

**PULLMAN
& COMLEY, LLC**
ATTORNEYS

CARRIE L. LARSON
90 State House Square
Hartford, CT 06103-3702
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www.pullcom.com

October 25, 2010

Via Federal Express

Linda Roberts, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RECEIVED
OCT 26 2010

ORIGINAL CONNECTICUT
SITING COUNCIL

Re: EM-Pocket-004-080924, 10 Redwood Lane, Avon, Connecticut

Dear Ms. Roberts:

Please be advised that this office represents Youghioghny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"). Pocket received approval for the above-referenced exempt modification October 10, 2008. That approval required that Pocket's coaxial cable be installed internally in the monopole's shaft. The enclosed photograph demonstrates that this requirement has been met. I assume that this information should satisfy the Council's approval for this application. Please let me know if you have any questions.

Respectfully Submitted,



Carrie L. Larson

Enc.

ACTIVE/72572.120/CLARSON/2278990v1



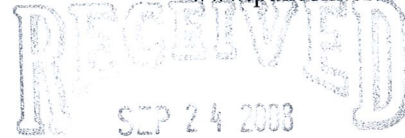
EM-POCKET-004-080924

CARRIE L. LARSON
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September 23, 2008

ORIGINAL



Via Federal Express

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

CONNECTICUT
SITING COUNCIL

**Re: Notice of Exempt Modification
SBA Communications Corporation Telecommunications Facility
10 Redwood Lane, Avon, Connecticut**

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"), intends to install antennas and appurtenant equipment at the existing 105-foot monopole facility owned by SBA Communications Corporation and located at 10 Redwood Lane, Avon, Connecticut ("Facility"). Pocket Communications provides prepaid, flat rate wireless voice and data services to more than a quarter of a million subscribers. Pocket is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation. This installation constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this notice has been sent to Philip K. Schenck, Jr., Town Manager, Town of Avon.

The existing Facility consists of a 105-foot self-supporting monopole tower capable of supporting multiple carriers within a fenced compound. The coordinates for the Facility are **Lat: 41°-46'-21" and Long: 72°-52'-48"**. The tower is located in the southern portion of Avon, approximately 2,700 feet north of the Farmington town line. The Facility is approximately 3,000 feet east of Lovely Road (Route 177) and roughly 3,400 feet northwest of West Avon Road (Route 167) where it cuts over to Unionville (see Site Map, attached as Exhibit A). The tower currently supports Sprint antennas at the eighty seven foot (87') level centerline AGL (above ground level), AT&T antennas at the ninety seven foot level (97') AGL, T-Mobile antennas at the one hundred six foot level (106') and a Farmington Woods whip style antenna off the top of the tower at the one hundred sixteen foot level (116') AGL. Pocket proposes to install three Kathrein 742-213 flush mount antennas on the tower at the seventy seven foot centerline (77') AGL, and a Nortel CDMA Micro BTS 3231 cabinet, mounted on an "H-Frame," contained

Page 2

within a six foot by six foot (6'-0" x 6'-0") lease area. A small GPS antenna will be mounted to an ice bridge which will run from the lease area to the tower. Utilities will be run via a proposed underground conduit from an existing utility backboard, just south of the compound (See Design Drawings and Equipment Specifications, attached as Exhibits B and C respectively).

For the following reasons, the proposed modifications to the Redwood Lane Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

1. The proposed modification will not increase the height of the tower as Pocket's antennas will be installed at a center line height of approximately 77 feet.
2. The installation of Pocket's equipment and shelter will not require an extension of the site boundaries.
3. The proposed modifications will not increase the noise levels at the existing Facility by six decibels or more.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. The worst-case RF power density calculations for the proposed Pocket antennas would be 27.16% of the FCC standard (see general power density calculations table, attached as Exhibit D).

Also attached, Exhibit E, is a structural analysis confirming that the tower can support the existing and proposed antennas and associated equipment.

For the foregoing reasons, Pocket respectfully submits that the proposed antenna installation and equipment at the Avon Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Respectfully Submitted,



Carrie L. Larson

cc: Philip R. Schenck, Jr., Town Manager
Avon Water Company, underlying property owner

Exhibit A

Site Map

Pocket Site HFCT0025A

10 Redwood Lane

Avon, Connecticut

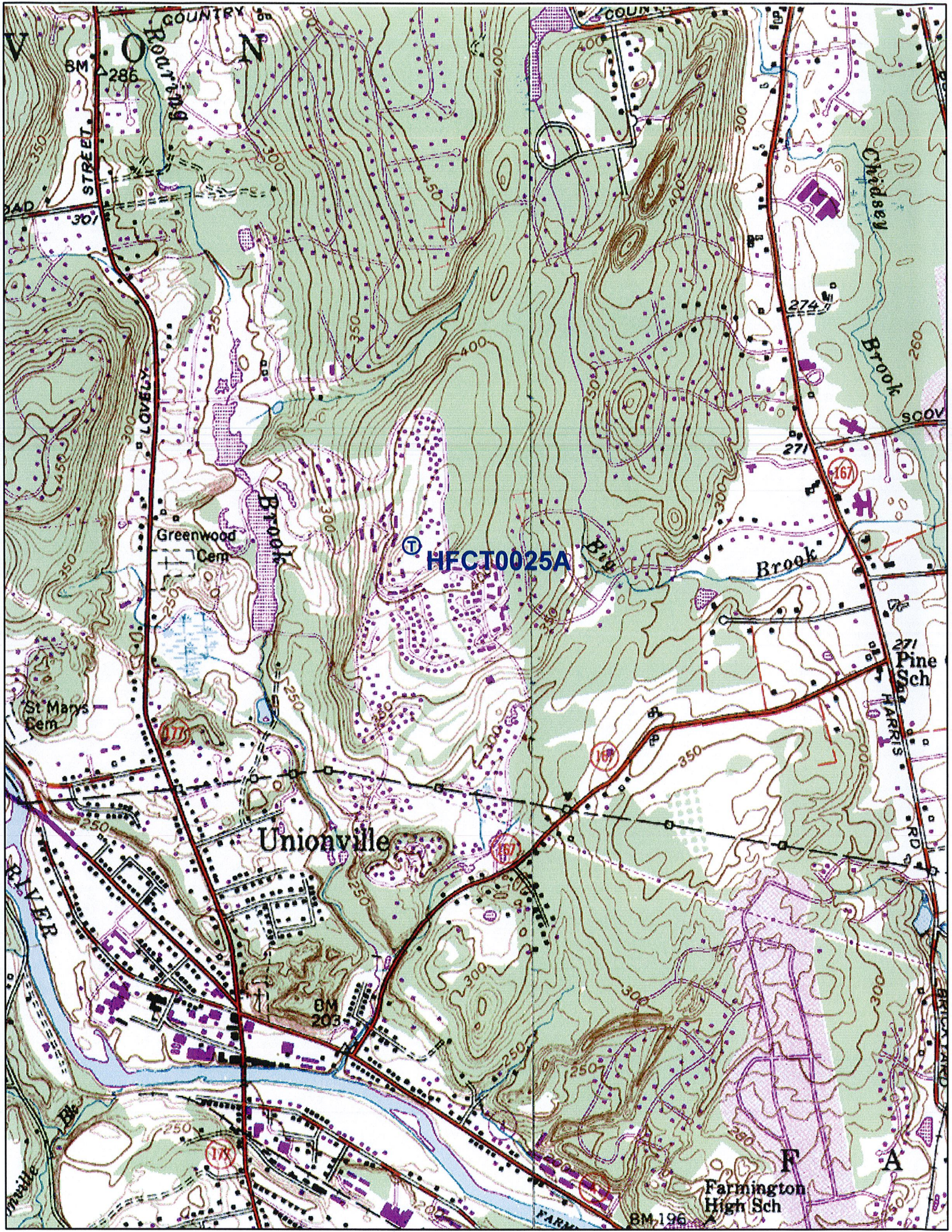


Exhibit B

Design Drawings

Pocket Site HFCT0025A

10 Redwood Lane

Avon, Connecticut



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

October 10, 2008

Carrie L. Larson, Esq.
Pullman and Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **EM-POCKET-004-080924** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 10 Redwood Lane, Avon, Connecticut.

Dear Attorney Larson:

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 condition that the applicant follow the recommendations of the Professional Engineer that the proposed coaxial cables should be installed inside the monopole shaft, but may be installed outside the shaft in a single row, if necessary.

The proposed modifications are to be implemented as specified here and in your notice dated September 23, 2008, 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/CML/cm

c: The Honorable John F. Carlson, Chairman Town Council, Town of Avon
Steven V. Kushner, Town Planner, Town of Avon
SBA Communications



Daniel F. Caruso
Chairman

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

September 25, 2008

The Honorable John F. Carlson
Chairman Town Council
Town of Avon
60 West Main Street
Avon, CT 06001-3743

RE: **EM-POCKET-004-080924** – Youghiogheny Communications-Northeast, LLC d/b/a Pocket Communications notice of intent to modify an existing telecommunications facility located at 10 Redwood Lane, Avon, Connecticut.

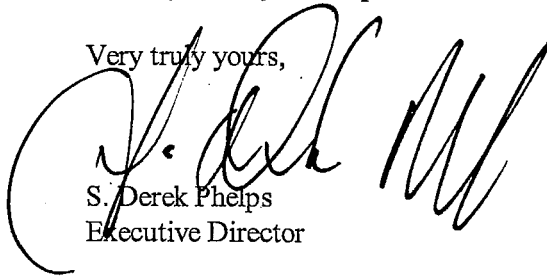
Dear Mr. Carlson:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by October 9, 2008.

Thank you for your cooperation and consideration.

Very truly yours,



S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Steven V. Kushner, Town Planner, Town of Avon
Philip K. Schenck, Jr., Town Manager, Town of Avon

REV.	DATE	BY	CHKD.	ISSUED FOR
0	09/16/08	CHS	CHS	ISSUED FOR CONSTRUCTION REVIEW
				ALTERNATE APPROVED BY DESIGNER

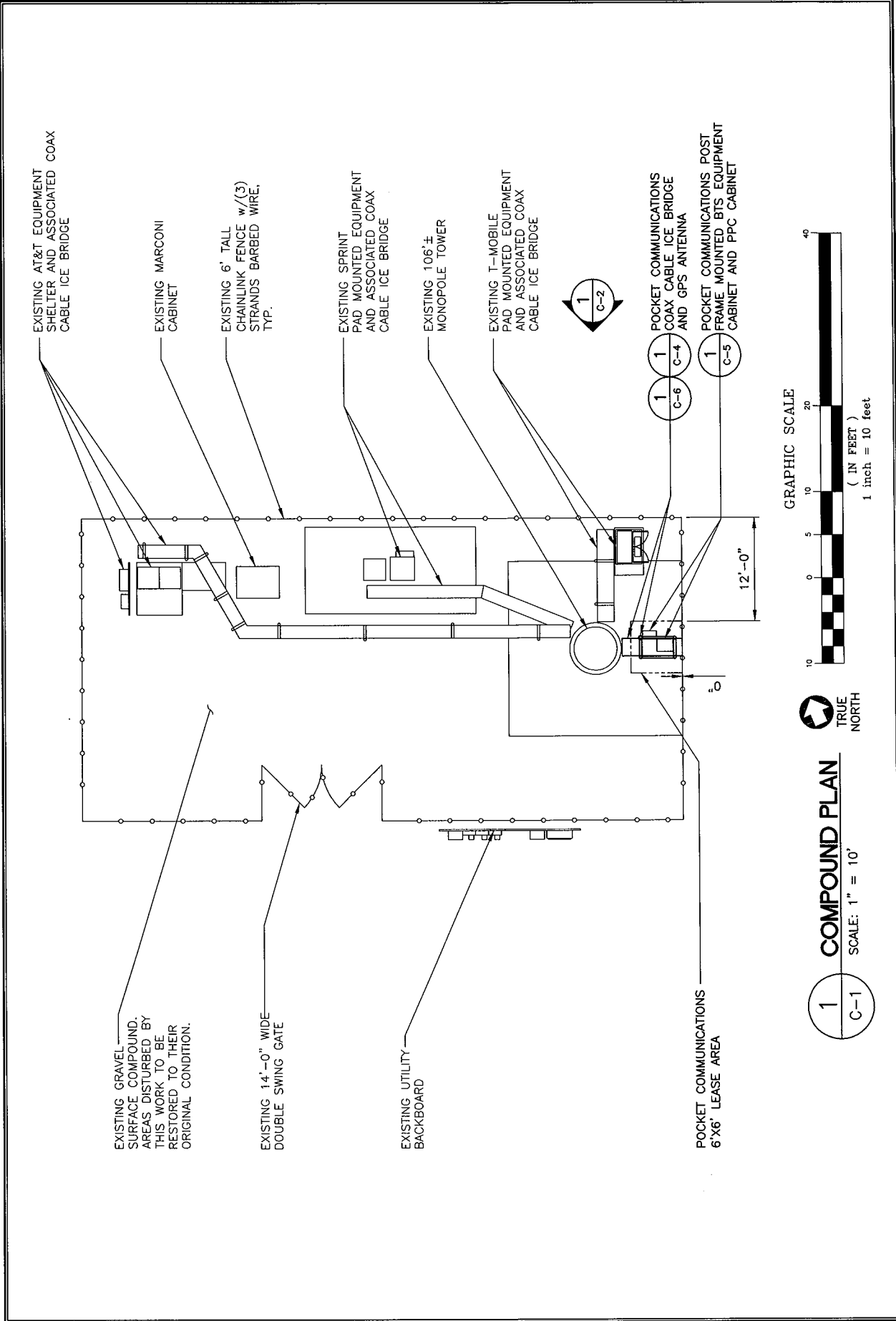


POCKET COMMUNICATIONS
 HFC02025A
 SBA CT01498 - S AVON
 10 REDWOOD LANE
 AVON, CT 06001

DATE: 09/12/08
 AS SHOWN
 JOB NO. 0817.0005

COMPOUND PLAN

SHEET NO. C-1
 OF 11



REV.	DATE	BY	CHKD BY	DESCRIPTION
0	8/16/08	CMS	CFC	ISSUED FOR CONSTRUCTION REVIEW

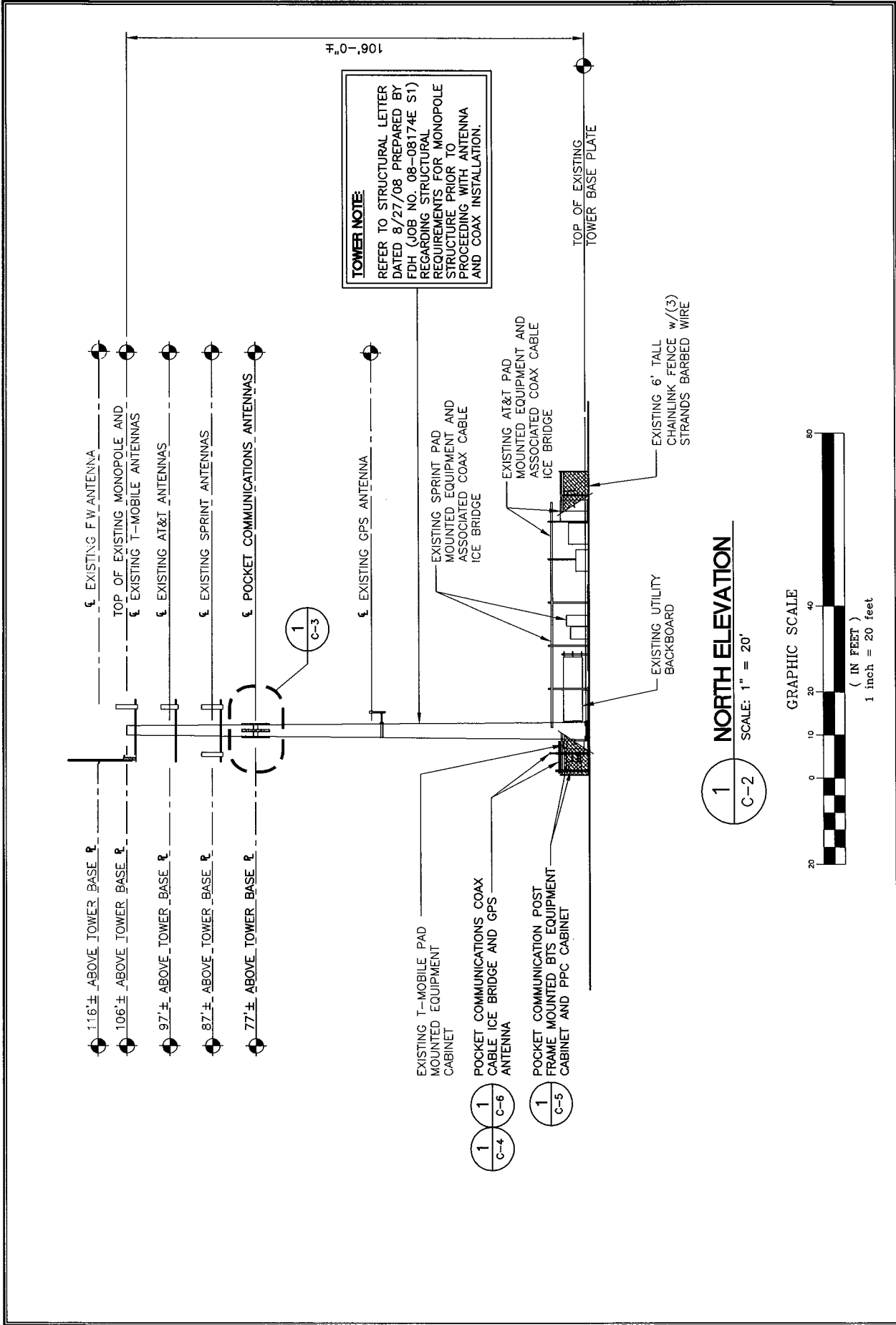
RENEW SET
FOR THE CONSTRUCTION



POCKET COMMUNICATIONS
SBA CT01498 - S AVON
10 REDWOOD LANE
AVON, CT 06001

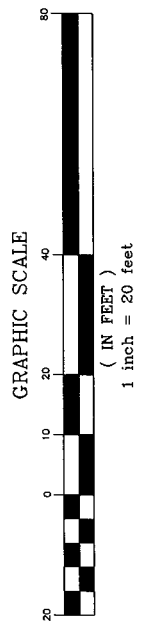
DATE: 06/12/08
SCALE: AS SHOWN
JOB NO.: 08117.0008

COMPOUND ELEVATION
SHEET NO. C-2
Sheet No. 3 of 13



TOWER NOTE:
REFER TO STRUCTURAL LETTER DATED 8/27/08 PREPARED BY FDH (JOB NO. 08-08174E S1) REGARDING STRUCTURAL REQUIREMENTS FOR MONOPOLE STRUCTURE PRIOR TO PROCEEDING WITH ANTENNA AND COAX INSTALLATION.

1 NORTH ELEVATION
SCALE: 1" = 20'



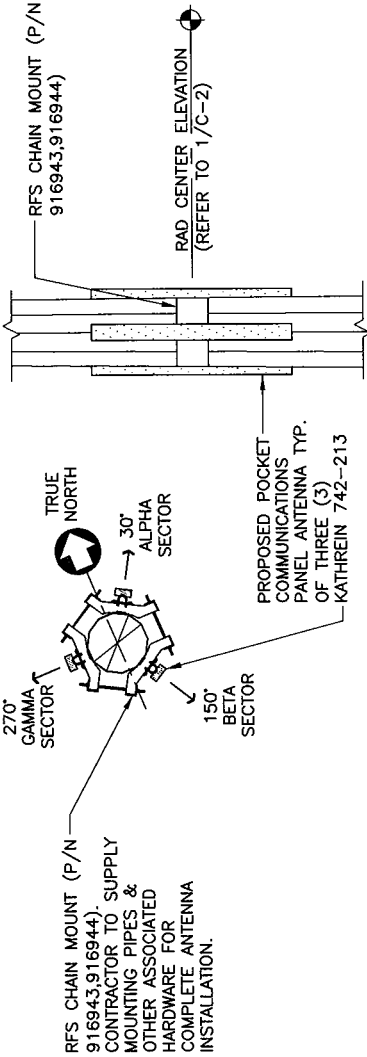
DESIGNED BY:	CFC
DRAWN BY:	CMS
CHECKED BY:	CFC
DATE:	09/12/06
ISSUED FOR CONSTRUCTION REVIEW:	
DATE:	09/12/06
ISSUED FOR CONSTRUCTION REVIEW:	
DATE:	09/12/06
ISSUED FOR CONSTRUCTION REVIEW:	



POCKET COMMUNICATIONS
 HFC02025A
 SBA CT01498 - 9 AVON
 10 REDWOOD LANE
 AVON, CT 06001

DATE: 09/12/06
 DRAWN BY: JS SHOWN
 CHECKED BY: JS SHOWN
 DATE: 08/17/2006

ANTENNA AND COAX DETAILS
 SHEET NO. C-3
 OF 3



TYPICAL SECTOR ELEVATION

PLAN VIEW

1 ANTENNA MOUNTING CONFIGURATION

NOT TO SCALE

ANTENNA KEY

# ANTENNAS PER SECTOR	ANTENNA NUMBER	COAX COLOR CODE	ANTENNA VENDOR	MODEL NUMBER	AZIMUTH	C/L HEIGHT	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	COAX SIZE	# COAX PER ANTENNA	COAX MODEL NUMBER	COAX LENGTH
1	A-1	(1)-RED BAND	KATHREIN	742-213	30°	77'-0"	0'	REFER TO RFD'S ANTENNA SHEET FOR FINAL TILT AND AZIMUTHS	1 5/8"	2	RFS	±90' PER RUN
1	B-1	(1)-BLUE BAND	KATHREIN	742-213	150°	77'-0"	0'	REFER TO RFD'S ANTENNA SHEET FOR FINAL TILT AND AZIMUTHS	1 5/8"	2	RFS	
1	C-1	(1)-GREEN BAND	KATHREIN	742-213	270°	77'-0"	0'	REFER TO RFD'S ANTENNA SHEET FOR FINAL TILT AND AZIMUTHS	1 5/8"	2	RFS	

TOWER NOTES:

- FOR DETAILED TOWER INFORMATION, REFER TO TOWER ERECTION DRAWINGS BY OTHERS. THE TOWER ON SHEET C-2 IS SHOWN GENERAL CONFIGURATION PURPOSES ONLY.
- ANTENNA CONFIGURATION IS SUBJECT TO CHANGE. VERIFY ANTENNA HEIGHT, DOWN-TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.
- THE TOWER STRUCTURAL SHALL BE REVISED TO REFLECT ANY REVISION IN ANTENNA OR COAX CONFIGURATION.

ANTENNA NOTES:

- ALL COAX SHALL BE COLOR CODED AT (2) PLACES EACH: AT ANTENNA AND AT CABINET.
- (2) COLOR BANDS DENOTES TRANSMIT.
- PRIOR TO ORDERING ANY ANTENNAS OR COAX, CONTRACTOR SHALL CONTACT POCKET COMMUNICATIONS CONSTRUCTION MANAGER AND OBTAIN APPROVAL FOR MATERIALS LISTED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THIS COORDINATION.

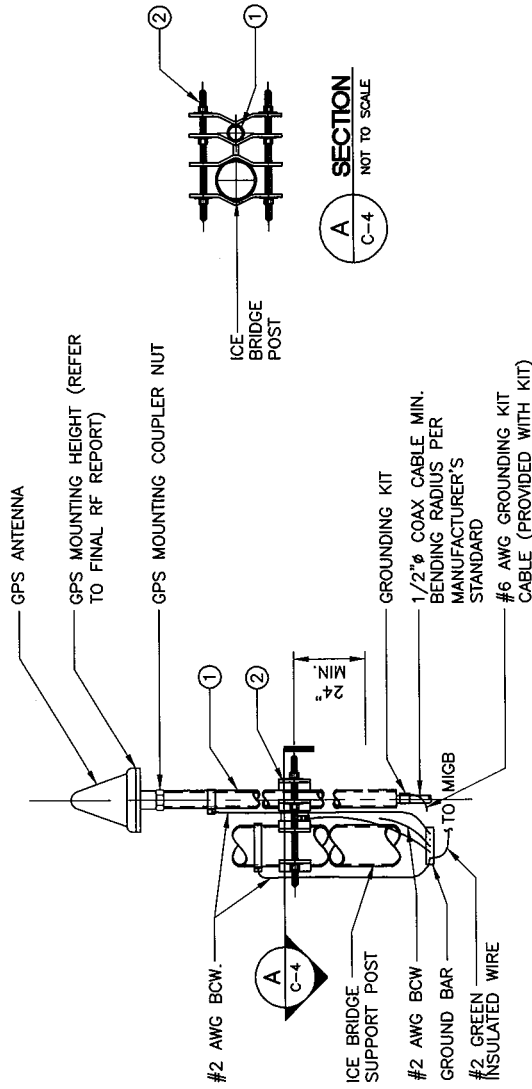
ISSUED BY:	CFC
ISSUED DATE:	08/12/08
ISSUED FOR:	ISSUED FOR CONSTRUCTION REVIEW
ISSUED BY:	CFC
ISSUED DATE:	08/12/08
ISSUED FOR:	ISSUED FOR CONSTRUCTION REVIEW
ISSUED BY:	CFC
ISSUED DATE:	08/12/08
ISSUED FOR:	ISSUED FOR CONSTRUCTION REVIEW

REVIEW SET FOR CONSTRUCTION



POCKET COMMUNICATIONS
 HFCT0025A
 SBA CT01498 - S AVON
 10 REDWOOD LANE
 AVON, CT 06001

GPS DETAIL
 SHEET NO. C-4
 OF 15



A
 C-4
 SECTION
 NOT TO SCALE

GPS ANTENNA MOUNTING BRACKET

BILL OF MATERIALS	
ITEM	QUANTITY
①	1
②	1

NOTES:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
2. GPS ANTENNA LOCATION MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. CONFIRM WITH HANDHELD GPS PRIOR TO ESTABLISHING FINAL LOCATION OF GPS ANTENNAS.
3. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A 1" OUTSIDE DIAMETER ALUMINUM PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 24 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.

GPS GROUNDING/MOUNTING BRACKET DETAIL

1
 C-4
 NOT TO SCALE

DESIGNED BY:	CHKD BY:	DATE:	ISSUED FOR:
08/16/08	08/16/08	08/16/08	ISSUED FOR CONSTRUCTION REVIEW
08/16/08	08/16/08	08/16/08	ISSUED FOR CONSTRUCTION REVIEW

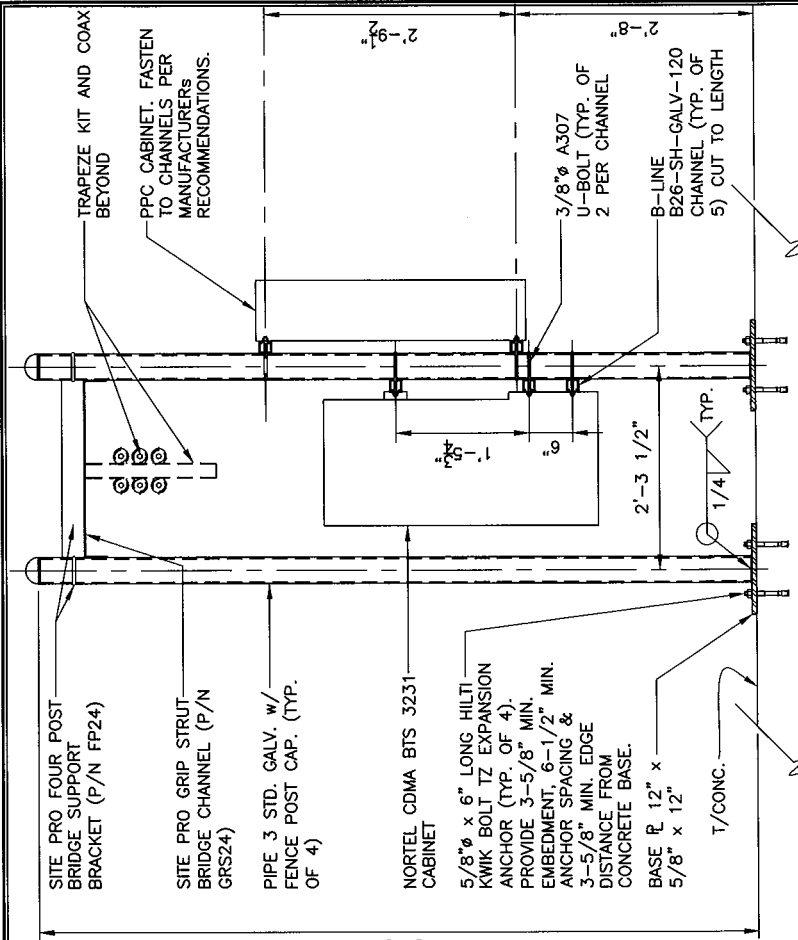
REVIEW SET



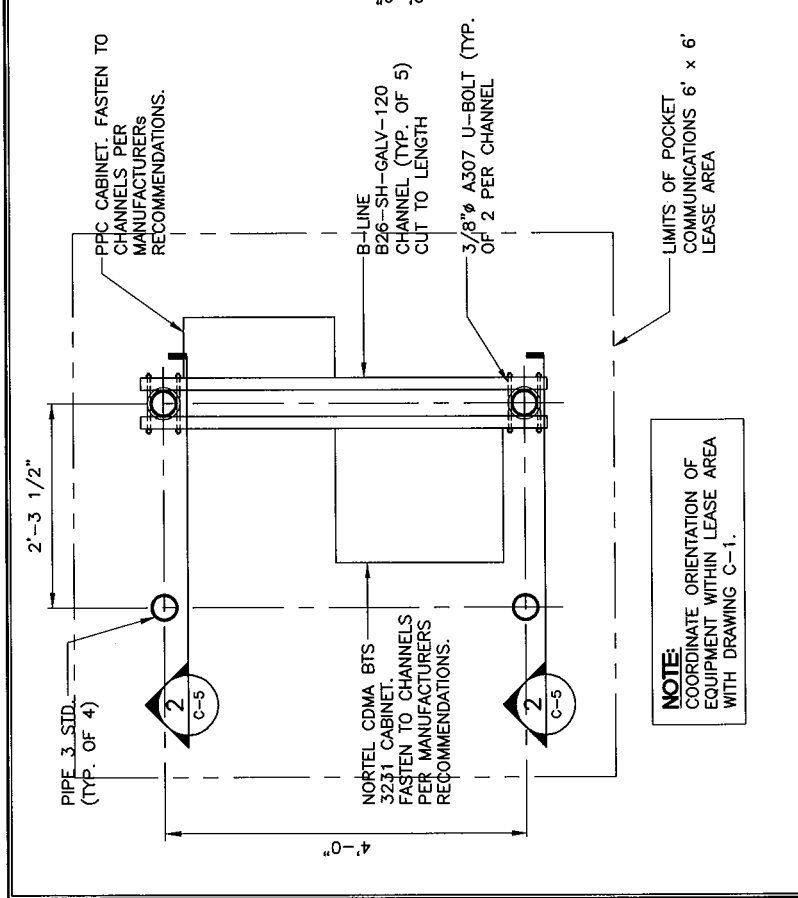
POCKET COMMUNICATIONS
 HFCT0025A
 SBA CT01498 - S AVON
 10 REDWOOD LANE
 AVON, CT 06001

EQUIPMENT CABINET SUPPORT DETAILS

PROJECT NO. C-5



2 SECTION
 SCALE: 3/4" = 1'-0"



1 EQUIP. CABINET SUPPORT FRAME PLAN
 SCALE: 3/4" = 1'-0"

NOTE:
 COORDINATE ORIENTATION OF EQUIPMENT WITHIN LEASE AREA WITH DRAWING C-1.

DESIGNED BY:	CFC
DRAWN BY:	CFC
CHECKED BY:	CFC
DATE:	07/18/08
ISSUED FOR:	ISSUED FOR CONSTRUCTION REVIEW
REVISION:	



POCKET COMMUNICATIONS	
HFC10025A	
SBA CT01498 - S AVON	
10 REDWOOD LANE	
AVON, CT 06001	
DATE:	07/18/08
DRAWN BY:	CFC
CHECKED BY:	CFC
DATE:	08/17/2008

PANEL AND BURIED CONDUIT DETAIL

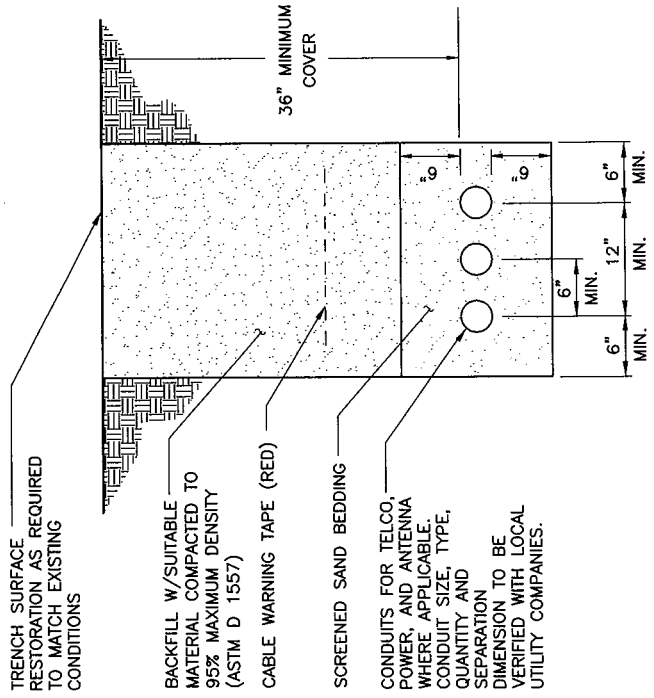
SHEET NO. E-3

PANEL "SSC"						
LOAD DESCRIPTION	LOAD (kVA)	BRKR. SIZE	PHASE A B	CKT. NO.	BRKR. SIZE	LOAD DESCRIPTION
BTS CABINET	2.5	30/2		1	2	2.2 TVSS
				3	4	2.2
LIGHTING	.9	10/1		5	6	SPACE
SPACE				7	8	SPACE
SPACE				9	10	SPACE
SPACE				11	12	SPACE
SPACE				13	14	SPACE
SPACE				15	16	SPACE
SPACE				17	18	SPACE
SPACE				19	20	SPACE
SPACE				21	22	SPACE
SPACE				23	24	SPACE
LOAD SUB-TOTAL	5.6				10.3 kVA	4.4
LOAD SUB-TOTAL						

100A MCB, 120/240V, 1P, 3W (65,000 AIC MIN)	
TOTAL CONNECTED LOAD	10.3 KW
25% OF LARGEST CONT. LOAD	1250 W
TOTAL LOADS	11.5 KW 48 AMPS
NOTE: ALL NON-OPTIONAL BREAKERS PROVIDED BY SSC MFR	

NOTE: CIRCUIT BREAKER SIZES SHOWN ARE TYPICAL. REFER TO EQUIPMENT MANUFACTURING SPECIFICATIONS FOR SITE SPECIFIC CIRCUIT BREAKER REQUIREMENTS.

1 PANEL SCHEDULE
E-3 NOT TO SCALE



- NOTES:**
1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
 2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

2 BURIED CONDUIT DETAIL
E-3 NOT TO SCALE

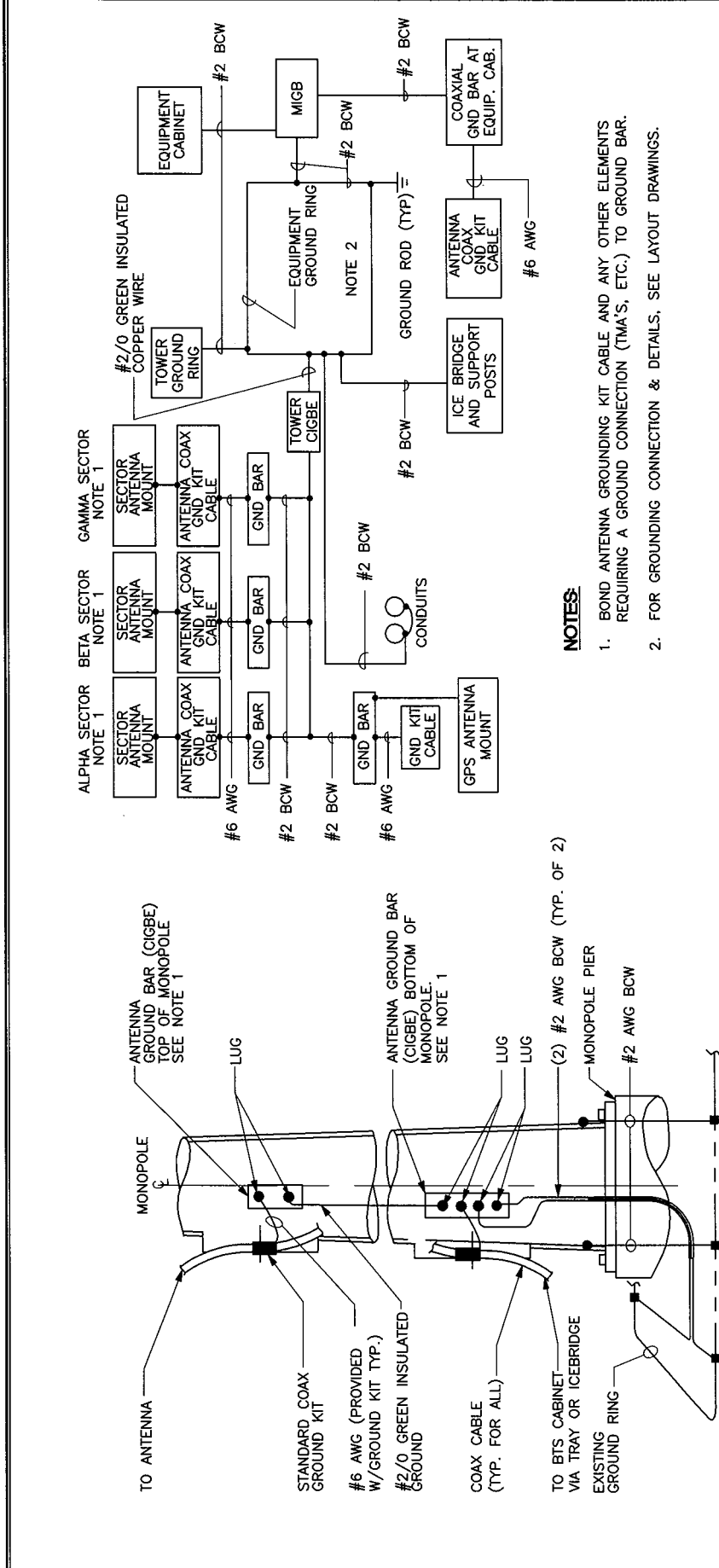
DESIGNED BY:	CRF
DRAWN BY:	CRF
CHECKED BY:	CRF
DATE:	09/18/08
SCALE:	AS SHOWN
PROJECT NO.:	08117.0005
DATE:	09/12/08
SCALE:	AS SHOWN
PROJECT NO.:	08117.0005



POCKET COMMUNICATIONS
 HFC70025A
 SBA CT01498 - S AVON
 10 REDWOOD LANE
 AVON, CT 06001

ANTENNA CABLE
 GROUNDING
 DETAIL

SHEET NO. **E-4**
 of 11



2 SCHEMATIC DIAGRAM - GROUNDING SYSTEM

NOT TO SCALE

2
E-4

NOTES:

1. BOND ANTENNA GROUNDING KIT CABLE AND ANY OTHER ELEMENTS REQUIRING A GROUND CONNECTION (TMA'S, ETC.) TO GROUND BAR.
2. FOR GROUNDING CONNECTION & DETAILS, SEE LAYOUT DRAWINGS.

NOTES:

1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

1 ANTENNA CABLE GROUNDING DETAIL

NOT TO SCALE

1
E-4

REV	DATE	BY	CHKD	ISSUED FOR
0	9/16/08	CMS	CFC	ISSUED FOR CONSTRUCTION REVIEW

REVIEW SET

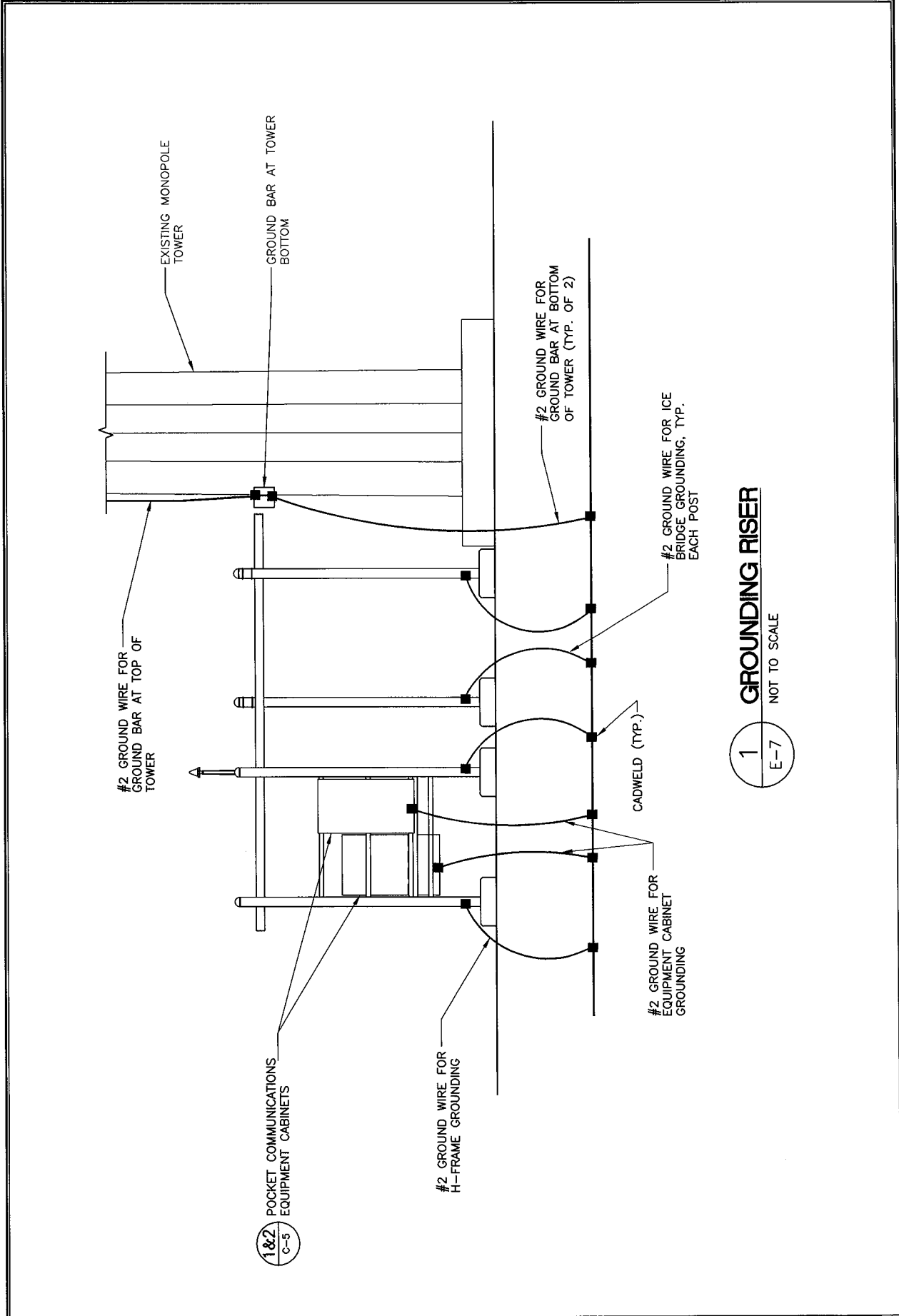


POCKET COMMUNICATIONS
 HFCT0025A
 SBA CT01498 - S AVON
 10 REDWOOD LANE
 AVON, CT 06001

DATE: 09/12/08
 DRAWN: AS SHOWN
 USED NO.: 08117.0008

GROUNDING RISER

SHEET NO. E-7
 Sheet No. 51 of 53



1 GROUNDING RISER
 E-7 NOT TO SCALE

1&2
 C-5

Exhibit C

Equipment Specifications

Pocket Site HFCT0025A

10 Redwood Lane

Avon, Connecticut

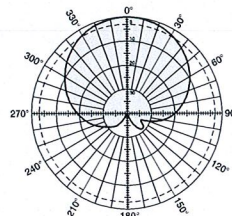
Kathrein's X-polarized adjustable electrical downtilt antennas offer the wireless carrier the ability to tailor polarization diversity sites for optimum performance. Using variable downtilt, only a few models need be procured to accommodate the needs of widely varying conditions. Remotely controlled downtilt is available as a retrofitable option.

- 0-6° downtilt range.
- UV resistant pulltruded fiberglass radome.
- DC Grounded metallic parts for impulse suppression.
- No moving electrical connections.
- Wideband vector dipole technology.
- Optional remote downtilt Control.
- Will accommodate future 3G / UMTS applications.

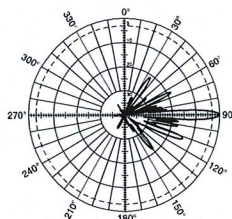
General specifications:

Frequency range	1710–2170 MHz	
VSWR	< 1.5:1	
Impedance	50 ohms	
Intermodulation (2x20w)	IM3: <-150 dBc	
Polarization	+45° and -45°	
Front-to-back ratio (180°±30°)	>30 dB (co-polar) >25 dB (total power)	
Maximum input power	300 watts per input (at 50°C)	
Electrical downtilt continuously adjustable	0–6 degrees	
Connector	2 x 7/16 DIN female	
Isolation	>30 dB	
Cross polar ratio		
Main direction 0°	25 dB (typical)	
Sector ±60°	>10 dB	
Weight	22 lb (10 kg)	
Dimensions	76.5 x 6.1 x 2.7 inches (1942 x 155 x 69 mm)	
Equivalent flat plate area	4.62 ft ² (0.429 m ²)	
Wind survival rating*	120 mph (200 kph)	
Shipping dimensions	87.2 x 6.8 x 3.6 inches (2214 x 172 x 92 mm)	
Shipping weight	24.3 lb (11 kg)	
Mounting	Fixed and tilt mount options are available for 2 to 4.6 inch (50 to 115 mm) OD masts.	

See reverse for order information.



Horizontal pattern
±45°- polarization



Vertical pattern
±45°- polarization



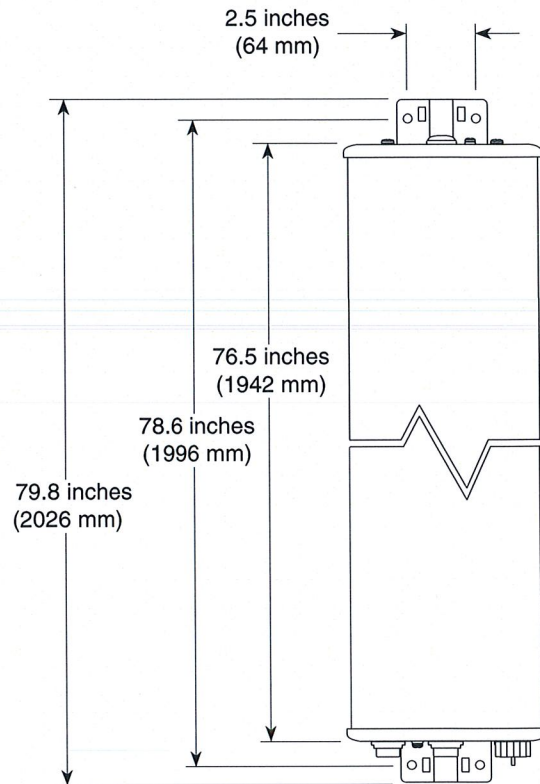
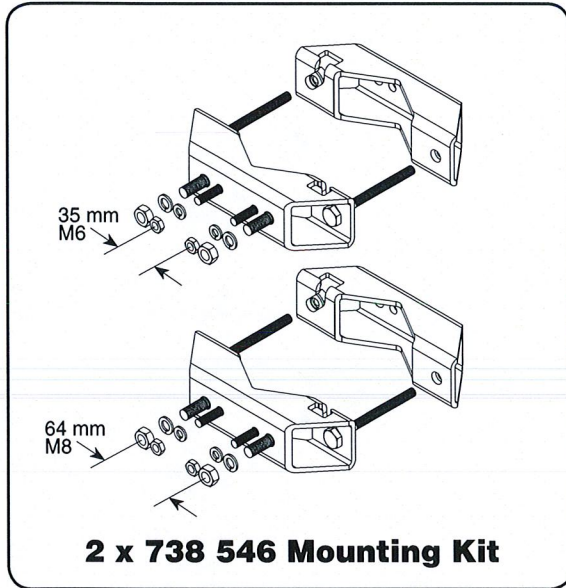
Specifications:	1710–1880 MHz				1850–1990 MHz				1920–2170 MHz			
Gain	19 dBi				19.2 dBi				19.5 dBi			
+45° and -45° polarization horizontal beamwidth	67° (half-power)				65° (half-power)				63° (half-power)			
+45° and -45° polarization vertical beamwidth	4.7° (half-power)				4.5° (half-power)				4.3° (half-power)			
Vertical Pattern—sidelobe suppression for first side-lobe above main beam	0°	2°	4°	6° T	0°	2°	4°	6° T	0°	2°	4°	6° T
	18	17	15	15 dB	18	18	17	15 dB	18	18	17	15 dB



10642-H
936.2074/h

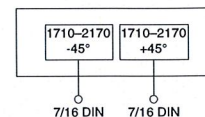
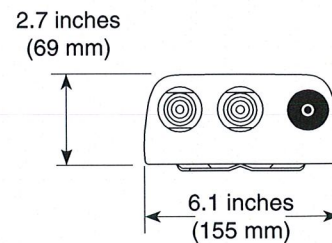


*Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.



Mounting Options:

Model	Description
2 x 738 546	Mounting Kit for 2 to 4.6 inch (50 to 115 mm) OD mast.
737 978	Tilt Kit for use with the above mounting kit, 0–11 degrees downtilt angle. (requires 2 x 738 546 Mounting Kit)
742 263	Three-panel Sector Mounting Kit (120 deg. ea.) for 3.5 inch (89 mm) OD mast.

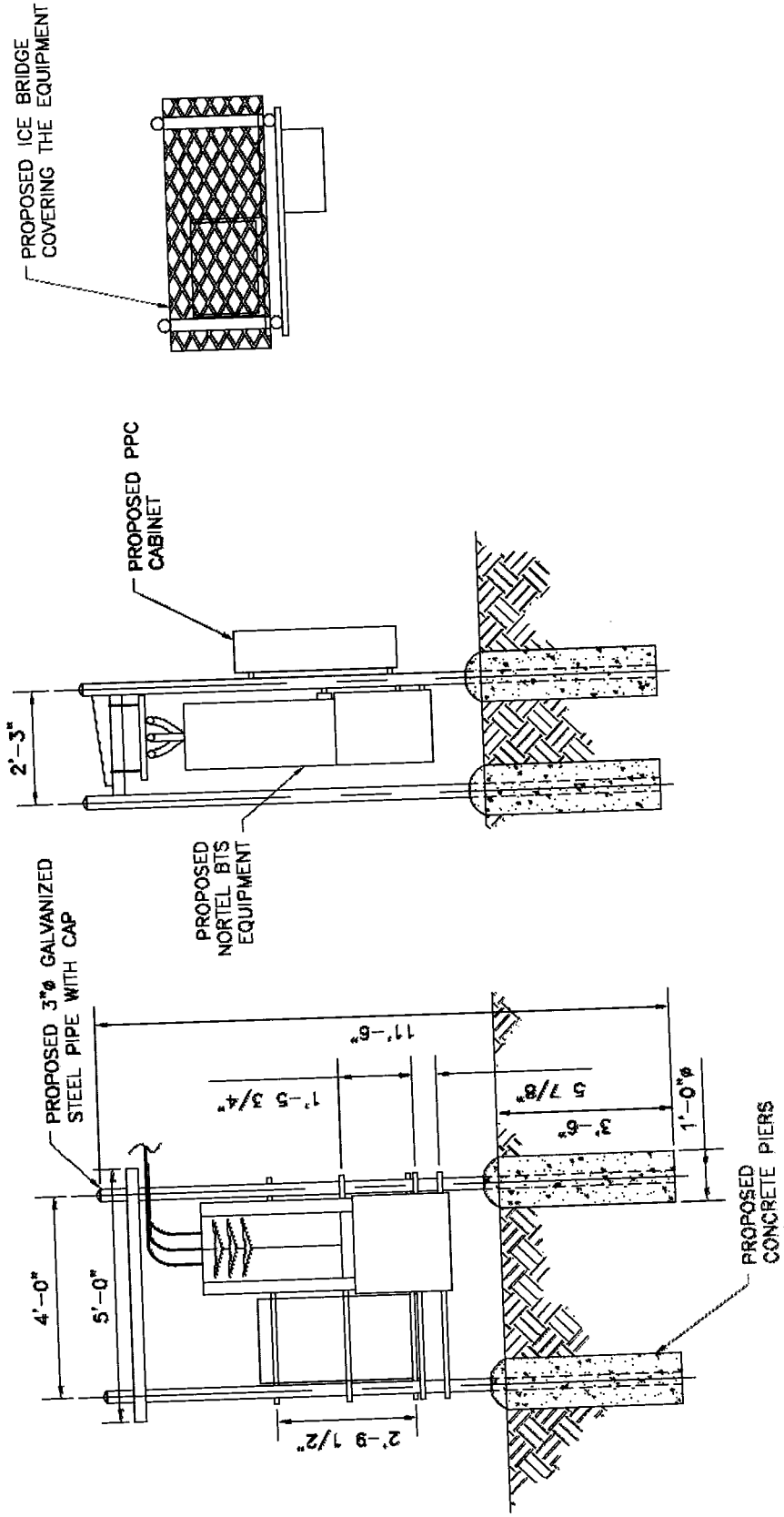


Order Information:

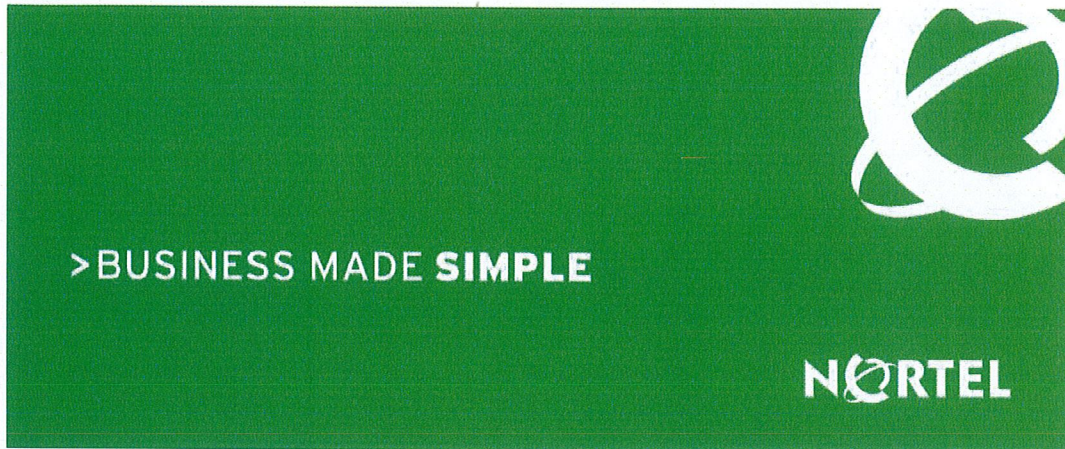
Model	Description
742 213	Antenna with 7/16 DIN connectors 0°–6° adjustable electrical downtilt

All specifications are subject to change without notice. The latest specifications are available at www.kathrein-scala.com.

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com



Pocket/Youghiogheny Communications – Northeast, LLC
 Rack Detail



CDMA BTS 3231 AWS 1.7/2.1 GHz (Outdoor/Indoor)

to transport to hard to reach locations such as the top of a high rise building.

CDMA BTS 3231

Industry's Highest Capacity AWS Micro BTS

The CDMA BTS 3231 is the latest extension to Nortel Networks BTS (Base Transceiver Station) portfolio providing the ideal solution for urban, sub-urban and rural deployments. The CDMA BTS 3231 is a 3-carrier, 3-sector outdoor/indoor BTS operating at the AWS band of 1.7/2.1 GHz supporting IS-95, 1XRTT and 1xEV-DO simultaneously. BTS 3231 provides flexible deployments solutions including floor, rack, and wall mount options. The power consumption of BTS3231 is industry leading consuming only 630W for 3C3S. The BTS 3231 is also very light at 240lbs making it easy

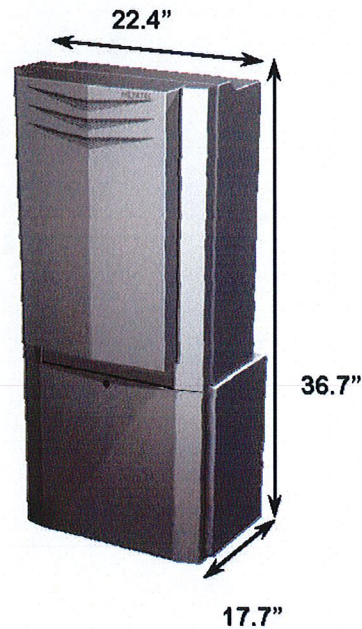


Exhibit D

Power Density Calculations

Pocket Site HFCT0025A

10 Redwood Lane

Avon, Connecticut



C Squared Systems, LLC
920 Candia Road
Manchester, NH 03109
Phone: (603) 657 9702
E-mail:

support@csquaredsystems.com

Calculated Radio Frequency Emissions



CT-0025

10 Redwood Lane, Avon, CT

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed Pocket antennas to be installed on the existing tower at 10 Redwood Lane, Avon, CT.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (mW/cm^2). The number of mW/cm^2 emitted is called the power density. The general population exposure limit for the cellular band is $0.567\text{-}0.593 \text{ mW}/\text{cm}^2$, and the general population exposure limit for the PCS/AWS band is $1.0 \text{ mW}/\text{cm}^2$. 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.

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

Higher exposure limits are permitted under the occupational / controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure (through training), and they must be able to exercise control over their exposure. General population / uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals.”

The FCC describes exposure to radio frequency (RF) energy in terms of percentage of maximum permissible exposure (MPE) with 100% being the maximum allowed. Rather than the FCC presenting the user specification in terms of complex power density figures over a specified surface area, this MPE measure is particularly useful, and even more so when considering that power density limits actually vary by frequency because of the different absorptive properties of the human body at different frequencies.

MPE limits are specified as time-averaged exposure limits. This means that exposure can be averaged over 30 minutes for general population / uncontrolled exposure (or 6 minutes for occupational / controlled exposure). However, for the case of exposure of the general public, time averaging is usually not applied because of uncertainties over exact exposure conditions and difficulty in controlling time of exposure. Therefore, the typical conservative approach is to assume that any RF exposure to the general public will be continuous.

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

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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

Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

3. RF Exposure Prediction Methods

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

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

Where:

EIRP = Effective Isotropic Radiated Power

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

H = Horizontal Distance from antenna

V = Vertical Distance from bottom of antenna

Off Beam Loss is determined by the selected antenna patterns

4. Calculation Results

Table 1 below outlines the power assumptions used to compute the power density.

Carrier	Operating Frequency (MHz)	Antenna Height (Feet)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Total ERP (Watts)
Cingular GSM	1900	98	2	464	928
Cingular UMTS	880	98	1	500	500
VoiceStream	1930	107	1	765	765
Sprint	1962.5	90	11	122	1342
Farm. Woods	155	115.5	2	400	800
Pocket	2130-2133.75	77	3	631	1,893

Table 1: Proposed Carrier Information

The calculated result for the cumulative %MPE is 27.16%.

Please note that for distances of 100 feet or less, a nominal 10 dB of attenuation due to antenna pattern is assumed. Also, as noted in the introduction, obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

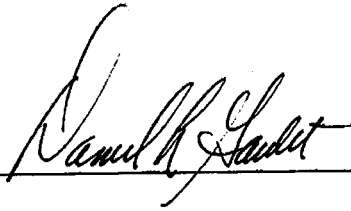
5. Conclusion

The above analysis verifies that emissions from the proposed site will be well below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at the base of the tower is 27.16% of the FCC limit.

Please note that for distances of 100 feet or less, a nominal 10 dB of attenuation due to antenna pattern is assumed. Also, as noted in the introduction, obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

6. Statement of Certification

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



Daniel I. Goulet
C Squared Systems, LLC

August 28, 2008

Date

Attachment A: References

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

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

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

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

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

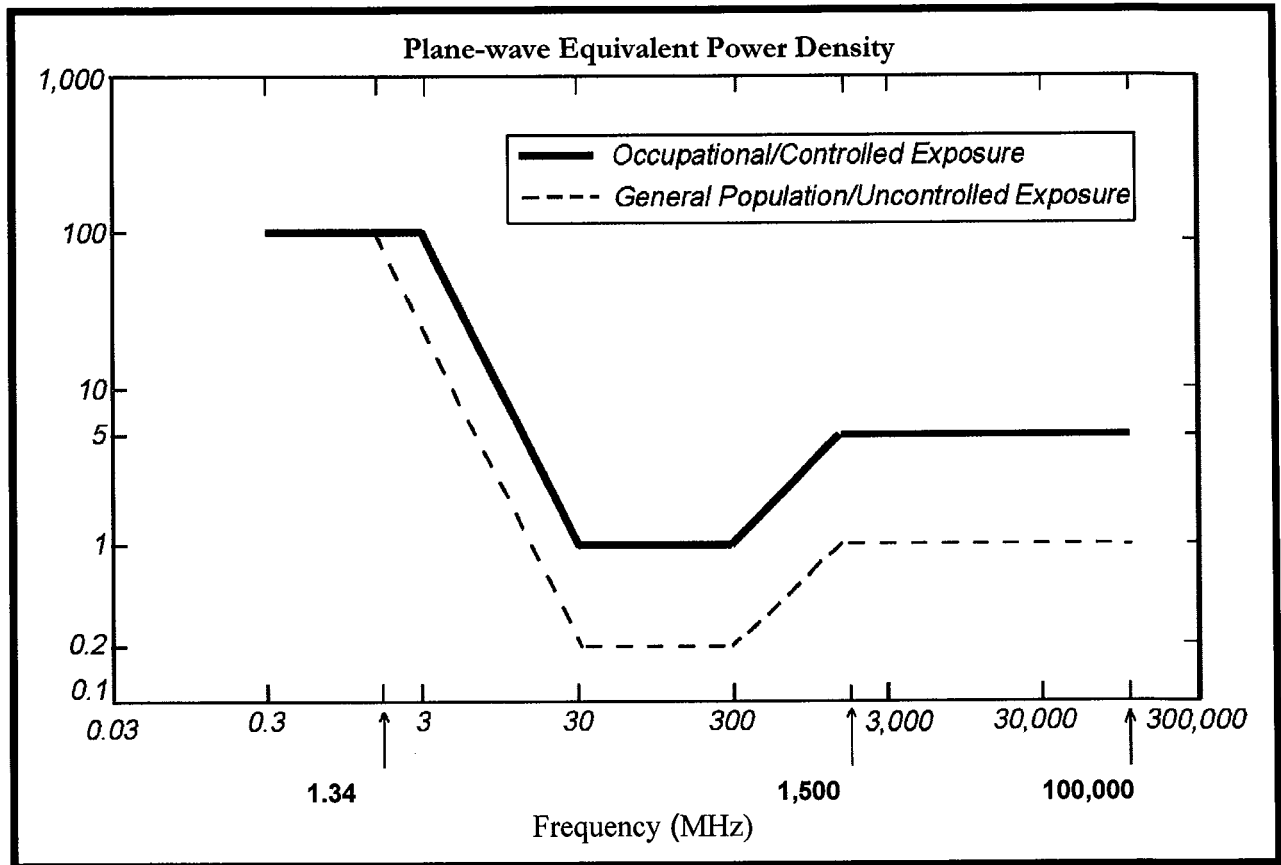
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.



• FCC Limits for Maximum Permissible Exposure (MPE)

Exhibit E

Structural Analysis

Pocket Site HFCT0025A

10 Redwood Lane

Avon, Connecticut

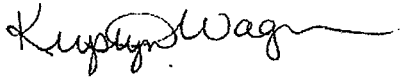
**Structural Analysis for
SBA Network Services**

105' Monopole

**Site Name: Avon
Site ID: CT01498-S**

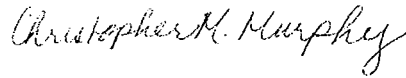
FDH Project Number 08-08174E S2

Prepared By:



Krystyn Wagner, EI
Project Engineer

Reviewed By:



Christopher M. Murphy, PE
Vice President
CT PE License No. 25842

FDH Engineering, Inc.
2730 Rowland Road, Suite 100
Raleigh, NC 27615
(919)-755-1012
info@fdh-inc.com

September 15, 2008



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EXECUTIVE SUMMARY

At the request of SBA Network Services, FDH Engineering performed a structural analysis of the monopole located in Avon, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads, pursuant to the *Structural Standard for Antenna Supporting Structures and Antennas, ANSI/TIA-222-G*. Information pertaining to the existing/proposed antenna loading, current tower geometry, and member sizes was obtained from the Pirod, Inc. (Engineering No. A-117586) original design drawings dated September 26, 2000 and SBA Network Services, Inc.

The *basic design wind speed* per *ANSI/TIA-222-G* standards is 105 MPH without ice and 50 MPH with 1" radial ice.

Conclusions

With the existing and proposed antennas from Pocket in place at 77 ft, the tower meets the requirements of the *ANSI/TIA-222-G* standards. Furthermore, provided the foundation was constructed per the original design drawings (see Pirod Eng. No. A-117586), the foundation should have the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower was properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *ANSI/TIA-222-G* standards are met with the existing and proposed loading in place, we have the following recommendations:

1. The proposed coax lines should be installed inside the monopole shaft, but may be installed outside the pole's shaft in a single row, if necessary.

APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from this layout, FDH should be contacted to perform a revised analysis.*

Table 1 – Appurtenance Loading

Existing Loading:

No.	Centerline Elevation (ft)	Coax and Lines ¹	Carrier	Mount Type	Description
1	116	(1) 7/8"	Farmington Woods	Low Profile Platform	(1) 20' Omni
2-7	106	(12) 1-5/8" ²	T-Mobile		(6) EMS RR901702DP (12) Allen FE15501P77-75 TMAs
8-19	97	(12) 1-5/8"	AT&T	Low Profile Platform	(9) Allgon 7184 (3) Powerwave 7770 panels (6) Powerwave LGP 21401 TMAs
20-31	87	(12) 1-5/8" ³	Sprint	Low Profile Platform	(12) Decibel DB980H90
32	30	(1) 1/2"	Sprint	Standoff	(1) GPS

¹ The existing coax is located inside the pole's shaft, unless otherwise noted.

² Currently T-Mobile has (3) EMS RR90-17-02DP panels, (3) Allen FE15501P77-75 TMAs and (6) 1-5/8" coax installed at 106 ft. According to information provided by SBA, T-Mobile may install (6) antennas, (12) TMAs, and (12) coax at 106 ft. Analysis performed with total leased loading in place.

³ Currently Sprint has (6) Decibel DB980H90 panels and (6) 1-5/8" coax installed at 87 ft. According to information provided by SBA, Sprint may install (12) antennas and (12) coax at 87 ft. Analysis performed with total leased loading in place.

Proposed Loading:

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Mount Type	Description
1-3	77	(6) 1-5/8"	Pocket	Flush	(3) Kathrein 742-213

RESULTS

Based on information obtained from the original design drawings, the yield strength of steel for individual members was as follows:

Table 2 - Material Strength

Member Type	Yield Strength
Tower Shaft Sections	42 ksi
Base Plate	36 ksi
Anchor Bolts	105 ksi

Table 3 displays the ratio (as a percentage) of actual force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note: Capacities up to 105% are considered acceptable.* **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information.

Table 3 – Summary of Working Percentage of Structural Components

Section No.	Elevation ft	Component Type	Size	% Capacity	Pass Fail
L1	105 - 80	Pole	P36x3/8	14.1	Pass
L2	80 - 60	Pole	P42x3/8	25.9	Pass
L3	60 - 40	Pole	P48x3/8	34.4	Pass
L4	40 - 20	Pole	P54x3/8	40.8	Pass
L5	20 - 0	Pole	P60x3/8	45.7	Pass
			Base Plate	OK	Pass
			Anchor Bolts	OK	Pass
			Flange Plates	OK	Pass
			Flange Bolts	OK	Pass

Table 4 – Maximum Base Reactions

Load Type	Current Analysis (ANSI/TIA-222-G)	Original Design (TIA/EIA-222-F)
Axial	36 k	41 k
Shear	23 k	31 k
Moment	1,573 k-ft	2,555 k-ft

* Current analysis reactions are within an allowable factor of 1.35 when the original design reactions are based on an allowable stress design per ANSI/TIA-222-G.

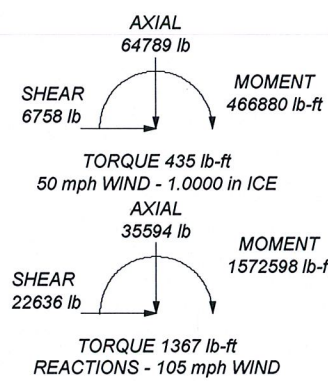
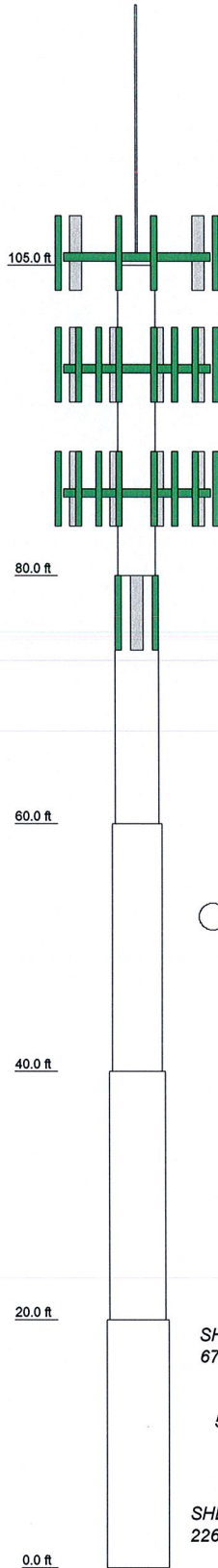
GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering should be notified immediately to perform a revised analysis.

LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

1	P36x3/8	25.00	A53-B-42	3570.4
2	P42x3/8	20.00	A53-B-42	3337.3
3	P48x3/8	20.00	A53-B-42	3818.4
4	P54x3/8	20.00	A53-B-42	4299.5
5	P60x3/8	20.00	A53-B-42	4780.5
				19806.1



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
20' Omni (Farmington Woods)	116	(2) TMA - Powerwave LGP21401 (ATI)	97
(2) RR90-17-02DP w/Mount Pipe (T-Mobile)	106	(2) TMA - Powerwave LGP21401 (ATI)	97
(2) RR90-17-02DP w/Mount Pipe (T-Mobile)	106	Low Profile Platform (ATI)	97
(2) RR90-17-02DP w/Mount Pipe (T-Mobile)	106	(4) DB980H90 w/Mount Pipe (Sprint)	87
(4) TMA (T-Mobile)	106	(4) DB980H90 w/Mount Pipe (Sprint)	87
(4) TMA (T-Mobile)	106	(4) DB980H90 w/Mount Pipe (Sprint)	87
(4) TMA (T-Mobile)	106	Low Profile Platform (Sprint)	87
Low Profile Platform (T-Mobile)	106	Kathrein 742-213 w/ Mount Pipe (Pocket)	77
(3) 7184 w/Mount Pipe (ATI)	97	Kathrein 742-213 w/ Mount Pipe (Pocket)	77
(3) 7184 w/Mount Pipe (ATI)	97	Kathrein 742-213 w/ Mount Pipe (Pocket)	77
(3) 7184 w/Mount Pipe (ATI)	97	Side Mount Standoff (1) (Sprint)	30
Powerwave 7770 w/ Mount Pipe (ATI)	97	GPS (Sprint)	30
Powerwave 7770 w/ Mount Pipe (ATI)	97		
Powerwave 7770 w/ Mount Pipe (ATI)	97		
(2) TMA - Powerwave LGP21401 (ATI)	97		

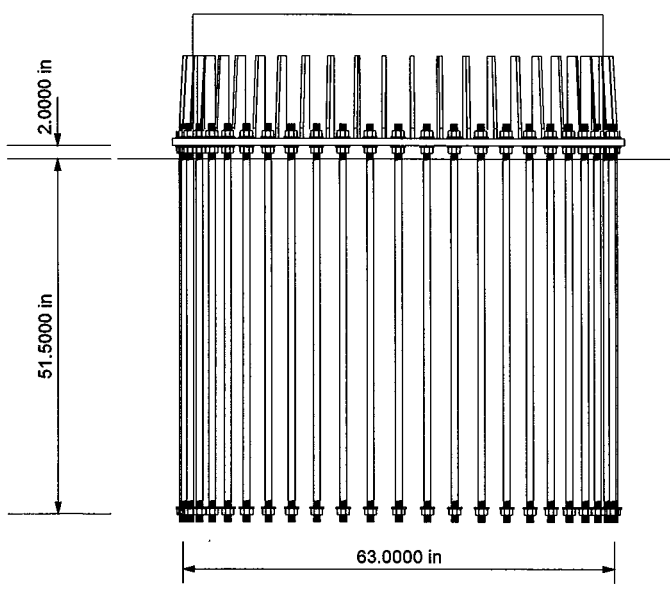
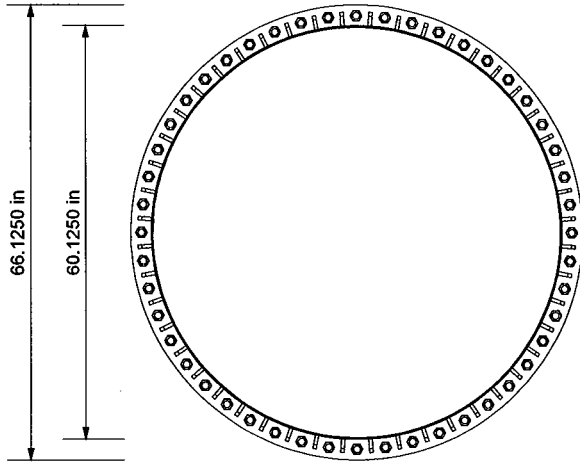
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. TOWER RATING: 50.3%

FDH Engineering		Job: Avon, CT01498-S	
2730 Rowland Road, Suite 100		Project: 08-08174E S2	
Raleigh, NC 27615		Client: SBA	Drawn by: Krystyn Wagner
Phone: (919) 755-1012		Code: TIA-222-G	Date: 09/16/08
FAX: (919) 755-1031		Path: \\fdh-served\projects\2009\Projects\08-August\08-08174E\Avon_CT01498-S\Analysis\Avon_CT01498-S.dwg	App'd: NTS
Tower Analysis			Dwg No. E-1



FOUNDATION NOTES

1. Plate thickness is 1.0000 in.
2. Plate grade is A36.
3. Anchor bolt grade is F1554-105.
4. fc is 4 ksi.

FDH Engineering 2730 Rowland Road, Suite 100 Raleigh, NC 27615 Phone: (919) 755-1012 FAX: (919) 755-1031		Job: Avon, CT01498-S	
		Project: 08-08174E S2	
Tower Analysis	Client: SBA	Drawn by: Krystyn Wagner	App'd:
	Code: TIA-222-G	Date: 09/16/08	Scale: NTS
	Path: \\FSB-server\projects\2008\Projects\08-08174E\Avon_CT01498-S.dwg		Dwg No. F-1