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**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

THE APPLICATION OF )  
CAPITAL TELECOM HOLDINGS LLC )  
AND KENTUCKY RSA NO. 1 PARTNERSHIP )  
d/b/a VERIZON WIRELESS )  
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC ) CASE NO.: 2019-00397  
CONVENIENCE AND NECESSITY TO CONSTRUCT )  
A WIRELESS COMMUNICATIONS FACILITY )  
IN THE COMMONWEALTH OF KENTUCKY )  
IN THE COUNTY OF FULTON )

SITE NAME: CRUTCHFIELD

\* \* \* \* \*

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

Capital Telecom Holdings LLC and Kentucky RSA No. 1 Partnership, a Delaware General Partnership, d/b/a Verizon Wireless ("Applicants"), 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 Verizon Wireless with wireless communications services.<sup>1</sup>

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

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<sup>1</sup> Applicants note that a CPCN was previously approved for this proposed WCF in case number 2016-00337. However, said CPCN expired as of November 22, 2017 prior to construction, and the present application is filed to request renewed authorization for construction of the proposed WCF.

information:

1. The complete name and address of the Applicants are Capital Telecom Holdings LLC having an address of 1500 Mt. Kemble Avenue, Suite 203, Morristown, NJ 07960 and Kentucky RSA No. 1 Partnership, a Delaware general partnership, d/b/a Verizon Wireless, having an address of 2421 Holloway Road, Louisville, KY 40299.

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. Capital Telecom Holdings LLC is a limited liability company organized in the State of Delaware on July 16, 2015.

4. Capital Telecom Holdings LLC attests that it is in good standing in the state in which it is organized and further states that it is authorized to transact business in Kentucky.

5. The Certificate of Authority filed with the Kentucky Secretary of State for Capital Telecom Holdings LLC is attached as part of **Exhibit A** pursuant to 807 KAR 5:001: Section 14(3).

6. Verizon Wireless operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of Verizon Wireless' 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. Capital Telecom Holdings LLC will build, own and manage the tower and tower compound where Verizon Wireless will place its equipment building, antennas, radio electronics equipment and appurtenances.

7. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve Verizon Wireless' services to an area currently not served or not adequately served by Verizon Wireless 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 Verizon Wireless' 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 Verizon Wireless' network design that must be in place to provide adequate coverage to the service area.

8. To address the above-described service needs, Applicant proposes to construct a WCF at 1311 Clinton Moscow Road in Fulton, KY (36°34'48.40" North latitude, 88°58'49.35" 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 Graham Farm Land, LLC pursuant to a Deed recorded at Deed Book 181, Page 6 in the office of the Fulton County Clerk. The proposed WCF will consist of a 295-foot tall tower, with an approximately 5-foot tall lightning arrestor attached at the top, for a total height of 300-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of Verizon Wireless' radio electronics equipment and appurtenant equipment. Verizon Wireless' 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**.

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

10. 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 Verizon Wireless' antennas has also been included as part of **Exhibit B**.

11. 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**.

12. Applicants 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 Verizon Wireless' antennas on an existing structure. When suitable towers or structures exist, Applicants 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.

13. A copy of the application for a Determination of No Hazard to Air Navigation

issued by the Federal Aviation Administration ("FAA") is attached as **Exhibit E**.

14. A copy of the application for Kentucky Airport Zoning Commission ("KAZC") Approval to construct the tower is attached as **Exhibit F**.

15. A geotechnical engineering firm has performed soil boring(s) and subsequent geotechnical engineering studies at the WCF site. 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.

16. 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.

17. Applicants, pursuant to a written agreement, have 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**.

18. 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.

19. The identity and qualifications of each person directly responsible for design

and construction of the proposed tower are contained in **Exhibits B & C**.

20. 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.

21. **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**.

22. 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.

23. 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**.

24. 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**.

25. The general area where the proposed facility is to be located is rural with very sparse residences.

26. The process that was used by Verizon Wireless' 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. Verizon Wireless' 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 Verizon Wireless. 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**.

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

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

29. 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: [dpike@pikelegal.com](mailto:dpike@pikelegal.com)

**WHEREFORE**, Applicants 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,



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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](mailto:dpike@pikelegal.com)  
Attorney for Applicants

## **LIST OF EXHIBITS**

- A - Certificate of Authority & 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**  
**CERTIFICATE OF AUTHORITY & FCC LICENSE**  
**DOCUMENTATION**

**Commonwealth of Kentucky**  
**Alison Lundergan Grimes, Secretary of State**

Alison Lundergan Grimes  
Secretary of State  
P. O. Box 718  
Frankfort, KY 40602-0718  
(502) 564-3490  
<http://www.sos.ky.gov>

**Certificate of Authorization**

Authentication number: 221296

Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,


**CAPITAL TELECOM HOLDINGS LLC**

, a limited liability company authorized under the laws of the state of Delaware, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on October 13, 2015.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 10<sup>th</sup> day of October, 2019, in the 228<sup>th</sup> year of the Commonwealth.



  
Alison Lundergan Grimes  
Secretary of State  
Commonwealth of Kentucky  
221296/0934434

**REFERENCE COPY**

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



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

**LICENSEE: KENTUCKY RSA NO. 1 PARTNERSHIP**

**ATTN: REGULATORY  
KENTUCKY RSA NO. 1 PARTNERSHIP  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022**

<b>Call Sign</b> KNKQ306	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA443	<b>Channel Block</b> B
<b>Sub-Market Designator</b> 0	

**FCC Registration Number (FRN): 0001836709**

<b>Market Name</b> Kentucky 1 - Fulton				
<b>Grant Date</b> 08-30-2011	<b>Effective Date</b> 11-02-2016	<b>Expiration Date</b> 10-01-2021	<b>Five Yr Build-Out Date</b>	<b>Print Date</b>

**Site Information:**

<b>Location</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Ground Elevation (meters)</b>	<b>Structure Hgt to Tip (meters)</b>	<b>Antenna Structure Registration No.</b>
1	36-20-59.2 N	089-22-12.3 W	98.0		

**Address: 0.68 MILE SOUTH OF LASSITER CORNER & REEL FOOT LAKE**  
**City: LASSITER CORNER County: LAKE State: TN Construction Deadline:**

**Antenna: 1**

**Maximum Transmitting ERP in Watts: 135.800**

<b>Azimuth(from true north)</b>	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	148.000	117.000	107.000	117.000	121.000	147.000	149.000	146.000
<b>Transmitting ERP (watts)</b>	133.300	103.500	36.500	4.500	1.500	3.900	38.800	109.600

**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 conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: KENTUCKY RSA NO. 1 PARTNERSHIP

Call Sign: KNKQ306

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	36-45-58.0 N	088-38-50.0 W	143.0	147.8	1043917

Address: 416 Jintown Road

City: MAYFIELD County: GRAVES State: KY Construction Deadline:

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)	124.300	120.000	100.800	92.100	88.300	103.100	108.600	100.800
Transmitting ERP (watts)	91.200	87.100	85.110	85.110	89.130	87.100	89.130	89.130

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	36-54-35.5 N	089-04-01.6 W	110.3	121.0	1030662

Address: (Wickliffe) 353 CR 1307

City: Bardwell County: CARLISLE State: KY Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	107.500	98.100	119.800	96.700	86.900	133.300	130.900	130.400
Transmitting ERP (watts)	189.230	48.640	1.690	0.930	0.930	0.930	1.810	52.120

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	107.500	98.100	119.800	96.700	86.900	133.300	130.900	130.400
Transmitting ERP (watts)	1.710	64.860	368.980	174.580	8.750	0.930	0.930	0.930

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	107.800	98.100	119.800	96.700	86.900	133.300	130.900	130.400
Transmitting ERP (watts)	0.350	0.350	1.230	35.330	112.440	35.270	1.000	0.350

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	36-31-12.4 N	088-50-41.5 W	144.2	122.2	1030665

Address: (Fulton) 550 Powell Road

City: Fulton County: HICKMAN State: KY Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.200	122.800	123.200	135.200	147.500	157.200	143.900	141.700
Transmitting ERP (watts)	110.570	412.100	98.560	4.220	1.510	0.920	0.920	6.530

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.200	122.800	123.200	135.200	147.500	157.200	143.900	141.700
Transmitting ERP (watts)	0.550	0.550	0.550	0.550	1.480	16.430	11.480	0.700

Licensee Name: KENTUCKY RSA NO. 1 PARTNERSHIP

Call Sign: KNKQ306

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	36-31-12.4 N	088-50-41.5 W	144.2	122.2	1030665

Address: (Fulton) 550 Powell Road

City: Fulton County: HICKMAN State: KY Construction Deadline:

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.200	122.800	123.200	135.200	147.500	157.200	143.900	141.700
Transmitting ERP (watts)	135.480	5.650	2.230	0.920	1.320	5.450	78.640	402.820

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	36-38-26.2 N	088-16-00.1 W	165.8	90.8	1030663

Address: (Murray) 1431 Van Cleave Road

City: Murray County: CALLOWAY State: KY Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	106.900	107.100	115.000	106.900	87.400	91.300	86.200	97.500
Transmitting ERP (watts)	124.240	6.420	0.560	0.560	0.560	0.830	39.630	251.940

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	106.900	107.100	115.000	106.900	87.400	91.300	86.200	97.500
Transmitting ERP (watts)	3.450	96.460	263.070	57.230	1.700	0.560	0.560	0.560

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	106.900	107.100	115.000	106.900	87.400	91.300	86.200	97.500
Transmitting ERP (watts)	0.370	0.370	0.370	12.730	121.110	104.340	9.310	0.370

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	37-03-51.4 N	088-57-23.6 W	116.4	92.4	1030664

Address: (La Center) 220 RICHARDSON LN

City: LA CENTER County: BALLARD State: KY Construction Deadline:

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)	85.600	78.400	71.900	66.000	65.300	67.000	87.700	96.100
Transmitting ERP (watts)	2.110	71.430	167.460	63.670	0.330	0.640	0.330	0.330

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)	85.600	78.400	71.900	66.000	65.300	67.000	87.700	96.100
Transmitting ERP (watts)	1.230	1.000	1.380	23.440	338.840	457.090	66.070	2.240

Licensee Name: KENTUCKY RSA NO. 1 PARTNERSHIP

Call Sign: KNKQ306

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	37-03-51.4 N	088-57-23.6 W	116.4	92.4	1030664

Address: (La Center) 220 RICHARDSON LN

City: LA CENTER County: BALLARD State: KY Construction Deadline:

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	85.600	78.400	71.900	66.000	65.300	67.000	87.700	96.100
Transmitting ERP (watts)	165.960	6.610	0.910	0.500	0.500	0.890	45.710	223.870

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	36-44-07.9 N	088-58-29.2 W	131.9	92.9	1030723

Address: 3975 State Route 2206

City: CLINTON County: HICKMAN State: KY Construction Deadline:

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)	100.500	101.900	98.900	84.700	107.900	118.900	119.900	100.400
Transmitting ERP (watts)	96.610	96.610	96.610	96.610	96.610	96.610	96.610	96.610

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	37-02-00.0 N	088-22-10.0 W	105.5	106.7	1040303

Address: (Calvert City) 641 Jary Johnson Rd.

City: Calvert City County: MARSHALL State: KY Construction Deadline:

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)	78.900	77.600	88.100	83.000	68.600	85.300	97.900	93.100
Transmitting ERP (watts)	23.380	330.300	378.360	36.130	0.970	0.970	0.970	0.970

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)	78.900	77.600	88.100	83.000	68.600	85.300	97.900	93.100
Transmitting ERP (watts)	0.970	0.970	0.970	14.730	240.930	357.480	49.940	1.230

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.900	77.600	88.100	83.000	68.600	85.300	97.900	93.100
Transmitting ERP (watts)	63.740	2.060	0.660	0.660	0.660	4.020	107.530	274.970

Licensee Name: KENTUCKY RSA NO. 1 PARTNERSHIP

Call Sign: KNKQ306

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
12	36-34-49.2 N	088-31-45.2 W	155.5	91.4	1202399

Address: 12201 SR 97

City: TriCity County: GRAVES State: KY Construction Deadline:

**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)	75.100	73.400	74.100	70.100	102.600	100.900	74.700	81.300
Transmitting ERP (watts)	0.280	4.680	67.610	91.200	13.180	0.450	0.250	0.200

**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)	75.100	73.400	74.100	70.100	102.600	100.900	74.700	81.300
Transmitting ERP (watts)	0.360	0.200	0.200	0.350	18.200	89.130	66.070	2.630

**Antenna: 4**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	75.100	73.400	74.100	70.100	102.600	100.900	74.700	81.300
Transmitting ERP (watts)	100.000	38.020	0.200	0.380	0.200	0.200	1.260	42.660

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	37-05-47.2 N	088-42-35.2 W	104.2	63.4	1200593

Address: (Paducah West) 4415 Merredith Rd.

City: Paducah County: MCCracken State: KY Construction Deadline: 07-08-2014

**Antenna: 4**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	59.900	55.900	65.200	50.700	38.200	34.700	42.800	64.600
Transmitting ERP (watts)	24.580	50.820	50.310	19.100	0.840	0.330	0.330	1.370

**Antenna: 5**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	59.900	55.900	65.200	50.700	38.200	34.700	42.800	64.600
Transmitting ERP (watts)	0.440	0.440	12.210	76.570	112.800	57.980	5.460	0.440

**Antenna: 6**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	59.900	55.900	65.200	50.700	38.200	34.700	42.800	64.600
Transmitting ERP (watts)	20.830	0.780	0.440	0.440	2.790	42.940	108.040	89.900

Licensee Name: KENTUCKY RSA NO. 1 PARTNERSHIP

Call Sign: KNKQ306

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-46-54.2 N	088-03-28.1 W	199.0	126.5	1205551

Address: 14664 Canton Road

City: Golden Pond County: TRIGG State: KY Construction Deadline: 05-19-2006

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)	165.000	178.000	160.400	174.500	170.600	167.000	177.000	183.900
Transmitting ERP (watts)	96.610	96.610	96.610	96.610	96.610	96.610	96.610	96.610

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	36-34-03.0 N	089-10-30.9 W	109.4	91.4	1282534

Address: (Hickman site) Holley Street

City: Hickman County: FULTON State: KY Construction Deadline: 05-28-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.500	102.800	96.700	89.300	75.700	68.400	107.900	107.300
Transmitting ERP (watts)	141.700	118.910	1.140	0.580	0.580	0.580	0.580	4.050

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)	105.500	102.800	96.700	89.300	75.700	68.400	107.900	107.300
Transmitting ERP (watts)	0.580	4.050	141.730	118.910	1.140	0.580	0.580	0.580

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)	105.500	102.800	96.700	89.300	75.700	68.400	107.900	107.300
Transmitting ERP (watts)	0.460	0.460	0.460	0.460	0.460	7.710	45.610	24.600

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	37-10-55.4 N	088-56-43.7 W	102.7	99.1	1252613

Address: (Monkey's Eyebrow) 4625 Odgen Colvin Circle

City: Kevil County: BALLARD State: KY Construction Deadline: 10-24-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	85.900	83.500	90.600	69.600	74.300	84.600	86.500	83.200
Transmitting ERP (watts)	7.080	125.890	478.630	112.200	4.570	1.580	1.000	1.000

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)	85.900	83.500	90.600	69.600	74.300	84.600	86.500	83.200
Transmitting ERP (watts)	1.000	1.410	12.020	213.800	446.680	64.570	2.820	1.000



**Licensee Name:** KENTUCKY RSA NO. 1 PARTNERSHIP

**Call Sign:** KNKQ306

**File Number:**

**Print Date:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	37-10-55.4 N	088-56-43.7 W	102.7	99.1	1252613

**Address:** (Monkey's Eyebrow) 4625 Odgen Colvin Circle

**City:** Kevil **County:** BALLARD **State:** KY **Construction Deadline:** 10-24-2014

**Antenna: 4**

**Maximum Transmitting ERP in Watts:** 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	85.900	83.500	90.600	69.600	74.300	84.600	86.500	83.200
<b>Transmitting ERP (watts)</b>	2.000	2.000	2.000	2.000	2.000	398.110	549.540	4.900

**Control Points:**

**Control Pt. No. 3**

**Address:** 500 W. Dove Rd.

**City:** Southlake **County:** TARRANT **State:** TX **Telephone Number:** (800)264-6620

**Waivers/Conditions:**

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

**REFERENCE COPY**

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



**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY  
 CELLCO PARTNERSHIP  
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> WQGA718	<b>File Number</b> 0007518718
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 11-29-2006	<b>Effective Date</b> 12-13-2016	<b>Expiration Date</b> 11-29-2021	<b>Print Date</b> 02-04-2017
<b>Market Number</b> REA004	<b>Channel Block</b> F	<b>Sub-Market Designator</b> 15	
<b>Market Name</b> Mississippi Valley			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**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 conferred 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 hardcopy version. 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.

**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WQGA718

**File Number:** 0007518718

**Print Date:** 02-04-2017

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

**LICENSEE:** CELLCO PARTNERSHIP

**ATTN:** REGULATORY  
 CELLCO PARTNERSHIP  
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> WQGA961	<b>File Number</b>
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

**FCC Registration Number (FRN):** 0003290673

<b>Grant Date</b> 11-29-2006	<b>Effective Date</b> 11-01-2016	<b>Expiration Date</b> 11-29-2021	<b>Print Date</b>
<b>Market Number</b> BEA073	<b>Channel Block</b> B	<b>Sub-Market Designator</b> 5	
<b>Market Name</b> Memphis, TN-AR-MS-KY			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**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 conferred 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 hardcopy version. 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.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGA961

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

**LICENSEE:** CELLCO PARTNERSHIP

**ATTN:** REGULATORY  
 CELLCO PARTNERSHIP  
 5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> WQJQ692	<b>File Number</b>
<b>Radio Service</b> WU - 700 MHz Upper Band (Block C)	

**FCC Registration Number (FRN):** 0003290673

<b>Grant Date</b> 11-26-2008	<b>Effective Date</b> 05-21-2019	<b>Expiration Date</b> 06-13-2019	<b>Print Date</b>
<b>Market Number</b> REA004	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Mississippi Valley			
<b>1st Build-out Date</b> 06-13-2013	<b>2nd Build-out Date</b> 06-13-2019	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

**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 conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WQJQ692

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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**EXHIBIT B**

**SITE DEVELOPMENT PLAN:**

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





# FULTON, KY (CRUTCHFIELD)

1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY

TENANT: KENTUCKY RSA NO. 1 PARTNERSHIP d/b/a VERIZON WIRELESS  
EV CRUTCHFIELD

FROM FULTON COUNTY JUDGE EXECUTIVE'S OFFICE: 2216 MYRON CORY DRIVE, HICKMAN, KY: HEAD NORTH ON MYRON CORY DRIVE TOWARD 7TH STREET. TURN RIGHT ONTO 7TH STREET (1.1 MILES). TURN RIGHT ONTO KY-94E / MOSCOW AVENUE (9.2 MILES). TURN LEFT ONTO STATE HIGHWAY 1907 (3.0 MILES). TURN LEFT ONTO STATE HIGHWAY 781 NORTH (26 FEET). TURN RIGHT ONTO CLINTON MOSCOW ROAD (1.3 MILES). THE SITE WILL BE ON THE RIGHT AT 1311 CLINTON MOSCOW ROAD IN FULTON, KY

PREPARED BY: POWER OF DESIGN GROUP, LLC - (502) 437-5252

## NEW 295' GUYED TOWER w/5' LIGHTNING ARRESTOR TOTAL TOWER HEIGHT 300'

**CAPITAL TELECOM SITE**  
FULTON, KY (CRUTCHFIELD)  
**VERIZON WIRELESS SITE**  
EV CRUTCHFIELD  
PROJECT#: 20151215225  
MARKET ID: KY RSA 1  
LOCATION CODE: 382052

**E911 ADDRESS**  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

**TOWER OWNER**  
CAPITAL TELECOM HOLDINGS LLC  
1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960  
CONTACT: ERIK HAMILTON-JONES  
PHONE: (973) 425-0606 x 110  
MOBILE: (201) 776-8663  
E-MAIL: EHAMILTON-JONES@CAPITALTELECOM.COM

**PROPERTY OWNER**  
GRAHAM FARM LAND, LLC  
1758 ST ROUTE 781 NORTH  
FULTON, KY 42041  
CONTACT: JERRY GRAHAM  
PHONE: (270) 627-0374

**POLICE**  
FULTON COUNTY SHERIFF  
2216 MYRON CORY DR # 4  
HICKMAN, KY 42050  
PHONE: (270) 236-2545

**FIRE**  
FULTON CITY FIRE DEPARTMENT  
340 BROWDER ST  
FULTON, KY 42041  
PHONE: (270) 472-1422

**GENERAL INFORMATION**  
LATITUDE : 36° 34' 48.40" N  
LONGITUDE : 88° 58' 49.35" W  
1983 (NAD83)  
ELEVATION : 434.00' AMSL  
1988 (NAVD88)

**CAPITAL TELECOM LEASE AREA**  
70'-0" x 70'-0"  
(4,900 SF)

**PROJECT TOTAL DISTURBED AREA**  
COMPOUND: (04,900 SF) = (0.11 ACRE)  
ACCESS DRIVE: (08,527 SF) = (0.20 ACRE)  
GROSS AREA: (13,427 SF) = (0.31 ACRE)

NOTE: ALL ITEMS WITHIN THESE CONSTRUCTION DOCUMENTS ARE BY TOWER OWNER'S GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS UNLESS NOTED AS (VZW GC) WHICH SHALL INCLUDE VERIZON WIRELESS GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS. GENERALLY DESCRIBED BELOW:

**CAPITAL TELECOM SCOPE:**

- INSTALL A NEW 295' GUYED TOWER w/ 5' LIGHTNING ROD (TOTAL 300')
- INSTALL A NEW TOWER FOUNDATION SYSTEM
- INSTALL A NEW 68"x68" FENCED GRAVEL COMPOUND
- INSTALL A NEW SITE H-FRAME
- INSTALL A NEW ELECTRICAL SERVICE RUN TO SITE H-FRAME
- INSTALL A NEW GRAVEL ACCESS DRIVE
- NO WATER OR SEWAGE SERVICES RUN TO SITE
- INSTALL NEW TOWER & SITE GROUNDING SYSTEM
- INSTALL NEW VZW SUBSURFACE GROUNDING SYSTEM
- INSTALL A NEW 11'-6"x19'-6" CONCRETE EQUIPMENT / GENERATOR PAD
- INSTALL ELECTRICAL SERVICE CONDUIT WITH PULL TAPES FROM ILC ENCLOSURE STUB-UP WITHIN VZW EQUIPMENT PAD TO UTILITY H-FRAME
- INSTALL NEW CONDUITS WITH PULL TAPES FROM VZW ILC & EQUIPMENT ENCLOSURE STUB-UP LOCATIONS TO THE GENERATOR LOCATION WITHIN VZW EQUIPMENT PAD
- INSTALL NEW CONDUITS WITH PULL TAPES FROM RF CABINET TO OVP H-FRAME LIT FIBER LOCATION
- INSTALL (1) NEW "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUIT WITH PULL TAPE AND TRACER WIRE FROM VZW EQUIPMENT TO NEW "VERIZON WIRELESS ONLY" 24" x 36" HAND HOLE OUTSIDE COMPOUND
- INSTALL (1) NEW "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUIT WITH PULL TAPE AND TRACER WIRE FROM NEW "VERIZON WIRELESS ONLY" 24" x 36" HAND HOLE AT ROW
- INSTALL (1) NEW "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUIT WITH PULL TAPE FROM NEW "VERIZON WIRELESS ONLY" 24" x 36" HAND HOLE OUTSIDE COMPOUND AND STUB UP AT FUTURE FIBER PEDESTAL LOCATION
- PERMANENT ELECTRIC POWER MUST BE AVAILABLE FOR VERIZON WIRELESS AT THE METER BASE PRIOR TO THE SITE BEING RELEASED AS TENANT READY.

**VERIZON WIRELESS SCOPE (VZW GC):**

- INSTALL A NEW 11'-6"x14'-9" PREFABRICATED CANOPY ON EXISTING CONCRETE PAD FOUNDATION
- INSTALL NEW 20KW DIESEL GENERATOR ON EXISTING CONCRETE FOUNDATION
- INSTALL VZW ICE BRIDGE AND FOUNDATIONS
- INSTALL VZW ANTENNA MOUNTING SUPPORT STRUCTURE ON TOWER
- INSTALL VZW ANTENNAS, LINES, COAX, GPS ANTENNA AND RADIO EQUIPMENT
- INSTALL EXISTING SUBSURFACE GROUND LEADS TO VZW EQUIPMENT & FACILITIES
- INSTALL VZW ELECTRIC SERVICE CONDUCTORS FROM UTILITY H-FRAME TO VZW ILC ENCLOSURE
- INSTALL VZW GENERATOR CIRCUITS FROM VZW ILC & EQUIPMENT ENCLOSURES TO VZW GENERATOR
- INSTALL CIRCUITS FROM VZW ILC TO VZW EQUIPMENT ENCLOSURES
- INSTALL NEW OUTDOOR OVP AND CABLING H-FRAME SUPPORT
- INSTALL (2) 1-1/4" & (1) 1" INNERDUCTS WITH PULL TAPES AND TRACER WIRE WITHIN OWNER INSTALLED "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUITS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

BUILDING CODE	2018 KENTUCKY BUILDING CODE
STRUCTURAL CODE	TIA/EIA-222 - REVISION G (INCLUDES ADDENDUM #2)
MECHANICAL CODE	2012 INTERNATIONAL MECHANICAL CODE (IMC 2012)
PLUMBING CODE	KENTUCKY STATE PLUMBING CODE (815 KAR CHAP. 20)
ELECTRICAL CODE	2014 NATIONAL ELECTRICAL CODE (NEC) - NFPA 70
FIRE/LIFE SAFETY CODE	2012 INTERNATIONAL FIRE CODE (2012 IFC)
ENERGY CODE	2012 INTERNATIONAL ENERGY CODE (COMMERCIAL)
GAS CODE	2009 NATIONAL FUEL GAS CODE (NFPA 54)

**ACCESSIBILITY REQUIREMENTS:**

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2009 IBC BUILDING CODE.

### APPLICABLE CODES

**SURVEYOR**

POWER OF DESIGN GROUP, LLC  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
PHONE: (502) 437-5252

**ARCHITECTURAL**

POWER OF DESIGN GROUP, LLC  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
PHONE: (502) 437-5252

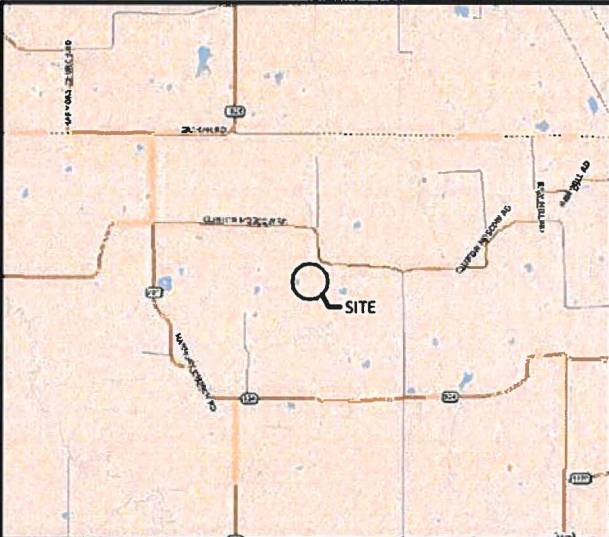
**ELECTRICAL**

GIBSON ELECTRIC MEMBERSHIP  
COOPERATIVE (GEMC)  
ADDRESS: 1702 MOSCOW AVE  
HICKMAN, KY 42050  
CONTACT: REX COFFEY  
PHONE: (270) 627-3312  
EMAIL: RCOFFEY@GIBSONEMC.COM

### CONSULTANT TEAM

SHEET NUMBER	DESCRIPTION
T-1	PROJECT INFORMATION, SITE MAPS, SHEET INDEX
B-1 TO B-1.2	SITE SURVEY
B-2 TO B-2.1	500' RADIUS & ABUTTERS MAP
R-1	REVISION LOG
TOWER ELEVATION	TOWER ELEVATION
TE-1	
CIVIL	
C-1	OVERALL SITE PLAN w/AERIAL OVERLAY
C-1A	OVERALL SITE PLAN w/DISTANCES TO PROPERTY LINES
C-1B	TOWER DISTANCE TO RESIDENTIAL STRUCTURES
C-3	DETAILED SITE PLAN
C-4	DIMENSIONED SITE PLAN

### PROJECT SUMMARY



VICINITY MAP

### PROJECT DESCRIPTION



LOCATION MAP



AERIAL



10/28/2019



EN PERMIT: 3594

### ZONING DRAWINGS

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

**SITE INFORMATION:**

FULTON, KY  
(CRUTCHFIELD)  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

POD NUMBER: 19-46733  
DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

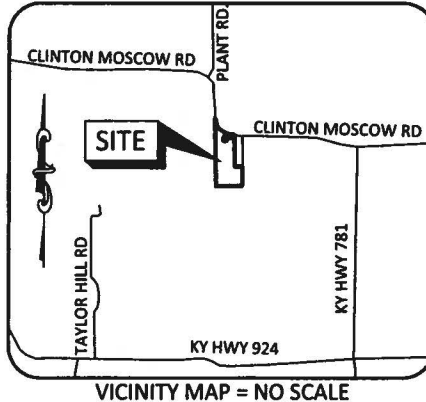
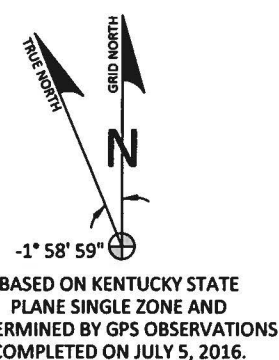
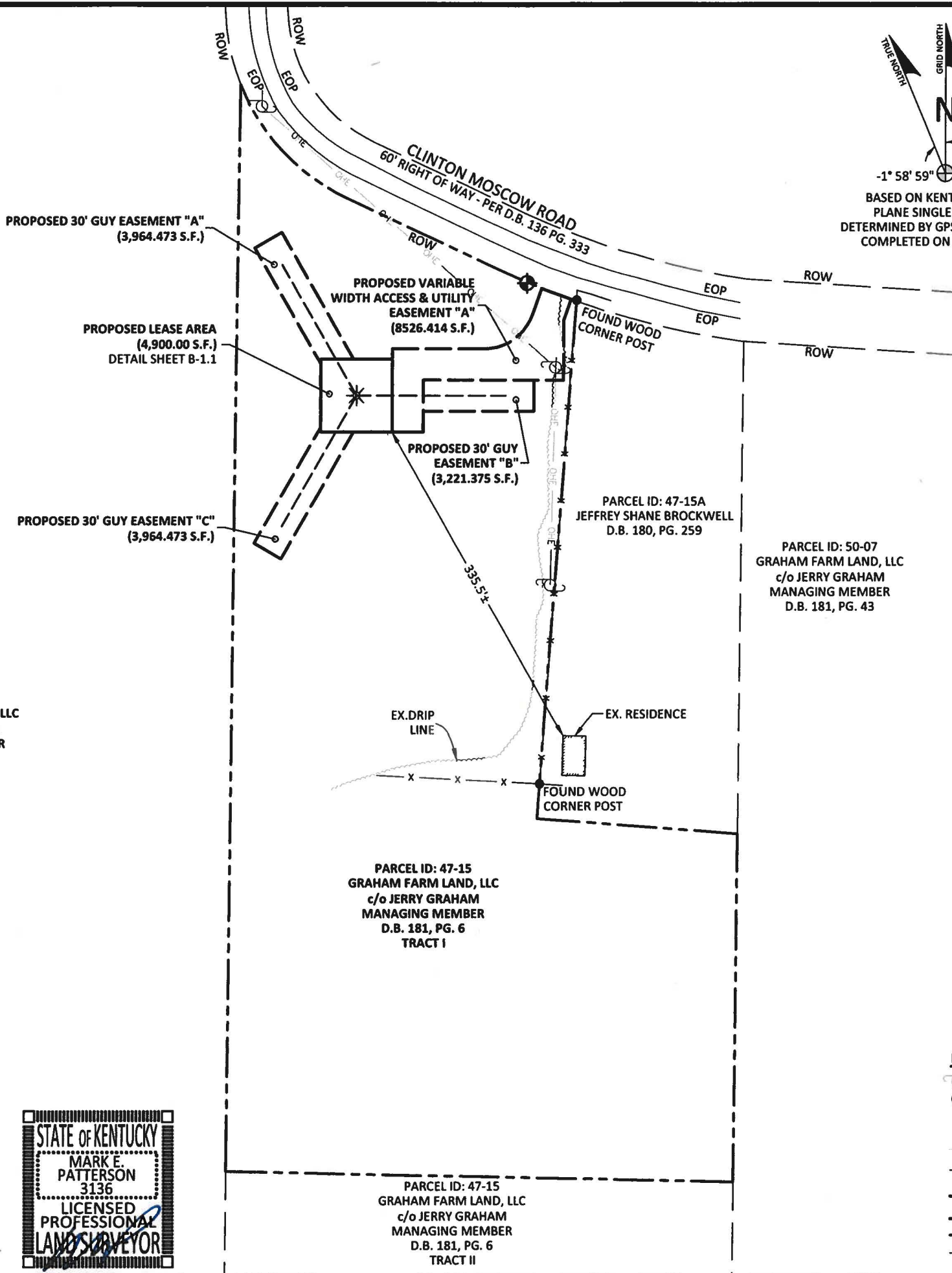
SHEET TITLE:  
PROJECT  
INFORMATION, SITE  
MAPS, SHEET INDEX

SHEET NUMBER:  
T-1



**TEMPORARY BENCHMARK**  
NORTHING: 3387221.80  
EASTING: 3972918.70  
ELEVATION: 431.24'  
LOCATION: SET 5/8" REBAR CAPPED  
"POD TRAV" N60°42'E 149.6'± FROM THE  
NORTHEAST CORNER OF THE PROPOSED  
LEASE AREA.

**FAA COORDINATE POINT**  
NAD 83  
LATITUDE: 36°34'48.40"  
LONGITUDE: 88°58'49.35"  
NAVD 88  
ELEVATION: 434'± AMSL  
NORTHING: 3387113.60  
EASTING: 3972753.17



**GENERAL NOTES**  
BASIS OF BEARING IS GPS OBSERVATIONS COMPLETED ON JULY 5, 2016.  
  
NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED BY POD GROUP TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT PARCEL.  
  
THIS SURVEY IS FOR THE PROPOSED LEASE AREA AND THE PROPOSED EASEMENTS ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT TRACT HAS BEEN PERFORMED.  
  
A PORTION OF THIS SURVEY WAS CONDUCTED BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. UNADJUSTED CLOSURE EQUALS 0.07', FOR A PRECISION OF 1:39,571 AND HAS NOT BEEN ADJUSTED.  
  
THIS PROPERTY IS SUBJECT TO ANY RECORDED EASEMENTS AND/OR RIGHTS OF WAY SHOWN HEREON OR NOT.  
  
THIS PLAT IS NOT INTENDED FOR LAND TRANSFER.  
  
THE PARENT PARCEL, THE PROPOSED LEASE AREA AND THE EASEMENTS ARE NOT LOCATED IN A 100-YEAR FLOOD PLAIN PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21075C0205D, DATED MAY 24, 2011. THE PARENT PARCEL IS LOCATED IN ZONE X.

**GLOBAL POSITIONING SYSTEMS NOTE**  
1. RANDOM TRAVERSE CONTROL MONUMENTS WERE SET USING GPS METHODS. A PORTION OF THE BOUNDARY AND TOPOGRAPHY WAS COLLECTED USING GPS METHODS.  
2. THE TYPE OF GPS UTILIZED WAS NETWORK ADJUSTED REAL TIME KINEMATIC (KYDOT VRS NETWORK), NAD 83 KENTUCKY SINGLE ZONE WITH THE ORTHOMETRIC HEIGHT COMPUTED USING GEOID12A. RELATIVE POSITIONAL ACCURACY VARIED FROM 0.04' TO 0.08' HORIZONTALLY.  
3. SPECTRA PRECISION EPOCH 50 DUAL FREQUENCY RECEIVERS WERE USED CONDUCTING THE SURVEY. SERIAL NUMBER: 5325400009



- LEGEND**
- UTILITY POLE
  - GUY ANCHOR
  - P.O.C. POINT OF COMMENCEMENT
  - P.O.B. POINT OF BEGINNING
  - ROW RIGHT OF WAY
  - EOP EDGE OF PAVEMENT
  - EX. OVERHEAD ELECTRIC
  - EX. FENCE LINE
  - SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136"
  - FOUND MONUMENT AS NOTED
  - PROPERTY LINE
  - ADJACENT PROPERTY LINE

11490 BLUEGRASS PKWY  
LOUISVILLE, KY 40299  
502-437-5252

SURVEY		
REV.	DATE	DESCRIPTION
A	7.15.16	PRELIM ISSUE W/TITLE
B	8.1.16	OLC COMMENTS
O	9.7.16	ISSUED AS FINAL

**SITE INFORMATION:**

**FULTON, KY (CRUTCHFIELD)**

1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY

**TAX PARCEL NUMBER:**  
47-15

**PROPERTY OWNER:**  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
1758 STATE ROUTE 781 N  
FULTON, KY 42041

**SOURCE OF TITLE:**  
DEED BOOK 181, PAGE 6

**VERIZON WIRELESS SITE NAME:**  
EV CRUTCHFIELD

**POD NUMBER:** 16-9168

**DRAWN BY:** RAE  
**CHECKED BY:** MEP  
**DATE:** 07.15.16

**SHEET TITLE:**  
**SITE SURVEY**

**SHEET NUMBER:**  
**B-1**

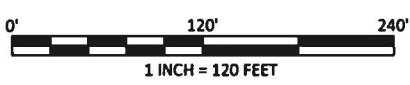
**LAND SURVEYOR'S CERTIFICATE**  
I, MARK E. PATTERSON, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY. I FURTHER CERTIFY THAT THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS BEING WITNESSED BY MONUMENTS SHOWN HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE "RURAL" SURVEY, AND THE PLAT ON WHICH IT IS BASED, MEETS ALL SPECIFICATIONS AS STATED IN KCR 201 18:150.

*Mark E. Patterson* 9-7-16  
MARK PATTERSON, PLS #3136 DATE

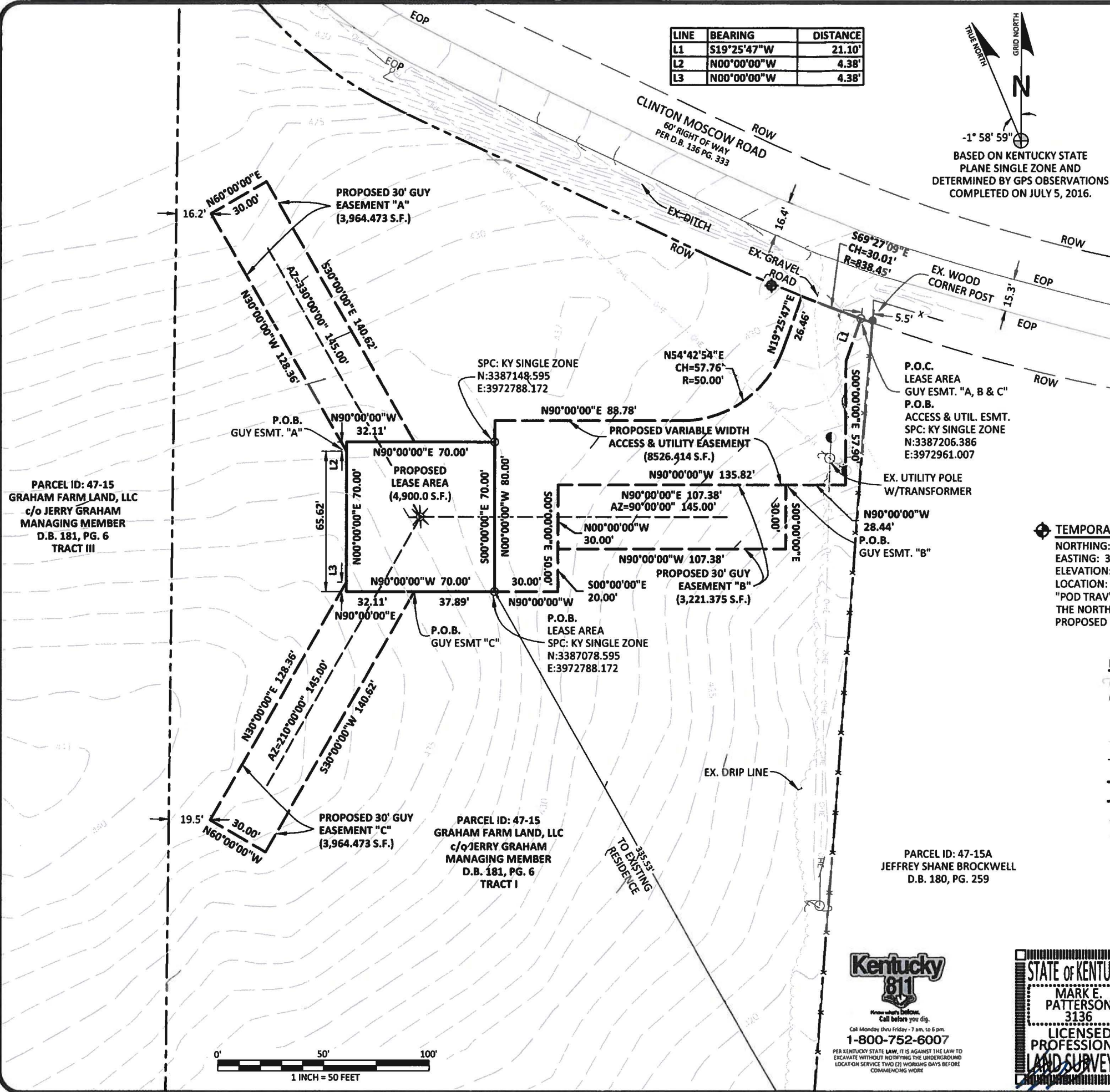


PARCEL ID: 47-15  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
D.B. 181, PG. 6  
TRACT II

PARCEL ID: 47-15  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
D.B. 181, PG. 6  
TRACT III







**GENERAL NOTES**

BASIS OF BEARING IS GPS OBSERVATIONS COMPLETED ON JULY 5, 2016.

NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED BY POD GROUP TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT PARCEL.

THIS SURVEY IS FOR THE PROPOSED LEASE AREA AND THE PROPOSED EASEMENTS ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT TRACT HAS BEEN PERFORMED.

A PORTION OF THIS SURVEY WAS CONDUCTED BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. UNADJUSTED CLOSURE EQUALS 0.07', FOR A PRECISION OF 1:39,571 AND HAS NOT BEEN ADJUSTED.

THIS PROPERTY IS SUBJECT TO ANY RECORDED EASEMENTS AND/OR RIGHTS OF WAY SHOWN HEREON OR NOT.

THIS PLAT IS NOT INTENDED FOR LAND TRANSFER.

THE PARENT PARCEL, THE PROPOSED LEASE AREA AND THE EASEMENTS ARE NOT LOCATED IN A 100-YEAR FLOOD PLAIN PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21075C0205D, DATED MAY 24, 2011. THE PARENT PARCEL IS LOCATED IN ZONE X.

**GLOBAL POSITIONING SYSTEMS NOTE**

- RANDOM TRAVERSE CONTROL MONUMENTS WERE SET USING GPS METHODS. A PORTION OF THE BOUNDARY AND TOPOGRAPHY WAS COLLECTED USING GPS METHODS.
- THE TYPE OF GPS UTILIZED WAS NETWORK ADJUSTED REAL TIME KINEMATIC (KYDOT VRS NETWORK), NAD 83 KENTUCKY SINGLE ZONE WITH THE ORTHOMETRIC HEIGHT COMPUTED USING GEOID12A. RELATIVE POSITIONAL ACCURACY VARIED FROM 0.04' TO 0.08' HORIZONTALLY.
- SPECTRA PRECISION EPOCH 50 DUAL FREQUENCY RECEIVERS WERE USED CONDUCTING THE SURVEY. SERIAL NUMBER: 5325400009

- LEGEND**
- | UTILITY POLE | GUY ANCHOR | P.O.C. | P.O.B. | ROW | EOP | EX. OVERHEAD ELECTRIC | EX. FENCE LINE | SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136" | FOUND MONUMENT AS NOTED | PROPERTY LINE | ADJACENT PROPERTY LINE |
|--------------|------------|--------|--------|-----|-----|-----------------------|----------------|---|-------------------------|---------------|------------------------|
| ○            | ●          | ○      | ○      | —   | —   | —                     | —              | —   | —                       | —             | —                      |

**TEMPORARY BENCHMARK**  
NORTHING: 3387221.80  
EASTING: 3972918.70  
ELEVATION: 431.24'  
LOCATION: SET 5/8" REBAR CAPPED "POD TRAV" N60°42'E 149.6'± FROM THE NORTHEAST CORNER OF THE PROPOSED LEASE AREA.

**FAA COORDINATE POINT**  
NAD 83  
LATITUDE: 36°34'48.40"  
LONGITUDE: 88°58'49.35"  
NAVD 88  
ELEVATION: 434'± AMSL  
NORTHING: 3387113.60  
EASTING: 3972753.17

**LEGEND**

UTILITY POLE	GUY ANCHOR	P.O.C.	P.O.B.	ROW	EOP	EX. OVERHEAD ELECTRIC	EX. FENCE LINE	SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136"	FOUND MONUMENT AS NOTED	PROPERTY LINE	ADJACENT PROPERTY LINE
○	●	○	○	—	—	—	—	—	—	—	—

**LAND SURVEYOR'S CERTIFICATE**

I, MARK E. PATTERSON, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY. I FURTHER CERTIFY THAT THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS BEING WITNESSED BY MONUMENTS SHOWN HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE "RURAL" SURVEY, AND THE PLAT ON WHICH IT IS BASED, MEETS ALL SPECIFICATIONS AS STATED IN KAR 201 18:150.

**MARK E. PATTERSON 3136 LICENSED PROFESSIONAL LAND SURVEYOR**

**MARK PATTERSON, PLS #3136**

**DATE**

**MARK PATTERSON, PLS #3136**

**DATE**



SURVEY		
REV.	DATE	DESCRIPTION
A	7.15.16	PRELIM ISSUE W/TITLE
B	8.1.16	OLC COMMENTS
O	9.7.16	ISSUED AS FINAL

SURVEY		
REV.	DATE	DESCRIPTION
A	7.15.16	PRELIM ISSUE W/TITLE
B	8.1.16	OLC COMMENTS
O	9.7.16	ISSUED AS FINAL

**SITE INFORMATION:**

**FULTON, KY (CRUTCHFIELD)**

1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY

**TAX PARCEL NUMBER:**  
47-15

**PROPERTY OWNER:**  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
1758 STATE ROUTE 781 N  
FULTON, KY 42041

**SOURCE OF TITLE:**  
DEED BOOK 181, PAGE 6

**VERIZON WIRELESS SITE NAME:**  
EV CRUTCHFIELD

**POD NUMBER:** 16-9168

**DRAWN BY:** RAE

**CHECKED BY:** MEP

**DATE:** 07.15.16

**SHEET TITLE:**

**SITE SURVEY**

**SHEET NUMBER:**

**B-1.1**



COMMITMENT FOR TITLE

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY POD GROUP, LLC. AND AS SUCH WE ARE NOT RESPONSIBLE FOR THE INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, UNRECORDED EASEMENTS, AUGMENTING EASEMENTS, IMPLIED OR PRESCRIPTIVE EASEMENTS, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE AND THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, COMMITMENT #01-16029484-01T, DATED MAY 25, 2016 AT 7:00 AM. THE FOLLOWING COMMENTS ARE IN REGARD TO SAID REPORT.

"SCHEDULE B - SECTION 2 - EXCEPTIONS"

- FACTS WHICH WOULD BE DISCLOSED BY A COMPREHENSIVE SURVEY OF THE PREMISES HEREIN DESCRIBED. (POWER OF DESIGN GROUP, LLC DID NOT PERFORM A BOUNDARY SURVEY OF THE PARENT PARCEL, THEREFORE WE CANNOT ADDRESS THIS ITEM.)
- RIGHTS OR CLAIMS OF PARTIES IN POSSESSION OR RIGHTS OF TENANTS IN POSSESSION AS TENANTS ONLY UNDER UNRECORDED LEASES. (POWER OF DESIGN GROUP, LLC DID NOT EXAMINE OR ADDRESS THIS ITEM.)
- MECHANICS', CONTRACTORS' OR MATERIAL MEN'S LIENS AND LIEN CLAIMS, IF ANY, WHERE NO NOTICE THEREOF APPEARS OF RECORD. (POWER OF DESIGN GROUP, LLC DID NOT EXAMINE OR ADDRESS THIS ITEM.)
- ANY CHANGES IN TITLE OCCURRING SUBSEQUENT TO THE EFFECTIVE DATE OF THIS COMMITMENT AND PRIOR TO THE DATE OF ISSUANCE OF THE TITLE POLICY. (POWER OF DESIGN GROUP, LLC DID NOT EXAMINE OR ADDRESS THIS ITEM.)
- TAXES AND SPECIAL ASSESSMENTS FOR CURRENT TAX YEAR DUE AND ALL SUBSEQUENT YEARS. (POWER OF DESIGN GROUP, LLC DID NOT EXAMINE OR ADDRESS THIS ITEM.)
- DELETING FROM ANY INSTRUMENT IN THE PUBLIC RECORDS REFLECTED HEREIN, ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH MATTERS VIOLATE 42 USC 3604(C). (POWER OF DESIGN GROUP, LLC DID NOT EXAMINE OR ADDRESS THIS ITEM.)

PROPOSED LEASE AREA

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED LEASE AREA TO BE LEASED FROM THE PROPERTY OF GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

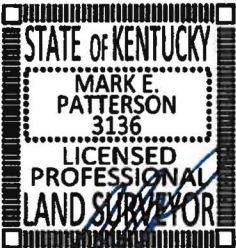
BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON JULY 5, 2016.

BEGINNING AT A SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", WITH A STATE PLANE COORDINATE, KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NORTH: 3387206.386 & EAST: 3972961.007 AND LYING ON THE SOUTHERLY RIGHT OF WAY OF CLINTON MOSCOW ROAD, WHICH HAS A 60' RIGHT OF WAY AS DESCRIBED IN DEED BOOK 136 PAGE 333 AND BEING IN THE NORTHERN LINE OF PROPERTY CONVEYED TO GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, SAID POINT BEING THE NORTHEASTERLY CORNER OF THE PROPOSED VARIABLE WIDTH ACCESS AND UTILITY EASEMENT; THENCE LEAVING SAID RIGHT OF WAY AND TRAVERSING THE LAND OF SAID GRAHAM FARM S19°25'47"W 21.10'; THENCE S00°00'00"E 57.90'; THENCE N90°00'00"W 135.82'; THENCE S00°00'00"E 50.00'; THENCE N90°00'00"W 30.00' TO A SET IPC IN THE SOUTHEAST CORNER OF THE PROPOSED LEASE AREA AND THE TRUE POINT OF BEGINNING, WITH A STATE PLANE COORDINATE, KENTUCKY SINGLE ZONE, NORTH: 3387078.595 & EAST: 3972788.172; THENCE N90°00'00"W 70.00' TO A SET IPC; THENCE N00°00'00"E 70.00' TO A SET IPC; THENCE N90°00'00"E 70.00' TO A SET IPC, HAVING A STATE PLANE COORDINATE, KENTUCKY SINGLE ZONE, NORTH: 3387148.595 & EAST: 3972788.172; THENCE S00°00'00"E 70.00' TO THE POINT OF BEGINNING CONTAINING 4,900.00 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED JULY 5, 2015.

LAND SURVEYOR'S CERTIFICATE

I, MARK E. PATTERSON, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY. I FURTHER CERTIFY THAT THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS BEING WITNESSED BY MONUMENTS SHOWN HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE "RURAL" SURVEY, AND THE PLAT ON WHICH IT IS BASED, MEETS ALL SPECIFICATIONS AS STATED IN KAR 201 18:150.

MARK PATTERSON, PLS #3136 DATE 9.7.16



PROPOSED VARIABLE WIDTH ACCESS & UTILITY EASEMENT

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED VARIABLE WIDTH ACCESS & UTILITY EASEMENT TO BE GRANTED FROM THE PROPERTY OF GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON JULY 5, 2016.

BEGINNING AT A SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", WITH A STATE PLANE COORDINATE, KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NORTH: 3387206.386 & EAST: 3972961.007 AND LYING ON THE SOUTHERLY RIGHT OF WAY OF CLINTON MOSCOW ROAD, WHICH HAS A 60' RIGHT OF WAY AS DESCRIBED IN DEED BOOK 136 PAGE 333 AND BEING IN THE NORTHERN LINE OF PROPERTY CONVEYED TO GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, SAID POINT BEING THE NORTHEASTERLY CORNER OF THE PROPOSED VARIABLE WIDTH ACCESS AND UTILITY EASEMENT; THENCE LEAVING SAID RIGHT OF WAY AND TRAVERSING THE LAND OF SAID GRAHAM FARM S19°25'47"W 21.10'; THENCE S00°00'00"E 57.90'; THENCE N90°00'00"W 135.82'; THENCE S00°00'00"E 50.00'; THENCE N90°00'00"W 30.00' TO A SET IPC IN THE SOUTHEAST CORNER OF THE PROPOSED LEASE AREA, WITH A STATE PLANE COORDINATE, KENTUCKY SINGLE ZONE, NORTH: 3387078.595 & EAST: 3972788.172; THENCE N00°00'00"W 80.00' (PASSING A SET IPC AT 70.00'); THENCE N90°00'00"E 88.78'; THENCE WITH THE CHORD OF A CURVE TO THE RIGHT HAVING A RADIUS OF 50.00', N54°42'54"E 57.76'; THENCE N19°25'47"E 26.46' TO THE SOUTHERLY RIGHT OF WAY OF CLINTON MOSCOW ROAD; THENCE WITH SAID RIGHT OF WAY WITH THE CHORD OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 838.45', S69°27'09"E 30.01' TO THE POINT OF BEGINNING, CONTAINING 8526.414 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED JULY 5, 2016.

PROPOSED 30' GUY EASEMENT "A"

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 30' GUY EASEMENT "A" TO BE GRANTED FROM THE PROPERTY OF GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON JULY 5, 2016.

BEGINNING AT A SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", WITH A STATE PLANE COORDINATE, KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NORTH: 3387206.386 & EAST: 3972961.007 AND LYING ON THE SOUTHERLY RIGHT OF WAY OF CLINTON MOSCOW ROAD, WHICH HAS A 60' RIGHT OF WAY AS DESCRIBED IN DEED BOOK 136 PAGE 333 AND BEING IN THE NORTHERN LINE OF PROPERTY CONVEYED TO GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, SAID POINT BEING THE NORTHEASTERLY CORNER OF THE PROPOSED VARIABLE WIDTH ACCESS AND UTILITY EASEMENT; THENCE LEAVING SAID RIGHT OF WAY AND TRAVERSING THE LAND OF SAID GRAHAM FARM S19°25'47"W 21.10'; THENCE S00°00'00"E 57.90'; THENCE N90°00'00"W 135.82'; THENCE S00°00'00"E 50.00'; THENCE N90°00'00"W 30.00' TO A SET IPC IN THE SOUTHEAST CORNER OF THE PROPOSED LEASE AREA, WITH A STATE PLANE COORDINATE, KENTUCKY SINGLE ZONE, NORTH: 3387078.595 & EAST: 3972788.172; THENCE N90°00'00"W 70.00' TO A SET IPC; THENCE N00°00'00"E 65.62' TO THE POINT OF BEGINNING OF THE PROPOSED 30' GUY EASEMENT "A"; THENCE N30°00'00"W 128.36'; THENCE N60°00'00"E 30.00'; THENCE S30°00'00"E 140.62' TO THE NORTH LINE OF THE PROPOSED LEASE AREA, THENCE N90°00'00"W 32.11' TO A SET IPC; THENCE S00°00'00"W 4.38' TO THE POINT OF BEGINNING, CONTAINING 3,964.473 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED JULY 5, 2015.

PROPOSED 30' GUY EASEMENT "B"

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 30' GUY EASEMENT "B" TO BE GRANTED FROM THE PROPERTY OF GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON JULY 5, 2016.

BEGINNING AT A SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", WITH A STATE PLANE COORDINATE, KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NORTH: 3387206.386 & EAST: 3972961.007 AND LYING ON THE SOUTHERLY RIGHT OF WAY OF CLINTON MOSCOW ROAD, WHICH HAS A 60' RIGHT OF WAY AS DESCRIBED IN DEED BOOK 136 PAGE 333 AND BEING IN THE NORTHERN LINE OF PROPERTY CONVEYED TO GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, SAID POINT BEING THE NORTHEASTERLY CORNER OF THE PROPOSED VARIABLE WIDTH ACCESS AND UTILITY EASEMENT; THENCE LEAVING SAID RIGHT OF WAY AND TRAVERSING THE LAND OF SAID GRAHAM FARM S19°25'47"W 21.10'; THENCE S00°00'00"E 57.90'; THENCE N90°00'00"W 28.44' TO THE TRUE POINT OF BEGINNING; THENCE S00°00'00"E 30.00'; THENCE N90°00'00"W 107.38' TO A POINT ON THE PROPOSED VARIABLE ACCESS AND UTILITY EASEMENT; THENCE N00°00'00"W ALONG AN EASTERLY LINE OF THE PROPOSED VARIABLE ACCESS AND UTILITY EASEMENT, A DISTANCE OF 30.00'; THENCE N90°00'00"E 107.38' TO THE POINT OF BEGINNING, CONTAINING 3,221.375 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED JULY 5, 2016.

PROPOSED 30' GUY EASEMENT "C"

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 30' GUY EASEMENT "C" TO BE GRANTED FROM THE PROPERTY OF GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON JULY 5, 2016.

BEGINNING AT A SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", WITH A STATE PLANE COORDINATE, KENTUCKY STATE PLANE COORDINATE SYSTEM, KENTUCKY SINGLE ZONE, NORTH: 3387206.386 & EAST: 3972961.007 AND LYING ON THE SOUTHERLY RIGHT OF WAY OF CLINTON MOSCOW ROAD, WHICH HAS A 60' RIGHT OF WAY AS DESCRIBED IN DEED BOOK 136 PAGE 333 AND BEING IN THE NORTHERN LINE OF PROPERTY CONVEYED TO GRAHAM FARM LAND, LLC c/o JERRY GRAHAM MANAGING MEMBER AS RECORDED IN DEED BOOK 181, PAGE 6, PARCEL ID: 47-15, SAID POINT BEING THE NORTHEASTERLY CORNER OF THE PROPOSED VARIABLE WIDTH ACCESS AND UTILITY EASEMENT; THENCE LEAVING SAID RIGHT OF WAY AND TRAVERSING THE LAND OF SAID GRAHAM FARM S19°25'47"W 21.10'; THENCE S00°00'00"E 57.90'; THENCE N90°00'00"W 135.82'; THENCE S00°00'00"E 50.00'; THENCE N90°00'00"W 30.00' TO A SET IPC IN THE SOUTHEAST CORNER OF THE PROPOSED LEASE AREA, WITH A STATE PLANE COORDINATE, KENTUCKY SINGLE ZONE, NORTH: 3387078.595 & EAST: 3972788.172; THENCE N90°00'00"W 37.89' TO THE POINT OF BEGINNING OF THE PROPOSED 30' GUY EASEMENT "C"; THENCE S30°00'00"W 140.62'; THENCE N60°00'00"W 30.00'; THENCE N30°00'00"E 128.36' TO A POINT ON THE WEST LINE OF THE PROPOSED LEASE AREA; THENCE S00°00'00"E 4.38'; THENCE N90°00'00"W 32.11' TO THE POINT OF BEGINNING, CONTAINING 3,964.473 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED JULY 5, 2015.



SURVEY

REV.	DATE	DESCRIPTION
A	7.15.16	PRELIM ISSUE W/TITLE
B	8.1.16	OLC COMMENTS
O	9.7.16	ISSUED AS FINAL

SITE INFORMATION:

FULTON, KY  
(CRUTCHFIELD)

1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY

TAX PARCEL NUMBER:  
47-15

PROPERTY OWNER:  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
1758 STATE ROUTE 781 N  
FULTON, KY 42041

SOURCE OF TITLE:  
DEED BOOK 181, PAGE 6

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

POD NUMBER: 16-9168  
DRAWN BY: RAE  
CHECKED BY: MEP  
DATE: 07.15.16

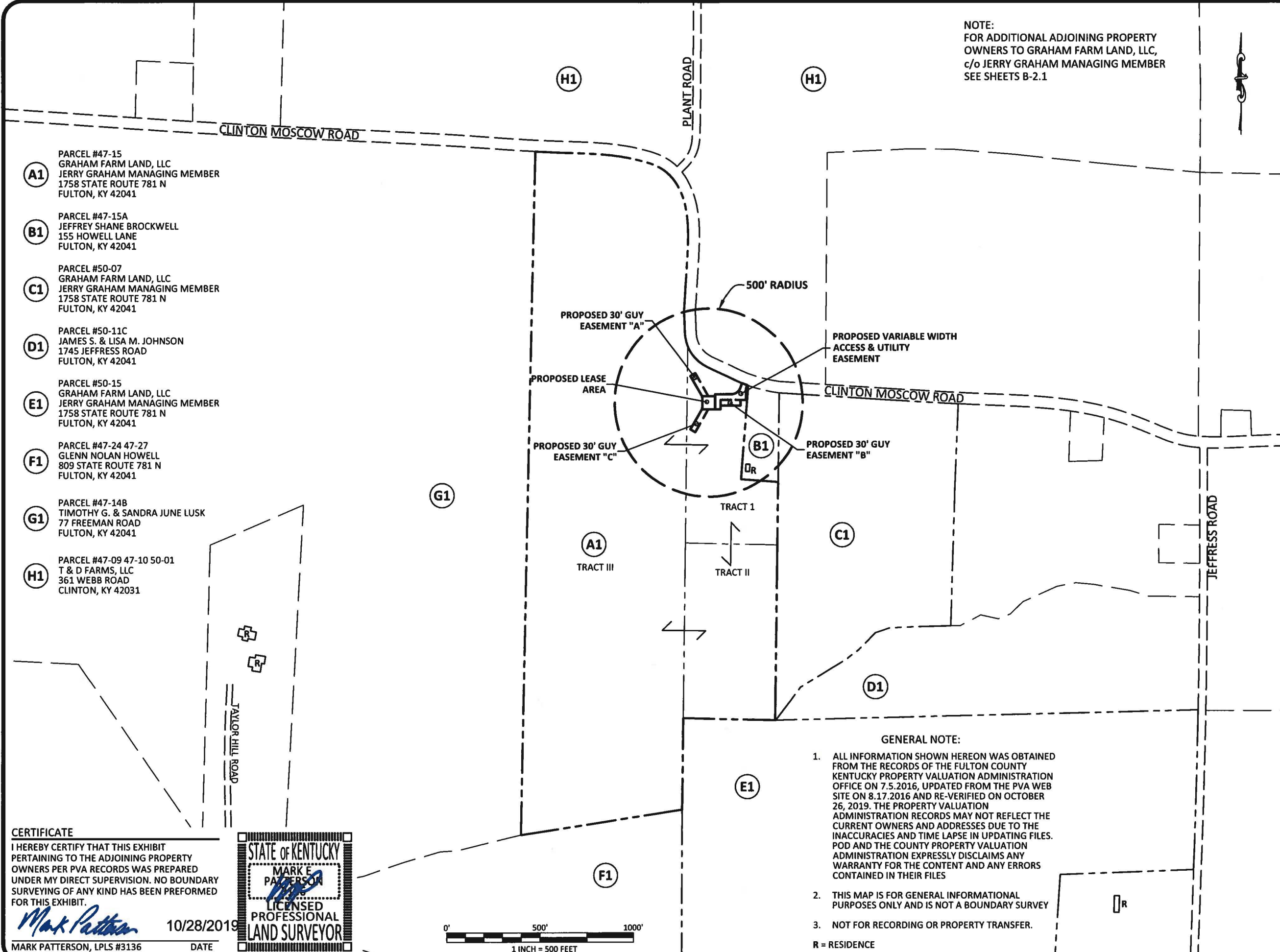
SHEET TITLE:

SITE SURVEY

SHEET NUMBER:

B-1.2





NOTE:  
FOR ADDITIONAL ADJOINING PROPERTY  
OWNERS TO GRAHAM FARM LAND, LLC,  
c/o JERRY GRAHAM MANAGING MEMBER  
SEE SHEETS B-2.1



POWER OF DESIGN  
11490 BLUEGRASS PKWY  
LOUISVILLE, KY 40299  
502-437-5252



CAPITAL  
TELECOM

EXHIBIT		
REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.26.19	UPDATED OWNER INFO

SITE INFORMATION:  
**FULTON, KY  
(CRUTCHFIELD)**  
1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY  
  
TAX PARCEL NUMBER:  
47-15  
  
PROPERTY OWNER:  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
1758 STATE ROUTE 781 N  
FULTON, KY 42041  
  
SOURCE OF TITLE:  
DEED BOOK 181, PAGE 6

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

POD NUMBER: 16-9174

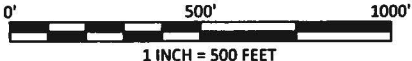
DRAWN BY: DAP  
CHECKED BY: MEP  
DATE: 8.18.16

SHEET TITLE:  
**500' RADIUS &  
ABUTTERS MAP**

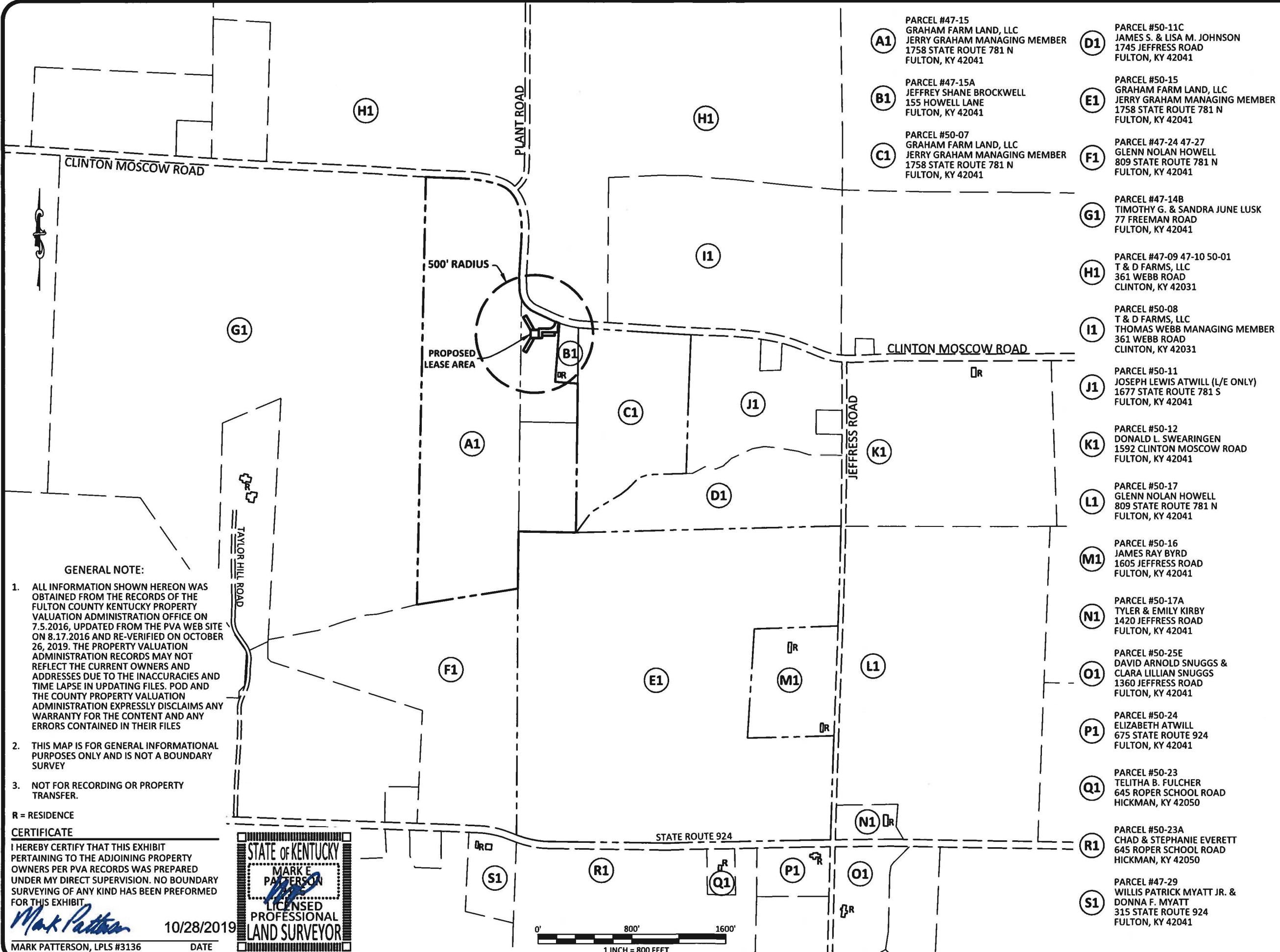
SHEET NUMBER: (2 pages)  
**B-2**

CERTIFICATE  
I HEREBY CERTIFY THAT THIS EXHIBIT  
PERTAINING TO THE ADJOINING PROPERTY  
OWNERS PER PVA RECORDS WAS PREPARED  
UNDER MY DIRECT SUPERVISION. NO BOUNDARY  
SURVEYING OF ANY KIND HAS BEEN PERFORMED  
FOR THIS EXHIBIT.  
*Mark Patterson*  
MARK PATTERSON, LPLS #3136

10/28/2019  
DATE



- GENERAL NOTE:
1. ALL INFORMATION SHOWN HEREON WAS OBTAINED FROM THE RECORDS OF THE FULTON COUNTY KENTUCKY PROPERTY VALUATION ADMINISTRATION OFFICE ON 7.5.2016, UPDATED FROM THE PVA WEB SITE ON 8.17.2016 AND RE-VERIFIED ON OCTOBER 26, 2019. THE PROPERTY VALUATION ADMINISTRATION RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE INACCURACIES AND TIME LAPSE IN UPDATING FILES. POD AND THE COUNTY PROPERTY VALUATION ADMINISTRATION EXPRESSLY DISCLAIMS ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES
  2. THIS MAP IS FOR GENERAL INFORMATIONAL PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY
  3. NOT FOR RECORDING OR PROPERTY TRANSFER.
- R = RESIDENCE



GENERAL NOTE:

- 1. ALL INFORMATION SHOWN HEREON WAS OBTAINED FROM THE RECORDS OF THE FULTON COUNTY KENTUCKY PROPERTY VALUATION ADMINISTRATION OFFICE ON 7.5.2016, UPDATED FROM THE PVA WEB SITE ON 8.17.2016 AND RE-VERIFIED ON OCTOBER 26, 2019. THE PROPERTY VALUATION ADMINISTRATION RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE INACCURACIES AND TIME LAPSE IN UPDATING FILES. POD AND THE COUNTY PROPERTY VALUATION ADMINISTRATION EXPRESSLY DISCLAIMS ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES
- 2. THIS MAP IS FOR GENERAL INFORMATIONAL PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY
- 3. NOT FOR RECORDING OR PROPERTY TRANSFER.

R = RESIDENCE

CERTIFICATE

I HEREBY CERTIFY THAT THIS EXHIBIT PERTAINING TO THE ADJOINING PROPERTY OWNERS PER PVA RECORDS WAS PREPARED UNDER MY DIRECT SUPERVISION. NO BOUNDARY SURVEYING OF ANY KIND HAS BEEN PERFORMED FOR THIS EXHIBIT.

Mark Patterson  
MARK PATTERSON, LPLS #3136

10/28/2019  
DATE



11490 BLUEGRASS PKWY  
LOUISVILLE, KY 40299  
502-437-5252

EXHIBIT

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.26.19	UPDATED OWNER INFO

SITE INFORMATION:

**FULTON, KY  
(CRUTCHFIELD)**

1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY

TAX PARCEL NUMBER:  
47-15

PROPERTY OWNER:  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
1758 STATE ROUTE 781 N  
FULTON, KY 42041

SOURCE OF TITLE:  
DEED BOOK 181, PAGE 6

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

POD NUMBER: 16-9174

DRAWN BY: DAP  
CHECKED BY: MEP  
DATE: 8.18.16

SHEET TITLE:

**500' RADIUS &  
ABUTTERS MAP**

SHEET NUMBER: (2 pages)

**B-2.1**



REVISION LOG

REV *	MM/DD/YY	SHEET NUMBER & NAME	DESCRIPTION OF REVISION
A	8/18/2016	ALL SHEETS	ISSUED FOR REVIEW
B	9/9/2016	ALL SHEETS	OLC COMMENTS
0	9/20/2016	ALL SHEETS	ISSUED AS FINAL
1	10/28/2019	ALL SHEETS	UPDATED STANDARDS



ZONING  
DRAWINGS

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

SITE INFORMATION:

FULTON, KY  
(CRUTCHFIELD)  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

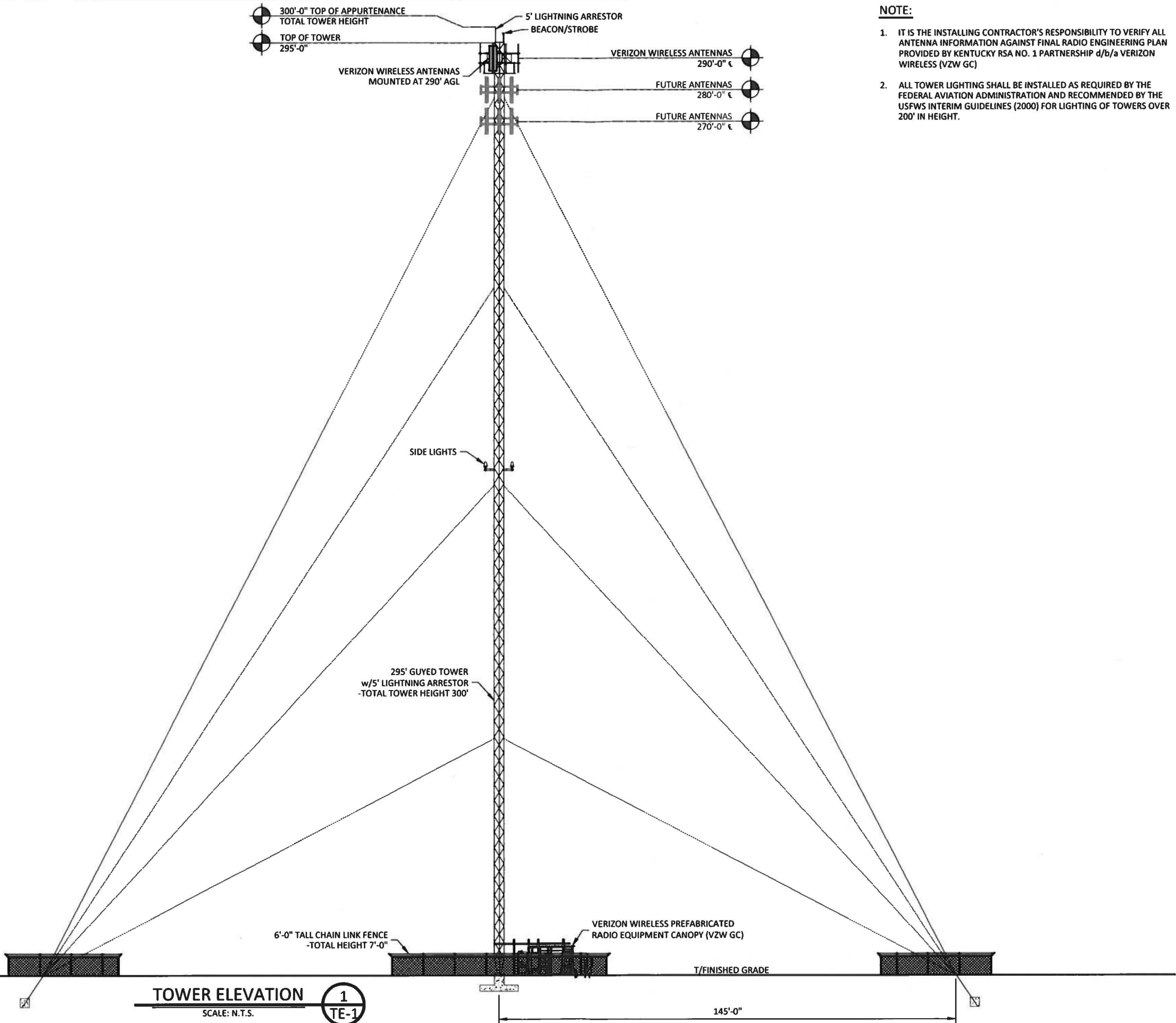
POD NUMBER: 19-46733

DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17


SHEET TITLE:

REVISION LOG


SHEET NUMBER:  
R-1



- NOTE:**
1. IT IS THE INSTALLING CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL RADIO ENGINEERING PLAN PROVIDED BY KENTUCKY RSA NO. 1 PARTNERSHIP d/b/a VERIZON WIRELESS (VZW GC)
  2. ALL TOWER LIGHTING SHALL BE INSTALLED AS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION AND RECOMMENDED BY THE USFWS INTERIM GUIDELINES (2000) FOR LIGHTING OF TOWERS OVER 200' IN HEIGHT.




**POD**  
POWER OF DESIGN  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
502-437-5252



**CAPITAL**  
TELECOM  
1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960

10/28/2019



MARK E. PATTERSON  
16300  
PROFESSIONAL ENGINEER

EN PERMIT: 3594

**ZONING  
DRAWINGS**

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

SITE INFORMATION:

**FULTON, KY  
(CRUTCHFIELD)**  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

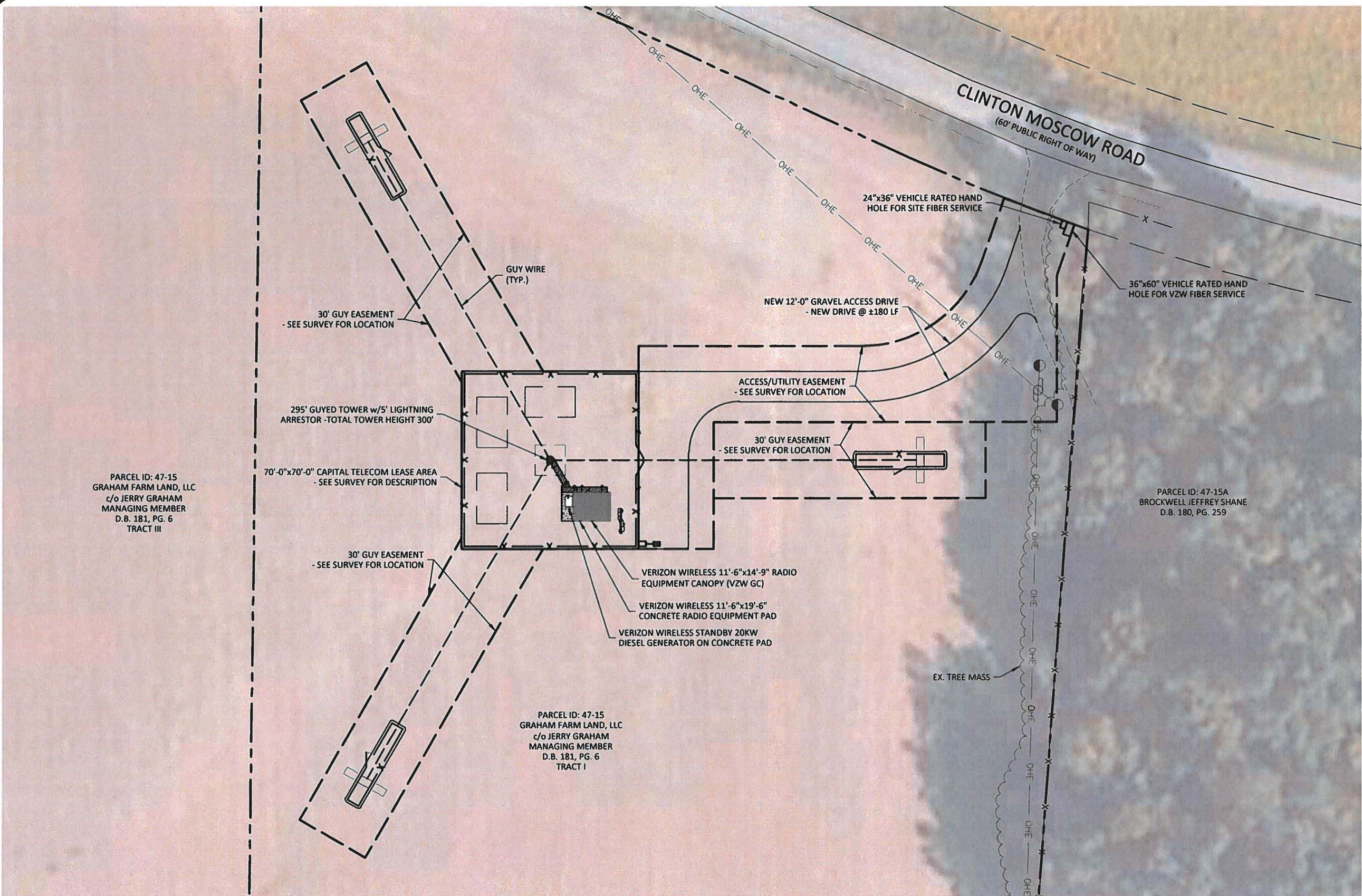
POD NUMBER: 19-46733

DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

SHEET TITLE:  
**TOWER ELEVATION**

SHEET NUMBER:  
**TE-1**








POWER OF DESIGN  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
502-437-5252



CAPITAL  
TELECOM  
1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960

10/28/2019



EN PERMIT: 3594

ZONING  
DRAWINGS

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

SITE INFORMATION:  
  
FULTON, KY  
(CRUTCHFIELD)  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD


POD NUMBER: 19-46733

DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

SHEET TITLE:

OVERALL SITE PLAN  
W/AERIAL OVERLAY

SHEET NUMBER:  
C-1



Know what's below.  
Call before you dig.  
Call Monday thru Friday - 7 am. to 6 pm.  
1-800-752-6007

PER KENTUCKY STATE LAW, IT IS AGAINST THE LAW TO  
EXCAVATE WITHOUT NOTICING THE JURISDICTIONAL  
LOCATION SERVICE TWO (2) WORKING DAYS BEFORE  
COMMENCING WORK.

OVERALL SITE PLAN w/AERIAL OVERLAY  
SCALE: 1" = 40'







POWER OF DESIGN  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
502-437-5252



1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960

10/28/2019



EN PERMIT: 3594

ZONING DRAWINGS		
REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

SITE INFORMATION:

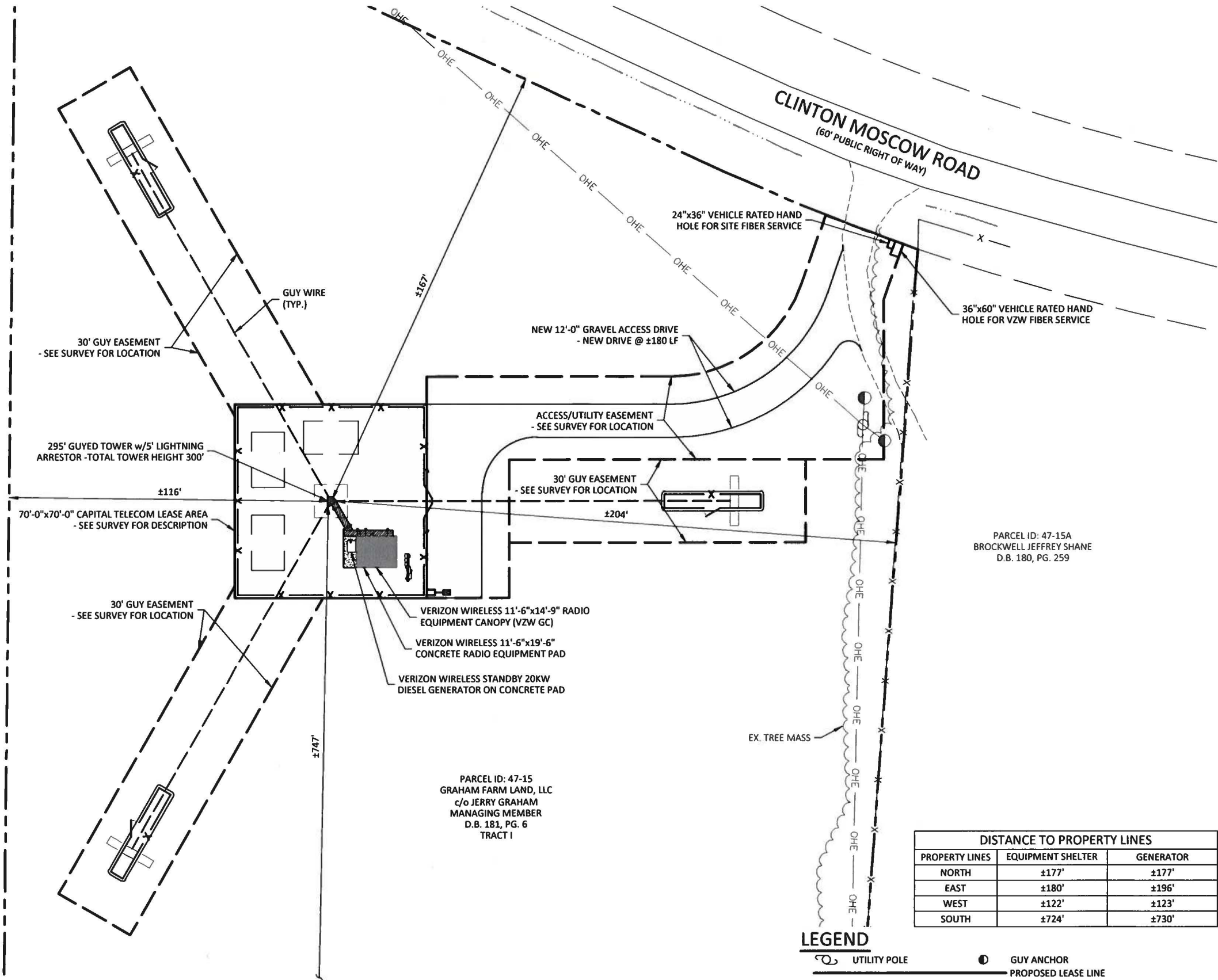
**FULTON, KY  
(CRUTCHFIELD)**  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
**EV CRUTCHFIELD**

POD NUMBER: 19-46733  
DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

SHEET TITLE:  
**OVERALL SITE PLAN  
W/DISTANCE TO  
PROPERTY LINES**

SHEET NUMBER:  
**C-1A**



DISTANCE TO PROPERTY LINES		
PROPERTY LINES	EQUIPMENT SHELTER	GENERATOR
NORTH	±177'	±177'
EAST	±180'	±196'
WEST	±122'	±123'
SOUTH	±724'	±730'

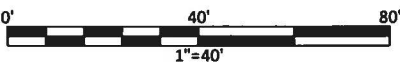
LEGEND

- UTILITY POLE
- GUY ANCHOR
- PROPOSED LEASE LINE
- PROPOSED EASEMENT
- PROPOSED GRAVEL
- PROPOSED FENCE
- EXISTING GRAVEL
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING PAVEMENT
- EXISTING DITCH LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE



OVERALL SITE PLAN w/DISTANCE TO PROPERTY LINES

SCALE: 1" = 40'



Know what's below.  
Call before you dig.  
Call Monday thru Friday - 7 am. to 6 pm.  
1-800-752-6007

FOR KENTUCKY STATE LAW, IT IS AGAINST THE LAW TO  
EXCAVATE WITHOUT NOTIFYING THE JURISDICTION D  
LOCATION SERVICE TWO (2) WORKING DAYS BEFORE  
COMMENCING WORK.

PARCEL ID: 47-15  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
D.B. 181, PG. 6  
TRACT III

70'-0"x70'-0" CAPITAL TELECOM LEASE AREA  
- SEE SURVEY FOR DESCRIPTION

VERIZON WIRELESS STANDBY 20KW  
DIESEL GENERATOR ON CONCRETE PAD  
30' GUY EASEMENT  
- SEE SURVEY FOR LOCATION

PARCEL ID: 47-15  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
D.B. 181, PG. 6  
TRACT I

VERIZON WIRELESS 11'-6"x14'-9" RADIO  
EQUIPMENT CANOPY (VZW GC)  
VERIZON WIRELESS 11'-6"x19'-6"  
CONCRETE RADIO EQUIPMENT PAD

GENERAL CONTRACTOR SHALL INSTALL  
NEW 12'-0" GRAVEL ACCESS DRIVE  
- NEW DRIVE @ ±180 LF

ACCESS/UTILITY EASEMENT  
- SEE SURVEY FOR LOCATION

30' GUY EASEMENT  
- SEE SURVEY FOR LOCATION

EX. TREE MASS

PARCEL ID: 47-15A  
BROCKWELL JEFFREY SHANE  
D.B. 180, PG. 259

CLINTON MOSCOW ROAD  
(60' PUBLIC RIGHT OF WAY)

24"x36" VEHICLE RATED HAND  
HOLE FOR SITE FIBER SERVICE

36"x60" VEHICLE RATED HAND  
HOLE FOR VZW FIBER SERVICE

LEGEND

- UTILITY POLE
- GUY ANCHOR
- PROPOSED LEASE LINE
- PROPOSED EASEMENT
- PROPOSED GRAVEL
- PROPOSED FENCE
- EXISTING GRAVEL
- EXISTING FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING PAVEMENT
- EXISTING DITCH LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE

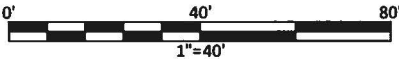
TOWER DISTANCE TO RESIDENTIAL STRUCTURES

SCALE: 1" = 40'



Call Monday thru Friday - 7 am. to 6 pm.  
1-800-752-6007

FOR KENTUCKY STATE LAW, IT IS AGAINST THE LAW TO  
EXCAVATE WITHOUT IDENTIFYING THE JUDICIAL GROUP D  
LOCATION SERVICE TWO (2) WORKING DAYS BEFORE  
COMMENCING WORK.



**POD**  
POWER OF DESIGN  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
502-437-5252

**CAPITAL**  
TELECOM  
1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960

10/28/2019



EN PERMIT: 3594

ZONING  
DRAWINGS

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
O	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

SITE INFORMATION:

**FULTON, KY  
(CRUTCHFIELD)**  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
**EV CRUTCHFIELD**

POD NUMBER: 19-46733

DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

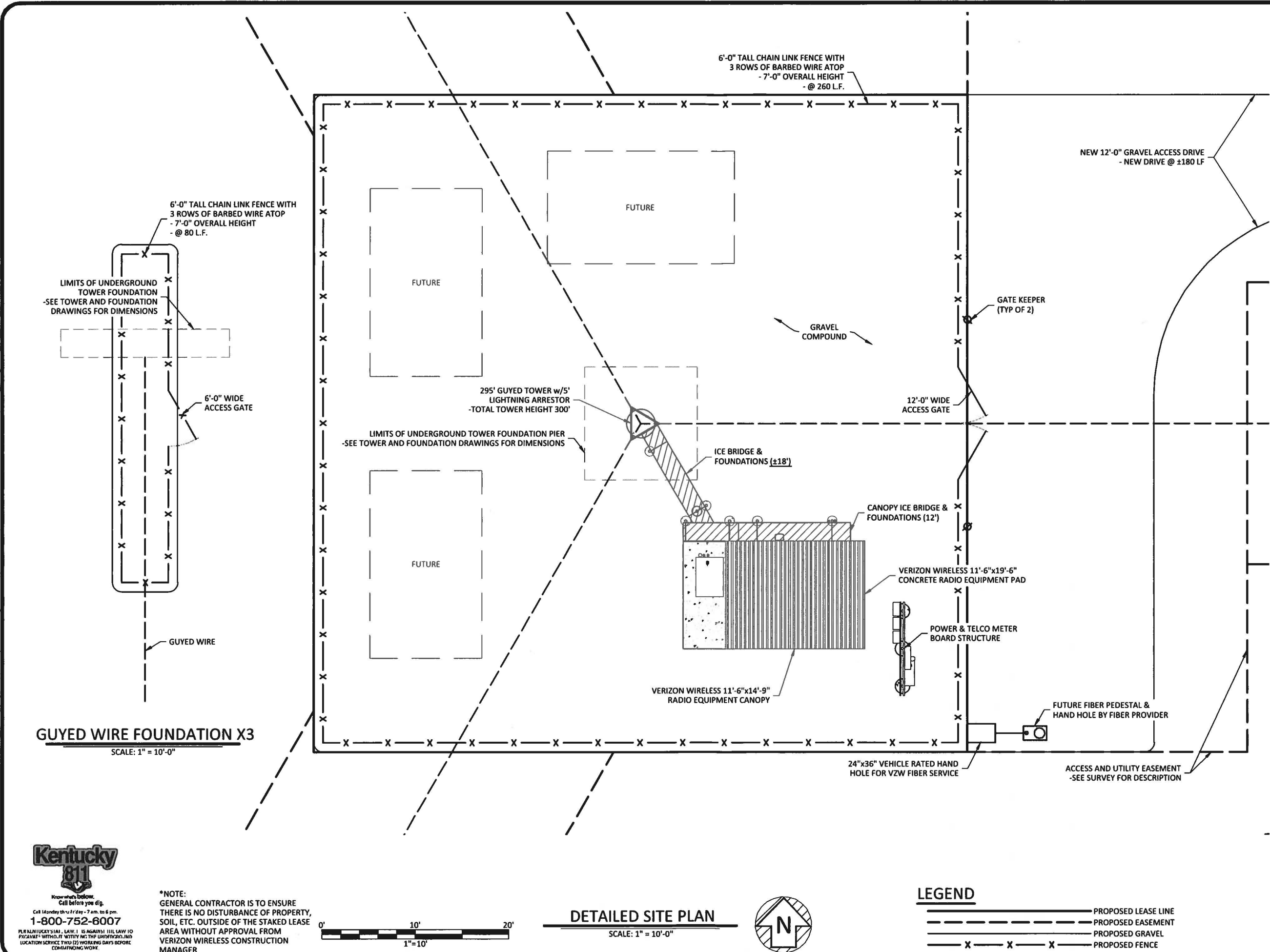
SHEET TITLE:

**TOWER DISTANCE  
TO RESIDENTIAL  
STRUCTURES**

SHEET NUMBER:

**C-1B**





**POD**  
POWER OF DESIGN  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
502-437-5252

**CAPITAL**  
TELECOM  
1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960

10/28/2019

STATE OF KENTUCKY

MARK E. PATTERSON  
16,380

PROFESSIONAL ENGINEER

EN PERMIT: 3594

**ZONING**  
**DRAWINGS**

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
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SITE INFORMATION:

**FULTON, KY**  
**(CRUTCHFIELD)**  
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FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
**EV CRUTCHFIELD**

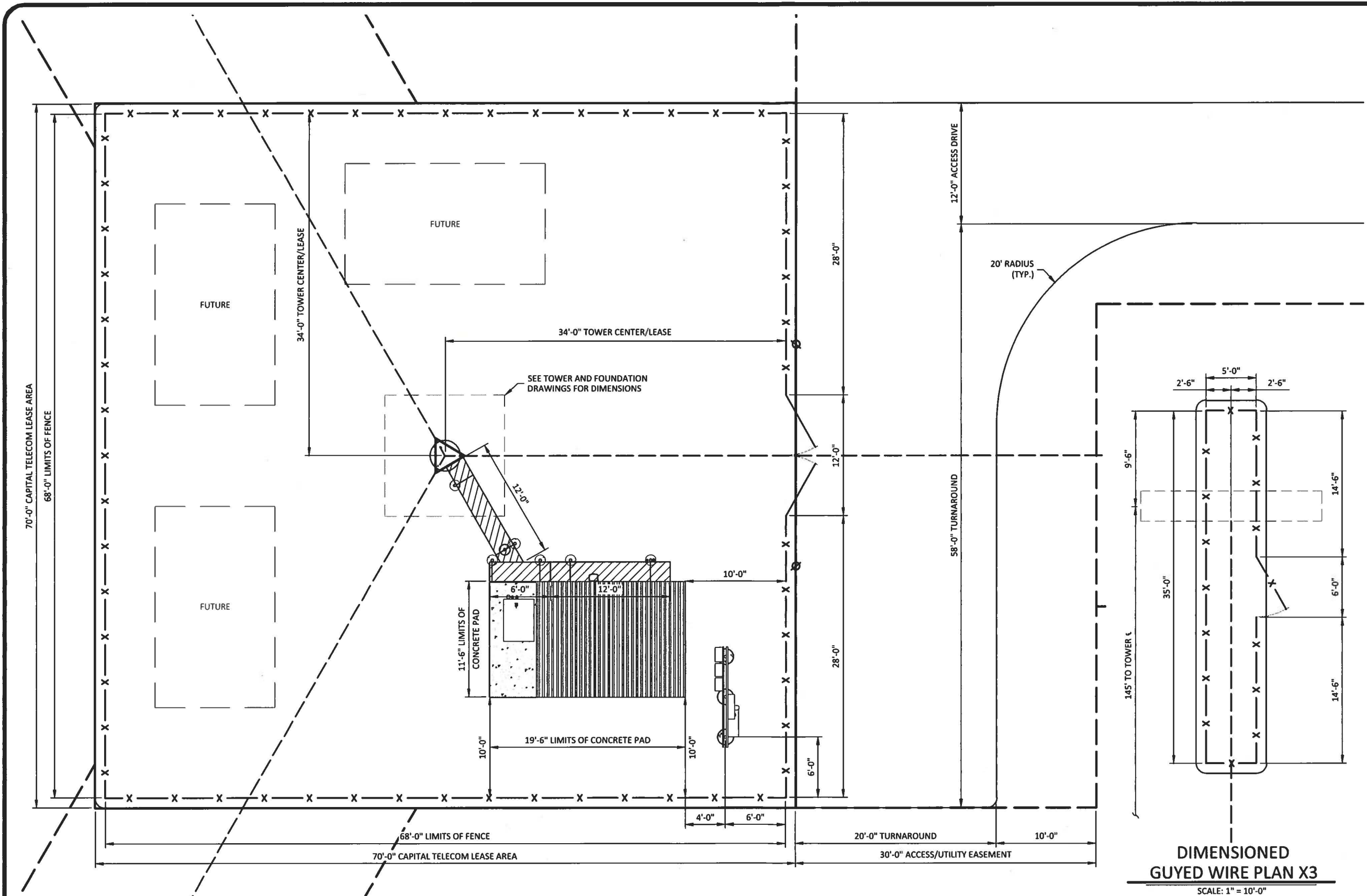
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DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

SHEET TITLE:

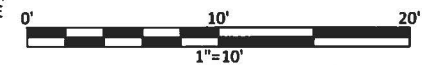
**DETAILED SITE PLAN**

SHEET NUMBER:  
**C-3**



Know what's below.  
Call before you dig.  
1-800-752-6007  
FOR KENTUCKY'S 811 LAW, 1 IS AGAINST THE LAW TO EXCAVATE WITHOUT IT. NOTIFY AND THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

\*NOTE:  
GENERAL CONTRACTOR IS TO ENSURE  
THERE IS NO DISTURBANCE OF PROPERTY,  
SOIL, ETC. OUTSIDE OF THE STAKED LEASE  
AREA WITHOUT APPROVAL FROM  
VERIZON WIRELESS CONSTRUCTION  
MANAGER



**DIMENSIONED SITE PLAN**  
SCALE: 1" = 10'-0"



**LEGEND**

- PROPOSED LEASE LINE
- - - PROPOSED EASEMENT
- x - x - x PROPOSED GRAVEL
- x - x - x PROPOSED FENCE

**POD**  
POWER OF DESIGN  
11490 BLUEGRASS PARKWAY  
LOUISVILLE, KY 40299  
502-437-5252

**CAPITAL**  
TELECOM  
1500 MT KEMBLE AVENUE  
SUITE 203  
MORRISTOWN, NJ 07960

10/28/2019  
**STATE OF KENTUCKY**  
MARK E. PATTERSON  
16300  
PROFESSIONAL ENGINEER

EN PERMIT: 3594

**ZONING  
DRAWINGS**

REV.	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
0	9.20.16	ISSUED AS FINAL
1	10.28.19	UPDATED STANDARDS

SITE INFORMATION:  
**FULTON, KY  
(CRUTCHFIELD)**  
1311 CLINTON MOSCOW RD  
FULTON, KY 42041  
FULTON COUNTY

VERIZON WIRELESS SITE NAME:  
**EV CRUTCHFIELD**

POD NUMBER: 19-46733  
DRAWN BY: POD  
CHECKED BY: MEP  
DATE: 01.17.17

SHEET TITLE:  
**DIMENSIONED SITE  
PLAN**

SHEET NUMBER:  
**C-4**

**DIMENSIONED  
GUYED WIRE PLAN X3**  
SCALE: 1" = 10'-0"

**EXHIBIT C**  
**TOWER AND FOUNDATION DESIGN**



1 Fairholm Avenue  
Peoria, IL 61603 USA  
Phone 309-566-3000  
FAX 309-566-3079

September 29, 2016

Pike Legal Group  
Attn: David A Pike  
1578 Highway 44 Est  
Suite 6  
Shepherdsville, KY. 40165

Capital Telecom Holding  
Attn: Erick Hamilton-Jones  
1500 Mountain Kimble Avenue  
Suite 203  
Morristown, NJ. 07960

Reference: EV Clutchfield, Fulton County, KY.  
295' no 80 Guyed Tower

File Number: 216991

Enclosed, please find the following for your use:

<u>Copies</u>	<u>Drawing Number</u>	<u>Description</u>
2	216991-01-D1	Design Drawing Sealed for the State of Kentucky
2	216991-01-F1	Base Pier Foundation Sealed for the State of Kentucky
2	216991-01-F2	Anchor Block Foundation Sealed for the State of Kentucky

Contact Phone Number: 502 955 4400 973 425 0606

Email Also: [ehamilton-jones@capitaltelecom.com](mailto:ehamilton-jones@capitaltelecom.com)  
[dpik@pikelegal.com](mailto:dpik@pikelegal.com)

Sincerely,

Ray Adams  
Ken Cordrey

crp

Products for a Growing World of Technology®



1 Fairholm Avenue  
Peoria, IL 61603 USA  
Phone: (309)-566-3000  
Fax: (309)-566-3079

**DATE:** SEPTEMBER 28, 2016

**PURCHASER:** CAPITAL TELECOM HOLDING

**PROJECT:** 295 FT MODEL 80 GUYED MAST  
EV CRUTCHFIELD, KENTUCKY

**FILE NUMBER:** 216991

**DRAWINGS:** 216991-01-D1 R1 , 216991-01-F1, 216991-01-F2

I CERTIFY THAT THE REFERENCED DRAWINGS WERE PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE DESIGN AND LOADING CRITERIA SPECIFIED BY THE PURCHASER AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**CERTIFIED BY:** \_\_\_\_\_

**DATE:** \_\_\_\_\_



***Products for a Growing World of Technology®***





TOWER DESIGN LOADING		
DESIGN WIND LOAD PER ANSI/TIA-222-G USING THE FOLLOWING DESIGN CRITERIA: BASIC WIND SPEED (NO ICE): 115 MPH ULTIMATE WIND SPEED PER ASCE 7-10 BASIC WIND SPEED (W/ ICE): 30 MPH DESIGN ICE THICKNESS: 1 IN EXPOSURE CATEGORY: C STRUCTURE CLASSIFICATION: II TOPOGRAPHIC CATEGORY: I EARTHQUAKE SPECTRAL RESPONSE ACCELERATION, S <sub>s</sub> : 1.38 THIS TOWER IS DESIGNED TO SUPPORT THE FOLLOWING LOADS:		
ELEVATION (FT)	ANTENNA TYPE	LINE SIZE (NOM)
TOP	LIGHTS & LIGHTNING ROD	(1) 3/4" CONDUIT
290	(6)HT4C6318R000 PANELS, (6)WWX063X19D00 PANELS, (6)AIR 32 PANELS, (6)RRUS B13, (6)RRUS B13 A2, (6)RRUS12 B4, (6)RRUS12 B4 A2, &(4)RHSDC-3315-PF ON LEG SECTOR FRAMES	(18) 1-5/8"
280	(6)HT4C6318R000 PANELS, (6)WWX063X19D00 PANELS, (6)AIR 32 PANELS, (6)RRUS B13, (6)RRUS B13 A2, (6)RRUS12 B4, (6)RRUS12 B4 A2, &(4)RHSDC-3315-PF ON LEG SECTOR FRAMES	(18) 1-5/8"
270	(9)800 10866 PANELS &(9)RRUS11 ON LEG SECTOR FRAMES	(9) 1-5/8"

MAXIMUM FACTORED REACTIONS		
AT	VERTICAL (+↑)	HORIZONTAL (+→)
BASE = 0.0 FT	375.3 KIPS	2.3 KIPS
145.0 FT	-98.2 KIPS	66.6 KIPS

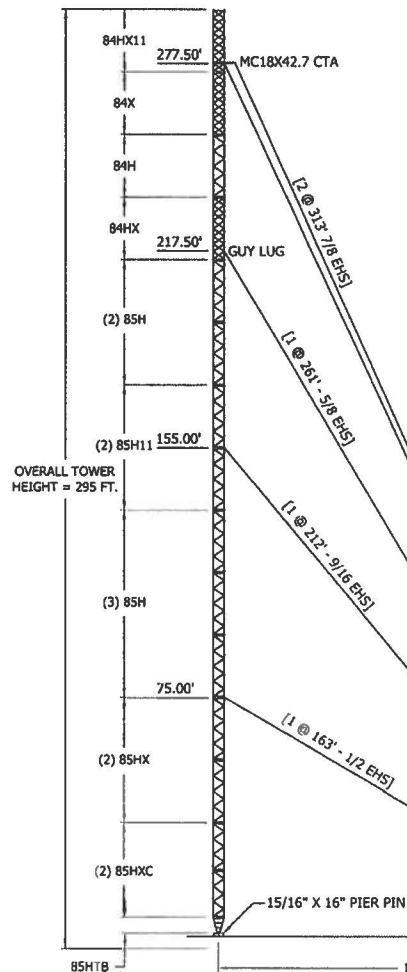
GUY WIRE DATA			
ELEVATION (FT)	SIZE (IN)	TYPE	ULTIMATE STRENGTH (LBS)
75	1/2	EHS	26,900
155	9/16	EHS	35,000
217.5	5/8	EHS	42,400
277.5	7/8	EHS	79,700

#### GENERAL NOTES:

- ROHN PRODUCTS, LLC TOWER DESIGNS CONFORM TO ANSI/TIA-222-G UNLESS OTHERWISE SPECIFIED UNDER TOWER DESIGN LOADING.
- THE DESIGN LOADING CRITERIA INDICATED HAS BEEN PROVIDED TO ROHN. THE DESIGN LOADING CRITERIA HAS BEEN ASSUMED TO BE BASED ON SITE-SPECIFIC DATA IN ACCORDANCE WITH ANSI/TIA-222-G AND MUST BE VERIFIED BY OTHERS PRIOR TO INSTALLATION.
- ANTENNAS AND LINES LISTED IN TOWER DESIGN LOADING TABLE ARE PROVIDED BY OTHERS UNLESS OTHERWISE SPECIFIED.
- TOWER MEMBER DESIGN DOES NOT INCLUDE STRESSES DUE TO ERECTION SINCE ERECTION EQUIPMENT AND CONDITIONS ARE UNKNOWN. DESIGN ASSUMES COMPETENT AND QUALIFIED PERSONNEL WILL ERECT THE TOWER.
- WORK SHALL BE IN ACCORDANCE WITH ANSI/TIA-222-G, "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
- THE MINIMUM YIELD STRENGTH OF STRUCTURAL STEEL MEMBERS SHALL BE 50 KSI, EXCEPT AS NOTED BELOW:  
TOWER BRACES SHALL BE 42 KSI.  
STRUCTURAL PLATES AND CHANNEL TORQUE ARMS SHALL BE 36 KSI.
- FIELD CONNECTIONS SHALL BE BOLTED. NO FIELD WELDS SHALL BE ALLOWED.
- STRUCTURAL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT WHERE NOTED.
- PAL NUTS ARE PROVIDED FOR ALL TOWER BOLTS.
- STRUCTURAL STEEL AND CONNECTION BOLTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ANSI/TIA-222-G.
- ALL HIGH STRENGTH BOLTS ARE TO BE TIGHTENED TO A "SNUGTIGHT CONDITION" AS DEFINED IN THE JUNE 23, 2000, AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". NO OTHER MINIMUM BOLT TENSION OR TORQUE VALUES ARE REQUIRED.
- PURCHASER SHALL VERIFY THE INSTALLATION IS IN CONFORMANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR OBSTRUCTION MARKING AND LIGHTING.
- TOLERANCE ON TOWER STEEL HEIGHT IS EQUAL TO PLUS 1% OR MINUS 1/2%.
- DESIGN ASSUMES THAT, AS A MINIMUM, MAINTENANCE AND INSPECTION WILL BE PERFORMED OVER THE LIFE OF THE STRUCTURE IN ACCORDANCE WITH ANSI/TIA-222-G.
- DESIGN ASSUMES LEVEL GRADE AT TOWER SITE.
- IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO TEMPORARILY GUY THE STRUCTURE WHEN REQUIRED DURING ERECTIONS TO MAINTAIN THE STABILITY OF THE STRUCTURE AND TO PREVENT OVERLOADING ANY MEMBER OF THE STRUCTURE.
- FOUNDATIONS SHALL BE DESIGNED TO SUPPORT THE REACTIONS SHOWN FOR THE CONDITIONS EXISTING AT THE SITE..

SECTION MAIN MEMBER SCHEDULE				
ELEVATION (FT)	SECTION	LEG	DIAGONAL	HORIZONTAL
0 - 5	85HTB	PIPE 3.500 X 0.437	-	-
5 - 35	85HXC	PIPE 3.500 X 0.300	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
35 - 75	85HX	PIPE 3.500 X 0.300	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
75 - 135	85H	PIPE 3.500 X 0.300	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
135 - 175	85H11	PIPE 3.500 X 0.300	PIPE 1.500 X 0.120	PIPE 1.500 X 0.120
175 - 215	85H	PIPE 3.500 X 0.300	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
215 - 235	84HX	PIPE 2.875 X 0.276	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
235 - 255	84H	PIPE 2.875 X 0.276	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
255 - 275	84X	PIPE 2.875 X 0.203	PIPE 1.500 X 0.058	PIPE 1.500 X 0.058
275 - 295	84HX11	PIPE 2.875 X 0.276	PIPE 1.500 X 0.120	PIPE 1.500 X 0.120

NOTE: SECTION NUMBERS ARE FOR REFERENCE ONLY.  
FOR NOMINAL FACE WIDTH DIMENSIONS, REFER TO THE STRESS ANALYSIS.



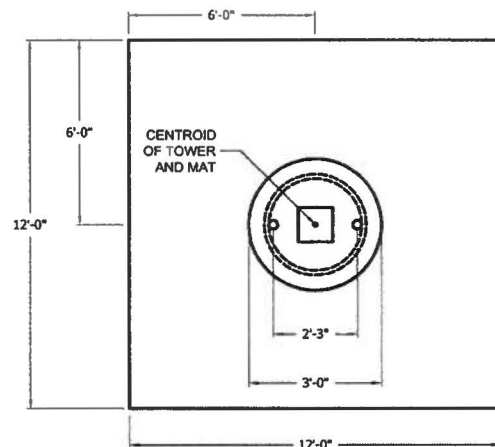
FOR BASE PIER DETAILS  
SEE SITE-SPECIFIC DRAWING

ELEVATION VIEW

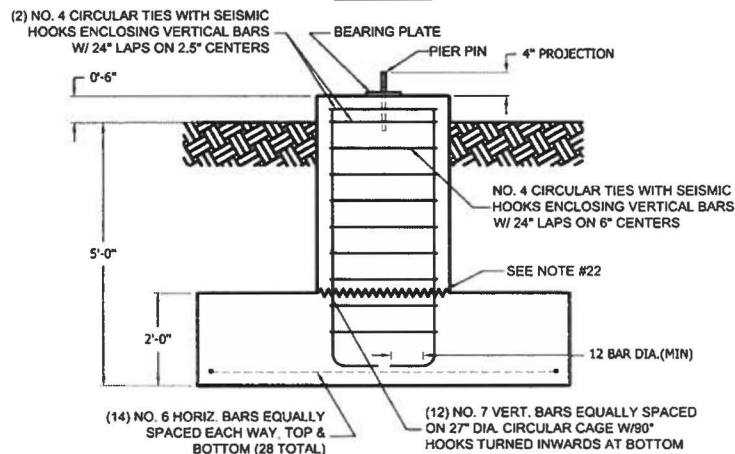
(2)L4X4X3/8 (BACK TO BACK)  
X 20" LONG ANCHOR RODS  
H=8.1  
V=12

FOR ANCHOR BLOCK FOUNDATION  
DETAILS SEE SITE-SPECIFIC DRAWING

FILE NO. 216991				
REVISIONS				
REV.	DESCRIPTION	DWN	CHK	APP
1	ALYSED TOWER DESIGN	DWG	HA	HA
DATE: 09/28/16				
<div style="text-align: center;"> <p>ROHN PRODUCTS, LLC</p> <p>PO BOX 5999 PEORIA, IL 61601-5999 TOLL FREE 800-727-ROHN</p> </div> <p>THIS DRAWING IS THE PROPERTY OF ROHN. IT IS NOT TO BE REPRODUCED, COPIED OR TRACED IN WHOLE OR IN PART WITHOUT OUR WRITTEN CONSENT.</p> <p>CAPITAL TELECOM HOLDING 295 FT. MODEL 80 GUYED TOWER</p> <p>EV CRUTCHFIELD, KY</p>				
DWN:	DWG	CHKD:	HA	DATE: 02/07/16
ENG'R:	HA	SHEET # 1 OF 1		
PRJ. ENGR:	DWG	PRJ. MGR:		
DRAWING NO: 216991-01-D1				REV. 1



**PLAN VIEW**



**ELEVATION VIEW**

**FACTORED REACTIONS**

DOWNLOAD = 375.3 KIPS  
SHEAR = 2.3 KIPS


**CONCRETE VOLUME (cu.yds)**

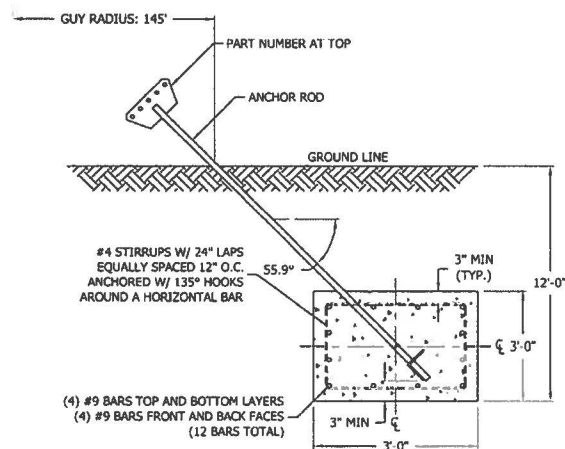
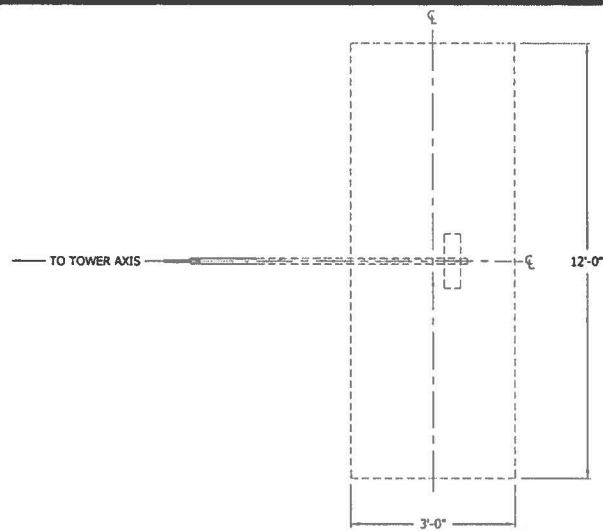
PIER 0.9  
PAD 10.7  
TOTAL 11.6

**GENERAL NOTES**

- FOUNDATION DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PROVIDED. FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT THE FOLLOWING DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED.
  - ULTIMATE SOIL BEARING PRESSURE AT 5 FT DEPTH = 6,000 PSF.  
ALLOWABLE SOIL BEARING PRESSURE AT 5 FT DEPTH = 3,000 PSF.
  - GROUND WATER TABLE IS AT OR BELOW FOUNDATION DEPTH.
  - MAXIMUM FROST PENETRATION DEPTH LESS THAN FOUNDATION DEPTH.
- WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, SAFETY REGULATIONS AND UNLESS OTHERWISE NOTED, THE LATEST REVISION OF ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.
- CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE STATE REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
- PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR RESISTANCE TO LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. AS A MINIMUM, CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI (31.0 MPa) IN 28 DAYS.
- MAXIMUM SIZE OF AGGREGATE SHALL NOT EXCEED SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR 1/3 CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING. MAXIMUM SIZE MAY BE INCREASED TO 2/3 CLEAR DISTANCE PROVIDED WORKABILITY AND METHODS OF CONSOLIDATION SUCH AS VIBRATING WILL PREVENT HONEYCOMBS OR VOIDS.
- REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED. SPLICES IN REINFORCEMENT SHALL NOT BE ALLOWED UNLESS OTHERWISE INDICATED.
- WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
- MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES (76 MM) UNLESS OTHERWISE NOTED. APPROVED SPACERS SHALL BE USED TO INSURE A 3 INCH (76 MM) MINIMUM COVER ON REINFORCEMENT.
- CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 3 INCHES (76MM) NOR BE LESS THAN 2 INCHES (51MM).
- FOUNDATION DESIGN ASSUMES STRUCTURAL BACKFILL TO BE COMPACTED IN 8 INCH (200 MM) MAXIMUM LAYERS TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. ADDITIONALLY, STRUCTURAL BACKFILL MUST HAVE A MINIMUM COMPACTED UNIT WEIGHT OF 110 POUNDS PER CUBIC FOOT (17 KN/M<sup>3</sup>).
- FOUNDATION DESIGN HAS BEEN BASED ON GEOTECHNICAL REPORT NO. 16-9169 DATED 09/14/16 BY POWER OF DESIGN GROUP, LLC.
- FOUNDATION DEPTH INDICATED IS BASED ON THE GRADE LINE DESCRIBED IN THE REFERENCED GEOTECHNICAL REPORT. FOUNDATION MODIFICATION MAY BE REQUIRED IN THE EVENT CUT OR FILL OPERATIONS HAVE TAKEN PLACE SUBSEQUENT TO THE GEOTECHNICAL INVESTIGATION.
- FOUNDATION DESIGN ASSUMES LEVEL GRADE AT STRUCTURE SITE.
- FOUNDATION DESIGN ASSUMES THE RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT CONCERNING VERIFICATION OF SUBSURFACE CONDITIONS ARE IMPLEMENTED PRIOR TO PLACEMENT OF CONCRETE.
- FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITH THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED INSTALLATION PRACTICES.
- FOUNDATION DESIGN ASSUMES INSTALLATION PROCEDURES WILL INCORPORATE THE PROCEDURES RECOMMENDED IN THE REFERENCED GEOTECHNICAL REPORT.
- FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
- FOR FOUNDATION AND ANCHOR TOLERANCES SEE DRAWING A810214.
- LOOSE MATERIAL SHALL BE REMOVED FROM BOTTOM OF EXCAVATION PRIOR TO CONCRETE PLACEMENT. SIDES OF EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
- CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL AND OTHER OCCURRENCES WHICH MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
- CONCRETE PREFERABLY SHALL BE PLACED AGAINST UNDISTURBED SOIL. WHEN FORMS ARE NECESSARY, THEY SHALL BE REMOVED PRIOR TO PLACING STRUCTURAL BACKFILL.
- CONSTRUCTION JOINTS, IF REQUIRED AT THE BASE OF THE PIERS, MUST BE INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4 INCH (6 MM). FOUNDATION DESIGN ASSUMES NO OTHER CONSTRUCTION JOINTS.
- TOP OF FOUNDATION OUTSIDE LIMITS OF ANCHOR BOLTS SHALL BE SLOPED TO DRAIN WITH A FLOATED FINISH. AREA INSIDE LIMITS OF ANCHOR BOLTS SHALL BE LEVEL WITH A SCRATCHED FINISH.
- EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" X 3/4" (19MM X 19MM) MINIMUM.

NOTE: SEE STRUCTURE ASSEMBLY DRAWING FOR FOUNDATION LAYOUT AND ANCHORAGE EMBEDMENT DRAWING NUMBER.

FILE NO.		216991	
REVISIONS			
REV	DESCRIPTION	DWN	CHK APP
 PO BOX 5999 PEORIA, IL 61601-5999 TOLL FREE 800-727-ROHN			
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CAPITAL TELECOM HOLDING BASE PIER FOUNDATION			
EV CRUTCHFIELD, KY			
DWN	CHK'D	HA	DATE: 09/28/16
ENGR:	HA	SHEET #	1 OF 1
PRJ. ENGR:	DWG	PRJ. MNGR:	
DRAWING NO:	216991-01-F1		REV: 0



#### FACTORED REACTIONS

LATERAL = 66.6 KIPS  
UPLIFT = 98.2 KIPS

#### VOLUME OF CONCRETE

(1) FOUNDATION 4.0 CU. YDS  
(3) FOUNDATIONS 12.0 CU. YDS

#### GENERAL NOTES

- FOUNDATION DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PROVIDED. FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT THE FOLLOWING DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED.
  - UPLIFT ANGLE WITH VERTICAL = 25°
  - ULTIMATE NET HORIZONTAL PRESSURE = 250 PSF/FT.
  - ALLOWABLE NET HORIZONTAL PRESSURE = 125 PSF/FT.
  - GROUND WATER TABLE AT OR BELOW DEPTH OF FOUNDATION.
- WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, SAFETY REGULATIONS AND UNLESS OTHERWISE NOTED, THE LATEST REVISION OF ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.
- CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE STATE REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
- PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR RESISTANCE TO LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. AS A MINIMUM, CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI (31.0 MPa) IN 28 DAYS.
- MAXIMUM SIZE OF AGGREGATE SHALL NOT EXCEED SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR 1/3 CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING. MAXIMUM SIZE MAY BE INCREASED TO 2/3 CLEAR DISTANCE PROVIDED WORKABILITY AND METHODS OF CONSOLIDATION SUCH AS VIBRATING WILL PREVENT HONEYCOMBS OR VOIDS.
- REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED. SPLICES IN REINFORCEMENT SHALL NOT BE ALLOWED UNLESS OTHERWISE INDICATED.
- WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
- MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES (76 MM) UNLESS OTHERWISE NOTED. APPROVED SPACERS SHALL BE USED TO INSURE A 3 INCH (76 MM) MINIMUM COVER ON REINFORCEMENT.
- FOUNDATION DESIGN ASSUMES STRUCTURAL BACKFILL TO BE COMPACTED IN 8 INCH (200 MM) MAXIMUM LAYERS TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. ADDITIONALLY, STRUCTURAL BACKFILL MUST HAVE A MINIMUM COMPACTED UNIT WEIGHT OF 100 POUNDS PER CUBIC FOOT (16 KN/M<sup>3</sup>).
- FOUNDATION DESIGN HAS BEEN BASED ON GEOTECHNICAL REPORT NO. 16-9169 DATED 09/14/16 BY POWER OF DESIGN GROUP, LLC.
- FOUNDATION DEPTH INDICATED IS BASED ON THE GRADE LINE DESCRIBED IN THE REFERENCED GEOTECHNICAL REPORT. FOUNDATION MODIFICATION MAY BE REQUIRED IN THE EVENT CUT OR FILL OPERATIONS HAVE TAKEN PLACE SUBSEQUENT TO THE GEOTECHNICAL INVESTIGATION.
- FOUNDATION DESIGN ASSUMES THE RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT CONCERNING VERIFICATION OF SUBSURFACE CONDITIONS ARE IMPLEMENTED PRIOR TO PLACEMENT OF CONCRETE.
- FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITH THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED INSTALLATION PRACTICES.
- FOUNDATION DESIGN ASSUMES INSTALLATION PROCEDURES WILL INCORPORATE THE PROCEDURES RECOMMENDED IN THE REFERENCED GEOTECHNICAL REPORT.
- FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
- FOR FOUNDATION AND ANCHOR TOLERANCES SEE STRUCTURE ASSEMBLY DRAWING.
- LOOSE MATERIAL SHALL BE REMOVED FROM BOTTOM OF EXCAVATION PRIOR TO CONCRETE PLACEMENT. SIDES OF EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
- CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL AND OTHER OCCURRENCES WHICH MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
- FOUNDATION DESIGN ASSUMES CONTINUOUS CONCRETE PLACEMENT WITHOUT CONSTRUCTION JOINTS.
- THE PORTION OF ALL STEEL ANCHORS, FROM TOP OF ANCHOR BLOCK TO GROUND LEVEL, SHALL BE COATED WITH BITUMEN. DESIGN ASSUMES PERIODIC INSPECTIONS WILL BE PERFORMED OVER THE LIFE OF THE STRUCTURE TO DETERMINE IF ADDITIONAL ANCHOR CORROSION PROTECTION MEASURES MUST BE IMPLEMENTED BASED ON OBSERVED SITE-SPECIFIC CONDITIONS.
- GRADING MAY BE REQUIRED TO PROVIDE PROPER DRAINAGE AWAY FROM ANCHOR AND TO MAINTAIN 6 INCHES (152MM) MINIMUM CLEARANCE TO EQUALIZER PLATE.
- DEPTH OF ANCHOR BLOCK SHOWN ON DRAWING MUST BE MAINTAINED AT ALL POINTS WITHIN AN AREA DEFINED BY THE PLAN DIMENSIONS OF THE ANCHOR BLOCK PLUS HORIZONTAL DISTANCE IN EACH DIRECTION EQUAL TO THE SPECIFIED ANCHOR BLOCK DEPTH BELOW GRADE. FILL, WHEN REQUIRED, SHALL MEET THE COMPACTION REQUIREMENTS SPECIFIED FOR STRUCTURAL BACKFILL.

NOTE: SEE STRUCTURE ASSEMBLY DRAWING FOR FOUNDATION LAYOUT AND ANCHORAGE EMBEDMENT DRAWING NUMBER.

FILE NO.

216991

#### REVISIONS

REV	DESCRIPTION	DWN	CHK	APP

**RQHN**  
PRODUCTS, LLC

PO BOX 5999  
PEORIA, IL 61601-5999  
TOLL FREE 800-727-RQHN

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CAPITAL TELECOM HOLDING  
ANCHOR BLOCK  
FOUNDATION DETAILS  
EV CRUTCHFIELD, KY

DWN:	DWG:	CHKD:	HA	DATE:	09/28/16
ENGR:	HA	SHEET #:	1 OF 1		
PRJ. ENGR:	DWG	PRJ. MANGER:			
DRAWING NO:	216991-01-F2				REV:
					0



ENGINEERING SOFTWARE  
TSTower - v 5.6.0 Tower Analysis Program  
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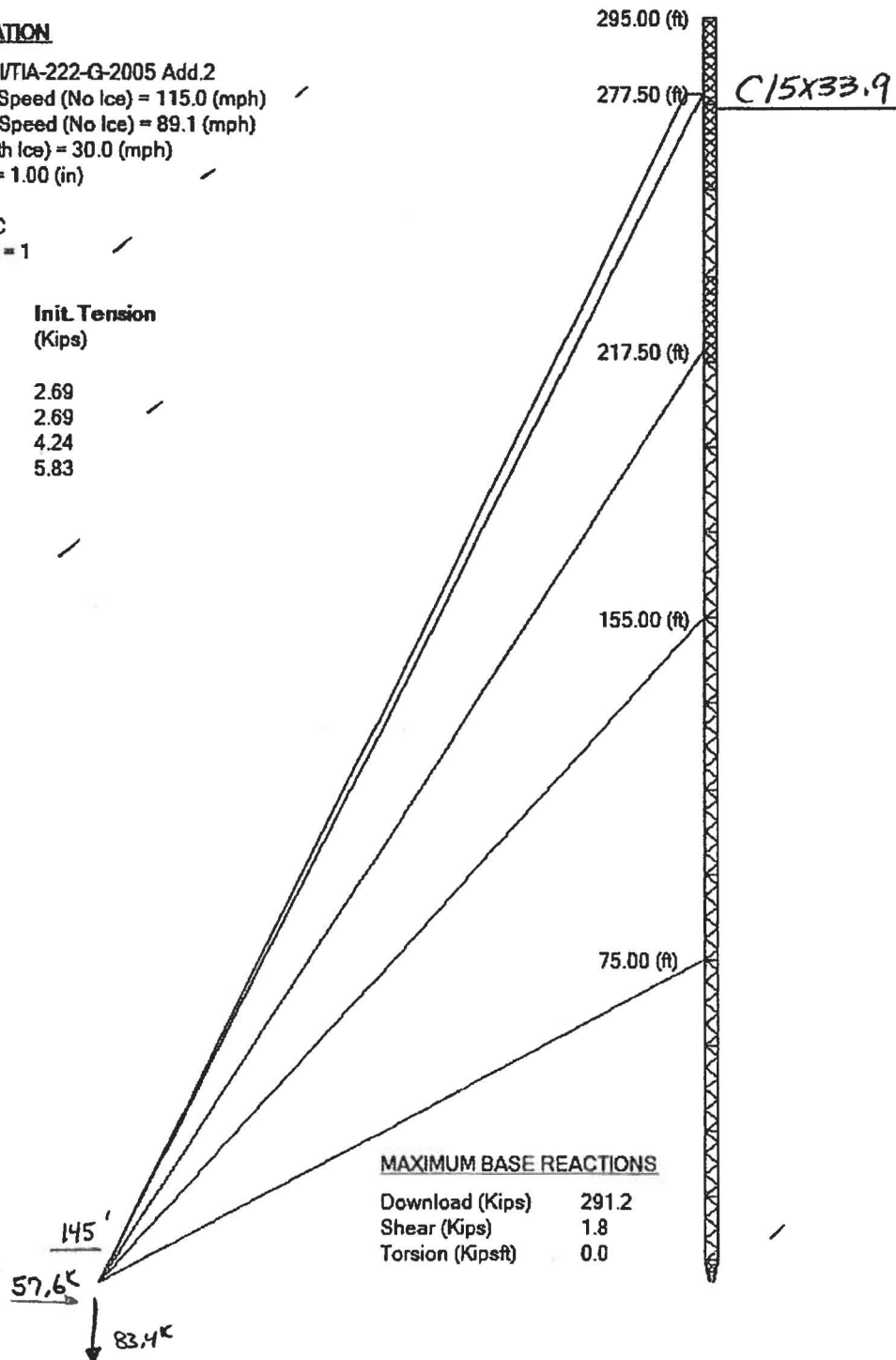
File: C:\Users\dgall\Documents\temp0.out  
Contract: 216991  
Project: 295 FT #80 GUYED TOWER  
Date and Time: 2/5/2016 3:51:31 PM

Revision: 0  
Site: EV CRUTCHFIELD, KY  
Engineer: DWG  
✓HA

### DESIGN SPECIFICATION

Design Standard: ANSI/TIA-222-G-2005 Add.2  
Ultimate Design Wind Speed (No Ice) = 115.0 (mph)  
Nominal Design Wind Speed (No Ice) = 89.1 (mph)  
Basic Wind Speed (With Ice) = 30.0 (mph)  
Design Ice Thickness = 1.00 (in)  
Structure Class = II  
Exposure Category = C  
Topographic Category = 1

Elev. (ft)	Guy Size	Init. Tension (Kips)
75.00	3-EH 1/2	2.69
155.00	3-EH 1/2	2.69
217.50	3-EH 5/8	4.24
277.50	6-EH 3/4	5.83



### MAXIMUM BASE REACTIONS

Download (Kips)	291.2
Shear (Kips)	1.8
Torsion (Kipsft)	0.0



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File: C:\Users\dgall\Documents\temp0.out  
Contract: 216991  
Project: 295 FT #80 GUYED TOWER  
Date and Time: 2/5/2016 3:51:31 PM

Revision: 0  
Site: EV CRUTCHFIELD  
Engineer: DWG

#### Section A: PROJECT DATA

Project Title: 295 FT #80 GUYED TOWER  
Customer Name: CAPITAL TELECOM  
Site: EV CRUTCHFIELD  
Contract No.: 216991  
Revision: 0  
Engineer: DWG  
Date: Feb 5 2016  
Time: 03:45:08 PM

Design Standard: ANSI/TIA-222-G-2005 Addendum 2

#### GENERAL DESIGN CONDITIONS

Start wind direction: 0.00 (Deg)  
End wind direction: 330.00 (Deg)  
Increment wind direction: 30.00 (Deg) ✓  
Elevation above ground: 0.00 (ft)  
Gust Response Factor Gh: 0.85  
Structure class: II ✓  
Exposure category: C  
Topographic category: 1  
Material Density: 490.1 (lbs/ft<sup>3</sup>)  
Young's Modulus: 29000.0 (ksi) ✓  
Poisson Ratio: 0.30  
Weight Multiplier: 1.12  
Minimum Bracing Resistance as per 4.4.1  
Mast Shear and Torsion: Section 3.7 applies

#### WIND ONLY CONDITIONS:

Ultimate Design Wind Speed (No Ice): 115.00 (mph) ✓  
Nominal Design Wind Speed (No Ice): 89.08 (mph)  
Directionality Factor Kd: 0.85  
Importance Factor I: 1.00  
Wind Load Factor: 1.60 ✓  
Dead Load Factor: 1.20  
Dead Load Factor for Guys: 1.00

#### WIND AND ICE CONDITIONS:

Basic Wind Speed (With Ice): 30.00 (mph) ✓  
Directionality Factor Kd: 0.85  
Wind Load Importance Factor Iw: 1.00  
Ice Thickness Importance Factor Ii: 1.00  
Ice Thickness: 1.00 (in) ✓  
Ice Density: 56.19 (lbs/ft<sup>3</sup>)  
Wind Load Factor: 1.00  
Dead Load Factor: 1.20  
Ice Load Factor: 1.00  
Dead Load Factor for Guys: 1.00  
Temperature Reduction with Ice: 50.4 (Deg. Fahrenheit)

#### WIND ONLY SERVICEABILITY CONDITIONS:

Serviceability Wind Speed: 60.00 (mph)  
Directionality Factor Kd: 0.85  
Importance Factor I: 1.00  
Wind Load Factor: 1.00 ✓  
Dead Load Factor: 1.00  
Dead Load Factor for Guys: 1.00



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File: C:\Users\dgall\Documents\temp0.out  
Contract: 216991  
Project: 295 FT #80 GUYED TOWER  
Date and Time: 2/5/2016 3:51:31 PM

Revision: 0  
Site: EV CRUTCHFIELD  
Engineer: DWG

EARTHQUAKE CONDITIONS:

Site class definition:	D
Spectral response acceleration Ss:	1.380
Spectral response acceleration S1:	0.477
Acceleration-based site coefficient Fa:	1.000
Velocity-based site coefficient Fv:	1.523
Design spectral response acceleration Sds:	0.920
Design spectral response acceleration Sdl:	0.484
Seismic analysis method:	1
Fundamental frequency of structure f1:	2.269
Total seismic shear Vs (Kips) :	15.27

Additional axial forces in horizontal members at Guy and Torsion Resistor levels due to local effect of Guys and/or TRs are considered.

Analysis performed using: Robot Millenium Finite Element Analysis Software (by Robobat)



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## Section B: STRUCTURE GEOMETRY

### TOWER GEOMETRY

Cross-Section	Height (ft)	Tot Height (ft)	# of Section	Bot Width (in)	Top Width (in)
Triangular	295.00	295.00	16	12.00	41.00

### SECTION GEOMETRY

Sec #	Sec. Name	Elevation		Widths		Legs (lbs)	Brcg. (lbs)	Masses		Sect. (lbs)	Database (lbs)	Brcg. Clear. (in)
		Bottom (ft)	Top (ft)	Bottom (in)	Top (in)			Sec.Brc (lbs)	Int.Brc (lbs)			
16	84HX11	275.00	295.00	41	41	799	423	0	0	1222	1020	0.787
15	84X	255.00	275.00	41	41	673	214	0	0	887	684	0.787
14	84H	235.00	255.00	41	41	733	112	0	0	845	685	0.787
13	84HX	215.00	235.00	41	41	799	214	0	0	1013	823	0.787
12	85H	195.00	215.00	41	41	908	112	0	0	1020	847	0.787
11	85H	175.00	195.00	41	41	908	112	0	0	1020	847	0.787
10	85H	155.00	175.00	41	41	908	112	0	0	1020	847	0.787
9	85H	135.00	155.00	41	41	908	112	0	0	1020	847	0.787
8	85H	115.00	135.00	41	41	908	112	0	0	1020	847	0.787
7	85H	95.00	115.00	41	41	908	112	0	0	1020	847	0.787
6	85H	75.00	95.00	41	41	908	112	0	0	1020	847	0.787
5	85H	55.00	75.00	41	41	908	112	0	0	1020	847	0.787
4	85H	35.00	55.00	41	41	908	112	0	0	1020	847	0.787
3	85HC	20.00	35.00	41	41	713	87	0	0	800	730	0.787
2	85HC	5.00	20.00	41	41	713	87	0	0	800	730	0.787
1	85HTB3	0.00	5.00	12	41	250	270	0	0	520	532	1.000
Total Mass:						12854	2413	0	0	15267	12827	



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### Section C: GUY SYSTEM DATA

#### Guy Levels, Sizes

Level #	Elevation (ft)	Guy Size	Breaking Strength (kips)	Efficiency Factor (%)	Typical Radius (ft)	# of Guys	Torsion Resistor
1	75.00	EH 1/2	26.90	100.00	145.00	3	(None)
2	155.00	EH 1/2	26.90	100.00	145.00	3	(None)
3	217.50	EH 5/8	42.40	100.00	145.00	3	(None)
4	277.50	EH 3/4	58.30	100.00	145.00	6	Beam Type

#### Guy Details

Level #	Guy #	Guy Size	Guy Azimuth (deg)	Anchor Elevation (ft)	Anchor Radius (ft)	Attachment Radius (ft)	Attachment Azimuth (deg)	Initial Tension (kips)	Temp. Coeff. (/F-Deg)
1	1	EH 1/2	0.00	0.00	145.00	1.97	0.00	2.69	0.0000065
1	2	EH 1/2	120.00	0.00	145.00	1.97	120.00	2.69	0.0000065
1	3	EH 1/2	240.00	0.00	145.00	1.97	240.00	2.69	0.0000065
2	1	EH 1/2	0.00	0.00	145.00	1.97	0.00	2.69	0.0000065
2	2	EH 1/2	120.00	0.00	145.00	1.97	120.00	2.69	0.0000065
2	3	EH 1/2	240.00	0.00	145.00	1.97	240.00	2.69	0.0000065
3	1	EH 5/8	0.00	0.00	145.00	1.97	0.00	4.24	0.0000065
3	2	EH 5/8	120.00	0.00	145.00	1.97	120.00	4.24	0.0000065
3	3	EH 5/8	240.00	0.00	145.00	1.97	240.00	4.24	0.0000065
4	1	EH 3/4	0.00	0.00	145.00	3.95	300.00	5.83	0.0000065
4	2	EH 3/4	0.00	0.00	145.00	3.95	60.00	5.83	0.0000065
4	3	EH 3/4	120.00	0.00	145.00	3.95	60.00	5.83	0.0000065
4	4	EH 3/4	120.00	0.00	145.00	3.95	180.00	5.83	0.0000065
4	5	EH 3/4	240.00	0.00	145.00	3.95	180.00	5.83	0.0000065
4	6	EH 3/4	240.00	0.00	145.00	3.95	300.00	5.83	0.0000065

#### Torsion Resistors Geometry

Level #	Elevation (ft)	Upper Arm Elevation (ft)	Lower Arm Elevation (ft)	Upper Truss Bracing	Lower Truss Bracing	Vertical Truss Bracing
4	277.50					

#### Torsion Resistors Member Data

Lev #	Type	Description	Steel Grade	Conn. Type	Bolt #-Size (in)	Bolt Grade	End Dist. (in)	Edge Dist. (in)	Gusset Thick. (in)	Bolt Space (in)	Dble Member Spacing Mem. Bolt (in)
4	TRArm	C15x33.9	A36	Tension	4-0.625	A325X	0.938	2.992	0.375	1.875	





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#### Section E: TRANSMISSION LINE DATA

##### Transmission Lines Position

No.	Bot El (ft)	Top El (ft)	Desc.	Radius (ft)	Az.	Orient.	No.	No. of Rows	Vert.	Antenna	User Ka
1	5.00	295.00	3/8 CABLE	3.00	0.00	0.00	1	1	Yes		
2	5.00	295.00	RC0.75-Cnd	1.72	60.00	5.00	1	1	No		
3	5.00	290.00	LDF7P-50A	1.14	60.00	30.00	9	1	No		
4	5.00	280.00	LDF7P-50A	1.14	300.00	270.00	9	1	No		
5	5.00	275.00	LDF7P-50A	1.14	180.00	150.00	9	1	No		

##### Transmission Lines Details

No.	Desc.	Width (in)	Depth (in)	Unit Mass (lb/ft)	Line Spacing (in)	Row Spacing (in)
1	3/8 CABLE	0.38	0.38	1.00	2.750	2.750
2	RC0.75-Cnd	1.05	1.05	1.09	2.750	2.750
3	LDF7P-50A	2.01	2.01	0.92	2.250	2.750
4	LDF7P-50A	2.01	2.01	0.92	2.250	2.750
5	LDF7P-50A	2.01	2.01	0.92	2.250	2.750



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#### Section G: POINT LOAD DATA

Structure Azimuth from North:0.00

#### POINT LOADS

No.	Description	Elev. (ft)	Radius (ft)	Azim. (Deg)	Orient. (Deg)	Vertical Offset (ft)	Tx Line	Comments
1	BEACON & LR	295.00	0.00	0.0	0.0	0.00		
2	(6)HT4C6318, (3)WWX	290.00	1.00	0.0	0.0	0.00		
3	(6)HT4C6318, (3)WWX	280.00	0.00	0.0	0.0	0.00		
4	(9)800 10866, (9)RRUS11	270.00	0.00	0.0	0.0	0.00		

#### POINT LOADS WIND AREAS AND WEIGHTS

No.	Description	Frontal Bare Area (ft^2)	Lateral Bare Area (ft^2)	Frontal Iced Area (ft^2)	Lateral Iced Area (ft^2)	Weight Bare (Kips)	Weight Iced (Kips)	Gh
1	BEACON & LR	5.00	5.00	10.00	10.00	0.50	1.50	0.85
2	(6)HT4C6318, (3)WWX	135.00	135.00	245.00	245.00	3.00	10.00	0.85
3	(6)HT4C6318, (3)WWX	135.00	135.00	245.00	245.00	3.00	10.00	0.85
4	(9)800 10866, (9)RRUS11	125.00	125.00	257.00	257.00	3.00	10.50	0.85



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Section J: STRUCTURE DISPLACEMENT DATA  
Load Combination Max Envelope

Wind Direction		Maximum displacements					
Node	Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (Deg)	W-E Rot (Deg)	Twist (Deg)
357	295.0	44.8	-39.4	-3.9	-1.02	-0.90	-2.08
354	292.5	44.3	-39.0	-3.9	-1.01	-0.90	-2.07
351	290.0	43.7	-38.5	-3.9	-1.00	-0.89	-2.06
348	287.5	43.2	-38.0	-3.9	-1.00	-0.89	-2.05
345	285.0	42.7	-37.6	-3.9	-0.99	-0.88	-2.04
342	282.5	42.2	-37.1	-3.9	-0.97	-0.86	-2.02
339	280.0	41.7	-36.7	-3.9	-0.94	-0.84	-2.00
336	277.5	41.2	-36.2	-3.9	-0.92	-0.82	-1.98
333	275.0	40.7	-35.8	-3.8	-0.92	-0.82	-1.99
330	272.5	40.2	-35.4	-3.8	-0.93	-0.83	-2.00
327	270.0	39.7	-34.9	-3.8	-0.94	-0.84	-2.01
324	267.5	39.2	-34.5	-3.7	-0.95	-0.85	-2.02
321	265.0	38.7	-34.0	-3.7	-0.96	-0.86	-2.03
318	262.5	38.2	-33.6	-3.7	-0.98	-0.88	-2.04
315	260.0	37.7	-33.1	-3.6	-1.00	-0.89	-2.05
312	257.5	37.2	-32.6	-3.6	-1.01	-0.91	-2.06
309	255.0	36.7	-32.2	-3.6	-1.03	-0.92	-2.07
306	252.5	36.1	-31.7	-3.5	-1.04	-0.93	-2.09
303	250.0	35.6	-31.2	-3.5	-1.05	-0.94	-2.10
300	247.5	35.0	-30.7	-3.5	-1.06	-0.94	-2.12
297	245.0	34.5	-30.2	-3.5	-1.06	-0.95	-2.14
294	242.5	33.9	-29.7	-3.4	-1.06	-0.95	-2.15
291	240.0	33.3	-29.2	-3.4	-1.06	-0.95	2.17
288	237.5	32.8	-28.7	-3.4	-1.06	-0.95	2.22
285	235.0	32.2	-28.2	-3.3	-1.06	-0.94	2.26
282	232.5	31.7	-27.7	-3.3	-1.04	-0.93	2.28
279	230.0	31.1	-27.2	-3.3	-1.03	-0.92	2.30
276	227.5	30.6	-26.8	-3.3	-1.01	-0.90	2.32
273	225.0	30.1	-26.3	-3.2	-1.00	-0.89	2.34
270	222.5	29.6	-25.8	-3.2	-0.97	-0.86	2.36
267	220.0	29.1	-25.4	-3.2	-0.94	-0.84	2.37
264	217.5	28.5	-25.0	-3.1	-0.91	-0.81	2.39
261	215.0	28.1	-24.7	-3.1	-0.88	-0.79	2.42
258	212.5	27.6	-24.3	-3.1	-0.87	-0.77	2.46
255	210.0	27.2	-24.0	-3.0	-0.85	-0.76	2.51
252	207.5	26.7	-23.6	-3.0	-0.84	-0.75	2.56
249	205.0	26.3	-23.2	-3.0	-0.83	-0.74	2.61
246	202.5	25.9	-22.9	-3.0	-0.82	-0.73	2.65
243	200.0	25.5	-22.6	-2.9	-0.81	-0.72	2.70
240	197.5	25.0	-22.2	-2.9	-0.80	-0.71	2.74
237	195.0	24.6	-21.9	-2.9	-0.79	-0.70	2.78
234	192.5	24.2	-21.6	-2.8	-0.78	-0.70	2.82
231	190.0	23.8	-21.2	-2.8	-0.78	-0.69	2.85
228	187.5	23.4	-20.9	-2.8	-0.77	-0.69	2.89
225	185.0	23.0	-20.6	-2.8	-0.77	-0.68	2.92
222	182.5	22.6	-20.2	-2.7	-0.76	-0.67	2.95
219	180.0	22.2	-19.9	-2.7	-0.75	-0.67	2.98
216	177.5	21.8	-19.6	-2.7	-0.75	-0.66	3.01
213	175.0	21.4	-19.3	-2.6	-0.74	-0.65	3.04
210	172.5	21.0	-19.0	-2.6	-0.73	-0.64	3.07
207	170.0	20.6	-18.6	-2.6	-0.72	-0.63	3.09
204	167.5	20.3	-18.3	-2.5	-0.71	-0.63	3.12
201	165.0	19.9	-18.0	-2.5	-0.70	-0.62	3.14
198	162.5	19.5	-17.7	-2.5	-0.68	-0.60	3.16
195	160.0	19.2	-17.4	-2.4	-0.66	-0.59	3.18
192	157.5	18.8	-17.1	-2.4	-0.65	-0.57	3.19



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189	155.0	18.5	-16.8	-2.4	-0.63	-0.56	3.21
186	152.5	18.2	-16.6	-2.3	-0.62	-0.55	3.25
183	150.0	17.9	-16.3	-2.3	-0.61	-0.54	3.29
180	147.5	17.5	-16.0	-2.3	-0.60	-0.53	3.32
177	145.0	17.2	-15.8	-2.2	-0.59	-0.52	3.36
174	142.5	16.9	-15.5	-2.2	-0.58	-0.51	3.39
171	140.0	16.6	-15.3	-2.2	-0.58	-0.51	3.43
168	137.5	16.3	-15.0	-2.1	-0.58	-0.51	3.46
165	135.0	16.0	-14.7	-2.1	-0.58	-0.50	3.49
162	132.5	15.7	-14.5	-2.1	-0.58	0.51	3.52
159	130.0	15.4	-14.2	-2.0	-0.58	0.51	3.54
156	127.5	15.1	-14.0	-2.0	-0.58	-0.51	3.57
153	125.0	14.8	-13.7	-2.0	-0.59	-0.52	3.59
150	122.5	14.5	-13.4	-1.9	-0.59	-0.53	3.61
147	120.0	14.2	-13.1	-1.9	-0.60	-0.53	3.63
144	117.5	13.9	-12.9	-1.9	-0.60	-0.54	3.65
141	115.0	13.5	-12.6	-1.8	-0.61	-0.55	3.67
138	112.5	13.2	-12.3	-1.8	-0.61	-0.56	3.69
135	110.0	12.9	-12.0	-1.7	-0.62	-0.56	3.70
132	107.5	12.6	-11.7	-1.7	-0.62	-0.57	3.72
129	105.0	12.3	-11.4	-1.7	-0.62	-0.58	3.73
126	102.5	11.9	-11.1	-1.6	-0.63	-0.58	3.74
123	100.0	11.6	-10.8	-1.6	-0.63	-0.58	3.75
120	97.5	11.3	-10.5	-1.6	-0.63	-0.58	3.76
117	95.0	10.9	-10.2	-1.5	-0.63	-0.59	3.77
114	92.5	10.6	-9.9	-1.5	-0.62	-0.58	3.77
111	90.0	10.3	-9.6	-1.5	-0.62	-0.58	3.78
108	87.5	10.0	-9.3	-1.4	-0.61	-0.57	3.78
105	85.0	9.6	-9.0	-1.4	-0.60	-0.57	3.79
102	82.5	9.3	-8.7	-1.3	-0.59	-0.55	3.78
99	80.0	9.0	-8.4	-1.3	-0.57	-0.53	3.78
96	77.5	8.7	-8.1	-1.3	-0.56	-0.52	3.78
93	75.0	8.4	-7.8	-1.2	-0.54	-0.50	3.78
90	72.5	8.2	-7.6	-1.2	-0.53	-0.49	3.81
87	70.0	7.9	-7.3	-1.1	-0.52	-0.48	3.84
84	67.5	7.6	-7.1	-1.1	-0.51	-0.46	3.87
81	65.0	7.4	-6.8	-1.1	-0.49	-0.45	3.89
78	62.5	7.1	-6.6	-1.0	-0.49	-0.45	3.92
75	60.0	6.9	-6.4	-1.0	-0.49	-0.44	3.94
72	57.5	6.6	-6.1	-0.9	-0.48	-0.44	3.96
69	55.0	6.3	-5.9	-0.9	-0.48	-0.44	3.99
66	52.5	6.1	-5.7	-0.9	-0.48	-0.44	4.01
63	50.0	5.8	-5.5	-0.8	-0.49	-0.44	4.02
60	47.5	5.6	-5.2	-0.8	-0.49	-0.45	4.04
57	45.0	5.3	-5.0	-0.7	-0.49	-0.45	4.06
54	42.5	5.1	-4.7	-0.7	-0.50	-0.46	4.08
51	40.0	4.8	-4.5	-0.7	-0.51	-0.47	4.09
48	37.5	4.5	-4.3	-0.6	-0.52	-0.48	4.10
45	35.0	4.3	-4.0	-0.6	-0.52	-0.48	4.12
42	32.5	4.0	-3.8	-0.5	-0.53	-0.49	4.13
39	30.0	3.7	-3.5	-0.5	-0.54	-0.50	4.14
36	27.5	3.4	-3.2	-0.4	-0.55	-0.51	4.15
33	25.0	3.1	-3.0	-0.4	-0.56	-0.52	4.15
30	22.5	2.8	-2.7	-0.4	-0.57	-0.53	4.16
27	20.0	2.5	-2.4	-0.3	-0.58	-0.54	4.17
24	17.5	2.2	-2.1	-0.3	-0.59	-0.55	4.17
21	15.0	1.9	-1.8	-0.2	-0.59	-0.56	4.18
18	12.5	1.6	-1.5	-0.2	-0.60	-0.57	4.18
15	10.0	1.3	-1.2	-0.2	-0.61	-0.57	4.18
12	7.5	1.0	-0.9	-0.1	-0.61	-0.58	4.18
9	5.0	0.7	-0.6	-0.1	-0.61	-0.58	4.19
6	2.5	0.3	-0.3	0.0	-0.63	-0.60	4.19
3	0.0	0.0	0.0	0.0	-0.63	-0.60	4.19



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Section L: STRENGTH ASSESSMENT SORTED DATA  
Load Combination Max Envelope  
Wind Direction Maximum

Sec	Pnl	Elev.	MType	Desc.	Len	kl/r	Gov.	Gov.	Max	Max	Asses.
		(ft)			(ft)		comp.	tens.	Compr.	Tens.	Ratio
							cap.	cap.	(Kips)	(Kips)	
							(Kips)	(Kips)			
16	8	292.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	5.2	2.0	0.05
16	7	290.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	6.8	4.6	0.07
16	6	287.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	9.4	7.2	0.10
16	5	285.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	11.9	9.8	0.13
16	4	282.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	20.5	15.7	0.22
16	3	280.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	27.2	22.5	0.29
16	2	277.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	33.9	29.3	0.36
16	1	275.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	36.1	0.0	0.38
15	8	272.50	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	39.5	0.0	0.55
15	7	270.00	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	39.8	0.0	0.56
15	6	267.50	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	40.7	0.0	0.57
15	5	265.00	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	42.9	0.0	0.60
15	4	262.50	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	44.4	0.0	0.62
15	3	260.00	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	44.2	0.0	0.62
15	2	257.50	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	44.1	0.0	0.62
15	1	255.00	Leg	PIPE 2.875x0.203	2.50	30.5	71.5	76.6	43.9	0.0	0.61
14	8	252.50	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	45.8	0.0	0.60
14	7	250.00	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	45.4	0.0	0.60
14	6	247.50	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	45.1	0.0	0.59
14	5	245.00	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	44.7	0.0	0.59
14	4	242.50	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	46.3	0.0	0.61
14	3	240.00	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	45.7	0.0	0.60
14	2	237.50	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	45.2	0.0	0.59
14	1	235.00	Leg	PIPE 2.875x0.276	2.50	62.6	76.1	101.4	44.9	0.0	0.59
13	8	232.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	47.1	0.0	0.50
13	7	230.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	48.3	0.0	0.51
13	6	227.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	52.1	0.0	0.55
13	5	225.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	55.8	0.0	0.59
13	4	222.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	60.6	0.0	0.64
13	3	220.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	65.1	3.5	0.69
13	2	217.50	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	69.7	7.8	0.74
13	1	215.00	Leg	PIPE 2.875x0.276	2.50	31.3	94.3	101.4	70.1	0.0	0.74
12	8	212.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	67.7	0.0	0.60
12	7	210.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	65.6	0.0	0.58
12	6	207.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	63.5	0.0	0.56
12	5	205.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	61.4	0.0	0.55
12	4	202.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	60.1	0.0	0.53
12	3	200.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	59.8	0.0	0.53
12	2	197.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	59.5	0.0	0.53
12	1	195.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	59.3	0.0	0.53
11	8	192.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	60.9	0.0	0.54
11	7	190.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	60.8	0.0	0.54
11	6	187.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	60.6	0.0	0.54
11	5	185.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	60.4	0.0	0.54
11	4	182.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	62.2	0.0	0.55
11	3	180.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	62.1	0.0	0.55
11	2	177.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	62.0	0.0	0.55
11	1	175.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	62.0	0.0	0.55
10	8	172.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	63.8	0.0	0.57
10	7	170.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	63.9	0.0	0.57
10	6	167.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	64.0	0.0	0.57
10	5	165.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	64.0	0.0	0.57
10	4	162.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	66.0	0.0	0.59
10	3	160.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	68.3	0.0	0.61
10	2	157.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	70.7	0.0	0.63



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Project: 295 FT #80 GUYED TOWER  
Date and Time: 2/5/2016 3:51:31 PM

Revision: 0  
Site: EV CRUTCHFIELD  
Engineer: DWG

10	1	155.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	73.0	0.0	0.65
9	8	152.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	73.5	0.0	0.65
9	7	150.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	72.6	0.0	0.65
9	6	147.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	72.1	0.0	0.64
9	5	145.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	71.6	0.0	0.64
9	4	142.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	73.0	0.0	0.65
9	3	140.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	73.1	0.0	0.65
9	2	137.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	73.2	0.0	0.65
9	1	135.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	73.4	0.0	0.65
8	8	132.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	75.2	0.0	0.67
8	7	130.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	75.4	0.0	0.67
8	6	127.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	75.5	0.0	0.67
8	5	125.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	75.7	0.0	0.67
8	4	122.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	77.4	0.0	0.69
8	3	120.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	77.4	0.0	0.69
8	2	117.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	77.5	0.0	0.69
8	1	115.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	77.5	0.0	0.69
7	8	112.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	79.1	0.0	0.70
7	7	110.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	79.0	0.0	0.70
7	6	107.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	78.9	0.0	0.70
7	5	105.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	78.9	0.0	0.70
7	4	102.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	80.3	0.0	0.71
7	3	100.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	80.2	0.0	0.71
7	2	97.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	80.0	0.0	0.71
7	1	95.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	79.9	0.0	0.71
6	8	92.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	81.3	0.0	0.72
6	7	90.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	81.5	0.0	0.72
6	6	87.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	81.9	0.0	0.73
6	5	85.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	82.3	0.0	0.73
6	4	82.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	84.3	0.0	0.75
6	3	80.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	84.8	0.0	0.75
6	2	77.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	85.2	0.0	0.76
6	1	75.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	85.7	0.0	0.76
5	8	72.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	90.3	0.0	0.80
5	7	70.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	89.9	0.0	0.80
5	6	67.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	89.5	0.0	0.80
5	5	65.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	89.1	0.0	0.79
5	4	62.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	90.2	0.0	0.80
5	3	60.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	89.9	0.0	0.80
5	2	57.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	89.6	0.0	0.80
5	1	55.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	89.8	0.0	0.80
4	8	52.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	91.3	0.0	0.81
4	7	50.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	91.5	0.0	0.81
4	6	47.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	91.7	0.0	0.81
4	5	45.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	91.9	0.0	0.82
4	4	42.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	93.4	0.0	0.83
4	3	40.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	93.5	0.0	0.83
4	2	37.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	93.6	0.0	0.83
4	1	35.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	93.7	0.0	0.83
3	6	32.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	94.9	0.0	0.84
3	5	30.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	95.0	0.0	0.84
3	4	27.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	95.0	0.0	0.84
3	3	25.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	96.0	0.0	0.85
3	2	22.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	95.9	0.0	0.85
3	1	20.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	95.8	0.0	0.85
2	6	17.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	96.7	0.0	0.86
2	5	15.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	96.6	0.0	0.86
2	4	12.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	96.4	0.0	0.86
2	3	10.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	97.2	0.0	0.86
2	2	7.50	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	97.0	0.0	0.86
2	1	5.00	Leg	PIPE 3.500x0.300	2.50	50.9	112.5	121.7	96.8	0.0	0.86
1	2	2.50	Leg	PIPE 3.50x0.437	2.60	26.4	152.5	121.7	96.9	0.0	0.64
1	1	0.00	Leg	PIPE 3.50x0.437	2.60	26.4	152.5	121.7	97.3	0.0	0.64



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Project: 295 FT #80 GUYED TOWER  
Date and Time: 2/5/2016 3:51:31 PM

Revision: 0  
Site: EV CRUTCHFIELD  
Engineer: DWG

16	8	292.50	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	1.6	1.6	0.20
16	7	290.00	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	1.8	1.8	0.23
16	6	287.50	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	2.1	2.1	0.27
16	5	285.00	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	2.4	2.4	0.31
16	4	282.50	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	3.8	3.8	0.48
16	3	280.00	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	4.3	4.3	0.55
16	2	277.50	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	4.8	4.8	0.61
16	1	275.00	Diag	PIPE 1.500x0.12	4.23	105.6	7.9	7.9	3.1	3.1	0.39
15	8	272.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.0	2.0	0.39
15	7	270.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.8	1.8	0.35
15	6	267.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.31
15	5	265.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.4	1.4	0.28
15	4	262.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.2	1.2	0.24
15	3	260.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.2	1.2	0.24
15	2	257.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.2	1.2	0.24
15	1	255.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.2	1.2	0.24
14	8	252.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.49
14	7	250.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.49
14	6	247.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.49
14	5	245.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.49
14	4	242.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.8	2.8	0.55
14	3	240.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.9	2.9	0.57
14	2	237.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.0	3.0	0.59
14	1	235.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.1	3.1	0.61
13	8	232.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.9	1.9	0.37
13	7	230.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.9	1.9	0.38
13	6	227.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.0	2.0	0.39
13	5	225.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.1	2.1	0.40
13	4	222.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.3	2.3	0.45
13	3	220.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.4	2.4	0.46
13	2	217.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.4	2.4	0.48
13	1	215.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.1	2.1	0.42
12	8	212.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.7	3.7	0.73
12	7	210.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.6	3.6	0.70
12	6	207.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.5	3.5	0.68
12	5	205.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.4	3.4	0.66
12	4	202.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.8	2.8	0.55
12	3	200.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.7	2.7	0.53
12	2	197.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.6	2.6	0.51
12	1	195.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.48
11	8	192.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.0	2.0	0.39
11	7	190.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.9	1.9	0.38
11	6	187.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.8	1.8	0.36
11	5	185.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.8	1.8	0.35
11	4	182.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
11	3	180.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
11	2	177.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
11	1	175.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
10	8	172.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
10	7	170.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
10	6	167.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
10	5	165.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.7	1.7	0.34
10	4	162.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.2	2.2	0.43
10	3	160.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.3	2.3	0.45
10	2	157.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.4	2.4	0.48
10	1	155.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.50
9	8	152.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	4.1	4.1	0.81
9	7	150.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	4.0	4.0	0.79
9	6	147.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.9	3.9	0.76
9	5	145.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.8	3.8	0.74
9	4	142.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.3	3.3	0.64
9	3	140.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.2	3.2	0.62
9	2	137.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.1	3.1	0.60
9	1	135.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.0	3.0	0.58



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8	8	132.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.4	2.4	0.48
8	7	130.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.3	2.3	0.46
8	6	127.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.2	2.2	0.44
8	5	125.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.1	2.1	0.42
8	4	122.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
8	3	120.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
8	2	117.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
8	1	115.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	8	112.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	7	110.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	6	107.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	5	105.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	4	102.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	3	100.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	2	97.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
7	1	95.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
6	8	92.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.8	1.8	0.35
6	7	90.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.9	1.9	0.37
6	6	87.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.0	2.0	0.39
6	5	85.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.1	2.1	0.40
6	4	82.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.48
6	3	80.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.6	2.6	0.50
6	2	77.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.6	2.6	0.52
6	1	75.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.7	2.7	0.53
5	8	72.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	4.1	4.1	0.80
5	7	70.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	4.0	4.0	0.78
5	6	67.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.9	3.9	0.77
5	5	65.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.8	3.8	0.75
5	4	62.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.4	3.4	0.66
5	3	60.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.3	3.3	0.65
5	2	57.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.2	3.2	0.63
5	1	55.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	3.1	3.1	0.61
4	8	52.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.7	2.7	0.53
4	7	50.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.6	2.6	0.51
4	6	47.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.5	2.5	0.49
4	5	45.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.4	2.4	0.48
4	4	42.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.0	2.0	0.40
4	3	40.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	2.0	2.0	0.38
4	2	37.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.9	1.9	0.37
4	1	35.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.8	1.8	0.35
3	6	32.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
3	5	30.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
3	4	27.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
3	3	25.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
3	2	22.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
3	1	20.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
2	6	17.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
2	5	15.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
2	4	12.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
2	3	10.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
2	2	7.50	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
2	1	5.00	Diag	PIPE 1.500x0.058	4.23	104.0	5.1	5.3	1.6	1.6	0.32
1	2	2.50	Diag	L2x2x1/4	3.78	60.4	25.1	30.4	0.8	0.8	0.03
1	1	0.00	Diag	L2x2x1/4	2.99	46.9	27.1	30.4	0.7	0.7	0.03





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Section N: GUY TENSION DATA

Load Combination		Max Envelope				
Wind Direction		Maximum				
Guy Level #	Elevation (ft)	Guy Size	Breaking Strength (Kips)	Tension At Anch. (Kips)	Tension At Mast (Kips)	Ratio
1	75.00	EH 1/2	26.90	12.22	12.25	0.76
2	155.00	EH 1/2	26.90	14.28	14.36	0.89
3	217.50	EH 5/8	42.40	21.68	21.85	0.86
4	277.50	EH 3/4	58.30	28.86	29.19	0.83



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#### Section O: BASE REACTION DATA

Load Combination		Max Envelope			
Wind Direction		Maximum			
Axial (Kips)	Shear N-S (Kips)	Shear E-W (Kips)	Moment N-S (Kipsft)	Moment E-W (Kipsft)	Torsion (Kipsft)
291.22	1.35	1.15	0.00	0.00	0.00
Load Combination		Wind Only			
Wind Direction		Maximum			
Axial (Kips)	Shear N-S (Kips)	Shear E-W (Kips)	Moment N-S (Kipsft)	Moment E-W (Kipsft)	Torsion (Kipsft)
183.37	1.35	1.15	0.00	0.00	0.00
Load Combination		Wind and Ice			
Wind Direction		Maximum			
Axial (Kips)	Shear N-S (Kips)	Shear E-W (Kips)	Moment N-S (Kipsft)	Moment E-W (Kipsft)	Torsion (Kipsft)
291.22	0.05	0.06	0.00	0.00	0.00
Load Combination		Earthquake			
Wind Direction		Maximum			
Axial (Kips)	Shear N-S (Kips)	Shear E-W (Kips)	Moment N-S (Kipsft)	Moment E-W (Kipsft)	Torsion (Kipsft)
99.14	0.09	0.08	0.00	0.00	0.00



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#### Section P: ANCHOR LOAD DATA

Load Combination  
Wind Direction

Max Envelope  
Maximum

Anchor #	Azimuth (deg)	Radius (ft)	Anchor Elevation (ft)	Horizontal Load (Kips)	Vertical Load (Kips)	Axial Load (Kips)	Angle (deg)
1	0.00	145.00	0.00	57.47	82.96	100.92	55.29
2	120.00	145.00	0.00	57.64	83.38	101.36	55.34
3	240.00	145.00	0.00	57.63	83.39	101.36	55.35

Load Combination  
Wind Direction

Wind Only  
Maximum

Anchor #	Azimuth (deg)	Radius (ft)	Anchor Elevation (ft)	Horizontal Load (Kips)	Vertical Load (Kips)	Axial Load (Kips)	Angle (deg)
1	0.00	145.00	0.00	57.47	82.96	100.92	55.29
2	120.00	145.00	0.00	57.64	83.38	101.36	55.34
3	240.00	145.00	0.00	57.63	83.39	101.36	55.35

Load Combination  
Wind Direction

Wind and Ice  
Maximum

Anchor #	Azimuth (deg)	Radius (ft)	Anchor Elevation (ft)	Horizontal Load (Kips)	Vertical Load (Kips)	Axial Load (Kips)	Angle (deg)
1	0.00	145.00	0.00	26.03	35.27	43.84	53.57
2	120.00	145.00	0.00	26.05	35.48	44.02	53.72
3	240.00	145.00	0.00	26.06	35.51	44.05	53.73

Load Combination  
Wind Direction

Earthquake  
Maximum

Anchor #	Azimuth (deg)	Radius (ft)	Anchor Elevation (ft)	Horizontal Load (Kips)	Vertical Load (Kips)	Axial Load (Kips)	Angle (deg)
1	0.00	145.00	0.00	20.75	31.53	37.74	56.65
2	120.00	145.00	0.00	20.75	31.57	37.78	56.68
3	240.00	145.00	0.00	20.75	31.57	37.78	56.68



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Engineer: DWG

**Section Q: TORSION RESISTORS ASSESSMENT DATA**

Load Combination                      Max Envelope  
Wind Direction                      Maximum

Guy Level	Elev. (ft)	MType	Desc.	Length (ft)	Max. Comp. (Kips)	Max. Tens. (Kips)	Max. Moment (Kipsft)	Asses. Ratio
4	277.5	TRArm	C15x33.9	3.42	7.22	14.43	73.48	0.60

**EXHIBIT D**  
**COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST**

## KY Public Service Commission

### Master Utility Search

- Search for the utility of interest by using any single or combination of criteria.
- Enter Partial names to return the closest match for Utility Name and Address/City/Contact entries.

Utility ID	Utility Name	Address/City/Contact	Utility Type	Status
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Active ▼
<input type="button" value="Search"/>				

	Utility ID	Utility Name	Utility Type	Class	City	State
<a href="#">View</a>	4111300	2600Hz, Inc. dba ZSWITCH	Cellular	D	San Francisco	CA
<a href="#">View</a>	4108300	Air Voice Wireless, LLC	Cellular	B	Bloomfield Hill	MI
<a href="#">View</a>	4110650	Alliant Technologies of KY, L.L.C.	Cellular	D	Morristown	NJ
<a href="#">View</a>	44451184	Alltel Corporation d/b/a Verizon Wireless	Cellular	A	Lisle	IL
<a href="#">View</a>	4110850	AltaWorx, LLC	Cellular	D	Fairhope	AL
<a href="#">View</a>	4107800	American Broadband and Telecommunications Company	Cellular	D	Toledo	OH
<a href="#">View</a>	4108650	AmeriMex Communications Corp.	Cellular	D	Dunedin	FL
<a href="#">View</a>	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
<a href="#">View</a>	4110700	Andrew David Balholm dba Norcell	Cellular	D	Clayton	WA
<a href="#">View</a>	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
<a href="#">View</a>	4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
<a href="#">View</a>	4111050	BlueBird Communications, LLC	Cellular	D	New York	NY
<a href="#">View</a>	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4107600	Boomerang Wireless, LLC	Cellular	B	Hiawatha	IA
<a href="#">View</a>	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
<a href="#">View</a>	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ

<a href="#">View</a>	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
<a href="#">View</a>	4111150	Comcast OTR1, LLC	Cellular	D	Philadelphia	PA
<a href="#">View</a>	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
<a href="#">View</a>	4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
<a href="#">View</a>	4108850	Cricket Wireless, LLC	Cellular	A	San Antonio	TX
<a href="#">View</a>	4111500	CSC Wireless, LLC d/b/a Altice Wireless	Cellular	C	Long Island City	NY
<a href="#">View</a>	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4111650	DataBytes, Inc.	Cellular	C	Rogers	AR
<a href="#">View</a>	4111200	Dynalink Communications, Inc.	Cellular	C	Brooklyn	NY
<a href="#">View</a>	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
<a href="#">View</a>	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
<a href="#">View</a>	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
<a href="#">View</a>	4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
<a href="#">View</a>	4105900	Flash Wireless, LLC	Cellular	C	Concord	NC
<a href="#">View</a>	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Oak Hill	VA
<a href="#">View</a>	4111750	Gabb Wireless, Inc.	Cellular	C	Palo Alto	CA
<a href="#">View</a>	4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
<a href="#">View</a>	4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
<a href="#">View</a>	4109600	Google North America Inc.	Cellular	A	Mountain View	CA
<a href="#">View</a>	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
<a href="#">View</a>	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	A	San Diego	CA
<a href="#">View</a>	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4111350	HELLO MOBILE TELECOM LLC	Cellular	D	Dania Beach	FL
<a href="#">View</a>	4103100	i-Wireless, LLC	Cellular	B	Newport	KY
<a href="#">View</a>	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Tulsa	OK
<a href="#">View</a>	22215360	KDDI America, Inc.	Cellular	D	New York	NY
<a href="#">View</a>	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4111250	Liberty Mobile Wireless, LLC	Cellular	D	Sunny Isles Beach	FL
<a href="#">View</a>	4111550	Lingo Telecom of the South, LLC	Cellular	C	Atlanta	GA
<a href="#">View</a>	4111400	Locus Telecommunications, LLC	Cellular	A	Fort Lee	NJ
<a href="#">View</a>	4110900	Lunar Labs, Inc.	Cellular	D	Detroit	MI

<a href="#">View</a>	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
<a href="#">View</a>	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
<a href="#">View</a>	4111700	Mint Mobile, LLC	Cellular	C	Costa Mesa	CA
<a href="#">View</a>	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
<a href="#">View</a>	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
<a href="#">View</a>	10900	New Par dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001800	OnStar, LLC	Cellular	A	Detroit	MI
<a href="#">View</a>	4110750	Onvoy Spectrum, LLC	Cellular	D	Chicago	IL
<a href="#">View</a>	4109050	Patriot Mobile LLC	Cellular	D	Irving	TX
<a href="#">View</a>	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
<a href="#">View</a>	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
<a href="#">View</a>	4202100	Powertel/Memphis, Inc. dba T- Mobile	Cellular	A	Bellevue	WA
<a href="#">View</a>	4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
<a href="#">View</a>	4106700	Q Link Wireless, LLC	Cellular	B	Dania	FL
<a href="#">View</a>	4108700	Ready Wireless, LLC	Cellular	B	Hiawatha	IA
<a href="#">View</a>	4110500	Republic Wireless, Inc.	Cellular	B	Raleigh	NC
<a href="#">View</a>	4111100	ROK Mobile, Inc.	Cellular	D	Culver City	CA
<a href="#">View</a>	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
<a href="#">View</a>	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Freemont	NE
<a href="#">View</a>	4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	NJ
<a href="#">View</a>	4111450	Spectrum Mobile, LLC	Cellular	C	St. Louis	MO
<a href="#">View</a>	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4109550	Stream Communications, LLC	Cellular	D	Dallas	TX
<a href="#">View</a>	4111600	STX Group LLC dba Twigby	Cellular	C	Murfreesboro	TN
<a href="#">View</a>	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
<a href="#">View</a>	4202200	T-Mobile Central, LLC dba T- Mobile	Cellular	A	Bellevue	WA
<a href="#">View</a>	4002500	TAG Mobile, LLC	Cellular	D	Carrollton	TX
<a href="#">View</a>	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	Portland	ME
<a href="#">View</a>	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
<a href="#">View</a>	4108900	Telrite Corporation	Cellular	D	Covington	GA



<a href="#">View</a>	4108450	Tempo Telecom, LLC	Cellular	B	Atlanta	GA
<a href="#">View</a>	4109000	Ting, Inc.	Cellular	A	Toronto	ON
<a href="#">View</a>	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
<a href="#">View</a>	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ
<a href="#">View</a>	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
<a href="#">View</a>	4002000	Truphone, Inc.	Cellular	D	Durham	NC
<a href="#">View</a>	4110300	UVNV, Inc. d/b/a Mint Mobile	Cellular	D	Costa Mesa	CA
<a href="#">View</a>	4105700	Virgin Mobile USA, L.P.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4110800	Visible Service LLC	Cellular	D	Basking Ridge	NJ
<a href="#">View</a>	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
<a href="#">View</a>	4110950	Wing Tel Inc.	Cellular	D	New York	NY

**EXHIBIT E**  
**FAA**



**Federal Aviation  
Administration**

The system will be going offline at 7pm ET today for scheduled upgrades.

« OE/AAA

**Proposed Case for : 2019-ASO-31151-OE**

**For information only.**

This proposal has not yet been studied. Study outcomes will be posted at a later date.  
Public comments are not requested, and will not be considered at this time.

<b>Overview</b>				
Study (ASN): 2019-ASO-31151-OE			Received Date: 10/18/2019	
Prior Study: 2019-ASO-27936-OE			Entered Date: 10/18/2019	
Status: Work In Progress			Map: <a href="#">View Map</a>	
<b>Construction Info</b>			<b>Structure Summary</b>	
Notice Of: CONSTR			Structure Type: Antenna Tower	
Duration: PERM (Months: 0 Days: 0)			Structure Name: Fulton KY007	
Work Schedule:			FCC Number: 1300975 <a href="#">FCC ASR Registration</a>	
<b>Structure Details</b>			<b>Height and Elevation</b>	
Latitude (NAD 83): 36° 34' 48.40" N			<b>Proposed</b>	
Longitude (NAD 83): 88° 58' 49.35" W			Site Elevation: 434	
Datum: NAD 83			Structure Height: 300	
City: Clinton			Total Height (AMSL): 734	
State: KY				
Nearest County: Fulton				
<b>Frequencies</b>				
Low Freq	High Freq	Unit	ERP	Unit
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

**EXHIBIT F**  
**KENTUCKY AIRPORT ZONING COMMISSION**



KENTUCKY TRANSPORTATION CABINET  
KENTUCKY AIRPORT ZONING COMMISSION

TC 55-2  
Rev. 06/2016  
Page 2 of 2

**APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE**

<b>APPLICANT (name)</b> Capital Telecom Holdings LLC		<b>PHONE</b> 262-649-4429	<b>FAX</b> 262-364-3600	<b>KY AERONAUTICAL STUDY #</b>	
<b>ADDRESS (street)</b> 820 Morris Turnpike, Suite 104		<b>CITY</b> Short Hills		<b>STATE</b> NJ	<b>ZIP</b> 07078
<b>APPLICANT'S REPRESENTATIVE (name)</b> Sarah Schaaf		<b>PHONE</b> 262-649-4429	<b>FAX</b> 262-364-3600		
<b>ADDRESS (street)</b> 820 Morris Turnpike, Suite 104		<b>CITY</b> Short Hills		<b>STATE</b> NJ	<b>ZIP</b> 07078
<b>APPLICATION FOR</b> <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				<b>WORK SCHEDULE</b>	
<b>DURATION</b> <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days )				Start End	
<b>TYPE</b> <input type="checkbox"/> Crane <input type="checkbox"/> Building <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank <input type="checkbox"/> Landfill <input type="checkbox"/> Other		<b>MARKING/PAINTING/LIGHTING PREFERRED</b> <input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity <input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other			
<b>LATITUDE</b> 36°34'48.40"		<b>LONGITUDE</b> 88°58'49.35"		<b>DATUM</b> <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other	
<b>NEAREST KENTUCKY</b> City Clinton County Fulton		<b>NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT</b> Fulton 1M7			
<b>SITE ELEVATION (AMSL, feet)</b> 434 ft		<b>TOTAL STRUCTURE HEIGHT (AGL, feet)</b> 300 ft		<b>CURRENT (FAA aeronautical study #)</b> 2019-ASO-31151-OE (pending)	
<b>OVERALL HEIGHT (site elevation plus total structure height, feet)</b> 734 ft				<b>PREVIOUS (FAA aeronautical study #)</b> 2019-ASO-27936-OE	
<b>DISTANCE (from nearest Kentucky public use or Military airport to structure)</b> 4.455 NM				<b>PREVIOUS (KY aeronautical study #)</b> AS-038-1M7-2016-063	
<b>DIRECTION (from nearest Kentucky public use or Military airport to structure)</b> 137.23 degrees					
<b>DESCRIPTION OF LOCATION</b> (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) 1311 Clinton Moscow Road, Fulton, KY 42041					
<b>DESCRIPTION OF PROPOSAL</b> New 295 ft. telecommunications tower, 300 ft overall with appurtenances.					
<b>FAA Form 7460-1</b> (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 10/18/2019 (5 ft added to previous Determination)					
<b>CERTIFICATION</b> (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
<b>PENALTIES</b> (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
<b>NAME</b> Sarah Schaaf	<b>TITLE</b> VP	<b>SIGNATURE</b> 		<b>DATE</b> 10/18/2019	
<b>COMMISSION ACTION</b>		<input type="checkbox"/> Chairperson, KAZC <input type="checkbox"/> Administrator, KAZC			
<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved		<b>SIGNATURE</b>		<b>DATE</b>	

**EXHIBIT G**  
**GEOTECHNICAL REPORT**

GEOTECHNICAL REPORT

**FULTON, KY (CRUTCHFIELD)**

**(VZW – EV CRUTCHFIELD)**

**36° 34' 48.40" N**

**88° 58' 49.35" W**

1311 Clinton Moscow Rd,  
Fulton, KY

Prepared For:



For:



Prepared By:







September 14, 2016

Mr. Erik Hamilton-Jones  
Capital Telecom  
1500 Mt. Kemble Ave. Suite 203  
Morristown, NJ 07960

Re: Geotechnical Report – **PROPOSED 295' GUYED TOWER w/ 5' LIGHTNING ARRESTOR**  
Site Name: **FULTON, KY (CRUTCHFIELD) (VZW- EV CRUTCHFIELD)**  
Site Address: 1311 Clinton Moscow Road, Fulton, Fulton County, Kentucky  
Coordinates: N 36° 34' 48.40", W 88° 58' 49.35"  
POD Project No. 16-9169

Dear Mr. Hamilton-Jones:

Attached is our geotechnical engineering report for the referenced project. This report contains our findings, an engineering interpretation of these findings with respect to the available project characteristics, and recommendations to aid design and construction of the tower and equipment support foundations.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact our office.

Cordially,

A handwritten signature in blue ink, appearing to read "Mark Patterson", is written over a circular professional engineer seal.

Mark Patterson, P.E.  
Project Engineer  
License No.: KY 16300



Copies submitted: (3) Mr. Erik Hamilton-Jones



**LETTER OF TRANSMITTAL****TABLE OF CONTENTS**

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**APPENDIX**

BORING LOCATION PLAN  
BORING LOG  
SOIL SAMPLE CLASSIFICATION

Geotechnical Report  
**PROPOSED 295' GUYED TOWER w/ 5' LIGHTNING ARRESTOR**  
Site Name: **FULTON, KY (CRUTCHFIELD) (VZW-EV CRUTCHFIELD)**  
1311 Clinton Moscow Road, Fulton, Fulton County, Kentucky  
N 36° 34' 48.40", W 88° 58' 49.35"

### 1. PURPOSE AND SCOPE

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

### 2. PROJECT CHARACTERISTICS

Capital Telecom is proposing to construct a guyed tower with three anchors on property located at N 36° 34' 48.40", W 88° 58' 49.35", 1311 Clinton Moscow Road, Fulton, Fulton County, Kentucky. The site is located in an open field on the south side of Clinton Moscow Road. The surrounding area is very rural farm land. The proposed tower location is shown on the Boring Location Plan in the Appendix.

Preliminary information provided to POD Group indicates that this project will consist of constructing a tower supported by three guy anchors. We have assumed the following structural information:

- ✧ Compression = 250 kips
- ✧ Uplift = 200 kips
- ✧ Total shear = 45 kips

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

According to the Kentucky Geological Survey, Kentucky Geologic Map Information Services, the site is underlain by the Loess that consist of silt and Continental Deposits which are made up of gravel, silt and sand with quartz and chert. There is no karst potential for these formations. Liquefaction potential has not been determined in this area but based on our field investigation, there is a low risk that these soils could liquefy.

### 3. SUBSURFACE CONDITIONS

The subsurface conditions were explored by drilling one test boring at the base of the proposed tower and three others at each anchor location. The Geotechnical Soil Test Boring Logs, which are included in the Appendix, describes the materials and conditions encountered. A sheet defining the terms and symbols used on the boring logs is also included

in the Appendix. The general subsurface conditions disclosed by the test borings are discussed in the following paragraphs.

The ground surface was covered by soy beans over about 4 inches of topsoil. Below the topsoil, the borings encountered clayey silt (ML) that became silty clay (CL) of low plasticity at about 18.5 feet in all of the borings. The SPT N-values in the silty soil ranged from 8 to 16 blows per foot (bpf) indicating a medium stiff to very stiff consistency. The SPT N-values in the clayey soils ranged from 13 to 20 bpf generally indicating a stiff to very stiff consistency. Borings 2, 3 and 4 were terminated in the silty clay at the scheduled depth of 20 feet.

Below the silty clay in Boring 1, a layer of hard, fine sandy clay (CS) of low plasticity was encountered from about 23.5 to 33.5 feet. Dense, fine grained sand was encountered from 33.5 feet to the scheduled termination depth of 50 feet.

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

According to the Seismic Zone Map of the United States, Fulton County is within Zone 2A but very close to Zone 2B. In this system, Zone 4 is the most seismically active while Zone 0 has the lowest earthquake potential. Based on the limited subsurface conditions encountered at the site and using Table 1615.1.1 of the 2013 Kentucky Building Code, the site class is considered "C". Seismic design requirements for telecommunication towers are given in section 1622 of the code. A detailed seismic study was beyond the scope of this report.

#### **4. FOUNDATION DESIGN RECOMMENDATIONS**

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

We recommend that the geotechnical engineer be retained to review the near-final project plans and specifications, pertaining to the geotechnical aspects of the project, prior to bidding and construction. We recommend this review to check that our assumptions and evaluations are appropriate based on the current

project information provided to us, and to check that our foundation and earthwork recommendations were properly interpreted and implemented.

#### 4.1. Proposed Tower

Our findings indicate that the proposed guyed supported tower can be supported on drilled piers or on a common mat foundation.

##### 4.1.1. Drilled Piers

The following table summarizes the recommended values for use in analyzing lateral and frictional resistance for the various strata encountered at the test boring. It is important to note that these values are estimated based on the standard penetration test results and soil types, and were not directly measured. The all values provided are ultimate values and appropriate factors of safety should be used in conjunction with these values. If the piers will bear deeper than about 50 feet, a deeper boring should be drilled to determine the nature of the deeper material.

Depth Below Ground Surface, feet	0 - 3	3 - 23	23 - 34	34 - 50
Ultimate Bearing Pressure (psf)		8,300	13,800	93,500
C Undrained Shear Strength, psf	500	1500	2500	0
$\phi$ Angle of Internal Friction, degrees	0	0	0	32°
Total Unit Weight, pcf	110	120	120	110
Soil Modulus Parameter k, pci	30	250	500	225
Passive Soil Pressure, psf/one foot of depth		1000 + 40(D-3)	1,650 + 40(D-23)	450(D <sup>2</sup> )
Side Friction, psf		375	625	1000

Note: D = Depth below ground surface (in feet) to point at which the passive pressure is calculated.

It is important that the drilled piers be installed by an experienced, competent drilled pier contractor who will be responsible for properly installing the piers in accordance with industry standards and generally accepted methods,

without causing deterioration of the subgrade. The recommendations contained herein relate only to the soil-pier interaction and do not account for the structural design of the piers.

#### **4.1.2. Mat Foundation**

The tower could be supported on a common mat foundation bearing at a depth of at least 3 feet in the silt. A net allowable bearing pressure of up to 3,000 pounds per square foot may be used. This value may be increased by 30 percent for the maximum edge pressure under transient loads. A friction value of 0.30 may be used between the concrete and the underlying silt. The passive pressures given for the drilled pier foundation may be used to resist lateral forces.

It is important that the mat be designed with an adequate factor of safety with regard to overturning under the maximum design wind load.

#### **4.2. Proposed Guy Anchors**

Our findings indicate that the proposed guy anchors can be supported as a dead men bearing at a depth of at least 3.5 feet in the silt. A net allowable bearing pressure of up to 3,000 pounds per square foot may be used. These values may be increased by 30 percent for the maximum edge pressure under transient loads. A friction value of 0.30 may be used between the concrete and the underlying silt. The passive pressures given for the drilled pier foundation may be used to resist lateral forces.

#### **4.3. Equipment Platform**

An equipment platform may be supported on shallow piers bearing in the natural clayey silt and designed for an ultimate bearing soil pressure of 8,000 pounds per square foot. The piers should bear at a depth of at least 30 inches to minimize the effects of frost action. All existing topsoil or soft natural soil should be removed beneath footings.

#### **4.4. Equipment Slab**

A concrete slab supporting the equipment must be supported on at least 6-inch layer of relatively clean granular material such as gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Provided that a minimum of 6 in. of granular material is placed below the slab, a modulus of subgrade reaction ( $k$ ) of 225



lbs/cu.in. can be used for design of the slab. All existing topsoil or soft natural soil should be removed beneath crushed stone layer.

#### **4.5. Equipment Building**

If an equipment building support on a slab is chosen in place of the equipment platform, it may be supported on shallow spread footings bearing in the natural clay soil and designed for an ultimate bearing soil pressure of 8,000 pounds per square foot.

The footings should be at least ten inches wide. If the footings bear on soil they should bear at a depth of at least 30 inches to minimize the effects of frost action. All existing topsoil or soft natural soil should be removed beneath footings.

The floor slab for the new equipment building can be supported on firm natural soils or on new compacted structural fill. Existing fill may be left in place below the slab if the owner can accept the possibility of greater than normal settlement and cracking. This risk can be reduced if the underlying subgrade is properly proof-rolled and any unstable areas disclosed by the proof-roll are improved as necessary.

Floor slabs must be supported on at least 4-inch layer of relatively clean granular material such as gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Provided that a minimum of 4 in. of granular material is placed below the slab, a modulus of subgrade reaction (k) of 225 lbs/cu.in. can be used for design of the floor slabs.

#### **4.6. Drainage and Groundwater Considerations**

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

At the time of this investigation, groundwater was not encountered with in the depth of the shallow foudnations. Therefore, no special provisions regarding groundwater control are considered necessary for the proposed structures. Any seepage should be able to be pumped with sumps.

## 5. GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

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

### 5.1 Drilled Piers

The following recommendations are recommended for drilled pier construction:

- Clean the foundation bearing area so it is nearly level or suitably benched and is free of ponded water or loose material.
- Make provisions for ground water removal from the drilled shaft excavation. While groundwater was not encountered during drilling, the contractor should have pumps on hand to remove water in the event seepage into the drilled pier is encountered.
- Specify concrete slumps ranging from 4 to 7 inches for the drilled shaft construction. These slumps are recommended to fill irregularities along the sides and bottom of the drilled hole, displace water as it is placed, and permit placement of reinforcing cages into the fluid concrete.
- Install a temporary protective steel casing to prevent side wall collapse, prevent excessive mud and water intrusion in the drilled shaft.
- The protective steel casing may be extracted as the concrete is placed provided a sufficient head of concrete is maintained inside the steel casing to prevent soil or water intrusion into the newly placed concrete.
- Direct the concrete placement into the drilled hole through a centering chute to reduce side flow or segregation.

### 5.2 Fill Compaction

All engineered fill placed adjacent to and above the tower foundation should be compacted to a dry density of at least 95 percent of the standard Proctor maximum dry density (ASTM D-698). This minimum compaction requirement should be increased to 98 percent for any fill placed below the tower foundation bearing elevation. Any fill placed beneath the tower foundation should be limited to well-graded sand and gravel or crushed stone. The compaction should be accomplished by placing the fill in about 8 inch (or less) loose lifts and mechanically

compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to insure that adequate moisture conditioning and compaction is being achieved.

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

### **5.3 Construction Dewatering**

If groundwater is encountered in the shallow foundations, it should be minor and can be handled by conventional dewatering methods such as pumping from sumps.

Dewatering of drilled pier excavations that extend below the groundwater level may be more difficult since pumping directly from the excavations could cause a deterioration of the bottom of the excavation. If the pier excavations are not dewatered, concrete should be placed by the tremie method.

## **6 FIELD INVESTIGATION**

One soil test boring was drilled based at the tower center location and one boring at each of the three guy locations. Split-spoon samples were obtained by the Standard Penetration Test (SPT) procedure (ASTM D1586) in all test borings. The borings were terminated at the scheduled depths of 20 and 50 feet. The split-spoon samples were inspected and visually classified by a geotechnical engineer. Representative portions of the soil samples were sealed in glass jars and returned to our laboratory.

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

## **7 WARRANTY AND LIMITATIONS OF STUDY**

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either express or implied. POD Group is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

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

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

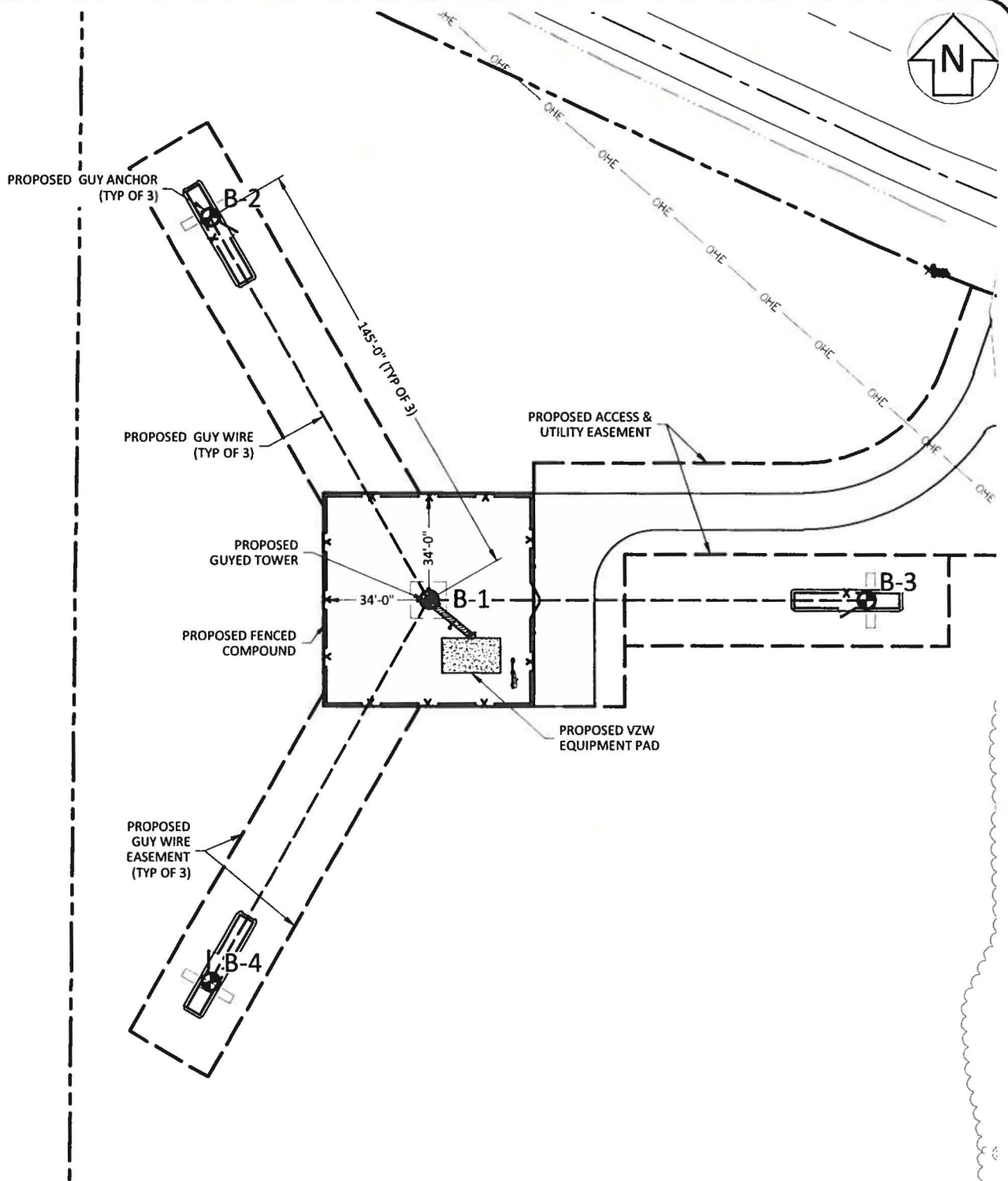


**APPENDIX**

BORING LOCATION PLAN

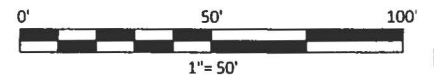
BORING LOG



SOIL SAMPLE CLASSIFICATION



# LEGEND

⊕ B-1 BORING LOCATION



SHEET TITLE: <b>BORING LOCATION PLAN</b>	SITE NUMBER:		SITE NAME: <b>FULTON, KY (CRUTCHFIELD)</b> VERIZON WIRELESS SITE NAME: <b>EV CRUTCHFIELD</b> SITE ADDRESS: 1311 CLINTON MOSCOW ROAD FULTON, KY 42041	 <b>POD</b> POWER OF DESIGN 11490 BLUEGRASS PKWY LOUISVILLE, KY 40299 502-437-5252
	LATITUDE:	36° 34' 48.40" N		
	LONGITUDE:	88° 58' 49.35" W		
SHEET NUMBER: <b>1</b>	TAX PARCEL #: 47-15 DEED BOOK 181, PAGE 6		OWNER INFORMATION: GRAHAM FARM LAND, LLC C/O JERRY GRAHAM 1758 STATE ROUTE 781 N FULTON, KY 42041	 <b>CAPITAL</b> T E L E C O M
	POD NUMBER:	16-9169		
	DRAWN BY:	NAB		
	CHECKED BY:	MEP		
	DATE:	8.30.16		



**Boring: B-1**  
**Page 1 of 1**

**Fulton, KY**

<b>Method:</b>	<b>H.S.A.</b>	<b>Boring Date:</b>	<b>29-Aug-16</b>	<b>Location:</b>	<b>Proposed Lease Area</b>
<b>Inside Diameter: 3 1/4"</b>		<b>Drill Rig Type:</b>		<b>CME-750 ATV</b>	
<b>Groundwater: DRY</b>				<b>Hammer Type: Auto</b>	
<b>Driller: Hoosier Drilling</b>				<b>Weather:</b>	
				<b>Note: ground cover was a soy bean field</b>	

[illegible]



## Page 1 of 1



**Fulton, KY**

**Location: Proposed Lease Area**

**Hammer Type: Auto**

**Weather:**

**Note: 4 inches of topsoil were encountered in a soy bean field**

From (ft)	To (ft)	Material Description		Sample Depth (ft)	Sample Type	Blows per 6-inch increment			Recovery (in)	SPT-N value	Rock Quality (RQD, %)	Atterberg Limits	Moisture Content (%)	% Fines (clay & silt)	Unconfined Compressive Strength, (ksf)
0.0	18.5	CLAYEY SILT (ML) - medium stiff, slightly moist, brown  -very stiff  - stiff, moist		1-2.5	SS	5,	4,	5	18	9,					3.3
3.5				3 1/2	SS	6,	7,	7	18	14,					4.0
	6.0				6-7.5	SS	6,	7,	8	18	15,				
				8.5	SS	6,	6,	6	14	12,					
				13.5	SS	7,	7,	9	18	16,					2.8
18.5	20.0			SILTY CLAY (CL) - very stiff, moist, reddish brown, trace fine sand		18.5	SS	6,	6,	10	15	16,			
		Boring Terminated at 20.0 feet													





## Page 1 of 1



**Fulton, KY**

**Location: Proposed Lease Area**

**Hammer Type: Auto**

**Weather:**

**Note: 4 inches of topsoil were encountered in a soy bean field**

From (ft)	To (ft)	Material Description		Sample Depth (ft)	Sample Type	Blows per 6-inch increment			Recovery (in)	SPT-N value	Rock Quality (RQD, %)	Atterberg Limits	Moisture Content (%)	% Fines (clay & silt)	Unconfined Compressive Strength, (ksf)	
0.0	18.5	CLAYEY SILT (ML) - medium stiff, slightly moist dark, brown		1-2.5	SS	2,	3,	5	12	8,					3.2	
3.5		- stiff, brown		3 1/2	SS	4,	6,	5	18	11,						
				6-7.5	SS	6,	5,	6	0	11,						
				8.5	SS	6,	7,	9	18	16,						
8.5		- very stiff, moist														2.8
				13.5	SS	6,	7,	10	16	17,						
18.5	20.0	SILTY CLAY (CL) - very stiff, moist, reddish brown, trace fine sand		18.5	SS	7,	9,	11	18	20,						
		Boring Terminated at 20.0 feet														



## Page 1 of 1

**Fulton, KY**

**Note: 4 inches of topsoil were encountered in a soy bean field**

[illegible]

# SOIL SAMPLE CLASSIFICATION

## FINE AND COARSE GRAINED SOIL INFORMATION

COARSE GRAINED SOILS (SANDS & GRAVELS)		FINE GRAINED SOILS (SILTS & CLAYS)		Qu, KSF Estimated	PARTICLE SIZE	
N	Relative Density	N	Consistency			
0-4	Very Loose	0-1	Very Soft	0-0.5	Boulders	Greater than 300 mm (12 in)
5-10	Loose	2-4	Soft	0.5-1	Cobbles	75 mm to 300 mm (3 to 12 in)
11-20	Firm	5-8	Firm	1-2	Gravel	4.74 mm to 75 mm (3/16 to 3 in)
21-30	Very Firm	9-15	Stiff	2-4	Coarse Sand	2 mm to 4.75 mm
31-50	Dense	16-30	Very Stiff	4-8	Medium Sand	0.425 mm to 2 mm
Over 50	Very Dense	Over 31	Hard	8+	Fine Sand	0.075 mm to 0.425 mm
					Silts & Clays	Less than 0.075 mm

The **STANDARD PENETRATION TEST** as defined by ASTM D 1586 is a method to obtain a disturbed soil sample for examination and testing and to obtain relative density and consistency information. A standard 1.4-inch I.D./2-inch O.D. split-barrel sampler is driven three 6-inch increments with a 140 lb. hammer falling 30 inches. The hammer can either be of a trip, free-fall design, or actuated by a rope and cathead. The blow counts required to drive the sampler the final two increments are added together and designate the N-value defined in the above tables.

## ROCK PROPERTIES

ROCK QUALITY DESIGNATION (RQD)		ROCK HARDNESS	
Percent RQD	Quality		
0-25	Very Poor	Very Hard:	Rock can be broken by heavy hammer blows.
25-50	Poor	Hard:	Rock cannot be broken by thumb pressure, but can be broken by moderate hammer blows.
50-75	Fair	Moderately Hard:	Small pieces can be broken off along sharp edges by considerable hard thumb pressure; can be broken with light hammer blows.
75-90	Good	Soft:	Rock is coherent but breaks very easily with thumb pressure at sharp edges and crumbles with firm hand pressure.
90-100	Excellent	Very Soft:	Rock disintegrates or easily compresses when touched; can be hard to very hard soil.

Recovery =	$\frac{\text{Length of Rock Core Recovered}}{\text{Length of Core Run}}$	X100	63 REC NQ 43 RQD	Core Diameter	Inches
RQD =	$\frac{\text{Sum of 4 in. and longer Rock Pieces Recovered}}{\text{Length of Core Run}}$	X100		BQ NQ HQ	1-7/16 1-7/8 2-1/2

## SYMBOLS

### KEY TO MATERIAL TYPES

SOILS	
Group Symbols	Typical Names
GW	Well graded gra.el - sand mixture, little or no fines
GP	Poorly graded gra.els or gra.el - sand mixture, little or no fines
GM	Silt, gra.els, gra.el - sand silt mixtures
GC	Clay, gra.els, gra.el - sand - clay mixtures
SW	Well graded sands, gra.ell, sands, little or no fines
SP	Poorly graded sands or gra.ell, sands, little or no fines
SM	Silt, sands, sand - silt mixtures
SC	Clay, sands, sand - clay mixtures
ML	Inorganic silts and clay, fine sands, rock flour, silt, or clay, fine sands, or clay, silts
OL	Organic silts and organic silt, clays of low plasticity
CL	Inorganic clays of low range plasticity, clayey silts, sandy clays, silty clays, lean clays
MH	Inorganic silts, micaceous or diatomaceous fine sand, or silt, silts, elastic silts
CH	Inorganic clays of high range plasticity, fat clays

ROCKS	
Symbols	Typical Names
	Limestone or Dolomite
	Shale
	Sandstone

### SOIL PROPERTY SYMBOLS

N:	Standard Penetration, BPF
M:	Moisture Content, %
LL:	Liquid Limit, %
PI:	Plasticity Index, %
Qp:	Pocket Penetrometer Value, TSF
Qu:	Unconfined Compressive Strength Estimated Qu, TSF
$\gamma_d$ :	Dry Unit Weight, PCF
F:	Fines Content

### SAMPLING SYMBOLS

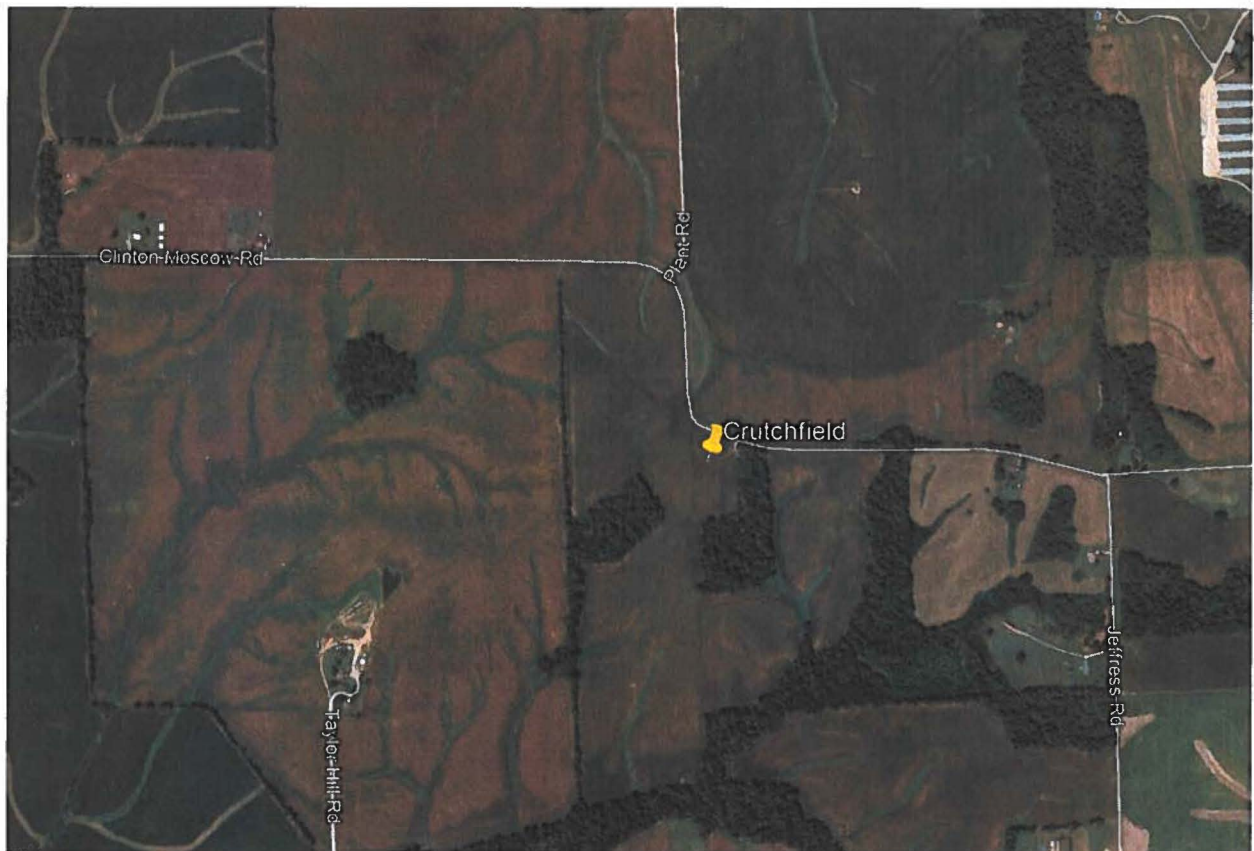
SS	Split Spoon Sample
	Relatively Undisturbed Sample
	Rock Core Sample

**EXHIBIT H**  
**DIRECTIONS TO WCF SITE**



### **Driving Directions to Proposed Tower Site**

1. Beginning at the Fulton County Judge Executive's Office, located at 2216 Myron Cory Drive in Hickman, KY 42050 head north on Myron Cory Drive toward 7<sup>th</sup> Street.
2. Turn right onto 7<sup>th</sup> Street and travel approximately 1.1 miles.
3. Turn right onto KY-94E / Moscow Avenue and travel approximately 9.2 miles.
4. Turn left onto State Highway 1907 and travel approximately 3.0 miles.
5. Turn left onto State Highway 781 North and travel approximately 26 feet.
6. Turn right onto Clinton Moscow Road and travel approximately 1.3 miles.
7. The site will be on the right at 1311 Clinton Moscow Road in Fulton, KY 42041.
8. The site coordinates are
  - a. North 36° 34' 48.40"
  - b. West 88° 58' 49.35"



Prepared by:  
Chris Shouse  
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**

## OPTION AND TELECOMMUNICATIONS FACILITY LEASE AGREEMENT

This Option and Telecommunications Facility Lease Agreement (the "**Lease**" or "**Agreement**") is entered into as of the date of full execution by the parties (the "**Effective Date**"), by and between Graham Farm Land LLC, a Kentucky limited liability company (the "**Landlord**"), with an address at 1758 State Route 781 North, Fulton, Kentucky 42041, and Capital Telecom Holdings LLC, a Delaware limited liability company (the "**Tenant**"), with an address at 820 Morris Turnpike, Suite 104, Short Hills, New Jersey 07078. (Landlord and Tenant are sometimes each referred to as a "**Party**" and together referred to as the "**Parties**").

### RECITALS

WHEREAS, Landlord is the owner of a certain tract or parcel of land situated and known as 84.87 Clinton/Moscow Rd., bearing APN No. 47-15, in the City of Fulton, County of Fulton and State of Kentucky, more fully described on Exhibit "A" attached hereto and made a part hereof (the "**Landlord's Property**"); and

WHEREAS, Tenant has requested, and Landlord has agreed, to lease to Tenant a portion of Landlord's Property ("**Leased Premises**") for the purpose of constructing, installing, operating, repairing, maintaining, upgrading and/or replacing a Telecommunications Facility (as hereinafter defined), upon the terms and conditions as set forth in this Lease; and

WHEREAS, this Agreement is intended to replace a prior "Option and Telecommunications Facility Lease Agreement," which the parties agreed to terminate in its entirety.

NOW THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

### OPTION

A. For and in consideration of the sum of Ten Dollars (\$10.00), (the "**Option Fee**") paid by Tenant to Landlord upon the full execution of this Lease, Landlord hereby grants to Tenant an option to develop the Leased Premises (the "**Option**"), as shown on Exhibit B attached hereto, in accordance with the terms and conditions set forth herein. Tenant may elect to exercise the Option, if at all, by written notice to Landlord of such exercise ("**Option Exercise**") at any time within twelve (12) months of the Effective Date (the "**Option Period**").

B. Should Tenant fail to exercise the Option within the Option Period or any extension thereof, all rights and privileges granted hereunder shall be deemed completely surrendered and the Option and this Lease shall expire and neither party shall have any further liability or obligation to the other.

C. During the Option Period, and during the Initial Term and any Renewal Term, without limiting Landlord's obligations during the Term of the Lease, Landlord agrees to

cooperate with Tenant and/or its assignee, and expressly grants to Tenant and/or its assignee, the right of reasonable access to Landlord's Property and the Leased Premises to conduct such surveys, physical inspections, environmental reports and inspections, subsurface boring tests and other activities of similar nature, as Tenant may deem necessary, at the sole cost of Tenant (provided Tenant returns Landlord's Property to its existing condition, free of mechanics liens); and (ii) cooperates with Tenant regarding Approvals as defined and set forth in Section 4 of the Lease. Tenant shall have the right to obtain a title report with respect to the Landlord's Property, at no cost to the Landlord. If the state of title shows any liens or encumbrances that interfere with Tenant's use and operation of the Premises, Tenant shall have the right to terminate this Lease without further liability.

D. If Tenant exercises the Option, Landlord hereby agrees to permit Tenant to develop the Leased Premises located at 924 State Route 924, Fulton, KY, sufficient for placement of the Telecommunication Facility (as defined below), together with all necessary space and easements for access, utilities, construction, landscaping and, if required, landscape buffer, and maintenance, as generally described and depicted in the attached **Exhibit "B"** and to further lease space on the Telecommunication Facility to third-parties, at a rental rate determined in the sole discretion of the Tenant. In order to allow Tenant to lease space on the Telecommunication Facility and to finance its development of the Telecommunication Facility on the Premises, Tenant's right to develop the Leased Premises shall be considered a leasehold interest in the Landlord's Property.

#### 1. Leased Premises.

Upon Tenant's exercise of the Option, as set forth above, and in consideration of the obligation of Tenant to pay rent, as set forth in Paragraph 3 below, along with the other terms, provisions and covenants stated herein, Landlord hereby demises and leases to Tenant, and Tenant hereby takes from Landlord, pursuant to the terms hereof, the Leased Premises located within Landlord's Property, all as more fully shown on **Exhibit B** attached hereto and made a part hereof, along with the following additional rights: (i) a non-exclusive right to use in common with others entitled to use same, the common areas of the Landlord's Property, including but not limited to a twenty foot (20') Access Easement for ingress and egress, to and through all driveways, parking areas, adjoining roadways and the "Premises" and (ii) the right to use, including without limitation the right to access, and, if necessary, install utilities, in common with others entitled to use same, a ten foot (10') foot wide right-of-way, Utility Easement for electric and telephone service, as generally depicted on **Exhibit B**, from the nearest available utility service and/or nearest public right-of-way to the Leased Premises. The Tenant's use of the common areas of the Landlord's Property shall be subject, however, to the terms and conditions set forth herein.

The parties understand and acknowledge that **Exhibits A** and **B**, attached to the Lease and/or Memorandum of Lease, at its execution, may be preliminary (the "Preliminary Exhibits"). Accordingly, the parties agree that, in the event, final, more complete exhibits are later prepared ("Revised Exhibits"), upon notice to the Landlord, the Preliminary Exhibits attached to the Lease and/or Memorandum of Lease shall thereupon be replaced with the Revised Exhibits which shall serve to supersede and replace any Preliminary Exhibits attached to the Lease and/or

Memorandum of Lease. Any references in the Lease pertaining to Exhibit A or B shall thereupon refer to the Revised Exhibits.

2. Term and Renewals.

This Agreement shall be effective as of the date of full execution by the parties (the "Effective Date") however, the initial term shall be for fifteen (15) years (the "Initial Term") commencing on the "Rent Commencement Date" (as hereinafter defined), at which time rental payments shall become due to the Lessor. The Term of this Agreement may be extended by Tenant for up to five (5) successive terms of five (5) years each (each a "Renewal Term," and collectively, the "Renewal Terms"). The Term of this Agreement will automatically renew for each Renewal Term unless Tenant shall give Landlord written notice of its intention not to exercise a renewal option at least six (6) months prior to the end of the Initial Term, or the then current Renewal Term, as the case may be (the Initial Term and Renewal Terms for which Tenant has exercised its option to renew are hereinafter collectively called the "Term"). Should Tenant hold over and not remove the Telecommunications Facility after the expiration of the Term hereof, without the execution of a new or extended agreement, Tenant shall be deemed to be using the Leased Premises from month to month, subject to such use being terminated by either Landlord or Tenant upon thirty (30) days' written notice and subject to all of the other terms, covenants and conditions of the Agreement.

3. Rent and Rent Commencement Date.

The "Rent Commencement Date" shall be, assuming this Agreement has not been terminated in accordance with Section 4(g), the first day of the month following the commencement of construction of a Telecommunications Facilities for which Permits (as hereinafter defined) have been issued.

(a) Commencing on the Rent Commencement Date, as defined above, and during the Term, Tenant shall pay Landlord the following:



(b) Monthly Rent payments are due on the first (1<sup>st</sup>) day of each month of the Term.

(c) The Rent shall be paid by Tenant, at the address provided herein for Landlord's notice, without any prior demand therefore and without any deduction or setoff whatsoever.

4. Use.



(a) The Leased Premises are leased for the purposes of constructing, installing, operating, repairing, maintaining, upgrading and replacing a communications tower, which, at any time during the lease term, may be extended vertically by up to ten (10) percent, as permitted by the local jurisdiction, without requiring the consent of the Landlord, poles, guy wires and anchors, equipment shelters, buildings, utility lines, communication equipment, signs, personal property and related facilities and improvements including without limitation all technological evolutions of any of the foregoing (the "**Telecommunications Facility**"). Tenant shall have the right to use the Telecommunications Facility for its business purposes, which shall include, without limitation, subleasing or licensing all or any portion of the Leased Premises and/or the Telecommunications Facility to third parties ("**Carriers**"), without Landlord consent.

(b) At all times during the Term of this Lease, Tenant and its employees, agents, customers and invitees shall have free access to the Leased Premises seven (7) days a week, twenty-four (24) hours a day. If, at any time, access is denied, for any reason whatsoever, and such denial of access continues for two (2) consecutive days, Tenant shall have the right, in addition to other rights and remedies available to Tenant at law or in equity, to terminate this Lease with no further liability or obligation hereunder.

(c) Tenant shall have the right to construct fencing around and within the Leased Premises and to otherwise secure the Leased Premises and the Telecommunications Facility. Tenant may enter upon Landlord's Property for the purpose of making surveys, conducting tests and investigations, cutting or trimming trees, bushes, or other vegetation that interferes with the use and operation of the Telecommunications Facility and to construct temporary anchors and guys in connection with the construction of any communications tower or pole on the Leased Premises. If the construction or maintenance of the Telecommunications Facility results in damage to the Leased Premises, Tenant shall promptly repair same to its prior condition, normal wear and tear and insured casualty excepted.

(d) At all times during the Term, Tenant will, and will cause its Carriers to, observe and conform to, in all material respects, all laws, ordinances, orders, rules and regulations now or hereafter applicable to the Leased Premises and the Telecommunications Facility and/or the use of either.

(e) Tenant is responsible to ensure that the Telecommunications Facility complies with all applicable rules and regulations of the Federal Communications Commission ("**FCC**"), Federal Aviation Administration ("**FAA**") and any and all applicable codes and regulations of the regulating federal, municipal, county and state authorities/agencies with respect to the installation, use, maintenance and removal of the Telecommunications Facility. Landlord assumes no responsibility for the licensing, operation and/or maintenance of the Telecommunications Facility. Tenant shall obtain the necessary permits, leases and approvals from all governmental authorities having jurisdiction. If, at any time during the Term of this Lease, the FAA, FCC, or other federal, state or governmental agency changes its regulations and requirements so that Tenant may no longer use the Leased Premises for the Telecommunications Facility, Tenant shall have the right to terminate this Lease upon thirty (30) days' written notice to Landlord. Upon the exercise of such right by Tenant this Lease shall become null and void and neither party shall have any further liability or obligation to the other.

(f) Tenant agrees that Tenant and any Carriers will be permitted to install only such equipment that is of the type and frequency which will not cause measurable interference to Landlord and/or Landlord's Property. In the event Landlord notifies Tenant in writing of any such interference, Tenant shall modify or cease its use of the Telecommunications Facility, as necessary, to promptly eliminate such interference. Tenant shall have the opportunity to relocate the Telecommunications Facility on the Landlord's Property if such relocation shall remedy the events described, whereupon this Lease shall be modified accordingly.

(g) The Permit Contingency Date ("Permit Contingency Date") is herein defined as two hundred seventy (270) days following the Option Exercise, wherein Tenant shall use its commercially reasonable efforts to obtain the final, unappealable (and for which no appeal is pending) certificates, permits and other approvals that are required by federal, state, local governmental or quasi-governmental authorities (collectively, the "Permits"). Provided that the Tenant is diligently pursuing the Permits, the Tenant shall have the right, upon written notice to Landlord, (to be delivered prior to the expiration of the last day of the then Permit Contingency Date), to extend the Permit Contingency Date from its date of expiration for up to two (2) ninety (90) day periods ("Extended Permit Contingency Date"). If Tenant is in the process of appealing or contesting an appeal, Tenant has the additional right to further extend the Permit Contingency Date until said appeal(s) has run its course, but in no event more than 24 months following the Option Exercise and so long as Tenant is diligently prosecuting such appeal. Tenant shall bear the responsibility and cost of obtaining the Permits. Landlord agrees to use reasonable efforts to cooperate with Tenant's efforts to obtain the Permits, including signing proper applications in a timely manner and/or joining in all such applications as may be necessary. Tenant shall use its commercially reasonable, diligent efforts to obtain the Permits and shall copy Landlord on all submissions to, and responses from, governmental agencies relevant to the Permits.

(h) In the event Tenant has not satisfied (which shall be evidenced by a written notice to Landlord from Tenant), or waived in writing, the Permit Contingency on or before the expiration of the Permit Contingency Date or the Extended Permit Contingency Date, Tenant shall have the right to terminate this Lease prior to the expiration of the Permit Contingency Period or the Extended Permit Contingency Date, or on such earlier date that Tenant has determined the Permits are not likely to be issued. Upon such termination, no further liability shall attach to either party under this Lease. At any time prior to the Permit Contingency Date or the Extended Permit Contingency Date, the Tenant shall have the right, upon thirty (30) days prior written notice to Landlord, to terminate this Lease if Tenant shall determine that the proposed use and/or business in respect of the Leased Premises shall not be feasible. Should Tenant exercise said termination right then Tenant will give immediate notice of the termination and neither Party shall have any further liability.

(i) The Landlord will cooperate with Tenant and shall seek to obtain a mutually acceptable subordination non-disturbance and attornment agreement ("SNDA") from any mortgagee(s) that encumbers the Leased Premises or the Landlord's interest therein. The Tenant shall be responsible for the payment of all third party costs incurred in connection with obtaining the SNDA. The SNDA shall be regarded as a Permit, and the failure to obtain a SNDA if not waived by Tenant, shall be regarded as the failure to obtain a Permit.

## **5. Utility Services/Taxes.**

Landlord: Graham Farm Land LLC  
Premises: 924 State Route 924, Fulton, KY

Tenant: Capital Telecom Holdings LLC

(a) Tenant shall pay all charges incurred for its use of utility services at the Leased Premises including, without limitation, gas, electricity, water, sewer and telephone. Landlord shall cooperate with Tenant in Tenant's efforts to obtain utility services along the Right of Way by signing such documents or easements as may be reasonably required by Tenant's utility service provider. Tenant shall bear the costs of any additional installations to provide utilities.

(b) Tenant will be responsible for payment of all personal property taxes assessed directly upon the Telecommunications Facility and arising solely from its use. Tenant will pay to Landlord any increase in real property taxes attributable solely to the Telecommunications Facility within sixty (60) days after receipt of satisfactory documentation indicating calculation of Tenant's share of such real estate taxes and payment of the real estate taxes by Landlord. Landlord will pay, when due, all real estate taxes and assessments attributable to Landlord's Property of which the Leased Premises is a part, subject to reimbursement by Tenant as required above.

#### 6. Insurance.

Tenant will, at its own cost and expense, obtain and maintain (and cause its Carriers to obtain and maintain) during the Term, a policy or policies of comprehensive general liability insurance, or its equivalent, with minimum limits of not less than (a) \$1,000,000 for injury to one or more persons in any one occurrence and (b) \$1,000,000 for property damage in any one accident.

The insurance coverage provided for herein may be maintained pursuant to master policies of insurance covering other tower locations of Tenant and its related business entities. All insurance policies required to be maintained by Tenant hereunder shall; (i) be with responsible insurance companies authorized to do business in the state where the Premises are located, if required by law; (ii) shall name Landlord as an additional insured; (iii) and shall provide for cancellation only upon ten (10) days' prior written notice to Landlord. Tenant shall evidence such insurance coverage by delivering to Landlord, if requested, certificates issued by the insurance companies underwriting such risks.

#### 7. Liability and Indemnification.

Landlord shall not be liable for any injury to person(s) or damage to property on or about the Landlord's Property and/or Premises caused by the negligence or willful misconduct of Tenant, its Carriers, employees, customers or agents, or of any other person entering upon Landlord's Property or the Leased Premises under express or implied invitation of Tenant (other than Landlord or Landlord's employees, contractors, agents or invitees), or for a breach of this Lease by Tenant, and Tenant agrees to indemnify and hold harmless Landlord from any loss, claim, damage, cost, or expense suffered or incurred by Landlord by reason of any such damage or injury. Tenant shall not be liable for any injury to person(s) or damage to property on or about Landlord's Property and/or the Leased Premises caused by the negligence or willful misconduct of Landlord, its employees, contractors, or agents, or of any other person entering upon Landlord's Property and/or the Leased Premises under express or implied invitation of Landlord (other than Tenant or Tenant's Carriers, employees, customers, agents or invitees), or for a breach of this Lease by Landlord, and Landlord agrees to indemnify and hold harmless Tenant

and its Carriers from any loss, claim, damage, cost, or expense suffered or incurred by Tenant or its Carriers by reason of any such damage or injury.

8. Quiet Enjoyment; Condition of Landlord's Property.

(a) Landlord covenants and agrees that Tenant, on paying rent and performing its obligations hereunder, shall peaceably and quietly hold and enjoy the Leased Premises for the Term of this Lease, including any Renewal Terms, without any hindrance, molestation or ejection by Landlord, its successors and/or assigns, or those claiming through any of them. Tenant shall not cause or permit any hazardous material to be brought upon, kept or used in or about the Landlord's Property by Tenant, its agents, employees, contractors or invitees. Throughout the Term, the Landlord shall not permit a competing Telecommunications Facility to operate on the Landlord's Property or any property in which the Landlord has a controlling interest or is owned or controlled by the Landlord, which adjoins the Landlord's Property.

(b) As used herein, the term "hazardous material" means any hazardous or toxic substance, material or waste (including, without limitation, asbestos) which is determined by any state, federal or local governmental authority to be capable of posing a risk of injury to health, safety or property and/or the use and/or disposal of which is regulated by any governmental authority. Tenant shall be responsible for all obligations of compliance with all environmental laws and regulations of any governmental authority regulating standards of liability or standards of conduct as may now or at any time hereinafter be in effect that are in any way related to the Telecommunications Facility or Tenant's activities conducted upon or about the Landlord's Property. Tenant hereby agrees to indemnify, defend and hold harmless Landlord (and its affiliates and their officers, employees, directors, managers, trustees and shareholders) from all fines, suits, procedures, claims, actions and costs in any way growing out of or connected with (i) any breach by Tenant of the foregoing covenants, (ii) any hazardous material introduced into the Landlord's Property by Tenant or its employees, contractors, agents, lessees or subtenants, and/or (iii) the Telecommunications Facility.

(c) Landlord represents and warrants that the Leased Premises is in compliance with any and all applicable federal, state or local statutes, ordinances, codes, administrative orders, rules or regulations relating to or concerning hazardous, toxic or dangerous waste, substance or material, including, without limitation, the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation and Liability Act, as amended, and the National Environmental Protection Agency requirements (collectively, "Environmental Laws").

(d) Landlord represents and warrants to Tenant that it is the fee owner of the Landlord's Property, free of any title defects, liens or encumbrances that would interfere with Tenant's use thereof. Landlord further represents and warrants that the signatory to this Lease is fully authorized to execute and enter into this Lease. During the Term of this Lease, Landlord covenants and agrees that should it grant, create, or suffer any claim, lien, charge, encumbrance, easement, restriction, or exception to title to the Premises, Landlord shall advise Tenant of such grant/creation, in writing. Landlord will cooperate with Tenant in its efforts to obtain, from any party/entity which encumbers the premises, a written instrument in form and substance reasonably satisfactory to Tenant; (i) to be bound by the terms of this Lease; (ii) not to disturb



Tenant's or its Carriers' use or possession of the Premises in the event of a foreclosure of such lien or encumbrance so long as Tenant is not in default under this Lease; and (iii) not to join Tenant or any of its Carriers as a party defendant in any such foreclosure proceeding taken by it. Any sale of Landlord's Property, including, without limitation, a sale in bankruptcy, shall be under and subject to this Lease.

Any sale of the Leased Premises, including, without limitation, a sale in bankruptcy, shall be under and subject to this Lease.

9. Assignment, Sublease, License, Mortgage.

(a) Tenant may assign this Lease at any time without the prior written consent of Landlord. After delivery by Tenant to Landlord of an instrument of assumption by an assignee that assumes all of the obligations of Tenant under this Lease, Tenant will be relieved of all liability hereunder, without necessity of any further writing. Tenant may sublease or lease all or any part of the Leased Premises at any time without prior consent. Landlord recognizes the subleases and leases of all of Tenant's Carriers, now or hereafter in effect, and will permit each Carrier of Tenant to remain in occupancy of and use the Leased Premises, notwithstanding any Default hereunder by Tenant, so long as each Carrier is not in default under its sublease or lease with Tenant.

(b) Tenant shall have the right to mortgage, pledge or grant a security interest in its interest in this Lease (the document or instrument evidencing and/or securing the mortgage, pledge or security interest shall be referred to individually or collectively as the "**Security Instrument**" and the holder thereof shall be referred to as the "**Tenant's Lender**"), or to assign, pledge or hypothecate the same as security for such Security Instrument. No such Security Instrument shall be binding upon Landlord in the enforcement of its rights and remedies herein and by law, unless and until an executed counterpart thereof, together with the address of the Tenant's Lender, shall have been delivered to Landlord.

(i) Provided that Tenant has advised Landlord in writing of the name and address of Tenant's Lender, Landlord shall notify Tenant's Lender of any default by Tenant under the Agreement and agrees that, notwithstanding any provision(s) of this Agreement to the contrary, no notice of termination of this Agreement shall be effective unless Tenant's Lender shall have received notice of default giving rise to such termination; or; (ii) in the case of any default that can be cured by the payment of money, until thirty (30) days shall have elapsed following the giving of such notice; or (iii) in the case of any other such default, until a reasonable period for remedying such default shall have elapsed following the giving of such notice and following the time when Tenant's Lender shall have become entitled under its Security Instrument to remedy the same, including such time as may be necessary to acquire possession of the Leased Premises. If possession is necessary to effect such cure, Tenant's Lender shall, with reasonable diligence, pursue such remedies as are available to it under its security instrument so as to be able to remedy the default and thereafter shall continue to remedy such default or cause the same to be remedied. Notwithstanding the foregoing, Tenant's Lender shall have no obligation to cure any such default.



(ii) Upon any rejection of this Lease in any bankruptcy, reorganization, arrangement or similar proceeding, which would, if it were not for this Paragraph 9, cause this Lease to terminate without any action or consent by Landlord, Tenant or any Tenant's Lender, the transfer of Tenant's interest hereunder to such Tenant's Lender or its nominee shall automatically occur. Such Tenant's Lender may terminate this Lease upon any such transfer by giving written notice thereof to Landlord no later than thirty (30) days after notice from Landlord of such transfer. Upon any such termination, such Tenant's Lender shall have no further obligations hereunder (including any obligations which may have accrued prior to such termination) except in the event that said Tenant's Lender shall request a new Lease as provided for hereinbelow, in which event all prior obligations accruing to the effective date of the new Lease shall be payable upon the date of its effectiveness, notwithstanding the earlier rejection and termination.

(iii) In the event of the termination of this Lease, or of any succeeding Lease made pursuant to the provisions of subparagraph (ii) above, prior to its stated expiration date, the Landlord will enter into a new lease for the Leased Premises with the Tenant's Lender for the remainder of the term, effective as of the date of such termination, at the Rent and upon the covenants, agreements, terms, provisions and limitations herein contained, provided:

a. such Tenant's Lender makes written request upon the Landlord for such new Lease within sixty (60) days from the date of such termination and such written request is accompanied by payment to the Landlord of all amounts then due and owing to the Landlord; and

b. such Tenant's Lender pays, or causes to be paid, to the Landlord, at the time of the execution and delivery of said new Lease, any and all sums which would at the time of the execution and delivery thereof, be due under this Agreement but for such termination, and additionally pays or causes to be paid, any and all expenses, including reasonable counsel fees, court costs and disbursements incurred by the Landlord in connection with any such default and termination as well as in connection with the execution and delivery of such new Lease.

(iv) Upon the execution and delivery of a new lease in accordance with the provisions of the preceding subparagraph (iii) of this Paragraph 9(b) all subleases or leases which theretofore may have been assigned and transferred to the Landlord shall thereupon be assigned and transferred, without recourse by the Tenant's Lender, to the Tenant's Lender as the new Tenant.

(v) No Tenant's Lender shall become personally liable under the agreements, terms, covenants or conditions of this Agreement or any new lease entered into in accordance with the provisions of subparagraph 9(b)(iii), unless and until it becomes, and then only for as long as it remains, the holder of the Leased estate.

(c) Landlord agrees to subordinate statutory lien rights it may have concerning the Telecommunications Facility on form reasonably acceptable to Landlord and Tenant.

10. Telecommunications Facility Ownership and Maintenance.

The Telecommunications Facility, when located on the Leased Premises and even if installed on or attached to the Leased Premises, shall not be deemed to be part of the Landlord's Property but shall be separately owned by Tenant and/or its Carriers, as the case may be. At any time during the Term of this Lease, Tenant and its Carriers shall have the right to remove all or any portion of the Telecommunications Facility from the Leased Premises. Tenant shall remove the Telecommunications Facility and related improvements from the Leased Premises within one hundred eighty (180) days of the termination of this Lease, with any foundations to be removed to two (2) feet below grade. Upon termination of this Lease, the Leased Premises shall be restored as closely as is practical to its condition existing on the date of this Lease (except for any tree, shrub or other vegetation that was removed), normal wear and tear and insured casualty excepted. Landlord shall provide Tenant with a written declaration stating that Landlord does not have an ownership interest in the Telecommunications Facility, or any part thereof, located on the Leased Premises and that same are owned by Tenant or its Carriers, as the case may be, within fifteen (15) days after receipt of a written request therefor from Tenant. Tenant, at its sole cost and expense, shall maintain the Telecommunications Facility in good condition and repair during the duration of this Agreement. Tenant shall, at its sole cost and expense, repair and replace any property of Landlord, including, but not limited to, the roof or any property of any other tenant or occupant at the Landlord's Property, which is damaged or adversely affected by reason of the installation, maintenance, use, or removal by Tenant, of the Telecommunications Facility. Tenant shall assume all risk of loss or damage to the Telecommunications Facility, its related equipment and all of Tenant's property used in connection with the installation, maintenance, repair, use and removal of the Telecommunications Facility. Landlord shall in no event be liable or responsible for any damage to any of Tenant's property, including without limitation, the Telecommunications Facility. If the Leased Premises shall be damaged by fire or other casualty not covered by Tenant's policies of fire and broad form extended coverage insurance and Tenant decides not to repair and restore the Premises, or sufficient funds are not made available by Tenant's lender/mortgagee, Tenant shall have the right, to be exercised by notice in writing, delivered to Landlord within sixty (60) days from and after the occurrence of such damage or destruction, to elect to cancel and terminate this Lease.

11. Right of Inspection.

Upon request and in the presence of Tenant or its employee or agent, Landlord and its agents and representatives shall be entitled to enter upon and inspect the Leased Premises at any time during normal business hours, provided only that such inspection shall not unreasonably interfere with Tenant's business and the operation of the Telecommunications Facility.

12. Notices.

All notices, demands, requests, or other communications which are required to be given, served or sent by one party to the other pursuant to this Agreement shall be in writing, and shall be mailed, postage pre-paid, by certified mail or delivered by a reliable overnight courier service for next business day delivery, with delivery verification, to the following addresses or at such other address as may be designated in writing by either party:

***If to Landlord:***

Landlord: Graham Farm Land LLC  
Premises: 924 State Route 924, Fulton, KY

***If to Tenant:***

Tenant: Capital Telecom Holdings LLC

Graham Farm Land LLC  
1758 State Route 781 North  
Fulton, KY 42041

**Capital Telecom Holdings LLC,**  
820 Morris Turnpike, Suite 104  
Short Hills, NJ 07078  
ATTN: Leasing

**Copy to:**

**Capital Telecom**  
1500 Mt. Kemble Avenue, Suite 203  
Morristown, NJ 07960  
Attention: Lease Manager

Notice given by certified mail or by reliable overnight courier shall be deemed delivered on the date of receipt (or on the date receipt is refused) as shown on the certification of receipt or on the records or manifest of the U.S. Postal Service or such courier service.

13. Default.

Either party hereunder shall be in default ("Default") under this Lease if that party fails to perform any of its material, non-monetary obligations under this Lease and such failure continues for thirty (30) days ("Cure Period") after the other party gives written notice thereof to the defaulting party; provided, however, that if more than thirty (30) days shall be required in order to cure any such default, the defaulting party shall have sufficient time as is reasonably required provided the defaulting party has commenced and is diligently pursuing corrective action within the Cure Period. Tenant shall be in default under this Lease should Tenant fail to satisfy any of its monetary obligations under this Lease and such failure continues for ten (10) days ("Monetary Cure Period") after the Landlord gives written notice thereof to the Tenant.

14. Condemnation

(a) If all of the Leased Premises (or if less than all, if Tenant determines that the Telecommunications Facility cannot be operated on the remaining portion as a communications tower site) shall be acquired by the right of condemnation or eminent domain for any public or quasi-public use or purpose, or transferred to a condemning authority under threat of condemnation, then the Term of this Lease shall cease and terminate as of the date of title vesting in such proceeding (or sale) and all rent shall be paid or refunded to that date, as the case may be, with no further liability or obligation arising hereunder.

(b) In the event of a partial taking or condemnation of less than a substantial portion of the Leased Premises and Tenant determines that the Telecommunications Facility can be operated on the remaining portion as a communications tower site, this Lease shall continue in full force and effect, but with an equitable reduction or abatement of rent.

(c) In the event of any condemnation, taking or sale, whether whole or partial, Landlord and Tenant shall each be entitled to seek, receive and retain such separate awards and portions of lump sum awards as may be allocated to their respective interests in any

Landlord: Graham Farm Land LLC  
Premises: 924 State Route 924, Fulton, KY

Tenant: Capital Telecom Holdings LLC

condemnation proceedings, or as may be otherwise agreed. Termination of this Lease shall not affect the right of the parties to such awards.

15. Force Majeure.

The time for performance by Landlord or Tenant of any term, provision, or covenant of this Lease shall be deemed extended by time lost due to delays resulting from acts of God, strikes, civil riots, floods, material or labor restrictions, any acts or failure to act by governmental authority and/or any other cause not within the control of Landlord or Tenant.

16. Recording.

Landlord or Tenant, promptly upon request of the other party, shall execute, acknowledge and deliver to the requesting party in recordable form, a short-form memorandum of this Lease (or the Lease if such is the local custom) setting forth the Initial Term, the Renewal Term options, and such other provisions hereof as Landlord or Tenant shall reasonably deem to be pertinent, which may be recorded at Landlord's or Tenant's option. The requesting party agrees to provide the other party with an executed duplicate of such short-form memorandum upon written request. The Tenant shall enter into a mutually acceptable SNDA with all mortgagees' of Landlord's interest in the Premises.

17. Right of First Refusal.

If, during the term of this Lease, as might be renewed or extended, the Landlord shall have received a bona fide arm's length offer to purchase the Leased Premises from any third party (the "Transferee"), the Landlord shall serve a notice (the "Transfer Notice") upon the Tenant. The Transfer Notice shall set forth the exact terms of the offer so received, together with a copy of such offer, and shall state the desire of the Landlord to sell the Leased Premises on such terms and conditions. Thereafter, the Tenant shall have the right and option to purchase the Leased Premises at the price and upon the terms and conditions specified in the offer (the "Offer"). If the Tenant desires to exercise its option, it shall give notice (the "Counternotice") to that effect to the Landlord within thirty (30) days after receipt of the Transfer Notice. The closing of the purchase and sale of the Leased Premises pursuant to this option shall occur at the time set forth in the Offer, provided that Tenant shall not be required to close before the 15th day following the date of the Counternotice. The Tenant's failure to give a timely Counternotice (or its notice of refusal to purchase) shall be deemed a waiver of its rights to exercise its right of first refusal to accept the Offer but shall not be deemed a waiver of its right of first refusal with respect to any modification to the Offer or any future Offers.

18. Rental Stream Offer.

If, at any time after the date of this Amendment, Landlord receives a bona fide written offer from a third party or receives a modified written offer from a third party seeking an assignment of the rental stream 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 ninety (90) days after it receives such copy and representation 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 of first refusal or fails to provide written notice to Landlord within the ninety (90) day period, Landlord may assign the rental stream 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.

19. Buyout of Lease Term.



20. Exclusivity.

Landlord agrees not to Lease or develop a telecommunications facility on any part of the Landlord's Property or any property in which the Landlord has a controlling interest or is owned or controlled by the Landlord which adjoins the Landlord's Property, while this Agreement is in effect.

21. Lease Execution.

This Lease Agreement shall be deemed to be in effect upon its full execution. This Lease may be executed in several counterparts and all so executed will constitute one agreement, binding on all the parties hereto even though all the parties are not signatories to the original or the same counterpart. The Parties agree that receipt of a fully signed Agreement, whether it is an executed original, or a photocopy, e-mail or facsimile thereof, shall be deemed receipt of an originally executed Agreement.



22. Miscellaneous.

(a) The captions used in this Lease are for convenience only and shall not be deemed to amplify, modify or limit the provisions hereof.

(b) Words of any gender used in this Lease shall be construed to include any other gender and words in the singular shall include the plural and vice versa, unless the context otherwise requires.

(c) This Lease shall be binding upon, and shall inure to, the benefit of the parties hereto and their respective heirs, legal representatives, successors and/or permitted assigns.

(d) This Lease, and every Exhibit attached hereto, contains the entire agreement of the parties hereto with respect to the subject matter hereof and can be altered, amended or modified only by written instrument executed by all such parties.

(e) The unenforceability of any provision hereof shall not affect the remaining provisions of this Lease, but rather such provision shall be severed and the remainder of this Lease shall remain in full force and effect.

(f) All rights and remedies available to any party hereunder in equity or at law shall be cumulative.

(g) This Agreement has been executed by the undersigned in his capacity as an officer of Landlord, not individually, and neither the officer executing this Agreement nor the partners, members, officers, employees of Landlord, or of any of Landlord's parents or affiliates shall be bound or have any personal liability hereunder. The party contracting with Landlord will not seek recourse or commence any action against the officer executing this Agreement or any of the partners, members, officers, employees of Landlord or of any of Landlord's parent companies or affiliates or any of their personal assets.

(h) In addition to other events permitting termination hereunder, this Lease may be terminated, without any penalty or further liability if Tenant is unable to enter into a sublease/sublicense with a Subtenant or if Tenant loses all of its Subtenants provided that loss is not attributable to any action or inaction by Tenant.

(i) This Lease may be executed in any number of separate counterparts, all of which counterparts taken together shall constitute the entirety of this Lease.


(j) From time to time, upon the request of either party to this Lease, Landlord and Tenant shall promptly provide to the other an estoppel letter confirming that this Lease is in full force and effect and/or such other matters as may be reasonably agreed to.

(k) This Lease shall be governed by and construed in accordance with the laws of the State in which the Leased Premises is located, without regard to conflict of laws.

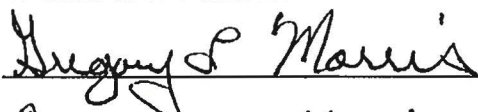
*[Remainder of page left blank – signature page follows]*

IN WITNESS WHEREOF, the parties have duly executed this Lease to be effective as of the date of its last signing, the "Effective Date".

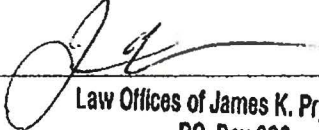
Witness as to Landlord

  
\_\_\_\_\_  
Darrell Powell  
(Print Name)

Witness as to Landlord

  
\_\_\_\_\_  
Gregory L. Morris  
(Print Name)


Witness as to Tenant

  
\_\_\_\_\_  
Law Offices of James K. Pryor, Esq.  
P.O. Box 623  
(Print Name) Mt. Freedom, NJ 07970

Witness as to Tenant

\_\_\_\_\_  
\_\_\_\_\_  
(Print Name)

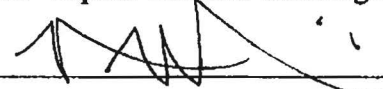
Landlord: Graham Farm Land LLC

By:   
\_\_\_\_\_  
JERRY GRAHAM  
(Print Name)

Title: PRESIDENT OF LLC

Date: 5.13.16

Tenant: Capital Telecom Holdings LLC

By:   
\_\_\_\_\_  
THOMAS WANIEUSKI

Title: Member

Date: 5/18/16

**EXHIBIT A**

**LANDLORD'S PROPERTY**

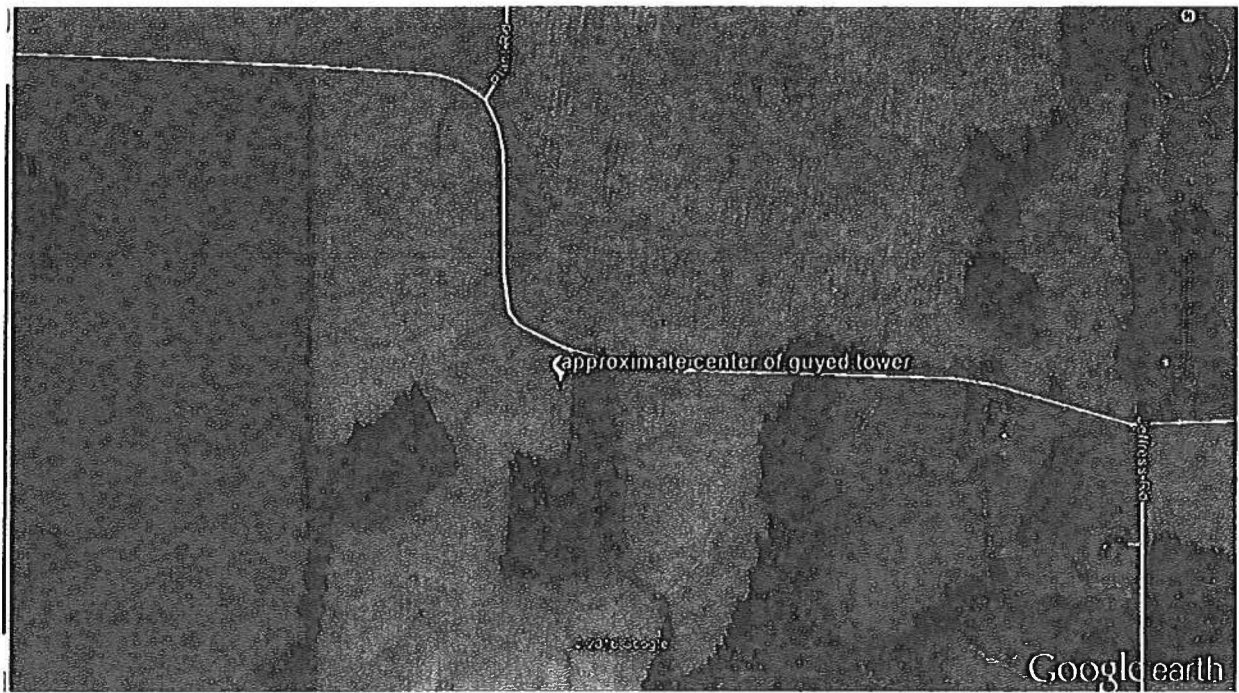
The Tenant has ordered a title search which will provide a legal description, but it is not available at the time of the lease; however, the parties agree that the subject property is 84.87 Clinton/Moscow Rd., bearing APN No. 47-15

**EXHIBIT B**

**LEASED PREMISES**

[The attached sketch of the Premises will be replaced at Tenant's option by a scale drawing and/or legal description.]





Landlord: Graham Farm Land LLC  
Premises: 924 State Route 924, Fulton, KY

Tenant: Capital Telecom Holdings LLC

**THIRD AMENDMENT TO OPTION AND TELECOMMUNICATIONS FACILITY  
LEASE AGREEMENT**

**THIS THIRD AMENDMENT TO TELECOMMUNICATIONS FACILITY LEASE AGREEMENT** ("**Third Amendment**") effective as of May 29, 2019, (the "**Effective Date**") is by and between Graham Farm Land LLC, a Kentucky limited liability company ("**Landlord**"), and Capital Telecom Holdings LLC, a Delaware limited liability company ("**Tenant**"). Tenant and Landlord shall each be referred to as "**Party**" and collectively as the "**Parties**".

**WITNESSETH:**

**WHEREAS**, Landlord and Tenant entered into that certain Option and Telecommunications Facility Lease Agreement dated May 18, 2016 ("**Lease**"), as amended by that certain First Amendment to Option and Telecommunications Facility Lease Agreement dated June 5, 2017 ("**First Amendment**"), as amended by that certain Second Amendment to Option and Telecommunications Facility Lease Agreement dated June 1, 2018 ("**Second Amendment**") (collectively, the "**Agreement**");

**WHEREAS**, the Parties desire to extend the Option Period and amend the Agreement as further described herein.

**NOW THEREFORE**, in consideration of the foregoing promises and other valuable consideration contained herein, the receipt, adequacy, and sufficiency of which are hereby expressly acknowledged, the parties agree to amend the Agreement as follows:

1. Option Extension. The Option Period, which is due to expire on or about June 5, 2019, is hereby extended for an additional twelve (12) months from the date of full execution of this Third Amendment.
2. Signing Bonus. Within thirty (30) days of the Effective Date of this Third Amendment, Tenant shall pay Landlord a one-time signing bonus in the amount of One Hundred and 00/100 Dollars (\$100.00).
3. Except as otherwise expressly set forth herein and amended by this Third Amendment, all terms of the Agreement shall remain in full force and effect. All capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Agreement. If there is any conflict between the terms and conditions of this Third Amendment and the terms and conditions of the Agreement or any prior addendum to the Agreement, the terms and conditions of this Third Amendment shall prevail.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Third Amendment as of Effective Date.

**LANDLORD:**

GRAHAM FARM LAND LLC

Graham Farm Land, LLC  
By: [Signature]  
Title: President  
Date: 5.21.19

**TENANT:**

CAPITAL TELCOM HOLDINGS LLC

[Signature]  
By: Michael G. Brett  
Title: Chief Financial Officer  
Date: 5/29/19

**EXHIBIT J**  
**NOTIFICATION LISTING**

**Crutchfield – Landowner Notice List**

GRAHAM FARM LAND LLC  
%GRAHAM JERRY MANAGING MEMBER  
1758 ST RT 781 N  
FULTON, KY 42041

BROCKWELL JEFFREY SHANE  
155 HOWELL LANE  
FULTON, KY 42041

JOHNSON JAMES S  
& JOHNSON LISA M  
1745 JEFFRESS RD  
FULTON, KY 42041

HOWELL GLENN NOLAN  
809 ST RT 781 N  
FULTON KY 42041

LUSK TIMOTHY G &  
LUSK SANDRA JUNE  
77 FREEMAN RD  
FULTON KY 42041

T&D FARMS LLC  
361 WEBB RD  
CLINTON KY 42031

T & D FARMS LLC  
WEBB THOMAS MANAGING MEMBER  
361 WEBB RD  
CLINTON KY 42031

ATWILL JOSEPH LEWIS (L/E ONLY)  
1677 ST RT 781S  
FULTON KY 42041

SWEARINGEN DONALD L  
1592 CLINTON MOSCOW RD  
FULTON KY 42041

BYRD JAMES RAY  
1605 JEFFRESS RD  
FULTON KY 42041



KIRBY TYLER &  
KIRBY EMILY  
1420 JEFFRESS RD  
FULTON KY 42041

SNUGGS DAVID ARNOLD  
& SNUGGS CLARA LILLIAN  
1360 JEFFRESS RD  
FULTON KY 42041

ATWILL ELIZABETH  
675 ST RT 924  
FULTON KY 42041

FULCHER TELITHA B  
645 ROPER SCHOOL ROAD  
HICKMAN KY 42050

EVERETT CHAD & STEPHANIE  
645 ROPER SCHOOL RD  
HICKMAN KY 42050

MYATT WILLIS PATRICK JR  
& MYATT DONNA F  
315 ST RT 924  
FULTON KY 42041

**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: Crutchfield**

Dear Landowner:

Capital Telecom Holdings LLC and Kentucky RSA No. 1 Partnership d/b/a Verizon Wireless have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 1311 Clinton Moscow Road, Fulton, KY 42041 (36°34'48.40" North latitude, 88°58'49.35" West longitude). The proposed facility will include a 295-foot tall antenna tower, plus a 5-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area. As you may know, the PSC previously approved construction of this proposed facility in 2016. However, the facility has not yet been constructed, and the present application is filed to request renewed authorization from the PSC to construct the proposed facility.

This notice is being sent to you because the Fulton County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or 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 2019-00397 in any correspondence sent in connection with this matter.

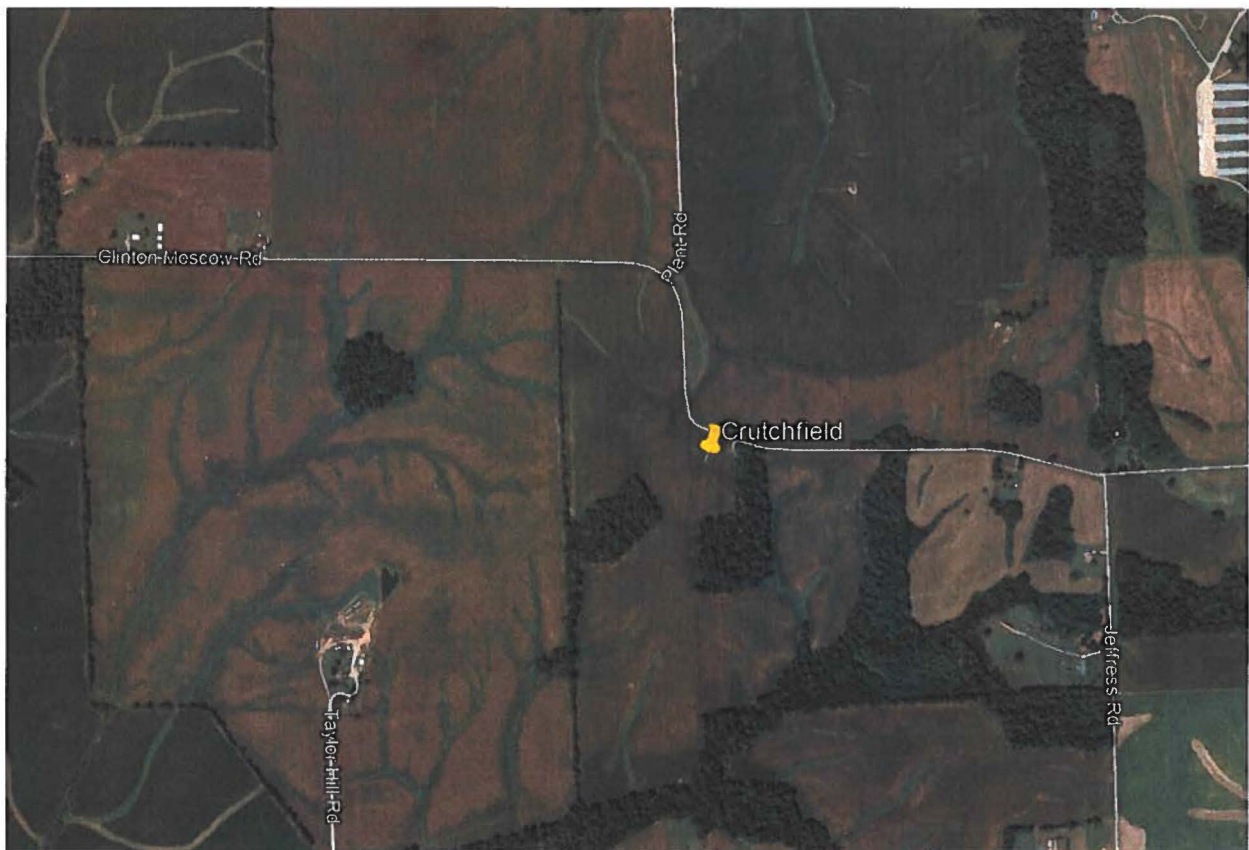
We have attached a map showing the site location for the proposed tower. Verizon Wireless' radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the 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 Applicants

enclosure

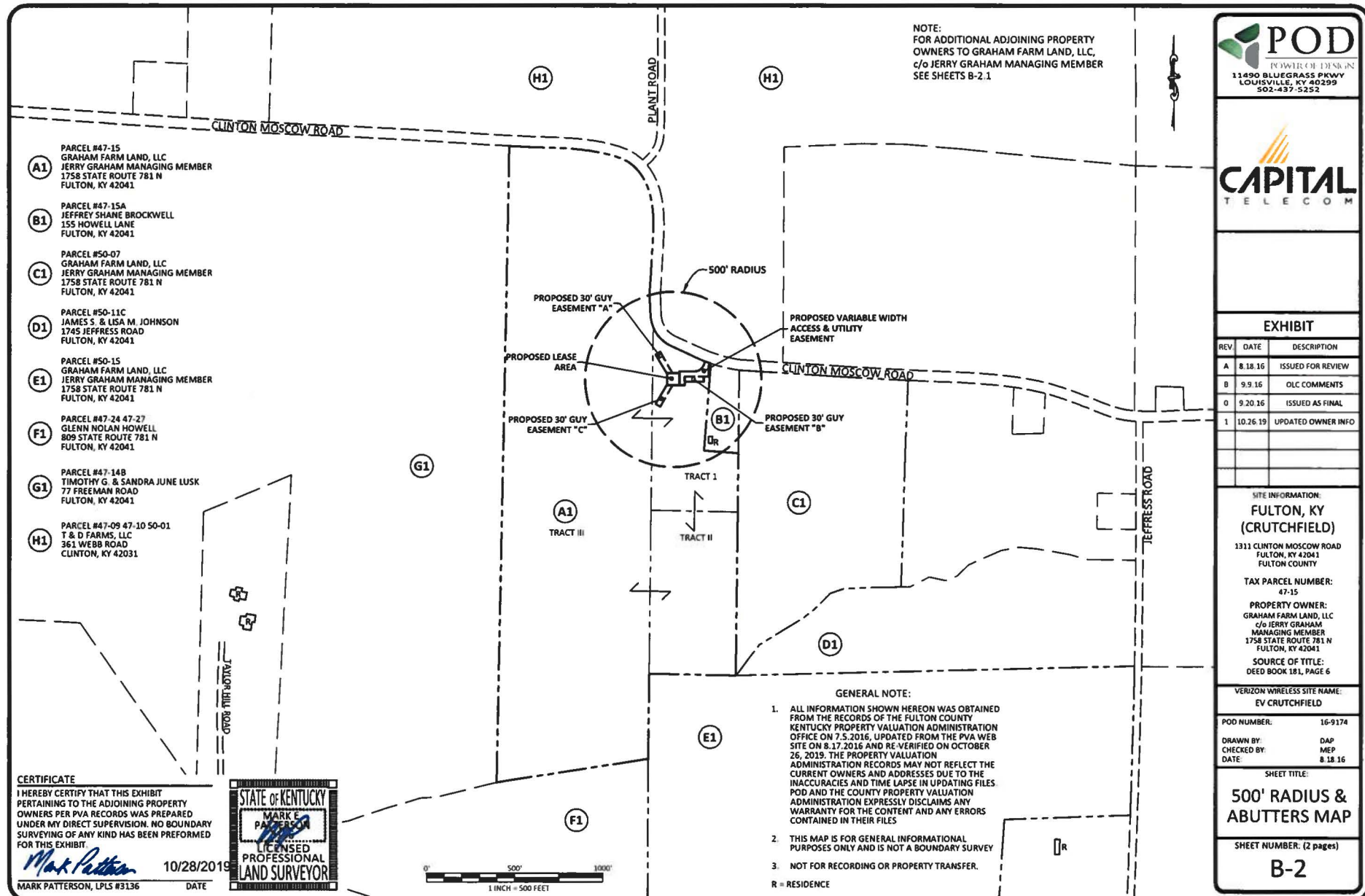
### **Driving Directions to Proposed Tower Site**

1. Beginning at the Fulton County Judge Executive's Office, located at 2216 Myron Cory Drive in Hickman, KY 42050 head north on Myron Cory Drive toward 7<sup>th</sup> Street.
2. Turn right onto 7<sup>th</sup> Street and travel approximately 1.1 miles.
3. Turn right onto KY-94E / Moscow Avenue and travel approximately 9.2 miles.
4. Turn left onto State Highway 1907 and travel approximately 3.0 miles.
5. Turn left onto State Highway 781 North and travel approximately 26 feet.
6. Turn right onto Clinton Moscow Road and travel approximately 1.3 miles.
7. The site will be on the right at 1311 Clinton Moscow Road in Fulton, KY 42041.
8. The site coordinates are
  - a. North 36° 34' 48.40"
  - b. West 88° 58' 49.35"

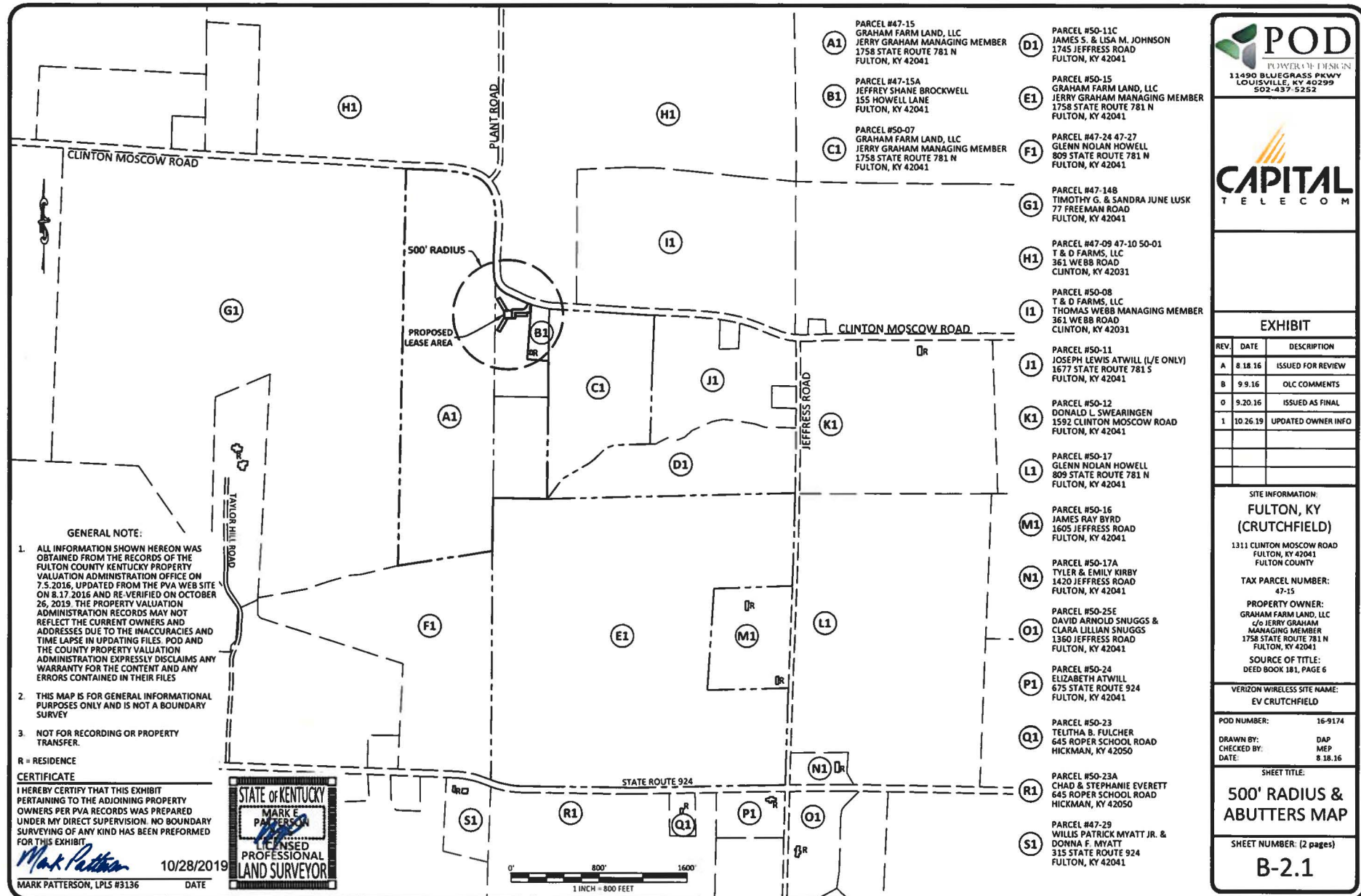


Prepared by:  
Chris Shouse  
Pike Legal Group PLLC  
1578 Highway 44 East, Suite 6  
P.O. Box 369  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293









**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**

Jim Martin  
2216 Myron Cory Drive Suite 1  
Hickman, KY 42050

RE: Notice of Proposal to Construct Wireless Communications Facility  
Kentucky Public Service Commission Docket No. 2019-00397  
Site Name: Crutchfield

Dear Judge Martin:

Capital Telecom Holdings LLC and Kentucky RSA No. 1 Partnership d/b/a Verizon Wireless have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 1311 Clinton Moscow Road, Fulton, KY 42041 (36°34'48.40" North latitude, 88°58'49.35" West longitude). The proposed facility will include a 295-foot tall antenna tower, plus a 5-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area. As you may know, the PSC previously approved construction of this proposed facility in 2016. However, the facility has not yet been constructed, and the present application is filed to request renewed authorization from the PSC to construct the proposed facility.

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 2019-00397 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. Verizon Wireless' 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.

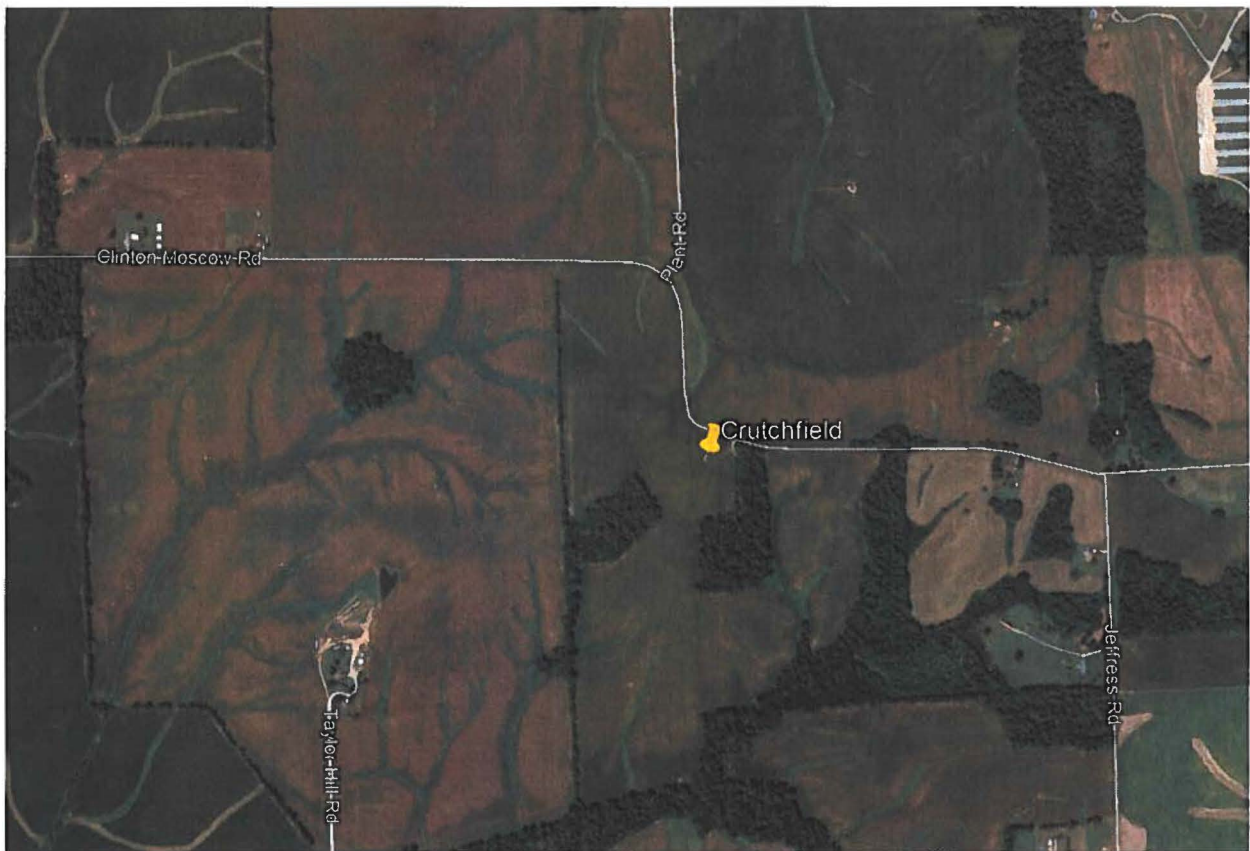
Sincerely,  
David A. Pike  
Attorney for Applicants

enclosure

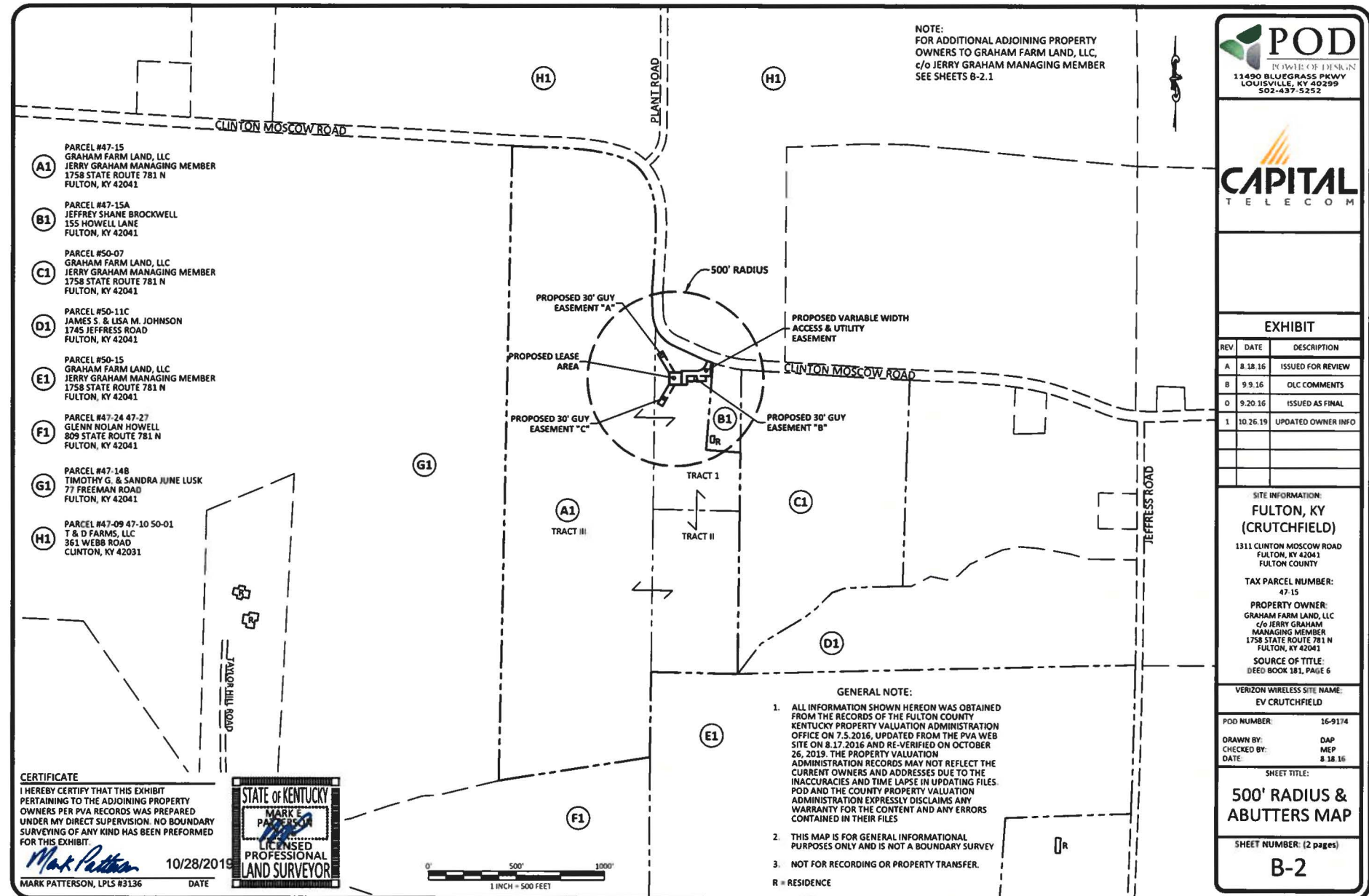


### **Driving Directions to Proposed Tower Site**

1. Beginning at the Fulton County Judge Executive's Office, located at 2216 Myron Cory Drive in Hickman, KY 42050 head north on Myron Cory Drive toward 7<sup>th</sup> Street.
2. Turn right onto 7<sup>th</sup> Street and travel approximately 1.1 miles.
3. Turn right onto KY-94E / Moscow Avenue and travel approximately 9.2 miles.
4. Turn left onto State Highway 1907 and travel approximately 3.0 miles.
5. Turn left onto State Highway 781 North and travel approximately 26 feet.
6. Turn right onto Clinton Moscow Road and travel approximately 1.3 miles.
7. The site will be on the right at 1311 Clinton Moscow Road in Fulton, KY 42041.
8. The site coordinates are
  - a. North 36° 34' 48.40"
  - b. West 88° 58' 49.35"



Prepared by:  
Chris Shouse  
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

REV	DATE	DESCRIPTION
A	8.18.16	ISSUED FOR REVIEW
B	9.9.16	OLC COMMENTS
D	9.20.16	ISSUED AS FINAL
1	10.26.19	UPDATED OWNER INFO

## SITE INFORMATION:

FULTON, KY  
(CRUTCHFIELD)

1311 CLINTON MOSCOW ROAD  
FULTON, KY 42041  
FULTON COUNTY

TAX PARCEL NUMBER:  
47-15

PROPERTY OWNER:  
GRAHAM FARM LAND, LLC  
c/o JERRY GRAHAM  
MANAGING MEMBER  
1758 STATE ROUTE 781 N  
FULTON, KY 42041

SOURCE OF TITLE:  
DEED BOOK 181, PAGE 6

VERIZON WIRELESS SITE NAME:  
EV CRUTCHFIELD

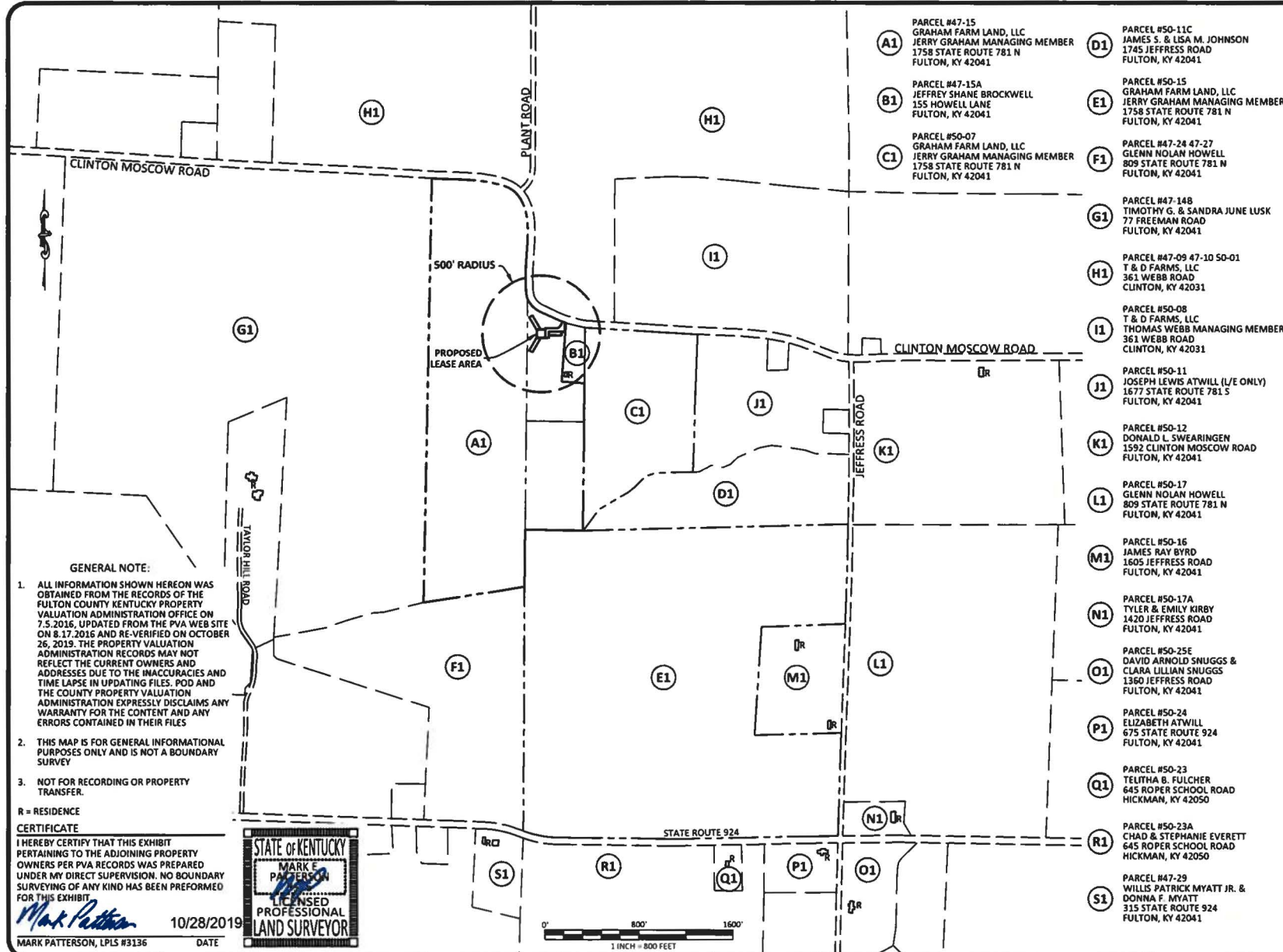
POD NUMBER: 16-9174  
DRAWN BY: DAP  
CHECKED BY: MEP  
DATE: 8.18.16

## SHEET TITLE:

500' RADIUS &  
ABUTTERS MAP

SHEET NUMBER: (2 pages)

B-2.1



**EXHIBIT M**  
**COPY OF POSTED NOTICES**  
**AND NEWSPAPER NOTICE ADVERTISEMENT**

**SITE NAME: CRUTCHFIELD**  
**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.

Capital Telecom Holdings LLC and Kentucky RSA No. 1 Partnership d/b/a Verizon Wireless propose 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 (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2019-00397 in your correspondence.

Capital Telecom Holdings LLC and Kentucky RSA No. 1 Partnership d/b/a Verizon Wireless 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 (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2019-00397 in your correspondence.



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**VIA TELEPHONE: 270-472-1121**

The Fulton Leader  
Attn: Benita Gammon  
304 E. State Line  
Fulton, KY 42041

RE: Legal Notice Advertisement  
Site Name: Crutchfield

Dear Ms. Gammon:

Please publish the following legal notice advertisement in the next edition of *The Fulton Leader*:

**NOTICE**

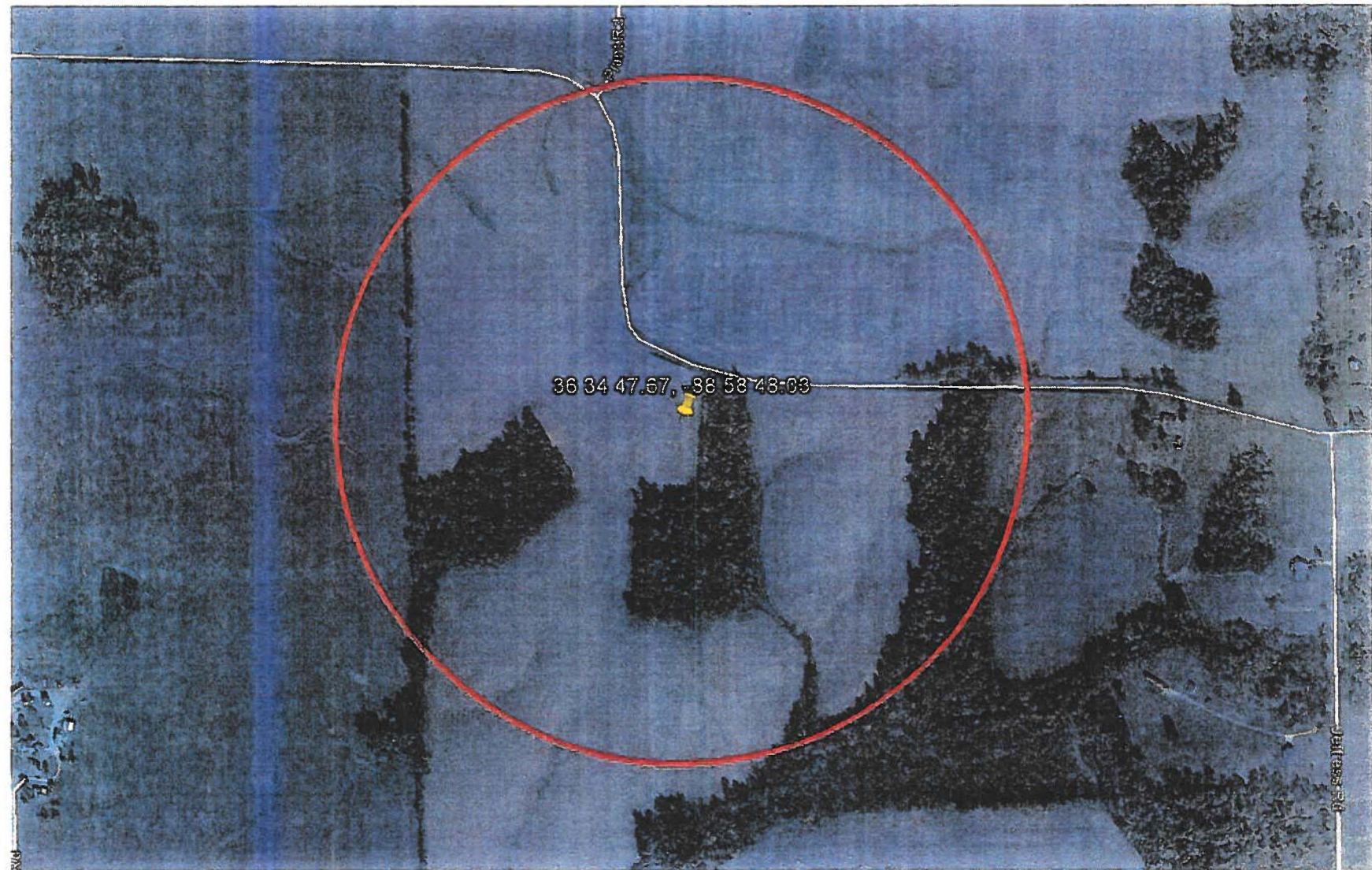
**Capital Telecom Holdings LLC and Kentucky RSA No. 1 Partnership d/b/a Verizon Wireless have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 1311 Clinton Moscow Road, Fulton, KY 42041 (36°34'48.40" North latitude, 88°58'49.35" 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 2019-00397 in any correspondence sent in connection with this matter.**

After this advertisement have 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,  
Chris Shouse  
Pike Legal Group, PLLC

**EXHIBIT N**  
**COPY OF RADIO FREQUENCY DESIGN SEARCH AREA**





EV Crutchfield – New Build SARF Map