

CONNECTICUT SITING COUNCIL

SUB-PETITION OF NEW CINGULAR WIRELESS)
PCS, LLC ("AT&T") TO THE CONNECTICUT)
SITING COUNCIL FOR MODIFICATION AND)
EXTENSION OF AN EXISTING WIRELESS) SUB-PETITION NO. ____
TELECOMMUNICATIONS FACILITY AT)
442 NORTH STREET IN GOSHEN,) MAY 23, 2019
CONNECTICUT)

SUB-PETITION FOR DECLARATORY RULING TO APPROVE ELIGIBLE FACILITIES REQUEST FOR MODIFICATION AND EXTENSION OF AN EXISTING WIRELESS TELECOMMUNICATIONS FACILITY AT 442 NORTH STREET, GOSHEN, CONNECTICUT

I. Introduction

New Cingular Wireless PCS, LLC ("AT&T"), is applying for administrative approval of a needed modification with an extension of an existing facility pursuant to Section 6409(a) of the Spectrum Act and published FCC guidance in the form of the October 14, 2014 Report and Order referenced as FCC-14-153. AT&T hereby petitions the Connecticut Siting Council ("Council") to modify the existing wireless telecommunication facility at 442 North Street, Goshen, Connecticut (the "Site"). More specifically AT&T is proposing to collocate on the existing 150-foot tower by extending it fifteen (15) feet, attaching six (6) new antennas and installing associated equipment within the existing fenced equipment compound. None of this work represents a substantial change to the existing tower.

II. Existing Facility and Site Background

The Site consists of a one hundred fifty (150) foot monopole owned by Cellco Partnership d/b/a/ Verizon Wireless and managed by America Tower Corporation, and associated facilities for T-Mobile and Verizon. A chain link fence surrounds the Site. The property is undeveloped and is surrounded by forested lands. Several single-family residences exist further west of the Site.

On December 14, 2007 (Docket No. 337), the Council approved Verizon's request for a Certificate of Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility at the Site. On February 21, 2014, the Council issued a Decision approving AT&T's tower share request to co-locate on the existing monopole at the approximately 137-foot level of the tower (No. TS-AT&T-055-140128). Subsequent to said Tower Share Decision, AT&T did not install the approved equipment. Verizon and T-Mobile installed their facilities at the 149-foot and 138-foot levels of the tower, respectively. Thus, AT&T does not currently operate a facility on the tower. The Council has previously issued acknowledgments of exempt modifications for the existing facility with the most recent being on March 28, 2019 (No. TS-T-MOBILE-055-18031). Copies of prior Council decisions are included in Attachment 4.

III. Proposed Modification

AT&T plans to extend the tower by fifteen (15) feet using a new monopole extension. AT&T will add six (6) new KMW-EPBQ-654L8H8-L2 model antennas that will be mounted to the extended tower at a centerline height of approximately 160 feet AGL. Additionally, AT&T will install nine (9) new remote radio units ("RRUs") onto this new extension. Associated equipment, including a walk-in equipment cabinet will be located on a 12' x 20' concrete equipment pad at the base of the tower. Site drawings for the proposed modification are included in Attachment 7. The equipment will include a Kohler 20REOZK-C diesel generator as a back-up power source for AT&T's facility. Specifications of the generator are provided in Attachment 6. A Structural Modification Report confirming that the tower can accommodate AT&T's proposed modification is included in Attachment 2.

IV. The Modification Does Not Represent a Substantial Change to the Physical Dimensions of the Existing Base Station and is an Eligible Facilities Request

Section 6409 requires that within 60 days of submission, a state or local agency must approve an "eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station". Section 6409 and the FCC Order provide that a modification does not "substantially change" the physical dimensions of a tower if it meets the following criteria:

- A. Modification does not increase the height by more than 10% or 20 feet, whichever is greater. The proposed extension requires only a fifteen (15) foot extension and is within the Section 6409 Criteria.
- B. Modification does not protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; for those towers in the rights-of-way and for all base stations, it must not protrude from the edge of the structure more than six feet. The modification is for an extension of the monopole tower, requires no additional protrusion and will continue to have the same overall silhouette as the existing facility.
- C. Proposal does not involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets. One new equipment cabinet is proposed for the installation of AT&T's new facility.
- D. Proposal does not require excavation or deployment outside the current site of the tower or base station. The proposed 12' x 20' equipment area is located within the existing fenced-in equipment compound area at the base of the tower. No new excavation outside of the tower site is proposed or required for this modification.
- E. The collocation does not defeat the existing concealment elements of the tower or base station. The existing tower does not incorporate concealment elements.
- F. The proposal complies with conditions associated with the prior approval of the tower or base station and any non-compliance is due to an increase in height, increase in width, addition of cabinets, or new excavation that does not exceed the corresponding "substantial change" thresholds. The tower will be raised above the height previously approved by the Council but within the parameters allowed under Section 6409. Further, Condition 1 of the Council's Certificate (Docket No. 337) to Verizon for construction of the facility requiring panel antennas to be installed using T-arm mounts was modified on March 28, 2019 to permit other types of antenna mounts to be used at the facility to

increase opportunities for tower sharing. See Docket Nos, 337 & TS-T-MOBILE-055-18031 included in Attachment 4. Therefore, AT&T's proposed tri-collar mount panel antennas are in compliance with the conditions associated with the prior approval of the tower.

In light of the foregoing, AT&T's proposal constitutes an "eligible facilities request" under Section 6409 as it is a "collocation of new transmission equipment" at an existing facility and does not constitute a substantial change to the physical dimensions of the existing facility.

V. Compliance with FCC MPE Limits

The facility will be within 11.43% of the Federal and State emission standards for the general public. A copy of the RF Power Density assessment completed by C2 Systems and dated April 23, 2019 is included in Attachment 3. As such, the total radio frequency power density will be well within standards adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and the Maximum Permissible Exposure ("MPE") limits established by the Federal Communications Commission for the public.

VI. Notice

Pursuant to Petition 1133, a notice letter and a copy of this Sub-Petition was provided to the Town of Goshen and the abutting property owners. Copies of this correspondence may be found in Attachments 5.

VII. Conclusion

It is respectfully submitted that AT&T's proposal satisfies the criteria of Section 6409, while also enhancing wireless communication services to the community and enabling users to access a state-of-the-art, digital system for voice communications, messaging, and data transmission and reception.

Respectfully Submitted,



Kristen Motel

On behalf of AT&T

cc: Town of Goshen
Abutting Property Owners
AT&T
SAI Communications, Inc.
Lucia Chiocchio, Esq.

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LETTER OF AUTHORIZATION

ATC SITE # / NAME: 413850/Goshen (Brass Mountain) CT
SITE ADDRESS: 438 North Street, Goshen, CT 06756-1206
LICENSEE: New Cingular Wireless PCS, LLC, AT&T Mobility

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

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

Signature:

Print Name: Margaret Robinson
Senior Counsel
American Tower*

NOTARY BLOCK

Commonwealth of MASSACHUSETTS
County of Middlesex

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

WITNESS my hand and official seal, this 24th day of April, 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

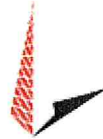
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CORPORATION

This report was prepared for American Tower Corporation by



**T O W E R
ENGINEERING
PROFESSIONALS**

Structural Analysis Report

Structure : 149 ft Monopole with proposed 15 ft extension
ATC Site Name : Goshen (Brass Mountain) CT, CT
ATC Site Number : 413850
Engineering Number : OAA742307_C3_05
Proposed Carrier : AT&T Mobility
Carrier Site Name : Goshen
Carrier Site Number : CT1453
Site Location : 438 North Street
Goshen, CT 06756-1206
41.856300,-73.241600
County : Litchfield
Date : February 7, 2019
Max Usage : 100%
Result : Pass - Pending Extension

Prepared By:
Bobby L. McCarn
TEP

Bobby L. McCarn

Reviewed By:



02/08/2019

COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 149 ft monopole with proposed 15 ft extension to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	EEI Project #15244, dated February 6, 2008
Foundation Drawing	EEI Project #15244, dated January 23, 2008
Geotechnical Report	JGI Project #J2075429, dated January 17, 2008

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:	236 ft
Spectral Response:	$S_s = 0.18$, $S_1 = 0.06$
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.

The design of the extension will be done in a future service.

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
149.0	3	Nokia AirScale RRH 4T4R B5 160W AHCA	T-Arm with Platform	(2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	VERIZON WIRELESS
	1	RFS DB-C1-12C-24AB-0Z			
	3	Alcatel-Lucent B25 RRH4x30			
	3	Alcatel-Lucent B13 RRH4x30-4R			
	3	Alcatel-Lucent B66A RRH 4x45			
	6	Amphenol Antel LPA-80080-6CF-EDIN-2			
	6	Commscope JAHH-65B-R3B			
	1	VZW Unused Reserve: 15,011 sq in			
138.0	8	Ericsson Radio 4449 B12,B71	Platform with Handrails	(4) 1 1/4" (1.25"-31.8mm) Fiber (1) 1/2" Coax	T-MOBILE
	1	RFS SC2-W100AB			
	4	Ericsson AIR 32 B2A/B66A			
	4	RFS APXVAARR24_43-U-NA20			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
No loading was considered as removed as part of this analysis.					

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
160.0	1	Raycap DC6-48-60-0-8C-EV	Sabre C10857001C Sector Frames w/ modifications	(2) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (3) 2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 8843 B2, B66A			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	2	Raycap DC6-48-60-18-8C			
	6	KMW EPBQ-654L8H8-L2			

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

Install proposed lines inside the pole shaft.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	53%	Pass
Shaft	91%	Pass
Base Plate	70%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	4,230.7	4,231.5	100%
Shear (Kips)	38.7	36.0	93%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
160.0	Raycap DC6-48-60-0-8C-EV	AT&T MOBILITY	3.223	2.193
	Ericsson RRUS 8843 B2, B66A			
	Ericsson RRUS 4449 B5, B12			
	Ericsson RRUS 4478 B14			
	Raycap DC6-48-60-18-8C			
	KMW EPBQ-654L8H8-L2			
138.0	RFS SC2-W100AB	T-MOBILE	2.393	2.095

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



Standard Conditions

All engineering services 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

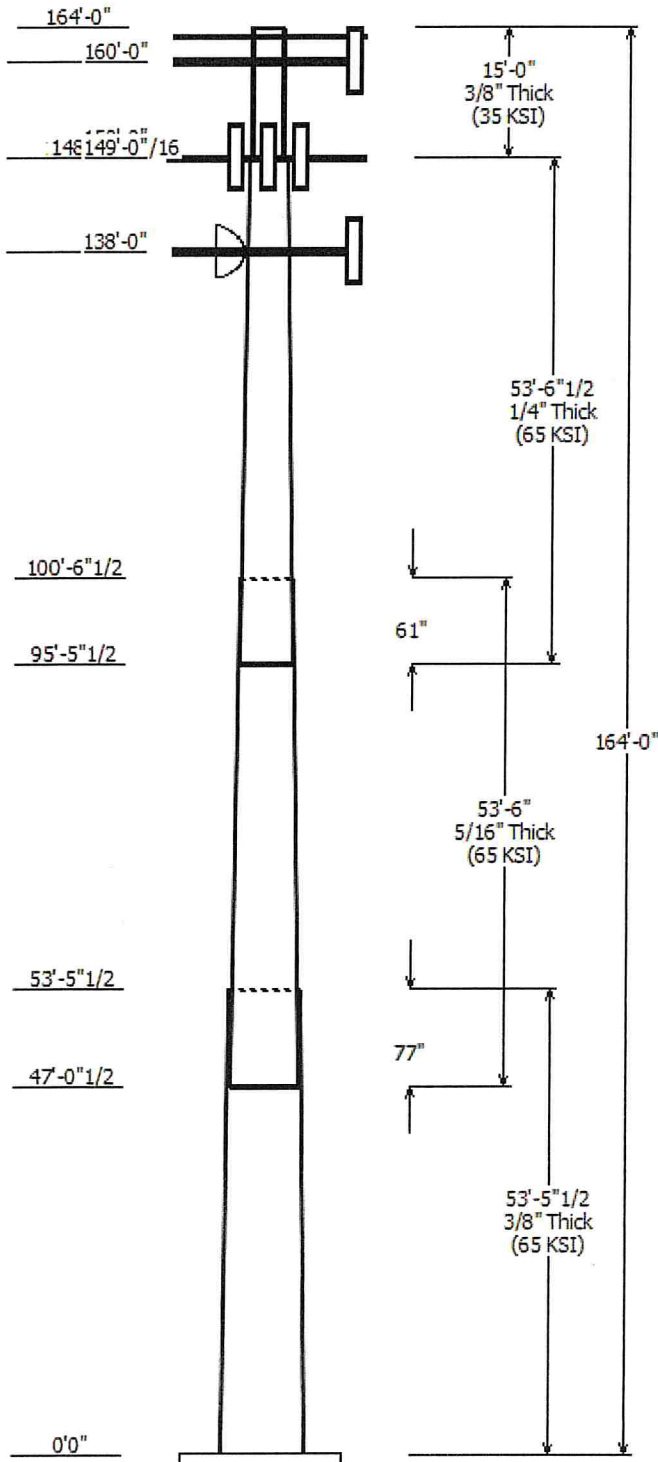
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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.

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Job Information

Pole : 413850 Code: ANSI/TIA-222-G
 Location : Goshen (Brass Mountain) CT, CT
 Description : 149 ft EEI Monopole w/ 15' Extension
 Client : AT&T MOBILITY Struct Class : II
 Shape : 18 Sides Exposure : B
 Height : 164.00 (ft) Topo : 3
 Base Elev (ft): 0.00
 Taper: 0.229027(in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom				
1	53.460	44.75	57.00	0.375		0.000	18 Sides 65
2	53.500	34.59	46.85	0.313	Slip Joint	77.000	18 Sides 65
3	53.540	24.00	36.26	0.250	Slip Joint	61.000	18 Sides 65
4	15.000	20.00	20.00	0.375	Butt Joint	0.000	Round 35

Discrete Appurtenance

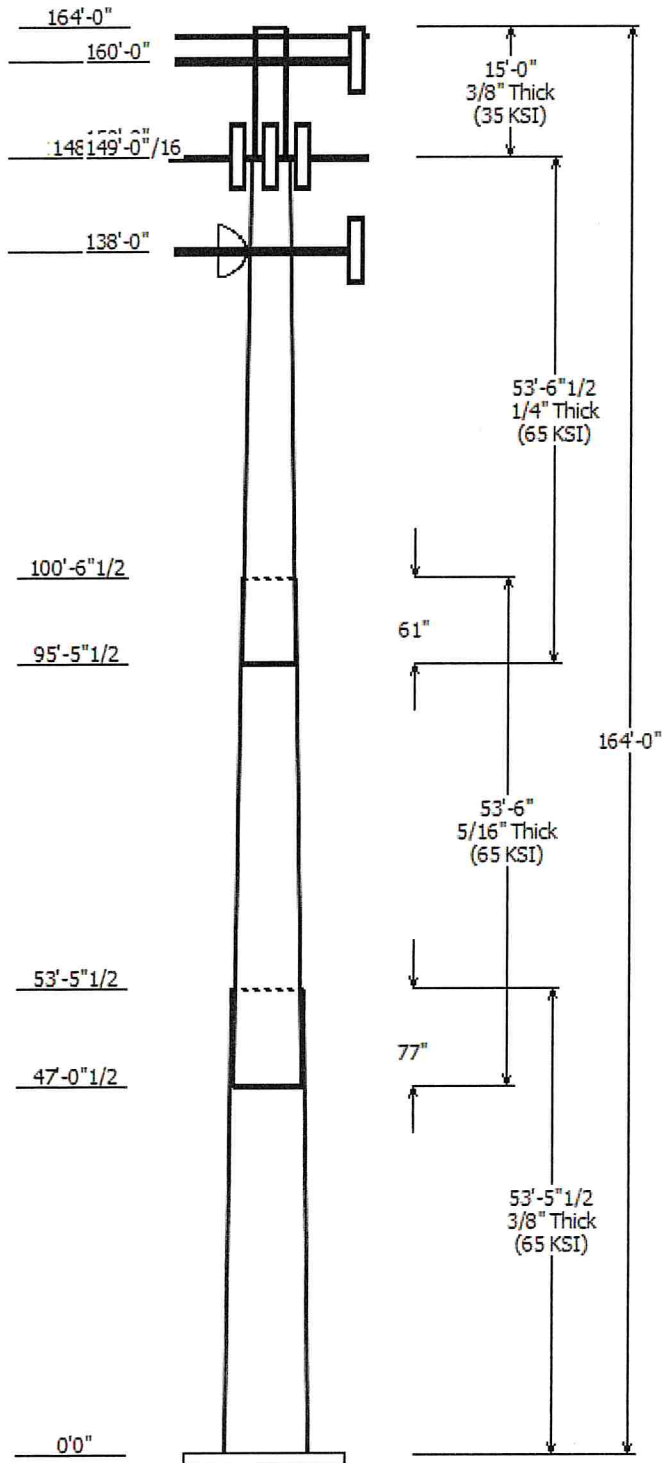
Attach Elev (ft)	Force Elev (ft)	Qty	Description
160.000	160.000	3	Round Sector Frame
160.000	160.000	6	KMW EPBQ-654L8H8-L2
160.000	160.000	2	Raycap DC6-48-60-18-8C
160.000	160.000	3	Ericsson RRUS 4478 B14
160.000	160.000	3	Ericsson RRUS 4449 B5, B12
160.000	160.000	3	Ericsson RRUS 8843 B2, B66A
160.000	160.000	1	Raycap DC6-48-60-0-8C-EV
150.000	150.000	1	RFS DB-C1-12C-24AB-0Z
150.000	150.000	3	Nokia AirScale RRH 4T4R B5 160
149.000	149.000	1	VZW Unused Reserve: 15011
149.000	149.000	6	Commscope JAHH-65B-R3B
149.000	149.000	6	Amphenol Antel LPA-80080-
149.000	149.000	3	Alcatel-Lucent B66A RRH 4x45
149.000	149.000	3	Alcatel-Lucent B13 RRH4x30-4R
149.000	149.000	3	Alcatel-Lucent B25 RRH4x30
148.900	148.900	3	Flat T-Arm w/ Platform
138.000	138.000	1	Flat Platform w/ Handrails
138.000	138.000	4	RFS APXVAARR24_43-U-NA20
138.000	138.000	4	Ericsson AIR 32 B2A/B66A
138.000	138.000	1	RFS SC2-W100AB
138.000	138.000	8	Ericsson Radio 4449 B12,B71

Linear Appurtenance

Elev (ft)		Description	Exposed To Wind
From	To		
0.000	138.0	1 1/4" (1.25")	No
0.000	138.0	1/2" Coax	No
0.000	149.0	1 5/8" Coax	No
0.000	150.0	1 5/8" (1.63")	No
0.000	160.0	0.39" (10mm)	No
0.000	160.0	0.78" (19.7mm) 8	No
0.000	160.0	2" conduit	No

Load Cases

1.2D + 1.6W	90 mph with No Ice
0.9D + 1.6W	90 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method

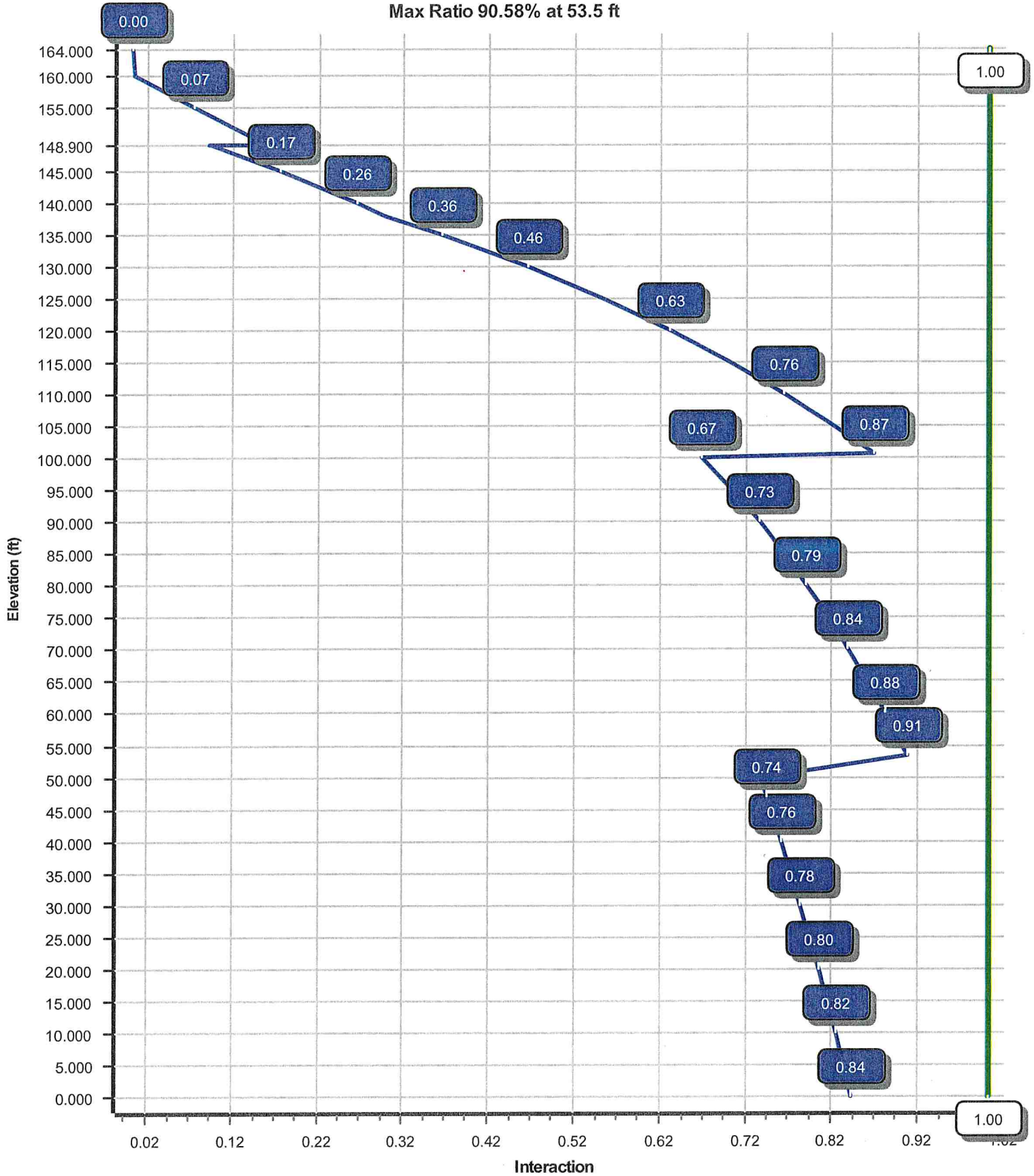


(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	4231.54	36.01	44.40
0.9D + 1.6W	4178.03	35.98	33.28
1.2D + 1.0Di + 1.0Wi	956.70	7.86	82.89
(1.2 + 0.2Sds) * DL + E ELFM	198.33	1.45	44.32
(1.2 + 0.2Sds) * DL + E EMAM	280.25	2.22	44.32
(0.9 - 0.2Sds) * DL + E ELFM	195.23	1.45	30.83
(0.9 - 0.2Sds) * DL + E EMAM	275.66	2.21	30.83
1.0D + 1.0W	1168.34	10.00	37.05

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	138.00	28.717	2.095

Load Case : 1.2D + 1.6W
Max Ratio 90.58% at 53.5 ft



Site Number: 413850	Code: ANSI/TIA-222-G	© 2007 - 2019 by ATC IP LLC. All rights reserved.
Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05		2/7/2019 11:03:37 AM
Customer: AT&T MOBILITY		

Analysis Parameters

Location :	LITCHFIELD County, CT	Height (ft) :	164
Code :	ANSI/TIA-222-G	Base Diameter (in) :	57.00
Shape :	18 Sides. Sect 4: Round	Top Diameter (in) :	20.00
Pole Type :	Custom	Taper (in/ft) :	0.229
Pole Manufacturer :	EEL	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	90 mph
Exposure Category:	B	Design Wind Speed With Ice:	40 mph
Topographic Category:	3	Operational Wind Speed:	60 mph
Crest Height:	236 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.58		
T_L (sec):	6	p :	1.3
S_S :	0.180	S_1 :	0.060
F_a :	1.600	F_v :	2.400
S_{ds} :	0.192	S_{d1} :	0.096
		C_s :	0.030
		C_s Max:	0.030
		C_s Min:	0.030

Load Cases

1.2D + 1.6W	90 mph with No Ice
0.9D + 1.6W	90 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph with 0.75 in Radial Ice
(1.2 + 0.2S _{ds}) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S _{ds}) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S _{ds}) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S _{ds}) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:37 AM

Customer: AT&T MOBILITY

Shaft Section Properties

Slip							Bottom							Top						
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Táper (in/ft)	
1-18	53.460	0.3750	65		0.00	10,935	57.00	0.00	67.40	27302.4	25.04	152.00	44.75	53.46	52.82	13145.4	19.28	119.35	0.229027	
2-18	53.500	0.3125	65	Slip	77.00	7,297	46.85	47.04	46.16	12630.7	24.67	149.92	34.59	100.54	34.01	5050.3	17.76	110.71	0.229027	
3-18	53.540	0.2500	65	Slip	61.00	4,320	36.26	95.46	28.57	4682.0	23.81	145.05	24.00	149.00	18.84	1343.0	15.16	96.00	0.229027	
4-R	15.000	0.3750	35	Butt	0.00	1,180	20.00	149.00	23.12	1113.9	0.00	53.33	20.00	164.00	23.12	1113.9	0.00	53.33	0.000000	
Shaft Weight						23,731														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Distance From Face (ft)	Vert Ecc (ft)	Weight (lb)	No Ice EPAA (sf)	Orientation Factor
160.00	Ericsson RRUS 4449 B5, B12	3	0.000	0.000	71.00	1.970	0.50
160.00	Ericsson RRUS 4478 B14	3	0.000	0.000	59.40	2.020	0.67
160.00	Ericsson RRUS 8843 B2, B66A	3	0.000	0.000	72.00	1.640	0.50
160.00	KMW EPBQ-654L8H8-L2	6	0.000	0.000	86.00	18.090	0.61
160.00	Raycap DC6-48-60-0-8C-EV	1	0.000	0.000	16.00	1.020	1.00
160.00	Raycap DC6-48-60-18-8C	2	0.000	0.000	16.00	2.030	0.70
160.00	Round Sector Frame	3	0.000	0.000	300.00	14.400	0.75
150.00	Nokia AirScale RRH 4T4R B5 160	3	0.000	0.000	35.30	1.290	0.50
150.00	RFS DB-C1-12C-24AB-0Z	1	0.000	0.000	32.00	4.060	1.00
149.00	Alcatel-Lucent B13 RRH4x30-4R	3	0.000	0.000	57.80	2.140	0.67
149.00	Alcatel-Lucent B25 RRH4x30	3	0.000	0.000	53.00	2.120	0.67
149.00	Alcatel-Lucent B66A RRH 4x45	3	0.000	0.000	67.00	2.580	0.67
149.00	Amphenol Antel LPA-80080-6CF-	6	0.000	0.000	21.00	8.630	0.62
149.00	Commscope JAHH-65B-R3B	6	0.000	0.000	60.60	9.110	0.69
149.00	VZW Unused Reserve: 15011 sq i	1	0.000	0.000	1339.10	104.24	1.00
148.90	Flat T-Arm w/ Platform	3	0.000	0.000	300.00	14.400	0.67
138.00	Ericsson AIR 32 B2A/B66A	4	0.000	0.000	143.30	6.870	0.75
138.00	Ericsson Radio 4449 B12,B71	8	0.000	0.000	74.00	1.640	0.50
138.00	Flat Platform w/ Handrails	1	0.000	0.000	2000.00	42.400	1.00
138.00	RFS APXVAARR24_43-U-NA20	4	0.000	0.000	127.90	20.240	0.63
138.00	RFS SC2-W100AB	1	0.000	0.000	22.00	4.800	1.00
Totals	Num Loadings:21	68			9170.00		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Projected Width (in)	Exposed To Wind	Carrier	
0.00	160.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0.00	N	AT&T MOBILITY
0.00	160.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0.00	N	AT&T MOBILITY
0.00	160.00	3	2" conduit	2.38	3.65	N	0.00	N	AT&T MOBILITY
0.00	150.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0.00	N	VERIZON WIRELESS
0.00	149.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	VERIZON WIRELESS
0.00	138.00	4	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0.00	N	T-MOBILE
0.00	138.00	1	1/2" Coax	0.63	0.15	N	0.00	N	T-MOBILE

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:37 AM

Customer: AT&T MOBILITY

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.3750	57.000	67.395	27,302.4	25.04	152.00	72.0	943.4	0.0	0.0
5.00		0.3750	55.855	66.033	25,679.2	24.50	148.95	72.6	905.5	0.0	1,135.1
10.00		0.3750	54.710	64.670	24,121.7	23.96	145.89	73.2	868.4	0.0	1,111.9
15.00		0.3750	53.565	63.307	22,628.5	23.42	142.84	73.9	832.1	0.0	1,088.7
20.00		0.3750	52.419	61.944	21,198.2	22.88	139.79	74.5	796.5	0.0	1,065.5
25.00		0.3750	51.274	60.581	19,829.5	22.35	136.73	75.1	761.7	0.0	1,042.3
30.00		0.3750	50.129	59.218	18,521.0	21.81	133.68	75.8	727.7	0.0	1,019.1
35.00		0.3750	48.984	57.855	17,271.4	21.27	130.62	76.4	694.5	0.0	995.9
40.00		0.3750	47.839	56.492	16,079.3	20.73	127.57	77.0	662.0	0.0	972.7
45.00		0.3750	46.694	55.129	14,943.3	20.19	124.52	77.7	630.3	0.0	949.6
47.04	Bot - Section 2	0.3750	46.226	54.572	14,495.0	19.97	123.27	77.9	617.6	0.0	381.4
50.00		0.3750	45.549	53.766	13,862.2	19.65	121.46	78.3	599.4	0.0	1,006.0
53.46	Top - Section 1	0.3125	45.381	44.701	11,471.5	23.84	145.22	73.4	497.9	0.0	1,158.4
55.00		0.3125	45.029	44.351	11,204.3	23.64	144.09	73.6	490.1	0.0	233.3
60.00		0.3125	43.883	43.215	10,365.3	23.00	140.43	74.4	465.2	0.0	744.9
65.00		0.3125	42.738	42.080	9,569.4	22.35	136.76	75.1	441.0	0.0	725.6
70.00		0.3125	41.593	40.944	8,815.2	21.71	133.10	75.9	417.4	0.0	706.3
75.00		0.3125	40.448	39.808	8,101.8	21.06	129.43	76.6	394.5	0.0	687.0
80.00		0.3125	39.303	38.672	7,427.9	20.41	125.77	77.4	372.2	0.0	667.6
85.00		0.3125	38.158	37.536	6,792.5	19.77	122.10	78.2	350.6	0.0	648.3
90.00		0.3125	37.013	36.401	6,194.3	19.12	118.44	78.9	329.6	0.0	629.0
95.00		0.3125	35.867	35.265	5,632.4	18.47	114.78	79.7	309.3	0.0	609.7
95.46	Bot - Section 3	0.3125	35.762	35.160	5,582.5	18.42	114.44	79.7	307.5	0.0	55.1
100.0		0.3125	34.722	34.129	5,105.5	17.83	111.11	80.4	289.6	0.0	970.3
100.5	Top - Section 2	0.2500	35.098	27.651	4,242.4	22.99	140.39	74.4	238.1	0.0	114.2
105.0		0.2500	34.077	26.841	3,880.4	22.27	136.31	75.2	224.3	0.0	413.2
110.0		0.2500	32.932	25.932	3,499.6	21.46	131.73	76.2	209.3	0.0	448.9
115.0		0.2500	31.787	25.024	3,144.4	20.66	127.15	77.1	194.8	0.0	433.5
120.0		0.2500	30.642	24.115	2,814.2	19.85	122.57	78.1	180.9	0.0	418.0
125.0		0.2500	29.497	23.206	2,507.9	19.04	117.99	79.0	167.5	0.0	402.6
130.0		0.2500	28.352	22.298	2,224.7	18.23	113.41	80.0	154.6	0.0	387.1
135.0		0.2500	27.206	21.389	1,963.7	17.43	108.83	80.9	142.2	0.0	371.6
138.0		0.2500	26.519	20.844	1,817.3	16.94	106.08	81.5	135.0	0.0	215.6
140.0		0.2500	26.061	20.480	1,723.9	16.62	104.24	81.9	130.3	0.0	140.6
145.0		0.2500	24.916	19.572	1,504.5	15.81	99.66	82.6	118.9	0.0	340.7
148.9		0.2500	24.023	18.863	1,346.9	15.18	96.09	82.6	110.4	0.0	255.0
149.0	Top - Section 3	0.2500	24.000	18.845	1,343.0	15.16	96.00	82.6	110.2	0.0	6.4
149.0	Bot - Section 4	0.3750	20.000	23.120	1,113.9	0.00	53.33	35.0	111.4	144.4	
150.0		0.3750	20.000	23.120	1,113.9	0.00	53.33	35.0	111.4	144.4	78.7
155.0		0.3750	20.000	23.120	1,113.9	0.00	53.33	35.0	111.4	144.4	393.4
160.0		0.3750	20.000	23.120	1,113.9	0.00	53.33	35.0	111.4	144.4	393.4
164.0		0.3750	20.000	23.120	1,113.9	0.00	53.33	35.0	111.4	144.4	314.7
											23,731.1

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:37 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

90 mph with No Ice

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		405.3	0.0					0.0	0.0	405.3	0.0	0.0	0.0
5.00		791.9	1,362.1					0.0	162.6	791.9	1,524.7	0.0	0.0
10.00		755.6	1,334.3					0.0	162.6	755.6	1,496.9	0.0	0.0
15.00		721.2	1,306.4					0.0	162.6	721.2	1,469.0	0.0	0.0
20.00		688.5	1,278.6					0.0	162.6	688.5	1,441.2	0.0	0.0
25.00		657.5	1,250.8					0.0	162.6	657.5	1,413.4	0.0	0.0
30.00		635.4	1,222.9					0.0	162.6	635.4	1,385.5	0.0	0.0
35.00		627.0	1,195.1					0.0	162.6	627.0	1,357.7	0.0	0.0
40.00		622.5	1,167.3					0.0	162.6	622.5	1,329.9	0.0	0.0
45.00		435.2	1,139.5					0.0	162.6	435.2	1,302.1	0.0	0.0
47.04	Bot - Section 2	308.0	457.7					0.0	66.4	308.0	524.1	0.0	0.0
50.00		394.0	1,207.2					0.0	96.2	394.0	1,303.4	0.0	0.0
53.46	Top - Section 1	304.7	1,390.1					0.0	112.5	304.7	1,502.6	0.0	0.0
55.00		392.2	280.0					0.0	50.1	392.2	330.1	0.0	0.0
60.00		591.7	893.9					0.0	162.6	591.7	1,056.5	0.0	0.0
65.00		578.7	870.7					0.0	162.6	578.7	1,033.3	0.0	0.0
70.00		565.0	847.5					0.0	162.6	565.0	1,010.1	0.0	0.0
75.00		550.8	824.3					0.0	162.6	550.8	986.9	0.0	0.0
80.00		536.1	801.2					0.0	162.6	536.1	963.8	0.0	0.0
85.00		521.0	778.0					0.0	162.6	521.0	940.6	0.0	0.0
90.00		505.7	754.8					0.0	162.6	505.7	917.4	0.0	0.0
95.00		271.5	731.6					0.0	162.6	271.5	894.2	0.0	0.0
95.46	Bot - Section 3	244.3	66.1					0.0	15.0	244.3	81.1	0.0	0.0
100.00		247.9	1,164.3					0.0	147.6	247.9	1,312.0	0.0	0.0
100.54	Top - Section 2	236.8	137.0					0.0	17.7	236.8	154.7	0.0	0.0
105.00		439.6	495.8					0.0	144.9	439.6	640.8	0.0	0.0
110.00		449.9	538.7					0.0	162.6	449.9	701.3	0.0	0.0
115.00		434.0	520.2					0.0	162.6	434.0	682.8	0.0	0.0
120.00		418.2	501.6					0.0	162.6	418.2	664.2	0.0	0.0
125.00		402.3	483.1					0.0	162.6	402.3	645.7	0.0	0.0
130.00		386.5	464.5					0.0	162.6	386.5	627.1	0.0	0.0
135.00		299.0	446.0					0.0	162.6	299.0	608.6	0.0	0.0
138.00	Appurtenance(s)	181.4	258.7	5,181.2	0.0	0.0	4,438.6	0.0	97.6	5,362.6	4,794.8	0.0	0.0
140.00		245.1	168.7					0.0	54.6	245.1	223.3	0.0	0.0
145.00		303.3	408.9					0.0	136.5	303.3	545.4	0.0	0.0
148.90		133.1	306.0					0.0	106.5	133.1	412.5	0.0	0.0
149.00	Top - Section 3	28.0	7.7	8,462.4	0.0	0.0	2,834.5	0.0	2.7	8,490.4	2,844.9	0.0	0.0
150.00	Appurtenance(s)	148.3	94.4	237.2	0.0	0.0	165.5	0.0	21.4	385.5	281.3	0.0	0.0
155.00		247.2	472.0					0.0	87.7	247.2	559.7	0.0	0.0
160.00	Appurtenance(s)	222.4	472.0	4,345.4	0.0	0.0	2,485.4	0.0	87.7	4,567.8	3,045.1	0.0	0.0
164.00		98.8	377.6					0.0	0.0	98.8	377.6	0.0	0.0
Totals:										35,251.8	43,386.1	0.00	0.00

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:39 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

90 mph with No Ice

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.40	-36.01	0.00	-4,231.54	0.00	4,231.54	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.842
5.00	-42.74	-35.37	0.00	-4,051.51	0.00	4,051.51	4,313.64	2,156.82	9,844.46	4,929.55	0.12	-0.22	0.832
10.00	-41.11	-34.77	0.00	-3,874.65	0.00	3,874.65	4,261.46	2,130.73	9,523.30	4,768.73	0.46	-0.44	0.822
15.00	-39.52	-34.19	0.00	-3,700.81	0.00	3,700.81	4,207.73	2,103.87	9,203.69	4,608.68	1.04	-0.66	0.813
20.00	-37.95	-33.63	0.00	-3,529.87	0.00	3,529.87	4,152.45	2,076.22	8,885.85	4,449.53	1.85	-0.89	0.803
25.00	-36.41	-33.10	0.00	-3,361.70	0.00	3,361.70	4,095.61	2,047.81	8,570.01	4,291.37	2.90	-1.12	0.793
30.00	-34.91	-32.58	0.00	-3,196.21	0.00	3,196.21	4,037.22	2,018.61	8,256.37	4,134.32	4.20	-1.35	0.782
35.00	-33.43	-32.06	0.00	-3,033.32	0.00	3,033.32	3,977.28	1,988.64	7,945.18	3,978.49	5.74	-1.59	0.771
40.00	-31.99	-31.53	0.00	-2,873.03	0.00	2,873.03	3,915.78	1,957.89	7,636.64	3,823.99	7.54	-1.83	0.760
45.00	-30.61	-31.15	0.00	-2,715.36	0.00	2,715.36	3,852.73	1,926.36	7,330.97	3,670.93	9.59	-2.08	0.748
47.04	-30.02	-30.89	0.00	-2,651.72	0.00	2,651.72	3,826.51	1,913.26	7,206.94	3,608.82	10.51	-2.19	0.743
50.00	-28.65	-30.53	0.00	-2,560.39	0.00	2,560.39	3,788.12	1,894.06	7,028.41	3,519.43	11.91	-2.34	0.735
53.46	-27.09	-30.22	0.00	-2,454.78	0.00	2,454.78	2,951.22	1,475.61	5,470.34	2,739.24	13.67	-2.52	0.906
55.00	-26.68	-29.90	0.00	-2,408.24	0.00	2,408.24	2,937.47	1,468.73	5,401.95	2,704.99	14.49	-2.60	0.900
60.00	-25.50	-29.39	0.00	-2,258.75	0.00	2,258.75	2,891.80	1,445.90	5,180.83	2,594.27	17.37	-2.89	0.880
65.00	-24.35	-28.89	0.00	-2,111.79	0.00	2,111.79	2,844.58	1,422.29	4,961.34	2,484.36	20.56	-3.19	0.859
70.00	-23.22	-28.39	0.00	-1,967.35	0.00	1,967.35	2,795.80	1,397.90	4,743.68	2,375.37	24.07	-3.50	0.837
75.00	-22.12	-27.89	0.00	-1,825.41	0.00	1,825.41	2,745.47	1,372.74	4,528.10	2,267.41	27.89	-3.80	0.814
80.00	-21.05	-27.41	0.00	-1,685.94	0.00	1,685.94	2,693.59	1,346.80	4,314.79	2,160.60	32.03	-4.11	0.789
85.00	-20.01	-26.93	0.00	-1,548.91	0.00	1,548.91	2,640.15	1,320.08	4,104.00	2,055.05	36.50	-4.42	0.762
90.00	-18.99	-26.45	0.00	-1,414.28	0.00	1,414.28	2,585.16	1,292.58	3,895.93	1,950.86	41.29	-4.73	0.733
95.00	-18.05	-26.16	0.00	-1,282.02	0.00	1,282.02	2,528.62	1,264.31	3,690.81	1,848.15	46.41	-5.04	0.701
95.46	-17.92	-25.96	0.00	-1,269.98	0.00	1,269.98	2,523.34	1,261.67	3,672.09	1,838.78	46.90	-5.07	0.698
100.00	-16.56	-25.64	0.00	-1,152.14	0.00	1,152.14	2,470.52	1,235.26	3,488.86	1,747.02	51.85	-5.35	0.667
100.54	-16.36	-25.43	0.00	-1,138.21	0.00	1,138.21	1,850.47	925.23	2,651.50	1,327.72	52.46	-5.38	0.867
105.00	-15.63	-25.02	0.00	-1,024.88	0.00	1,024.88	1,816.72	908.36	2,526.35	1,265.05	57.61	-5.66	0.820
110.00	-14.83	-24.59	0.00	-899.79	0.00	899.79	1,777.39	888.69	2,387.38	1,195.46	63.71	-6.01	0.762
115.00	-14.06	-24.17	0.00	-776.85	0.00	776.85	1,736.51	868.25	2,250.11	1,126.73	70.18	-6.35	0.698
120.00	-13.32	-23.75	0.00	-656.03	0.00	656.03	1,694.07	847.03	2,114.79	1,058.97	76.99	-6.67	0.628
125.00	-12.61	-23.34	0.00	-537.29	0.00	537.29	1,650.08	825.04	1,981.63	992.29	84.13	-6.98	0.550
130.00	-11.93	-22.93	0.00	-420.62	0.00	420.62	1,604.53	802.27	1,850.85	926.80	91.57	-7.25	0.462
135.00	-11.30	-22.59	0.00	-305.98	0.00	305.98	1,557.44	778.72	1,722.67	862.61	99.27	-7.48	0.363
138.00	-7.22	-16.65	0.00	-238.23	0.00	238.23	1,528.43	764.22	1,647.10	824.77	103.99	-7.60	0.294
140.00	-7.00	-16.39	0.00	-204.92	0.00	204.92	1,508.78	754.39	1,597.31	799.84	107.18	-7.67	0.261
145.00	-6.47	-16.03	0.00	-122.96	0.00	122.96	1,454.09	727.05	1,470.45	736.32	115.27	-7.80	0.172
148.90	-5.15	-14.63	0.00	-60.45	0.00	60.45	1,401.44	700.72	1,365.37	683.70	121.65	-7.87	0.093
149.00	-3.50	-5.83	0.00	-58.98	0.00	58.98	1,400.09	700.04	1,362.73	682.38	121.82	-7.87	0.089
149.00	-3.50	-5.83	0.00	-58.98	0.00	58.98	728.28	364.14	584.01	379.17	121.82	-7.87	0.161
150.00	-3.27	-5.42	0.00	-53.15	0.00	53.15	728.28	364.14	584.01	379.17	123.46	-7.88	0.145
155.00	-2.74	-5.09	0.00	-26.07	0.00	26.07	728.28	364.14	584.01	379.17	131.72	-7.93	0.073
160.00	-0.36	-0.15	0.00	-0.60	0.00	0.60	728.28	364.14	584.01	379.17	140.02	-7.95	0.002
164.00	0.00	-0.10	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	146.66	-7.95	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:39 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

90 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		405.3	0.0					0.0	0.0	405.3	0.0	0.0	0.0
5.00		791.9	1,021.6					0.0	121.9	791.9	1,143.5	0.0	0.0
10.00		755.6	1,000.7					0.0	121.9	755.6	1,122.6	0.0	0.0
15.00		721.2	979.8					0.0	121.9	721.2	1,101.8	0.0	0.0
20.00		688.5	958.9					0.0	121.9	688.5	1,080.9	0.0	0.0
25.00		657.5	938.1					0.0	121.9	657.5	1,060.0	0.0	0.0
30.00		635.4	917.2					0.0	121.9	635.4	1,039.2	0.0	0.0
35.00		627.0	896.3					0.0	121.9	627.0	1,018.3	0.0	0.0
40.00		622.5	875.5					0.0	121.9	622.5	997.4	0.0	0.0
45.00		435.2	854.6					0.0	121.9	435.2	976.5	0.0	0.0
47.04	Bot - Section 2	308.0	343.2					0.0	49.8	308.0	393.1	0.0	0.0
50.00		394.0	905.4					0.0	72.1	394.0	977.5	0.0	0.0
53.46	Top - Section 1	304.7	1,042.5					0.0	84.4	304.7	1,126.9	0.0	0.0
55.00		392.2	210.0					0.0	37.6	392.2	247.6	0.0	0.0
60.00		591.7	670.4					0.0	121.9	591.7	792.4	0.0	0.0
65.00		578.7	653.0					0.0	121.9	578.7	775.0	0.0	0.0
70.00		565.0	635.6					0.0	121.9	565.0	757.6	0.0	0.0
75.00		550.8	618.3					0.0	121.9	550.8	740.2	0.0	0.0
80.00		536.1	600.9					0.0	121.9	536.1	722.8	0.0	0.0
85.00		521.0	583.5					0.0	121.9	521.0	705.4	0.0	0.0
90.00		505.7	566.1					0.0	121.9	505.7	688.0	0.0	0.0
95.00		271.5	548.7					0.0	121.9	271.5	670.6	0.0	0.0
95.46	Bot - Section 3	244.3	49.6					0.0	11.2	244.3	60.8	0.0	0.0
100.00		247.9	873.2					0.0	110.7	247.9	984.0	0.0	0.0
100.54	Top - Section 2	236.8	102.8					0.0	13.3	236.8	116.0	0.0	0.0
105.00		439.6	371.9					0.0	108.7	439.6	480.6	0.0	0.0
110.00		449.9	404.0					0.0	121.9	449.9	526.0	0.0	0.0
115.00		434.0	390.1					0.0	121.9	434.0	512.1	0.0	0.0
120.00		418.2	376.2					0.0	121.9	418.2	498.2	0.0	0.0
125.00		402.3	362.3					0.0	121.9	402.3	484.3	0.0	0.0
130.00		386.5	348.4					0.0	121.9	386.5	470.3	0.0	0.0
135.00		299.0	334.5					0.0	121.9	299.0	456.4	0.0	0.0
138.00	Appurtenance(s)	181.4	194.0	5,181.2	0.0	0.0	3,328.9	0.0	73.2	5,362.6	3,596.1	0.0	0.0
140.00		245.1	126.6					0.0	40.9	245.1	167.5	0.0	0.0
145.00		303.3	306.7					0.0	102.4	303.3	409.0	0.0	0.0
148.90		133.1	229.5					0.0	79.9	133.1	309.4	0.0	0.0
149.00	Top - Section 3	28.0	5.8	8,462.4	0.0	0.0	2,125.9	0.0	2.0	8,490.4	2,133.7	0.0	0.0
150.00	Appurtenance(s)	148.3	70.8	237.2	0.0	0.0	124.1	0.0	16.0	385.5	211.0	0.0	0.0
155.00		247.2	354.0					0.0	65.7	247.2	419.8	0.0	0.0
160.00	Appurtenance(s)	222.4	354.0	4,345.4	0.0	0.0	1,864.1	0.0	65.7	4,567.8	2,283.9	0.0	0.0
164.00		98.8	283.2					0.0	0.0	98.8	283.2	0.0	0.0
Totals:										35,251.8	32,539.6	0.00	0.00

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:42 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

90 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-33.28	-35.98	0.00	-4,178.03	0.00	4,178.03	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.829
5.00	-32.01	-35.31	0.00	-3,998.12	0.00	3,998.12	4,313.64	2,156.82	9,844.46	4,929.55	0.11	-0.21	0.819
10.00	-30.76	-34.67	0.00	-3,821.57	0.00	3,821.57	4,261.46	2,130.73	9,523.30	4,768.73	0.45	-0.43	0.809
15.00	-29.53	-34.05	0.00	-3,648.25	0.00	3,648.25	4,207.73	2,103.87	9,203.69	4,608.68	1.02	-0.65	0.799
20.00	-28.33	-33.46	0.00	-3,478.01	0.00	3,478.01	4,152.45	2,076.22	8,885.85	4,449.53	1.82	-0.87	0.789
25.00	-27.15	-32.89	0.00	-3,310.73	0.00	3,310.73	4,095.61	2,047.81	8,570.01	4,291.37	2.86	-1.10	0.778
30.00	-25.99	-32.34	0.00	-3,146.27	0.00	3,146.27	4,037.22	2,018.61	8,256.37	4,134.32	4.14	-1.33	0.768
35.00	-24.86	-31.79	0.00	-2,984.58	0.00	2,984.58	3,977.28	1,988.64	7,945.18	3,978.49	5.66	-1.57	0.757
40.00	-23.75	-31.24	0.00	-2,825.63	0.00	2,825.63	3,915.78	1,957.89	7,636.64	3,823.99	7.43	-1.81	0.745
45.00	-22.69	-30.84	0.00	-2,669.44	0.00	2,669.44	3,852.73	1,926.36	7,330.97	3,670.93	9.46	-2.05	0.733
47.04	-22.24	-30.57	0.00	-2,606.42	0.00	2,606.42	3,826.51	1,913.26	7,206.94	3,608.82	10.36	-2.15	0.728
50.00	-21.20	-30.19	0.00	-2,516.05	0.00	2,516.05	3,788.12	1,894.06	7,028.41	3,519.43	11.74	-2.30	0.721
53.46	-20.02	-29.89	0.00	-2,411.58	0.00	2,411.58	2,951.22	1,475.61	5,470.34	2,739.24	13.47	-2.48	0.888
55.00	-19.69	-29.55	0.00	-2,365.55	0.00	2,365.55	2,937.47	1,468.73	5,401.95	2,704.99	14.28	-2.56	0.882
60.00	-18.78	-29.02	0.00	-2,217.81	0.00	2,217.81	2,891.80	1,445.90	5,180.83	2,594.27	17.12	-2.85	0.862
65.00	-17.89	-28.49	0.00	-2,072.73	0.00	2,072.73	2,844.58	1,422.29	4,961.34	2,484.36	20.26	-3.14	0.841
70.00	-17.02	-27.97	0.00	-1,930.27	0.00	1,930.27	2,795.80	1,397.90	4,743.68	2,375.37	23.70	-3.44	0.819
75.00	-16.17	-27.46	0.00	-1,790.41	0.00	1,790.41	2,745.47	1,372.74	4,528.10	2,267.41	27.47	-3.74	0.796
80.00	-15.34	-26.96	0.00	-1,653.10	0.00	1,653.10	2,693.59	1,346.80	4,314.79	2,160.60	31.54	-4.04	0.771
85.00	-14.54	-26.47	0.00	-1,518.31	0.00	1,518.31	2,640.15	1,320.08	4,104.00	2,055.05	35.94	-4.35	0.745
90.00	-13.75	-25.98	0.00	-1,385.98	0.00	1,385.98	2,585.16	1,292.58	3,895.93	1,950.86	40.65	-4.65	0.716
95.00	-13.04	-25.69	0.00	-1,256.07	0.00	1,256.07	2,528.62	1,264.31	3,690.81	1,848.15	45.67	-4.95	0.685
95.46	-12.93	-25.48	0.00	-1,244.26	0.00	1,244.26	2,523.34	1,261.67	3,672.09	1,838.78	46.15	-4.98	0.682
100.00	-11.90	-25.17	0.00	-1,128.59	0.00	1,128.59	2,470.52	1,235.26	3,488.86	1,747.02	51.02	-5.26	0.651
100.54	-11.74	-24.96	0.00	-1,114.91	0.00	1,114.91	1,850.47	925.23	2,651.50	1,327.72	51.62	-5.29	0.847
105.00	-11.17	-24.54	0.00	-1,003.67	0.00	1,003.67	1,816.72	908.36	2,526.35	1,265.05	56.68	-5.56	0.800
110.00	-10.55	-24.10	0.00	-880.99	0.00	880.99	1,777.39	888.69	2,387.38	1,195.46	62.68	-5.90	0.744
115.00	-9.96	-23.67	0.00	-760.49	0.00	760.49	1,736.51	868.25	2,250.11	1,126.73	69.03	-6.24	0.681
120.00	-9.38	-23.25	0.00	-642.14	0.00	642.14	1,694.07	847.03	2,114.79	1,058.97	75.72	-6.55	0.613
125.00	-8.84	-22.84	0.00	-525.89	0.00	525.89	1,650.08	825.04	1,981.63	992.29	82.73	-6.85	0.536
130.00	-8.32	-22.43	0.00	-411.70	0.00	411.70	1,604.53	802.27	1,850.85	926.80	90.03	-7.11	0.450
135.00	-7.84	-22.10	0.00	-299.54	0.00	299.54	1,557.44	778.72	1,722.67	862.61	97.59	-7.34	0.353
138.00	-4.94	-16.33	0.00	-233.23	0.00	233.23	1,528.43	764.22	1,647.10	824.77	102.23	-7.46	0.286
140.00	-4.78	-16.07	0.00	-200.57	0.00	200.57	1,508.78	754.39	1,597.31	799.84	105.36	-7.53	0.254
145.00	-4.38	-15.73	0.00	-120.21	0.00	120.21	1,454.09	727.05	1,470.45	736.32	113.30	-7.66	0.167
148.90	-3.43	-14.38	0.00	-58.88	0.00	58.88	1,401.44	700.72	1,365.37	683.70	119.57	-7.72	0.089
149.00	-2.46	-5.68	0.00	-57.45	0.00	57.45	1,400.09	700.04	1,362.73	682.38	119.73	-7.73	0.086
149.00	-2.46	-5.68	0.00	-57.45	0.00	57.45	728.28	364.14	584.01	379.17	119.73	-7.73	0.155
150.00	-2.30	-5.27	0.00	-51.76	0.00	51.76	728.28	364.14	584.01	379.17	121.34	-7.74	0.140
155.00	-1.91	-4.97	0.00	-25.40	0.00	25.40	728.28	364.14	584.01	379.17	129.45	-7.79	0.070
160.00	-0.27	-0.14	0.00	-0.55	0.00	0.55	728.28	364.14	584.01	379.17	137.59	-7.80	0.002
164.00	0.00	-0.10	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	144.11	-7.80	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:42 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

40 mph with 0.75 in Radial Ice

25 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		97.3	0.0					0.0	0.0	97.3	0.0	0.0	0.0
5.00		190.6	1,906.7					0.0	162.6	190.6	2,069.3	0.0	0.0
10.00		182.8	1,926.1					0.0	162.6	182.8	2,088.7	0.0	0.0
15.00		175.1	1,911.9					0.0	162.6	175.1	2,074.5	0.0	0.0
20.00		167.6	1,887.0					0.0	162.6	167.6	2,049.6	0.0	0.0
25.00		160.4	1,856.6					0.0	162.6	160.4	2,019.2	0.0	0.0
30.00		155.4	1,823.0					0.0	162.6	155.4	1,985.6	0.0	0.0
35.00		153.6	1,787.3					0.0	162.6	153.6	1,949.9	0.0	0.0
40.00		152.8	1,750.0					0.0	162.6	152.8	1,912.6	0.0	0.0
45.00		107.0	1,711.7					0.0	162.6	107.0	1,874.3	0.0	0.0
47.04	Bot - Section 2	75.8	689.9					0.0	66.4	75.8	756.4	0.0	0.0
50.00		97.1	1,543.5					0.0	96.2	97.1	1,639.7	0.0	0.0
53.46	Top - Section 1	75.1	1,777.9					0.0	112.5	75.1	1,890.4	0.0	0.0
55.00		96.9	451.6					0.0	50.1	96.9	501.6	0.0	0.0
60.00		146.4	1,438.1					0.0	162.6	146.4	1,600.7	0.0	0.0
65.00		143.5	1,402.3					0.0	162.6	143.5	1,564.9	0.0	0.0
70.00		140.4	1,366.2					0.0	162.6	140.4	1,528.8	0.0	0.0
75.00		137.2	1,329.8					0.0	162.6	137.2	1,492.4	0.0	0.0
80.00		133.9	1,293.3					0.0	162.6	133.9	1,455.9	0.0	0.0
85.00		130.5	1,256.7					0.0	162.6	130.5	1,419.3	0.0	0.0
90.00		127.0	1,219.9					0.0	162.6	127.0	1,382.5	0.0	0.0
95.00		68.3	1,183.1					0.0	162.6	68.3	1,345.7	0.0	0.0
95.46	Bot - Section 3	61.5	107.6					0.0	15.0	61.5	122.5	0.0	0.0
100.00		62.5	1,567.3					0.0	147.6	62.5	1,715.0	0.0	0.0
100.54	Top - Section 2	59.8	185.1					0.0	17.7	59.8	202.8	0.0	0.0
105.00		111.3	879.2					0.0	144.9	111.3	1,024.1	0.0	0.0
110.00		114.2	955.1					0.0	162.6	114.2	1,117.7	0.0	0.0
115.00		110.6	922.8					0.0	162.6	110.6	1,085.4	0.0	0.0
120.00		107.0	890.5					0.0	162.6	107.0	1,053.1	0.0	0.0
125.00		103.4	858.2					0.0	162.6	103.4	1,020.8	0.0	0.0
130.00		99.8	825.8					0.0	162.6	99.8	988.4	0.0	0.0
135.00		77.5	793.5					0.0	162.6	77.5	956.1	0.0	0.0
138.00	Appurtenance(s)	47.2	462.2	884.9	0.0	0.0	12,803.4	0.0	97.6	932.0	13,363.2	0.0	0.0
140.00		64.0	302.2					0.0	54.6	64.0	356.8	0.0	0.0
145.00		79.5	728.9					0.0	136.5	79.5	865.4	0.0	0.0
148.90		35.0	547.3					0.0	106.5	35.0	653.8	0.0	0.0
149.00	Top - Section 3	8.1	13.9	1,679.2	0.0	0.0	9,307.0	0.0	2.7	1,687.3	9,323.7	0.0	0.0
150.00	Appurtenance(s)	43.6	145.4	42.6	0.0	0.0	571.5	0.0	21.4	86.2	738.3	0.0	0.0
155.00		72.7	726.9					0.0	87.7	72.7	814.5	0.0	0.0
160.00	Appurtenance(s)	65.4	726.8	828.1	0.0	0.0	8,686.4	0.0	87.7	893.4	9,500.9	0.0	0.0
164.00		29.0	581.4					0.0	0.0	29.0	581.4	0.0	0.0
Totals:										7,701.30	80,086.0	0.00	0.00

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:44 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

40 mph with 0.75 in Radial Ice

25 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-82.89	-7.86	0.00	-956.70	0.00	956.70	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.207
5.00	-80.81	-7.74	0.00	-917.39	0.00	917.39	4,313.64	2,156.82	9,844.46	4,929.55	0.03	-0.05	0.205
10.00	-78.71	-7.63	0.00	-878.68	0.00	878.68	4,261.46	2,130.73	9,523.30	4,768.73	0.10	-0.10	0.203
15.00	-76.63	-7.51	0.00	-840.55	0.00	840.55	4,207.73	2,103.87	9,203.69	4,608.68	0.23	-0.15	0.201
20.00	-74.58	-7.41	0.00	-802.98	0.00	802.98	4,152.45	2,076.22	8,885.85	4,449.53	0.42	-0.20	0.198
25.00	-72.55	-7.31	0.00	-765.94	0.00	765.94	4,095.61	2,047.81	8,570.01	4,291.37	0.66	-0.25	0.196
30.00	-70.56	-7.21	0.00	-729.40	0.00	729.40	4,037.22	2,018.61	8,256.37	4,134.32	0.95	-0.31	0.194
35.00	-68.61	-7.11	0.00	-693.36	0.00	693.36	3,977.28	1,988.64	7,945.18	3,978.49	1.30	-0.36	0.192
40.00	-66.69	-7.01	0.00	-657.81	0.00	657.81	3,915.78	1,957.89	7,636.64	3,823.99	1.71	-0.42	0.189
45.00	-64.81	-6.93	0.00	-622.76	0.00	622.76	3,852.73	1,926.36	7,330.97	3,670.93	2.18	-0.47	0.186
47.04	-64.05	-6.88	0.00	-608.60	0.00	608.60	3,826.51	1,913.26	7,206.94	3,608.82	2.39	-0.50	0.185
50.00	-62.41	-6.81	0.00	-588.24	0.00	588.24	3,788.12	1,894.06	7,028.41	3,519.43	2.71	-0.53	0.184
53.46	-60.51	-6.75	0.00	-564.67	0.00	564.67	2,951.22	1,475.61	5,470.34	2,739.24	3.11	-0.57	0.227
55.00	-60.01	-6.70	0.00	-554.27	0.00	554.27	2,937.47	1,468.73	5,401.95	2,704.99	3.30	-0.59	0.225
60.00	-58.40	-6.60	0.00	-520.80	0.00	520.80	2,891.80	1,445.90	5,180.83	2,594.27	3.95	-0.66	0.221
65.00	-56.83	-6.51	0.00	-487.79	0.00	487.79	2,844.58	1,422.29	4,961.34	2,484.36	4.68	-0.73	0.216
70.00	-55.30	-6.42	0.00	-455.25	0.00	455.25	2,795.80	1,397.90	4,743.68	2,375.37	5.48	-0.80	0.211
75.00	-53.80	-6.32	0.00	-423.18	0.00	423.18	2,745.47	1,372.74	4,528.10	2,267.41	6.36	-0.87	0.206
80.00	-52.34	-6.23	0.00	-391.56	0.00	391.56	2,693.59	1,346.80	4,314.79	2,160.60	7.31	-0.94	0.201
85.00	-50.91	-6.14	0.00	-360.40	0.00	360.40	2,640.15	1,320.08	4,104.00	2,055.05	8.34	-1.01	0.195
90.00	-49.52	-6.05	0.00	-329.70	0.00	329.70	2,585.16	1,292.58	3,895.93	1,950.86	9.44	-1.09	0.188
95.00	-48.18	-5.99	0.00	-299.44	0.00	299.44	2,528.62	1,264.31	3,690.81	1,848.15	10.61	-1.16	0.181
95.46	-48.05	-5.96	0.00	-296.69	0.00	296.69	2,523.34	1,261.67	3,672.09	1,838.78	10.73	-1.17	0.180
100.00	-46.33	-5.89	0.00	-269.64	0.00	269.64	2,470.52	1,235.26	3,488.86	1,747.02	11.87	-1.23	0.173
100.54	-46.13	-5.85	0.00	-266.45	0.00	266.45	1,850.47	925.23	2,651.50	1,327.72	12.01	-1.24	0.226
105.00	-45.10	-5.78	0.00	-240.36	0.00	240.36	1,816.72	908.36	2,526.35	1,265.05	13.20	-1.30	0.215
110.00	-43.98	-5.70	0.00	-211.48	0.00	211.48	1,777.39	888.69	2,387.38	1,195.46	14.60	-1.39	0.202
115.00	-42.89	-5.62	0.00	-182.99	0.00	182.99	1,736.51	868.25	2,250.11	1,126.73	16.10	-1.47	0.187
120.00	-41.83	-5.54	0.00	-154.89	0.00	154.89	1,694.07	847.03	2,114.79	1,058.97	17.68	-1.54	0.171
125.00	-40.81	-5.46	0.00	-127.19	0.00	127.19	1,650.08	825.04	1,981.63	992.29	19.33	-1.61	0.153
130.00	-39.82	-5.37	0.00	-99.91	0.00	99.91	1,604.53	802.27	1,850.85	926.80	21.06	-1.68	0.133
135.00	-38.86	-5.29	0.00	-73.06	0.00	73.06	1,557.44	778.72	1,722.67	862.61	22.85	-1.73	0.110
138.00	-25.53	-3.96	0.00	-57.19	0.00	57.19	1,528.43	764.22	1,647.10	824.77	23.94	-1.76	0.086
140.00	-25.17	-3.90	0.00	-49.26	0.00	49.26	1,508.78	754.39	1,597.31	799.84	24.69	-1.78	0.078
145.00	-24.31	-3.80	0.00	-29.77	0.00	29.77	1,454.09	727.05	1,470.45	736.32	26.57	-1.81	0.057
148.90	-20.86	-3.44	0.00	-14.94	0.00	14.94	1,401.44	700.72	1,365.37	683.70	28.05	-1.83	0.037
149.00	-11.59	-1.45	0.00	-14.60	0.00	14.60	1,400.09	700.04	1,362.73	682.38	28.09	-1.83	0.030
149.00	-11.59	-1.45	0.00	-14.60	0.00	14.60	728.28	364.14	584.01	379.17	28.09	-1.83	0.054
150.00	-10.86	-1.34	0.00	-13.14	0.00	13.14	728.28	364.14	584.01	379.17	28.48	-1.83	0.050
155.00	-10.05	-1.25	0.00	-6.42	0.00	6.42	728.28	364.14	584.01	379.17	30.40	-1.84	0.031
160.00	-0.58	-0.05	0.00	-0.19	0.00	0.19	728.28	364.14	584.01	379.17	32.33	-1.85	0.001
164.00	0.00	-0.03	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	33.88	-1.85	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:45 AM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		112.6	0.0					0.0	0.0	112.6	0.0	0.0	0.0
5.00		220.0	1,135.1					0.0	135.5	220.0	1,270.6	0.0	0.0
10.00		209.9	1,111.9					0.0	135.5	209.9	1,247.4	0.0	0.0
15.00		200.3	1,088.7					0.0	135.5	200.3	1,224.2	0.0	0.0
20.00		191.3	1,065.5					0.0	135.5	191.3	1,201.0	0.0	0.0
25.00		182.7	1,042.3					0.0	135.5	182.7	1,177.8	0.0	0.0
30.00		176.5	1,019.1					0.0	135.5	176.5	1,154.6	0.0	0.0
35.00		174.2	995.9					0.0	135.5	174.2	1,131.4	0.0	0.0
40.00		172.9	972.7					0.0	135.5	172.9	1,108.2	0.0	0.0
45.00		120.9	949.6					0.0	135.5	120.9	1,085.1	0.0	0.0
47.04	Bot - Section 2	85.6	381.4					0.0	55.4	85.6	436.8	0.0	0.0
50.00		109.4	1,006.0					0.0	80.1	109.4	1,086.1	0.0	0.0
53.46	Top - Section 1	84.6	1,158.4					0.0	93.8	84.6	1,252.2	0.0	0.0
55.00		109.0	233.3					0.0	41.7	109.0	275.1	0.0	0.0
60.00		164.4	744.9					0.0	135.5	164.4	880.4	0.0	0.0
65.00		160.8	725.6					0.0	135.5	160.8	861.1	0.0	0.0
70.00		157.0	706.3					0.0	135.5	157.0	841.8	0.0	0.0
75.00		153.0	687.0					0.0	135.5	153.0	822.5	0.0	0.0
80.00		148.9	667.6					0.0	135.5	148.9	803.1	0.0	0.0
85.00		144.7	648.3					0.0	135.5	144.7	783.8	0.0	0.0
90.00		140.5	629.0					0.0	135.5	140.5	764.5	0.0	0.0
95.00		75.4	609.7					0.0	135.5	75.4	745.2	0.0	0.0
95.46	Bot - Section 3	67.9	55.1					0.0	12.5	67.9	67.6	0.0	0.0
100.00		68.9	970.3					0.0	123.0	68.9	1,093.3	0.0	0.0
100.54	Top - Section 2	65.8	114.2					0.0	14.7	65.8	128.9	0.0	0.0
105.00		122.1	413.2					0.0	120.8	122.1	534.0	0.0	0.0
110.00		125.0	448.9					0.0	135.5	125.0	584.4	0.0	0.0
115.00		120.6	433.5					0.0	135.5	120.6	569.0	0.0	0.0
120.00		116.2	418.0					0.0	135.5	116.2	553.5	0.0	0.0
125.00		111.8	402.6					0.0	135.5	111.8	538.1	0.0	0.0
130.00		107.4	387.1					0.0	135.5	107.4	522.6	0.0	0.0
135.00		83.1	371.6					0.0	135.5	83.1	507.1	0.0	0.0
138.00	Appurtenance(s)	50.4	215.6	1,439.2	0.0	0.0	3,698.8	0.0	81.3	1,489.6	3,995.7	0.0	0.0
140.00		68.1	140.6					0.0	45.5	68.1	186.1	0.0	0.0
145.00		84.3	340.7					0.0	113.7	84.3	454.5	0.0	0.0
148.90		37.0	255.0					0.0	88.7	37.0	343.8	0.0	0.0
149.00	Top - Section 3	7.8	6.4	2,350.7	0.0	0.0	2,362.1	0.0	2.3	2,358.4	2,370.8	0.0	0.0
150.00	Appurtenance(s)	41.2	78.7	65.9	0.0	0.0	137.9	0.0	17.8	107.1	234.4	0.0	0.0
155.00		68.7	393.4					0.0	73.0	68.7	466.4	0.0	0.0
160.00	Appurtenance(s)	61.8	393.4	1,207.1	0.0	0.0	2,071.2	0.0	73.0	1,268.8	2,537.6	0.0	0.0
164.00		27.4	314.7					0.0	0.0	27.4	314.7	0.0	0.0
Totals:										9,792.19	36,155.1	0.00	0.00

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:47 AM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-37.05	-10.00	0.00	-1,168.34	0.00	1,168.34	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.238
5.00	-35.77	-9.81	0.00	-1,118.36	0.00	1,118.36	4,313.64	2,156.82	9,844.46	4,929.55	0.03	-0.06	0.235
10.00	-34.51	-9.64	0.00	-1,069.29	0.00	1,069.29	4,261.46	2,130.73	9,523.30	4,768.73	0.13	-0.12	0.232
15.00	-33.28	-9.47	0.00	-1,021.10	0.00	1,021.10	4,207.73	2,103.87	9,203.69	4,608.68	0.29	-0.18	0.229
20.00	-32.07	-9.31	0.00	-973.75	0.00	973.75	4,152.45	2,076.22	8,885.85	4,449.53	0.51	-0.24	0.227
25.00	-30.88	-9.16	0.00	-927.20	0.00	927.20	4,095.61	2,047.81	8,570.01	4,291.37	0.80	-0.31	0.224
30.00	-29.72	-9.01	0.00	-881.41	0.00	881.41	4,037.22	2,018.61	8,256.37	4,134.32	1.16	-0.37	0.221
35.00	-28.58	-8.86	0.00	-836.38	0.00	836.38	3,977.28	1,988.64	7,945.18	3,978.49	1.58	-0.44	0.217
40.00	-27.46	-8.71	0.00	-792.09	0.00	792.09	3,915.78	1,957.89	7,636.64	3,823.99	2.08	-0.51	0.214
45.00	-26.37	-8.60	0.00	-748.54	0.00	748.54	3,852.73	1,926.36	7,330.97	3,670.93	2.65	-0.57	0.211
47.04	-25.93	-8.53	0.00	-730.97	0.00	730.97	3,826.51	1,913.26	7,206.94	3,608.82	2.90	-0.60	0.209
50.00	-24.84	-8.42	0.00	-705.76	0.00	705.76	3,788.12	1,894.06	7,028.41	3,519.43	3.29	-0.64	0.207
53.46	-23.58	-8.34	0.00	-676.62	0.00	676.62	2,951.22	1,475.61	5,470.34	2,739.24	3.77	-0.69	0.255
55.00	-23.30	-8.25	0.00	-663.78	0.00	663.78	2,937.47	1,468.73	5,401.95	2,704.99	4.00	-0.72	0.253
60.00	-22.41	-8.10	0.00	-622.53	0.00	622.53	2,891.80	1,445.90	5,180.83	2,594.27	4.79	-0.80	0.248
65.00	-21.54	-7.96	0.00	-582.01	0.00	582.01	2,844.58	1,422.29	4,961.34	2,484.36	5.67	-0.88	0.242
70.00	-20.69	-7.82	0.00	-542.20	0.00	542.20	2,795.80	1,397.90	4,743.68	2,375.37	6.64	-0.96	0.236
75.00	-19.86	-7.68	0.00	-503.09	0.00	503.09	2,745.47	1,372.74	4,528.10	2,267.41	7.70	-1.05	0.229
80.00	-19.04	-7.55	0.00	-464.66	0.00	464.66	2,693.59	1,346.80	4,314.79	2,160.60	8.84	-1.13	0.222
85.00	-18.25	-7.42	0.00	-426.92	0.00	426.92	2,640.15	1,320.08	4,104.00	2,055.05	10.07	-1.22	0.215
90.00	-17.48	-7.28	0.00	-389.85	0.00	389.85	2,585.16	1,292.58	3,895.93	1,950.86	11.39	-1.30	0.207
95.00	-16.73	-7.20	0.00	-353.43	0.00	353.43	2,528.62	1,264.31	3,690.81	1,848.15	12.81	-1.39	0.198
95.46	-16.66	-7.15	0.00	-350.11	0.00	350.11	2,523.34	1,261.67	3,672.09	1,838.78	12.94	-1.40	0.197
100.00	-15.56	-7.06	0.00	-317.67	0.00	317.67	2,470.52	1,235.26	3,488.86	1,747.02	14.31	-1.48	0.188
100.54	-15.43	-7.01	0.00	-313.83	0.00	313.83	1,850.47	925.23	2,651.50	1,327.72	14.48	-1.48	0.245
105.00	-14.89	-6.89	0.00	-282.61	0.00	282.61	1,816.72	908.36	2,526.35	1,265.05	15.90	-1.56	0.232
110.00	-14.30	-6.77	0.00	-248.15	0.00	248.15	1,777.39	888.69	2,387.38	1,195.46	17.58	-1.66	0.216
115.00	-13.72	-6.66	0.00	-214.28	0.00	214.28	1,736.51	868.25	2,250.11	1,126.73	19.37	-1.75	0.198
120.00	-13.16	-6.55	0.00	-180.98	0.00	180.98	1,694.07	847.03	2,114.79	1,058.97	21.25	-1.84	0.179
125.00	-12.62	-6.43	0.00	-148.26	0.00	148.26	1,650.08	825.04	1,981.63	992.29	23.23	-1.92	0.157
130.00	-12.09	-6.32	0.00	-116.09	0.00	116.09	1,604.53	802.27	1,850.85	926.80	25.28	-2.00	0.133
135.00	-11.59	-6.23	0.00	-84.48	0.00	84.48	1,557.44	778.72	1,722.67	862.61	27.41	-2.06	0.105
138.00	-7.64	-4.60	0.00	-65.78	0.00	65.78	1,528.43	764.22	1,647.10	824.77	28.72	-2.10	0.085
140.00	-7.46	-4.53	0.00	-56.58	0.00	56.58	1,508.78	754.39	1,597.31	799.84	29.60	-2.11	0.076
145.00	-7.01	-4.43	0.00	-33.93	0.00	33.93	1,454.09	727.05	1,470.45	736.32	31.83	-2.15	0.051
148.90	-5.77	-4.05	0.00	-16.64	0.00	16.64	1,401.44	700.72	1,365.37	683.70	33.60	-2.17	0.028
149.00	-3.49	-1.61	0.00	-16.23	0.00	16.23	1,400.09	700.04	1,362.73	682.38	33.65	-2.17	0.026
149.00	-3.49	-1.61	0.00	-16.23	0.00	16.23	728.28	364.14	584.01	379.17	33.65	-2.17	0.048
150.00	-3.26	-1.49	0.00	-14.63	0.00	14.63	728.28	364.14	584.01	379.17	34.10	-2.17	0.043
155.00	-2.80	-1.40	0.00	-7.18	0.00	7.18	728.28	364.14	584.01	379.17	36.39	-2.19	0.023
160.00	-0.31	-0.04	0.00	-0.16	0.00	0.16	728.28	364.14	584.01	379.17	38.68	-2.19	0.001
164.00	0.00	-0.03	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	40.52	-2.19	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

2/7/2019 11:03:47 AM

Customer: AT&T MOBILITY

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_g):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.58
Redundancy Factor (ρ):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	37.06 k
Seismic Base Shear (E):	1.45 k

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

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
40	162.00	315	8,259	0.022	32	390
39	157.50	466	11,570	0.031	45	578
38	152.50	466	10,847	0.029	42	578
37	149.50	97	2,157	0.006	8	120
36	148.95	9	193	0.001	1	11
35	146.95	344	7,423	0.020	29	426
34	142.50	454	9,229	0.025	36	563
33	139.00	186	3,596	0.010	14	230
32	136.50	297	5,531	0.015	21	368
31	132.50	507	8,904	0.024	34	628
30	127.50	523	8,496	0.023	33	647
29	122.50	538	8,074	0.022	31	666
28	117.50	554	7,642	0.020	30	685
27	112.50	569	7,201	0.019	28	705
26	107.50	584	6,754	0.018	26	724
25	102.77	534	5,640	0.015	22	661
24	100.27	129	1,296	0.003	5	160
23	97.73	1,093	10,442	0.028	40	1,354
22	95.23	68	613	0.002	2	84
21	92.50	745	6,376	0.017	25	923
20	87.50	764	5,853	0.016	23	947
19	82.50	784	5,335	0.014	21	971
18	77.50	803	4,824	0.013	19	995

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

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Customer: AT&T MOBILITY

17	72.50	822	4,323	0.012	17	1,019
16	67.50	842	3,835	0.010	15	1,042
15	62.50	861	3,364	0.009	13	1,066
14	57.50	880	2,911	0.008	11	1,090
13	54.23	275	809	0.002	3	341
12	51.73	1,252	3,351	0.009	13	1,551
11	48.52	1,086	2,557	0.007	10	1,345
10	46.02	437	925	0.002	4	541
9	42.50	1,085	1,960	0.005	8	1,344
8	37.50	1,108	1,558	0.004	6	1,372
7	32.50	1,131	1,195	0.003	5	1,401
6	27.50	1,155	873	0.002	3	1,430
5	22.50	1,178	596	0.002	2	1,459
4	17.50	1,201	368	0.001	1	1,487
3	12.50	1,224	191	0.001	1	1,516
2	7.50	1,247	70	0.000	0	1,545
1	2.50	1,271	8	0.000	0	1,573
Raycap DC6-48-60-0-8	160.00	16	410	0.001	2	20
Ericsson RRUS 8843 B	160.00	216	5,530	0.015	21	267
Ericsson RRUS 4449 B	160.00	213	5,453	0.015	21	264
Ericsson RRUS 4478 B	160.00	178	4,562	0.012	18	221
Raycap DC6-48-60-18-	160.00	32	819	0.002	3	40
Round Sector Frame	160.00	900	23,040	0.062	89	1,115
KMW EPBQ-654L8H8-L2	160.00	516	13,210	0.035	51	639
Nokia AirScale RRH 4	150.00	106	2,383	0.006	9	131
RFS DB-C1-12C-24AB-0	150.00	32	720	0.002	3	40
Alcatel-Lucent B25 R	149.00	159	3,530	0.009	14	197
Alcatel-Lucent B13 R	149.00	173	3,850	0.010	15	215
Alcatel-Lucent B66A	149.00	201	4,462	0.012	17	249
Amphenol Antel LPA-8	149.00	126	2,797	0.007	11	156
Commscope JAHH-65B-R	149.00	364	8,072	0.022	31	450
VZW Unused Reserve:	149.00	1,339	29,729	0.079	115	1,658
Flat T-Arm w/ Platfo	148.90	900	19,954	0.053	77	1,115
Ericsson Radio 4449	138.00	592	11,274	0.030	44	733
RFS SC2-W100AB	138.00	22	419	0.001	2	27
Ericsson AIR 32 B2A/	138.00	573	10,916	0.029	42	710
RFS APXVAARR24_43-U-	138.00	512	9,743	0.026	38	634
Flat Platform w/ Han	138.00	2,000	38,088	0.102	147	2,477
		37,055	374,109	1.000	1,445	45,889

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

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
40	162.00	315	8,259	0.022	32	271
39	157.50	466	11,570	0.031	45	402
38	152.50	466	10,847	0.029	42	402
37	149.50	97	2,157	0.006	8	83
36	148.95	9	193	0.001	1	7
35	146.95	344	7,423	0.020	29	296
34	142.50	454	9,229	0.025	36	392
33	139.00	186	3,596	0.010	14	160
32	136.50	297	5,531	0.015	21	256
31	132.50	507	8,904	0.024	34	437
30	127.50	523	8,496	0.023	33	450
29	122.50	538	8,074	0.022	31	464
28	117.50	554	7,642	0.020	30	477
27	112.50	569	7,201	0.019	28	490
26	107.50	584	6,754	0.018	26	504
25	102.77	534	5,640	0.015	22	460

Site Number: 413850

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Customer: AT&T MOBILITY

24	100.27	129	1,296	0.003	5	111
23	97.73	1,093	10,442	0.028	40	942
22	95.23	68	613	0.002	2	58
21	92.50	745	6,376	0.017	25	642
20	87.50	764	5,853	0.016	23	659
19	82.50	784	5,335	0.014	21	675
18	77.50	803	4,824	0.013	19	692
17	72.50	822	4,323	0.012	17	709
16	67.50	842	3,835	0.010	15	725
15	62.50	861	3,364	0.009	13	742
14	57.50	880	2,911	0.008	11	759
13	54.23	275	809	0.002	3	237
12	51.73	1,252	3,351	0.009	13	1,079
11	48.52	1,086	2,557	0.007	10	936
10	46.02	437	925	0.002	4	376
9	42.50	1,085	1,960	0.005	8	935
8	37.50	1,108	1,558	0.004	6	955
7	32.50	1,131	1,195	0.003	5	975
6	27.50	1,155	873	0.002	3	995
5	22.50	1,178	596	0.002	2	1,015
4	17.50	1,201	368	0.001	1	1,035
3	12.50	1,224	191	0.001	1	1,055
2	7.50	1,247	70	0.000	0	1,075
1	2.50	1,271	8	0.000	0	1,095
Raycap DC6-48-60-0-8	160.00	16	410	0.001	2	14
Ericsson RRUS 8843 B	160.00	216	5,530	0.015	21	186
Ericsson RRUS 4449 B	160.00	213	5,453	0.015	21	184
Ericsson RRUS 4478 B	160.00	178	4,562	0.012	18	154
Raycap DC6-48-60-18-	160.00	32	819	0.002	3	28
Round Sector Frame	160.00	900	23,040	0.062	89	775
KMW EPBQ-654L8H8-L2	160.00	516	13,210	0.035	51	445
Nokia AirScale RRH 4	150.00	106	2,383	0.006	9	91
RFS DB-C1-12C-24AB-0	150.00	32	720	0.002	3	28
Alcatel-Lucent B25 R	149.00	159	3,530	0.009	14	137
Alcatel-Lucent B13 R	149.00	173	3,850	0.010	15	149
Alcatel-Lucent B66A	149.00	201	4,462	0.012	17	173
Amphenol Antel LPA-8	149.00	126	2,797	0.007	11	109
Commscope JAHH-65B-R	149.00	364	8,072	0.022	31	313
VZW Unused Reserve:	149.00	1,339	29,729	0.079	115	1,154
Flat T-Arm w/ Platfo	148.90	900	19,954	0.053	77	775
Ericsson Radio 4449	138.00	592	11,274	0.030	44	510
RFS SC2-W100AB	138.00	22	419	0.001	2	19
Ericsson AIR 32 B2A/	138.00	573	10,916	0.029	42	494
RFS APXVAARR24_43-U-	138.00	512	9,743	0.026	38	441
Flat Platform w/ Han	138.00	2,000	38,088	0.102	147	1,723
		37,055	374,109	1.000	1,445	31,927

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

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Customer: AT&T MOBILITY

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces MethodCalculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.32	-1.45	0.00	-198.33	0.00	198.33	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.049
5.00	-42.77	-1.46	0.00	-191.09	0.00	191.09	4,313.64	2,156.82	9,844.46	4,929.55	0.01	-0.01	0.049
10.00	-41.25	-1.46	0.00	-183.81	0.00	183.81	4,261.46	2,130.73	9,523.30	4,768.73	0.02	-0.02	0.048
15.00	-39.77	-1.47	0.00	-176.50	0.00	176.50	4,207.73	2,103.87	9,203.69	4,608.68	0.05	-0.03	0.048
20.00	-38.31	-1.47	0.00	-169.16	0.00	169.16	4,152.45	2,076.22	8,885.85	4,449.53	0.09	-0.04	0.047
25.00	-36.88	-1.47	0.00	-161.81	0.00	161.81	4,095.61	2,047.81	8,570.01	4,291.37	0.14	-0.05	0.047
30.00	-35.48	-1.48	0.00	-154.44	0.00	154.44	4,037.22	2,018.61	8,256.37	4,134.32	0.20	-0.06	0.046
35.00	-34.10	-1.47	0.00	-147.06	0.00	147.06	3,977.28	1,988.64	7,945.18	3,978.49	0.27	-0.08	0.046
40.00	-32.76	-1.47	0.00	-139.69	0.00	139.69	3,915.78	1,957.89	7,636.64	3,823.99	0.36	-0.09	0.045
45.00	-32.22	-1.47	0.00	-132.33	0.00	132.33	3,852.73	1,926.36	7,330.97	3,670.93	0.46	-0.10	0.044
47.04	-30.87	-1.46	0.00	-129.32	0.00	129.32	3,826.51	1,913.26	7,206.94	3,608.82	0.50	-0.10	0.044
50.00	-29.32	-1.45	0.00	-124.99	0.00	124.99	3,788.12	1,894.06	7,028.41	3,519.43	0.57	-0.11	0.043
53.46	-28.98	-1.45	0.00	-119.97	0.00	119.97	2,951.22	1,475.61	5,470.34	2,739.24	0.65	-0.12	0.054
55.00	-27.89	-1.44	0.00	-117.74	0.00	117.74	2,937.47	1,468.73	5,401.95	2,704.99	0.69	-0.13	0.053
60.00	-26.82	-1.43	0.00	-110.53	0.00	110.53	2,891.80	1,445.90	5,180.83	2,594.27	0.83	-0.14	0.052
65.00	-25.78	-1.42	0.00	-103.36	0.00	103.36	2,844.58	1,422.29	4,961.34	2,484.36	0.99	-0.15	0.051
70.00	-24.76	-1.41	0.00	-96.25	0.00	96.25	2,795.80	1,397.90	4,743.68	2,375.37	1.15	-0.17	0.049
75.00	-23.77	-1.39	0.00	-89.20	0.00	89.20	2,745.47	1,372.74	4,528.10	2,267.41	1.34	-0.18	0.048
80.00	-22.80	-1.38	0.00	-82.23	0.00	82.23	2,693.59	1,346.80	4,314.79	2,160.60	1.54	-0.20	0.047
85.00	-21.85	-1.36	0.00	-75.35	0.00	75.35	2,640.15	1,320.08	4,104.00	2,055.05	1.76	-0.21	0.045
90.00	-20.93	-1.33	0.00	-68.57	0.00	68.57	2,585.16	1,292.58	3,895.93	1,950.86	1.99	-0.23	0.043
95.00	-20.84	-1.33	0.00	-61.91	0.00	61.91	2,528.62	1,264.31	3,690.81	1,848.15	2.24	-0.24	0.042
95.46	-19.49	-1.29	0.00	-61.30	0.00	61.30	2,523.34	1,261.67	3,672.09	1,838.78	2.26	-0.25	0.041
100.00	-19.33	-1.29	0.00	-55.44	0.00	55.44	2,470.52	1,235.26	3,488.86	1,747.02	2.50	-0.26	0.040
100.54	-18.67	-1.26	0.00	-54.74	0.00	54.74	1,850.47	925.23	2,651.50	1,327.72	2.53	-0.26	0.051
105.00	-17.94	-1.24	0.00	-49.11	0.00	49.11	1,816.72	908.36	2,526.35	1,265.05	2.78	-0.27	0.049
110.00	-17.24	-1.21	0.00	-42.91	0.00	42.91	1,777.39	888.69	2,387.38	1,195.46	3.08	-0.29	0.046
115.00	-16.55	-1.18	0.00	-36.84	0.00	36.84	1,736.51	868.25	2,250.11	1,126.73	3.39	-0.31	0.042
120.00	-15.89	-1.15	0.00	-30.92	0.00	30.92	1,694.07	847.03	2,114.79	1,058.97	3.72	-0.32	0.039
125.00	-15.24	-1.12	0.00	-25.15	0.00	25.15	1,650.08	825.04	1,981.63	992.29	4.07	-0.34	0.035
130.00	-14.61	-1.09	0.00	-19.55	0.00	19.55	1,604.53	802.27	1,850.85	926.80	4.42	-0.35	0.030
135.00	-14.24	-1.06	0.00	-14.12	0.00	14.12	1,557.44	778.72	1,722.67	862.61	4.80	-0.36	0.026
138.00	-9.43	-0.75	0.00	-10.92	0.00	10.92	1,528.43	764.22	1,647.10	824.77	5.02	-0.37	0.019
140.00	-8.87	-0.71	0.00	-9.43	0.00	9.43	1,508.78	754.39	1,597.31	799.84	5.18	-0.37	0.018
145.00	-8.45	-0.68	0.00	-5.88	0.00	5.88	1,454.09	727.05	1,470.45	736.32	5.57	-0.37	0.014
148.90	-7.32	-0.59	0.00	-3.23	0.00	3.23	1,401.44	700.72	1,365.37	683.70	5.88	-0.38	0.010
149.00	-4.28	-0.36	0.00	-3.17	0.00	3.17	1,400.09	700.04	1,362.73	682.38	5.88	-0.38	0.008
149.00	-4.28	-0.36	0.00	-3.17	0.00	3.17	728.28	364.14	584.01	379.17	5.88	-0.38	0.014
150.00	-3.53	-0.30	0.00	-2.81	0.00	2.81	728.28	364.14	584.01	379.17	5.96	-0.38	0.012
155.00	-2.95	-0.26	0.00	-1.28	0.00	1.28	728.28	364.14	584.01	379.17	6.36	-0.38	0.007
160.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	6.76	-0.38	0.000
164.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	7.08	-0.38	0.000

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Customer: AT&T MOBILITY

Load Case (0.9 - 0.2Sds) * DL + E ELFMSeismic (Reduced DL) Equivalent Lateral Forces MethodCalculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.83	-1.45	0.00	-195.23	0.00	195.23	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.045
5.00	-29.76	-1.45	0.00	-187.99	0.00	187.99	4,313.64	2,156.82	9,844.46	4,929.55	0.01	-0.01	0.045
10.00	-28.70	-1.46	0.00	-180.73	0.00	180.73	4,261.46	2,130.73	9,523.30	4,768.73	0.02	-0.02	0.045
15.00	-27.67	-1.46	0.00	-173.45	0.00	173.45	4,207.73	2,103.87	9,203.69	4,608.68	0.05	-0.03	0.044
20.00	-26.65	-1.46	0.00	-166.16	0.00	166.16	4,152.45	2,076.22	8,885.85	4,449.53	0.09	-0.04	0.044
25.00	-25.66	-1.46	0.00	-158.85	0.00	158.85	4,095.61	2,047.81	8,570.01	4,291.37	0.13	-0.05	0.043
30.00	-24.68	-1.46	0.00	-151.54	0.00	151.54	4,037.22	2,018.61	8,256.37	4,134.32	0.20	-0.06	0.043
35.00	-23.73	-1.46	0.00	-144.23	0.00	144.23	3,977.28	1,988.64	7,945.18	3,978.49	0.27	-0.07	0.042
40.00	-22.79	-1.45	0.00	-136.93	0.00	136.93	3,915.78	1,957.89	7,636.64	3,823.99	0.35	-0.09	0.042
45.00	-22.41	-1.45	0.00	-129.66	0.00	129.66	3,852.73	1,926.36	7,330.97	3,670.93	0.45	-0.10	0.041
47.04	-21.48	-1.44	0.00	-126.69	0.00	126.69	3,826.51	1,913.26	7,206.94	3,608.82	0.49	-0.10	0.041
50.00	-20.40	-1.43	0.00	-122.41	0.00	122.41	3,788.12	1,894.06	7,028.41	3,519.43	0.56	-0.11	0.040
53.46	-20.16	-1.43	0.00	-117.46	0.00	117.46	2,951.22	1,475.61	5,470.34	2,739.24	0.64	-0.12	0.050
55.00	-19.40	-1.42	0.00	-115.25	0.00	115.25	2,937.47	1,468.73	5,401.95	2,704.99	0.68	-0.12	0.049
60.00	-18.66	-1.41	0.00	-108.15	0.00	108.15	2,891.80	1,445.90	5,180.83	2,594.27	0.82	-0.14	0.048
65.00	-17.94	-1.40	0.00	-101.09	0.00	101.09	2,844.58	1,422.29	4,961.34	2,484.36	0.97	-0.15	0.047
70.00	-17.23	-1.39	0.00	-94.09	0.00	94.09	2,795.80	1,397.90	4,743.68	2,375.37	1.13	-0.17	0.046
75.00	-16.53	-1.37	0.00	-87.17	0.00	87.17	2,745.47	1,372.74	4,528.10	2,267.41	1.32	-0.18	0.044
80.00	-15.86	-1.35	0.00	-80.32	0.00	80.32	2,693.59	1,346.80	4,314.79	2,160.60	1.51	-0.20	0.043
85.00	-15.20	-1.33	0.00	-73.57	0.00	73.57	2,640.15	1,320.08	4,104.00	2,055.05	1.72	-0.21	0.042
90.00	-14.56	-1.31	0.00	-66.93	0.00	66.93	2,585.16	1,292.58	3,895.93	1,950.86	1.95	-0.22	0.040
95.00	-14.50	-1.30	0.00	-60.40	0.00	60.40	2,528.62	1,264.31	3,690.81	1,848.15	2.20	-0.24	0.038
95.46	-13.56	-1.26	0.00	-59.80	0.00	59.80	2,523.34	1,261.67	3,672.09	1,838.78	2.22	-0.24	0.038
100.00	-13.45	-1.26	0.00	-54.07	0.00	54.07	2,470.52	1,235.26	3,488.86	1,747.02	2.45	-0.25	0.036
100.54	-12.99	-1.24	0.00	-53.39	0.00	53.39	1,850.47	925.23	2,651.50	1,327.72	2.48	-0.26	0.047
105.00	-12.48	-1.21	0.00	-47.88	0.00	47.88	1,816.72	908.36	2,526.35	1,265.05	2.73	-0.27	0.045
110.00	-11.99	-1.18	0.00	-41.82	0.00	41.82	1,777.39	888.69	2,387.38	1,195.46	3.02	-0.28	0.042
115.00	-11.52	-1.16	0.00	-35.90	0.00	35.90	1,736.51	868.25	2,250.11	1,126.73	3.32	-0.30	0.038
120.00	-11.05	-1.12	0.00	-30.12	0.00	30.12	1,694.07	847.03	2,114.79	1,058.97	3.65	-0.32	0.035
125.00	-10.60	-1.09	0.00	-24.50	0.00	24.50	1,650.08	825.04	1,981.63	992.29	3.98	-0.33	0.031
130.00	-10.16	-1.06	0.00	-19.04	0.00	19.04	1,604.53	802.27	1,850.85	926.80	4.34	-0.34	0.027
135.00	-9.91	-1.04	0.00	-13.75	0.00	13.75	1,557.44	778.72	1,722.67	862.61	4.70	-0.35	0.022
138.00	-6.56	-0.73	0.00	-10.65	0.00	10.65	1,528.43	764.22	1,647.10	824.77	4.92	-0.36	0.017
140.00	-6.17	-0.69	0.00	-9.19	0.00	9.19	1,508.78	754.39	1,597.31	799.84	5.07	-0.36	0.016
145.00	-5.88	-0.66	0.00	-5.73	0.00	5.73	1,454.09	727.05	1,470.45	736.32	5.45	-0.37	0.012
148.90	-5.09	-0.58	0.00	-3.15	0.00	3.15	1,401.44	700.72	1,365.37	683.70	5.75	-0.37	0.008
149.00	-2.98	-0.35	0.00	-3.09	0.00	3.09	1,400.09	700.04	1,362.73	682.38	5.76	-0.37	0.007
149.00	-2.98	-0.35	0.00	-3.09	0.00	3.09	728.28	364.14	584.01	379.17	5.76	-0.37	0.012
150.00	-2.46	-0.30	0.00	-2.74	0.00	2.74	728.28	364.14	584.01	379.17	5.84	-0.37	0.011
155.00	-2.05	-0.25	0.00	-1.25	0.00	1.25	728.28	364.14	584.01	379.17	6.23	-0.37	0.006
160.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	6.62	-0.37	0.000
164.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	6.93	-0.37	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

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Customer: AT&T MOBILITY

Equivalent Modal Forces Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.18
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):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.58
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2S_{ds}) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	S _{az}	Horizontal Force (lb)	Vertical Force (lb)
40	162.00	315	1.844	1.747	1.055	0.334	91	390
39	157.50	466	1.743	1.293	0.882	0.272	110	578
38	152.50	466	1.634	0.888	0.718	0.210	85	578
37	149.50	97	1.571	0.690	0.631	0.176	15	120
36	148.95	9	1.559	0.657	0.616	0.170	1	11
35	146.95	344	1.517	0.545	0.564	0.149	44	426
34	142.50	454	1.427	0.337	0.460	0.106	42	563
33	139.00	186	1.358	0.209	0.389	0.076	12	230
32	136.50	297	1.309	0.134	0.344	0.057	15	368
31	132.50	507	1.234	0.039	0.281	0.029	13	628
30	127.50	523	1.142	-0.043	0.214	0.000	0	647
29	122.50	538	1.054	-0.092	0.160	-0.023	-11	666
28	117.50	554	0.970	-0.116	0.117	-0.039	-19	685
27	112.50	569	0.889	-0.122	0.083	-0.049	-24	705
26	107.50	584	0.812	-0.114	0.057	-0.052	-26	724
25	102.77	534	0.742	-0.099	0.039	-0.049	-23	661
24	100.27	129	0.707	-0.089	0.031	-0.046	-5	160
23	97.73	1,093	0.671	-0.078	0.025	-0.040	-38	1,354
22	95.23	68	0.637	-0.066	0.019	-0.034	-2	84
21	92.50	745	0.601	-0.053	0.015	-0.026	-17	923
20	87.50	764	0.538	-0.030	0.009	-0.009	-6	947
19	82.50	784	0.478	-0.008	0.006	0.009	6	971
18	77.50	803	0.422	0.011	0.006	0.025	17	995
17	72.50	822	0.369	0.027	0.008	0.037	27	1,019
16	67.50	842	0.320	0.041	0.011	0.046	34	1,042
15	62.50	861	0.274	0.051	0.015	0.051	38	1,066
14	57.50	880	0.232	0.058	0.019	0.054	41	1,090
13	54.23	275	0.207	0.062	0.022	0.055	13	341
12	51.73	1,252	0.188	0.064	0.025	0.055	59	1,551
11	48.52	1,086	0.165	0.067	0.028	0.055	51	1,345
10	46.02	437	0.149	0.068	0.030	0.054	21	541
9	42.50	1,085	0.127	0.070	0.033	0.054	50	1,344
8	37.50	1,108	0.099	0.071	0.037	0.052	50	1,372
7	32.50	1,131	0.074	0.072	0.040	0.051	50	1,401

Site Number: 413850

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6	27.50	1,155	0.053	0.071	0.042	0.050	50	1,430
5	22.50	1,178	0.036	0.069	0.041	0.048	49	1,459
4	17.50	1,201	0.022	0.065	0.038	0.046	48	1,487
3	12.50	1,224	0.011	0.056	0.033	0.041	44	1,516
2	7.50	1,247	0.004	0.041	0.023	0.032	35	1,545
1	2.50	1,271	0.000	0.017	0.009	0.015	16	1,573
Raycap DC6-48-60-0-8	160.00	16	1.799	1.534	0.975	0.305	4	20
Ericsson RRUS 8843 B	160.00	216	1.799	1.534	0.975	0.305	57	267
Ericsson RRUS 4449 B	160.00	213	1.799	1.534	0.975	0.305	56	264
Ericsson RRUS 4478 B	160.00	178	1.799	1.534	0.975	0.305	47	221
Raycap DC6-48-60-18-	160.00	32	1.799	1.534	0.975	0.305	8	40
Round Sector Frame	160.00	900	1.799	1.534	0.975	0.305	238	1,115
KMW EPBQ-654L8H8-L2	160.00	516	1.799	1.534	0.975	0.305	137	639
Nokia AirScale RRH 4	150.00	106	1.581	0.721	0.645	0.181	17	131
RFS DB-C1-12C-24AB-0	150.00	32	1.581	0.721	0.645	0.181	5	40
Alcatel-Lucent B25 R	149.00	159	1.560	0.660	0.617	0.171	23	197
Alcatel-Lucent B13 R	149.00	173	1.560	0.660	0.617	0.171	26	215
Alcatel-Lucent B66A	149.00	201	1.560	0.660	0.617	0.171	30	249
Amphenol Antel LPA-8	149.00	126	1.560	0.660	0.617	0.171	19	156
Commscope JAHH-65B-	149.00	364	1.560	0.660	0.617	0.171	54	450
VZW Unused Reserve:	149.00	1,339	1.560	0.660	0.617	0.171	198	1,658
Flat T-Arm w/ Platfo	148.90	900	1.558	0.654	0.615	0.169	132	1,115
Ericsson Radio 4449	138.00	592	1.338	0.177	0.371	0.068	35	733
RFS SC2-W100AB	138.00	22	1.338	0.177	0.371	0.068	1	27
Ericsson AIR 32 B2A/	138.00	573	1.338	0.177	0.371	0.068	34	710
RFS APXVAARR24_43-U-	138.00	512	1.338	0.177	0.371	0.068	30	634
Flat Platform w/ Han	138.00	2,000	1.338	0.177	0.371	0.068	118	2,477
		37,055	60.557	24.286	21.466	6.077	2,227	45,889

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

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
40	162.00	315	1.844	1.747	1.055	0.334	91	271
39	157.50	466	1.743	1.293	0.882	0.272	110	402
38	152.50	466	1.634	0.888	0.718	0.210	85	402
37	149.50	97	1.571	0.690	0.631	0.176	15	83
36	148.95	9	1.559	0.657	0.616	0.170	1	7
35	146.95	344	1.517	0.545	0.564	0.149	44	296
34	142.50	454	1.427	0.337	0.460	0.106	42	392
33	139.00	186	1.358	0.209	0.389	0.076	12	160
32	136.50	297	1.309	0.134	0.344	0.057	15	256
31	132.50	507	1.234	0.039	0.281	0.029	13	437
30	127.50	523	1.142	-0.043	0.214	0.000	0	450
29	122.50	538	1.054	-0.092	0.160	-0.023	-11	464
28	117.50	554	0.970	-0.116	0.117	-0.039	-19	477
27	112.50	569	0.889	-0.122	0.083	-0.049	-24	490
26	107.50	584	0.812	-0.114	0.057	-0.052	-26	504
25	102.77	534	0.742	-0.099	0.039	-0.049	-23	460
24	100.27	129	0.707	-0.089	0.031	-0.046	-5	111
23	97.73	1,093	0.671	-0.078	0.025	-0.040	-38	942
22	95.23	68	0.637	-0.066	0.019	-0.034	-2	58
21	92.50	745	0.601	-0.053	0.015	-0.026	-17	642
20	87.50	764	0.538	-0.030	0.009	-0.009	-6	659
19	82.50	784	0.478	-0.008	0.006	0.009	6	675
18	77.50	803	0.422	0.011	0.006	0.025	17	692
17	72.50	822	0.369	0.027	0.008	0.037	27	709
16	67.50	842	0.320	0.041	0.011	0.046	34	725
15	62.50	861	0.274	0.051	0.015	0.051	38	742

Site Number: 413850

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14	57.50	880	0.232	0.058	0.019	0.054	41	759
13	54.23	275	0.207	0.062	0.022	0.055	13	237
12	51.73	1,252	0.188	0.064	0.025	0.055	59	1,079
11	48.52	1,086	0.165	0.067	0.028	0.055	51	936
10	46.02	437	0.149	0.068	0.030	0.054	21	376
9	42.50	1,085	0.127	0.070	0.033	0.054	50	935
8	37.50	1,108	0.099	0.071	0.037	0.052	50	955
7	32.50	1,131	0.074	0.072	0.040	0.051	50	975
6	27.50	1,155	0.053	0.071	0.042	0.050	50	995
5	22.50	1,178	0.036	0.069	0.041	0.048	49	1,015
4	17.50	1,201	0.022	0.065	0.038	0.046	48	1,035
3	12.50	1,224	0.011	0.056	0.033	0.041	44	1,055
2	7.50	1,247	0.004	0.041	0.023	0.032	35	1,075
1	2.50	1,271	0.000	0.017	0.009	0.015	16	1,095
Raycap DC6-48-60-0-8	160.00	16	1.799	1.534	0.975	0.305	4	14
Ericsson RRUS 8843 B	160.00	216	1.799	1.534	0.975	0.305	57	186
Ericsson RRUS 4449 B	160.00	213	1.799	1.534	0.975	0.305	56	184
Ericsson RRUS 4478 B	160.00	178	1.799	1.534	0.975	0.305	47	154
Raycap DC6-48-60-18-	160.00	32	1.799	1.534	0.975	0.305	8	28
Round Sector Frame	160.00	900	1.799	1.534	0.975	0.305	238	775
KMW EPBQ-654L8H8-L2	160.00	516	1.799	1.534	0.975	0.305	137	445
Nokia AirScale RRH 4	150.00	106	1.581	0.721	0.645	0.181	17	91
RFS DB-C1-12C-24AB-0	150.00	32	1.581	0.721	0.645	0.181	5	28
Alcatel-Lucent B25 R	149.00	159	1.560	0.660	0.617	0.171	23	137
Alcatel-Lucent B13 R	149.00	173	1.560	0.660	0.617	0.171	26	149
Alcatel-Lucent B66A	149.00	201	1.560	0.660	0.617	0.171	30	173
Amphenol Antel LPA-8	149.00	126	1.560	0.660	0.617	0.171	19	109
Commscope JAHH-65B-	149.00	364	1.560	0.660	0.617	0.171	54	313
VZW Unused Reserve:	149.00	1,339	1.560	0.660	0.617	0.171	198	1,154
Flat T-Arm w/ Platfo	148.90	900	1.558	0.654	0.615	0.169	132	775
Ericsson Radio 4449	138.00	592	1.338	0.177	0.371	0.068	35	510
RFS SC2-W100AB	138.00	22	1.338	0.177	0.371	0.068	1	19
Ericsson AIR 32 B2A/	138.00	573	1.338	0.177	0.371	0.068	34	494
RFS APXVAARR24_43-U-	138.00	512	1.338	0.177	0.371	0.068	30	441
Flat Platform w/ Han	138.00	2,000	1.338	0.177	0.371	0.068	118	1,723
		37,055	60.557	24.286	21.466	6.077	2,227	31,927

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.32	-2.22	0.00	-280.25	0.00	280.25	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.065
5.00	-42.77	-2.19	0.00	-269.17	0.00	269.17	4,313.64	2,156.82	9,844.46	4,929.55	0.01	-0.01	0.065
10.00	-41.25	-2.16	0.00	-258.21	0.00	258.21	4,261.46	2,130.73	9,523.30	4,768.73	0.03	-0.03	0.064
15.00	-39.77	-2.12	0.00	-247.42	0.00	247.42	4,207.73	2,103.87	9,203.69	4,608.68	0.07	-0.04	0.063
20.00	-38.31	-2.08	0.00	-236.83	0.00	236.83	4,152.45	2,076.22	8,885.85	4,449.53	0.12	-0.06	0.062
25.00	-36.88	-2.04	0.00	-226.43	0.00	226.43	4,095.61	2,047.81	8,570.01	4,291.37	0.19	-0.07	0.062
30.00	-35.47	-2.00	0.00	-216.24	0.00	216.24	4,037.22	2,018.61	8,256.37	4,134.32	0.28	-0.09	0.061
35.00	-34.10	-1.95	0.00	-206.27	0.00	206.27	3,977.28	1,988.64	7,945.18	3,978.49	0.38	-0.11	0.060
40.00	-32.76	-1.91	0.00	-196.50	0.00	196.50	3,915.78	1,957.89	7,636.64	3,823.99	0.50	-0.12	0.060
45.00	-32.22	-1.89	0.00	-186.96	0.00	186.96	3,852.73	1,926.36	7,330.97	3,670.93	0.64	-0.14	0.059
47.04	-30.87	-1.84	0.00	-183.09	0.00	183.09	3,826.51	1,913.26	7,206.94	3,608.82	0.70	-0.15	0.059
50.00	-29.32	-1.79	0.00	-177.64	0.00	177.64	3,788.12	1,894.06	7,028.41	3,519.43	0.80	-0.16	0.058
53.46	-28.98	-1.78	0.00	-171.46	0.00	171.46	2,951.22	1,475.61	5,470.34	2,739.24	0.92	-0.17	0.072
55.00	-27.89	-1.74	0.00	-168.72	0.00	168.72	2,937.47	1,468.73	5,401.95	2,704.99	0.97	-0.18	0.072
60.00	-26.82	-1.71	0.00	-160.03	0.00	160.03	2,891.80	1,445.90	5,180.83	2,594.27	1.17	-0.20	0.071
65.00	-25.78	-1.68	0.00	-151.50	0.00	151.50	2,844.58	1,422.29	4,961.34	2,484.36	1.39	-0.22	0.070
70.00	-24.76	-1.66	0.00	-143.10	0.00	143.10	2,795.80	1,397.90	4,743.68	2,375.37	1.63	-0.24	0.069
75.00	-23.76	-1.65	0.00	-134.81	0.00	134.81	2,745.47	1,372.74	4,528.10	2,267.41	1.89	-0.26	0.068
80.00	-22.79	-1.64	0.00	-126.58	0.00	126.58	2,693.59	1,346.80	4,314.79	2,160.60	2.18	-0.29	0.067
85.00	-21.85	-1.65	0.00	-118.36	0.00	118.36	2,640.15	1,320.08	4,104.00	2,055.05	2.49	-0.31	0.066
90.00	-20.92	-1.68	0.00	-110.08	0.00	110.08	2,585.16	1,292.58	3,895.93	1,950.86	2.83	-0.33	0.065
95.00	-20.84	-1.68	0.00	-101.71	0.00	101.71	2,528.62	1,264.31	3,690.81	1,848.15	3.19	-0.36	0.063
95.46	-19.48	-1.72	0.00	-100.93	0.00	100.93	2,523.34	1,261.67	3,672.09	1,838.78	3.22	-0.36	0.063
100.00	-19.32	-1.72	0.00	-93.15	0.00	93.15	2,470.52	1,235.26	3,488.86	1,747.02	3.57	-0.38	0.061
100.54	-18.66	-1.75	0.00	-92.21	0.00	92.21	1,850.47	925.23	2,651.50	1,327.72	3.62	-0.38	0.080
105.00	-17.94	-1.78	0.00	-84.43	0.00	84.43	1,816.72	908.36	2,526.35	1,265.05	3.99	-0.41	0.077
110.00	-17.23	-1.80	0.00	-75.55	0.00	75.55	1,777.39	888.69	2,387.38	1,195.46	4.43	-0.44	0.073
115.00	-16.54	-1.83	0.00	-66.53	0.00	66.53	1,736.51	868.25	2,250.11	1,126.73	4.90	-0.47	0.069
120.00	-15.88	-1.84	0.00	-57.41	0.00	57.41	1,694.07	847.03	2,114.79	1,058.97	5.40	-0.49	0.064
125.00	-15.23	-1.84	0.00	-48.22	0.00	48.22	1,650.08	825.04	1,981.63	992.29	5.94	-0.52	0.058
130.00	-14.60	-1.83	0.00	-39.02	0.00	39.02	1,604.53	802.27	1,850.85	926.80	6.49	-0.54	0.051
135.00	-14.23	-1.81	0.00	-29.89	0.00	29.89	1,557.44	778.72	1,722.67	862.61	7.08	-0.57	0.044
138.00	-9.42	-1.53	0.00	-24.46	0.00	24.46	1,528.43	764.22	1,647.10	824.77	7.44	-0.58	0.036
140.00	-8.86	-1.49	0.00	-21.39	0.00	21.39	1,508.78	754.39	1,597.31	799.84	7.68	-0.59	0.033
145.00	-8.44	-1.44	0.00	-13.94	0.00	13.94	1,454.09	727.05	1,470.45	736.32	8.30	-0.60	0.025
148.90	-7.31	-1.30	0.00	-8.32	0.00	8.32	1,401.44	700.72	1,365.37	683.70	8.80	-0.61	0.017
149.00	-4.27	-0.90	0.00	-8.19	0.00	8.19	1,400.09	700.04	1,362.73	682.38	8.81	-0.61	0.015
149.00	-4.27	-0.90	0.00	-8.19	0.00	8.19	728.28	364.14	584.01	379.17	8.81	-0.61	0.027
150.00	-3.52	-0.79	0.00	-7.29	0.00	7.29	728.28	364.14	584.01	379.17	8.94	-0.61	0.024
155.00	-2.95	-0.67	0.00	-3.35	0.00	3.35	728.28	364.14	584.01	379.17	9.58	-0.62	0.013
160.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	10.23	-0.62	0.000
164.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	10.75	-0.62	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

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Customer: AT&T MOBILITY

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis MethodCalculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.83	-2.21	0.00	-275.66	0.00	275.66	4,364.26	2,182.13	10,166.9	5,091.03	0.00	0.00	0.061
5.00	-29.76	-2.19	0.00	-264.59	0.00	264.59	4,313.64	2,156.82	9,844.46	4,929.55	0.01	-0.01	0.061
10.00	-28.70	-2.15	0.00	-253.66	0.00	253.66	4,261.46	2,130.73	9,523.30	4,768.73	0.03	-0.03	0.060
15.00	-27.67	-2.11	0.00	-242.91	0.00	242.91	4,207.73	2,103.87	9,203.69	4,608.68	0.07	-0.04	0.059
20.00	-26.65	-2.07	0.00	-232.37	0.00	232.37	4,152.45	2,076.22	8,885.85	4,449.53	0.12	-0.06	0.059
25.00	-25.66	-2.02	0.00	-222.05	0.00	222.05	4,095.61	2,047.81	8,570.01	4,291.37	0.19	-0.07	0.058
30.00	-24.68	-1.98	0.00	-211.94	0.00	211.94	4,037.22	2,018.61	8,256.37	4,134.32	0.27	-0.09	0.057
35.00	-23.72	-1.93	0.00	-202.06	0.00	202.06	3,977.28	1,988.64	7,945.18	3,978.49	0.38	-0.10	0.057
40.00	-22.79	-1.89	0.00	-192.41	0.00	192.41	3,915.78	1,957.89	7,636.64	3,823.99	0.49	-0.12	0.056
45.00	-22.41	-1.87	0.00	-182.98	0.00	182.98	3,852.73	1,926.36	7,330.97	3,670.93	0.63	-0.14	0.056
47.04	-21.48	-1.82	0.00	-179.17	0.00	179.17	3,826.51	1,913.26	7,206.94	3,608.82	0.69	-0.14	0.055
50.00	-20.40	-1.76	0.00	-173.79	0.00	173.79	3,788.12	1,894.06	7,028.41	3,519.43	0.78	-0.15	0.055
53.46	-20.16	-1.75	0.00	-167.70	0.00	167.70	2,951.22	1,475.61	5,470.34	2,739.24	0.90	-0.17	0.068
55.00	-19.40	-1.71	0.00	-165.01	0.00	165.01	2,937.47	1,468.73	5,401.95	2,704.99	0.96	-0.17	0.068
60.00	-18.66	-1.68	0.00	-156.46	0.00	156.46	2,891.80	1,445.90	5,180.83	2,594.27	1.15	-0.19	0.067
65.00	-17.93	-1.65	0.00	-148.08	0.00	148.08	2,844.58	1,422.29	4,961.34	2,484.36	1.36	-0.21	0.066
70.00	-17.22	-1.62	0.00	-139.85	0.00	139.85	2,795.80	1,397.90	4,743.68	2,375.37	1.60	-0.24	0.065
75.00	-16.53	-1.61	0.00	-131.73	0.00	131.73	2,745.47	1,372.74	4,528.10	2,267.41	1.85	-0.26	0.064
80.00	-15.86	-1.61	0.00	-123.68	0.00	123.68	2,693.59	1,346.80	4,314.79	2,160.60	2.13	-0.28	0.063
85.00	-15.20	-1.62	0.00	-115.65	0.00	115.65	2,640.15	1,320.08	4,104.00	2,055.05	2.44	-0.30	0.062
90.00	-14.55	-1.63	0.00	-107.57	0.00	107.57	2,585.16	1,292.58	3,895.93	1,950.86	2.77	-0.33	0.061
95.00	-14.50	-1.64	0.00	-99.39	0.00	99.39	2,528.62	1,264.31	3,690.81	1,848.15	3.12	-0.35	0.060
95.46	-13.55	-1.68	0.00	-98.64	0.00	98.64	2,523.34	1,261.67	3,672.09	1,838.78	3.16	-0.35	0.059
100.00	-13.44	-1.68	0.00	-91.03	0.00	91.03	2,470.52	1,235.26	3,488.86	1,747.02	3.50	-0.37	0.058
100.54	-12.98	-1.71	0.00	-90.12	0.00	90.12	1,850.47	925.23	2,651.50	1,327.72	3.54	-0.38	0.075
105.00	-12.48	-1.73	0.00	-82.52	0.00	82.52	1,816.72	908.36	2,526.35	1,265.05	3.91	-0.40	0.072
110.00	-11.98	-1.76	0.00	-73.85	0.00	73.85	1,777.39	888.69	2,387.38	1,195.46	4.34	-0.43	0.069
115.00	-11.51	-1.78	0.00	-65.05	0.00	65.05	1,736.51	868.25	2,250.11	1,126.73	4.80	-0.46	0.064
120.00	-11.04	-1.79	0.00	-56.15	0.00	56.15	1,694.07	847.03	2,114.79	1,058.97	5.29	-0.48	0.060
125.00	-10.59	-1.79	0.00	-47.18	0.00	47.18	1,650.08	825.04	1,981.63	992.29	5.81	-0.51	0.054
130.00	-10.15	-1.78	0.00	-38.21	0.00	38.21	1,604.53	802.27	1,850.85	926.80	6.36	-0.53	0.048
135.00	-9.90	-1.77	0.00	-29.31	0.00	29.31	1,557.44	778.72	1,722.67	862.61	6.93	-0.55	0.040
138.00	-6.55	-1.50	0.00	-24.01	0.00	24.01	1,528.43	764.22	1,647.10	824.77	7.28	-0.57	0.033
140.00	-6.16	-1.46	0.00	-21.00	0.00	21.00	1,508.78	754.39	1,597.31	799.84	7.52	-0.57	0.030
145.00	-5.87	-1.41	0.00	-13.70	0.00	13.70	1,454.09	727.05	1,470.45	736.32	8.13	-0.59	0.023
148.90	-5.08	-1.27	0.00	-8.19	0.00	8.19	1,401.44	700.72	1,365.37	683.70	8.61	-0.60	0.016
149.00	-2.97	-0.89	0.00	-8.06	0.00	8.06	1,400.09	700.04	1,362.73	682.38	8.63	-0.60	0.014
149.00	-2.97	-0.89	0.00	-8.06	0.00	8.06	728.28	364.14	584.01	379.17	8.63	-0.60	0.025
150.00	-2.45	-0.77	0.00	-7.18	0.00	7.18	728.28	364.14	584.01	379.17	8.75	-0.60	0.022
155.00	-2.05	-0.66	0.00	-3.30	0.00	3.30	728.28	364.14	584.01	379.17	9.38	-0.60	0.012
160.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	10.01	-0.61	0.000
164.00	0.00	0.00	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	10.52	-0.61	0.000

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

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Customer: AT&T MOBILITY

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	36.01	0.00	44.40	0.00	0.00	4231.54	53.46	0.91
0.9D + 1.6W	35.98	0.00	33.28	0.00	0.00	4178.03	53.46	0.89
1.2D + 1.0Di + 1.0Wi	7.86	0.00	82.89	0.00	0.00	956.70	53.46	0.23
(1.2 + 0.2Sds) * DL + E ELFM	1.45	0.00	44.32	0.00	0.00	198.33	53.46	0.05
(1.2 + 0.2Sds) * DL + E EMAM	2.22	0.00	44.32	0.00	0.00	280.25	100.54	0.08
(0.9 - 0.2Sds) * DL + E ELFM	1.45	0.00	30.83	0.00	0.00	195.23	53.46	0.05
(0.9 - 0.2Sds) * DL + E EMAM	2.21	0.00	30.83	0.00	0.00	275.66	100.54	0.07
1.0D + 1.0W	10.00	0.00	37.05	0.00	0.00	1168.34	53.46	0.26

Site Number: 413850

Code: ANSI/TIA-222-G

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Site Name: Goshen (Brass Mountain) CT, CT Engineering Number: OAA742307_C3_05

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Customer: AT&T MOBILITY

Base Summary

Reactions

Original Design			Analysis			Moment Design %
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	
4,230.70	28.90	38.70	4,231.54	82.89	36.01	100.02

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
50.0	3.000	71.000	Round	0	0.00	7.538	534.62	763.22	0.70

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
65.00	24	2.25" A615-	2.25	75.00	100.00	Radial	0.00	0.0	133.65	260.00	0.53	126.75	260.00	0.50

3



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Calculated Radio Frequency Emissions



at&t

CT1453

Goshen North Street

442 North Street, Goshen, CT 06756

April 23, 2019

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of AT&T antenna arrays to be mounted on an extension of the existing monopole tower located at 442 North Street in Goshen, CT. The coordinates of the tower are 41° 51' 22.78" N, 73° 14' 26.69" W.

AT&T is proposing the following:

- 1) Install nine (9) multi-band antennas (three per sector) to support its commercial LTE network and the FirstNet National Public Safety Broadband Network ("NPSBN").

This report considers the planned antenna configuration for AT&T¹ to derive the resulting % MPE of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

¹ As referenced to AT&T's Radio Frequency Design Sheet updated 09/21/2018.

3. RF Exposure Calculation Methods

The power density calculation results were generated using the following formula as outlined in FCC bulletin OET 65, and Connecticut Siting Council recommendations:

$$\text{Power Density} = \left(\frac{1.6^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

ERP = Effective Radiated Power

$R = \text{Radial Distance} = \sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna

V = Vertical Distance from radiation center of antenna

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all antenna channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not consider actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Calculation Results

Table 1 below outlines the power density information for the site. The proposed AT&T antennas are directional in nature; therefore, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical pattern of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	% MPE
AT&T	137	880	2	500	0.0021	0.5867	0.36%
AT&T	137	1900	1	500	0.0010	1.0000	0.10%
AT&T	137	700	1	500	0.0010	0.4667	0.22%
AT&T	137	1900	1	500	0.0010	1.0000	0.10%
AT&T	137	2300	1	500	0.0010	1.0000	0.10%
T-Mobile	138	1900	2	1556	0.00643	1.0000	0.64%
T-Mobile	138	1900	1	1556	0.00321	1.0000	0.32%
T-Mobile	138	2100	2	2334	0.00964	1.0000	0.96%
T-Mobile	138	600	2	789	0.00326	0.4000	0.81%
T-Mobile	138	700	2	433	0.00179	0.4667	0.38%
T-Mobile	138	11000	1	1718	0.0004	1.0000	0.04%
Verizon	150	1970	1	1064	0.0018	1.0000	0.18%
Verizon	150	869	1	340	0.0006	0.5793	0.10%
Verizon	150	876	3	448	0.0023	0.5840	0.40%
Verizon	150	2145	1	1560	0.0027	1.0000	0.27%
Verizon	150	746	1	887	0.0015	0.4973	0.31%
AT&T	160	722	1	1730	0.0026	0.4813	0.55%
AT&T	160	739	1	3794	0.0058	0.4927	1.17%
AT&T	160	763	1	3794	0.0058	0.5087	1.13%
AT&T	160	885	1	4066	0.0062	0.5900	1.05%
AT&T	160	1900	1	5743	0.0087	1.0000	0.87%
AT&T	160	2100	1	8614	0.0131	1.0000	1.31%
AT&T	160	2300	1	6153	0.0093	1.0000	0.93%
						Total	11.43%

Table 1: Carrier Information^{2 3 4}

² The existing CSC filing for AT&T should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for Verizon was taken directly from the CSC database dated 12/12/2018. T-Mobile information is based on the analysis included as an attachment to the Transcend Wireless letter to the CSC on behalf of T-Mobile dated 10/19/2018. Please note that % MPE values listed are rounded to two decimal points and the total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not identically match the total value reflected in the table.

³ In the case where antenna models are not uniform across all 3 sectors for the same frequency band, the antenna model with the highest gain was used for the calculations to present a worse-case scenario.

⁴ Antenna height listed for AT&T is in reference to the Tower Engineering Professionals Structural Analysis Report dated February 7, 2019, and the Advanced Engineering Group, P.C. site drawings dated February 14, 2019 (Rev. 0).


5. Conclusion

The above analysis concludes that RF exposure at ground level from the proposed site modifications will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using conservative calculation methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **11.43% of the FCC General Population/Uncontrolled limit.**


As noted previously, the calculated % MPE levels are more conservative (higher) than the actual % MPE levels will be from the finished modifications.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in FCC OET Bulletin 65 Edition 97-01, ANSI/IEEE Std. C95.1, and ANSI/IEEE Std. C95.3.


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April 23, 2019
Date


Reviewed/Approved By: Keith Vellante
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April 23, 2019
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure⁵

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (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 Exposure⁶

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (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

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

⁵ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure

⁶ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

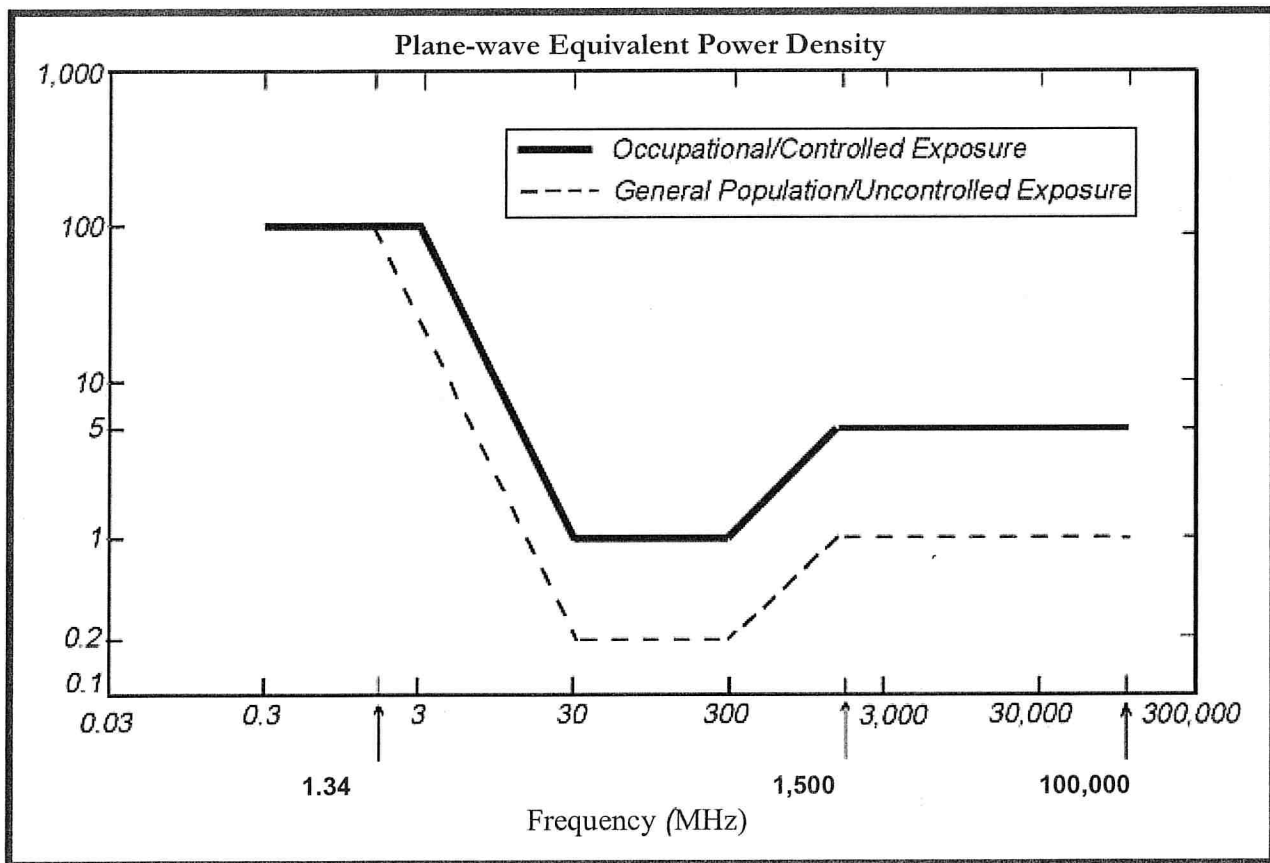
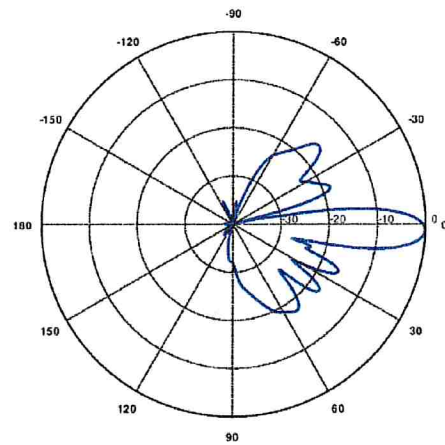


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Antenna Data Sheets and Electrical Patterns

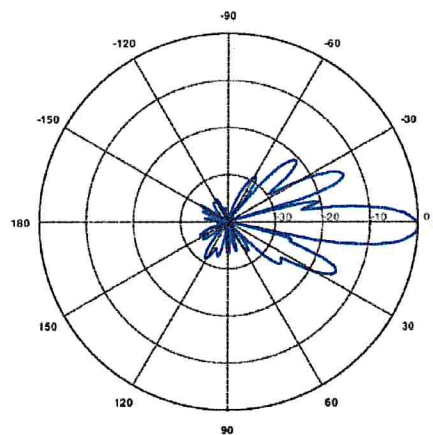
722 MHz

Manufacturer: CCI
 Model #: HPA65R-BU8A
 Frequency Band: 698-806 MHz
 Gain: 15.5 dBi
 Vertical Beamwidth: 9.7°
 Horizontal Beamwidth: 67°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 11.7" x 7.6"



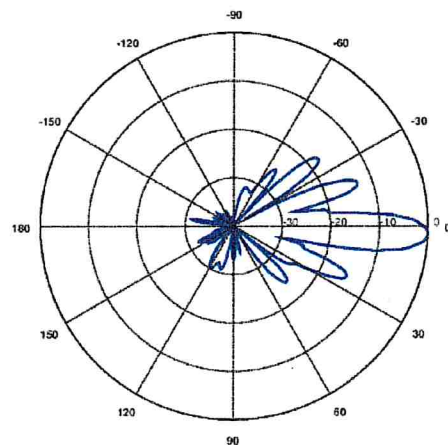
739/763 MHz

Manufacturer: KMW
 Model #: EPBQ-654L8H8-L2
 Frequency Band: 698-806 MHz
 Gain: 15.9 dBi
 Vertical Beamwidth: 9.3°
 Horizontal Beamwidth: 67°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 21.0" x 6.3"



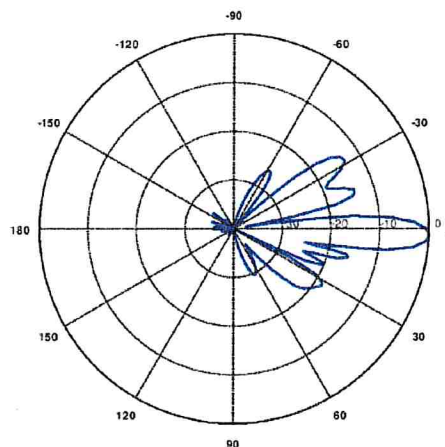
885 MHz

Manufacturer: KMW
 Model #: EPBQ-654L8H8-L2
 Frequency Band: 806-894 MHz
 Gain: 16.2 dBi
 Vertical Beamwidth: 8.7°
 Horizontal Beamwidth: 66°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 21.0" x 6.3"



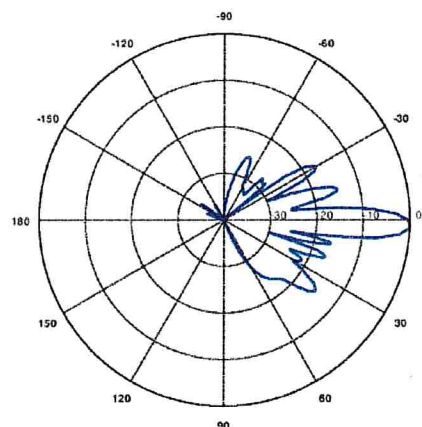
1900 MHz

Manufacturer: KMW
 Model #: EPBQ-654L8H8-L2
 Frequency Band: 1910-2180 MHz
 Gain: 17.7 dBi
 Vertical Beamwidth: 7.4°
 Horizontal Beamwidth: 60°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 21.0" x 6.3"



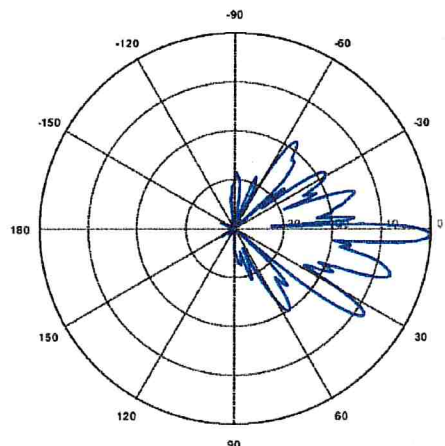
2100 MHz

Manufacturer: KMW
 Model #: EPBQ-654L8H8-L2
 Frequency Band: 1910-2180 MHz
 Gain: 17.7 dBi
 Vertical Beamwidth: 7.4°
 Horizontal Beamwidth: 60°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 21.0" x 6.3"



2300 MHz

Manufacturer: CCI
 Model #: HPA65R-BU8A
 Frequency Band: 2300-2400 MHz
 Gain: 18.0 dBi
 Vertical Beamwidth: 4.0°
 Horizontal Beamwidth: 60°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 11.7" x 7.6"



4

DOCKET NO. 337 - Cellco Partnership d/b/a Verizon Wireless	}	Connecticut
application for a Certificate of Environmental Compatibility and	}	
Public Need for the construction, maintenance and operation of a	}	Siting
telecommunications facility located off North Street (Route 63),	}	
Goshen, Connecticut.	}	Council

December 13, 2007

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership d/b/a Verizon Wireless for the construction, maintenance and operation of a wireless telecommunications facility to be located off North Street (Route 63) in Goshen, Connecticut.

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

1. The tower shall be designed and constructed as a monopole no taller than 150 feet above ground level to provide telecommunications services to both public and private entities. Panel antennas of commercial wireless telecommunications providers shall be installed on the tower using T-arm mounts.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Goshen and all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antenna mountings, equipment building, access road, and utility line;
 - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council in the event other carriers locate at this facility or if circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new state or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Goshen public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Goshen. Any proposed modifications to this Decision and Order shall likewise be so served.
9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
10. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Waterbury Republican-American.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors in this proceeding are:

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	Cellco Partnership d/b/a Verizon Wireless 99 East River Drive East Hartford, CT 06108	Sandy Carter Regulatory Manager 99 East River Drive East Hartford, CT 06108 Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

February 21, 2014

Adam Braillard
Smartlink
33 Boston Post Road West
Marlborough, MA 01752

RE: **TS-AT&T-055-140128** – AT&T request for an order to approve tower sharing at an existing telecommunications facility located at 442 North Street, Goshen, Connecticut.

Dear Mr. Braillard:

At a public meeting held February 20, 2014, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the following conditions:

- Any deviation from the proposed installation as specified in the original tower share request and supporting materials with the Council shall render this decision invalid;
- Any material changes to the proposed installation as specified in the original tower share request and supporting materials filed with the Council shall require an explicit request for modification to the Council pursuant to Connecticut General Statutes § 16-50aa, including 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;
- Not less than 45 days after completion of the proposed installation, the Council shall be notified in writing that the installation has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council. This facility has 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. 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.


This decision applies only to this request for tower sharing and is not applicable to any other request or construction. Please be advised that the validity of this action shall expire one year from the date of this letter.

The proposed shared use is to be implemented as specified in your letter dated January 27, 2014, including the placement of all necessary equipment and shelters within the tower compound.



Thank you for your attention and cooperation.

Very truly yours,


Robert Stein
Chairman

RS/CDM/laf

c: The Honorable Robert P. Valentine, First Selectman, Town of Goshen
Martin Connor, Land Use Enforcement Officer, Town of Goshen
Verizon

DOCKET NO. 337 - Celco Partnership d/b/a Verizon Wireless	}	Connecticut
Certificate of Environmental Compatibility and Public Need for the		
construction, maintenance and operation of a telecommunications	}	Siting
facility located off North Street (Route 63), Goshen, Connecticut.		
	}	Council

March 28, 2019

Decision and Order

In response to the Connecticut Siting Council's (Council) reopening of the record in this docket on March 28, 2019 to consider whether changed conditions exist that would warrant a modification to the original Decision and Order's Condition 1 eliminating the requirement that panel antennas on this telecommunications facility be installed using T-arm mounts, the Council hereby rescinds the Decision and Order in Docket 337 rendered on December 14, 2007 and issues this new Decision and Order for the construction, maintenance and operation of a telecommunications facility located off North Street (Route 63), Goshen, Connecticut.

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

1. The tower shall be designed and constructed as a monopole no taller than 150 feet above ground level to provide telecommunications services to both public and private entities.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Goshen and all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antenna mountings, equipment building, access road, and utility line;
 - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council in the event other carriers locate at this facility or if circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new state or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Goshen public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Goshen. Any proposed modifications to this Decision and Order shall likewise be so served.
9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
10. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.
11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

We hereby direct that a copy of the staff report and modified Decision and Order be served on each person listed in the Service List, dated May 24, 2007, and notice of issuance published in the Waterbury Republican-American.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

STATE OF CONNECTICUT)

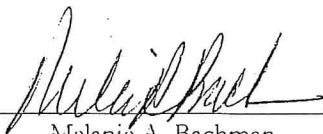
ss. New Britain, Connecticut :

March 29, 2019

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the Modified Decision and Order and reissued Certificate of Environmental Compatibility and Public Need by the Connecticut Siting Council, State of Connecticut.

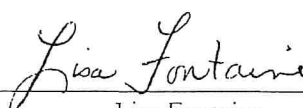
ATTEST:



Melanie A. Bachman
Executive Director
Connecticut Siting Council

I certify that a copy of the Modified Decision and Order and reissued Certificate of Environmental Compatibility and Public Need in Docket No. 337 have been forwarded by Certified First Class Return Receipt Requested mail on March 29, 2019, to all parties and intervenors of record as listed on the attached service list, dated May 24, 2007.

ATTEST:



Lisa Fontaine
Fiscal Administrative Officer
Connecticut Siting Council

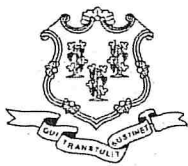
May 24, 2007

Docket No. 337

Page 1 of 1

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	Cellco Partnership d/b/a Verizon Wireless 99 East River Drive East Hartford, CT 06108	Sandy Carter Regulatory Manager Verizon Wireless 99 East River Drive East Hartford, CT 06108 Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597



STATE OF CONNECTICUT

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March 29, 2019

TO: Classified/Legal Supervisor
337190328
Waterbury Republican American
389 Meadow Street
P.O. Box 2090
Waterbury, CT 06722

FROM: Lisa Fontaine, Fiscal Administrative Officer

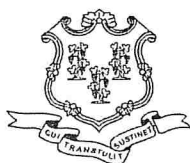
RE: **DOCKET NO. 337** - Celco Partnership d/b/a Verizon Wireless Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off North Street (Route 63), Goshen, Connecticut.

Please publish the attached legal notice for one day on the first day possible from receipt of this notice.

Please send an affidavit of publication and invoice to my attention.

Thank you.

RDM/laf



STATE OF CONNECTICUT

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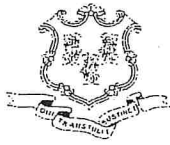
NOTICE

Pursuant to General Statutes § 4-181a(b), the Connecticut Siting Council (Council) announces that, on March 28, 2019, the Council modified the Decision and Order in Docket 337, dated December 14, 2007, and reissued the Certificate of Environmental Compatibility and Public Need, thereby eliminating the requirement that panel antennas on this telecommunications facility be installed using T-arm mounts in DOCKET NO. 337 - Celco Partnership d/b/a Verizon Wireless Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off North Street (Route 63), Goshen, Connecticut. This record is available for public inspection in the Council's office, Ten Franklin Square, New Britain, Connecticut.



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Web Site: www.ct.gov/csc

Docket No. 337 442 North Street, Goshen ATC Request to Reopen and Modify the Decision and Order

Staff Report
March 28, 2019

Introduction

On December 27, 2007 the Connecticut Siting Council (Council) issued a Certificate of Environmental Compatibility and Public Need (Certificate) to Cellco Partnership d/b/a Verizon Wireless (Cellco) for the construction, maintenance and operation of a 150-foot telecommunications facility at 442 North Street, Goshen, Connecticut.

The Council's Docket 337 Decision and Order (D&O), Condition 1, specified that "panel antennas of commercial wireless telecommunications providers shall be installed on the tower using T-arm mounts".

On February 15, 2019, American Tower Corporation (ATC), the manager of the facility for Cellco, submitted a Request to Reopen and Modify D&O Condition 1 to allow for other types of antenna mounts to be used at this facility, thereby increasing opportunities for tower sharing from entities that cannot utilize T-arm mounts with current or future antenna designs and to promote safety of tower maintenance personnel.

Background Site Information

On May 8, 2008, the Council approved the Development and Management (D&M) Plan for this facility that included a 150-foot monopole and 12 panel antennas mounted on T-arm mounts at a centerline height of 150-feet. A minor revision to the D&M Plan was approved on August 28, 2008 to address concerns from the Department of Transportation and Department of Environmental Protection related to a curb cut and access road erosion control measures, respectively. The site was constructed and operational by mid-2009.

T-Mobile Tower Share Request

On October 19, 2018, Transcend Wireless, on behalf of T-Mobile Northeast LLC (T-Mobile), submitted a tower share request to install equipment at the 138-foot level of the existing facility. T-Mobile's tower share request included 8 panel antennas, a microwave dish and associated equipment to be installed on a low-profile antenna platform. On December 3, 2018, the Council submitted correspondence to Transcend Wireless stating the filing is incomplete as it does not conform to the Council's D&O Condition 1 that limited panel antennas to a T-arm mount design.

Request to Reopen and Modify

In response to the Council's December 3, 2018 tower share request incomplete letter, ATC's February 15, 2019 Request to Reopen and Modify the D&O seeks to allow the use of low-profile platform antenna mounts and other antenna mounting designs to promote tower sharing, enhance existing wireless service and promote worker safety, as detailed below:

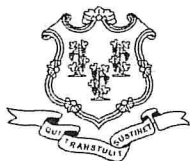
- Restricting antenna installations to T-arm mounts has the potential to deter wireless carriers and other entities that do not use this type of antenna mounting equipment from co-locating on the facility;
- Since the time of the Council's approval of this facility in 2007, there have been many technological advancements and changes to wireless technology and services. Panel antennas are larger and heavier and are usually deployed with associated remote radio heads, tower-mounted amplifiers, and other tower-mounted equipment. Due to the increase in the structural mass of antenna deployments, different mounting designs may be necessary to adequately support antenna structural loading;
- The use of a low-profile antenna platform increases worker safety and reduces overall work time for a cell site technician to perform work at an antenna installation by providing a safe, level workspace at the antenna array. T-arm antenna deployments require the use of cranes or a mechanical lift to provide safe access to the arrays, thereby increasing project time and cost for antenna maintenance/deployments; and
- The visual effect of a T-arm antenna deployment compared to a low-profile antenna deployment is negligible. Although there are walkways and handrails associated with a low-profile antenna mount, these components are mounted behind the visual mass of the antennas and would not be overly discernible except when viewed from areas near and below the tower. For this site, the tower is located in a heavily wooded area, approximately 1,000 feet east of the nearest road. No residences are within 500 feet. Based on a recent field evaluation of tower visibility, the existing antenna mounting equipment is not discernible from area vantage points, the nearest of which is a 0.65 mile to the northwest along Route 63.

On February 15, 2019, ATC notified the Town of Goshen and abutting property owners of the Request to Reopen and Modify the D&O.

On February 19, 2019, the Council notified parties and intervenors and the Town of Goshen of the Request to Reopen and Modify the D&O and requested that any submission of comments or statements with respect to whether the Request to Reopen and Modify the D&O should be granted or denied including any request for a hearing be submitted to the Council by close of business on March 15, 2019. No comments were received.

Photo simulation of Proposed T-Mobile installation with platform-mounted antennas





STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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CERTIFICATE
OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED
DOCKET NO. 337

Pursuant to General Statutes § 4-181a(b), the Connecticut Siting Council hereby reissues a Certificate of Environmental Compatibility and Public Need to Celco Partnership d/b/a Verizon Wireless for the construction, maintenance and operation of a telecommunications facility located off North Street (Route 63), Goshen, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on March 28, 2019.

By order of the Council,

Melanie A. Bachman, Executive Director

March 28, 2019

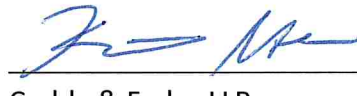


5

CERTIFICATION OF SERVICE

I hereby certify that on the 23rd day of May 2019, a copy of the following letter and notice of intended filing of a Sub-Petition with the Connecticut Siting Council for a declaratory ruling was sent by first class certified mail to the attached list of abutting property:

Dated: 5/23/19



Cuddy & Feder LLP
45 Hamilton Avenue, 14th Floor
White Plains, New York 10601
Attorneys for:
New Cingular Wireless PCS, LLC (AT&T)

IVY MOUNTAIN FARM LLC 17 HOLLY LANE DARIEN, CT 06820- 0000	ARCA LLC 25 LARCHMONT CIRCLE STRATFORD, CT 06614-1336- 0000
WOLVEN ROBERT A 20 HOLMES ROAD GOSHEN, CT 06756- 0000	KINSELLA ALLEN S & VICKI G 406 NORTH ST GOSHEN, CT 06756- 0000
ANSTETT COURTNEY PO BOX 305 GOSHEN, CT 06756- 0000	BUDNEY WAYNE CUSTODIAN FOR SKYE SABRE & ELLIOT DAVIS BUDNEY 97 GEER ROAD LEBANON, CT 06249- 0000
ARCA LLC 25 LARCHMONT CIRCLE STRATFORD, CT 06614-1336- 0000	LAPLACA GERALD B & JANICE M 498 NORTH STREET GOSHEN, CT 06756- 0000
BUDNEY TERRI A 114 WETHERSFIELD RD BERLIN, CT 06037- 0000	BAHR EDWARD S & KIM M 80 HOLMES ROAD GOSHEN, CT 06756- 0000
KINSELLA ALLEN S & VICKI G 406 NORTH ST GOSHEN, CT 06756- 0000	MARINO JACK R TRUST 236 IVY MOUNTAIN ROAD GOSHEN, CT 06790- 0000

PEET LINDA K 426 NORTH ST GOSHEN, CT 06756- 0000	BOY SCOUTS OF AMERICA HOUSATON 111 NEW HAVEN ROAD DERBY, CT 06418- 0000
BUDNEY KEVIN M CO-TRUSTEE & NEWCOMBE R VAUGHN CO-TRUSTEE 74 QUINCY TRAIL BERLIN, CT 06037- 0000	GOSHEN LAND TRUST INC PO BOX 501 GOSHEN, CT 06756- 0000

Name and Address of Sender		Check type of mail or service	Affix Stamp Here (If issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.													
USPS Tracking/Article Number	Addressee (Name, Street, City, State, & ZIP Code™)	<input type="checkbox"/> Adult Signature Required <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery (COD) <input type="checkbox"/> Insured Mail <input type="checkbox"/> Priority Mail	<input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Registered Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery	Postage	(Extra Service) Fee	Handling Charge	Actual Value If Registered	Insured Value	Due Sender If COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee
1.																
2.																
3.	Ivy Mountain Farm 17 Holly Lane Darien, CT 06820															
4.	Arca LLC 25 Larchmont Circle Stratford, CT 06614															
5.																
6.	Wolven Robert A 20 Holmes Rd Goshen, CT 06756															
7.																
8.																
Total Number of Pieces Listed by Sender 3	Total Number of Pieces Received at Post Office	Postmaster, Per (Name of receiving employee)														

Name and Address of Sender CUDDY & FEDER LLP 45 HAMILTON AVENUE, 14TH FLOOR WHITE PLAINS, NY 10601		Check type of mail or service <input type="checkbox"/> Adult Signature Required <input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Certified Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Collect on Delivery (COD) <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Priority Mail		Affix Stamp Here (If issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.											
USPS Tracking/Article Number	Addressee (Name, Street, City, State, & ZIP Code™)	Postage	(Extra Service) Fee	Handling Charge	Actual Value If Registered	Insured Value	Due Sender If COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee	
1.	Kinsella Allen S & Vicki G 406 North St Goshen, CT 06756														
2.															
3.	Anstett Courtney PO Box 305 Goshen, CT 06756														
4.															
5.	Budney Wayne Custodian For SkySabre & Elliot Davis Budney 97 Greer Road Lebanon, CT 06249														
6.															
7.	Arca LLC 25 Larchmont Circle Stratford, CT 06614														
8.															
Total Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster, Per (Name of receiving employee)													

1844-3073

Name and Address of Sender		Check type of mail or service		Affix Stamp Here (If issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.													
USPS Tracking/Article Number		Addressee (Name, Street, City, State, & ZIP Code™)		Postage	(Extra Service) Fee	Handling Charge	Actual Value If Registered	Insured Value	Due Sender If COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee	
1.		Laplaca Gerald B & Janice M 498 North Street Goshen, CT 06756															
2.																	
3.		Budney Terri A 114 Wethersfield Rd Berlin, CT 06037															
4.																	
5.		Bahr Edward S & Kim M 80 Holmes Road Goshen, CT 06756															
6.																	
7.																	
8.																	
Total Number of Pieces Listed by Sender		Total Number of Pieces Received at Post Office		Postmaster, Per (Name of receiving employee)													

1844-3072


Name and Address of Sender		Check type of mail or service		Affix Stamp Here (If issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.													
USPS Tracking/Article Number		Addressee (Name, Street, City, State, & ZIP Code™)		Postage	(Extra Service) Fee	Handling Charge	Actual Value If Registered	Insured Value	Due Sender If COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee	
1.	CUDDY & FEDER LLP 45 HAMILTON AVENUE, 14TH FLOOR WHITE PLAINS, NY 10601	<input type="checkbox"/> Adult Signature Required <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery (COD) <input type="checkbox"/> Insured Mail <input type="checkbox"/> Priority Mail	<input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Registered Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery														
2.		Kinsella Allen S & Vicki G 406 North St Goshen, CT 06756															
3.		Marino Jack R Trust 236 Ivy Mountain Road Goshen, CT 06790															
4.																	
5.		Peet Linda K 426 North St Goshen, CT 06756															
6.																	
7.																	
8.																	
Total Number of Pieces Listed by Sender (3)		Total Number of Pieces Received at Post Office		Postmaster, Per (Name of receiving employee)													

Name and Address of Sender		Check type of mail or service		Affix Stamp Here (If issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.												
USPS Tracking/Article Number		Addressee (Name, Street, City, State, & ZIP Code™)		Postage	(Extra Service) Fee	Handling Charge	Actual Value If Registered	Insured Value	Due Sender If COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee
1.	CUDDY & FEDER LLP 45 HAMILTON AVENUE, 14TH FLOOR WHITE PLAINS, NY 10601	<input type="checkbox"/> Adult Signature Required <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery (COD) <input type="checkbox"/> Insured Mail <input type="checkbox"/> Priority Mail	<input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Registered Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery													
2.		Boy Scouts of America Housaton 111 New Haven Road Derby, CT 06418														
3.		Budney Kevin M Co-Trustee & Newcombe R Vaughn Co-Trustee 74 Quincy Trail Berlin, CT 06037														
4.		Goshen Land Trust Inc PO Box 501 Goshen, CT 06756														
5.																
6.																
7.																
8.																
Total Number of Pieces Listed by Sender 3		Total Number of Pieces Received at Post Office		Postmaster, Per (Name of receiving employee)												

CERTIFICATION OF SERVICE

I hereby certify that on the 23 day of May 2019, a copy of the following letter and notice of intended filing of a Sub-Petition with the Connecticut Siting Council for a declaratory ruling was sent by first class certified mail to the list below.

Dated: 5/23/2019



Cuddy & Feder LLP
45 Hamilton Avenue, 14th Floor
White Plains, New York 10601
Attorneys for:
New Cingular Wireless PCS, LLC (AT&T)

Town of Goshen

BOB VALENTINE, FIRST SELECTMAN TOWN HALL 42A NORTH STREET GOSHEN, CT 06756	PLANNING & ZONING COMMISSION MARTIN J. CONNOR, TOWN PLANNER TOWN HALL 42A NORTH STREET GOSHEN, CT 06756
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CUDDY & FEDER LLP

445 HAMILTON AVENUE, 14TH FLOOR
WHITE PLAINS, NY 10601

(1844-3073)

To:

BOB VALENTINE, FIRST SELECTMAN

TOWN HALL

42A NORTH STREET

GOSHEN, CT 06756

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CUDDY & FEDER LLP
445 HAMILTON AVENUE, 14TH FLOOR
WHITE PLAINS, NY 10601
(1844-3073)

To:

PLANNING & ZONING COMMISSION
MARTIN J. CONNOR, TOWN PLANNER
TOWN HALL
42A NORTH STREET
GOSHEN, CT 06756

Postmark Here



445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Kristen Motel
kmotel@cuddyfeder.com

May 23, 2019

FIRST CLASS MAIL
[ADDRESSEE]

Re: Connecticut Siting Council Sub-Petition
Extension of Existing Telecommunications Facility
442 North Street, Goshen, Connecticut

Dear Sir or Madam:

We are writing to you on behalf of our client New Cingular Wireless PCS, LLC ("AT&T") with respect to the above referenced matter and the filing today of a sub-petition for declaratory ruling ("Sub-Petition") with the Connecticut Siting Council ("Council") to allow a modification of the existing wireless facility at the above-referenced location. AT&T plans to extend the height of the existing tower by 15 feet to a total height of 165 feet and install six (6) new antennas. AT&T's antennas will be mounted to the new monopole extension in a similar manner to the existing facilities, so the appearance will remain the same as today, but taller. Associated unmanned equipment will be installed on a concrete pad in the existing equipment area at the base of the monopole.

AT&T is submitting this Sub-Petition as an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation Act of 2012 (codified at 47 USC Sec. 1455(a)) and as further clarified by the Federal Communications Commission in its October 21, 2014 Order (FCC-14-153).

This notice and the enclosed copy of the Sub-Petition are provided to you as an abutting property owner in keeping with the Council's ruling in Petition 1113. Any comments regarding this proposal should be provided to the Council within thirty (30) days of the date of this submission.

Should you have any questions please feel free to contact me at the address above or the Council at 860.827.2935.

Very truly yours,

Kristen Motel
Enclosure

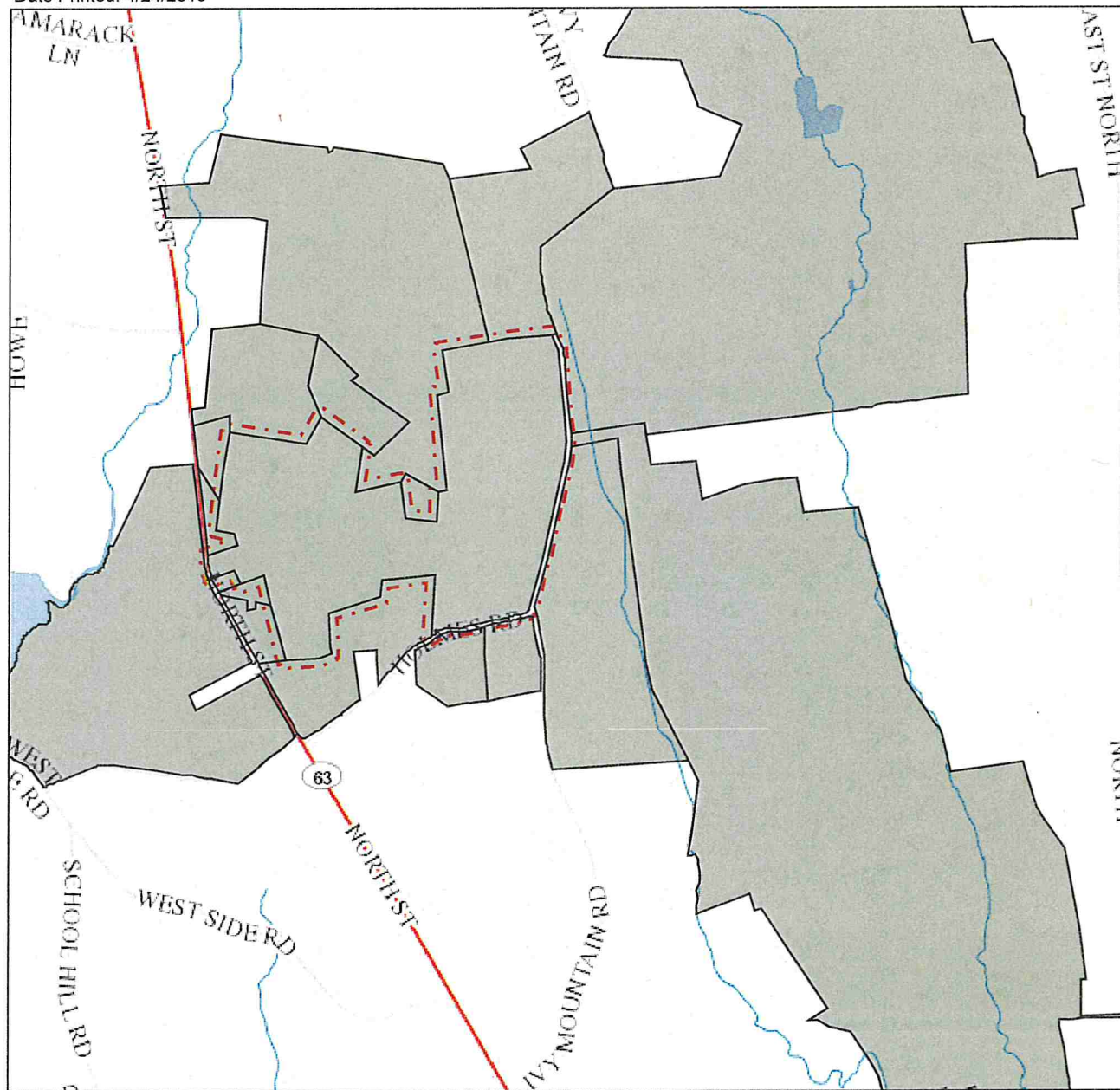
TOWN OF GOSHEN, CONNECTICUT		442 North Street					
Parcel ID	Site Address	Owner Name	Co Owner	Mailing Address	Mailing City	Mailing State	Mailing Zip
05-014-012-00	496 HAGEMAN SHEAN ROAD	IVY MOUNTAIN FARM LLC		17 HOLLY LANE	DARIEN	CT	06820- 0000
06-012-007-00	NORTH STREET	ARCA LLC		25 LARCHMONT CIRCLE	STRATFORD	CT	06614-1336- 0000
06-010-035-00	11 HOLMES ROAD	WOLVEN ROBERT A		20 HOLMES ROAD	GOSHEN	CT	06756- 0000
06-012-010-00	406 NORTH STREET	KINSELLA ALLEN S & VICKI G		406 NORTH ST	GOSHEN	CT	06756- 0000
06-012-001-00	271 IVY MOUNTAIN ROAD	ANSTETT COURTNEY		PO BOX 305	GOSHEN	CT	06756- 0000
06-014-030-00	IVY MOUNTAIN ROAD	BUDNEY WAYNE CUSTODIAN FOR	SKYE SABRE & ELLIOT DAVIS BUDNEY	97 GEER ROAD	LEBANON	CT	06249- 0000
06-012-012-00	NORTH STREET	ARCA LLC		25 LARCHMONT CIRCLE	STRATFORD	CT	06614-1336- 0000
06-012-003-00	498 NORTH STREET	LAPLACA GERALD B & JANICE M		498 NORTH STREET	GOSHEN	CT	06756- 0000
06-012-008-0A	NORTH STREET	BUDNEY TERRI A		114 WETHERSFIELD RD	BERLIN	CT	06037- 0000
06-012-001-02	80 HOLMES ROAD	BAHR EDWARD S & KIM M		80 HOLMES ROAD	GOSHEN	CT	06756- 0000
06-012-011-00	NORTH STREET	KINSELLA ALLEN S & VICKI G		406 NORTH ST	GOSHEN	CT	06756- 0000
06-012-002-00	236 IVY MOUNTAIN ROAD	MARINO JACK R TRUST		236 IVY MOUNTAIN ROAD	GOSHEN	CT	06790- 0000
06-012-009-00	426 NORTH STREET	PEET LINDA K		426 NORTH ST	GOSHEN	CT	06756- 0000
07-012-025-00	278 WEST SIDE ROAD	BOY SCOUTS OF AMERICA HOUSATON		111 NEW HAVEN ROAD	DERBY	CT	06418- 0000
07-014-013-00	610 NORTH STREET	BUDNEY KEVIN M CO-TRUSTEE &	NEWCOMBE R VAUGHN CO-TRUSTEE	74 QUINCY TRAIL	BERLIN	CT	06037- 0000
06-012-006-00	NORTH STREET	GOSHEN LAND TRUST INC		PO BOX 501	GOSHEN	CT	06756- 0000

Town of Goshen

Geographic Information System (GIS)

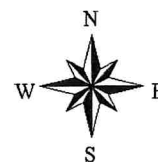


Date Printed: 4/24/2019



MAP DISCLAIMER - NOTICE OF LIABILITY

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



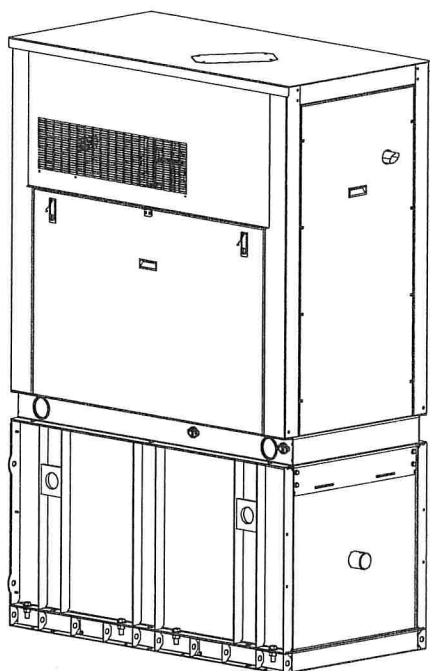
6



**EPA-Certified for Stationary
Emergency Applications**

Ratings Range

		60 Hz
Standby:	kW	20.0
	kVA	20.0



Unit Shown with Standard Subbase Fuel Tank

Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set has a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110.
- The generator set engine is certified to meet the Environmental Protection Agency (EPA) emergency stationary emissions requirements.
- A five-year limited warranty covers all generator set systems and components.
- Alternator features:
 - Kohler's wound field excitation system with its unique PowerBoost™ design delivers great voltage response and short-circuit capability.
- Other features:
 - Kohler designed controller for one-source system integration and remote communication.
 - The low coolant level shutdown prevents overheating.
 - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.
 - Sound attenuated enclosure has a sound pressure level of 65 dB(A) log average at 7 m (23 ft.) with full load.

Generator Set Ratings

130°C Rise Standby Rating					
Alternator	Voltage	Ph	Hz	kW/kVA	Amps
4E3.8	120/240	1	60	20.0/20.0	83.3

RATINGS: All single-phase units are rated at 1.0 power factor. **Standby Ratings:** Standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. **Prime Power Ratings:** At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. Obtain the technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Wound Field
Leads: quantity, type	4, 120/240 V
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	±0.5%
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltage below)
240 V 4E3.8 (4 lead)	31

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Capable of sustained line-to-neutral short-circuit current of up to 300% of the rated current for up to 2 seconds. (IEC 60092-301 short-circuit performance.)
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.

Application Data

Engine

Engine Specifications	
Manufacturer	Kohler Diesel
Engine model	KDI2504M
Engine type	4-Cycle, Naturally Aspirated
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	2.5 (158)
Bore and stroke, mm (in.)	88 x 102 (3.46 x 4.02)
Compression ratio	18:1
Piston speed, m/min. (ft./min.)	367 (1206)
Main bearings: quantity, type	5, Sleeve
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	29.7 (39.9)
Cylinder head material	Cast Iron
Crankshaft material	Cast Iron
Valve material:	
Intake	Stainless Steel
Exhaust	Stainless Steel
Governor: type, make/model	Electronic
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.5%
Air cleaner type, all models	Dry

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m ³ /min. (cfm)	6 (212)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	570 (1058)
Maximum allowable back pressure, kPa (in. Hg)	8.5 (2.5)

Engine Electrical

Engine Electrical System	
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	12
Ampere rating	50
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating	One, 650
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	8.0 (0.31)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, electric fuel pump, m (ft.)	3.0 (10.0)
Max. fuel flow, Lph (gph)	46.0 (12.2)
Max. return line restriction, kPa (in. Hg)	20 (5.9)
Fuel filter	
Prefilter	74 Microns
Primary/Water Separator	5 Microns @ 98% Efficiency
Recommended fuel	#2 Ultra Low Sulfur Diesel

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.) §	10.7 (11.3)
Oil pan capacity with filter, L (qt.) §	11 (11.6)
Oil filter: quantity, type §	1, Cartridge
§ Kohler recommends the use of Kohler Genuine oil and filters.	

Application Data

Cooling

Radiator System	
Ambient temperature, °C (°F)	45 (113)
Radiator system capacity, including engine, L (gal.)	9.46 (2.5)
Heat rejected to cooling water at rated kW, dry exhaust kW (Btu/min.)	21.6 (1228)

Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m ³ /min. (scfm) †	44.9 (1585)
Combustion air, m ³ /min. (cfm)	2.1 (74.2)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	20.4 (1160)
Alternator, kW (Btu/min.)	5.1 (290)

† Air density = 1.20 kg/m³ (0.075 lbm/ft³)

Fuel Consumption	
Diesel, Lph (gph) at % load	Standby Rating
100%	7.3 (1.9)
75%	5.5 (1.5)
50%	3.9 (1.0)
25%	2.4 (0.6)

Controller

APM402 Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.

Modbus® is a registered trademark of Schneider Electric.

Sound Enclosure

- Steel construction, single-side service with lift-off key and padlockable doors.
- Internal-mounted silencer and flexible exhaust connector.
- Stainless steel hardware.
- Fade-, scratch-, and corrosion-resistant Kohler Power Armor™ automotive-grade textured finish.
- Acoustic insulation that meets UD94 HF1 flammability classification and repels moisture absorption.
- Sound enclosure uses acoustic insulation.
- High wind bracing, 241 kph (150 mph).
- Meets snow load of 70 lbs. per sq. foot.

Additional Standard Features

- Air cleaner, heavy duty with restriction indicator
- Alternator protection
- Battery
- Battery charger, equalize/float type 6 amp
- Battery rack and cables
- Block heater (700 W, 120 V)
- Closed coolant recovery
- Closed crankcase ventilation
- Coolant and engine oil in generator set.
- Critical silencer with stainless steel flex exhaust
- Electronic governor
- Factory installed radiator
- Fan guards
- Flexible fuel lines (fire resistant)
- Line circuit breaker with shunt trip (NEMA type 1 enclosure), 100 amp, 80% rated, thermal magnetic with auxiliary contact and alarm switch.
- Oil drain and coolant drain with hose barb
- Oil drain extension
- Operation and installation literature
- Rodent guards

Standard Subbase Fuel Tank Package

- Fuel tank has a Power Armor™ Plus textured epoxy-based rubberized coating.
- UL listed. Secondary containment generator set base tank meeting UL 142 requirements.
- Both the inner and outer tanks have emergency relief vents.
- NFPA compliant. Designed to comply with the installation standards of NFPA 30 and NFPA 37.
- 110% engine fluid containment.
- Fuel tank capacity, 397 L (105 gal.).
- 48-hour run time.
- Fuel level gauge with sender.
- Mechanical fuel level gauge.
- Leak detection switch. Annunciates a contained primary tank fuel leak condition at generator set control.
- Fire safety valve (fusible link).
- Fork lift pockets on bottom of fuel tank.

State Subbase Fuel Tank Package

- Has all of features of the standard subbase fuel tank option.
- 18.9 L (5 gallon) spill containment
- High fuel level switch with alarm

Additional Loose Options Available for the State Subbase Fuel Tank Package

Fuel Supply Options

- ☐ Ball valve (installed on fuel supply line)

Fuel Fill Options

- ☐ 18.9 L (5 gallon) spill containment with 95% shutoff
- ☐ 18.9 L (5 gallon) spill containment fill to within 152 mm (6 in.) of bottom of fuel tank

High Fuel Level Switch

- ☐ Fuel tank panel, 3 alarm

Normal Vent Options

- ☐ 3.7 m (12 ft.) above grade (with spill containment)

Tank Marking Options

- ☐ Decal, combustible liquids - Keep Fire Away (qty. 2)
- ☐ Decal, NFPA 704 identification (qty. 2)
- ☐ Decal, tank number and safe fuel fill height (qty. 2)

Available Options

Approvals and Listings

- ☐ CSA certified

Fuel System

- ☐ Fuel pressure gauge

Electrical System

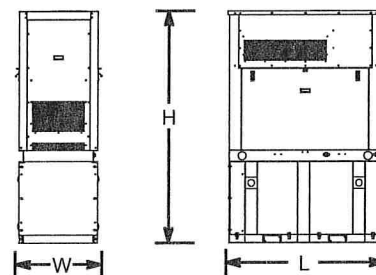
- ☐ Alternator strip heater
- ☐ Cold weather kit with battery heater, battery wrap, and temperature switch
- ☐ Battery heater

Literature

- ☐ General maintenance
- ☐ NFPA 110
- ☐ Overhaul
- ☐ Production

Dimensions and Weights (Standard Tank)

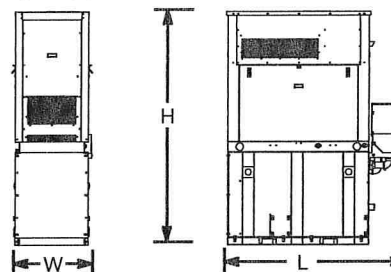
Overall Size, L x W x H, mm (in.): 1473.2 x 762.0 x 2252.2
Standard Tank (58.0 x 30.0 x 88.7)
Weight, kg (lb.): 982 (2164)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.








Dimensions and Weights (State Tank)

Overall Size, L x W x H, mm (in.): 1848 x 812.8 x 2430
State Tank (72.7 x 32.0 x 95.7)
Tank Foot Print 1473 x 762 (58.0 x 30.0)
Weight, kg (lb.): 1021 (2250)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

PROJECT INFORMATION			SITE NUMBER: CT1453 SITE NAME: GOSHEN NORTH STREET 442 NORTH STREET GOSHEN, CT 06756 LITCHFIELD COUNTY PROJECT: NSB FA SITE NUMBER: 10577841 PACE ID: MRCTB006466 STRUCTURE TYPE: MONOPOLE																													
SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS SITE ADDRESS: 442 NORTH STREET GOSHEN, CT 06756 LATITUDE: 41° 51' 22.78" N LONGITUDE: 73° 14' 29.69" W JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES CURRENT USE: TELECOMMUNICATIONS FACILITY PROPOSED USE: TELECOMMUNICATIONS FACILITY DESIGN GUIDELINE: NSB			DRAWING INDEX		REV	LOCUS MAP	GENERAL NOTES																									
T-1 TITLE SHEET GN-1 GENERAL NOTES C-1 SITE PLAN Z-1 COMPOUND PLAN Z-2 ELEVATIONS Z-3 ANTENNA PLAN Z-4 DETAILS Z-5 DETAILS					3 3 3 3 3 3 3 3	 <p>DRIVING DIRECTIONS FROM 550 COCHITUATE ROAD, FRAMINGHAM, MA: 1. HEAD NORTHEAST TOWARD SPEEN ST, TURN RIGHT ONTO SPEEN ST 2. TURN RIGHT ONTO COCHITUATE RD 3. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90/MASSPIKE/SPRINGFIELD/BOSTON 4. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR INTERSTATE 90 W/MASSACHUSETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE 5. MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE 6. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I-84 TOWARD US-20/HARTFORD/NEW YORK CITY 7. CONTINUE ONTO I-84 8. TAKE EXIT 61 FOR I-291 W TOWARD WINDSOR, CONTINUE ONTO I-291 W 9. TAKE EXIT 28 TO MERGE ONTO I-91 N TOWARD SPRINGFIELD 10. USE THE RIGHT 2 LANES TO TAKE EXIT 40 FOR CT-20 TOWARD BRADLEY INTERNATIONAL AIRPORT 11. CONTINUE ONTO CT-20 W 12. TAKE THE CT-20 W EXIT TOWARD E GRANBY/GRANBY 13. SLIGHT LEFT ONTO CT-20 W/W GRANBY RD, CONTINUE TO FOLLOW CT-20 W 14. TURN LEFT ONTO CT-219 S 15. TURN LEFT ONTO CT-179 S/CT-219 S, CONTINUE TO FOLLOW CT-219 S 16. TURN RIGHT ONTO CT-318 W 17. TURN LEFT ONTO CT-181 S/CT-318 W, CONTINUE TO FOLLOW CT-318 W 18. TURN RIGHT ONTO US-44 W/NEW HARTFORD RD 19. TURN LEFT ONTO CT-8 S (SIGNS FOR TORRINGTON/WATERBURY) 20. TAKE EXIT 44 FOR CT-4 TOWARD US-202/TORRINGTON/DOWNTOWN 21. TURN RIGHT ONTO CT-4 W/E ELM ST 22. AT THE TRAFFIC CIRCLE, TAKE THE 1ST EXIT ONTO CT-63 23. TURN RIGHT ONTO IVY MOUNTAIN RD</p>	<p>1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.</p> <p>2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.</p> <p>3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.</p>																									
						<div>DIG SAFE SYSTEM, INC. CALL BEFORE YOU DIG CALL TOLL FREE: 811 OR 888-DIG-SAFE</div>																										
						UNDERGROUND SERVICE ALERT																										
 <p>Civil Engineering - Site Development - Surveying - Telecommunications 500 North Broadway East Providence, RI 02914 Phone: (401) 354-2403 Fax: (401) 633-6354</p>			 <p>SAI COMMUNICATIONS 12 INDUSTRIAL WAY SALEM, NH 03079</p>		SITE NUMBER: CT1453 SITE NAME: GOSHEN NORTH STREET 442 NORTH STREET GOSHEN, CT 06756 LITCHFIELD COUNTY		 <p>550 COCHITUATE ROAD, SUITE 13, FRAMINGHAM, MA 01701-4681</p>																									
						<table><tr><td>NO.</td><td>DATE</td><td>REVISIONS</td><td>BY</td><td>CHK</td></tr><tr><td>0</td><td>02/14/19</td><td>ISSUED FOR REVIEW</td><td>AAB</td><td>MRC</td></tr><tr><td>1</td><td>06/07/19</td><td>ISSUED FOR CONSTRUCTION</td><td>AAB</td><td>MRC</td></tr><tr><td>2</td><td>06/08/19</td><td>REVISED</td><td>AAB</td><td>MRC</td></tr><tr><td>3</td><td>06/15/19</td><td>REVISED</td><td>AAB</td><td>MRC</td></tr></table>		NO.	DATE	REVISIONS	BY	CHK	0	02/14/19	ISSUED FOR REVIEW	AAB	MRC	1	06/07/19	ISSUED FOR CONSTRUCTION	AAB	MRC	2	06/08/19	REVISED	AAB	MRC	3	06/15/19	REVISED	AAB	MRC
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						TITLE SHEET SHEET NO. T-1																										

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455
18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS SHOWN HEREIN.
19. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.
20. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.
21. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
22. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.
23. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
24. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.
25. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
26. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
27. ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

28. ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR
29. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES
30. DURING CONSTRUCTION, PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS
31. FOR WIRELESS COMMUNICATIONS SYSTEMS, PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.
32. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL
- ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

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

BUILDING CODE:

2015 INTERNATIONAL BUILDING CODE
2018 CT STATE BUILDING CODE (CSBC)
ELECTRICAL CODE: NEC 2017
NFPA 780 2014

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250.
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALMA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.
23. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.



ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	(P)	PROPOSED/NEW	TBR	TO BE REMOVED
(E)	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		
(F)	FUTURE				



SITE NUMBER: CT1453
SITE NAME: GOSHEN NORTH STREET
442 NORTH STREET
GOSHEN, CT 06756
LITCHFIELD COUNTY

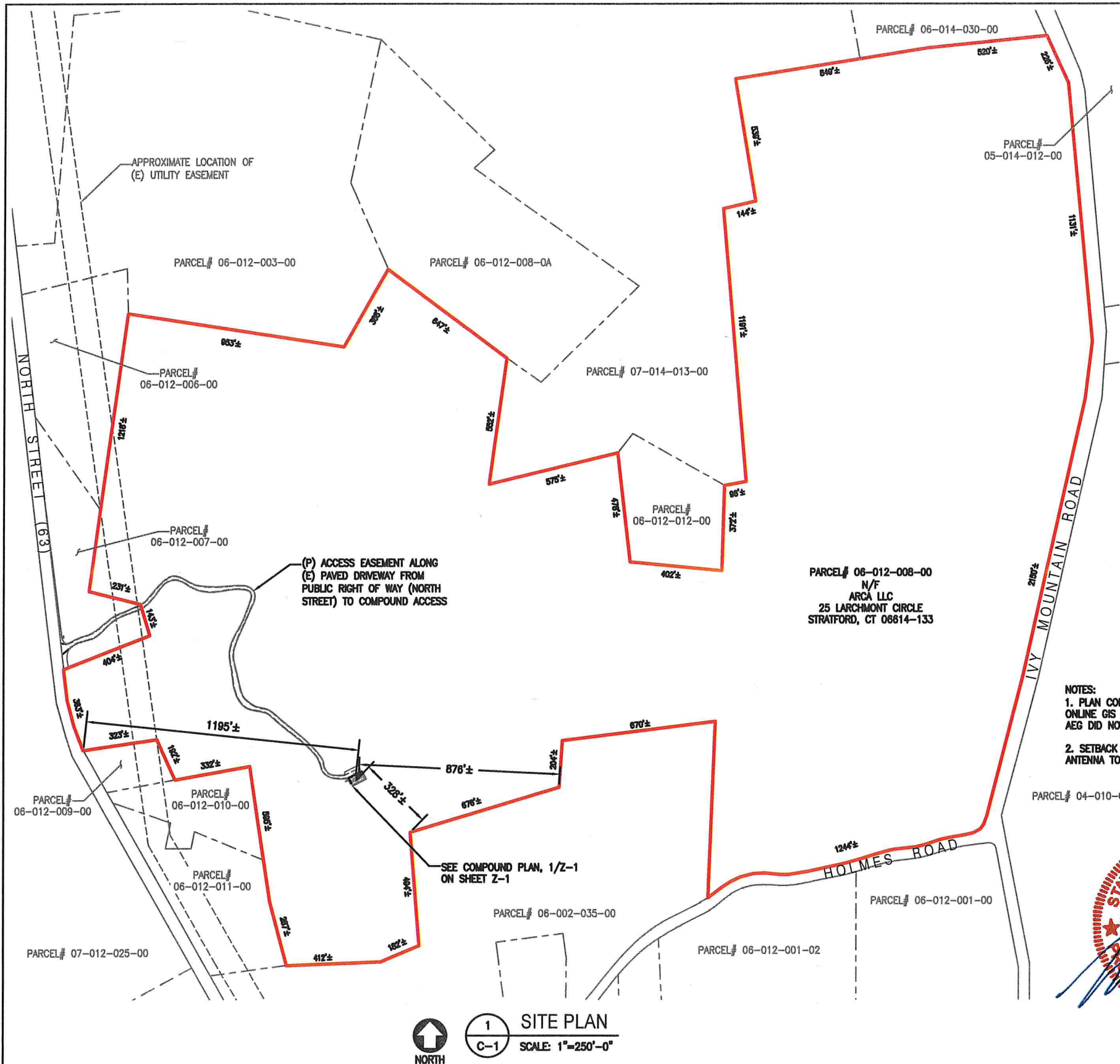


NO.	DATE	REVISIONS	BY	CHK
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GENERAL NOTES

SHEET NO.

GN-1



LEGEND	
	PROPERTY LINE
	ABUTTING PROPERTY LINE
	EXIST. CONTOUR
	EXIST. CHAIN LINK FENCE
	PROP. CHAIN LINK FENCE
	EXIST. TREE LINE
	EXIST. STREET LAYOUT
	EXIST. EASEMENT
	EXIST. OVERHEAD UTILITIES
	PROP. OVERHEAD UTILITIES
	EXIST. UNDERGROUND UTILITIES
	PROP. UNDERGROUND UTILITIES
	EXIST. UTILITY POLE (POLE)
	ZONING BOUNDARY LINE
	TOWN BOUNDARY LINE

ZONING SUMMARY TABLE		
ZONING DISTRICT: RESIDENTIAL-AGRICULTURE, RA-5		
ASSESSORS ID: 06-012-008-00		
PROPOSED USE: WIRELESS COMMUNICATION FACILITY		
DIMENSION	REQUIRED MINIMUM	PROVIDED
LOT AREA	5.0 ACRES	233.2± ACRES
LOT FRONTAGE	150 FT	5,114± FT
FRONT YARD SETBACK*	50 FT	1195± FT
SIDE YARD SETBACK*	30 FT	328± FT
REAR YARD SETBACK*	50 FT	878± FT
MONOPOLE SETBACK (110% HEIGHT)	165 FT	328± FT
*ANTENNA TO NEAREST LOT LINE		

GENERAL NOTES:	
1. FIELD SURVEY DATE:	N/A
2. VERTICAL DATUM:	NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
3. HORIZONTAL DATUM:	NORTH AMERICAN DATUM OF 1983 (NAD83)
4. SITE CONTROL POINT:	CENTER OF MONOPOLE LATITUDE: N 41° 43' 28.70" LONGITUDE: W -72° 29' 18.42"
5. PROPERTY OWNER:	ARCA LLC 25 LARCHMONT CIRCLE STRATFORD, CT 06814-133
6. SITE NUMBER:	S1453A
7. SITE ADDRESS:	442 NORTH STREET GOSHEN, CT 06814 LITCHFIELD COUNTY
8. APPLICANT:	AT&T MOBILITY, LLC 550 COCHITUATE ROAD, SUITE 13 & 14, FRAMINGHAM, MA 01701-4681
9. JURISDICTION:	TOWN OF GOSHEN
10. TAX ID:	06-012-008-00
11. DEED REFERENCE:	N/A
12. PLAN REFERENCES:	TOWN OF GOSHEN
13. ZONING JURISDICTION:	TOWN OF GOSHEN
14.	ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-800-344-7233 CALL BEFORE YOU DIG (CT): 1-800-622-4455
15.	PROPERTY LINE INFORMATION IS COMPILED FROM GOSHEN'S ONLINE GIS SYSTEM, AND IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.
16.	THE SITE IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP FOR TOWN OF GOSHEN, CONNECTICUT, LITCHFIELD COUNTY, PANEL 6 OF 15, COMMUNITY PANEL NUMBER: 060177 0006 A, EFFECTIVE DATE: NOVEMBER 16, 1990.
17.	BEARING SYSTEM OF THIS PLAN IS BASED ON TRUE NORTH. TRUE NORTH WAS ESTABLISHED FROM EXISTING PLAN REFERENCE. IT IS NOT INTENDED TO BE AN EXACT REPRESENTATION OF TRUE NORTH.

NOTES:
1. PLAN CONTENT HAS BEEN DERIVED FROM GOSHEN'S ONLINE GIS SYSTEM, AND A LIMITED SITE INSPECTION. AEG DID NOT PERFORM A METES AND BOUNDS SURVEY.
2. SETBACK DIMENSIONS SHOWN ARE FROM CLOSEST ANTENNA TO NEAREST PROPERTY LINE.

PARCEL# 04-010-009-00



ABUTTERS LIST				
MAP	BLOCK	LOT	OWNER	MAILING ADDRESS
06	012	001-00	ANSTEIT COURTNEY	P.O. BOX 305, GOSHEN, CT 06756
06	012	001-02	BAHR EDWARD S & KIM M	80 HOLMES ROAD, GOSHEN, CT 06756
06	012	002-00	MARINO JACK R TRUST	236 IVY MOUNTAIN ROAD, GOSHEN, CT 06756
06	012	003-00	LAPLACA GERALD B & JANICE M	486 NORTH STREET, GOSHEN, CT 06756
06	012	006-00	GOSHEN LAND TRUST INC	P.O. BOX 501, GOSHEN, CT 06756
06	012	007-00	ARCA LLC	25 LARCHMONT CIRCLE, STRATFORD, CT 06814-1336
06	012	008-0A	BUDNEY TERRI A	114 WETHERSFIELD ROAD, BERLIN, CT 06037
06	012	008-00	PEET LINDA K	426 NORTH STREET, GOSHEN, CT 06756
06	012	010-00	KOSELLA ALLEN S & VICKI G	408 NORTH STREET, GOSHEN, CT 06756
06	012	011-00	KOSELLA ALLEN S & VICKI G	406 NORTH STREET, GOSHEN, CT 06756
06	014	012-00	IVY MOUNTAIN FARM LLC	17 HOLLY LAKE DRIVE, CT 06820
06	012	012-00	ARCA LLC	25 LARCHMONT CIRCLE, STRATFORD, CT 06814-1336
07	014	013-00	BUDNEY KEVIN M CO-TRUSTEE & NEWCOMBER VAUGHN CO-TRUSTEE	74 QUINCY TRAIL, BERLIN, CT 06756
07	012	025-00	BOY SCOUTS OF AMERICA HOUSATON	111 NEW HWYEN ROAD, DERBY, CT 06418
06	014	030-00	BUDNEY WAYNE CUSTODIAN FOR SKYE SABRE & ELLIOT DAVIS BUDNEY	97 GERR ROAD, LEBANON, CT 06240
06	010	035-00	WOLVEN ROBERT A	20 HOLMES ROAD, GOSHEN, CT 06756
04	010	008-00	BEECH HILL ROAD LLC	2 PARK LAWN DRIVE, BETHEL, CT 06801

ADVANCED
ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

SAI
SAI COMMUNICATIONS
12 INDUSTRIAL WAY
SALEM, NH 03079

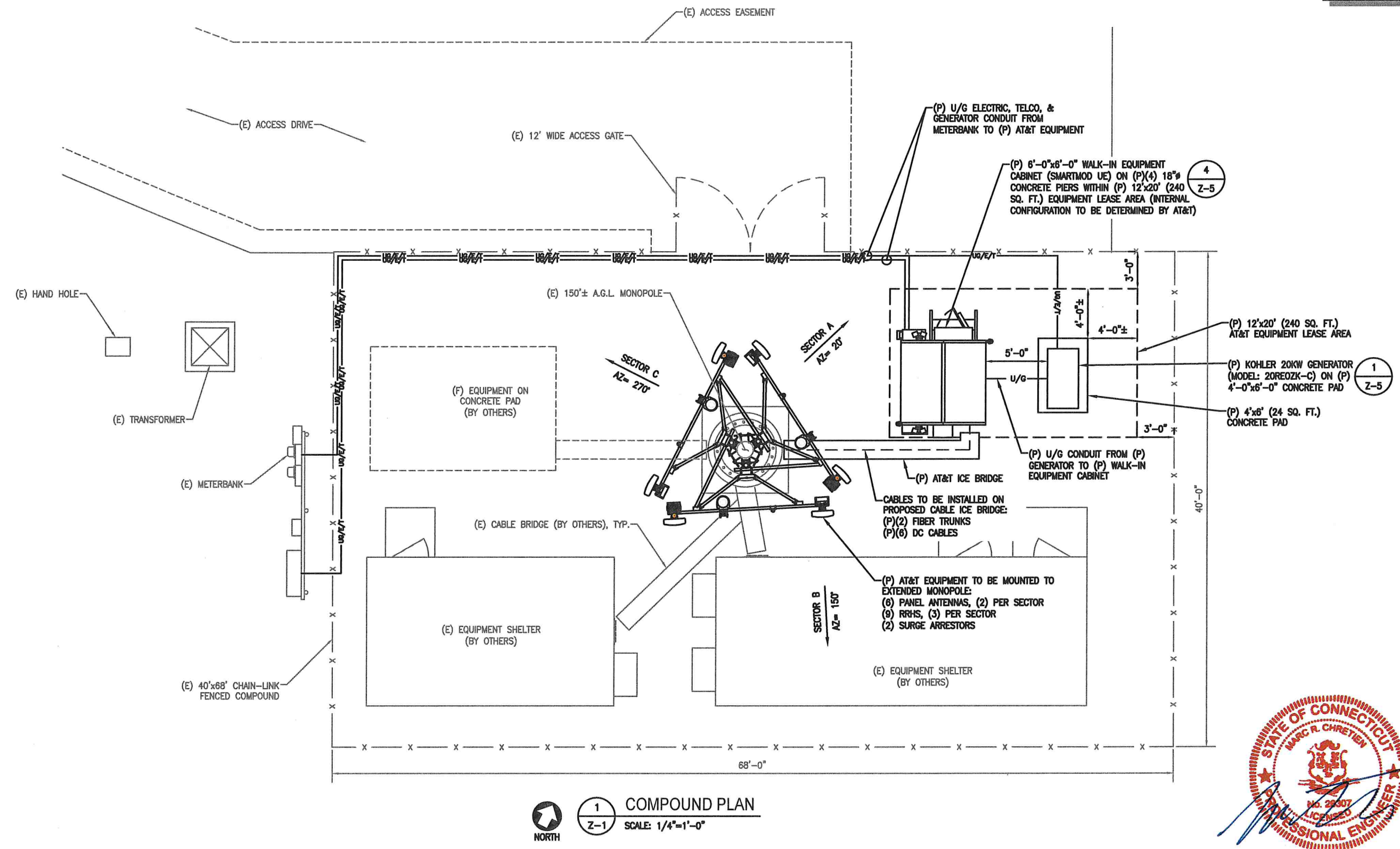
SITE NUMBER: CT1453
SITE NAME: GOSHEN NORTH STREET
442 NORTH STREET
GOSHEN, CT 06756
LITCHFIELD COUNTY

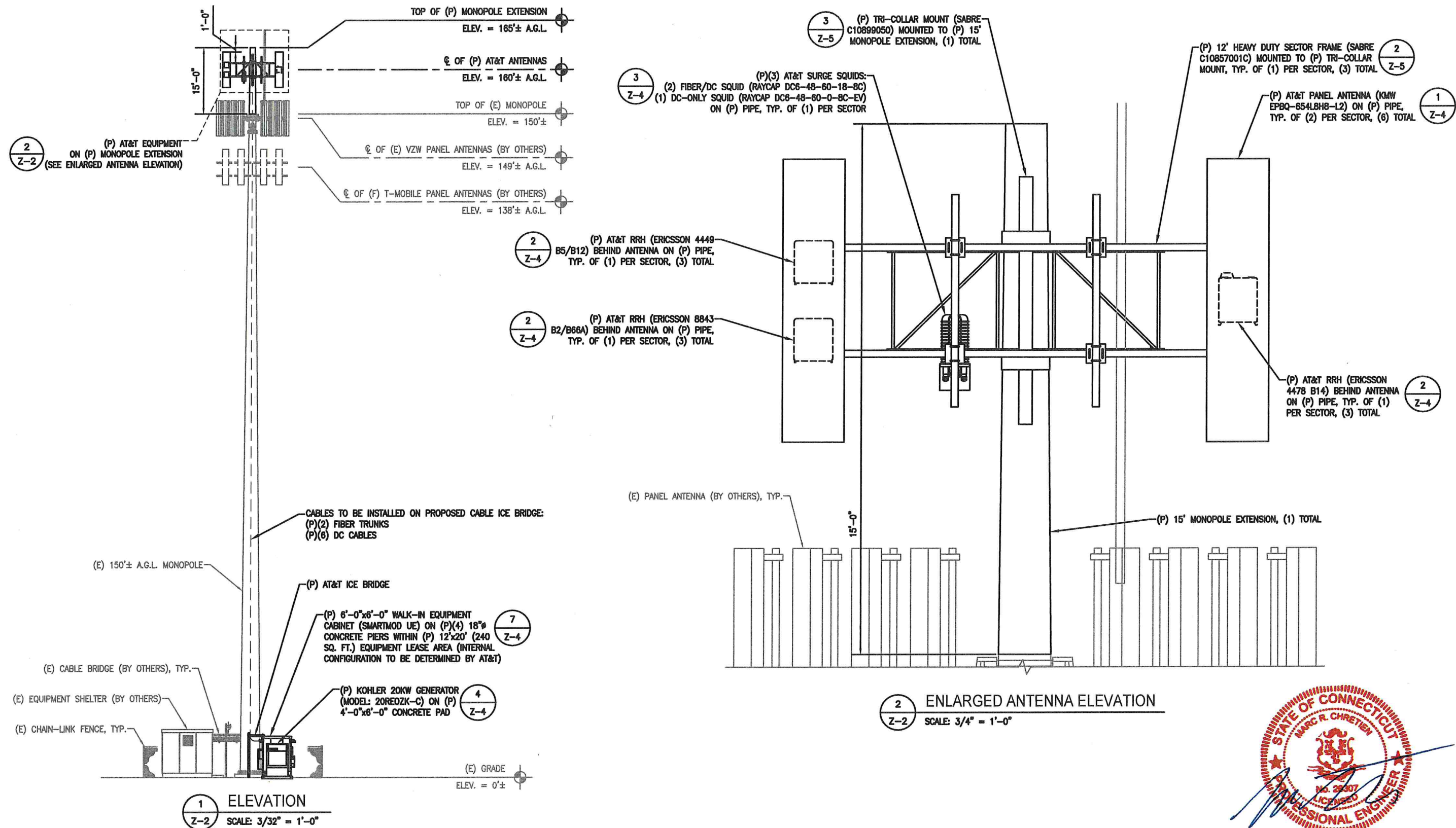
at&t
550 COCHITUATE ROAD, SUITE 13,
FRAMINGHAM, MA 01701-4681

NO.	DATE	REVISIONS	BY	CHK
0	02/14/19	ISSUED FOR REVIEW	AAB	MRC
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2	05/08/19	REVISED	AAB	MRC
3	05/15/19	REVISED	AAB	MRC

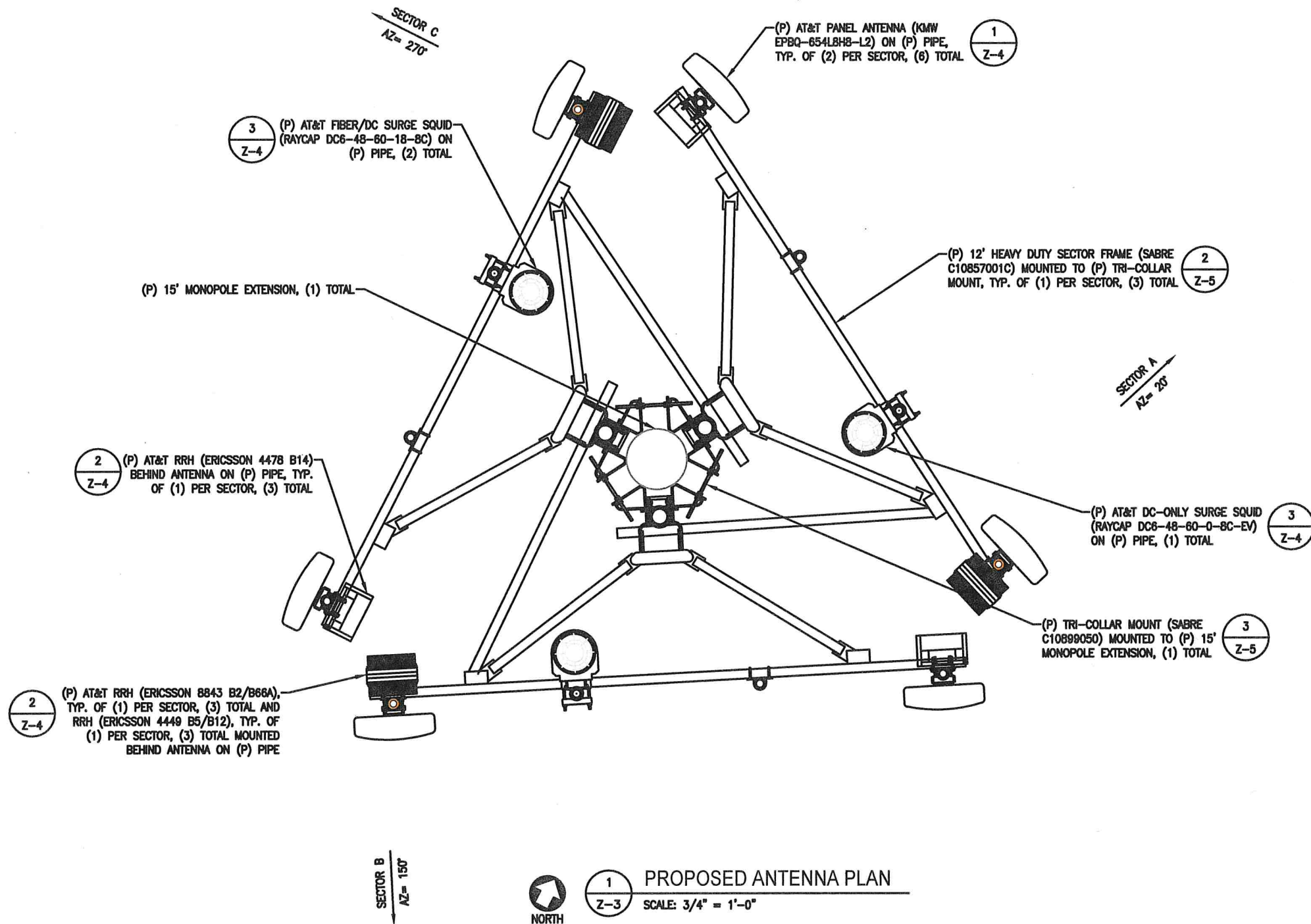
SITE PLAN	
SHEET NO.	C-1

HALF SIZE PRINT
THIS DRAWING IS SCALEABLE
AT HALF THE NOTED SCALE

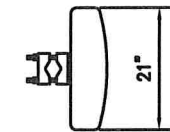
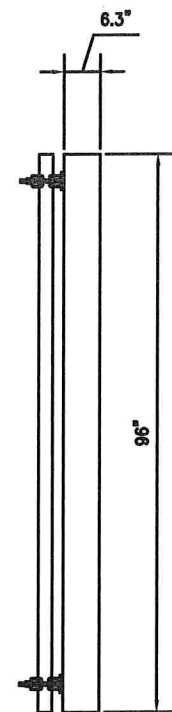




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EPBQ-654L8H8-L2

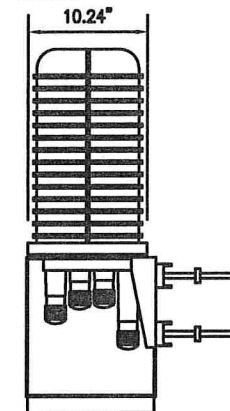
MANUFACTURER: KMW
DIMENSIONS: (HxWxD) 96"x21"x6.3"
WEIGHT: 86 LBS.

1 ANTENNA DETAIL
Z-4 SCALE: N.T.S.

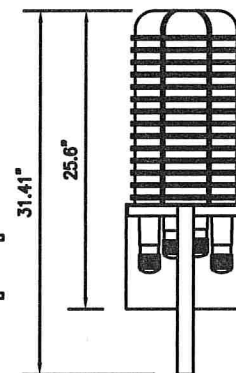
RAYCAP DC6-48-60-18-8c

NUMBER OF RADIOS PROTECTED:
SUPPRESSION CONNECTION METHOD:
#2-#14 AWG COPPER, #2-#12
ENVIRONMENTAL RATING:
WEIGHT:

6
COMPRESSION LUG,
ALUMINUM
IP 68, 7M 72HRS
26.2 LBS



SIDE



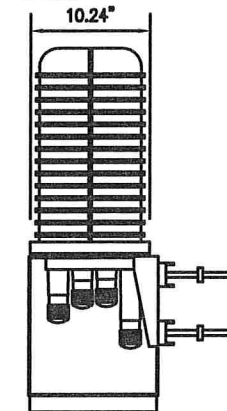
FRONT

FIBER/DC

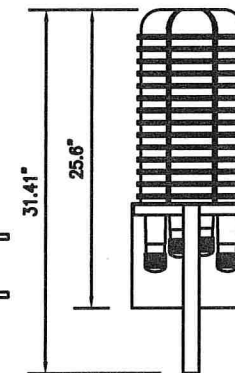
RAYCAP DC6-48-60-0-8C-EV

NUMBER OF RADIOS PROTECTED:
SUPPRESSION CONNECTION METHOD:
#2-#14 AWG COPPER, #2-#12
ENVIRONMENTAL RATING:
WEIGHT:

6
COMPRESSION LUG,
ALUMINUM
IP 68, 7M 72HRS
26.2 LBS



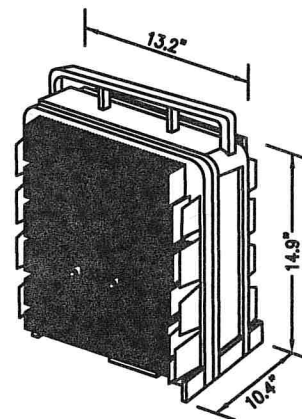
SIDE



FRONT

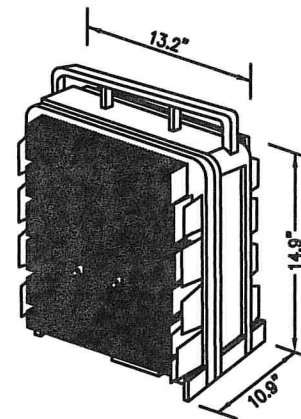
DC-ONLY

3 SURGE ARRESTOR DETAILS
Z-4 SCALE: N.T.S.



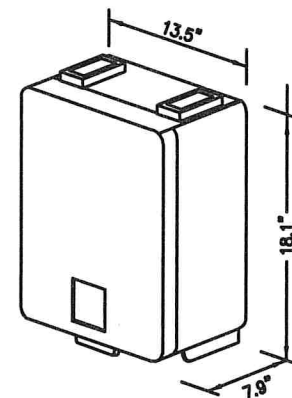
RRUS-4449 B5/B12

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 14.9"x13.2"x10.4"
WEIGHT: 74 LBS



RRUS-8843 B2/B66A

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 14.9"x13.2"x10.9"
WEIGHT: 72 LBS



RRUS-4478 B14

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 18.1"x13.5"x7.9"
WEIGHT: 56.2 LBS

2 REMOTE RADIO HEAD (RRH) DETAILS
Z-4 SCALE: N.T.S.

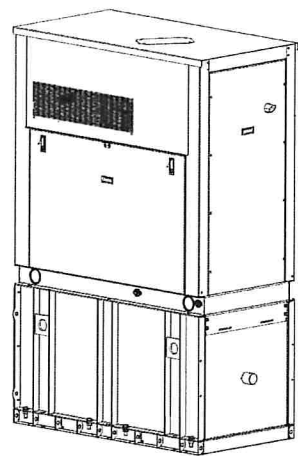


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DETAILS

SHEET NO.

Z-4

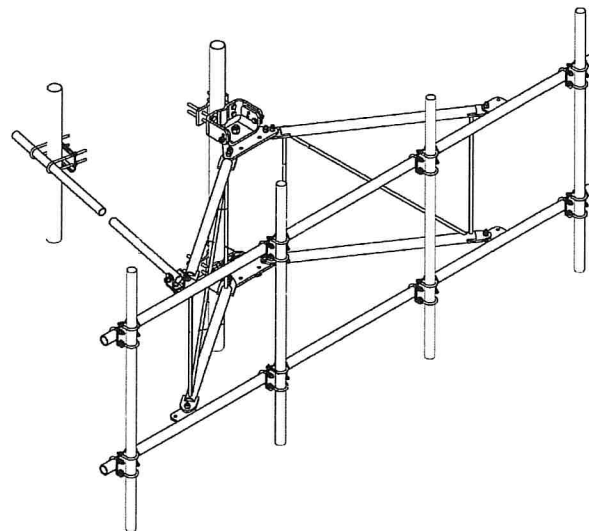


Unit Shown with Standard Subbase Fuel Tank

20REOZK-C

MANUFACTURER: KOHLER
DIMENSIONS: (HxWxD) 88.7"x30.0"x58.0"
WEIGHT: 982 LBS.

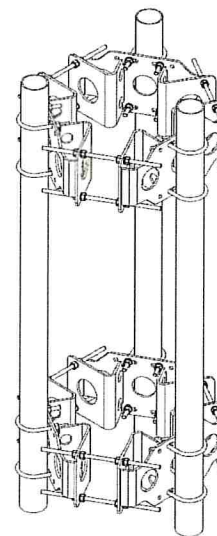
1 GENERATOR DETAIL
Z-5 SCALE: N.T.S.



C10857001C

MANUFACTURER: SABRE INDUSTRIES

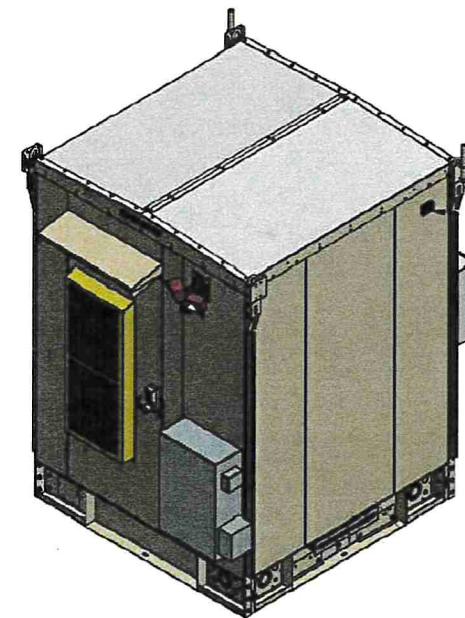
2 HEAVY DUTY SECTOR FRAME DETAIL
Z-5 SCALE: N.T.S.



C10899050

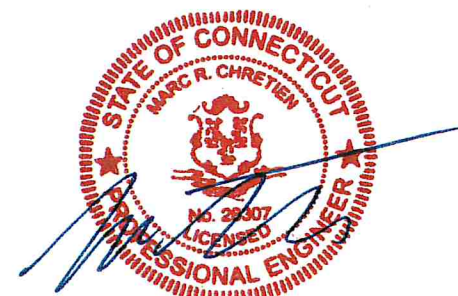
MANUFACTURER: SABRE INDUSTRIES

3 TRI-COLLAR MOUNT DETAIL
Z-5 SCALE: N.T.S.



MANUFACTURER: VERTIV
MODEL NAME: SMARTMOD UE INTERNAL
DIMENSIONS: 6'-0"x6'-0"x8'-7"
EXTERNAL DIMENSIONS: 6'-8"x6'-8"x9'-5"

4 WALK-IN CABINET DETAIL
Z-5 SCALE: N.T.S.



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DETAILS

SHEET NO. Z-5