COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF NEW CINGULAR WIRELESS PCS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AT&T MOBILITY FOR ISSUANCE OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A WIRELESS COMMUNICATIONS FACILITY IN THE COMMONWEALTH OF KENTUCKY IN THE COUNTY OF CASEY

) CASE NO.: 2018-00359

SITE NAME: MURPHY BRANCH FN

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APPLICATION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR CONSTRUCTION OF A WIRELESS COMMUNICATIONS FACILITY

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility ("Applicant"), by counsel, pursuant to (i) KRS §§ 278.020, 278.040, 278.650, 278.665, and other statutory authority, and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully submits this Application requesting issuance of a Certificate of Public Convenience and Necessity ("CPCN") from the Kentucky Public Service Commission ("PSC") to construct, maintain, and operate a Wireless Communications Facility ("WCF") to serve the customers of the Applicant with wireless communications services.

In support of this Application, Applicant respectfully provides and states the following information:

1. The complete name and address of the Applicant: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having a local address of Meidinger Tower, 462 S. 4th Street, Suite 2400, Louisville, Kentucky 40202.

2. Applicant proposes construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicant submits this application to the PSC for a certificate of public convenience and necessity pursuant to KRS §§ 278.020(1), 278.040, 278.650, 278.665, and other statutory authority.

3. The Certificate of Authority filed with the Kentucky Secretary of State for the Applicant entity was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference.

4. The Applicant operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Applicant's FCC licenses to provide wireless services are attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations.

5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services to an area currently not served or not adequately served by the Applicant by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in the Applicant's communications network that is designed to meet the increasing demands

for wireless services in Kentucky's wireless communications service area. The WCF is an integral link in the Applicant's network design that must be in place to provide adequate coverage to the service area.

6. To address the above-described service needs, Applicant proposes to construct a WCF at Highway 78, Liberty, Kentucky 42539 (37°27'17.626" North latitude, 84°59'26.115" West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by John W. and Paula G. Cox pursuant to a Deed recorded at Deed Book 191, Page 141 in the office of the County Clerk. The proposed WCF will consist of a 195-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 199-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Applicant's radio electronics equipment and appurtenant equipment. The Applicant's equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

7. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as **Exhibit D**.

8. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas of the Applicant has also been included

as part of Exhibit B.

9. Foundation design plans signed and sealed by a professional engineer registered in Kentucky and a description of the standards according to which the tower was designed are included as part of **Exhibit C**.

10. Applicant has considered the likely effects of the installation of the proposed WCF on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate Applicant's antennas on an existing structure. When suitable towers or structures exist, Applicant attempts to co-locate on existing structures such as communications towers or other structures capable of supporting Applicant's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.

11. Documentation confirming that no notice is required to the Federal Aviation Administration ("FAA") for the proposed tower site is attached as **Exhibit E**.

12. Documentation confirming that a Kentucky Airport Zoning Commission ("KAZC") permit is not required for the proposed site is attached as **Exhibit F**.

13. A copy of the geotechnical engineering report, signed and sealed by a professional engineer registered in the Commonwealth of Kentucky, is attached as Exhibit
G. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this exhibit.

14. Clear directions to the proposed WCF site from the County seat are attached

as **Exhibit H**. The name and telephone number of the preparer of **Exhibit H** are included as part of this exhibit.

15. Applicant, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as **Exhibit I**.

16. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of **Exhibit C** bear the signature and stamp of a professional engineer registered in the Commonwealth of Kentucky. All tower designs meet or exceed the minimum requirements of applicable laws and regulations.

17. The Construction Manager for the proposed facility is Don Murdock and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibits B & C**.

18. As noted on the Survey attached as part of **Exhibit B**, the surveyor has determined that the site is not within any flood hazard area.

19. **Exhibit B** includes a map drawn to an appropriate scale that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is illustrated in **Exhibit B**.

20. Applicant has notified every person who, according to the records of the

County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as **Exhibit J** and **Exhibit K**, respectively.

21. Applicant has notified the applicable County Judge/Executive by certified mail, return receipt requested, of the proposed construction. This notice included the PSC docket number under which the application will be processed and informed the County Judge/Executive of his/her right to request intervention. A copy of this notice is attached as **Exhibit L**.

22. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit M**. A legal notice advertisement regarding the location of the proposed facility has been published in a newspaper of general circulation in the county in which the WCF is proposed to be located. A copy of the newspaper legal notice advertisement is attached as part of **Exhibit M**.

23. The general area where the proposed facility is to be located is rural,

mountainous, wooded and sparsely populated. There are no existing residential structures within 500 feet of the proposed tower location.

24. The process that was used by the Applicant's radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. Applicant's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered by the Applicant when searching for sites for its antennas that would provide the coverage deemed necessary by the Applicant. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit N**.

25. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area.

26. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.

27. All responses and requests associated with this Application may be directed

to:

David A. Pike Pike Legal Group, PLLC 1578 Highway 44 East, Suite 6 P. O. Box 369 Shepherdsville, KY 40165-0369 Telephone: (502) 955-4400 Telefax: (502) 543-4410 Email: <u>dpike@pikelegal.com</u>

WHEREFORE, Applicant respectfully request that the PSC accept the foregoing Application for filing, and having met the requirements of KRS §§ 278.020(1), 278.650, and 278.665 and all applicable rules and regulations of the PSC, grant a Certificate of Public Convenience and Necessity to construct and operate the WCF at the location set forth herein.

Respectfully submitted,

Pavid a Pilse

David A. Pike Pike Legal Group, PLLC 1578 Highway 44 East, Suite 6 P. O. Box 369 Shepherdsville, KY 40165-0369 Telephone: (502) 955-4400 Telefax: (502) 543-4410 Email: dpike@pikelegal.com Attorney for New Cingular Wireless PCS, LLC d/b/a AT&T Mobility

LIST OF EXHIBITS

- A FCC License Documentation
- B Site Development Plan:

500' Vicinity Map Legal Descriptions Flood Plain Certification Site Plan Vertical Tower Profile

- C Tower and Foundation Design
- D Competing Utilities, Corporations, or Persons List
- E FAA
- F Kentucky Airport Zoning Commission
- G Geotechnical Report
- H Directions to WCF Site
- I Copy of Real Estate Agreement
- J Notification Listing
- K Copy of Property Owner Notification
- L Copy of County Judge/Executive Notice
- M Copy of Posted Notices and Newspaper Notice Advertisement
- N Copy of Radio Frequency Design Search Area

EXHIBIT A FCC LICENSE DOCUMENTATION

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

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LICENSEE: NEW	CINGULAR W	/IRELES	SS PCS, LI	LC		ſ	Call KNKN	Sign 1964	File N	lumber
ATTN: CECIL J M. NEW CINGULAR 208 S AKARD ST.,	WIRELESS PC	CS; LLC				ſ		Radio : CL - C	Service ellular	
DALLAS, TX 7520	1988 B.	dist.					CMA]	el Block 3
FCC Registration Num	ber (FRN): 00	0329119	2			Į	S	ub-Market	-	or
Market Name Kentucky 6 - Madison							·			
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Site Information: Location Latitude	Longitu	de		ound Elev eters)	ation		ıcture Hgt ters)	-	ntenna St egistratio	
5 37-18-37.2 N Address: 604 HATFIELI City: Liberty County:	•	•••		5.8 ction Dead	line:	69.2	2)43347	
Antenna: 1 Maximum Transmitting E Azimuth(from true no Antenna Height AAT (met Transmitting ERP (watts) Antenna: 2 Maximum Transmitting E	orth) ers) 5	0 9.800 192.800	45 102.600 103.500	90 65.700 11.600	135 61.100 0.400		180 108.000 0.600	225 120,600 0.500	270 100.900 8.800	315 65.400 94.400
Azimuth(from true no Antenna Height AAT (met Transmitting ERP (watts) Antenna: 3 Maximum Transmitting E	orth) ers) 5	0 59.800 1.400	45 102.600 22.100	90 65.700 142.900	135 61.100 188.40		180 108.000 56.900	225 120:600 3.700	270 100.900 0.400	315 65.400 0.400
Azimuth(from true no Antenna Height AAT (met Transmitting ERP (watts)	orth) (ers) 5	0 59.800 1.300	45 102.600 0.400	90 65.700 0.400	135 61.10 3.300	0	180 108.000 49.500	225 120.600 179.900	270 100.900 1 53 .100	315 65.400 27.200
Contit							*	<u> </u>		·
Conditions: Pursuant to §309(h) of th following conditions: Th frequencies designated in license nor the right grant 1934, as amended. See 4 the Communications Act	is license shall the license bey ted thereunder s 7 U.S.C. § 310	not vest i rond the t shall be a (d). This	in the licenterm there ssigned or license is	nsee any rig of nor in an otherwise subject in	ght to op y other transfer	perat man rred i	e the statio ner than au n violation	n nor any ri ithorized he of the Com	ght in the rein: Neith municatio	ise of the her the ns Act of

Call Sign: KNKN964	File	Number:			P	rint Date	:	
Location Latitude 7 37-32-40.8 N	Longitude 084-17-40.6 W	(m	ound Elev eters) 8.7	ation	Structure Hg (meters) 128.0	t to Tip	Antenna Si Registratio 1228453	
Address: 521 FENTRESS LA	NE (76213)							
City: Berea County: MADI		Constr	uction Dea	adline:	05-19-2015			
Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2		45 170.300 66.200	90 101.700 8.600	135 65.000 0.400	180 0 99.300 0.200	225 140.700 0.200	270 147.900 2.100	315 171.700 27.300
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3	0 172.500 0.600	45 170.300 9.400	90 101.700 67.500	135 65.000 94.400		225 140.700 1.500	270 147.900 0.200	315 171.700 0.200
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140,820 0 172.500 21.200	45 170.300	90 101.700 1.200	135 65.000 1.100	180 0 99.300 17.200	225 140.700 192.100	270 147.900 389.900	315 171.700 205.800
Location Latitude 8 37-45-36.3 N Address: 363 JESSE BRIM R	Longitude 084-38-06.5 W	(m	ound Elev eters) 1.1	ation	Structure Hg (meters) 86.9	t to Tip	Antenna St Registratio 1043357	
	• •	ate: KY 📣	Construct	ion Dea	adline: 05-19-2	015		
Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	Watts: 140.820 0 112.000 82.600	45 109.800 298.200	90 147.300 252.300	135 118.9 44/10	180 90. 97.300 97.300 1.700	225 106.100 0.600	270 107.500 0.600	315 134.700 4.900
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 4	0 112.000 0.600	45 109.800 2.500	90 147.300 47.700	135 118.90 266.80		225 106.100 74.600	270 107.500 3.600	315 134.700 0.600
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 112.000 1.800	45 109.800 0.200	90 147.300 0.200	135 118.9 0.300	5,900	225 106.100 48.600	270 107.500 81.200	315 134.700 26.400



Call Sign: KNKN964	File I	Number:			P	rint Date	:	
Location Latitude	Longitude		round Elev neters)	ation	Structure Hg (meters)	t to Tip	Antenna St Registratio	
11 37-24-08:4 N	084-52-12.5 W	-	14.4		123.1		1244845	
Address: 1064 GEORGE BR	P45.	474)						
City: HUSTONVILLE Cou	inty: CASEY Sta	ate: KY	Construct	tion Dea	adline: 05-19-2	2015		
Antenna: 1 Maximum Transmitting ERP in	20 20 20 20 20 20 20 20 20 20 20 20 20 2		0.0	43.5				
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	0 113.900 141,900	45 150.700 76.200	90 149.300 8.600	135 146.00 0.300	180 00 168.200 0.500	225 167.200 0.400	270 124.000 6.500	315 147.600 69.500
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3	. 0	45 150.700 30.200	90 149.300 198.200	135 146.00 256.70		225 167.200 4.200	270 124.000 0.513	315 147.600 0.600
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 113.900 1.600	45 150.700 0.600	90 149.300 0.600	135 146.00 4.700	180 00 168.200 79.800	225 167.200 288.100	270 124.000 238.200	315 147.600 43.600
Location Latitude 12 37-52-28.6 N	Longitude 084-20-20.7 W	(n	round Elev ieters) 35.0	ation	Structure Hg (meters) 121.9	t to Tip	Antenna Si Registratio 1002236	
Address: 3600 LEXINGTON					121,9		1002230	
	. ,	te: KY	Construct	ion Dea	adline: 05-19-2	2015		
Antenna: 1 Maximum Transmitting ERP ir Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2		45 113.700 136.300	90 133.000 13.900	135 106-20 0.600	180	225 112.000 0.700	270 92.600 11.000	315 86.400 124.300
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 91.600 2.000	45 113.700 37.500	90 133.000 246.600	135 106.20 319.50		225 112.000	270 92.600 0.639	315 86.400 0.800
Antenna: 3 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820	45 113.700 0.610	90 133.000 0.610	135 106.20 5.000	180	225 112.000 305.100		315 86.400 45.100
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Call Sign: KNKN964	File	Number:			P	rint Date	:	
Location Latitude	Longitude		ound Elev eters)	ation	Structure Hg (meters)	t to Tip	Antenna St Registratio	
15 37-35-261 N	084-50-43.3 W		6.9		59.1			
Address: 4213 PERSIMMON		01147)						
City: JUNCTION CITY Co	inty: BOYLE S	State: KY	Constru	ction I	Deadline: 05-19	-2015		
Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in	168.700 1.600	171.100 2.100	158.800 2.300	149.2 0.900		133.900 0.100	101.600 0.100	177.600 0.300
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3	0 168.700 0.107	45 171.100 0.200	90 158.800 3.400	135 149.2 28.00		225 133.900 25.000	270 101.600 2.700	315 177.600 0.200
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 168.700 34.000	45 171.100 3≩100	90 158.800 0.400	135 149.2 0.500		225 133.900 24.100	270 101.600 129.000	315 177.600 161.700
Location Latitude 16 37-21-10.9 N	Longitude 084-39-33.8 W	(m	ound Elev eters) 6.2	ation	Structure Hg (meters) 87.2	t to Tip	Antenna St Registratio 1257886	
Address: 12900 US HWY 27 S	S (106194)	S.	a State	on Dea	dline: 05-19-20	15	1257000	
Antenna: 1 Maximum Transmitting ERP in					· · · · · · · · · · · · · · · · · · ·			
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	0 107.700 397.200	45 134.700 162.700	90 131.900 9.900	135 154.4 1.400		225 118.300 1.000	270 145.400 27.800	315 145.200 210.100
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters)	Watts: 140.820 0 107.700	45 134.700	90 131.900	135 154.4	180 00 120.400	225 118.300	270 145.400	315 145.200
Transmitting ERP (watts) Antenna: 3	3.900	62.100	309.500	354.7		3.600	0.709	1.000
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 107.700 2.000	45 134.700 0.742	90 131.900 0.742	135 154.4 11.10		225 118.300 371.400	270 145.400 269.600	315 145.200 30.500



Call Sign: KNKN964	File	Number:			Р	rint Date	:	
Location Latitude	Longitude 084-57-39.5 W	(m	round Elev 1eters) 95.0	I	Structure Hg (meters) 78.9	t to Tip	Antenna So Registratio 1263764	
Address: 309 Antioch Church	Rd (110472)							
City: Liberty County: CAS	EY State: KY	Constru	ction Dead	line: 05-	-19-2015			
Antenna: 4 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5 Maximum Transmitting ERP in	0 90.900 365.600	45 41.300 148.900	90 39,900 7.800	135 47.800 1.500	180 59.300 0.731	225 71.200 1.300	270 92.000 23.600	315 74.100 196.200
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 6	0 90,900 2.900	45 41.300 29.300	90 39.900 156.900	135 47.800 196.700		225 71.200 3.800	270 92.000 0.500	315 74.100 0.700
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 90.900 0.300	45 41.300 0.100	90 39.900 0.100	135 47.800 0.900	180 59.300 8.500	225 71.200 23.800	270 92.000 21.000	315 74.100 3.900
Location Latitude 18 37-32-51.0 N	Longitude 084-19-59.0 W	(n	round Elev ieters) 78.0	(Structure Hg (meters) 91.1	t to Tip	Antenna St Registratio 1018906	
Address: 850 S. Dogwood Dr. City: BEREA County: MA	• •	W Cod	All Allon T) og dlin o	: 05-19-2015			
Antenna: 4 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5		45 159.200 32.100	90 126.200 61.200	135 70.300 28.600	180 118.900	225 123.900 0.200	270 150.200 0.122	315 185.600 0.200
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 6	Watts: 140.820 0 168.900 0.300	45 159.200 0.400	90 126.200 1.600	135 70.300 18.000		225 123.900 111.200	270 150.200 26.100	315 185.600 2.500
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 168.900 19.800	45 159.200 3.700	90 126.200 0.300	135 70.300 0.100	0.100	225 123.900 0.800	270 150.200 8.000	315 185.600 22.400
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Call Sign: KNKN964	Fil	e Number	:		P	rint Date	:	
Location Latitude	Longitude		Ground Elev meters)		Structure Hg (meters)	t to Tip	Antenna St Registratio	
19 37-17-0 9.6 N	084-39-48.6 W	-	69.1	9	97.5		1047763	
Address: 933 Ellison Pulaski		d (87875)						
City: EUBANKS County:	LINCOLN Sta	te: KY	Constructio	n Deadli	ne: 05-19-201	5		
Antenna: 1	n an							
Maximum Transmitting ERP in Azimuth(from true north)	STATE BALLED STATE	45	00	125	190	225	270	215
Antenna Height AAT (meters)	0 61.000	45 89.700	90 113.300	135 109.400	180) 116.000	225 113.900	270 103.800	315 96.300
Transmitting ERP (watts)	207.000		7.100	0.900	0.414	0.500	13.500	104.300
Maximum Transmitting ERP in Azimuth(from true north)	1 Watts: 140.820	45	00	125	190	225	170	215
Antenna Height AAT (meters)	61.000	45 89.700	90 113.300	135 109.400	180) 116.000	225 113.900	270 103.800	315 96.300
Transmitting ERP (watts)	2.800	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	154.300	193.500		3.700	0.500	0.700
Antenna: 3 Maximum Transmitting ERP in	Watts: 140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters) Transmitting ERP (watts)	61.000	89.700	113.300	109.400		113.900	103.800	96.300
	1.900	0,400	0.400	6.900	57.500	193.500	147.100	15.900
Location Latitude	Longitude	101 S 101 S 101	Ground Elev meters)		Structure Hg (meters)	t to Tip	Antenna Si Registratio	
20 37-38-56 8 N		ೆಗೊಡಿ	A CONTRACTOR OF THE OWNER				itegisti atio	H 1100
4V 1/-18-36 X N	084-57-46.0 W	de Calif	289 0 184	4	18 2			
57 56 50.011	084-57-46.0 W (88217)		289.0	2	48.2			
Address: 710 COX STREET	(88217)	1983				15		
Address: 710 COX STREET	(88217)	1983			48.2 ine: 05-19-20	15		
Address: 710 COX STREET City: PERRYVILLE Count	(88217)	1983				15		
Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP ir	(88217) ty: BOYLE St	1983		on Deadl	ine: 05-19-20	15		
Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north)	(88217) ty: BOYLE St Watts: 140.820 0	ate: KY 🐳	Construcți 90	on Deadl	ine: 05-19-20	225	270	315
Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters)	(88217) ty: BOYLE St Watts: 140.820 0 85.200	45 61.400	Construcți 90 39.400	on Deadl 135- 30.000	ine: 05-19-20 180 30.000	225 37.500	68.300	61.100
Address: 710 COX STREET City: PERRYVILLE Count Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	(88217) ty: BOYLE Sta Watts: 140.820 0 85.200 68.700	ate: KY 🐳	Construcți 90	on Deadl	ine: 05-19-20	225		
Address: 710 COX STREET City: PERRYVILLE Count Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in	(88217) ty: BOYLE Sta Watts: 140.820 0 85.200 68.700 1 Watts: 140.820	45 61.400 32.100	200 90 39.400 3.400	135 30.000 0.200	180 30.000 0.137	225 37.500 0.200	68.300 4.400	61.100 36.000
Address: 710 COX STREET City: PERRYVILLE Count Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters)	(88217) ty: BOYLE Sta Watts: 140.820 0 85.200 68.700	45 61.400	Construcți 90 39.400	on Deadl 135- 30.000	ine: 05-19-20 180 30.000 0.137 180 30.000	225 37.500 0.200 225 37.500	68.300	61.100
Address: 710 COX STREET City: PERRYVILLE Count Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	(88217) ty: BOYLE Standard Sta	45 61.400 32.100 45	200 90 39.400 3.400 90	135 30,000 0,200 135	ine: 05-19-20 180 30.000 0.137 180	225 37.500 0.200 225 37.500	68.300 4.400 270	61.100 36.000 315
Address: 710 COX STREET City: PERRYVILLE Count Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3	(88217) ty: BOYLE St Watts: 140.820 0 85.200 68.700 Watts: 140.820 0 85.200 0.700	45 61.400 32.100 45 61.400	200 90 39.400 3.400 90 39.400	135 30.000 0.200 135 30.000	ine: 05-19-20 180 30,000 0.137 180 30,000 17,400	225 37.500 0.200 225 37.500	68.300 4.400 270 68.300 0.200	61.100 36.000 315 61.100 0.200
Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Maximum Transmitting ERP in Azimuth(from true north)	(88217) ty: BOYLE Standard Sta	45 61.400 32.100 45 61.400 10.100 45	90 39.400 3.400 90 39.400 52.900 90	135- 30.000 0.200 135 30.000 63.100 135	ine: 05-19-20 180 30,000 0.137 180 30,000 17,400	225 37.500 0.200 225 37.500 1.300	68.300 4.400 270 68.300 0.200 270	61.100 36.000 315 61.100 0.200 315
Address: 710 COX STREET City: PERRYVILLE Count Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters)	(88217) ty: BOYLE Standard Sta	45 61.400 32.100 45 61.400 10.100 45 61.400	90 39,400 3.400 90 39,400 52,900 90 39,400 52,900	135- 30.000 0.200 135 30.000 63.100 135 30.000	ine: 05-19-20 180 30.000 0.137 180 30.000 17.400 180 30.000	225 37.500 0.200 225 37.500 1.300 225 37.500	68.300 4.400 270 68.300 0.200 270 68.300	61.100 36.000 315 61.100 0.200 315 61.100
Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Maximum Transmitting ERP in Azimuth(from true north)	(88217) ty: BOYLE Standard Sta	45 61.400 32.100 45 61.400 10.100 45	90 39.400 3.400 90 39.400 52.900 90	135- 30.000 0.200 135 30.000 63.100 135	ine: 05-19-20 180 30.000 0.137 180 30.000 17.400 180 30.000 20.000	225 37.500 0.200 225 37.500 1.300	68.300 4.400 270 68.300 0.200 270	61.100 36.000 315 61.100 0.200 315
Address: 710 COX STREET City: PERRYVILLE Coun- Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters)	(88217) ty: BOYLE Standard Sta	45 61.400 32.100 45 61.400 10.100 45 61.400	90 39,400 3.400 90 39,400 52,900 90 39,400 52,900	135- 30.000 0.200 135 30.000 63.100 135 30.000	ine: 05-19-20 180 30.000 0.137 180 30.000 17.400 180 30.000	225 37.500 0.200 225 37.500 1.300 225 37.500	68.300 4.400 270 68.300 0.200 270 68.300	61.100 36.000 315 61.100 0.200 315 61.100

Call Sign: KNKN964	File	Number:			Р	int Date:	:	
Location Latitude	Longitude 084-19-23.5 W	(m	ound Elev eters) 6.5	(Structure Hg (meters) 84.1	to Tip	Antenna St Registratio	
Address: 1322 Walnut Meado		21	0.5		04.1		1217000	
City: Berea County: MADI		Constr	uction De	adline: 0	5-19-2015			
								
Antenna: 1	P Destriction							
Maximum Transmitting ERP in Azimuth(from true north)	Watts: 140.820	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.600	67.700	85.700	30.000	36.000	34.900	73.800	71.000
Transmitting ERP (watts) Mattenna: 2	359.700	189.900	19.500	0.800	1.100	1.000	15.900	177.200
Maximum Transmitting ERP in		15	00	125	100	225	270	215
Azimuth(from true north) Antenna Height AAT (meters)	0 69.600	45 67.700	90 85.700	135 30.000	180 36.000	225 34.900	270 73.800	315 71.000
Transmitting ERP (watts) Antenna: 3	2.200	41.100	269.800	349.500		5.700	0.700	0.800
Maximum Transmitting ERP in	Watts: 140.820							
Azimuth(from true north) Antenna Height AAT (meters)	0 69.600	45	90	135	180	225	270 72 800	315
Transmitting ERP (watts)	1.900	67.700 0.700	85.700 0.700	30.000 5.500	36.000 92.500	34.900 333.800	73.800 282.500	71.000 49.400
Location Latitude	Longitude	Gi	ound Elev	ation S	Structure Hg	to Tip	Antenna St	ructure
	5	1. 18 M 1	eters)	((meters)		Registratio	n No.
22 37-44-57.3 N	084-10-08.8 W	al 27	4.9	:	82.3		1230519	
Address: 176 Kennedy Lane (,	VN 0 ⁴		р Ш'		-		
City: Richmond County: M	ADISON State		onstruction		ne: 05-19-201	.		
Antenna: 1			and the second s					
Maximum Transmitting ERP in	Watts: 140.820							
Azimuth(from true north) Antenna Height AAT (meters)	0 120.300	45 124.900	90	135	180 65.900	225 60.500	270 72.000	315 90.300
Transmitting ERP (watts)	95.500	46.000	128.100 4.500	96.900 0.200	0.200	0.200	3.600	41.000
Antenna: 2 Maximum Transmitting ERP in	Watts: 140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters) Transmitting ERP (watts)	120.300 0.700	124.900 8.600	128.100 43.500	96.900 49.700	65.900 13,500	60.500 0.900	72.000 0.100	90.300 0.100
Antenna: 3		0.000	45.500	19.700	a de la companya de l			0.100
Maximum Transmitting ERP in Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters) Transmitting ERP (watts)	120.300	124.900	128.100	96.900	65.900	60,500	72.000	90.300
	5.900	0.722	0.900	2.300	42.400	278.600	361.000	104.700
Control Points:					i na senar A			
Control Pt. No. 1					200			
Address: 2601 Palumbo Drive								
City: Lexington County:	State: KY Te	elephone N	Number:		1		A	
						AN CONTRACT	<u>d</u>	>
						4	Alera	See.

Call Sign: KNKN964

File Number:

Print Date:



Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).



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	RADIO STATION GULAR WIRELESS PCS, LL EW ELESS PCS, LLC	munications Bureau AUTHORIZATION C	Call Sign WPOI255 Rad	File Number io Service CS Broadband
FCC Registration Number (FF	and the second		. 1	
05-27-2015	Effective Date 08-31-2018	Expiration Dat 06-23-2025	te	Print Date
Market Number MTA026	Cha	nnel Block A	Sub-M	larket Designator 19
		et Name kington-Evansvill		
1st Build-out Date 06-23-2000	2nd Build-out Date 06-23-2005	3rd ⁹ Build-out Da	ite	4th Build-out Date
Waivers/Conditions: This authorization is subject to t authorized in an adjacent foreign km (45 miles) of the United Stat adjacent foreign territory and to License renewal granted on a co 10-86, paras. 113 and 126).	n territory (Canada/United State tes/Canada border shall be requ ensure continuance of equal ac	es), future coordination of a ired to eliminate any harm cess to the frequencies by	any base statio ful interferenc both countries	on transmitters within 72 e to operations in the
following conditions: This lic frequencies designated in the license nor the right granted the 1934, as amended. See 47 U.S.	mmunications Act of 1934, as a cense shall not vest in the licens license beyond the term thereof nereunder shall be assigned or of S.C. § 310(d). This license is s 934, as amended. See 47 U.S.C	ee any right to operate the nor in any other manner the otherwise transferred in vio ubject in terms to the right	station nor any han authorized lation of the C	y right in the use of the herein Neither the communications Act of
To view the specific geographi under the Market Tab of the lic	operation throughout the entire c area and spectrum authorized cense record in the Universal Li c.gov/uls/index.htm?job=home	by this license, refer to the censing System (ULS). To	e Spectrum and o view the lice	d Markel Area information ense record, go to the ULS

Call Sign: WPOI255

File Number:

Print Date:

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

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

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918558.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918558, was terminated on 04/14/2005. See file number 0002135370.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).





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LICENSEE: NEW CIN ATTN: CECIL J MATH NEW CINGULAR WIR	W RA GULAR V EW ELESS P(unications Bure	au ON Call Sign WPOK659	9 Radio S	
208 S AKARD ST., RM DALLAS, TX 75202 FCC Registration Number (FF		291192		CW	- PCS B	Broadband
Grant Date 10-29-2009]	Effective Date 08-31-2018	Expiration 09-29-20			Print Date
Market Number BTA423		Chânn	el Block	S	ub-Mark	tet Designator 1
		Market Somerse				
1st Build-out Date 09-29-2004	2nd	Build-out Date	3rd/Build-ou	t Date	4th	Build-out Date
Waivers/Conditions: This authorization is subject to t authorized in an adjacent foreign km (45 miles) of the United Stat adjacent foreign territory and to	n territory es/Canada	(Canada/United States) border shall be require	, future coordinatior d to eliminate any h	n of any base armful interfe	station tr erence to	ansmitters within 72
Conditions: Pursuant to §309(h) of the Confollowing conditions: This lice frequencies designated in the license nor the right granted the 1934, as amended. See 47 U.S. the Communications Act of 19	ense shall icense bey hereunder S.C. § 310	not vest in the licensee yond the term thereof no shall be assigned or oth (d). This license is sub	any right to operate or in any other mann erwise transferred in ject in terms to the r	the station ner than authon violation of	or any rig orized her the Com	th in the use of the rem. Neither the munications Act of
This license may not authorize To view the specific geographi under the Market Tab of the lic homepage at http://wireless.fcc search for license information.	c area and ense recor	spectrum authorized by d in the Universal Lice	y this license, refer t nsing System (ULS)	o the Spectrum). To view the	m and M e license	arker Area information record, go to the ULS tructions on how to
						FCC 601-MB



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n place of an official FCC neense.				
	Federal Communica Wireless Telecomm	unications Bureau		
COMMISSION .	RADIO STATION A	UTHORIZATION	,	
LICENSEE: NEW CIN	GULAR WIRELESS PCS, LLC			
ATTN: CECIL J MATH			Call Sign WPXT205	File Number
NEW CINGULAR WIR 208 S AKARD ST., RM DALLAS, TX 75202				Radio Service - PCS Broadband
FCC Registration Number (FR	RN): 0003291192			······································
Grant Date 06-02-2015	Effective Date 08-31-2018	Expiration Dat 06-23-2025	te	Print Date
Market Number MTA026	Channe	el Block	Sul	b-Market Designator 8
	Market Louisville-Lexin			
1st Build-out Date 06-23-2000	2nd Build-out Date 06-23-2005	3rd Build-out Da	ıte	4th Build-out Date
authorized in an adjacent foreign km (45 miles) of the United Stat adjacent foreign territory and to	he condition that, in the event that n territory (Canada/United States), tes/Canada border shall be require ensure continuance of equal acces onditional basis, subject to the outo	, future coordination of a ed to eliminate any harm ss to the frequencies by	any base st ful interfer both count	tation transmitters within 72 rence to operations in the ries.
Pursuant to §309(h) of the Con following conditions: This lic frequencies designated in the I license nor the right granted the 1934, as amended. See 47 U.S.	mmunications Act of 1934, as amore shall not vest in the licensee license beyond the term thereof not nereunder shall be assigned or othe S.C. § 310(d). This license is subj934, as amended. See 47 U.S.C. §	any right to operate the or in any other manner th erwise transferred in vio ject in terms to the right	station nor han author plation of th	r any right in the use of the ized herein. Neither the be Communications Act of
To view the specific geographi under the Market Tab of the lic	operation throughout the entire ge c area and spectrum authorized by cense record in the Universal Licen c.gov/uls/index.htm?job=home and	y this license, refer to the nsing System (ULS). To	e Spectrum o view the	and Market Area information license record, go to the ULS

Call Sign: WPXT205

File Number:

Print Date:

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).



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	and the second se	unications Bureau AUTHORIZATION	all Sign QGD755	File Number Service			
208 S AKARD ST., RM DALLAS, TX 75202 FCC Registration Number (FF		AV	W - AWS (171	10-1755 MHz and 55 MHz)			
Grant Date 12-18-2006	Effective Date 08-31-2018	Expiration Date 12-18-2021		Print Date			
Market Number BEA047		el Block	Sub-Ma	rket Designator 9			
Market Name Lexington, KY-TN=VA-WV							
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	. 41	th Build-out Date			
reasonable efforts to coordinate operating in the 1710-1755 MH: Coordination Procedures in the 2006. Grant of the request to update lit 1.948); if an assignment or trans- licensed under the prior name.	d upon the licensee, prior to initia frequency usage with known co- z band whose facilities could be a 1710-1755 MHz Band, Public No icensee name is conditioned on it n sfer occurred without proper notif	channel and adjacent chann affected by the proposed op otice, FCC 06-50, WTB Do not reflecting an assignmen	nel incumbent perations. See, poket No. 02-3 nt or transfer o	federal users e.g., FCC and NTIA 53, rel. April 20, of control (see Rule			
following conditions: This lic frequencies designated in the l license nor the right granted th 1934, as amended. See 47 U.S.	ommunications Act of 1934, as am cense shall not vest in the licensee license beyond the term thereof no hereunder shall be assigned or oth S.C. § 310(d). This license is sub 934, as amended. See 47 U.S.C.	e any right to operate the sta or in any other manner than herwise transferred in viola- oject in terms to the right of	ation nor any n authorized h tion of the Col	right in the use of the erein Neither the mmunications Act of			
To view the specific geographi under the Market Tab of the lic	e operation throughout the entire g ic area and spectrum authorized by cense record in the Universal Lice c.gov/uls/index.htm?job=home an	y this license, refer to the S ensing System (ULS). To v	Spectrum and view the licens	Market-Area information se record, go to the ULS			



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LICENSEE: NEW CIN ATTN: LESLIE WILSO NEW CINGULAR WIR 208 S AKARD ST., RM DALLAS, TX 75202	Wireles RADIO S GULAR WIRELE N ELESS PCS, LLC	s Telecommu STATION A ESS PCS, LLC		Call Sign VQGD757 I AW - AW	
FCC Registration Number (FI	RN): 0003291192				
Grant Date 12-18-2006	Effectiv 08-31-		Expiration Da 12-18-2021	te	Print Date
Market Number BEA070		Channe	l Block	Su	b-Market Designator 0
		Market I Louisville,			
1st Build-out Date	2nd Build-	out Date	3rd Build-out Da	ite	4th Build-out Date
Waivers/Conditions: This authorization is conditione reasonable efforts to coordinate operating in the 1710-1755 MH Coordination Procedures in the 2006. Grant of the request to update li 1.948); if an assignment or trans- licensed under the prior name.	frequency usage v z band whose facil 1710-1755 MHz E censee name is con	vith known co-cl lities could be af 3and, Public Not nditioned on it no	nannel and adjacent cha fected by the proposed ice, FCC 06-50, WTB ot reflecting an assignm	nnel incur operations Docket No nent or trai	mbent federal users s. See, e.g., FCC and NTIA o. 02-353, rel. April 20, nsfer of control (see Rule
Conditions: Pursuant to §309(h) of the Co following conditions: This lic frequencies designated in the license nor the right granted th 1934, as amended. See 47 U. the Communications Act of 19 This license may not authorize	cense shall not vest license beyond the hereunder shall be S.C. § 310(d). Thi 934, as amended.	t in the licensee a term thereof no assigned or othe is license is subjo See 47 U.S.C. §	any right to operate the r in any other manner the rwise transferred in vic ect in terms to the right 606.	station no han author lation of t of use or o	or any right in the use of the cized herein. Neither the he Communications Act of control conterred by §706 of
To view the specific geographi under the Market Tab of the lic homepage at http://wireless.fcc search for license information.	ic area and spectru cense record in the	m authorized by Universal Licen	this license, refer to the sing System (ULS). T	e Spectrun o view the	n and Market Area information clicense record, go to the ULS



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Federal Communications Commission Wireless Telecommunications Bureau RADIO STATION AUTHORIZATION LICENSEE: NEW CINGULAR WIRELESS PCS, LLC					
ATTN: LESLIE A. WI	SON		Call Sign VQUZ670	File Number	
NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD STREET, RM 1016 DALLAS, TX 75202			Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)		
FCC Registration Number (FI	RN): 0003291192	r			
Grant Date 09-26-2014	Effective Date 08-31-2018	Expiration Dat 11-29-2021	te	Print Date	
Market Number REA004	Chann	el Block S		Sub-Market Designator 10	
Market Name Mississippi Valley					
1st Build-out Date	2nd Build-out Date	3rd Build-out Da	ite	4th Build-out Date	
Waivers/Conditions: This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.					
Conditions: Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conterred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.					
This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardconstruction.					
To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.					
				FCC 601-MB	

Call Sign: WQUZ670

File Number:

Print Date:

The license is subject to compliance with the provisions of the January 12, 2001 Agreement between Deutsche Telekom AG, VoiceStream Wireless Corporation, VoiceStream Wireless Holding Corporation and the Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI), which addresses national security, law enforcement, and public safety issues of the FBI and the DOJ regarding the authority granted by this license. Nothing in the Agreement is intended to limit any obligation imposed by Federal lawor regulation including, but not limited to, 47 U.S.C. Section 222(a) and (c)(1) and the FCC's implementing regulations. The Agreement is published at VoiceStream-DT Order, IB Docket No. 00-187, FCC 01-142, 16 FCC Rcd 9779, 9853 (2001).



EXHIBIT B

SITE DEVELOPMENT PLAN:

500' VICINITY MAP LEGAL DESCRIPTIONS FLOOD PLAIN CERTIFICATION SITE PLAN VERTICAL TOWER PROFILE



DRIVING DIRECTIONS

FROM 625 CAMPBELLSVILLE ST, LIBERTY, KY 42539:

- HEAD SOUTHEAST ON CAMPBELLSVILLE ST TOWARD COURT HOUSE SQUARE 240 FT
- TURN LEFT ONTO KY-49 N/HUSTONVILLE ST & CONTINUE TO FOLLOW KY-49 N 11.3 MI
- TURN RIGHT ONTO KY-78 (BRADFORDSVILLE RD) 1.8 MI & THE DESTINATION WILL BE ON THE LEFT

BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE LOCATION.

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

- AMERICAN CONCRETE INSTITUTE 318
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION TIA-222
- STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND SUPPORTING STRUCTURES TIA-601
- COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
- INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS IEEE-81, IEEE 1100, IEEE C62.41
- ANSI T1.311, FOR TELECOM DC POWER SYSTEMS -TELECOM. ENVIRONMENTAL PROTECTION
- 2014 KBC
- 2014 NEC

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN.

SITE NAME: **MURPHY BRANCH FN**

14397272

PROPOSED RAW LAND SITE WITH A 195' MONOPOLE WITH A 4' LIGHTNING ARRESTOR AND INSTALLATION OF AN 8'x8' SHELTER ON A 8'x14' PATIO WITH A GENERATOR

PREPARED FOR:



PREPARED BY:



TOGETHER PLANNING A BETTER TOMORROW **158 BUSINESS CENTER DRIVE BIRMINGHAM, AL 35244** TEL: 205-252-6985 FAX: 205-320-1504

KENTUCKY ONE-CALL STATE WIDE CALL: 811 CALL BEFORE YOU DIG

LATITUDE (NAD 83): LONGITUDE (NAD 83):

PARCEL ID: JURISDICTION:

APPLICANT:

ENGINEER:

POWER: FIBER:

T-1

SURVEY B-1 B-1.1 B-1.2

B-2 CIVIL: C-1

C-2C-3C-4

SCOPE OF WORK

FACILITY.

INSTALLATIONS.






DATE DESCRIPTION: 0 10/23/18 ISSUED FOR CLIENT REV. 1 10/26/18 REISSUED FOR CLIENT REV. 2 10/29/18 REISSUED FOR CLIENT REV. 3 12/06/18 REISSUED FOR CLIENT REV. 4 12/11/18 ISSUED FOR CONSTRUCTION
ESCRIPTION: SUED FOR CLIENT REV. EISSUED FOR CLIENT REV. EISSUED FOR CLIENT REV. EISSUED FOR CLIENT REV. SUED FOR CONSTRUCTION
DATE DE 0 10/23/18 IS 1 10/26/18 RE 2 10/29/18 RE 3 12/06/18 RE 3 12/06/18 RE
MURPHY BRANCH FN SITE SURVEY
DESIGNED: JDS DRAWN: BMD CHECKED: RTB JOB #: 14397272

)
	DESCRIPTION:	0 10/23/18 ISSUED FOR CLIENT REV.	1 10/26/18 REISSUED FOR CLIENT REV.	2 10/29/18 REISSUED FOR CLIENT REV.	3 12/06/18 REISSUED FOR CLIENT REV.	4 12/11/18 ISSUED FOR CONSTRUCTION
	# DATE	0 10/23/18	1 10/26/18	2 10/29/18	3 12/06/18	4 12/11/18
	MURPHY BRANCH FN			SITE SURVEY		
		RAW	NEC N: KED		JDS BMI RTE 727	D 3
MURPHY BRANCH FN COMMONWEALTH OF KENTUCKY CASEY COUNTY, KENTUCKY	E	3	_ '	1	. ´	1

PARENT TRACT (TITLE)

BEGINNING at an iron pin the center of the Rolling Fork, originally William Spraggens and William Hafleys corner, thence with their division line North 42 degrees West 250 poles to a gum and whiteoak, originally Bettie A. Hoskins corner; thence with her line North 77 degrees West 47 poles to a poplar and walnut; North 15 degrees West 11 poles to a whiteoak J.G. McAnelly's corner; thence with his line South 45 degrees West 34 poles to a stake 14 poles West of a large chestnut oak; thence South 39 degrees East 266 poles to a stone at foot of a hill; thence North 55 degrees East 6 poles and 9 links to a stone; South 35 degrees East 13–1/2 poles to a stone; thence North 60 degrees East 12 links to a stone; thence South 40 degrees East 19 poles to center of the Rolling Fork; thence up the same with its center which is reduced to a straight line would be North 78 degrees East 14 poles, North 66 degrees 16 poles, North 54 East 17 poles to an iron pin in aforeside division line of said Spraggens and Hafley; thence with same North 24 degrees East 25–1/2 poles to the beginning. FXCFPT

BEGINNING at a point in old line at Northeast end of culvert and running North 40 degrees West 12.32 poles to a stake in drain; thence with an offset South 60 degrees West 12 links to a post and stone; thence North 35 degrees West 12.08 poles to a stone in old line; thence a new line North 62 degrees East 13.30 poles to a stone in fence line at foot of hill; thence South 38 degrees East 21.60 poles to a stake at edge of Kentucky Highway #78; thence with said road South 51 degrees West 12.68 poles to the point of beginning, containing 2 acres, more or less, said description being pursuant to a survey conducted on July 22, 1971, by Lewis J. Cochran, Registered land Surveyor #1038.

100' x 100' LEASE AREA (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows;

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79'49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence N 79'04'26" W a distance of 100.00 feet to a set 5/8" rebar; Thence N 10'55'34" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 10'55'34" W a distance of 100.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 10'55'34" W a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 10,000 square feet (0.23 acres) of land more or less.

30' INGRESS/EGRESS & UTILITY EASEMENT (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows;

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79°49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence S 10'55'34" W a distance of 30.00 feet to a point; Thence N 79'04'26" W a distance of 69.92 feet to a point; Thence S 16'46'06" W a distance of 40.86 feet to a point; Thence S 20'35'04" W a distance of 78.09 feet to a point; Thence S 03'04'18" E a distance of 32.43 feet to a point; Thence with a curve turning to the left with an arc length of 61.23 feet, radius of 72.13 feet, chord bearing of S 62'43'48" E, chord length of 59.40 feet to a point: Thence N 86'38'39" E a distance of 71.81 feet to a point: Thence N 72'19'26" E a distance of 271.22 feet to a point; Thence N 83'59'36" E a distance of 251.79 feet to a point; Thence S 73'47'06" E a distance of 29.74 feet to a point: Thence S 40'22'13" E a distance of 28.56 feet to a point: Thence S 14'43'05" W a distance of 53.32 feet to a point; Thence S 39'08'22" E a distance of 40.07 feet to a point; Thence S 84'10'20" E a distance of 64.35 feet to a point; Thence S 40'07'37" E a distance of 75.34 feet more or less, to a point on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway 78 (public right-of-way); Thence along said right-of-way line, S 53'44'07" W a distance of 30.00 feet to a point; Thence leaving said right-of-way line, N 40'07'37" W a distance of 61.18 feet to a point; Thence N 84'10'20" W a distance of 64.65 feet to a point; Thence N 39'08'22" W a distance of 67.74 feet to a point; Thence N 14'43'05" E a distance of 52.91 feet to a point; Thence N 40'22'13" W a distance of 3.91 feet to a point; Thence N 73'47'06" W a distance of 14.84 feet to a point; Thence S 83'59'36" W a distance of 242.84 feet to a point; Thence S 72'19'26" W a distance of 271.93 feet to a point; Thence S 86'38'39" W a distance of 77.09 feet to a point; Thence with a curve turning to the right with an arc length of 98.79 feet, radius of 102.13 feet, chord bearing of N 60'20'33" W, chord length of 94.99 feet to a point; Thence N 03'04'18" W a distance of 47.37 feet to a point; Thence N 20'35'04" E a distance of 83.37 feet to a point; Thence N 16'53'23" E a distance of 36.80 feet to a point; Thence N 10'55'33" E a distance of 30.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 36,332.56 square feet (0.83 acres) of land more or less.

PLOTTABLE EXCEPTIONS

U.S. Title Solutions, Commitment for Title Insurance Commitment File No. 58911-KY1712-5030 Commitment for Title Insurance Commitment Reference No. FA 14397272 Date December 21, 2017 @ 8:00 a.m.

Schedule	ь,	Section	11

Exception No.	Instrument	Comment
()-6	N/A	Standard exceptions. Contains no surveying matters.
\bigcirc	Book 182, Page 607	Does affect the subject lease area and easements, is blanket in nature, and is not shown hereon.
8	Book 8, Page 761	Contains no surveying matters.

SURVEYOR'S CERTIFICATION

I certify that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Kentucky to the best of my knowledge, information, and belief.

David D. McKinney Kentucky License No. 3964

- 51	ATE OF KENTUCK	
-	DAVID D.	
	McKINNEY 3964	
	LICENSED PROFESSIONAL	I
ā.,	LAND SURVEYOR	

SURVEYOR'S NOTES

1. This is an Rawland Tower Survey, made on the ground under the supervision of a Kentucky Registered Land Surveyor. Date of field survey is May 21, 2018.

2. The following surveying instruments were used at time of field visit: Nikon NPL-352, Total Station, Reflectorless and Hiper + Legacy E RTK, GD 1HZ.

Bearings are based on Kentucky Single Zone State Plane Coordinates NAD 83 by GPS observation.
 No underground utilities, underground encroachments or building foundations were measured or located as a part of this survey, unless otherwise shown. Trees and shrubs not located, unless otherwise shown.

5. Benchmark used is a GPS Continuously Operating Reference Station, PID DK3324. Onsite benchmark is as shown hereon. Elevations shown are in feet and refer to NAVD 88.

6. This survey was conducted for the purpose of an Rawland Tower Survey only, and is not intended to delineate the regulatory jurisdiction of any federal, state, regional or local agency, board, commission or other similar entity.
7. Attention is directed to the fact that this survey may have been reduced or enlarged in size due to reproduction. This should be taken into consideration when obtaining scaled data.

8. This Survey was conducted with the benefit of an Abstract Title Search.

9. This survey meets or exceeds the Minimum Standards of Practice as required by the State of Kentucky for a Class A survey as defined by 201 KAR 18:150.

10. Field data upon which this map or plat is based has a closure precision of not less than one-foot in 15,000 feet (1':15,000') and an angular error that does not exceed 10 seconds times the square root of the number of angles turned. Field traverse was not adjusted.

11. This survey is not valid without the original signature and the original seal of a state licensed surveyor and mapper.
12. This survey does not constitute a boundary survey of the Parent Tract. Any parent tract property lines shown hereon are from supplied information and may not be field verified.

 The Lease Area, and Access and Utility Easement shown hereon was provided by Integrsite dated May 11, 2018 in direct correlation with existing monuments and physical evidence found through inspection and may not depict actual rights of occupancy.
 No water lines were located at the time of this survey.

15. Zoning information not provided at the time of this survey

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DATE DESCRIPTION:	0 10/23/18 ISSUED FOR CLIENT REV.	10/26/18 REISSUED FOR CLIENT REV.	2 10/29/18 REISSUED FOR CLIENT REV.	3 12/06/18 REISSUED FOR CLIENT REV.	12/11/18 ISSUED FOR CONSTRUCTION
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MURPHY BRANCH FN			SITE SURVEY		
DR CH	AW	KED	:	JDS BMI RTE 727	D 3

MURPHY BRANCH FN

COMMONWEALTH OF KENTUCKY

CASEY COUNTY, KENTUCKY



- APN: 032-06 Hoskins todd & tracie 50 FAIRWAY VIEW DR LIBERTY, KY 42539
- APN: 032-05 CORBAT & KENDRICK MARK-PAM - LANCE-JAN 3425 W 700 N MARKLE, IN 46770
- APN: 047-35 ELLIS & ELLIS EDGAR JOE & MARILYN JEAN 5427 W KY 78 HUSTONVILLE, KY 40437
- APN: 047-36 COX JOHN W & PAULA 1651 KY 78 BRADFORDSVILLE, KY 40009
- APN: 032-13 COX JOHN W & PAULA 1651 KY 78 BRADFORDSVILLE, KY 40009
- APN: 047-36A JAMES & ROBIN SULLIVAN 1711 KY 78 BRADSFORDSVILLE, KY 40009
- APN: 048-06 GRIFFIN BERNIECE 121 MURPHY BRANCH ROAD HUSTONVILLE, KY 40437
- APN: 048-04 COYLE GENEVA MURPHY ESTATE C/O SUZANNE COYLE 4124 SUNMEADOW LN INDIANAPOLIS, IN 46228
- APN: 048-05 COYLE & ZINN 4124 SUNMEADOW LN INDIANAPOLIS, IN 46228

200' RADIUS FROM PROPOSED 30' / VARIABLE WIDTH ACCESS & UTILITY EASEMENT

	DR CH	MURPHY BRANCH FN	# DATE	DESCRIPTION:	(
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-2	:	20	2 10/29/18	2 10/29/18 REISSUED FOR CLIENT REV.		1 B-
2	JDS BMI RTE	ABUTTERS MAP	3 12/06/18	3 12/06/18 REISSUED FOR CLIENT REV.		130
	D B		4 12/11/18	4 12/11/18 ISSUED FOR CONSTRUCTION)	E E









TOWER NOTES

- 1. THE PROPOSED TOWER, FOUNDATION, ANTENNA MOUNTS AND ANTENNAS WERE DESIGNED BY OTHERS.
- 2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
- SEE TOWER MANUFACTURER'S DRAWINGS FOR TOWER AND FOUNDATION DETAILS & SPECIFICATIONS.
- MANUFACTURER'S DRAWINGS SUPERSCEDE A&E DRAWINGS.





EXHIBIT C TOWER AND FOUNDATION DESIGN



October 10th, 2018 Kentucky Public Service Commission 211 Sower Blvd. P.O. Box 615 Frankfort, KY 40602-0615

RE: Site Name – Murphy Branch FN
Proposed Cell Tower
37° 27' 17.26" North Latitude, 84° 59' 26.11" West Longitude

Dear Commissioners:

The Project / Construction Manager for the proposed new communications facility will be Don Murdock. His contact information is (615) 207-8280 or <u>Don.Murdock@mastec.com</u>

Don has been in the industry completing civil construction and constructing towers since 2009. He has worked at Mastec Network Solutions since 2009 completing project and construction management on new site build projects.

Thank you,

Don Murdock, Sr. Project Manager – Tennessee/Kentucky Market MasTec Network Solutions (615) 207-8280

Sabre Industries Towers and Poles	
Structural Design Report 195' Monopole Site: Murphy Branch FN, KY	
Prepared for: AT&T by: Sabre Towers & Poles ™	
Job Number: 420173	
October 12, 2018	
Monopole Profile	1
Foundation Design Summary (Preliminary)	2
Pole Calculations	3-13
Foundation Calculations	14-15







No.: 420173

Date: 10/12/18 By: REB

Customer: AT&T

Site: Murphy Branch FN, KY 195' Monopole at

89 mph wind and 30 mph wind with 0.75" ice per ANSI/TIA-222-G.

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW (91.27 Cu. Yds.) (1 REQUIRED; NOT TO SCALE)

Notes:

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-G-2005. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
- 6) 4 ft of soil cover is required over the entire area of the foundation slab.
- 7) The foundation is based on the following factored loads: Moment = 9,758.09 k-ft Axial = 93.11 k Shear = 61.41 k

	Rebar Schedule for Pad and Pier
Pier	(60) #8 vertical rebar w/ hooks at bottom w/ #5 ties, two within top 5" of pier, then 12" C/C
Pad	(71) #8 horizontal rebar evenly spaced each way top and bottom (284 total)

Information contained herein is the sole property of Sabre Towers & Poles, constitutes a trade secret as defined by Iowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Towers & Poles.

		42017	73				
(USA 222-G) - Monopole Spatia	l Analysis		(c)201	5	Guym	ast Inc.
теl:(416)736-7453	Fax:(416)736-4372			١	web:ww	w.guy	mast.com
Processed under license at:							
Sabre Towers and Poles		on:	12	oct	2018	at:	8:21:13
			===	:			

195' Monopole / Murphy Branch FN, KY

* All pole diameters shown on the following pages are across corners. See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	NO. SIDE	OUTSIDE DIAM in	THICK -NESS in	♦*Pn	TANCES ♦*Mn ft-kip		OVERL LENGTH ft	AP RATIO	w/t
194.0	Α	18	17.52 30.83	0.375		510.9 1628.1				6.3
	А/В	18	30.83 31.35		2651.6		SLIP	4.50) 1.75	
141.7	в	18		0.500	3580.8	2218.4				9.1
	в/с	18	43.25 44.01	0.500 0.500	5050.9	4434.1	SLIP	6.25	5 1.73	
	с	18	44.01 55.00	0.500 0.500		4434.1 6843.6				13.5
	с/р	18	55.00 56.18	0.500	6305.5	7101.6	SLIP	7.75	5 1.68	
	D	18	56.18 68.86	0.500	6305.5 7243.8					17.7
	SSEMBLY									
SECTION NAME	BASE ELE\ f1	/ NUM				STREN	STH TH	READS IN EAR PLANE	BA E EL	SE
A B C D	141.750 92.750 45.500 0.000		0 A3 0 A3 0 A3 0 A3	25 25 25 25	$0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$	92	2.0 2.0 2.0 2.0) 45.5	50 00
	ECTIONS									
	NO.Of 1 SIDES	ENGTH_	BC *	т тс		ER: ID		ANGE.ID T TOP	FLANGE GROUP BOT	
A B C D	18 18 18 18	52.2 53.5 53.5 53.2	0 45.0 0 57.1	1 30.0 8 42.2	0.0	00 00	1 0 2 0 3 0 4 0	Õ	0 0 0 0	0 0 0 0

420173

.THICKNESS.

WEB FLANGE

IRREGULARITY

.PROJECTION. % OF ORIENT AREA

* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT	HEIGHT	WIDTH
			& dea	in	in

		&	deg	in	in	in	in	ARLA	deg
PL	1	1	0.0	32.10	0.38	0.375	0.375	0.00	0.0
PL	2	1	0.0	45.01	0.50	0.500	0.500	0.00	0.0
PL	3	1	0.0	57.18	0.50	0.500	0.500	0.00	0.0
PL	4	1	0.0	68.86	0.50	0.500	0.500	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	STRI Fu ksi	ENGTH Fy ksi	THERMAL COEFFICIENT /deg
1 2 3 4	29000.0 29000.0 29000.0 29000.0	490.0 490.0 490.0 490.0	80.0 80.0 80.0 80.0	65.0 65.0 65.0 65.0	0.00001170 0.00001170 0.00001170 0.00001170 0.00001170

* Only 3 condition(s) shown in full * Some concentrated wind loads may have been derived from full-scale wind tunnel testing

89 mph wind with no ice. Wind Azimuth: 0+

LOADS ON POLE

LOAD	ELEV	APPLYLO		LOAD	FORC		MOME	
TYPE	<i>c</i> .	RADIUS	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
с	189.000	0.00	0.0	0.0	0.0000	4.2457	0.0000	0.0000
č	189.000	0.00	0.0	Õ.Õ	13.6549	7.2000	0.0000	0.0000
с	177.000	0.00	0.0	0.0	0.0000	3.9761	0.0000	0.0000
С	177.000	0.00	0.0	0.0	10.0773	4.8000	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0000	3.7066	0.0000	0.0000
C	165.000	0.00	0.0	0.0	9.9303	4.8000	0.0000	0.0000
C C	153.000 153.000	0.00 0.00	$0.0 \\ 0.0$	0.0 0.0	0.0000 9.7746	3.4370 4.8000	0.0000	0.0000
C	133.000	0.00	0.0	0.0	9.7740	4.0000	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0523	0.0930	0.0000	0.0000
D	178.083	0.00	180.0	0.0	0.0523	0.0930	0.0000	0.0000
D	178.083	0.00	180.0	0.0	0.0629	0.1140	0.0000	0.0000
D	162.167	0.00	180.0	0.0	0.0629	0.1140	0.0000	0.0000
D	162.167	0.00	180.0	0.0	0.0730	0.1349	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0730	0.1349	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0791	0.3417	0.0000	0.0000
D D	$141.750 \\ 141.750$	$0.00 \\ 0.00$	$180.0 \\ 180.0$	0.0 0.0	0.0791 0.0826	0.3417 0.2098	$0.0000 \\ 0.0000$	0.0000
D	127.500	0.00	180.0	0.0	0.0826	0.2098	0.0000	0.0000
Ď	127.500	ŏ.ŏŏ	180.0	ŏ.ŏ	0.0903	0.2349	0.0000	0.0000
D	113.250	ŏ.ŏŏ	180.0	ŏ.ŏ	0.0903	0.2349	0.0000	0.0000
D	113.250	0.00	180.0	0.0	0.0973	0.2599	0.0000	0.0000
D	99.000	0.00	180.0	0.0	0.0973	0.2599	0.0000	0.0000
D	99.000	0.00	180.0	0.0	0.1019	0.5503	0.0000	0.0000
D	92.750	0.00	180.0	0.0	0.1019	0.5503	0.0000	0.0000
D	92.750	0.00	180.0	0.0	0.1035	0.2895	0.0000	0.0000
D	79.583	0.00	180.0	0.0	0.1035	0.2895	0.0000	0.0000

					42	20173		
D	79.583	0.00	180.0	0.0	0.1080	0.3127	0.0000	0.0000
D	66.417	0.00	180.0	0.0	0.1080	0.3127	0.0000	0.0000
D	66.417	0.00	180.0	0.0	0.1113	0.3359	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1113	0.3359	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1129	0.7030	0.0000	0.0000
D	45.500	0.00	180.0	0.0	0.1129	0.7030	0.0000	0.0000
D	45.500	0.00	180.0	0.0	0.1111	0.3655	0.0000	0.0000
D	34.125	0.00	180.0	0.0	0.1111	0.3655	0.0000	0.0000
D	34.125	0.00	180.0	0.0	0.1095	0.3856	0.0000	0.0000
D	22.750	0.00	180.0	0.0	0.1095	0.3856	0.0000	0.0000
D	22.750	0.00	180.0	0.0	0.1039	0.4057	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1050	0.4258	0.0000	0.0000
=====						=============		

89 mph wind with no ice. Wind Azimuth: 0♦

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLYLO RADIUS ft	ADAT AZI	LOAD AZI	FORC HORIZ kip	ES DOWN kip	MOME VERTICAL ft-kip	NTS TORSNAL ft-kip
	189.000 189.000 177.000 177.000 165.000 165.000 153.000 153.000	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ \end{array}$	$\begin{array}{c} 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0$	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0000 13.6549 0.0000 10.0773 0.0000 9.9303 0.0000 9.7746	3.1843 5.4000 2.9821 3.6000 2.7799 3.6000 2.5777 3.6000	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000 \end{array}$	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$
D D D D D D D D D D D D	$194.000 \\ 178.083 \\ 178.083 \\ 162.167 \\ 146.250 \\ 146.250 \\ 146.250 \\ 141.750 \\ 127.500 \\ 127.500 \\ 113.250 \\ 113.250 \\ 113.250 \\ 99.000 \\ 99.000 \\ 99.000 \\ 99.000 \\ 99.000 \\ 99.000 \\ 99.000 \\ 99.000 \\ 99.000 \\ 53.250 \\ 45.500 \\ 45.500 \\ 45.500 \\ 34.125 \\ 34.125 \\ 34.125 \\ 34.125 \\ 34.250 \\ 22.750 \\ 22.750 \\ 0.000 $	$\begin{array}{c} 0.00\\$	$\begin{array}{c} 180.0\\ 18$		0.0523 0.0629 0.0629 0.0730 0.0791 0.0791 0.0826 0.0903 0.0903 0.0973 0.0973 0.1019 0.1019 0.1035 0.1080 0.1129 0.1129 0.1111 0.1129 0.1111 0.1129 0.1035 0.1050 0.10	0.0698 0.0698 0.0855 0.1012 0.2563 0.2563 0.2563 0.1574 0.1761 0.1761 0.1761 0.1761 0.2171 0.2171 0.2171 0.2345 0.2345 0.2520 0.25273 0.25273 0.2741 0.2741 0.2741 0.2741 0.2892 0.3043 0.3193	0.0000 0.0000	0.0000 0.00

30 mph wind with 0.75 ice. Wind Azimuth: 0♦

LOADS ON POLE

LOAD ELEV APPLY..LOAD..AT LOADFORCES...... MOMENTS.....

						420173		
ΤΥΡΕ	ft	RADIUS ft	AZI	AZI	HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
c	189.000 189.000	0.00	0.0	0.0	0.0000 1.6678	4.2457 17.9218	0.0000	0.0000
c c	177.000	0.00	0.0 0.0	0.0	0.0000	3.9761	0.0000	0.0000
С	177.000	0.00	0.0	0.0	1.9861	11.9014	0.0000	0.0000
C C	165.000 165.000	$0.00 \\ 0.00$	$0.0 \\ 0.0$	0.0 0.0	0.0000 1.9484	3.7066 11.8520	0.0000 0.0000	0.0000 0.0000
c	153.000	0.00	0.0	ŏ.ŏ	0.0000	3.4370	0.0000	0.0000
С	153.000	0.00	0.0	0.0	1.9087	11.7993	0.0000	0.0000
D D	194.000 178.083	$0.00 \\ 0.00$	$180.0 \\ 180.0$	0.0 0.0	$0.0081 \\ 0.0081$	0.1399 0.1399	0.0000 0.0000	$0.0000 \\ 0.0000$
D	178.083	0.00	180.0	0.0	0.0095	0.1700	0.0000	0.0000
D	162.167	0.00	180.0	0.0	0.0095	0.1700	0.0000	0.0000
D D	162.167 146.250	$0.00 \\ 0.00$	$180.0 \\ 180.0$	0.0 0.0	0.0107 0.0107	0.1999 0.1999	$0.0000 \\ 0.0000$	0.0000
D	146.250	0.00	180.0	0.0	0.0115	0.4122	0.0000	0.0000
D D	141.750 141.750	$0.00 \\ 0.00$	180.0 180.0	$0.0 \\ 0.0$	$0.0115 \\ 0.0119$	0.4122 0.2838	$0.0000 \\ 0.0000$	$0.0000 \\ 0.0000$
D	127.500	0.00	180.0 180.0	0.0	0.0119	0.2838	0.0000	0.0000
D	127.500	0.00	180.0	0.0	0.0129	0.3163	0.0000	0.0000
D D	113.250 113.250	$0.00 \\ 0.00$	$180.0 \\ 180.0$	0.0 0.0	0.0129 0.0138	0.3163 0.3485	0.0000 0.0000	0.0000 0.0000
D	99.000	0.00	180.0	0.0	0.0138	0.3485	0.0000	0.0000
D	99.000	0.00	180.0	0.0	0.0144	0.6438	0.0000	0.0000
D D	92.750 92.750	$0.00 \\ 0.00$	180.0 180.0	0.0 0.0	0.0144 0.0145	0.6438 0.3854	$0.0000 \\ 0.0000$	0.0000
D	79.583	0.00	180.0	0.0	0.0145	0.3854	0.0000	0.0000
D	79.583 66.417	0.00	180.0	0.0	0.0151	0.4143	0.0000	0.0000
D D	66.417	$0.00 \\ 0.00$	180.0 180.0	0.0 0.0	0.0151 0.0155	0.4143 0.4426	0.0000 0.0000	0.0000 0.0000
D	53.250	0.00	180.0	0.0	0.0155	0.4426	0.0000	0.0000
D D	53.250 45.500	$0.00 \\ 0.00$	$180.0 \\ 180.0$	0.0 0.0	0.0156 0.0156	0.8132 0.8132	0.0000 0.0000	0.0000 0.0000
D	45.500	0.00	180.0	0.0	0.0154	0.4768	0.0000	0.0000
D	11.375	0.00	180.0	0.0	0.0143	0.5191	0.0000	0.0000
D D	$11.375 \\ 0.000$	$0.00 \\ 0.00$	$180.0 \\ 180.0$	0.0	$0.0143 \\ 0.0143$	0.5329	0.0000 0.0000	0.0000
-								
	222-G) - Moi					(c)20		ymast Inc.
	416)736-745		Fax	(416)7	36-4372		web:www.g	uymast.com
Proces	ssed under	license a	t:					
	Towers and					on: 12 oc		

195' Monopole / Murphy Branch FN, KY

MAST ELEV ft	DEFLECTI HORIZONTA ALONG		DOWN	ROTATIO		TWIST
194.0	20.16A	-0.06E	3.01c	12.15A	-0.03E	0.00R
178.1	16.94A	-0.05E	2.33c	11.93A	-0.03E	0.00R
162.2	13.86A	-0.04E	1.71c	11.07A	-0.03E	0.00R
146.2	11.05A	-0.04E	1.20c	9.73A	-0.03E	0.00E
141.7	10.32A	-0.03E	1.08c	9.40A	-0.03E	0.00E
127.5	8.18A	-0.03E	0.75c	8.23к	-0.03E	0.00E
113.2	6.31A	-0.02E	0.50C	7.08K	-0.02E	0.00E
99.0	4.70A	-0.02E	0.31c	5.98A	-0.02E	0.00E

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

420173

92.7	4.08A	-0.01E	0.25C	5.53A	-0.02E	0.00E
79.6	2.93A	-0.01E	0.15c	4.56A	-0.02E	0.00E
66.4	2.00A	-0.01E	0.08C	3.66A	-0.01E	0.00E
53.2	1.25D	0.00E	0.04c	2.84A	-0.01E	0.00E
45.5	0.90D	0.00E	0.03C	2.38A	-0.01E	0.00E
34.1	0.49D	0.00E	0.01c	1.72D	-0.01E	0.00E
22.7	0.21D	0.00E	0.00c	1.11D	0.00E	0.00E
11.4	0.05D	0.00E	0.00A	0.53D	0.00E	0.00E
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t ALONG kip	.WIND.DIR ACROSS kip		t.WIND.DIR ACROSS ft-kip	
194.0	-0.01 Q	0.00 Q	0.00 R	-0.02 T	-0.01 R	0.00 R
178.1	24.39 AA 24.39 Z			-176.49 C -176.50 I	0.05 R 0.06 R	
162.2	58.53 z	35.47 Q	0.00 Q	-648.34 C	0.15 R	0.24 R
146.2	58.53 AG 76.95 AG	35.47 м 46.39 м	-0.01 E	-648.36 с -1369.58 с	0.30 R	
	76.96 z 78.81 z	46.80 ⊤ 47.15 ⊤		-1369.86 C -1605.63 A		0.50 R 0.57 R
141.7	78.82 AD 82.86 AD			-1605.37 А -2362.65 к	0.83 R 4.57 E	0.57 R 0.77 R
127.5	82.86 AD	48.03 к	-0.25 E	-2362.67 к	4.56 E	0.77 R
113.2	87.36 AD 87.36 AD			-3134.35 к -3134.38 к		-1.18 E -1.18 E
99.0	92.33 AD 92.33 AG	50.71 к 50.67 о		-3920.97 к -3921.04 к		
92.7	96.35 AG 96.35 AG	51.31 O 51.42 D		-4270.97 к -4270.95 к		-1.72 E -1.73 E
79.6	101.43 AG		0.28 к	-5018.21 K	15.47 E 15.42 E	-1.96 E
66.4	101.43 AD 106.88 AD	54.14 D	-0.25 E	-5018.20 к -5776.20 к	18.73 E	-2.18 E
5 2 2	106.88 AD 112.71 AD	54.15 D 55.62 D		-5776.25 к -6545.04 А		-2.18 E -2.38 E
53.2	112.71 AD	55.64 D 56.52 D		-6545.06 A -7003.77 A		-2.38 E -2.45 E
45.5	119.01 AD	56.52 D		-7003.77 A	23.59 E	-2.45 E
	124.51 AD	57.78 D	-0.21 C	-7683.51 A	25.94 E	-2.54 E

34.1				420173		
34.L	124.51 AD	57.79 D	-0.24 c -	7683.48 A	25.93 E	-2.54 E
22.7	130.18 AD	59.04 D	-0.24 c -	8369.66 D	28.09 E	-2.60 E
22.1	130.18 AD	59.03 D	-0.23 c -	8369.65 D	28.09 E	-2.60 E
11.4	136.00 AD	60.22 D	-0.23 c -	9061.60 D	30.25 E	-2.63 E
11.4	136.00 AD	60.22 D	-0.22 c -	9061.61 D	30.26 E	-2.63 E
	142.06 AD	61.41 D	-0.22 c -	9758.09 D	32.44 E	-2.64 E
base reaction	142.06 AD	-61.41 D	0.22 с	9758.09 D	-32.44 E	2.64 E
eaction	142.06 AD	-61.41 D	0.22 C	9758.09 D	-32.44 E	2.64 E

COMPLIANCE WITH 4.8.2 & 4.5.4

$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ELEV ft	AXIAL	BENDING	- SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
0.00Q 0.00T 0.00Q 0.00T YES 6.35A 45.2 178.08								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	194.00	0.00Q	0.00T	0.00Q	0.00⊤	YES	6.35A	45.2
0.01z 0.22i 0.02q 0.22c YES 8.40A 45.2 162.17 03z 0.55c 0.03w 0.56c YES 10.46A 45.2 146.25 03AG 0.84c 0.03M 0.86c YES 12.52A 45.2 146.25 02z 0.64c 0.03M 0.86c YES 8.95A 45.2 141.75 02z 0.69A 0.03T 0.70A YES 9.38A 45.2 141.75 02zd 0.69A 0.03T 0.70A YES 9.38A 45.2 127.50 02ad 0.83k 0.02k 0.85k YES 10.50A 45.2 113.25 02ad 0.83k 0.02k 0.90k YES 11.88A 45.2 99.00 02ad 0.92k 0.02k 0.93k YES 13.26A 45.2 92.75 02ad 0.92k 0.02k 0.93k YES 13.52A 45.2 92.75	170 00	0.01AA	0.22C	0.02Q	0.22C	YES	8.40A	45.2
162.17	1/8.08	0.01z	0.221	0.02Q	0.22c	YES	8.40A	45.2
0.03AG 0.55C 0.03M 0.56C YES 10.46A 45.2 146.25 0.03AG 0.84C 0.03M 0.86C YES 12.52A 45.2 141.75 0.02Z 0.69A 0.03T 0.66C YES 8.95A 45.2 141.75 0.02Z 0.69A 0.03T 0.70A YES 9.38A 45.2 127.50 0.02AD 0.72A 0.03K 0.74A YES 10.50A 45.2 113.25 0.02AD 0.83K 0.02K 0.85K YES 11.88A 45.2 99.00 0.02AD 0.89K 0.02K 0.90K YES 11.88A 45.2 99.00 0.02AD 0.89K 0.02C 0.93K YES 13.26A 45.2 99.00 0.02AG 0.92K 0.02O 0.93K YES 13.52A 45.2 92.75 0.02AG 0.92K 0.02D 0.93K YES 13.52A 45.2 92.75 0.	162 17	0.03z	0.55c	0.03w	0.56C	YES	10.46A	45.2
146.25 0.02z 0.64c 0.03T 0.65c YES 8.95A 45.2 141.75 0.02z 0.69A 0.03T 0.70A YES 9.38A 45.2 141.75 0.02AD 0.72A 0.03K 0.74A YES 9.38A 45.2 127.50 0.02AD 0.83K 0.02K 0.85K YES 10.50A 45.2 113.25 0.02AD 0.83K 0.02K 0.90K YES 11.88A 45.2 99.00 0.02AD 0.89K 0.02K 0.90K YES 11.88A 45.2 99.00 0.02AD 0.89K 0.02K 0.93K YES 13.26A 45.2 99.00 0.02AG 0.92K 0.02O 0.93K YES 13.26A 45.2 92.75 0.02AG 0.92K 0.02O 0.93K YES 13.32A 45.2 92.75 0.02AG 0.92K 0.02D 0.93K YES 13.52A 45.2 92.75 0.02AG 0.96K 0.02C 0.93K YES 14.79A 45.2 <td>162.17</td> <td>0.03AG</td> <td>0.55c</td> <td>0.03M</td> <td>0.56C</td> <td>YES</td> <td>10.46A</td> <td>45.2</td>	162.17	0.03AG	0.55c	0.03M	0.56C	YES	10.46A	45.2
0.02z 0.64c 0.03t 0.65c YES 8.95A 45.2 141.75 0.02z 0.69A 0.03t 0.70A YES 9.38A 45.2 127.50 0.02AD 0.83k 0.02k 0.85k YES 10.50A 45.2 113.25 0.02AD 0.83k 0.02k 0.85k YES 10.50A 45.2 113.25 0.02AD 0.83k 0.02k 0.90k YES 11.88A 45.2 99.00 0.02AD 0.89k 0.02k 0.90k YES 11.88A 45.2 99.00 0.02AD 0.89k 0.02k 0.90k YES 13.26A 45.2 99.00 0.02AD 0.92k 0.02C 0.93k YES 13.26A 45.2 92.75 0.02AG 0.92k 0.02D 0.93k YES 13.52A 45.2 92.75 0.02AG 0.96k 0.02k 0.97k YES 13.52A 45.2 92.75 0.0	146 35	0.03AG	0.84c	0.03м	0.86C	YES	12.52A	45.2
141.75 0.02AD 0.72A 0.03K 0.74A YES 9.12A 45.2 127.50 0.02AD 0.83K 0.02K 0.85K YES 10.50A 45.2 113.25 0.02AD 0.83K 0.02K 0.85K YES 11.88A 45.2 113.25 0.02AD 0.89K 0.02K 0.90K YES 11.88A 45.2 99.00 0.02AD 0.89K 0.02K 0.90K YES 13.26A 45.2 99.00 0.02AD 0.92K 0.02O 0.93K YES 13.26A 45.2 99.00 0.02AG 0.92K 0.02O 0.93K YES 13.26A 45.2 99.00 0.02AG 0.92K 0.02O 0.93K YES 13.26A 45.2 92.75 0.02AG 0.92K 0.02O 0.93K YES 13.87A 45.2 92.75 0.02AG 0.96K 0.02K 0.97K YES 14.79A 45.2 92.75 0.02AG 0.96K 0.02K 0.97K YES 14.79A 45.2<	140.25	0.02z	0.64c	0.03⊤	0.65c	YES	8.95A	45.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		0.02z	0.69A	0.03T	0.70A	YES	9.38A	45.2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	141.75	0.02AD	0.72A	0.03K	0.74A	YES	9.12A	45.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	127 50	0.02AD	0.83к	0.02K	0.85K	YES	10.50A	45.2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	127.50	0.02AD	0.83K	0.02K	0.85K	YES	10.50A	45.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	113 35	0.02AD	0.89к	0.02K	0.90к	YES	11.88A	45.2
99.00 0.02AG 0.92K 0.020 0.93K YES 13.26A 45.2 92.75 0.02AG 0.92K 0.020 0.93K YES 13.87A 45.2 92.75 0.02AG 0.92K 0.02D 0.93K YES 13.52A 45.2 92.75 0.02AG 0.96K 0.02D 0.98K YES 13.52A 45.2 79.58 0.02AG 0.96K 0.02K 0.97K YES 14.79A 45.2 66.42 0.02AD 0.95K 0.02K 0.97K YES 16.07A 45.2 0.02AD 0.95K 0.02K 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 0.02AD 0.96A 0.02K 0.97A	113.23	0.02AD	0.89к	0.02K	0.90к	YES	11.88A	45.2
0.02AG 0.92K 0.020 0.93K YES 13.26A 45.2 92.75 0.02AG 0.92K 0.020 0.93K YES 13.87A 45.2 92.75 0.02AG 0.96K 0.02D 0.93K YES 13.87A 45.2 79.58 0.02AG 0.96K 0.02K 0.97K YES 14.79A 45.2 79.58 0.02AD 0.96K 0.02K 0.97K YES 14.79A 45.2 66.42 0.02AD 0.96K 0.02K 0.97K YES 16.07A 45.2 66.42 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.97A YES 17.34A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 0.02AD 0.99A 0.	00.00	0.02AD	0.92к	0.02K	0.93к	YES	13.26A	45.2
92.75 0.02AG 0.96K 0.02D 0.98K YES 13.52A 45.2 79.58 0.02AG 0.96K 0.02K 0.97K YES 14.79A 45.2 66.42 0.02AD 0.95K 0.02K 0.97K YES 16.07A 45.2 0.02AD 0.95K 0.02K 0.96K YES 16.07A 45.2 66.42 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.99A 0.02K 1.00A YES	99.00	0.02AG	0.92к	0.020	0.93K	YES	13.26A	45.2
0.02AG 0.96K 0.02D 0.98K YES 13.52A 45.2 79.58 0.02AG 0.96K 0.02K 0.97K YES 14.79A 45.2 0.02AD 0.96K 0.02K 0.97K YES 14.79A 45.2 66.42 0.02AD 0.96K 0.02K 0.97K YES 16.07A 45.2 66.42 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02O 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 17.34A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 65.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.99A 0.02K 1.00A YES 18.8	02.75	0.02AG	0.92к	0.020	0.93ĸ	YES	13.87A	45.2
79.58 0.02AD 0.96K 0.02K 0.97K YES 14.79A 45.2 66.42 0.02AD 0.95K 0.02K 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02C 0.96K YES 17.34A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 45.50 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.99A 0.02K 1.00A YES 18.84A 45.2 34.12 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2	92.75	0.02AG	0.96к	0.02D	0.98к	YES	13.52A	45.2
0.02AD 0.96K 0.02K 0.97K YES 14.79A 45.2 66.42 0.02AD 0.95K 0.02K 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02O 0.96K YES 16.07A 45.2 0.02AD 0.95K 0.02O 0.96K YES 16.07A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 65.42 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 34.12 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2	70 50	0.02AG	0.96к	0.02K	0.97к	YES	14.79A	45.2
66.42 0.02AD 0.95K 0.02O 0.96K YES 16.07A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 66.42 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 45.50 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2 34.12 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2	79.58	0.02AD	0.96к	0.02K	0.97к	YES	14.79A	45.2
0.02AD 0.95K 0.020 0.96K YES 16.07A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 45.50 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 45.4 0.02AD 0.99A 0.02K 1.00A YES 18.84A 45.2 34.12 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2	66 43	0.02AD	0.95ĸ	0.02K	0.96к	YES	16.07A	45.2
53.25 0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 45.50 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 34.12 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2	66.42	0.02AD	0.95ĸ	0.020	0.96к	YES	16.07A	45.2
0.02AD 0.96A 0.02K 0.97A YES 17.34A 45.2 45.50 0.02AD 0.96A 0.02K 0.97A YES 18.09A 45.2 45.50 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.99A 0.02K 1.00A YES 18.84A 45.2 34.12 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2	5 2 25	0.02AD	0.96A	0.02K	0.97A	YES	17.34A	45.2
45.50 0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2 34.12	53.25	0.02AD	0.96A	0.02K	0.97A	YES	17.34A	45.2
0.02AD 0.99A 0.02K 1.00A YES 17.74A 45.2 0.02AD 0.98A 0.02K 1.00A YES 18.84A 45.2 34.12	45 50	0.02AD	0.96A	0.02K	0.97A	YES	18.09A	45.2
34.12	45.50	0.02AD	0.99A	0.02K	1.00A	YES	17.74A	45.2
	74 17	0.02AD	0.98A	0.02K	1.00A	YES	18.84A	45.2
	34.12	0.02AD	0.98A	0.02K	1.00A	YES	18.84A	45.2

	0.02AD	0.98D	0.02ĸ	0.99A	420173 YES	19.95A	45.2
22.75 .	0.02AD	0.98D	0.02K	0.99A	YES	19.95A	45.2
11 27	0.02AD	0.98D	0.02K	0.99D	YES	21.05A	45.2
11.37 .	0.02AD	0.98D	0.02K	0.99D	YES	21.05A	45.2
0.00 .	0.02AD	0.97D			YES	22.15A	45.2
	OADS ONTO FO						
DOWN	SHEAR.w.r ALONG	t.WIND.DI. ACROS		NT.W.r.t. ALONG	WIND.DIR ACROSS	TORSION	
kip	kip	ki		t-kip	ft-kip	ft-kip	
142.06 AD	61.41 D		2 -97	58.09 D	32.44 E	-2.64 E	
			********		F22222223 ²¹		
(USA 222-	G) - Monopol				(c)20		mast Inc.
[e]:(416)	736-7453	F	ax:(416);	736-4372		Web:www.gu	uymast.com
rocessed	under licen	ise at:					
abre Tow	ers and Pole	2S				t 2018 at:	8:21:22
95' Mono	pole / Murph						
		ly branch i	N, N				
*****	****	****	*****	*****	****	****	****
******	******	**** Serv	ice Load	Conditio	n *******	*****	*****
*********	**********	***** Serv *******	ice Load	Conditio	n *******	*****	*****
********** ********** Onlv 1 c	*****	***** Serv ************************************	ice Load	Conditio	n ********* *********	***********	******
Only 1 consonant	************** ondition(s) centrated wi	**** Serv ************* shown in f ind loads m	ice Load full ay have b	Conditio	n ********* ************* ved from fu	***********	******
only 1 c Some con	************** ondition(s) centrated wi	shown in f nd loads m	fice Load first to the second s second second second second second second second second second second second second second second secon	Condition	n ********* ************* ved from fu	***********	******
only 1 c Some con	************** ondition(s) centrated wi ONDITION A	shown in f nd loads m	fice Load first to the second s second second second second second second second second second second second second second second secon	Condition	n ********* ************* ved from fu	***********	******
only 1 c Some con	ondition(s) centrated wi ONDITION A d with no ic	shown in f nd loads m	fice Load first to the second s second second second second second second second second second second second second second second secon	Condition	n ********* ************* ved from fu	***********	******
only 1 c Some con LOADING C	ondition(s) centrated wi ONDITION A d with no ic	shown in f nd loads m	fice Load first to the second s second second second second second second second second second second second second second second secon	Condition	n ********* ************* ved from fu	***********	******

LOAD	ELEV	APPLYLO	ADAT	LOAD	FOR(CES	MOMI	ENTS
TYPE		RADIUS	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
С	189.000	0.00	0.0	0.0	0.0000	3.5381	0.0000	0.0000
С	189.000	0.00	0.0	0.0	3.4705	6.0000	0.0000	0.0000
С	177.000	0.00	0.0	0.0	0.0000	3.3134	0.0000	0.0000
С	177.000	0.00	0.0	0.0	2.5612	4.0000	0.0000	0.0000
С	165.000	0.00	0.0	0.0	0.0000	3.0888	0.0000	0.0000
С	165.000	0.00	0.0	0.0	2.5238	4.0000	0.0000	0.0000
С	153.000	0.00	0.0	0.0	0.0000	2.8642	0.0000	0.0000
с	153.000	0.00	0.0	0.0	2.4843	4.0000	0.0000	0.0000
-	104 000				0 01 00		0 0000	
D	194.000	0.00	180.0	0.0	0.0133	0.0775	0.0000	0.0000
D	178.083	0.00	180.0	0.0	0.0133	0.0775	0.0000	0.0000
D	178.083	0.00	180.0	0.0	0.0160	0.0950	0.0000	0.0000
D	162.167	0.00	180.0	0.0	0.0160	0.0950	0.0000	0.0000
D	162.167	0.00	180.0	0.0	0.0185	0.1124	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0185	0.1124	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0201	0.2847	0.0000	0.0000
D	141.750	0.00	180.0	0.0	0.0201	0.2847	0.0000	0.0000
D	141.750	0.00	180.0	0.0	0.0210	0.1748	0.0000	0.0000
D	127.500	0.00	180.0	0.0	0.0210	0.1748	0.0000	0.0000

					42	20173		
D	127.500	0.00	180.0	0.0	0.0230	0.1957	0.0000	0.0000
D	113.250	0.00	180.0	0.0	0.0230	0.1957	0.0000	0.0000
D	113.250	0.00	180.0	0.0	0.0247	0.2166	0.0000	0.0000
D	99.000	0.00	180.0	0.0	0.0247	0.2166	0.0000	0.0000
D	99.000	0.00	180.0	0.0	0.0259	0.4586	0.0000	0.0000
D	92.750	0.00	180.0	0.0	0.0259	0.4586	0.0000	0.0000
D	92.750	0.00	180.0	0.0	0.0263	0.2413	0.0000	0.0000
D	79.583	0.00	180.0	0.0	0.0263	0.2413	0.0000	0.0000
D	79.583	0.00	180.0	0.0	0.0274	0.2606	0.0000	0.0000
D	66.417	0.00	180.0	0.0	0.0274	0.2606	0.0000	0.0000
D	66.417	0.00	180.0	0.0	0.0283	0.2799	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0283	0.2799	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0287	0.5858	0.0000	0.0000
D	45.500	0.00	180.0	0.0	0.0287	0.5858	0.0000	0.0000
D	45.500	0.00	180.0	0.0	0.0282	0.3046	0.0000	0.0000
D	34.125	0.00	180.0	0.0	0.0282	0.3046	0.0000	0.0000
D	34.125	0.00	180.0	0.0	0.0278	0.3213	0.0000	0.0000
D	22.750	0.00	180.0	0.0	0.0278	0.3213	0.0000	0.0000
D	22.750	0.00	180.0	0.0	0.0264	0.3381	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0267	0.3548	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTI HORIZONTA ALONG		DOWN	ROTATI(TILT . ALONG	ONS (deg) ACROSS	TWIST
194.0	5.28E	-0.01F	0.21E	3.13E	-0.01F	0.00F
178.1	4.42E	-0.01F	0.16E	3.07e	-0.01F	0.00F
162.2	3.60E	-0.01F	0.12E	2.84E	-0.01F	0.00F
146.2	2.86E	-0.01F	0.08E	2.50E	-0.01F	0.00F
141.7	2.66E	-0.01F	0.07E	2.41E	-0.01F	0.00F
127.5	2.10E	-0.01F	0.05E	2.11E	-0.01F	0.00F
113.2	1.62E	-0.01F	0.04E	1.81E	-0.01F	0.00F
99.0	1.20E	0.00F	0.02E	1.53E	0.00F	0.00F
92.7	1.04E	0.00F	0.02E	1.41E	0.00F	0.00F
79.6	0.75E	0.00F	0.01E	1.16E	0.00F	0.00F
66.4	0.51E	0.00F	0.01E	0.93E	0.00F	0.00F
53.2	0.32E	0.00F	0.00E	0.72E	0.00F	0.00F
45.5	0.23E	0.00F	0.00E	0.61E	0.00F	0.00F
34.1	0.13E	0.00F	0.00E	0.44E	0.00F	0.00F
22.7	0.05E	0.00F	0.00E	0.28E	0.00F	0.00F
11.4	0.01E	0.00F	0.00E	0.14E	0.00F	0.00F
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A
	• • • • • • • • • • • • • • • • • •	• • • • • • • • • • •		•••••	• • • • • • • • • • • •	• • • • • • • • •

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t ALONG kip	.WIND.DIR ACROSS kip	MOMENT.w.r. ALONG ft-kip	t.WIND.DIR ACROSS ft-kip	TORSION ft-kip
194.0	0.00 G	0.00 к	0.00 L	0.00 K	0.00 L	0.00 L
178.1	10.77 I 10.77 I	3.68 A 3.68 I	0.00 E 0.00 к	-45.63 A -45.63 E	0.00 в 0.00 і	0.00 н 0.00 н

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162.2	26.68 I	9.02 I	0.00 K	-167.23 E	0.02 н	0.00 в
162.2	26.68 K	9.02 н	0.00 I	-167.22 F	0.02 H	0.00 в
				-352.18 E		
146.2	35.34 L	11.88 L	0.04 I	-352.26 F	-0.11 L	0.01 в
	36.62 L	11.97 L	0.04 I	-412.33 н	-0.15 I	0.02 н
141.7	36.63 I	11.95 к	-0.07 F	-412.43 A	-0.13 I	0.02 н
				-605.54 к		
127.5	39.11 в	12.25 E	-0.06 F	-605.52 к	1.07 F	-0.03 F
	41.90 в	12.58 E	-0.06 F	-801.64 L	1.92 F	-0.05 F
113.2	41.90 в	12.58 E	-0.05 F	-801.64 L	1.92 F	-0.05 F
	44.98 в	12.93 E	-0.05 F	-1001.15 E	2.71 F	-0.07 F
99.0	44.98 в	12.93 L	-0.06 F	-1001.13 E	2.68 F	-0.07 F
00 7				-1089.80 E		
92.7	47.85 в	13.11 E	-0.05 F	-1089.77 E	3.08 F	-0.08 F
7 0 C	51.02 в	13.46 E	-0.05 F	-1279.17 E	3.79 F	-0.09 F
79.6	51.02 в	13.45 E	-0.06 F	-1279.17 E	3.79 F	-0.09 F
<i>cc</i> 1				-1471.18 E		
66.4	54.45 B	13.81 E	-0.06 F	-1471.20 E	4.53 F	-0.11 F
52.2				-1666.09 E		
53.2	58.14 в	14.18 E	-0.06 F	-1666.12 E	5.28 F	-0.11 F
4E E				-1782.29 E		
45.5	62.68 в	14.42 E	-0.06 F	-1782.30 E	5.74 F	-0.12 F
24 1	66.14 B	14.74 E	-0.06 F	-1954.77 E		-0.12 F
34.1	66.14 B	14.74 E	-0.06 F	-1954.78 E	6.46 F	-0.12 F
77 7				-2129.05 E		
22.7	69.80 в	15.06 E	-0.06 F	-2129.05 E	7.16 F	-0.13 F
11.4				-2304.98 E		
11.4	73.69 в	15.36 E	-0.07 F	-2304.98 E	7.89 F	-0.13 F
	77.68 в	15.66 E	-0.07 F	-2482.39 E	8.64 F	-0.13 F
base				2482.39 E		

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
194.00	0.00g	0.00L	0.00к	0.00L	YES	6.35A	45.2
170 00	0.011	0.06A	0.00A	0.06A	YES	8.40A	45.2
178.08	0.011	0.06E	0.001	0.06E	YES	8.40A	45.2
162.17	0.011	0.14E	0.011	0.15E	YES	10.46A	45.2
101.11				•••••			

	0.01.1				420173	40.40	
	0.01K	0.14F	0.01H	0.15F	YES	10.46A	45.2
146.25	0.01K	0.22E	0.01H	0.23E	YES	12.52A	45.2
	0.01L	0.16F	0.01L	0.17F	YES	8.95A	45.2
141.75	0.01L	0.18н	0.01L	0.19н	YES	9.38A	45.2
	0.011	0.19A	0.01K	0.20A	YES	9.12A	45.2
127.50	0.011	0.21K	0.01K	0.22K	YES	10.50A	45.2
127.30	0.01в	0.21K	0.01E	0.22K	YES	10.50A	45.2
112 25	0.01в	0.23L	0.01E	0.24L	YES	11.88A	45.2
113.25	0.01в	0.23L	0.01E	0.24L	YES	11.88A	45.2
	0.01B	0.23E	0.01E	0.24E	YES	13.26A	45.2
99.00	0.01в	0.23E	0.01L	0.24E	YES	13.26A	45.2
00 75	0.01в	0.23E	0.01L	0.24E	YES	13.87A	45.2
92.75	0.01B	0.25E	0.01E	0.26E	YES	13.52A	45.2
70 50	0.01B	0.25E	0.00E	0.25E	YES	14.79A	45.2
79.58	0.01в	0.25E	0.00E	0.25E	YES	14.79A	45.2
66 43	0.01B	0.24E	0.00E	0.25E	YES	16.07A	45.2
66.42	0.01в	0.24E	0.00E	0.25E	YES	16.07A	45.2
F2 25	0.01в	0.24E	0.00E	0.25E	YES	17.34A	45.2
53.25	0.01в	0.24E	0.00E	0.25E	YES	17.34A	45.2
45 50	0.01B	0.24E	0.00E	0.25E	YES	18.09A	45.2
45.50	0.01B	0.25E	0.00E	0.26E	YES	17.74A	45.2
24 12	0.01в	0.25E	0.00E	0.26E	YES	18.84A	45.2
34.12	0.01B	0.25E	0.00E	0.26E	YES	18.84A	45.2
22.75	0.01B	0.25E	0.00E	0.26E	YES	19.95A	45.2
22.75	0.01в	0.25E	0.00E	0.26E	YES	19.95A	45.2
11 77	0.01B	0.25E	0.00E	0.26E	YES	21.05A	45.2
11.37	0.01в	0.25E	0.00E	0.26E	YES	21.05A	45.2
0.00	0.01B	0.25E	0.00E	0.26E	YES	22.15A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t		MOMENT.w.r.t		TORSION
kip	ALONG kip	ACROSS kip	ALONG ft-kip	ACROSS ft-kip	ft-kip
77.68 В	15.66 E	-0.07 F	-2482.39 E	8.64 F	-0.13 F



SO#: 420173 Site Name: Murphy Branch FN, KY Date: 10/12/2018

Round Base Plate and Anchor Rods, per ANSI/TIA 222-G

Pole Data

Diameter:	67.810	in (flat to flat)
Thickness:	0.5	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	9758.09	ft-kips
Axial, Pu:	93.11	kips
Shear, Vu:	61.41	kips

Anchor Rod Data

Quantity:	26			
Diameter:	2.25	in	Anchor Rod Results	
Rod Material:	A615			
Strength (Fu):	100	ksi	Maximum Rod (Pu+ Vu/ŋ):	248.5 Kips
Yield (Fy):	75	ksi	Allowable Φ*Rnt:	260.0 Kips (per 4.9.9)
BC Diam. (in):	75	BC Override:	Anchor Rod Interaction Ratio:	95.6% Pass

Plate Data

			Daseria
Diameter (in):	80.75	Dia. Override:	
Thickness:	2.5	in	Base Plate
Yield (Fy):	50	ksi	Allowable
Eff Width/Rod:	8.28	in	Base Plate
Drain Hole:	2.625	in. diameter	
Drain Location:	31.75	in. center of pole to center	of drain hole
Center Hole:	55.5	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	42.7 ksi	
Allowable Φ*Fy:	45.0 ksi	(per AISC)
Base Plate Interaction Ratio:	94.8% Pass	

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES

195' Monopole AT&T Murphy Branch FN, KY (420173) 10/12/18 REB

Overall Loads:			
Factored Moment (ft-kips)	9758.09		
Factored Axial (kips)	93.11		
Factored Shear (kips)	61.41		
Bearing Design Strength (ksf)	3.75	Max. Net Bearing Press. (ksf)	3.28
Water Table Below Grade (ft)	999		
Width of Mat (ft)	33	Allowable Bearing Pressure (ksf)	2.50
Thickness of Mat (ft)	2	Safety Factor	2.00
Depth to Bottom of Slab (ft)	6	Ultimate Bearing Pressure (ksf)	5.00
Quantity of Bolts in Bolt Circle	26	Bearing Φs	0.75
Bolt Circle Diameter (in)	75		
Top of Concrete to Top			
of Bottom Threads (in)	60		
Diameter of Pier (ft)	9	Minimum Pier Diameter (ft)	7.58
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	7.98
Ht. of Pier Below Ground (ft)	4	Square Pier? (Y/N)	N
Quantity of Bars in Mat	71		
Bar Diameter in Mat (in)	1		
Area of Bars in Mat (in^2)	55.76		
Spacing of Bars in Mat (in)	5.56	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	60		
Bar Diameter in Pier (in)	1		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	12		
Area of Bars in Pier (in^2)	47.12	Minimum Pier A_s (in ²)	45.80
Spacing of Bars in Pier (in)	5.22	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.11		
Unit Wt. of Concrete (kcf)	0.15		
()			
Volume of Concrete (yd ³)	91.27		
Two-Way Shear Action:			
	20		
Average d (in)	20		
φv _c (ksi)	0.227	v _u (ksi)	0.197
$\phi v_{\rm c} = \phi (2 + 4/\beta_{\rm c}) {f'_{\rm c}}^{1/2}$	0.342		
$\phi v_c = \phi (\alpha_s d/b_o + 2) f'_c^{1/2}$	0.227		
$\phi v_{c} = \phi 4 f'_{c}^{-1/2}$	0.228		
Shear perimeter, b_o (in)	402.12		
β _c	1		
One-Way Shear:			
ϕV_{c} (kips)	903.2	V _u (kips)	550.2
Stability:			
Overturning Design Strength (ft-k)	13341.3	Total Applied M (ft-k)	10157.3
g = = : .g. = cg. (n n)			

	Pier Design:			
$\begin{array}{c cccc} V_{s} \left(kips \right) & 0.0 & *** V_{s} \max = 4 \ f'_{c} \ 1^{1/2} b_{w} d \left(kips \right) & 2503.8 \\ \hline Maximum Spacing (in) & 6.78 & (Only if Shear Ties are Required) \\ \hline Actual Hook Development (in) & 19.00 & Req'd Hook Development l_{dh} (in) & 12.17 \\ & & & & & & & & & & & & & & & & & & $	φV _n (kips)	1069.5	V _u (kips)	61.4
$\begin{array}{c cccc} Maximum Spacing (in) & 6.78 & (Only if Shear Ties are Required) \\ Actual Hook Development (in) & 19.00 & Req'd Hook Development I_{dh} (in) & 12.17 \\ & & & & & \\ & & & & \\ & & & & \\ \hline & & & &$	$\phi V_c = \phi 2(1 + N_u / (2000 A_g)) f'_c^{1/2} b_w d$	1069.5		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	V _s (kips)	0.0	*** $V_s max = 4 f'_c^{1/2} b_w d$ (kips)	2503.8
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Maximum Spacing (in)	6.78	(Only if Shear Ties are Required)	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Actual Hook Development (in)	19.00	Req'd Hook Development I _{dh} (in)	12.17
			*** Ref. To Spacing Requirements ACI	11.5.4.3
a (in)2.21Steel Ratio 0.00704 β_1 0.825 Maximum Steel Ratio 0.0197 Minimum Steel Ratio 0.0018 Rebar Development in Pad (in) 147.14 Required Development in Pad (in) 26.45 Maximum Soil Bearing Pressure 1	Flexure in Slab:			
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	φM _n (ft-kips)	4741.6	M _u (ft-kips)	4683.1
$\begin{array}{c c} & 0.825 \\ Maximum Steel Ratio (\rho_t) & 0.0197 \\ Minimum Steel Ratio & 0.0018 \\ Rebar Development in Pad (in) & 147.14 \\ \hline \hline \\ \hline $	a (in)	2.21		
Maximum Steel Ratio (ρ _t) 0.0197 Minimum Steel Ratio 0.0018 Rebar Development in Pad (in) 147.14 Condition 1 is OK, 0 Fails Maximum Soil Bearing Pressure 1	Steel Ratio	0.00704		
Minimum Steel Ratio 0.0018 Rebar Development in Pad (in) 147.14 Required Development in Pad (in) 26.45 Condition 1 is OK, 0 Fails Maximum Soil Bearing Pressure 1	β1	0.825		
Rebar Development in Pad (in) 147.14 Required Development in Pad (in) 26.45 Condition 1 is OK, 0 Fails Maximum Soil Bearing Pressure 1	Maximum Steel Ratio (pt)	0.0197		
Condition 1 is OK, 0 Fails Maximum Soil Bearing Pressure 1	Minimum Steel Ratio	0.0018	_	
Maximum Soil Bearing Pressure 1	Rebar Development in Pad (in)	147.14	Required Development in Pad (in)	26.45
Maximum Soil Bearing Pressure 1				
		1 is OK, 0 Fails		
Diar Area of Chaol		1		
	Pier Area of Steel	1		
Pier Shear 1		1		
Interaction Diagram Visual Check 1	Ū	1		
Two-Way Shear Action 1		1		
One-Way Shear Action 1	One-Way Shear Action	1		
Overturning 1	Overturning	1		
Flexure 1	Flexure	1		
Steel Ratio 1	Steel Ratio	1		
Length of Development in Pad 1	Length of Development in Pad	1		
Hook Development 1	Hook Development	1		

EXHIBIT D COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST

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Networking Rep

KY Public Service Commission

Master Utility Search

 Search for the utility of interest by using any single or combination of criteria.
 Utility ID

Utility

Name

 Enter Partial names to return the closest match for Utility Name and Address/City/Contact entries. Address/City/Contact Utility Type Status

Search

	Utility ID	Utility Name	Utility Type	Class	City	State
View	4111300	2600Hz, Inc. dba ZSWITCH	Cellular	С	San Francisco	CA
View	4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
View	4109300	Access Point, Inc.	Cellular	D	Cary	NC
View	4108300	Air Voice Wireless, LLC	Cellular	A	Bloomfield Hill	MI
View	4110650	Alliant Technologies of KY, L.L.C.	Cellular	D	Morristown	NJ
View	44451184	Alltel Communications, LLC	Cellular	A	Basking Ridge	NJ
View	4110850	AltaWorx, LLC	Cellular	D	Fairhope	AL
View	4107800	American Broadband and Telecommunications Company	Cellular	D	Toledo	ОН
View	4108650	AmeriMex Communications Corp.	Cellular	D	Dunedin	FL
View	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
View	4110700	Andrew David Balholm dba Norcell	Cellular	D	Clayton	WA
View	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
View	4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
View	4108750	Blue Jay Wireless, LLC	Cellular	С	Carrollton	ΤХ
View	4111050	BlueBird Communications, LLC	Cellular	С	New York	NY
View	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
View	4107600	Boomerang Wireless, LLC	Cellular	В	Hiawatha	IA

Utility Master Information -- Search

		Utility Master Information Search				
√iew	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
∕iew	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	IJ
∕iew	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
/iew	4111150	Comcast OTR1, LLC	Cellular	D	Philadelphia	PA
∕iew	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
√iew	4106400	Credo Mobile, Inc.	Cellular	В	San Francisco	CA
√iew	4108850	Cricket Wireless, LLC	Cellular	D	San Antonio	ТΧ
√iew	10640	Cumberland Cellular Partnership	Cellular	Α	Elizabethtown	KΥ
√iew	4111200	Dynalink Communications, Inc.	Cellular	С	Brooklyn	NY
View	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	КY
√iew	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
√iew	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	ок
	4110450	Excellus Communications, LLC	Cellular		Chattanooga	ΤN
√iew	4105900	Flash Wireless, LLC	Cellular	С	Concord	NC
√iew	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Oak Hill	VA
View	4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
√iew	4102200	Globalstar USA, LLC	Cellular	В	Covington	LA
View	4109600	Google North America Inc.	Cellular	A	Mountain View	CA
√iew	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
View	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	Α	San Diego	CA
√iew	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	Α	Basking Ridge	נא
∕iew	4103100	i-Wireless, LLC	Cellular	Α	Newport	KΥ
√iew	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Tulsa	ок
√iew	22215360	KDDI America, Inc.	Cellular	D	New York	NY
√iew	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	LΩ
√iew	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	КY
√iew	10681	Kentucky RSA #4 Cellular General	Cellular		Elizabethtown	КY
√iew	4109750	Konatel, Inc. dba telecom.mobi	Cellular	D	Johnstown	PA
∕iew	4111250	Liberty Mobile Wireless, LLC	Cellular	С	Sunny Isles Beach	
View	4111400	Locus Telecommunications, LLC	Cellular	С	Fort Lee	LΝ
√iew	4110900	Lunar Labs, Inc.	Cellular	D	Detroit	MI
√iew	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	IJ
liew	4108800	MetroPCS Michigan, LLC	Cellular	Δ	Bellevue	WA

Utility Master Information -- Search

View	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
/iew	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	тх
∕iew	10900	New Par dba Verizon Wireless	Cellular	A	Basking Ridge	UЛ
View	4000800	Nextel West Corporation	Cellular	D	Overland Park	ĸs
View	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	ĸs
View	4001800	OnStar, LLC	Cellular	Α	Detroit	MI
View	4110750	Onvoy Spectrum, LLC	Cellular	D	Plymouth	MN
View	4109050	Patriot Mobile LLC	Cellular	D	Southlake	ТΧ
View	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
View	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	он
View	4202100	Powertel/Memphis, Inc. dba T- Mobile	Cellular	A	Bellevue	WA
View	4107700	Puretalk Holdings, LLC	Cellular	Α	Covington	GA
View	4111350	Q LINK MOBILE LLC	Cellular	С	Dania Beach	FL
View	4106700	Q Link Wireless, LLC	Cellular	В	Dania	FL
View	4108700	Ready Wireless, LLC	Cellular	В	Hiawatha	IA
View	4110500	Republic Wireless, Inc.	Cellular	D	Raleigh	NC
View	4111100	ROK Mobile, Inc.	Cellular	С	Culver City	CA
View	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	ΓN
View		Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
View	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Freemont	NE
View	4106300	SI Wireless, LLC	Cellular	Α	Carbondale	IL
View	4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	LΩ
View	4200100	Sprint Spectrum, L.P.	Cellular	Α	Atlanta	GA
View	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
View	4109550	Stream Communications, LLC	Cellular	D	Dallas	ТΧ
View	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
View	4202200	T-Mobile Central, LLC dba T- Mobile	Cellular	A	Bellevue	WA
View	4002500	TAG Mobile, LLC	Cellular	D	Carrollton	ТΧ
View	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	South Portland	ME
View	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
View	4108900	Telrite Corporation	Cellular	D	Covington	GA
View	4108450	Tempo Telecom, LLC	Cellular	D	Atlanta	GA
View	4109950	The People's Operator USA, LLC	Cellular	D	New York	NY
View	4109000	Ting, Inc.	Cellular	A	Toronto	ON

Utility Master Information -- Search

		ound mader monator ocaron				
View	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
View	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	ΓN
View	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
View	4002000	Truphone, Inc.	Cellular	D	Durham	NC
View	4110300	UVNV, Inc. d/b/a Mint Mobile	Cellular	D	Costa Mesa	CA
View	4105700	Virgin Mobile USA, L.P.	Cellular	A	Atlanta	GA
View	4110800	Visible Service LLC	Cellular	D	Lone Tree	CO
View	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
View	4110950	Wing Tel Inc.	Cellular	D	New York	NY
View	4109900	Wireless Telecom Cooperative, Inc. dba theWirelessFreeway	Cellular	D	Louisville	КY

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EXHIBIT E FAA

Federal Airways & Airspace * * * Summary Report: New Construction Antenna Structure Airspace User: Not Identified File: Murphy Branch FN Location: Bradfordsville, KY Latitude: 37°-27'-17.26" Longitude: 84°-59'-26.11" SITE ELEVATION AMSL.....962 ft. STRUCTURE HEIGHT.....199 ft. OVERALL HEIGHT AMSL.....1161 ft. SURVEY HEIGHT AMSL.....1161 ft. NOTICE CRITERIA FAR 77.9(a): NNR (DNE 200 ft AGL) FAR 77.9(b): NNR (DNE Notice Slope) FAR 77.9(c): NNR (Not a Traverse Way) FAR 77.9: NNR (No Expected TERPS® impact with DVK) FAR 77.9: NNR (No Expected TERPS® impact 612) FAR 77.9(d): NNR (Off Airport Construction) NR = Notice Required NNR = Notice Not Required PNR = Possible Notice Required (depends upon actual IFR procedure) For new construction review Air Navigation Facilities at bottom of this report. Notice to the FAA is not required at the analyzed location and height for slope, height or Straight-In procedures. Please review the 'Air Navigation' section for notice requirements for offset IFR procedures and EMI. OBSTRUCTION STANDARDS FAR 77.17(a)(1): DNE 499 ft AGL FAR 77.17(a)(2): DNE - Airport Surface FAR 77.19(a): DNE - Horizontal Surface FAR 77.19(b): DNE - Conical Surface FAR 77.19(c):DNE - Conical SurfaceFAR 77.19(d):DNE - Approach SurfaceFAR 77.19(e):DNE - Approach Transitional SurfaceFAR 77.19(e):DNE - Abeam Transitional Surface VFR TRAFFIC PATTERN AIRSPACE FOR: DVK: STUART POWELL FIELD Type: A RD: 77124.53 RE: 1013.6 FAR 77.17(a)(1): DNE

FAR 77.17(a)(2): DNE - Greater Than 5.99 NM. VFR Horizontal Surface: DNE VFR Conical Surface: DNE VFR Primary Surface: DNE VFR Approach Surface: DNE VFR Transitional Surface: DNE VFR TRAFFIC PATTERN AIRSPACE FOR: 612: LEBANON SPRINGFIELD-GEORGE H Type: A RD: 95444.86 RE: 866 FAR 77.17(a)(1): DNE FAR 77.17(a)(2): DNE - Greater Than 5.99 NM. VFR Horizontal Surface: DNE VFR Conical Surface: DNE VFR Primary Surface: DNE VFR Approach Surface: DNE VFR Transitional Surface: DNE TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4) FAR 77.17(a)(3) Departure Surface Criteria (40:1) DNE Departure Surface MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA) FAR 77.17(a)(4): DNE - No Airway Found PRIVATE LANDING FACILITIES No Private Landing Facilites Are Within 6 NM AIR NAVIGATION ELECTRONIC FACILITIES FAC ST DIST DELTA GRND APCH TYPE AT FREQ VECTOR (ft) ELEVA ST LOCATION IDNT ANGLE BEAR ____ ____ _____ _____ TYC NDB D 27 255.23 75985 +101 KY TAYLOR COUNTY .08 DVK NDB I 31 55.95 79243 +161 KY GOODALL .12 EWO VOR/DME I 110.8 288.18 208886 +201 KY NEW HOPE .06 LEX RADAR ON 2750. 27.86 237299 +101 KY BLUE GRASS .02

CFR Title 47, §1.30000-§1.30004 AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station. Movement Method Proof as specified in §73.151(c) is not required. Please review 'AM Station Report' for details.

Nearest AM Station: WKDO @ 17734 meters.

Airspace® Summary Version 18.5.504

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06-28-2018 15:29:40 EXHIBIT F KENTUCKY AIRPORT ZONING COMMISSION

Cody Knox

From:	Houlihan, John F (KYTC) <john.houlihan@ky.gov></john.houlihan@ky.gov>
Sent:	Friday, July 06, 2018 8:23 AM
То:	Cody Knox
Subject:	RE: AT&T KAZC permit determination - Murphy Branch FN

No permit is required from the KAZC. Thank you

Kentucky Airport Zoning Commission (KAZC) John Houlihan, Administrator Department of Highways, District Six 421 Buttermilk Pike Covington, KY 41017 Office 859-341-2700, Desk 859-341-2707 Ext. 292, Cell 502-330-3955

KAZC webpage: <u>https://transportation.ky.gov/Aviation/Pages/airportzoning.aspx</u>

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From: Cody Knox <<u>cknox@integrisite.net</u>> Sent: Thursday, July 05, 2018 5:44 PM To: Houlihan, John F (KYTC) <<u>John.Houlihan@ky.gov</u>> Cc: Marie Glasgow <<u>Marie.Glasgow@mastec.com</u>>; Matt Hill <<u>Joseph.Hill2@mastec.com</u>>; Roy Johnson <<u>rjohnson@johnsonpm.com</u>>; Sam Astrahan <<u>Sam.Astrahan@mastec.com</u>>; Steven Milana <<u>Steven.Milana@mastec.com</u>>; Ed Coachman <<u>edward.coachman@mastec.com</u>>; Wayne Barnett <<u>wbarnett@integrisite.net</u>> Subject: AT&T KAZC permit determination - Murphy Branch FN

John,

AT&T is proposing to construct a new tower per the specifications below. Can you confirm if a KAZC permit is required?

Project Name: Murphy Branch FN Latitude: 37 27 17.26 N Longitude: 84 59 26.11 W GE: 962' Tower height including lightning arrestor: 199' Overall height: 1,161'

Thank you,

Cody Knox Integrisite, Inc. 214 Expo Circle, Suite 4 West Monroe, LA 71292
318-355-6599

EXHIBIT G GEOTECHNICAL REPORT



ENVIRONMENTAL CORPORATION OF AMERICA

ENVIRONMENTAL | GEOTECHNICAL | WETLANDS | ECOLOGY | CULTURAL RESOURCES

Preliminary Geotechnical Investigation

Murphy Branch FN

Off Kentucky Highway 78 Bradfordsville, Casey County, Kentucky

ECA Project No. U3008



SUBMITTED TO:

SMW Engineering Group, Inc. 158 Business Center Drive Birmingham, AL 35244

PREPARED BY:

Environmental Corporation of America 1375 Union Hill Industrial Court, Suite A Alpharetta, GA 30004



ENVIRONMENTAL CORPORATION OF AMERICA

ENVIRONMENTAL | GEOTECHNICAL | WETLANDS | ECOLOGY | CULTURAL RESOURCES

September 24, 2018

SMW Engineering Group, Inc. 158 Business Center Drive Birmingham, AL 35244

Attention: Mr. Jeremy Sharit

Subject: Report of Preliminary Geotechnical Investigation Murphy Branch FN Off Kentucky Highway 78 Bradfordsville, Casey County, Kentucky ECA Project No. U3008

Dear Mr. Sharit:

Environmental Corporation of America (ECA) is pleased to submit this report of our Preliminary Geotechnical Investigation for the proposed project. Our services were provided as authorized by an email approval dated September 17, 2018.

This report presents a review of the information provided to us, a description of the site and subsurface conditions, and our recommendations. The appendices contain a USGS Topographic Map, Project Site Survey, Local Geology, USDA Web Soil Survey map and Soil Descriptions for mapped soil types.

Purpose and Scope of Work

The purpose of this effort was to evaluate the likely site conditions so that preliminary foundation design plans can be prepared. No soil borings or testing has been conducted for this report. A final Geotechnical Investigation including borings should be conducted for the proposed tower.

Project Information

We were provided with a project survey prepared by SMW Engineering Group, Inc., and dated June 5, 2018. The proposed tower would be located off Kentucky Highway 78, Bradfordsville, Casey County, Kentucky. In general, the proposed tower compound would be located within a relatively flat terrain with surface elevations ranging between 955 to 963 feet Above Mean Sea Level (AMSL) within the proposed 10,000 (100-foot by 100- foot) square foot lease area. The

Mr. Jeremy Sharit Page 2

ground surface within the proposed lease area is mostly covered with low grass. We understand that plans include constructing a 199-foot tall monopole tower, approximately as shown on Figure 1 in Appendix A.

Estimated Site and Subsurface Conditions

The topography leading up to the proposed compound is mostly relatively flat. The elevation at the proposed tower location is about 962 feet AMSL. The soil survey shows two potential soil types near the proposed tower location. The soil survey described the existing site soils as mainly silt loam and silty clay loam. The descriptions of the soil types are attached in Appendix B. The geology of the site is best described by the Geological Map of State of Kentucky, Kentucky Geological Survey, and the U.S. Geological Survey, as being within Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided, with the primary soil type of Limestone and Shale. The local geology is also shown in Appendix B. In summary, the general soil profile descriptions include limestone or shale occurring at relatively shallow depth.

Based on the information provided by the USDA Web Soil Survey depth of groundwater table will likely be encountered below 80 inches.

Recommendations

Based on the anticipated soil conditions and relatively shallow residual soils, the tower will likely be supported on a shallow mat (pad and pier) foundation system. Assuming existing residual soils at the tower foundation bearing level, a nominal bearing pressure of about 3,000 pounds per square foot (psf) is likely appropriate.

We appreciate the opportunity to be of service. Please call us with any questions at (770) 667-2040.

Sincerely, Environmental Corporation of America

Héctor A. Acosta, M.S.C.E., P.E. Principal Geotechnical Engineer State of Kentucky Reg. No. 31144



Athulya Balakrishnan Project Engineer

Appendix-AFigure 1 – Topographic Map and Site SurveyAppendix-BLocal Geology, Soil Survey, and Soil Description

APPENDIX A

Topographic Map and Site Survey

ENVIRONMENTAL CORPORATION OF AMERICA

Atlanta, GA | Asheville, NC | Chicago, IL | Nashville, TN | West Palm Beach, FL | www.eca-usa.com | (770) 667-2040





PARENT TRACT (TITLE)

BEGINNING at an iron pin the center of the Rolling Fork, originally William Spraggens and William Hafleys corner, thence with their division line North 42 degrees West 250 poles to a gum and whiteoak, originally Bettie A. Hoskins corner; thence with her line North 77 degrees West 47 poles to a poplar and walnut; North 15 degrees West 11 poles to a whiteoak J.G. McAnelly's corner; thence with his line South 45 degrees West 34 poles to a stake 14 poles West of a large chestnut oak; thence South 39 degrees East 266 poles to a stone at foot of a hill; thence North 55 degrees East 6 poles and 9 links to a stone; South 35 degrees East 13-1/2 poles to a stone; thence North 60 degrees East 12 links to a stone; thence South 40 degrees East 19 poles to center of the Rolling Fork; thence up the same with its center which is reduced to a straight line would be North 78 degrees East 14 poles. North 66 degrees 16 poles. North 54 East 17 poles to an iron pin in aforeside division line of said Spraggens and Hafley; thence with same North 24 degrees East 25-1/2 poles to the beginning. FXCEPT

BEGINNING at a point in old line at Northeast end of culvert and running North 40 degrees West 12.32 poles to a stake in drain; thence with an offset South 60 degrees West 12 links to a post and stone; thence North 35 degrees West 12.08 poles to a stone in old line; thence a new line North 62 degrees East 13.30 poles to a stone in fence line at foot of hill; thence South 38 degrees East 21.60 poles to a stake at edge of Kentucky Highway #78; thence with said road South 51 degrees West 12.68 poles to the point of beginning, containing 2 acres, more or less, said description being pursuant to a survey conducted on July 22, 1971, by Lewis J. Cochran, Registered land Surveyor #1038.

100' x 100' LEASE AREA (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows:

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79'49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence N 79'04'26" W a distance of 100.00 feet to a set 5/8" rebar; Thence N 10'55'34" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 10'55'34" W a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 10,000 square feet (0.23 acres) of land more or less.

30' INGRESS/EGRESS & UTILITY EASEMENT (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows:

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79'49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence S 10'55'34" W a distance of 30.00 feet to a point; Thence N 79'04'26" W a distance of 69.92 feet to a point; Thence S 16'46'06" W a distance of 40.86 feet to a point; Thence S 20'35'04" W a distance of 78.09 feet to a point; Thence S 03'04'18" E a distance of 32.43 feet to a point; Thence with a curve turning to the left with an arc length of 61.23 feet, radius of 72.13 feet, chord bearing of S 62'43'48" E, chard length of 59.40 feet to a point; Thence N 86'38'39" E a distance of 71.81 feet to a point; Thence N 72'19'26" E a distance of 271.22 feet to a point; Thence N 83'59'36" E a distance of 251.79 feet to a point; Thence S 73'47'06" E a distance of 29.74 feet to a point; Thence S 40°22'13" E a distance of 28.56 feet to a point; Thence S 14°43'05" W a distance of 53.32 feet to a point; Thence S 39'08'22" E a distance of 40.07 feet to a point; Thence S 84'10'20" E a distance of 64.35 feet to a point; Thence S 40'07'37" E a distance of 75.34 feet more or less, to a point on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway 78 (public right-of-way); Thence along said right-of-way line, S 53*44'07" W a distance of 30.00 feet to a point; Thence leaving said right-of-way line, N 40'07'37" W a distance of 61.18 feet to a point; Thence N 84'10'20" W a distance of 64.65 feet to a point; Thence N 39'06'22" W a distance of 67.74 feet to a point; Thence N 14'43'05" E a distance of 52.91 feet to a point; Thence N 40'22'13" W a distance of 3.91 feet to a point; Thence N 73'47'06" W a distance of 14.84 feet to a point; Thence S 83'59'36" W a distance of 242.84 feet to a point; Thence S 72'19'26" W a distance of 271.93 feet to a point; Thence S 86'38'39" W a distance of 77.09 feet to a point; Thence with a curve turning to the right with an arc length of 98.79 feet, radius of 102.13 feet, chard bearing of N 60'20'33" W, chard length of 94.99 feet to a point; Thence N 03'04'18" W a distance of 47.37 feet to a point; Thence N 20'35'04" E a distance of 83.37 feet to a point; Thence N 16'53'23" E a distance of 36.80 feet to a point; Thence N 10'55'33" E a distance of 30.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 36,332.56 square feet (0.83 acres) of land more or less.

PLOTTABLE EXCEPTIONS U.S. Title Solutions. Commitment for Title Insurance Commitment File No. 58911-KY1712-5030

Commitment for Title Insurance Commitment Reference No. FA 14397272 Date December 21, 2017 @ 8:00 a.m.

Schedule	B.	Section II	

Exception No.	Instrument	Comment
()-6	N/A	Standard exceptions. Contains no surveying matters.
\bigcirc	Book 182, Page 607	Does affect the subject lease area and easements, is blanket in nature, and is not shown hereon.
8	Book 8, Page 761	Contains no surveying matters.

SURVEYOR'S CERTIFICATION

I certify that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Kentucky to the best of my knowledge, information, and belief.

David D. McKini Kentucky License No. 3964

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	LAND SURVEYOR
	p/13/18

survey is May 21, 2018.

RTK. GD 1HZ.

otherwise shown. Trees and shrubs not located, unless atherwise shown.

adjusted.

supplied information and may not be field verified.

15. Zoning information not provided at the time of this survey



APPENDIX B

Local Geology, Soil Survey, and Soil Descriptions

ENVIRONMENTAL CORPORATION OF AMERICA

Atlanta, GA | Asheville, NC | Chicago, IL | Nashville, TN | West Palm Beach, FL | www.eca-usa.com | (770) 667-2040

(https://www.usgs.gov/)

Mineral Resources (https://minerals.usgs.gov/) / Online Spatial Data (/) / Geology (/geology/) / by state (/geology/state/) / Kentucky (/geology/state/state.php?state=KY)

Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided

XML (/geology/state/xml/KYOdc;0) JSON (/geology/state/json/KYOdc;0)

Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided; in Boyle, Casey, and Marion Counties

State	Kentucky (/geology/state/state.php?state=KY)
Name	Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided
Geologic age	Ordovician
Lithologic constituents	 Major Sedimentary > Carbonate > Limestone lithologies and lithology percentages estimated from stratigraphic column on paper source map; collectively these units are about 55% limestone, 30% dolostone (dolomite) (some of it nodular), and 15% interbedded shale Minor Sedimentary > Clastic > Mudstone > Shale lithologies and lithology percentages estimated from stratigraphic column on paper source map; collectively these units are about 55% limestone, 30% dolostone (dolomite) (some of it nodular), and 15% interbedded shale Sedimentary > Carbonate > Dolostone lithologies and lithology percentages estimated from stratigraphic column on paper source map; collectively these units are about 55% limestone, 30% dolostone (dolomite) (some of it nodular), and 15% interbedded shale Sedimentary > Carbonate > Dolostone lithologies and lithology percentages estimated from stratigraphic column on paper source map; collectively these units are about 55% limestone, 30% dolostone (dolomite) (some of it nodular), and 15% interbedded shale
Comments	collectively, in west-central Kentucky, these units range from 30-137 m thick

References Noger, M.C., compiler, 1988, Geologic map of Kentucky: sesquicenntennial edition of the Kentucky Geological Survey: U.S. Geological Survey and the Kentucky Geological Survey, scale 1:500,000.

NGMDB	NGMDB product page for 16355
product	(https://ngmdb.usgs.gov/Prodesc/proddesc_16355.htm)
Counties	Boyle (/geology/state/fips-unit.php?code=f21021) - Casey (/geology/state/fips-unit.php?code=f21045) - Marion (/geology/state/fips- unit.php?code=f21155) - Taylor (/geology/state/fips-unit.php? code=f21217)

DOI Privacy Policy (https://www.doi.gov/privacy) | Legal (https://www.usgs.gov/laws/policies_notices.html) | Accessibility (https://www2.usgs.gov/laws/accessibility.html) | Site Map (https://www.usgs.gov/sitemap.html) | Contact USGS (https://answers.usgs.gov/)

U.S. Department of the Interior (https://www.doi.gov/) | DOI Inspector General (https://www.doioig.gov/) | White House (https://www.whitehouse.gov/) | E-gov (https://www.whitehouse.gov/omb/management/egov/) | No Fear Act (https://www.doi.gov/pmb/eeo/no-fear-act) | FOIA (https://www2.usgs.gov/foia)



Natural Resources Conservation Service

USDA

Web Soil Survey National Cooperative Soil Survey 9/20/2018 Page 1 of 3



ISDA

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CpD	Colyer-Trappist complex, 12 to 20 percent slopes	4.9	9.3%
FfE2	Faywood-Fairmount-Rock outcrop complex, 20 to 30 percent slopes, eroded	37.1	71.3%
No	Nolin silt loam, 0 to 2 percent slopes, occasionally flooded	10.1	19.3%
Totals for Area of Interest		52.1	100.0%

LOCATION COLYER

KY+IN OH

Established Series Rev. JMR 08/2001

COLYER SERIES

The Colyer series consists of shallow, well drained, slowly permeable soils formed in clayey residuum of weathered, black, highly fissile, bituminous shale. These sloping to very steep soils are on uplands. Slopes range from 6 to 60 percent. The mean annual temperature is 57 degrees F., and the mean annual precipitation is about 46 inches.

TAXONOMIC CLASS: Clayey-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

TYPICAL PEDON: Colyer shaly silty clay loam on a 25 percent convex south facing hillside, forested. (Colors are for moist soil unless otherwise stated.)

Oi--3 to 1 inches; loose, undecomposed, leaf and twig litter from mixed hardwood pine forest.

Oe--1 to 0 inch; black (10YR 2/1) decomposed litter.

A--0 to 1 inch; dark grayish brown (10YR 4/2) shaly silty clay loam; moderate fine granular structure; friable; many roots; 15 percent shale fragments, reddish brown on fresh broken surface; very strongly acid, abrupt wavy boundary. (1 to 4 inches thick)

AB--1 to 4 inches; brown (7.5YR 5/4) shaly silty clay loam; moderate fine granular structure; friable, many roots; 20 percent black shale fragments; extremely acid; gradual wavy boundary. (2 to 6 inches thick)

Bw--4 to 9 inches; brown (7.5YR 5/4) shaly silty clay; weak medium subangular blocky structure; firm; sticky and slightly plastic; common roots; few shiny pressure faces on peds; 45 percent black shale fragments; extremely acid; clear smooth boundary. (5 to 15 inches thick)

C--9 to 14 inches; mottled brown (7.5YR 4/4) and yellowish red (5YR 4/6) very shaly silty clay; massive and relict shale structure; firm; 80 percent black shale fragments, dark reddish on broken surface; extremely acid; clear wavy boundary. (0 to 10 inches thick)

R--14 inches; black (5YR 2/1) highly fissile hard black shale.

TYPE LOCATION: Clark County, Kentucky; about 10 miles east-southeast of Winchester, 1970 feet north of Indian Fields P. O., then east 1640 feet to road junction, then 2625 feet on left fork, then 75 feet to right of road.

RANGE IN CHARACTERISTICS: Depth to bedrock and solum thickness range from 8 to 20 inches. Reaction ranges from extremely acid through medium acid in the A horizon and from very strongly acid to extremely acid in the B and C horizon.

The A horizon has hue of 10YR or 2.5YR, value of 2 to 4, and chroma of 1 to 4. Texture is silt loam or silty clay loam and their channery and very channery modifiers. Rock fragments range from 5 to 40 percent.

The AB horizons has hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 2 to 6. Texture is silt loam or silty clay loam and their channery, very channery and extremely channery modifiers. Shale fragments range from 10 to 65 percent.

The Bw horizon has hue of 10YR, 7.5YR, or 5YR, value of 4 or 5, and chroma of 4 or 6, and some pedons have mottles in shades of red, brown, and yellow. Texture of the fine-earth is silty clay loam, silty clay, or clay and their very channery and extremely channery modifiers. Shale fragments range from 35 to 65 percent.

The C horizon has colors like those of the Bw horizon and some pedons also have mottles in shades of gray or olive. Texture of the fine-earth is silty clay, clay, or silty clay loam and their very channery and extremely modifiers. Shale fragments range from 35 to 90 percent.

The R horizon is hard fissile shale.

COMPETING SERIES: This is the only member of this family. In closely related families are the <u>Gilpin, Litz, Rohan</u>, and <u>Weikert</u> series. Gilpin soils have argillic horizons with less than 35 percent clay, less than 35 percent coarse fragments, and are 20 to 40 inches to bedrock. Litz soils have shaly or very shaly silt loam B horizons and bedrock exceeds a depth of 20 inches and averages about 35 inches. Rohan soils have less than 35 percent coarse fragments. Weikert soils have shaly, very shaly, channery, or very channery silt loam B horizons.

GEOGRAPHIC SETTING: Sloping to very steep upland areas with slopes of about 6 to 60 percent. The regolith is clayey residuum from black, highly fissile, bituminous shales. Mean annual temperature ranges from 47 degrees to 57 degrees F., and the mean annual precipitation ranges from 40 to 49 inches.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the competing <u>Rockcastle</u> series and the <u>Muse</u>, <u>Shrouts</u>, <u>Tilsit</u>, and <u>Trappist</u> series. Muse, Shrouts, and Trappist soils have argillic horizons, and are more than 20 inches to bedrock. Tilsit soils have fragipans.

DRAINAGE AND PERMEABILITY: Well drained, runoff is rapid. Permeability is slow.

USE AND VEGETATION: Most areas are in forest or pasture. Many cleared areas have become idle and are reverting to forest. The native forests have oak, red and sugar maple, hickory, ash, gum, dogwood, beech, and Virginia and shortleaf pine as the dominant species.

DISTRIBUTION AND EXTENT: Colyer soils are extensive in the Knobs and Eastern Pennyroyal regions of Kentucky, and in southern Indiana, and southern Ohio. Extent is large.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Morgantown, West Virginia

SERIES ESTABLISHED: Centre County, Pennsylvania, 1908.

REMARKS: Diagnostic horizon and features in this pedon are:

Ochric epipedon, 0 to 4 inches, (A, AB) Cambric horizon, 4 to 9 inches, (BW) Lithic contact at 14 inches.

National Cooperative Soil Survey U.S.A.

Established Series Rev. JMR:JDM 11/2005

TRAPPIST SERIES

The Trappist series consists of moderately deep, well drained soils that formed in residuum weathered from acid shale on ridgetops, side slopes and benches. Slopes range from 2 to 60 percent.

TAXONOMIC CLASS: Fine, mixed, semiactive, mesic Typic Hapludults

TYPICAL PEDON: Trappist silt loam--in woodland on a complex 40 percent slope. (Colors are for moist soil.)

Oi--1.5 to 0 inch; hardwood leaves and needles.

A--0 to 2 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; very friable; many fine roots; 5 percent shale channers; very strongly acid; abrupt smooth boundary. (1 to 3 inches thick)

E--2 to 6 inches; brown (10YR 5/3) silt loam; weak fine granular structure; very friable; many fine roots; 5 percent shale channers; very strongly acid; abrupt smooth boundary. (0 to 7 inches thick)

BE--6 to 9 inches; strong brown (7.5YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; common fine roots; 5 percent shale channers; very strongly acid; gradual smooth boundary. (0 to 5 inches thick)

Bt1--9 to 21 inches; strong brown (7.5YR 5/6) silty clay; moderate medium subangular blocky structure; firm, sticky and slightly plastic; common fine roots; common faint clay films on faces of peds; 10 percent shale channers; very strongly acid; gradual wavy boundary. (5 to 20 inches thick)

Bt2--21 to 28 inches; strong brown (7.5YR 5/6) silty clay; common medium distinct yellowish red (5YR 4/6) and light yellowish brown (10YR 6/4) lithochromic mottles; moderate medium angular blocky structure; very firm, sticky and plastic; common faint clay films on faces of peds; 10 percent shale channers; very strongly acid; gradual wavy boundary. (5 to 15 inches thick)

C--28 to 35 inches; variegated yellowish red (5YR 4/6), yellowish brown (10YR 5/6) and light brownish gray (10YR 6/2) very channery clay; relic platy structure; very firm, sticky and plastic; 60 percent shale channers; very strongly acid; clear wavy boundary. (0 to 20 inches thick)

R--35 inches; hard black fissile shale.

TYPE LOCATION: Rowan County, Kentucky; on a south facing side slope about 80 feet east of Kentucky Highway 801 and 900 feet north of the intersection of Kentucky Highways 801 and 1722; 1 mile north of the community of Farmers; 38 degrees, 09 minutes, 17 seconds N. latitude and 83 degrees, 33 minutes, 10 seconds W. Longitude; USGS Farmers Quadrangle.

RANGE IN CHARACTERISTICS: Thickness of the solum and depth to hard shale or siltstone bedrock ranges from 20 to 40 inches. Rock fragments, mostly channers of shale or siltstone, range from 0 to 35 percent in the solum and from 25 to 75 in the C horizon. Coverage of surface stones ranges from 0 to 10 percent. Reaction ranges from strongly to extremely acid, except where limed.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4 and chroma of 1 to 4. The Ap horizon, where present, has hue of 10YR or 7.5YR, value of 4 or 5 and chroma of 2 to 4. Fine-earth texture is silt loam, silty clay loam or loam.

The E horizon has hue of 10YR, 7.5YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Fine-earth texture is similar to the A horizon.

The Bt horizon has hue of 10YR, 7.5YR or 5YR, value of 4 to 6 and chroma of 4 to 8. Fine-earth texture is silty clay loam, silty clay or clay. Some pedons are variegated with lithochromic mottles in shades of red or brown.

Some pedons have BC horizons with colors and textures similar to the Bt horizon and lithochromic mottles that include shades of gray.

The C horizon has hue of 10YR, 7.5YR or 5YR, value of 4 to 6 and chroma of 4 to 8. Lithochromic mottles in shades of red, brown or gray are common. Fine-earth texture is silty clay, clay, clay loam or silty clay loam.

Some pedons have a thin Cr horizon 3 to 6 inches thick.

The R horizon is hard fissile shale or siltstone.

COMPETING SERIES: These are <u>Boden</u>, <u>Braddock</u>, <u>Buffstat</u>, <u>Christian</u>, <u>Clifton</u>, <u>Clover</u>, <u>Danripple</u>, <u>Flagspring</u>, <u>Goresville</u>, <u>Groseclose</u>, <u>Howell</u>, <u>Muse</u>, <u>Rapidan</u>, <u>Sequoia</u>, <u>Totier</u> and <u>Unison</u> series; the tentative <u>Casville</u>, <u>Mount Rush</u>, <u>Spears Mountain</u> and <u>Yellowbottom</u> series; and the inactive <u>Warminster</u> series. All of these soils are more than 40 inches to hard bedrock with the exception of the Mount Rush, Sequoia and Spears Mountain series. The Mount Rush and Spears Mountain series weathered from metamorphic or igneous rock. The Sequoia series is a close competitor, but has paralithic contact above 40 inches with soft shale or siltstone and is not commonly associated with black shale.

GEOGRAPHIC SETTING: Uplands including ridgetops, side slopes and benches. The soil developed mostly in residuum with some influence from colluvial creep on steeper slopes. Annual temperature ranges from about 53 to 57 degrees F. with a mean of 54 degrees. Annual precipitation ranges from 40 to 48 inches with a mean of 47 inches.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the <u>Berea</u>, <u>Colyer</u>, <u>Gilpin</u>, <u>Greenbriar</u>, <u>Jessietown</u>, <u>Latham</u>, <u>Muse</u>, <u>Rohan</u>, <u>Shelocta</u> and <u>Tilsit</u> series. Berea, Greenbriar and Jessietown soils are fine-silty. Colyer soils are clayey-skeletal and Rohan soils are loamy-skeletal. Both of these soils are less than 20 inches deep to bedrock. Gilpin and Shelocta soils are fine-loamy. Latham soils are moderately well drained and have a paralithic contact. Tilsit soils have a fragipan. Greenbriar, Muse, Shelocta and Tilsit soils are all more than 40 inches deep to bedrock.

DRAINAGE AND PERMEABILITY: Well drained with slow permeability. Runoff is high on slopes less than 5 percent and very high on slopes greater than 5 percent.

USE AND VEGETATION: Principally hay or pasture, corn, tobacco, small grains and truck or fruit farms. Steeper areas are reverting to native forest of upland oaks, hickory, pine, yellow-poplar, blackgum, dogwood and persimmon.

DISTRIBUTION AND EXTENT: The Knobs region of Kentucky and similar areas in Ohio and Indiana. Extent is large.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Morgantown, West Virginia

SERIES ESTABLISHED: Scott County, Indiana; 1959.

REMARKS: Diagnostic horizons in the pedon are: Ochric epipedon: 0 to 2 inches, A Argillic horizon: 9 to 28 inches, Bt1, Bt2 Lithic contact at 35 inches.

National Cooperative Soil Survey U.S.A.

Casey County, Kentucky

CpD—Colyer-Trappist complex, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: If4y Elevation: 730 to 1,190 feet Mean annual precipitation: 42 to 61 inches Mean annual air temperature: 46 to 68 degrees F Frost-free period: 169 to 210 days Farmland classification: Not prime farmland

Map Unit Composition

Colyer and similar soils: 60 percent Trappist and similar soils: 35 percent Minor components: 5 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Colyer

Setting

Landform: Hills Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Convex Across-slope shape: Concave Parent material: Clayey residuum weathered from limestone

Typical profile

H1 - 0 to 3 inches: silt loam

- H2 3 to 10 inches: very channery silty clay
- H3 10 to 14 inches: extremely channery silty clay
- R 14 to 24 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 20 percent Depth to restrictive feature: 8 to 20 inches to lithic bedrock Natural drainage class: Well drained Runoff class: Very high Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None

Frequency of ponding: None Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: D Hydric soil rating: No

JSDA

Description of Trappist

Setting

Landform: Hills Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Convex Across-slope shape: Concave Parent material: Clayey residuum weathered from acid shale and/or siltstone

Typical profile

H1 - 0 to 6 inches: silt loam

H2 - 6 to 26 inches: silty clay

H3 - 26 to 34 inches: very channery silty clay

Cr - 34 to 38 inches: weathered bedrock

R - 38 to 48 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock; 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: C Hydric soil rating: No

Minor Components

Carpenter

Percent of map unit: 1 percent Hydric soil rating: No

Rock outcrop, shale

Percent of map unit: 1 percent Hydric soil rating: No

Lenberg

Percent of map unit: 1 percent Hydric soil rating: No

Faywood

Percent of map unit: 1 percent Hydric soil rating: No



Severely eroded soils

Percent of map unit: 1 percent Hydric soil rating: No

Data Source Information

Soil Survey Area: Casey County, Kentucky Survey Area Data: Version 18, Sep 27, 2017



EXHIBIT H DIRECTIONS TO WCF SITE

Driving Directions to Proposed Tower Site

- 1. Beginning at 625 Court House Square, Liberty, Kentucky, head northwest (towards Campbellsville Street) and travel approximately 266 feet.
- 2. Turn right onto Campbellsville Street and travel approximately 233 feet.
- 3. Turn left onto KY-49 N / Hustonville Street and travel approximately 0.1 miles.
- 4. Make a slight left to remain on KY-49 N / Hustonville Street and continue for approximately 11.2 miles.
- 5. Turn right onto KY-78 and travel approximately 1.8 miles.
- 6. The site is on the left. The site coordinates are:
 - a. North 37 deg 27 min 17.626 sec
 - b. West 84 deg 59 min 26.115 sec



Prepared by: Aaron Roof Pike Legal Group PLLC 1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-3069 Telephone: 502-955-4400 or 800-516-4293 EXHIBIT I COPY OF REAL ESTATE AGREEMENT Market: Lexington Cell Site Number: 198441 Cell Site Name: Murphy Branch FN Eixed Asset Number: 14397272

OPTION AND LEASE AGREEMENT

THIS OPTION AND LEASE AGREEMENT ("Agreement"), dated as of the latter of the signature dates below (the "Effective Date"), is entered into by John W. Cox and Paula G. Cox, husband and wife, having a mailing address of 1651 Highway 78, Bradfordsville, KY 40009 ("Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 575 Morosgo Drive, Atlanta, GA 30324 ("Tenant").

BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, as described on **Exhibit 1**, together with all rights and privileges arising in connection therewith, located at 0 Highway 78, in the County of Casey, State of Kentucky (collectively, the "Property"). Tenant desires to use a portion of the Property in connection with its federally licensed communications business. Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

1. OPTION TO LEASE.

(a) Landlord grants to Tenant an option (the "**Option**") to lease a certain portion of the Property containing approximately 10,000 square feet including the air space above such ground space, as described on attached **Exhibit 1** (the "**Premises**"), for the placement of Tenant's Communication Facility.

During the Option Term, and during the term of this Agreement, Tenant and its agents, engineers, (b)surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "Tests"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, and construction permits (collectively, the "Government Approvals"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property. Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.

(c) In consideration of Landlord granting Tenant the Option. Tenant agrees to pay Landlord the sum of within forty five (45) business days of the Effective Date. The Option will be for an initial term of one (i) year commencing on the Effective Date (the "Initial Option Term") and may be renewed by Tenant for an additional one (1) year (the "Renewal Option Term") upon written notification to Landlord and the payment of an additional

no later than five (5) days prior to the expiration date of the Initial Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "Option Term."

(d) The Option may be sold, assigned or transferred at any time by Tenant to an Affiliate (as that term is hereinafter defined) of Tenant or to any third party agreeing to be subject to the terms hereof. Otherwise,

the Option may not be sold, assigned or transferred without the written consent of Landlord, such consent not to be unreasonably withheld, conditioned or delayed. From and after the date the Option has been sold, assigned or transferred by Tenant to an Affiliate or a third party agreeing to be subject to the terms hereof, Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.

(e) During the Option Term, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option then Landlord leases the Premises to Tenant subject to the terms and conditions of this Agreement. If Tenant does not exercise the Option during the Initial Option Term or any extension thereof, this Agreement will terminate and the parties will have no further liability to each other.

(f) If during the Option Term, or during the term of this Agreement the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises or Property, or in the event of foreclosure, Landlord shall immediately notify Tenant in writing. Landlord agrees that during the Option Term, or during the Term of this Agreement if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises or Property, or impose or consent to any other use or restriction that would prevent or limit Tenant from using the Premises for the Permitted Use. Any and all terms and conditions of this Agreement that by their sense and context are intended to be applicable during the Option Term shall be so applicable.

Tenant may use the Premises for the transmission and reception of 2. PERMITTED USE. communications signals and the installation, construction, maintenance, operation, repair, replacement and upgrade of its communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure, associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (collectively, the "Communication Facility"), as well as the right to test, survey and review title on the Property; Tenant further has the right but not the obligation to add, modify and/or replace equipment in order to be in compliance with any current or future federal, state or local mandated application, including, but not limited to, emergency 911 communication services, at no additional cost to Tenant or Landlord (collectively, the "Permitted Use"). Landlord and Tenant agree that any portion of the Communication Facility that may be conceptually described on Exhibit 1 will not be deemed to limit Tenant's Permitted Use. If Exhibit 1 includes drawings of the initial installation of the Communication Facility, Landlord's execution of this Agreement will signify Landlord's approval of Exhibit 1. For a period of ninety (90) days following the start of construction. Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of Landlord's Property as described on Exhibit 1 as may reasonably be required during construction and installation of the Communication Facility. Tenant has the right to install and operate transmission cables from the equipment shelter or cabinet to the antennas, electric lines from the main feed to the equipment shelter or cabinet and communication lines from the Property's main entry point to the equipment shelter or cabinet, and to make other improvements, alterations, upgrades or additions appropriate for Tenant's Permitted Use, including the right to construct a fence around the Premises and undertake any other appropriate means to secure the Premises at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the equipment, increase the number of antennas or relocate the Communication Facility within the Premises at any time during the term of this Agreement. Tenant will be allowed to make such alterations to the Property in order to ensure that Tenant's Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, in a manner that requires an additional portion of the Property (the "Additional Premises") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

3. <u>TERM.</u>

(a) The initial lease term will be five (5) years (the "Initial Term"), commencing on the effective date of written notification by Fenant to Landlord of Tenant's exercise of the Option (the "Term Commencement Date"). The Initial Term will terminate on the fifth (5th) anniversary of the Term Commencement Date.

(b) This Agreement will automatically renew for four (4) additional five (5) year term(s) (each five (5) year term shall be defined as an "Extension Term"), upon the same terms and conditions unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the Initial Term or then-existing Extension Term.

(c) Unless (i) Landlord or Tenant notifies the other in writing of its intention to terminate this Agreement at least six (6) months prior to the expiration of the final Extension 1erm, or (ii) the Agreement is terminated as otherwise permitted by this Agreement prior to the end of the final Extension Term, then upon the expiration of the final Extension Term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter ("Annual Term") 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 the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "Holdover Term"), subject to the terms and conditions of this Agreement.

(d) The Initial Term, any Extension Terms, any Annual Terms and any Holdover Term are collectively referred to as the Term (the "Term").

4. <u>**RENT.</u>**</u>

(a) Commencing on the first day of the month following the date that Tenant commences construction (the "**Rent Commencement Date**"), Tenant will pay Landlord on or before the fifth (5th) day of each calendar month in advance to the first date of the Rent (the "**Rent**"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.

(b) In year one (1) of each Extension Term, the monthly Rent will increase by over the Rent paid during the previous five (5) year term.

(c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to monthly Rent which is due and payable without a requirement that it be billed by Landlord. The provisions of this subsection shall survive the termination or expiration of this Agreement.

5. <u>APPROVALS.</u>

(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for Tenant's Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Government Approvals for Tenant's Permitted Use under this Agreement and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.

(b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a title insurance company of its choice and to have the Property surveyed by a surveyor of its choice.

(c) Tenant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.

6. **TERMINATION.** This Agreement may be terminated, without penalty or further liability, as follows:

(a) by either party on thirty (30) days prior written notice, if the other party remains in default under Section 15 of this Agreement after the applicable cure periods:

(b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant: or if Tenant determines, in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable:

(c) by Tenant, upon written notice to Landlord, if Tenant determines, in its sole discretion, due to the title report results or survey results, that the condition of the Premises is unsatisfactory for its intended uses;

(d) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or

(e) by Tenant upon sixty (60) days' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months' Rent. at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any termination provision contained in any other Section of this Agreement, including the following: 5 Approvals, 6(a) Termination, 6(b) Termination, 6(c) Termination, 6(d) Termination, 11(d) Environmental, 18 Condemnation, or 19 Casualty

7. INSURANCE.

(a) During the Term, Tenant will carry, at its own cost and expense, the following insurance: (i) workers' compensation insurance as required by law: and (ii) commercial general liability (CGL) insurance with respect to its activities on the Property, such insurance to afford protection of up to

per occurrence and general aggregate, based on Insurance general aggregate, based on Insurance Services Office (ISO) Form CG 00 01 or a substitute form providing substantially equivalent coverage. Tenant's CGL insurance shall contain a provision including Landlord as an additional insured. Such additional insured coverage:

(i) shall be limited to bodily injury, property damage or personal and advertising injury caused, in whole or in part, by Tenant, its employees, agents or independent contractors;

(ii) shall not extend to claims for punitive or exemplary damages arising out of the acts or omissions of Landlord, its employees, agents or independent contractors or where such coverage is prohibited by law or to claims arising out of the gross negligence of Landlord, its employees, agents or independent contractors; and

(iii) shall not exceed Tenant's indemnification obligation under this Agreement, if any.
 (b) Notwithstanding the foregoing. Tenant shall have the right to self-insure the coverages required in subsection (a). In the event Tenant elects to self-insure its obligation to include Landlord as an additional insured, the following provisions shall apply (in addition to those set forth in subsection (a)):

(i) Landlord shall promptly and no later than thirty (30) days after notice thereof provide Tenant with written notice of any claim, demand, lawsuit, or the like for which it seeks coverage pursuant to this Section and provide Tenant with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like:

(ii) Landlord shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of Tenant; and

(iii) Landlord shall fully cooperate with Tenant in the defense of the claim, demand, lawsuit, or the like.

8. <u>INTERFERENCE.</u>

(a) Prior to or concurrent with the execution of this Agreement, Landlord has provided or will provide Tenant with a list of radio frequency user(s) and frequencies used on the Property as of the Effective Date. Tenant warrants that its use of the Premises will not interfere with those existing radio frequency uses on the Property, as long as those existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.

(b) Landlord will not grant, after the date of this Agreement, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.

(c) Landlord will not, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to, interfere in any way with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period, Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.

(d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility.

9. INDEMNIFICATION.

(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, agents or independent contractors.

(b) Landlord agrees to indemnify, defend and hold Tenant harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees or agents, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Tenant, its employees, agents or independent contractors.

(c) The indemnified party: (i) shall promptly provide the indemnifying party with written notice of any claim, demand, lawsuit, or the like for which it seeks indemnification pursuant to this Section and provide the indemnifying party with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying party; and (iii) shall fully cooperate with the indemnifying party in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying party of its indemnity obligation, except (1) to the extent the indemnifying party can show it was prejudiced by the delay; and (2) the indemnifying party shall not be liable for any settlement or litigation expenses incurred before the time when notice is given.

10. <u>WARRANTIES</u>.

(a) Tenant and Landlord each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power and authority to enter into this Agreement and bind itself hereto through the party set forth as signatory for the party below.

(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license: (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, conditions, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this

Agreement; (iii) as long as Tenant is not in default then Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises without hindrance or ejection by any persons lawfully claiming under Landlord; (iv) Landlord's execution and performance of this Agreement will not violate any laws, ordinances, covenants or the provisions of any mortgage, lease or other agreement binding on Landlord; and (v) if the Property is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, Landlord will provide promptly to Tenant a mutually agreeable subordination, non-disturbance and attornment agreement executed by Landlord and the holder of such security interest.

11. <u>ENVIRONMENTAL.</u>

(a) Landlord represents and warrants that, except as may be identified in **Exhibit 11** attached to this Agreement, (i) the Property, as of the date of this Agreement, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes, regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.

(b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party 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 ("Claims"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and indemnify Tenant from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from subsurface or other contamination of the Property with hazardous substances prior to the Effective Date of this Agreement or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of substances by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.

(c) The indemnifications of this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.

(d) In the event Tenant becomes aware of any hazardous substances on the Property, or any environmental, health or safety condition or matter relating to the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, or if Tenant believes that the leasing or continued leasing of the Premises would expose Tenant to undue risks of liability to a government agency or other third party, Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.

12. ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in Exhibit 1, Landlord grants to Tenant an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute a letter granting Tenant Access to the Property substantially in the form attached as Exhibit 12; upon Tenant's request, Landlord shall execute additional letters during the Term. Landlord acknowledges that in the event Tenant cannot obtain Access to the

Premises, Tenant shall incur significant damage. If Landlord fails to provide the Access granted by this Section 12, such failure shall be a default under this Agreement. In connection with such default, in addition to any other rights or remedies available to Tenant under this Agreement or at law or equity, Landlord shall pay Tenant, as liquidated damages and not as a penalty for the section of Tenant's damages until Landlord cures such default. Landlord and Tenant agree that Tenant's damages in the event of a denial of Access are difficult, if not impossible, to ascertain, and the liquidated damages set forth above are a reasonable approximation of such damages.

13. <u>REMOVAL/RESTORATION.</u> All portions of the Communication Facility brought onto the Property by Tenant will be and remain Tenant's personal property and, at Tenant's option, may be removed by Tenant at any time during the Term. Landlord covenants and agrees that no part of the Communication Facility constructed, erected or placed on the Premises by Fenant will become, or be considered as being affixed to or a part of, the Property, it being the specific intention of the Landlord that all improvements of every kind and nature constructed, erected or placed by Tenant on the Premises will be and remain the property of the Tenant and may be removed by Tenant at any time during the Term. Within one hundred twenty (120) days after the termination of this Agreement. Tenant will, to the extent reasonable, restore the Premises to its condition at the commencement of the Agreement, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted. Footings, foundations, and concrete will be removed to a depth of one foot below grade. Notwithstanding the foregoing. Tenant will not be responsible for the replacement of any trees, shrubs, or other vegetation, nor will Tenant be required to remove from the Premises or the Property any underground utilities.

14. MAINTENANCE/UTILITIES.

(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements. Landlord will be responsible for maintenance of landscaping on the Property, including any landscaping installed by Tenant as a condition of this Agreement or any required permit.

(b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply. Tenant will have the right, at its own cost and expense, to submeter from Landlord. When submetering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Landlord agrees that it will not include a markup on the utility charges. Landlord further agrees to provide the usage data and invoice on forms provided by Tenant and to send such forms to such address and/or agent designated by Tenant. Tenant will remit payment within forty-five (45) days of receipt of the usage data and required forms. As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advance notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.

(c) Landlord hereby grants to any company providing utility or similar services, including electric power and telecommunications, to Tenant an easement over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of constructing, operating and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as such companies may from time to time require in order to provide such services to the Premises. Upon Tenant's or the service company's request, Landlord will execute a separate recordable easement evidencing this grant, at no cost to Tenant or the service company.

15. **DEFAULT AND RIGHT TO CURE.**

(a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) nonpayment of Rent if such Rent remains unpaid for more than thirty (30) days after written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.

(b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) Landlord's failure to provide Access to the Premises as required by Section 12 of this Agreement within twenty-four (24) hours after written notice of such failure; (ii) Landlord's failure to cure an interference problem as required by Section 8 of this Agreement within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.

16. <u>ASSIGNMENT/SUBLEASE.</u> Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein, in whole or in part, without Landlord's consent. Upon notification to Landlord of such assignment, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement to the extent of such assignment.

17. <u>NOTICES.</u> All notices, requests and demands hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows:

If to Tenant:	New Cingular Wireless PCS, LLC		
	Attn: Network Real Estate Administration		
	Re: Cell Site #: 198441; Cell Site Name: Murphy Branch FN (KY)		
	Fixed Asset No.: 14397272		
	575 Morosgo Drive		
	Atlanta, GA 30324		
With a copy to:			
•••	New Cingular Wireless PCS, LLC		
	Attn.: Legal Department		
	Re: Cell Site #: 198441: Cell Site Name: Murphy Branch FN (KY)		
	Fixed Asset No.: 14397272		
	208 S. Akard Street		
	Dallas, TX 75202-4206		

The copy sent to the Legal Department is an administrative step which alone does not constitute legal notice.

If to Landlord:	John & Paula Cox
	1651 Highway 78
	Bradfordsville, KY 40009

Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other as provided herein.

18. <u>CONDEMNATION</u>. In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within forty-eight (48) hours. If a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.

19. CASUALTY. Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within forty-eight (48) hours of the casualty or other harm. If any part of the Communication Facility or Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a prorata basis. Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of the Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Landlord or Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Premises and/or the Communication Facility is completed. If Landlord determines not to rebuild or restore the Property, Landlord will notify Tenant of such determination within thirty (30) days after the casualty or other harm. If Landlord does not so notify Tenant, and Tenant decides not to terminate under this Section, then Landlord will promptly rebuild or restore any portion of the Property interfering with or required for Tenant's Permitted Use of the Premises to substantially the same condition as existed before the casualty or other harm. Landlord agrees that the Rent shall be abated until the Property and/or the Premises are rebuilt or restored, unless Tenant places temporary transmission and reception facilities on the Property.

20. <u>WAIVER OF LANDLORD'S LIENS.</u> Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

21. <u>TAXES</u>.

(a) Landlord shall be responsible for timely payment of all taxes and assessments levied upon the lands, improvements and other property of Landlord, including any such taxes that may be calculated by the taxing authority using any method, including the income method. Tenant shall be responsible for any taxes and assessments attributable to and levied upon Tenant's leasehold improvements on the Premises if and as set forth in this Section 21. Nothing herein shall require Tenant to pay any inheritance, franchise, income, payroll, excise, privilege, rent, capital stock, stamp, documentary, estate or profit tax, or any tax of similar nature, that is or may be imposed upon Landlord.
(b) In the event Landlord receives a notice of assessment with respect to which taxes or assessments are imposed on Tenant's leasehold improvements on the Premises, Landlord shall provide Tenant with copies of each such notice immediately upon receipt, but in no event later than thirty (30) days after the date of such notice of assessment. If Landlord does not provide such notice or notices to Tenant within such time period, Landlord shall be responsible for payment of the tax or assessment set forth in the notice, and Landlord shall not have the right to reimbursement of such amount from Tenant. If Landlord provides a notice of assessment to Tenant within such time period and requests reimbursement from Tenant as set forth below, then Tenant shall reimburse Landlord for the tax or assessments identified on the notice of assessment on Tenant's leasehold improvements, which has been paid by Landlord. If Landlord seeks reimbursement from Tenant, Landlord shall, no later than thirty (30) days after Landlord's payment of the taxes or assessments for the assessed tax year, provide Tenant with written notice including evidence that Landlord has timely paid same, and Landlord shall provide to Tenant any other documentation reasonably requested by Tenant to allow Tenant to evaluate the payment and to reimburse Landlord.

(c) For any tax amount for which Tenant is responsible under this Agreement, Tenant shall have the right to contest, in good faith, the validity or the amount thereof using such administrative, appellate or other proceedings as may be appropriate in the jurisdiction, and may defer payment of such obligations, pay same under protest, or take such other steps as Tenant may deem appropriate. This right shall include the ability to institute any legal, regulatory or informal action in the name of Landlord, Tenant, or both, with respect to the valuation of the Premises. Landlord shall cooperate with respect to the commencement and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant, to the extent the amounts were originally paid by Tenant. In the event Tenant notifies Landlord by the due date for assessment of Tenant's intent to contest the assessment, Landlord shall not pay the assessment pending conclusion of the contest, unless required by applicable law.

(d) Landlord shall not split or cause the tax parcel on which the Premises are located to be split, bifurcated, separated or divided without the prior written consent of Tenant.

(e) Tenant shall have the right but not the obligation to pay any taxes due by Landlord hereunder if Landlord fails to timely do so, in addition to any other rights or remedies of Tenant. In the event that Tenant exercises its rights under this Section 21(e) due to such Landlord default. Tenant shall have the right to deduct such tax amounts paid from any monies due to Landlord from Tenant as provided in Section 15(b), provided that Tenant may exercise such right without having provided to Landlord notice and the opportunity to cure per Section 15(b).

(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17 and, in addition, of a copy of any such notices shall be sent to the following address. Promptly after the Effective Date of this Agreement, Landlord shall provide the following address to the taxing authority for the authority's use in the event the authority needs to communicate with Tenant. In the event that Tenant's tax addresses changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

New Cingular Wireless PCS, LLC Attn: Network Real Estate Administration -- Taxes Re: Cell Site #: 198441; Cell Site Name: Murphy Branch (**KY**) Fixed Asset No: 14397272 575 Morosgo Drive Atlanta, GA 30324

(g) Notwithstanding anything to the contrary contained in this Section 21, Tenant shall have no obligation to reimburse any tax or assessment for which the Landlord is reimbursed or rebated by a third party.

22. <u>SALE OF PROPERTY</u>

(a) Landlord shall not be prohibited from the selling, leasing or use of any of the Property except as provided below.

(b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer. Landlord or its successor shall send the documents listed below in this subsection (b) to Tenant. Until Tenant receives all such documents. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement.

- i. Old deed to Property
- ii. New deed to Property
- iii. Bill of Sale or Transfer
- iv. Copy of current Tax Bill
- v. New IRS Form W-9
- vi. Completed and Signed AT&T Payment Direction Form
- vii. Full contact information for new Landlord including phone number(s)

(c) Landlord agrees not to sell, lease or use any areas of the Property for the installation, operation or maintenance of other wireless communications facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion. Landlord or Landlord's prospective purchaser shall reimburse Tenant for any costs and expenses of such testing. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property for purposes of any installation, operation or maintenance of any other wireless communications facility or equipment.

(d) The provisions of this Section shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.

23. <u>**RENTAL STREAM OFFER.</u>** If at any time after the date of this Agreement, Landlord receives a bona fide written offer from a third party seeking an assignment or transfer of Rent payments associated with this Agreement ("**Rental Stream Offer**"), Landlord shall immediately furnish Tenant with a copy of the Rental Stream Offer. Tenant shall have the right within twenty (20) days after it receives such copy to match the Rental Stream Offer and agree in writing to match the terms of the Rental Stream Offer. Such writing shall be in the form of a contract substantially similar to the Rental Stream Offer. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the twenty (20) day period, Landlord may assign the right to receive Rent payments pursuant to the Rental Stream Offer, subject to the terms of this Agreement. If Landlord attempts to assign or transfer Rent payments without complying with this Section, the assignment or transfer shall be void. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement until Landlord complies with this Section.</u>

24. <u>MISCELLANEOUS.</u>

(a) **Amendment/Waiver.** This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.

(b) Memorandum/Short Form Lease. Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum or Short Form of Lease substantially in the form attached as

Exhibit 24b. Either party may record this Memorandum or Short Form of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term of this Agreement, either party will, at any time upon fifteen (15) business days' prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum or Short Form of Lease.

(c) **Limitation of Liability.** Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liability.

(d) **Compliance with Law**. Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("Laws") applicable to Tenant's use of the Communication Facility on the Property. Landlord agrees to comply with all Laws relating to Landlord's ownership and use of the Property and any improvements on the Property.

(e) **Bind and Benefit**. The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.

(f) Entire Agreement. This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement. Exhibits are numbered to correspond to the Section wherein they are first referenced. Except as otherwise stated in this Agreement, each party shall bear its own fees and expenses (including the fees and expenses of its agents, brokers, representatives, attorneys, and accountants) incurred in connection with the negotiation, drafting, execution and performance of this Agreement and the transactions it contemplates.

(g) Governing Law. This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.

Interpretation. Unless otherwise specified, the following rules of construction and (h) interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in this Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.

(i) Affiliates. All references to "Tenant" shall be deemed to include any Affiliate of New Cingular Wireless PCS, LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownership of voting securities, by contract, by agency or otherwise.

(j) **Survival.** Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.

(k) W-9. As a condition precedent to payment, Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant, including, any change in Landlord's name or address.

(1) **Execution/No Option.** The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth

herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.

(m) Attorneys' Fees. In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including without limitation, reasonable attorneys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.

(n) **WAIVER OF JURY TRIAL.** EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.

[SIGNATURES APPEAR ON NEXT PAGE]

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the last date written below.

"LANDLORD"

John W. Cox thea. By: Print Name: John W. Cox Date: 3-29-2018

Paula G. Cox By: Print Name: Paula G. Cox Date:

LANDLORD ACKNOWLEDGMENT

STATE OF KENTUCKY) SS: OUNTY OF Lincel-)

On the 2G+h day of Mauch. 2018 before me, personally appeared John W. Cox and Paula G. Cox, who acknowledged under oath, that he/she/they is/are the person/officer named in the within instrument, and that he/she/they executed the same in his/her/their stated capacity as the voluntary act and deed of the Landlord for the purposes therein contained.

Votary Public: 1/4 State at heres. My Commission Expires: 11-06-2018.

"TENANT"

New Cingular Wireless PCS, LLC, a Delaware limited liability company By: AT&T Mobility Corporation Its: Manager

Ellda By: Print Name: Jason Allday Its: Area Manager - TN/KY Date:

TENANT ACKNOWLEDGMENT

STATE OF ALABAMA

)) ss:

COUNTY OF JEFFERSON)

On the 27 day of 3222, 2018, before me personally appeared Jason Allday, and acknowledged under oath that he is the Area Manager – TN/KY of AT&T Mobility Corporation, the Manager of New Cingular Wireless PCS. LLC, the Tenant named in the attached instrument, and as such was authorized to execute this instrument on behalf of the Tenant.



(ally	UL	LCS.		
Notary Public:	Kathy	M.	ha	aughlin
My Commission	Expires:	10	26	2020

EXHIBIT 1

DESCRIPTION OF PREMISES

Page 1 of 3

to the Option and Lease Agreement dated <u>www.21</u>, 2018, by and between John W. Cox and Paula G. Cox, husband and wife, as Landlord, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows: Deed Book 191, Page 141

BEGINNING at an irin pin the center of the Rolling Fork, originally William Spraggene and William Hafleys corner; thence with their division line North 42 degrees West DED poles to a gum and white tak, triginally Bettie A. Hiskins corner: thence with her line North 77 degrees West 47 poles be a poplar and Walnub; North 15 degrees West 11 piles to a white cak J.G. McAnelly's corner; thence with his line South 45 degrees West 34 poles to a stake 54 poles west of a large chestnut bak; thence south 35 degrees East 100 poles to a stone at foot of a holly thence North 55 degrees East 6 piles and 9 links to a stine; South 35 degrees East 13-1.2 poles a stone; thence North 40 degrees East 12 links to a stone; thence south 40 degrees East 19 poles to center of the Rolling Firk, thence up the same with its center which is reduced to a straight line would be North 78 degrees East 14 piles, Nirth 66 degrees 16 piles, North 84 East 17 poles to an iron pin in affressid division line if said Spraggens and Hafley; thence with same Nirth 24 degrees East 18-1/2 piles to the beginning.

EXCEPT

BEGINNING at a point in tid line at northeast end of culvert and running North 4) degrees West 12.32 poles to a stake in drain; thence with an offset South 60 degrees West 12 links to a post and stone; thence North 35 degrees West 12.39 poles to a stone in tid line; thence a new line North 62 degrees East 13.31 poles to a stone in fence line at foot of hill; thence South 38 degrees East 11.61 poles to a stake at edge of Kentucky Highway 476; thence with said road South 81 degrees West 12.68 poles to the point of beginning, containing 1 acres, more or less, said description being pursuant to a survey conducted on July 12, 1871, by Lewis J. Cochran, Registered 1and Surveyor \$1381.



PARENT TRACT (TITLE)

PARENT TRACT (TITLE) BECREARC 4: set Ton pit the senter of the Reding Fork, originally Million Spreggess and Million Helloys carrier, hence with Usir shharm The abort, 42 degrees West 250 poles to a guin, and whiteek, originally Sata A. Heating carrier, bance with Million The State Next 47 poles to a popier and work; North 18 segrees West 11 poles to a chilaneau LG. Moladafy correr; bance with North 77 degrees Next 47 poles to a popier and work; North 18 segrees West 11 poles to a chilaneau LG. Moladafy correr; bance with the test 50.00 degrees was a state of the second s

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100 x 100" LEASE AREA (AS-SURVEYED) A purther of John W Dax & Purk & Dox notbord of a wild tract described in Dead Book 191, Pope 141 as recorded in the Doshiy Guid Cyme Office Roeavy County, Kenkacy, Mauteri in the Commenvesite of Kantusay in and County and being more porticitable described as

holeves: COMMERCENC as a 1° reune ber tourne marshing the Bootheost corner of soic John W & Pould Cox tract and on the horthway right-of-way the of Broghordswills Broad/Kentucky Higheory \$18; Thence H 1946/bit W a distance of \$15.55 forto a set 5/5" rebor and the PONT Of Beotheosik() Theorem N 7504726 K a distance of 100.00 feet to a set 5/5" rybor, Thence H 1075574 E a distance of 100.00 feet to a set 3/5" rebort, Theorem 3 7504726 K a distance of 100.00 feet to a set 5/5" rybor, Thence H 1075574 B a distance of 100.00 feet to a a set 5/8" ratio and the POBT of BEDRINNE Containing 10,000 square that (0,23 occes) at land more at less

30' INGREDS/EGRESS & UTILITY EASEMENT (AS-SURVEYED)

SO INGRESS/ECRESS & UTILITY EASEMENT (AS-SURVEYED) A contain of John W Dex & Poule G. Cas, husband and WE tool described in Deed back (191, Poge 141 as recorded in the County Count Cert Office and County, Centrol, Manufactor, Backad & Mark County of and County and back may move particularly described as (SDM2)25(NC of a 1 result bor hund marking the Bulleack county of actual county of and County and and not the Workshoff (Mark) (SDM2)25(NC of a 1 result bor hund marking the Bulleack county of actual county of and County and and not the Workshoff (SMC) (SDM2)25(NC of a 1 result bor hund marking the Bulleack county of actual county of and County and not on the Workshoff (SMC) (SDM2)25(NC of a 1 result bor hund marking the Bulleack county of actual of 1818.25 fast to an 15 0/5 fast of the SMC of SMC) (SDM2)25(NC of a 1 result bor hund marking the Bulleack county of actual to 20 rect and on the Workshoff (SMC) (SDM2)25(NC of a 1 result bor hund marking the SUDDeet to a point the SMC) of the SMC of the SMC of the SMC of SMC of SMC of the SMC of th source feet (0.83 ecree) of tond more or leas.

PLOTTABLE EXCEPTIONS

U.S. The Southons Commitment for Title Insurance Commitment File No: 58911-KY1712-5030 Commitment for Title Insurance Commitment Reference No. FA 14397272 Date December 21, 2017 B 5000 com.

Schedule B, Section F				
Exerction No.	intirenani.	Constant		
Q-©	r/a	Statedard exceptions. Contains no surveying matters.		
Ø	Seck 182, Page 607	Does affect the subject lease even and essements, is basist in taking, and is not shows hences		
(8)	Book 5, Page 781	Contains no surveying matters.		

SURVEYOR'S CERTIFICATION

i perity that all parts of this survey and drawing here been completed in eccordance with the current requirements of the Practice for Surveyleg in the Secte of Kentucky to the best of my keanledge, information, and belief.



Kun, mj 6-14-2018

SURVEYOR'S NOTES This is an Apphanel Tower Survey, seade on the ground under the supervision of a Kentucky Registered Lend Surveyor. Date of Field survey is May 21, 2018. This (description surveyor) between the surveyor state of Field Vield, Niler MML-332, Task Station, Reflectiviese and Mase: + Legeng ETH. CO 1HZ Fin. Go LHZ. 2. Baorings are based on Kasturby Single Zehr Stote More Coordinates MKC 85 by GPE observation. 4. Re indegraded subtres, undergoveral electoorbands or is Eding foundedans were measured or leaster or a port otherwise shown. These see Binths and Locade, unlike software shown. 5. Benchmark used is a GPE Continueuely Operating Relevance Station, PID DK3324. Desite beachmark is de share-shown on its field and unlike to MMD 85. or leaded as a sort of this survey, while anown on is real one have to have to have as. 5 his early was conducted for the perpose of an Review Jover Survey ody, and is not herefold to defined in the requisiony jarisoften of any fieldersk stork, regional er bood agency, bornt, commission ar other similar arithm. 7. Retrefect is defected at the fact that the servey may bere have nearboard or whinged in size due to reproduction. This smooth be there is consideration share obtaining earlied date. 5. This servey meets ar eacoust the Mainteent of the Alerect Tzie Search. 5. This servey meets ar eacoust the Mainteent of Practice as required by the Stork of Returbe for a Close & survey con change by 201 KAP 15:15. 10. Field deta appar which this map or plat is based has a prosure precision of not ease than sma-bat in 15,000 feet (1'193,000) and a mayden error that does not exceed 10 seconds times the square root of the number of angles kined. First framme mat not edipated. 11. This survey is not velid without the original signature and the articles see of a side increased survey and snapper. 12. It's survey is not velid without the original signature of the Parket Tract. Any parent tract property finas shown herear dre from supplied formation and many not be field worlded. 13. The losses area, and Access and With Ecosymat shown herean was provided by means added May 11, 2018 in direct correlation with addring meansmaks are physical welfains fund through lespection and may not easist occupinghis of acceptory. 14. Ne world loss area tooled at the time of this survey. 15. Zoning Internation and provided at the time of the survey. **\$**-PROJECT NO

18-1305

EXTERNATION OF MENETUCINY

DAVID D.

SIGNEY

19494 a ... 1000



2 Cox

EXHIBIT 11

ENVIRONMENTAL DISCLOSURE

Landlord represents and warrants that the Property, as of the date of this Agreement, is free of hazardous substances except as follows:

1. NONE.

[Landlord Letterhead]

DATE

Building Staff / Security Staff Landlord, Lessee, Licensee Street Address City, State, Zip

Re: Authorized Access granted to AT&T

Dear Building and Security Staff,

Please be advised that we have signed a lease with AT&T permitting AT&T to install, operate and maintain telecommunications equipment at the property. The terms of the lease grant AT&T and its representatives, employees, agents and subcontractors ("representatives") 24 hour per day, 7 day per week access to the leased area.

To avoid impact on telephone service during the day, AT&T representatives may be seeking access to the property outside of normal business hours. AT&T representatives have been instructed to keep noise levels at a minimum during their visit.

Please grant the bearer of a copy of this letter access to the property and to leased area. Thank you for your assistance.

andlord Signature

Landlord Signature

EXHIBIT J NOTIFICATION LISTING

Murphy Branch FN - Notice List

Hoskins Todd & Tracie 50 Fairway View Dr Liberty, KY 42539

Corbat & Kendrick Mark-Pam-Lance-Jan 3425 W 700 N Markle, IN 46770

Ellis & Ellis Edgar Joe & Marilyn Jean 5427 W KY 78 Hustonville, KY 40437

Cox John W & Paula 1651 KY 78 Bradfordsville, KY 40009

Sullivan James & Robin 1711 KY 78 Bradfordsville, KY 40009

Griffin Berniece 121 Murphy Branch Rd Hustonville, KY 40437

Coyle Geneva Murphy Estate c/o Suzanne Coyle 4124 Sunmeadow Ln Indianapolis, IN 46228

Coyle & Zinn 4124 Sunmeadow Ln Indianapolis, IN 46228 EXHIBIT K COPY OF PROPERTY OWNER NOTIFICATION



1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-0369 Phone (502) 955-4400 or (800) 516-4293 Fax (502) 543-4410 or (800) 541-4410

Notice of Proposed Construction of Wireless Communications Facility Site Name: Murphy Branch FN

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on Highway 78, Liberty, Kentucky 42539 (37°27'17.626" North latitude, 84°59'26.115" West longitude). The proposed facility will include a 195-foot tall antenna tower, plus a 4-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site <u>or</u> contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00359 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. Applicant's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us toll free at (800) 516-4293 if you have any comments or questions about this proposal.

Sincerely, David A. Pike Attorney for Applicant

enclosure

Driving Directions to Proposed Tower Site

- 1. Beginning at 625 Court House Square, Liberty, Kentucky, head northwest (towards Campbellsville Street) and travel approximately 266 feet.
- 2. Turn right onto Campbellsville Street and travel approximately 233 feet.
- 3. Turn left onto KY-49 N / Hustonville Street and travel approximately 0.1 miles.
- 4. Make a slight left to remain on KY-49 N / Hustonville Street and continue for approximately 11.2 miles.
- 5. Turn right onto KY-78 and travel approximately 1.8 miles.
- 6. The site is on the left. The site coordinates are:
 - a. North 37 deg 27 min 17.626 sec
 - b. West 84 deg 59 min 26.115 sec



Prepared by: Aaron Roof Pike Legal Group PLLC 1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-3069 Telephone: 502-955-4400 or 800-516-4293



EXHIBIT L COPY OF COUNTY JUDGE/EXECUTIVE NOTICE



1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-0369 Phone (502) 955-4400 or (800) 516-4293 Fax (502) 543-4410 or (800) 541-4410

VIA CERTIFIED MAIL

Hon. Randy Dial County Judge Executive 625 Courthouse Square Liberty, KY 42539

RE: Notice of Proposal to Construct Wireless Communications Facility Kentucky Public Service Commission Docket No. 2018-00359 Site Name: Murphy Branch FN

Dear Judge/Executive:

New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at Highway 78, Liberty, Kentucky 42539 (37°27'17.626" North latitude, 84°59'26.115" West longitude). The proposed facility will include a 195-foot tall antenna tower, plus a 4-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00359 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us with any comments or questions you may have.

Sincerely, David A. Pike Attorney for Applicant

enclosures

Driving Directions to Proposed Tower Site

- 1. Beginning at 625 Court House Square, Liberty, Kentucky, head northwest (towards Campbellsville Street) and travel approximately 266 feet.
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- 6. The site is on the left. The site coordinates are:
 - a. North 37 deg 27 min 17.626 sec
 - b. West 84 deg 59 min 26.115 sec



Prepared by: Aaron Roof Pike Legal Group PLLC 1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-3069 Telephone: 502-955-4400 or 800-516-4293



EXHIBIT M COPY OF POSTED NOTICES AND NEWSPAPER NOTICE ADVERTISEMENT

SITE NAME: MURPHY BRANCH FN NOTICE SIGNS

The signs are at least (2) feet by four (4) feet in size, of durable material, with the text printed in black letters at least one (1) inch in height against a white background, except for the word "**tower**," which is at least four (4) inches in height.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility proposes to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00359 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility proposes to construct a telecommunications **tower** near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00359 in your correspondence.

TELEPHONE: 606-787-7171

The Casey County News P.O. Box 40 Liberty, KY 42539

> RE: Legal Notice Advertisement Site Name: Murphy Branch FN

Dear Casey County News:

Please publish the following legal notice advertisement in the next edition of *The Casey County News*:

NOTICE

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct а new wireless communications facility on a site located on Highway 78 in Liberty, KY 42539 (37°27'17.626" North latitude, 84°59'26.115" West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00359 in any correspondence sent in connection with this matter.

After this advertisement has been published, please forward a tearsheet copy, affidavit of publication, and invoice to Pike Legal Group, PLLC, P. O. Box 369, Shepherdsville, KY 40165. Please call me at (800) 516-4293 if you have any questions. Thank you for your assistance.

Sincerely,

Aaron L. Roof Pike Legal Group, PLLC EXHIBIT N COPY OF RADIO FREQUENCY DESIGN SEARCH AREA



Lat: 37.449429 Lon: -84.988761 Radius: .4 miles Murphy Branch Search Area