

Alex Murshteyn, Site Acquisition
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767
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March 18, 2016

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

**RE: Notice of Exempt Modification // Site Number: CT2091 (Site Name: Ansonia NW)
401 Wakelee Avenue, Ansonia, CT 06401 (401 Wakelee Street)
N 41.35615 // W 73.09193**

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains 9 antennas at the 167-foot level of the existing 196-foot lattice tower at 401 Wakelee Avenue, Ansonia, CT. The tower is owned by American Tower Asset Sub, LLC. The property is also owned by City of Ansonia. AT&T now intends to replace 3 of its existing antennas with 3 new GSM/WCS (850/2300 band) antennas for its LTE upgrade. These antennas would be installed at the 167-foot level of the tower. AT&T also intends to install 3 remote radio units, 1 surge arrester, 2 DC power lines and 1 fiber line.

The current proposal involves an antenna swap only (three for three); no antennas will be added.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to David S. Casseti, Mayor for the City of Ansonia, as well as the tower owner, American Tower Asset Sub, LLC and the ground owner, City of Ansonia.

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

Attached to accommodate this filing are construction drawings dated February 19, 2016 by ComEx Consultants, a structural analysis dated March 2, 2016 by A.T. Engineering Service, PLLC and an Emissions Analysis Report dated November 9, 2015 by EBI Consulting.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading as shown in the attached structural analysis by A.T. Engineering, dated March 2, 2016, which updates the loading to the latest configuration in order to update the prior analysis submitted for this work.

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

Sincerely,



Alex Murshteyn, Site Acquisition
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

Attachments

cc: David S. Cassetti, Mayor, City of Ansonia - as elected official
American Tower Asset Sub, LLC - as tower owner
David S. Cassetti, Mayor, City of Ansonia - as property owner (reference only / see above)



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 196 ft Self Supported Tower
ATC Site Name : Ansonia Wakelee, CT
ATC Site Number : 302470
Engineering Number : 64510422
Proposed Carrier : AT&T Mobility
Carrier Site Name : Ansonia NW
Carrier Site Number : CT2091/FA#10035308
Site Location : 401 Wakelee Ave
Ansonia, CT 06401-1226
41.356069,-73.092000
County : New Haven
Date : March 2, 2016
Max Usage : 100%
Result : Pass

Reviewed by:
William Garrett, PE
Chief Engineer

Prepared By:
Joshua L. Johnson, E.I.
Structural Engineer I



Mar 2 2016 4:18 PM

COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 196 ft self supported tower to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Rohn Drawing #A991899, dated July 7, 1999
Foundation Drawing	Rohn Drawing #A992523-1, dated September 22, 1999
Geotechnical Report	Tectonic Engineering Consultants W.O. #1170.C754, dated May 20, 1999

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	105 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Spectral Response:	$S_s = 0.19, S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

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

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



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
194.0	196.0	2	DragonWave A-ANT-18G-2-C	Sector Frames	(6) 1 5/8" Coax (10) 1 1/4" Coax (6) 5/16" Coax (2) 2" Conduit (2) 1/2" Coax	Clearwire
		2	DragonWave Horizon Compact			
	194.0	3	Argus LLPX310R			
		3	NextNet BTS-2500			
		2	EMS RR90-11-00DBL			
		6	Decibel DB844H90E-XY			
	184.0	184.0	3			KMW AM-X-WM-17-65-00T
			3			KMW TTA (HB-X-WM-17-65-00T)
183.0	184.0	1	12" x 12" Junction Box	Leg	(6) 1 5/8" Coax	Sprint Nextel
		189.0	3	Alcatel-Lucent 800MHz RRH	Sector Frames	
	3		Alcatel-Lucent 1900MHz 4x45 RRH			
	6		Andrew DB980H90E-M			
	186.0	2	Powerwave P40-16-XLPP-RRR			
1		RFS APXVSP18-C-A20				
175.0	175.0	9	Andrew SBNHH-1D65B	Sector Frames	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	Verizon
		2	RFS DB-T1-6Z-8AB-0Z			
		3	Alcatel-Lucent PCS B25 RRH2x60/4x30			
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent RRH2X60-AWS			
		3	Antel BXA-80080/4CF			
167.0	167.0	6	Ericsson RRUS 11 (Band 12) (55 lb)	Sector Frames	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6	AT&T Mobility
		3	Powerwave 7770.00			
		3	KMW AM-X-CD-16-65-00T-RET			
		3	Powerwave TT19-08BP111-001			
157.0	157.0	3	Kathrein 742 213	Leg	(6) 1 5/8" Coax	Metro PCS
148.0	148.0	3	Andrew LNX-6515DS-VTM	Sector Frames	(12) 1 5/8" Coax (1) 1 1/4" Hybriflex	T-Mobile
		3	Ericsson RRUS 11 B12			
		3	Ericsson KRY 112 144/1			
		3	Ericsson AIR 21, 1.3M, B4A B2P			
		3	Ericsson AIR 21, 1.3 M, B2A B4P			
125.0	125.0	2	Motorola PTP54600	Leg	(2) 1/4" Coax	City Of Ansonia, CT
101.0	102.0	2	GPS	Standoffs	(2) 1/2" Coax	Sprint Nextel
79.0	89.0	1	10' Dipole	Standoffs	(1) 1/2" Coax	Ansonia Fire Department
76.0	76.0	1	PCTEL GPS-TMG-HR-26N	Standoffs	(1) 1/2" Coax	Sprint Nextel

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
167.0	167.0	3	Powerwave 7770.00	-	(12) 1 5/8" Coax	AT&T Mobility
		6	CCI DTMABP7819VG12A			



Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
167.0	167.0	3	Ericsson RRUS-32	Sector Frames	(2) 0.78" 8 AWG 6 (2) 0.39" Fiber Trunk	AT&T Mobility
		2	Raycap DC6-48-60-18-8F			
		1	CCI OPA-65R-LCUU-H8			
		2	CCI OPA-65R-LCUU-H6			
		3	Powerwave TT19-08BP111-001			

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

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

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	99%	Pass
Diagonals	100%	Pass
Horizontals	15%	Pass
Anchor Bolts	65%	Pass
Leg Bolts	82%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	301.1	406.5	391.1	96%
Axial (Kips)	343.0	463.1	441.3	95%
Shear (Kips)	36.3	49.0	45.9	94%

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

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



Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
194.0	DragonWave A-ANT-18G-2-C	Clearwire	0.452	0.012	0.261
167.0	CCI OPA-65R-LCUU-H6	AT&T Mobility	0.346	0.010	0.250
	CCI OPA-65R-LCUU-H8				
	Ericsson RRUS-32				
	Powerwave TT19-08BP111-001				
	Raycap DC6-48-60-18-8F				

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



Standard Conditions

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

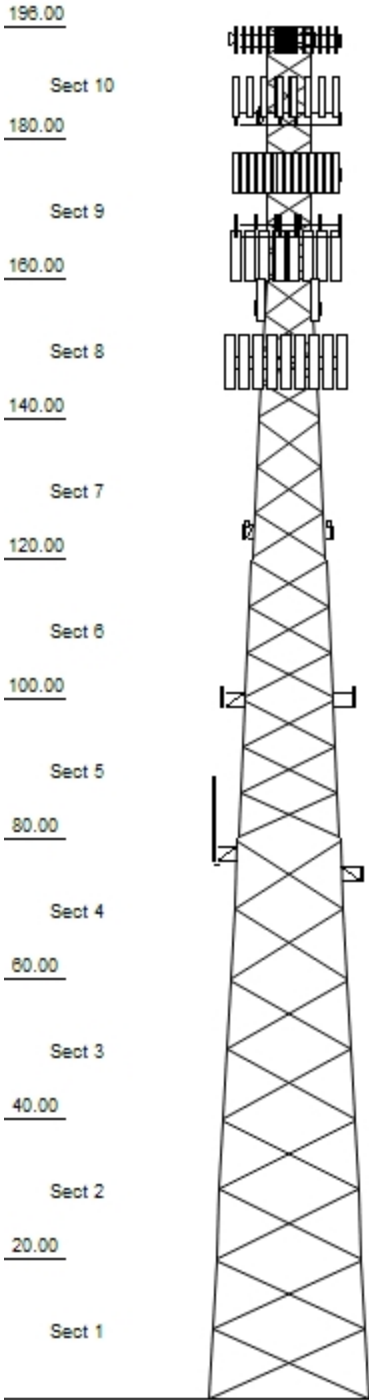
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

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

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

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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



198.00
Sect 10
180.00
Sect 9
160.00
Sect 8
140.00
Sect 7
120.00
Sect 6
100.00
Sect 5
80.00
Sect 4
60.00
Sect 3
40.00
Sect 2
20.00
Sect 1

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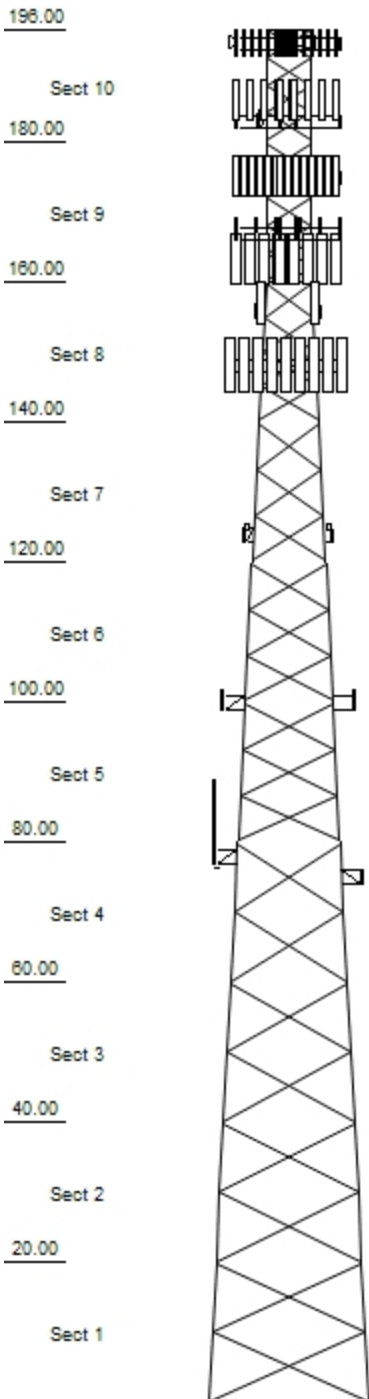
Loads: 105 mph no ice
50 mph w / 3/4" radial ice
Site Class: D Ss: 0.19 S1: 0.06
60 mph Serviceability

Uplift 391.06 k Moment 8,390.45 k Moment Ice 2,239.98 k-ft
Vert 441.31 k Tot Down 60.22 k Tot Down Ice 176.02 k
Horiz 45.86 k Tot Shear 75.92 k Tot Shear Ice 20.49 k

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

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	2	EMS RR90-11-00DBL	
194.00	Panel	6	Decibel DB844H90E-XY	
194.00	Panel	3	KMW AM-X-WM-17-65-00T	
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	Panel	3	KMW TTA(HB-X-WM-17-65-00T)	
194.00	Mounting Frame	3	Round Sector Frames	
184.00	Panel	1	12" x 12" Junction Box	
183.00	Panel	6	Andrew DB980H90E-M	
183.00	Panel	3	Alcatel-Lucent 800 MHz RRH	
183.00	Panel	3	Alcatel-Lucent 1900 MHz 4x45 R	
183.00	Panel	2	Powerwave Aligon P40-16-XLPP-R	
183.00	Panel	1	RFS APXVSP18-C-A20	
183.00	Mounting Frame	3	Round Sector Frames	
175.00	Panel	9	Andrew SBNHH-1D65B	
175.00	Panel	2	RFS DB-T1-6Z-8AB-0Z	
175.00	Panel	3	Alcatel-Lucent PCS B25 RRH2x60	
175.00	Panel	3	Alcatel-Lucent RRH2x60 700	
175.00	Panel	3	Alcatel-Lucent RRH2X60-AWS	
175.00	Mounting Frame	3	Flat Light Sector Frames	
175.00	Panel	3	Antel BXA-80080/4CF	
167.00	Panel	3	Ericsson RRUS-32	
167.00	Panel	3	Powerwave Aligon 7770.00	
167.00	Panel	3	KMW AM-X-CD-16-65-00T-RET	
167.00	Panel	1	CCI OPA-65R-LCUU-H8	
167.00	Panel	2	CCI OPA-65R-LCUU-H6	
167.00	Panel	3	Powerwave TT19-08BP111-001	
167.00	Panel	3	Powerwave TT19-08BP111-001	
167.00	Panel	6	Ericsson RRUS 11 (Band 12) (55	
167.00	Panel	2	Raycap DC6-48-60-18-8F	
167.00	Mounting Frame	3	Round Sector Frames	
157.00	Panel	3	Kathrein 742 213	
148.00	Panel	3	Andrew LNX-6515DS-VTM	
148.00	Panel	3	Ericsson RRUS 11 B12	
148.00	Panel	3	Ericsson KRY 112 144/1	
148.00	Panel	3	Ericsson AIR 21, 1.3M, B4AB2P	
148.00	Panel	3	Ericsson AIR 21, 1.3 M, B2AB4	
148.00	Mounting Frame	3	Round Sector Frame	
125.00	Panel	2	Motorola PTP54600	
101.00	Straight Arm	2	Standoffs	
101.00	Whip	2	GPS	
79.00	Straight Arm	1	Standoffs	
79.00	Whip	1	10' Dipole	
76.00	Straight Arm	1	Standoffs	
76.00	Panel	1	PCTEL GPS-TMG-HR-26N	



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

Linear Appurtenance			
Elev (ft)			
From	To	Qty	Description
8.000	194.00	1	Wave Guide
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	184.00	6	1 5/8" Coax
8.000	183.00	1	Wave Guide
8.000	183.00	3	1 1/4" Hybriflex Cab
8.000	175.00	2	1 5/8" Hybriflex
8.000	175.00	12	1 5/8" Coax
8.000	167.00	1	Wave Guide
8.000	167.00	12	1 5/8" Coax
8.000	167.00	2	0.78" 8 AWG 6
8.000	167.00	2	0.78" 8 AWG 6
8.000	167.00	2	0.39" Fiber Trunk
8.000	157.00	1	Waveguide
8.000	157.00	6	1 5/8" Coax
8.000	148.00	1	Wave Guide
8.000	148.00	12	1 5/8" Coax
8.000	148.00	1	1 1/4" Hybriflex
8.000	125.00	2	1/4" Coax
8.000	101.00	2	1/2" Coax
8.000	79.000	1	1/2" Coax
8.000	76.000	1	1/2" Coax

Uplift 391.06 k Moment 8,390.45 k Moment Ice 2,239.98 k-ft
 Vert 441.31 k Tot Down 60.22 k Tot Down Ice 176.02 k
 Horiz 45.86 k Tot Shear 75.92 k Tot Shear Ice 20.49 k

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

3/2/2016 2:43:38 PM

Customer: AT&T Mobility

Analysis Parameters

Location:	New Haven County, CT		
Code:	ANSI/TIA-222-G	Height (ft):	196
Shape:	Triangle	Base Elevation (ft):	0.00
Tower Manufacturer:	Rohn	Bottom Face Width (ft):	23.00
Tower Type:	Self Support	Top Face Width (ft):	6.65

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	105 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.99				
T_L (sec):	6	p:	1.3	C_s :	0.034
S_s :	0.195	S_1 :	0.064	$C_{s, Max}$:	0.034
F_a :	1.600	F_v :	2.400	$C_{s, Min}$:	0.030
S_{ds} :	0.208	S_{d1} :	0.102		

Load Cases

1.2D + 1.6W Normal	105 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	105 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	105 mph 90 degree with No Ice
0.9D + 1.6W Normal	105 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	105 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	105 mph 90 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 degree with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 degree with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 degree
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 degree
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 degree
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 degree
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 degree
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 degree

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

3/2/2016 2:43:38 PM

Customer: AT&T Mobility

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
194.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	28.65	253	124
194.0	Decibel DB844H90E-	6	14	3.6	4.0	8.0	6.5	0.80	0.74	0.0	0.0	28.65	500	121
194.0	DragonWave A-ANT-	2	27	4.7	2.2	0.0	0.0	0.80	1.00	2.0	586.5	28.73	293	78
194.0	DragonWave	2	11	0.4	0.4	9.3	9.3	0.80	0.50	2.0	26.9	28.73	13	31
194.0	EMS RR90-11-00DBL	2	18	5.6	4.0	12.0	7.0	0.80	0.68	0.0	0.0	28.65	237	52
194.0	KMW AM-X-WM-17-	3	14	3.4	4.0	7.3	2.6	0.80	0.64	0.0	0.0	28.65	201	61
194.0	KMW TTA (HB-X-WM-	3	16	0.6	1.3	7.3	3.7	0.80	0.50	0.0	0.0	28.65	30	69
194.0	NextNet BTS-2500	3	35	1.8	1.6	11.3	5.1	0.80	0.50	0.0	0.0	28.65	85	151
194.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.65	846	1296
184.0	12" x 12" Junction	1	10	1.2	1.0	12.0	8.0	0.80	1.00	0.0	0.0	28.22	37	14
183.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	1.00	0.50	6.0	807.5	28.44	135	259
183.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	1.00	0.50	6.0	741.4	28.44	124	229
183.0	Andrew DB980H90E-	6	9	3.9	5.0	6.3	3.0	0.80	0.67	3.0	1448.6	28.31	483	73
183.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	0.61	3.0	1022.4	28.31	341	184
183.0	RFS APXVSPP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	0.69	3.0	511.3	28.31	170	82
183.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	28.18	931	1296
175.0	Alcatel-Lucent PCS	3	55	2.2	1.8	12.0	9.5	0.80	0.50	0.0	0.0	27.82	100	238
175.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	27.82	98	245
175.0	Alcatel-Lucent	3	44	1.9	1.7	11.2	7.6	0.80	0.50	0.0	0.0	27.82	85	190
175.0	Andrew SBNHH-	9	51	8.2	6.1	11.9	7.1	1.00	0.69	0.0	0.0	27.82	1919	657
175.0	Antel BX-80080/4CF	3	14	4.8	4.0	11.2	5.9	0.80	0.67	0.0	0.0	27.82	292	62
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.82	1021	1728
175.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	27.82	145	127
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.66	-2.0	759.0	27.35	380	210
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	0.67	-2.0	517.7	27.35	259	127
167.0	Ericsson RRUS 11	6	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	27.45	226	475
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	2.0	297.6	27.54	149	333
167.0	KMW AM-X-CD-16-	3	49	8.0	6.0	11.8	5.9	0.80	0.67	-2.0	959.5	27.35	480	210
167.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	-2.0	639.6	27.35	320	151
167.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	-2.0	57.1	27.35	29	69
167.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	-2.0	57.1	27.35	29	69
167.0	Raycap DC6-48-60-	2	32	1.3	2.0	9.7	9.7	0.80	0.67	2.0	102.8	27.54	51	92
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.45	810	1296
157.0	Kathrein 742 213	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	26.97	379	95
148.0	Andrew LNX-	3	51	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	26.52	693	222
148.0	Ericsson AIR 21, 1.3	3	83	6.1	4.7	12.0	8.0	0.80	0.71	0.0	0.0	26.52	372	359
148.0	Ericsson AIR 21,	3	82	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	26.52	369	352
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	26.52	18	48
148.0	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	26.52	121	219
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	26.52	783	1296
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	0.58	0.0	0.0	25.27	70	35
101.0	GPS	2	10	1.0	1.0	9.0	6.0	0.90	1.00	1.0	58.4	23.84	58	29
101.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	23.78	146	216
79.00	10' Dipole	1	30	3.8	10.0	3.0	3.0	0.90	1.00	10.0	1055.4	22.93	106	43
79.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	22.16	75	108
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.90	1.00	0.0	0.0	21.92	2	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.92	75	108
Totals		132	9394	699.7										

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

3/2/2016 2:43:38 PM

Customer: AT&T Mobility

Tower Loading

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
194.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	28.65	253	69
194.0	Decibel DB844H90E-	6	14	3.6	4.0	8.0	6.5	0.80	0.74	0.0	0.0	28.65	500	68
194.0	DragonWave A-ANT-	2	27	4.7	2.2	0.0	0.0	0.80	1.00	2.0	586.5	28.73	293	44
194.0	DragonWave	2	11	0.4	0.4	9.3	9.3	0.80	0.50	2.0	26.9	28.73	13	17
194.0	EMS RR90-11-00DBL	2	18	5.6	4.0	12.0	7.0	0.80	0.68	0.0	0.0	28.65	237	29
194.0	KMW AM-X-WM-17-	3	14	3.4	4.0	7.3	2.6	0.80	0.64	0.0	0.0	28.65	201	35
194.0	KMW TTA (HB-X-WM-	3	16	0.6	1.3	7.3	3.7	0.80	0.50	0.0	0.0	28.65	30	39
194.0	NextNet BTS-2500	3	35	1.8	1.6	11.3	5.1	0.80	0.50	0.0	0.0	28.65	85	85
194.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.65	846	729
184.0	12" x 12" Junction	1	10	1.2	1.0	12.0	8.0	0.80	1.00	0.0	0.0	28.22	37	8
183.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	1.00	0.50	6.0	807.5	28.44	135	146
183.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	1.00	0.50	6.0	741.4	28.44	124	129
183.0	Andrew DB980H90E-	6	9	3.9	5.0	6.3	3.0	0.80	0.67	3.0	1448.6	28.31	483	41
183.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	0.61	3.0	1022.4	28.31	341	104
183.0	RFS APXVSP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	0.69	3.0	511.3	28.31	170	46
183.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	28.18	931	729
175.0	Alcatel-Lucent PCS	3	55	2.2	1.8	12.0	9.5	0.80	0.50	0.0	0.0	27.82	100	134
175.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	27.82	98	138
175.0	Alcatel-Lucent	3	44	1.9	1.7	11.2	7.6	0.80	0.50	0.0	0.0	27.82	85	107
175.0	Andrew SBNHH-	9	51	8.2	6.1	11.9	7.1	1.00	0.69	0.0	0.0	27.82	1919	370
175.0	Antel BX-80080/4CF	3	14	4.8	4.0	11.2	5.9	0.80	0.67	0.0	0.0	27.82	292	35
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.82	1021	972
175.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	27.82	145	71
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.66	-2.0	759.0	27.35	380	118
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	0.67	-2.0	517.7	27.35	259	71
167.0	Ericsson RRUS 11	6	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	27.45	226	267
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	2.0	297.6	27.54	149	187
167.0	KMW AM-X-CD-16-	3	49	8.0	6.0	11.8	5.9	0.80	0.67	-2.0	959.5	27.35	480	118
167.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	-2.0	639.6	27.35	320	85
167.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	-2.0	57.1	27.35	29	39
167.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	-2.0	57.1	27.35	29	39
167.0	Raycap DC6-48-60-	2	32	1.3	2.0	9.7	9.7	0.80	0.67	2.0	102.8	27.54	51	52
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.45	810	729
157.0	Kathrein 742 213	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	26.97	379	53
148.0	Andrew LNX-	3	51	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	26.52	693	125
148.0	Ericsson AIR 21, 1.3	3	83	6.1	4.7	12.0	8.0	0.80	0.71	0.0	0.0	26.52	372	202
148.0	Ericsson AIR 21,	3	82	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	26.52	369	198
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	26.52	18	27
148.0	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	26.52	121	123
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	26.52	783	729
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	0.58	0.0	0.0	25.27	70	20
101.0	GPS	2	10	1.0	1.0	9.0	6.0	0.90	1.00	1.0	58.4	23.84	58	16
101.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	23.78	146	122
79.00	10' Dipole	1	30	3.8	10.0	3.0	3.0	0.90	1.00	10.0	1055.4	22.93	106	24
79.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	22.16	75	61
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.90	1.00	0.0	0.0	21.92	2	0
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.92	75	61
Totals		132	9394	699.7										

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

3/2/2016 2:43:38 PM

Customer: AT&T Mobility

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
194.0	Argus LLPX310R	3	39	5.8	3.5	11.8	4.5	0.80	0.63	0.0	0.0	6.50	49	160
194.0	Decibel DB844H90E-	6	128	4.5	4.0	8.0	6.5	0.80	0.74	0.0	0.0	6.50	89	941
194.0	DragonWave A-ANT-	2	127	6.4	2.2	0.0	0.0	0.80	1.00	2.0	112.8	6.52	56	318
194.0	DragonWave	2	14	0.6	0.4	9.3	9.3	0.80	0.50	2.0	5.2	6.52	3	40
194.0	EMS RR90-11-00DBL	2	162	6.1	4.0	12.0	7.0	0.80	0.68	0.0	0.0	6.50	37	398
194.0	KMW AM-X-WM-17-	3	97	4.3	4.0	7.3	2.6	0.80	0.64	0.0	0.0	6.50	36	359
194.0	KMW TTA (HB-X-WM-	3	22	0.9	1.3	7.3	3.7	0.80	0.50	0.0	0.0	6.50	6	89
194.0	NextNet BTS-2500	3	47	2.5	1.6	11.3	5.1	0.80	0.50	0.0	0.0	6.50	16	196
194.0	Round Sector	3	677	31.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.50	261	2653
184.0	12" x 12" Junction	1	64	1.7	1.0	12.0	8.0	0.80	1.00	0.0	0.0	6.40	7	79
183.0	Alcatel-Lucent 1900	3	158	3.0	2.1	11.1	10.7	1.00	0.50	6.0	148.5	6.45	25	611
183.0	Alcatel-Lucent 800	3	143	2.8	1.6	13.0	10.8	1.00	0.50	6.0	136.2	6.45	23	552
183.0	Andrew DB980H90E-	6	105	5.0	5.0	6.3	3.0	0.80	0.67	3.0	261.8	6.42	87	771
183.0	Powerwave Allgon	2	279	10.3	4.5	20.0	6.5	0.80	0.61	3.0	165.3	6.42	55	701
183.0	RFS APXVSPP18-C-	1	262	9.3	6.0	11.8	7.0	0.80	0.69	3.0	84.4	6.42	28	328
183.0	Round Sector	3	621	24.7	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.39	226	2453
175.0	Alcatel-Lucent PCS	3	141	2.8	1.8	12.0	9.5	0.80	0.50	0.0	0.0	6.31	18	548
175.0	Alcatel-Lucent	3	139	2.8	1.8	12.0	9.0	0.80	0.50	0.0	0.0	6.31	18	543
175.0	Alcatel-Lucent	3	114	2.5	1.7	11.2	7.6	0.80	0.50	0.0	0.0	6.31	16	443
175.0	Andrew SBNHH-	9	257	9.5	6.1	11.9	7.1	1.00	0.69	0.0	0.0	6.31	316	2887
175.0	Antel BXA-80080/4CF	3	144	5.8	4.0	11.2	5.9	0.80	0.67	0.0	0.0	6.31	50	530
175.0	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.31	268	2827
175.0	RFS DB-T1-6Z-8AB-	2	190	5.7	2.0	24.0	10.0	0.80	0.50	0.0	0.0	6.31	24	477
167.0	CCI OPA-65R-LCUU-	2	308	11.0	6.0	14.8	7.4	0.80	0.66	-2.0	123.0	6.20	61	775
167.0	CCI OPA-65R-LCUU-	1	383	14.6	7.7	14.8	7.4	0.80	0.67	-2.0	82.6	6.20	41	481
167.0	Ericsson RRUS 11	6	137	3.2	1.5	17.0	7.2	0.80	0.50	0.0	0.0	6.22	40	1063
167.0	Ericsson RRUS-32	3	176	4.6	2.5	13.3	9.5	0.80	0.50	2.0	58.7	6.25	29	688
167.0	KMW AM-X-CD-16-	3	240	9.3	6.0	11.8	5.9	0.80	0.67	-2.0	158.2	6.20	79	900
167.0	Powerwave Allgon	3	172	6.6	4.6	11.0	5.0	0.80	0.65	-2.0	108.2	6.20	54	645
167.0	Powerwave TT19-	3	44	0.9	0.8	6.7	5.4	0.80	0.50	-2.0	11.4	6.20	6	171
167.0	Powerwave TT19-	3	44	0.9	0.8	6.7	5.4	0.80	0.50	-2.0	11.4	6.20	6	171
167.0	Raycap DC6-48-60-	2	114	2.5	2.0	9.7	9.7	0.80	0.67	2.0	28.8	6.25	14	288
167.0	Round Sector	3	618	24.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.22	196	2441
157.0	Kathrein 742 213	3	135	6.4	6.4	6.1	2.7	1.00	0.67	0.0	0.0	6.12	67	502
148.0	Andrew LNX-	3	315	13.1	8.0	11.9	7.1	0.80	0.70	0.0	0.0	6.01	112	1170
148.0	Ericsson AIR 21, 1.3	3	252	7.1	4.7	12.0	8.0	0.80	0.71	0.0	0.0	6.01	62	967
148.0	Ericsson AIR 21,	3	250	7.2	4.7	12.1	7.9	0.80	0.70	0.0	0.0	6.01	62	960
148.0	Ericsson KRY 112	3	27	0.6	0.6	6.1	2.7	0.80	0.50	0.0	0.0	6.01	4	107
148.0	Ericsson RRUS 11	3	137	3.5	1.6	17.0	7.2	0.80	0.50	0.0	0.0	6.01	21	530
148.0	Round Sector Frame	3	669	31.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.01	239	2623
125.0	Motorola PTP54600	2	16	2.4	1.2	14.5	3.8	1.00	0.58	0.0	0.0	5.73	13	45
101.0	GPS	2	15	3.3	1.0	9.0	6.0	0.90	1.00	1.0	27.5	5.41	28	42
101.0	Standoffs	2	100	2.8	0.0	0.0	0.0	1.00	0.90	0.0	0.0	5.39	23	277
79.00	10' Dipole	1	40	5.0	10.0	3.0	3.0	0.90	1.00	10.0	197.9	5.20	20	55
79.00	Standoffs	1	99	2.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.03	12	137
76.00	PCTEL GPS-TMG-HR-	1	10	0.3	0.4	3.2	3.2	0.90	1.00	0.0	0.0	4.97	1	12
76.00	Standoffs	1	99	2.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.97	12	137
Totals		132	26529	1015.0										

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Tower Loading

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
194.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	9.36	52	86
194.0	Decibel DB844H90E-	6	14	3.6	4.0	8.0	6.5	0.80	0.74	0.0	0.0	9.36	102	84
194.0	DragonWave A-ANT-	2	27	4.7	2.2	0.0	0.0	0.80	1.00	2.0	119.7	9.38	60	54
194.0	DragonWave	2	11	0.4	0.4	9.3	9.3	0.80	0.50	2.0	5.5	9.38	3	21
194.0	EMS RR90-11-00DBL	2	18	5.6	4.0	12.0	7.0	0.80	0.68	0.0	0.0	9.36	48	36
194.0	KMW AM-X-WM-17-	3	14	3.4	4.0	7.3	2.6	0.80	0.64	0.0	0.0	9.36	41	43
194.0	KMW TTA (HB-X-WM-	3	16	0.6	1.3	7.3	3.7	0.80	0.50	0.0	0.0	9.36	6	48
194.0	NextNet BTS-2500	3	35	1.8	1.6	11.3	5.1	0.80	0.50	0.0	0.0	9.36	17	105
194.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	9.36	173	900
184.0	12" x 12" Junction	1	10	1.2	1.0	12.0	8.0	0.80	1.00	0.0	0.0	9.21	8	10
183.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	1.00	0.50	6.0	164.8	9.29	27	180
183.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	1.00	0.50	6.0	151.3	9.29	25	159
183.0	Andrew DB980H90E-	6	9	3.9	5.0	6.3	3.0	0.80	0.67	3.0	295.6	9.24	99	51
183.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	0.61	3.0	208.7	9.24	70	128
183.0	RFS APXVSP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	0.69	3.0	104.3	9.24	35	57
183.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.20	190	900
175.0	Alcatel-Lucent PCS	3	55	2.2	1.8	12.0	9.5	0.80	0.50	0.0	0.0	9.08	20	165
175.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	9.08	20	170
175.0	Alcatel-Lucent	3	44	1.9	1.7	11.2	7.6	0.80	0.50	0.0	0.0	9.08	17	132
175.0	Andrew SBNHH-	9	51	8.2	6.1	11.9	7.1	1.00	0.69	0.0	0.0	9.08	392	456
175.0	Antel BXA-80080/4CF	3	14	4.8	4.0	11.2	5.9	0.80	0.67	0.0	0.0	9.08	60	43
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	9.08	208	1200
175.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	9.08	30	88
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.66	-2.0	154.9	8.93	77	146
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	0.67	-2.0	105.6	8.93	53	88
167.0	Ericsson RRUS 11	6	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	8.96	46	330
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	2.0	60.7	8.99	30	231
167.0	KMW AM-X-CD-16-	3	49	8.0	6.0	11.8	5.9	0.80	0.67	-2.0	195.8	8.93	98	146
167.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	-2.0	130.5	8.93	65	105
167.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	-2.0	11.7	8.93	6	48
167.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	-2.0	11.7	8.93	6	48
167.0	Raycap DC6-48-60-	2	32	1.3	2.0	9.7	9.7	0.80	0.67	2.0	21.0	8.99	10	64
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.96	165	900
157.0	Kathrein 742 213	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	8.81	77	66
148.0	Andrew LNX-	3	51	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	8.66	141	154
148.0	Ericsson AIR 21, 1.3	3	83	6.1	4.7	12.0	8.0	0.80	0.71	0.0	0.0	8.66	76	249
148.0	Ericsson AIR 21,	3	82	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	8.66	75	245
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	8.66	4	33
148.0	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	8.66	25	152
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.66	160	900
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	0.58	0.0	0.0	8.25	14	24
101.0	GPS	2	10	1.0	1.0	9.0	6.0	0.90	1.00	1.0	11.9	7.79	12	20
101.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	7.76	30	150
79.00	10' Dipole	1	30	3.8	10.0	3.0	3.0	0.90	1.00	10.0	215.4	7.49	22	30
79.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.24	15	75
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.90	1.00	0.0	0.0	7.16	0	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.16	15	75
Totals		132	9394	699.7										

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
8.00	194.0	1 1/4" Coax	10	1.55	0.63	90	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	1.00	1.00	0.00
8.00	194.0	2" Conduit	2	2.38	3.65	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.00	194.0	5/16" Coax	6	0.32	0.04	0	2	Individual	0.00	N	0.00	1.00	0.01
8.00	194.0	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	50	3	Block	0.00	N	0.00	1.00	0.00
8.00	183.0	1 1/4" Hybriflex	3	1.54	1.00	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	183.0	Wave Guide	1	1.00	5.00	0	2	Individual	0.00	N	0.00	1.00	0.00
8.00	175.0	1 5/8" Coax	12	1.98	0.82	50	Lin App	Block	0.00	N	0.00	1.00	0.00
8.00	175.0	1 5/8" Hybriflex	2	1.98	1.30	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	0.39" Fiber Trunk	2	0.39	0.06	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	0.00	1.00	0.01
8.00	167.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	0.00	1.00	0.01
8.00	167.0	1 5/8" Coax	12	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.00
8.00	167.0	Wave Guide	1	1.00	5.00	0	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	157.0	Waveguide	1	1.50	6.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.00	148.0	1 1/4" Hybriflex	1	1.54	1.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
8.00	148.0	1 5/8" Coax	12	1.98	0.82	67	3	Block	0.00	N	0.00	1.00	0.00
8.00	148.0	Wave Guide	1	1.50	5.00	0	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	101.0	1/2" Coax	2	0.63	0.15	0	3	Individual	0.00	N	0.00	1.00	0.00
8.00	79.00	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

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Force/Stress Summary

Section: 1		15N25		Bot Elev (ft): 0.00				Height (ft): 20.000						
		Pu	Len	Bracing %			Fy	Phic	Pn	Num	Shear	Bear	Use	
Max Compression Member		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	PX - 8" DIA PIPE	-431.26	9.77	100	100	100	50.0	510.32	0	0	0.00	0.00	84	Member X
HORIZ		0.00	0.000	0	0	0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.25	-14.41	23.62	48	48	48	43.5	14.96	1	1	17.89	23.40	96	Member Z

Max Tension Member		Pu	Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Use		Controls
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	(kip)	%		
LEG	PX - 8" DIA PIPE	393.17	50	65	576.00	0	0	0.00	0.00	68		Member	
HORIZ		0.00	0	0	0.00	0	0	0.00	0.00	0			
DIAG	SAE - 4X4X0.25	14.11	50	65	62.93	1	1	17.89	14.14	99		Bolt Bear	

Max Splice Forces		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Top Tension		356.41	0.00	0	0		
Top Compression		401.65	0.00	0			
Bot Tension		393.17	605.70	65	10	1" A354-BC	
Bot Compression		442.76	0.00	0			

Section: 2		14N46		Bot Elev (ft): 20.00				Height (ft): 20.000						
		Pu	Len	Bracing %			Fy	Phic	Pn	Num	Shear	Bear	Use	
Max Compression Member		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	PSP - ROHN 8 EHS	-388.60	9.77	100	100	100	50.0	388.80	0	0	0.00	0.00	99	Member X
HORIZ		0.00	0.000	0	0	0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.25	-13.85	22.69	48	48	48	43.5	16.22	1	1	17.89	23.40	85	Member Z

Max Tension Member		Pu	Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Use		Controls
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	(kip)	%		
LEG	PSP - ROHN 8 EHS	356.73	50	65	437.40	0	0	0.00	0.00	81		Member	
HORIZ		0.00	0	0	0.00	0	0	0.00	0.00	0			
DIAG	SAE - 4X4X0.25	13.60	50	65	62.93	1	1	17.89	14.14	96		Bolt Bear	

Max Splice Forces		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Top Tension		316.69	0.00	0	0		
Top Compression		356.27	0.00	0			
Bot Tension		356.41	436.16	82	8	1 A325	
Bot Compression		401.65	0.00	0			

Site Number: 302470

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Force/Stress Summary

Section: 3		13N88		Bot Elev (ft): 40.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PSP - ROHN 8 EHS	-343.80	1.2D + 1.6W	9.77	100	100	100	40.1	50.0	388.78	0	0	0.00	0.00	88 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	-12.51	1.2D + 1.6W 90	20.87	48	48	48	174.8	50.0	12.50	1	1	17.89	23.40	100 Member Z
Max Tension Member															
LEG	PSP - ROHN 8 EHS	317.13	0.9D + 1.6W 60	50	65	437.40	0	0	0.00	0.00	0	0	0.00	72	Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0	
DIAG	SAE - 3.5X3.5X0.25	12.34	1.2D + 1.6W 90	50	65	53.79	1	1	17.89	14.14	1	1	17.89	14.14	87 Bolt Bear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	277.43	0.9D + 1.6W 60		0.00	0	0								
	Top Compression	311.51	1.2D + 1.6W		0.00	0									
	Bot Tension	316.69	0.9D + 1.6W 60		436.16	73	8	1 A325							
	Bot Compression	356.27	1.2D + 1.6W		0.00	0									

Section: 4		12N50		Bot Elev (ft): 60.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PX - 6" DIA PIPE	-298.41	1.2D + 1.6W	9.77	100	100	100	53.4	50.0	306.88	0	0	0.00	0.00	97 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	-12.18	1.2D + 1.6W 90	19.04	48	48	48	159.4	50.0	15.02	1	1	17.89	23.40	81 Member Z
Max Tension Member															
LEG	PX - 6" DIA PIPE	277.75	0.9D + 1.6W 60	50	65	378.00	0	0	0.00	0.00	0	0	0.00	73	Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0	
DIAG	SAE - 3.5X3.5X0.25	12.07	1.2D + 1.6W 90	50	65	53.79	1	1	17.89	14.14	1	1	17.89	14.14	85 Bolt Bear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	235.07	0.9D + 1.6W 60		0.00	0	0								
	Top Compression	263.75	1.2D + 1.6W		0.00	0									
	Bot Tension	277.43	0.9D + 1.6W 60		436.16	64	8	1 A325							
	Bot Compression	311.51	1.2D + 1.6W		0.00	0									

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Force/Stress Summary

Section: 5		11N223		Bot Elev (ft): 80.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 6 EHS	-253.83	1.2D + 1.6W	6.51	100	100	100	35.1	50.0	275.92	0	0	0.00	0.00	91 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	-10.92	1.2D + 1.6W 90	15.90	48	48	48	154.7	50.0	13.59	1	1	17.89	23.40	80 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 6 EHS	233.11	1.2D + 1.6W 60	50	65	301.95	0	0	0.00	0.00	77	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3X3X0.25	10.72	1.2D + 1.6W 90	50	65	44.65	1	1	17.89	14.14	75	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		190.29	0.9D + 1.6W 60	0.00	0	0	
Top Compression		213.76	1.2D + 1.6W	0.00	0		
Bot Tension		235.07	0.9D + 1.6W 60	327.12	72	6	1 A325
Bot Compression		263.75	1.2D + 1.6W	0.00	0		

Section: 6		10N152		Bot Elev (ft): 100.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	-204.68	1.2D + 1.6W	6.51	100	100	100	42.5	50.0	240.98	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 - 2.5X2.5X0.25	-9.13	1.2D + 1.6W 90	14.13	48	48	48	165.8	36.0	9.77	1	1	12.43	17.40	93 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	190.59	0.9D + 1.6W 60	50	65	274.95	0	0	0.00	0.00	69	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.25	9.17	1.2D + 1.6W 90	36	58	32.71	1	1	12.43	10.44	87	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		147.09	0.9D + 1.6W 60	0.00	0	0	
Top Compression		166.04	1.2D + 1.6W	0.00	0		
Bot Tension		190.29	0.9D + 1.6W 60	327.12	58	6	1 A325
Bot Compression		213.76	1.2D + 1.6W	0.00	0		

Site Number: 302470

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Force/Stress Summary

Section: 7		9N216		Bot Elev (ft): 120.0				Height (ft): 20.000								
		Pu		Len	Bracing %			Fy	Phic	Pn	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	
															Controls	
LEG	PX - 5" DIA PIPE	-156.39	1.2D + 1.6W	6.51	100	100	100	42.5	50.0	240.99	0	0	0.00	0.00	64	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	-8.90	1.2D + 1.6W 90	11.25	48	48	48	132.0	36.0	15.41	1	1	12.43	17.40	71	Bolt Shear
Max Tension Member		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Use				
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		(kip)	(kip)	%	Controls			
LEG	PX - 5" DIA PIPE	145.76	1.2D + 1.6W 60	50	65	274.95	0	0		0.00	0.00	53	Member			
HORIZ		0.00		0	0	0.00	0	0		0.00	0.00	0				
DIAG	SAE - 2.5X2.5X0.25	8.71	1.2D + 1.6W 90	36	58	32.71	1	1		12.43	10.44	83	Bolt Bear			
Max Splice Forces		Pu		phiRnt	Use	Num										
		(kip)	Load Case	(kip)	%	Bolts	Bolt Type									
Top Tension		100.02	0.9D + 1.6W 60	0.00	0	0										
Top Compression		114.77	1.2D + 1.6W	0.00	0											
Bot Tension		147.09	0.9D + 1.6W 60	218.08	67	4	1 A325									
Bot Compression		166.04	1.2D + 1.6W	0.00	0											

Section: 8		A780252		Bot Elev (ft): 140.0				Height (ft): 20.000								
		Pu		Len	Bracing %			Fy	Phic	Pn	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	
															Controls	
LEG	PX - 4" DIA PIPE	-107.55	1.2D + 1.6W	4.88	100	100	100	39.6	50.0	176.95	0	0	0.00	0.00	60	Member X
HORIZ	SAE - 2X2X0.125	-0.42	1.2D + 1.6W 60	6.760	100	100	100	203.8	36.0	2.61	1	1	12.43	8.70	15	Member Z
DIAG	SAE - 2X2X0.25	-7.07	1.2D + 1.6W 90	9.848	48	48	48	145.1	36.0	10.09	1	1	12.43	17.40	70	Member Z
Max Tension Member		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Use				
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes		(kip)	(kip)	%	Controls			
LEG	PX - 4" DIA PIPE	100.24	0.9D + 1.6W 60	50	65	198.45	0	0		0.00	0.00	50	Member			
HORIZ	SAE - 2X2X0.125	0.27	1.2D + 1.6W 90	36	58	12.60	1	1		12.43	5.22	5	Bolt Bear			
DIAG	SAE - 2X2X0.25	7.06	1.2D + 1.6W 90	36	58	24.55	1	1		12.43	10.44	67	Bolt Bear			
Max Splice Forces		Pu		phiRnt	Use	Num										
		(kip)	Load Case	(kip)	%	Bolts	Bolt Type									
Top Tension		53.76	0.9D + 1.6W 60	0.00	0	0										
Top Compression		63.64	1.2D + 1.6W	0.00	0											
Bot Tension		100.02	0.9D + 1.6W 60	218.08	46	4	1 A325									
Bot Compression		114.77	1.2D + 1.6W	0.00	0											

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

Force/Stress Summary

Section: 9		A780178		Bot Elev (ft): 160.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	-62.91	1.2D + 1.6W	0.25	100	100	100	2.6	50.0	135.83	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	-7.08	1.2D + 1.6W 90	7.798	48	48	48	115.5	36.0	11.48	2	1	24.86	26.10	61 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	53.45	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	6.98	1.2D + 1.6W 90	36	58	18.74	2	1	24.86	20.88	37	Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		8.32	0.9D + 1.6W 60	0.00	0	0	
Top Compression		13.01	1.2D + 1.6W	0.00	0		
Bot Tension		53.76	0.9D + 1.6W 60	166.24	32	4	7/8 A325
Bot Compression		63.64	1.2D + 1.6W	0.00	0		

Section: 10		A780178		Bot Elev (ft): 180.0				Height (ft): 16.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-12.89	1.2D + 1.6W	0.25	100	100	100	3.2	50.0	76.62	0	0	0.00	0.00	16 Member X
HORIZ	SAE - 2X2X0.125	-0.36	1.2D + 1.6W 90	6.647	100	100	100	200.4	36.0	2.70	1	1	12.43	8.70	13 Member Z
DIAG	SAE - 1.75X1.75X0.18	-2.65	1.2D + 1.6W	7.758	48	48	48	130.3	36.0	8.23	1	1	12.43	13.05	32 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	8.05	1.2D + 1.6W 60	50	65	76.68	0	0	0.00	0.00	10	Member
HORIZ	SAE - 2X2X0.125	0.37	1.2D + 1.6W 60	36	58	12.60	1	1	12.43	5.22	7	Bolt Bear
DIAG	SAE - 1.75X1.75X0.18	2.61	1.2D + 1.6W	36	58	15.67	1	1	12.43	7.83	33	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		0.33	1.2D + 1.0Di +	0.00	0		
Bot Tension		8.32	0.9D + 1.6W 60	120.40	7	4	3/4 A325
Bot Compression		13.01	1.2D + 1.6W	0.00	0		

Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
(0.9 - 0.2Sds) * DL + E 60 deg M1	1b	-0.38	-1.23	-0.22	
	1a	-1.43	21.67	0.73	
	1	-0.08	21.67	-1.60	
(0.9 - 0.2Sds) * DL + E 60 deg M2	1b	-0.13	1.55	-0.08	
	1a	-1.29	20.28	0.68	
	1	-0.06	20.28	-1.45	
(0.9 - 0.2Sds) * DL + E 90 deg M1	1b	-0.25	0.81	-0.09	
	1a	-1.84	27.26	1.01	
	1	-0.10	14.04	-0.92	
(0.9 - 0.2Sds) * DL + E 90 deg M2	1b	-0.02	3.22	0.02	
	1a	-1.61	24.85	0.89	
	1	-0.06	14.04	-0.92	
(0.9 - 0.2Sds) * DL + E Normal M1	1b	0.25	6.40	0.05	
	1a	-0.25	6.40	0.05	
	1	0.00	29.30	-2.28	
(0.9 - 0.2Sds) * DL + E Normal M2	1b	0.36	7.79	0.14	
	1a	-0.36	7.79	0.14	
	1	0.00	26.52	-1.99	
(1.2 + 0.2Sds) * DL + E 60 deg M1	1b	-0.03	5.01	-0.02	
	1a	-1.78	27.95	0.93	
	1	-0.08	27.95	-2.01	
(1.2 + 0.2Sds) * DL + E 60 deg M2	1b	0.22	7.79	0.13	
	1a	-1.64	26.56	0.88	
	1	-0.06	26.56	-1.86	
(1.2 + 0.2Sds) * DL + E 90 deg M1	1b	0.11	7.06	0.12	
	1a	-2.19	33.55	1.21	
	1	-0.10	20.30	-1.33	
(1.2 + 0.2Sds) * DL + E 90 deg M2	1b	0.33	9.47	0.23	
	1a	-1.97	31.14	1.10	
	1	-0.06	20.30	-1.33	
(1.2 + 0.2Sds) * DL + E Normal M1	1b	0.60	12.66	0.25	
	1a	-0.60	12.66	0.25	
	1	0.00	35.60	-2.69	
(1.2 + 0.2Sds) * DL + E Normal M2	1b	0.71	14.05	0.35	
	1a	-0.71	14.05	0.35	
	1	0.00	32.81	-2.40	
0.9D + 1.6W 60 deg	1b	-36.70	-391.06	-21.18	
	1a	-21.69	217.97	7.16	
	1	-4.65	218.25	-22.37	
0.9D + 1.6W 90 deg	1b	-33.42	-339.65	-16.00	
	1a	-34.61	369.76	16.88	
	1	-5.54	15.06	-0.88	
0.9D + 1.6W Normal	1b	-16.17	-195.27	-15.19	
	1a	16.17	-195.27	-15.19	

Site Number: 302470

Code:

ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 64510422

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Customer: AT&T Mobility

	1	0.00	435.70	-45.53
1.0D + 1.0W Service 60 deg	1b	-6.70	-66.73	-3.87
	1a	-5.20	58.43	1.91
	1	-0.95	58.49	-5.46
1.0D + 1.0W Service 90 deg	1b	-6.03	-56.19	-2.84
	1a	-7.86	89.65	3.90
	1	-1.11	16.73	-1.07
1.0D + 1.0W Service Normal	1b	-2.54	-26.37	-2.63
	1a	2.54	-26.37	-2.63
	1	0.00	102.93	-10.20
1.2D + 1.0Di + 1.0Wi 60 deg	1b	-10.09	-52.40	-5.82
	1a	-6.06	114.18	2.00
	1	-1.30	114.23	-6.25
1.2D + 1.0Di + 1.0Wi 90 deg	1b	-9.12	-37.80	-4.38
	1a	-9.60	155.15	4.67
	1	-1.52	58.67	-0.29
1.2D + 1.0Di + 1.0Wi Normal	1b	-4.32	2.44	-4.05
	1a	4.32	2.44	-4.05
	1	0.00	171.13	-12.39
1.2D + 1.6W 60 deg	1b	-36.43	-386.61	-21.03
	1a	-21.97	223.28	7.33
	1	-4.64	223.56	-22.70
1.2D + 1.6W 90 deg	1b	-33.15	-335.13	-15.85
	1a	-34.90	375.27	17.05
	1	-5.53	20.08	-1.20
1.2D + 1.6W Normal	1b	-15.90	-190.54	-15.03
	1a	15.90	-190.54	-15.03
	1	0.00	441.31	-45.86

Max Uplift: 391.06 (kip)
 Max Down: 441.31 (kip)
 Max Shear: 45.86 (kip)

Moment: 8,390.45 (kip-ft) 1.2D + 1.6W Normal
 Total Down: 60.22 (kip)
 Total Shear: 75.92 (kip)

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL
TO NON-IONIZING EMISSIONS

AT&T Existing Facility

Site ID: CT2091

Ansonia NW Spectrasite Tower
401 Wakalee Avenue
Ansonia, CT 06401

November 9, 2015

EBI Project Number: 6215005551

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	5.30 %

November 9, 2015

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

Emissions Analysis for Site: **CT2091 – Ansonia NW Spectrasite Tower**

EBI Consulting was directed to analyze the proposed AT&T facility located at **401 Wakalee Avenue, Ansonia, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately $467 \mu\text{W}/\text{cm}^2$ and $567 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at **401 Wakalee Avenue, Ansonia, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 GSM channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 4 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 4 UMTS channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 2 LTE channels (WCS Band – 2300 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 5) 2 LTE channels (PCS Band – 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 6) 2 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 60 Watts

- 7) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antennas used in this modeling are the **Powerwave 7770.00** for 1900 MHz (PCS) and 850 MHz channels, the **CCI OPA-65R-LCUU-H6 & CCI OPA-65R-LCUU-H8** for and 2300 MHz (WCS) and 850 MHz and the **KMW AM-X-CD-16-65-00T-RET & Powerwave P65-17-XLH-RR** for 1900 MHz (PCS) and 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The maximum gain values for these antennas are listed in the following Site Inventory and Power Data table. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 10) The antenna mounting height centerline of the proposed antennas is **167 feet** above ground level (AGL).
- 11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

AT&T Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Powerwave 7770.00	Make / Model:	Powerwave 7770.00	Make / Model:	Powerwave 7770.00
Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	8	Channel Count	8	# PCS Channels:	8
Total TX Power:	240	Total TX Power:	240	# AWS Channels:	240
ERP (W):	4,281.78	ERP (W):	4,281.78	ERP (W):	4,281.78
Antenna A1 MPE%	0.77	Antenna B1 MPE%	0.77	Antenna C1 MPE%	0.77
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	CCI OPA-65R-LCUU-H6	Make / Model:	CCI OPA-65R-LCUU-H8	Make / Model:	CCI OPA-65R-LCUU-H8
Gain:	12.5 / 15.5 dBd	Gain:	13.45 / 15 dBd	Gain:	12.5 / 15.5 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	850 MHz / 2300 MHz (WCS)	Frequency Bands	850 MHz / 2300 MHz (WCS)	Frequency Bands	850 MHz / 2300 MHz (WCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	180	Total TX Power:	180	Total TX Power:	180
ERP (W):	5,324.78	ERP (W):	5,107.39	ERP (W):	5,324.78
Antenna A2 MPE%	0.85	Antenna B2 MPE%	0.85	Antenna C2 MPE%	0.85
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	KMW AM-X-CD-16-65-00T-RET	Make / Model:	Powerwave P65-17-XLH-RR	Make / Model:	KMW AM-X-CD-16-65-00T-RET
Gain:	13.35 / 15.25 dBd	Gain:	14.3 / 15.1 dBd	Gain:	13.35 / 15.25 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	240	Total TX Power:	240	Total TX Power:	240
ERP (W):	6,614.85	ERP (W):	7,112.97	ERP (W):	6,614.85
Antenna A3 MPE%	1.33	Antenna B3 MPE%	1.50	Antenna C3 MPE%	1.33

Site Composite MPE%	
Carrier	MPE%
AT&T – Max per sector	3.11
MetroPCS	0.28 %
Clearwire	0.05 %
Sprint	0.51 %
Verizon Wireless	0.97 %
Nextel	0.36 %
T-Mobile	0.02 %
Site Total MPE %:	5.30 %

AT&T Sector 1 Total:	2.95 %
AT&T Sector 2 Total:	3.11 %
AT&T Sector 3 Total:	2.95 %
Site Total:	5.30 %

AT&T _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
AT&T 850 MHz UMTS	4	414.12	167	2.30	850	567	0.41 %
AT&T 1900 MHz (PCS) UMTS	4	656.33	167	3.64	1900	1000	0.36 %
AT&T 850 MHz GSM	2	656.33	167	1.82	850	567	0.32 %
AT&T 2300 MHz (WCS) LTE	2	1897.37	167	5.26	2300	1000	0.53 %
AT&T 700 MHz LTE	2	1614.92	167	4.48	700	467	0.96 %
AT&T 1900 MHz (PCS) LTE	2	1941.56	167	5.39	1900	1000	0.54 %
						Total:	3.11 %

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector 1:	2.95 %
Sector 2:	3.11 %
Sector 3 :	2.95 %
AT&T Maximum Total (per sector):	3.11 %
Site Total:	5.30 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **5.30%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.



Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

PROJECT INFORMATION

- SCOPE OF WORK:
- AT&T ANTENNAS: (1) NEW LTE ANTENNA PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) NEW LTE ANTENNAS; (2) EXISTING ANTENNAS TO REMAIN (2 PER SECTOR). (1) EXISTING ANTENNA PER SECTOR TO BE REMOVED FOR A TOTAL OF 3 ANTENNAS.
 - AT&T RRUS: (1) NEW RRUS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) NEW RRUS; (2) EXISTING RRU PER SECTOR TO REMAIN, FOR A TOTAL OF (6) EXISTING RRUS.
 - AT&T DC-6: (1) NEW DC-6 SQUID, (1) EXISTING DC-6 SQUID
 - AT&T CABLING: (1) NEW FIBER TRUNK AND (2) NEW DC TRUNKS

SITE ADDRESS: 401 WAKELEE AVENUE
ANSONIA, CT 06401

LATITUDE: 41.3560750 41° 21' 21.87"N
LONGITUDE: -73.0920269 73° 5' 31.29684"W

USID: 44824

TOWER OWNER: AMERICAN TOWER
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

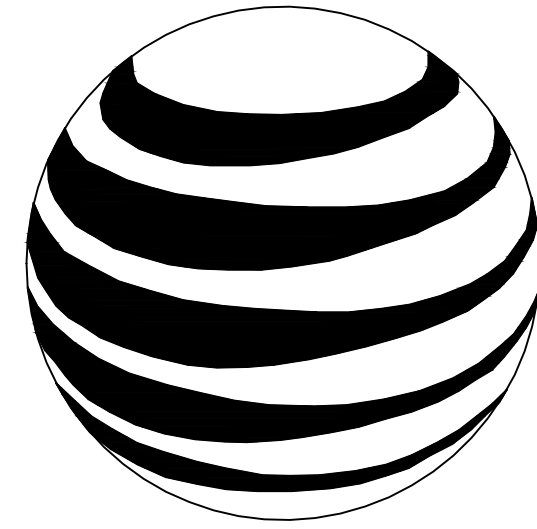
TYPE OF SITE: SELF SUPPORTING TOWER/INDOOR EQUIPMENT

TOWER HEIGHT: 196'-0"± (ABOVE BASE PLATE)

RAD CENTER: 167'-0"± (ABOVE BASE PLATE)

CURRENT USE: UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY

PROPOSED USE: UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY



at&t
MOBILITY

FA CODE: 10035308
SITE NUMBER: CT2091
SITE NAME: ANSONIA
NW_SPECTRASITE TOWER

PROJECT TEAM

CLIENT REPRESENTATIVE

COMPANY: EMPIRE TELECOM
ADDRESS: 16 ESQUIRE ROAD
BILLERICA, MA 01821
CONTACT: DAVID COOPER
PHONE: 617-639-4908
EMAIL: dcooper@empiretelecomm.com

SITE ACQUISITION:

COMPANY: VERTICAL DEVELOPMENT, LLC
ADDRESS: 20 COMMERCIAL STREET
BRANFORD, CT 06405
CONTACT: DAVID BASS
PHONE: 203-826-5857
EMAIL: dbass@verticaldevelopmentllc.com

ZONING:

COMPANY: VERTICAL DEVELOPMENT, LLC
ADDRESS: 20 COMMERCIAL STREET
BRANFORD, CT 06405
CONTACT: DAVID BASS
PHONE: 203-826-5857
EMAIL: dbass@verticaldevelopmentllc.com

ENGINEERING:

COMPANY: COM-EX CONSULTANTS, LLC
ADDRESS: 115 ROUTE 46
SUITE E39
MOUNTAIN LAKES, NJ 07046
CONTACT: NICHOLAS D. BARILE, P.E.
PHONE: 862-209-4300
EMAIL: nbarile@comexconsultants.com

RF ENGINEER:

COMPANY: AT&T MOBILITY – NEW ENGLAND
ADDRESS: 550 COCHITUATE ROAD
SUITE 550 13 & 14
FRAMINGHAM, MA 01701
CONTACT: CAMERON SYME
PHONE: 508-596-7146
EMAIL: cs6970@att.com

CONSTRUCTION MANAGEMENT:

COMPANY: EMPIRE TELECOM
ADDRESS: 16 ESQUIRE ROAD
BILLERICA, MA 01821
CONTACT: GRZEGORZ "GREG" DORMAN
PHONE: 484-683-1750
EMAIL: gdorman@empiretelecomm.com

APPROVED

DRAWING INDEX

REV.

T-1	TITLE SHEET	0
GN-1	GROUNDING & GENERAL NOTES	0
A-1	COMPOUND LAYOUT	0
A-2	EQUIPMENT LAYOUT	0
A-3	ANTENNA LAYOUTS & ELEVATION	0
A-4	DETAILS	0
G-1	GROUNDING, ONE-LINE DIAGRAM & DETAILS	0

VICINITY MAP

DEPART 500 ENTERPRISE DR, ROCKY HILL, CT 06067: ON ENTERPRISE DR (EAST). TURN LEFT (NORTH-WEST) ONTO CAPITOL BLVD [CAPITAL BLVD]. BEAR RIGHT (NORTH) ONTO CAPITOL BLVD, THEN IMMEDIATELY TURN LEFT (WEST) ONTO WEST ST. TAKE RAMP (LEFT) ONTO I-91 AT EXIT 17, TURN RIGHT ONTO RAMP. TAKE RAMP (LEFT) ONTO SR-15 [WILBUR CROSS PKWY] AT EXIT 58, TAKE RAMP (RIGHT) ONTO SR-34 [DERBY AVE]. TAKE RAMP (RIGHT) ONTO SR-8 [GENERAL SAMUEL JESKILKA HWY]. AT EXIT 19, TURN RIGHT ONTO RAMP, TURN RIGHT (SOUTH) ONTO SR-334 [WAKELEE AVE]. KEEP STRAIGHT TO STAY ON SR-334 [WAKELEE AVE]. TURN RIGHT (WEST) ONTO LOCAL ROAD(S) ARRIVE AT SITE.



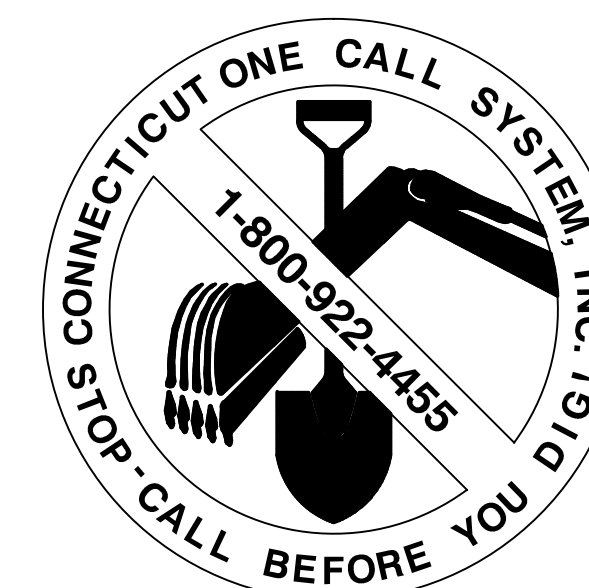
GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY, AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN, ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR SITE MODIFICATIONS.

DISCIPLINE:	NAME:	DATE:
SITE ACQUISITION:		
CONSTRUCTION MANAGER:		
AT&T PROJECT MANAGER:		



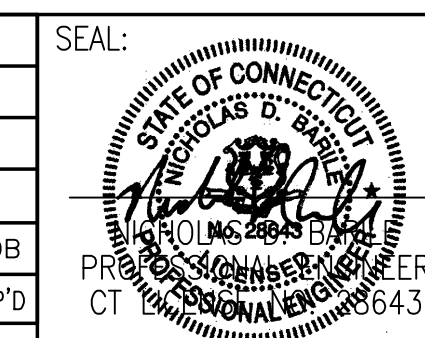
CONNECTICUT LAW REQUIRES TWO WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES BY CALLING 800-922-4455 OR DIAL 811



SITE NUMBER: CT2091
SITE NAME: ANSONIA
NW_SPECTRASITE TOWER
401 WAKELEE AVENUE
ANSONIA, CT 06401
NEW HAVEN COUNTY



0	02/16/16	ISSUED AS FINAL	GR	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: NJM	DRAWN BY: NJM		



AT&T		
DRAWING TITLE: TITLE SHEET		
JOB NUMBER 15061-EMP	DRAWING NUMBER T-1	REV 0

GROUNDING NOTES:

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH 25471-000-3PS-EG00-0001, DESIGN & TESTING OF FACILITY GROUNDING FOR CELL SITES.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED WITH STAINLESS STEEL HARDWARE TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
13. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/TIA 222. FOR TOWERS BEING BUILT TO REV-G OF THE STANDARD, THE WIRE SIZE OF THE BURIED GROUND RING AND CONNECTIONS BETWEEN THE TOWER AND THE BURIED GROUND RING SHALL BE CHANGED FROM 2 AWG TO 2/0 AWG. IN ADDITION, THE MINIMUM LENGTH OF THE GROUND RODS SHALL BE INCREASED FROM EIGHT FEET (8') TO TEN FEET (10').
14. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID TINNED COPPER GROUND WIRE, PER NEC 250.50.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR - EMPIRE TELECOM
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER - AT&T MOBILITY
 OEM - ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR (EMPIRE TELECOM).
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. ROUTING OF TRENCHING SHALL BE APPROVED BY CONTRACTOR
9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OFF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
12. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
13. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS UNLESS OTHERWISE SPECIFIED. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
14. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy=36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
15. CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 25741-000-3APS-A00Z-00002, "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY SITES."
16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
17. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK MAY NEED TO BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
18. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

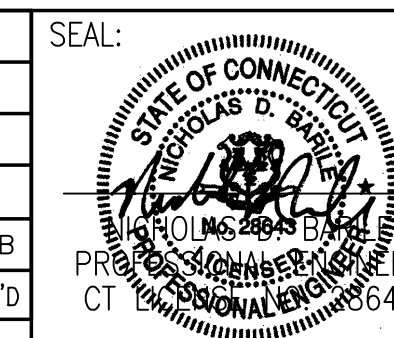
19. SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
 - INTERNATIONAL BUILDING CODE: IBC 2009 WITH LOCAL & COUNTY AMENDMENTS
 - NATIONAL ELECTRICAL CODE: NEC 2011 WITH LOCAL & COUNTY AMENDMENTS
 - FIRE/LIFE SAFETY CODE: NFPA-101 2009 WITH LOCAL & COUNTY AMENDMENTS
20. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
 - AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION
 - AMERICAN SOCIETY OF TESTING OF MATERIALS, ASTM
 - TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA-222-G-1), STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
 - TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
 - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, OSHA
 - INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVELY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
 - TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS
21. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.
22. 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 AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.



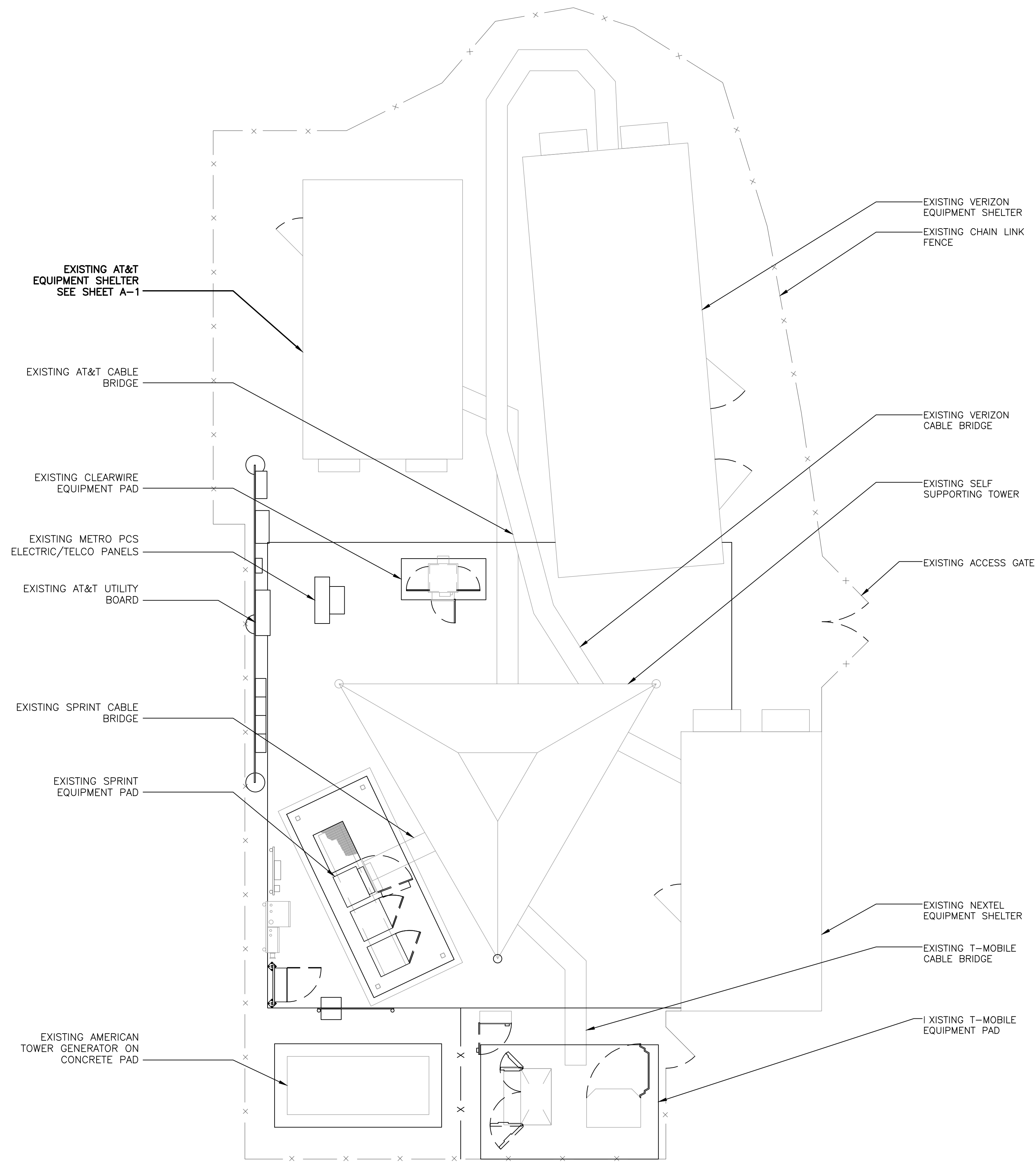
SITE NUMBER: CT2091
SITE NAME: ANSONIA
NW_SPECTRASITE TOWER
 401 WAKELEE AVENUE
 ANSONIA, CT 06401
 NEW HAVEN COUNTY



0	02/16/16	ISSUED AS FINAL	GR	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: NJM	DRAWN BY: NJM		



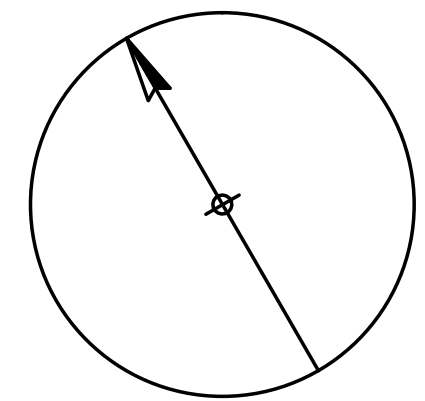
AT&T		
DRAWING TITLE: GROUNDING & GENERAL NOTES		
JOB NUMBER 15061-EMP	DRAWING NUMBER GN-1	REV 0



COMPOUND LAYOUT

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

22"x34" SCALE: 3/16" = 1'-0"
 11"x17" SCALE: 3/32" = 1'-0"



NORTH

NOTE:
 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 AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.

COM-EX
 Consultants
 115 ROUTE 46
 SUITE E39
 MOUNTAIN LAKES, NJ 07046
 PHONE: 862.209.4300
 FAX: 862.209.4301

EMPIRE
 telecom
 16 ESQUIRE ROAD
 BILLERICA, MA 01821

SITE NUMBER: CT2091
SITE NAME: ANSONIA
NW_SPECTRASITE TOWER
 401 WAKELEE AVENUE
 ANSONIA, CT 06401
 NEW HAVEN COUNTY

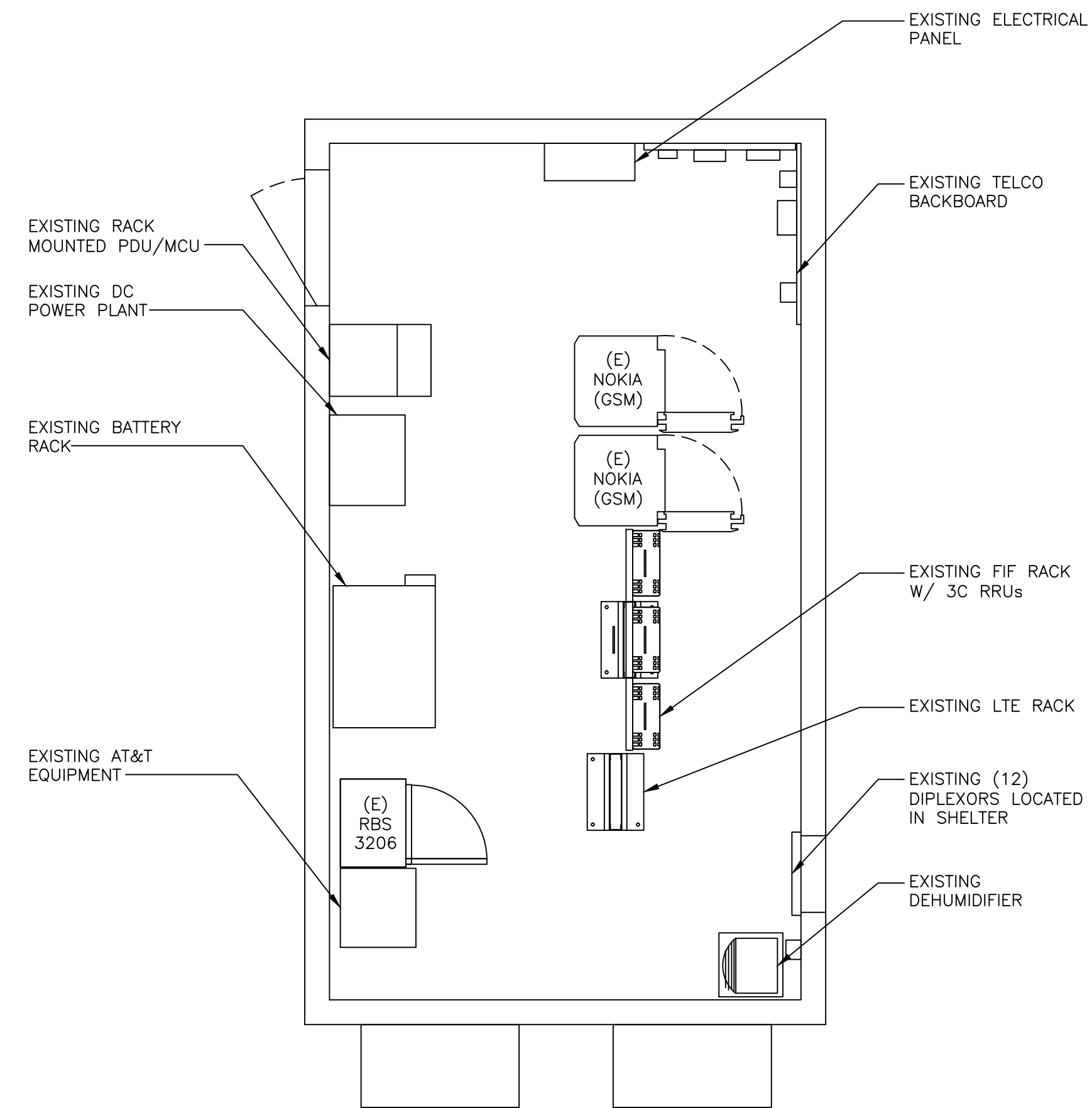
at&t
 MOBILITY
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

0	02/16/16	ISSUED AS FINAL	GR	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: NJM	DRAWN BY: NJM		

SEAL:

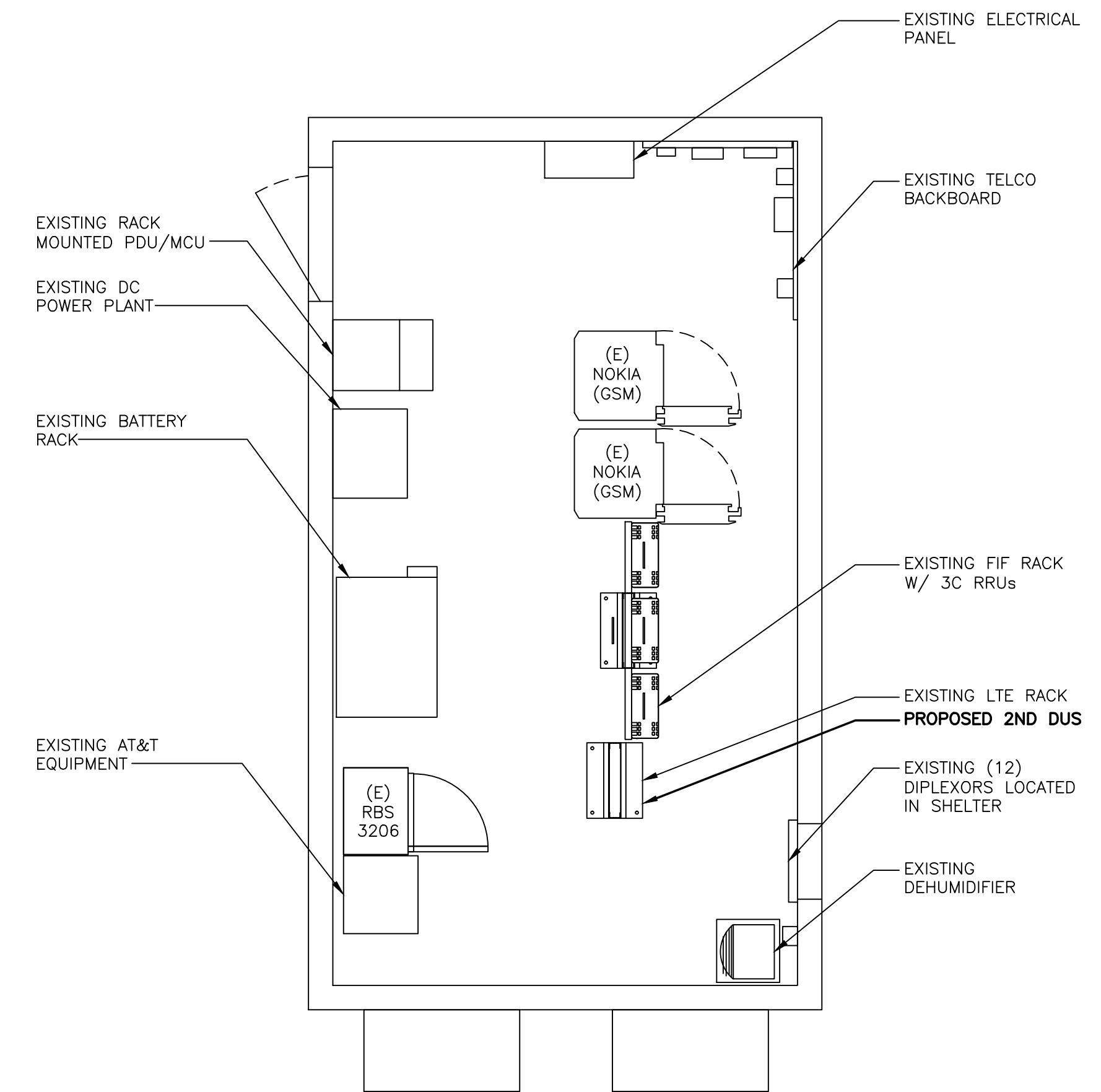
 NICHOLAS D. BARONE
 PROFESSIONAL ENGINEER
 CT LICENSE NO. 8643

AT&T		
DRAWING TITLE: ROOFTOP LAYOUT		
JOB NUMBER 15061-EMP	DRAWING NUMBER A-1	REV 0



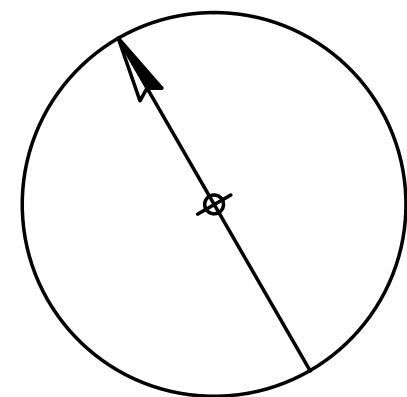
EXISTING EQUIPMENT LAYOUT

SCALE: 3/8" = 2'-0"
 22"x34" SCALE: 3/8" = 1'-0"
 11"x17" SCALE: 3/16" = 1'-0"

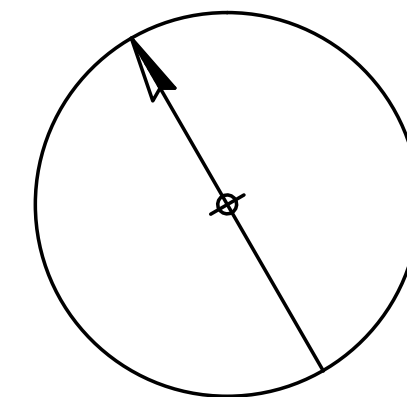


PROPOSED EQUIPMENT LAYOUT

SCALE: 3/8" = 2'-0"
 22"x34" SCALE: 3/8" = 1'-0"
 11"x17" SCALE: 3/16" = 1'-0"



NORTH



NORTH

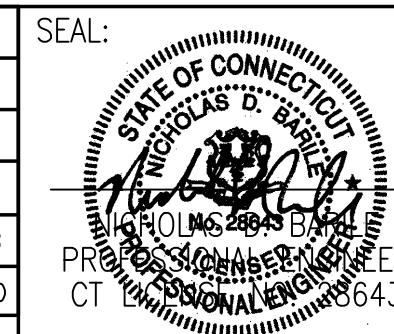
COM-EX
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 115 ROUTE 46
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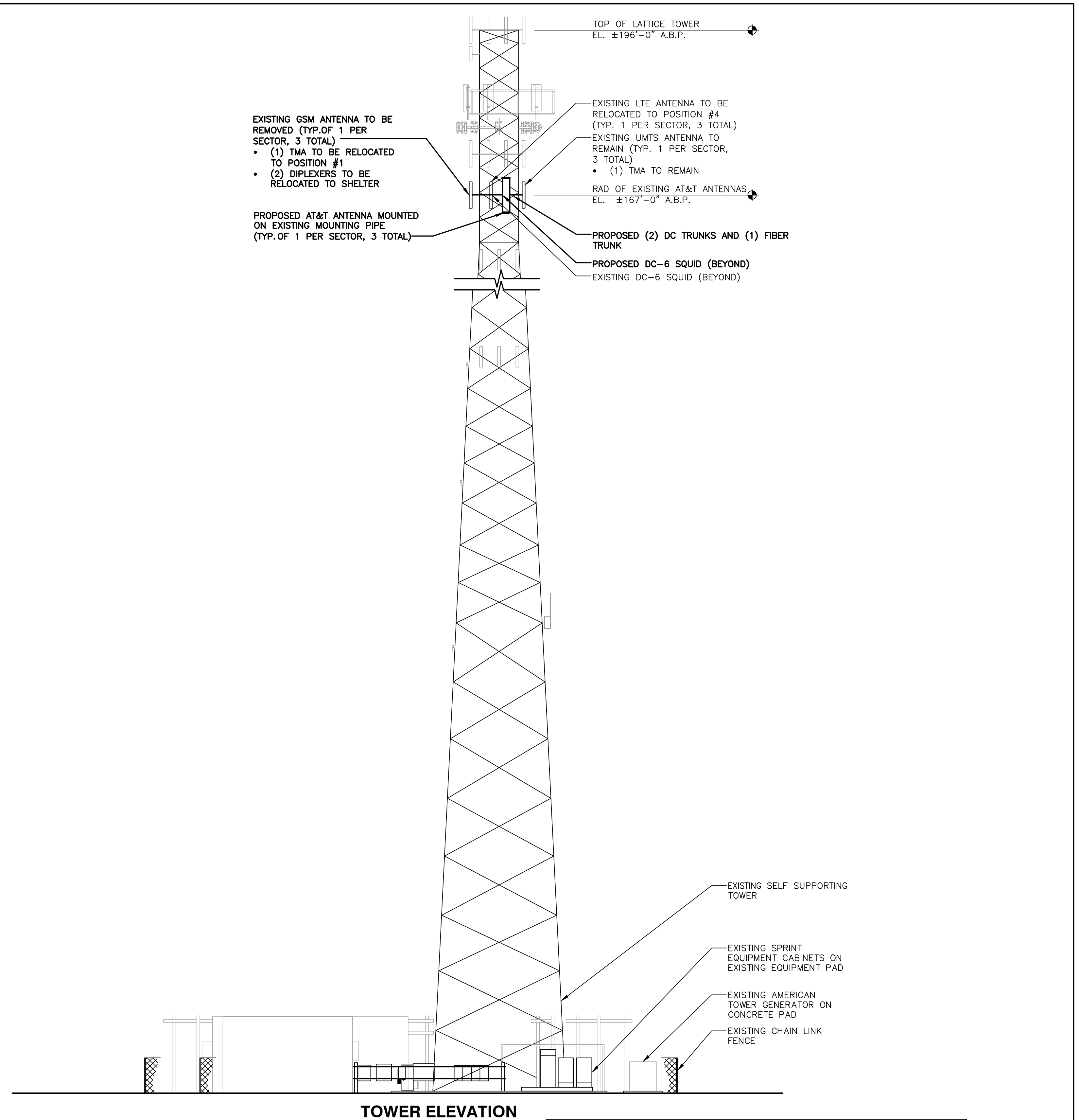
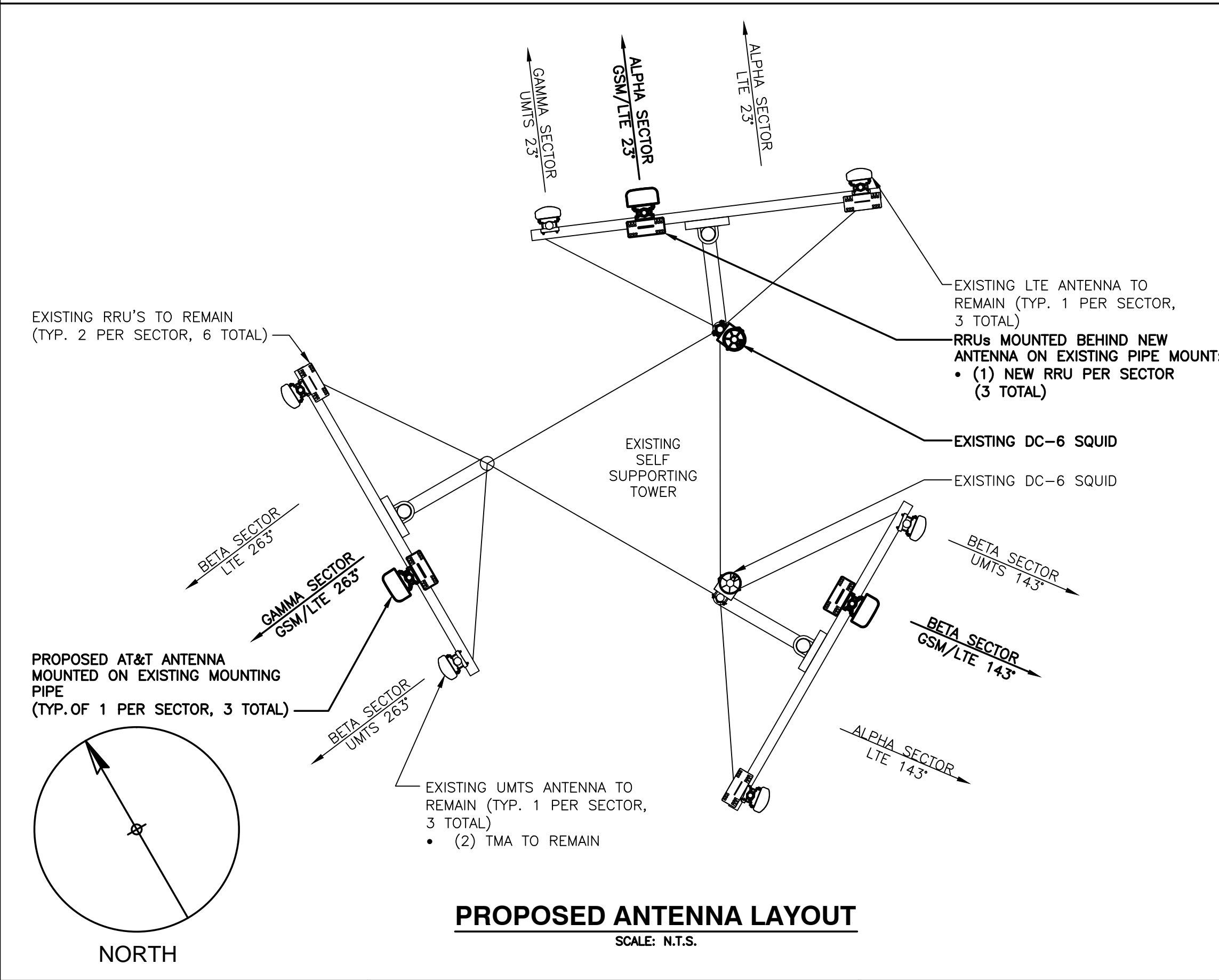
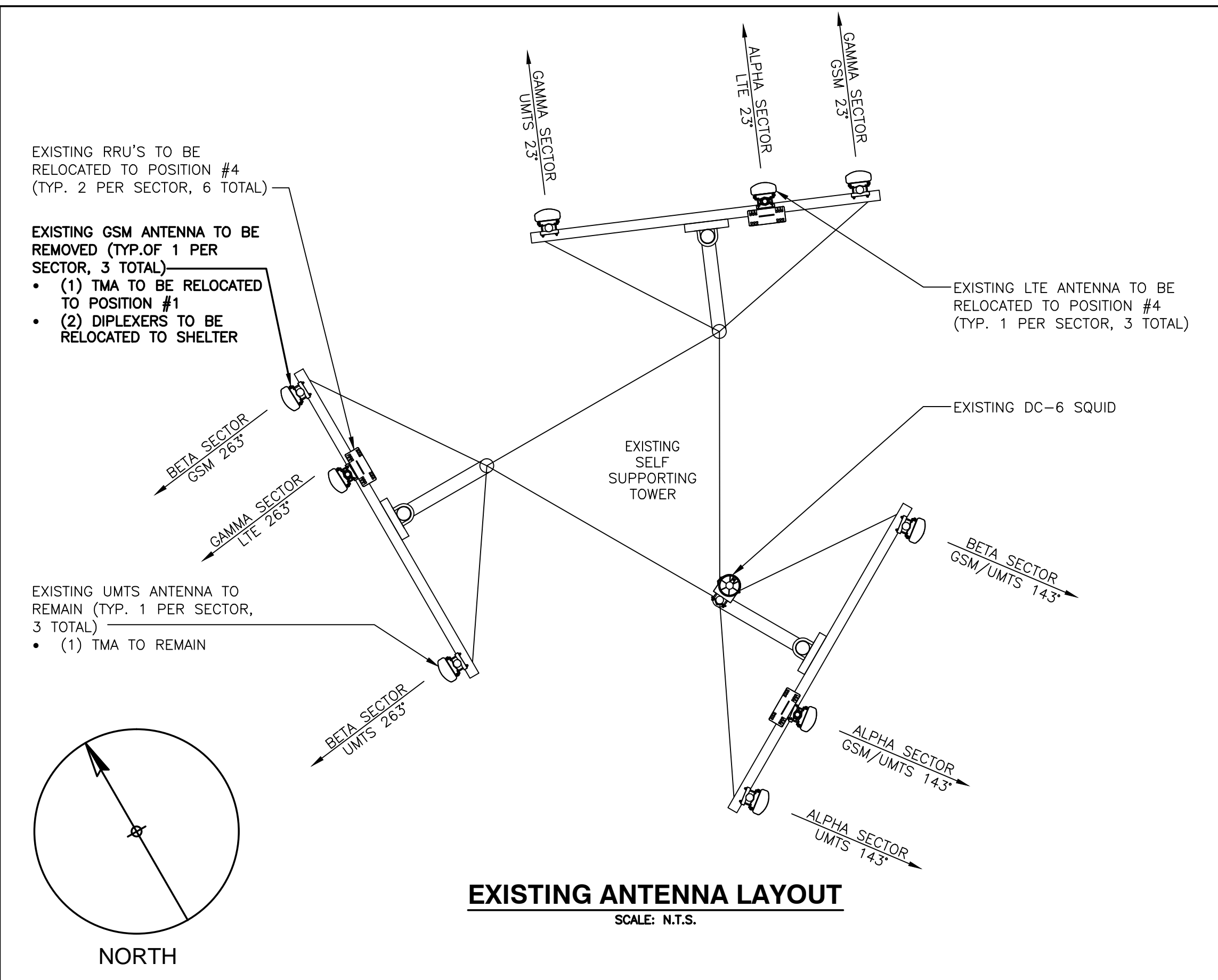
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 **at&t**
 MOBILITY
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

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SCALE: AS SHOWN		DESIGNED BY: NJM	DRAWN BY: NJM		



AT&T		
DRAWING TITLE: EQUIPMENT LAYOUTS		
JOB NUMBER 15061-EMP	DRAWING NUMBER A-2	REV 0



PROJECT OWNER IS RESPONSIBLE FOR PROVIDING A STRUCTURAL STABILITY ANALYSIS TO DETERMINE THE CAPACITY AND SUITABILITY OF THE EXISTING ANTENNA SUPPORT STRUCTURE TO SAFELY CARRY ALL ADDITIONAL LOADS IMPOSED BY THE PROPOSED EQUIPMENT AS SHOWN HEREIN. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCORPORATING ANY REQUIRED STRUCTURAL MODIFICATIONS INTO THEIR SCOPE OF WORK.

COM-EX
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telecom
16 ESQUIRE ROAD
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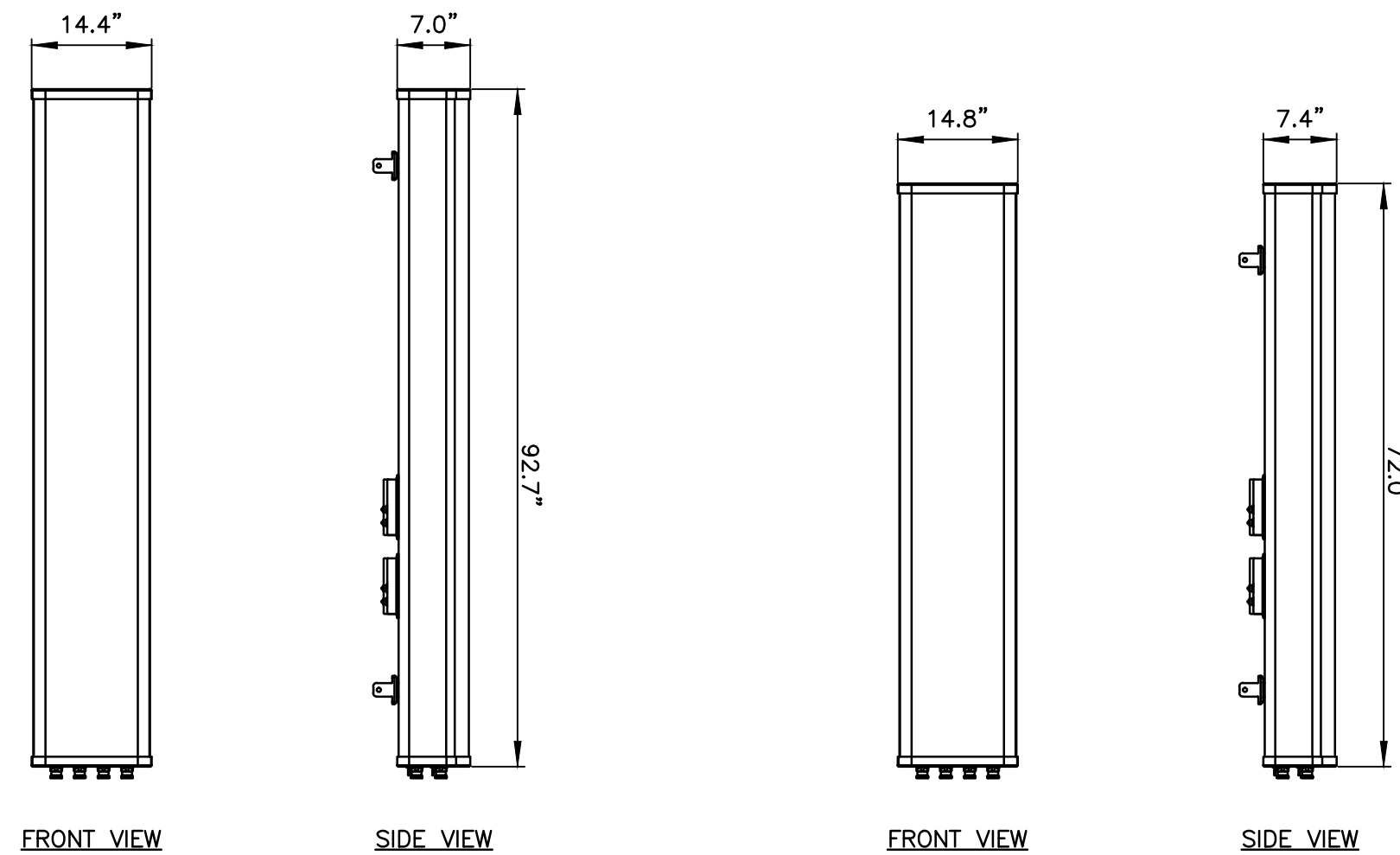
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0	02/16/16	ISSUED AS FINAL	GR	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: NJM	DRAWN BY: NJM		

SEAL:
STATE OF CONNECTICUT
PROFESSIONAL ENGINEER
CT LICENSE NO. 8643

AT&T		
DRAWING TITLE: ANTENNA LAYOUTS & ELEVATION		
JOB NUMBER 15061-EMP	DRAWING NUMBER A-3	REV 0

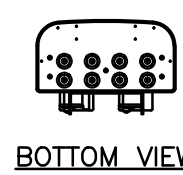


FRONT VIEW

SIDE VIEW

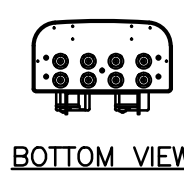
FRONT VIEW

SIDE VIEW



BOTTOM VIEW

MANUFACTURER	CCI
MODEL	OPA-65R-LCUU-H8
WEIGHT	88.0 LBS

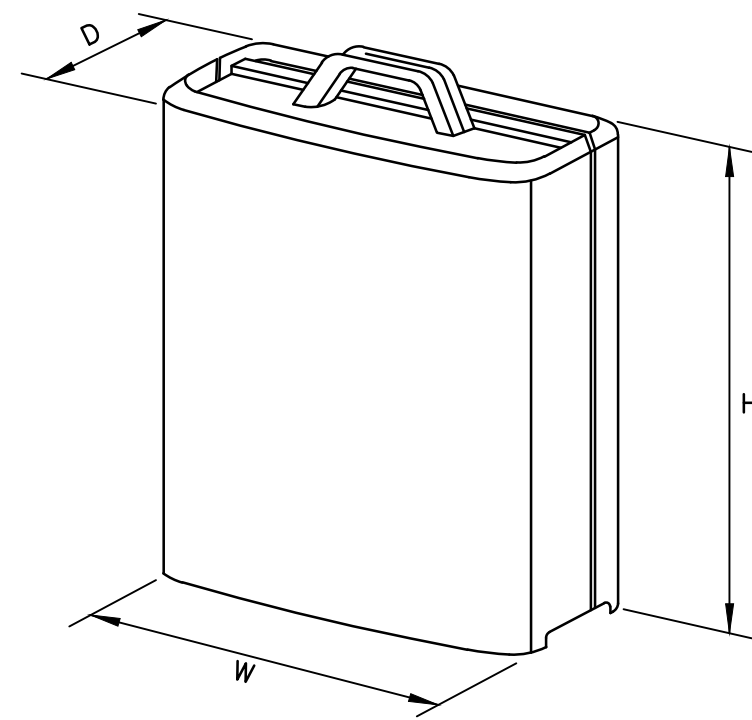


BOTTOM VIEW

MANUFACTURER	CCI
MODEL	OPA-65R-LCUU-H6
WEIGHT	73.0 LBS

LTE ANTENNA DETAIL

SCALE: N.T.S.

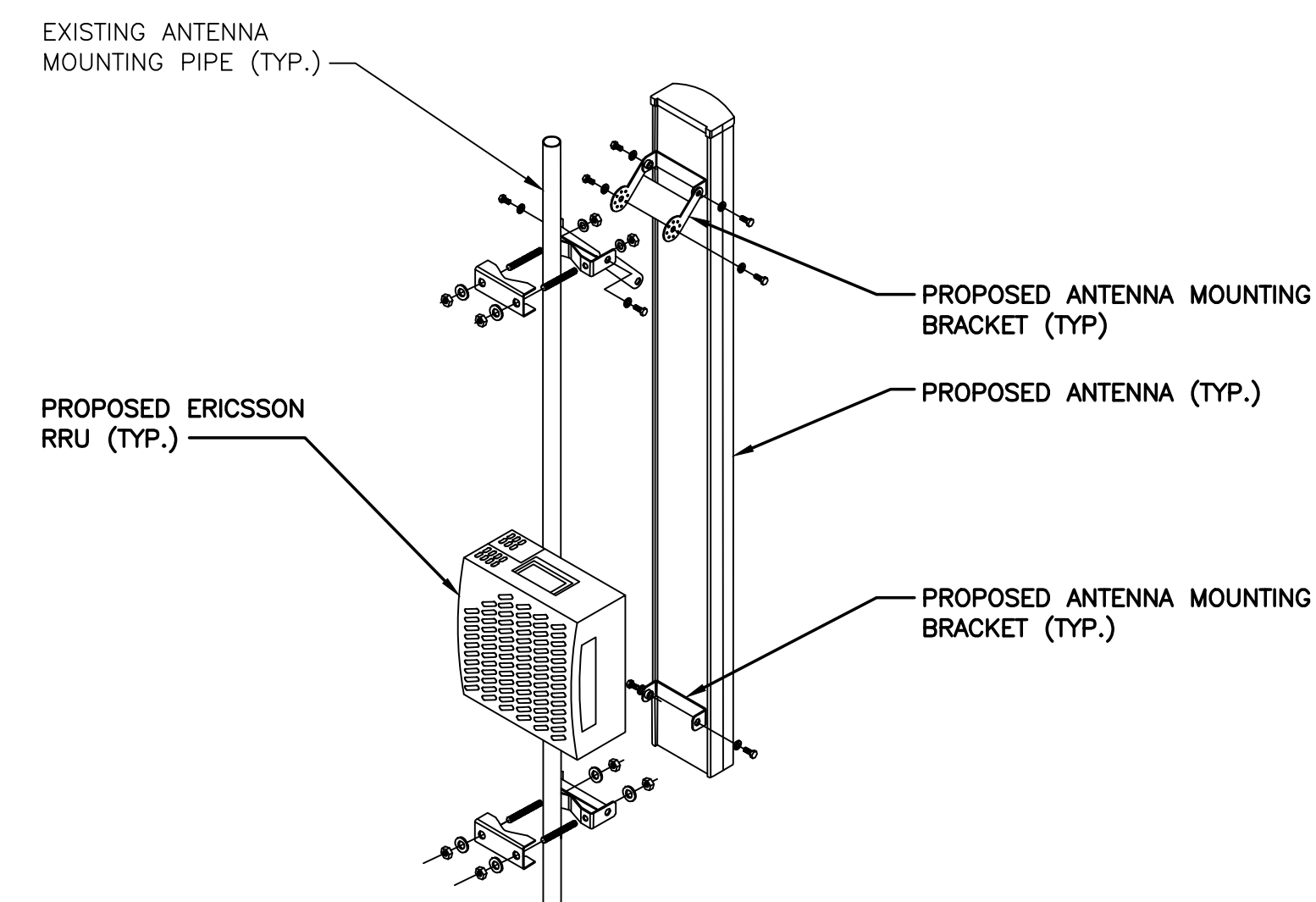


MODEL	L x W x H	WEIGHT
*RRUS-11	19.69" x 16.97" x 7.17"	50.7 LBS
RRUS-32	29.9" x 13.3" x 9.5"	77 LBS

*DENOTES EXISTING.

RRUS DETAIL

SCALE: N.T.S.

**ANTENNA AND RRU MOUNTING DETAIL**

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

SECTOR	POSITION	MAKE	MODEL	SIZE (INCHES)
ALPHA	A1	POWERWAVE	7770.00	55"x11"x5"
	A2	-	-	-
	A3	KMW	AM-X-CD-16-65-00T-RET	72"x11.8"x5.9"
	A4	POWERWAVE	P65-17-XLH-RR	96"x12"x6"
BETA	B1	POWERWAVE	7770.00	55"x11"x5"
	B2	-	-	-
	B3	POWERWAVE	P65-17-XLH-RR	96"x12"x6"
	B4	KMW	AM-X-CD-16-65-00T-RET	72"x11.8"x5.9"
GAMMA	G1	POWERWAVE	7770.00	55"x11"x5"
	G2	-	-	-
	G3	KMW	AM-X-CD-16-65-00T-RET	72"x11.8"x5.9"
	G4	KMW	AM-X-CD-16-65-00T-RET	72"x11.8"x5.9"

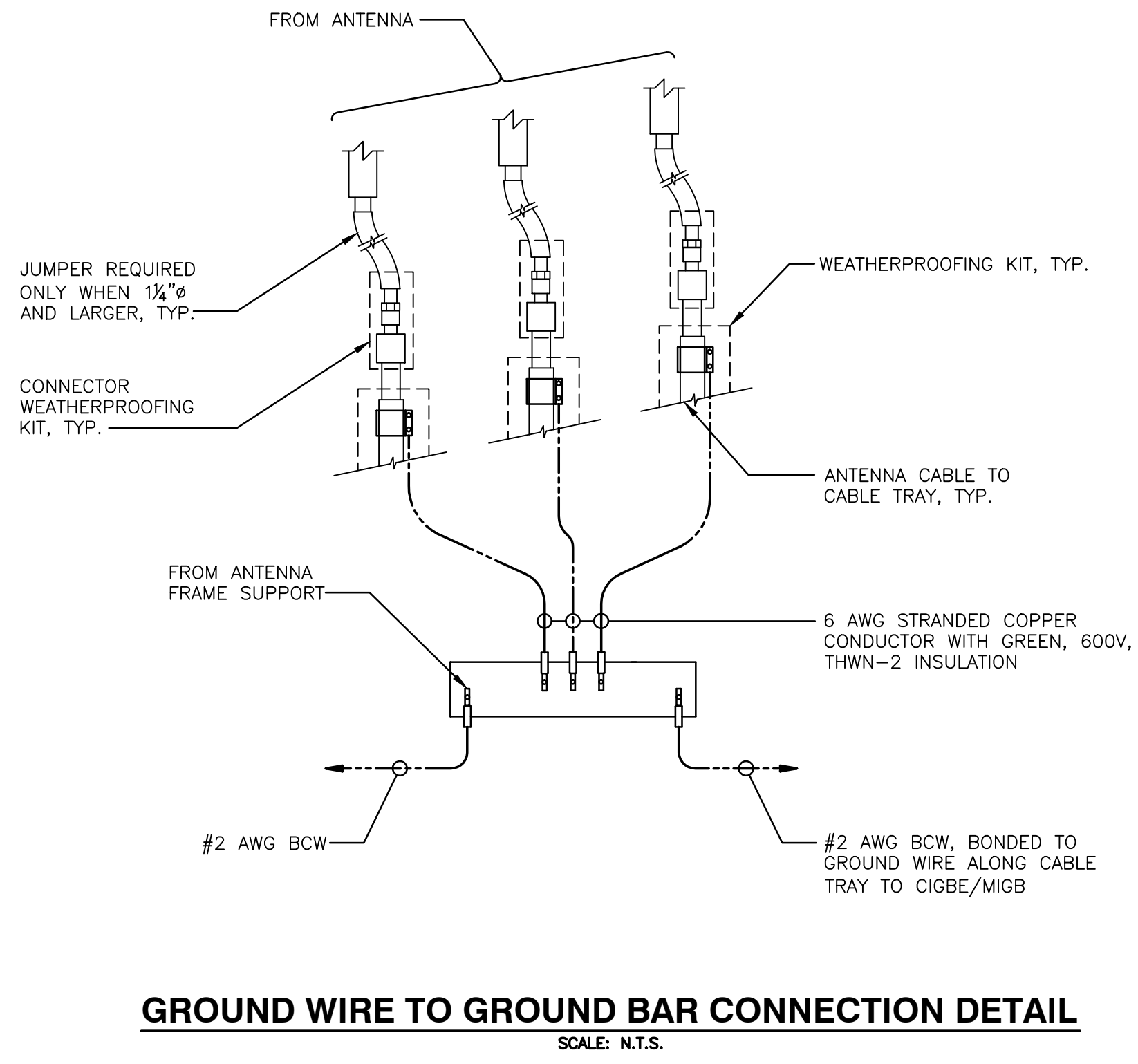
FINAL ANTENNA SCHEDULE

SECTOR	POSITION	MAKE	MODEL	SIZE (INCHES)
ALPHA	A1	POWERWAVE	7770.00	55"x11"x5"
	A2	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	A3	-	-	-
	A4	KMW	AM-X-CD-16-65-00T-RET	72"x11.8"x5.9"
BETA	B1	POWERWAVE	7770.00	55"x11"x5"
	B2	CCI	OPA-65R-LCUU-H8	92.7"x14.4"x7"
	B3	-	-	-
	B4	POWERWAVE	P65-17-XLH-RR	96"x12"x6"
GAMMA	G1	POWERWAVE	7770.00	55"x11"x5"
	G2	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	G3	-	-	-
	G4	KMW	AM-X-CD-16-65-00T-RET	72"x11.8"x5.9"

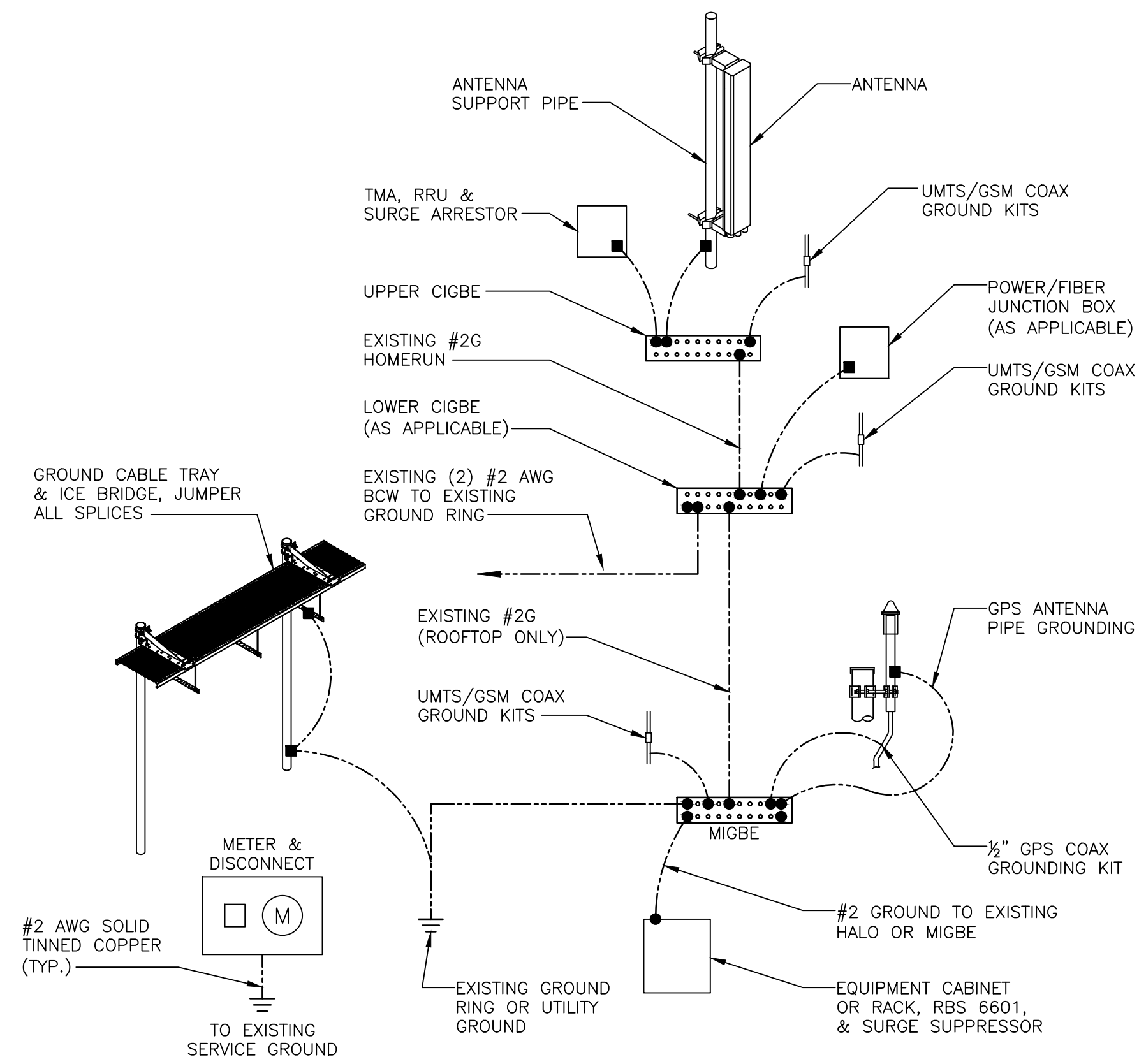
PROPOSED RRH SCHEDULE

SECTOR	MAKE	MODEL	SIZE (INCHES)	ADDITIONAL COMPONENT	SIZE (INCHES)
ALPHA	ERICSSON	RRUS-32	29.9"x13.3"x9.5"		
	ERICSSON	RRUS-11	19.7"x16.9"x7.2"		
	ERICSSON	RRUS-11	19.7"x16.9"x7.2"		
BETA	ERICSSON	RRUS-32	29.9"x13.3"x9.5"		
	ERICSSON	RRUS-11	19.7"x16.9"x7.2"		
	ERICSSON	RRUS-11	19.7"x16.9"x7.2"		
GAMMA	ERICSSON	RRUS-32	29.9"x13.3"x9.5"		
	ERICSSON	RRUS-11	19.7"x16.9"x7.2"		
	ERICSSON	RRUS-11	19.7"x16.9"x7.2"		

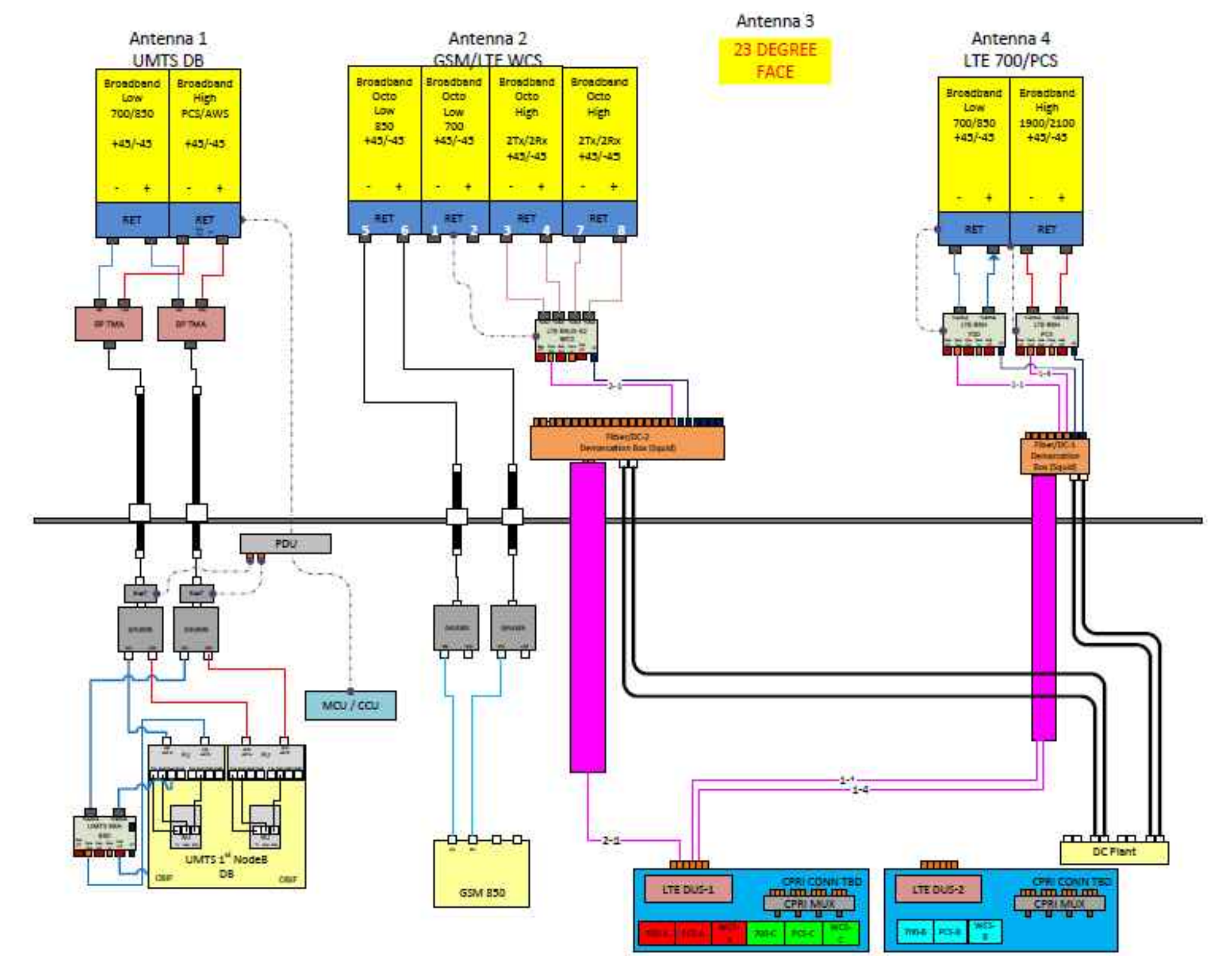
PROJECT OWNER IS RESPONSIBLE FOR PROVIDING A STRUCTURAL STABILITY ANALYSIS TO DETERMINE THE CAPACITY AND SUITABILITY OF THE EXISTING ANTENNA SUPPORT STRUCTURE TO SAFELY CARRY ALL ADDITIONAL LOADS IMPOSED BY THE PROPOSED EQUIPMENT AS SHOWN HEREIN. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCORPORATING ANY REQUIRED STRUCTURAL MODIFICATIONS INTO THEIR SCOPE OF WORK.



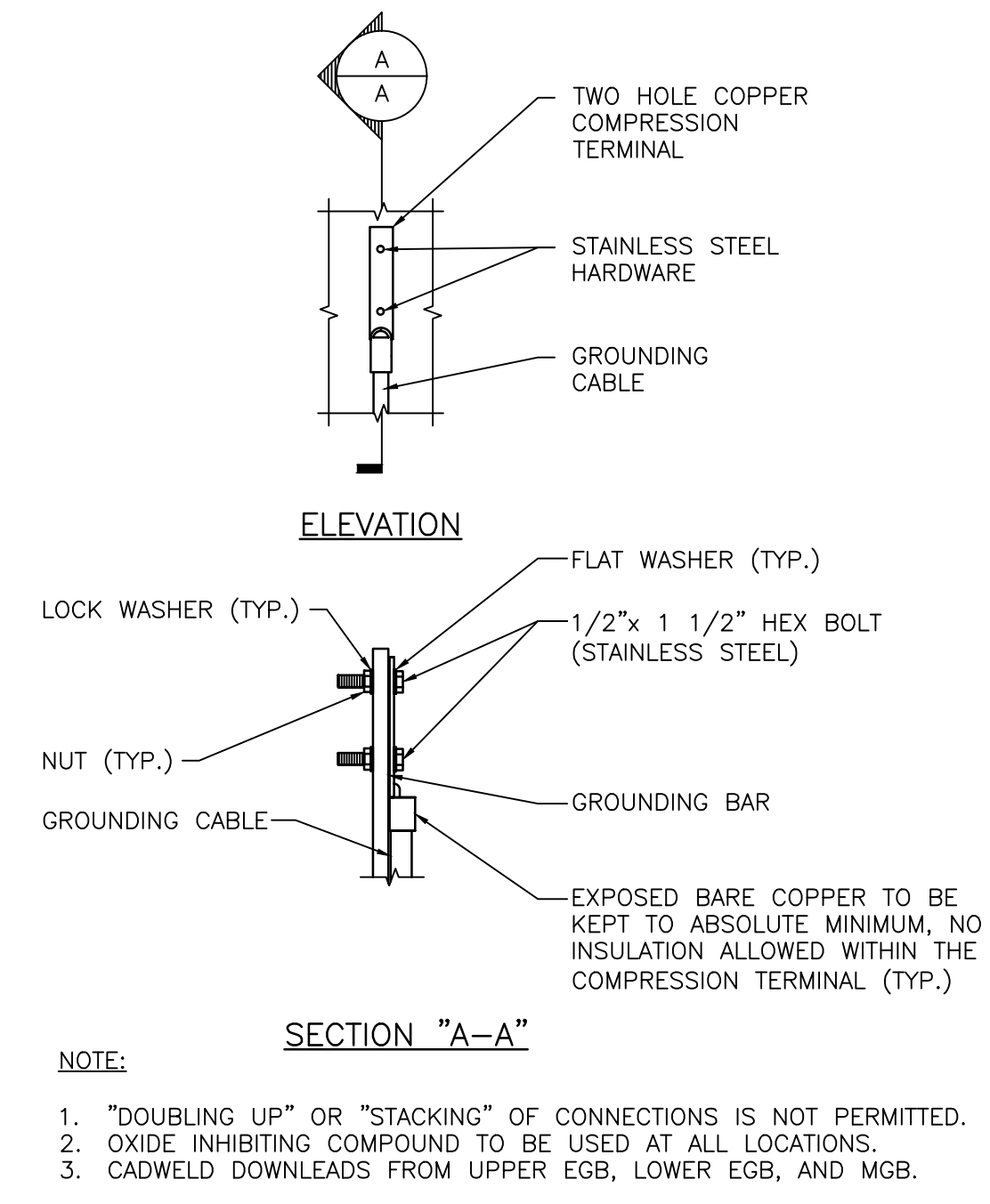
GROUND WIRE TO GROUND BAR CONNECTION DETAIL
SCALE: N.T.S.



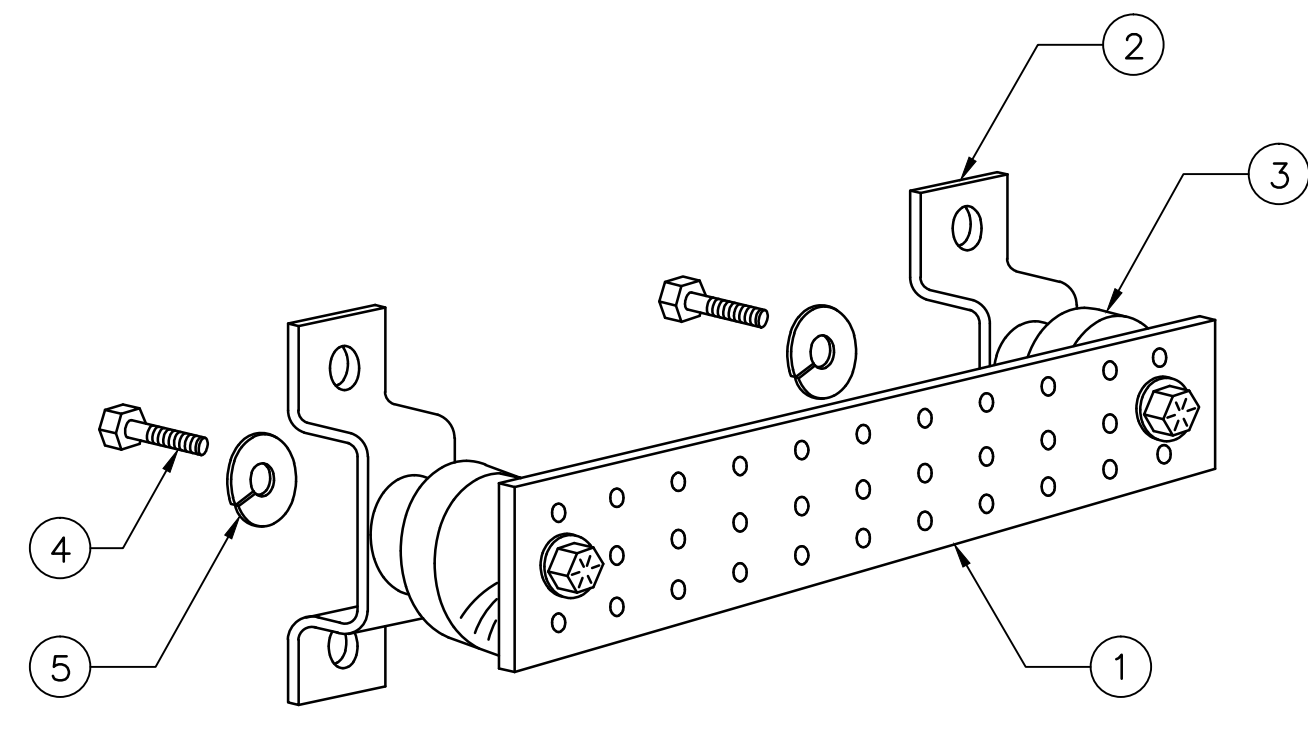
GROUNDING RISER DIAGRAM
SCALE: N.T.S.



TYPICAL PLUMBING DIAGRAM (PER SECTOR)
SCALE: N.T.S.



TYPICAL GROUND BAR CONNECTION DETAIL
SCALE: N.T.S.



ITEM NO.	QTY.	DESCRIPTION
1	1	SOLID GROUND BAR (20"x 4"x 1/4")
2	2	WALL MOUNTING BRACKET
3	2	INSULATORS
4	4	5/8"-11x1" H.H.C.S.
5	4	5/8" LOCK WASHER

- NOTES:
- EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION
- SECTION "P" - SURGE PRODUCERS**
- CABLE ENTRY PORTS (HATCH PLATES) (#2)
 - GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
 - TELCO GROUND BAR
 - COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
 - +24V POWER SUPPLY RETURN BAR (#2)
 - -48V POWER SUPPLY RETURN BAR (#2)
 - RECTIFIER FRAMES
- SECTION "A" - SURGE ABSORBERS**
- INTERIOR GROUND RING (#2)
 - EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
 - METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
 - BUILDING STEEL (IF AVAILABLE) (#2)

GROUND BAR DETAIL
SCALE: N.T.S.