# STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF CELLCO PARTNERSHIP

D/B/A VERIZON WIRELESS FOR A

CERTIFICATE OF ENVIRONMENTAL

COMPATIBILITY AND PUBLIC NEED FOR

THE CONSTRUCTION, MAINTENANCE

AND OPERATION OF A WIRELESS

TELECOMMUNICATIONS FACILITY OFF

NORFOLK ROAD, WINCHESTER,

CONNECTICUT

DOCKET NO. 361

JUNE 20, 2008

# SUPPLEMENTAL INFORMATION

On Friday, May 30, 2008, Cellco Partnership d/b/a Verizon Wireless ("Cellco") acquired the CT-1 RSA cellular license for Litchfield County, Connecticut from Alltel Communications. The acquisition of this license will enable Cellco to expand its cellular footprint and improve its network service into Litchfield County including the Town of Winchester.

In addition to cellular and PCS service, Cellco also has recently acquired the FCC license to provide service in the 700 MHz frequency range. Cellco's 700 MHz frequencies will use LTE Technology for 4G (4<sup>th</sup> Generation) wireless service. The information provided below and in the attached exhibits is intended to supplement the information previously filed in the Docket No. 361 Application.

# Proposed Antenna Installation

Cellco intends to install six PCS and six cellular antennas at the 150-foot level on the proposed Winchester Facility tower. Cellular antenna specifications are included behind <u>Tab 1</u> of this filing. At cellular frequencies, Cellco will provide reliable service to a 3.4 mile portion of Route 44, a 3.5 mile portion of Route 183 and an overall area of approximately 8.9 square miles overall. Plots showing Cellco's existing and proposed cellular coverage in Winchester are attached behind <u>Tab 2</u>. Cellco does not intend to install 700 MHz frequency antennas on the Winchester tower at this time.

# Cellular License

A copy of the recently acquired the FCC CT-1 RSA Cellular License is attached behind Tab 3.

# **Visibility**

The installation of cellular antennas in addition to the PCS antennas currently proposed will not change, in any way the findings in the Visual Resource Evaluation Report included in the Application.

# Non-Ionizing Radio Frequency Radiation

To supplement the information included on page 15 and behind <u>Tab 1</u> of the Application, Cellco has performed new maximum power density calculations for the proposed Winchester Facility including both cellular and PCS antennas. This calculation is a conservative worst-case approximation for RF power density levels at the closest accessible point, the base of the tower,

with all antennas transmitting simultaneously on all channels at full power. The calculations indicate that the maximum power density level for Cellco antennas would be 20.08% of the FCC standard.

Respectfully submitted,

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

Kenneth C. Baldwin, Esq.

Robinson & Cole LLP 280 Trumbull Street

Hartford, Connecticut 06103-3597

(860) 275-8200

# **Mechanical specifications**

		THE RESERVE THE PERSON NAMED IN		Taken Dear taken o	Charles A. Physics
	Length	1200	mm	47.2	in
	Width	140	mm	5.5	in
	Depth Depth with z-bracket	240 280	mm mm	9.4 11.0	Lastin)
1)	Weight	5	kg	11.0	lbs
	Wind Area Fore/Aft	0.17	m²	1.8	ft²
	Side	0.29	m²	3.1	ft²

Rated Wind Velocity (Safety factor 2.0) >444 km/hr >276 mph

Wind Load @ 100 mph (161 km/hr)
Fore/Aft 254 N 57.1 lbs
Side 415 N 93.3 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

## Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in).

Mounting Bracket & Downtilt Bracket Kit #21699999

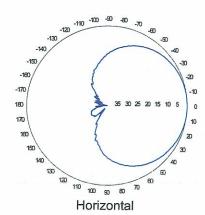
# **Electrical specifications**

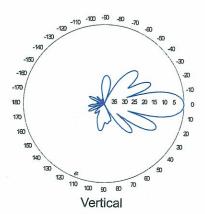
Frequency Range	696-900 MHz
Impedance	50Ω
3) Connector(s)	NE or E-DIN 1 port / center
1) VSWR	≤ 1.4:1
Polarization	Vertical
<sup>1)</sup> Gain	11.5 dBd
2) Power Rating	500 W
1) Half Power Angle	
H-Plane	90°
E-Plane	15°
1) Electrical Downtilt	O°
<sup>1)</sup> Null Fill	10-15%
Lightning Protection	Direct Ground

# LPA-70090/4CF

When ordering replace "\_\_" with connector type.

## Radiation pattern1)

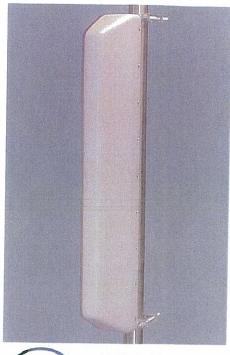




# Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.





Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- 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 bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a fiveyear limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.

2) Power rating limited by connector only.

NE indicates an elongated N connector.
 E-DIN indicates an elongated DIN connector.

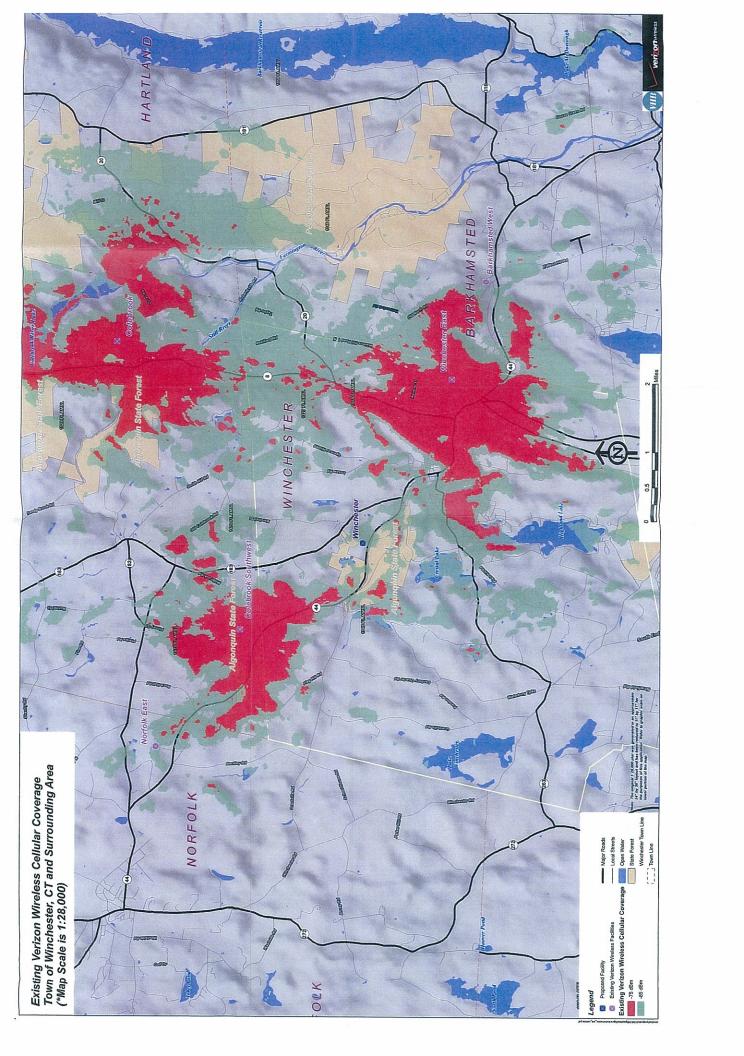
 The antenna weight listed above does not include the bracket weight.

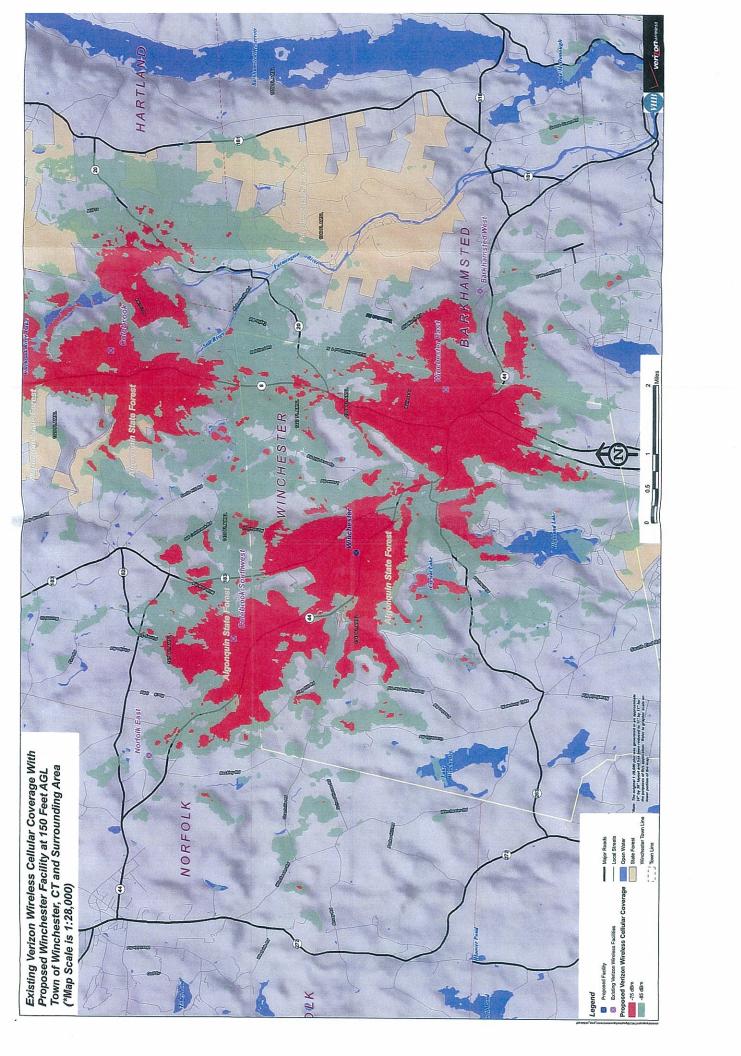
Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

696-900 MHz







#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



# **Federal Communications Commission** Wireless Telecommunications Bureau

# RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY CELLCO PARTNERSHIP 1120 SANCTUARY PKWY #150 - GASA5REG ALPHARETTA, GA 30004

Call Sign KNKN833	File Number				
	Service ellular				
Market Numer CMA357	Channel Block A				
Sub-Market	Designator				

FCC Registration Number (FRN): 0003290673

Market Nam	e
Connecticut 1	- Litchfield

Grant Date 10-16-2001	Effective Date 05-15-2008	Expiration Date 10-01-2011	Five Yr Build-Out Date	Print Date
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#### Site Information:

Location Latitude I	ongitude		Fround Ele	vation	Structure Hg	gt to Tip	Antenna St	
3 41-49-16.6 N O Address: Mohawk Mountain	073-17-47.1 W	`	neters) 14.2		(meters) 26.8		Registratio	n No.
City: Mohawk County: LITCHFIELD State: CT Construction Deadline:								
Antenna: 3 Azimuth (from true n	orth) 0	45	90	135	180	225	270	315
Antenna Height AAT (meters) Transmitting ERP (watts)	178.500 68.380	113.000 124.450	194.500 56.870	187.7 7.320	00 230.200 0.440	134.200 0.240	207.600 0.680	219.300 10.110
Antenna: 4 Azimuth (from true no Antenna Height AAT (meters) Transmitting ERR (meters)	178.500	<b>45</b> 113.000	<b>90</b> 194.500	135 187.70	180 00 230.200	<b>225</b> 134.200	<b>270</b> 207.600	315 219.300
Transmitting ERP (watts)	0.550	1.550	25.400	161.3	278.610	134.200	18.400	1.010

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Call Sign:	KNKN833
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# File Number:

### **Print Date:**

Print Date:								
0	itude 05-49.3 W	(1	Ground Elemeters) 223.7	(	Structure Hg (meters) 56.3	t to Tip	Antenna S Registratio	
City: Terryville County: LITCHFI		ate: CT	Constructi	on Deadl	ine:			
Antenna: 1 Azimuth (from true north Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Azimuth (from true north)	30.000 59.560 <b>0</b>	45 30.200 184.070 45	90 68.000 146.210 90	135 41.400 34.270 135	180 69.000 3.500 180	225 30.000 0.370 225	270 30.000 0.660 270	315 30.000 9.660 315
Antenna Height AAT (meters) Transmitting ERP (watts)	30.000 0.380	30.200 5.550	68.000 41.200	41.400 160.320	69.000 171.790	30.000 50.690	30.000 6.530	30.000 0.400
Antenna: 3 Azimuth (from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	0 30.000 60.950	45 30.200 9.010	90 68.000 0.450	135 41.400 0.360	180 69.000 4.120	225 30.000 33.400	<b>270</b> 30.000 146.200	315 30.000 184.000
Location Latitude Longing 9 41-53-37.7 N 072-59 Address: 50 Rust Road (Barhamstead City: Litchfield County: LITCHFIE	(n 24	round Elev neters) 41.7 Constructio	(r 4:	tructure Hgt neters) 5.7	to Tip	Antenna Structure Registration No. 1250429		
Antenna: 1 Azimuth (from true north) Antenna Height AAT (meters) Transmitting ERP (watts)		45 30.000 62.370	90 75.200 7.850	135 134.200 0.390	180 30.000 0.300	225 30.000 0.980	270 30.000 12.730	315 30.000 86.000
Antenna: 2 Azimuth (from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Azimuth (from true north)	0 30.000 0.260	45 30.000 3.500	90 75.200 17.570	135 134.200 22.130	180 30.000 6.380	225 30.000 0.680	270 30.000 0.100	315 30.000 0.100
Antenna Height AAT (meters) Transmitting ERP (watts)	0 30.000 1.330	45 30.000 0.280	90 75.200 0.280	135 134.200 4.410	30.000 44.150	225 30.000 142.880	270 30.000 108.390	315 30.000 20.650

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN833

#### File Number:

## **Print Date:**

Location Latitude Longiti	ude		round Ele neters)		Structure Hg (meters)	t to Tip	Antenna St Registratio	
10 41-51-43.3 N 073-23 Address: 7 Sirdan Mountain Road (Cor	-58.6 W	4:	19.1		60.0		Registratio	n No.
City: Cornwall County: LITCHFIEL		. 1	Constructi	on Deadl	ine:			
Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	195.900	156.200	78.900	137.200	0 168.300	131.800	229.400	196.200
Transmitting ERP (watts)	10.710	6.510	1.140	0.100	0.100	0.100	0.940	5.830

#### **Control Points:**

### Waivers/Conditions:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918527.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918527, was terminated on 04/14/2005. See file number 0002135354.