McBRAYER, McGINNIS, LESLIE & KIRKLAND, PLLC

ATTORNEYS-AT-LAW

W. BRENT RICE <u>brice@mmlk.com</u>

201 E. Main Street, Suite 1000 Lexington, Kentucky 40507 (859) 231-8780 FAX (859) 231-6518 RECEIVED

September 23, 2005

SEP 2 3 2005

VIA HAND DELIVERY

Ms. Beth A. O'Donnell, Executive Director Public Service Commission P.O. Box 615 211 Sower Blvd. Frankfort, KY 40602-0615

RE: Application of Cellco Partnership d/b/a Verizon Wireless, for Issuance of a Certificate of Public Convenience and Necessity to Construct a Cell Facility on Sand Hill Road and Mize Branch Road, Bath County, Kentucky ("Application") PSC Case No. 2005-00360 (Sandy Ridge 2 Facility)

Dear Ms. O'Donnell:

Please be advised that the undersigned represents Verizon Wireless in regard to the above-referenced application which I am filing on its behalf today with the Commission.

I request a waiver of the required original and ten copies of the Application and submit the original and four (4) copies for filing. Additionally, two sets of project description drawings are submitted with the Application, both of which are signed and sealed by a licensed professional engineer in Kentucky. Any comments or questions in regard to the application should be forwarded to the undersigned.

Thank you for your assistance in this matter.

Sincerely,

6. Spant nin

W. Brent Rice Counsel for Verizon Wireless

WBR/dkw Enclosures

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

RECEIVED

SFP 2 3 7005

APPLICATION OF CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS FOR ISSUANCE OF A)	PUBLIC SERVICE COMMISSION
CERTIFICATE OF PUBLIC CONVENIENCE AND)	
NECESSITY TO CONSTRUCT AN ADDITIONAL)	Case No. 2005-00360
CELL FACILITY ON SAND HILL ROAD & MIZE)	
BRANCH ROAD, LIVINGSTON, ROCKCASTLE)	
COUNTY, KENTUCKY)	
(THE SANDY RIDGE 2 CELL FACILITY))	

APPLICATION

Cellco Partnership, a Delaware General Partnership, d/b/a Verizon Wireless ("Applicant") applies for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility to serve the customers of its wireless radio telecommunications network in the Commonwealth of Kentucky. In support of this Application, Applicant, respectfully states that:

1. Its complete name, address and telephone number are: Cellco Partnership, d/b/a Verizon Wireless, 180 Washington Valley Road, Bedminster, New Jersey 07921, (908)306-7000, having a local address of 652 South Third Street, Louisville, Kentucky 40202, (502)588-2348.

2. The Applicant is a Delaware general partnership and is therefore not subject to the Articles of Incorporation filing requirements set forth in 807 KAR 5:063 § 1(1)(a) and 807 KAR 5:001 § 8(1)(3). It is a successor in interest to GTE Wireless of the Mid-West Incorporated and GTE Wireless of the South Incorporated, both of which contributed assets to Cellco Partnership as the Public Service Commission was advised by letter dated July 5, 2000, a copy of which is attached hereto as **Exhibit A**. Cellco Partnership's Adoption Notice was filed with the Public Service Commission as "P.S.C. Adoption Notice No. 1" on July 5, 2000, effective pursuant to 807 KAR

5:011 § 9(1) on July 10, 2000. A copy of this Adoption Notice, stamped as "Effective" by the Public Service Commission is additionally attached as part of **Exhibit A**.

3. The Applicant proposes to construct an additional cellular facility in Rockcastle County, Kentucky (the "Cell Facility"). The Cell Facility will be comprised of a 300' self-supporting tower and an equipment shelter. The equipment shelter will contain the transmitters and receivers required to connect the cell facility with wireless telephone users, which will link the Cell Facility with Applicant's other cells. The Cell Facility will be fenced with a secured access gate. Three (3) Project Description Drawings are being submitted with this Application. A detailed description of the manner in which the Cell Facility will be constructed is included on the Site Plan (scale: 1" = 200'). A reduced copy of the survey is attached as **Exhibit B**. The survey is signed and sealed by Frank L. Sellinger, II, a licensed professional land surveyor registered in Kentucky and it depicts the proposed location of the tower and all easements and existing structures on the property on which the tower will be located. A vertical tower profile and its foundation, each signed and sealed by a professional engineer registered in Kentucky are attached as **Exhibit C**. The tower design plans include a description of the standard according to which the tower was designed.

4. An original geotechnical investigation report performed by FStan Land surveyors and Consulting Engineering of Louisville, Kentucky, dated February 25, 2005 is attached as **Exhibit D**. The geotechnical investigation report is signed and sealed by Raymond E. Frye, Jr., P.E., a professional engineer registered in Kentucky. The geotechnical investigation report includes boring logs and foundation design recommendations.

5. As noted on the Survey attached as a part of **Exhibit B**, the surveyor has determined

that the site is not within any FIA flood hazard area.

6. The possibility of a strong ground shaking has been considered in the design of this guyed tower. Formulas are given in codes for earthquake loading. The formulas are for lateral loads, and they take into account the seismic zone, ground motion and structure. The two most important components of the structure are its weight and shape. Applying all of the factors to the formula, the resultant earthquake load is less than the design wind load. Seismic loading has been considered in the design of this tower, although it is regarded as secondary to the wind loading.

Even if the tower would fall as result of an earthquake, it should not damage any occupied buildings. In the event of failure of the tower mast, all of the debris will most likely lie within a circle whose center is the tower base and whose radius is no more than 60% of the tower height.

7. Similarly, the possibility of a strong wind has been considered in the design of this tower. It has been designed and engineered by professional engineers using computer assistance and the same accepted codes and standards as are typically used for high-rise building construction. This tower has been designed in accordance with the Electronic Industries Association ("EIA") Standard RS-222E, which has been accepted and approved by ANSI and is a nationally recognized tower design standard. The ANSI/EIA standard utilizes a "stepped" wind loading in tower design. This means that a standardized wind speed (the "basic wind speed") is applied to the tower structure at the 33-foot level and then is "increased" with increments of tower height. In this case, the design wind speed is 75 mph. Using the appropriate wind speed for each antenna level, the thrust of the antenna and its corresponding waveguide load are applied to the tower structure for maximum member loads.

8. Personnel directly responsible for the design and construction of the proposed tower

are qualified and experienced. The soil testing and part of the foundation design was performed by FStan of Louisville, Kentucky under the supervision of Raymond E. Frye, Jr., a registered professional engineer in the Commonwealth of Kentucky. His specialty is geotechnical engineering which includes sub-surface exploration and foundation design. He has served as project and principal engineer on various projects similar to the applicant's. These projects include construction, tower crane foundations, and nexrad doppler radar towers, other mobile telephone towers and elevated water towers. Foundation types for these towers have included drilled piers, auger-cast piles, driven piles and spread footings. Design of the tower and foundation was performed by Ft. Worth Tower, Inc. of Ft. Worth, Texas by Martin L. de la Rosa, a licensed professional engineer in the Commonwealth of Kentucky. The applicant uses qualified installation crews and site inspectors for construction of its towers.

9. The public convenience and necessity require the construction of this additional Cell Facility. The additional Cell Facility is essential to improve service to Applicant's current customers in that transmission and reception "weak spots" within the area to be covered by the Cell Facility will be substantially reduced. The Cell Facility will also increase the system's capacity to meet the increasing demands for cellular service in Kentucky.

The process that was used in selecting the site for the proposed Cell Facility by the applicant's radio frequency engineers was consistent with the process used for selecting generally all other existing cell facilities within the licensed area. The engineers used computer programs to locate cell sites that will enable the cell facilities to serve the Federal Communications Commission certificated territory without extending beyond its approved boundary and to meet other mandates of the Commission. The engineers select the optimum site in terms of elevation and location to provide the

best quality service to customers in the service area. A map of the area in which the tower is proposed to be located, that is drawn to scale and that clearly depicts the necessary search area within which a site should be located as determined by the Applicant's Radio Frequency Engineers is attached as **Exhibit E**.

It is imperative that the proposed Cell Facility be constructed to allow Applicant to meet its licensing requirements as mandated by the Federal Communications Commission and to further meet the increasing demands for cellular service in the licensed area.

10. The Cell Facility will serve an area totally within Applicant's current service area in the licensed area.

11. Since the proposed Cell Facility will serve only the licensed area, no further approvals by the Federal Communications Commission ("FCC") are required. <u>See</u> 47 C.F.R. §24.11(b), "[b]lanket licenses are granted for each market and frequency block. Applications for individual sites are not required and will not be accepted."

12. An Application to the Federal Aviation Administration ("FAA") was filed on September 21, 2005, a copy of which is attached as **Exhibit F**. Upon receiving a determination from the FAA, the applicant will forward a copy of such determination as a supplement to this Application. An Application to the Kentucky Airport Zoning Commission ("KAZC") was filed on September 21, 2005, a copy of which is additionally attached as **Exhibit G**. Upon receiving a determination from KAZC, the applicant will forward a copy of such determination as a supplement to this application.

13. The proposed location of the tower is not within a jurisdiction that has adopted

planning and zoning regulations in accordance with KRS Chapter 100. The Applicant has notified the Rockcastle County Judge Executive, by certified mail, return receipt requested, of the proposed construction. The Applicant included in the notice the Commission docket number under which the application will be processed and informed said person of his right to request intervention. A copy of the notice is attached as **Exhibit H**.

14. The Cell Facility will be located on Sand Hill Road and Mize Branch Road, Livingston, Rockcastle County, Kentucky 40445. Appropriate notices 2' X 4' with the word "TOWER" in letters at least four inches high, have been posted in a visible location on the proposed site and on the nearest public road and shall remain posted for at least two (2) weeks after the Application is filed. The location of the proposed facility has been published in a newspaper of general circulation in Rockcastle County, Kentucky. The Cell Facility's coordinates are: Latitude: 37° 17' 20.82" N; Longitude: 84° 15' 44.24" W.

15. Clear directions to the proposed site are set forth on the title sheet to the Project Description Drawings. The Vicinity Map attached to the Survey identifies every structure within 500' of the proposed tower, and all easements and existing structures within 200' of the access drive, including the intersection with the Public Street System, drawn to a scale no less than one (1) inch equals 200'. The telephone number of the person preparing the directions is (502)459-8402.

16. Applicant has notified every person who is contiguous or within 500' of the proposed tower by certified mail, return receipt requested, of the proposed construction. Applicant included in said notice the Commission docket number under which the Application will be processed and informed each person of his or her right to request intervention. A list of the property owners and

copies of the certified letters sent to the referenced property owners are attached as **Exhibit I**. Copies of the return receipts will be filed with the Commission when received.

17. The site for the proposed Facility is located on Sand Hill and Mize Branch Road, Rockcastle County, Kentucky, on the Ralph and Connie Hamilton property. The proposed site is a rural area and the subject property is not zoned.

18. Applicant has considered the likely effects of the installation on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate service can be provided. Applicant attempted to co-locate on existing towers or structures, however, there are no such existing towers or structures in the vicinity of the proposed site.

19. The site for the Cell Facility is to be leased from Ralph and Connie Hamilton, pursuant to an Option and Lease Agreement dated June 16, 2005. A copy of the Option and Lease Agreement is attached as **Exhibit J**.

20. The names of all public utilities, corporations, or persons with whom the proposed new construction is likely to compete is Cingular Wireless, RamCell, Sprint PCS, Nextel Partners, and AT&T Wireless

21. Applicant plans to finance the construction of the Cell Facility through the use of working capital. If sufficient funds are not available form this source, the company will obtain funds through short-term loans payable within two years.

22. Any customer complaints may be reported by dialing 611 on the customer's cellular phone.

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WHEREFORE, Applicant requests that the Commission, pursuant to KRS 278.020, grant a

Certificate of Public Convenience and Necessity to Applicant for construction and operation of the

proposed Cell Facility and providing for such other relief as is necessary and appropriate.

Respectfully submitted,

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W. Brent Rice MCBRAYER, MCGINNIS, LESLIE & KIRKLAND 201 East Main Street, Suite 1000 Lexington, KY 40507 Phone: 859/231-8780

COUNSEL FOR CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

LIST OF EXHIBITS

Exhibit A	Applicant Adoption Notices
Exhibit B	Reduced Site Plan and Survey
Exhibit C	Tower and Foundation Profile
Exhibit D	Report of Geotechnical Exploration
Exhibit E	Search Area Map
Exhibit F	FAA Application
Exhibit G	KAZC Application
Exhibit H	Correspondence to Rockcastle County Judge Executive
Exhibit I	Notice to Adjoining Property Owners
Exhibit J	Real Estate Lease Agreement

GTE GOVERMENT RELATIONS

JACKSON & KELLY PLLC

1600 LAIDLEY TOWER: CHAPLESTON, WEST VIROINIA 25301 TELEPHONE 304-340-1000

IND FORCROFT AVENUE MARTINSBURG, WEST VIRGINIA 25402 I ELLEPIKONE 204-28/3-8800

256 HUSSELL AVENUE NEW MARTINSVILLE, WEST VIRGINIA 20155 TELEPHONE 304-455-1751

BXXX HAMPTON CENTER MORGANTOWN, WEST VIRGINIA 28505 TELEPHONE 304-589-3XXX

1000 TECHNOLOGY DRIVE FAIRMONT, WEST VIRGINIA 28554 TELEPHONE 304-368-2000 ATTORNEYS AT LAW 175 EAST MAIN STREET P. O. BOX 2150 LEXINGTON, KENTUCKYX40059548150m 40588-9945

TELEPHONE 806-255-9500 TELECOPIER 605-281-6478

http://www.jscksonkelly.com

412 MARKET STREET PAAKERSBURG, WEST VIRGINIA 25101 TELEPHONE 304-424-3450

111

1144 MARKET STREET WHEELING, WEBT VIRGINIA 28003 TELEPHONE 304-233-4000

1650 LINCOLN STREET DENVER, COLORADO 603/14 TELEPHONE 303-300-0003

2401 PENNSYLVANIA AVENUE N.W. WASHINGTON, D.C. 20037 TELEPHONE 202-973-0200

MEMBER OF LEX MUNOL THE WORLD'S LEADING ASSOCIATION OF INDEPENDENT LAW FIFMS.

July 5, 2000

Hon. Martin J. Huelsmann Executive Director Kentucky Public Service Commission 211 Sower Blvd. Frankfort, KY 40602-0615

SUL 0 5 2580

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Re: Transfer of GTE Wireless Companies to Cellco Partnership d/b/a Verizon Wireless

Dear Mr. Huelsmann:

We are hereby notifying the Commission, on behalf of all involved companies, of the following restructuring resulting from the merger of GTE Corporation ("GTE") and Bell Atlantic Corporation ("Bell Atlantic"). On June 30, 2000, Bell Atlantic and GTE completed their merger. As a result of the merger, the assets and licenses of GTE Wireless will be contributed to the merged company's domestic national wireless subsidiary known as Cellco Partnership ("Cellco"). GTE Wireless' Kentucky operations, with the exception of its Cincinnati PCS license (see letter dated June 21, 2000), will thus be combined with the other wireless operations managed by Bell Atlantic, all of which will do business under the brand name Verizon Wireless.

1. GTE Mobilnet of Clarksville Incorporated will transfer its assets and cellular business in the Clarksville, Tennessee-Hopkinsville, Kentucky Metropolitan Statistical Area to GTE Wireless Holdings LLC. Both companies are wholly owned by GTE Wireless Incorporated. The membership interest of GTE Wireless Holdings LLC will then be contributed to Cellco. GTE Wireless Holdings LLC will be liquidated into Cellco.

2. The stock of GTE Wireless of the Midwest Incorporated will be contributed to Cellco. GTE Wireless of the Midwest Incorporated will continue to provide cellular service in Evansville and Owensboro Metropolitan Statistical Areas.





Hon. Martin J. Huelsmann July 5, 2000 Page 2

3. The Kentucky RSA No. 1 Partnership interest will be contributed to Cellco. Kentucky RSA No. 1 Partnership will continue to provide cellular service in Kentucky Rural Service Area No. 1.

4. The assets of GTE Wireless of the South Incorporated will be contributed to Cellco. GTE Wireless of the South Incorporated provides cellular service in the Louisville and Lexington Metropolitan Statistical Areas and Kentucky Rural Service Areas No. 2 and 7.

Cellco will adopt the tariffs of GTE Mobilnet of Clarksville Incorporated and GTE Wireless of the South. Their adoption notices are enclosed. In addition, revised tariffs for GTE Wireless of the Midwest Incorporated and Kentucky RSA No. 1 Partnership will be filed shortly reflecting that these entities will be doing business as Verizon Wireless.

We understand from this Commission's January 8, 1998 Order in Administrative Case No. 360 that this notice is all that is required for this restructuring. If you have any questions, please do not hesitate to contact me.

Sincerely yours,

-gell Ang

Jeffrey J. Yost

JJY:bsh

c: Mr. Francis Malnati Mr. Carl Povelites

11113\301\308852

P.S.C. Adoption Notice No. 1 ADOPTION NOTICE

The undersigned, Cellco Partnership d/b/a Verizon Wireless, of Bedminster, New Jersey, hereby adopts, ratifies, and makes its own, in every respect as if the same had been originally filed and posted by it, all tariffs and supplements containing rates, rules and regulations for furnishing commercial mobile radio service in the Commonwealth of Kentucky, filed with the Public Service Commission by GTE Wireless of the South Incorporated of Alpharetta, Georgia, and in effect on the day of July 10, 2000, the date on which the public service business of GTE Wireless of the South Incorporated, was taken over by it.

This notice is issued on the <u>Sth</u> day of <u>Juv</u>, 2000, in conformity with Section 20 of P.S.C. Tariff Regulations adopted by the Public Service Commission.

B¥

S. Mark Tuller Vice President, Legal and External Affairs and General Counsel Cellco Partnership d/b/a Verizon Wireless Public Service Commission of Kentucky Effective

JUL 10 2000

PURSUANT TO BOT KAR 5:011, SECTION 9 (1) BY: <u>Stephan</u>O <u>BALY</u> SECRETARY OF THE COMMENT 1

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GELLCO PARTNERSHIP D/B/A/ VERIZON WIRELESS

-CELLULAR RADIO TELECOMMUNICATIONS SERVICE TARIFF-

For the Lexington, Kentucky; Louisville, Kentucky/Indiana MSAs and the Kentucky 7 - Trimble RSA and the Kentucky 2 - Union RSA Cellular Geographic Service Areas

> FUBLIC SERVICE COMMISSION OF KENTUCKY EFFECTIVE

> > JUL 10 2000

PURSUANT TO 807 KAP. 5.011, BECTION 9 (1) BY: Stephand BALLO EECHETARY OF THE COMMENT

ISSUED: JULY 6, 2000

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CELLCO PARTNERSHIP D/B/A/ VERIZON WIRELESS

۵ BX: 14 1 act S. Mark Tuller

V.P. Legal and External Affairs and General Counsel 180 Washington Valley Road Bedminster, NJ 07921 EFFECTIVE: JULY 10, 2000

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09/21/2000



Federal Communications Commission

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£.1

Wireless Telecommunications Bureau

Radio Station Authorization

Name of Licensee:	Call Sign	File N	lumber	Print Date	
	KNKA638	0000202312	2	09/21/2000	
Attention:	Market Nu	mber	Chan	nel Block	
180 Washington Valley Road	CMA116		A	İ	
	Sub-Market De	signator		SID	
Bedminster NJ 07921	0		0213		
	Market Name				
	Lexington-Fayette, K	(Y			
	Effective Date	Five Yr Bui	ld-Out Date	Expiration Date	
	08/11/1987			12/17/2006	

SITE INFORMATION

Location	Latitude	Lo	ongitude		Ground Elevation (meters)			Structure Hgt to Tip (meters)				Antenna Structure Registration No.		
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Address				City			Cour	State		Construction Deadline				
556 CANE RUN ROAD GEORG					ETOWN SCOTT					KY		- 1		
Antenna:	north)	0*	45*		90*	135"	180*	2	25*	270*	315*			
Antenna He	75	5.0	73.0	76.0	71.0	. 74	ŧ.0	88.0	102.0	103.0				
Transmitting ERP (watts)					00 9.	7.700	47.900	7.600	0.6	00	0.300	4.500	29.500	
Antenna: 2 Azimuth (degrees from true north)					45*		90*	135"	180*	2	25*	270*	315"	
Antenna He	lght AAT (meters)			75	5.0	73.0	76.0	71.0	74	4.0	88.0	102.0	103.0	
Transmitting	g ERP (watts)			0.6	00	8.100	51.300	97.700	81.3	00	30.200	4.300	0.400	
Antenna:	3 Azimuth (degrees	from true	north)	0*	45*		90*	135*	180*	2	25*	270*	315*	
Antenna He	ight AAT (meters)			75	5.0	73.0	76.0	71.0	74	4.0	88.0	102.0	103.0	
Transmittin	g ERP (watts)			15.8	00	1.700	1.100	1.900	15.5	00	69.200	97.700	67.600	
Antenna: 4 Azimuth (degrees from true north)					45*		90*	135*	180*	2	25*	270*	315*	
Antenna He	Antenna Height AAT (meters)				7.0	75.0	78.0	73.0	76	5.0	90.0	104.0	105.0	
Transmittin	Transmitting ERP (watts)					0.000	100.000	100.000	100.0	00	100.000	100.000	100.000	

3.





Customer: VERIZON WIRELESS Site: SANDY RIDGE 2, ROCKCASTLE COUNTY, KY J050405006 Job



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AZ COAX

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(1)-EW220

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MEMBER TABLE

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MAX. DOWNLOAD: 109.3 KIPS.

TOTAL SHEAR: 55.2 KIPS

B L2 X 2 X 3/16

MEGISIONAL







DATE: 4-	6-2005	TIME: 15:25:48	PAGE	1							
USER INTER DISCRETE L	FACE VERSION: 9.04.00 OADS VERSION: 1.1.0	14 DESIGN PROGRAM V FLANGE PLATES DA	TERSION: 6.1.0								
FWT INC. Analysis	P. O. BOX 8597. FC & Design of 300FT	RT WORTH, TX 76124-059 Tower per EIA/TIA-222-	ר7 - די								
Design NO. Location Customer	Design NO.: S05-0135-C Design Date: March 30, 2005 Location: SANDY RIDGE 2,ROCKCASTLE COUNTY, KY JOB NO.: J050405006 Customer: VERIZON WIRELESS Engineer: HD/TW										
		DESIGN LOAD COM	BINATIONS:								
	Case 1: Wind at 75. Case 2: Wind at 65.	MPH. Radial Ice Thick MPH. Radial Ice Thick	ness = .00 Inches.								
		OPERATIONAL CON	DITIONS:								

Wind at 50. MPH. Radial Ice Thickness = .00 Inches.

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The method of analysis used is based on the equilibrium of joints. The basic structure is statically determinate and the forces in members meeting at a joint can be determined independent of the forces in members at other joints.



The analysis reported in this document must be reviewed by an experienced engineer.

TIME: 15:25:48 PAGE 3 DATE: 4- 6-2005 USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1 FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F Design NO.: S05-0135-C Design Date: March 30, 2005 JOB NO.: J050405006 Location: SANDY RIDGE 2, ROCKCASTLE COUNTY, KY Customer: VERIZON WIRELESS Engineer: HD/TW Į, DESIGN LOAD COMBINATIONS: == Case 1: Wind at 75. MPH. Radial Ice Thickness = .00 Inches. Case 2: Wind at 65. MPH. Radial Ice Thickness = .50 Inches.

OPERATIONAL CONDITIONS:

Wind at 50. MPH. Radial Ice Thickness = .00 Inches.

Design Wind Velocity (V) = 75.00 mph. Importance Factor = 1.00Gust Response Factor (Gh) = 1.09 Qz = $.00256 \pm Kz \pm (5625.0)$

VELOCITY PRESSURES AT SECTION MID-HEIGHTS.

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260.00	280.00	1.823	28.556
240.00	260.00	1.783	27.935
220.00	240.00	1.741	27.278
200.00	220.00	1.697	26.578
180.00	200.00	1.649	25.828
160.00	180.00	1.597	25.021
140.00	160.00	1.541	24.142
120.00	140.00	1.480	23.174
100.00	120.00	1.411	22.094
80.00	100.00	1.332	20.863
60.00	80.00	1.240	19.418
40.00	60.00	1.126	17.638
20.00	40.00	1.000	15.663
.00	20.00	1.000	15.663

* Elevations are measured from Tower Base. Tower Base Elevation = 0.

DATE: 4-6-2005 TIME: 15:25:48 PAGE 5

USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1

FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F

Design NO.:	S05~0135~C	1	Design D	ate:	March 3	30,	2005		
Location:	SANDY RIDGE	2, ROCKCASTLE	COUNTY,	КY				JOB NO.:	J050405006
Customer:	VERIZON WIRE	LESS						Engineer:	HD/TW

WIND LOAD DUE TO STRUCTURE & LINEAR APPURTENANCES PER TOWER PANEL

Panel	Elevati From* T	ons o* V	Ave. Midth	Gh*O	z			Effect:	ive Stı Areas	cuctural W	ind	Total D Wind	istribu Force	ted Panel (kips)
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20	200.0 205	. 0	7.8	26.6	. 43	2.01	.66	12.00	11.46	11.60	.00	.640	.611	.618
	Data for	. 50	inch	ice:	.55	1.84	.73	16.54	16.00	16.13	.00	. 606	.586	.591
		SECI	ION	5 NO	ICE ?	FOTALS:		48.45	46.44	46.94	.00	2.496	2.393	2.419
				WITH	ICE !	FOTALS:		67.63	65.62	66.12	.00	2.432	2.360	2.378
21	190.0 200	.0	8.5	25.8	. 42	2.03	.66	25.59	24.21	24.56	.00	1.344	1.272	1,290
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22	180.0 190	.0	9.5	25.8	.38	2.11	. 64	25.58	24.12	24.49	.00	1.396	1.316	1.336
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		2501	1.014	WT WU	TOP	COTALS:		51.17	40.33	49.04	.00	2.741	2,000	2.020
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20	Data for	50	inch	ice	44	1 99	.05	33 67	32 11	32 50	00	1 258	1 200	1 215
24	160 0 170	.0 1	1.5	25.0	32	2.25	. 62	25.94	24.29	24.70	.00	1.458	1.365	1,389
	Data for	.50	inch	ice:	.41	2.05	. 65	33.75	32.09	32.51	.00	1.298	1.234	1.250
						2.00		55115	52.05	011101		2,200		2.200
		SECI	ION	7 NO	ICE !	FOTALS :		51.66	48.45	49.25	.00	2.863	2.685	2.730
				WITH	ICE :	FOTALS:		67.42	64.21	65.01	.00	2.556	2.434	2.465
25	150.0 160	.0 1	2.5	24.1	.30	2.28	. 62	27.08	25.23	25.69	,00	1.492	1.390	1.416
	Data for	.50	inch	ice:	.39	2.09	.65	34.85	33.00	33.46	.00	1.318	1.248	1.265
26	140.0 150	.0 1	3.5	24.1	.29	2.33	.61	27.46	25.50	25.99	.00	1.546	1.436	1.464
	Data for	.50	inch	ice:	.37	2.14	.64	35.18	33.22	33.71	.00	1.361	1.286	1.305
		SECI	ION	8 NO	ICE 1	COTALS:		54.54	50.72	51.67	.00	3.039	2.826	2.879
				WITH	ICE 1	COTALS :		70.03	66.22	67.17	,00	2.679	2.533	2.570
~-					~ ~					0.0.05				
27	130.0 140	.0 1	4.5	23.2	.28	2.35	.61	29.42	27.06	27.65	.00	1.602	1.473	1.505
	Data for	.50	inch	ice:	.36	2.16	. 63	37.19	34.83	35.42	.00	1.396	1.307	1.329
28	120.0 130	.0 1	5.5	23.2	.27	2.39	.61	29.93	27.44	28.07	.00	1.657	1.520	1.554
	Data for	.50	inch	ice:	.34	2.20	. 63	37.71	35.22	35.84	.00	1.442	1.347	1.371
		enem		0 10	T (7)77 (F0 36		FE 70	00	2 250	0 000	2 050
		SECI	TOW	9 NO	TOP	CTALS:		39.30 74 00	70 05	55.72 71 96	.00	2.239	2.993	3.059
				MTTH	105	LOIALS.		/4.90	70.05	11.20	.00	2.050	2.004	2.700
29	110 0 120	0 1	65	22.1	25	2 41	60	31 19	28 44	29.12	00	1.663	1 516	1 553
25	Data for	50	inch	ice	33	2.31	62	39 02	36 26	36.95	00	1 440	1 338	1 364
30	100 0 110	0 1	7 5	22 1	25	2 45	60	31 79	28 90	29 62	00	1 717	1 561	1 600
50	Data for	50	inch	ice	31	2 26	62	39 66	36 77	37.49	00	1 486	1 378	1 405
			1	100.	, 	2	. 02	55.00		07.120	.00	21.200	2.070	1.400
		SECT	ION 1	LO NO	ICE 1	OTALS:		62.98	57.34	58.75	.00	3.380	3.077	3.153
				WITH	ICE 1	OTALS:		78.68	73.04	74.45	.00	2.926	2.716	2.768
											-			
31	90.0 100.	0 1	8.5	20.9	.24	2.47	. 60	32.67	29.65	30.40	.00	1.682	1.526	1.565
	Data for	.50	inch	ice:	.30	2.29	. 62	40.62	37.60	38.35	.00	1.453	1.345	1.372
32	80.0 90.	0 1	9.5	20,9	.23	2.50	. 60	33.30	30.14	30.93	.00	1.734	1.569	1.610
	Data for	.50	inch	ice:	.29	2.31	.61	41.32	38.16	38.95	.00	1.497	1.382	1.411
		SECT	ION 1	1 NO	ICE 1	OTALS :		65.98	59.79	61.33	.00	3.416	3.095	3.175
				WITH	ICE 1	OTALS:		81.94	75.75	77.30	.00	2.950	2.727	2.783

DATE: 4- 6-2005 TIME: 15:25:48

USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1

FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F

 Design NO.:
 S05-0135-C
 Design Date: March 30, 2005

 Location:
 SANDY RIDGE 2,ROCKCASTLE COUNTY, KY
 JOB NO.: J050405006

 Customer:
 VERIZON WIRELESS
 Engineer: HD/TW

POINT LOADS AT ELEVATION 300.0 ft FROM TOWER BASE.

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Load # 1: Lightning Rod. Mounted at Tower C.G. Azimuth= .0 Wind Area (ft*ft). No Ice: .60; Iced: 1.14 Weight (lbs). No Ice: 15.00; Iced: 21.00

		NO	ICE L	DAD VZ	ALUES			WITH	ICE	LOAD	VALUES_	
Case	Fx	FУ	Fz	Mx	My	Mz	Fx	Fγ	Fz	Mx	My	Mz
1	02	.00	01	.00	.00	.00	03	.00	02	.00	.00	.00
2	01	.02	01	.00	.00	.00	01	. 02	02	.00	.00	.00
3	.01	.02	01	.00	.00	.00	.01	.02	02	.00	.00	.00
4	.02	.00	01	.00	.00	.00	.03	.00	02	.00	.00	.00
5	.01	02	01	. 00	.00	.00	.01	02	02	.00	.00	.00
6	01	02	01	.00	.00	.00	01	02	02	.00	.00	.00
7	02	01	01	.00	.00	.00	02	~.01	02	.00	.00	.00
8	.00	.02	~.01	.00	.00	.00	.00	.03	02	.00	.00	.00
9	.02	01	01	.00	.00	.00	.02	01	02	.00	.00	.00
10	.02	.01	01	.00	. 00	. 00	.02	.01	02	.00	.00	.00
11	.00	02	01	.00	.00	.00	.00	03	02	.00	.00	.00
12	02	.01	01	.00	.00	.00	02	.01	02	.00	.00	.00

Load # 2: 12-SC 9014-DIN. Mounted at Tower C.G. Azimuth= .0 Wind Area (ft*ft). No Ice: 74.13; Iced: 86.49 Weight (lbs). No Ice: 576.00; Iced: 1308.00

		NO	ICE L	OAD V	ALUES			WITH	ICE	LOAD	VALUES	
Case	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	-2.18	.00	58	.00	.00	.00	-1.91	.00	-1.31	.00	.00	.00
2	-1.09	1.89	58	. 00	. 00	.00	95	1.65	-1.31	.00	.00	.00
З	1.09	1.89	58	.00	.00	.00	.95	1.65	-1.31	.00	.00	.00
4	2.18	.00	58	.00	.00	.00	1.91	.00	-1.31	.00	.00	.00
5	1.09	-1.89	58	. 00	.00	.00	. 95	-1.65	-1.31	.00	.00	.00
6	-1.09	-1.89	58	.00	.00	.00	95	-1.65	-1.31	.00	.00	.00
7	-1.89	-1.09	58	.00	.00	.00	-1.65	95	-1.31	.00	.00	.00
8	.00	2.18	58	.00	. 00	.00	.00	1.91	-1.31	.00	.00	.00
9	1.89	~1.09	58	.00	. 00	.00	1.65	95	-1.31	.00	.00	.00
10	1.89	1.09	58	.00	.00	.00	1.65	. 95	-1.31	.00	.00	.00
11	.00	-2.18	58	.00	.00	.00	.00	-1.91	-1.31	.00	.00	.00
12	-1.89	1.09	58	.00	.00	.00	-1.65	. 95	-1.31	.00	.00	.00

USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1

FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F

4,

 Design NO.:
 S05-0135-C
 Design Date: March 30, 2005

 Location:
 SANDY RIDGE 2,ROCKCASTLE COUNTY, KY
 JOB NO.: J050405006

 Customer:
 VERIZON WIRELESS
 Engineer: HD/TW

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POINT LOADS AT ELEVATION 280.0 ft FROM ("TOWER BASE.

Load # 5: 14' MTS SEC FRAMES. Mounted at Tower C.G. Azimuth= .0 Wind Area (ft*ft). No Ice: 28.00; Iced: 34.00 Weight (lbs). No Ice: 1500.00; Iced: 2000.00

		NO	ICE I	OAD V	ALUES			WITH	ICE	LOAD	VALUES	
Case	Fx	БУ	Fz	Мx	Мy	Mz	Fx	Fy	Fz	Mx	Мy	Mz
1	81	.00	-1.50	.00	.00	,00	74	.00	-2.00	.00	.00	. 00
2	40	.70	-1.50	.00	.00	.00	37	. 64	-2.00	.00	.00	.00
3	.40	.70	-1.50	.00	.00	.00	. 37	. 64	-2.00	.00	.00	. 00
4	.81	.00	-1.50	.00	.00	.00	.74	.00	-2.00	.00	.00	. 00
5	.40	70	-1.50	.00	.00	.00	. 37	64	-2.00	.00	.00	.00
6	40	70	-1.50	.00	.00	.00	37	64	-2.00	.00	.00	.00
7	70	40	-1.50	.00	.00	.00	64	37	-2.00	.00	.00	.00
8	.00	.81	-1.50	.00	.00	.00	. 00	.74	-2.00	.00	.00	.00
9	.70	40	-1.50	.00	.00	.00	.64	~.37	~2.00	.00	.00	.00
10	.70	.40	-1.50	.00	.00	.00	. 64	. 37	-2.00	.00	.00	.00
11	.00	81	-1.50	.00	.00	.00	.00	~.74	~2.00	.00	.00	.00
12	70	.40	-1.50	.00	.00	.00	64	. 37	-2.00	.00	.00	.00

POINT LOADS AT ELEVATION 260.0 ft FROM TOWER BASE.

Load # 6: 12-SC 9014-DIN. Mounted at Tower C.G. Azimuth= .0 Wind Area (ft*ft). No Ice: 74.13; Iced: 86.49 Weight (lbs). No Ice: 576.00; Iced: 1308.00

		NO	ICE L	OAD V	VALUES			WITH	ICE	LOAD	VALUES_	
Case	Fx	FУ	Fz	Мx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	-2.09	.00	58	.00	.00	. 00	-1.83	. 00	-1.31	.00	.00	.00
2	-1.05	1.81	58	.00	.00	. 00	92	1.59	-1.31	.00	.00	.00
3	1.05	1.81	58	.00	.00	.00	. 92	1.59	-1.31	.00	.00	.00
4	2.09	.00	58	.00	.00	.00	1.83	.00	-1.31	.00	.00	.00
5	1.05	-1.81	58	.00	.00	.00	. 92	-1.59	-1.31	.00	.00	.00
6	-1.05	-1.81	58	.00	.00	. 00	92	-1.59	-1.31	.00	.00	.00
7	-1.81	-1.05	58	.00	.00	.00	-1.59	92	-1.31	.00	.00	.00
8	.00	2.09	58	.00	.00	.00	.00	1.83	-1.31	.00	.00	.00
9	1.81	-1.05	58	.00	.00	. 00	1.59	92	-1.31	.00	.00	.00
10	1.81	1.05	58	.00	.00	.00	1.59	. 92	-1.31	.00	.00	.00
11	.00	-2.09	58	.00	.00	.00	.00	-1.83	-1.31	.00	.00	.00
12	-1.81	1.05	58	.00	.00	.00	-1.59	. 92	-1.31	.00	.00	.00

DATE: 4-6-2005 TIME: 15:25:48 PAGE 11

USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1

FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F

 Design NO.:
 S05-0135-C
 Design Date: March 30, 2005

 Location:
 SANDY RIDGE 2,ROCKCASTLE COUNTY, KY
 JOB NO.: J050405006

 Customer:
 VERIZON WIRELESS
 Engineer: HD/TW

£.

POINT LOADS AT ELEVATION 240.0 ft FROM TOWER BASE.

Load # 9: 14' MTS SEC FRAMES. Mounted at Tower C.G. Azimuth= .0 Wind Area (ft*ft). No Ice: 28.00; Iced: 34.00 Weight (lbs). No Ice: 1500.00; Iced: 2000.00

		NO	ICE	LOAD	VALUES			WITH	ICE	LOAD	VALUES	
Case	Fx	- Fy	Fz	Ma	⊾ My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	77	.00	-1.50	.00	00. (.00	70	.00	-2.00	.00	.00	.00
2	39	.67	-1.50	. 00	00. (.00	35	. 61	-2.00	.00	.00	.00
3	.39	. 67	-1.50	. 00	.00	.00	.35	. 61	-2.00	.00	.00	.00
4	.77	.00	-1.50	. 00	00. 0	.00	.70	.00	-2.00	.00	.00	.00
5	.39	67	-1.50	.00	.00	.00	. 35	61	-2.00	.00	.00	.00
6	39	67	-1.50	.00	.00	.00	~.35	61	-2.00	.00	.00	. 00
7	67	39	-1.50	.00	.00	.00	61	35	-2.00	.00	.00	.00
8	.00	.77	-1.50	. 00	.00	.00	.00	.70	-2.00	.00	.00	.00
9	. 67	39	-1.50	.00	00, 0	.00	.61	35	-2.00	.00	.00	.00
10	. 67	.39	~1.50	.00	00. (.00	.61	. 35	-2.00	.00	.00	.00
11	.00	77	-1.50	.00	,00	.00	.00	70	-2.00	.00	.00	.00
12	67	. 39	-1.50	. 00	,00	.00	61	. 35	-2.00	.00	.00	.00

POINT LOADS AT ELEVATION 220.0 ft FROM TOWER BASE.

Load # 10: 1-8-ft STD PARABOLIC-No Rad. Mounted at Corner 1. Azimuth= .0 Wind Area (ft*ft). No Ice: 50.27; Iced: 50.27 Weight (lbs). No Ice: 264.00; Iced: 550.00

		NO	ICE I	OAD 1	VALUES			WITH	ICE	LOAD	VALUES	
Case	Fx	 Fy	Fz	Мx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	-2.77	.00	26	.00	.00	.00	-2.16	. 00	55	.00	.00	.00
2	-1.38	2.40	26	.00	.00	.00	-1.08	1.87	55	.00	.00	.00
3	1.38	2.40	26	.00	.00	.00	1.08	1.87	55	.00	.00	.00
4	2.77	.00	26	.00	.00	.00	2.16	. 00	55	.00	.00	.00
5	1.38	-2.40	26	.00	.00	.00	1,08	-1.87	55	.00	.00	.00
6	-1.38	-2.40	26	.00	.00	.00	-1.08	-1.87	55	.00	.00	.00
7	-1.83	-1.06	26	.00	.00	-1.59	-1.43	83	55	.00	.00	-1.24
8	.00	2.12	26	.00	.00	-1.59	.00	1.65	55	.00	.00	~1.24
9	1.83	-1.06	26	.00	.00	-1.59	1.43	83	55	.00	.00	-1.24
10	1.83	1.06	26	.00	.00	1.59	1.43	. 83	55	.00	.00	1.24
11	.00	-2.12	26	. 00	.00	1.59	.00	-1.65	55	.00	.00	1.24
12	-1.83	1.06	26	.00	.00	1.59	-1.43	. 83	55	.00	.00	1.24

DATE: 4-	6-2005		TIME:	15:25:4	8	PAGE	13
USER INTER DISCRETE L	FACE VERS	SION: 9.04.00 SION: 1.1.0	14 D F	ESIGN P LANGE P	ROGRAM VER LATES DATA	SION: 6.1.0 VER: 2.5.1	
FWT INC. Analysis	P. O. H & Design	BOX 8597. FO n of 300FT	RT WORT Tower p	H, TX 7 er EIA/	6124-0597 TIA-222-F		
Design NO. Location Customer	: S05-01 : SANDY H : VERIZON	135-C RIDGE 2,ROCKC N WIRELESS	De ASTLE C	sign Da OUNTY, 1	te: March KY	30, 2005	JOB NO.: J050405006 Engineer: HD/TW
Section	Top	Top Face	Bay	Brace	Weight		
Number	Elev	Width	Size	Type	(1b)		
1	300.00	4.00	5.00	X1	995.4		
2	280.00	4.00	5.00	X1	1136.6		
3	260.00	4.00	5.00	X1	1768.0		
4	240.00	4.00	5.00	X1	2055.9		
5	220.00	6.00	5.00	X1	2133.3		
6	200.00	8.00	10.00	X 2	2594.5		
7	180 00	10.00	10.00	X2	2675.8		
8	160.00	12.00	10.00	X2	3102.2		
9	140.00	14.00	10.00	X2	3337.4		
10	120.00	16.00	10.00	X2	3514.9		
11	100.00	18.00	10.00	X2	4255.4		
12	80.00	20,00	20.00	X3	4075.8		
13	60.00	22.00	20.00	хз	4293.3		

40.00

20.00

.00

14 15

16

24.00

26.00

28.00

20.00

20.00

хз

хз

Est. Tower Weight: Legs and Braces. (No Bolts, Gussets, Splice Plates or Galvanizing) 46312.3 LB

4887.3

5486.4

DATE: 4- 6-2005 TIME: 15:25:48

USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1

FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F

 Design NO.:
 S05-0135-C
 Design Date: March 30, 2005

 Location:
 SANDY RIDGE 2,ROCKCASTLE COUNTY, KY
 JOB NO.: J050405006

 Customer:
 VERIZON WIRELESS
 Engineer: HD/TW

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TOWER DESIGN SUMMARY ALLOWABLE LOADS ARE INCREASED BY 33.3% Yield Stress: Legs- 50. ksi; Bracing- 36. ksi.

EL = Equal Leg Angle. SL = Short Leg Vertical. LL = Long Leg Vertical. CC = Compression Capacity. CL = Compression Load. TC = Tension Capacity. TL = Tension Load.

	MEMBER DATA	CO	COMPRESS		SION		NSIO		
Section		KL/r	CL	CC	CL/CC	TL	TC	TL/TC	A325N
Number	Type DESCRIPTION		(kips)	(kips)		(kips)	(kips)		BOLTS
10	LEG: 3 3/4" SOLID ROD	65.9	306.8	319.2	. 96	271.3	291.9	.93 *	6-1 1/8
	DIA: 1L3 X 3 X 3/16	181.8	5.6	6.6	.86	5.5	15.1	.37 т	2-5/8
	HOR: 1L3 X 3 X 3/16	171.1	4.6	7.4	. 62	4.6	8.2	.56 в	1-5/8
	TOP-SPL: PL 2 1/4" x 12" Φ								
	BOT-SPL: PL 2 1/4" x 13" Φ	1							
11	LEG: 4" SOLID ROD	61.6	327.8	375.9	. 87	286.1	342.6	.84 *	6-1 1/4
	DIA: 1L3 X 3 X 1/4	196.3	5.9	7.4	.80	5.9	17.2	.34 S	2-5/8
	HOR: 1L3 X 3 X 3/16	191.3	4.9	5.9	. 83	4.9	8.2	.60 B	1-5/8
	TOP-SPL: PL 2 1/4" x 13" Φ	ļ							
	BOT-SPL: PL 2 1/4" x 13" Ф								
12	LEG: 4" SOLID ROD	63.0	342.1	372.1	. 92	301.6	342.6	.88 *	6-1 1/4
	DIA: 1L3 X 3 X 1/4	162.9	8.1	10.8	.75	7.4	17.2	.43 S	2-5/8
	HOR: 1L3 X 3 X 3/16	201.3	5.1	5.4	.96	5.1	8.2	.63 B	1-5/8
	SDG: 1L2 1/2 X 2 1/2 X 3/16	167.9	5.1	6.4	.81	5.1	8.2	.63 В	1-5/8
	SHR: 1L2 X 2 X 3/16	149.4	5.1	6.4	. 80	5.1	7.3	.71 T	1-5/8
	TOP-SPL: PL 2 1/4" x 13" Φ								
	BOT-SPL: PL 2 1/4" x 13" Ф								
13	LEG: 4" SOLID BOD	62.7	365.3	372.8	. 98	316.8	342.6	.92 *	6-1 1/4
10	DTA: $113 \times 3 \times 1/4$	168.7	7.8	10.1	.78	7.8	17.2	.46 S	2-5/8
	HOR: $2L2 \times 2 \times 3/16$	213.9	5.5	6.2	.88	5.5	14.5	.38 т	1-5/8
	SDG: 1L2 1/2 X 2 1/2 X 3/16	177.5	5.5	5.7	.96	5.5	8.2	.67 B	1-5/8
	SHR: 1L2 1/2 X 2 1/2 X 3/16	131.0	5.5	10,5	. 52	5.5	8.2	.67 B	1-5/8
	TOP-SPL: PL 2 1/4" x 13" Φ								
	BOT-SPL: PL 2 1/4" x 15" Φ								
1.0	TEC. A 1/AN SOLTD BOD	50 0	301 7	133 5	80	331 5	396 8	84 *	6-1 3/8
14	$113 \times 3 \times 1/4$	174 7	304.7 8 A	433.3 Q 4	89	8.0	17 2	46 9	2-5/8
	HOR: $2I_2 1/2 \ge 21/2 \ge 3/16$	185 1	5.8	10.5	.55	5.8	16.3	.35 B	1-5/8
	SDG: $1I_3 \times 3 \times 3/16$	155.5	5.8	9.0	. 64	5.8	8.2	.71 B	1-5/8
	SHR: $1L2 1/2 \times 2 1/2 \times 3/16$	142.9	5.8	8.8	. 66	5.8	8.2	.71 B	1-5/8
	TOP-SPT: PT. 2 $1/2" \times 15" \Phi$								
	$BOT - SPT + PT 2 1/2" + 15" \Phi$								
	DOT SEN. FIL 2 1/2 \times 15 φ								
		50 5	40.0 0	424 0	0.4	240 1	206.0	00 +	
12	LEG: $4 \frac{1}{4}$ SOLID ROD	58.7	406.9	434.0	.94	348.1	396.8 20 F	.88 ×	2-5/9
	DIA: $2L2 I/2 X Z I/2 X 3/16$	1 1/3.6	8.2	TT'A	. 69	6.2	20.5	.29 T	2-5/8
	$\frac{1}{10} \text{ K: } \frac{2}{12} \frac{1}{2} $	200.5	1.0	6,9 67	. 00		10.3 0 C	. J / B 9 10	1-5/8
	$113 \times 3 \times 3/16$	162 0	. L E 1	υ./ Ω 1	.02		0.0 Q 7	.01 S 75 B	1-5/8
	סער, גם א כער, א כער. פער, 170 ג א 1/2 א כער, 170 ג געולי	155 1	5.1 6 1	7 5	. 75	6.1 6.1	0.Z g 🤈	.,, b 75 p	1-5/8
	$3\pi x$, $4\pi z$ $1/2$ x z $1/2$ x $3/10$	100.1	0.1	1.5	. 02	0.1	0.2	. 13 8	, <u>, , , , , , , , , , , , , , , , , , </u>
	TOP-SPL: PL Z $1/2" \times 15" \Phi$								
	BOT-SPL: PL 1 1/2" x 19" Φ								

anchor plate: 19" Φ x 3/4" Thk. Anchor Bolts: 6-2" Φ x 6'- 0" total anchor Bolt length

NOTES: THREADS INCLUDED IN SHEAR PLANE.

* - Tension Capacity of Bottom Splice Connection.

PAGE 16

USER INTERFACE VERSION: 9.04.0014 DESIGN PROGRAM VERSION: 6.1.0 DISCRETE LOADS VERSION: 1.1.0 FLANGE PLATES DATA VER: 2.5.1

FWT INC. P. O. BOX 8597. FORT WORTH, TX 76124-0597 Analysis & Design of 300.-FT Tower per EIA/TIA-222-F

 Design NO.:
 S05-0135-C
 Design Date: March 30, 2005

 Location:
 SANDY RIDGE 2,ROCKCASTLE COUNTY, KY
 JOB NO.: J050405006

 Customer:
 VERIZON WIRELESS
 Engineer: HD/TW

MAXIMUM DISPLACEMENTS OF TOWER CENTER LINE WIND SPEED = 50. MPH, ICE = .00 INCHES

	ELEV	EV C.G DISP			ΑY_	TW	TWIST		
	(feet)	(Inches)	Case	(Deg)	Case	(Deg)	Case		
				_					
0	300.0	23.544	4	. 902	4	.472	10		
	295.0	22.370	4	.901	4	.466	8		
	290.0	21.643	4	.896	4	.455	10		
	285.0	20.486	4	.888	4	.454	8		
0	280.0	19.767	4	.876	4	.438	10		
	275.0	18.636	4	.863	4	.433	8		
	270.0	17.929	4	.844	4	.405	10		
	265.0	16.850	4	.819	4	.409	8		
0	260.0	16.180	4	. 787	4	.372	10		
	255.0	15.170	4	.766	4	.368	11		
	250.0	14.526	4	.739	4	.328	10		
	245.0	13.590	4	.708	4	.330	11		
0	240.0	12.991	4	. 670	4	.283	10		
	235.0	12.173	4	.624	4	.258	11		
	230.0	11.651	4	.606	4	.204	10		
	225.0	10.909	4	. 567	4	.193	11		
М	220.0	10.434	4	.550	4	.157	10		
	215.0	9.756	4	.517	4	.147	11		
	210.0	9.316	4	.500	4	. 117	10		
	205.0	8.703	4	.471	4	.110	11		
	200.0	8.297	4	.454	4	.087	10		
	190.0	7.286	4	.412	4	.092	11		
	180.0	6.520	4	.381	4	.056	10		
	170.0	5.672	4	.345	4	.063	11		
	160.0	5.029	4	.316	4	.038	10		
	150.0	4.321	4	.288	4	.042	11		
	140.0	3.776	4	.264	4	.025	10		
	130.0	3.187	4	.238	4	.030	11		
	120.0	2.736	4	.216	4	.017	10		
	110.0	2.252	4	.192	4	.021	8		
	100.0	1.884	4	.170	4	.011	10		
	90.0	1.504	4	.150	4	.014	11		
	80.0	1.214	4	.132	4	.007	10		
	60.0	.662	4	.095	4	.022	11		
	40.0	.331	4	.060	4	.003	10		
	20.0	.075	2	.029	4	.014	11		

M --> MICROWAVE ANTENNA LEVEL

O --> NON-MICROWAVE ANTENNA LEVEL

Elevations are measured from Tower Base

.



Land Surveyors & Consulting Engineers

GEOTECHNICAL ENGINEERING STUDY

Proposed Sandy Ridge 2 Tower Site Sand Hill Road & Mize Branch Road, Mount Vernon, Rockcastle County, KY FStan Project No. 04-2997

> FStan Land Surveyors & Consulting Engineers 2315 Crittenden Drive PO Box 17546 Louisville, KY 40217 Phone: (502) 636-5111 Fax: (502) 636-5263

Prepared For:

Ms. Jana Luecke Craig & Associates 2508 Newburg Road Louisville, KY 40205

February 25, 2005



Land Surveyors and Consulting Engineers Formerly F.S. Land & T. Alan Neal Companies

February 25, 2005

Ms. Jana Luecke 2508 Newburg Road Louisville, KY 40205-2478

Re: Geotechnical Engineering Study Proposed 300-foot SST Cellco Partnership Site Name: Sandy Ridge 2 Sandy Hill Road and Mize Branch Road Mount Vernon, Rockcastle County, KY 40445 FStan Project No. 04-2997

Dear Ms. Luecke:

Transmitted herewith is our geotechnical engineering report for the referenced project. This report contains our findings, an engineering interpretation of these findings with respect to the available project characteristics, and recommendations to aid design and construction of the tower foundations. We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact our office.

Cordially, FStan Land Surveyors and Consulting Engineers RAYMOND E FRYE JR Raymond E/Frye, Jr., P.E. 17276 Geøtechnical Engineer KY License Nd.: 17276 MAL E MINING STREET

Copies submitted: (3) Ms. Jana Luecke

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APPENDIX

BORING LOCATION PLAN GEOTECHNICAL BORING LOG SOIL SAMPLE CLASSIFICATION
GEOTECHNICAL ENGINEERING INVESTIGATION

Proposed 300-foot Self-Supporting Telecommunications Tower Cellco Partnership – Sandy Ridge 2 Sand Hill Road and Mize Branch Road, Mount Vernon, Rockcastle County, Kentucky FStan Project No. 04-2997

1. PURPOSE AND SCOPE

The purpose of this study was to determine the general subsurface conditions at the location of the proposed tower by drilling four soil test borings and to evaluate this data with respect to foundation concept and design for the proposed self-supported tower. Also included is an evaluation of the site with respect to potential construction problems and recommendations for quality control during construction.

2. PROJECT CHARACTERISTICS

Cellco Partnership is proposing to construct a 300 feet tall self-supporting communications tower on property owned by Ralph and Connie Hamilton located on Sand Hill Road, Mount Vernon, Rockcastle County, Kentucky. The site explored consists of a grass covered hillside located south of Sand Hill Road. The site topography sloped from the southeast property corner downhill to the northwest property corner. The total site relief was about 9 feet and the approximate ground elevation at the anticipated tower center was about 1390 feet msl. An access road runs north from the site to Sand Hill Road. A truck mounted CME 55 drill rig was used to advance the borings. The location of the proposed tower is shown on the Boring Location Plan in the Appendix.

Preliminary information provided us indicates that this project will consist of constructing a self-support communications tower 300 feet tall. We have assumed the following structural information:

- Compression (per leg) = 500 kips
- Uplift (Per Leg) = 400 kips
- Total shear = 45 kips

The development will also include a small equipment shelter near the base of the tower. The

wall and floor loads for the shelter are assumed to be less than 4 kip/ln.ft. and 200 lbs/sq.ft., respectively.

Site Geology

The 1971 Mount Vernon Geologic Quadrangle map indicates the tower site is underlain by the Pennsylvanian aged Corbin Sandstone Member of the Lee Formation. The Corbin Sandstone consists of pinkish and yellowish gray fine to medium grained sandstone and conglomeratic sandstone. The formation weathers to pinkish gray to grayish red. The formation exists in lenses and can be cross bedded. The formation consists of rounded clear and amber stained quartz grains. The map indicated that the thickness of the Corbin sandstone is about 90 feet in the quadrangle area.

The geologic map indicated that coal is present over the quadrangle area, but did not indicate that surface or deep mining of the coal had occurred in the past. A detailed coal mining study was beyond the scope of this study.

3. SUBSURFACE CONDITIONS

The subsurface conditions were explored by drilling 4 soil test borings near the center of the proposed tower as located and staked on site by the project surveyor. We had originally proposed to advanced 3 soil test boring at the site; however, sampling the soft sandstone rock in boring B-1 was difficult as the sampling process washed the soft sandstone rock away, resulting in very poor sample recovery. A fourth boring was advanced to attempt to sample the soft rock using more aggressive soil augering techniques. The Geotechnical Boring Logs, which are included in the Appendix, describes the materials and conditions encountered. A reference sheet defining the terms and symbols used on the boring logs is also included in the Appendix. The general subsurface conditions disclosed by the test borings are discussed in the following paragraphs.

The below the surface vegetation the thickness of the topsoil encountered at the boring locations ranged from about 2 to 12 inches thick. Below the topsoil, the borings encountered reddish brown weathered sandstone. The standard penetration test values (N-values) ranged from 12

Geotechnical Engineering Study FStan Project Number 04-2997

blows per foot (bpf) to more than 100 bpf. Refusal materials were encountered in each boring at depths ranging from 1 foot to 20 feet below the ground surface.

The bedrock was sampled in boring B-1 from 1 foot to a depth of 20.0 feet below the ground surface. In general, the rock samples consisted of poorly cemented reddish brown fine to medium grained sandstone. Because the sandstone was soft and poorly cemented, the rock coring process tended to wash the sample away resulting in poor sample recovery of less than 20 percent. The Rock Quality Designation (RQD) was 0 percent. The rock coring was terminated at a depth of 20 feet. These values generally represent poor quality rock from a foundation support viewpoint.

Observations made at the completion of soil drilling operations indicated the borings were dry. It must be noted however, that short-term water readings in test borings are not necessarily a reliable indication of the actual groundwater level. Furthermore, it must be emphasized that the groundwater level is not stationary, but will fluctuate seasonally.

According to the 2002 Kentucky Building Code, Rockcastle County, Kentucky is within seismic design category B (an UBC equivalent seismic zone of 1). In this system, Zone E is the most seismically active while Zone B has the lowest earthquake potential. Based on the limited subsurface conditions encountered at the site and using Table 1615.1.1 of the building code, the site class is considered C. Seismic design requirements for telecommunication towers are given in section 1622 of the code. A detailed seismic study was beyond the scope of this report.

4. GEOTECHNICAL DESIGN RECOMMENDATIONS

The following geotechnical design recommendations have been developed on the basis of the previously described project characteristics (Section 2.0) and subsurface conditions (Section 3.0). This office must be notified if the project description included herein is incorrect, or if the proposed structure location is changed, to establish if revisions to the following recommendations are necessary.

3

4.1. Tower

4.1.1 General

The following design recommendations are based on the previously described project information, the subsurface conditions encountered in our borings, the results of our laboratory testing, empirical correlations for the soil types encountered, our analyses, and our experience. If there is any change in the project criteria or structure location, you should retain us to review our recommendations so that we can determine if any modifications are required. The findings of such a review can then be presented in a supplemental report or addendum.

We recommend FStan be retained to review the near-final project plans and specifications, pertaining to the geotechnical aspects of the project, prior to bidding and construction. We recommend this review to check that our assumptions and evaluations are appropriate based on the current project information provided to us, and to check that our foundation and earthwork recommendations were properly interpreted and implemented.

4.1.1 Mat Foundation

<u>Bearing Capacity</u>: A mat foundation is recommended for support of the proposed tower foundation. We recommend the mat foundation be designed to act as a rigid structure. All mat foundations should bear on the weathered rock that was encountered below about 5.0 feet in the borings. An allowable static net bearing pressure of 10 kips per square foot (ksf) is available in the weathered sandstone below a depth of about 5.0 feet. The mat foundation should be buried sufficiently deep to resist uplift and overturning forces.

<u>Modulus of Subgrade Reaction</u>: Based on the conditions encountered by the borings and our experience, we recommend sizing the mat foundation for a modulus of subgrade reaction (k_s) of 80 kcf. The k_s value was determined using the estimated total settlement of $\frac{1}{2}$ inch and the total contact pressure applied to the foundation subgrade. The total pressure applied to the foundation subgrade beneath the mat was assumed to be distributed uniformly across the plan dimension of the mat. A more rigorous analysis, such as using the computer program *PCA-Mats*, was beyond the scope of our services.

4.2. Equipment Building

We recommend that foundation inspections be performed at the time of foundation construction in an effort to identify unsuitable soils and remove them prior to foundation construction. The equipment building may be supported on shallow spread footings bearing in the weathered sandstone. The equipment building foundations should be sized for an allowable bearing pressure of 2000 pounds per square foot. The footings should be at least 12 inches wide. The footings should bear at a depth of at least 30 inches. All existing fill, topsoil or soft natural soil should be removed beneath footings.

The floor slab for the new equipment building may be subgrade supported on a properly prepared subgrade. The slab should be designed and adequately reinforced to resist the loads proposed. The exposed subgrade should be carefully inspected by probing and testing as needed. Any organic material still in place, frozen or excessively soft soil and other undesirable materials should be removed.

Once the subgrade has been properly prepared and evaluated, fill may be placed to attain the desired final grade. Any non-organic, naturally occurring, non-expansive soils can be used for structural fill, including those encountered on this site, pending evaluation by the geotechnical engineer. If more than 3 feet of fill is placed below the tower foundation, the geotechnical engineer should be contacted.

All engineered fill should be compacted to a dry density of at least 98 percent of the standard Proctor maximum dry density (ASTM D698). The compaction should be accomplished by placing the fill in about eight inch loose lifts and mechanically compacting each lift to at least the specified density. Field tests should be performed on each lift as necessary to insure that adequate compaction is being achieved.

4.3. Drainage and Groundwater Considerations

Good site drainage must be provided. Surface run-off water should be drained away from the shelter building and not allowed to pond. It is recommended that all foundation concrete be

placed the same day the excavation is made.

At the time of this investigation, groundwater was not encountered. Therefore, no special provisions regarding groundwater control are considered necessary for the proposed structures.

5. GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

It is possible that variations in subsurface conditions will be encountered during construction. Although only minor variations that can be readily evaluated and adjusted for during construction are anticipated, it is recommended the geotechnical engineer or a qualified representative be retained to perform continuous inspection and review during construction of the soils-related phases of the work. This will permit correlation between the test boring data and the actual soil conditions encountered during construction.

5.1 Shallow Foundations

The following is recommended for the mat and equipment building foundations:

We recommend the foundation subgrades be protected from exposure to water. Surface run-off water should be drained away from the excavation and not allowed to pond. If possible, all concrete should be placed that same day the excavation is made. If this is not practical, the excavation should be adequately protected. The following guides address protection of footing subgrades and our recommended remediation for any soft soils encountered.

- Protect foundation support materials exposed in open excavations from freezing weather, severe drying, and water accumulation.
- Remove any soils disturbed by exposure prior to foundation concrete placement.
- Place a "lean" concrete mud-mat over the bearing soils if the excavations must remain open overnight or for an extended period of time.
- Level or suitably bench the foundation bearing area.

- Remove loose soil, debris, and excess surface water from the bearing surface prior to concrete placement.
- Retain the geotechnical engineer to observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.

5.2 Fill Compaction

All engineered fill placed adjacent to and above the tower foundation should be compacted to a dry density of at least 95 percent of the standard Proctor maximum dry density (ASTM D-698). This should be increased to 98 percent for any fill placed below the foundations of equipment building. The compaction should be accomplished by placing the fill in about 8 inch (or less) loose lifts and mechanically compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to insure that adequate moisture conditioning and compaction is being achieved.

Compaction by flooding is not considered acceptable. This method will generally not achieve the desired compaction and the large quantities of water will tend to soften the foundation soils.

5.3 Construction Dewatering

No serious dewatering problems are anticipated for shallow excavations. At the time of our investigation, ground water was not encountered. Depending upon seasonal conditions, some minor seepage into excavations may be experienced in shallow excavations. It is anticipated that any such seepage into shallow excavations can be handled by conventional dewatering methods such as pumping from sumps.

6. FIELD AND LABORATORY INVESTIGATION

The soil test boring was drilled at the tower center location established in the field by the project surveyor. Split-spoon samples were obtained by the Standard Penetration Test (SPT) procedure (ASTM D1586) in the test boring. The boring was extended to refusal materials. The refusal materials were sampled in one boring to the predetermined termination depth of 40.0 feet. The split-spoon and rock core samples were inspected and visually classified by a geotechnical

engineer. Representative portions of the soil samples were sealed in glass jars and the rock core were placed in standard sample boxes and returned to our laboratory.

The boring logs are included in the Appendix along with a reference sheet defining the terms and symbols used on the log and an explanation of the Standard Penetration Test (SPT) procedure. The log presents visual descriptions of the soil strata encountered, Unified Soil Classification System designations, groundwater observations, sampling information, laboratory test results, and other pertinent field data and observations.

7. LIMITATIONS OF STUDY

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. FStan is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

This geotechnical study is inherently limited since the engineering recommendations are developed from information obtained from test borings that only depict subsurface conditions at that specific location, time and depths shown on the log. Soil conditions at other locations may differ from those encountered in the test borings, and the passage of time may cause the soil conditions to change from those described in this report.

The nature and extent of variation and change in the subsurface conditions at the site may not become evident until the course of construction. Construction monitoring by the geotechnical engineer or a representative is therefore considered necessary to verify the subsurface conditions and to check that the soils connected construction phases are properly completed. If significant variations or changes are in evidence, it may then be necessary to re-evaluate the recommendations of this report. Furthermore, if the project characteristics are altered significantly from those discussed in this report, if the project information contained in this report is incorrect, or if additional information becomes available, a review must be made by this office to determine if any modification in the recommendations will be required.

8

Geotechnical Engineering Study FStan Project Number 04-2997

APPENDIX

BORING LOCATION PLAN GEOTECHNICAL BORING LOG SOIL SAMPLE CLASSIFICATION



FStan Land Surveyors and Consulting Engin P.O. Box 17546 2315 Crittenden Drive Louisville, KY 40217 (502) 636-5866 (502) 636-5263					ers		<u>, , , , , , , , , , , , , , , , , , , </u>			C E	Geotechnical Boring Log Boring No: B-1
Client: NEW PAR dba Verizon Wireless					iect	Nun	ber: 04	1-29	97		
Proje	ct: Pr	oposed Sandy Ridge 2 Tower		Dril	ling	Firm	: CAE				
Locat	ion: S	Sand Hill Road, Mt. Vernon, KY. 40445		Pro	ject	Mar	ager: F	Ray F	- Frye		
Date S	Starte	d: 2/22/2005		Tota	al D	epth	of Borir	ng: 2	20 f		
Date 0	Comp	leted: 2/23/2005		C	RY	on r	ods				
Boring	Meth	od: HSA w/CME-55		C	RY	at c	ompletic	on			
Surfac	e Ele	vation: NA		N	IA N	IA h	ours afte	er co	mp	etio	n
Layer Depth	gend	Material Description	Dep Sca	oth ale			Sample I	Data Rec.	PP	w	Remarks
ft	e <u>1</u>	TOPSOIL.	ft		No.	Гуре	Blows	%	tsf	%	SURFACE TYPE: GRASS
0.6		Reddish brown, weatherd SANDSTONE.			1	SS	2-7-50	33			HAMMER TYPE: AUTOMATIC
20.0 2020 04-2097 GPJ FSTAN GDI 222405		Reddish brown, weathered SANDSTONE.			1	RC		0			coring. RQD = 0 RQD = 0
GEOTECHN				-							

1 (302) 030-3203 Boring No: 🗖	
Client: NEW PAR dba Verizon Wireless	-2
Project: Proposed Sandy Ridge 2 Tower Drilling Firm: CAF	
Location: Sand Hill Road, Mt. Vernon, KY. 40445 Project Manager: Ray Frve	
Date Started: 2/22/2005 Total Depth of Boring: 2 ft	
Date Completed: 2/23/2005 DRY on rods	
Boring Method: HSA w/CME-55 DRY at completion	
Surface Elevation: NA NA hours after completion	
Layer P Depth Sample Data Depth Scale	arks
ft 9 ft No. Type Blows Kec. FP W 0.5 V/V/ TOPSOIL	GRASS
0.3 Image: Source of Sourc	AUTOMATIC
Bottom of Boring at 2 ft Drive sampler ref Boring terminated	usal at 2.0 feet. J.

FStan Land Surveyors and Consulting Engineers P.O. Box 17546 2315 Crittenden Drive Louisville, KY 40217 (502) 636-5866					C	Geotechnical Boring Log				
Client: NE	(502) 636-5263				NI	aber 0	4.00	07	B	Boring No: D-J
Proiect: P	roposed Sandy Ridge 2 Tower		Drilli	ing	Firm		4-29	J/		
Location:	Sand Hill Road, Mt. Vernon, KY. 40445		Proi	ect	Man	ager F	Rav I	- Frve		
Date Starte	ed: 2/22/2005		Tota	al D	epth	of Bori	na:	1 ft		
Date Comp	bleted: 2/23/2005		D	RY	on r	ods				
Boring Met	hod: HSA w/CME-55		D	RY	at c	ompletio	on			
Surface Ele	evation: NA		N	A N	IA ho	ours afte	er cc	mpl	etior	ו
Layer 2 Depth 8 ft 9	Material Description	Dep Sca	pth ale	No	Type	Sample I Blows	Data Rec.	PP	W	Remarks
	TOPSOIL. Weatherd SANDSTONE. Bottom of Boring at 1 ft		10		AU	0-0-0/0"	0		<u>%</u>	SURFACE TYPE: GRASS HAMMER TYPE: AUTOMATIC Auger refusal at 1.0 feet. Boring terminated.

	FStan Land Surveyors and Consulting E P.O. Box 17546 2315 Crittenden Drive Louisville, KY 40217 (502) 636-5866 (502) 636-5263				eers	•				1	Geotechnical Boring Log Boring No: B-4
╞	Client:	NEV	W PAR dba Verizon Wireless	Pr	oiect	Nur	nber: 04	4-29	97		
F	Projec	t: Pro	oposed Sandy Ridge 2 Tower	Dr	illing	Firn	n: CAE				nn 1.48,4489.4589.499.0000.00001.454
	Locatio	on: S	and Hill Road, Mt. Vernon, KY. 40445	Pr	ojeci	Mai	nager: F	Ray	Frye	;	
	Date St	tarteo	1: 2/22/2005	То	tal D	epth	of Bori	ng:	20 f	t	
	Date C	ompl	eted: 2/23/2005		DRY	on I	rods				
Ī	Boring	Meth	od: HSA w/CME-55		DRY	′at c	ompletic	on			
	Surface	e Elev	vation: NA		NA I	NA h	ours afte	er co	ompl	etio	n
	Layer	end	Material Description	Depth Scale			Sample I	Data		-	Remarks
	ft	Leg		ft	No.	Туре	Blows	Rec. %	PP tsf	W %	
	1.0-	24.2	TOPSOIL. Reddish brown, weathered SANDSTONE.		1	AU	4-7-5	13			SURFACE TYPE: GRASS HAMMER TYPE: AUTOMATIC
		• • • • • • • • • • • • • • • • • • •		5-	2	AU	27-44-60	67			Drive sampler refusal at 3 feet.
					3	AU	50/0"				
	:			- 10-	4	AU	50/0"				The driller collected auger
					-						cuttings at the sample depths.
					5	AU	50/0"				
				-		AU	50/0"				
	20.0		Bottom of Boring at 20 ft	20-	- 0						Boring terminated.
. 2/25/05				25-							
J FSTAN.GD1											
04-2997.GP				 							
BORING LOG				35-							
EOTECHNICAL E											

SOIL CLASSIFICATION CHART

		ONS	SYME	30LS	TYPICAL	
174			GRAPH	LETTER	DESCRIPTIONS	
	GRAVEL AND	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
	GRAVELLY SOILS	(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
COARSE GRAINED SOILS	MORE THAN 50% OF COARSE FRACTION	GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
	RETAINED ON NO. 4 SIEVE	(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES	
MORE THAN 50% OF MATERIAL IS	SAND AND	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
LARGER THAN NO. 200 SIEVE SIZE	SANDY SOILS	(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES	
	MORE THAN 50% OF COARSE FRACTION	SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES	
	PASSING ON NO. 4 SIEVE	(APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
				ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
JULU				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE				мн	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	
SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		СН	INORGANIC CLAYS OF HIGH PLASTICITY	
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
Н	IGHLY ORGANIC	SOILS	76 76 76 7 6 76 76 76 76 76 76 76	PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

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Notice of Proposed Construction or Alteration Project Name: CELLC-000024126-05

Project Name:	CELLC-000024126-05	Project Status:	Submitted		
Sponsor:	Cellco Partnership (JF)	Date Submitted:	09/21/2005		
Representative:	Jennifer Flynn	Date Accepted:			
Actions:	Show Case List	Date Determined:			

Case

	мана (мана к. ч. у умана промини ва							
Construction / Alte	ration Information	Str	ucture Sum	mary				
* Notice O		* Structure Name: Sandy Ridge 2						
* Duratio	n: Permanent 📡		* Structure Type: Tower					
If Temporary	🧀 Months: 📃 Days:	Str	Structure Type - Other:					
Work Schedule - Star	t: (mm/dd/yyyy)		FCC N	lumber:				
Work Schedule - En		Pric	or ASN:	▼ -				
Structure Details		Co	mmon Frequ	iency Ban	ds			
* Latitude:	37 Deg 17 M 20.82 S N 😴	Г	Low Freq	High Freq	Freq Unit	ERP		
		Γ.	806	824	MHz	500		
* Longitude:	84 Deg 15 м 44.24 s VV 🐑	Г	824	849	MHz	500		
* Horizontal Datum:	NAD83 🖌 Accuracy: None 👻	Γ	851	866	MHz	500		
		Г	869	894	MHz	500		
* Site Elevation:	1390 (nearest foot)	Γ	896	901	MHz	500		
		Γ	901	902	MHz	7		
* Structure Height:	(nearest foot)	Г	930	931	MHz	3500		
* Marking/Lighting:	Dual-red and medium intensity	Γ	931	932	MHz	3500		
Other M/L Desc:		Г	932	932.5	MHz	17		
* *******		Г	935	940	MHz	1000		
* Nearest City:	Livingsion	Γ	940	941	MHz	3500		
* Nearest State:	Kentucky	Y	1850	1910	MHz	164(
* **		र	1930	1990	MHz	1640		
≁ Traversewaγ:	No naverseway	Γ	2305	2310	MHz	2000		
* Description of	Mt. Vernon, KY	Г	2345	2360	MHz	2000		
Location:			ecific Freque	encies				
Description of Proposal:	Applicant proposes to construct a 315 ft structure.							
					94 - 118 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119 - 119			

CELLCO PARTNERSHIP

1A Letter

Site Name: SANDY RIDGE 2 Site No:

For Aeronautical Study No.

Location:	City County	Mt. Vernon, Ky. Rockcastle
U.S.G.S. Qua	drangle:	Mt. Vernon, Ky.
(NAD 27)	LATITUDE	37° 17' 20.51"
	LONGITUDE	84° 15' 44.47"
(NAD 83)	LATITUDE	37° 17' 20.82"
. ,	LONGITUDE	84° 15' 44.24"
SITE ELEVA	TION (NAVD 88)	1390' ± AMSL
PROPOSED	TOWER HEIGHT	300' ± FAA AGL
PROPOSED	LIGHTNING ARRESTOR HEIGHT	325' ± FAA AGL
OVERALL H	EIGHT ELEVATION	1715' ± AMSL

I Certify, to the best of my knowledge and belief, that the horizontal and vertical datum as established from the referenced U.S.G.S. Quadrangle, is accurate to 1A Reporting requirements of ± 20 feet horizontally and ± 3 feet vertically.

The horizontal datum (coordinates) are in terms of the North American Datum of 1927 (NAD 27) and 1983 (NAD 83) and expressed as degrees, minutes and seconds.

The vertical datum (heights) are in terms of the National Geodetic Vertical Datum of 1988 and are determined to the nearest foot.

Kentucky State Plane Coordinates (South Zone) were established with Trimble Global Positioning Systems (GPS) receivers. This site has ties to the National Geodetic Reference System established by the National Geodetic Survey, formerly the U.S. Coast & Geodetic Survey by measurements to PID Station "GZ0632", designated as "175 T 52 RM 2".

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	FRANKL,
	#3282
	LICENSED PROFESSIONAL
	LAND SURVEYOR

CONSULTANT

Frank L. Sellinger, H. KY PLS No. 3282 FSTAN Land Surveyors and Consulting Engineers 2313/2315 Crittenden Drive, Louisville, Ky, 40217 Phone: 502-635-5866 Fax: 502-636-5263

Date: January 7, 2005 FSTAN Project No: 04-2996 -- INSTRUCTIONS ON REVERSE SIDE OF FORM --

TC 56-50 (Rev. 08/00) PAGE 1 OF 2

Kentucky Transportation Cabinet, Kentucky Airport Zoning Commission, 200 Mero Street, Frankfort KY 40622 Kentucky Aeronautical Study Number							
APPLICATION FOR PERMIT TO CONSTRUCT OR	ALTER A STRUCTURE						
1 APPLICANT – Name, Address, Telephone, Fax, etc. Cellco Parinership 30 Independence Blvd. Warren, NJ 07059 908-607-8132	9. Latitude: 37°17'20.82" 10. Longitude:084°15'44.24" 11. Datum: ☑ NAD 83 □ NAD 27 □ Other						
2 Representative of Applicant – Name, Address, Telephone, Fax Jennifer Flynn Verizon Wireless 30 Independence Blvd. Warren, NJ 908-607-8132	London-Corbin Arpt 14 Distance from #13 to Structure 15.02 NM 15 Direction from #13 to Structure: 143 87 degrees 16. Site Elevation (<i>AMSL</i>): 1390 Feet						
 3. Application for: New Construction Alteration Existing 4. Duration: Permanent Temporary (MonthsDays) 5. Work Schedule: StartEnd 	 17. Total Structure Height (AGL): 315 _ Feet 18. Overall Height (#16 + #17) (AMSL): 1705 Feet 19. Previous FAA and/or Kentucky Aeronautical Study Number(s): 						
6 Type:	Description of Location: (Attach a USGS 7.5 minute Quadrangle Map or an Airport Layout Drawing with the precise site marked and any certified survey)						
20. Description of Proposal: We are proposing to construct a 315 ft self support tower.							
22. Has a "NOTICE OF CONSTRUCTION OR ALTERATION" (FAA Form 7460-1) Ino been filed with the Federal Aviation Administration? Image: No							
CERTIFICATION: 1 hereby certify that all the above statements made by me are tr	ue, complete and correct to the best of my knowledge and belief						
Jennifer Flynn9/21/2005							
Printed Name Date PENALTIES: Persons failing to comply with Kentucky Revised Statutes (KRS 183 861 through 183.990) and Kentucky Administrative Regulations (602 KAR 050: Series) are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Non-compliance with Federal Aviation Administration Regulations may result in further penalties.							
Commission Action:	C Administrator, KAZC						
Approved Disapproved	Date						

ATTORNEYS-AT-LAW

W. BRENT RICE <u>brice@mmlk.com</u>

201 E. Main Street, Suite 1000 Lexington, Kentucky 40507 (859) 231-8780 FAX (859) 231-6518

September 22, 2005

Hon. Buzz Carloftis Rockcastle County Judge Executive Courthouse 205 Main Street Mt. Vernon, KY 40456

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

Re: Public Notice - Public Service Commission of Kentucky, Case No. 2005-00360 (The Sandy Ridge 2 Facility)

Dear Judge Carloftis:

Cellco Partnership d/b/a Verizon Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 300' self-supporting tower and an equipment shelter to be located on Sand Hill Road and Mize Branch Road, Livingston, Rockcastle County, Kentucky. A map showing the location of the proposed new cell facility is enclosed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. Your initial communication to the Commission must be received by the Commission within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, Post Office Box 615, Frankfort, KY 40602. Please refer to **Case No. 2005-00360** in your correspondence. If I can be of assistance to you, please do not hesitate to call me.

Sincerely,

1. Prent ni

W. Brent Rice Counsel for Verizon Wireless

WBR/dkw

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Cellco Paratnership d/b/a Verizon Wireless Adjoining Property Owners Sandy Ridge 2 Facility

Mr. and Mrs. Ralph Hamilton Route 5, Box 448 Livingston, KY 40445

Ms. Elaine Arkle Ms. Elaine Sellers P.O. Box 194 Livingston, KY 40445

Mr. and Mrs. James Smith 2196 Route 28 Goshen, OH 45122

Mr. and Mrs. Billy Gene Burke P.O. Box 206 Livingston, KY 40445

Ms. Evelyn Mink Route 5, Box 451 Livingston, KY 40445

Mr. and Mrs. Melvin Cromer Route 5, Box 453 Mt. Vernon, KY 40456

Ms. Dora Sturgill Route 5, Box 445 Livingston, KY 40445

Mr. and Mrs. Jackie Blackburn Route 5, Box 443 Livingston, KY 40445

ATTORNEYS-AT-LAW

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September 22, 2005

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Mr. and Mrs. Ralph Hamilton Route 5, Box 448 Livingston, KY 40445

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W. Brent Rice Counsel for Verizon Wireless

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W. BRENT RICE brice@mmlk.com

201 E. Main Street, Suite 1000 Lexington, Kentucky 40507 (859) 231-8780 FAX (859) 231-6518

September 22, 2005

VIA CERTIFIED MAIL- RETURN RECEIPT REQUESTED

Ms. Elaine Arkle Ms. Elaine Sellers P.O. Box 194 Livingston, KY 40445

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Sincerely,

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W. Brent Rice Counsel for Verizon Wireless

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September 22, 2005

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Mr. and Mrs. James Smith 2196 Route 28 Goshen, OH 45122

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W. Brent Rice Counsel for Verizon Wireless

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201 E. Main Street, Suite 1000 Lexington, Kentucky 40507 (859) 231-8780 FAX (859) 231-6518

September 22, 2005

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Mr. and Mrs. Billy Gene Burke P.O. Box 206 Livingston, KY 40445

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Sincerely,

L. Gronni

W. Brent Rice Counsel for Verizon Wireless

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201 E. Main Street, Suite 1000 Lexington, Kentucky 40507 (859) 231-8780 FAX (859) 231-6518

September 22, 2005

VIA CERTIFIED MAIL- RETURN RECEIPT REQUESTED

Ms. Evelyn Mink Route 5, Box 451 Livingston, KY 40445

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Sincerely,

L. Sperrac

W. Brent Rice Counsel for Verizon Wireless

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September 22, 2005

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Mr. and Mrs. Melvin Cromer Route 5, Box 453 Mt. Vernon, KY 40456

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W. BRENT RICE <u>brice@mmlk.com</u>

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September 22, 2005

VIA CERTIFIED MAIL- RETURN RECEIPT REQUESTED

Ms. Dora Sturgill Route 5, Box 445 Livingston, KY 40445

RE: Public Notice - Public Service Commission of Kentucky, Case No. 2005-00360 (The Sandy Ridge 2 Facility)

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W. Brent Rice Counsel for Verizon Wireless

$McBRAYER, McGINNIS, LESLIE \& KIRKLAND, {}^{\text{pllc}}$

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W. BRENT RICE brice@mmlk.com

201 E. Main Street, Suite 1000 Lexington, Kentucky 40507 (859) 231-8780 FAX (859) 231-6518

September 22, 2005

VIA CERTIFIED MAIL- RETURN RECEIPT REQUESTED

Mr. and Mrs. Jackie Blackburn Route 5, Box 443 Livingston, KY 40445

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Sincerely, Sperra

W. Brent Rice Counsel for Verizon Wireless
OPTION AND LEASE AGREEMENT

This Agreement made this ______ day of May, 2005, between RALPH and CONNIE HAMILTON, with a principal mailing address of Route 5, Box 448, Livingston, Rockcastle County, Kentucky 40445 Social Security # **103 - 10 - S371** hereinafter designated LESSOR and CELLCO PARTNERSHIP, a Delaware general partnership d/b/a VERIZON WIRELESS, with its principal offices located at 180 Washington Valley Road, Bedminster, New Jersey, 07921, hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

LESSOR is the owner of that certain real property located in Livingston, Rockcastle County, State of Kentucky, as shown on the Tax Map of the City of Livingston as Map Number 75, Lot 10 and being further described in Deed Book 129 at Page 635 as recorded in the Office of Rockcastle County Clerk's Office (the entirety of LESSOR's property is referred to hereinafter as the "Property"). LESSEE desires to obtain an option to lease a portion of said Property, with a right-of-way for access thereto (hereinafter referred to as the "Premises"), containing approximately 10,000 square feet, and as substantially shown on Exhibit "A" attached hereto and made a part hereof.

NOW THEREFORE, in consideration of the sum of **Constant** to the LESSOR, which LESSEE will provide upon its execution of this Agreement, the LESSOR hereby grants to LESSEE the right and option to lease said Premises including a right-of-way for access thereto, for the term and in accordance with the covenants and conditions set forth herein.

The option may be exercised at any time on or prior to July 1, 2005. At LESSEE's election and upon LESSEE's prior written notification to LESSOR, the time during which the option may be exercised may be further extended for three additional periods of six (6) months each, through and including January 1, 2006; June 30, 2006; and December 31, 2006 with an additional payment of sectended, and with an additional payment of LESSEE to LESSOR for the first option period so extended, and with an additional payment of LESSEE to LESSOR for the time during which the option may be exercised may be further extended by mutual agreement in writing. If during said option period, or during the term of the lease, if the option is exercised, the LESSOR decides to subdivide, sell or change the status of the Property or his property contiguous thereto he shall immediately notify LESSEE in writing so that LESSEE can take steps necessary to protect LESSEE's interest in the Premises.

This option may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal; to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, 05/17/05

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acquisition or other business reorganization; or to any entity which acquires or receives an interest in the majority of communication towers of the LESSEE in the market defined by the Federal Communications Commission in which the Property is located. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld or delayed.

Should LESSEE fail to exercise this option or any extension thereof within the time herein limited, all rights and privileges granted hereunder shall be deemed completely surrendered, this option terminated, and LESSOR shall retain all money paid for the option, and no additional money shall be payable by either Party to the other.

LESSOR shall cooperate with LESSEE in its effort to obtain all certificates, permits and other approvals that may be required by any Federal, State or Local authorities which will permit LESSEE use of the Premises. LESSOR shall take no action which would adversely affect the status of the Property with respect to the proposed use by LESSEE.

The LESSOR shall permit LESSEE, during the option period, free ingress and egress to the Premises to conduct such surveys, inspections, structural strength analysis, subsurface soil tests, and other activities of a similar nature as LESSEE may deem necessary, at the sole cost of LESSEE.

LESSOR agrees to execute a Memorandum of this Option to Lease Agreement which LESSEE may record with the appropriate Recording Officer. The date set forth in the Memorandum of Option to Lease is for recording purposes only and bears no reference to commencement of either term or rent payments.

Notice of the exercise of the option shall be given by LESSEE to the LESSOR in writing by certified mail, return receipt requested. Notice shall be deemed effective on the date it is posted. On the date of such notice the following agreement shall take effect:

LEASE AGREEMENT

1. <u>PREMISES</u>. LESSOR hereby leases to LESSEE a portion of that certain parcel of property (the entirety of LESSOR's property is referred to hereinafter as the "Property") containing 10,000 square feet situated on Map Number 75, Lot 10 all as shown on the Tax Map of the City of Livingston, together with the non-exclusive right for ingress and egress, seven (7) days a week, twenty-four (24) hours a day, on foot or motor vehicle, including trucks, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along a thirty (30) foot wide right-of-way extending from the nearest public right-of-way, Sand Hill Road and Mize Branch Road, to the demised premises, said demisted premises and right-of-way (hereinafter referred to as the "Premises") for access being substantially as described herein in Exhibit "A" attached hereto and made a part hereof.

05/17/05

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In the event any public utility is unable to use the aforementioned right-of-way, the LESSOR hereby agrees to grant an additional right-of-way either to the LESSEE or to the public utility at no cost to the LESSEE.

2. <u>SURVEY</u>. LESSOR also hereby grants to LESSEE the right to survey the Property and the Premises, and said survey shall then become Exhibit "B" which shall be attached hereto and made a part hereof, and shall control in the event of boundary and access discrepancies between it and Exhibit "A". Cost for such work shall be borne by the LESSEE.

3. <u>TERM</u>. This Agreement shall be for an initial term of five (5) years, and beginning on the date the option is exercised by LESSEE at an annual rental of Eight Thousand Four Hundred 00/100 Dollars (\$8,400.00) to be paid in equal monthly installments on the first day of the month, in advance, to LESSEE, or to such other person, firm or place as the LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date. The obligation to pay rent will begin immediately upon the exercise of the option, at which time rental payments and term will begin.

4. <u>EXTENSIONS</u>. This Agreement shall automatically be extended for four (4) additional five (5) year terms unless the LESSEE terminates it at the end of the then current term by giving the LESSOR written notice of the intent to terminate at least six (6) months prior to the end of the then current term.

5. <u>EXTENSION RENTALS</u>. The annual rental for the first (1st) five (5) year extension term shall be increased to the second (2nd) five (5) year extension term shall be increased to the third (3rd) five (5) year extension term shall be increased to the five (5) year extension shall be increased to
6. <u>ADDITIONAL EXTENSIONS</u>. If at the end of the fourth (4th) five (5) year extension term this Agreement has not been terminated by either Party by giving to the other written notice of an intention to terminate it at least six (6) months prior to the end of such term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of five (5) years and for five (5) year terms thereafter until terminated by either Party by giving to the other written notice of its intention to so terminate at least six (6) months prior to the end of such term. Annual rental for each such additional five (5) year term shall be equal to 115% of the annual rental payable with respect to the immediately preceding five (5) year term.

7. <u>USE; GOVERNMENTAL APPROVALS</u>. LESSEE shall use the Premises for the purpose of constructing, maintaining and operating a communications facility and uses incidental and all necessary appurtenances. A security fence consisting of chain link construction or similar but comparable construction may be placed around the perimeter of the Premises at the 05/17/05

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discretion of LESSEE (not including the access easement). All improvements shall be at LESSEE's expense and the installation of all improvements shall be at the discretion and option of the LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its equipment or any portion thereof, whether the equipment is specified or not on any exhibit attached hereto. during the term of this Agreement. LESSEE will maintain the Premises in a good condition reasonable wear and tear excepted. LESSOR will maintain the Property, excluding the Premises, in good condition, reasonable wear and tear excepted. It is understood and agreed that LESSEE's ability to use the Premises is contingent upon its obtaining after the execution date of this Agreement all of the certificates, permits and other approvals that may be required by any Federal, State or Local authorities as well as satisfactory soil boring tests which will permit LESSEE use of the Premises as set forth above. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Property with respect to the proposed use by LESSEE. In the event that any of such applications should be finally rejected or any certificate, permit, license or approval issued to LESSEE is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority or soil boring tests are found to be unsatisfactory so that LESSEE in its sole discretion will be unable to use the Property for its intended purposes or the LESSEE determines that the Premises is no longer technically compatible for its intended use, LESSEE shall have the right to terminate this Agreement. Notice of the LESSEE's exercise of its right to terminate shall be given to LESSOR in writing by certified mail, return receipt requested, and shall be effective upon the mailing of such notice by the LESSEE. All rentals paid to said termination date shall be retained by the LESSOR. Upon such termination, this Agreement shall become null and void and all the Parties shall have no further obligations including the payment of money, to each other.

8. <u>INDEMNIFICATION</u>.Each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the use and occupancy of the Premises or the Property by the Party, its servants or agents, excepting, however, such claims or damages as may be due to or caused by the acts or omissions of the other Party, or its servants or agents.

9. <u>INSURANCE</u>. The Parties hereby waive any and all rights of action for negligence against the other which may hereafter arise on account of damage to the premises or to property, resulting from any fire, or other casualty of the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, or either of them. LESSOR and LESSEE each agree that at its own cost and expense, each will maintain comprehensive general liability and property liability insurance with liability limits of not less than \$500,000 for injury to or death of one or more persons in any one occurrence and \$500,000 for damage or destruction to property in any one occurrence; provided, however, that in the event LESSOR conducts, maintains, or operates any commercial enterprise pursuant to which LESSOR makes any part of the Premises available for access or use to members of the public at large, LESSOR shall maintain at its own cost and expense, comprehensive general liability insurance with limits of not less than \$1,000,000 for injury or death of one or more persons in any one or more persons in any one occurrence and \$500,000 for other 200,000 for damage or 05/17/05

destruction to property in any one occurrence. LESSOR agrees that LESSEE may self-insure against any loss or damage which could be covered by a comprehensive general public liability insurance policy.

10. <u>ANNUAL TERMINATION</u>. Notwithstanding anything to the contrary contained herein, provided LESSEE is not in default hereunder and shall have paid all rents and sums due and payable to the LESSOR by LESSEE, LESSEE shall have the right to terminate this Agreement upon the annual anniversary of this Agreement provided that three (3) months prior notice is given the LESSOR.

11. <u>INTERFERENCE</u>. LESSOR agrees that LESSOR and/or any other tenants of the Property who currently have or in the future take possession of the Property will be permitted to install only such radio equipment that is of the type and frequency which will not cause measurable interference the existing equipment of the LESSEE. The Parties acknowledge that there will not be an adequate remedy at law for non-compliance with the provisions of this paragraph and therefore, LESSEE shall have the right to specifically enforce the provisions of this paragraph in a court of competent jurisdiction.

12. <u>REMOVAL UPON TERMINATION</u>. LESSEE, upon termination of the Agreement, shall, within ninety (90) days, remove its building(s), antenna structure(s) (except footings), fixtures and all personal property and otherwise restore the Property to its original condition, reasonable wear and tear excepted. If such time for removal causes LESSEE to remain on the Property after termination of this Agreement, LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until such time as the removal of the building, antenna structure, fixtures and all personal property are completed.

13. <u>RIGHT OF FIRST REFUSAL</u>. If the LESSOR during the lease term or any extension of the lease term elects to sell all or any portion of the Property, whether separately or as part of the larger parcel of which the Property are a part, the LESSEE shall have the right of first refusal to meet any bona fide offer of sale on the same terms and conditions of such offer. If LESSEE fails to meet such bona fide offer within thirty (30) days after notice thereof from LESSOR, LESSOR may sell the Property or portion thereof to such third person in accordance with the terms and conditions of his offer. For purposes of this Paragraph, any transfer, bequest or devise of the LESSOR's interest in the Property as a result of the death of the LESSOR, whether by will or intestate succession, shall not be considered a sale of the Property for which the LESSEE has any right of first refusal.

14. <u>RIGHTS UPON SALE</u>. Should the LESSOR, at any time during the term of this Agreement, decide to sell all or any part of the Property to a purchaser other than LESSEE, such sale shall be under and subject to this Agreement and LESSEE's rights hereunder, and any sale by the LESSOR of the portion of this Property underlying the right-of-way herein granted shall be under and subject to the right of the LESSEE in and to such right-of-way.

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15. <u>QUIET ENJOYMENT</u>. LESSOR covenants that LESSEE, on paying rent and performing the covenants shall peaceably and quietly have, hold and enjoy the Premises.

16. <u>TITLE</u>. LESSOR covenants that LESSOR is seized of good and sufficient title and interest to the Property and has full authority to enter into and execute this Agreement. LESSOR further covenants that there are no other liens, judgments or impediments of title on the Property, or affecting LESSOR's title to the same and that there are no covenants, easements or restrictions which prevent the use of the Premises by the LESSEE as set forth above.

17. <u>INTEGRATION</u>. It is agreed and understood that this Agreement contains all agreements, promises and understandings between the LESSOR and LESSEE and that no verbal or oral agreements, promises or understandings shall be binding upon either the LESSOR or LESSEE in any dispute, controversy or proceeding at law, and any addition, variation or modification to this Agreement shall be void and ineffective unless made in writing and signed by the Parties. In the event any provision of the Agreement is found to be invalid or unenforceable, such finding shall not effect the validity and enforceability of the remaining provisions of this Agreement. The failure of either Party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights under the Agreement shall not waive such rights and such Party shall have the right to enforce such rights at any time and take such action as may be lawful and authorized under this Agreement, either in law or in equity.

18. <u>GOVERNING LAW</u>. This Agreement and the performance thereof shall be governed, interpreted, construed and regulated by the laws of the State in which the Property is located.

19. <u>ASSIGNMENT</u>. This Agreement may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal; to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization; or to any entity which acquires or receives an interest in the majority of communication towers of the LESSEE in the market defined by the Federal Communications Commission in which the Property is located. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld or delayed. LESSEE may sublet the Premises within its sole discretion, upon notice to LESSOR. Any sublease that is entered into by LESSEE shall be subject to the provisions of this Agreement and shall be binding upon the successors, assigns, heirs and legal representatives of the respective parties hereto.

20. <u>NOTICES</u>. All notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the 05/17/05

addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

LESSOR: RALPH and CONNIE HAMILTON Route 5, Box 448 Livingston, Kentucky 40445

LESSEE: CELLCO PARTNERSHIP d/b/a Verizon Wireless 180 Washington Valley Road Bedminster, New Jersey 07921 Attention: Network Real Estate

Notice shall be effective upon mailing or delivering the same to a commercial courier, as permitted above.

21. <u>SUCCESSORS</u>. This Agreement shall extend to and bind the heirs, personal representatives, successors and assigns of the Parties hereto.

22. SUBORDINATION AND NON-DISTURBANCE. At LESSOR's option, this Agreement shall be subordinate to any mortgage or other security interest or other security interest by LESSOR which from time to time may encumber all or part of the Property or right-of-way; provided, however, every such mortgage or other security interest or other security interest shall recognize the validity of this Agreement in the event of a foreclosure of LESSOR's interest and also LESSEE's right to remain in occupancy of and have access to the Premises as long as LESSEE is not in default of this Agreement. LESSEE shall execute whatever instruments may reasonably be required to evidence this subordination clause. In the event the Property is encumbered by a mortgage or other security interest or other security interest, the LESSOR immediately after this Agreement is executed, will obtain and furnish to LESSEE, a non-disturbance agreement for each such mortgage or other security interest or other security interest in recordable form. In the event the LESSOR defaults in the payment and/or other performance of any mortgage or other security interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights. titles, liens and equities of the holders of such mortgage or security interest and the LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

23. <u>RECORDING.LESSOR</u> agrees to execute a Memorandum of this Lease Agreement which LESSEE may record with the appropriate Recording Officer. The date set forth in the Memorandum of Lease is for recording purposes only and bears no reference to commencement of either term or rent payments.

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24. <u>DEFAULT</u>. In the event there is a default by the LESSEE with respect to any of the provisions of this Agreement or its obligations under it, including the payment of rent, the LESSOR shall give LESSEE written notice of such default. After receipt of such written notice, the LESSEE shall have fifteen (15) days in which to cure any monetary default and thirty (30) days in which to cure any non-monetary default, provided the LESSEE shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and the LESSEE commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. The LESSOR may not maintain any action or effect any remedies for default against the LESSEE unless and until the LESSEE has failed to cure the same within the time periods provided in this Paragraph.

25. ENVIRONMENTAL.

<u>a</u>. LESSOR will be responsible for all obligations of compliance with any and all environmental and industrial hygiene laws, including any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene conditions or concerns as may now or at any time hereafter be in effect, that are or were in any way related to activity now conducted in, on, or in any way related to the Property, unless such conditions or concerns are caused by the activities of the LESSEE.

b. LESSOR shall hold LESSEE harmless and indemnify the LESSEE from and assume all duties, responsibility and liability at LESSOR's sole cost and expense, for all duties, responsibilities, and liability (for payment of penalties, sanctions, forfeitures, losses, costs, or damages) and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding which is in any way related to: a) failure to comply with any environmental or industrial hygiene law, including without limitation any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene concerns or conditions as may now or at any time hereafter be in effect, unless such compliance results from conditions caused by the LESSEE; and b) any environmental or industrial hygiene conditions arising out of or in any way related to the condition of the Property or activities conducted thereon, unless such environmental conditions are caused by the LESSEE.

26. <u>CASUALTY</u>. In the event of damage by fire or other casualty to the Premises that cannot reasonably be expected to be repaired within forth-five (45) days following same or, if the Property is damaged by fire or other casualty so that such damage may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, then LESSEE may at any time following such fire or other casualty, provided LESSOR has not completed the restoration required to permit LESSEE to resume its operation at the Premises, terminate this Lease upon fifteen (15) days written notice to LESSOR. Any such notice of termination shall cause this Lease to expire with the same force and effect as though the date set forth in such notice were the 05/17/05

date originally set as the expiration date of this Lease and the parties shall make an appropriate adjustment, as of such termination date, with respect to payments due to the other under this Lease. Notwithstanding the foregoing, all rental shall abate during the period of such fire or other casualty.

27. <u>CONDEMNATION</u>. In the event of any condemnation of the Property, LESSEE may terminate this Lease upon fifteen (15) days written notice to LESSOR if such condemnation may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to the antennas, equipment, its relocation costs and its damages and losses (but not for the loss of its leasehold interest). Any such notice of termination shall cause this Lease to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Lease and the parties shall make an appropriate adjustment as of such termination date with respect to payments due to the other under this Lease.

28. <u>SUBMISSION OF LEASE</u>. The submission of this Lease for examination does not constitute an offer to lease the Premises and this Lease becomes effective only upon the full execution of this Lease by the Parties. If any provision herein is invalid, it shall be considered deleted from this Lease and shall not invalidate the remaining provisions of this Lease. Each of the Parties hereto warrants to the other that the person or persons executing this Lease on behalf of such party has the full right, power and authority to enter into and execute this Lease on such Party's behalf and that no consent from any other person or entity is necessary as a condition precedent to the legal effect of this Lease.

29. <u>APPLICABLE LAWS</u>. LESSEE shall use the Premises as may be required or as permitted by applicable laws, rules and regulations. LESSOR agrees to keep the Property in conformance with all applicable, laws, rules and regulations and agrees to reasonably cooperate with the LESSEE regarding any compliance required by the LESSEE in respect to its use of the Premises.

30. <u>SURVIVAL</u>. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement. Additionally, any provisions of this Agreement which require performance subsequent to the termination or expiration of this Agreement shall also survive such termination or expiration.

31. <u>CAPTIONS</u>. The captions contained in this Agreement are inserted for convenience only and are not intended to be part of the Agreement. They shall not affect or be utilized in the construction or interpretation of the Agreement.

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written. 05/17/05

LESSOR:

BY:

WITNESS

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WITNESS

Ralph Hamilton

BY:

Connie Hamilton

LESSEE:

CELLCO PARTNERSHIP, a Delaware general partnership, d/b/a Verizon Wireless

WITNESS

BY:

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Howard H. Bower Midwest Area Vice President

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05/17/05

Exhibit "A"

(Sketch of Property)

05/17/05

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