x40-850
37.50	Platform	1	Access Platform

Linear Appurtenance

Elev (ft) From	To	Qty	Description

Job Information

Client : AT&T MOBILITY			
Tower : 88009	Location : CORNWALL CT,	Base Width :	20.00 ft
Code : ANSI/TIA-222-G		Top Width :	7.00 ft
		Tower Ht :	65.00 ft
		Shape :	Square

0.00	74.00	1	7/8" Coax
0.00	69.00	4	1 1/4" Hybriflex Cab
0.00	67.00	1	Waveguide
0.00	67.00	1	Climbing Ladder
0.00	65.00	12	1 1/4" Coax
0.00	65.00	2	0.78" (19.7mm) 8 AWG
0.00	65.00	2	0.78" (19.7mm) 8 AWG
0.00	65.00	1	0.39" (10mm) Fiber T
0.00	65.00	1	0.39" (10mm) Fiber T
0.00	63.00	1	7/8" Coax
0.00	57.00	3	1 5/8" (1.63"-41.3mm
0.00	56.00	1	Waveguide
0.00	48.00	12	7/8" Coax
0.00	48.00	3	1/2" Coax
0.00	46.00	6	1 5/8" Coax
0.00	46.00	2	1 5/8" (1.63"-41.3mm

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	2,784.71	57.79	59.77
DL + WL + IL	811.68	165.32	15.26

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
113.14	87.11	25.00

Site Number:	88009	Code:	ANSI/TIA-222-G	
Site Name:	CORNWALL CT, CT	Engineering Number:	OAA752048_C3_02	12/17/2019 4:16:11 PM
Customer:	AT&T MOBILITY			

Analysis Parameters

Location:	Litchfield County, CT	Height (ft):	65
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Square	Bottom Face Width (ft):	20.00
Tower Manufacturer:	CSEI	Top Face Width (ft):	7.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	90 mph
Exposure Category:	B	Design Windspeed With Ice:	40 mph
Topographic Category:	3	Operational Windspeed:	60 mph
Crest Height:	214 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):	0.71				
T_L (sec):	6	p:	1	C_S:	0.049
S_S:	0.181	S_1:	0.065	C_S, Max:	0.049
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.193	S_{d1}:	0.104		

Load Cases

1.2D + 1.6W Normal	90 mph Normal to Face with No Ice
1.2D + 1.6W 45 deg	90 mph 45 degree with No Ice
1.2D + 1.6W 90 deg	90 mph 90 degree with No Ice
1.2D + 1.6W 135 deg	90 mph 135 degree with No Ice
1.2D + 1.6W 180 deg	90 mph 180 degree with No Ice
1.2D + 1.6W 225 deg	90 mph 225 degree with No Ice
1.2D + 1.6W 270 deg	90 mph 270 degree with No Ice
1.2D + 1.6W 315 deg	90 mph 315 degree with No Ice
0.9D + 1.6W Normal	90 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 45 deg	90 mph 45 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	90 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 135 deg	90 mph 135 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	90 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 225 deg	90 mph 225 deg with No Ice (Reduced DL)
0.9D + 1.6W 270 deg	90 mph 270 deg with No Ice (Reduced DL)
0.9D + 1.6W 315 deg	90 mph 315 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	40 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 45 deg	40 mph 45 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	40 mph 90 deg with 0.75 in Radial Ice

Analysis Parameters

1.2D + 1.0Di + 1.0Wi 135 deg	40 mph 135 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	40 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 225 deg	40 mph 225 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 270 deg	40 mph 270 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 315 deg	40 mph 315 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 45 deg	Seismic 45 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 135 deg	Seismic 135 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 225 deg	Seismic 225 deg
(1.2 + 0.2Sds) * DL + E 270 deg	Seismic 270 deg
(1.2 + 0.2Sds) * DL + E 315 deg	Seismic 315 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 45 deg	Seismic (Reduced DL) 45 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 135 deg	Seismic (Reduced DL) 135 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 225 deg	Seismic (Reduced DL) 225 deg
(0.9 - 0.2Sds) * DL + E 270 deg	Seismic (Reduced DL) 270 deg
(0.9 - 0.2Sds) * DL + E 315 deg	Seismic (Reduced DL) 315 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 45 deg	Serviceability - 60 mph Wind 45 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 135 deg	Serviceability - 60 mph Wind 135 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 225 deg	Serviceability - 60 mph Wind 225 deg
1.0D + 1.0W Service 270 deg	Serviceability - 60 mph Wind 270 deg
1.0D + 1.0W Service 315 deg	Serviceability - 60 mph Wind 315 deg

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	24.54	151	48
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	24.54	180	66
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	24.52	59	30
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	24.50	68	190
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.67	0.0	0.0	24.50	114	180
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	0.0	0.0	24.50	114	191
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	24.50	197	252
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	24.50	844	1350
69.00	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	24.50	443	205
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	24.50	502	209
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.80	1.00	2.0	2.4	24.48	1	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	2.0	88.4	24.48	44	115
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	2.0	67.1	24.48	34	24
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	24.45	74	216
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	24.45	79	256
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	2.0	288.2	24.48	144	183
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	24.45	101	36
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.80	0.65	2.0	576.9	24.48	288	97
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.80	0.72	0.0	0.0	24.45	317	163
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.80	0.63	0.0	0.0	24.45	852	381
65.00	Round Sector Frame	3	1365	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.45	808	4914
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.45	4988	2400
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	24.42	526	112
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.41	903	2400
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	24.35	8982	1920
57.00	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	24.31	65	266
57.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.67	-1.0	148.2	24.29	148	183
57.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.67	-1.0	148.2	24.29	148	183
57.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	-1.0	313.2	24.29	313	147
57.00	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	24.31	1012	460
56.00	T-Arm	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	24.29	717	1080
50.00	Platfrom w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.11	2296	6000
48.00	Decibel	3	117	22.2	6.0	37.0	9.5	1.00	0.59	0.0	0.0	24.04	1285	421
47.00	Antel LPA-80063/6CF	6	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	24.00	1071	194
46.00	Nokia B5 RRH4x40-	3	49	1.3	1.1	12.2	6.9	0.75	0.50	1.0	48.5	24.00	49	175
46.00	Alcatel-Lucent B13	3	58	2.1	1.8	12.0	8.9	0.75	0.67	1.0	105.3	24.00	105	208
46.00	Alcatel-Lucent B25	3	51	2.1	1.8	12.0	7.2	0.75	0.67	1.0	105.3	24.00	105	184
46.00	Alcatel-Lucent B66a	3	67	2.7	2.2	12.0	6.8	0.75	0.67	1.0	130.9	24.00	131	241
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	99.3	24.00	99	38
46.00	Andrew	6	21	7.0	6.0	10.0	8.5	0.75	0.75	0.0	0.0	23.96	773	151
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	923.7	24.00	924	436
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	23.50	1438	6000
	Totals	118	26922	1260.5									31491	32306

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	24.54	151	36
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	24.54	180	50
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	24.52	59	23
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	24.50	68	143

Tower Loading

69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.67	0.0	0.0	24.50	114	135
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	0.0	0.0	24.50	114	143
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	24.50	197	189
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	24.50	844	1013
69.00	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	24.50	443	154
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	24.50	502	157
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.80	1.00	2.0	2.4	24.48	1	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	2.0	88.4	24.48	44	86
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	2.0	67.1	24.48	34	18
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	24.45	74	162
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	24.45	79	192
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	2.0	288.2	24.48	144	137
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	24.45	101	27
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.80	0.65	2.0	576.9	24.48	288	73
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.80	0.72	0.0	0.0	24.45	317	122
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.80	0.63	0.0	0.0	24.45	852	286
65.00	Round Sector Frame	3	1365	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.45	808	3686
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.45	4988	1800
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	24.42	526	84
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.41	903	1800
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	24.35	8982	1440
57.00	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	24.31	65	200
57.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.67	-1.0	148.2	24.29	148	137
57.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.67	-1.0	148.2	24.29	148	137
57.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	-1.0	313.2	24.29	313	110
57.00	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	24.31	1012	345
56.00	T-Arm	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	24.29	717	810
50.00	Platfrom w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.11	2296	4500
48.00	Decibel	3	117	22.2	6.0	37.0	9.5	1.00	0.59	0.0	0.0	24.04	1285	316
47.00	Antel LPA-80063/6CF	6	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	24.00	1071	146
46.00	Nokia B5 RRH4x40-	3	49	1.3	1.1	12.2	6.9	0.75	0.50	1.0	48.5	24.00	49	131
46.00	Alcatel-Lucent B13	3	58	2.1	1.8	12.0	8.9	0.75	0.67	1.0	105.3	24.00	105	156
46.00	Alcatel-Lucent B25	3	51	2.1	1.8	12.0	7.2	0.75	0.67	1.0	105.3	24.00	105	138
46.00	Alcatel-Lucent B66a	3	67	2.7	2.2	12.0	6.8	0.75	0.67	1.0	130.9	24.00	131	181
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	99.3	24.00	99	29
46.00	Andrew	6	21	7.0	6.0	10.0	8.5	0.75	0.75	0.0	0.0	23.96	773	113
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	923.7	24.00	924	327
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	23.50	1438	4500
	Totals	118	26922	1260.5									31491	24230

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
75.00	Generic 12' Dipole	1	184	12.3	12.0	3.0	3.0	1.00	1.00	0.0	0.0	4.85	50	192
74.00	Generic 18' Omni	1	202	12.3	18.0	3.0	3.0	1.00	1.00	0.0	0.0	4.85	51	213
72.00	Generic 6' Omni	1	75	3.1	6.0	3.0	3.0	1.00	1.00	0.0	0.0	4.84	13	80
69.00	Alcatel-Lucent	3	117	2.6	1.3	13.0	9.8	0.80	0.50	0.0	0.0	4.84	13	383
69.00	Alcatel-Lucent	3	129	3.2	1.7	12.2	10.6	0.80	0.67	0.0	0.0	4.84	21	418
69.00	Alcatel-Lucent 800	3	133	3.2	1.6	13.0	10.8	0.80	0.67	0.0	0.0	4.84	21	430
69.00	Alcatel-Lucent TD-	3	172	5.5	2.2	18.6	6.7	0.80	0.61	0.0	0.0	4.84	33	559
69.00	Generic Flat Side	6	332	9.7	0.0	0.0	0.0	1.00	0.67	0.0	0.0	4.84	160	2215
69.00	RFS APXVSPP18-C-	3	244	11.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	4.84	75	765
69.00	Commscope	3	276	12.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	4.84	82	864
65.00	Andrew ABT-DFDM-	1	4	0.2	0.3	1.7	1.6	0.80	1.00	2.0	1.5	4.83	1	4
65.00	Powerwave Allgon	6	38	1.1	0.8	6.7	5.4	0.80	0.50	2.0	21.8	4.83	11	246

Tower Loading

65.00	Raycap DC6-48-60-	1	77	2.0	2.0	9.7	9.7	0.80	1.00	2.0	13.0	4.83	6	81
65.00	Ericsson RRUS 4478	3	120	2.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	4.83	14	395
65.00	Ericsson RRUS 4449	3	141	3.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	4.83	15	465
65.00	Ericsson RRUS 32	3	128	3.9	2.2	12.1	6.7	0.80	0.67	2.0	52.1	4.83	26	415
65.00	Raycap DC6-48-60-	1	122	5.2	2.3	16.7	5.5	0.80	1.00	0.0	0.0	4.83	17	128
65.00	Powerwave Allgon	3	150	7.9	4.6	11.0	4.9	0.80	0.65	2.0	100.8	4.83	50	467
65.00	CCI DMP65R-BU4D	2	263	10.5	4.0	20.7	7.7	0.80	0.72	0.0	0.0	4.83	50	554
65.00	CCI DMP65R-BU6DA	4	358	15.7	5.9	20.7	7.7	0.80	0.63	0.0	0.0	4.83	130	1496
65.00	Round Sector Frame	3	3175	32.3	0.0	0.0	0.0	0.75	0.75	0.0	0.0	4.83	224	10344
65.00	Fire Warden Cabin	1	6521	771.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.83	3168	6921
63.00	Sinclair SV228-	1	610	64.1	6.0	116.0	62.0	1.00	1.00	0.0	0.0	4.82	263	629
62.00	Platform with	1	3401	53.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.82	220	3801
59.00	Generic 10' Dish w/	4	2506	72.1	10.0	120.0	0.0	1.00	1.00	0.0	0.0	4.81	1179	10343
57.00	Ericsson Radio 4449	3	135	2.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	4.80	12	448
57.00	Ericsson RRUS 11 B4	3	129	4.0	1.6	17.0	7.2	0.80	0.67	-1.0	26.1	4.80	26	417
57.00	Ericsson RRUS 11 B2	3	129	4.0	1.6	17.0	7.2	0.80	0.67	-1.0	26.1	4.80	26	417
57.00	RFS APX16DWV-	3	167	8.9	4.7	13.3	3.1	0.80	0.60	-1.0	52.4	4.80	52	526
57.00	RFS	3	552	24.3	8.0	24.0	8.7	0.80	0.63	0.0	0.0	4.80	150	1734
56.00	T-Arm	3	698	32.3	0.0	0.0	0.0	0.75	0.67	0.0	0.0	4.80	199	2273
50.00	Platfrom w/	1	18097	331.9	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.76	1344	19097
48.00	Decibel	3	621	24.3	6.0	37.0	9.5	1.00	0.59	0.0	0.0	4.75	173	1933
47.00	Antel LPA-80063/6CF	6	339	11.1	5.9	15.0	13.1	0.75	0.76	0.0	0.0	4.74	152	2067
46.00	Nokia B5 RRH4x40-	3	93	2.1	1.1	12.2	6.9	0.75	0.50	1.0	9.7	4.74	10	308
46.00	Alcatel-Lucent B13	3	132	3.2	1.8	12.0	8.9	0.75	0.67	1.0	19.5	4.74	20	430
46.00	Alcatel-Lucent B25	3	116	3.2	1.8	12.0	7.2	0.75	0.67	1.0	19.5	4.74	20	380
46.00	Alcatel-Lucent B66a	3	143	3.9	2.2	12.0	6.8	0.75	0.67	1.0	23.7	4.74	24	470
46.00	RFS DB-C1-12C-	1	169	5.5	2.5	16.5	12.6	0.75	1.00	1.0	16.7	4.74	17	175
46.00	Andrew	6	236	8.4	6.0	10.0	8.5	0.75	0.75	0.0	0.0	4.73	114	1439
46.00	Commscope JAHH-	6	278	12.1	6.0	13.8	8.2	0.75	0.69	1.0	151.3	4.74	151	1740
37.50	Access Platform	1	18296	211.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.64	833	19296
	Totals	118	90171	2699.8									9215	95556

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	10.91	42	40
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	10.91	50	55
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	10.90	16	25
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	10.89	19	159
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.67	0.0	0.0	10.89	32	150
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	0.0	0.0	10.89	32	159
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	10.89	55	210
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	10.89	234	1125
69.00	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	10.89	123	171
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	10.89	139	174
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.80	1.00	2.0	0.7	10.88	0	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	2.0	24.5	10.88	12	96
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	2.0	18.6	10.88	9	20
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	10.87	20	180
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	10.87	22	213
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	2.0	80.0	10.88	40	152
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	10.87	28	30
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.80	0.65	2.0	160.3	10.88	80	81
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.80	0.72	0.0	0.0	10.87	88	136
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.80	0.63	0.0	0.0	10.87	237	318

Site Number: 88009
Site Name: CORNWALL CT, CT
Customer: AT&T MOBILITY

Code: ANSI/TIA-222-G
Engineering Number: OAA752048_C3_02

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Tower Loading

65.00	Round Sector Frame	3	1365	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	10.87	224	4095
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.87	1386	2000
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	10.85	146	93
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.85	251	2000
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	10.82	2495	1600
57.00	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	10.80	18	222
57.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.67	-1.0	41.2	10.79	41	152
57.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.67	-1.0	41.2	10.79	41	152
57.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	-1.0	87.0	10.79	87	122
57.00	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	10.80	281	384
56.00	T-Arm	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.79	199	900
50.00	Platfrom w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.72	638	5000
48.00	Decibel	3	117	22.2	6.0	37.0	9.5	1.00	0.59	0.0	0.0	10.69	357	351
47.00	Antel LPA-80063/6CF	6	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	10.67	297	162
46.00	Nokia B5 RRH4x40-	3	49	1.3	1.1	12.2	6.9	0.75	0.50	1.0	13.5	10.67	13	146
46.00	Alcatel-Lucent B13	3	58	2.1	1.8	12.0	8.9	0.75	0.67	1.0	29.3	10.67	29	173
46.00	Alcatel-Lucent B25	3	51	2.1	1.8	12.0	7.2	0.75	0.67	1.0	29.3	10.67	29	153
46.00	Alcatel-Lucent B66a	3	67	2.7	2.2	12.0	6.8	0.75	0.67	1.0	36.4	10.67	36	201
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	27.6	10.67	28	32
46.00	Andrew	6	21	7.0	6.0	10.0	8.5	0.75	0.75	0.0	0.0	10.65	215	126
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	256.6	10.67	257	364
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.44	399	5000
	Totals	118	26922	1260.5									8747	26922

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	74.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	69.00	1 1/4" Hybriflex	4	1.54	1.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	67.00	Climbing Ladder	1	2.00	6.90	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	67.00	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	0.39" (10mm) Fiber	1	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	65.00	0.39" (10mm) Fiber	1	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	65.00	0.78" (19.7mm) 8	2	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	65.00	0.78" (19.7mm) 8	2	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	65.00	1 1/4" Coax	12	1.55	0.63	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	63.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	57.00	1 5/8" (1.63"-	3	1.63	1.61	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	56.00	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	48.00	1/2" Coax	3	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	48.00	7/8" Coax	12	1.09	0.33	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	46.00	1 5/8" (1.63"-	2	1.63	1.61	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	46.00	1 5/8" Coax	6	1.98	0.82	50	1	Block	0.00	N	1.00	1.00	0.00

Section Forces

LoadCase 1.2D + 1.6W Normal — 90 mph Normal to Face with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	3535	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	407	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4884	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	5565	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	5399	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	5690	0	4456	1834	6290	
														25481	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.6W 45 deg — 90 mph 45 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	3535	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	407	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4884	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	5565	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	5399	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	5690	0	5006	1834	6841	
														25481	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.6W 90 deg — 90 mph 90 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	3535	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	407	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4884	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	5565	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	5399	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	5690	0	4456	1834	6290	
														25481	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.6W 135 deg — 90 mph 135 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	3535	0	3225	1076	4301

Section Forces

5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	407	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4884	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	5565	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	5399	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	5690	0	5006	1834	6841	
														25481	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.6W 180 deg

90 mph 180 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	3535	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	407	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4884	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	5565	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	5399	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	5690	0	4456	1834	6290	
														25481	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.6W 225 deg

90 mph 225 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	3535	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	407	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4884	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	5565	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	5399	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	5690	0	5006	1834	6841	
														25481	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.6W 270 deg

90 mph 270 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	3535	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	407	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4884	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	5565	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	5399	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	5690	0	4456	1834	6290	
														25481	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.2D + 1.6W 315 deg

90 mph 315 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	3535	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	407	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4884	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	5565	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	5399	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	5690	0	5006	1834	6841	
														25481	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W Normal

90 mph Normal to Face with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2651	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	305	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	3663	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4174	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4049	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4268	0	4456	1834	6290	
														19110	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W 45 deg

90 mph 45 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2651	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	305	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	3663	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4174	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4049	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4268	0	5006	1834	6841	
														19110	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W 90 deg

90 mph 90 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2651	0	2687	1076	3763	

Section Forces

5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	305	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	3663	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4174	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4049	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4268	0	4456	1834	6290	
														19110	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W 135 deg

90 mph 135 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2651	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	305	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	3663	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4174	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4049	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4268	0	5006	1834	6841	
														19110	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W 180 deg

90 mph 180 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2651	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	305	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	3663	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4174	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4049	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4268	0	4456	1834	6290	
														19110	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W 225 deg

90 mph 225 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2651	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	305	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	3663	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4174	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4049	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4268	0	5006	1834	6841	
														19110	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 0.9D + 1.6W 270 deg — 90 mph 270 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2651	0	2687	1076	3763	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	305	0	295	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	3663	0	3184	1526	4710	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4174	0	3650	1625	5275	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4049	0	3890	1711	5601	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4268	0	4456	1834	6290	
														19110	0			25709	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.6W 315 deg — 90 mph 315 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	24.32	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2651	0	3225	1076	4301	
5	50.05	24.12	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	305	0	354	0	71	**
4	43.75	23.86	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	3663	0	3625	1526	5151	
3	31.25	22.98	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4174	0	4190	1625	5816	
2	18.75	24.20	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4049	0	4392	1711	6103	
1	6.25	25.94	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4268	0	5006	1834	6841	
														19110	0			28282	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi Normal — 40 mph Normal with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.00	1.00	1.9	59.31	120.55	29.25	10135	6600	492	251	743	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.00	1.00	1.9	6.96	14.61	2.68	773	366	59	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.00	1.00	1.9	57.73	144.78	25.52	13800	8915	580	454	1034	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.00	1.00	1.8	65.82	164.53	26.78	15348	9783	635	474	1108	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.00	1.00	1.8	65.72	172.00	27.61	14977	9578	699	503	1201	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.00	1.00	1.6	67.11	180.95	26.85	14729	9038	788	522	1310	
														69761	44280			5406	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 45 deg — 40 mph 45 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.20	1.20	1.9	71.17	144.66	29.25	10135	6600	591	251	841

Section Forces

5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.20	1.20	1.9	8.35	17.53	2.68	773	366	71	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.20	1.20	1.9	69.28	173.74	25.52	13800	8915	696	454	1150	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.20	1.20	1.8	78.99	197.43	26.78	15348	9783	762	474	1235	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.20	1.20	1.8	78.86	206.40	27.61	14977	9578	838	503	1341	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.20	1.20	1.6	80.54	217.14	26.85	14729	9038	946	522	1468	
														69761	44280			6045	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg — 40 mph 90 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.00	1.00	1.9	59.31	120.55	29.25	10135	6600	492	251	743	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.00	1.00	1.9	6.96	14.61	2.68	773	366	59	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.00	1.00	1.9	57.73	144.78	25.52	13800	8915	580	454	1034	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.00	1.00	1.8	65.82	164.53	26.78	15348	9783	635	474	1108	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.00	1.00	1.8	65.72	172.00	27.61	14977	9578	699	503	1201	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.00	1.00	1.6	67.11	180.95	26.85	14729	9038	788	522	1310	
														69761	44280			5406	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 135 deg — 40 mph 135 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.20	1.20	1.9	71.17	144.66	29.25	10135	6600	591	251	841	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.20	1.20	1.9	8.35	17.53	2.68	773	366	71	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.20	1.20	1.9	69.28	173.74	25.52	13800	8915	696	454	1150	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.20	1.20	1.8	78.99	197.43	26.78	15348	9783	762	474	1235	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.20	1.20	1.8	78.86	206.40	27.61	14977	9578	838	503	1341	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.20	1.20	1.6	80.54	217.14	26.85	14729	9038	946	522	1468	
														69761	44280			6045	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 180 deg — 40 mph 180 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.00	1.00	1.9	59.31	120.55	29.25	10135	6600	492	251	743	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.00	1.00	1.9	6.96	14.61	2.68	773	366	59	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.00	1.00	1.9	57.73	144.78	25.52	13800	8915	580	454	1034	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.00	1.00	1.8	65.82	164.53	26.78	15348	9783	635	474	1108	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.00	1.00	1.8	65.72	172.00	27.61	14977	9578	699	503	1201	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.00	1.00	1.6	67.11	180.95	26.85	14729	9038	788	522	1310	
														69761	44280			5406	

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 225 deg — 40 mph 225 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.20	1.20	1.9	71.17	144.66	29.25	10135	6600	591	251	841	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.20	1.20	1.9	8.35	17.53	2.68	773	366	71	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.20	1.20	1.9	69.28	173.74	25.52	13800	8915	696	454	1150	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.20	1.20	1.8	78.99	197.43	26.78	15348	9783	762	474	1235	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.20	1.20	1.8	78.86	206.40	27.61	14977	9578	838	503	1341	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.20	1.20	1.6	80.54	217.14	26.85	14729	9038	946	522	1468	
														69761	44280			6045	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 270 deg — 40 mph 270 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.00	1.00	1.9	59.31	120.55	29.25	10135	6600	492	251	743	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.00	1.00	1.9	6.96	14.61	2.68	773	366	59	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.00	1.00	1.9	57.73	144.78	25.52	13800	8915	580	454	1034	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.00	1.00	1.8	65.82	164.53	26.78	15348	9783	635	474	1108	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.00	1.00	1.8	65.72	172.00	27.61	14977	9578	699	503	1201	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.00	1.00	1.6	67.11	180.95	26.85	14729	9038	788	522	1310	
														69761	44280			5406	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 315 deg — 40 mph 315 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor 1.00 Ice Importance Factor : 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	4.80	30.064	29.246	29.24	0.509	2.03	1.20	1.20	1.9	71.17	144.66	29.25	10135	6600	591	251	841	
5	50.05	4.76	4.279	2.679	2.679	1.000	2.10	1.20	1.20	1.9	8.35	17.53	2.68	773	366	71	0	9	**
4	43.75	4.71	32.213	25.518	25.51	0.324	2.51	1.20	1.20	1.9	69.28	173.74	25.52	13800	8915	696	454	1150	
3	31.25	4.54	39.046	26.777	26.77	0.327	2.50	1.20	1.20	1.8	78.99	197.43	26.78	15348	9783	762	474	1235	
2	18.75	4.78	38.105	27.613	27.61	0.292	2.62	1.20	1.20	1.8	78.86	206.40	27.61	14977	9578	838	503	1341	
1	6.25	5.12	40.268	26.847	26.84	0.271	2.70	1.20	1.20	1.6	80.54	217.14	26.85	14729	9038	946	522	1468	
														69761	44280			6045	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service Normal — Serviceability - 60 mph Wind Normal

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)

Section Forces

6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2946	0	746	299	1045	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	339	0	82	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4070	0	884	424	1308	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4637	0	1014	451	1465	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4499	0	1080	475	1556	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4742	0	1238	509	1747	
														21234	0			7141	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 45 deg

Serviceability - 60 mph Wind 45 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2946	0	896	299	1195	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	339	0	98	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4070	0	1007	424	1431	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4637	0	1164	451	1615	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4499	0	1220	475	1695	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4742	0	1391	509	1900	
														21234	0			7856	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 90 deg

Serviceability - 60 mph Wind 90 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2946	0	746	299	1045	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	339	0	82	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4070	0	884	424	1308	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4637	0	1014	451	1465	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4499	0	1080	475	1556	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4742	0	1238	509	1747	
														21234	0			7141	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 135 deg

Serviceability - 60 mph Wind 135 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2946	0	896	299	1195	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	339	0	98	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4070	0	1007	424	1431	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4637	0	1164	451	1615	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4499	0	1220	475	1695	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4742	0	1391	509	1900	
														21234	0			7856	

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.0D + 1.0W Service 180 deg — Serviceability - 60 mph Wind 180 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2946	0	746	299	1045	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	339	0	82	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4070	0	884	424	1308	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4637	0	1014	451	1465	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4499	0	1080	475	1556	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4742	0	1238	509	1747	
														21234	0			7141	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 225 deg — Serviceability - 60 mph Wind 225 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2946	0	896	299	1195	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	339	0	98	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4070	0	1007	424	1431	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4637	0	1164	451	1615	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4499	0	1220	475	1695	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4742	0	1391	509	1900	
														21234	0			7856	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 270 deg — Serviceability - 60 mph Wind 270 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2946	0	746	299	1045	
5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	339	0	82	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4070	0	884	424	1308	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4637	0	1014	451	1465	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4499	0	1080	475	1556	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4742	0	1238	509	1747	
														21234	0			7141	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 315 deg — Serviceability - 60 mph Wind 315 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	57.55	10.81	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2946	0	896	299	1195	

Section Forces

5	50.05	10.72	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	339	0	98	0	20	**
4	43.75	10.60	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4070	0	1007	424	1431	
3	31.25	10.21	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4637	0	1164	451	1615	
2	18.75	10.75	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4499	0	1220	475	1695	
1	6.25	11.53	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4742	0	1391	509	1900	
														21234	0			7856	

** = Section Force Exceeds Solidity Ratio Criteria

Equivalent Lateral Force Method

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

Spectral Response Acceleration for Short Period (S_s):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s:	0.05
Lower Limit C_s:	0.03
Period based on Rayleigh Method (sec):	0.71
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.11
Total Unfactored Dead Load:	48.16 k
Seismic Base Shear (E):	2.34 k

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,946	260,918	0.082	192	3,648
5	50.05	339	25,757	0.008	19	420
4	43.75	4,070	266,213	0.084	196	5,041
3	31.25	4,637	209,027	0.066	154	5,744
2	18.75	4,499	115,244	0.036	85	5,573
1	6.25	4,742	36,019	0.011	27	5,873
Generic 12' Dipole	65.00	40	4,054	0.001	3	50
Generic 18' Omni	65.00	55	5,574	0.002	4	68
Generic 6' Omni	65.00	25	2,534	0.001	2	31
Alcatel-Lucent RRH2x50-08	65.00	159	16,085	0.005	12	197
Alcatel-Lucent RRH2x40 (700)	65.00	150	15,203	0.005	11	186
Alcatel-Lucent 800 MHz RRH	65.00	159	16,115	0.005	12	197
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	65.00	210	21,284	0.007	16	260
Generic Flat Side Arm	65.00	1,125	114,023	0.036	84	1,393
RFS APXVSPP18-C-A20	65.00	171	17,331	0.005	13	212
Commscope DT465B-2XR	65.00	174	17,636	0.006	13	216
Andrew ABT-DFDM-ADB	65.00	1	111	0.000	0	1
Powerwave Allgon TT19-08BP111-001	65.00	96	9,730	0.003	7	119
Raycap DC6-48-60-18-8F	65.00	20	2,027	0.001	1	25
Ericsson RRUS 4478 B14	65.00	180	18,213	0.006	13	223
Ericsson RRUS 4449 B5, B12	65.00	213	21,588	0.007	16	264
Ericsson RRUS 32 (50.8 lbs)	65.00	152	15,446	0.005	11	189
Raycap DC6-48-60-18	65.00	30	3,041	0.001	2	37

Equivalent Lateral Force Method

Powerwave Allgon 7770.00A	65.00	81	8,210	0.003	6	100
CCI DMP65R-BU4D	65.00	136	13,764	0.004	10	168
CCI DMP65R-BU6DA	65.00	318	32,190	0.010	24	393
Round Sector Frame w/ Modification	65.00	4,095	415,043	0.131	306	5,072
Fire Warden Cabin	65.00	2,000	202,707	0.064	150	2,477
Sinclair SV228-HF2SNM	63.00	93	9,106	0.003	7	115
Platform with Handrails	62.00	2,000	192,382	0.061	142	2,477
Generic 10' Dish w/ Radome	59.00	1,600	145,687	0.046	107	1,982
Ericsson Radio 4449 B12,B71	57.00	222	19,457	0.006	14	275
Ericsson RRUS 11 B4	57.00	152	13,331	0.004	10	188
Ericsson RRUS 11 B2	57.00	152	13,331	0.004	10	188
RFS APX16DWV-16DWVS-E-A20	57.00	122	10,702	0.003	8	151
RFS APXVAARR24_43-U-NA20	57.00	384	33,630	0.011	25	475
T-Arm	56.00	900	77,352	0.024	57	1,115
Platfrom w/ Handrails	50.00	5,000	379,089	0.119	280	6,193
Decibel 776QNB120EXM	48.00	351	25,437	0.008	19	435
Antel LPA-80063/6CF	47.00	162	11,470	0.004	8	201
Nokia B5 RRH4x40-850	46.00	146	10,059	0.003	7	180
Alcatel-Lucent B13 RRH4x30-4R	46.00	173	11,988	0.004	9	215
Alcatel-Lucent B25 RRH4x30-4R	46.00	153	10,578	0.003	8	190
Alcatel-Lucent B66a RRH4x45 (AWS-3)	46.00	201	13,896	0.004	10	249
RFS DB-C1-12C-24AB-0Z	46.00	32	2,212	0.001	2	40
Andrew DB846F65ZAXY	46.00	126	8,711	0.003	6	156
Commscope JAHH-65B-R3B	46.00	364	25,138	0.008	19	450
Access Platform	37.50	5,000	275,744	0.087	203	6,193
		48,156	3,174,389	1.000	2,342	59,646

LoadCase (0.9 - 0.2Sds) * DL + E — Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,946	260,918	0.082	192	2,537
5	50.05	339	25,757	0.008	19	292
4	43.75	4,070	266,213	0.084	196	3,506
3	31.25	4,637	209,027	0.066	154	3,995
2	18.75	4,499	115,244	0.036	85	3,876
1	6.25	4,742	36,019	0.011	27	4,085
Generic 12' Dipole	65.00	40	4,054	0.001	3	34
Generic 18' Omni	65.00	55	5,574	0.002	4	47
Generic 6' Omni	65.00	25	2,534	0.001	2	22
Alcatel-Lucent RRH2x50-08	65.00	159	16,085	0.005	12	137
Alcatel-Lucent RRH2x40 (700)	65.00	150	15,203	0.005	11	129
Alcatel-Lucent 800 MHz RRH	65.00	159	16,115	0.005	12	137
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	65.00	210	21,284	0.007	16	181
Generic Flat Side Arm	65.00	1,125	114,023	0.036	84	969
RFS APXVSPP18-C-A20	65.00	171	17,331	0.005	13	147
Commscope DT465B-2XR	65.00	174	17,636	0.006	13	150
Andrew ABT-DFDM-ADB	65.00	1	111	0.000	0	1
Powerwave Allgon TT19-08BP111-001	65.00	96	9,730	0.003	7	83
Raycap DC6-48-60-18-8F	65.00	20	2,027	0.001	1	17
Ericsson RRUS 4478 B14	65.00	180	18,213	0.006	13	155
Ericsson RRUS 4449 B5, B12	65.00	213	21,588	0.007	16	183
Ericsson RRUS 32 (50.8 lbs)	65.00	152	15,446	0.005	11	131
Raycap DC6-48-60-18	65.00	30	3,041	0.001	2	26

Equivalent Lateral Force Method

Powerwave Allgon 7770.00A	65.00	81	8,210	0.003	6	70
CCI DMP65R-BU4D	65.00	136	13,764	0.004	10	117
CCI DMP65R-BU6DA	65.00	318	32,190	0.010	24	274
Round Sector Frame w/ Modification	65.00	4,095	415,043	0.131	306	3,527
Fire Warden Cabin	65.00	2,000	202,707	0.064	150	1,723
Sinclair SV228-HF2SNM	63.00	93	9,106	0.003	7	80
Platform with Handrails	62.00	2,000	192,382	0.061	142	1,723
Generic 10' Dish w/ Radome	59.00	1,600	145,687	0.046	107	1,378
Ericsson Radio 4449 B12,B71	57.00	222	19,457	0.006	14	191
Ericsson RRUS 11 B4	57.00	152	13,331	0.004	10	131
Ericsson RRUS 11 B2	57.00	152	13,331	0.004	10	131
RFS APX16DWV-16DWVS-E-A20	57.00	122	10,702	0.003	8	105
RFS APXVAARR24_43-U-NA20	57.00	384	33,630	0.011	25	331
T-Arm	56.00	900	77,352	0.024	57	775
Platfrom w/ Handrails	50.00	5,000	379,089	0.119	280	4,307
Decibel 776QNB120EXM	48.00	351	25,437	0.008	19	302
Antel LPA-80063/6CF	47.00	162	11,470	0.004	8	140
Nokia B5 RRH4x40-850	46.00	146	10,059	0.003	7	125
Alcatel-Lucent B13 RRH4x30-4R	46.00	173	11,988	0.004	9	149
Alcatel-Lucent B25 RRH4x30-4R	46.00	153	10,578	0.003	8	132
Alcatel-Lucent B66a RRH4x45 (AWS-3)	46.00	201	13,896	0.004	10	173
RFS DB-C1-12C-24AB-0Z	46.00	32	2,212	0.001	2	28
Andrew DB846F65ZAXY	46.00	126	8,711	0.003	6	109
Commscope JAHH-65B-R3B	46.00	364	25,138	0.008	19	313
Access Platform	37.50	5,000	275,744	0.087	203	4,307
		48,156	3,174,389	1.000	2,342	41,481

Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period (S_s):	0.18
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):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	0.71
Redundancy Factor (p):	1.00

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,946	1.482	0.457	0.521	0.241	236	3,648
5	50.05	339	1.121	-0.058	0.200	0.128	14	420
4	43.75	4,070	0.856	-0.120	0.071	0.089	121	5,041
3	31.25	4,637	0.437	0.006	0.006	0.065	100	5,744
2	18.75	4,499	0.157	0.067	0.029	0.039	59	5,573
1	6.25	4,742	0.017	0.062	0.037	0.018	28	5,873
Generic 12' Dipole	65.00	40	1.890	1.980	1.140	0.452	6	50
Generic 18' Omni	65.00	55	1.890	1.980	1.140	0.452	8	68
Generic 6' Omni	65.00	25	1.890	1.980	1.140	0.452	4	31
Alcatel-Lucent RRH2x50-08	65.00	159	1.890	1.980	1.140	0.452	24	197
Alcatel-Lucent RRH2x40 (700)	65.00	150	1.890	1.980	1.140	0.452	23	186
Alcatel-Lucent 800 MHz RRH	65.00	159	1.890	1.980	1.140	0.452	24	197
Alcatel-Lucent TD-RRH8x20-25	65.00	210	1.890	1.980	1.140	0.452	32	260
Generic Flat Side Arm	65.00	1,125	1.890	1.980	1.140	0.452	169	1,393
RFS APXVSPP18-C-A20	65.00	171	1.890	1.980	1.140	0.452	26	212
Commscope DT465B-2XR	65.00	174	1.890	1.980	1.140	0.452	26	216
Andrew ABT-DFDM-ADB	65.00	1	1.890	1.980	1.140	0.452	0	1
Powerwave Allgon TT19-	65.00	96	1.890	1.980	1.140	0.452	14	119
Raycap DC6-48-60-18-8F	65.00	20	1.890	1.980	1.140	0.452	3	25
Ericsson RRUS 4478 B14	65.00	180	1.890	1.980	1.140	0.452	27	223
Ericsson RRUS 4449 B5, B12	65.00	213	1.890	1.980	1.140	0.452	32	264
Ericsson RRUS 32 (50.8 lbs)	65.00	152	1.890	1.980	1.140	0.452	23	189
Raycap DC6-48-60-18	65.00	30	1.890	1.980	1.140	0.452	5	37
Powerwave Allgon 7770.00A	65.00	81	1.890	1.980	1.140	0.452	12	100
CCI DMP65R-BU4D	65.00	136	1.890	1.980	1.140	0.452	20	168
CCI DMP65R-BU6DA	65.00	318	1.890	1.980	1.140	0.452	48	393
Round Sector Frame w/	65.00	4,095	1.890	1.980	1.140	0.452	616	5,072
Fire Warden Cabin	65.00	2,000	1.890	1.980	1.140	0.452	301	2,477
Sinclair SV228-HF2SNM	63.00	93	1.775	1.429	0.936	0.384	12	115
Platform with Handrails	62.00	2,000	1.720	1.198	0.845	0.354	236	2,477
Generic 10' Dish w/ Radome	59.00	1,600	1.557	0.652	0.613	0.273	146	1,982
Ericsson Radio 4449 B12,B71	57.00	222	1.453	0.393	0.489	0.229	17	275
Ericsson RRUS 11 B4	57.00	152	1.453	0.393	0.489	0.229	12	188
Ericsson RRUS 11 B2	57.00	152	1.453	0.393	0.489	0.229	12	188
RFS APX16DWV-16DWVS-E-A20	57.00	122	1.453	0.393	0.489	0.229	9	151
RFS APXVAARR24_43-U-NA20	57.00	384	1.453	0.393	0.489	0.229	29	475
T-Arm	56.00	900	1.403	0.289	0.435	0.210	63	1,115
Platfrom w/ Handrails	50.00	5,000	1.118	-0.059	0.198	0.128	213	6,193

Equivalent Modal Analysis Method

Decibel 776QNB120EXM	48.00	351	1.031	-0.101	0.147	0.111	13	435
Antel LPA-80063/6CF	47.00	162	0.988	-0.113	0.126	0.104	6	201
Nokia B5 RRH4x40-850	46.00	146	0.947	-0.119	0.106	0.099	5	180
Alcatel-Lucent B13 RRH4x30-4R	46.00	173	0.947	-0.119	0.106	0.099	6	215
Alcatel-Lucent B25 RRH4x30-4R	46.00	153	0.947	-0.119	0.106	0.099	5	190
Alcatel-Lucent B66a RRH4x45	46.00	201	0.947	-0.119	0.106	0.099	7	249
RFS DB-C1-12C-24AB-0Z	46.00	32	0.947	-0.119	0.106	0.099	1	40
Andrew DB846F65ZAXY	46.00	126	0.947	-0.119	0.106	0.099	4	156
Commscope JAHH-65B-R3B	46.00	364	0.947	-0.119	0.106	0.099	12	450
Access Platform	37.50	5,000	0.629	-0.063	0.018	0.074	124	6,193
		48,156	69.764	48.336	32.453	13.990	2,932	59,646

LoadCase (0.9 - 0.2Sds) * DL + E Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,946	1.482	0.457	0.521	0.241	236	2,537
5	50.05	339	1.121	-0.058	0.200	0.128	14	292
4	43.75	4,070	0.856	-0.120	0.071	0.089	121	3,506
3	31.25	4,637	0.437	0.006	0.006	0.065	100	3,995
2	18.75	4,499	0.157	0.067	0.029	0.039	59	3,876
1	6.25	4,742	0.017	0.062	0.037	0.018	28	4,085
Generic 12' Dipole	65.00	40	1.890	1.980	1.140	0.452	6	34
Generic 18' Omni	65.00	55	1.890	1.980	1.140	0.452	8	47
Generic 6' Omni	65.00	25	1.890	1.980	1.140	0.452	4	22
Alcatel-Lucent RRH2x50-08	65.00	159	1.890	1.980	1.140	0.452	24	137
Alcatel-Lucent RRH2x40 (700)	65.00	150	1.890	1.980	1.140	0.452	23	129
Alcatel-Lucent 800 MHz RRH	65.00	159	1.890	1.980	1.140	0.452	24	137
Alcatel-Lucent TD-RRH8x20-25	65.00	210	1.890	1.980	1.140	0.452	32	181
Generic Flat Side Arm	65.00	1,125	1.890	1.980	1.140	0.452	169	969
RFS APXVSPP18-C-A20	65.00	171	1.890	1.980	1.140	0.452	26	147
Commscope DT465B-2XR	65.00	174	1.890	1.980	1.140	0.452	26	150
Andrew ABT-DFDM-ADB	65.00	1	1.890	1.980	1.140	0.452	0	1
Powerwave Allgon TT19-	65.00	96	1.890	1.980	1.140	0.452	14	83
Raycap DC6-48-60-18-8F	65.00	20	1.890	1.980	1.140	0.452	3	17
Ericsson RRUS 4478 B14	65.00	180	1.890	1.980	1.140	0.452	27	155
Ericsson RRUS 4449 B5, B12	65.00	213	1.890	1.980	1.140	0.452	32	183
Ericsson RRUS 32 (50.8 lbs)	65.00	152	1.890	1.980	1.140	0.452	23	131
Raycap DC6-48-60-18	65.00	30	1.890	1.980	1.140	0.452	5	26
Powerwave Allgon 7770.00A	65.00	81	1.890	1.980	1.140	0.452	12	70
CCI DMP65R-BU4D	65.00	136	1.890	1.980	1.140	0.452	20	117
CCI DMP65R-BU6DA	65.00	318	1.890	1.980	1.140	0.452	48	274
Round Sector Frame w/	65.00	4,095	1.890	1.980	1.140	0.452	616	3,527
Fire Warden Cabin	65.00	2,000	1.890	1.980	1.140	0.452	301	1,723
Sinclair SV228-HF2SNM	63.00	93	1.775	1.429	0.936	0.384	12	80
Platform with Handrails	62.00	2,000	1.720	1.198	0.845	0.354	236	1,723
Generic 10' Dish w/ Radome	59.00	1,600	1.557	0.652	0.613	0.273	146	1,378
Ericsson Radio 4449 B12,B71	57.00	222	1.453	0.393	0.489	0.229	17	191
Ericsson RRUS 11 B4	57.00	152	1.453	0.393	0.489	0.229	12	131
Ericsson RRUS 11 B2	57.00	152	1.453	0.393	0.489	0.229	12	131
RFS APX16DWV-16DWVS-E-A20	57.00	122	1.453	0.393	0.489	0.229	9	105
RFS APXVAARR24_43-U-NA20	57.00	384	1.453	0.393	0.489	0.229	29	331
T-Arm	56.00	900	1.403	0.289	0.435	0.210	63	775
Platfrom w/ Handrails	50.00	5,000	1.118	-0.059	0.198	0.128	213	4,307
Decibel 776QNB120EXM	48.00	351	1.031	-0.101	0.147	0.111	13	302
Antel LPA-80063/6CF	47.00	162	0.988	-0.113	0.126	0.104	6	140
Nokia B5 RRH4x40-850	46.00	146	0.947	-0.119	0.106	0.099	5	125
Alcatel-Lucent B13 RRH4x30-4R	46.00	173	0.947	-0.119	0.106	0.099	6	149
Alcatel-Lucent B25 RRH4x30-4R	46.00	153	0.947	-0.119	0.106	0.099	5	132
Alcatel-Lucent B66a RRH4x45	46.00	201	0.947	-0.119	0.106	0.099	7	173
RFS DB-C1-12C-24AB-0Z	46.00	32	0.947	-0.119	0.106	0.099	1	28
Andrew DB846F65ZAXY	46.00	126	0.947	-0.119	0.106	0.099	4	109
Commscope JAHH-65B-R3B	46.00	364	0.947	-0.119	0.106	0.099	12	313

Equivalent Modal Analysis Method

Access Platform	37.50	5,000	0.629	-0.063	0.018	0.074	124	4,307
		48,156	69.764	48.336	32.453	13.990	2,932	41,481

Force/Stress Summary

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 12.500

Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.625	-100.92	1.2D + 1.6W 135 deg	12.57	50	50	50	63.9	33.0	173.38	0	0	0.00	0.00	58	Member Z
HORIZ	DAL - 3X2.5X0.25	-4.19	0.9D + 1.6W Normal	18.12	50	100	13	199.8	36.0	14.89	0	0	0.00	0.00	28	Member Y
DIAG	SAU - 4X3X0.25	-12.02	1.2D + 1.6W Normal	22.81	47	47	47	179.2	36.0	11.89	0	0	0.00	0.00	101	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.625	77.22	0.9D + 1.6W 45 deg	33	45	211.17	0	0	0.00	0.00		36	Member
HORIZ	DAL - 3X2.5X0.25	5.50	1.2D + 1.6W Normal	36	58	85.21	0	0	0.00	0.00	0.00	6	Member
DIAG	SAU - 4X3X0.25	10.43	1.2D + 1.6W Normal	36	58	54.76	0	0	0.00	0.00	0.00	19	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	69.57	0.9D + 1.6W 135 deg	0.00	0	0	
Top Compression	94.48	1.2D + 1.6W 135 deg	0.00	0		
Bot Tension	89.29	0.9D + 1.6W 135 deg	0.00	0		
Bot Compression	114.34	1.2D + 1.6W 135 deg	0.00	0		

Section: 2 1 Bot Elev (ft): 12.50 Height (ft): 12.500

Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.625	-82.58	1.2D + 1.6W 135 deg	12.57	50	50	50	63.9	33.0	173.38	0	0	0.00	0.00	47	Member Z
HORIZ	DAL - 3X2.5X0.25	-2.82	0.9D + 1.6W 90 deg	16.25	50	50	17	106.7	36.0	46.79	0	0	0.00	0.00	6	Member Y
DIAG	SAU - 4X3X0.25	-12.60	1.2D + 1.6W Normal	21.27	47	47	47	169.0	36.0	13.36	0	0	0.00	0.00	94	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.625	59.94	0.9D + 1.6W 45 deg	33	45	211.17	0	0	0.00	0.00		28	Member
HORIZ	DAL - 3X2.5X0.25	3.63	1.2D + 1.6W Normal	36	58	85.21	0	0	0.00	0.00	0.00	4	Member
DIAG	SAU - 4X3X0.25	11.08	1.2D + 1.6W Normal	36	58	54.76	0	0	0.00	0.00	0.00	20	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	50.63	0.9D + 1.6W 315 deg	0.00	0	0	
Top Compression	74.70	1.2D + 1.6W 135 deg	0.00	0		
Bot Tension	69.57	0.9D + 1.6W 135 deg	0.00	0		
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 3 1 Bot Elev (ft): 25.00 Height (ft): 12.500

Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	-60.41	1.2D + 1.6W 135 deg	12.57	50	50	50	63.9	33.0	140.22	0	0	0.00	0.00	43	Member Z
HORIZ	DAL - 3.5X3X0.3125	-4.26	0.9D + 1.6W 180 deg	14.37	50	100	17	136.1	36.0	47.22	0	0	0.00	0.00	9	Member Y
DIAG	SAU - 3.5X3X0.25	-13.11	1.2D + 1.6W 90 deg	19.78	47	47	47	163.4	36.0	13.20	0	0	0.00	0.00	99	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	40.29	0.9D + 1.6W 45 deg	33	45	170.77	0	0	0.00	0.00		23	Member
HORIZ	DAL - 3.5X3X0.3125	6.54	1.2D + 1.6W Normal	36	58	125.39	0	0	0.00	0.00	0.00	5	Member
DIAG	SAU - 3.5X3X0.25	11.27	1.2D + 1.6W 90 deg	36	58	50.54	0	0	0.00	0.00	0.00	22	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	30.72	0.9D + 1.6W 315 deg	0.00	0	0	
Top Compression	51.95	1.2D + 1.6W 135 deg	0.00	0		
Bot Tension	50.63	0.9D + 1.6W 315 deg	0.00	0		
Bot Compression	0.00		0.00	0		

Section: 4 1 Bot Elev (ft): 37.50 Height (ft): 12.500

Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	-38.54	1.2D + 1.6W 135 deg	12.57	50	50	50	63.9	33.0	140.22	0	0	0.00	0.00	27	Member Z
HORIZ	DAL - 3.5X3X0.3125	-8.54	0.9D + 1.6W 90 deg	12.50	100	100	17	136.4	36.0	47.01	0	0	0.00	0.00	18	Member X
DIAG	SAE - 3.5x3.5x0.25	-12.83	1.2D + 1.6W 180 deg	18.37	47	47	47	143.4	36.0	18.57	0	0	0.00	0.00	69	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	24.30	0.9D + 1.6W 315 deg	33	45	170.77	0	0	0.00	0.00		14	Member
HORIZ	DAL - 3.5X3X0.3125	2.60	1.2D + 1.6W 90 deg	36	58	125.39	0	0	0.00	0.00	0.00	2	Member
DIAG	SAE - 3.5x3.5x0.25	10.45	0.9D + 1.6W Normal	36	58	54.76	0	0	0.00	0.00	0.00	19	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	13.63	0.9D + 1.6W 315 deg	0.00	0	0	
Top Compression	34.45	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension	30.72	0.9D + 1.6W 315 deg	0.00	0		
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 5 1 Bot Elev (ft): 50.00 Height (ft): 0.100

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-12.06	1.2D + 1.6W 135 deg	0.39	50	50	50	2.0	33.0	170.74	0	0	0.00	0.00	7	Member Z
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00		

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.5	23.95	1.2D + 1.6W 45 deg	33	45	170.77	0	0	0.00	0.00		14	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	24.28	0.9D + 1.6W 225 deg	0.00	0	0	
Top Compression	13.19	1.2D + 1.6W 135 deg	0.00	0		
Bot Tension	13.63	0.9D + 1.6W 315 deg	0.00	0		
Bot Compression	0.00		0.00	0		

Section: 6 1 Bot Elev (ft): 50.10 Height (ft): 14.900

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-34.26	1.2D + 1.6W 45 deg	7.45	100	100	100	75.8	33.0	129.46	0	0	0.00	0.00	26	Member Z
HORIZ DAL - 2.5X2X0.25	-10.75	1.2D + 1.6W 45 deg	7.000	100	100	50	133.7	36.0	26.92	0	0	0.00	0.00	39	Member Y
DIAG SAU - 3X2X0.25	-8.96	1.2D + 1.6W Normal	10.22	50	50	50	136.0	36.0	14.52	0	0	0.00	0.00	61	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.5	6.91	0.9D + 1.6W 315 deg	33	45	170.77	0	0	0.00	0.00		4	Member
HORIZ DAL - 2.5X2X0.25	2.16	1.2D + 1.6W 45 deg	36	58	69.01	0	0	0.00	0.00	0.00	3	Member
DIAG SAU - 3X2X0.25	19.06	1.2D + 1.6W 45 deg	36	58	38.56	0	0	0.00	0.00	0.00	49	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	10.19	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension	24.28	0.9D + 1.6W 225 deg	0.00	0		
Bot Compression	0.00		0.00	0		

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal	**14.14**	**00.00**	**45**	**1**	**-8.65**	**81.62**	**-16.38**	
	14.14	**00.00**	**135**	**1a**	**5.41**	**-52.05**	**-13.11**	
	14.14	**00.00**	**225**	**1b**	**-6.34**	**-52.24**	**-12.30**	
	14.14	**00.00**	**315**	**1c**	**9.57**	**80.45**	**-15.41**	
1.2D + 1.6W 45 deg	**14.14**	**00.00**	**45**	**1**	**-16.99**	**112.28**	**-18.32**	
	14.14	**00.00**	**135**	**1a**	**-7.34**	**15.07**	**-4.00**	
	14.14	**00.00**	**225**	**1b**	**-15.08**	**-83.35**	**-13.91**	
	14.14	**00.00**	**315**	**1c**	**-2.86**	**13.79**	**-6.03**	
1.2D + 1.6W 90 deg	**14.14**	**00.00**	**45**	**1**	**-15.42**	**81.11**	**-9.65**	
	14.14	**00.00**	**135**	**1a**	**-16.35**	**82.13**	**8.76**	
	14.14	**00.00**	**225**	**1b**	**-13.11**	**-52.57**	**-5.50**	
	14.14	**00.00**	**315**	**1c**	**-12.32**	**-52.88**	**6.39**	
1.2D + 1.6W 135 deg	**14.14**	**00.00**	**45**	**1**	**-6.67**	**14.18**	**3.38**	
	14.14	**00.00**	**135**	**1a**	**-17.66**	**113.14**	**17.69**	
	14.14	**00.00**	**225**	**1b**	**-3.39**	**14.24**	**6.66**	
	14.14	**00.00**	**315**	**1c**	**-14.54**	**-83.77**	**14.53**	
1.2D + 1.6W 180 deg	**14.14**	**00.00**	**45**	**1**	**5.50**	**-52.61**	**13.10**	
	14.14	**00.00**	**135**	**1a**	**-8.73**	**82.18**	**16.36**	
	14.14	**00.00**	**225**	**1b**	**9.63**	**81.17**	**15.42**	
	14.14	**00.00**	**315**	**1c**	**-6.39**	**-52.94**	**12.31**	
1.2D + 1.6W 225 deg	**14.14**	**00.00**	**45**	**1**	**13.93**	**-83.35**	**15.05**	
	14.14	**00.00**	**135**	**1a**	**4.00**	**15.13**	**7.32**	
	14.14	**00.00**	**225**	**1b**	**18.28**	**112.29**	**17.03**	
	14.14	**00.00**	**315**	**1c**	**6.05**	**13.72**	**2.86**	
1.2D + 1.6W 270 deg	**14.14**	**00.00**	**45**	**1**	**12.31**	**-52.19**	**6.34**	
	14.14	**00.00**	**135**	**1a**	**13.12**	**-52.00**	**-5.41**	
	14.14	**00.00**	**225**	**1b**	**16.36**	**81.58**	**8.67**	
	14.14	**00.00**	**315**	**1c**	**15.41**	**80.40**	**-9.59**	
1.2D + 1.6W 315 deg	**14.14**	**00.00**	**45**	**1**	**3.48**	**14.83**	**-6.70**	
	14.14	**00.00**	**135**	**1a**	**14.46**	**-83.09**	**-14.43**	
	14.14	**00.00**	**225**	**1b**	**6.72**	**14.76**	**-3.49**	
	14.14	**00.00**	**315**	**1c**	**17.61**	**111.29**	**-17.65**	
0.9D + 1.6W Normal	**14.14**	**00.00**	**45**	**1**	**-8.25**	**77.93**	**-15.95**	
	14.14	**00.00**	**135**	**1a**	**5.82**	**-55.75**	**-13.52**	
	14.14	**00.00**	**225**	**1b**	**-6.74**	**-55.80**	**-12.70**	
	14.14	**00.00**	**315**	**1c**	**9.17**	**76.96**	**-15.02**	
0.9D + 1.6W 45 deg	**14.14**	**00.00**	**45**	**1**	**-16.59**	**108.55**	**-17.89**	
	14.14	**00.00**	**135**	**1a**	**-6.92**	**11.29**	**-4.42**	
	14.14	**00.00**	**225**	**1b**	**-15.48**	**-86.87**	**-14.31**	
	14.14	**00.00**	**315**	**1c**	**-3.27**	**10.37**	**-5.65**	
0.9D + 1.6W 90 deg	**14.14**	**00.00**	**45**	**1**	**-15.02**	**77.41**	**-9.22**	
	14.14	**00.00**	**135**	**1a**	**-15.93**	**78.28**	**8.33**	
	14.14	**00.00**	**225**	**1b**	**-13.52**	**-56.11**	**-5.89**	
	14.14	**00.00**	**315**	**1c**	**-12.72**	**-56.25**	**6.78**	
0.9D + 1.6W 135 deg	**14.14**	**00.00**	**45**	**1**	**-6.28**	**10.56**	**3.80**	
	14.14	**00.00**	**135**	**1a**	**-17.24**	**109.26**	**17.27**	
	14.14	**00.00**	**225**	**1b**	**-3.81**	**10.63**	**6.27**	
	14.14	**00.00**	**315**	**1c**	**-14.93**	**-87.11**	**14.92**	

0.9D + 1.6W 180 deg	**14.14**	**00.00**	**45**	**1**	**5.89**	**-56.17**	**13.52**
	14.14	**00.00**	**135**	**1a**	**-8.31**	**78.34**	**15.94**
	14.14	**00.00**	**225**	**1b**	**9.20**	**77.48**	**15.03**
	14.14	**00.00**	**315**	**1c**	**-6.78**	**-56.31**	**12.71**
0.9D + 1.6W 225 deg	**14.14**	**00.00**	**45**	**1**	**14.33**	**-86.87**	**15.46**
	14.14	**00.00**	**135**	**1a**	**4.42**	**11.37**	**6.91**
	14.14	**00.00**	**225**	**1b**	**17.85**	**108.56**	**16.63**
	14.14	**00.00**	**315**	**1c**	**5.67**	**10.28**	**3.27**
0.9D + 1.6W 270 deg	**14.14**	**00.00**	**45**	**1**	**12.71**	**-55.74**	**6.74**
	14.14	**00.00**	**135**	**1a**	**13.53**	**-55.70**	**-5.83**
	14.14	**00.00**	**225**	**1b**	**15.94**	**77.88**	**8.26**
	14.14	**00.00**	**315**	**1c**	**15.01**	**76.90**	**-9.18**
0.9D + 1.6W 315 deg	**14.14**	**00.00**	**45**	**1**	**3.88**	**11.21**	**-6.29**
	14.14	**00.00**	**135**	**1a**	**14.87**	**-86.75**	**-14.84**
	14.14	**00.00**	**225**	**1b**	**6.31**	**11.13**	**-3.89**
	14.14	**00.00**	**315**	**1c**	**17.21**	**107.76**	**-17.25**
1.2D + 1.0Di + 1.0Wi Normal	**14.14**	**00.00**	**45**	**1**	**-4.34**	**59.54**	**-6.51**
	14.14	**00.00**	**135**	**1a**	**-0.82**	**25.67**	**-1.02**
	14.14	**00.00**	**225**	**1b**	**0.57**	**23.51**	**-1.09**
	14.14	**00.00**	**315**	**1c**	**4.59**	**56.59**	**-6.00**
1.2D + 1.0Di + 1.0Wi 45 deg	**14.14**	**00.00**	**45**	**1**	**-6.45**	**67.70**	**-7.06**
	14.14	**00.00**	**135**	**1a**	**-4.10**	**43.71**	**1.39**
	14.14	**00.00**	**225**	**1b**	**-1.61**	**15.26**	**-1.58**
	14.14	**00.00**	**315**	**1c**	**1.37**	**38.64**	**-3.54**
1.2D + 1.0Di + 1.0Wi 90 deg	**14.14**	**00.00**	**45**	**1**	**-5.97**	**59.47**	**-4.89**
	14.14	**00.00**	**135**	**1a**	**-6.49**	**61.72**	**4.67**
	14.14	**00.00**	**225**	**1b**	**-1.06**	**23.42**	**0.54**
	14.14	**00.00**	**315**	**1c**	**-1.10**	**20.70**	**-0.32**
1.2D + 1.0Di + 1.0Wi 135 deg	**14.14**	**00.00**	**45**	**1**	**-3.66**	**41.46**	**-1.52**
	14.14	**00.00**	**135**	**1a**	**-6.89**	**69.92**	**6.92**
	14.14	**00.00**	**225**	**1b**	**1.49**	**41.41**	**3.68**
	14.14	**00.00**	**315**	**1c**	**-1.73**	**12.53**	**1.71**
1.2D + 1.0Di + 1.0Wi 180 deg	**14.14**	**00.00**	**45**	**1**	**-0.52**	**23.47**	**1.03**
	14.14	**00.00**	**135**	**1a**	**-4.63**	**61.69**	**6.52**
	14.14	**00.00**	**225**	**1b**	**4.85**	**59.44**	**5.99**
	14.14	**00.00**	**315**	**1c**	**0.30**	**20.72**	**1.08**
1.2D + 1.0Di + 1.0Wi 225 deg	**14.14**	**00.00**	**45**	**1**	**1.59**	**15.29**	**1.59**
	14.14	**00.00**	**135**	**1a**	**-1.35**	**43.67**	**4.12**
	14.14	**00.00**	**225**	**1b**	**7.03**	**67.70**	**6.48**
	14.14	**00.00**	**315**	**1c**	**3.52**	**38.66**	**-1.40**
1.2D + 1.0Di + 1.0Wi 270 deg	**14.14**	**00.00**	**45**	**1**	**1.11**	**23.52**	**-0.58**
	14.14	**00.00**	**135**	**1a**	**1.05**	**25.64**	**0.85**
	14.14	**00.00**	**225**	**1b**	**6.49**	**59.55**	**4.36**
	14.14	**00.00**	**315**	**1c**	**5.97**	**56.60**	**-4.62**
1.2D + 1.0Di + 1.0Wi 315 deg	**14.14**	**00.00**	**45**	**1**	**-1.23**	**41.53**	**-3.93**
	14.14	**00.00**	**135**	**1a**	**1.47**	**17.44**	**-1.39**
	14.14	**00.00**	**225**	**1b**	**3.96**	**41.57**	**1.20**
	14.14	**00.00**	**315**	**1c**	**6.58**	**64.78**	**-6.67**
(1.2 + 0.2Sds) * DL + E Normal M1	**14.14**	**00.00**	**45**	**1**	**-2.03**	**17.28**	**-2.27**
	14.14	**00.00**	**135**	**1a**	**-1.32**	**11.07**	**1.10**
	14.14	**00.00**	**225**	**1b**	**1.32**	**11.07**	**1.10**
	14.14	**00.00**	**315**	**1c**	**2.03**	**17.28**	**-2.27**

(1.2 + 0.2Sds) * DL + E Normal M2	**14.14**	**00.00**	**45**	**1**	**-2.15**	**18.34**	**-2.41**
	14.14	**00.00**	**135**	**1a**	**-1.21**	**10.01**	**0.96**
	14.14	**00.00**	**225**	**1b**	**1.21**	**10.01**	**0.96**
	14.14	**00.00**	**315**	**1c**	**2.15**	**18.34**	**-2.41**
(1.2 + 0.2Sds) * DL + E 45 deg M1	**14.14**	**00.00**	**45**	**1**	**-2.33**	**18.57**	**-2.35**
	14.14	**00.00**	**135**	**1a**	**-1.84**	**14.18**	**1.52**
	14.14	**00.00**	**225**	**1b**	**1.02**	**9.78**	**1.03**
	14.14	**00.00**	**315**	**1c**	**1.51**	**14.18**	**-1.85**
(1.2 + 0.2Sds) * DL + E 45 deg M2	**14.14**	**00.00**	**45**	**1**	**-2.52**	**20.07**	**-2.53**
	14.14	**00.00**	**135**	**1a**	**-1.86**	**14.18**	**1.50**
	14.14	**00.00**	**225**	**1b**	**0.83**	**8.28**	**0.84**
	14.14	**00.00**	**315**	**1c**	**1.49**	**14.18**	**-1.87**
(1.2 + 0.2Sds) * DL + E 90 deg M1	**14.14**	**00.00**	**45**	**1**	**-2.26**	**17.28**	**-2.04**
	14.14	**00.00**	**135**	**1a**	**-2.26**	**17.28**	**2.04**
	14.14	**00.00**	**225**	**1b**	**1.09**	**11.07**	**1.33**
	14.14	**00.00**	**315**	**1c**	**1.09**	**11.07**	**-1.33**
(1.2 + 0.2Sds) * DL + E 90 deg M2	**14.14**	**00.00**	**45**	**1**	**-2.40**	**18.35**	**-2.16**
	14.14	**00.00**	**135**	**1a**	**-2.40**	**18.35**	**2.16**
	14.14	**00.00**	**225**	**1b**	**0.95**	**10.01**	**1.21**
	14.14	**00.00**	**315**	**1c**	**0.95**	**10.01**	**-1.21**
(1.2 + 0.2Sds) * DL + E 135 deg M1	**14.14**	**00.00**	**45**	**1**	**-1.84**	**14.18**	**-1.52**
	14.14	**00.00**	**135**	**1a**	**-2.33**	**18.57**	**2.35**
	14.14	**00.00**	**225**	**1b**	**1.51**	**14.18**	**1.85**
	14.14	**00.00**	**315**	**1c**	**1.02**	**9.78**	**-1.03**
(1.2 + 0.2Sds) * DL + E 135 deg M2	**14.14**	**00.00**	**45**	**1**	**-1.86**	**14.18**	**-1.50**
	14.14	**00.00**	**135**	**1a**	**-2.52**	**20.07**	**2.53**
	14.14	**00.00**	**225**	**1b**	**1.49**	**14.18**	**1.87**
	14.14	**00.00**	**315**	**1c**	**0.83**	**8.28**	**-0.84**
(1.2 + 0.2Sds) * DL + E 180 deg M1	**14.14**	**00.00**	**45**	**1**	**-1.32**	**11.07**	**-1.10**
	14.14	**00.00**	**135**	**1a**	**-2.03**	**17.28**	**2.27**
	14.14	**00.00**	**225**	**1b**	**2.03**	**17.28**	**2.27**
	14.14	**00.00**	**315**	**1c**	**1.32**	**11.07**	**-1.10**
(1.2 + 0.2Sds) * DL + E 180 deg M2	**14.14**	**00.00**	**45**	**1**	**-1.21**	**10.01**	**-0.96**
	14.14	**00.00**	**135**	**1a**	**-2.15**	**18.34**	**2.41**
	14.14	**00.00**	**225**	**1b**	**2.15**	**18.34**	**2.41**
	14.14	**00.00**	**315**	**1c**	**1.21**	**10.01**	**-0.96**
(1.2 + 0.2Sds) * DL + E 225 deg M1	**14.14**	**00.00**	**45**	**1**	**-1.02**	**9.78**	**-1.03**
	14.14	**00.00**	**135**	**1a**	**-1.51**	**14.18**	**1.85**
	14.14	**00.00**	**225**	**1b**	**2.33**	**18.57**	**2.35**
	14.14	**00.00**	**315**	**1c**	**1.84**	**14.18**	**-1.52**
(1.2 + 0.2Sds) * DL + E 225 deg M2	**14.14**	**00.00**	**45**	**1**	**-0.83**	**8.28**	**-0.84**
	14.14	**00.00**	**135**	**1a**	**-1.49**	**14.18**	**1.87**
	14.14	**00.00**	**225**	**1b**	**2.52**	**20.07**	**2.53**
	14.14	**00.00**	**315**	**1c**	**1.86**	**14.18**	**-1.50**
(1.2 + 0.2Sds) * DL + E 270 deg M1	**14.14**	**00.00**	**45**	**1**	**-1.09**	**11.07**	**-1.33**
	14.14	**00.00**	**135**	**1a**	**-1.09**	**11.07**	**1.33**
	14.14	**00.00**	**225**	**1b**	**2.26**	**17.28**	**2.04**
	14.14	**00.00**	**315**	**1c**	**2.26**	**17.28**	**-2.04**
(1.2 + 0.2Sds) * DL + E 270 deg M2	**14.14**	**00.00**	**45**	**1**	**-0.95**	**10.01**	**-1.21**
	14.14	**00.00**	**135**	**1a**	**-0.95**	**10.01**	**1.21**
	14.14	**00.00**	**225**	**1b**	**2.40**	**18.35**	**2.16**
	14.14	**00.00**	**315**	**1c**	**2.40**	**18.35**	**-2.16**
(1.2 + 0.2Sds) * DL + E 315 deg M1	**14.14**	**00.00**	**45**	**1**	**-1.51**	**14.18**	**-1.85**

	14.14	00.00	135	1a	-1.02	9.78	1.03
	14.14	00.00	225	1b	1.84	14.18	1.52
	14.14	00.00	315	1c	2.33	18.57	-2.35
(1.2 + 0.2Sds) * DL + E 315 deg M2	14.14	00.00	45	1	-1.49	14.18	-1.87
	14.14	00.00	135	1a	-0.83	8.28	0.84
	14.14	00.00	225	1b	1.86	14.18	1.50
	14.14	00.00	315	1c	2.52	20.07	-2.53
(0.9 - 0.2Sds) * DL + E Normal M1	14.14	00.00	45	1	-1.52	12.96	-1.75
	14.14	00.00	135	1a	-0.82	6.76	0.59
	14.14	00.00	225	1b	0.82	6.76	0.59
	14.14	00.00	315	1c	1.52	12.96	-1.75
(0.9 - 0.2Sds) * DL + E Normal M2	14.14	00.00	45	1	-1.63	14.02	-1.90
	14.14	00.00	135	1a	-0.70	5.70	0.44
	14.14	00.00	225	1b	0.70	5.70	0.44
	14.14	00.00	315	1c	1.63	14.02	-1.90
(0.9 - 0.2Sds) * DL + E 45 deg M1	14.14	00.00	45	1	-1.82	14.25	-1.83
	14.14	00.00	135	1a	-1.33	9.86	1.01
	14.14	00.00	225	1b	0.51	5.47	0.51
	14.14	00.00	315	1c	1.00	9.86	-1.34
(0.9 - 0.2Sds) * DL + E 45 deg M2	14.14	00.00	45	1	-2.01	15.75	-2.02
	14.14	00.00	135	1a	-1.35	9.86	0.99
	14.14	00.00	225	1b	0.32	3.97	0.32
	14.14	00.00	315	1c	0.98	9.86	-1.35
(0.9 - 0.2Sds) * DL + E 90 deg M1	14.14	00.00	45	1	-1.75	12.96	-1.52
	14.14	00.00	135	1a	-1.75	12.96	1.52
	14.14	00.00	225	1b	0.58	6.76	0.82
	14.14	00.00	315	1c	0.58	6.76	-0.82
(0.9 - 0.2Sds) * DL + E 90 deg M2	14.14	00.00	45	1	-1.89	14.02	-1.64
	14.14	00.00	135	1a	-1.89	14.02	1.64
	14.14	00.00	225	1b	0.44	5.70	0.70
	14.14	00.00	315	1c	0.44	5.70	-0.70
(0.9 - 0.2Sds) * DL + E 135 deg M1	14.14	00.00	45	1	-1.33	9.86	-1.01
	14.14	00.00	135	1a	-1.82	14.25	1.83
	14.14	00.00	225	1b	1.00	9.86	1.34
	14.14	00.00	315	1c	0.51	5.47	-0.51
(0.9 - 0.2Sds) * DL + E 135 deg M2	14.14	00.00	45	1	-1.35	9.86	-0.99
	14.14	00.00	135	1a	-2.01	15.75	2.02
	14.14	00.00	225	1b	0.98	9.86	1.35
	14.14	00.00	315	1c	0.32	3.97	-0.32
(0.9 - 0.2Sds) * DL + E 180 deg M1	14.14	00.00	45	1	-0.82	6.76	-0.59
	14.14	00.00	135	1a	-1.52	12.96	1.75
	14.14	00.00	225	1b	1.52	12.96	1.75
	14.14	00.00	315	1c	0.82	6.76	-0.59
(0.9 - 0.2Sds) * DL + E 180 deg M2	14.14	00.00	45	1	-0.70	5.70	-0.44
	14.14	00.00	135	1a	-1.63	14.02	1.90
	14.14	00.00	225	1b	1.63	14.02	1.90
	14.14	00.00	315	1c	0.70	5.70	-0.44
(0.9 - 0.2Sds) * DL + E 225 deg M1	14.14	00.00	45	1	-0.51	5.47	-0.51
	14.14	00.00	135	1a	-1.00	9.86	1.34
	14.14	00.00	225	1b	1.82	14.25	1.83
	14.14	00.00	315	1c	1.33	9.86	-1.01
(0.9 - 0.2Sds) * DL + E 225 deg M2	14.14	00.00	45	1	-0.32	3.97	-0.32
	14.14	00.00	135	1a	-0.98	9.86	1.35

	14.14	00.00	225	1b	2.01	15.75	2.02
	14.14	00.00	315	1c	1.35	9.86	-0.99
(0.9 - 0.2Sds) * DL + E 270 deg M1	14.14	00.00	45	1	-0.58	6.76	-0.82
	14.14	00.00	135	1a	-0.58	6.76	0.82
	14.14	00.00	225	1b	1.75	12.96	1.52
	14.14	00.00	315	1c	1.75	12.96	-1.52
(0.9 - 0.2Sds) * DL + E 270 deg M2	14.14	00.00	45	1	-0.44	5.70	-0.70
	14.14	00.00	135	1a	-0.44	5.70	0.70
	14.14	00.00	225	1b	1.89	14.02	1.64
	14.14	00.00	315	1c	1.89	14.02	-1.64
(0.9 - 0.2Sds) * DL + E 315 deg M1	14.14	00.00	45	1	-1.00	9.86	-1.34
	14.14	00.00	135	1a	-0.51	5.47	0.51
	14.14	00.00	225	1b	1.33	9.86	1.01
	14.14	00.00	315	1c	1.82	14.25	-1.83
(0.9 - 0.2Sds) * DL + E 315 deg M2	14.14	00.00	45	1	-0.98	9.86	-1.35
	14.14	00.00	135	1a	-0.32	3.97	0.32
	14.14	00.00	225	1b	1.35	9.86	0.99
	14.14	00.00	315	1c	2.01	15.75	-2.02
1.0D + 1.0W Service Normal	14.14	00.00	45	1	-3.25	30.71	-5.51
	14.14	00.00	135	1a	0.55	-6.08	-2.73
	14.14	00.00	225	1b	-0.86	-6.46	-2.50
	14.14	00.00	315	1c	3.57	29.98	-5.15
1.0D + 1.0W Service 45 deg	14.14	00.00	45	1	-5.58	39.23	-6.06
	14.14	00.00	135	1a	-3.00	12.55	-0.22
	14.14	00.00	225	1b	-3.29	-15.10	-2.94
	14.14	00.00	315	1c	0.12	11.47	-2.53
1.0D + 1.0W Service 90 deg	14.14	00.00	45	1	-5.14	30.58	-3.63
	14.14	00.00	135	1a	-5.50	31.18	3.33
	14.14	00.00	225	1b	-2.74	-6.55	-0.61
	14.14	00.00	315	1c	-2.50	-7.05	0.91
1.0D + 1.0W Service 135 deg	14.14	00.00	45	1	-2.73	11.99	0.01
	14.14	00.00	135	1a	-5.84	39.79	5.85
	14.14	00.00	225	1b	-0.02	12.00	2.74
	14.14	00.00	315	1c	-3.14	-15.62	3.14
1.0D + 1.0W Service 180 deg	14.14	00.00	45	1	0.62	-6.56	2.73
	14.14	00.00	135	1a	-3.32	31.19	5.51
	14.14	00.00	225	1b	3.62	30.60	5.15
	14.14	00.00	315	1c	-0.92	-7.07	2.50
1.0D + 1.0W Service 225 deg	14.14	00.00	45	1	2.94	-15.09	3.28
	14.14	00.00	135	1a	0.23	12.57	3.00
	14.14	00.00	225	1b	6.04	39.24	5.59
	14.14	00.00	315	1c	2.53	11.44	-0.13
1.0D + 1.0W Service 270 deg	14.14	00.00	45	1	2.50	-6.44	0.86
	14.14	00.00	135	1a	2.74	-6.06	-0.54
	14.14	00.00	225	1b	5.50	30.70	3.26
	14.14	00.00	315	1c	5.14	29.96	-3.58
1.0D + 1.0W Service 315 deg	14.14	00.00	45	1	0.09	12.16	-2.79
	14.14	00.00	135	1a	3.08	-14.69	-3.07
	14.14	00.00	225	1b	2.79	12.14	-0.08
	14.14	00.00	315	1c	5.78	38.53	-5.80

Site Number:	88009	Code:	ANSI/TIA-222-G		
Site Name:	CORNWALL CT, CT	Engineering Number:	OAA752048_C3_02		12/17/2019 4:16:13 PM
Customer:	AT&T MOBILITY				

Max Uplift:	87.11 (kip)	Moment Ice:	811.68 (kip-ft)	Moment:	2,784.71 (kip-ft)	1.2D + 1.6W 135 deg
Max Down:	113.14 (kip)	Total Down Ice:	165.32 (kip)	Total Down:	57.79 (kip)	
Max Shear:	25.00 (kip)	Total Shear Ice:	15.26 (kip)	Total Shear:	59.77 (kip)	

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
90 mph Normal to Face with No Ice	37.50	0.037	1.6589	0.9722	1.8790
90 mph Normal to Face with No Ice	50.00	0.055	2.3347	3.2598	4.0096
90 mph Normal to Face with No Ice	57.55	0.454	2.5392	2.6750	3.6882
90 mph Normal to Face with No Ice	65.00	0.725	2.5056	2.0166	3.1994
90 mph 45 degree with No Ice	37.50	0.039	1.8797	1.1801	2.1934
90 mph 45 degree with No Ice	50.00	0.057	2.6364	3.8868	4.6966
90 mph 45 degree with No Ice	57.55	0.508	2.7353	3.1661	4.1840
90 mph 45 degree with No Ice	65.00	0.785	2.7222	2.1137	3.3807
90 mph 90 degree with No Ice	37.50	0.037	1.5382	1.0269	1.8114
90 mph 90 degree with No Ice	50.00	0.055	2.1506	3.5737	4.1390
90 mph 90 degree with No Ice	57.55	0.495	2.2376	3.4916	4.1471
90 mph 90 degree with No Ice	65.00	0.816	2.2206	2.2067	3.1021
90 mph 135 degree with No Ice	37.50	0.038	0.1594	1.2617	1.2687
90 mph 135 degree with No Ice	50.00	0.055	0.2801	4.3767	4.3785
90 mph 135 degree with No Ice	57.55	0.403	0.3114	3.8353	3.8358
90 mph 135 degree with No Ice	65.00	0.751	0.3084	2.2607	2.2816
90 mph 180 degree with No Ice	37.50	0.037	-1.5283	0.9805	1.8286
90 mph 180 degree with No Ice	50.00	0.055	-2.1803	3.2995	3.9922
90 mph 180 degree with No Ice	57.55	0.457	-2.1910	2.7041	3.6533
90 mph 180 degree with No Ice	65.00	0.734	-2.2058	2.0619	3.1618
90 mph 225 degree with No Ice	37.50	0.038	-1.8486	1.1633	2.1975
90 mph 225 degree with No Ice	50.00	0.057	-2.5769	3.9870	4.7351
90 mph 225 degree with No Ice	57.55	0.513	-2.6253	3.2298	4.1186
90 mph 225 degree with No Ice	65.00	0.789	-2.6322	2.0832	3.4574
90 mph 270 degree with No Ice	37.50	0.037	-1.6103	1.0140	1.8692
90 mph 270 degree with No Ice	50.00	0.054	-2.1913	3.5231	4.1506
90 mph 270 degree with No Ice	57.55	0.492	-2.2681	3.4350	4.1546
90 mph 270 degree with No Ice	65.00	0.805	-2.2605	2.1544	3.1517
90 mph 315 degree with No Ice	37.50	0.037	-0.0722	1.0204	1.0209
90 mph 315 degree with No Ice	50.00	0.055	-0.0165	3.4691	3.4702
90 mph 315 degree with No Ice	57.55	0.381	0.0541	3.2231	3.2247
90 mph 315 degree with No Ice	65.00	0.710	0.0410	2.1855	2.1874
90 mph Normal to Face with No Ice (Reduced DL)	37.50	0.037	1.6261	0.8943	1.7881
90 mph Normal to Face with No Ice (Reduced DL)	50.00	0.055	2.2471	2.9697	3.7240
90 mph Normal to Face with No Ice (Reduced DL)	57.55	0.447	2.4393	2.6064	3.5698
90 mph Normal to Face with No Ice (Reduced DL)	65.00	0.715	2.4086	1.9865	3.1173
90 mph 45 deg with No Ice (Reduced DL)	37.50	0.038	1.8494	1.1019	2.1163
90 mph 45 deg with No Ice (Reduced DL)	50.00	0.057	2.5734	3.5924	4.4191
90 mph 45 deg with No Ice (Reduced DL)	57.55	0.500	2.6707	3.0655	4.0657
90 mph 45 deg with No Ice (Reduced DL)	65.00	0.774	2.6583	2.0766	3.3068
90 mph 90 deg with No Ice (Reduced DL)	37.50	0.037	1.5050	0.9449	1.7317
90 mph 90 deg with No Ice (Reduced DL)	50.00	0.055	2.0915	3.2633	3.8442
90 mph 90 deg with No Ice (Reduced DL)	57.55	0.486	2.1714	3.3899	4.0257
90 mph 90 deg with No Ice (Reduced DL)	65.00	0.802	2.1560	2.1494	3.0164
90 mph 135 deg with No Ice (Reduced DL)	37.50	0.038	0.1566	1.1754	1.1817
90 mph 135 deg with No Ice (Reduced DL)	50.00	0.055	0.2362	4.0520	4.0536
90 mph 135 deg with No Ice (Reduced DL)	57.55	0.396	0.2557	3.7247	3.7251
90 mph 135 deg with No Ice (Reduced DL)	65.00	0.738	0.2551	2.2022	2.2169
90 mph 180 deg with No Ice (Reduced DL)	37.50	0.037	-1.4776	0.9003	1.7421
90 mph 180 deg with No Ice (Reduced DL)	50.00	0.055	-2.1105	3.0003	3.7026
90 mph 180 deg with No Ice (Reduced DL)	57.55	0.448	-2.1132	2.6326	3.5388
90 mph 180 deg with No Ice (Reduced DL)	65.00	0.722	-2.1299	2.0219	3.0810
90 mph 225 deg with No Ice (Reduced DL)	37.50	0.038	-1.8051	1.0848	2.1259
90 mph 225 deg with No Ice (Reduced DL)	50.00	0.057	-2.5174	3.6883	4.4591
90 mph 225 deg with No Ice (Reduced DL)	57.55	0.505	-2.5646	3.1352	4.0168

90 mph 225 deg with No Ice (Reduced DL)	65.00	0.779	-2.5719	2.0501	3.3673
90 mph 270 deg with No Ice (Reduced DL)	37.50	0.037	-1.5680	0.9350	1.7814
90 mph 270 deg with No Ice (Reduced DL)	50.00	0.054	-2.1341	3.2237	3.8587
90 mph 270 deg with No Ice (Reduced DL)	57.55	0.484	-2.2159	3.3454	4.0349
90 mph 270 deg with No Ice (Reduced DL)	65.00	0.794	-2.2070	2.1096	3.0594
90 mph 315 deg with No Ice (Reduced DL)	37.50	0.037	-0.0741	0.9530	0.9532
90 mph 315 deg with No Ice (Reduced DL)	50.00	0.055	-0.0221	3.2155	3.2162
90 mph 315 deg with No Ice (Reduced DL)	57.55	0.377	0.0365	3.2394	3.2407
90 mph 315 deg with No Ice (Reduced DL)	65.00	0.702	0.0264	2.1380	2.1395
40 mph Normal with 0.75 in Radial Ice	37.50	0.011	1.0378	0.9987	1.4403
40 mph Normal with 0.75 in Radial Ice	50.00	0.015	1.4965	3.6245	3.9213
40 mph Normal with 0.75 in Radial Ice	57.55	0.181	1.5582	1.4345	2.1180
40 mph Normal with 0.75 in Radial Ice	65.00	0.257	1.5508	0.6981	1.6360
40 mph 45 deg with 0.75 in Radial Ice	37.50	0.012	1.1463	1.0738	1.5701
40 mph 45 deg with 0.75 in Radial Ice	50.00	0.016	1.6351	3.8686	4.2000
40 mph 45 deg with 0.75 in Radial Ice	57.55	0.220	1.6726	1.8194	2.4635
40 mph 45 deg with 0.75 in Radial Ice	65.00	0.317	1.6625	1.0319	1.8324
40 mph 90 deg with 0.75 in Radial Ice	37.50	0.011	0.9507	1.0469	1.4141
40 mph 90 deg with 0.75 in Radial Ice	50.00	0.016	1.3703	3.8687	4.0820
40 mph 90 deg with 0.75 in Radial Ice	57.55	0.225	1.4358	1.8033	2.2307
40 mph 90 deg with 0.75 in Radial Ice	65.00	0.348	1.4295	1.1740	1.7809
40 mph 135 deg with 0.75 in Radial Ice	37.50	0.012	0.0528	1.1185	1.1188
40 mph 135 deg with 0.75 in Radial Ice	50.00	0.017	0.1375	4.1087	4.1087
40 mph 135 deg with 0.75 in Radial Ice	57.55	0.159	0.2022	1.8332	1.8333
40 mph 135 deg with 0.75 in Radial Ice	65.00	0.302	0.1890	1.1685	1.1697
40 mph 180 deg with 0.75 in Radial Ice	37.50	0.011	-1.0067	1.0330	1.4546
40 mph 180 deg with 0.75 in Radial Ice	50.00	0.017	-1.4052	3.7405	4.0256
40 mph 180 deg with 0.75 in Radial Ice	57.55	0.214	-1.4781	1.3743	2.0847
40 mph 180 deg with 0.75 in Radial Ice	65.00	0.320	-1.4687	1.0591	1.7443
40 mph 225 deg with 0.75 in Radial Ice	37.50	0.012	-1.2053	1.0549	1.5990
40 mph 225 deg with 0.75 in Radial Ice	50.00	0.016	-1.6676	3.8935	4.2191
40 mph 225 deg with 0.75 in Radial Ice	57.55	0.220	-1.7215	1.6870	2.3393
40 mph 225 deg with 0.75 in Radial Ice	65.00	0.308	-1.7176	0.8698	2.0070
40 mph 270 deg with 0.75 in Radial Ice	37.50	0.011	-1.1005	1.0013	1.5044
40 mph 270 deg with 0.75 in Radial Ice	50.00	0.015	-1.5028	3.7101	4.0141
40 mph 270 deg with 0.75 in Radial Ice	57.55	0.199	-1.5298	1.6149	2.2525
40 mph 270 deg with 0.75 in Radial Ice	65.00	0.285	-1.5311	0.8471	1.8665
40 mph 315 deg with 0.75 in Radial Ice	37.50	0.011	-0.4706	0.8639	0.9969
40 mph 315 deg with 0.75 in Radial Ice	50.00	0.015	-0.6111	3.1429	3.2257
40 mph 315 deg with 0.75 in Radial Ice	57.55	0.120	-0.5950	1.1059	1.3276
40 mph 315 deg with 0.75 in Radial Ice	65.00	0.197	-0.6020	0.8193	1.0897
Seismic Normal M1	37.50	0.002	-0.0079	0.3124	0.3125
Seismic Normal M1	50.00	0.003	0.0039	1.1663	1.1663
Seismic Normal M1	57.55	0.015	0.0082	0.2953	0.2954
Seismic Normal M1	65.00	0.027	0.0077	0.1605	0.1605
Seismic Normal M2	37.50	0.002	0.0088	0.3308	0.3309
Seismic Normal M2	50.00	0.003	0.0054	1.2311	1.2311
Seismic Normal M2	57.55	0.024	0.0118	0.3617	0.3619
Seismic Normal M2	65.00	0.046	0.0108	0.2133	0.2133
Seismic 45 deg M1	37.50	0.002	0.0078	0.3254	0.3255
Seismic 45 deg M1	50.00	0.003	0.0028	1.2091	1.2091
Seismic 45 deg M1	57.55	0.016	0.0053	0.3554	0.3555
Seismic 45 deg M1	65.00	0.029	0.0051	0.1882	0.1883
Seismic 45 deg M2	37.50	0.002	0.0083	0.3528	0.3528
Seismic 45 deg M2	50.00	0.003	0.0032	1.3049	1.3049
Seismic 45 deg M2	57.55	0.026	0.0063	0.4556	0.4557
Seismic 45 deg M2	65.00	0.049	0.0060	0.2470	0.2470
Seismic 90 deg M1	37.50	0.002	0.0072	0.3152	0.3153
Seismic 90 deg M1	50.00	0.003	0.0024	1.1750	1.1750
Seismic 90 deg M1	57.55	0.017	0.0054	0.3499	0.3499
Seismic 90 deg M1	65.00	0.031	0.0052	0.1948	0.1949
Seismic 90 deg M2	37.50	0.002	0.0075	0.3355	0.3355

Seismic 90 deg M2	50.00	0.003	0.0027	1.2462	1.2462
Seismic 90 deg M2	57.55	0.028	0.0066	0.4480	0.4480
Seismic 90 deg M2	65.00	0.052	0.0062	0.2603	0.2604
Seismic 135 deg M1	37.50	0.002	0.0074	0.3254	0.3255
Seismic 135 deg M1	50.00	0.003	0.0038	1.2091	1.2091
Seismic 135 deg M1	57.55	0.016	0.0082	0.3554	0.3555
Seismic 135 deg M1	65.00	0.029	0.0077	0.1882	0.1883
Seismic 135 deg M2	37.50	0.002	0.0081	0.3528	0.3528
Seismic 135 deg M2	50.00	0.003	0.0055	1.3049	1.3049
Seismic 135 deg M2	57.55	0.026	0.0119	0.4556	0.4557
Seismic 135 deg M2	65.00	0.049	0.0110	0.2470	0.2470
Seismic 180 deg M1	37.50	0.002	0.0079	0.3124	0.3125
Seismic 180 deg M1	50.00	0.003	0.0039	1.1663	1.1663
Seismic 180 deg M1	57.55	0.015	0.0082	0.2953	0.2954
Seismic 180 deg M1	65.00	0.027	0.0077	0.1605	0.1605
Seismic 180 deg M2	37.50	0.002	0.0088	0.3308	0.3309
Seismic 180 deg M2	50.00	0.003	0.0054	1.2311	1.2311
Seismic 180 deg M2	57.55	0.024	0.0118	0.3617	0.3619
Seismic 180 deg M2	65.00	0.046	0.0108	0.2133	0.2133
Seismic 225 deg M1	37.50	0.002	0.0078	0.3254	0.3255
Seismic 225 deg M1	50.00	0.003	0.0028	1.2091	1.2091
Seismic 225 deg M1	57.55	0.016	0.0053	0.3554	0.3555
Seismic 225 deg M1	65.00	0.029	0.0051	0.1882	0.1883
Seismic 225 deg M2	37.50	0.002	0.0083	0.3528	0.3528
Seismic 225 deg M2	50.00	0.003	0.0032	1.3049	1.3049
Seismic 225 deg M2	57.55	0.026	0.0063	0.4556	0.4557
Seismic 225 deg M2	65.00	0.049	0.0060	0.2470	0.2470
Seismic 270 deg M1	37.50	0.002	0.0072	0.3152	0.3153
Seismic 270 deg M1	50.00	0.003	0.0024	1.1750	1.1750
Seismic 270 deg M1	57.55	0.017	0.0054	0.3499	0.3499
Seismic 270 deg M1	65.00	0.031	0.0052	0.1948	0.1949
Seismic 270 deg M2	37.50	0.002	0.0075	0.3355	0.3355
Seismic 270 deg M2	50.00	0.003	0.0027	1.2462	1.2462
Seismic 270 deg M2	57.55	0.028	0.0066	0.4480	0.4480
Seismic 270 deg M2	65.00	0.052	0.0062	0.2603	0.2604
Seismic 315 deg M1	37.50	0.002	-0.0078	0.3254	0.3255
Seismic 315 deg M1	50.00	0.003	0.0038	1.2091	1.2091
Seismic 315 deg M1	57.55	0.016	0.0082	0.3554	0.3555
Seismic 315 deg M1	65.00	0.029	0.0077	0.1882	0.1883
Seismic 315 deg M2	37.50	0.002	-0.0083	0.3528	0.3528
Seismic 315 deg M2	50.00	0.003	0.0055	1.3049	1.3049
Seismic 315 deg M2	57.55	0.026	0.0119	0.4556	0.4557
Seismic 315 deg M2	65.00	0.049	0.0110	0.2470	0.2470
Seismic (Reduced DL) Normal M1	37.50	0.002	0.0074	0.2238	0.2239
Seismic (Reduced DL) Normal M1	50.00	0.003	0.0010	0.8323	0.8323
Seismic (Reduced DL) Normal M1	57.55	0.015	0.0044	0.2320	0.2320
Seismic (Reduced DL) Normal M1	65.00	0.027	0.0040	0.1328	0.1328
Seismic (Reduced DL) Normal M2	37.50	0.002	-0.0088	0.2419	0.2421
Seismic (Reduced DL) Normal M2	50.00	0.003	0.0017	0.8963	0.8963
Seismic (Reduced DL) Normal M2	57.55	0.024	0.0068	0.3007	0.3008
Seismic (Reduced DL) Normal M2	65.00	0.045	0.0061	0.1886	0.1886
Seismic (Reduced DL) 45 deg M1	37.50	0.002	0.0073	0.2367	0.2368
Seismic (Reduced DL) 45 deg M1	50.00	0.003	0.0007	0.8743	0.8743
Seismic (Reduced DL) 45 deg M1	57.55	0.016	0.0026	0.2877	0.2877
Seismic (Reduced DL) 45 deg M1	65.00	0.029	0.0025	0.1550	0.1550
Seismic (Reduced DL) 45 deg M2	37.50	0.002	0.0086	0.2636	0.2636
Seismic (Reduced DL) 45 deg M2	50.00	0.003	0.0010	0.9686	0.9686
Seismic (Reduced DL) 45 deg M2	57.55	0.026	0.0034	0.3865	0.3865
Seismic (Reduced DL) 45 deg M2	65.00	0.048	0.0032	0.2131	0.2131
Seismic (Reduced DL) 90 deg M1	37.50	0.002	0.0063	0.2266	0.2266
Seismic (Reduced DL) 90 deg M1	50.00	0.003	0.0002	0.8407	0.8407
Seismic (Reduced DL) 90 deg M1	57.55	0.016	0.0023	0.2829	0.2829

Seismic (Reduced DL) 90 deg M1	65.00	0.030	0.0022	0.1621	0.1621
Seismic (Reduced DL) 90 deg M2	37.50	0.002	0.0069	0.2465	0.2466
Seismic (Reduced DL) 90 deg M2	50.00	0.003	0.0003	0.9108	0.9108
Seismic (Reduced DL) 90 deg M2	57.55	0.027	0.0028	0.3801	0.3801
Seismic (Reduced DL) 90 deg M2	65.00	0.051	0.0026	0.2271	0.2271
Seismic (Reduced DL) 135 deg M1	37.50	0.002	0.0065	0.2367	0.2368
Seismic (Reduced DL) 135 deg M1	50.00	0.003	0.0009	0.8743	0.8743
Seismic (Reduced DL) 135 deg M1	57.55	0.016	0.0042	0.2877	0.2877
Seismic (Reduced DL) 135 deg M1	65.00	0.029	0.0038	0.1550	0.1550
Seismic (Reduced DL) 135 deg M2	37.50	0.002	0.0072	0.2636	0.2636
Seismic (Reduced DL) 135 deg M2	50.00	0.003	0.0016	0.9686	0.9686
Seismic (Reduced DL) 135 deg M2	57.55	0.026	0.0063	0.3865	0.3865
Seismic (Reduced DL) 135 deg M2	65.00	0.048	0.0057	0.2131	0.2131
Seismic (Reduced DL) 180 deg M1	37.50	0.002	0.0074	0.2238	0.2239
Seismic (Reduced DL) 180 deg M1	50.00	0.003	0.0010	0.8323	0.8323
Seismic (Reduced DL) 180 deg M1	57.55	0.015	0.0044	0.2320	0.2320
Seismic (Reduced DL) 180 deg M1	65.00	0.027	0.0040	0.1328	0.1328
Seismic (Reduced DL) 180 deg M2	37.50	0.002	0.0088	0.2419	0.2421
Seismic (Reduced DL) 180 deg M2	50.00	0.003	0.0017	0.8963	0.8963
Seismic (Reduced DL) 180 deg M2	57.55	0.024	0.0068	0.3007	0.3008
Seismic (Reduced DL) 180 deg M2	65.00	0.045	0.0061	0.1886	0.1886
Seismic (Reduced DL) 225 deg M1	37.50	0.002	0.0073	0.2367	0.2368
Seismic (Reduced DL) 225 deg M1	50.00	0.003	0.0007	0.8743	0.8743
Seismic (Reduced DL) 225 deg M1	57.55	0.016	0.0026	0.2877	0.2877
Seismic (Reduced DL) 225 deg M1	65.00	0.029	0.0025	0.1550	0.1550
Seismic (Reduced DL) 225 deg M2	37.50	0.002	0.0086	0.2636	0.2636
Seismic (Reduced DL) 225 deg M2	50.00	0.003	-0.0012	0.9686	0.9686
Seismic (Reduced DL) 225 deg M2	57.55	0.026	0.0034	0.3865	0.3865
Seismic (Reduced DL) 225 deg M2	65.00	0.048	0.0032	0.2131	0.2131
Seismic (Reduced DL) 270 deg M1	37.50	0.002	-0.0063	0.2266	0.2266
Seismic (Reduced DL) 270 deg M1	50.00	0.003	0.0002	0.8407	0.8407
Seismic (Reduced DL) 270 deg M1	57.55	0.016	0.0023	0.2829	0.2829
Seismic (Reduced DL) 270 deg M1	65.00	0.030	0.0022	0.1621	0.1621
Seismic (Reduced DL) 270 deg M2	37.50	0.002	0.0069	0.2465	0.2466
Seismic (Reduced DL) 270 deg M2	50.00	0.003	0.0003	0.9108	0.9108
Seismic (Reduced DL) 270 deg M2	57.55	0.027	0.0028	0.3801	0.3801
Seismic (Reduced DL) 270 deg M2	65.00	0.051	0.0026	0.2271	0.2271
Seismic (Reduced DL) 315 deg M1	37.50	0.002	-0.0073	0.2367	0.2368
Seismic (Reduced DL) 315 deg M1	50.00	0.003	0.0009	0.8743	0.8743
Seismic (Reduced DL) 315 deg M1	57.55	0.016	0.0042	0.2877	0.2877
Seismic (Reduced DL) 315 deg M1	65.00	0.029	0.0038	0.1550	0.1550
Seismic (Reduced DL) 315 deg M2	37.50	0.002	-0.0086	0.2636	0.2636
Seismic (Reduced DL) 315 deg M2	50.00	0.003	0.0016	0.9686	0.9686
Seismic (Reduced DL) 315 deg M2	57.55	0.026	0.0063	0.3865	0.3865
Seismic (Reduced DL) 315 deg M2	65.00	0.048	0.0057	0.2131	0.2131
Serviceability - 60 mph Wind Normal	37.50	0.010	0.9610	0.4390	1.0345
Serviceability - 60 mph Wind Normal	50.00	0.015	1.3317	1.4808	1.9915
Serviceability - 60 mph Wind Normal	57.55	0.167	1.3827	0.8539	1.6252
Serviceability - 60 mph Wind Normal	65.00	0.238	1.3789	0.5799	1.4758
Serviceability - 60 mph Wind 45 deg	37.50	0.011	1.1515	0.5049	1.2396
Serviceability - 60 mph Wind 45 deg	50.00	0.016	1.5930	1.6779	2.3137
Serviceability - 60 mph Wind 45 deg	57.55	0.204	1.6349	1.0462	1.9407
Serviceability - 60 mph Wind 45 deg	65.00	0.283	1.6336	0.6431	1.7234
Serviceability - 60 mph Wind 90 deg	37.50	0.010	0.9448	0.4540	1.0396
Serviceability - 60 mph Wind 90 deg	50.00	0.015	1.3023	1.6045	2.0616
Serviceability - 60 mph Wind 90 deg	57.55	0.185	1.3355	1.1284	1.7484
Serviceability - 60 mph Wind 90 deg	65.00	0.276	1.3335	0.6924	1.4989
Serviceability - 60 mph Wind 135 deg	37.50	0.011	0.0542	0.5091	0.5119
Serviceability - 60 mph Wind 135 deg	50.00	0.016	0.0643	1.8122	1.8129
Serviceability - 60 mph Wind 135 deg	57.55	0.114	0.0798	1.2071	1.2078
Serviceability - 60 mph Wind 135 deg	65.00	0.213	0.0776	0.7019	0.7062
Serviceability - 60 mph Wind 180 deg	37.50	0.010	-0.9181	0.4471	1.0222

Serviceability - 60 mph Wind 180 deg	50.00	0.015	-1.2870	1.5114	1.9938
Serviceability - 60 mph Wind 180 deg	57.55	0.173	-1.3230	0.8639	1.6055
Serviceability - 60 mph Wind 180 deg	65.00	0.250	-1.3224	0.6152	1.4585
Serviceability - 60 mph Wind 225 deg	37.50	0.011	-1.1485	0.4891	1.2640
Serviceability - 60 mph Wind 225 deg	50.00	0.016	-1.5941	1.7137	2.3426
Serviceability - 60 mph Wind 225 deg	57.55	0.204	-1.6333	1.0508	1.9331
Serviceability - 60 mph Wind 225 deg	65.00	0.281	-1.6333	0.6089	1.7667
Serviceability - 60 mph Wind 270 deg	37.50	0.010	-0.9830	0.4432	1.0770
Serviceability - 60 mph Wind 270 deg	50.00	0.015	-1.3482	1.5647	2.0709
Serviceability - 60 mph Wind 270 deg	57.55	0.180	-1.3767	1.0828	1.7663
Serviceability - 60 mph Wind 270 deg	65.00	0.263	-1.3770	0.6464	1.5376
Serviceability - 60 mph Wind 315 deg	37.50	0.010	-0.0672	0.4094	0.4120
Serviceability - 60 mph Wind 315 deg	50.00	0.015	-0.0650	1.4384	1.4406
Serviceability - 60 mph Wind 315 deg	57.55	0.105	-0.0508	0.7667	0.7724
Serviceability - 60 mph Wind 315 deg	65.00	0.194	-0.0535	0.6537	0.6581

Maximum Reactions Summary

	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
Anchor Group	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	57.79	165.32	113.14	25.00	59.77	15.26	2784.71	811.68

Site Name: Cornwall, CT
Site Number: 88009
Tower Type: SST w/4 Legs
Design Loads (Factored) - Analysis per TIA-222-G Standards

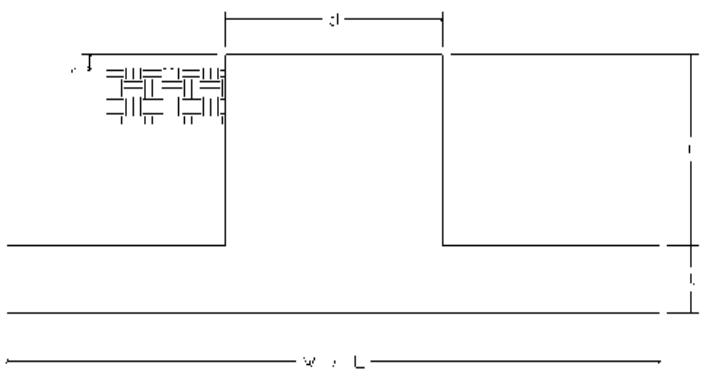
Monolithic Mat & Pier Foundation Analysis

Foundation Analysis Parameters		
Design / Analysis / Mapping:	Mapping	-
Compression/Leg:	113.1	k
Uplift/Leg:	87.1	k
Total Shear:	59.8	k
Moment:	2,784.7	k-ft
Tower + Appurtenance Weight:	57.8	k
Depth to Base of Foundation (l + t - h):	4.92	ft
Diameter of Pier (d):	4	ft
Length of Pier (l):	2.5	ft
Height of Pier above Ground (h):	0.5	ft
Width of Pad (W):	30	ft
Length of Pad (L):	30	ft
Thickness of Pad (t):	2.92	ft
Tower Leg Center to Center:	20	ft
Number of Tower Legs:	4	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	125	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	62.6	pcf
Friction Angle of Uplift:	35	°
Coefficient of Shear Friction:	0.5	-
Ultimate Compressive Bearing Pressure:	40,000	psf
Ultimate Passive Pressure on Pad Face:	1,914	psf
$f_{Soil\ and\ Concrete\ Weight}$:	0.9	-
f_{Soil}:	0.75	-

Overturning Moment Usage		
Design OTM:	3108.7	k-ft
OTM Resistance:	9625.6	k-ft
Design OTM / OTM Resistance:	32%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	896	psf
Factored Nominal Bearing Pressure:	30000	psf
Factored Nominal (Net) Bearing Pressure:	3%	Pass
Load Direction Controling Design Bearing Pressure:	*Diagonal to Pad Edge*	

Sliding Factor of Safety		
Ultimate Friction Resistance:	336.8	k
Ultimate Passive Pressure Resistance:	150.9	k
Total Factored Sliding Resistance:	365.8	k
Sliding Design / Sliding Resistance:	16%	Pass



GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA–222 STANDARD, AWWA–D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA–1019–A–2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
   - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325–X. Fu=120 KSI, U.N.O.
   - U–BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT–TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE – HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE – HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE – RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"–20 LOW CARBON STEEL COPPER–FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI–318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	**ULTIMATE TORQUE STRENGTH**	**RECOMMENDED MAXIMUM INSTALLATION TORQUE**
3/8–16 UNC	8 FT–LBS	4 FT–LBS
1/2–13 UNC	18 FT–LBS	8 FT–LBS
5/8–11 UNC	35 FT–LBS	16 FT–LBS
3/4–10 UNC	50 FT–LBS	24 FT–LBS
1–8 UNC	110 FT–LBS	50 FT–LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	**RECOMMENDED**
EDGE DISTANCE – CL* BOLT TO END	2.0–4.0	3.0
EDGE DISTANCE – CL* BOLT TO SIDE	1.5–3.5	2.5
BOLT PITCH – CL* TO CL*	4.0–5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F–1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
   - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

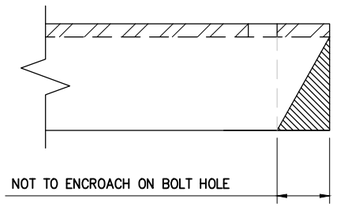
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
   b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN–OF–THE–NUT" METHOD.
   c. MECHANICAL AND EPOXIED ANCHORAGES.
   d. FIBER REINFORCED POLYMER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



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STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
09-17-19

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	TAG	09/16/19

Drawn: TAG Date: 09/16/19
Designed: TM Date: 09/16/19
Checked: BA Date: 09/16/19

Project Number: 499-006

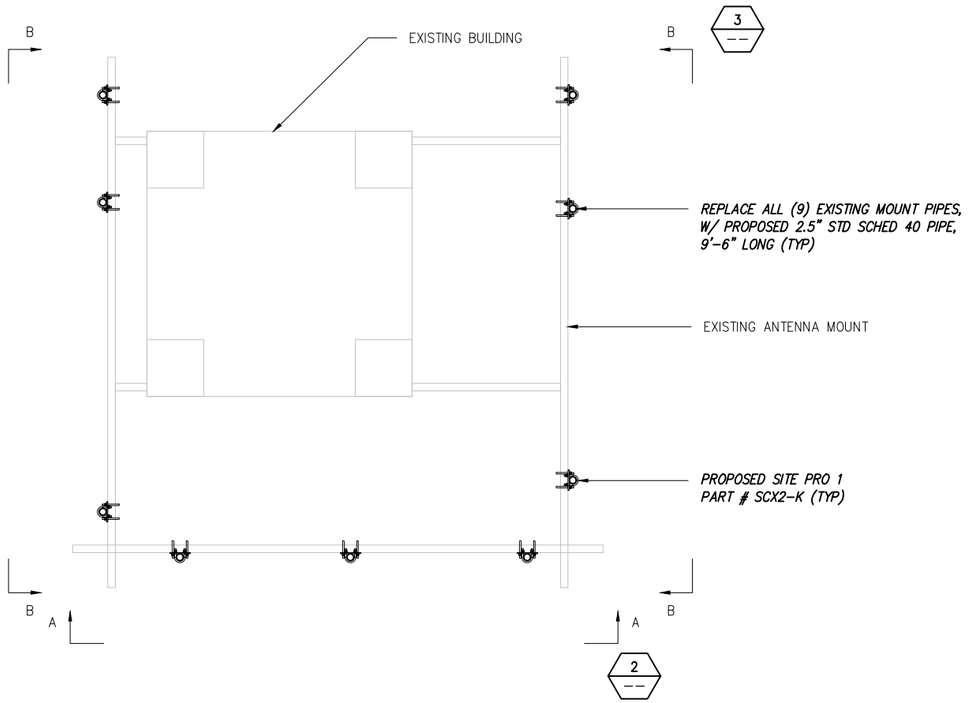
Project Title:
CORNWALL
CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 09/16/19
SD

Drawing Title
GENERAL NOTES

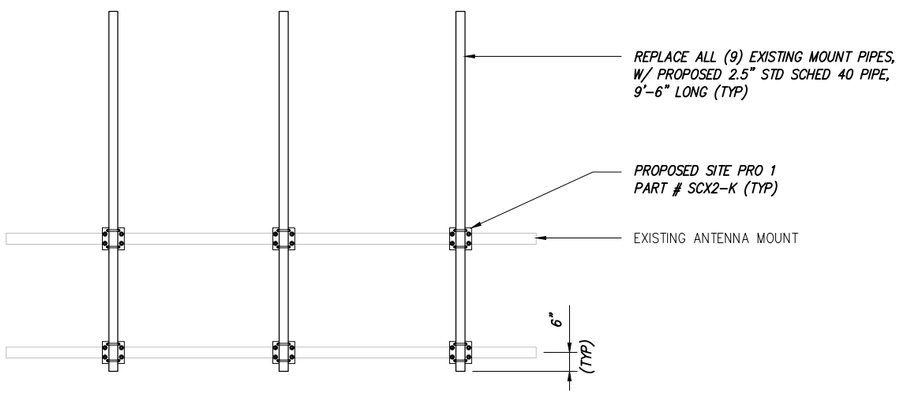
Drawing Number
S1



1 PLAN VIEW
SCALE: NOT TO SCALE

NOTE:
1. VARIOUS EXISTING CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. ALL SITE PRO 1 PARTS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, EXCEPT OTHERWISE NOTED.



2 SECTION A–A
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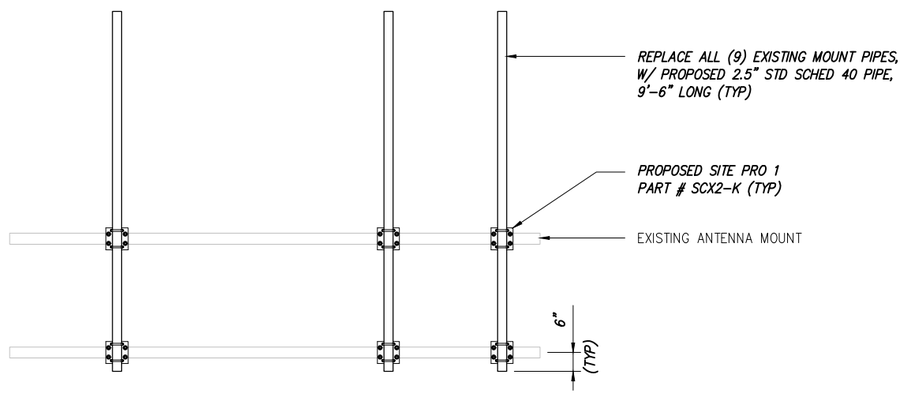

3 SECTION B–B
SCALE: NOT TO SCALE

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09-17-19

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	TAG	09/16/19

Drawn: TAG Date: 09/16/19
Designed: TM Date: 09/16/19
Checked: BA Date: 09/16/19

Project Number:
499-006

Project Title:
CORNWALL
CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For:
smartlink

Drawing Scale:
AS NOTED
Date:
09/16/19
SD

Drawing Title
MOUNT MODIFICATIONS

Drawing Number
S2

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA–222 STANDARD, AWWA–D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
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3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
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6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA–1019–A–2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
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1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
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   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325–X. Fu=120 KSI, U.N.O.
   - U–BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT–TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE – HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE – HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE – RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"–20 LOW CARBON STEEL COPPER–FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI–318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

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1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	**ULTIMATE TORQUE STRENGTH**	**RECOMMENDED MAXIMUM INSTALLATION TORQUE**
3/8–16 UNC	8 FT–LBS	4 FT–LBS
1/2–13 UNC	18 FT–LBS	8 FT–LBS
5/8–11 UNC	35 FT–LBS	16 FT–LBS
3/4–10 UNC	50 FT–LBS	24 FT–LBS
1–8 UNC	110 FT–LBS	50 FT–LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	**RECOMMENDED**
EDGE DISTANCE – CL* BOLT TO END	2.0–4.0	3.0
EDGE DISTANCE – CL* BOLT TO SIDE	1.5–3.5	2.5
BOLT PITCH – CL* TO CL*	4.0–5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F–1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
   - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

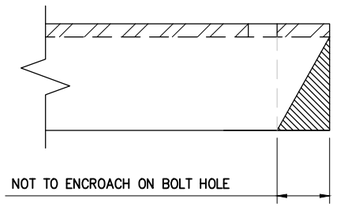
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
   b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN–OF–THE–NUT" METHOD.
   c. MECHANICAL AND EPOXIED ANCHORAGES.
   d. FIBER REINFORCED POLYMER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



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JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
09-17-19

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	TAG	09/16/19

Drawn: TAG Date: 09/16/19
Designed: TM Date: 09/16/19
Checked: BA Date: 09/16/19

Project Number: 499-006

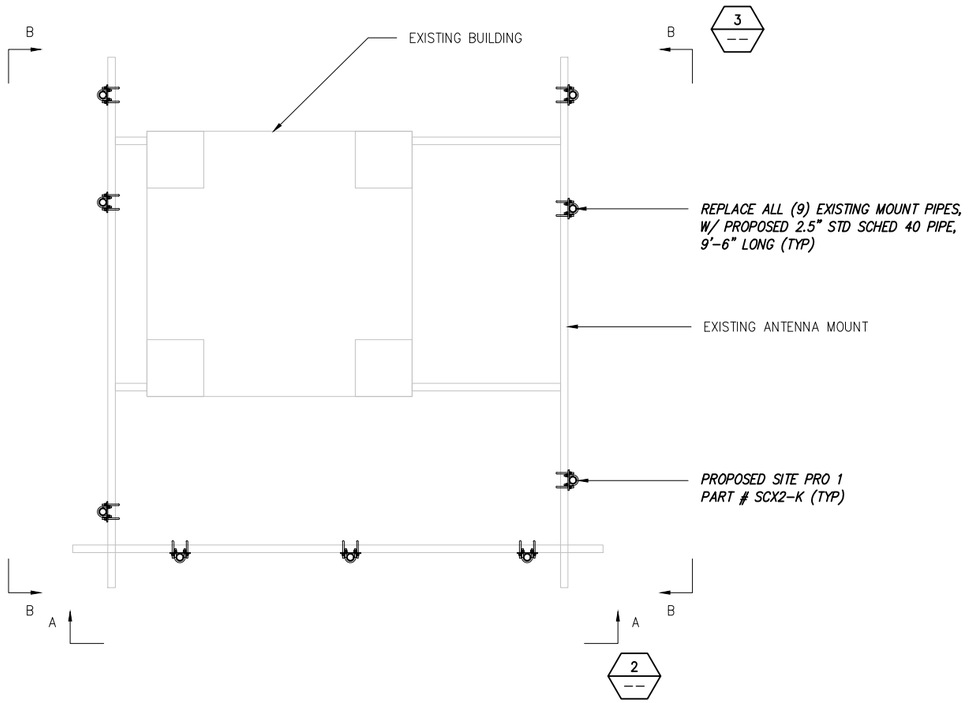
Project Title:
CORNWALL
CTL01025
FA# 10035044
36 MOHAWK MOUNTAIN
CORNWALL, CT 06753

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 09/16/19
SD

Drawing Title
GENERAL NOTES

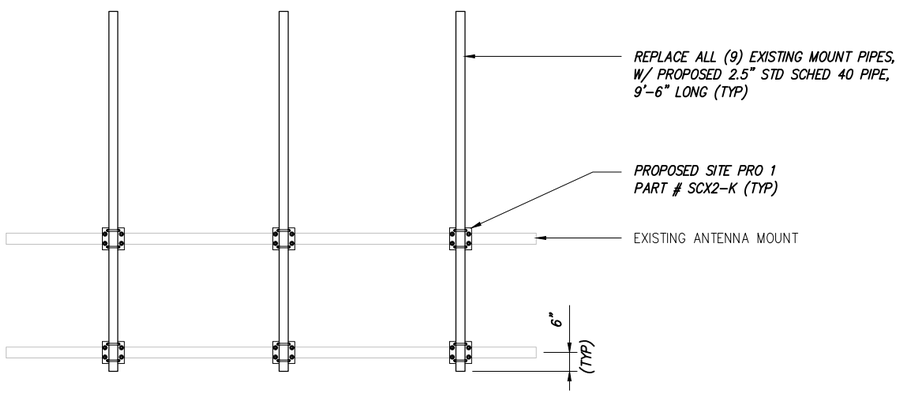
Drawing Number
S1



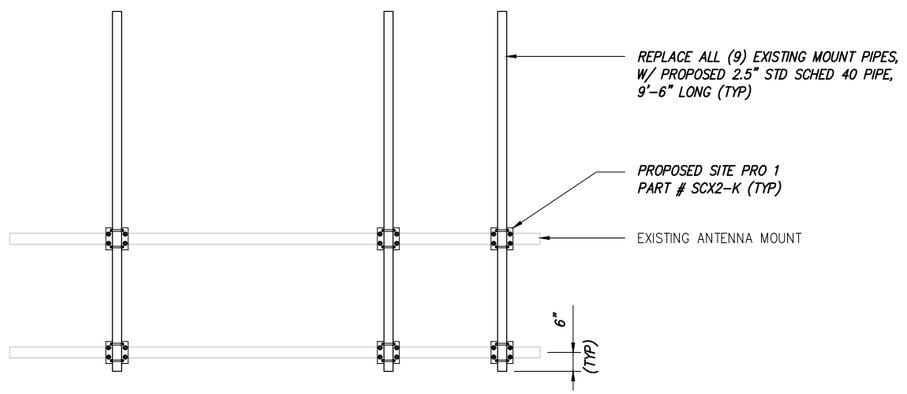
1 PLAN VIEW
SCALE: NOT TO SCALE

NOTE:
1. VARIOUS EXISTING CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. ALL SITE PRO 1 PARTS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, EXCEPT OTHERWISE NOTED.



2 SECTION A–A
SCALE: NOT TO SCALE



3 SECTION B–B
SCALE: NOT TO SCALE

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smartlink

Drawing Scale:
AS NOTED
Date:
09/16/19
SD

Drawing Title
MOUNT MODIFICATIONS

Drawing Number
S2

INFINIGY

THE SOLUTIONS ARE ENDLESS

Non-Ionizing Radiation Report

Compiled For: Smartlink on behalf of AT&T

Site Name: Cornwall

Site FA: 10035044

Site ID: CTL01025

36 Mohawk Mountain, Cornwall, CT 6753

Latitude: 41.8212981 Longitude: -73.2964431

Structure Type: Self Support

Report Date: September 30, 2019

Status: AT&T will be compliant with FCC rules on RF Exposure with the recommended signage.

Table of Contents

1. Executive Summary:

Smartlink on behalf of AT&T has contracted Infinigy Solutions, LLC to determine whether the site Cornwall located at 36 Mohawk Mountain in Cornwall, CT Will Be Compliant with all Federal Communications Commission (FCC) rules and regulations for radio frequency (RF) exposure as indicated in **47CFR§1.1310**.

The report incorporates a theoretical RF field analysis in accordance with the FCC Rules and Regulations for all individuals classified as "Occupational or Controlled" and "General Public or Uncontrolled" (see Appendix A and B).

This document and the conclusions herein are based on information provided by Smartlink on behalf of AT&T.

As a result of the analysis, **AT&T Will Be Compliant with FCC rules with the recommended signage in section 4 of this report.**

All Carriers, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	**0.1215**
	% Exposure	**14.77%**
Controlled / Occupational	Exposure values at the site (mW/cm^2)	**0.1214**
	% Exposure	**2.79%**

The exposure calculations were derived based on data provided by Smartlink on behalf of AT&T and engineering assumptions for all other operators. The exposure calculations do not pose a threat to anyone on the ground of the site.

2. Site Summary:

Site Information	
Site Name: Cornwall	
Site Address: 36 Mohawk Mountain, Cornwall, CT 6753	
Site Type: Self Support	
Compliance Status	Will Be Compliant
Mitigation Required	No
Signage Required	Yes
Barriers Required	No
Access Locked	No
Area Controlled or Uncontrolled	Uncontrolled

3. Site Compliance

This report also incorporates overview of the site information:

- Antenna Inventory Table
- Calculation Tables showing exposure for each carrier transmit frequency
- Total exposure for all carriers existing and proposed at ground level considering the centerline of all antennas and horizontal distance from the tower.
- Maximum Effective Radiated Power Assumed as Worst Case for Calculations used in this study
- Calculations based on flat ground around base of the structure

4. Site Compliance Recommendations

Infinigy recommends the following upon the installation of antennas at the site:

Base of tower

Caution 2 sign. The recommendation is moot if there is already signage installed at the site.

5. Antenna Inventory Table

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
1	Alpha	AT&T	Powerwave	7770	850	65	334
2	Alpha	AT&T	CCI	DMP65R-BU6DA	700	65	2951
3a	Alpha	AT&T	CCI	DMP65R-BU6DA	700	65	1476
3b	Alpha	AT&T	CCI	DMP65R-BU6DA	1900	65	4842
3c	Alpha	AT&T	CCI	DMP65R-BU6DA	850	65	1000
4	Beta	AT&T	Powerwave	7770	850	65	334
5	Beta	AT&T	CCI	DMP65R-BU6DA	700	65	2951
6a	Beta	AT&T	CCI	DMP65R-BU6DA	700	65	1476
6b	Beta	AT&T	CCI	DMP65R-BU6DA	1900	65	4842
6c	Beta	AT&T	CCI	DMP65R-BU6DA	850	65	1000
7	Gamma	AT&T	Powerwave	7770	850	65	334
8	Gamma	AT&T	CCI	DMP65R-BU6DA	700	65	2951
9a	Gamma	AT&T	CCI	DMP65R-BU6DA	700	65	1476
9b	Gamma	AT&T	CCI	DMP65R-BU6DA	1900	65	4842
9c	Gamma	AT&T	CCI	DMP65R-BU6DA	850	65	1000
10		Unknown	Generic	Dipole	150	75	100
11		Homeland Security	Generic	Omni-150 MHz	150	74	100
12		Unknown	Generic	Omni-150 MHz	150	72	100
13	Alpha	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	69	2664
14a	Alpha	Sprint	Commscope	DT465B-2XR-V2	850	69	2037
14b	Alpha	Sprint	Commscope	DT465B-2XR-V2	2500	69	2405
15	Beta	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	69	2664

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
16a	Beta	Sprint	Commscope	DT465B-2XR-V2	850	69	2037
16b	Beta	Sprint	Commscope	DT465B-2XR-V2	2500	69	2405
17	Gamma	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	69	2664
18a	Gamma	Sprint	Commscope	DT465B-2XR-V2	850	69	2037
18b	Gamma	Sprint	Commscope	DT465B-2XR-V2	2500	69	2405
19		Homeland Security	Sinclair	SV228-HF2SNM	150	63	100
20		Unknown	Generic	10' Dish-11000	11000	59	1
21	Alpha	T-Mobile	RFS	APX16DW-16DWS	1900	57	5447
22	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	2100	57	5355
23	Beta	T-Mobile	RFS	APX16DW-16DWS	1900	57	5447
24	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	2100	57	5355
25	Gamma	T-Mobile	RFS	APX16DW-16DWS	1900	57	5447
26	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	2100	57	5355
27	Alpha	Alltel (Verizon Wireless)	Commscope	DB846F65ZAXY	850	46	3488
28a	Alpha	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-1900	1900	46	5704
28b	Alpha	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-700	700	46	3074
28c	Alpha	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-2100	2100	46	5738
29	Alpha	Alltel (Verizon Wireless)	Antel	LPA-80063/6CF	850	46	5527
30	Beta	Alltel (Verizon Wireless)	Commscope	DB846F65ZAXY	850	46	3488

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
31a	Beta	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-1900	1900	46	5704
31b	Beta	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-700	700	46	3074
31c	Beta	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-2100	2100	46	5738
32	Beta	Alltel (Verizon Wireless)	Antel	LPA-80063/6CF	850	46	5527
33	Gamma	Alltel (Verizon Wireless)	Commscope	DB846F65ZAXY	850	46	3488
34a	Gamma	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-1900	1900	46	5704
34b	Gamma	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-700	700	46	3074
34c	Gamma	Alltel (Verizon Wireless)	Commscope	JAHH-65C-3B-2100	2100	46	5738
35	Gamma	Alltel (Verizon Wireless)	Antel	LPA-80063/6CF	850	46	5527

6. RF Guidelines

To ensure safety of company workers, the following points need to be taken into consideration and implemented at wireless sites in accordance with the Carriers policies:

a) Worksite: Any employee at the site should avoid working directly in front of the antenna or in areas predicted to exceed general population exposure limits by 100%. Workers should insist that the transmitters be switched off during the work period.

b) RF Safety Training and Awareness: All employees working in areas exceeding the general population limits should have a basic awareness of RF safety measures. Videos, classroom lectures and online courses are all appropriate training methods on these topics.

c) Site Access: Restricting access to transmitting antenna locations is one of the most important elements of RF safety. This can be done with:
   - Locked doors/gates/ladder access
   - Alarmed doors
   - Restrictive barriers

d) Three-foot Buffer: There is an inverse relationship between the strength of the field and the distance from the antenna. The RF field diminishes with distance from the antenna. Workers should maintain a three-foot distance from the antennas.

e) Antennas: Workers should always assume that the antenna is transmitting and should never stop right in front of the antenna. If someone must pass by an antenna, he/she should move quickly, thus reducing RF exposure.

Attachment 1: AT&T Exposure Analysis

AT&T 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.5**
	Exposure values at the site (mW/cm^2)	**0.0125**
	% Exposure	**2.50%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.3**
	Exposure values at the site (mW/cm^2)	**0.0125**
	% Exposure	**0.54%**

AT&T 850 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0009**
	% Exposure	**0.16%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0009**
	% Exposure	**0.03%**

AT&T 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0028**
	% Exposure	**0.47%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0028**
	% Exposure	**0.10%**

AT&T 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0137**
	% Exposure	**1.37%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0137**
	% Exposure	**0.27%**

Attachment 2: T-Mobile Exposure Analysis

T-Mobile 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0180**
	% Exposure	**1.80%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0180**
	% Exposure	**0.36%**

AT&T 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0177**
	% Exposure	**1.77%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0177**
	% Exposure	**0.35%**

Attachment 3: Alltel (Verizon Wireless) Exposure Analysis

Verizon Wireless 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.5**
	Exposure values at the site (mW/cm^2)	**0.0126**
	% Exposure	**2.53%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.3**
	Exposure values at the site (mW/cm^2)	**0.0126**
	% Exposure	**0.55%**

Verizon Wireless 850 MHz CDMA		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0048**
	% Exposure	**0.80%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0048**
	% Exposure	**0.17%**

Verizon Wireless 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0323**
	% Exposure	**5.38%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0323**
	% Exposure	**1.15%**

Verizon Wireless 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0235**
	% Exposure	**2.35%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0235**
	% Exposure	**0.47%**

Verizon Wireless 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0236**
	% Exposure	**2.36%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0236**
	% Exposure	**0.47%**

Attachment 4: Sprint Exposure Analysis

Sprint 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0053**
	% Exposure	**0.89%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0053**
	% Exposure	**0.1062%**

Sprint 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0069**
	% Exposure	**0.69%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0069**
	% Exposure	**0.1389%**

Sprint 2500 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0063**
	% Exposure	**0.63%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0063**
	% Exposure	**0.1254%**

Attachment 5: Homeland Security Exposure Analysis

Homeland Security 100 MHz VHF		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.2**
	Exposure values at the site (mW/cm^2)	**0.0002**
	% Exposure	**0.09%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0002**
	% Exposure	**0.02%**

Attachment 6: Unknown Exposure Analysis

Unknown 100 MHz VHF		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	0.0002
	Exposure values at the site (mW/cm^2)	**0.0000**
	% Exposure	0.08%
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	0.0002
	Exposure values at the site (mW/cm^2)	**0.0000**
	% Exposure	0.02%

Unknown 11 GHz VHF		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.000001**
	% Exposure	**0.00%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.000001**
	% Exposure	**0.0000%**

Attachment 7: Combined Exposure Analysis for each Carrier

AT&T All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0299
	% Exposure	4.49%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0299
	% Exposure	0.95%

T-Mobile All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0357
	% Exposure	3.57%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0357
	% Exposure	0.71%

Verizon Wireless All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0185
	% Exposure	2.21%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0185
	% Exposure	0.37%

Sprint All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0185
	% Exposure	2.21%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0185
	% Exposure	0.37%

Homeland Security All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0002
	% Exposure	0.09%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0002
	% Exposure	0.02%

Unknown All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0002
	% Exposure	0.08%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0002
	% Exposure	0.02%

7. Appendix A: FCC Guidelines

FCC Policies

The Federal Communications Commission (FCC) in 1996 implemented regulations and policies for analysis of RF propagation to evaluate RF emissions. All the analysis and results of this report are compared with FCC's (Federal Communications Commission) rules to determine whether a site is compliant for Occupational/Controlled or General Public/Uncontrolled exposure. All the analysis of RF propagation is done in terms of a percentage. The limits primarily indicate the power density and are generally expressed in terms of milliwatts per centimeter square, mW/cm^2.

FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the scenario/ situation in which that exposure takes place or the status of the individuals who are subjected to that exposure. The decision as to which tier is applied to a scenario is based on the following definitions:

Occupational / Controlled

These limits apply in situations when someone is exposed to RF energy through his/her occupation, is fully aware of the harmful effects of the RF exposure and has an ability to exercise control over this exposure. Occupational / controlled exposure limits also apply when exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. limits for Occupational/Controlled exposure can be found on Table 1(A).

General Population / Uncontrolled

These limits apply to situations in which the general public may be exposed or in which persons who are exposed because of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure to RF. Therefore, members of the general public would always be considered under this category, for example, in the case of a telecommunications tower that exposes people in a nearby residential area. Exposure limits for General Population/Uncontrolled can be found on Table 1(B).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

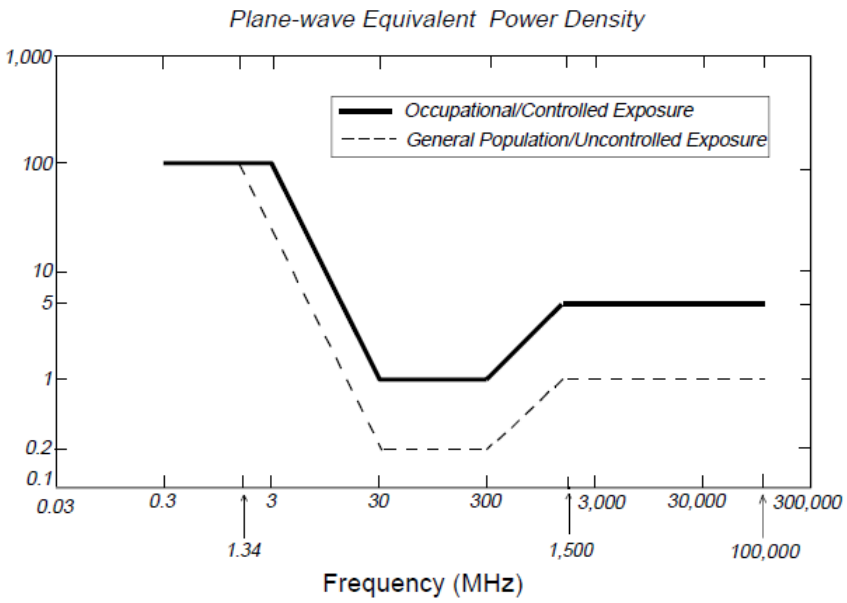
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	$(900/f^2)$*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

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

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



OSHA Statement:

The objective of the OSHA Act is to ensure the safety and health of the working men and women by enforcing certain standards. The act also assists and encourages the states in their efforts to ensure safe and healthy working conditions through means of research, information, education and training in the field of occupational safety and health and for other purposes.

According to OSHA Act section 5, important duties to be considered are:

(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 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.

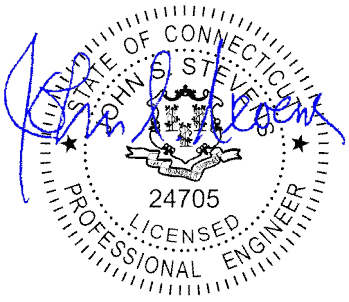
8. Appendix B: Preparer Certification

I, Tim Harris, preparer of this report, certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commission and the Occupational Safety and Heath Administration regarding Human Exposure to Radio Frequency Radiation. In addition, I have been trained in 1) RF safety and 2) RF modeling using RoofView modeling software.

I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris *9/30/2019*

Signature Date



10/03/2019

From: TrackingUpdates@fedex.com
To: Katherine Benson
Subject: FedEx Shipment 777569119556 Delivered
Date: Thursday, January 23, 2020 12:14:04 PM

FedEx®

Your package has been delivered

Tracking # 777569119556

Ship date:
Wed, 1/22/2020

Katie Benson
Smartlink LLC
North Billerica, MA 01862
US

Delivered

Delivery date:
Thu, 1/23/2020 12:11 pm

American Tower Corporation
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVE
BOSTON, MA 02116574999
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777569119556
Status:	Delivered: 01/23/2020 12:11 PM Signed for By: AOLLNM
Reference:	CTL01025
Signed for by:	AOLLNM
Delivery location:	Boston, MA
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	1/23/2020

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 11:13 AM CST on 01/23/2020.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date the package should be delivered by, based on the selected service, destination, and ship date. Limitations and exceptions may apply.Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.

From: TrackingUpdates@fedex.com
To: Katherine Benson
Subject: FedEx Shipment 777569057451 Delivered
Date: Thursday, January 23, 2020 9:53:10 AM

FedEx®

Your package has been delivered

Tracking # 777569057451

Ship date:
Wed, 1/22/2020

Katie Benson
Smartlink LLC
North Billerica, MA 01862
US

Delivered

Delivery date:
Thu, 1/23/2020 9:51 am

Gordon M. Ridgway
GORDON M. RIDGWAY
26 PINE ST
CORNWALL, CT 06753
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777569057451
Status:	Delivered: 01/23/2020 09:51 AM Signed for By: Signature Not Req
Reference:	CTL01025
Signed for by:	Signature Not Req
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	1/23/2020

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:53 AM CST on 01/23/2020.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date the package should be delivered by, based on the selected service, destination, and ship date. Limitations and exceptions may apply.Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.

036 TOOMEY RD

Location	036 TOOMEY RD	**Mblu**	F04/ 01/ / /
Acct#	98100011	**Owner**	AMERICAN TOWER MGMT INC
PBN		**Assessment**	$53,800
Appraisal	$76,800	**PID**	10
Building Count	1		

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$76,800	$0	$76,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$53,800	$0	$53,800

Owner of Record

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

Sale Price $221,229
Certificate
Book & Page 088/811
Sale Date 04/03/2000
Instrument QC

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
AMERICAN TOWER MGMT INC	$221,229		088/811	QC	04/03/2000

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo

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

Building Layout

Building Layout
(http://images.vgsi.com/photos/CornwallCTPhotos/Sketches/10_

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	2-1V
Description	COMM LND MDL-00
Zone	
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

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

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FGR1	GARAGE-AVE			946 S.F.	$23,700	1
SHP2	WORK SHOP GOOD			936 S.F	$28,100	1
	TOWER EQUIPMENT			1	$25,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$76,800	$0	$76,800
2016	$76,800	$0	$76,800
2015	$51,800	$0	$51,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$53,800	$0	$53,800
2016	$53,800	$0	$53,800
2015	$36,300	$0	$36,300

AMERICAN TOWER®
CORPORATION

LETTER OF AUTHORIZATION

SITE NO: 88009 **Site Name: CORNWALL CT**

ADDRESS: 36 Toomey Rd., Cornwall, CT 06759-4232

I, Margaret Robinson, Senior Counsel, US Tower Division on behalf of American Tower*, owner of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize Network Building + Consulting, its successors and assigns, to act as American Tower's non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment on the Tower Facility located at the above address. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

American Tower understands that the application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower's installation. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit Network Building + Consulting to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower's installation of telecommunications equipment without the prior written approval of American Tower.

Signature: _____

Margaret Robinson, Senior Counsel
US Tower Division

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

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

WITNESS my hand and official seal, this 27th day of February, 2019.

NOTARY SEAL

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

Notary Public _____
My Commission Expires: 8/9/24

American Tower as used herein is defined as American Tower Asset Sub, LLC and any of its affiliates or subsidiaries.

NB+C, LLC
100 Apollo Drive Suite 303
Chelmsford, MA 01824
Agent for American Tower Corporation
David Hoogasian – Project Manager
508-344-3343
dhoogasian@nbcllc.com

February 25, 2019

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

Notice of Exempt Modification
Facility Address: 36 Mohawk Mountain Rd, (aka 36 Toomey Rd.) Cornwall, CT 06759 // ATC SITE: 88009 CORNWALL CT
Facility Coordinates (N) 41.82130278
(W) 73.29644167

Dear Ms. Bachman:

American Tower Corporation, Inc (ATC) currently maintains an Existing Cellular Tower Facility (65' Self Support Tower) at 36 Mohawk Mountain Rd, (now known as 36 Toomey Rd) Cornwall, CT 06759, Parcel ID: F04/01, in the Town of Cornwall. The tower is owned by American Tower. The property is owned by the State of Connecticut. American Tower Corporation, Inc (ATC) now intends install an automatic transfer switch and remote monitoring communications circuitry, to an existing optional standby generator, within the leased, fenced ground space area of the facility. The purpose of the installation is to allow for a shared back up emergency power option for its current (and future) wireless carrier tenants.

Because the proposed transfer switch and monitoring system are within the existing, approved compound space, and the applicant is NOT requesting expansion of ground space beyond the approved conditions, this modification request complies with the conditions of the original Tower Approval.

Please accept this letter, as notification pursuant to Regulations of Connecticut State Agencies @16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. @16-50j-72(b)(2). IN accordance with R.C.S.A. @16-50j-73, a copy of this letter is being sent to First Selectman Gordon M. Ridgway of the Town of Cornwall, David Colbert, Chair of the Cornwall, CT Planning and Zoning Commission, as well as the property owner and tower owner.

ATTACHMENT A

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

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

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

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

4. The operation of the generator back up power facility will not increase radio frequency emissions at the facility to the level at or above the Federal Communications Commission safety standard.

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

6. The existing structure and its foundation can support the proposed loading if the tower will be re-enforced to support them. <<< NOTE – This condition is N/A. The proposed Generator attachments are based on the ground, and not associated or loaded onto the tower or foundation.

   For the foregoing reasons, American Tower Corporation (ATC) respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. @16-50j-72(b)(2).

   Sincerely,

   David Hoogasian

   Attachments

   Cc: First Selectman Gordon M. Ridgway – Chief Elected Official
   David Colbert – Chair of the Planning and Zoning Commission, Town of Cornwall, CT
   American Tower Corporation (ATC) – Tower owner
   The State of Connecticut – Property owner

Property Location: 036 TOOMEY RD | MAP ID: F04/ 01/ / / | Bldg Name: | State Use: 2-1

Vision ID: 10 | Account #98100011 | Bldg #: 1 of 1 | Sec #: 1 of 1 | Card 1 of 1 | Print Date: 09/21/2017 15:18

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
AMERICAN TOWER MGMT INC				
PO BOX 723597				
ATLANTA, GA 31139				
Additional Owners:				

SUPPLEMENTAL DATA

Other ID:
CENSUS TRAC 2632
SURVEY # 662

GIS ID: | ASSOC PID#

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
COM OUTBL	2-5	76,800	53,800
		Total	76,800	53,800

6031
CORNWALL, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
AMERICAN TOWER MGMT INC	088/811	04/03/2000	Q		221,229	QC

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2016	2-5	53,800	2015	2-5	36,300	2010	2-5	36,220
	Total:	53,800		Total:	36,300		Total:	36,220

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	76,800
Appraised Land Value (Bldg)	0
Special Land Value	0
Total Appraised Parcel Value	76,800
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	76,800

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD NAME	STREET INDEX NAME	TRACING	BATCH
0001/A				

NOTES

BLDGS ONLY ON STATE LAND (E6-3-6)
POLE ON PERSONAL PROPERTY
2016 PRICE 2014 IMPROVEMENTS
2017 CHANGED ADDRESS TO TOOMEY RD
PREVIOUSLY MOHAWK MOUNTAIN RD

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
11128	10/06/2014	RE	Remodel	25,000		0		UPGRADE EQUIPMEN

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Frontage	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing	Adj. Unit Price	Land Value
1	2-1V	COMM LND MDL-00					0	SF	0.00	1.00	0	1.0000	1.00		0.00				0

Total Card Land Units: 0.00 AC | Parcel Total Land Area: 0 AC | Total Land Value: 0

Property Location: GREAT HOLLOW RD | MAP ID: E06/ 03/ 06E/ / | Bldg Name: | State Use: 5-1

Vision ID: 1265 | Account #98106020 | Bldg #: 1 of 1 | Sec #: 1 of 1 | Card 1 of 1 | Print Date: 08/02/2016 10:14

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
CONNECTICUT STATE OF				
79 ELM ST				
HARTFORD, CT 06134				
Additional Owners:				

SUPPLEMENTAL DATA

Other ID:
CENSUS TRAC 2632
SURVEY #

GIS ID: | ASSOC PID#

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
VAC RS LN	5-1	563,900	394,800
FOREST	6-2	4,091,600	245,500
	Total	4,655,500	640,300

6031
CORNWALL, CT

VISION

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
CONNECTICUT STATE OF	043/ 472	10/01/1963				

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2015	5-1	394,800	2010	5-1	656,310	2007	5-1	8,802,990
2015	6-2	133,000	2010	6-2	194,350	2007	6-2	193,120
	Total:	527,800		Total:	850,660		Total:	8,996,110

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	0
Appraised Land Value (Bldg)	563,900
Special Land Value	4,091,600
Total Appraised Parcel Value	4,655,500
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	4,655,500

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD NAME	STREET INDEX NAME	TRACING	BATCH
0001/A				

NOTES

LAND FOR SKI AREA
2009 CORR AC PER GIS & DEP

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
6246	09/15/2000	RP	Repair	10,000		0		
6247	09/15/2000	AD	Addition	15,000		0		

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Frontage	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing	Adj. Unit Price	Land Value
1	5-1	VAC LAND	R-5				5.00	AC	336,000.00	0.28	A	1.0000	1.00		0.00	SKI AREA			470,100
1	6-2	FOREST LND	R-5				1,461.30	AC	10,000.00	1.00	0	0.2800	1.00		0.00		490:240		4,091,600
1	5-1	VAC LAND	R-5				6.70	AC	10,000.00	5.00	0	0.2800	1.00		0.00	DEVELOPED SKI SLOPES			93,800

Total Card Land Units: 1,473.00 AC | Parcel Total Land Area: 1473 AC | Total Land Value: 4,655,500

Property Location: GREAT HOLLOW RD *MAP ID:* E06/ 03/ 06E/ / *Bldg Name:* *State Use:* 5-1

Vision ID: 1265 *Account #* 98106020 *Bldg #:* 1 of 1 *Sec #:* 1 *of* 1 *Card* 1 *of* 1 *Print Date:* 08/02/2016 10:14

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Model	00		Vacant

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
5-1	VAC LAND	100

COST/MARKET VALUATION

Adj. Base Rate:	0.00
Replace Cost	0
AYB	
EYB	0
Dep Code	
Remodel Rating	
Year Remodeled	
Dep %	
Functional Obsinc	
External Obsinc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	
Apprais Val	
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
	Ttl. Gross Liv/Lease Area:	0	0			

No Photo On Record

Property Location: 036 TOOMEY RD *MAP ID:* F04/ 01/ / / *Bldg Name:* *State Use:* 2-1

Vision ID: 10 *Account #* 98100011 *Bldg #:* 1 of 1 *Sec #:* 1 *of* 1 *Card* 1 *of* 1 *Print Date:* 09/21/2017 15:18

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Model	00		Vacant

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
2-1V	COMM LND MDL-00	100

COST/MARKET VALUATION

Adj. Base Rate:	0.00
Replace Cost	0
AYB	
EYB	0
Dep Code	
Remodel Rating	
Year Remodeled	
Dep %	
Functional Obsinc	
External Obsinc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	
Apprais Val	
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
FGR1	GARAGE-AVE			L	946	25.00	0		0		100	23,700
SHP2	WORK SHOP			L	936	30.00	0		0		100	28,100
	TOWER EQUI			L	1	25,000.00	2015					25,000

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
	Ttl. Gross Liv/Lease Area:	0	0			

No Photo On Record

CORNWALL, CONN.

Teomey Rd

CELL TOWER

STATE OF CONNECTICUT

WADHAMS

CONNECTICUT

1

2
50.13 AC

3
68.66 AC

STATE OF CONNECTICUT
1
32.638 AC

15.047 AC
SEE MAP E 4

CLARK RD

STATE OF CONNECTICUT
P/O F4-1-1
14.392 AC

5
28.86 AC

CLARK POND

CAMP MOHAWK
Y.M.C.A.

4
31 AC

MOHAWK POND
STATE OF CONNECTICUT

P/O E6 - 3 - 6

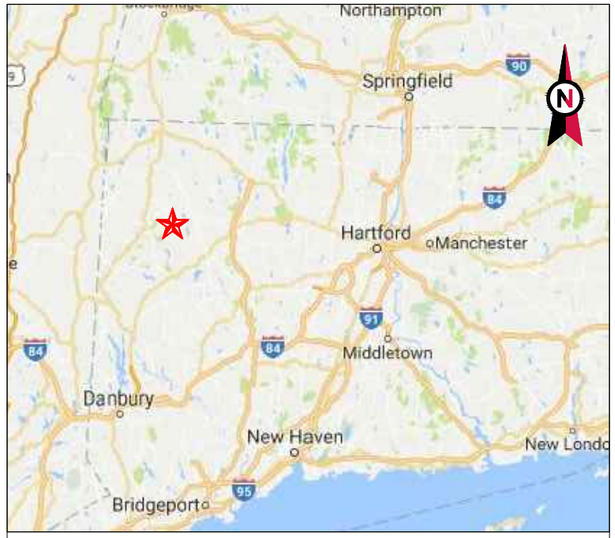
ROAD

GOSHEN

PREPARED UNDER THE DIRECTION OF
THE CORNWALL BOARD OF ASSESSORS
BY AVIS AIRMAP INC., BRAINTREE, MASS.

200 0 200 400 600 FEET

E5 F5
E4 F4



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: CORNWALL CT
SITE NUMBER: 88009
SITE ADDRESS: 36 TOOMEY RD
CORNWALL, CT 06759

LOCATION MAP

SHARED GENERATOR PROGRAM
ADDITIONAL TENANT

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE
PHONE: (877) 659-6326

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

36 TOOMEY RD
CORNWALL, CT 06759
COUNTY: LITCHFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.82130278

LONGITUDE: -73.29644167

GROUND ELEVATION: 1678' AMSL

ZONING INFORMATION:

JURISDICTION: LITCHFIELD COUNTY

PROJECT TEAM

ATC REGIONAL NETWORK DEVELOPMENT PROJECT MANAGER:
GREG CSAPO
(919) 749-6927

ATC NETWORK OPERATIONS CENTER:
(877) 518-6937

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

PROPERTY OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEERED BY:

ATC TOWER SERVICES
3500 REGENCY PARKWAY SUITE 100
CARY, NC 27518

PROJECT DESCRIPTION

THE PROPOSED PROJECT INSTALLS AN AUTOMATIC TRANSFER SWITCH AND REMOTE MONITORING COMMUNICATIONS CIRCUITRY, TO AN EXISTING GENERATOR OPTIONAL STANDBY SYSTEM FOR A COMMUNICATION TOWER TENANT.

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM HARTFORD, CT:

TAKE I-84 WEST TO RT 4 WEST. FOLLOW RT 4 TO GOSHEN, CT. GO PAST THE GOSHEN MOTEL AND TAKE A LEFT ONTO ALLYN ROAD. ALLYN ROAD WILL TURN INTO MOWHAWK MOUNTAIN ROAD WHERE THE STATE FOREST BEGINS. FOLLOW THIS TO THE TOP OF THE MOUNTAIN. ATC TOWER IS THE FIRST ONE ON THE LEFT AT THE TOP.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	01/08/19	MG
G-002	GENERAL NOTES	0	01/08/19	MG
C-101	SITE PLAN	0	01/08/19	MG
C-501	TRENCHING AND H-FRAME DETAILS	0	01/08/19	MG
E-601	ELECTRICAL ONE-LINE	0	01/08/19	MG

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MG	01/08/19

ATC SITE NUMBER:
88009

ATC SITE NAME:
CORNWALL CT

SITE ADDRESS:
36 TOOMEY RD
CORNWALL, CT 06759

SEAL:

T-Mobile

DRAWN BY:	MG
APPROVED BY:	PPB
DATE DRAWN:	01/08/19
ATC JOB NO:	12643567

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ATC CM PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE ATC CM PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE ATC CM, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE ATC CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE ATC CONSTRUCTION MANAGER IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH ATC WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH ATC CM TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH ATC CONSTRUCTION MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY ATC. ALL REQUIRED PERMITS NOT OBTAINED BY ATC MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH ATC SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ATC FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO ATC SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY ATC CM A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE ATC CM. ANY WORK FOUND BY THE ATC CM TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY ATC CM PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-5" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C150, TYPE 2
REINFORCEMENT:	ASTM A185, PLAIN STEEL WELDED WIRE FABRIC
REINFORCEMENT BARS:	ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE:	ASTM C33
WATER:	ASTM C 94/C 94M
ADMIXTURES:	
-WATER-REDUCING AGENT:	ASTM C 494/C 494M, TYPE A
-AIR-ENTERING AGENT:	ASTM C 260/C 260M
-SUPERPLASTICIZER:	ASTM C494, TYPE F OR TYPE G
-RETARDING:	ASTM C 494/C 494M, TYPE B

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ATC CM APPROVAL WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. DO NOT ALLOW REINFORCEMENT, CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 3 DAYS AFTER PLACEMENT.
14. FOR COLD-WEATHER(ACI 306) AND HOT-WEATHER(ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
15. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
16. UNLESS OTHERWISE NOTED:
    A. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615/A 615M/A-996, GRADE 60.
    B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
17. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
18. REINFORCING BAR DEVELOPMENT LENGTHS, AS COMPUTED IN ACCORDANCE WITH ACI 318, FORM THE BASIS FOR BAR EMBEDMENT LENGTHS AND BAR SPLICED LENGTHS SHOWN IN THE DRAWINGS. APPLY APPROPRIATE MODIFICATION FACTORS FOR TOP STEEL, BAR SPACING, COVER AND THE LIKE.
19. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
20. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
21. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
22. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
23. BAR SUPPORTS SHALL BE ALL-GALVINIZED METAL WITH PLASTIC TIPS.
24. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
25. SLAB ON GROUND:
    A. COMPACT SUBGRADE AND ENSURE THERE IS PLACE 6" GRAVEL BENEATH SLAB.
    B. PROVIDE VAPOR BARRIER BENEATH SLAB ON GROUND.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
    A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
    B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
    C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
    D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
    E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
    A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
    B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
    C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
    D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
    E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
    F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
    G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MG	01/08/19

ATC SITE NUMBER:
88009

ATC SITE NAME:
CORNWALL CT

SITE ADDRESS:
36 TOOMEY RD
CORNWALL, CT 06759

SEAL:

T-Mobile

DRAWN BY:	MG
APPROVED BY:	PPB
DATE DRAWN:	01/08/19
ATC JOB NO:	12643567

GENERAL NOTES

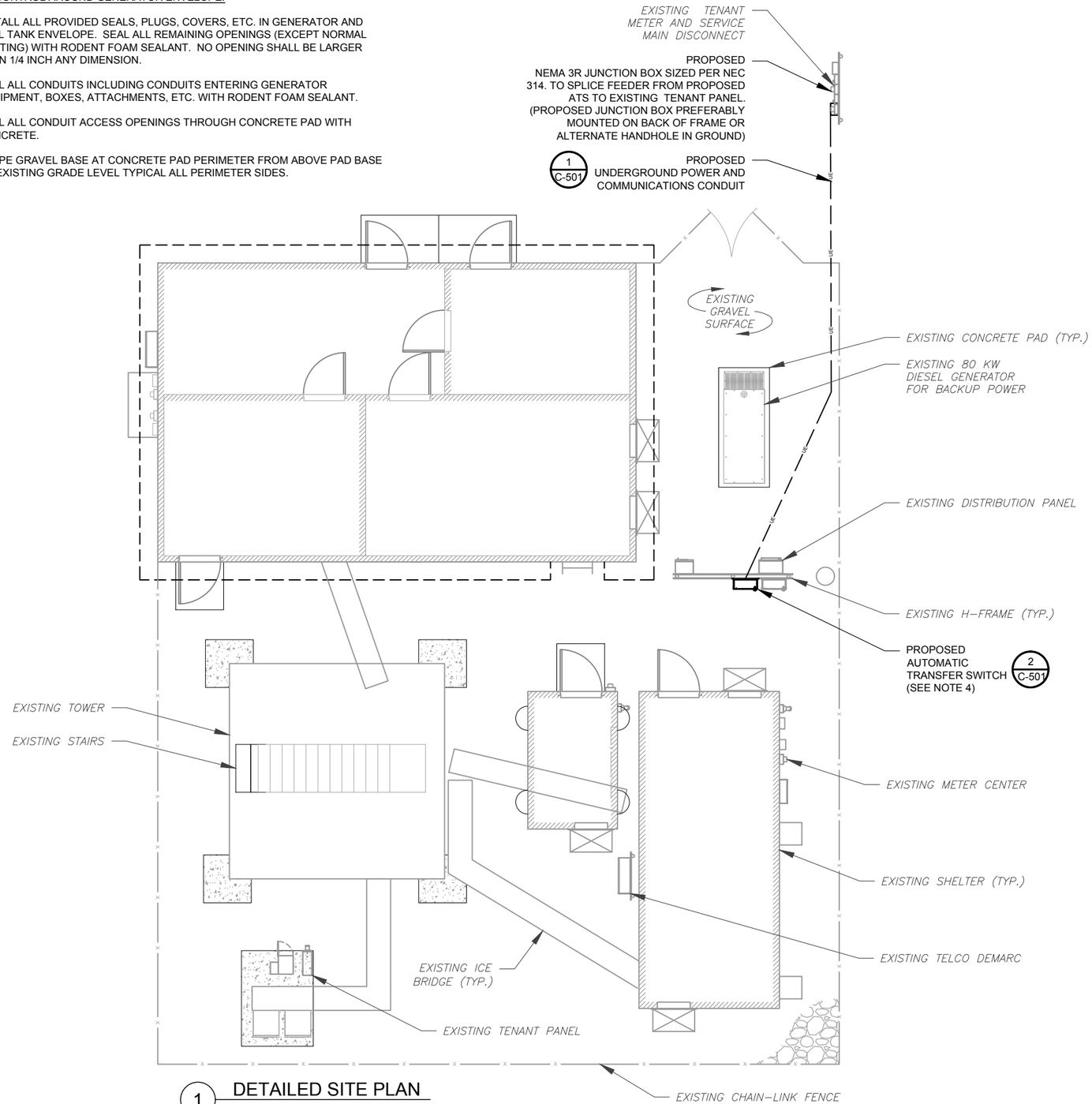
SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ATC CONSTRUCTION MANAGER AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
4. CONTRACTOR SHALL INSURE THAT ALL WORKING SPACE REQUIREMENTS ARE MET PER APPLICABLE CODES AND MANUFACTURER SPECIFICATIONS.
5. ABOVE GROUND CONDUITS NEED TO BE SUPPORTED/FASTENED PER NEC 344 AND PER ATC MASTER SPECIFICATIONS.
6. THE FOLLOWING SIGNS SHALL BE INSTALLED AT TENANT SERVICE MAIN DISCONNECT PER NEC 702.7.
   - 6.1. "CAUTION: TWO SOURCES OF SUPPLY STANDBY GENERATOR LOCATED OUTDOORS"
   - 6.2. "WARNING: SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE IS ENERGIZED"

RODENT CONTROL AROUND GENERATOR ENVELOPE:

1. INSTALL ALL PROVIDED SEALS, PLUGS, COVERS, ETC. IN GENERATOR AND FUEL TANK ENVELOPE. SEAL ALL REMAINING OPENINGS (EXCEPT NORMAL VENTING) WITH RODENT FOAM SEALANT. NO OPENING SHALL BE LARGER THAN 1/4 INCH ANY DIMENSION.
2. SEAL ALL CONDUITS INCLUDING CONDUITS ENTERING GENERATOR EQUIPMENT, BOXES, ATTACHMENTS, ETC. WITH RODENT FOAM SEALANT.
3. SEAL ALL CONDUIT ACCESS OPENINGS THROUGH CONCRETE PAD WITH CONCRETE.
4. SLOPE GRAVEL BASE AT CONCRETE PAD PERIMETER FROM ABOVE PAD BASE TO EXISTING GRADE LEVEL TYPICAL ALL PERIMETER SIDES.



1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

APPROXIMATE TRENCH LENGTHS	
40'	LINEAR DISTANCE FROM STANDBY GENERATOR TO POWER SOURCE

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T-Mobile

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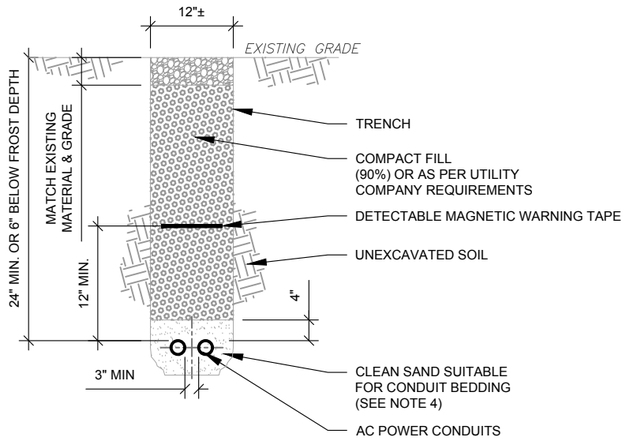
APPROVED BY:	PPB
DATE DRAWN:	01/08/19
ATC JOB NO:	12643567

SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0



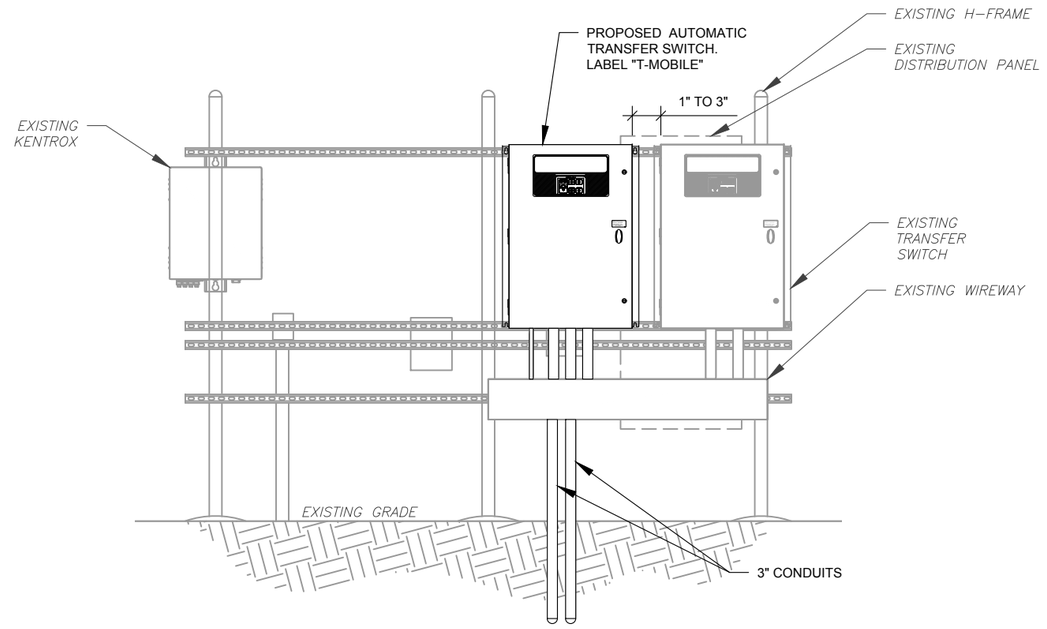
TRENCH NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL.
2. COMPACT IN 8" LIFTS USING A MECHANICAL PLATE TAMPER, MIN 3 PASSES. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING. SEE ATC MASTER SPEC 312000 SECTION 3.15.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

1 AC POWER CONDUIT TRENCH

SCALE: N.T.S.

3 EXISTING H-FRAME



H-FRAME NOTES:

1. IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST SHALL BE REQUIRED.
2. PROPOSED UNISTRUTS TO BE FIELD CUT AND SHALL NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
3. SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
4. UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
5. ALL PROPOSED HARDWARE TO BE MOUNTED AND GROUNDED PER MANUFACTURERS SPECS
6. ALL ITEMS ARE PROPOSED UNLESS OTHERWISE NOTED.
7. LAYOUT H-FRAME & PROPOSED EQUIPMENT EXACTLY AS SHOWN TO ALLOW FOR FUTURE EQUIPMENT. ANY DEVIATIONS MUST BE APPROVED BY ATC CM, IN WRITING, NO EXCEPTIONS.
8. FOOTINGS SHALL BE ONE OF THE FOLLOWING: USS POLECRETE STABILIZER SYSTEM, PRECAST CONCRETE (WHERE ALLOWED BY JURISDICTION) OR CAST IN PLACE. FOR PRECAST FOOTINGS, CONTRACTORS SHALL THOROUGHLY COMPACT THE PERIMETER (2' MIN) OF FOOTING WITH MECHANICAL PLATE TAMPER.

2 H-FRAME

SCALE: N.T.S.

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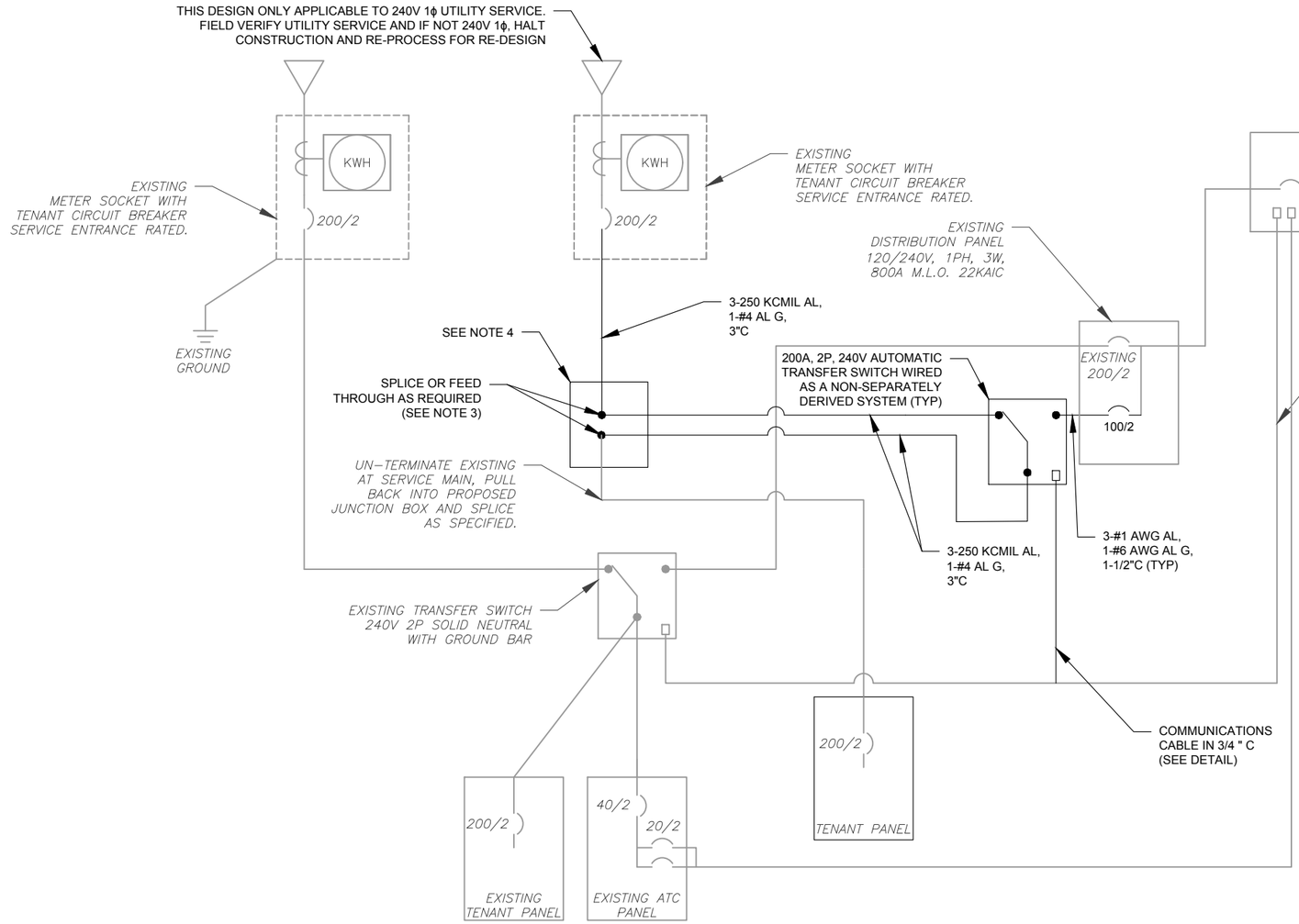
TRENCHING AND
H-FRAME DETAILS

SHEET NUMBER:	REVISION:
C-501	0

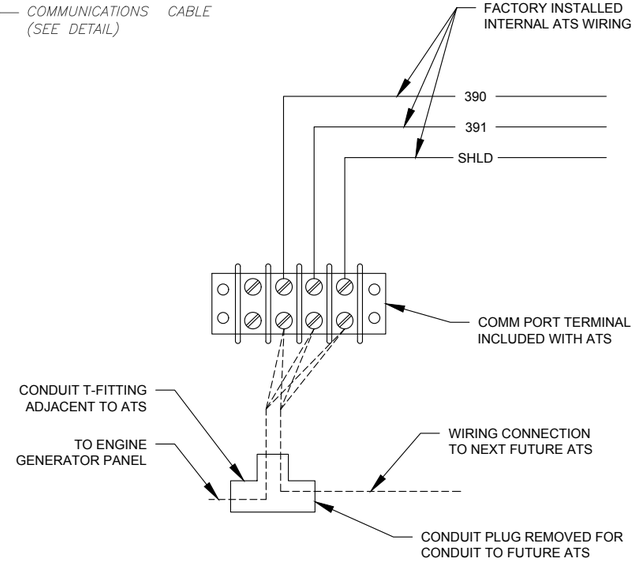


ONE-LINE NOTES:

1. CONNECT CT'S PER HTS OWNERS MANUAL-SECTION 3.11.2 INSTRUMENT PACKAGE
2. SPLICE WITH "POLARIS" TAPS OR APPROVED EQUAL, SECURELY WRAPPED WITH COMMERCIAL GRADE NYLON ELECTRICAL TAPE AFTER INSTALLATION IS COMPLETE.
3. UTILIZE EXISTING ENCLOSURES FOR SPLICING (PER NEC 312.8) OR INSTALL NEW JUNCTION BOX AS APPLICABLE PER SITE CONDITIONS AND CODES. SIZE JUNCTION BOX AS PER NEC 314.28
4. IF TAPPING AT TENANT EQUIPMENT, NO TAPS MAY BE MADE WITHIN THEIR EXISTING EQUIPMENT, INCLUDING PPC.

1 ELECTRICAL ONE-LINE DIAGRAM

SCALE: NOT TO SCALE



NOTES:

1. COMMUNICATION WIRING SHALL BE 2-CONDUCTOR WITH SHIELD, BELDEN #9460 OR EQUAL.
2. COMMUNICATION WIRING SHALL BE INSTALLED IN SEPARATE CONDUITS FROM AC POWER AND CONTROL.
3. CONNECT SHIELD, SHLD, AT EACH ATS, BUT DO NOT CONNECT THE SHIELD AT THE ENGINE GENERATOR.
4. SET DIP SWITCHES IN ATS AS FOLLOWS, OR AS SUPERSEDED BY THE ATS INSTALLATION MANUAL:
   a. DIP SWITCH 1
      1) SWITCHES 1-3 AS PER INSTALLATION MANUAL PER VOLTAGE/PHASE OF SYSTEM.
      2) SWITCH 6 ON FOR 3-PHASE, OFF FOR 1-PHASE.
      3) SWITCH 7-8 TO ESTABLISH THE MODBUS ADDRESS OF THE ATS PER INSTALLATION MANUAL. 1ST ATS SHALL BE MODBUS ADDRESS 240, 2ND ADDRESS 241, 3RD ADDRESS 242, AND 4TH ADDRESS 243.
   b. DIP SWITCH 2
      1) SWITCH 1 ON FOR 60 HZ SYSTEM.
      2) SWITCHES 2-6 NO FUNCTION.
      3) SWITCHES 7-8 OFF-OFF FOR 4800 BAUD RATE.

2 COMMUNICATIONS CABLE DETAIL

SCALE: NOT TO SCALE

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MG	01/08/19

ATC SITE NUMBER:
88009

ATC SITE NAME:
CORNWALL CT

SITE ADDRESS:
36 TOOMEY RD
CORNWALL, CT 06759

SEAL:

T-Mobile

DRAWN BY:	MG
APPROVED BY:	PPB
DATE DRAWN:	01/08/19
ATC JOB NO:	12643567

ELECTRICAL ONE-LINE

SHEET NUMBER:	REVISION:
E-601	0

From: TrackingUpdates@fedex.com
Sent: Monday, March 04, 2019 10:43 AM
To: David Hoogasian
Subject: FedEx Shipment 774565816334 Delivered

Your package has been delivered

Tracking # 774565816334

Ship date:
Thu, 2/28/2019

David Hoogasian
NB+C
CHELMSFORD, MA 01824
US

Delivered

Delivery date:
Mon, 3/4/2019 10:37 am

David Colbert
26 Pine Street
CORNWALL, CT 06753
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	774565816334
Status:	Delivered: 03/04/2019 10:37 AM Signed for By: V.DEAVENA
Reference:	100510
Signed for by:	V.DEAVENA
Delivery location:	CORNWALL, CT
Delivered to:	Receptionist/Front Desk
Service type:	FedEx 2Day®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	0.50 lb.
Special handling/Services:	Adult Signature Required
	Deliver Weekday
Standard transit:	3/4/2019 by 4:30 pm

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:43 AM CST on 03/04/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.

From: TrackingUpdates@fedex.com
Sent: Monday, March 04, 2019 10:44 AM
To: David Hoogasian
Subject: FedEx Shipment 774565712027 Delivered

Your package has been delivered

Tracking # 774565712027

Ship date:
Thu, 2/28/2019

David Hoogasian
NB+C
CHELMSFORD, MA 01824
US

Delivered

Delivery date:
Mon, 3/4/2019 10:40 am

Gordon M. Ridgway, First Selectman
26 Pine Street
CORNWALL, CT 06753
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	774565712027
Status:	Delivered: 03/04/2019 10:40 AM Signed for By: G.HART
Reference:	100510
Signed for by:	G.HART
Delivery location:	CORNWALL, CT
Delivered to:	Receptionist/Front Desk
Service type:	FedEx 2Day®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	0.50 lb.
Special handling/Services:	Adult Signature Required
	Deliver Weekday
Standard transit:	3/4/2019 by 4:30 pm

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:43 AM CST on 03/04/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.

From: TrackingUpdates@fedex.com
Sent: Monday, March 04, 2019 10:07 AM
To: David Hoogasian
Subject: FedEx Shipment 774565861750 Delivered

Your package has been delivered

Tracking # 774565861750

Ship date:
Thu, 2/28/2019

David Hoogasian
NB+C
CHELMSFORD, MA 01824
US

Delivered

Delivery date:
Mon, 3/4/2019 10:04 am

State of Connecticut
79 Elm Street
HARTFORD, CT 06134
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	774565861750
Status:	Delivered: 03/04/2019 10:04 AM Signed for By: M.FERRARI
Reference:	100510
Signed for by:	M.FERRARI
Delivery location:	HARTFORD, CT
Delivered to:	Receptionist/Front Desk
Service type:	FedEx 2Day®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	0.50 lb.
Special handling/Services:	Adult Signature Required
	Deliver Weekday
Standard transit:	3/4/2019 by 4:30 pm

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:06 AM CST on 03/04/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.

David Hoogasian

From: TrackingUpdates@fedex.com
Sent: Friday, March 01, 2019 9:59 AM
To: David Hoogasian
Subject: FedEx Shipment 774552005791 Delivered

Your package has been delivered

Tracking # 774552005791

Ship date:
Thu, 2/28/2019

David Hoogasian
NB+C
CHELMSFORD, MA 01824
US

Delivery date:
Fri, 3/1/2019 9:54 am

American Tower Corporation
American Tower Corporation
10 Presidential Way
WOBURN, MA 01801
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	774552005791
Status:	Delivered: 03/01/2019 09:54 AM Signed for By: P.ANCRI
Reference:	100510
Signed for by:	P.ANCRI
Delivery location:	WOBURN, MA
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Standard Overnight®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	0.50 lb.
Special handling/Services:	Adult Signature Required
	Deliver Weekday
Standard transit:	3/1/2019 by 3:00 pm

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.

From: TrackingUpdates@fedex.com
To: Katherine Benson
Subject: FedEx Shipment 777569092501 Delivered
Date: Friday, January 24, 2020 9:38:45 AM

FedEx®

Your package has been delivered

Tracking # 777569092501

Ship date:
Wed, 1/22/2020

Katie Benson
Smartlink LLC
North Billerica, MA 01862
US

Delivered

Delivery date:
Fri, 1/24/2020 9:37 am

Karen Nelson-Zoning Enforcement
TOWN OF CORNWALL
26 PINE ST
CORNWALL, CT 06753
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777569092501
Status:	Delivered: 01/24/2020 09:37 AM Signed for By: Signature Not Req
Reference:	CTL01025
Signed for by:	Signature Not Req
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	1/23/2020

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:38 AM CST on 01/24/2020.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date the package should be delivered by, based on the selected service, destination, and ship date. Limitations and exceptions may apply.Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

Thank you for your business.