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

June 15, 2012

Douglas Talmadge
Real Estate Consultant
New Cingular Wireless PCS, LLC
147 Austin Ryer Lane
Branford, CT 06405

RE: **EM-CING-002-120601** –New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 401 Wakelee Avenue, Ansonia, Connecticut.

Dear Mr. Talmadge:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction 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;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 31, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies

Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

LRoberts

Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable James T. DellaVolpe, Mayor, City of Ansonia
Peter Crabtree, Zoning Enforcement Officer, City of Ansonia

EM-CING-002-120601

r Wireless PCS, LLC
147 Austin Ryer ln
Branford, CT 06405
one: (203)-410-4531
Douglas Talmadge
Real Estate Consultant

May 31, 2012

Hand Delivered

Ms. Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 401 Wakelee Ave, Ansonia, CT 06401.

Dear Ms. Roberts:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the state of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and its attachments is being sent to the chief elected official of the municipality in which affected cell site is located.

UMTS offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is

documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modification as defined Connecticut General Statues ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for the R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will not be affected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound as all equipment will be located in the existing AT&T shelter.
3. The proposed changes will not increase the noise level at the existing facility by 6 decibels or more.
4. Radio Frequency power density may increase due to the use of one or more GSM channels for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons New Cingular Wireless PCS, LLC respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (203)-410-4531 or email DTalmadge@Transcendwireless.com with questions concerning this matter.
Thank you for your consideration.

Sincerely,

Douglas Talmadge
Real Estate Consultant

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**196 ft Rohn Self Supported Tower**
ATC Site Name	:	**Ansonia Wakelee, CT**
ATC Site Number	:	**302470**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**Ansonia Wakelee Ave**
Carrier Site Number	:	**10035308/CT2091**
County	:	**New Haven**
Engineering Number	:	**49169121**
Date	:	**April 17, 2012**
Usage	:	**90% Legs, 100% Diagonals, 11% Horizontals**
Result	:	**Pass**

Submitted by:
Esha Modi
Project Engineer

STATE OF CONNECTICUT
RAPHAEL I. MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

4/26/12

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 196 ft Rohn Self Supported Tower located at 401 Wakelee Ave., Ansonia, CT 06401, New Haven County (ATC Site No. 302470). The tower was originally designed and manufactured by Rohn (Drawing No. A991899, dated July 7, 1999).

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software.

Basic Wind Speed: 105 mph (3-Second Gust)
Radial Ice: 50 mph (3-Second Gust) w/ 1.5" ice
Code: ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplements and 2009 CT Amendments

Antenna Loads

The following antenna loads were used in the tower analysis.
Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
194.0	3	Argus LLPX310R	Sector Frames	(2) 2" Conduit (2) ½ (6) 5/16	Clearwire
	2	DragonWave A-ANT-18G-2-C			
	3	NextNet BTS-2500			
	2	DragonWave Horizon Compact			
	3	KMW TTA (HB-X-WM-17-65-00T)		(10) 1 ¼ (6) 1 5/8	Sprint Nextel
	3	72" x 12" Panels			
	9	48" x 12" Panels			
184.0	6	Decibel DB950F65E-M	Sector Frames	(6) 1 5/8	
178.0	3	Rymsa MGD3-800T0	Sector Frames	(12) 1 5/8	Verizon
	3	Powerwave P65-16-XL-2			
	6	RFS FD9R6004/1C-3L			
	6	Decibel DB844H90E-XY			
157.0	3	RFS APXV18-206517-C	Leg	(6) 1 5/8	Youghiogheny
148.0	3	RFS APX16DWV-16DWVS-E-A20	Sector Frames	(18) 1 5/8	T-Mobile
	3	RFS ATMAA1412D-1A20			
	3	EMS DR65-18-XXDPL2Q			
	3	CCI DTMA-1819-DD-12			
125.0	2	Motorola PTP54600	Leg	(2) 1/4	City Of Ansonia
124.0	1	GPS	Leg	(1) 1/2	Verizon
104.0	2	2" x 8" GPS	Side Arms	(2) 1/2	Sprint Nextel
82.0	1	10' Omni	Side Arm	(1) 1/2	Ansonia Fire Dept.
76.0	1	2" x 8" GPS	Side Arm	(1) 1/2	Sprint Nextel
12.0	1	Nortel NTGB01MA	Leg	(1) 7/8	Youghiogheny

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
167.0	9	72" x 12" Panel	Sector Frames	(2) 19.7 mm (1) 10 mm (12) 1 5/8	AT&T Mobility
	3	36" x 8" x 6" Panel			
	6	Ericsson RRUS 11			
	1	Raycap DC6-48-60-18-8F			
	9	14" x 9" TTA			

Double stack proposed coax on same tower face as existing AT&T coax.

Results

The maximum structure usage is: 100 %

Foundation Reactions	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift/Leg (kips)	301.1	406.5	357.3	88
Axial/Leg (kips)	343.0	463.1	405.3	88
Shear/Leg (kips)	36.3	49.0	42.1	86

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

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

Conclusion

Based on the analysis results, the structure meets the requirements per the ANSI/TIA-222-G standard and the 2003 IBC w/ 2005 CT Supplements and 2009 CT Amendments. The tower and foundation can support the existing and proposed antennas with the transmission line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5017.

Standard Conditions

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

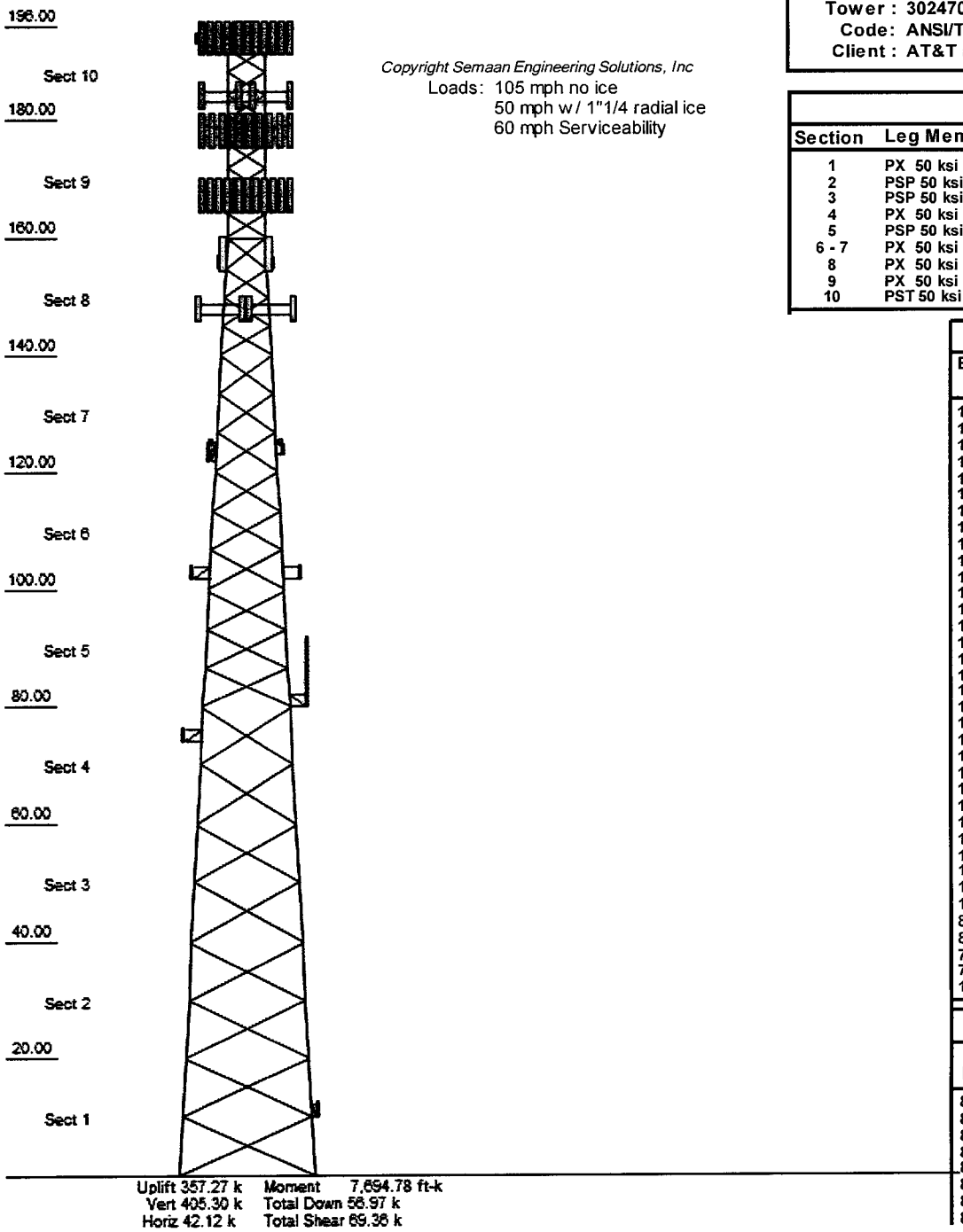
-- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Loads: 105 mph no ice
50 mph w/ 1"1/4 radial ice
60 mph Serviceability

Job Information

Tower : 302470	Location : Ansonia Wakelee, CT	
Code: ANSI/TIA-222 Rev G	Shape : Triangle	Base Width : 23.00 ft
Client : AT&T Mobility		Top Width : 6.65 ft

Sections Properties

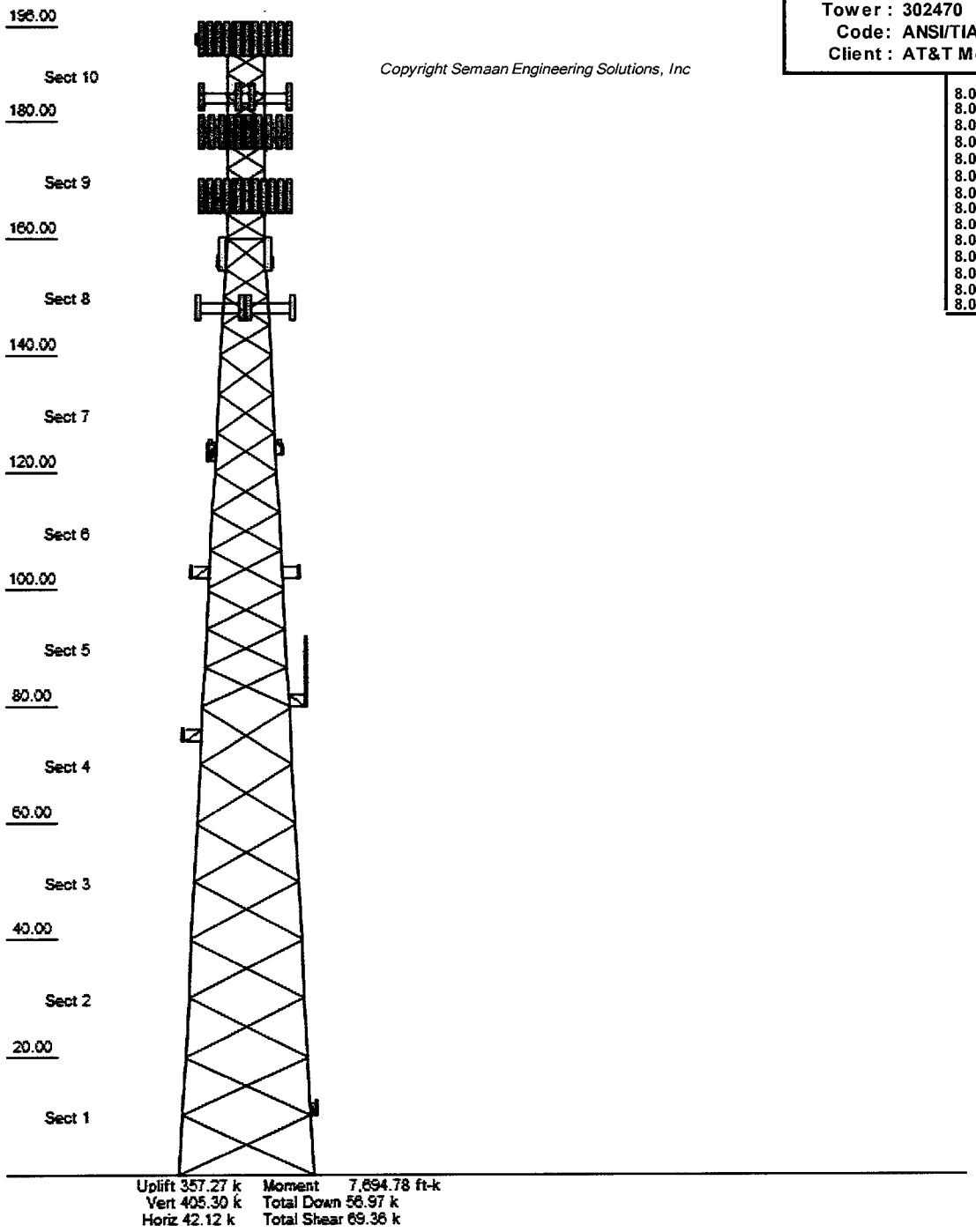
Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 8" DIA PIPE	SAE 50 ksi 4X4X0.25	
2	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 4X4X0.25	
3	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 3.5X3.5X0.25	
4	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25	
5	PSP 50 ksi ROHN 6 EHS	SAE 50 ksi 3X3X0.25	
6 - 7	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
8	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25	SAE 36 ksi 2X2X0.125
9	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 2X2X0.1875	
10	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 2X2X0.125

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
194.00	Panel	3	Argus LLPX310R
194.00	Dish	2	DragonWave A-ANT-18G-2-C
194.00	Panel	3	NextNet BTS-2500
194.00	Panel	2	DragonWave Horizon Compact
194.00		3	KMW TTA (HB-X-WM-17-65-00T)
194.00	Mounting Frame	3	Round Sector Frames
194.00	Panel	3	72" x 12" Panels
194.00	Panel	9	48" x 12" Panels
184.00	Mounting Frame	3	Round Sector Frames
184.00	Panel	6	Decibel DB950F65E-M
178.00	Panel	3	Rvmsa MGD3-800T0
178.00	Panel	3	Powerwave P65-16-XL-2
178.00	Mounting Frame	3	Flat Light Sector Frames
178.00	Panel	6	RFS FD9R6004/1C-3L
178.00	Panel	6	Decibel DB844H90E-XY
167.00	Panel	9	72" x 12" Panel
167.00	Panel	3	36" x 8" x 6" Panel
167.00	Panel	6	Ericsson RRUS 11
167.00	Panel	1	Raycap DC6-48-60-18-8F
167.00	Mounting Frame	3	Round Sector Frames
167.00		9	14" x 9" TTA
157.00	Panel	3	RFS APXV18-206517-C
148.00	Panel	3	RFS APX16DWV-16DWVS-E-A20
148.00		3	RFS ATMAA1412D-1A20
148.00	Panel	3	EMS DR65-18-XXDPL2Q
148.00		3	CCI DTMA-1819-DD-12
148.00	Mounting Frame	3	Round Sector Frames
125.00	Panel	2	Motorola PTP54600
124.00	Whip	1	GPS
104.00	Straight Arm	2	Side Arms
104.00	Whip	2	2" x 8" GPS
82.00	Straight Arm	1	Side Arm
82.00	Whip	1	10' Omni
76.00	Straight Arm	1	Side Arm
76.00	Whip	1	2" x 8" GPS
12.00	Whip	1	Nortel NTGB01MA

Linear Appurtenance

Elev (ft) From	To	Qty	Description
8.000	194.00	6	5/16" Coax
8.000	194.00	2	2" Conduit
8.000	194.00	2	1/2" Coax
8.000	194.00	6	1 5/8" Coax
8.000	194.00	10	1 1/4" Coax
8.000	193.99	1	Wave Guide
8.000	184.00	6	1 5/8" Coax
8.000	183.99	1	Wave Guide

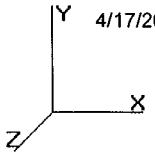


Job Information

Tower : 302470	Location : Ansonia Wakelee, CT	
Code: ANSI/TIA-222 Rev G	Shape : Triangle	Base Width : 23.00 ft
Client : AT&T Mobility		Top Width : 6.65 ft

8.000	178.00	12	1 5/8" Coax
8.000	167.00	2	19.7 mm Cable
8.000	167.00	1	10 mm Cable
8.000	167.00	12	1 5/8" Coax
8.000	166.99	1	Wave Guide
8.000	157.00	6	1 5/8" Coax
8.000	148.00	18	1 5/8" Coax
8.000	147.99	1	Wave Guide
8.000	125.00	2	1/4" Coax
8.000	124.00	1	1/2" Coax
8.000	104.00	2	1/2" Coax
8.000	82.000	1	1/2" Coax
8.000	76.000	1	1/2" Coax
8.000	12.000	1	7/8" Coax

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

LoadCase 1.2D + 1.6W Normal

105.00 mph Normal to Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	28.39	9.85	7.67	0.00	0.16	2.74	1.00	1.00	0.00	14.20	30.26	0.00	1,299.2	0.0	1,503.75	992.71	2,496.46
9	170.0	27.59	12.51	11.67	0.00	0.17	2.69	1.00	1.00	0.00	17.53	79.10	0.00	2,586.6	0.0	1,770.18	2,505.8	4,276.07
8	150.0	26.62	12.84	15.03	0.00	0.17	2.70	1.00	1.00	0.00	19.29	129.82	0.00	3,694.7	0.0	1,883.05	3,966.1	5,849.16
7	130.0	25.55	14.17	18.58	0.00	0.16	2.74	1.00	1.00	0.00	22.04	158.05	0.00	4,575.9	0.0	2,096.28	4,678.8	6,775.16
6	110.0	24.36	16.34	18.58	0.00	0.14	2.80	1.00	1.00	0.00	24.04	159.75	0.00	4,735.9	0.0	2,231.28	4,501.4	6,732.69
5	90.00	23.01	22.18	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.48	159.85	0.00	5,315.6	0.0	2,716.90	4,252.9	6,969.85
4	70.00	21.41	21.17	22.12	0.00	0.13	2.84	1.00	1.00	0.00	30.23	161.64	0.00	5,672.9	0.0	2,500.03	3,995.6	6,495.72
3	50.00	19.45	23.01	29.22	0.00	0.14	2.81	1.00	1.00	0.00	35.09	161.85	0.00	6,211.7	0.0	2,607.01	3,633.4	6,240.47
2	30.00	16.81	28.69	29.22	0.00	0.14	2.81	1.00	1.00	0.00	40.78	161.85	0.00	6,618.4	0.0	2,618.11	3,140.0	5,758.14
1	10.00	16.79	31.16	28.80	0.00	0.13	2.84	1.00	1.00	0.00	42.96	97.47	0.00	6,651.2	0.0	2,785.11	1,888.4	4,673.52
														47,362.0	0.0			56,267.23

LoadCase 1.2D + 1.6W 60 deg

105.00 mph 60 deg with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	28.39	9.85	7.67	0.00	0.16	2.74	0.80	1.00	0.00	12.24	30.26	0.00	1,299.2	0.0	1,295.27	992.71	2,287.98
9	170.0	27.59	12.51	11.67	0.00	0.17	2.69	0.80	1.00	0.00	15.03	79.10	0.00	2,586.6	0.0	1,517.55	2,505.8	4,023.44
8	150.0	26.62	12.84	15.03	0.00	0.17	2.70	0.80	1.00	0.00	16.73	129.82	0.00	3,694.7	0.0	1,632.45	3,966.1	5,598.57
7	130.0	25.55	14.17	18.58	0.00	0.16	2.74	0.80	1.00	0.00	19.20	158.05	0.00	4,575.9	0.0	1,826.70	4,678.8	6,505.58
6	110.0	24.36	16.34	18.58	0.00	0.14	2.80	0.80	1.00	0.00	20.77	159.75	0.00	4,735.9	0.0	1,928.00	4,501.4	6,429.41
5	90.00	23.01	22.18	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.05	159.85	0.00	5,315.6	0.0	2,334.08	4,252.9	6,587.03
4	70.00	21.41	21.17	22.12	0.00	0.13	2.84	0.80	1.00	0.00	25.99	161.64	0.00	5,672.9	0.0	2,149.90	3,995.6	6,145.59
3	50.00	19.45	23.01	29.22	0.00	0.14	2.81	0.80	1.00	0.00	30.49	161.85	0.00	6,211.7	0.0	2,265.19	3,633.4	5,898.64
2	30.00	16.81	28.69	29.22	0.00	0.14	2.81	0.80	1.00	0.00	35.04	161.85	0.00	6,618.4	0.0	2,249.68	3,140.0	5,389.71
1	10.00	16.79	31.16	28.80	0.00	0.13	2.84	0.80	1.00	0.00	36.73	97.47	0.00	6,651.2	0.0	2,381.12	1,888.4	4,269.52
														47,362.0	0.0			53,135.47

LoadCase 1.2D + 1.6W 90 deg

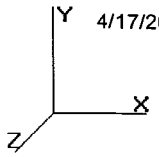
105.00 mph 90 deg with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	28.39	9.85	7.67	0.00	0.16	2.74	0.85	1.00	0.00	12.73	30.26	0.00	1,299.2	0.0	1,347.39	992.71	2,340.10

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
9	170.0	27.59	12.51	11.67	0.00	0.17	2.69	0.85	1.00	0.00	15.65	79.10	0.00	2,586.6	0.0	1,580.70	2,505.8	4,086.59
8	150.0	26.62	12.84	15.03	0.00	0.17	2.70	0.85	1.00	0.00	17.37	129.82	0.00	3,694.7	0.0	1,695.10	3,966.1	5,661.21
7	130.0	25.55	14.17	18.58	0.00	0.16	2.74	0.85	1.00	0.00	19.91	158.05	0.00	4,575.9	0.0	1,894.09	4,678.8	6,572.97
6	110.0	24.36	16.34	18.58	0.00	0.14	2.80	0.85	1.00	0.00	21.59	159.75	0.00	4,735.9	0.0	2,003.82	4,501.4	6,505.23
5	90.00	23.01	22.18	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.16	159.85	0.00	5,315.6	0.0	2,429.79	4,252.9	6,682.74
4	70.00	21.41	21.17	22.12	0.00	0.13	2.84	0.85	1.00	0.00	27.05	161.64	0.00	5,672.9	0.0	2,237.43	3,995.6	6,233.13
3	50.00	19.45	23.01	29.22	0.00	0.14	2.81	0.85	1.00	0.00	31.64	161.85	0.00	6,211.7	0.0	2,350.65	3,633.4	5,984.10
2	30.00	16.81	28.69	29.22	0.00	0.14	2.81	0.85	1.00	0.00	36.48	161.85	0.00	6,618.4	0.0	2,341.79	3,140.0	5,481.82
1	10.00	16.79	31.16	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.29	97.47	0.00	6,651.2	0.0	2,482.12	1,888.4	4,370.52
														47,362.0	0.0			53,918.41

LoadCase 0.9D + 1.6W Normal — 105.00 mph Normal to Face with No Ice (Reduced DL)

Gust Response Factor : 0.85
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

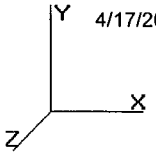
Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	28.39	9.85	7.67	0.00	0.16	2.74	1.00	1.00	0.00	14.20	30.26	0.00	974.4	0.0	1,503.75	992.71	2,496.46
9	170.0	27.59	12.51	11.67	0.00	0.17	2.69	1.00	1.00	0.00	17.53	79.10	0.00	1,939.9	0.0	1,770.18	2,505.8	4,276.07
8	150.0	26.62	12.84	15.03	0.00	0.17	2.70	1.00	1.00	0.00	19.29	129.82	0.00	2,771.0	0.0	1,883.05	3,966.1	5,849.16
7	130.0	25.55	14.17	18.58	0.00	0.16	2.74	1.00	1.00	0.00	22.04	158.05	0.00	3,431.9	0.0	2,096.28	4,678.8	6,775.16
6	110.0	24.36	16.34	18.58	0.00	0.14	2.80	1.00	1.00	0.00	24.04	159.75	0.00	3,551.9	0.0	2,231.28	4,501.4	6,732.69
5	90.00	23.01	22.18	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.48	159.85	0.00	3,986.7	0.0	2,716.90	4,252.9	6,969.85
4	70.00	21.41	21.17	22.12	0.00	0.13	2.84	1.00	1.00	0.00	30.23	161.64	0.00	4,254.6	0.0	2,500.03	3,995.6	6,495.72
3	50.00	19.45	23.01	29.22	0.00	0.14	2.81	1.00	1.00	0.00	35.09	161.85	0.00	4,658.8	0.0	2,607.01	3,633.4	6,240.47
2	30.00	16.81	28.69	29.22	0.00	0.14	2.81	1.00	1.00	0.00	40.78	161.85	0.00	4,963.8	0.0	2,618.11	3,140.0	5,758.14
1	10.00	16.79	31.16	28.80	0.00	0.13	2.84	1.00	1.00	0.00	42.96	97.47	0.00	4,988.4	0.0	2,785.11	1,888.4	4,673.52
														35,521.5	0.0			56,267.23

LoadCase 0.9D + 1.6W 60 deg — 105.00 mph 60 deg with No Ice (Reduced DL)

Gust Response Factor : 0.85
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	28.39	9.85	7.67	0.00	0.16	2.74	0.80	1.00	0.00	12.24	30.26	0.00	974.4	0.0	1,295.27	992.71	2,287.98
9	170.0	27.59	12.51	11.67	0.00	0.17	2.69	0.80	1.00	0.00	15.03	79.10	0.00	1,939.9	0.0	1,517.55	2,505.8	4,023.44
8	150.0	26.62	12.84	15.03	0.00	0.17	2.70	0.80	1.00	0.00	16.73	129.82	0.00	2,771.0	0.0	1,632.45	3,966.1	5,598.57
7	130.0	25.55	14.17	18.58	0.00	0.16	2.74	0.80	1.00	0.00	19.20	158.05	0.00	3,431.9	0.0	1,826.70	4,678.8	6,505.58
6	110.0	24.36	16.34	18.58	0.00	0.14	2.80	0.80	1.00	0.00	20.77	159.75	0.00	3,551.9	0.0	1,928.00	4,501.4	6,429.41
5	90.00	23.01	22.18	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.05	159.85	0.00	3,986.7	0.0	2,334.08	4,252.9	6,587.03
4	70.00	21.41	21.17	22.12	0.00	0.13	2.84	0.80	1.00	0.00	25.99	161.64	0.00	4,254.6	0.0	2,149.90	3,995.6	6,145.59
3	50.00	19.45	23.01	29.22	0.00	0.14	2.81	0.80	1.00	0.00	30.49	161.85	0.00	4,658.8	0.0	2,265.19	3,633.4	5,898.64
2	30.00	16.81	28.69	29.22	0.00	0.14	2.81	0.80	1.00	0.00	35.04	161.85	0.00	4,963.8	0.0	2,249.68	3,140.0	5,389.71
1	10.00	16.79	31.16	28.80	0.00	0.13	2.84	0.80	1.00	0.00	36.73	97.47	0.00	4,988.4	0.0	2,381.12	1,888.4	4,269.52
														35,521.5	0.0			53,135.47

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

LoadCase 0.9D + 1.6W 90 deg

105.00 mph 90 deg with No Ice (Reduced DL)

Gust Response Factor : 0.85
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	28.39	9.85	7.67	0.00	0.16	2.74	0.85	1.00	0.00	12.73	30.26	0.00	974.4	0.0	1,347.39	992.71	2,340.10
9	170.0	27.59	12.51	11.67	0.00	0.17	2.69	0.85	1.00	0.00	15.65	79.10	0.00	1,939.9	0.0	1,580.70	2,505.8	4,086.59
8	150.0	26.62	12.84	15.03	0.00	0.17	2.70	0.85	1.00	0.00	17.37	129.82	0.00	2,771.0	0.0	1,695.10	3,966.1	5,661.21
7	130.0	25.55	14.17	18.58	0.00	0.16	2.74	0.85	1.00	0.00	19.91	158.05	0.00	3,431.9	0.0	1,894.09	4,678.8	6,572.97
6	110.0	24.36	16.34	18.58	0.00	0.14	2.80	0.85	1.00	0.00	21.59	159.75	0.00	3,551.9	0.0	2,003.82	4,501.4	6,505.23
5	90.00	23.01	22.18	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.16	159.85	0.00	3,986.7	0.0	2,429.79	4,252.9	6,682.74
4	70.00	21.41	21.17	22.12	0.00	0.13	2.84	0.85	1.00	0.00	27.05	161.64	0.00	4,254.6	0.0	2,237.43	3,995.6	6,233.13
3	50.00	19.45	23.01	29.22	0.00	0.14	2.81	0.85	1.00	0.00	31.64	161.85	0.00	4,658.8	0.0	2,350.65	3,633.4	5,984.10
2	30.00	16.81	28.69	29.22	0.00	0.14	2.81	0.85	1.00	0.00	36.48	161.85	0.00	4,963.8	0.0	2,341.79	3,140.0	5,481.82
1	10.00	16.79	31.16	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.29	97.47	0.00	4,988.4	0.0	2,482.12	1,888.4	4,370.52
														35,521.5	0.0			53,918.41

LoadCase 1.2D + 1.0Di + 1.0Wi Normal

50.00 mph Normal with 1.25 in Radial Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
10	188.0	6.44	7.88	46.10	49.96	0.46	1.97	1.00	1.00	2.98	46.01	60.00	39.67	8,291.4	6,992.2	494.90	416.08	910.98	
9	170.0	6.26	10.01	55.66	57.90	0.44	2.00	1.00	1.00	2.95	55.44	143.89	108.49	15,071.9	12,485.	588.23	1,048.5	1,636.77	
8	150.0	6.04	12.84	73.43	58.40	0.50	1.90	1.00	1.00	2.91	63.12	215.13	175.49	20,167.1	16,472.	615.50	1,380.5	1,860.73	**
7	130.0	5.79	14.17	71.56	52.98	0.40	2.07	1.00	1.00	2.87	59.66	253.62	188.29	22,392.6	17,816.	607.19	1,812.6	2,223.02	**
6	110.0	5.52	16.34	75.57	56.99	0.36	2.15	1.00	1.00	2.82	63.18	253.74	210.55	23,254.5	18,518.	637.48	1,860.0	2,497.52	
5	90.00	5.22	22.18	82.97	60.85	0.35	2.16	1.00	1.00	2.76	73.40	251.98	222.03	24,972.1	19,656.	704.23	1,796.9	2,501.21	
4	70.00	4.86	21.17	73.71	51.59	0.28	2.35	1.00	1.00	2.70	64.89	251.48	231.79	24,527.9	18,855.	628.89	1,803.6	2,432.58	
3	50.00	4.41	23.01	82.15	52.93	0.28	2.36	1.00	1.00	2.61	71.61	248.72	225.86	25,033.5	18,821.	634.42	1,615.2	2,249.70	
2	30.00	3.81	28.69	82.48	53.27	0.26	2.40	1.00	1.00	2.48	77.23	244.39	214.61	25,035.8	18,417.	599.86	1,362.5	1,962.43	
1	10.00	3.81	31.16	79.24	50.44	0.24	2.47	1.00	1.00	2.22	77.31	141.85	116.85	19,148.3	12,497.	618.14	781.06	1,399.20	
														207,895.0	160,533.			19,674.14	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 60 deg

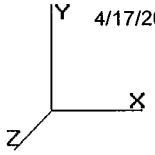
50.00 mph 60 deg with 1.25 in Radial Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	6.44	7.88	46.10	49.96	0.46	1.97	0.80	1.00	2.98	44.44	60.00	39.67	8,291.4	6,992.2	477.96	416.08	894.04

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
9	170.0	6.26	10.01	55.66	57.90	0.44	2.00	0.80	1.00	2.95	53.44	143.89	108.49	15,071.9	12,485.	567.00	1,048.5	1,615.53	
8	150.0	6.04	12.84	73.43	58.40	0.50	1.90	0.80	1.00	2.91	60.55	215.13	175.49	20,167.1	16,472.	590.46	1,380.5	1,860.73	**
7	130.0	5.79	14.17	71.56	52.98	0.40	2.07	0.80	1.00	2.87	56.83	253.62	188.29	22,392.6	17,816.	578.35	1,812.6	2,223.02	**
6	110.0	5.52	16.34	75.57	56.99	0.36	2.15	0.80	1.00	2.82	59.91	253.74	210.55	23,254.5	18,518.	604.51	1,860.0	2,464.55	
5	90.00	5.22	22.18	82.97	60.85	0.35	2.16	0.80	1.00	2.76	68.97	251.98	222.03	24,972.1	19,656.	661.67	1,796.9	2,458.65	
4	70.00	4.86	21.17	73.71	51.59	0.28	2.35	0.80	1.00	2.70	60.66	251.48	231.79	24,527.9	18,855.	587.86	1,803.6	2,391.56	
3	50.00	4.41	23.01	82.15	52.93	0.28	2.36	0.80	1.00	2.61	67.01	248.72	225.86	25,033.5	18,821.	593.65	1,615.2	2,208.93	
2	30.00	3.81	28.69	82.48	53.27	0.26	2.40	0.80	1.00	2.48	71.49	244.39	214.61	25,035.8	18,417.	555.28	1,362.5	1,917.85	
1	10.00	3.81	31.16	79.24	50.44	0.24	2.47	0.80	1.00	2.22	71.08	141.85	116.85	19,148.3	12,497.	568.32	781.06	1,349.38	
														207,895.0	160,533.			19,384.24	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg

50.00 mph 90 deg with 1.25 in Radial Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00
Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
10	188.0	6.44	7.88	46.10	49.96	0.46	1.97	0.85	1.00	2.98	44.83	60.00	39.67	8,291.4	6,992.2	482.20	416.08	898.27	
9	170.0	6.26	10.01	55.66	57.90	0.44	2.00	0.85	1.00	2.95	53.94	143.89	108.49	15,071.9	12,485.	572.31	1,048.5	1,620.84	
8	150.0	6.04	12.84	73.43	58.40	0.50	1.90	0.85	1.00	2.91	61.19	215.13	175.49	20,167.1	16,472.	596.72	1,380.5	1,860.73	**
7	130.0	5.79	14.17	71.56	52.98	0.40	2.07	0.85	1.00	2.87	57.54	253.62	188.29	22,392.6	17,816.	585.56	1,812.6	2,223.02	**
6	110.0	5.52	16.34	75.57	56.99	0.36	2.15	0.85	1.00	2.82	60.72	253.74	210.55	23,254.5	18,518.	612.75	1,860.0	2,472.80	
5	90.00	5.22	22.18	82.97	60.85	0.35	2.16	0.85	1.00	2.76	70.08	251.98	222.03	24,972.1	19,656.	672.31	1,796.9	2,469.29	
4	70.00	4.86	21.17	73.71	51.59	0.28	2.35	0.85	1.00	2.70	61.72	251.48	231.79	24,527.9	18,855.	598.12	1,803.6	2,401.81	
3	50.00	4.41	23.01	82.15	52.93	0.28	2.36	0.85	1.00	2.61	68.16	248.72	225.86	25,033.5	18,821.	603.84	1,615.2	2,219.12	
2	30.00	3.81	28.69	82.48	53.27	0.26	2.40	0.85	1.00	2.48	72.93	244.39	214.61	25,035.8	18,417.	566.43	1,362.5	1,929.00	
1	10.00	3.81	31.16	79.24	50.44	0.24	2.47	0.85	1.00	2.22	72.64	141.85	116.85	19,148.3	12,497.	580.77	781.06	1,361.84	
														207,895.0	160,533.			19,456.72	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service Normal

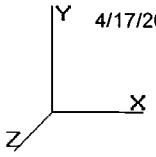
Serviceability - 60.00 Wind Normal

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	9.27	9.85	7.67	0.00	0.16	2.74	1.00	1.00	0.00	14.20	30.26	0.00	1,082.7	0.0	306.89	202.59	509.48
9	170.0	9.01	12.51	11.67	0.00	0.17	2.69	1.00	1.00	0.00	19.16	79.10	0.00	2,155.5	0.0	394.90	511.41	906.31
8	150.0	8.69	12.84	15.03	0.00	0.17	2.70	1.00	1.00	0.00	21.40	129.82	0.00	3,078.9	0.0	426.30	809.41	1,235.71
7	130.0	8.34	14.17	18.58	0.00	0.16	2.74	1.00	1.00	0.00	24.73	158.05	0.00	3,813.3	0.0	480.10	954.87	1,434.97
6	110.0	7.96	16.34	18.58	0.00	0.14	2.80	1.00	1.00	0.00	26.86	159.75	0.00	3,946.6	0.0	508.89	918.66	1,427.54
5	90.00	7.51	22.18	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.48	159.85	0.00	4,429.7	0.0	554.47	867.95	1,422.42
4	70.00	6.99	21.17	22.12	0.00	0.13	2.84	1.00	1.00	0.00	33.69	161.64	0.00	4,727.4	0.0	568.59	815.45	1,384.04
3	50.00	6.35	23.01	29.22	0.00	0.14	2.81	1.00	1.00	0.00	35.09	161.85	0.00	5,176.4	0.0	532.04	741.52	1,273.56
2	30.00	5.49	28.69	29.22	0.00	0.14	2.81	1.00	1.00	0.00	40.78	161.85	0.00	5,515.3	0.0	534.31	640.82	1,175.13
1	10.00	5.48	31.16	28.80	0.00	0.13	2.84	1.00	1.00	0.00	42.96	97.47	0.00	5,542.6	0.0	568.39	385.39	953.78
														39,468.3	0.0			11,722.95

** = Section Force Exceeds Solidity Ratio Criteria

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

LoadCase 1.0D + 1.0W Service 60 deg

Serviceability - 60.00 Wind 60 deg

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	9.27	9.85	7.67	0.00	0.16	2.74	0.80	1.00	0.00	12.24	30.26	0.00	1,082.7	0.0	264.34	202.59	466.93
9	170.0	9.01	12.51	11.67	0.00	0.17	2.69	0.80	1.00	0.00	16.66	79.10	0.00	2,155.5	0.0	343.34	511.41	854.75
8	150.0	8.69	12.84	15.03	0.00	0.17	2.70	0.80	1.00	0.00	18.83	129.82	0.00	3,078.9	0.0	375.16	809.41	1,184.57
7	130.0	8.34	14.17	18.58	0.00	0.16	2.74	0.80	1.00	0.00	21.90	158.05	0.00	3,813.3	0.0	425.08	954.87	1,379.96
6	110.0	7.96	16.34	18.58	0.00	0.14	2.80	0.80	1.00	0.00	23.60	159.75	0.00	3,946.6	0.0	447.00	918.66	1,365.65
5	90.00	7.51	22.18	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.05	159.85	0.00	4,429.7	0.0	476.34	867.95	1,344.29
4	70.00	6.99	21.17	22.12	0.00	0.13	2.84	0.80	1.00	0.00	29.45	161.64	0.00	4,727.4	0.0	497.13	815.45	1,312.58
3	50.00	6.35	23.01	29.22	0.00	0.14	2.81	0.80	1.00	0.00	30.49	161.85	0.00	5,176.4	0.0	462.28	741.52	1,203.80
2	30.00	5.49	28.69	29.22	0.00	0.14	2.81	0.80	1.00	0.00	35.04	161.85	0.00	5,515.3	0.0	459.12	640.82	1,099.94
1	10.00	5.48	31.16	28.80	0.00	0.13	2.84	0.80	1.00	0.00	36.73	97.47	0.00	5,542.6	0.0	485.94	385.39	871.33
														39,468.3	0.0			11,083.81

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 90 deg

Serviceability - 60.00 Wind 90 deg

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
10	188.0	9.27	9.85	7.67	0.00	0.16	2.74	0.85	1.00	0.00	12.73	30.26	0.00	1,082.7	0.0	274.98	202.59	477.57
9	170.0	9.01	12.51	11.67	0.00	0.17	2.69	0.85	1.00	0.00	17.28	79.10	0.00	2,155.5	0.0	356.23	511.41	867.64
8	150.0	8.69	12.84	15.03	0.00	0.17	2.70	0.85	1.00	0.00	19.48	129.82	0.00	3,078.9	0.0	387.95	809.41	1,197.36
7	130.0	8.34	14.17	18.58	0.00	0.16	2.74	0.85	1.00	0.00	22.61	158.05	0.00	3,813.3	0.0	438.84	954.87	1,393.71
6	110.0	7.96	16.34	18.58	0.00	0.14	2.80	0.85	1.00	0.00	24.41	159.75	0.00	3,946.6	0.0	462.47	918.66	1,381.13
5	90.00	7.51	22.18	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.16	159.85	0.00	4,429.7	0.0	495.88	867.95	1,363.82
4	70.00	6.99	21.17	22.12	0.00	0.13	2.84	0.85	1.00	0.00	30.51	161.64	0.00	4,727.4	0.0	515.00	815.45	1,330.44
3	50.00	6.35	23.01	29.22	0.00	0.14	2.81	0.85	1.00	0.00	31.64	161.85	0.00	5,176.4	0.0	479.72	741.52	1,221.24
2	30.00	5.49	28.69	29.22	0.00	0.14	2.81	0.85	1.00	0.00	36.48	161.85	0.00	5,515.3	0.0	477.92	640.82	1,118.74
1	10.00	5.48	31.16	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.29	97.47	0.00	5,542.6	0.0	506.55	385.39	891.94
														39,468.3	0.0			11,243.59

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase Normal No Ice

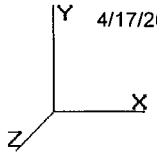
90.00 mph Wind Normal To Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

** = Section Force Exceeds Solidity Ratio Criteria	0.0	0.0	0.00

LoadCase 60 deg No Ice

90.00 mph Wind at 60 deg From Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00
														0.0	0.0			0.00

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 90 deg No Ice

90.00 mph Wind at 90 deg From Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00
														0.0	0.0			0.00

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase Normal Ice

77.94 mph Wind Normal To Face with Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 0.00
Ice Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00
														0.0	0.0			0.00

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 60 deg Ice

77.94 mph Wind at 60 deg From Face with Ice

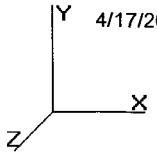
Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 0.00
Ice Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Section Forces

** = Section Force Exceeds Solidity Ratio Criteria															0.0	0.0			0.00

LoadCase 90 deg Ice — 77.94 mph Wind at 90 deg From Face with Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00
Wind Importance Factor : 0.00
Ice Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00
** = Section Force Exceeds Solidity Ratio Criteria														0.0	0.0			0.00

LoadCase Normal Twist/Sway — 50.00 mph Wind Normal To Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00
** = Section Force Exceeds Solidity Ratio Criteria														0.0	0.0			0.00

LoadCase 60 deg Twist/Sway — 50.00 mph Wind at 60 deg From Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance Factor : 0.00

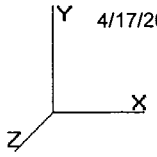
Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00
** = Section Force Exceeds Solidity Ratio Criteria														0.0	0.0			0.00

LoadCase 90 deg Twist/Sway — 50.00 mph Wind at 90 deg From Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance Factor : 0.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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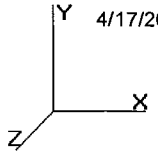
Section Forces

** = Section Force Exceeds Solidity Ratio Criteria	0.0	0.0	0.00

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Tower Loading

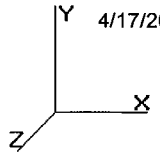
Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	Ice Weight (lb)	Ice CaAa (sf)	Len (ft)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
194.0	Argus LLPX310R	3	28.60	4.830	45.62	7.704	3.500	11.80	4.500	0.80	0.70	0.000
194.0	DragonWave A-ANT-18G-2-C	2	27.10	4.690	193.80	7.481	2.170	0.000	0.000	0.80	0.80	0.000
194.0	NextNet BTS-2500	3	35.00	2.120	55.83	3.381	1.583	11.30	5.100	0.80	0.50	0.000
194.0	DragonWave Horizon	2	10.60	0.430	16.91	0.686	0.392	9.300	9.300	0.80	0.50	0.000
194.0	KMW TTA (HB-X-WM-17-65-	3	15.90	0.650	25.36	1.037	1.325	7.300	3.700	0.80	0.50	0.000
194.0	Round Sector Frames	3	300.00	14.400	928.35	42.675	0.000	0.000	0.000	0.75	0.75	0.000
194.0	72" x 12" Panels	3	40.00	8.400	63.80	13.398	6.000	12.00	6.000	0.80	0.67	0.000
194.0	48" x 12" Panels	9	30.00	5.600	47.85	8.932	4.000	12.00	6.000	0.80	0.67	0.000
184.0	Round Sector Frames	3	300.00	14.400	835.52	31.537	0.000	0.000	0.000	0.75	0.75	0.000
184.0	Decibel DB950F65E-M	6	16.00	4.430	25.52	7.066	5.000	11.00	7.000	0.80	0.83	0.000
178.0	Rymsa MGD3-800T0	3	19.80	3.450	31.46	5.482	4.530	6.300	3.500	0.80	0.82	0.000
178.0	Powerwave P65-16-XL-2	3	33.00	8.130	384.82	10.420	6.000	12.00	5.000	0.80	0.75	0.000
178.0	Flat Light Sector Frames	3	400.00	17.900	908.95	43.417	0.000	0.000	0.000	0.75	0.75	0.000
178.0	RFS FD9R6004/1C-3L	6	3.10	0.370	35.95	0.835	0.483	6.500	1.500	0.80	0.50	0.000
178.0	Decibel DB844H90E-XY	6	14.00	3.610	22.25	5.737	4.000	8.000	6.500	0.75	0.91	0.000
167.0	72" x 12" Panel	9	45.00	8.400	413.98	10.420	6.000	12.00	6.000	0.80	0.67	0.000
167.0	36" x 8" x 6" Panel	3	25.00	2.800	193.23	3.898	3.000	8.000	6.000	0.80	0.67	0.000
167.0	Ericsson RRUS 11	6	55.00	2.940	214.22	3.680	1.480	17.00	7.200	0.80	0.50	0.000
167.0	Raycap DC6-48-60-18-8F	1	32.80	1.470	215.05	3.371	2.000	11.00	11.00	0.80	0.50	0.000
167.0	Round Sector Frames	3	300.00	14.400	830.16	31.365	0.000	0.000	0.000	0.75	0.75	0.000
167.0	14" x 9" TTA	9	10.00	1.230	15.89	1.520	1.167	9.000	4.000	0.80	0.50	0.000
157.0	RFS APXV18-206517-C	3	26.40	5.170	41.76	8.178	6.000	6.800	3.200	1.00	0.80	0.000
148.0	RFS APX16DWV-16DWVS-E-	3	40.70	7.220	64.38	11.420	4.660	13.30	3.100	0.80	0.65	0.000
148.0	RFS ATMAA1412D-1A20	3	13.00	1.170	20.56	1.851	1.000	10.00	4.000	0.80	0.50	0.000
148.0	EMS DR65-18-XXDPL2Q	3	24.00	6.300	279.09	7.658	4.500	12.00	4.000	0.80	0.69	0.000
148.0	CCI DTMA-1819-DD-12	3	14.30	0.710	22.62	1.123	1.100	5.500	3.200	0.80	0.50	0.000
148.0	Round Sector Frames	3	300.00	14.400	823.56	31.154	0.000	0.000	0.000	0.75	0.75	0.000
125.0	Motorola PTP54600	2	12.10	2.040	19.04	3.210	1.210	14.50	3.800	1.00	0.80	0.000
124.0	GPS	1	10.00	1.000	88.38	1.270	1.000	9.000	6.000	1.00	1.00	0.500
104.0	Side Arms	2	200.00	2.000	312.79	2.451	0.000	0.000	0.000	1.00	0.80	0.000
104.0	2" x 8" GPS	2	0.26	0.160	0.49	0.780	0.670	2.000	2.000	0.90	0.90	0.000
82.00	Side Arm	1	200.00	2.000	310.55	2.442	0.000	0.000	0.000	1.00	1.00	0.000
82.00	10' Omni	1	10.00	3.000	15.53	4.658	10.00	3.000	3.000	0.90	1.00	5.000
76.00	Side Arm	1	200.00	2.000	307.81	2.431	0.000	0.000	0.000	1.00	1.00	0.000
76.00	2" x 8" GPS	1	0.26	0.160	0.48	0.753	0.670	2.000	2.000	0.90	1.00	0.000
12.00	Nortel NTGB01MA	1	10.00	0.090	14.44	0.130	0.670	2.000	2.000	1.00	1.00	0.335
	Totals	119	8003.88		24790.69					Number of Appurtenances : 36		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
8.00	194.0	1 1/4" Coax	10	1.55	0.63	60	3	Block	0.00	N	0.00	1.00	0.00
8.00	194.0	1 5/8" Coax	6	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
8.00	194.0	1/2" Coax	2	0.63	0.15	0	2	Individual	0.00	N	0.00	1.00	0.00
8.00	194.0	2" Conduit	2	2.38	3.65	0	2	Individual	0.00	N	0.00	1.00	0.00
8.00	194.0	5/16" Coax	6	0.00	0.04	50	2	Block	0.00	N	0.00	1.00	0.00

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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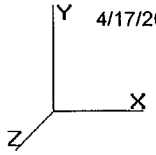
Tower Loading

8.00	193.9	Wave Guide	1	1.00	5.00	0	3	Individual	0.00	N	0.00	1.00	0.00
8.00	184.0	1 5/8" Coax	6	1.98	0.82	0	2	Individual	0.00	N	0.00	1.00	0.00
8.00	183.9	Wave Guide	1	1.00	5.00	100	2	Individual	0.00	N	0.00	1.00	0.00
8.00	178.0	1 5/8" Coax	12	1.98	0.82	33	3	Block	0.00	N	0.00	1.00	0.00
8.00	167.0	1 5/8" Coax	12	1.98	0.82	50	1	Block	0.00	N	0.00	1.00	0.00
8.00	167.0	10 mm Cable	1	0.39	0.07	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	167.0	19.7 mm Cable	2	0.78	0.59	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	166.9	Wave Guide	1	1.00	5.00	100	1	Individual	0.00	N	0.00	1.00	0.00
8.00	157.0	1 5/8" Coax	6	1.98	0.82	0	1	Individual	0.00	N	0.00	1.00	0.00
8.00	148.0	1 5/8" Coax	18	1.98	0.82	66	3	Block	0.00	N	0.00	1.00	0.00
8.00	147.9	Wave Guide	1	1.00	5.00	100	3	Individual	0.00	N	0.00	1.00	0.00
8.00	125.0	1/4" Coax	2	0.34	0.06	0	1	Individual	0.00	N	0.00	1.00	0.00
8.00	124.0	1/2" Coax	1	0.63	0.15	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	104.0	1/2" Coax	2	0.00	0.15	0	3	Individual	0.00	N	0.00	1.00	0.00
8.00	82.00	1/2" Coax	1	0.63	0.15	0	1	Individual	0.00	N	0.00	1.00	0.00
8.00	76.00	1/2" Coax	1	0.63	0.15	0	2	Individual	0.00	N	0.00	1.00	0.00
8.00	12.00	7/8" Coax	1	1.09	0.33	0	1	Individual	0.00	N	0.00	1.00	0.00

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 1 15N25 Bot Elev (ft): 0.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-396.11	1.2D + 1.6W	9.85	100	100	100	41.0	50.0	509.25	0	0	0.00	0.00	77	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-11.81	1.2D + 1.6W 90	24.54	50	50	50	185.2	43.5	12.77	1	1	17.89	23.40	92	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	359.24	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00	62	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	12.49	1.2D + 1.6W 90	50	65	62.93	1	1	0.00	23.40	19	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	326.37	0.9D + 1.6W 60	0.00	0	0	
Top Compression	369.46	1.2D + 1.6W	0.00	0		
Bot Tension	359.25	0.9D + 1.6W 60	605.70	59	10	1" A354-BC
Bot Compression	406.61	1.2D + 1.6W	0.00	0		

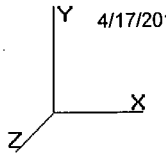
Section: 2 14N46 Bot Elev (ft): 20.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-357.59	1.2D + 1.6W	9.85	100	100	100	40.3	50.0	394.32	0	0	0.00	0.00	90	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-12.32	1.2D + 1.6W 90	22.69	50	50	50	171.3	43.5	14.94	1	1	17.89	23.40	82	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	326.68	0.9D + 1.6W 60	50	65	444.15	0	0	0.00	0.00	73	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	12.00	1.2D + 1.6W 90	50	65	62.93	1	1	0.00	23.40	19	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	290.86	0.9D + 1.6W 60	0.00	0	0	
Top Compression	328.37	1.2D + 1.6W	0.00	0		
Bot Tension	326.37	0.9D + 1.6W 60	436.16	75	8	1 A325
Bot Compression	369.46	1.2D + 1.6W	0.00	0		

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 3 13N88 Bot Elev (ft): 40.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-316.33	1.2D + 1.6W	9.85	100	100	100	40.3	50.0	394.32	0	0	0.00	0.00	80	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-11.73	1.2D + 1.6W 90	20.88	50	50	50	180.6	49.5	11.71	1	1	17.89	23.40	100	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	291.23	0.9D + 1.6W 60	50	65	444.15	0	0	0.00	0.00	65	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	11.43	1.2D + 1.6W 90	50	65	53.79	1	1	0.00	23.40	21	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	253.99	0.9D + 1.6W 60	0.00	0	0	
Top Compression	285.99	1.2D + 1.6W	0.00	0		
Bot Tension	290.86	0.9D + 1.6W 60	436.16	67	8	1 A325
Bot Compression	328.37	1.2D + 1.6W	0.00	0		

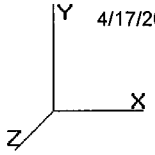
Section: 4 12N50 Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	-274.03	1.2D + 1.6W	9.85	100	100	100	53.9	50.0	305.78	0	0	0.00	0.00	89	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-10.94	1.2D + 1.6W 90	19.11	50	50	50	165.3	49.5	13.97	1	1	17.89	23.40	78	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	254.34	0.9D + 1.6W 60	50	65	378.00	0	0	0.00	0.00	67	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	10.85	1.2D + 1.6W 90	50	65	53.79	1	1	0.00	23.40	20	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	215.99	0.9D + 1.6W 60	0.00	0	0	
Top Compression	242.65	1.2D + 1.6W	0.00	0		
Bot Tension	253.99	0.9D + 1.6W 60	436.16	58	8	1 A325
Bot Compression	285.99	1.2D + 1.6W	0.00	0		

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 5 11N223 Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 6 EHS	-233.95	1.2D + 1.6W	6.57	100	100	100	35.4	50.0	275.49	0	0	0.00	0.00	84	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-9.36	1.2D + 1.6W 90	15.94	50	50	50	161.6	50.0	12.46	1	1	17.89	23.40	75	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 6 EHS	216.30	0.9D + 1.6W 60	50	65	301.95	0	0	0.00	0.00	71	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	9.18	1.2D + 1.6W 90	50	65	44.65	1	1	0.00	23.40	20	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	177.21	0.9D + 1.6W 60	0.00	0	0	
Top Compression	198.72	1.2D + 1.6W	0.00	0		
Bot Tension	215.99	0.9D + 1.6W 60	327.12	66	6	1 A325
Bot Compression	242.65	1.2D + 1.6W	0.00	0		

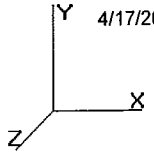
Section: 6 10N152 Bot Elev (ft): 100.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	-190.29	1.2D + 1.6W	6.57	100	100	100	42.8	50.0	240.44	0	0	0.00	0.00	79	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-8.33	1.2D + 1.6W 90	14.11	50	50	50	172.5	36.0	9.03	1	1	12.43	17.40	92	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	177.44	0.9D + 1.6W 60	50	65	274.95	0	0	0.00	0.00	64	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	8.29	1.2D + 1.6W 90	36	58	32.71	1	1	0.00	17.40	25	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	137.54	0.9D + 1.6W 60	0.00	0	0	
Top Compression	154.42	1.2D + 1.6W	0.00	0		
Bot Tension	177.21	0.9D + 1.6W 60	327.12	54	6	1 A325
Bot Compression	198.72	1.2D + 1.6W	0.00	0		

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 7 9N216 Bot Elev (ft): 120.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	-145.83	1.2D + 1.6W	6.57	100	100	100	42.8	50.0	240.44	0	0	0.00	0.00	60	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-7.57	1.2D + 1.6W 90	12.35	50	50	50	151.0	36.0	11.79	1	1	12.43	17.40	64	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	137.74	0.9D + 1.6W 60	50	65	274.95	0	0	0.00	0.00	50	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	7.58	1.2D + 1.6W 90	36	58	32.71	1	1	0.00	17.40	23	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	95.90	0.9D + 1.6W 60	0.00	0	0	
Top Compression	108.64	1.2D + 1.6W	0.00	0		
Bot Tension	137.54	0.9D + 1.6W 60	218.08	63	4	1 A325
Bot Compression	154.42	1.2D + 1.6W	0.00	0		

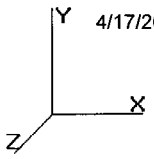
Section: 8 A780252 Bot Elev (ft): 140.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	-102.08	1.2D + 1.6W	4.93	100	100	100	39.9	50.0	176.61	0	0	0.00	0.00	57	Member X
HORIZ SAE - 2X2X0.125	-0.31	1.2D + 1.6W 60	6.760	100	100	100	203.8	36.0	2.61	1	1	12.43	8.70	11	Member Z
DIAG SAE - 2X2X0.25	-6.25	1.2D + 1.6W 90	9.841	50	50	50	151.0	36.0	9.31	1	1	12.43	17.40	67	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	96.10	0.9D + 1.6W 60	50	65	198.45	0	0	0.00	0.00	48	Member
HORIZ SAE - 2X2X0.125	0.22	1.2D + 1.6W	36	58	12.60	1	1	0.00	8.70	1	Member
DIAG SAE - 2X2X0.25	6.21	1.2D + 1.6W 90	36	58	24.55	1	1	0.00	17.40	25	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	53.83	0.9D + 1.6W 60	0.00	0	0	
Top Compression	62.04	1.2D + 1.6W	0.00	0		
Bot Tension	95.90	0.9D + 1.6W 60	218.08	44	4	1 A325
Bot Compression	108.64	1.2D + 1.6W	0.00	0		

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 9 A780178 Bot Elev (ft): 160.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 3" DIA PIPE	-55.26	1.2D + 1.6W	3.93	100	100	100	41.4	50.0	119.89	0	0	0.00	0.00	46	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2X2X0.1875	-6.56	1.2D + 1.6W 90	7.816	50	50	50	119.3	36.0	10.96	1	1	12.43	13.05	59	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 3" DIA PIPE	53.54	0.9D + 1.6W 60	50	65	135.90	0	0	0.00	0.00	39	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2X2X0.1875	6.46	1.2D + 1.6W 90	36	58	18.74	1	1	0.00	13.05	34	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	9.89	0.9D + 1.6W 60	0.00	0	0	
Top Compression	12.89	1.2D + 1.6W	0.00	0		
Bot Tension	53.83	0.9D + 1.6W 60	166.24	32	4	7/8 A325
Bot Compression	62.04	1.2D + 1.6W	0.00	0		

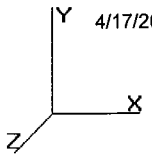
Section: 10 A780178 Bot Elev (ft): 180.0 Height (ft): 16.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-12.77	1.2D + 1.6W	0.17	100	100	100	2.1	50.0	76.65	0	0	0.00	0.00	16	Member X
HORIZ SAE - 2X2X0.125	-0.31	1.2D + 1.6W	6.655	100	100	100	200.7	36.0	2.69	1	1	12.43	8.70	11	Member Z
DIAG SAE - 1.75X1.75X0.18	-2.65	1.2D + 1.6W	7.778	50	50	50	136.1	36.0	7.58	1	1	12.43	13.05	35	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	9.98	0.9D + 1.6W 60	50	65	76.68	0	0	0.00	0.00	13	Member
HORIZ SAE - 2X2X0.125	0.31	1.2D + 1.6W 60	36	58	12.60	1	1	0.00	8.70	2	Member
DIAG SAE - 1.75X1.75X0.18	2.70	1.2D + 1.6W 90	36	58	15.67	1	1	0.00	13.05	17	Member

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	0.55	1.2D + 1.0Di +	0.00	0		
Bot Tension	9.89	0.9D + 1.6W 60	120.39	8	4	3/4 A325
Bot Compression	12.89	1.2D + 1.6W	0.00	0		

Site Number: 302470
Location: Ansonia Wakelee, CT
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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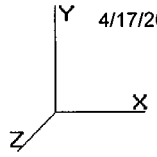
Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.0D + 1.0W Service 90 deg	1b	-5.58	-51.75	-2.63	
	1a	-7.33	83.40	3.65	
	1	-1.01	15.82	-1.02	
1.0D + 1.0W Service 60 deg	1b	-6.20	-61.45	-3.58	
	1a	-4.85	54.46	1.81	
	1	-0.86	54.46	-5.10	
1.0D + 1.0W Service Normal	1b	-2.36	-24.27	-2.42	
	1a	2.36	-24.27	-2.42	
	1	0.00	96.02	-9.55	
1.2D + 1.0Di + 1.0Wi 90 deg	1b	-8.75	-24.62	-4.08	
	1a	-11.42	178.53	5.64	
	1	-1.67	76.96	-1.56	
1.2D + 1.0Di + 1.0Wi 60 deg	1b	-9.79	-40.05	-5.65	
	1a	-7.63	135.46	2.75	
	1	-1.43	135.46	-7.98	
1.2D + 1.0Di + 1.0Wi Normal	1b	-3.55	17.90	-3.75	
	1a	3.55	17.90	-3.75	
	1	0.00	195.06	-14.55	
0.9D + 1.6W 90 deg	1b	-30.46	-310.58	-14.69	
	1a	-31.66	339.06	15.54	
	1	-4.89	14.25	-0.85	
0.9D + 1.6W 60 deg	1b	-33.47	-357.27	-19.32	
	1a	-19.79	199.98	6.69	
	1	-4.10	200.02	-20.48	
0.9D + 1.6W Normal	1b	-14.86	-178.67	-13.77	
	1a	14.86	-178.67	-13.77	
	1	0.00	400.06	-41.81	
1.2D + 1.6W 90 deg	1b	-30.20	-306.25	-14.54	
	1a	-31.93	344.22	15.70	
	1	-4.88	19.00	-1.16	
1.2D + 1.6W 60 deg	1b	-33.21	-353.00	-19.17	
	1a	-20.05	204.97	6.85	
	1	-4.09	205.00	-20.79	
1.2D + 1.6W Normal	1b	-14.60	-174.17	-13.62	
	1a	14.60	-174.17	-13.62	
	1	0.00	405.30	-42.12	

Max Uplift:	357.27 (kip)	Moment:	7,694.78 (ft-kip)	1.2D + 1.6W Normal
Max Down:	405.30 (kip)	Total Down:	56.97 (kip)	
Max Shear:	42.12 (kip)	Total Shear:	69.36 (kip)	

Site Number:	**302470**
Location:	**Ansonia Wakelee, CT**
Code:	**ANSI/TIA-222 Rev G**
Struct Class :	**II**
Exposure :	**B**
Topo :	**1**



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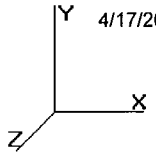

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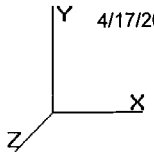
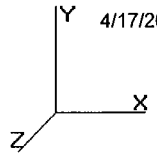
Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
Serviceability - 60.00 Wind 60 deg	10.00	0.0019	0.0007	0.0153
	79.83	0.0656	0.0046	0.1011
	80.17	0.0662	0.0046	0.1013
	106.72	0.1193	0.0059	0.1331
	126.72	0.1715	0.0069	0.1615
	150.00	0.2446	0.0080	0.1989
	154.92	0.2619	0.0081	0.2024
	168.03	0.3114	0.0086	0.2266
	179.83	0.3588	0.0085	0.2481
	184.13	0.3763	0.0084	0.2300
	192.04	0.4086	0.0083	0.2336
Serviceability - 60.00 Wind 90 deg	10.00	0.0021	0.0005	0.0156
	79.83	0.0663	0.0029	0.1012
	80.17	0.0669	0.0029	0.1015
	106.72	0.1204	0.0037	0.1343
	126.72	0.1730	0.0042	0.1628
	150.00	0.2468	0.0048	0.2003
	154.92	0.2642	0.0049	0.2049
	168.03	0.3141	0.0051	0.2292
	179.83	0.3619	0.0051	0.2484
	184.13	0.3795	0.0050	0.2323
	192.04	0.4121	0.0050	0.2360
Serviceability - 60.00 Wind Normal	10.00	0.0023	0.0007	0.0162
	79.83	0.0682	0.0042	0.1034
	80.17	0.0688	0.0042	0.1039
	106.72	0.1236	0.0057	0.1376
	126.72	0.1775	0.0068	0.1666
	150.00	0.2529	0.0080	0.2053
	154.92	0.2708	0.0082	0.2089
	168.03	0.3217	0.0087	0.2341
	179.83	0.3705	0.0086	0.2564
	184.13	0.3886	0.0086	0.2373
	192.04	0.4219	0.0085	0.2409
105.00 mph 60 deg with No Ice (Reduced DL)	10.00	0.0098	0.0036	0.0741
	79.83	0.3159	0.0228	0.4821
	80.17	0.3188	0.0229	0.4838
	106.72	0.5741	0.0297	0.6405
	126.72	0.8255	0.0350	0.7776
	150.00	1.1780	0.0409	0.9598
	154.92	1.2614	0.0414	0.9767
	168.03	1.5003	0.0443	1.0958
	179.83	1.7290	0.0447	1.2013
	184.13	1.8139	0.0441	1.1120
	192.04	1.9697	0.0441	1.1294
105.00 mph 60 deg with No Ice	10.00	0.0098	0.0036	0.0741
	79.83	0.3164	0.0229	0.4831
	80.17	0.3192	0.0229	0.4848
	106.72	0.5750	0.0298	0.6418



	126.72	0.8269	0.0351	0.7793
	150.00	1.1802	0.0410	0.9619
	154.92	1.2638	0.0415	0.9788
	168.03	1.5032	0.0444	1.0983
	179.83	1.7324	0.0448	1.2041
	184.13	1.8175	0.0442	1.1146
	192.04	1.9737	0.0442	1.1320
105.00 mph 90 deg with No Ice (Reduced DL)	10.00	0.0094	0.0022	0.0747
	79.83	0.3183	0.0144	0.4831
	80.17	0.3212	0.0144	0.4845
	106.72	0.5785	0.0182	0.6459
	126.72	0.8319	0.0210	0.7836
	150.00	1.1874	0.0242	0.9648
	154.92	1.2712	0.0244	0.9878
	168.03	1.5122	0.0260	1.1062
	179.83	1.7426	0.0262	1.1993
	184.13	1.8281	0.0256	1.1220
	192.04	1.9852	0.0256	1.1400
105.00 mph 90 deg with No Ice	10.00	0.0094	0.0022	0.0747
	79.83	0.3187	0.0144	0.4841
	80.17	0.3216	0.0145	0.4855
	106.72	0.5794	0.0182	0.6472
	126.72	0.8333	0.0211	0.7853
	150.00	1.1896	0.0243	0.9670
	154.92	1.2735	0.0244	0.9900
	168.03	1.5151	0.0260	1.1088
	179.83	1.7461	0.0262	1.2023
	184.13	1.8317	0.0257	1.1246
	192.04	1.9893	0.0257	1.1427
105.00 mph Normal to Face with No Ice (Reduced	10.00	0.0105	0.0036	0.0773
	79.83	0.3272	0.0206	0.5008
	80.17	0.3302	0.0206	0.5030
	106.72	0.5937	0.0280	0.6618
	126.72	0.8530	0.0337	0.8027
	150.00	1.2168	0.0400	0.9898
	154.92	1.3025	0.0410	1.0072
	168.03	1.5494	0.0440	1.1294
	179.83	1.7852	0.0437	1.2387
	184.13	1.8725	0.0442	1.1459
	192.04	2.0335	0.0442	1.1636
105.00 mph Normal to Face with No Ice	10.00	0.0106	0.0036	0.0774
	79.83	0.3277	0.0206	0.5014
	80.17	0.3307	0.0206	0.5036
	106.72	0.5947	0.0281	0.6630
	126.72	0.8545	0.0338	0.8044
	150.00	1.2191	0.0401	0.9921
	154.92	1.3049	0.0411	1.0096
	168.03	1.5524	0.0441	1.1322
	179.83	1.7888	0.0439	1.2418
	184.13	1.8763	0.0443	1.1487
	192.04	2.0376	0.0443	1.1664
50.00 mph 60 deg with 1.25 in Radial Ice	10.00	0.0061	0.0012	0.0326
	79.83	0.1001	0.0069	0.1535
	80.17	0.1010	0.0069	0.1537



	106.72	0.1780	0.0088	0.1916
	126.72	0.2524	0.0102	0.2288
	150.00	0.3551	0.0117	0.2768
	154.92	0.3789	0.0118	0.2812
	168.03	0.4475	0.0125	0.3134
	179.83	0.5125	0.0124	0.3377
	184.13	0.5366	0.0123	0.3152
	192.04	0.5807	0.0123	0.3192
50.00 mph 90 deg with 1.25 in Radial Ice	10.00	0.0058	0.0007	0.0318
	79.83	0.1000	0.0042	0.1521
	80.17	0.1009	0.0042	0.1523
	106.72	0.1781	0.0052	0.1919
	126.72	0.2527	0.0060	0.2293
	150.00	0.3556	0.0068	0.2779
	154.92	0.3794	0.0069	0.2833
	168.03	0.4483	0.0072	0.3141
	179.83	0.5133	0.0072	0.3375
	184.13	0.5375	0.0071	0.3166
	192.04	0.5817	0.0071	0.3205
50.00 mph Normal with 1.25 in Radial Ice	10.00	0.0049	0.0012	0.0296
	79.83	0.1000	0.0066	0.1501
	80.17	0.1009	0.0066	0.1502
	106.72	0.1785	0.0086	0.1929
	126.72	0.2536	0.0101	0.2305
	150.00	0.3573	0.0117	0.2800
	154.92	0.3812	0.0119	0.2845
	168.03	0.4505	0.0126	0.3160
	179.83	0.5160	0.0126	0.3423
	184.13	0.5402	0.0125	0.3183
	192.04	0.5847	0.0125	0.3222
	192.04	0.0000	0.0000	0.0000

WIRELESS COMMUNICATIONS FACILITY

CT2091

ANSONIA NW_SPECTRASITE TOWER

401 WAKELEE AVE.

ANSONIA, CT 06401

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2005 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "F" "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES." 2005 CONNECTICUT FIRE SAFETY CODE AND 2009 AMENDMENTS, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. THE COMPOUND, TOWER, PRIMARY GROUND RING, ELECTRICAL SERVICE TO THE METER BANK AND TELEPHONE SERVICE TO THE DEMARCATION POINT ARE PROVIDED BY SITE OWNER. AS BUILT FIELD CONDITIONS REGARDING THESE ITEMS SHALL BE CONFIRMED BY THE CONTRACTOR. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN 'AS-BUILT' SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND 'MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE AT&T CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
21. CONTRACTOR SHALL COMPLY WITH OWNERS ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.

SITE DIRECTIONS

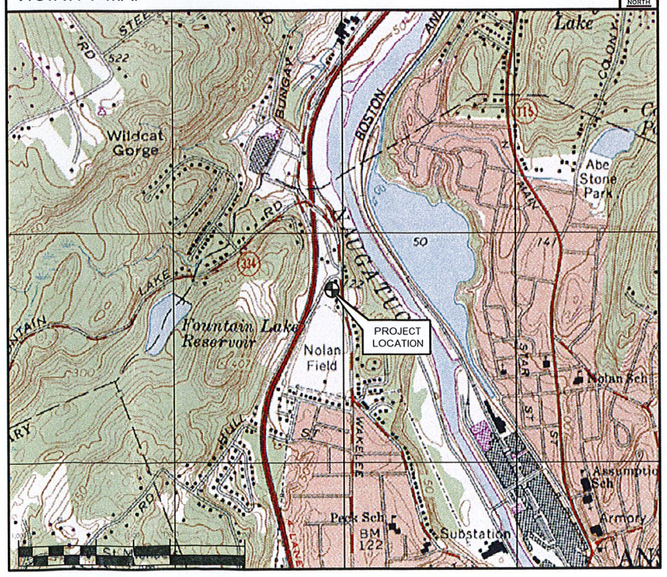
FROM: 500 ENTERPRISE DRIVE, ROCKY HILL, CONNECTICUT

TO: 401 WAKELEE AVE., ANSONIA, CT 06401

1.	Take ramp left for I-91 South	9.7 mi
2.	At exit 17, take ramp right for CT-15 South toward W. Cross Pkwy / E. Main St	21.8 mi
3.	Take ramp right for CT-34 West / Derby Ave	1.1 mi
4.	Take ramp right for CT-8 North toward Waterbury	2.7 mi
5.	At exit 19, take ramp right and follow signs for CT-334	0.2 mi
	Turn right onto CT-334 / Wakelee Ave	0.2 mi
	Arrive at 401 Wakelee Ave, Ansonia, CT 06401	

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK GENERALLY CONSISTS OF THE REPLACEMENT OF (2) OF THE (3) EXISTING ANTENNAS PER SECTOR: ONE (1) LTE ANTENNA PER SECTOR AND ONE (1) GSM ANTENNA PER SECTOR FOR A TOTAL OF (6) REPLACEMENT ANTENNAS. AN LTE BASEBAND EQUIPMENT UNIT (RBS) WILL BE INSTALLED WITHIN THE EXISTING AT&T EQUIPMENT SHELTER.
2. ADDITIONALLY, (2) REMOTE RADIO UNITS (RRUs) PER SECTOR WILL BE INSTALLED. SURGE ARRESTORS WILL BE INSTALLED AT BOTH AT&T RRU AND EQUIPMENT LOCATIONS. REFER TO THESE ACCOMPANYING DRAWINGS FOR FURTHER INFORMATION.

PROJECT INFORMATION

AT&T SITE NUMBER:	CT2091
AT&T SITE NAME:	ANSONIA NW_SPECTRASITE TOWER
SITE ADDRESS:	401 WAKELEE AVE. ANSONIA, CT 06401
LESSEE/APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT. 06405
PROJECT COORDINATES:	LATITUDE: 41°-21'-22.13"N LONGITUDE: 73°-05'-30.96"W GROUND ELEVATION: ±130'AMSL

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	NOTES AND SPECIFICATIONS	0
C-1	PLANS AND ELEVATION	0
C-2	LTE EQUIPMENT DETAILS	0
E-1	ELECTRICAL DETAILS AND NOTES	0
E-2	ELECTRICAL DETAILS	0

DESIGNED BY:	FLO
DRAWN BY:	DEB
CHK'D BY:	CFC

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CONSTRUCTION
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TITLE SHEET

T-1

STRUCTURAL SPECIFICATIONS

DESIGN BASIS

GOVERNING CODE: 2003 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2005 CONNECTICUT STATE BUILDING CODE AND 2009 AMENDMENTS.

1. DESIGN CRITERIA:
   - WIND LOAD: PER EIA/TIA 222 F-96 (ANTENNA MOUNTS): 85 MPH (FASTEST MILE), EQUIVALENT TO 105 MPH (3 SECOND GUST).
   - BASIC WIND SPEED (OTHER STRUCTURE): 105 MPH (3 SECOND GUST) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-02) PER 2003 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2005 CONNECTICUT SUPPLEMENT AND 2009 AMMENDMENT.
   - SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-95 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

GENERAL NOTES

1. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.
2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
4. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)
   - A. STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
   - B. STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
   - C. STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
   - D. STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
   - E. PIPE---ASTM A53 (FY = 35 KSI)
   - F. CONNECTION BOLTS---ASTM A325-N
   - G. U-BOLTS---ASTM A36
   - H. ANCHOR RODS---ASTM F 1554
   - I. WELDING ELECTRODE---ASTM E 70XX
2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.
3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
5. FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.
6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.
7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON-GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.
8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.
9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE".
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES APPEARANCE AND QUALITY OF WELDS, AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLET J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION" 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
11. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.
12. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.
13. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.
14. CONNECTIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR SHELTERS", LATEST EDITION, AND THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.
15. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.
16. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.
17. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.
18. FABRICATE BEAMS WITH MILL CAMBER UP.
19. LEVEL AND PLUMB INDMDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.
20. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.
21. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.
22. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

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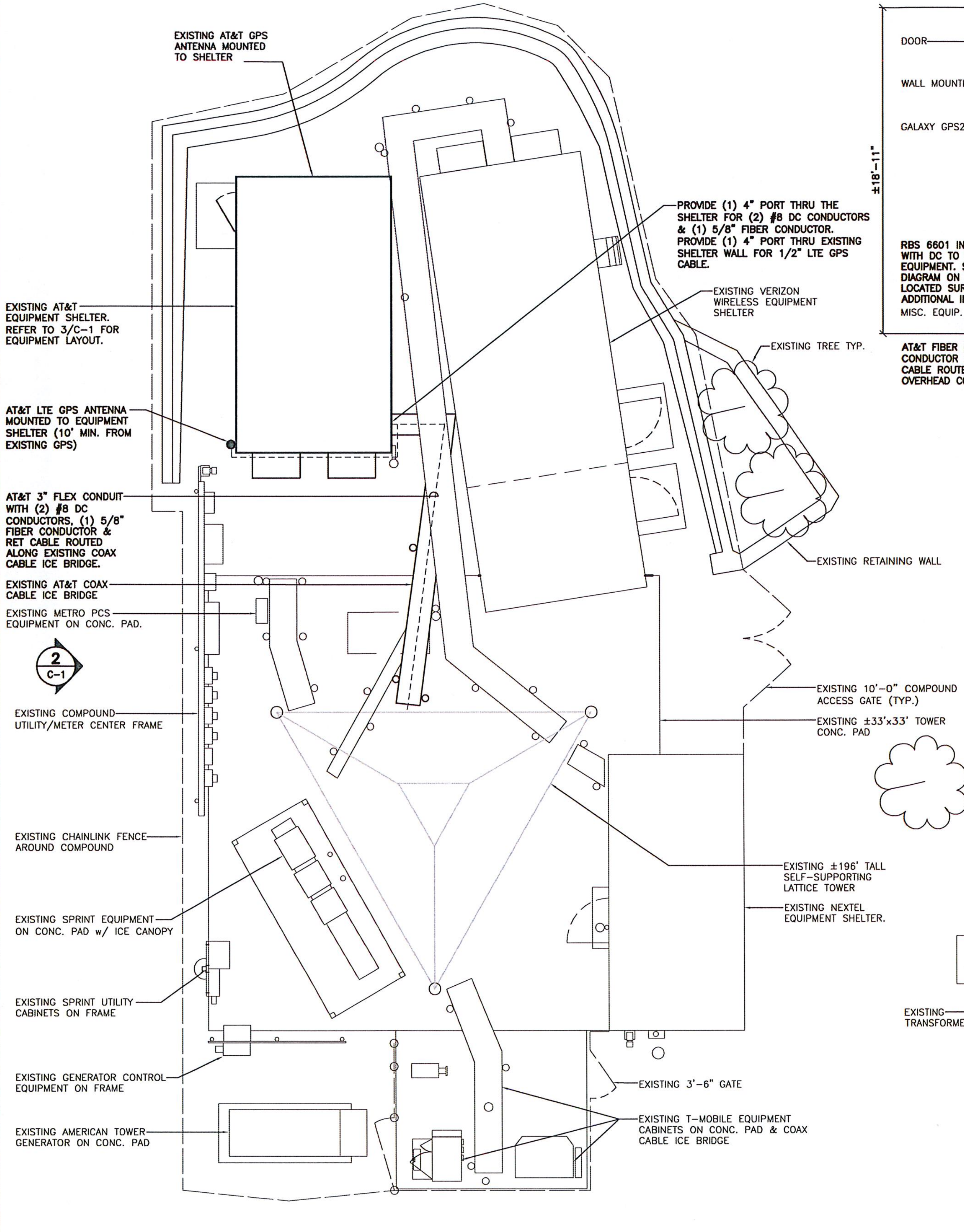
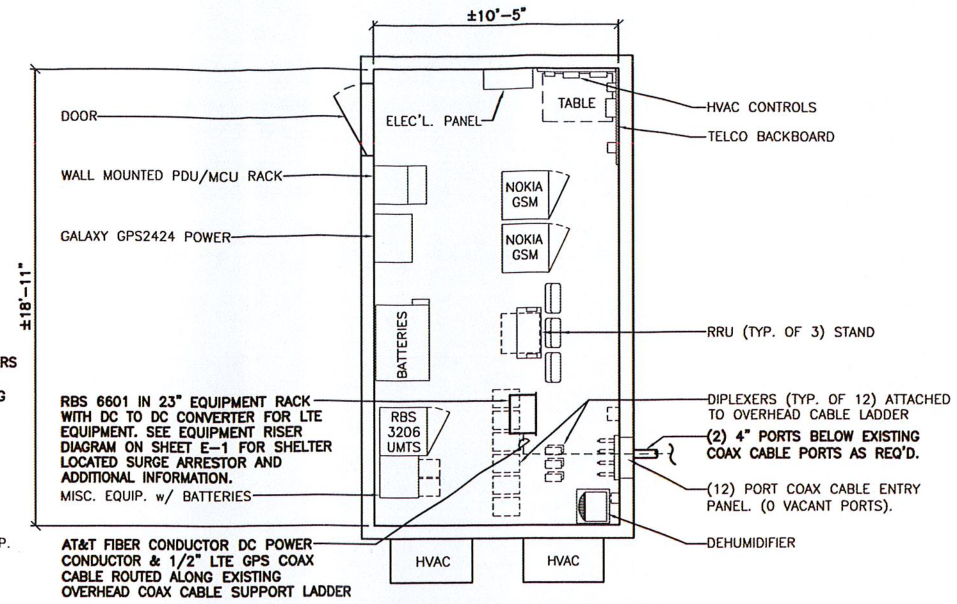
NOTES AND SPECIFICATIONS

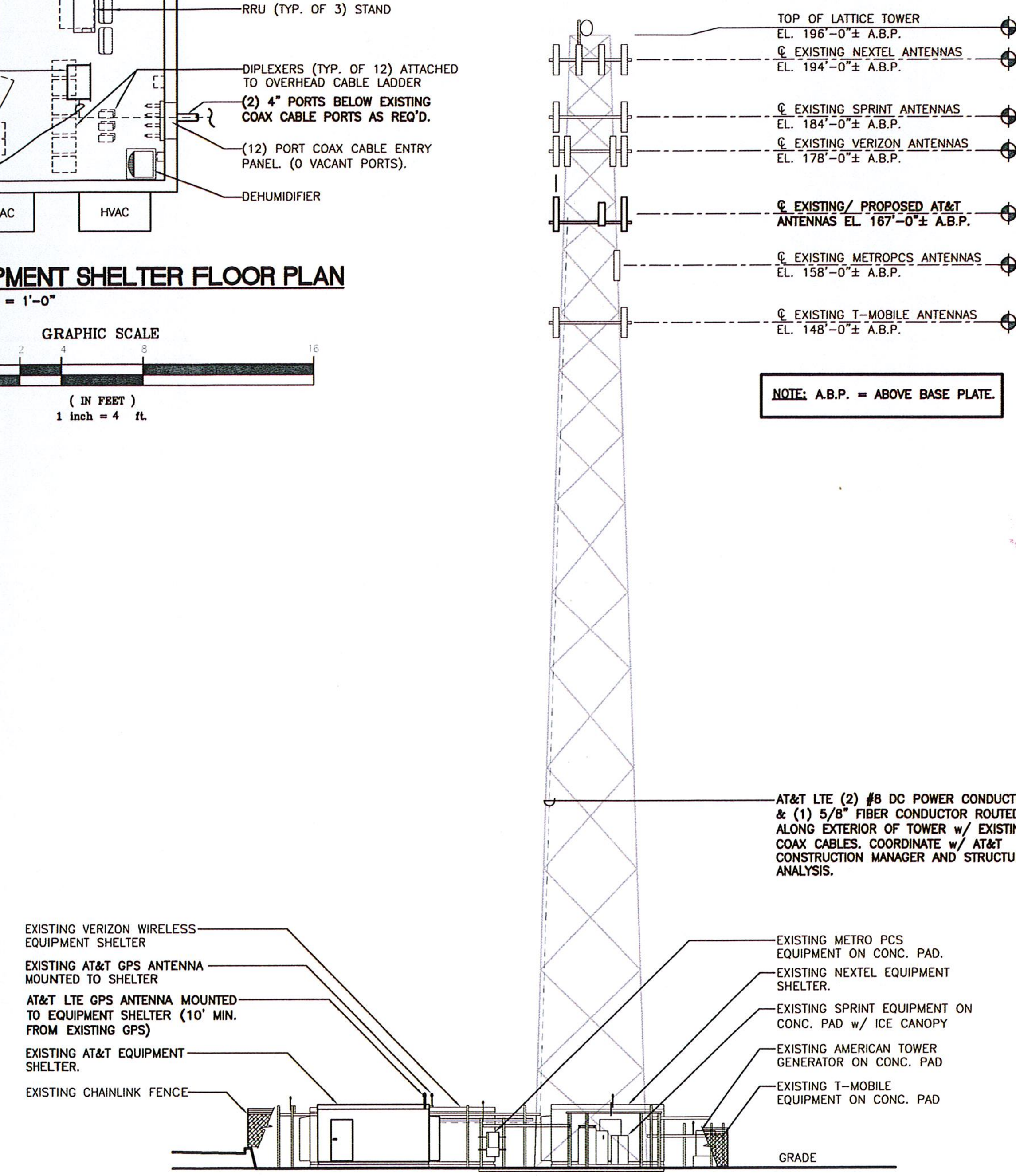
N-1



1 C-1 **COMPOUND PLAN**
SCALE: 1" = 5'-0"



3 C-1 **EQUIPMENT SHELTER FLOOR PLAN**
SCALE: 1/4" = 1'-0"



2 C-1 **WEST ELEVATION**
SCALE: 1" = 15'-0"

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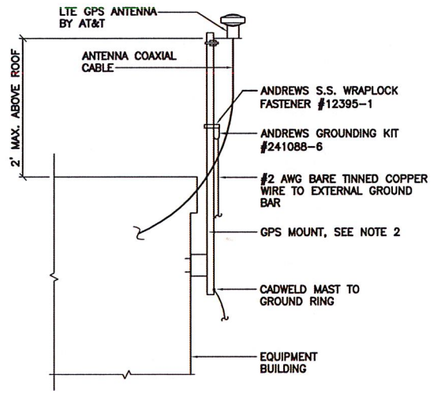
PLANS, ELEVATION AND DETAIL

C-1

Sheet No. 3 of 6

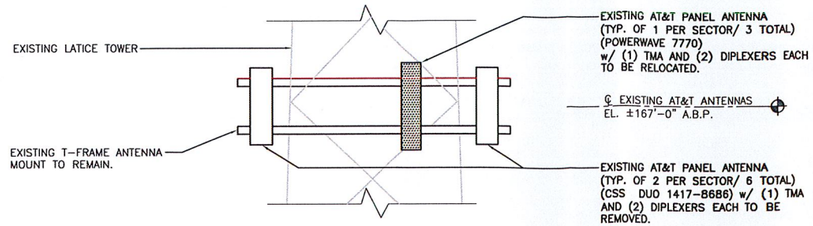


GPS ANTENNA MOUNTING NOTES:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT AND SHALL BE COORDINATED WITH AT&T'S CONSTRUCTION MANAGER..
2. GPS ANTENNA MOUNT, 3/4"ø THREADED MAST, 4 FEET LONG WITH (4) 7/16" MOUNTING HOLES AND 6" STANDOFF BY SITE PRO 1, INC., TELEPHONE 1-800-438-7761, PART NUMBER GPS1.
3. HOLLOW WALL KITS (HWK38) FOR "STICK BUILD" SHELTERS AND SOLID WALL KITS (SWK38) FOR CONCRETE SHELTERS ARE ALSO AVAILABLE FROM SITE PRO 1.

8 C-2 GPS ANTENNA MOUNTING DETAIL

NOT TO SCALE

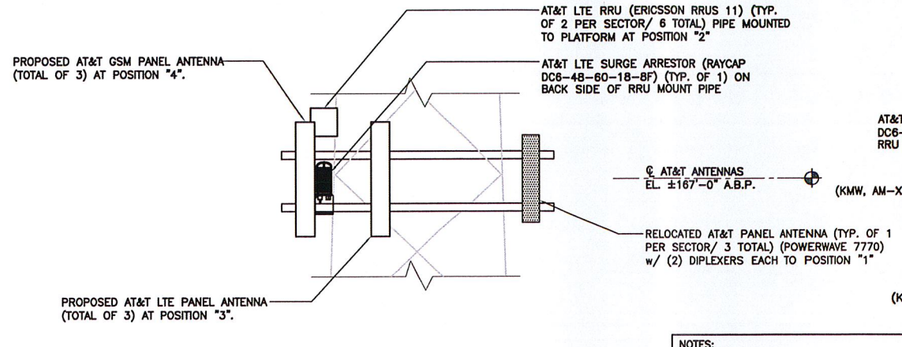


2 C-2 EXISTING ANTENNA SECTOR ELEVATION

SCALE: 1/4" = 1'-0"

NOTE: VERIFY IN FIELD PLATFORM FACE LOCATION OF EXISTING NON-AT&T DIPOLE & GPS ANTENNA.

NOTE: A.B.P. = ABOVE BASE PLATE.

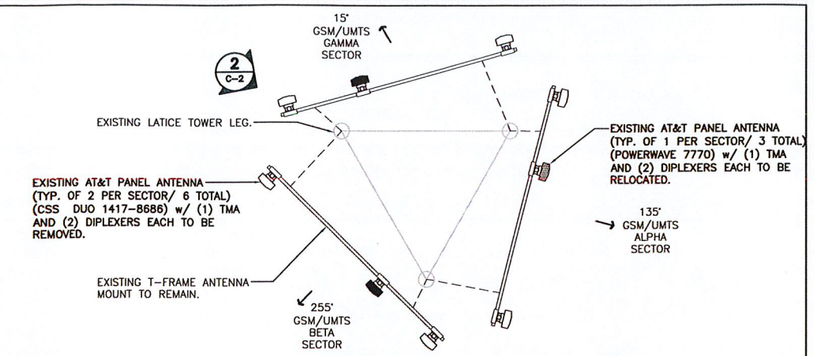


4 C-2 PROPOSED ANTENNA SECTOR ELEVATION

SCALE: 1/4" = 1'-0"

NOTES:

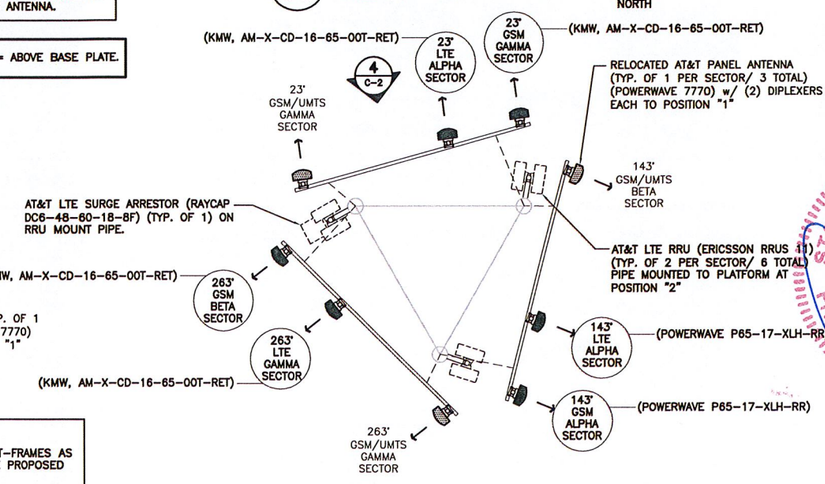
1. ROTATE EXISTING ANTENNA T-FRAMES AS REQUIRED TO ACCOMMODATE PROPOSED AZIMUTHS.
2. PROVIDE MOUNTING PIPES, CROSSOVERS & ASSOCIATED HARDWARE TO COMPLETE THE PROPOSED UPGRADE.
3. REFER TO STRUCTURAL ANALYSIS AND FINAL AT&T RFDS PRIOR TO INSTALLATION OF ANTENNAS AND COAX.



1 C-2 EXISTING ANTENNA PLAN

SCALE: 1/4" = 1'-0"

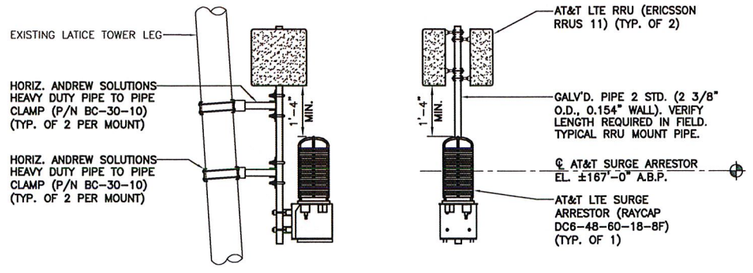
APPROX. NORTH



3 C-2 PROPOSED ANTENNA PLAN

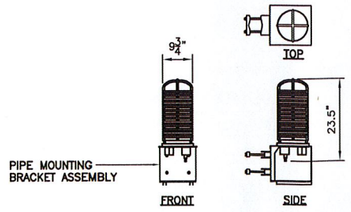
SCALE: 1/4" = 1'-0"

APPROX. NORTH



5 C-2 PROPOSED RRU MOUNTING PLAN

SCALE: 1/4" = 1'-0"

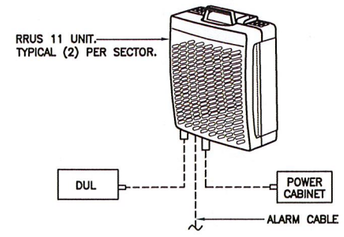


SURGE ARRESTOR				
SITE TYPE	ARRESTOR MAKE/MODEL	QTY REQUIRED	ARRESTOR LOCATION	WEIGHT
TOWER	MAKE: RAYCAP (SQUID) MODEL: DC6-48-60-18-8F	(1) PER SITE	TOWER, ADJACENT TO AT&T ANTENNAS AND RRUs.	20 LBS. (WITHOUT MOUNT)

NOTES:
1. CONTRACTOR TO COORDINATE FINAL SURGE ARRESTOR MODEL SELECTION(S) WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.
2. CONTRACTOR TO INSTALL ARRESTOR IN CONFORMANCE WITH MANUFACTURERS RECOMMENDATIONS.

6 C-2 SURGE ARRESTOR DETAIL

NOT TO SCALE



RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 11	17.8"L x 17.3"W x 7.2"D	BAND 4: 44 LBS. BAND 12: 50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. SIDE: 0" MIN.

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

5 C-2 RRU DETAIL

NOT TO SCALE

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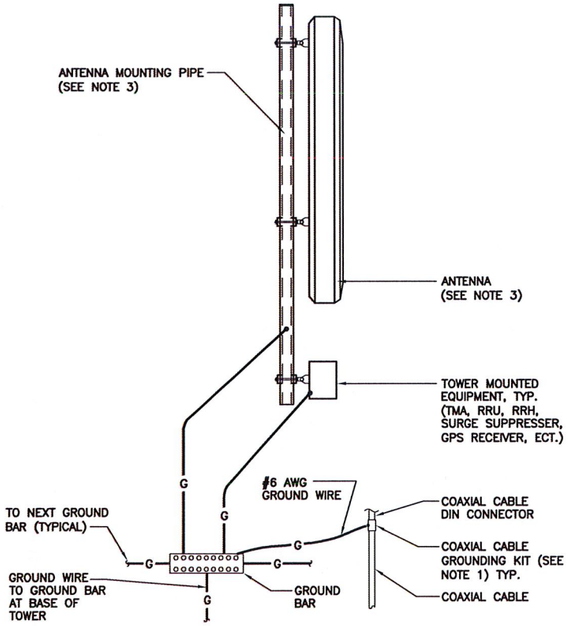
LTE EQUIPMENT DETAILS

C-2

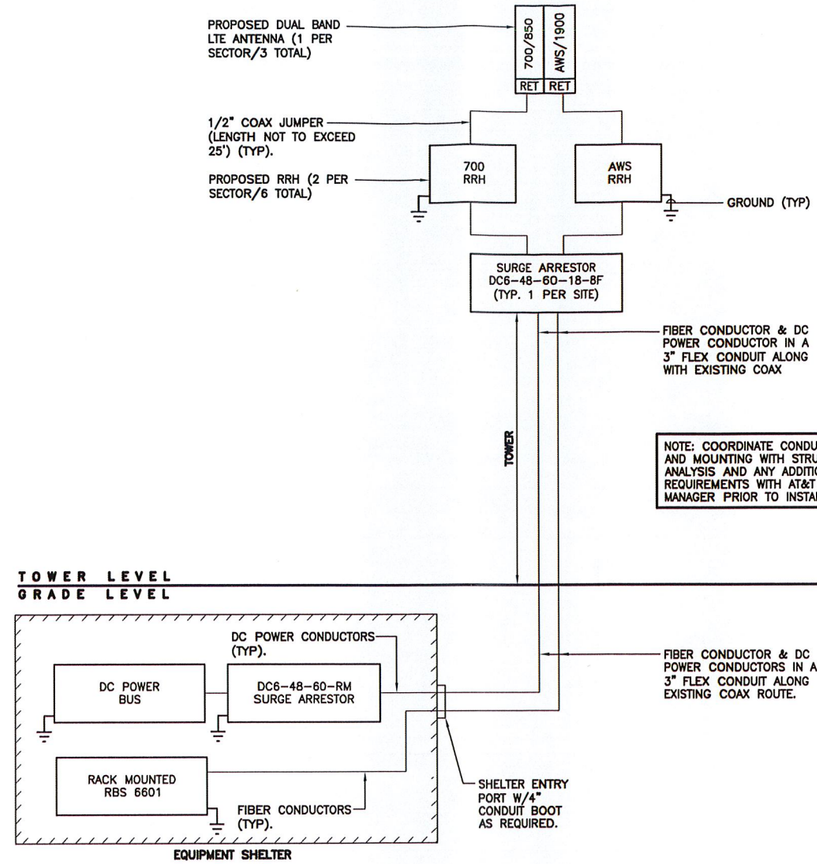


NOTES:

1. BOND COAXIAL CABLE GROUND KITS TO EACH OWNER'S GROUND BAR ALONG ENTIRE COAX RUN FROM ANTENNA TO SHELTER.
2. BOND ALL EQUIPMENT TO GROUND PER NEC AND MANUFACTURERS SPECIFICATIONS.
3. DETAIL IS TYPICAL FOR ALL ANTENNA SECTORS, INCLUDING GPS ANTENNA.

1 / E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE

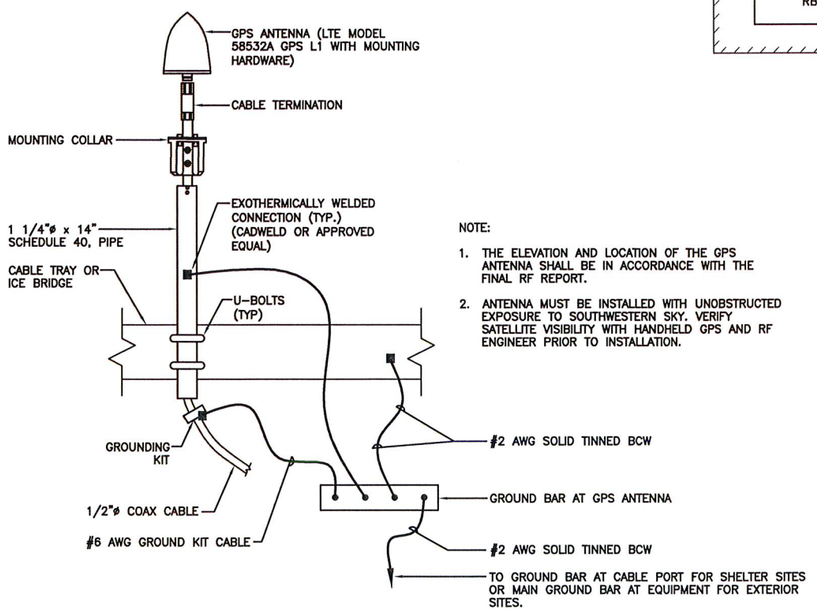


NOTES:

1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURERS RECOMMENDATIONS.

2 / E-1 LTE SCHEMATIC DIAGRAM

NOT TO SCALE



NOTE:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
2. ANTENNA MUST BE INSTALLED WITH UNOBSTRUCTED EXPOSURE TO SOUTHWESTERN SKY. VERIFY SATELLITE VISIBILITY WITH HANDHELD GPS AND RF ENGINEER PRIOR TO INSTALLATION.

3 / E-1 GPS MOUNTED TO CABLE TRAY / ICE BRIDGE

NOT TO SCALE

ELECTRICAL NOTES

1. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
2. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
3. CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
4. MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
5. PRIOR TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY EXISTING AVAILABLE CAPACITY FOR PROPOSED INSTALLATION. IF INADEQUATE CAPACITY IS AVAILABLE, CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING ELECTRIC SERVICE.
6. CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LIGHTNING PROTECTION SYSTEM AND ENSURE THAT IT IS IN COMPLIANCE WITH NEC, AND SITE OWNER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE PRESENTED TO OWNERS REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
7. ALL TRANSMISSION TOWER SITES CONTAIN AN EXTENSIVE BURIED GROUNDING SYSTEM. ALL GROUNDING WORK MUST BE COORDINATED WITH, AND APPROVED BY, THE TOWER OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
8. PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
9. ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS, #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:
10. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
11. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
12. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNER'S REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
15. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
16. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
17. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
18. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
19. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
20. CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16980).

TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

A. CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:

TEST 1: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM.

THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:

1. TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
2. CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
3. GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.

B. TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNERS CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.

C. THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.

D. CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

DESIGNED BY:	CKD
DRAWN BY:	TJB
CHK'D BY:	CKD

REV.	DATE	DRAWN BY	CHK'D BY
0	05/29/12	DMD	DEB
1	05/31/12	DMD	DEB

CONSTRUCTION
CONSTRUCTION - CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

at&t

NEXLINK

CENTEK engineering
Centered on Solutions℠
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

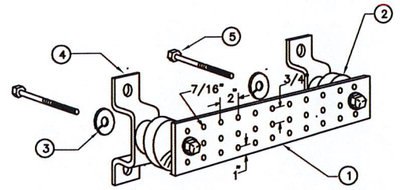
AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY-LTE UPGRADE
CT2091
ANSONIA NW_SPECTRASITE TOWER
401 WAKELEE AVE.
ANSONIA, CT 06401

DATE:	05/31/12
SCALE:	AS NOTED
JOB NO.	11118.C019

ELECTRICAL DETAILS AND NOTES

E-1

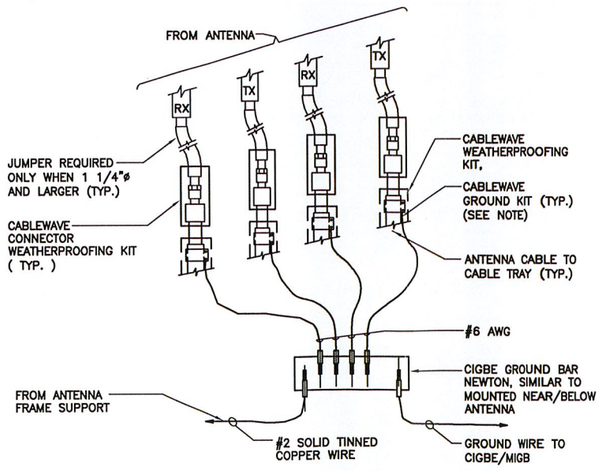
Sheet No. 5 of 6



LEGEND

1. TINNED COPPER GROUND BAR, 1/4"x 4"x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG .
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 2. 3061-4.
3. 3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. 4. CAT NO. A-6056.
5. STAINLESS STEEL SECURITY SCREWS.

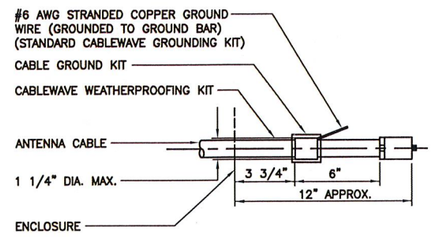
1 / E-2 **GROUND BAR DETAIL**
NOT TO SCALE



NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

2 / E-2 **CONNECTION OF GROUND WIRES TO GROUND BAR**
NOT TO SCALE



NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

3 / E-2 **ANTENNA CABLE GROUNDING DETAIL**
NOT TO SCALE

DESIGNED BY:	CKD
DRAWN BY:	TJB
CHK'D BY:	CKD

REV.	DATE	DRAWN BY	CHK'D BY
1	05/31/12	DMD	DEB
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1 CONSTRUCTION
0 CONSTRUCTION - CLIENT REVIEW

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AT&T MOBILITY

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CT2091

ANSONIA NW_SPECTRASITE TOWER

401 WAKELEE AVE.
ANSONIA, CT 06401

DATE:	05/31/12
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ELECTRICAL DETAILS

E-2

Sheet No. 6 of 6

C Squared Systems, LLC
65 Dartmouth Drive, Unit A3
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Calculated Radio Frequency Emissions

at&t

CT2091

(Ansonia-Wakelee Avenue)

401 Wakelee Avenue, Ansonia, CT 06401

April 4, 2012

Table of Contents

List of Tables

List of Figures

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the lattice tower located at 401 Wakelee Avenue in Ansonia, CT. The coordinates of the tower are 41-21-22.16 N, 73-5-31.01 W.

AT&T is proposing the following modifications:

1) Replace six of nine existing dual-band (850/1900 MHz) panel antennas with six multi-band (700/850/1900/2100 MHz) antennas (two per sector).

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/cm^2). 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.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

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

Where:

EIRP = Effective Isotropic Radiated Power

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

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

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 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 take into account 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 finished modifications.

4. Calculation Results

Table 1 below outlines the power density information for the site. Because the proposed AT&T antennas are directional in nature, 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
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pocket	157	2130	3	631	0.0276	1.0000	2.76%
Clearwire	194	2496	2	153	0.0029	1.0000	0.29%
Clearwire	194	11000	1	211	0.0020	1.0000	0.20%
Sprint	188	1962.5	11	367	0.0411	1.0000	4.11%
Verizon	178	869	9	206	0.0210	0.5793	3.63%
Verizon	178	1970	3	377	0.0128	1.0000	1.28%
Verizon	178	757	1	639	0.0073	0.5047	1.44%
Sprint Nextel iDEN	194	851	12	100	0.0115	0.5673	2.02%
Sprint Nextel WiMAX	194	2657	3	562	0.0161	1.0000	1.61%
T-Mobile GSM	148	1945	8	144	0.0189	1.0000	1.89%
T-Mobile UMTS	148	2100	2	677	0.0222	1.0000	2.22%
AT&T UMTS	169	880	2	565	0.0014	0.5867	0.24%
AT&T UMTS	169	1900	2	875	0.0022	1.0000	0.22%
AT&T LTE	169	734	1	1615	0.0020	0.4893	0.42%
AT&T GSM	169	880	1	647	0.0008	0.5867	0.14%
AT&T GSM	169	1900	4	813	0.0041	1.0000	0.41%
						Total	**22.89%**

Table 1: Carrier Information[1][2]

[1] The existing CSC filing for Cingular should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 3/29/2012.

[2] 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.

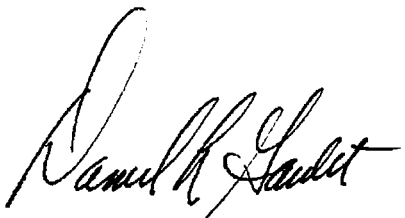
5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative 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 **22.89% of the FCC limit**.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal 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 ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

April 4, 2012
Date

Attachment A: References

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

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

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

(A) Limits for Occupational/Controlled Exposure[3]

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 Exposure[4]

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)

[3] 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

[4] 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

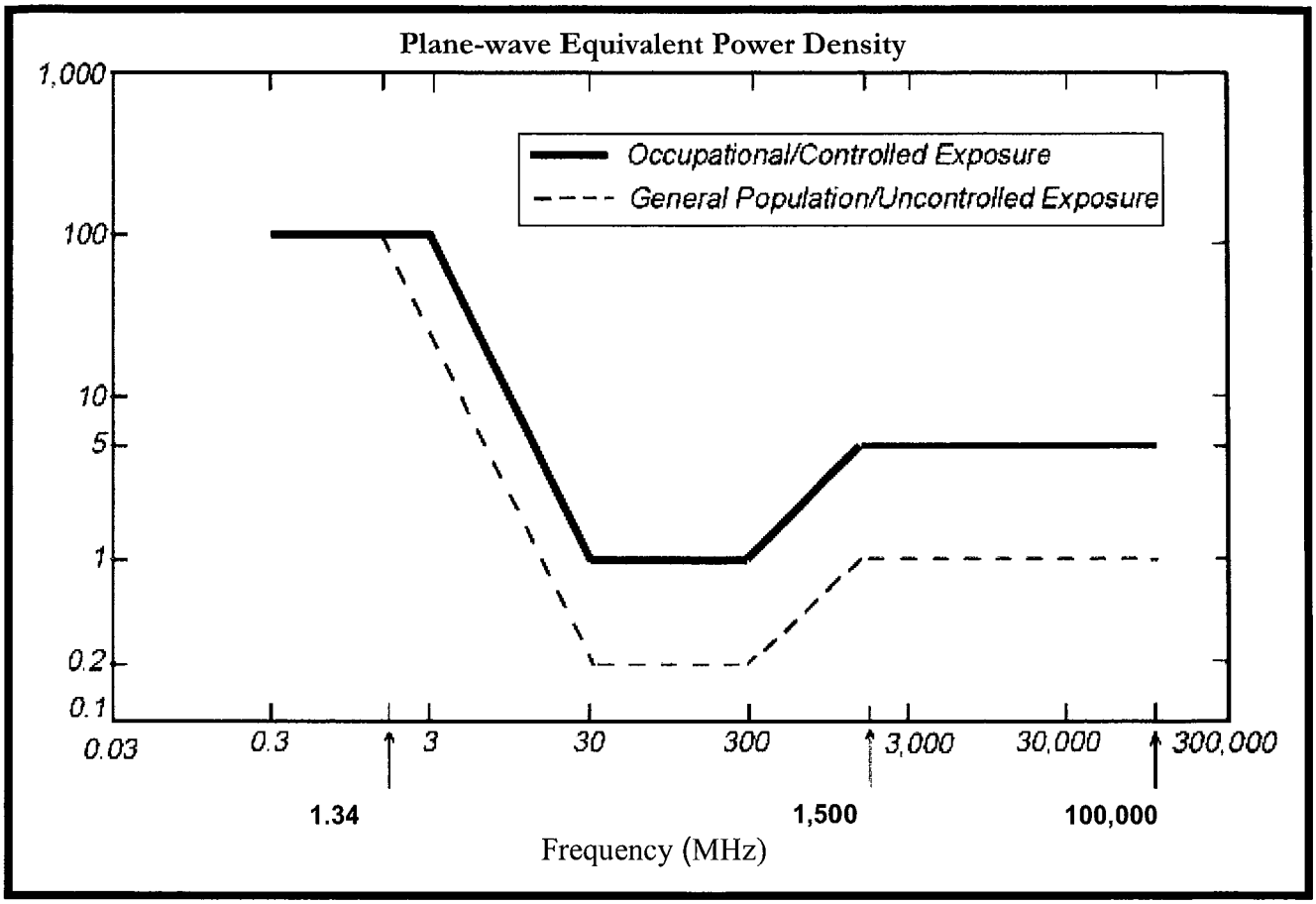
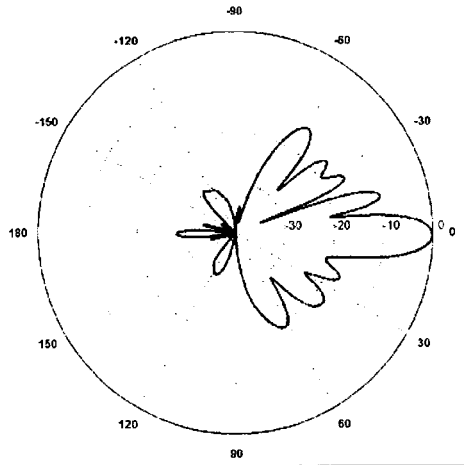


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

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

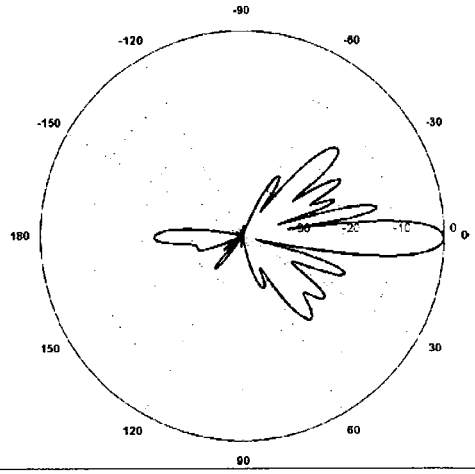
700 MHz

Manufacturer:	Powerwave
Model #:	P65-17-XLH-RR
Frequency Band:	698-806 MHz
Gain:	14.3 dBd
Vertical Beamwidth:	8.4°
Horizontal Beamwidth:	70°
Polarization:	Dual Slant ± 45°
Size L x W x D:	96"x12"x6"



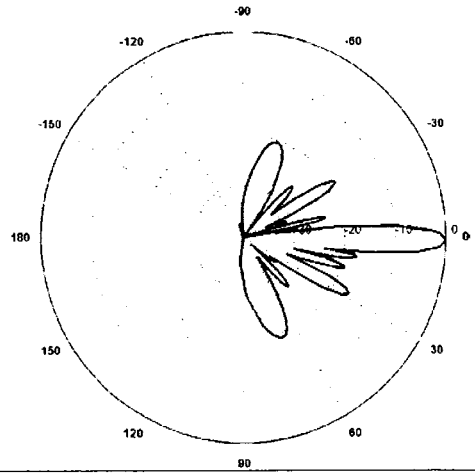
850 MHz GSM

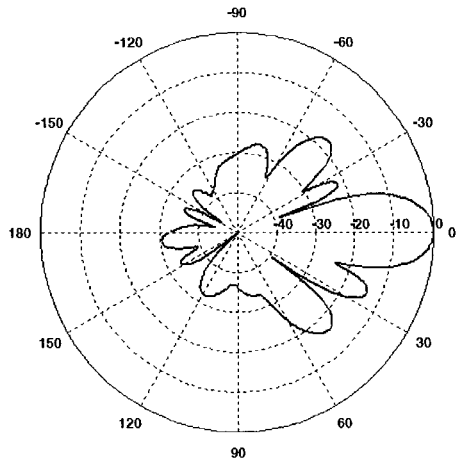
Manufacturer:	Powerwave
Model #:	P65-17-XLH-RR
Frequency Band:	806-894 MHz
Gain:	15.1 dBd
Vertical Beamwidth:	8.4°
Horizontal Beamwidth:	63°
Polarization:	Dual Linear ±45°
Size L x W x D:	96.0" x 12.0" x 6.0"



1900 MHz GSM

Manufacturer:	KMW Communications
Model #:	AM-X-CD-16-65-00T
Frequency Band:	1850-1900 MHz
Gain:	15.3 dBd
Vertical Beamwidth:	6°
Horizontal Beamwidth:	67°
Polarization:	Dual Slant ± 45°
Size L x W x D:	72.0" x 11.8" x 5.9"



850 MHz UMTS Manufacturer: Powerwave Model #: 7770.00 Frequency Band: 824-896 MHz Gain: 11.4 dBd Vertical Beamwidth: 15° Horizontal Beamwidth: 85° Polarization: Dual Linear ±45° Size L x W x D: 55.4" x 11.0" x 5.0"	
1900 MHz UMTS Manufacturer: Powerwave Model #: 7770.00 Frequency Band: 1850-1990 MHz Gain: 13.4 dBd Vertical Beamwidth: 7° Horizontal Beamwidth: 90° Polarization: Dual Linear ±45° Size L x W x D: 55.4" x 11.0" x 5.0"