

Phoenix Partnership

April 29, 2016

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

**Re: Docket No. 464 Application of Blue Sky Towers LLC,
For a Certificate of Environmental Compatibility and Public
Need for the Construction, Maintenance and Operation of a
Telecommunications Facility at 220 Evergreen Street
the City of Bridgeport, Connecticut Development and
Management Plan**

Dear Attorney Bachman:

Please find enclosed one (1) original and twenty (20) sets of the Development and Management Plan ("D&M Plan") pertaining to the telecommunications facility approved by the Connecticut Siting Council ("Council") in the above-captioned docket. The Applicant, Blue Sky Towers, LLC ("Blue Sky") submits this D&M Plan in accordance with the Council's Decision and Order ("Decision") and Certificate of Environmental Compatibility and Public Need ("Certificate"). Additionally, please find enclosed twenty (20) copies of the tower specifications.

Development and Management Plan

Pursuant to Order Number 1, the telecommunications facility to be located at 220 Evergreen Street, Bridgeport, Connecticut ("Facility") includes a monopole at a height of 135 feet above grade level ("AGL").

Pursuant to Order Number 1, the monopole would accommodate the antennas of New Cingular Wireless PCS, LLC (AT&T) and other entities both public and private.

Pursuant to Orders Number 2, Blue Sky has prepared a D&M Plan in accordance with the Decision and applicable regulations. The proposed D&M Plan includes detailed plans of the tower, tower foundation, antennas, equipment

110 Washington Avenue North Haven, Connecticut 06473
Phone - 203-623-3287 Fax 203-234-6398

compound, radio equipment, access road, utility line and landscaping. Also included are construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended.

Pursuant to Order Number 3, prior to commencement of operation, Blue Sky will provide the Council with worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the Facility base.

Pursuant to Order Number 5, Blue Sky shall provide reasonable space on the Facility for fair consideration for other entities both public and private provided such use can be accommodated and is compatible with the structural integrity of the Facility.

Conclusion

In accordance with the provisions of § 16-50j-77 of the Regulations of Connecticut State Agencies and Order Number 10, Blue Sky hereby notifies the Council of its intention to commence clearing and related site work immediately upon D&M Plan approval and to commence other construction activities immediately upon issuance of a building permit by the City of Bridgeport. The supervisor for all construction related matters on this project is Sean Gormley of Blue Sky, and he can be reached by phone at (978) 833-8668 or at seang@blueskytower.com.

Blue Sky respectfully requests that this matter be included on the Council's next agenda for review and approval.

Please contact me if you have any questions.

Very truly yours,

A handwritten signature in blue ink, appearing to be the name 'Sean Gormley', written in a cursive style.

Enclosures

cc: Service List
City of Bridgeport
Mayor Joseph P. Ganim
45 Lyon Terrace
Bridgeport, CT 06604

AT&T
Michele Briggs
500 Enterprise Drive
Rocky Hill, CT 06067-3900

Christopher B. Fisher Esq
Daniel M. Laub Esq.
445 Hamilton Ave 14th Floor
White Plains, NY 10601

Sean Gormley
Blue Sky Towers, LLC
352 Park Street
North Reading, MA 01864



1 Fairholm Avenue
Peoria, IL 61603 USA
Phone 309-566-3000
FAX 309-566-3079

April 19, 2016

Blue Sky Tower
Attn: Sean Gormley
352 Park Street
Suite 106
North Reading, MA. 01864

Reference: Bridgeport Evergreen ST CT-5020, Fairfield County, CT.
135' Future 155' Tapered Steel Pole

File Number: 217435

Enclosed, please find the following for your use:

<u>Copies</u>	<u>Drawing Number</u>	<u>Description</u>
2	217435-01-D1R1	Design Drawing Sealed for the State of Connecticut
2	217435-01-F1	Mat with Raised Pier Foundation Sealed for the State of Connecticut

Contact Phone Number: 978 833 8668

Email Also: seang@blueskytower.com

Sincerely,

JD Long
Ken Cordrey

crp

Products for a Growing World of Technology®



1 Fairholm Avenue
Peoria, IL 61603 USA
Phone: (309)-566-3000
Fax: (309)-566-3079

DATE: MARCH 19, 2016

PURCHASER: BLUE SKY TOWER

PROJECT: 135 FT TSP MONOPOLE
BRIDGEPORT EVERGREEN ST CT-5020, CONNECTICUT

FILE NUMBER: 217435

DRAWINGS: 217435-01-D1 R1 , 217435-01-F1

I CERTIFY THAT THE REFERENCED DRAWINGS WERE PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE DESIGN AND LOADING CRITERIA SPECIFIED BY THE PURCHASER AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT.

CERTIFIED BY: _____

DATE: _____

4/19/16



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FILE NO.	217435
REV.	DESCRIPTION
1	DATE: 04/17/14
	DWG. CHK. APP.
	DWG. HA. PA.

DESIGN WIND LOAD PER 2006 INTERNATIONAL BUILDING CODE USING ANSIT/TA-222-F-1996 IN ACCORDANCE WITH SECTION 3108.4.
 (100 MPH 3-SECOND GUST WIND SPEED (1.27 RADIAL ICE LOAD)
 85 MPH FASTEST MILE WIND SPEED (1.27 RADIAL ICE LOAD)
 THIS POLE IS DESIGNED TO SUPPORT THE FOLLOWING LOADS:

ELEVATION (FT)	ANTENNA TYPE	LINE SIZE (NOH)
TOP	LIGHTNING ROD	
*150	(12)LNK-651605-VTM PANELS A10/R8US11 B12 ON A LOW PROFILE MOUNT	(12) 1-5/8"
*140	(12)LNK-651605-VTM PANELS A10/R8US11 B12 ON A LOW PROFILE MOUNT	(12) 1-5/8"
130	(9)HPA-65R-8X4-H8 PANELS, (3)HRU 32, (9)HRU 11, (6)HRU 12, (3)HRU-EZ, (6)HRU A2, (3)YPODDC-3145-PP-48 ON A LOW PROFILE MOUNT	(4) 3" CONCRETS
120	(12)LNK-651605-VTM PANELS A10/R8US11 B12 ON A LOW PROFILE MOUNT	(12) 1-5/8"
110	(12)LNK-651605-VTM PANELS A10/R8US11 B12 ON A LOW PROFILE MOUNT	(12) 1-5/8"

SEE STRESS ANALYSIS FOR A COMPLETE LISTING OF ALL LOADS ON POLE.
 * INDICATES FUTURE LOADING WHEN POLE IS EXTENDED.



- GENERAL NOTES:**
- ROHN PRODUCTS POLE DESIGNS CONFORM TO ANSIT/TA-222-F-1996 UNLESS OTHERWISE SPECIFIED UNDER POLE DESIGN LOADINGS.
 - DESIGN LOADING CRITERIA INDICATED HAS BEEN PROVIDED TO ROHN. DESIGN LOADING CRITERIA HAS BEEN ASSUMED TO BE BASED ON SPECIFIC DATA IN ACCORDANCE WITH ANSIT/TA-222-F-1996 AND MUST BE VERIFIED PRIOR TO INSTALLATION.
 - ANTENNAS AND LINES LISTED IN POLE DESIGN LOADING TABLE ARE PROVIDED BY OTHER VENDORS UNLESS OTHERWISE SPECIFIED.
 - POLE MEMBER DESIGN DOES NOT TAKE INTO ACCOUNT STRESSES DUE TO ERECTION SINCE ERECTION EQUIPMENT AND CONNECTIONS ARE UNKNOWN. DESIGN ASSUMES COMPETENT AND QUALIFIED PERSONNEL WILL ERECT THE POLE. WORK SHALL BE IN ACCORDANCE WITH ANSIT/TA-222-F-1996, "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
 - FIELD CONNECTIONS SHALL BE BOLTED. NO FIELD WELDS SHALL BE ALLOWED.
 - STRUCTURAL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT WHERE NOTED.
 - A NUT LOCKING DEVICE SHALL BE PROVIDED FOR ALL STRUCTURAL BOLTS ON THE POLE.
 - STRUCTURAL STEEL AND CONNECTION BOLTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ANSIT/TA-222-F-1996.
 - ALL HIGH STRENGTH BOLTS ARE TO BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED IN THE RCSC. SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS. NO OTHER MINIMUM BOLT TENSION OR TORQUE VALUES ARE REQUIRED.
 - PURCHASER SHALL VERIFY THE INSTALLATION IS IN CONFORMANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR OBSTRUCTION MARKING AND LIGHTING.
 - TOLERANCE ON POLE STEEL HEIGHT IS EQUAL TO PLUS 1% OR MINUS 1/2%.
 - DESIGN ASSUMES THAT, AS A MINIMUM, MAINTENANCE AND INSPECTION WILL BE PERFORMED OVER THE LIFE OF THE STRUCTURE IN ACCORDANCE WITH ANSIT/TA-222-F-1996.
 - DESIGN ASSUMES LEVEL GRADE AT POLE SITE.
 - FOUNDATION SHALL BE DESIGNED TO SUPPORT THE REACTIONS SHOWN OVER THE CONDITIONS EXISTING AT THE SITE.
 - POLE SHAFT CONFORMS TO ASTM A572 GR 60. POLE BASE PLATE AND TOP PLATE STEEL CONFORMS TO ASTM A572 GR 50. POLE ANCHOR BOLTS CONFORM TO ASTM A307 GR 70.
 - THIS POLE IS DESIGNED FOR A 75 FT. FUTURE EXTENSION.
 - POLE DESIGN INCLUDES CONSIDERATION OF A CONTAINED FALL RADIUS EQUAL TO 50 FEET BY PROVIDING STRONGER SECTIONS THAN REQUIRED BY ANALYSIS IN THE LOWER PORTION OF THE POLE.

MAXIMUM ADJUSTED REACTIONS

DOWNLOAD =	82.7 KIPS
SHEAR =	53.5 KIPS
O.T.M. =	6265.6 FT-KIPS

SECTION SCHEDULE

SECTION	LENGTH (FT)	DIAMETER	WALL THICK (IN)	P _y (KSI)	WEIGHT (KIPS)
1	25.02	36.67	29.50	0.2500	65.0
2	29.50	42.81	34.58	0.3125	65.0
3	48.00	53.73	40.49	0.4375	65.0
4	48.00	64.00	50.76	0.5000	65.0

FOR POLYGONAL POLES, DIAMETER IS MEASURED ACROSS FLATS.

ROHN
 PRODUCTS, LLC
 PO BOX 5099
 ROCKA, IL 61601-5999
 TOLL FREE 800-727-ROHN

BLUE SKY TOWER
 DESIGN PROFILE
 135' (155' FUTURE) A.G.L. MONOPOLE
 BRIDGEPORT EVERGREEN ST CT-5020, CT

DWN DWG CHK: HA DATE: 3/17/2016
 SMTS: DWG CHK: HA SHEET #: 1 OF 1
 PRI ENGR: DWG PRI. HANDB: 1 OF 1
 DRAWING NO. 217435-01-D1 REV: 1

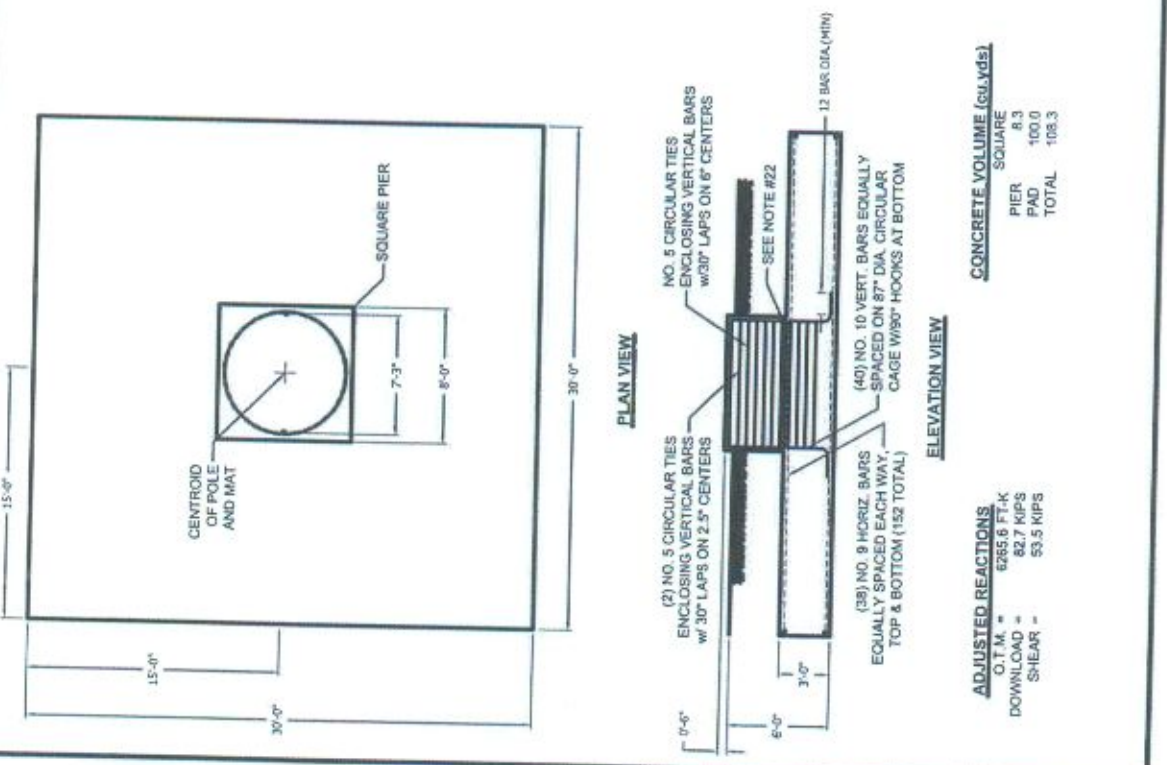
FILE NO.	217435
REVISIONS	
DESCRIPTION	
DATE	
BY	
CHECKED	
APPROVED	

OWNER	DATE
PROJECT	NO.
PROJECT	NO.
PROJECT	NO.

PROJECT	NO.
PROJECT	NO.
PROJECT	NO.

GENERAL NOTES

- FOUNDATION DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SURFACE DATA PROVIDED. FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT THE FOLLOWING DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED.
 - ALLOWABLE SOIL BEARING PRESSURE AT 6 FT DEPTH = 6850 PSF.
 - GROUND WATER TABLE IS AT OR BELOW FOUNDATION DEPTH.
 - MAXIMUM FROST PENETRATION DEPTH LESS THAN FOUNDATION DEPTH.
- WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, SAFETY REGULATIONS AND UNLESS OTHERWISE NOTED, THE LATEST REVISION OF ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.
- CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE STATE REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
- PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR RESISTANCE TO LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. AS A MINIMUM, CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI IN 28 DAYS.
- MAXIMUM SIZE OF AGGREGATE SHALL NOT EXCEED SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR 1/3 CLEAR DISTANCE BETWEEN REINFORCING. MAXIMUM SIZE MAY BE INCREASED TO 2/3 CLEAR DISTANCE PROVIDED WORKABILITY AND METHODS OF CONSOLIDATION SUCH AS VIBRATING WILL PREVENT HONEYCOMBS OR VOIDS.
- REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED. SPLICES IN REINFORCEMENT SHALL NOT BE ALLOWED UNLESS OTHERWISE INDICATED.
- WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
- MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES (76 MM) UNLESS OTHERWISE NOTED. APPROVED SPACERS SHALL BE USED TO INSURE A 3 INCH (76 MM) MINIMUM COVER ON REINFORCEMENT.
- CONCRETE COVER FROM TOP OF FOUNDATION TO END OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 3 INCHES (76MM) NOR BE LESS THAN 2 INCHES (51MM).
- FOUNDATION DESIGN ASSUMES STRUCTURAL BACKFILL TO BE COMPACTED IN 8 INCH (200 MM) MAXIMUM LAYERS TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. ADDITIONALLY, STRUCTURAL BACKFILL MUST HAVE A MINIMUM COMPACTED UNIT WEIGHT OF 110 POUNDS PER CUBIC FOOT (17 KN/M3).
- FOUNDATION DESIGN HAS BEEN BASED ON GEOTECHNICAL REPORT NO. 64256L39272 DATED 10/20/15 BY TOWER ENGINEERING PROFESSIONALS, INC.
- GEOTECHNICAL DEPTH INDICATED IS BASED ON THE GRADE LINE DESCRIBED IN THE REFERENCED GEOTECHNICAL REPORT. FOUNDATION MODIFICATION MAY BE REQUIRED IN THE EVENT CUT OR FILL OPERATIONS HAVE TAKEN PLACE SUBSEQUENT TO THE GEOTECHNICAL INVESTIGATION.
- FOUNDATION DESIGN ASSUMES LEVEL GRADE AT STRUCTURE SITE.
- FOUNDATION DESIGN ASSUMES THE RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT CONCERNING VERIFICATION OF SUBSURFACE CONDITIONS ARE IMPLEMENTED PRIOR TO PLACEMENT OF CONCRETE.
- FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITH THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED INSTALLATION PRACTICES.
- FOUNDATION DESIGN ASSUMES INSTALLATION PROCEDURES WILL INCORPORATE THE PROCEDURES RECOMMENDED IN THE REFERENCED GEOTECHNICAL REPORT.
- FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
- FOR FOUNDATION AND ANCHOR TOLERANCES SEE DRAWING A10214.
- LOOSE MATERIAL SHALL BE REMOVED FROM BOTTOM OF EXCAVATION PRIOR TO CONCRETE PLACEMENT. SIDES OF EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
- CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL, AND OTHER OCCURRENCES WHICH MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
- CONCRETE PREFERABLY SHALL BE PLACED AGAINST UNDISTURBED SOIL. WHEN FORMS ARE NECESSARY, THEY SHALL BE REMOVED PRIOR TO PLACING STRUCTURAL BACKFILL.
- CONSTRUCTION JOINTS, IF REQUIRED AT THE BASE OF THE PIERS, MUST BE INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4 INCH (6 MM). FOUNDATION DESIGN ASSUMES NO OTHER CONSTRUCTION JOINTS.
- TOP OF FOUNDATION OUTSIDE LIMITS OF ANCHOR BOLTS SHALL BE SLOPED TO DRAIN WITH A FLOATED FINISH. AREA INSIDE LIMITS OF ANCHOR BOLTS SHALL BE LEVEL WITH A SCRATCHED FINISH.
- EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" X 3/4" (19MM X 19MM) MINIMUM.



NOTE: SEE STRUCTURE ASSEMBLY DRAWING FOR FOUNDATION LAYOUT AND ANCHORAGE EMBEDMENT DRAWING NUMBER.

DRAWING NO. 217435-01-F1
REV: 0

File: W:\Jobs\2016\217435\217435F.out

Contract: 217435

Project: 135' (155' FUTURE) OAH TAPERED STEEL POLE

Date and Time: 3/17/2016 9:54:48 AM

Revision: 0

Site: BRIDGEPORT EVERGREEN ST CT-5020

Engineer: DWG ✓ AA

DESIGN SPECIFICATION

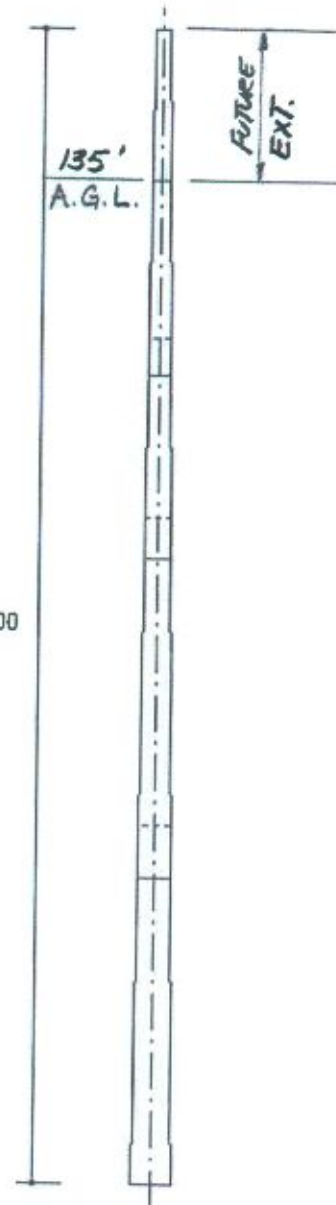
Design Standard: TIA/EIA-222-F-1996

Basic Wind Speed = 85.0 (mph)

Service Wind speed = 50.0 (mph)

Ice thickness = 0.50 (in)

Sct	Length (ft)	Overlap (ft)	Top Dia (in)	Bot Dia (in)	Thick (in)
1	48.00	7.00	50.93	64.00	0.5000
2	48.00	5.58	40.65	53.71	0.4375
3	29.50	4.83	34.76	42.79	0.3125
4	25.92	0.00	29.52	36.58	0.2500
5	20.00	0.00	24.00	29.52	0.1875



MAXIMUM BASE REACTIONS

Download (Kips) 78.4
 Shear (Kips) 50.7
 Moment (Kipsft) 5937.4

ADJUSTED REACTIONS

82.7K
 53.5K
 6265.6'-K

✓

File: W:\Jobs\2016\217435\217435F.out
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Revision: 0
Site: BRIDGEPORT EVERGREEN ST CT-5020
Engineer: DWG

Section A: PROJECT DATA

Project Title: 135' (155' FUTURE) OAH TAPERED STEEL POLE
Customer Name: BLUE SKY TOWER
Site: BRIDGEPORT EVERGREEN ST CT-5020
Contract No.: 217435
Revision: 0
Engineer: DWG
Date: Mar 17 2016
Time: 09:54:28 AM

Design Standard: TIA/EIA-222-F-1996

GENERAL DESIGN CONDITIONS

Start Wind direction: 0.00 (Deg)
End Wind direction: 315.00 (Deg)
Increment wind direction: 45.00 (Deg)
Elevation above ground: 1.00 (ft)
Gust Response Factor Gh: 1.69
Material Density: 490.1 (lbs/ft³)
Young's Modulus: 29000.0 (ksi)
Poisson Ratio: 0.3
Weight Multiplier: 1.10
Allowable Stress Incr. Factor: 1.333
Increase allowable stress: Yes

WIND ONLY CONDITIONS:

Basic Wind Speed: 85.00 (mph)

WIND AND ICE CONDITIONS:

Basic Wind Speed: 85.00 (mph)
Ice Thickness: 0.50 (in)
Ice density: 56.19 (lbs/ft³)
Wind pressure reduction
for iced conditions: 0.75

WIND ONLY SERVICEABILITY CONDITIONS:

Operational Wind Speed: 50.00 (mph)

Analysis performed using: TowerSoft Finite Element Analysis Program

File: W:\Jobs\2016\217435\217435F.out
 Contract: 217435
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 Date and Time: 3/17/2016 9:54:48 AM

Revision: 0
 Site: BRIDGEPORT EVERGREEN ST CT-5020
 Engineer: DWG

Section B: STRUCTURE GEOMETRY

Total Height (ft)	Bottom Diameter (in)	Top Diameter (in)
154.00	64.00	24.00

Sect. No	Length (ft)	Overlap (ft)	Bot Dia. (in)	Top Dia. (in)	Thick. (in)	Sides	Joint Type	Yield Stress (ksi)	Mass (lbs)	Calculated Taper (in/ft)	(in)
1	48.00	7.00	64.00	50.93	0.5000	18-sided	Flange	65.0	16244.0	0.27224	
2	48.00	5.58	53.71	40.65	0.4375	18-sided	Telescopic	65.0	11662.4	0.27224	
3	29.50	4.83	42.79	34.76	0.3125	18-sided	Telescopic	65.0	4212.8	0.27224	
4	25.92	0.00	36.58	29.52	0.2500	18-sided	Telescopic	65.0	2524.7	0.27224	
5 *	20.00	0.00	29.52	24.00	0.1875	18-sided	Flange	65.0	1183.9	0.27600	

Total Mass:

35827.9

* FUTURE EXTENSION

File: W:\Jobs\2016\217435\217435F.out
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Date and Time: 3/17/2016 9:54:48 AM

Revision: 0
Site: BRIDGEPORT EVERGREEN ST CT-5020
Engineer: DWG

Section D: TRANSMISSION LINE DATA

Transmission Lines Position

No.	Bot El (ft)	Top El (ft)	Desc.	Radius (ft)	Az.	Orient.	No.	Shielded	Shielded Lines	Antenna
1	0.00	154.00	3/8" CABLE	3.00	0.00	0.00	1	No	0	
2	0.00	150.00	LDF7P-50A	0.00	0.00	0.00	12	Yes	12	
3	0.00	140.00	LDF7P-50A	0.00	0.00	0.00	12	Yes	12	
4	0.00	130.00	RC2.00-Cnd	0.00	0.00	0.00	4	Yes	4	
5	0.00	120.00	LDF7P-50A	0.00	0.00	0.00	12	Yes	12	
6	0.00	110.00	LDF7P-50A	0.00	0.00	0.00	12	Yes	12	

Transmission Lines Details

No.	Desc.	Width (in)	Depth (in)	Unit Mass (lb/ft)
1	3/8" CABLE	0.38	0.38	1.00
2	LDF7P-50A	2.01	2.01	0.92
3	LDF7P-50A	2.01	2.01	0.92
4	RC2.00-Cnd	2.37	2.37	3.49
5	LDF7P-50A	2.01	2.01	0.92
6	LDF7P-50A	2.01	2.01	0.92

Utilization of the cross-section for TX Lines: 17.05%

File: W:\Jobs\2016\217435\217435F.out
Contract: 217435
Project: 135' (155' FUTURE) OAH TAPERED STEEL POLE
Date and Time: 3/17/2016 9:54:48 AM

Revision: 0
Site: BRIDGEPORT EVERGREEN ST CT-5020
Engineer: DWG

Section F: POINT LOAD DATA

Structure Azimuth from North:0.00

POINT LOADS

No.	Description	Elev. (ft)	Radius (ft)	Azim. (Deg)	Orient. (Deg)	Vertical Offset (ft)	Tx Line	Comments
1	LROD	154.00	0.00	0.0	0.0	0.00		
2	CARRIER	* 150.00	0.00	0.0	0.0	0.00		
3	CARRIER	* 140.00	0.00	0.0	0.0	0.00		
4	CARRIER	130.00	0.00	0.0	0.0	0.00		
5	CARRIER	120.00	0.00	0.0	0.0	0.00		
6	CARRIER	110.00	0.00	0.0	0.0	0.00		

POINT LOADS WIND AREAS AND WEIGHTS

No.	Description	Frontal Bare Area (ft^2)	Lateral Bare Area (ft^2)	Frontal Iced Area (ft^2)	Lateral Iced Area (ft^2)	Weight Bare (Kips)	Weight Iced (Kips)
1	LROD	2.00	2.00	3.00	3.00	0.10	0.20
2	CARRIER	150.00	150.00	190.00	190.00	4.00	5.50
3	CARRIER	150.00	150.00	190.00	190.00	4.00	5.50
4	CARRIER	✓ 180.00	180.00	✓ 220.00	✓ 220.00	5.00 ✓	8.20
5	CARRIER	150.00	150.00	190.00	190.00	4.00	5.50
6	CARRIER	150.00	150.00	190.00	190.00	4.00	5.50

* FUTURE LOADS

File: W:\Jobs\2016\217435\217435F.out

Contract: 217435

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Site: BRIDGEPORT EVERGREEN ST CT-5020

Engineer: DWG

Section G: WIND LOAD DATA

Load Combination Wind Only

Wind Direction 0.00 (deg)

Pole Wind Data

Element	Top Elev. (ft)	Bot. Elev. (ft)	Top Diam. (in)	Bot. Diam. (in)	Top Kz	Top Press. (psf)	Bot. Kz	Bot. Press. (psf)
30	154.00	150.67	24.00	24.92	1.56	48.62	1.55	48.32
29	150.67	147.33	24.92	25.84	1.55	48.32	1.54	48.02
28	147.33	144.00	25.84	26.76	1.54	48.02	1.53	47.71
27	144.00	140.67	26.76	27.68	1.53	47.71	1.52	47.39
26	140.67	137.33	27.68	28.60	1.52	47.39	1.51	47.07
25	137.33	134.00	28.60	29.52	1.51	47.07	1.50	46.74
24	134.00	129.78	29.52	30.67	1.50	46.74	1.48	46.32
23	129.78	125.57	30.67	31.82	1.48	46.32	1.47	45.89
22	125.57	121.35	31.82	32.96	1.47	45.89	1.46	45.45
21	121.35	117.13	32.96	34.11	1.46	45.45	1.44	44.99
20	117.13	112.92	34.11	35.26	1.44	44.99	1.43	44.53
19	112.92	108.08	35.26	36.58	1.43	44.53	1.41	43.98
18	108.08	104.27	36.08	37.11	1.41	43.98	1.40	43.54
17	104.27	100.45	37.11	38.15	1.40	43.54	1.38	43.08
16	100.45	96.63	38.15	39.19	1.38	43.08	1.37	42.61
15	96.63	92.82	39.19	40.23	1.37	42.61	1.35	42.13
14	92.82	89.00	40.23	41.27	1.35	42.13	1.33	41.63
13	89.00	83.42	41.27	42.79	1.33	41.63	1.31	40.87
12	83.42	76.33	42.17	44.09	1.31	40.87	1.28	39.86
11	76.33	69.25	44.09	46.02	1.28	39.86	1.24	38.78
10	69.25	62.17	46.02	47.95	1.24	38.78	1.21	37.62
9	62.17	55.08	47.95	49.88	1.21	37.62	1.17	36.37
8	55.08	48.00	49.88	51.81	1.17	36.37	1.12	34.99
7	48.00	41.00	51.81	53.71	1.12	34.99	1.07	33.48
6	41.00	34.17	52.84	54.70	1.07	33.48	1.02	31.83
5	34.17	27.33	54.70	56.56	1.02	31.83	1.00	31.20
4	27.33	20.50	56.56	58.42	1.00	31.20	1.00	31.20
3	20.50	13.67	58.42	60.28	1.00	31.20	1.00	31.20
2	13.67	6.83	60.28	62.14	1.00	31.20	1.00	31.20
1	6.83	0.00	62.14	64.00	1.00	31.20	1.00	31.20

Projected and Wind Areas

Element	Pole Proj Area (ft^2)	Tx-Line Proj Area (ft^2)	Ladder Proj Area (ft^2)	Ra	Top Drag Factor	Bot Drag Factor
30	6.90	0.10	0.00	0.02	0.65	0.65
29	7.16	0.10	0.00	0.01	0.65	0.65
28	7.42	0.10	0.00	0.01	0.65	0.65
27	7.68	0.10	0.00	0.01	0.65	0.65
26	7.94	0.10	0.00	0.01	0.65	0.65
25	8.20	0.10	0.00	0.01	0.65	0.65
24	10.74	0.13	0.00	0.01	0.65	0.65
23	11.15	0.13	0.00	0.01	0.65	0.65
22	11.56	0.13	0.00	0.01	0.65	0.65
21	11.97	0.13	0.00	0.01	0.65	0.65
20	12.38	0.13	0.00	0.01	0.65	0.65
19	14.69	0.15	0.00	0.01	0.65	0.65
18	11.82	0.12	0.00	0.01	0.65	0.65
17	12.15	0.12	0.00	0.01	0.65	0.65
16	12.49	0.12	0.00	0.01	0.65	0.65
15	12.83	0.12	0.00	0.01	0.65	0.65

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Contract: 217435

Project: 135' (155' FUTURE) OAH TAPERED STEEL POLE

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Engineer: DWG

14	13.16	0.12	0.00	0.01	0.65	0.65
13	19.86	0.17	0.00	0.01	0.65	0.65
12	25.85	0.22	0.00	0.01	0.65	0.65
11	27.01	0.22	0.00	0.01	0.65	0.65
10	28.16	0.22	0.00	0.01	0.65	0.65
9	29.32	0.22	0.00	0.01	0.65	0.65
8	30.47	0.22	0.00	0.01	0.65	0.65
7	31.25	0.22	0.00	0.01	0.65	0.65
6	31.09	0.21	0.00	0.01	0.65	0.65
5	32.17	0.21	0.00	0.01	0.65	0.65
4	33.24	0.21	0.00	0.01	0.65	0.65
3	34.32	0.21	0.00	0.01	0.65	0.65
2	35.39	0.21	0.00	0.01	0.65	0.65
1	36.47	0.21	0.00	0.01	0.65	0.65

App. Concentrated Loads

Ant.	Description	Qty	Mount	Desc.	Elev. (ft)	CaAc	CaAc	XForce	YForce	ZForce	M-x	M-y	M-z
						X-Dir E-W (ft^2)	Y-Dir N-S (ft^2)	E-W (Kips)	N-S (Kips)	(Kips)	(kipsft)	(kipsft)	(kipsft)
1	LROD				154	0.00	-2.00	0.00	-0.10	-0.10	0.00	0.00	0.00
2	CARRIER				150	0.00	-149.990.00		-7.24	-4.00	0.00	0.00	0.00
3	CARRIER				140	0.00	-149.990.00		-7.10	-4.00	0.00	0.00	0.00
4	CARRIER				130	0.00	-179.980.00		-8.35	-5.00	0.00	0.00	0.00
5	CARRIER				120	0.00	-149.990.00		-6.80	-4.00	0.00	0.00	0.00
6	CARRIER				110	0.00	-149.990.00		-6.63	-4.00	0.00	0.00	0.00

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Engineer: DWG

Section H: STRUCTURE DISPLACEMENT DATA

Load Combination Max Envelope

Wind Direction	Maximum displacements					
Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (deg)	W-E Rot (deg)	Twist Rot (deg)
154.00	101.4	-101.3	-3.5	-5.90	-5.91	0.00
150.67	97.3	-97.2	-3.3	-5.90	-5.91	0.00
147.33	93.2	-93.1	-3.1	-5.90	-5.90	0.00
144.00	89.1	-89.0	-2.9	-5.87	-5.88	0.00
140.67	85.0	-84.9	-2.7	-5.83	-5.84	0.00
137.33	80.9	-80.8	-2.5	-5.77	-5.78	0.00
134.00	76.9	-76.8	-2.4	-5.69	-5.69	0.00
129.78	72.0	-71.9	-2.1	-5.59	-5.60	0.00
125.57	67.1	-67.0	-1.9	-5.46	-5.47	0.00
121.35	62.3	-62.2	-1.7	-5.31	-5.32	0.00
117.13	57.7	-57.6	-1.5	-5.13	-5.14	0.00
112.92	53.2	-53.2	-1.4	-4.94	-4.94	0.00
108.08	48.4	-48.3	-1.2	-4.68	-4.69	0.00
104.27	44.7	-44.6	-1.0	-4.50	-4.50	0.00
100.45	41.2	-41.1	-0.9	-4.30	-4.31	0.00
96.63	37.8	-37.8	-0.8	-4.09	-4.10	0.00
92.82	34.6	-34.6	-0.7	-3.88	-3.89	0.00
89.00	31.6	-31.6	-0.6	-3.67	-3.67	0.00
83.42	27.5	-27.5	-0.5	-3.34	-3.34	0.00
76.33	22.8	-22.7	-0.4	-3.02	-3.03	0.00
69.25	18.5	-18.5	-0.3	-2.71	-2.71	0.00
62.17	14.7	-14.7	-0.2	-2.39	-2.39	0.00
55.08	11.4	-11.4	-0.1	-2.08	-2.08	0.00
48.00	8.5	-8.5	-0.1	-1.77	-1.77	0.00
41.00	6.2	-6.2	-0.1	-1.47	-1.47	0.00
34.17	4.2	-4.2	0.0	-1.21	-1.21	0.00
27.33	2.7	-2.7	0.0	-0.95	-0.95	0.00
20.50	1.5	-1.5	0.0	-0.70	-0.71	0.00
13.67	0.7	-0.7	0.0	-0.46	-0.46	0.00
6.83	0.2	-0.2	0.0	-0.23	-0.23	0.00
0.00	0.0	0.0	0.0	0.00	0.00	0.00

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Engineer: DWG

Section L: STRENGTH ASSESSMENT DATA

Load Combination	Max Envelope					
Wind Direction	Maximum					
Elev.	Bending	Axial	Shear	Total	Allowable	Assess.
(ft)	Stress	Stress	Stress	Stress	Stress	
(ksi)	(ksi)	(ksi)	(ksi)	(ksi)	(ksi)	
154.00	0.00	0.02	0.02	0.04	52.00	0.001
150.67	0.10	0.02	0.02	0.13	52.00	0.002
150.67	0.10	0.30	0.43	0.85	52.00	0.016
147.33	2.69	0.29	0.42	3.06	52.00	0.059
147.33	2.70	0.37	0.53	3.20	52.00	0.061
144.00	5.60	0.35	0.51	6.02	52.00	0.116
144.00	5.82	0.25	0.54	6.14	52.00	0.118
140.67	8.49	0.24	0.53	8.79	52.00	0.169
140.67	8.50	0.42	0.91	9.06	52.00	0.174
137.33	12.95	0.41	0.88	13.45	52.00	0.259
137.33	12.96	0.46	0.98	13.53	52.00	0.260
134.00	17.41	0.45	0.95	17.93	52.00	0.345
134.00	13.15	0.36	0.75	13.57	52.00	0.261
129.78	16.98	0.35	0.72	17.37	52.00	0.334
129.78	16.99	0.53	1.08	17.62	52.00	0.339
125.57	22.53	0.51	1.04	23.11	52.00	0.444
125.57	22.54	0.54	1.06	23.15	52.00	0.445
121.35	27.30	0.52	1.02	27.88	52.00	0.536
121.35	27.32	0.63	1.22	28.03	52.00	0.539
117.13	32.61	0.61	1.18	33.28	52.00	0.640
117.13	32.62	0.67	1.28	33.37	52.00	0.642
112.92	37.67	0.65	1.23	38.38	52.00	0.738
112.92	37.69	0.73	1.35	38.49	52.00	0.740
108.08	35.89	0.66	1.18	36.61	52.00	0.704
104.27	39.65	0.64	1.15	40.34	52.00	0.776
104.27	39.65	0.68	1.16	40.38	52.00	0.777
100.45	42.99	0.66	1.13	43.70	52.00	0.840
100.45	43.00	0.68	1.14	43.73	52.00	0.841
96.63	46.01	0.66	1.11	46.72	52.00	0.898
96.63	46.02	0.69	1.11	46.75	52.00	0.899
92.82	48.66	0.67	1.09	49.36	52.00	0.949
92.82	48.67	0.69	1.09	49.39	52.00	0.950
89.00	51.01	0.68	1.07	51.72	52.00	0.995
89.00	51.02	0.70	1.08	51.76	52.00	<u>0.995</u>
83.42	40.11	0.54	0.76	40.66	52.00	0.782
76.33	42.38	0.51	0.73	42.91	52.00	0.825
76.33	42.38	0.56	0.74	42.96	52.00	0.826
69.25	44.21	0.54	0.71	44.76	52.00	0.861
69.25	44.22	0.57	0.72	44.80	52.00	0.862
62.17	45.68	0.55	0.69	46.24	52.00	0.889
62.17	45.68	0.58	0.70	46.28	52.00	0.890
55.08	46.84	0.56	0.67	47.42	52.00	0.912
55.08	46.85	0.60	0.68	47.46	52.00	0.913
48.00	47.76	0.58	0.65	48.35	52.00	0.930
48.00	47.76	0.61	0.66	48.39	52.00	0.931
41.00	43.99	0.57	0.58	44.58	52.00	0.857
34.17	44.43	0.55	0.56	44.99	52.00	0.865
34.17	44.43	0.60	0.56	45.04	52.00	0.866
27.33	44.73	0.58	0.54	45.32	52.00	0.871
27.33	44.73	0.61	0.55	45.35	52.00	0.872
20.50	44.93	0.59	0.53	45.53	52.00	0.876
20.50	44.93	0.62	0.54	45.56	52.00	0.876
13.67	45.05	0.60	0.52	45.66	52.00	0.878
13.67	45.05	0.63	0.53	45.70	52.00	0.879
6.83	45.12	0.61	0.51	45.74	52.00	0.880
6.83	45.12	0.65	0.51	45.77	52.00	0.880
0.00	45.11	0.63	0.50	45.75	52.00	0.880

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Project: 135' (155' FUTURE) OAH TAPERED STEEL POLE
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Revision: 0
Site: BRIDGEPORT EVERGREEN ST CT-5020
Engineer: DWG

Section M: SECTION PROPERTIES DATA

Elev. (ft)	Diam. (in)	Width (in)	Thick. (in)	W/t	Area (in ²)	S (in ³)
154.0	24.0	3.9	0.188	20.6	14.2	83.29
150.7	24.9	4.0	0.188	21.4	14.7	89.88
150.7	24.9	4.0	0.188	21.4	14.7	89.88
147.3	25.8	4.2	0.188	22.3	15.3	96.71
147.3	25.8	4.2	0.188	22.3	15.3	96.71
144.0	26.8	4.3	0.188	23.2	15.8	103.80
144.0	26.8	4.3	0.188	23.2	15.8	103.80
140.7	27.7	4.5	0.188	24.0	16.4	111.14
140.7	27.7	4.5	0.188	24.0	16.4	111.14
137.3	28.6	4.7	0.188	24.9	16.9	118.73
137.3	28.6	4.7	0.188	24.9	16.9	118.73
134.0	29.5	4.8	0.188	25.8	17.5	126.56
134.0	29.5	4.7	0.250	18.8	23.2	167.68
129.8	30.7	4.9	0.250	19.6	24.1	181.15
129.8	30.7	4.9	0.250	19.6	24.1	181.15
125.6	31.8	5.1	0.250	20.4	25.0	195.14
125.6	31.8	5.1	0.250	20.4	25.0	195.14
121.4	33.0	5.3	0.250	21.2	26.0	209.64
121.4	33.0	5.3	0.250	21.2	26.0	209.64
117.1	34.1	5.5	0.250	22.1	26.9	224.67
117.1	34.1	5.5	0.250	22.1	26.9	224.67
112.9	35.3	5.7	0.250	22.9	27.8	240.22
112.9	35.3	5.7	0.250	22.9	27.8	240.22
108.1	36.6	5.9	0.250	23.8	28.8	258.68
108.1	36.1	5.7	0.313	18.4	35.5	312.85
104.3	37.1	5.9	0.313	18.9	36.5	331.37
104.3	37.1	5.9	0.313	18.9	36.5	331.37
100.5	38.2	6.1	0.313	19.5	37.5	350.42
100.5	38.2	6.1	0.313	19.5	37.5	350.42
96.6	39.2	6.3	0.313	20.1	38.6	370.01
96.6	39.2	6.3	0.313	20.1	38.6	370.01
92.8	40.2	6.5	0.313	20.7	39.6	390.13
92.8	40.2	6.5	0.313	20.7	39.6	390.13
89.0	41.3	6.7	0.313	21.3	40.6	410.79
89.0	41.3	6.7	0.313	21.3	40.6	410.79
83.4	42.8	6.9	0.313	22.1	42.1	441.96
83.4	42.2	6.6	0.438	15.0	57.9	595.27
76.3	44.1	6.9	0.438	15.8	60.6	651.85
76.3	44.1	6.9	0.438	15.8	60.6	651.85
69.3	46.0	7.2	0.438	16.5	63.3	711.00
69.3	46.0	7.2	0.438	16.5	63.3	711.00
62.2	48.0	7.6	0.438	17.3	66.0	772.73
62.2	48.0	7.6	0.438	17.3	66.0	772.73
55.1	49.9	7.9	0.438	18.1	68.7	837.01
55.1	49.9	7.9	0.438	18.1	68.7	837.01
48.0	51.8	8.3	0.438	18.9	71.3	903.87
48.0	51.8	8.3	0.438	18.9	71.3	903.87
41.0	53.7	8.6	0.438	19.6	74.0	972.47
41.0	52.8	8.3	0.500	16.6	83.1	1071.22
34.2	54.7	8.6	0.500	17.3	86.0	1149.09
34.2	54.7	8.6	0.500	17.3	86.0	1149.09
27.3	56.6	9.0	0.500	17.9	89.0	1229.69
27.3	56.6	9.0	0.500	17.9	89.0	1229.69
20.5	58.4	9.3	0.500	18.6	91.9	1313.03
20.5	58.4	9.3	0.500	18.6	91.9	1313.03
13.7	60.3	9.6	0.500	19.3	94.9	1399.09
13.7	60.3	9.6	0.500	19.3	94.9	1399.09
6.8	62.1	10.0	0.500	19.9	97.8	1487.89
6.8	62.1	10.0	0.500	19.9	97.8	1487.89
0.0	64.0	10.3	0.500	20.6	100.8	1579.42

Note: w/t values marked with * (asterisk) indicate width to thickness exceeding maximum allowable values by standards.

Pole Mat Foundation With Raised Pier

3/17/2016
1:36 PM

Project Number	217435	
Engineer	DWG	✓ WA
Axial Download	82.7	kips
Overturing Moment	6265.6	ft-kips ✓
Shear	53.5	kips
Bolt Circle Diameter	70.5	in
Number of Anchor Bolts	20	
Anchor Bolt Diameter	2-1/4"	
Anchor Bolt Length	84	in
Anchor Bolt Projection	12	in
Allowable Soil Pressure	6850	psf
Pier Projection	0.5	feet
Pier Diameter	8	feet
Pad Width	30	feet
Pad Thickness	3	feet
Depth	6	feet
Concrete Volume=	108.5	Cubic Yards

Description: 135' (155' FUTURE) TSP
Customer: BLUE SKY TOWER
Site: BRIDGEPORT EVERGREEN ST CT-5020
6452.85 ft-kips OTM at top of pad
6613.35 ft-kips OTM at bottom of pad

3615 Actual Soil Bearing Pressure/Diagonal Axis OKII ✓

8 ft. minimum pier diameter
✓ 1.74 Factor of Safety to resist OTM OKII

5.8 minimum depth of foundation based on AB length

Concrete f_c'	4500	psi ✓
Rebar Yield Strength	60000	psi
Unit Weight Soil	100	lbs/ft ³
Unit Weight Concrete	150	lbs/ft ³
Concrete Design Load Factor	1.3	
Anchor Bolt Grade	A615 Gr 75	

1.257 Area pad reinforcement required (Inches²/ft)
1.267 Area pad reinforcement provided (Inches²/ft) OKII ✓

#9 Size of pad reinforcement
38 Number of bars in each layer
9.32 Inches Center-Center spacing OKII ✓

14.13 Kips/Ft - Actual Beam Shear
33.55 Kips/Ft - Beam Shear Capacity OKII ✓

0.19 ksi - Actual Punching Shear Stress
0.23 ksi - Punching Shear Stress Capacity OKII ✓

Use 30 ft. x 30 ft. x 3 ft. thick pad bearing 6 ft. below grade with a 8 ft 50 Pier projecting 6 inches above grade.
Use (38) 29.5 ft long #9 horizontal bars both ways, top and bottom in the pad. (152) total ✓

Total Volume of Concrete required = 108.7 Cubic Yards ✓

Area of Shaft Reinforcement Required = 48.45 ✓
Area of Shaft Reinforcement Provided = 50.8
OKII

#10 Size of Vertical Shaft Reinforcement
40 Minimum Number of Rebars Required
40 Number of Vertical Rebars

✓ Use (40) #10 Vertical Rebars in the pier on a 8" Diameter Cage with 90 degree hooks at bottom.

Use #5 Circular Ties 6" Center on Center for the height of the pier. ✓

SHAFT REINFORCING PROGRAM VER. 91.7

DESIGNED BY: DWG
ENG. FILE NO.: 217435
DATE: 03/17/16

CUSTOMER: BLUE SKY TOWER
DESCRIPTION: BRIDGEPORT EVERGREEN ST CT-5020

INPUT DATA

C = 82.70 Kips	Vc = 53.50 Kips	Mc = 6452.85 Ft-K
T = 0.00 Kips	Vt = 0.00 Kips	Mt = 0.00 Ft-K
Fy = 60.00 Ksi	Fyt = 60.00 Ksi	L.F. = 1.30
H = 96.00 In.	Ds = 84.00 In.	F'c = 4.50 Ksi
U = 1.00	Irs = 1	

SUMMARY OF ANALYSIS

Minimum area of steel req'd. = 48.45 sq.in. (Rhomn = 0.0067)
Maximum steel area limit = 579.06 sq.in. (Rhomax = 0.0800)

CIRCULAR TIE DATA

$V_u < .85 * V_c / 2$, shear reinforcement is not required.

Use maximum tie spacing specified in A.C.I. 318
Section 7.10.5 for compression reinforcement.

DEVELOPMENT LENGTH MODIFIERS FOR TENSION AND COMPRESSION BAR DEVELOPMENT

DLMT = MODIFIER FOR TENSION DEVELOPMENT = .667

DLMC = MODIFIER FOR COMPRESSION DEVELOPMENT = .294

REQUIRED Ld = MODIFIER * BASIC Ld * ACI 318 MODIFIERS (12 in. min.)



ISSUED ENGINEER	DATE

REV. #	DATE	DESCRIPTION
0	08/14/15	ISSUED FOR REVIEW
1	04/12/16	REVISED PER COMMENTS
2	04/20/16	REVISED PER COMMENTS
3	04/20/16	REVISED PER COMMENTS

PROJECT NO.	22044	DATE	04/15/16
CT-NO.	10000	SCALE	AS SHOWN

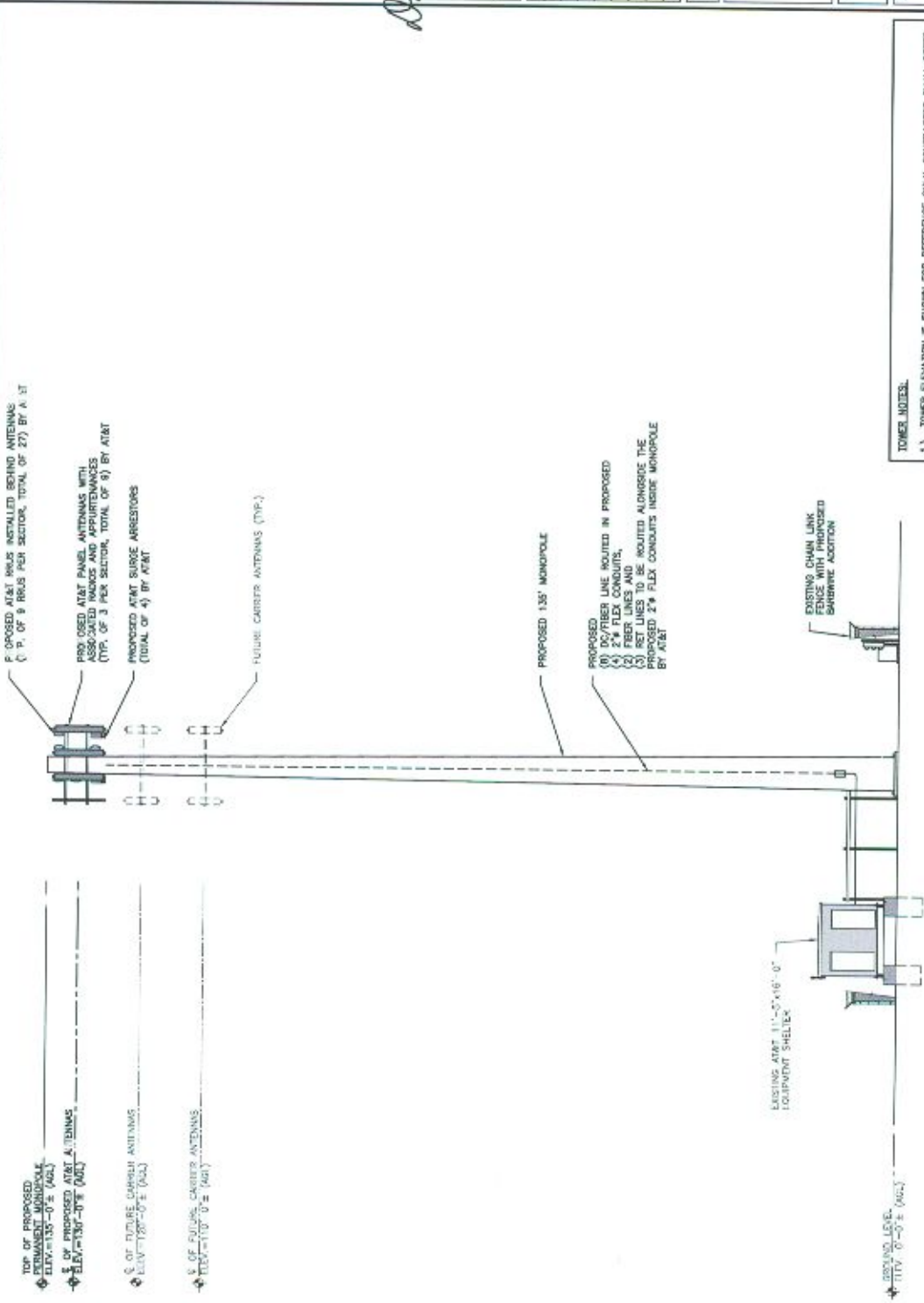
SIT. NAME:
EVERGREEN STREET

SITE NUMBER:
CT-5020

SIT. ADDRESS:
220 EVERGREEN STREET
BRIDGEPORT, CT 06606

SHEET TITLE:
ELEVATION

SHEET NO.:
A-1



- TOWER NOTES:**
- 1.) TOWER ELEVATION IS GIVEN FOR REFERENCE ONLY. CONTRACTOR SHALL REFER TO TOWER MANUFACTURER DRAWINGS FOR COMPLETE INSTALLATION AND BILL OF MATERIAL INFORMATION.
 - 2.) TOWER MINIMUM DESIGN SPECIFICATIONS SHALL BE IN ACCORDANCE WITH ANSI/TIA-222-F STRUCTURAL STANDARDS FOR TOWER MANUFACTURING, REVISION F AND GOVERNING FEDERAL, STATE AND LOCAL CODE REQUIREMENTS.
 - 3.) TOWER MANUFACTURER SHALL BE RESPONSIBLE FOR DESIGN AND STRUCTURAL COMPONENTS OF THE TOWER.
 - 4.) FINAL UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE LOCAL UTILITIES.



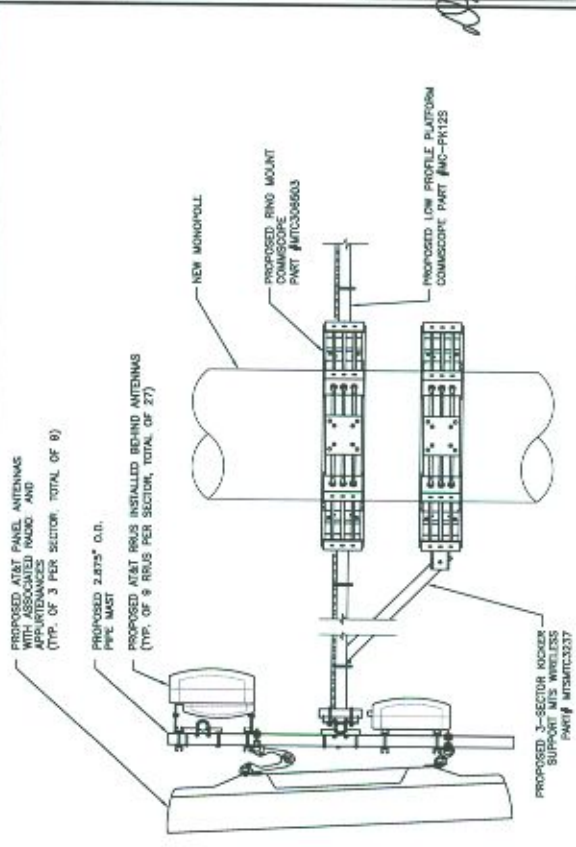


REV #	DATE	DESCRIPTION
1	04/25/16	REVISED PER COMMENTS
2	04/25/16	REVISED PER COMMENTS
3	04/25/16	REVISED PER COMMENTS
4	04/25/16	REVISED PER COMMENTS
5	04/25/16	REVISED PER COMMENTS
6	04/25/16	REVISED PER COMMENTS
7	04/25/16	REVISED PER COMMENTS
8	04/25/16	REVISED PER COMMENTS
9	04/25/16	REVISED PER COMMENTS
10	04/25/16	REVISED PER COMMENTS
11	04/25/16	REVISED PER COMMENTS
12	04/25/16	REVISED PER COMMENTS
13	04/25/16	REVISED PER COMMENTS
14	04/25/16	REVISED PER COMMENTS
15	04/25/16	REVISED PER COMMENTS
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17	04/25/16	REVISED PER COMMENTS
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48	04/25/16	REVISED PER COMMENTS
49	04/25/16	REVISED PER COMMENTS
50	04/25/16	REVISED PER COMMENTS

SHEET NO. 1
 PROJECT NO. CT-5020
 PROJECT NAME: EVERGREEN STREET
 SITE NUMBER: CT-5020

SHEET NO. 2
 PROJECT NO. CT-5020
 PROJECT NAME: EVERGREEN STREET
 SITE NUMBER: CT-5020

SHEET NO. 3
 PROJECT NO. CT-5020
 PROJECT NAME: EVERGREEN STREET
 SITE NUMBER: CT-5020



ANTENNA MOUNTING DETAIL 2
 22.34 SCALE: N.T.S.

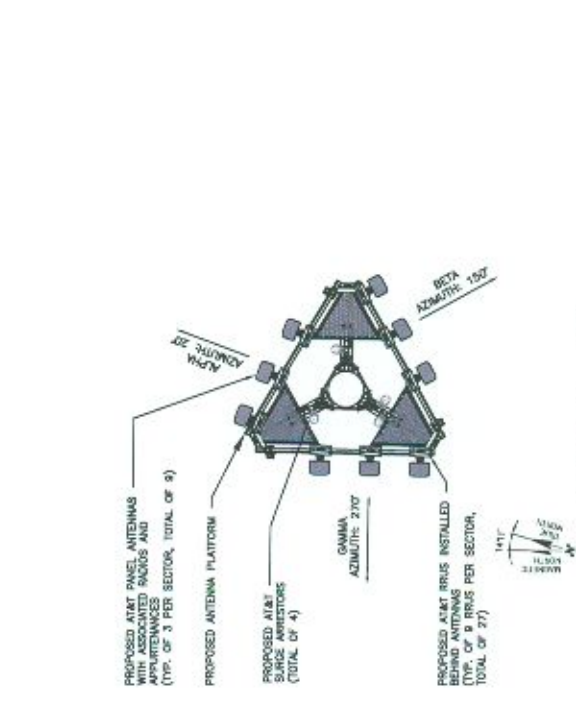


RRUS -	L	W	D
11	19.7"	17.0"	7.3"
12	20.4"	18.5"	7.5"
32	27.2"	12.1"	7.0"
E2	20.4"	18.5"	7.5"
A2	15.4"	15.2"	3.4"

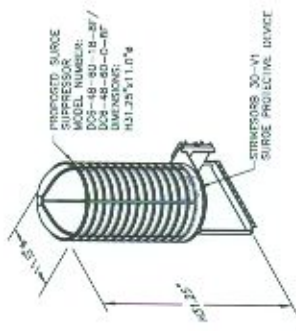
PROPOSED RRUS REFER TO THE FINAL RRUS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE: MOUNT PER MANUFACTURER'S SPECIFICATIONS.

RRU DETAIL 4
 22.34 SCALE: N.T.S.



ANTENNA PLAN 1
 22.34 SCALE: N.T.S.



NOTE: MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL 3
 22.34 SCALE: N.T.S.



David P. Hann

STATE OF CONNECTICUT
 REGISTERED PROFESSIONAL ENGINEER
 LICENSE NO. 10000
 EXPIRES 12/31/2018

ISSUED FOR: _____ DATE: _____
 LICENSED PROVIDER: _____ DATE: _____

NO.	DATE	DESCRIPTION
1	04/20/18	ISSUED FOR COMMENTS
2	04/20/18	REVISED FOR COMMENTS
3	04/20/18	REVISED FOR COMMENTS
4	04/20/18	REVISED FOR COMMENTS
5	04/20/18	REVISED FOR COMMENTS
6	04/20/18	REVISED FOR COMMENTS
7	04/20/18	REVISED FOR COMMENTS
8	04/20/18	REVISED FOR COMMENTS
9	04/20/18	REVISED FOR COMMENTS
10	04/20/18	REVISED FOR COMMENTS

PROJECT NO.	CT-5020
ISSUED BY	DAVID P. HANN
DATE	04/20/18
SCALE	AS SHOWN

SITE NAME:
EVERGREEN STREET

SITE NUMBER:
CT-5020

SITE ADDRESS:
 228 EVERGREEN STREET
 BRIDGEPORT, CT 06605

SHEET TITLE:
RF SYSTEM SCHEDULE AND B.O.M.

SHEET NO.:
RF-1

RF SYSTEM SCHEDULE & B.O.M.

RFR INFORMATION		ANTENNA INFORMATION				FEED		RAD GIR		FITTERS		MECHANICAL		ELECTRICAL	
MAKE	MODEL	QTY.	SECTOR	POSITION	MODEL	FEED	AZ/MUTH	(AG)	FIBER/POWER LENGTH	TYPE	DOWNHILL	DOWNHILL	DOWNHILL	DOWNHILL	DOWNHILL
ERICSSON	RHUS-11	3	IA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-12	2	ALPHA	OPA-65H-LCU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	A-2	2	ALPHA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	E-2	1	ALPHA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-32	1	ALPHA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-11	3	IB	OPA-65H-LCU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-12	2	BETA	OPA-65H-LCU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	A-2	2	BETA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	E-2	1	BETA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-32	1	BETA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-11	3	IC	OPA-65H-LCU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-12	2	GAMMA	OPA-65H-LCU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	A-2	2	GAMMA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	E-2	1	GAMMA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'
ERICSSON	RHUS-32	1	GAMMA	HPA-65R-BLU-H8	BOTTOM	20'	130° ±	189' ±	FIBER/CD	0'	0'	0'	0'	0'	0'

REFER TO THE MOST UPDATE RF DATA SHEET FOR FINAL ANTENNA CONFIGURATION

RF SYSTEM SCHEDULE & B.O.M.

2018 SCALE: N.T.S.

1
RF-1



REV. #	DATE	DESCRIPTION
1	04/20/16	ISSUED FOR CONSTRUCTION
2	04/20/16	REVISED FOR COMMENTS
3	04/20/16	REVISED FOR COMMENTS
4	04/20/16	REVISED FOR COMMENTS
5	04/20/16	REVISED FOR COMMENTS

SITE NAME:
EVERGREEN STREET

SITE NUMBER:
CT-5020

SITE ADDRESS:
220 EVERGREEN STREET
BRIDGEPORT, CT 06606

SHEET TITLE:
**GENERAL SIGNAGE
DETAILS**

SHEET NO.:
RF-2

STRUCTURE TYPE	VERT SIGN #	HORIZ SIGN #	VERT SIGN #	HORIZ SIGN #	NOTES	CAUTION 1-2
TOWERS						
MONOPOLE / MONOPILE / MASTPOLL	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
SEE TOWER / TOWER WITH VALVE	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
LIGHT POLES / TOWER Poles	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
UTILITY WOOD POLES (UP)	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
MONOPOLLS MOUNTED ON NON-PN POLES	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
ROOF TOPS	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
AT ANTENNA TOWNS OF THE ROOF	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
CONCRETE ANTENNAS	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
ANTENNAS MOUNTED INSIDE OUTSIDE THE BUILDING	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
ANTENNAS MOUNTED ON ROOF STRUCTURE	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
NAVIGATION AREA IS WITH ANTENNA	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
NAVIGATION IS WITH ANTENNA	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
CHURCH STEEPLES	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND
WATER TANKS	ADVANCE TO THE SIGNAGE TO THE TOWER	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	ON THE SIDE OF ANTENNA	AT THE HEIGHT OF SIGNAGE, SIGNAGE SHALL BE PLACED ON THE GROUND



ALERTING SIGNS

S T A Y B A C K 3 F E E T F R O M A N T E N N A



ALERTING SIGNS



INFO SIGN #5



INFO SIGN #3



INFO SIGN #2



ALERTING SIGN



INFO SIGN #1

NOTES: THE HEIGHT OF SIGNAGE SHALL BE AS LOW AS POSSIBLE TO THE OUTER EDGE OF THE EXTENDED OFF AREA OF THE MAIN ANTENNAS OF THE TOWER. THE HEIGHT OF SIGNAGE SHALL BE AS LOW AS POSSIBLE TO THE OUTER EDGE OF THE EXTENDED OFF AREA OF THE MAIN ANTENNAS OF THE TOWER.

1. THE HEIGHT OF SIGNAGE SHALL BE AS LOW AS POSSIBLE TO THE OUTER EDGE OF THE EXTENDED OFF AREA OF THE MAIN ANTENNAS OF THE TOWER.

2. THE HEIGHT OF SIGNAGE SHALL BE AS LOW AS POSSIBLE TO THE OUTER EDGE OF THE EXTENDED OFF AREA OF THE MAIN ANTENNAS OF THE TOWER.

3. THE HEIGHT OF SIGNAGE SHALL BE AS LOW AS POSSIBLE TO THE OUTER EDGE OF THE EXTENDED OFF AREA OF THE MAIN ANTENNAS OF THE TOWER.

