ROBINSON & COLE LLP

ORIGINAL

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

June 3, 2011

David Martin
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **EM-VER-034-100420 – Cellco Partnership d/b/a Verizon Wireless**
24 Hospital Avenue, Danbury, Connecticut

Dear Mr. Martin:

On May 26, 2010, the Siting Council acknowledged receipt of Cellco's notice of intent to modify the above-referenced telecommunications facility. This modification involved the replacement of Cellco's twelve (12) existing antennas with twelve (12) newer model antennas.

As a condition of this acknowledgement, Cellco was required to provide the Council with a letter from a Professional Engineer certifying that the tower reinforcement was completed in accordance with the modification plans filed with the Council. Attached is a Tower Modification Certification Letter verifying this fact.

If you have any questions regarding any of these materials, please do not hesitate to contact me or Rachel Mayo.

Sincerely,

Kenneth C. Baldwin

Attachment
Copy to:
Sandy M. Carter
Brian Ragozzine
Mark Gauger

CENTEK engineering

Centered on Solutions℠

June 2, 2011

Mr. Mark Gauger
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

Re: Exiting Telecommunications Tower Modification Certification Letter

Project:	**Verizon ~ Danbury** 24 Hospital Avenue Danbury, Connecticut
Engineer:	**Centek Engineering** 63-2 North Branford Road Branford, CT 06405
Contractor:	**Construction Services of Branford** 63-2 North Branford Road Branford, CT 06405

Centek Project No.: 10179.CO24

Dear Mr. Gauger,

We are providing this "Existing Telecommunications Tower Modification Certification Letter" with regard to the antenna upgrade by Verizon Wireless at the above referenced project.

The following are the basis for substantiating compliance with the design documents prepared by Centek Engineering:

- Review of the structural letter prepared by Centek Engineering dated 4/16/2010.
- Review of the reinforcement drawings SSK-1 through SSK-5 prepared by Centek Engineering dated 4/9/2010.
- Field observations by Centek personnel of antenna installation on 6/1/2011 confirming compliance with the above referenced documents.

The work under this Contract has been reviewed and found, to the Engineer's best knowledge, information and belief, to be completed in general compliance with the documents referenced above.

Sincerely,

Carlo F. Centore, PE
Principal ~Structural Engineer

CC: Rachel Mayo, Tim Parks,

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

May 26, 2010

Kenneth C. Baldwin
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-034-100420-** Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 24 Hospital Avenue, Danbury, Connecticut.

Dear Attorney Baldwin:

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

- The antenna mount frame shall be reinforced per drawings SSK-1 through SSK-5 of the structural certification letter dated April 16, 2010 prior to the antenna swap; and

- Not more than 45 days after completion of construction, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the reinforcements have been properly completed.

The proposed modifications are to be implemented as specified here and in your notice dated April 20, 2010, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

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

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Mark D. Boughton, Mayor, City of Danbury
Dennis Elpern, City Planner, City of Danbury
Danbury Hospital

ROBINSON & COLE LLP

EM-VER-034-100420

KENNETH C. BALDWIN

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ORIGINAL

April 20, 2010

Via Hand Delivery

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
Hospital Avenue, Danbury, Connecticut

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility on the roof at Danbury Hospital, off Hospital Avenue in Danbury. The building is owned by Danbury Hospital, Inc. The Council approved Cellco's use of the existing facility in 1987 through Docket No. 79 and, therefore, remains under the Council's exclusive jurisdiction. Cellco now intends to modify its installation by replacing all of its existing antennas with four (4) model DB846F65ZAXY cellular antennas; two (2) model DB846H80E-SX cellular antennas; three (3) model MG D3-800T0 PCS antennas; two (2) model P65-16-XL-2 LTE antennas; and one (1) model BXA-70063/6CF LTE antenna, all at the same height and in the same location as the existing antennas. Attached behind Tab 1 are the specifications for the new antennas.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mark D. Boughton, Mayor for the City of Danbury. A copy of this letter is also being sent to Danbury Hospital, Inc.

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

1. The proposed modifications will not result in any increase in the height of the existing building. Cellco's antennas will be located at the same height and in the same location as the existing antennas.

2. The proposed modifications will not involve any modifications to associated equipment and, therefore, will not require the extension of the site boundaries.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A cumulative power density table for Cellco's modified facility is included behind Tab 2.

Also included is a Structural Certification Letter confirming that the building can support Cellco's proposed antenna modifications, with reinforcement of the existing antenna mount frames. (See Tab 3).

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Mark D. Boughton, Danbury Mayor
Danbury Hospital, Inc.
Sandy M. Carter

ANDREW®

Vertically Polarized Directed Dipole® Panel Antennas

806 - 960 MHz

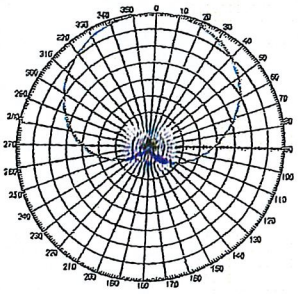
65° HORIZONTAL BEAMWIDTH

HORIZONTAL BEAMWIDTH	65°	65°	65°
FREQUENCY RANGE	806-960 MHz 14.5 & 14.8 dBd / 0° Tilt	806-896 MHz 14.5 dBd / 0° Tilt	806-896 MHz 14.3 dBd / 5° Tilt
MODEL	DB846F65ZAXY	DB846H65E-SX	846H65T5E-SX
TYPE	Directed Dipole®, No Screen	Directed Dipole®	Directed Dipole®
ELECTRICAL SPECIFICATIONS			
Frequency Range (MHz)	806-896	870-960	806-896	806-896
Gain (dBd/dBi)	14.5 / 16.6	14.8 / 16.9	14.5 / 16.6	14.3 / 16.4
Horizontal Beamwidth (Deg.)	65	60	65	65
Elevation Beamwidth (Deg.)	11	10.5	11	10.5
USLS (dB)	>15	>15	N/A	N/A
Null Fill (dB) – Below Peak	N/A	N/A	N/A	N/A
Beam Tilt (Deg.)	0	0	0	5
VSWR	<1.33:1	<1.33:1	<1.5:1	<1.5:1
Front-To-Back Ratio (dB)	40	40	30	40
Isolation (dB)	N/A	N/A	N/A	N/A
Max. Input Power (Watts)	500	500	500	500
Polarization	Vertical	Vertical	Vertical	Vertical
Connector Location	Back	Back	Back	Back
Connector Type	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female
Optional Connectors	N/A	N/A	N/A	N/A
MECHANICAL SPECIFICATIONS				
Length (inch/mm)	72 / 1,829	72 / 1,829	72 / 1,829	72 / 1,829
Width (inch/mm)	10 / 254	10 / 254	20.5 / 521	20.5 / 521
Depth (inch/mm)	8.5 / 216	8.5 / 216	9 / 229	9 / 229
Net Weight (lbs/kg)	21 / 9.5	21 / 9.5	24 / 10.9	24 / 10.9
Max. Flat Plate Area (ft²/m²)	1.61 / 0.15	1.61 / 0.15	4.95 / 0.46	4.95 / 0.46
Max. Wind Load at 100 mph (lbf/N)	87 / 386	87 / 386	273 / 1,214	273 / 1,214
Max. Wind Speed (mph/kmh)	125 / 201	125 / 201	125 / 201	125 / 201
Radome Material	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant
Reflector Material	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum
Radiator Material	Aluminum	Aluminum	Brass	Brass
Hardware Material	Galvanized Steel	Galvanized Steel	Galvanized Steel	Galvanized Steel
Color	Light Gray	Light Gray	Light Gray	Light Gray
Std. Mounting Hardware	DB380	DB380	DB380	DB380
Optional Downtilt Kit	DB5083	DB5083	DB5083	DB5083
Optional Special Mounting	DB5084-AZ	DB5084-AZ	DB5084-AZ	DB5084-AZ

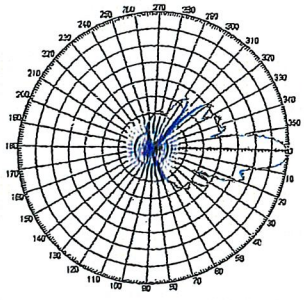
Specifications are subject to change. Please see our website for the latest information.

DB846F65ZAXY

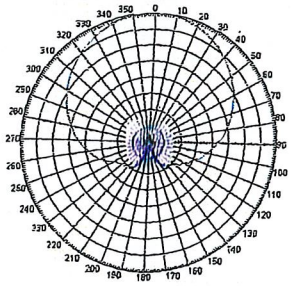
Azimuth Pattern

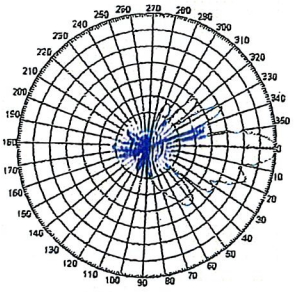


Elevation Pattern



DB846H65E-SX





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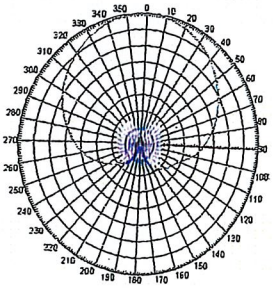
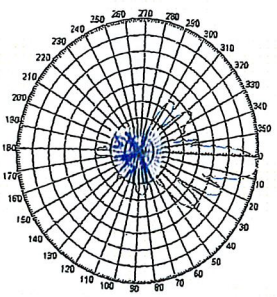




Scale: 10° radials, 5 dB per division

Vertically Polarized Directed Dipole® Panel Antennas

80° HORIZONAL BEAMWIDTH

ANDREW®

806 - 960 MHz

HORIZONTAL BEAMWIDTH	80°		80°	80°
FREQUENCY RANGE	806-960 MHz		806-896 MHz	806-896 MHz
	12.3 & 12.5 dBd / 6° Tilt		12.5 dBd / 0-16° Tilt	14 dBd / 0° Tilt
MODEL	844H80T6E-XY		844G80VTA-SX	DB846H80E-SX
TYPE	Directed Dipole®		Directed Dipole®	Directed Dipole®
ELECTRICAL SPECIFICATIONS				
Frequency Range (MHz)	806-896	870-960	806-896	806-896
Gain (dBd/dBi)	12.3 / 14.4	12.5 / 14.6	12.5 / 14.6	14 / 16.1
Horizontal Beamwidth (Deg.)	80	80	80	80
Elevation Beamwidth (Deg.)	15	15	16	10
USLS (dB)	>15	>15	>15	N/A
Null Fill (dB) – Below Peak	N/A	N/A	N/A	N/A
Beam Tilt (Deg.)	6	6	0-16	0
VSWR	<1.5:1	<1.5:1	<1.4:1	<1.5:1
Front-To-Back Ratio (dB)	40	40	35	40
Isolation (dB)	N/A	N/A	N/A	N/A
Max. Input Power (Watts)	500	500	500	500
Polarization	Vertical	Vertical	Vertical	Vertical
Connector Location	Back	Back	Back	Back
Connector Type	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female
Optional Connectors	N/A	N/A	N/A	N/A
MECHANICAL SPECIFICATIONS				
Length (inch/mm)	48 / 1,219	48 / 1,219	48 / 1,219	72 / 1,829
Width (inch/mm)	6.5 / 165	6.5 / 165	10 / 254	6.5 / 165
Depth (inch/mm)	8 / 203	8 / 203	8.5 / 216	8 / 203
Net Weight (lbs/kg)	14 / 6.3	14 / 6.3	11.5 / 5.2	16 / 7.2
Max. Flat Plate Area (ft^2/m^2)	1.08 / 0.10	1.08 / 0.10	0.97 / 0.09	1.72 / 0.16
Max. Wind Load at 100 mph (lbf/N)	59 / 262	59 / 262	53 / 233	95.6 / 425
Max. Wind Speed (mph/kmh)	125 / 201	125 / 201	125 / 201	125 / 201
Radome Material	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant
Reflector Material	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum
Radiator Material	Brass	Brass	Aluminum	Brass
Hardware Material	Galvanized Steel	Galvanized Steel	Galvanized Steel	Galvanized Steel
Color	Light Gray	Light Gray	Light Gray	Light Gray
Std. Mounting Hardware	DB380	DB380	DB380	DB380
Optional Downtilt Kit	DB5083	DB5083	DB5083	DB5083
Optional Special Mounting	DB5084-AZ	DB5084-AZ	DB5084-AZ	DB5084-AZ

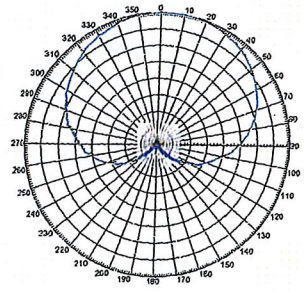
Specifications are subject to change. Please see our website for the latest information.

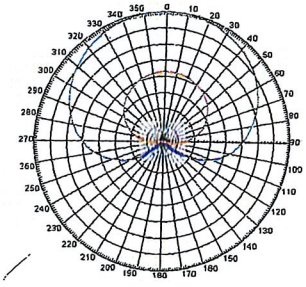
844H80T6E-XY

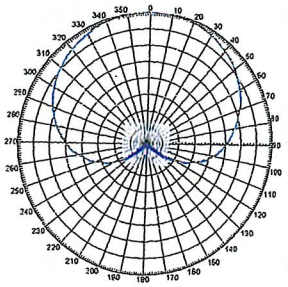
844G80VTA-SX

DB846H80E-SX

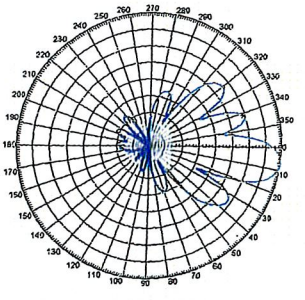
Azimuth Pattern

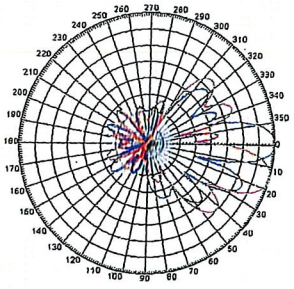


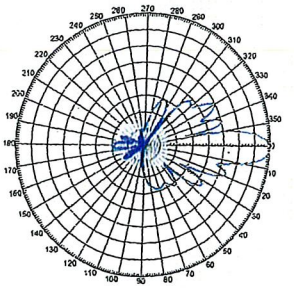




Elevation Pattern







Scale: 10° radials, 5 dB per division

XPol

VERTICAL Directed Dipole®

VERTICAL Panel

Omni

Yagi

SINGLE-BAND PANEL ANTENNA

BROADBAND 1700-2170 MHZ

MGD3-800TX

1710-1880	1850-1990	1920-2170
H66º V7.2º	H64º V6.6º	H63º V6.3º
Fixed Tilt 0º2,º4,º6,º	Fixed Tilt 0º2,º4,º6,º	Fixed Tilt 0º2,º4,º6,º

ELECTRICAL SPECIFICATIONS

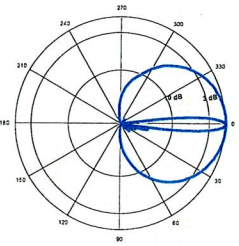
BROADBAND *1710-2170 MHz*

Antenna Model	MGD3-800TX		
Polarization	± 45º		
Frequency	1710 - 1880	1850 - 1990	1920 - 2170
Horizontal Beamwidth	66º	64º	63º
Vertical Beamwidth	7.2º	6.6º	6.3º
Gain (dBi)	17.9	18	18.5
Vertical Electrical Tilt	FIXED 0º, 2º, 4º, 6º	FIXED 0º, 2º, 4º, 6º	FIXED 0º, 2º, 4º, 6º
Upper Sidelobe Suppression for the 1st lobe above main beam (dB)	20	20	20
Front-to-Back Ratio /Cpol @ ± 20º (dB)	> 30	> 30	> 30
VSWR	< 1.4 : 1	< 1.4 : 1	< 1.4 : 1
Cross Polar Ratio @ ± 60º (dB)	> 10	> 10	> 10
Isolation Between Ports (dB)	> 30	> 30	> 30
Maximum Power Per Input (W)	250		
Intermodulation (dBc)	< - 150		
Impedance (Ω)	50		

MECHANICAL SPECIFICATIONS

Connectors	2 X 7/16 Female
Connector Position	Bottom
Survival Wind Speed mph (km/h)	124 (200)
Front Windload lbs (N) @ 160 km/h	83 (370)
Lateral Windload lbs (N) @ 160 km/h	38 (170)
Radome Color	Grey, paintable
Temperature Range F (ºC)	-67º to 140º (-55º to +60º)
Humidity	100%
Antenna Weight lbs (kg)	15.43 (7)
Antenna Dimension in (mm) H X W X D	53 X 6.29 X 3.54 (1340 X 160 X 90)

H&V Pattern



RYMSA Telecom Group (Headquarters)

RYMSA TELECOM GROUP

www.rymsawireless.com

RYMSA México:

RYMSA Wireless U.S.A.:

P65-16-XL-2 Very Low Broadband Antennas

POLARIZATION: Dual linear ±45°
FREQUENCY (MHz): 698-894
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.0/13.9
TILT: 2
LENGTH: 72"

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	698-894	
Frequency band (MHz)	698-806	806-894
Gain (dBi/dBd)	15.5/13.4	16.0/13.9
Polarization		
Nominal Impedance (Ω)		
VSWR		
Horizontal beam width, -3 dB (°)	68	65
Vertical beam width, -3 dB (°)	10.5	9.5
Electrical down tilt (°)		
Side lobe suppression, vertical 1st upper (dB)	> 15	> 15
Isolation between inputs (dB)	> 30	> 30
Tracking, horizontal plane ±60° (dB)	< 2	< 2
First null fill (dB)	-	-
Vertical beam squint (°)	< 0.5	< 0.5
Front to back ratio (dB)	> 30	> 30
Front to back ratio, total power (dB)	> 25	> 25
Cross polar discrimination (XPD) 0° (dB)	> 15	> 15
Cross polar discrimination (XPD) ±60° (dB)	> 10	> 10
Far field coupling		
IM3, 2xTx@43dBm (dBc)	-153	
IM7, 2xTx@43dBm (dBc)		
Power handling, average per input (W)		
Power handling, average total (W)		

MECHANICAL SPECIFICATIONS*

Connector	2 X 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	72" x 12" x 5" (1829 x 305 x 125)
Mounting	Pre-mounted Tilt Brackets
Weight, with brackets, kg (lbs)	44 (20)
Weight, without brackets, kg (lbs)	33 (15)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1380
Maximum operational wind speed, m/s (mph)	100 (45)
Survival wind speed, m/s (mph)	125 (55)
Lightning protection	DC Ground
Radome material	PVC
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	82" x 16" x 10" (2082 x 400 x 255)
Shipping weight, kg (lbs)	55 (25)
RET	N/A
Brackets	7256.00, 7454.00, 2210.00

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.

Slant ±45° Dual Polarized FET Panel 63° / 14.5 dBd
696-900 MHz

Mechanical specifications

Length	1804	mm	71.0	in
Width	285	mm	11.2	in
Depth	114	mm	4.5	in
Depth with z-bracket	154	mm	6.1	in
Weight [4]	7.9	kg	17.0	lbs
Wind Area Fore/Aft	0.51	m^2	5.5	ft^2
Wind Area Side	0.21	m^2	2.2	ft^2
Max Wind Survivability	>201	km/hr	>125	mph
Wind Load @ 100 mph (161 km/hr)				
Fore/Aft	753	N	169	lbf
Side	351	N	79	lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiber-glass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-160 mm; Ø2.0-6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

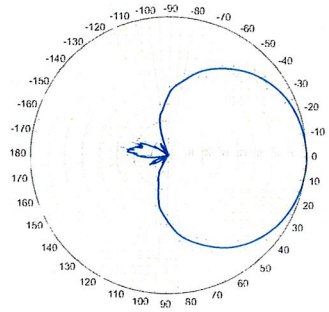
Frequency Range	696-900 MHz
Impedance	50Ω
Connector [3]	NE or E-DIN Female 2 ports / Center
VSWR [1]	≤ 1.35:1
Polarization	Slant ±45°
Isolation Between Ports [1]	< -25 dB
Gain [1]	14.5 dBd 16.5 dBi
Power Rating [2]	500 W
Half Power Angle [1]	
Horizontal Beamwidth	63°
Vertical Beamwidth	11°
Electrical downtilt [5]	0°
Null fill [1]	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

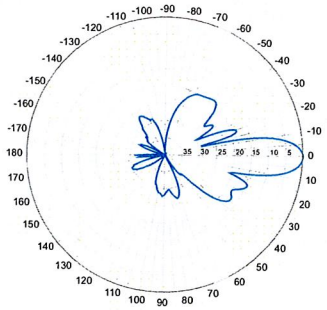
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) Antenna weight does not include brackets.
5) Add'l downtilts may be available. Check website for details.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1]
750 MHz

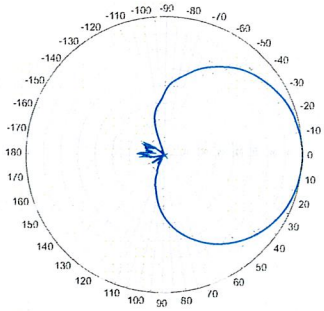


Horizontal

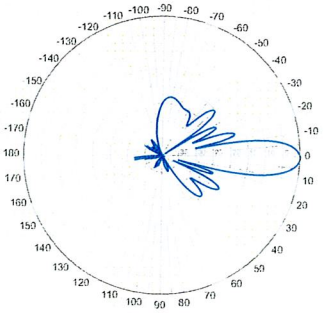


Vertical

850 MHz



Horizontal

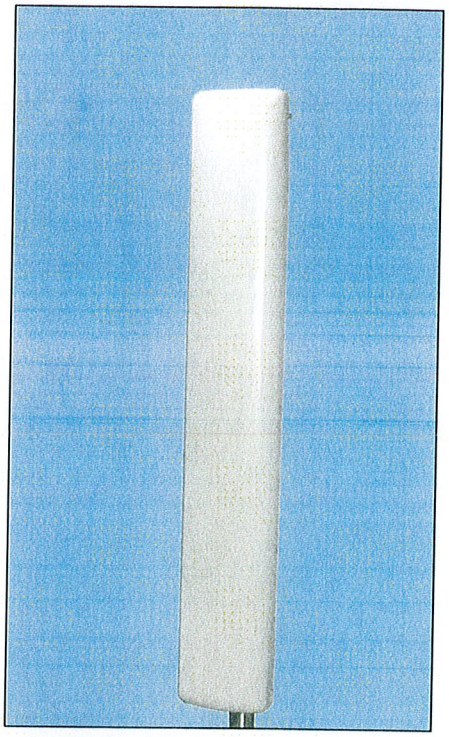


Vertical

696-900 MHz

BXA-70063/6CF __

When ordering replace "__" with connector type.



Featuring our Exclusive 3T Technology™ Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:
This antenna is under a five-year limited warranty for repair or replacement.

Revision Date 01/08/09

815.399.0001 • antel@antelinc.com • www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

	General	Power	Density					
Site Name: Danbury								
Tower Height: Verizon @ 156Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*T-Mobile UMTS	2	845	127	0.0377	2100	1.0000	3.77%	
*T-Mobile GSM	8	202	127	0.0360	1945	1.0000	3.60%	
Verizon	**3**	**387**	**156**	**0.0172**	**1970**	**1.0000**	**1.72%**	
Verizon	**9**	**373**	**156**	**0.0496**	**869**	**0.5793**	**8.56%**	
Verizon	**1**	**649**	**156**	**0.0096**	**757**	**0.4973**	**1.93%**	
								19.58%
* Source: Siting Council								

CENTEK engineering

Centered on Solutions℠

April 16, 2010

Mr. Tom Nolan
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Re: Structural Certification Letter ~ LTE Antenna Upgrade
Verizon Wireless Site Ref ~ Danbury Hospital
24 Hospital Avenue,
Danbury, CT 06810

Natcomm Project No. 10001.CO45

Dear Mr. Nolan,

Centek Engineering, Inc. has reviewed the proposed Verizon Wireless LTE antenna upgrade at the above referenced site. The purpose of the review is to determine the structural adequacy of the existing eight (8) story,152-ft +/- tall host building to support the proposed modified antenna configuration. The existing antenna installation consists of four (4) independent steel antenna support frames connected to the roof top mounted steel support structure of the host building. The review considered the effects of wind load, dead load, ice load and seismic forces in accordance with TIA/EIA-222-F and the 2005 Connecticut State Building Code. Visual verification of the existing antenna installation was conducted by Centek Engineering personnel on March 04, 2010.

The existing, proposed and future Verizon Wireless loads considered in this analysis consist of the following:

- Verizon (Existing to Remain):
  Coax: Twelve (12) 1-5/8in dia. coaxial cables routed within existing roof mounted cable trays.
- Verizon (Existing to Remove):
  Antennas: Six (6) Swedcom ALP9212-N and six (6) Andrew DB948F85T2E-M panel antennas mounted to existing antenna support frames with a RAD center elevation of 156-ft +/- AGL.
- **Verizon (Proposed):**
  Antennas: One (1) Antel BXA 70063/6CF, two (2) Powerwave P65-16-XL-2, two (2) Andrew DB846H80E-SX, four (4) Andrew DB846F65ZAXY and three (3) RYMSA MGD3-800T0 panel antennas mounted to the modified antenna frames with a RAD center elevation of 156-ft +/- AGL.
  Coaxial Cables: Six (6) 1-5/8" dia. coaxial cables.

CENTEK engineering, INC
Structural Certification Letter
Verizon Wireless ~ Danbury Hospital
24 Hospital Avenue,
Danbury, CT 06810

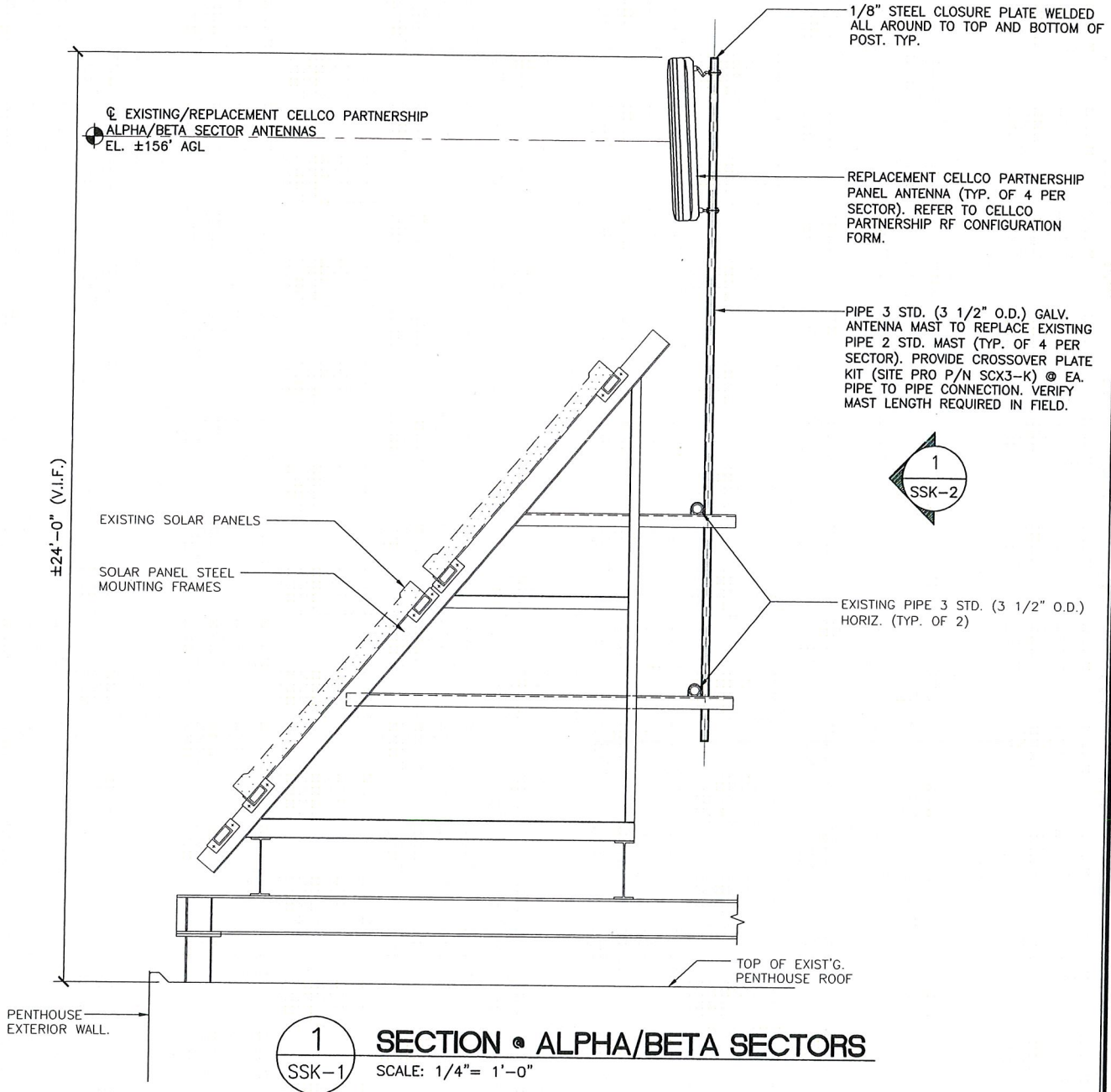
Reinforcement of the existing antenna mount frames is required for the proposed antenna installation. Please refer to the attached reinforcement drawings SSK-1 thru SSK-5 prepared by Centek Engineering Inc; dated April 09, 2010.

With the aforementioned antenna frame modifications, the proposed antenna installation meets the requirements of the TIA/EIA-222-F Standard considering the basic wind speed (fastest mile) of 85 mph for Fairfield County which controls over the basic wind speed (fastest mile) of 77.5 mph for Danbury (equivalent to 95 mph 3-second gust wind speed as required in Appendix K of the Connecticut supplement per Table 1609.3.1).

In conclusion, the proposed Verizon LTE antenna upgrade with the aforementioned reinforcements will not negatively impact the structural integrity of the existing antenna support structure or host building. If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:

Carlo F. Centore, PE
Principal ~ Structural Engineer



1 / SSK-1 **SECTION @ ALPHA/BETA SECTORS**

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

NOTE:

BETA SECTOR MOUNT SHOWN. SIMILAR AT ALPHA SECTOR.

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(203) 488-8587 Fax
63-2 North Branford Road, Branford, CT 06405

DANBURY

24 HOSPITAL AVENUE
DANBURY, CT 06810

PROJECT NO:10001.CO45	
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CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	4/9/10

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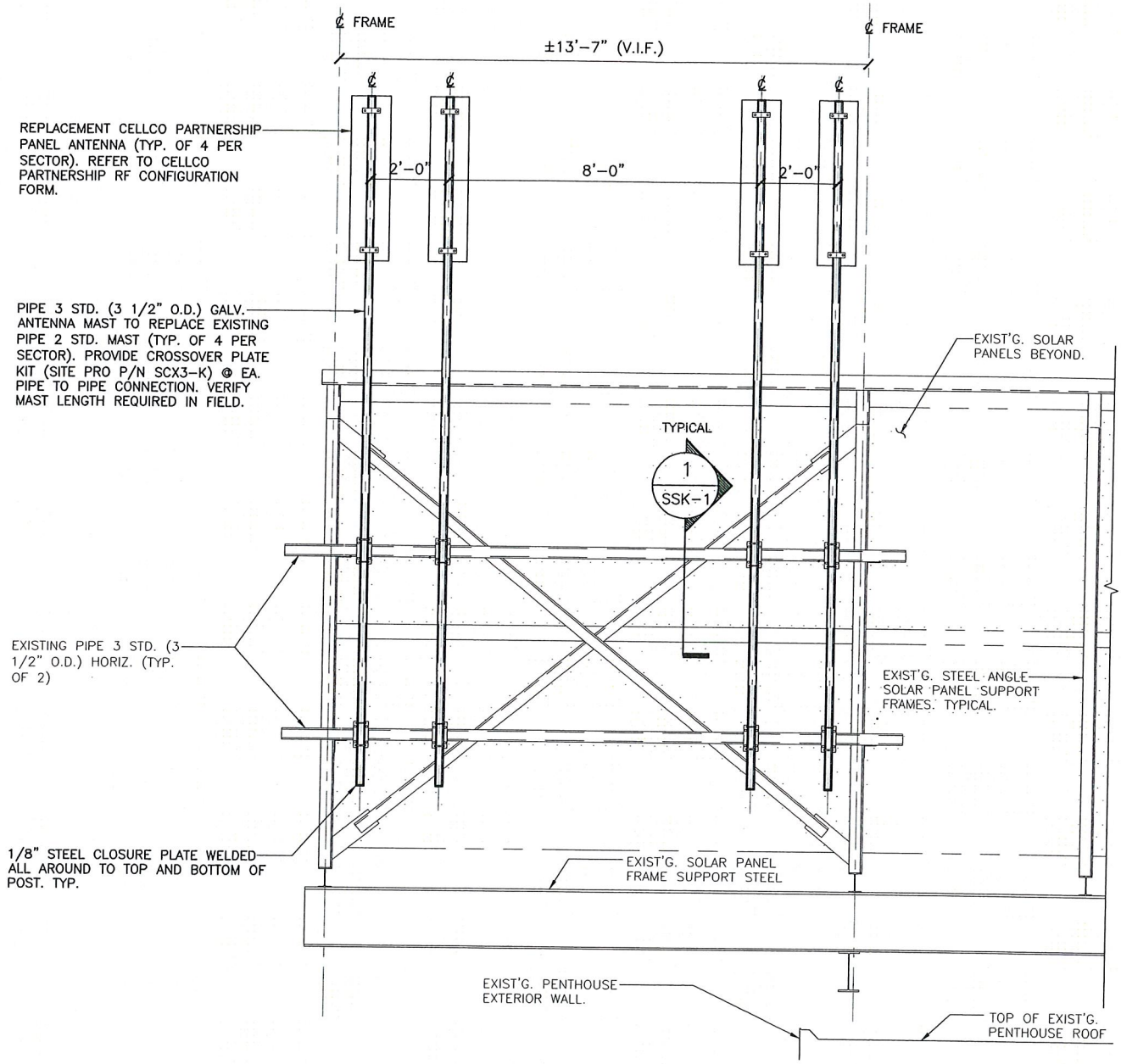
SSK-1

DWG. 1 OF 5



1 / SSK-2 ELEVATION @ ALPHA/BETA SECTORS

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

NOTE:

BETA SECTOR MOUNT SHOWN. SIMILAR AT ALPHA SECTOR.

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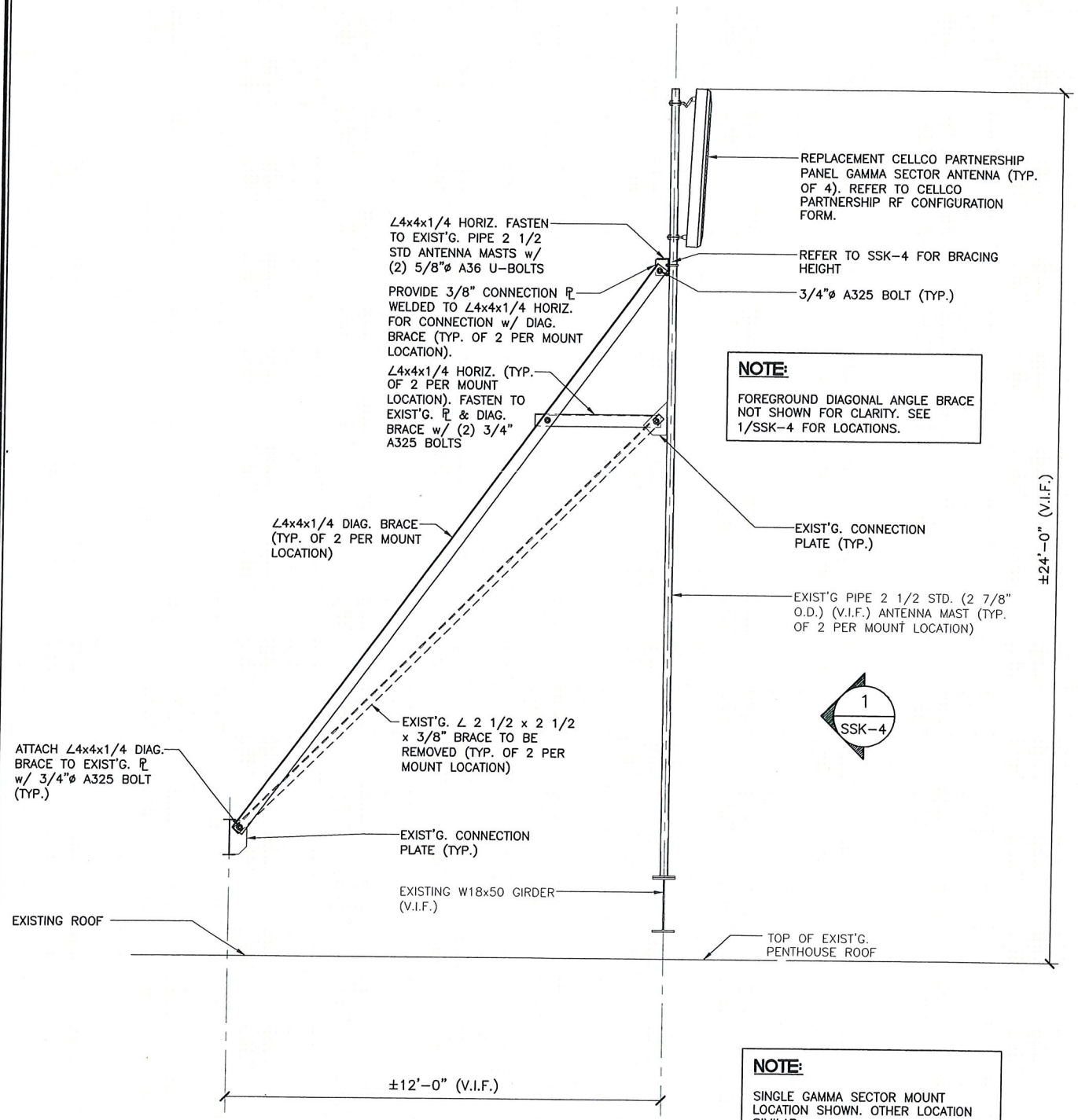
SSK-2

DWG. 2 OF 5



1 SSK-3 SECTION @ GAMMA SECTOR

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

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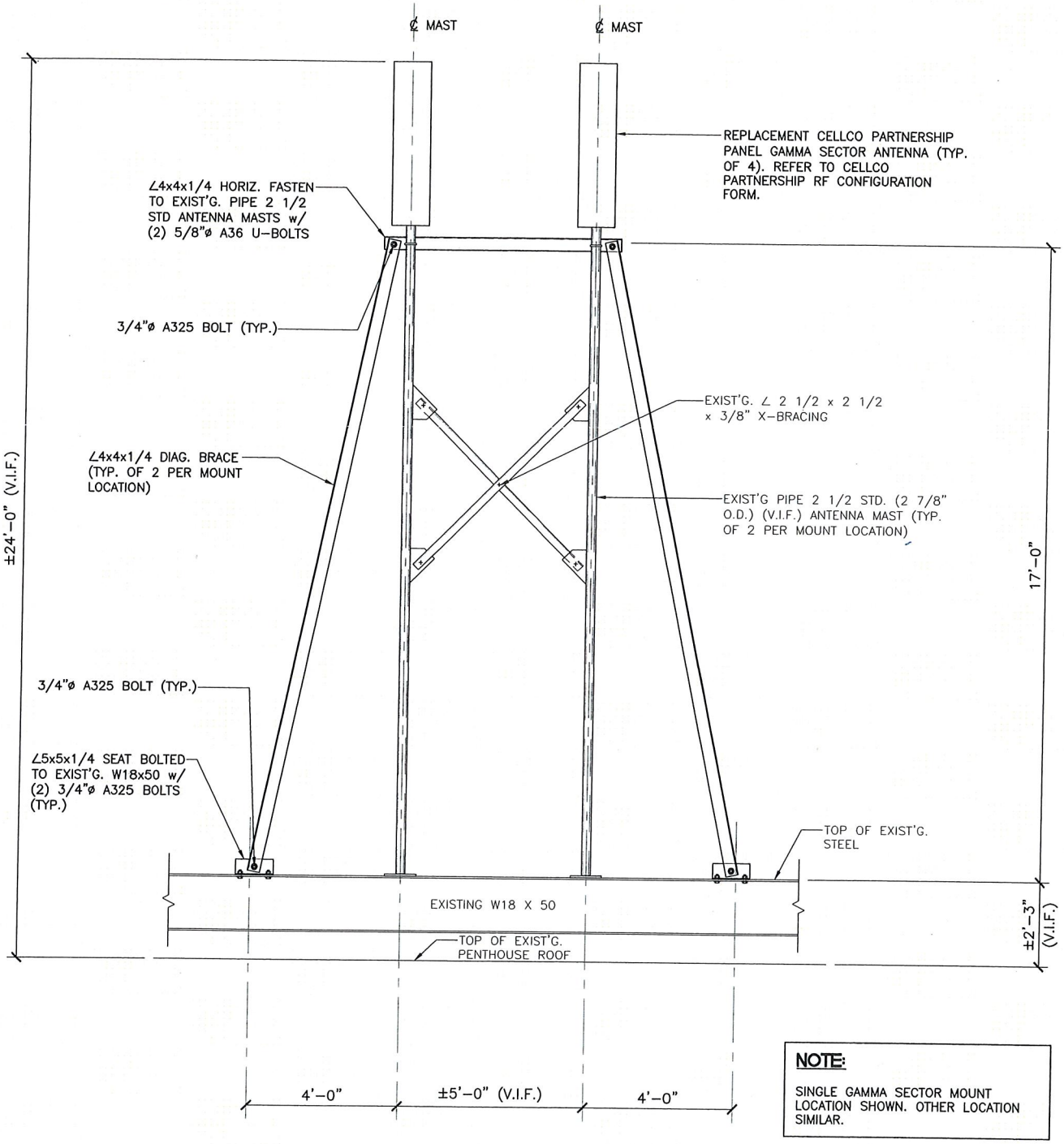
SSK-3

DWG. 3 OF 5



NOTE:

SINGLE GAMMA SECTOR MOUNT LOCATION SHOWN. OTHER LOCATION SIMILAR.

1 / SSK-4 **ELEVATION @ GAMMA SECTOR**

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

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SSK-4

DWG. 4 OF 5

DESIGN BASIS

GOVERNING CODE: 2003 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2005 CONNECTICUT SUPPLEMENT.

1. DESIGN CRITERIA:

   - WIND LOAD: PER EIA/TIA 222 F–96 (ANTENNA MOUNTS): 85 MPH (FASTEST MILE)

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)

   A. STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
   B. STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
   C. STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
   D. STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
   E. PIPE---ASTM A53 (FY = 35 KSI)
   F. CONNECTION BOLTS---ASTM A325–N
   G. U–BOLTS---ASTM A36
   H. ANCHOR RODS---ASTM F 1554
   I. WELDING ELECTRODE---ASTM E 70XX

2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.

3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.

4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.

5. FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.

6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.

7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON–GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.

8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.

9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT–DIP) ON IRON AND STEEL HARDWARE".

10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES APPEARANCE AND QUALITY OF WELDS, AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLET J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION" 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.

11. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.

12. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.

13. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.

14. CONNECTIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR SHELTERS", LATEST EDITION, AND THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.

15. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.

16. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.

17. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.

18. FABRICATE BEAMS WITH MILL CAMBER UP.

19. LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.

20. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.

21. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.

22. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

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